

# IMP3

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The Integrated Modelling Project #3 on “Transport Code and Discharge Evolution” plays a central role in the Integrated Tokamak Modelling Task Force (ITM-TF): virtually all the other modelling projects will need information on the plasma state (densities, temperatures etc.) simulated by IMP3 modules; at the same time these modules require data from the other projects’ modelling codes, e.g. auxiliary heating deposition profiles. The ultimate goal of the IMP3 activity, and the ITM-TF in general, is whole device modelling, i.e. integrating modelling of all the essential processes relevant for a fusion plasma. Within IMP3 itself the major challenge is to integrate modelling of different transport processes and regions of a fusion device. For instance the core transport needs to be coupled to the edge transport, which in its turn must be integrated with models for the thermal properties of targets etc. Moreover, the developed transport code interfaces must be adapted to incorporate the data structures that provide the necessary information, e.g. sources and sinks, simulated by codes from the other IMPs. In fact, models of different complexity and scope are needed for the ITM-TF, ranging from 0D modelling for fast routine assessments of various scenarios to 2D-3D models that integrate all the relevant regions of a fusion plasma.

## 1 Core Transport Simulator (ETS)

### 1.1 ETS source in FORTRAN

You can checkout the FORTRAN ETS workflow from [gforge](https://gforge6.eufus.eu/project/ets/)<sup>1</sup> / [project ETS](https://gforge6.eufus.eu/project/ets/)<sup>2</sup> following instructions from [ETS User Guide](https://www.efda-itm.eu/ITM/imports/imp3/public/ETS_Documentation/ETS_User_Guide.pdf)<sup>3</sup>

If you did not use ETS before, first you need to request access to the code via the [EFDA ITM Portal](https://www.efda-itm.eu/ITM/imports/imp3/public/ETS_Documentation/ETS_User_Guide.pdf)<sup>4</sup> by follow-

<sup>1</sup>[https://www.efda-itm.eu/ITM/html/itm\\_glossary.html#g\\_gforge](https://www.efda-itm.eu/ITM/html/itm_glossary.html#g_gforge)

<sup>2</sup><https://gforge6.eufus.eu/project/ets/>

<sup>3</sup>[https://www.efda-itm.eu/ITM/imports/imp3/public/ETS\\_Documentation/ETS\\_User\\_Guide.pdf](https://www.efda-itm.eu/ITM/imports/imp3/public/ETS_Documentation/ETS_User_Guide.pdf)

<sup>4</sup><https://gforge6.eufus.eu/>

ing the GForge tab, following the [project ETS](#)<sup>5</sup> and requesting access. Once you have access to the code, it can be checked out of SVN using

```
svn co https://gforge6.eufus.eu/svn/ets
```

to access the whole repository, or

```
svn co https://gforge6.eufus.eu/svn/ets/trunk/ETS
```

to access just the trunk version of the ETS.

The [ETS project on Gforge](#)<sup>6</sup> also includes:

- [A wiki](#)<sup>7</sup>
- [Some documentation](#)<sup>8</sup>
- [Trackers](#)<sup>9</sup>
- [News](#)<sup>10</sup>
- [Mailing lists](#)<sup>11</sup>
- [The SVN repository \(web interface\)](#)<sup>12</sup>

## 1.2 ETS workflows in KEPLER

The ETS workflow is used for 1-D transport simulation of a tokamak core plasma.

*ETS workflows in KEPLER :*

- use actors and composite actors from other IMPs, thus for the most recent versions of them please check with relevant project
- complex, but clearly structured workflow, which offers user friendly interface for configuring the simulation
- allow for easy modifications ( *connecting new modules, or reconnecting parts of the workflow* ) through an easy graphical interface
- provide users with all updates through the version control system
- still in active development tool

There are currently 2 workflows being developed within ITM-IMP3 project:

- [ETS\\_A\\_4.10b](#)<sup>13</sup> Contact person: [denis.kalupin@efda.org?subject=ETS%20in%20KEPLER](mailto:denis.kalupin@efda.org?subject=ETS%20in%20KEPLER) (Skype: dkalupin) (Status)<sup>14</sup>
- [ETS\\_A\\_4.10a](#)<sup>15</sup> Contact person: [denis.kalupin@efda.org?subject=ETS%20in%20KEPLER](mailto:denis.kalupin@efda.org?subject=ETS%20in%20KEPLER) (Skype: dkalupin) (Status)<sup>16</sup>
- [ETS\\_C](#)<sup>17</sup> Contact person: [vincent.basiuk@cea.fr?subject=ETS%20in%20KEPLER](mailto:vincent.basiuk@cea.fr?subject=ETS%20in%20KEPLER) [philippe.huynh@cea.fr?subject=ETS%](mailto:philippe.huynh@cea.fr?subject=ETS%20in%20KEPLER)<sup>18</sup>

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<sup>5</sup><https://gforge6.eufus.eu/project/ets/>

<sup>6</sup><https://gforge6.eufus.eu/project/ets/>

<sup>7</sup><https://gforge6.eufus.eu/project/ets/wiki/>

<sup>8</sup><https://gforge6.eufus.eu/project/ets/docman/>

<sup>9</sup><https://gforge6.eufus.eu/project/ets/tracker/>

<sup>10</sup><https://gforge6.eufus.eu/project/ets/news/>

<sup>11</sup><https://gforge6.eufus.eu/project/ets/mailman/>

<sup>12</sup><https://gforge6.eufus.eu/project/ets/scmsvn/>

<sup>13</sup>[https://www.efda-itm.eu/ITM/html/ETS\\_A\\_KEPLER\\_4.10b.html](https://www.efda-itm.eu/ITM/html/ETS_A_KEPLER_4.10b.html)

<sup>14</sup>[https://www.efda-itm.eu/ITM/html/ets\\_status.html](https://www.efda-itm.eu/ITM/html/ets_status.html)

<sup>15</sup>[https://www.efda-itm.eu/ITM/html/ETS\\_A\\_KEPLER\\_4.10a.html](https://www.efda-itm.eu/ITM/html/ETS_A_KEPLER_4.10a.html)

<sup>16</sup>[https://www.efda-itm.eu/ITM/html/ets\\_status.html](https://www.efda-itm.eu/ITM/html/ets_status.html)

<sup>17</sup>[https://www.efda-itm.eu/ITM/html/ETS\\_C\\_KEPLER.html](https://www.efda-itm.eu/ITM/html/ETS_C_KEPLER.html)

<sup>18</sup>[https://www.efda-itm.eu/ITM/html/ets\\_status.html](https://www.efda-itm.eu/ITM/html/ets_status.html)

## 1.2.1 ETS\_A 4.10b

### 1.2.1.1 Obtaining the ETS

Contact person: [denis.kalupin@euro-fusion.org?subject=ETS%20in%20KEPLER](mailto:denis.kalupin@euro-fusion.org?subject=ETS%20in%20KEPLER) (Skype: dkalupin)

---

#### 1.2.1.1.1 Installing the ETS

The default ETS release is the [tag 4.10b10.3](#)<sup>19</sup>

*\*Before installation make sure that:*

- you have your private data base for the version of the [UAL](#)<sup>20</sup> required by the workflow
- you have the version of [KEPLER](#)<sup>21</sup> required by the workflow installed. Quick start on kepler required for the ETS can be found [here](#)<sup>22</sup>
- inside the window, where you will be downloading the ETS the source command:

```
>source $ITMSCRIPTDIR/ITMv1  
\textit{Kepler\_Version Data\_Base\_Name UAL\_Version
```

is executed.

*To install your local copy of the ETS workflow please do:*

```
>svn co https://gforge6.eufus.eu/svn/keplerworkflows/tags/ets_4.10b10.3/ETS  
>cd ETS  
>make import_ets
```

Press the play button on the workflow.



*The workflow shall run!* If it does not, please use the [denis.kalupin@euro-fusion.org?subject=ETS%20in%20KEPLER](mailto:denis.kalupin@euro-fusion.org?subject=ETS%20in%20KEPLER) from above.

---

*Starting the workflow:* If you have the workflow already installed, there are there are several ways to execute it:

- For execution via kepler GUI:

```
>kepler.sh workflow_path/workflow_name.xml
```

- For execution in none GUI mode:

```
>kepler.sh -runwf -nogui -redirectgui $ITMHOME/some_dir_name workflow_path/workflow_name.xml
```

<sup>19</sup>[https://www.eufus.eu/documentation/ITM/html/ETS\\_A\\_4.10a\\_obtain.html#ETS\\_A\\_4.10a\\_obtain\\_3](https://www.eufus.eu/documentation/ITM/html/ETS_A_4.10a_obtain.html#ETS_A_4.10a_obtain_3)

<sup>20</sup><http://portal.efda-itm.eu/twiki/bin/view/Main/UallListOrReleases>

<sup>21</sup><http://portal.efda-itm.eu/twiki/bin/view/Main/KeplerListOfReleases>

<sup>22</sup><http://portal.efda-itm.eu/twiki/bin/view/Main/InstallMultipleKeplers>



- For execution in batch mode:  
it is essential to keep the workflow inside your \$ITMWORK area  
it is essential to switch to scripts/R2.2 module

```
>module switch scripts/R2.2
>submit_batch_kepler.sh run_dirctory 1 $ITMWORK/workflow_path/workflow_name.xml $ITMSCRIPDIR/ba
```

### 1.2.1.1.2 ETS revisions

Revision Name:	UAL version:	KEPLER version:	Short Summary:	Comments:
4.10b0.1	4.10b8_R2.1.0	any, up to 4.10b3.5	Contains:Fixed boundary equilibrium; Simple transport models; full HCD package; Impurity; Pellets; Sawtooth	Test 4.10b release, restricted module choice, restricted physics capabilities, work around of coredelta
4.10b8.1	4.10b8_R2.1.0	central installation 4.10b3.central <sup>23</sup> is preferred; local installation 4.10b3.6 <sup>24</sup> or above	Contains:Fixed boundary equilibrium; Simple transport models; full HCD package; Impurity; Pellets; Sawtooth; Scenario	Test 4.10b release, restricted module choice, restricted physics capabilities, work around of coredelta, produces scenario output on request
4.10b10.1	4.10b10	central installation 4.10b3.central <sup>25</sup> is preferred; local installation 4.10b3.6 <sup>26</sup> or above	MODIFICATIONS COMPATIBLE WITH 4.10b10 DATA STRUCTURE	UNDER CONSTRUCTION: release at the Code Camp in Prague
4.10b10.2	4.10b10.branches.R2.1.r1380	central installation 4.10b3.central <sup>27</sup> is preferred; local installation 4.10b3.6 <sup>28</sup> or above	Added synchrotron radiation, some of neo-classical actors,reworked combiners	UNDER CONSTRUCTION: release at the Code Camp in Prague
4.10b10.3	4.10b10.branches.R2.1.r1380	central installation kepler_rc (2.4/R3.8/kepler or more recent) <sup>29</sup> is preferred	Added synchrotron radiation, some of neo-classical actors,reworked combiners	compared to previous shall contain completed transport, new controller for pellet and sawteeth module

### 1.2.1.2 Configuring the ETS run

#### 1.2.1.2.1 WORKFLOW PARAMETERS

##### 1.2.1.2.2 General Parameters

- **USER** - your userid
- **MACHINE** - machine name (database name) for which comutations are done
- **SHOT\_IN** - input shot number
- **RUN\_IN** - input run number
- **SHOT\_OUT** - output shot number
- **RUN\_OUT** - output run number
- **NUMERICAL\_SOLVER** - choice of the numerics solving transport equations (RECOMENDED SELECTION: 3 or 4)

<sup>23</sup><http://portal.efda-itm.eu/twiki/bin/view/Main/InstallANewVersionOfKepler>

<sup>24</sup><http://portal.efda-itm.eu/twiki/bin/view/Main/InstallANewVersionOfKepler>

<sup>25</sup><http://portal.efda-itm.eu/twiki/bin/view/Main/InstallANewVersionOfKepler>

<sup>26</sup><http://portal.efda-itm.eu/twiki/bin/view/Main/InstallANewVersionOfKepler>

<sup>27</sup><http://portal.efda-itm.eu/twiki/bin/view/Main/InstallANewVersionOfKepler>

<sup>28</sup><http://portal.efda-itm.eu/twiki/bin/view/Main/InstallANewVersionOfKepler>

<sup>29</sup><http://portal.efda-itm.eu/twiki/bin/view/Main/InstallANewVersionOfKepler>

### 1.2.1.2.3 Space resolution

- **NRHO** - number of radial points for transport equations
- **NPSI** - number of points for equilibrium 1-D arrays
- **NEQ\_DIM1** - number of points for equilibrium 2-D arrays, first index
- **NEQ\_DIM2** - number of points for equilibrium 2-D arrays, second index
- **NEQ\_MAX\_NPOINTS** - maximum number of points for equilibrium boundary

### 1.2.1.2.4 Time resolution

*Start and End time:*

- **TBEGIN** - Computations start time
- **TEND** - Computations end time

## European Transport Simulator

Workflow parameters



#### General parameters:

- USER: denka
- machine: test
- shot\_in: 77922
- run\_in: 2
- shot\_out: 77922
- run\_out: 8

#### Times:

- tbegin: 48
- tend: 48.2

#### ETS dimensions:

- TRANSPORT:
  - NRHO: 100

#### EQUILIBRIUM:

- NPSI: 100
- NEQ\_DIM1: 100
- NEQ\_DIM2: 100
- NEQ\_MAX\_POINTS: 100

#### NUMERICS:

- NUMERICAL\_SOLVER: 4

*Time step:*

- right click on the box **BEFORE THE TIME EVOLUTION**
- select *Configure actor*
- **TAU** :specify value of the time step in [s]
- **TAU\_OUT** : specify value of the output time interval in [s]
- *Commit*



### 1.2.1.2.5 ION, IMPURITY and NEUTRAL COMPOSITION

Before starting the run you need to define types of main ions, impurity (optional) and neutrals (optional) to be included in simulations.

To define plasma composition:

- right click on the box **BEFORE THE TIME EVOLUTION**
- select *Configure actor*
- choose one of modes for setting *Run\_compositions*
  - **from\_input\_CPO** - will pick up the COMPOSITIONS structure of the COREPROF CPO saved to the input shot;
  - **configure\_manually** - will force the composition from the values specified below

- specify values of atomic mass ( *AMN\_ion* ), nuclear charge ( *ZN\_ion* ) and charge ( *Z\_ion* , from the first ion to the last [*1:NION*] , separated by commas
- (optional) specify values of atomic mass ( *AMN\_imp* ), nuclear charge ( *ZN\_imp* ) and maximal ionization state ( *max\_Z\_imp* ) for impurity ions, from the first to the last [*1:NIMP*] , separated by commas
- (optional)for neutrals activate, by switchen them to *ON* , the types which shall be followed by neutral solver
- press *Commit*

COMPOSITIONS =====:	Please set up composition for Ion, Impurity and Neutral species, or load them from input COMPOSITIONS.CPO
Run_compositions:	<b>configure_manually</b>
PLASMA COMPOSITION (1:NION):	Parameters for manual specification:
AMN_ion:	*Please specify atomic mass number and charge for main ion components (1:NION)*
ZN_ion:	2
Z_ion:	1
IMPURITY COMPOSITION (1:NIMP):	*Please specify atomic mass number and charge for all impurity components (1:NIMP)*
AMN_imp:	12
ZN_imp:	6
max_Z_imp:	6
TYPES OF NEUTRALS TO BE TREATED:	Please indicate types of neutrals which should be included
cold_neutrals:	OFF
thermal_neutrals:	OFF
fast_neutrals:	OFF
NBI_neutrals:	OFF

### 1.2.1.2.6 EQUATIONS TO BE SOLVED AND BOUNDARY CONDITIONS

#### 1.2.1.2.7 Main Plasma

Before starting the run you need to select the type and value of the boundary conditions for all equations. Please note that the value should correspond to the type. All equations allow for following types of boundary conditions:

- *OFF* - equation is not solved, initial profiles will be kept for whole run
- *value* - edge value should be specified
- *gradient* - edge gradient should be specified
- *scale\_length* - edge scale length should be specified
- *generic* - generic form:  $a1*y + a2*y = a3$  of the boundary condition is assumed, 3 coefficients ( *a1* , *a2* , *a3* ) should be provided
- *value\_from\_input\_CPO* - equation is solved, edge value evolution will be read from input shot
- *profile\_from\_input\_CPO* - equation is not solved, profile evolution will be read from input shot

The particular equation will be activated if the boundary condition type for it is other than *OFF*

BOUNDARY CONDITIONS=====:

BOUNDARY CONDITIONS FOR MAIN PLASMA:  
===== Current Equation =====  
psi\_bnd\_type: total\_current  
psi\_bnd\_value: 1.7e6  
===== Te Equation =====  
te\_bnd\_type: OFF  
te\_bnd\_value: 150  
===== Ti Equations =====  
ti\_bnd\_type\_ION1: OFF  
ti\_bnd\_value\_ION1: 150  
ti\_bnd\_type\_ION2: OFF  
ti\_bnd\_value\_ION2: 150  
ti\_bnd\_type\_ION3: OFF  
ti\_bnd\_value\_ION3: 0  
===== Ne Equation =====  
ne\_bnd\_type: value  
ne\_bnd\_value: 5e18  
===== Ni Equations =====  
ni\_bnd\_type\_ION1: value  
ni\_bnd\_value\_ION1: 2.5e18  
ni\_bnd\_type\_ION2: OFF  
ni\_bnd\_value\_ION2: 2  
ni\_bnd\_type\_ION3: OFF  
ni\_bnd\_value\_ION3: 3  
:::  
ni\_from\_quasineutrality: charge\_proportional  
===== Vtor Equations =====  
vtor\_bnd\_type\_ION1: OFF  
vtor\_bnd\_value\_ION1: 0.0  
vtor\_bnd\_type\_ION2: OFF  
vtor\_bnd\_value\_ION2: 0.0  
vtor\_bnd\_type\_ION3: OFF  
vtor\_bnd\_value\_ION3: 0.0

"Please select appropriate type of the boundary conditions for each equation"

To set up boundary conditions:

- right click on the box **BEFORE THE TIME EVOLUTION**
- select *Configure actor*
- select appropriate boundary condition for each equation
- specify values for boundary conditions corresponding to the type and to the ion component
- *Commit*

The workflow will not allow the user all particle components ( **ions[1:NION]+electrons** ) to be run predictively. At least one of them shall be set to **OFF** (this component will be computed from quasi-neutrality condition).

**!!!** If electron density is solved, all ions with **ni\_bnd\_type=OFF** will be computed from the quasineutrality condition and scaled proportional to specified **ni\_bnd\_value** or inversely proportional to their charge, **charge\_proportional** . This is defined by option: **ni\_from\_quasineutrality** .

### 1.2.1.2.8 Impurity

You can set up the boundary conditions for impurity ions in a similar way as for main ions.

**!!!** Note, that at the moment only types: **OFF** ; **value** and **value\_from\_input\_CPO** are accepted by impurity solver.

To set up boundary conditions:

- right click on the box **BEFORE THE TIME EVOLUTION**
- select *Configure actor*
- select appropriate boundary condition for each impurity species ( **OFF** -equation is not solved)
- specify values for boundary density of each impurity component [1:MAX\_Z\_IMP] , separated by commas
- *Commit*

BOUNDARY CONDITIONS FOR IMPURITIES:  
===== Nz Equations =====  
imp\_bnd\_type: OFF  
imp\_bnd\_value\_IMP1: 1.e17  
imp\_bnd\_value\_IMP2: 0.0  
imp\_bnd\_value\_IMP3: 0.0  
imp\_bnd\_value\_IMP4: 0.0  
imp\_bnd\_value\_IMP5: 0.0  
:  
coronal\_distribution: OFF  
:

Interface for impurity boundary condition has additional option, *coronal\_distribution* , that allow to preset the edge values or entire profiles of individual ionization states from coronal distribution. In tis case only single value is required to be specified for each impurity boundary value.

The options are:

- *OFF* - the boundary values for impurity densities will be as they are specified above;
- *boundary\_conditions* - the boundary densities will be renormalized with corona, using the first element from above as a total density
- *boundary\_conditions\_and\_profiles* - the boundary densities and starting profiles will be renormalized with corona, using the first element from above as a total density

### 1.2.1.2.9 Neutrals

**!!! AT THE MOMENT BOUNDARY CONDITIONS FOR NEUTRAL VELOCITIES ARE DISABLED, MIGHT BE ADDED ON REQUEST**

Note, that ALL values should be specified in the order: { 1, 2, 3 ...*NION*, 1, 2, 3, ...*NIMP* }

To set up boundary conditions:

- right click on the box **BEFORE THE TIME EVOLUTION**
- select *Configure actor*
- select appropriate boundary condition for each neutral species ( *OFF* -equation is not solved)
- specify values for boundary density and temperature of each neutral component [*1, 2, 3 ...NION, 1, 2, 3, ...NIMP*] , separated by commas
- *Commit*

### 1.2.1.2.10 Input profiles interpolation

You are going to start the ETS run from some input shot, which might contain some conflicting rho grids saved to different CPOs.

Thus there is a choice for the user to decide on the grid on which the starting profiles should be load by the workflow, *Interpolation\_of\_input\_profiles* .

To define the interpolation grid select:

- *on\_RHO\_TOR\_grid* - interpolate input profiles based on the grid specyified in [m];
- *on\_RHO\_TOR\_NORM\_grid* - interpolate input profiles based on normalised rho grid [0:1]

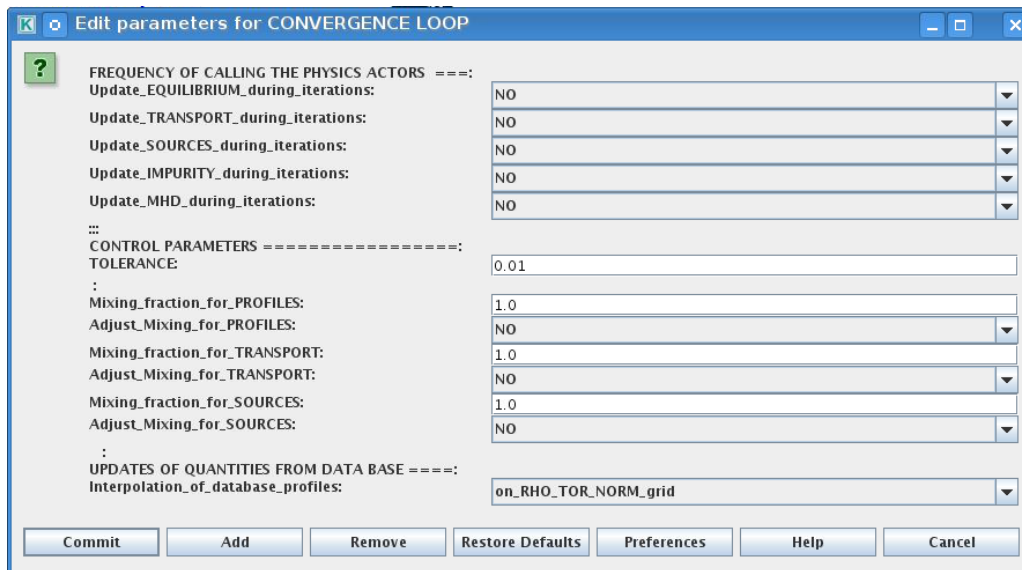
### 1.2.1.2.11 CONVERGENCE LOOP

ETS updates input from different physics actors in a sequence, which is finished by solving the transport equations. There are possible none-linear couplings between different parts of the system. These nonlinearities are trited by the ETS using iterations.

The decision to step in time is made by the ETS based on the criteria that the maximum relative deviation of main plasma profiles is lower than some predefined tolerance.

There is a number of settings and sitches in the ETS that are used by the iterative scheme. To edit them do:

- right click on the box **CONVERGENCE LOOP**
- select *Configure actor* to edit settings
- choose your settings
- *Commit*



Switches in the field *FREQUENCY OF CALLING THE PHYSICS ACTORS* define how many times the the actors of a certain catgory (equilibrium, transport, etc.) should be called in a single time step.

By selecting *YES* all actors of this catgory will be called every iteration

By selecting *NO* all actors of this catgory will be called only ones in a time step

Switches and parameters in the field *CONTROL PARAMETERS* define how iterations are done

- *Tolerance* - defines the maximum relative error of profiles change compared to previous iteration. If it is achieved the time stepping is done.

For highly none-linear case the required precision can be achieved faster by the iterative scheme if only fraction of the new solution is mixed to the previous state.

The following scheme is adopted by the ets to reduce none-linearities in profiles, transport coefficients and sources:

$$Y = (A_{mix} * Y+) + ((1-A_{mix})*Y-)$$

where  $A_{mix}$  is the mixing fraction

You can activate the mixing of profiles, transport coefficient and sources by selecting the corresponding *Mixing fraction...* to be between [0:1]

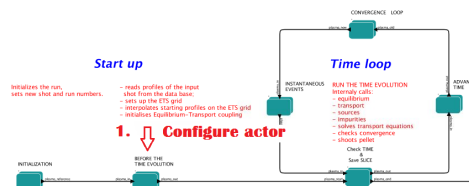
You also can activate the authomatic ajustment of this fraction by selecting: *Ajust\_Mixing\_for\_...* to *YES*

### 1.2.1.2.12 EQUILIBRIUM

#### 1.2.1.2.13 Initialization Settings

Before starting the run you need to set up your initial equilibrium. There are several options to do it: if your input shot contains the consistent equilibrium with all necessary parameters - you can start immediately from it; if your input shot contains the equilibrium but it is not consistent or some parameters are missing you can check it automatically; if your input equilibrium is corrupt or not present - you can define the starting equilibrium by tree moment description. To select your starting equilibrium please do:

- right click on the box **BEFORE THE TIME EVOLUTION**
- select *Configure actor* to edit settings
- Select your settings or specify values
- *Commit*



#### SETTINGS:

- *Equilibrium\_configuration* - select *configure\_manually* if you like to specify configuration below; select *from\_input\_CPO* if all quantities should be picked up from the input CPO
- *R0\_Machine\_characteristic\_radius* - Characteristic radius of the machine, here  $B_0$  is measured [m]
- *B0\_Magnetic\_field\_at\_R0* - Magnetic field measured at the position  $R_0$  [T]
- *RGEO\_Major\_Radius\_of\_LCMS\_centre* - R coordinate of the geometrical centre of the LCMS [m]
- *ZGEO\_Altitude\_of\_LCMS\_centre* - Z coordinate of the geometrical centre of the LCMS [m]
- *Total\_plasma\_current\_IP* - plasma current within the LCMS [A]
- *Minor\_radius* - minor radius of the LCMS [m]
- *Elongation* - elongation of the LCMS [-]
- *Triangularity\_upper* - upper triangularity of the LCMS [-]
- *Triangularity\_lower* - lower triangularity of the LCMS [-]
- *Equilibrium\_code* - select one of available equilibrium solvers to check the consistency between starting equilibrium and current profile; use *INTERPRETATIVE* if you trust your input data (in this case the check will be ignored).

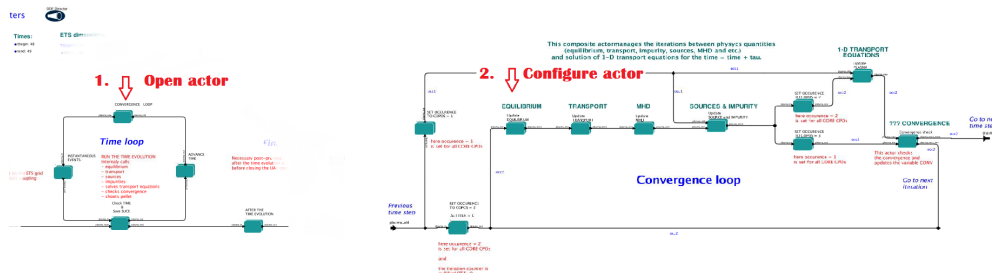
STARTING EQUILIBRIUM=====:	
Equilibrium_configuration:	configure_manually
:	
:	
R0_Machine_characteristic_radius:	6.2
B0_Magnetic_field_at_R0:	5.3
:	
RGEO_Major_Radius_of_LCMS_centre:	6.15
ZGEO_Altitude_of_LCMS_centre:	0.65
:	
Total_plasma_current_IP:	15E6
:	
minor_radius:	1.95
elongation_upper:	1.72
elongation_lower:	1.85
triangularity_upper:	0.42
triangularity_lower:	0.35
:	
Equilibrium code for preiterations:	Select one of EQUILIBRIUM solvers or choose INTERPRETATIVE to ignore the iterations
EquilibriumCode:	chease

Please note, that different equilibrium solvers might require slightly different input. Thus it is a user responsibility to check that the information inside input shot/run is enough to run selected equilibrium solver.

### 1.2.1.2.14 Run Settings

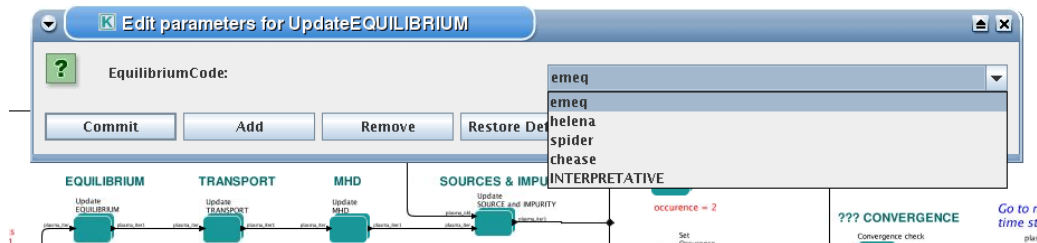
There are several equilibrium solvers connected to the ETS. You can select the one of them. Therefore please do:

- right click on the box **CONVERGENCE LOOP**
- select *Open actor*
- right click on the box **EQUILIBRIUM**
- select *Configure actor* to edit settings
- choose your equilibrium solver
- *Commit*



**INTERPRETATIVE** means that the ETS will not update the equilibrium, instead it will be using the initial equilibrium.

Please note, that it is better to select the same code as you used for pre-iterations. Because outputs of different equilibrium solver are not necessary done with the same resolution. Therefore the routine saving the information to the data base might brake due to incompatible sizes of some signals.

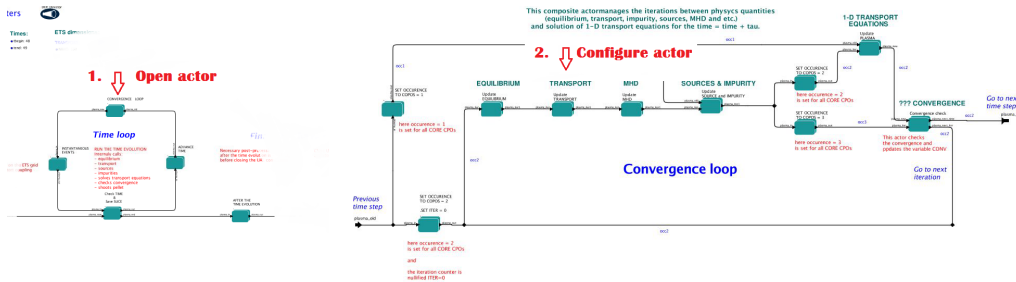


### 1.2.1.2.15 TRANSPORT

The settings for TRANSPORT can be done inside the CONVERGENCE LOOP composite actor. Therefore please do:

- right click on the box **CONVERGENCE LOOP**
- select *Open actor*
- right click on the box **TRANSPORT**
- select *Configure actor* to edit settings
- choose your settings
- press *Commit*





### 1.2.1.2.16 Transport models

ETS constructs the total transport coefficients from the combination of Anomalous transport (model choice), Neoclassical transport (model choice), Database transport (transport coefficients be saved to the input shot) and Background transport (Transport coefficients defined through the GUI interface)

$$D_{tot} = D_{DB} * M_{DB} + D_{AN} * M_{AN} + D_{NC} * M_{NC} + D_{BG} * M_{BG}$$

You should choose from the list of available models in each category or switch it **OFF**

Individual multipliers for all channels shall be specified on the lower level through the code parameters of **Transport Combiner**

The list of available transport models can be found [here](#) <sup>30</sup>.

TRANSPORT MODEL ACTIVATION:	
DatabaseTransport:	OFF
AnomalousTransportModel:	BohmGyroBohm
NeoclassicalTransportModel:	OFF
BackgroundTransport:	ON
:	:

Please select Transport Models which could be used in your run.  
NOTE: it is not possible to combine two models from the same category in one simulation.

### 1.2.1.2.17 Background transport

You can add the constant background level for each coefficient (ion and impurity coefficients are expected to be the strings of [1:NION] and [1:NIMP] elements respectively, separated by commas)

ADDITIONAL TRANSPORT:	
CURRENT:	OFF
SpitzerResistivity:	OFF
SIGMA_BG:	20e7
ELECTRONS:	
DIFF_NE_BG:	1
VCONV_NE_BG:	0
DIFF_TE_BG:	1
VCONV_TE_BG:	0
MAIN IONS (1:NION):	
DIFF_NL_BG:	1
VCONV_NL_BG:	0
DIFF_TL_BG:	1
VCONV_TL_BG:	0
DIFF_VTOR_BG:	0
VCONV_VTOR_BG:	0
IMPURITIES (1:NIMP):	
ImportImpurityAnomalousTransport:	OFF
DIFF_NZ_BG:	0.1
VCONV_NZ_BG:	0

Please select and specify here the additions to the transport provided by the transport models above

Please specify the value, constant background transport will be added

Please specify values {1:NION}, constant background transport will be added

### 1.2.1.2.18 Edge transport barrier

In this section you can artificially suppress the transport outside of specified *RHO\_TOR\_NORM\_ETB*. Total transport coefficients for all transport channels (*ne, ni, nz, Te, Ti,...*) will be reduced to constant values specified below (ion and impurity coefficients are expected to be the strings [1:NION] and [1:NIMP] respectively)

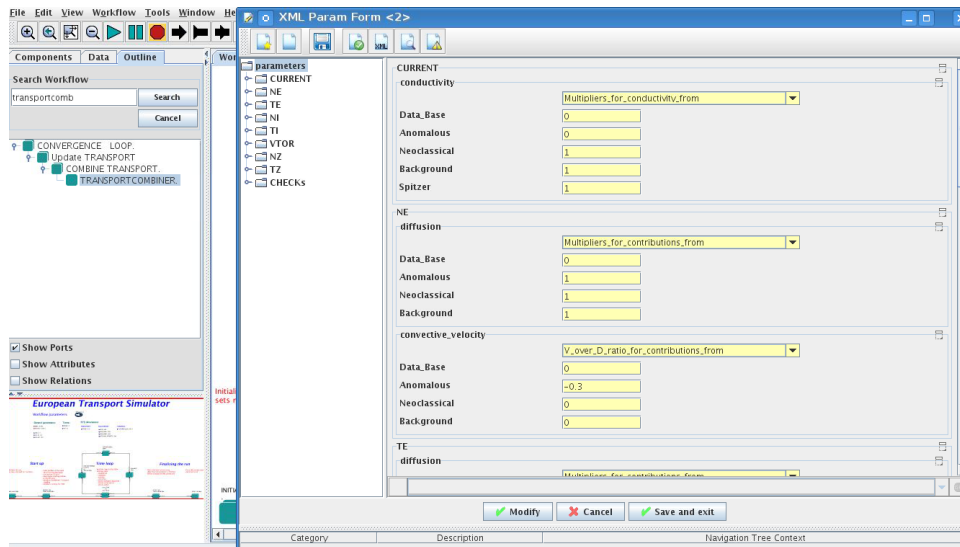
<sup>30</sup>[https://www.eufus.eu/documentation/ITM/html/ets\\_status.html](https://www.eufus.eu/documentation/ITM/html/ets_status.html)

SUPPRESSION OF TRANSPORT WITHIN EDGE TRANSPORT BARRIER:	
EdgeTransportBarrier:	OFF
RHO_TOR_NORM_ETB:	0.97
:	Please specify values (1:NION), transport within ETB will be reduced to specified value
DIFF_NL_ETB:	0.5
VCONV_NL_ETB:	0.0
DIFF_NE_ETB:	0.5
VCONV_NE_ETB:	0.0
DIFF_TL_ETB:	0.5
VCONV_TL_ETB:	0.0
DIFF_TE_ETB:	0.5
VCONV_TE_ETB:	0.0
DIFF_VTOR_ETB:	0.5
VCONV_VTOR_ETB:	0.0
:	Please specify values (1:NIMP), transport within ETB will be reduced to specified value
DIFF_NZ_ETB:	0.1, 0.1
VCONV_NZ_ETB:	0.0, 0.0

### 1.2.1.2.19 Total transport coefficients

The fine tuning of of transport coefficients can be done through editing the XML code parameters of the *transport combiner* actor:

- In *Outline* browse for **transportcombiner**
- select *Configure actor*
- click *Edit Code Parameters*
- – If you select *OFF* contributions from all transport models to this channel will be nullified;
- – If you select *Multippliers for contributions from* the transport channel will be activated, and the total transport coefficient will be combined from active tranport models. You gust need to specify multiplier against each channel;
- – For convective velocity there is an additional option *V over D ratio for contributions from* . With this option selected the combiner will ignore the convective components provided by transport models. The convective velocity will be determined from the diffusion coefficient by applying fixed V/D ratio (*for inward pinch the values should be negative!* ).
- *Save and exit*
- *Commit*

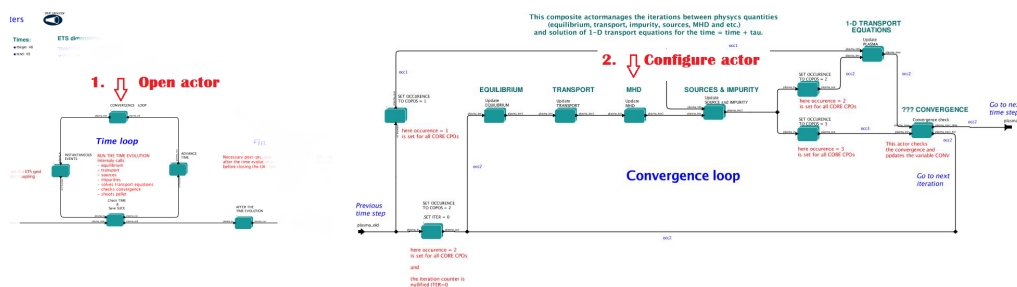


### 1.2.1.2.20 MHD

The settings for MHD type of events can be done inside the CONVERGENCE LOOP composite actor. Therefore please do:

- right click on the box **CONVERGENCE LOOP**
- select *Open actor*

- right click on the box **MHD**
- select *Configure actor* to edit settings
- choose your settings
- *Commit*



At the moment ETS allows only for NTM to be activated. The sawtooth module is expected to be deployed before ITM Code Camp in Slovenia.

User can adjust the following NTM settings:

- **NTM ON** means that ETS will add the NTM driven transport to the total transport coefficient; **OFF** - ignored
- **NTMTransportMultiplier** the transport contribution from NTM will be multiplied with this value
- **Onset\_NTM\_time** - activation time for the NTM mode
- **Onset\_NTM\_width** - starting width of the mode
- **m\_NTM\_poloidal\_number**
- **n\_NTM\_toroidal\_number**
- **NTM\_phase**
- **NTM\_frequency**

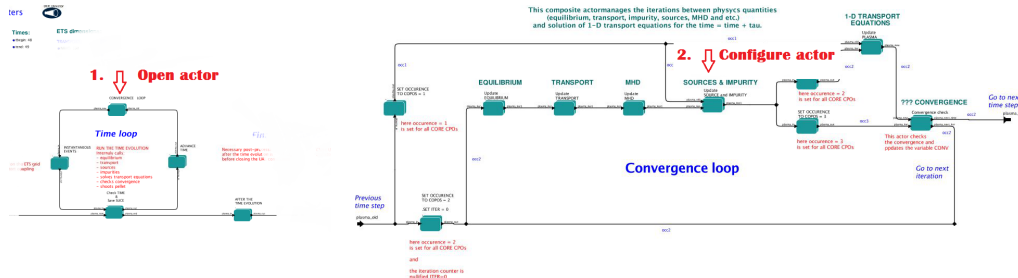
NTM:	ON
NTMTransportMultiplier:	1.0
:	
===== CONFIGURE MHD ONSET =====	
Onset_NTM_time:	48
Onset_NTM_width:	0.004
m_NTM_poloidal_number:	3
n_NTM_toroidal_number:	2
NTM_phase:	0
NTM_frequency:	10.0

### 1.2.1.2.21 SOURCES AND IMPURITY

The settings for SOURCES AND IMPURITY can be done inside the CONVERGENCE LOOP composite actor. Therefore please do:

- right click on the box **CONVERGENCE LOOP**
- select *Open actor*
- right click on the box **SOURCES AND IMPURITY**
- select *Configure actor* to edit settings
- choose your settings

- **Commit**



### 1.2.1.2.22 Analytical & Impurity sources

There is a number of sources developed by IMP3 project, which are actors or internal routines of the transport solver. You can activate them by selecting **ON / OFF** in front of corresponding source:

- **Database Sources** **ON** - ETS will pick up the evolution of source profiles saved to your input shot/run; **OFF** - ignored
- **Ohmic Heating** **ON** - ETS will compute Ohmic heating internally; **OFF** - ignored
- **Gaussian Sources** **ON** - ETS will add sources from the Gaussian source actor (you can configure heat and particle deposition profiles by editing the code parameters of the actor); **OFF** - ignored
- **Neutral Sources** **ON** - Fluid neutrals will be solved according to the boundary conditions specified on Before\_time\_evolution composite actor interface; **OFF** - ignored
- **Switch\_IMPURITY** **ON** - Impurity density and radiative sources will be computed; **OFF** - ignored; **INTERPRETATIVE** profiles of impurity density will be read from input shot/run

```

=====ETS INTERNAL SOURCES=====:
DatabaseSources: OFF
OhmicHeating: ON
GaussianSources: ON
NeutralsSources: OFF
Switch_IMPURITY: OFF
  
```

### 1.2.1.2.23 HCD sources

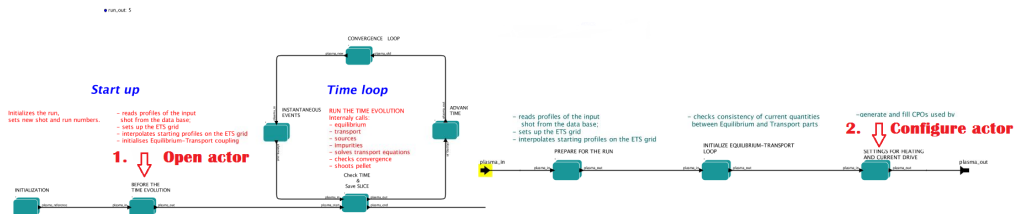
There is a number of sources developed by HCD project, that are incorporated by the ETS workflow. For the HCD sources please activate the type of heating source, by ticking the box in front of it, and select the code to simulate it.

```

===== IMP5HCD SUORCES =====:
for more info: 'www.efda-itm.eu/ITM/html/imp5hcd_init_param_input.html'
::
== SELECT HEATING SCHEMES ==:
Use_ECRH_in: 
Use_ICRH_in: 
Use_NBI_in: 
Use_nuclear_heating_in: 
== SELECT CODES ==:
EC_wave_code: gray
IC_wave_code: icdep
LH_wave_code: none
NBI_source_code: bbnbi
Nuclear_source_code: nuclearsim
Ion_FokkerPlanck_with_source_code: nbisim
Ion_FokkerPlanck_wave_heating_code: none
Ion_FokkerPlanck_wave_and_source_code: none
Electron_FokkerPlanck_code: none
  
```

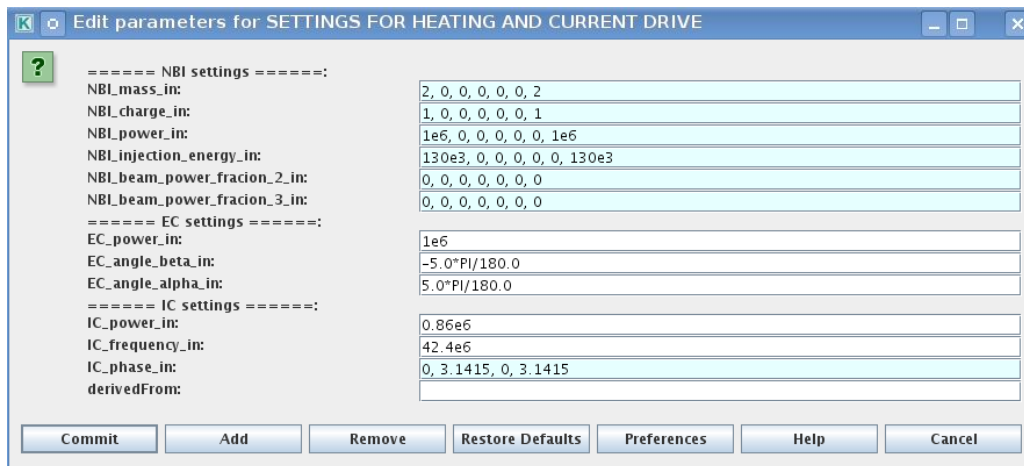
You also need to configure initial IMP5HCD settings. Therefore please:

- right click on the box **BEFORE THE TIME EVOLUTION**
- select *Open Actor*
- right click on the box **SETTINGS FOR HEATING AND CURRENT DRIVE**
- select *Configure actor*
- edit the settings
- *Commit*



The detailed information on initial IMP5HCD settings can be found [here](#)<sup>31</sup>.

Please note that settings for NBI are done independent for each PINI. Therefore, for NBI settings, please insert the values separated by commas. The number of the element in the array corresponds to the number of activated PINI. Maximum accepted number of PINIs = 16.



#### 1.2.1.2.24 Power control

You also can activate the power control for the IMP5HCD sources.

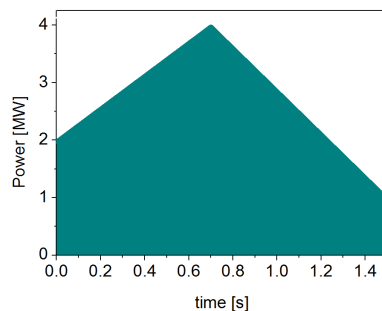
<sup>31</sup>[https://www.eufus.eu/documentation/ITM/html/imp5\\_imp5hcd.html](https://www.eufus.eu/documentation/ITM/html/imp5_imp5hcd.html)

" == POWER_CONTROL ==:	
::	
NBI_power_control:	specific
Times_NBI:	0, 100
Power_NBI_P1:	2E6, 2E6
Power_NBI_P2:	0
Power_NBI_P3:	0
Power_NBI_P4:	0
Power_NBI_P5:	0
Power_NBI_P6:	0
Power_NBI_P7:	2E6, 2E6
Power_NBI_P8:	0
Power_NBI_P9:	0
Power_NBI_P10:	0
Power_NBI_P11:	0
Power_NBI_P12:	0
Power_NBI_P13:	0
Power_NBI_P14:	0
Power_NBI_P15:	0
Power_NBI_P16:	0
tstart_NBI_control:	48
tend_NBI_control:	49
frequency_NBI_control:	100
:	
ECRH_power_control:	OFF
Times_ECRH:	48
Power_ECRH:	3e6, 0e6, 2e6
tstart_ECRH_control:	48
tend_ECRH_control:	49
frequency_ECRH_control:	100
:	
ICRH_power_control:	OFF
Times_ICRH:	0
Power_ICRH:	0
tstart_ICRH_control:	47
tend_ICRH_control:	55
frequency_ICRH_control:	100

If the **POWER\_CONTROL** is not **OFF**, there are two modes of operation: *specific* and *frequency*

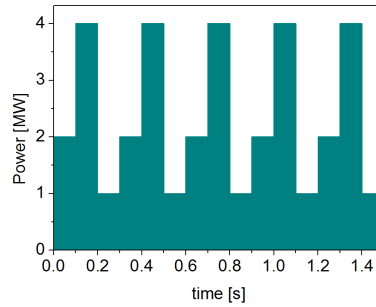
For *specific* you should specify the time sequence separated by commas and the corresponding power sequence (where first power level corresponds to the first time, second to second and etc.). Linear interpolation will be done between the sequence points.

For example: if you give the power *sequence* = 2e6,4e6,1e6 and *times* = 0.0, 0.7, 1.5 (s) the delivered power would be:



For *frequency* you should specify the power levels sequence separated by commas, start and end time of the power control and the frequency of switching between these levels.

For example: if you give the power *sequence* = 2e6,4e6,1e6 and *frequency* = 10 (Hz) *tstart* = 0.0 (s) *tend* = 1.5 (s) the delivered power would be:



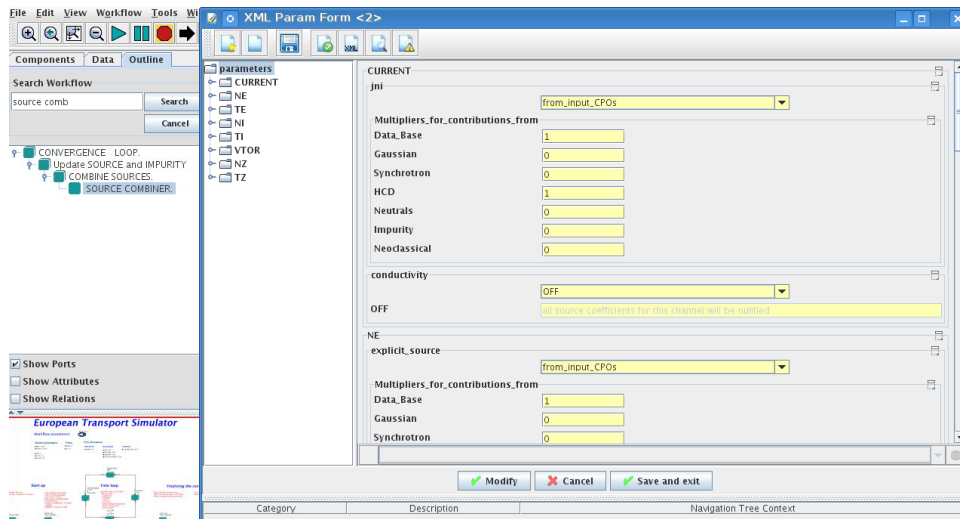
### 1.2.1.2.25 Total power

Profiles of the total source for each channel are obtained from the the individual contributions (Data Base, Gaussian, Neutrals, Impurity and HCD) as a summ of all activated sources multiplied with coefficients specified on the interface of the composite actor.

$$S_{tot} = S_{DS} * DSM + S_{GS} * GSM + S_{Neu} * NeuSM + S_{IMP} * IMPSM + S_{HCD} * HCDSM$$

The fine tuning of of sources can be done through editing the XML code parameters of the source combiner actor:

- In the *Outline* browse for **source combiner**
- select *Configure actor*
- click *Edit Code Parameters*
- If you like the sources to the particular equation being activated - select *from\_input\_CPOs* , and then, put the multipliers against each contribution; if you select *OFF* contributions from all sources to this channel will be nullified.
- save and exit
- *Commit*



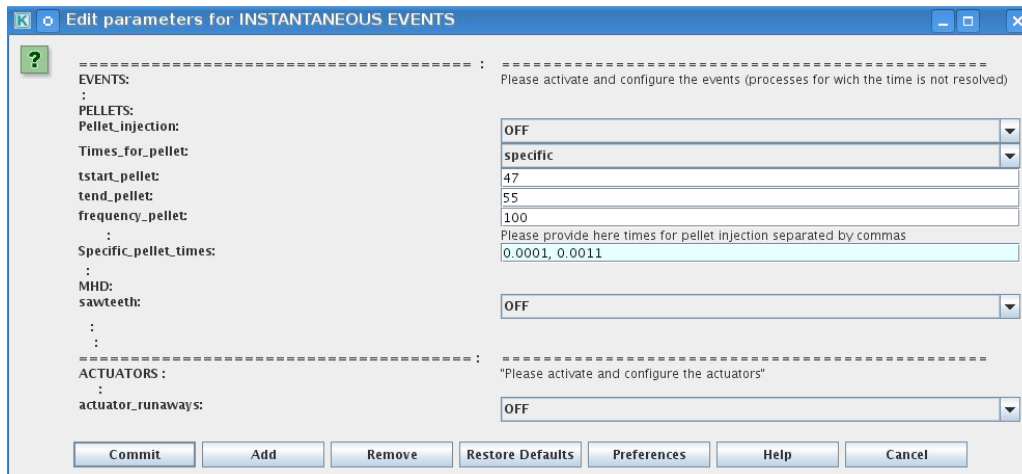
### 1.2.1.2.26 INSTANTANEOUS EVENTS & ACTUATORS

At the moment, user can swith *ON* and *OFF* two types of events: PELLET and SAWTOOTH

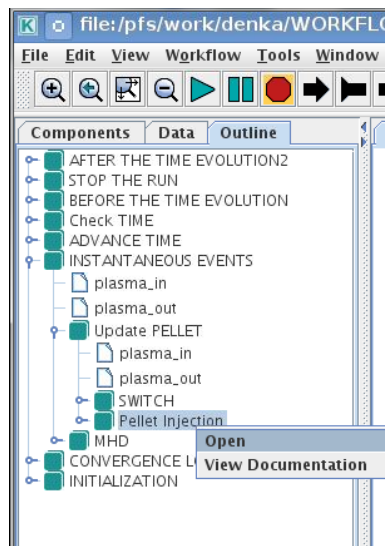
#### 1.2.1.2.27 Pellet

At the top level of the workflow you can configure times for pellet injection

- right click on the box **INSTANTANEOUS EVENTS & ACTUATORS**
- select *Configure actor* to edit settings
- Select **Pellet\_injection** equal **ON** if you like to use pellet in your simulation
- Select mode of operation:
  - **Times\_for\_pellets** equals *specific* - pellets will be shut at exact times specified in array **times\_pellet**
  - **Times\_for\_pellets** equals *frequency* pellets will be shut from **tstart\_pellet** until **tend\_pellet** with a **frequency\_pellet**
- **Commit**

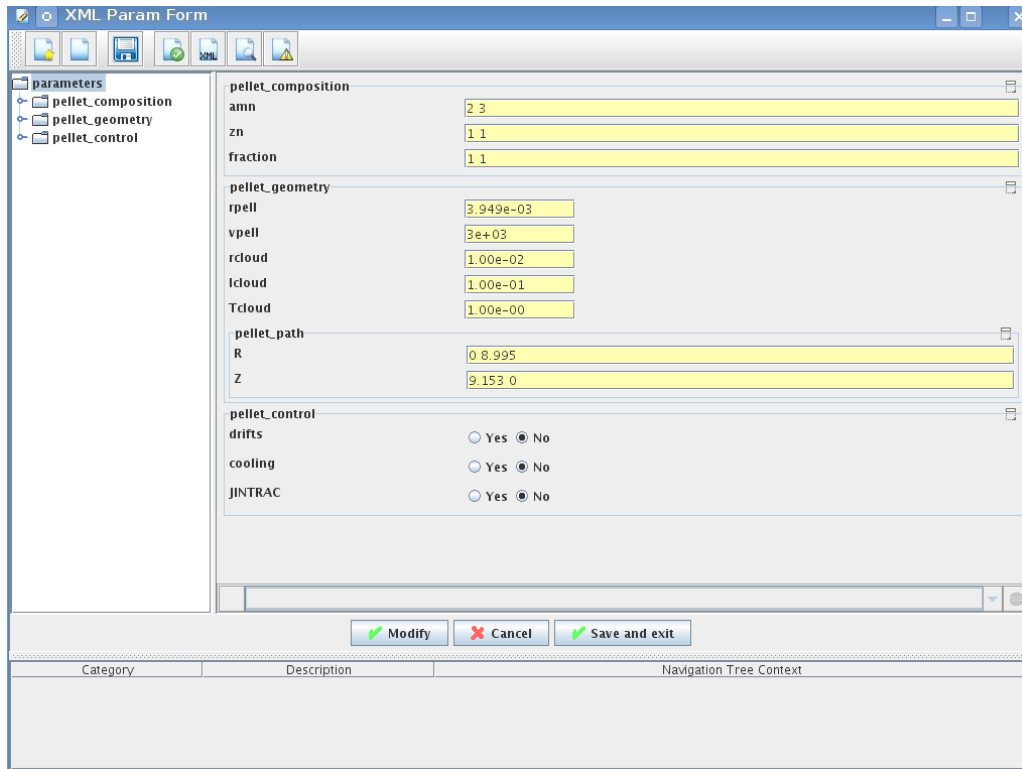


Parameters of individual pellet need to be configured through the code\_parameters of the PELLET actor. To access it go to **Outline** on the right upper corner and open the following:



- right click on the actor **PELLET**
- select *Configure actor*
- click *Edit Code Parameters*
- edit parameters and click *save and exit*
- **Commit**





**amn** atomic mass number: array of elements separated by space (1:nelements) [-]

**zn** nuclear charge: array of elements separated by space (1:nelements) [-]

**fraction** fraction of each element in the pellet, based on the number of atoms: array of elements separated by space (1:nelements) [-]

**rpell** radius of the pellet [m]

**vpell** velocity of the pellet [m/s]

**rcloud** radius of the pellet cloud [m], radial extension of the cloud =  $2*rp_0$

**lcloud** length of the pellet cloud along the field line [m]

**Tcloud** temperature of the pellet cloud [eV]

Pellet path is specified by two points, for which R and Z coordinates should be specified

**R** R coordinates of the pivot and second points of the pellet path, separated by space [m]

**Z** Z coordinates of the pivot and second points of the pellet path, separated by space [m]

Control switches allow to activate:

- **drifts** - YES - will activate radial displacement of deposition profile, same for all path points
- **cooling** - YES - will activate cooling of the other side of the plasma due to parallel heat transport (essential for large pellets, which might cross the same flux surface twice)
- **JINTRAC** - YES - will provide temperature reduction consistent with the model used in JETTO

#### 1.2.1.2.28 Sawtooth

At the top level of the workflow you can switch ON/OFF possible MHD events

- right click on the box **INSTANTANEOUS EVENTS & ACTUATORS**
- select *Configure actor* to edit settings
- Select **SAWTOOTH ON** if you like to use them in your simulation
- *Commit*

### 1.2.1.2.29 Actuators

At the top level of the workflow you can switch ON/OFF actuator for runaways

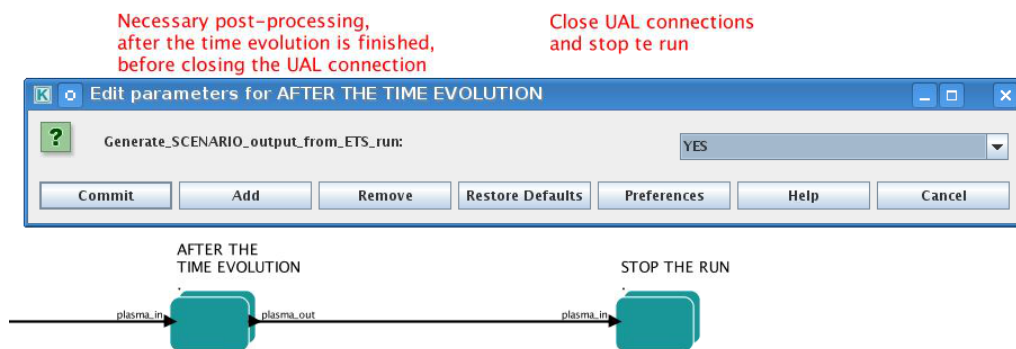
- right click on the box **INSTANTANEOUS EVENTS & ACTUATORS**
- select *Configure actor* to edit settings
- Select **actuator\_runaways ON** if you like to use them in your simulation
- *Commit*

### 1.2.1.2.30 SCENARIO OUTPUT

You can summarize the ETS run by activating the output to SCENARIO CPO (as post-processing of the run). To activate the SCENARIO output:

- right click on the box **AFTER THE TIME EVOLUTION**
- select *Configure actor*
- select **Generate\_SCENARIO\_output\_from\_ETS\_run** equal **YES**
- *Commit*

## Finalizing the run



### 1.2.1.2.31 VISUALIZATION

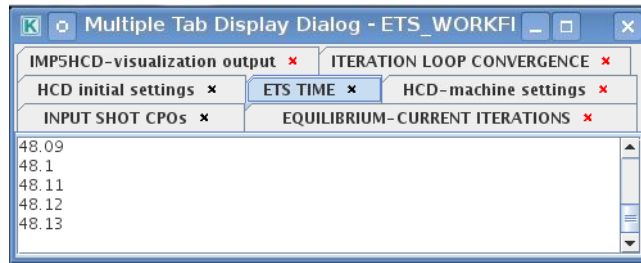
There is a number tools visualizing the ETS run.

### 1.2.1.2.32 Multiple Tab Display

The display appears automatically when the ETS workflow is launched. It displays diagnostic text messages from the workflow on following topics:

- Input data statement
- Iterations to check the initial convergence between EQUILIBRIUM and CURRENT
- Time evolution
- Convergence of iteratinos within the time step
- IMP5HCD settings
- Power used by IMP5HCD actors during the run

Also the error messages from execution of the workflow will be displayed here.



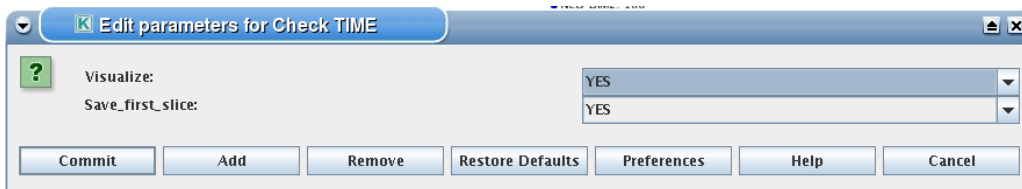
### 1.2.1.2.33 Python Visualization Display

Please note, if you plan to use python based vizualization *nomatlab* argument is essential by the opening of the workflow.

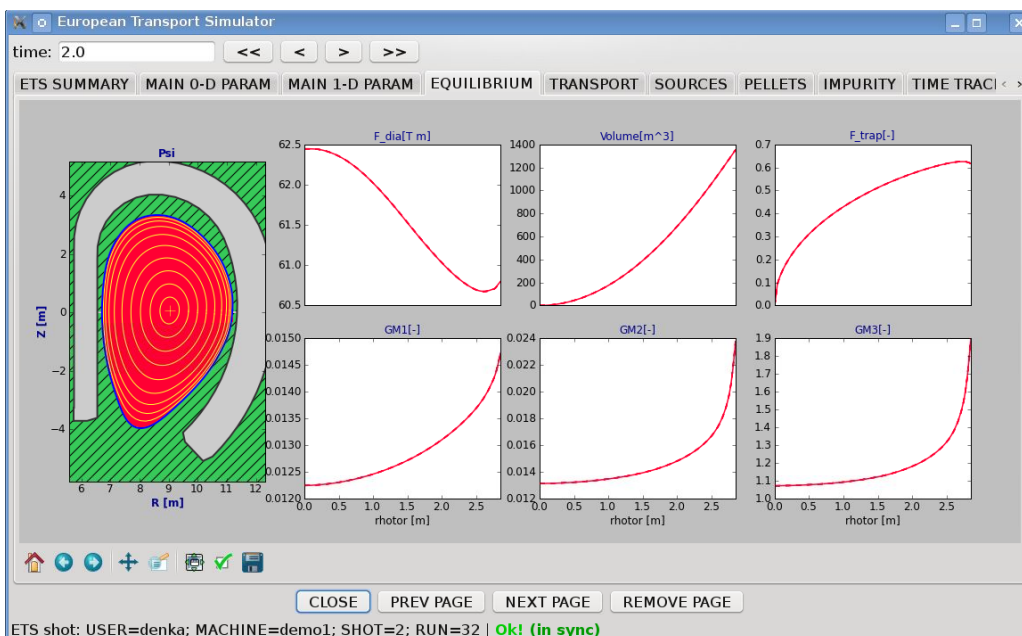
```
>kepler.sh nomatlab workflow_path/workflow_name.xml
```

You can activate the graphical visualization of your run evolution:

- right click on the box **Check Time & Save Slice**
- select *Configure actor*
- select visualisation **YES** or **NO**
- **Commit**



Then evolution of main discharge parameters will be shown in this window:



## 1.2.1.3 LIST OF ACTORS

UNDER DEVELOPMENT

### 1.2.1.3.1 Equilibrium actors

Code name	Code Category	Contact persons	Short description
chease	Grad-Shafranov solver	Olivier Sauter	Chease is a fixed boundary Grad-Shafranov solver based on cubic hermitian finite elements see [ H. L&#252;tjens, A. Bondeson, O. Sauter, Computer Physics Communications 97 (1996) 219-260 <sup>32</sup> ]
emeq	-	-	
spider	-	-	

### 1.2.1.3.2 Core transport actors

Code name	Code Category	Contact persons	Short description
ETS	Transport solver	Denis Kalupin	
BohmGB	Bohm/gyro-Bohm transport coefficients	-	
TCI/Weiland	Transport coefficient from drift wave turbulence	P&#228;r Strand	
TCI/GLF23	Transport coefficient from drift wave turbulence	-	
TCI/RITM	Transport coefficient from drift wave turbulence	-	
TCI/MMM (not yet in ETS)	Transport coefficient from drift wave turbulence	-	
TCI/EDWM (not yet in ETS)	Transport coefficient from drift wave turbulence	-	
nclass (not yet in ETS)	Neoclassical transport coefficients	P&#228;r Strand	
neos (not yet in ETS)	Neoclassical transport coefficients	Olivier Sauter	
neowesz	Neoclassical transport coefficients	Bruce Scott	Neoclassical transport coefficients based on the expression in John Wesson's book Tokamaks.
neoartz	Neoclassical transport coefficients	Bruce Scott	
spitzer			
ETBtransport			
coronal			
synchrotronsources			

### 1.2.1.3.3 Edge transport actors

### 1.2.1.3.4 Heating and current drive actors

Code name	Code Category	Contact persons	Short description
<a href="#">gray</a> <sup>33</sup>	EC/waves	Lorenzo Figini	GRAY is a quasi-optical ray-tracing code for electron cyclotron heating & current drive calculations in tokamaks. Code-parameter documentation can be found <a href="#">here</a> <sup>34</sup> .
<a href="#">travis</a> <sup>35</sup>	EC/waves	Nikolai Marushchenko and Lorenzo Figini	Travis is a ray-tracing code for electron cyclotron heating & current drive calculations in tokamaks.

<sup>32</sup>[https://crppwww.epfl.ch/~sauter/chease/Lutjens\\_CHEASE\\_CPC96.pdf](https://crppwww.epfl.ch/~sauter/chease/Lutjens_CHEASE_CPC96.pdf)

<sup>33</sup>[https://www.efda-itm.eu/ITM/html/imp5\\_listcodes.html#imp5\\_listcodes\\_gray](https://www.efda-itm.eu/ITM/html/imp5_listcodes.html#imp5_listcodes_gray)

<sup>34</sup>[https://www.efda-itm.eu/ITM/html/imp5\\_code\\_parameter\\_documentation\\_lion.html](https://www.efda-itm.eu/ITM/html/imp5_code_parameter_documentation_lion.html)

<sup>35</sup>[https://www.efda-itm.eu/ITM/html/imp5\\_listcodes.html#imp5\\_listcodes\\_travis](https://www.efda-itm.eu/ITM/html/imp5_listcodes.html#imp5_listcodes_travis)

Code name	Code Category	Contact persons	Short description
<a href="#">Torrax-FOM</a> <sup>36</sup>	EC/waves	Egbert Westerhof	Torrax-FOM is a ray-tracing code for electron cyclotron heating & current drive calculations in tokamaks.
<a href="#">bbnbi</a> <sup>37</sup>	NBI/source	Otto Asunta	Calculate the deposition rates of neutrals beam particles, i.e. the input source for Fokker-Planck solvers (not the heating and current drive). Note that the number of markers generated by BBNBI is described by the kepler variable <code>number.nbi.markers.in</code> .
<a href="#">nemo</a> <sup>38</sup>	NBI/source	Mireille Schneider	Calculate the deposition rates of neutrals beam particles, i.e. the input source for Fokker-Planck solvers (not the heating and current drive). Code-parameter documentation can be found <a href="#">here</a> <sup>39</sup> .
<a href="#">nuclearsim</a> <sup>40</sup>	nuclear/source	Thomas Johnson	Simple code for nuclear sources from thermal/thermal reactions. Code-parameter documentation can be found <a href="#">here</a> <sup>41</sup> .
<a href="#">nbisim</a> <sup>42</sup>	NBI, alphas / Fokker-Planck	Thomas Johnson	Simple Fokker-Planck code calculating the collisional ion and electron heating from a particle source, either NBI or nuclear. Code-parameter documentation can be found <a href="#">here</a> <sup>43</sup> .
<a href="#">risk</a> <sup>44</sup>	NBI Fokker-Planck	Mireille Schneider	Bounce averaged steady-state Fokker-Planck solver calculating the collisional ion and electron heating from a particle source and the NBI current drive. Code-parameter documentation can be found <a href="#">here</a> <sup>45</sup> .
<a href="#">spot</a> <sup>46</sup>	NBI, alphas and ICRF Fokker-Planck	Mireille Schneider	Monte Carlo solver for the Fokker-Planck equation. Traces guiding centre orbits in a steady state magnetic equilibrium under the influence of Coulomb collisions and interactions with ICRF waves (through the RFOF library). The code can also be used for NBI and alpha particle modelling as it can handle source terms from the <code>distsource</code> CPO.
<a href="#">ascot4serial</a> <sup>47</sup>	NBI, alphas, ICRF / Fokker-Planck	Otto Asunta/Seppo Sipila	Monte Carlo Fokker-Planck solver calculating the collisional ion and electron heating from a particle source and the NBI current drive.
<a href="#">ascot4parallel</a> <sup>48</sup>	NBI, alphas, ICRF / Fokker-Planck	Otto Asunta/Seppo Sipila	Monte Carlo Fokker-Planck solver calculating the collisional ion and electron heating from a particle source and the NBI current drive.
Lion	IC / waves	Olivier Sauter and Laurent Villard	Global ICRF wave solver. Code-parameter documentation can be found <a href="#">here</a> <sup>49</sup> .
Cyrano	IC / waves	Ernesto Lerche and Dirk Van Eester	Global ICRF wave solver. Code-parameter documentation can be found <a href="#">here</a> <sup>50</sup> .
Eve (not yet in ETS)	IC / waves	Remi Dumont	Global ICRF wave solver
StixReDist	IC / waves	Dirk Van Eester and Ernesto Lerche	1d Fokker-Planck solver for ICRF heating.
ICdep	IC / waves	Thomas Johnson	Generates Waves-cpo with an IC wave field with Gaussian deposition profiles described by a combination of antenna-cpo input and through code parameters input. Code-parameter documentation can be found <a href="#">here</a> <sup>51</sup> .
<a href="#">ICcoup</a> <sup>52</sup>	IC / coupling	Thomas Johnson	Simple model for the coupling waves from ion cyclotron antennas to the plasma. Code-parameter documentation can be found <a href="#">here</a> <sup>53</sup> .

### 1.2.1.3.5 Events actors

Code name	Code Category	Contact persons	Short description
pelletactor	pellet	Denis Kalupin	
pellettrigger	pellet	Denis Kalupin	
sawcrash_slice	sawteeth	Olivier Sauter	
sawcrit	sawteeth	Olivier Sauter	

<sup>36</sup>[https://www.efda-itm.eu/ITM/html/imp5\\_listcodes.html#imp5\\_listcodes\\_travis](https://www.efda-itm.eu/ITM/html/imp5_listcodes.html#imp5_listcodes_travis)

<sup>37</sup>[https://www.efda-itm.eu/ITM/html/imp5\\_listcodes.html#imp5\\_listcodes\\_bbnbi](https://www.efda-itm.eu/ITM/html/imp5_listcodes.html#imp5_listcodes_bbnbi)

<sup>38</sup>[https://www.efda-itm.eu/ITM/html/imp5\\_listcodes.html#imp5\\_listcodes\\_bbnbi](https://www.efda-itm.eu/ITM/html/imp5_listcodes.html#imp5_listcodes_bbnbi)

<sup>39</sup>[https://www.efda-itm.eu/ITM/html/imp5\\_code\\_parameter\\_documentation\\_nemo.html](https://www.efda-itm.eu/ITM/html/imp5_code_parameter_documentation_nemo.html)

<sup>40</sup>[https://www.efda-itm.eu/ITM/html/imp5\\_listcodes.html#imp5\\_listcodes\\_nuclearsim](https://www.efda-itm.eu/ITM/html/imp5_listcodes.html#imp5_listcodes_nuclearsim)

<sup>41</sup>[https://www.efda-itm.eu/ITM/html/imp5\\_code\\_parameter\\_documentation\\_nuclearsim.html](https://www.efda-itm.eu/ITM/html/imp5_code_parameter_documentation_nuclearsim.html)

<sup>42</sup>[https://www.efda-itm.eu/ITM/html/imp5\\_listcodes.html#imp5\\_listcodes\\_nbisim](https://www.efda-itm.eu/ITM/html/imp5_listcodes.html#imp5_listcodes_nbisim)

<sup>43</sup>[https://www.efda-itm.eu/ITM/html/imp5\\_code\\_parameter\\_documentation\\_nbisim.html](https://www.efda-itm.eu/ITM/html/imp5_code_parameter_documentation_nbisim.html)

<sup>44</sup>[https://www.efda-itm.eu/ITM/html/imp5\\_listcodes.html#imp5\\_listcodes\\_risk](https://www.efda-itm.eu/ITM/html/imp5_listcodes.html#imp5_listcodes_risk)

<sup>45</sup>[https://www.efda-itm.eu/ITM/html/imp5\\_code\\_parameter\\_documentation\\_risk.html](https://www.efda-itm.eu/ITM/html/imp5_code_parameter_documentation_risk.html)

<sup>46</sup>[https://www.efda-itm.eu/ITM/html/imp5\\_listcodes.html#imp5\\_listcodes\\_spot](https://www.efda-itm.eu/ITM/html/imp5_listcodes.html#imp5_listcodes_spot)

<sup>47</sup>[https://www.efda-itm.eu/ITM/html/imp5\\_listcodes.html#imp5\\_listcodes\\_ascot](https://www.efda-itm.eu/ITM/html/imp5_listcodes.html#imp5_listcodes_ascot)

<sup>48</sup>[https://www.efda-itm.eu/ITM/html/imp5\\_listcodes.html#imp5\\_listcodes\\_ascot](https://www.efda-itm.eu/ITM/html/imp5_listcodes.html#imp5_listcodes_ascot)

<sup>49</sup>[https://www.efda-itm.eu/ITM/html/imp5\\_code\\_parameter\\_documentation\\_lion.html](https://www.efda-itm.eu/ITM/html/imp5_code_parameter_documentation_lion.html)

<sup>50</sup>[https://www.efda-itm.eu/ITM/html/imp5\\_code\\_parameter\\_documentation\\_cyrano.html](https://www.efda-itm.eu/ITM/html/imp5_code_parameter_documentation_cyrano.html)

<sup>51</sup>[https://www.efda-itm.eu/ITM/html/imp5\\_code\\_parameter\\_documentation\\_icdep.html](https://www.efda-itm.eu/ITM/html/imp5_code_parameter_documentation_icdep.html)

<sup>52</sup>[https://www.efda-itm.eu/ITM/html/imp5\\_listcodes.html#imp5\\_listcodes\\_iccoup](https://www.efda-itm.eu/ITM/html/imp5_listcodes.html#imp5_listcodes_iccoup)

<sup>53</sup>[https://www.efda-itm.eu/ITM/html/imp5\\_code\\_parameter\\_documentation\\_iccoup.html](https://www.efda-itm.eu/ITM/html/imp5_code_parameter_documentation_iccoup.html)

Code name	Code Category	Contact persons	Short description
runaway_indicator <sup>54</sup>	runaway	Roland Lohner och Gergo Pokol	<p>Indicating the presence of runaway electrons:</p> <p>1) Indicate, whether electric field is below the critical level, thus runaway generation is impossible.</p> <p>2) Indicate, whether runaway electron growth rate exceeds a preset limit. This calculation takes only the Dreicer runaway generation method in account and assumes a velocity distribution close to Maxwellian, therefore this result should be considered with caution. The growth rate limit can be set via an input of the actor. Limit value is set to</p> <p style="text-align: center;"><math>10^{12}</math></p> <p>particle per second by default. (This growth rate generates a runaway current of approximately 1 kA considering a 10 seconds long discharge.)</p>

### 1.2.1.3.6 Non-physics actors

The ETS uses the following list of non-physics actors:

addECant, addICant, backgroundtransport, calculateRH0, changeocc, changepsi, changeradii, checkconvergence, controlAMIX, coredelta2coreprof, correctcurrent, deltacombiner, emptydistribution, emptydistsource, emptywaves, eqinput, etsstart, fillcoreimpur, fillcoreneutrals, fillcoreprof, fillcoresource, fillcoretrasp, fillequilibrium, fillneoclassic, filltoroidfield, gausiansources, geomfromcpo, hcd2coresource, ignoredelta, ignoreimpurity, ignoreneoclassic, ignoreneutrals, ignorepellet, ignoresour, ignoretransport, IMP4dv, IMP4imp, importimptransport, itmimpurity, itmneutrals, merger4distribution, merger4distsource, merger4waves, nbifiller, neoclassic2coresource, neoclassic2coretrasp, parabolicprof, plasmacomposition, PowerFromArray, PowerModulation, profilesdatabase, readjustprof, sawupdate\_slice, scaleprof, sourcecombiner, sourcedatabase, transportcombiner, transportdatabase, wallFiller and waves2sources.

### 1.2.2 ETS\_A 4.10a

The development on this version of the workflow discontinues. You can use it for production runs using 4.10a data structure and UAL. New functionalities shall be requested to 4.10b version!

*ETS\_A workflow in KEPLER :*

- uses as actors and composite actors from other IMPs, thus for the most recent versions of them please check with relevant project
- complex, but clearly structured workflow, which offers user friendly interface for configuring the simulation
- allows for easy modifications ( *connecting new modules, or reconnecting the parts of the workflow* ) through the easy graphical interface
- provides users with all updates through the version control system
- still actively developing tool

The list and status of available physics models for the ETS\_A can be found [here](#)<sup>55</sup>.

**Contact person:** [denis.kalupin@euro-fusion.org?subject=ETS%20in%20KEPLER](mailto:denis.kalupin@euro-fusion.org?subject=ETS%20in%20KEPLER) (Skype: dkalupin)

<sup>54</sup><http://portal.efda-itm.eu/twiki/bin/view/Main/HCD-codes-runin-usermanual>

<sup>55</sup>[https://www.eufus.eu/documentation/ITM/html/ets\\_status.html](https://www.eufus.eu/documentation/ITM/html/ets_status.html)

# European Transport Simulator

## Workflow parameters



### General parameters:

- USER: kalupin
- machine: test
- shot\_in: 77922
- run\_in: 2
- shot\_out: 77922
- run\_out: 4

### Times:

- tbegin: 47.7
- tend: 48

### ETS dimensions:

#### TRANSPORT:

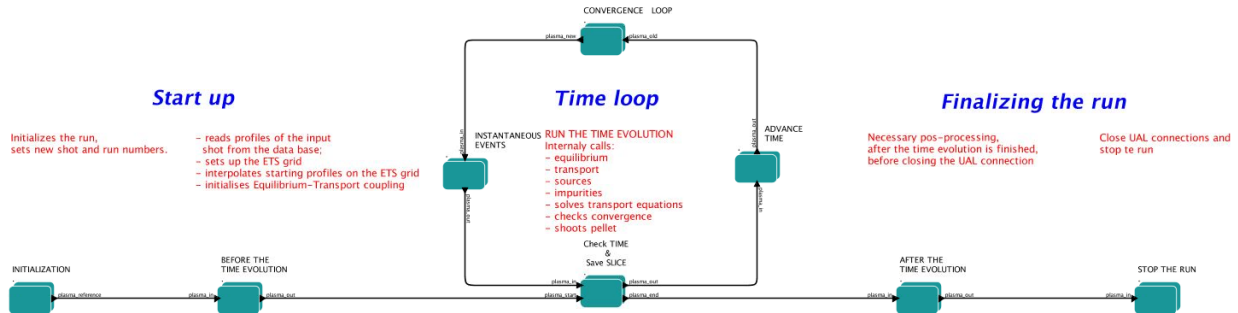
- NRHO: 100

#### EQUILIBRIUM:

- NPSI: 100
- NEQ\_DIM1: 100
- NEQ\_DIM2: 100
- NEQ\_MAX\_NPOINTS: 150

#### NUMERICS:

- NUMERICAL\_SOLVER: 4



### 1.2.2.1 Obtaining the ETS

Copy the ETS workflow to your space:

```
>svn co https://gforge6.eufus.eu/svn/keplerworkflows/trunk/4.10a/imp3/ets $ITMSCRATCH/ETS_WORKFLOWS
```

Compile ETS actors:

```
>cd $ITMSCRATCH/ETS_WORKFLOWS
>make import_ets
```

### 1.2.2.2 Updating the ETS

If you have already a copy of the ETS you do not need to check it out again!!!

If you like to update everything (WORKFLOW + ACTORS + VISUALIZATION + INPUT DATA)

```
>cd $ITMSCRATCH/ETS_WORKFLOWS
>svn update
>make import_ets
```

To update ETS actors go inside your ETS\_ACTORS:

```
>cd $ITMSCRATCH/ETS_WORKFLOWS
>svn update
>make import_actors
```

To update the workflow go inside your ETS.WORKFLOWS:

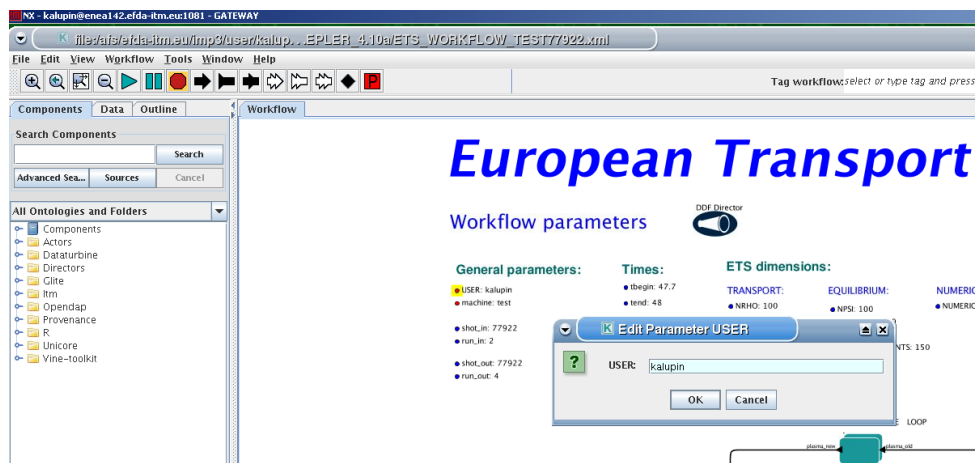
```
>cd $ITMSCRATCH/ETS_WORKFLOWS
>svn update
```

To update visualization scripts go inside your \$KEPLER/kplots:

```
>svn update
```

This is ALL you need to do for updates!

### 1.2.2.3 Executing the ETS



Open ETS workflow in Kepler:

```
>kepler.sh $ITMSCRATCH/ETS_WORKFLOWS/ETS_WORKFLOW.xml
```

- on the top of the workflow, change the parameter "user" to your user.ID.  
You can run the workflow!!!

### 1.2.2.4 Configuring the ETS run

#### 1.2.2.4.1 WORKFLOW PARAMETERS

##### 1.2.2.4.2 General Parameters

- USER - your userid
- MACHINE - machine name (database name) for which computations are done
- SHOT\_IN - input shot number
- RUN\_IN - input run number
- SHOT\_OUT - output shot number
- RUN\_OUT - output run number
- NUMERICAL\_SOLVER - choice of the numerics solving transport equations (RECOMENDED SELECTION: 3 or 4)



### 1.2.2.4.3 Space resolution


- NRHO - number of radial points for transport equations
- NPSI - number of points for equilibrium 1-D arrays
- NEQ\_DIM1 - number of points for equilibrium 2-D arrays, first index
- NEQ\_DIM2 - number of points for equilibrium 2-D arrays, second index
- NEQ\_MAX\_NPOINTS - maximum number of points for equilibrium boundary

### 1.2.2.4.4 Time resolution

Start and End time

- TBEGIN - Computations start time
- TEND - Computations end time

## European Transport Simulator

Workflow parameters 

**General parameters:**

- USER: denka
- machine: test
- shot\_in: 77922
- run\_in: 2
- shot\_out: 77922
- run\_out: 8

**Times:**

- tbegin: 48
- tend: 48.2

**ETS dimensions:**

**TRANSPORT:**

- NRHO: 100

**EQUILIBRIUM:**

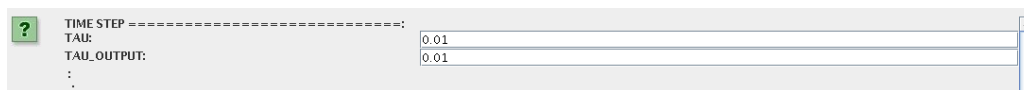
- NPSI: 100
- NEQ\_DIM1: 100
- NEQ\_DIM2: 100
- NEQ\_MAX\_NPOINTS: 100

**NUMERICS:**

- NUMERICAL\_SOLVER: 4

Time step

- right click on the box BEFORE THE TIME EVOLUTION
- select Configure actor
- TAU: specify value of the time step in [s]
- TAU\_OUT: specify value of the output time interval in [s]
- Commit



### 1.2.2.4.5 PLASMA, IMPURITY and NEUTRALS COMPOSITION

Before starting the run you need to define types of main and impurity ions and types of neutrals to be included in simulations.

To set up the composition:

- right click on the box BEFORE THE TIME EVOLUTION
- select Configure actor
- choose one of modes for setting "Run\_compositions"
  - "from\_input.CPO" - will pick up the COMPOSITIONS structure of the COREPROF CPO from the input shot;
  - "configure\_manually" - will force the composition from the values specified below

- specify values of AMN\_ion, ZN\_ion and Z\_ion for ions, from the first ion to the last [1:NION], separated by commas
- specify values of AMN\_imp, ZN\_imp and max\_Z\_imp for impurity ions, from the first to the last [1:NIMP], separated by commas
- choose the neutrals types, which should be switched "ON"
- Commit

COMPOSITIONS =====:	Please set up composition for Ion, Impurity and Neutral species, or load them from input COMPOSITIONS CPO
Run_compositions:	<input type="text" value="configure_manually"/>
PLASMA COMPOSITION (1:NION):	Parameters for manual specification:
AMN_ion:	"Please specify atomic mass number and charge for main ion components (1:NION)"
ZN_ion:	<input type="text" value="2"/>
Z_ion:	<input type="text" value="1"/>
IMPURITY COMPOSITION (1:NIMP):	"Please specify atomic mass number and charge for all impurity components (1:NIMP)"
AMN_imp:	<input type="text" value="12"/>
ZN_imp:	<input type="text" value="6"/>
max_Z_imp:	<input type="text" value="6"/>
TYPES OF NEUTRALS TO BE TREATED:	Please indicate types of neutrals which should be included
cold_neutrals:	<input type="text" value="OFF"/>
thermal_neutrals:	<input type="text" value="OFF"/>
fast_neutrals:	<input type="text" value="OFF"/>
NBI_neutrals:	<input type="text" value="OFF"/>

#### 1.2.2.4.6 EQUATIONS TO BE SOLVED AND BOUNDARY CONDITIONS

##### 1.2.2.4.7 MAIN PLASMA

Before starting the run you need to select the type and value of the boundary conditions for all equations. Please note that the value should correspond to the type. All equations allow for following types of boundary conditions:

- *OFF* - equation is not solved, initial profiles will be kept for whole run
- *value* - edge value should be specified
- *gradient* - edge gradient should be specified
- *scale\_length* - edge scale length should be specified
- *generic* - 3 coefficients (a1,a2,a3) should be provided:  $a1*y + a2*y = a3$
- *value\_from\_input\_CPO* - equation is solved, edge value evolution will be read from input shot
- *profile\_from\_input\_CPO* - equation is not solved, profile evolution will be read from input shot

The particular equation will be activated if the boundary condition type for it is other than *OFF* !

BOUNDARY CONDITIONS=====:

BOUNDARY CONDITIONS FOR MAIN PLASMA:  
===== Current Equation =====  
psi\_bnd\_type: total\_current  
psi\_bnd\_value: 1.7e6

===== Te Equation =====  
te\_bnd\_type: OFF  
te\_bnd\_value: 150

===== Ti Equations =====  
ti\_bnd\_type\_ION1: OFF  
ti\_bnd\_value\_ION1: 150  
ti\_bnd\_type\_ION2: OFF  
ti\_bnd\_value\_ION2: 150  
ti\_bnd\_type\_ION3: OFF  
ti\_bnd\_value\_ION3: 0

===== Ne Equation =====  
ne\_bnd\_type: value  
ne\_bnd\_value: 5e18

===== Ni Equations =====  
ni\_bnd\_type\_ION1: value  
ni\_bnd\_value\_ION1: 2.5e18  
ni\_bnd\_type\_ION2: OFF  
ni\_bnd\_value\_ION2: 2  
ni\_bnd\_type\_ION3: OFF  
ni\_bnd\_value\_ION3: 3

ni\_from\_quasineutrality: charge\_proportional

===== Vtor Equations =====  
vtor\_bnd\_type\_ION1: OFF  
vtor\_bnd\_value\_ION1: 0.0  
vtor\_bnd\_type\_ION2: OFF  
vtor\_bnd\_value\_ION2: 0.0  
vtor\_bnd\_type\_ION3: OFF  
vtor\_bnd\_value\_ION3: 0.0

To set up boundary conditions:

- right click on the box BEFORE THE TIME EVOLUTION
- select Configure actor
- select appropriate boundary condition for each equation
- specify values for boundary conditions corresponding to the type and to the ion component
- Commit

!!! If electron density is solved, all ions with  $ni\_bnd\_type=OFF$  will be computed from the quasineutrality condition and scaled proportional to specified  $ni\_bnd\_value$  or inversely proportional to their charge ( $charge\_proportional$ ). This is defined by option:  $ni\_from\_quasineutrality$ .

#### 1.2.2.4.8 IMPURITY

You can set up the boundary conditions for impurity ions in a similar way as for main ions.

!!! Note, that at the moment only types:  $OFF$ ;  $value$  and  $value\_from\_input\_CPO$  are accepted by impurity solver.

To set up boundary conditions:

- right click on the box BEFORE THE TIME EVOLUTION
- select Configure actor
- select appropriate boundary condition for each impurity species (OFF-equation is not solved)
- specify values for boundary density of each impurity component [1:MAX\_Z\_IMP], separated by commas
- Commit

BOUNDARY CONDITIONS FOR IMPURITIES:  
===== Nz Equations =====  
imp\_bnd\_type: OFF  
imp\_bnd\_value\_IMP1: 1e17  
imp\_bnd\_value\_IMP2: 0.0  
imp\_bnd\_value\_IMP3: 0.0  
imp\_bnd\_value\_IMP4: 0.0  
imp\_bnd\_value\_IMP5: 0.0  
coronal\_distribution: OFF

Interface for impurity boundary condition has additional option , *coronal\_distribution* , that allow to preset the edge values or entire profiles of individual ionization states from coronal distribution. In tis case only single value is required to be specified for each impurity boundary value.

The options are:

- *OFF* - the boundary values for impurity densities will be as they are specified above;
- *boundary\_conditions* - the boundary densities will be renormalized with corona, using the first element from above as a total density
- *boundary\_conditions\_and\_profiles* - the boundary densities and starting profiles will be renormalized with corona, using the first element from above as a total density

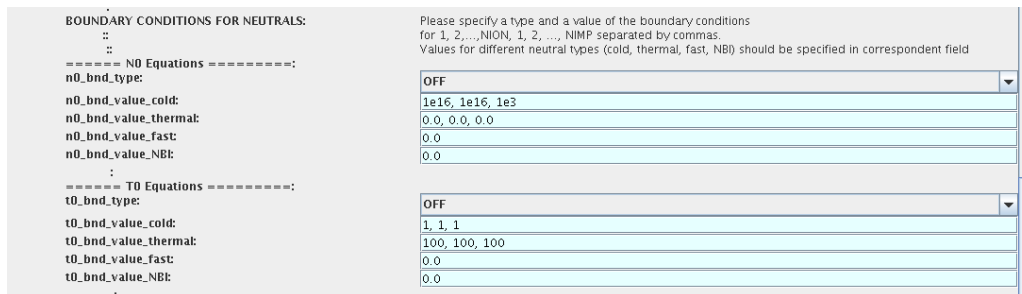
#### 1.2.2.4.9 NEUTRALS

!!! AT THE MOMENT BOUNDARY CONDITIONS FOR NEUTRAL VELOCITIES ARE DISABLED, MIGHT BE ADDED ON REQUEST

Note, that ALL values should be specified in the order: {1, 2, 3 ...NION, 1, 2, 3, ...NIMP}

To set up boundary conditions:

- right click on the box BEFORE THE TIME EVOLUTION
- select Configure actor
- select appropriate boundary condition for each neutral species (OFF-equation is not solved)
- specify values for boundary density and temperature of each neutral component [1, 2, 3 ...NION, 1, 2, 3, ...NIMP], separated by commas
- Commit

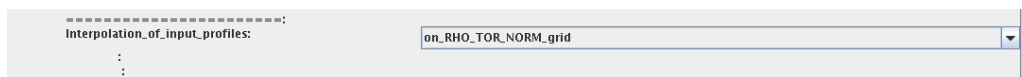


#### 1.2.2.4.10 INPUT PROFILES INTERPOLATION

You are going to start the ETS run from some input shot, which might contain some conflicting rho grids. Thus there is a choice for the user to decide on the grid on which the starting profiles should be load by the workflow, *Interpolation\_of\_input\_profiles* .

To define the interpolation grid select:

- *on\_RHO\_TOR\_grid* - interpolate input profiles based on the grid specyified in [m];
- *on\_RHO\_TOR\_NORM\_grid* - interpolate input profiles based on normalised rho grid [0:1]



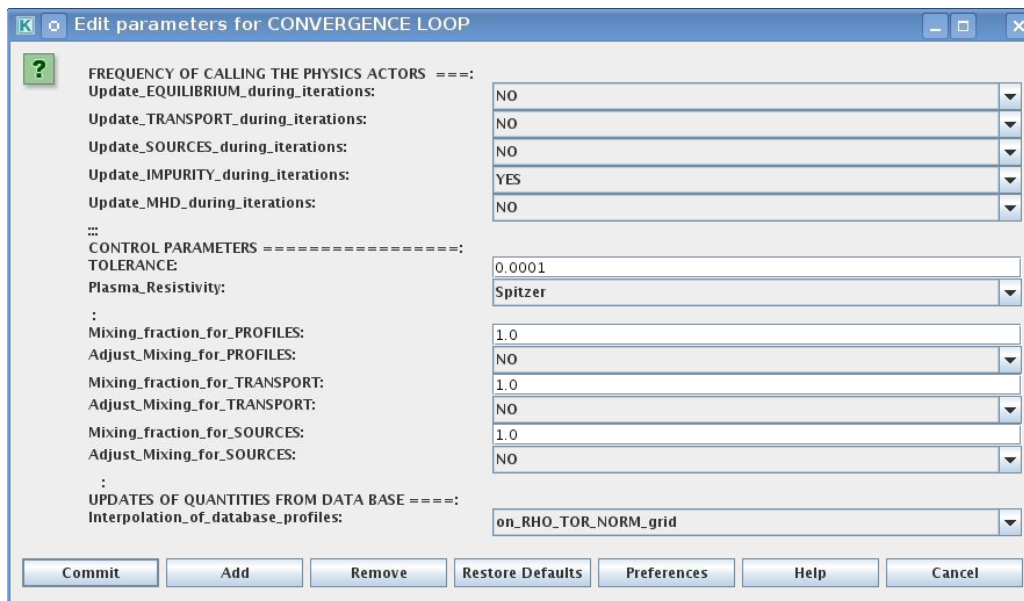
### 1.2.2.4.11 CONVERGENCE LOOP

ETS updates input from different physics actors in a sequence, which is finished by solving the transport equations. There are possible none-linear couplings between different parts of the system. These nonlinearities are trited by the ETS using iterations.

The decision to step in time is made by the ETS based on the criteria that the maximum relative deviation of main plasma profiles is lower than some predefined tolerance.

There is a number of settings and sitches in the ETS that are used by the iterative scheme. To edit them do:

- right click on the box CONVERGENCE LOOP
- select Configure actor to edit settings
- choose your settings
- Commit



Switches in the field *FREQUENCY OF CALLING THE PHYSICS ACTORS* define how many times the the actors of a certain cathegory (equilibrium, transport, etc.) should be called in a single time step.

By selecting *YES* all actors of this cathegory will be called every iteration

By selecting *NO* all actors of this cathegory will be called only ones in a time step

Switches and parameters in the field *CONTROL PARAMETERS* define how iterations are done

- *Tolerance* - defines the maximum relative error of profiles change compared to previous iteration. If it is achieved the time stepping is done.

For highly none-linear case the required precision can be achieved faster by the iterative scheme if only fraction of the new solution is mixed to the previous state.

The following scheme is adopted by the ets to reduce none-linearities in profiles, transport coefficients and sources:

$$Y = (A_{mix} * Y+) + ((1-A_{mix})*Y-)$$

where  $A_{mix}$  is the mixing fraction

You can activate the mixing of profiles, transport coefficient and sources by selecting the corresponding *Mixing fraction....* to be between [0:1]

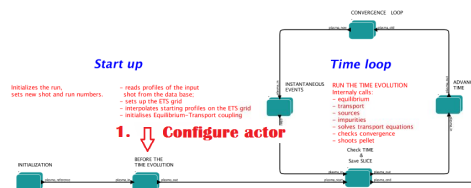
You also can activate the authomatic ajustment of this fraction by selecting: *Ajust\_Mixing\_for....* to *YES*

### 1.2.2.4.12 EQUILIBRIUM

#### 1.2.2.4.13 Starting Settings

Before starting the run you need to set up your initial equilibrium. There are several options to do it: if your input shot contains the consistent equilibrium with all necessary parameters - you can start immediately from it; if your input shot contains the equilibrium but it is not consistent or some parameters are missing you can check it automatically; if your input equilibrium is corrupt or not present - you can define the starting equilibrium by tree moment description. To select your starting equilibrium please do:

- right click on the box BEFORE THE TIME EVOLUTION
- select Configure actor to edit settings
- Select your settings or specify values
- Commit



#### SETTINGS:

- *Equilibrium\_configuration* - select *configure\_manually* if you like to specify configuration below; select *from\_input\_CPO* if all quantities should be picked up from the input CPO
- *Major\_Radius\_of\_geom\_axis\_RGEO* - radius of the geometrical centre of the vessel [m]
- *Altitude\_of\_geom\_axis\_ZGEO* - altitude of the geometrical centre of the vessel [m]
- *Major\_Radius\_of\_LCMS\_centre\_R0* - radius of the plasma centre [m]
- *Altitude\_of\_LCMS\_centre\_Z0* - altitude of the plasma centre [m]
- *Magn\_field\_on\_LCMS\_centre\_B0* - vacume magnetic field at R0 [T]
- *Total\_plasma\_current\_IP* - plasma current within the LCMS [A]
- *Minor\_radius* - minor radius of the LCMS [m]
- *Elongation* - elongation of the LCMS [-]
- *Triangularity\_upper* - upper triangularity of the LCMS [-]
- *Triangularity\_lower* - lower triangularity of the LCMS [-]
- *Equilibrium code* - select one of available equilibrium solvers to check the consistency between starting equilibrium and current profile; use *INTERPRETATIVE* if you trust your input data (in this case the check will be ignored).

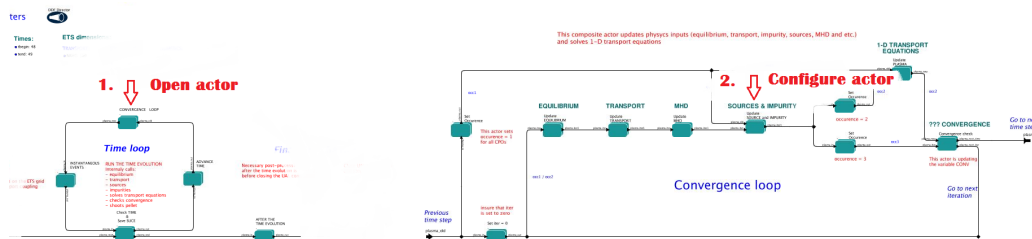
STARTING EQUILIBRIUM=====:	
Equilibrium_configuration:	configure_manually
:	Parameters for manual configuration.
Major_Radius_of_geom_axis_RGEO:	2.95
Altitude_of_geom_axis_ZGEO:	0.0
:	
Major_Radius_of_LCMS_centre_R0:	2.87
Altitude_of_LCMS_centre_Z0:	0.0
Magn_field_on_LCMS_centre_B0:	2.3
:	
Total_plasma_current_IP:	1.6E6
:	
minor_radius:	0.93
elongation:	1.65
triangularity_upper:	0.38
triangularity_lower:	0.38
:	
Equilibrium code for preiterations:	Select one of EQUILIBRIUM solvers or choose INTERPRETATIVE to ignore the iterations
EquilibriumCode:	emeq

Please note, that different equilibrium solvers might require slightly different input. Thus it is a user responsibility to check that the information inside input shot/run is enough to run selected equilibrium solver.

#### 1.2.2.4.14 Run Settings

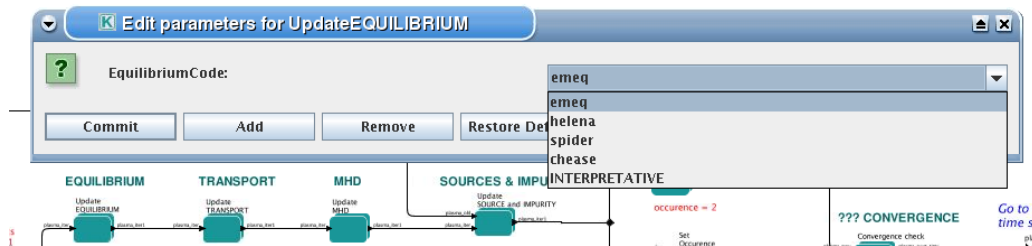
There are several equilibrium solvers connected to the ETS. You can select the one of them. Therefore please do:

- right click on the box CONVERGENCE LOOP
- select Open actor
- right click on the box EQUILIBRIUM
- select Configure actor to edit settings
- choose your equilibrium solver
- Commit



*INTERPRETATIVE* means that the ETS will not update the equilibrium, instead it will be using the initial equilibrium.

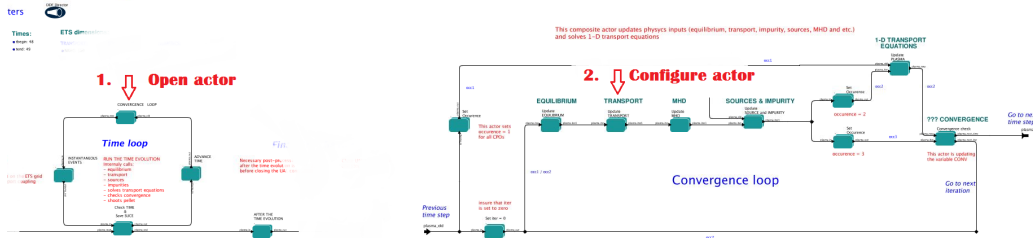
Please note, that it is better to select the same code as you used for pre-iterations. Because outputs of different equilibrium solver are not necessary done with the same resolution. Therefore the routine saving the information to the data base might brake due to incompatible sizes of some signals.



#### 1.2.2.4.15 TRANSPORT

The settings for TRANSPORT can be done inside the CONVERGENCE LOOP composite actor. Therefore please do:

- right click on the box CONVERGENCE LOOP
- select Open actor
- right click on the box TRANSPORT
- select Configure actor to edit settings
- choose your settings
- Commit

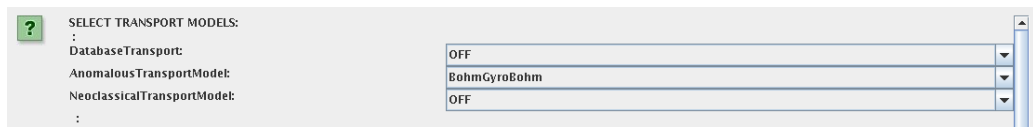


### 1.2.2.4.16 Choice of transport model

ETS constructs the total transport coefficients from the combination of Anomalous transport (model choice), Neoclassical transport (model choice) and Database transport (transport coefficients be saved to the input shot)

$$D_{tot} = D_{DB} * M_{DB} + D_{AN} * M_{AN} + D_{NC} * M_{NC}$$

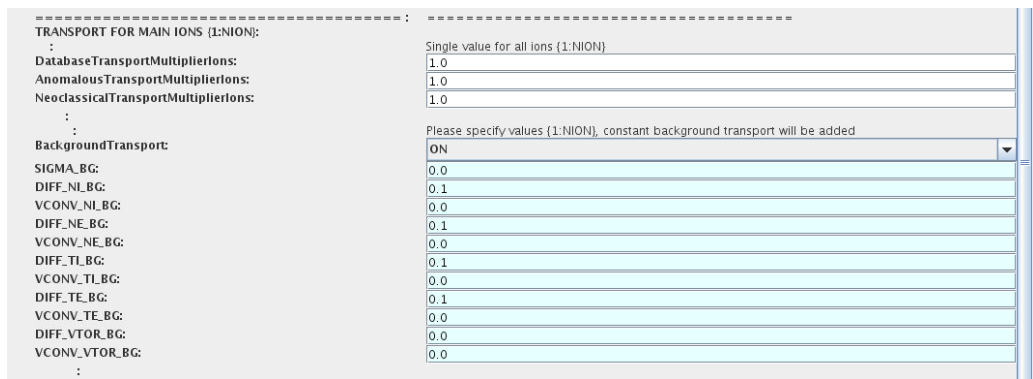
You should choose from the list of available models in each category or switch it OFF  
 The list of available transport models can be found [here](#)<sup>56</sup>.



### 1.2.2.4.17 Main plasma transport

In this section you define how total transport coefficients for main ions should be constructed from contributions provided by different models. You need to provide the multipliers for Anomalous, Neoclassical and Database contributions, which will determine their weights in total transport coefficient.

You also can add the constant background level for each coefficient (ion coefficients are expected to be the string {1:NION}, separated by commas)



### 1.2.2.4.18 Impurity transport

In this section you define how total transport coefficients for impurity ions should be constructed from contributions provided by different models. You need to provide the multipliers for Anomalous, Neoclassical and Database contributions, which will determine their weights in total transport coefficient.

You also can add the constant background level for each coefficient (coefficients are expected to be the string {1:NIMP}, separated by commas)

In addition, there is an option to import the Anomalous component of transport coefficient *from first ion* or *from electrons* (the same anomalous contribution will be added to all impurity components, all ionization states)

<sup>56</sup>[https://www.eufus.eu/documentation/ITM/html/ets\\_status.html](https://www.eufus.eu/documentation/ITM/html/ets_status.html)



TRANSPORT FOR IMPURITIES (1:NIMP):	:	
ImportImpurityAnomalousTransport:	OFF	
:	Single value for all impurities (1:NIMP)	
DatabaseTransportMultiplierImp:	1.0	
AnomalousTransportMultiplierImp:	1.0	
NeoclassicalTransportMultiplierImp:	1.0	
:	Please specify values (1:NIMP), constant background transport will be added	
Backgroundtransport:	ON	
DIFF_NZ_BG:	0.1, 0.1	
VCONV_NZ_BG:	1.7, 1.7	
:	:	

### 1.2.2.4.19 Edge transport barrier

In this section you can artificially suppress the transport outside of specified *RHO\_TOR\_NORM\_ETB*. Total transport coefficients for all transport channels (ne, ni, nz, Te, Ti,...) will be reduced to constant values specified below (ion and impurity coefficients are expected to be the strings {1:NION}) and {1:NIMP} respectively)

===== : Select ON/OFF for transport suppression, give barrier position and transport coefficients within the barrier	
SUPPRESSION OF TRANSPORT WITHIN EDGE TRANSPORT BARRIER:	OFF
EdgeTransportBarrier:	0.97
RHO_TOR_NORM_ETB:	Please specify values (1:NION), transport within ETB will be reduced to specified value
:	0.5
DIFF_NL_ETB:	0.0
VCONV_NL_ETB:	0.5
DIFF_NE_ETB:	0.0
VCONV_NE_ETB:	0.5
DIFF_TL_ETB:	0.0
VCONV_TL_ETB:	0.5
DIFF_TE_ETB:	0.0
VCONV_TE_ETB:	0.5
DIFF_VTOR_ETB:	0.0
VCONV_VTOR_ETB:	0.0
:	Please specify values (1:NIMP), transport within ETB will be reduced to specified value
DIFF_NZ_ETB:	0.1, 0.1
VCONV_NZ_ETB:	0.0, 0.0

### 1.2.2.4.20 Total transport coefficients

Profiles of the total transport coefficient for each channel are obtained from the the individual contributions (Data Base, Anomalous, Neoclassical and Background) as a summ of all activated transport models multiplied with coefficients specified on the interface of the composite actor.

$$X_{tot} = X_{DB} * DBM + X_{AN} * ANM + X_{NC} * NCM + X_{BG} * BGM$$

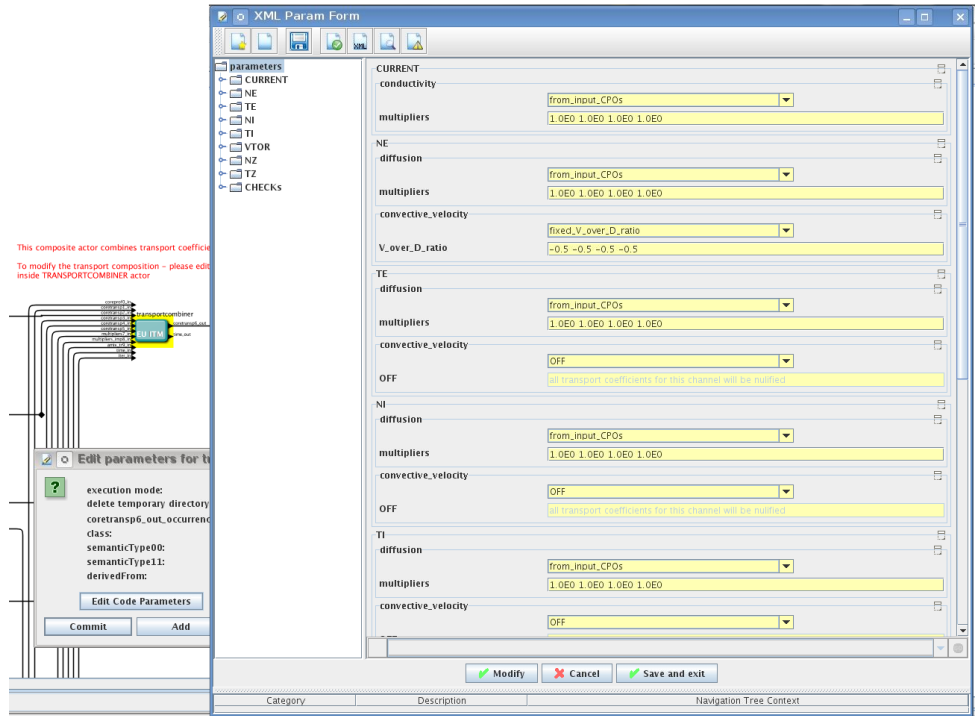
!!! Note, that contributions to all transport equations will be multiplied with the same value. For example: if AnomalousTransportMultiplier=3.0, then contributions from selected anomalous transport model to each transport equation will be multiplied with 3.0

The fine tuning of of transport coefficients can be done through editing the XML code parameters of the transport combiner actor:

- right click on the box TRANSPORT
- select Open actor to edit settings
- right click on the box Transport Combiner
- select Open actor to edit settings
- right click on the box transportcombiner
- select Configure actor
- click Edit Code Parameters
- If you select **OFF** contributions from all transport models to this channel will be nullified; If you select **from\_input\_CPOs** the transport channel will be activated, and the total transport coefficient will be combined from active transport models; For convective velocity there is an additional option **fixed\_V\_over\_D\_ratio**, by selecting this the combiner will ignore the convective components provided by transport models. The convective velocity will be determined from the total diffusion coefficient by applying fixed V/D ratio (*for inward pinch the values should be negative!*).
- For all active channels you can adjust multipliers for combining contributions from different transport models (array of four space separated values is expected):

- first position - Data Base transport coefficients;
- second position Anomalous transport coefficients;
- third position Neoclassical transport coefficients;
- fourth position Background (constant level) transport coefficients;

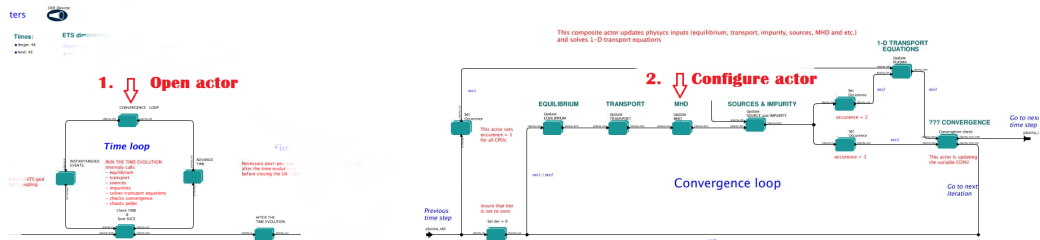
- save and exit
- Commit



### 1.2.2.4.21 MHD

The settings for MHD type of events can be done inside the CONVERGENCE LOOP composite actor. Therefore please do:

- right click on the box CONVERGENCE LOOP
- select Open actor
- right click on the box MHD
- select Configure actor to edit settings
- choose your settings
- Commit



At the moment ETS allows only for NTM to be activated. The sawtooth module is expected to be deployed before ITM Code Camp in Slovenia.

User can adjust the following NTM settings:

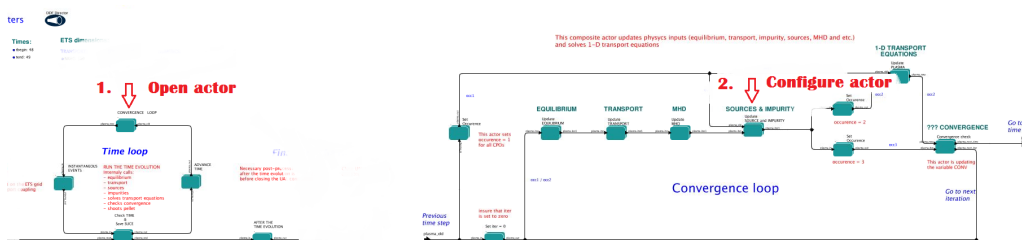
- NTM *ON* means that ETS will add the NTM driven transport to the total transport coefficient; *OFF* -ignored
- NTMTransportMultiplier the transport contribution from NTM will be multiplied with this value
- Onset\_NTM\_time - activation time for the NTM mode
- Onset\_NTM\_width - starting width of the mode
- m\_NTM\_poloidal\_number
- n\_NTM\_toroidal\_number
- NTM\_phase
- NTM\_frequency

NTM:	ON
NTMTransportMultiplier:	1.0
:	
===== CONFIGURE MHD ONSET =====	
Onset_NTM_time:	48
Onset_NTM_width:	0.004
m_NTM_poloidal_number:	3
n_NTM_toroidal_number:	2
NTM_phase:	0
NTM_frequency:	10.0

#### 1.2.2.4.22 SOURCES AND IMPURITY

The settings for SOURCES AND IMPURITY can be done inside the CONVERGENCE LOOP composite actor. Therefore please do:

- right click on the box CONVERGENCE LOOP
- select Open actor
- right click on the box SOURCES AND IMPURITY
- select Configure actor to edit settings
- choose your settings
- Commit



#### 1.2.2.4.23 IMP3 sources

There is a number of sources developed by IMP3 project, which are actors or internal routines of the transport solver. You can activate them by selecting *ON*/*OFF* in front of corresponding source:

- Database Sources *ON* - ETS will pick up the evolution of source profiles saved to your input shot/run; *OFF* -ignored
- Ohmic Heating *ON* - ETS will compute Ohmic heating internally; *OFF* -ignored

- Gaussian Sources *ON* - ETS will add sources from the Gaussian source actor (you can configure heat and particle deposition profiles by editing the code parameters of the actor); *OFF* -ignored
- Neutral Sources *ON* - Fluid neutrals will be solved according to the boundary conditions specified on Before\_time\_evolution composite actor interface; *OFF* -ignored
- Switch\_IMPURITY *ON* - Impurity density and radiative sources will be computed; *OFF* -ignored; *INTERPRETATIVE* profiles of impurity density will be read from input shot/run

```

=====ETS INTERNAL SOURCES=====:
DatabaseSources: OFF
DatabaseSourceMultiplier: 1.0
:
OhmicHeating: ON
OhmicHeatingMultiplier: 1.0
:
GaussianSources: OFF
GaussianSourceMultiplier: 1.0
:
===== NEUTRALS =====:
NeutralsSources: OFF
NeutralsSourceMultiplier: 1.0
:
===== IMPURITY =====:
Switch_IMPURITY: ON
ImpuritySourceMultiplier: 1.0
:

```

#### 1.2.2.4.24 IMP5HCD sources

There is a number of sources developed by IMP5 project, that are incorporated by the ETS workflow.

For the IMP5HCD sources please activate the type of heating source, by ticking the box in front of it, and select the code to simulate it.

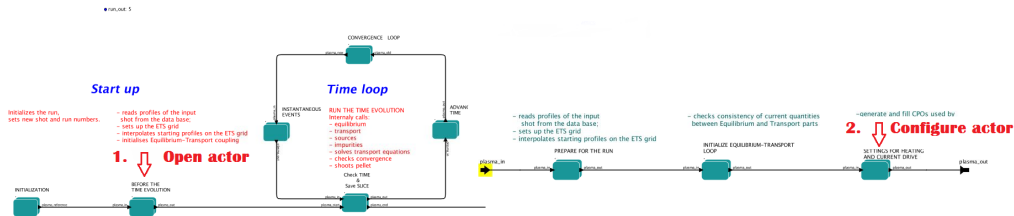
```

===== IMP5HCD SUORCES =====:
for more info: 'www.efda-itm.eu/ITM/html/imp5hcd_init_param_input.html'
:
== SELECT HEATING SCHEMES ==:
Use_ECRH_in: 
Use_ICRH_in: 
Use_NBI_in: 
Use_nuclear_heating_in: 
== SELECT CODES ==:
EC_wave_code: gray
IC_wave_code: icdep
LH_wave_code: none
NBI_source_code: bbnbi
Nuclear_source_code: nuclearsim
Ion_FokkerPlanck_with_source_code: nbisim
Ion_FokkerPlanck_wave_heating_code: none
Ion_FokkerPlanck_wave_and_source_code: none
Electron_FokkerPlanck_code: none
:

```

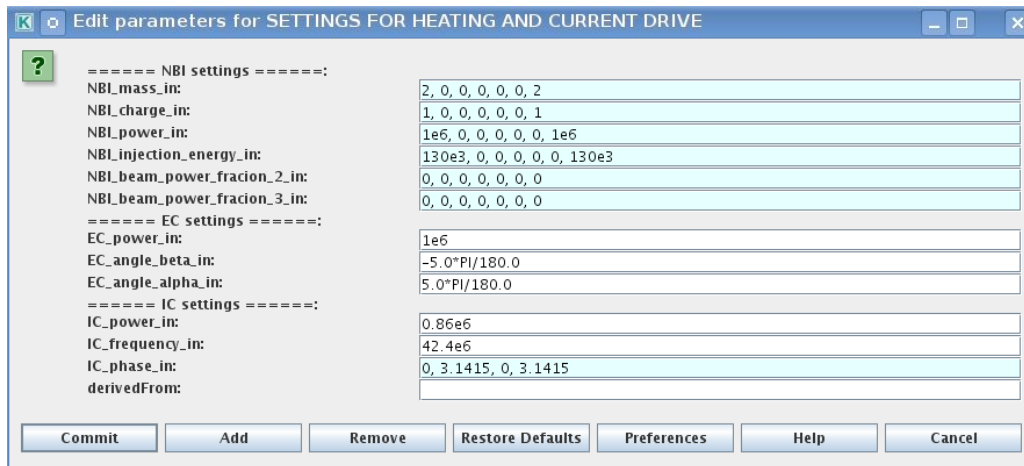
You also need to configure initial IMP5HCD settings. Therefore please:

- right click on the box BEFORE THE TIME EVOLUTION
- select Open Actor
- right click on the box SETTINGS FOR HEATING AND CURRENT DRIVE
- select Configure actor
- edit the settings
- Commit



The detailed information on initial IMP5HCD settings can be found [here](#)<sup>57</sup>.

Please note that settings for NBI are done independent for each PINI. Therefore, for NBI settings, please insert the values separated by commas. The number of the element in the array corresponds to the number of activated PINI. Maximum accepted number of PINIs = 16.



#### 1.2.2.4.25 Power control

You also can activate the power control for the IMP5HCD sources.

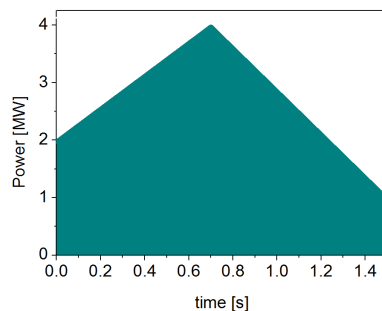
<sup>57</sup>[https://www.eufus.eu/documentation/ITM/html/imp5\\_imp5hcd.html](https://www.eufus.eu/documentation/ITM/html/imp5_imp5hcd.html)

" == POWER_CONTROL ==:	
::	
NBI_power_control:	specific
Times_NBI:	0, 100
Power_NBI_P1:	2E6, 2E6
Power_NBI_P2:	0
Power_NBI_P3:	0
Power_NBI_P4:	0
Power_NBI_P5:	0
Power_NBI_P6:	0
Power_NBI_P7:	2E6, 2E6
Power_NBI_P8:	0
Power_NBI_P9:	0
Power_NBI_P10:	0
Power_NBI_P11:	0
Power_NBI_P12:	0
Power_NBI_P13:	0
Power_NBI_P14:	0
Power_NBI_P15:	0
Power_NBI_P16:	0
tstart_NBI_control:	48
tend_NBI_control:	49
frequency_NBI_control:	100
:	
ECRH_power_control:	OFF
Times_ECRH:	48
Power_ECRH:	3e6, 0e6, 2e6
tstart_ECRH_control:	48
tend_ECRH_control:	49
frequency_ECRH_control:	100
:	
ICRH_power_control:	OFF
Times_ICRH:	0
Power_ICRH:	0
tstart_ICRH_control:	47
tend_ICRH_control:	55
frequency_ICRH_control:	100

If the POWER.CONTROL is not OFF , there are two modes of operation: *specific* and *frequency*

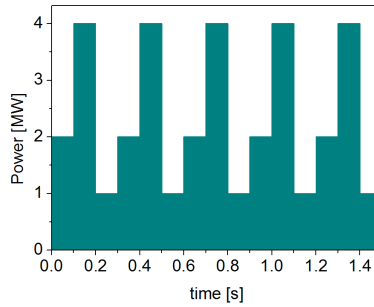
For *specific* you should specify the time sequence separated by commas and the corresponding power sequence (where first power level corresponds to the first time, second to second and etc.). Linear interpolation will be done between the sequence points.

For example: if you give the power sequence = 2e6,4e6,1e6 and times = 0.0, 0.7, 1.5 (s) the delivered power would be:



For *frequency* you should specify the power levels sequence separated by commas, start and end time of the power control and the frequency of switching between these levels.

For example: if you give the power sequence = 2e6,4e6,1e6 and frequency = 10 (Hz) tstart =0.0 (s) tend = 1.5 (s) the delivered power would be:



#### 1.2.2.4.26 Total power

Profiles of the total source for each channel are obtained from the the individual contributions (Data Base, Gaussian, Neutrals, Impurity and HCD) as a summ of all activated sources multiplied with coefficients specified on the interface of the composite actor.

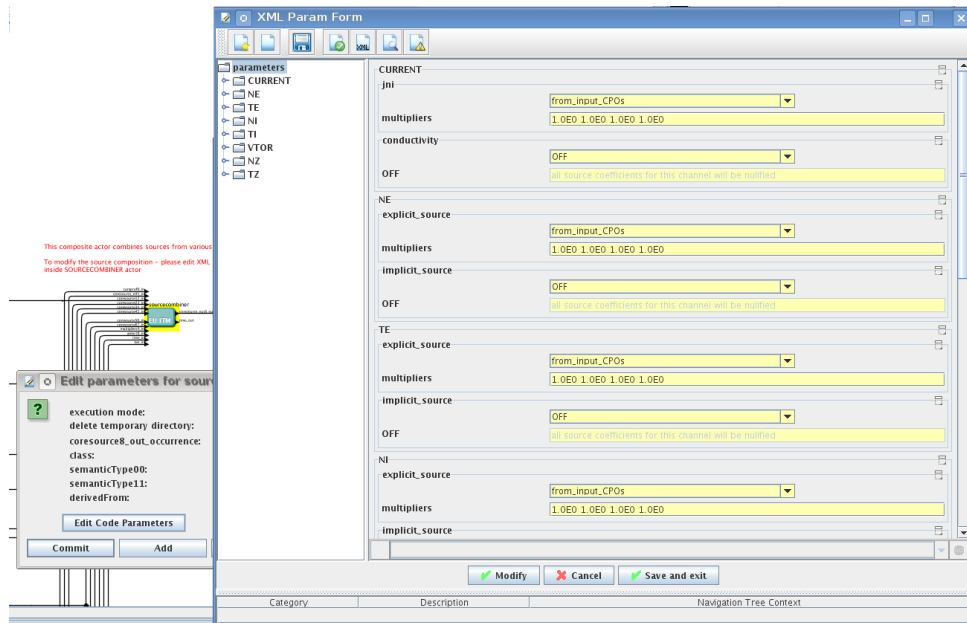
$$S_{\text{tot}} = S_{\text{DS}}*DSM + S_{\text{GS}}*GSM + S_{\text{Neu}}*NeuSM + S_{\text{IMP}}*IMPSPM + S_{\text{HCD}}*HCDSM$$

!!! Note, that contributions to all transport equations will be multiplied with the same value.

For example: if ImpuritySourceMultiplier=3.0, then contributions from impurity to Se, Sz and Qe will be multiplied with 3.0

The fine tuning of of sources can be done through editing the XML code parameters of the source combiner actor:

- right click on the box SOURCES and IMPURITY
- select Open actor to edit settings
- right click on the box Source Combiner
- select Open actor to edit settings
- right click on the box sourcecombiner
- select Configure actor
- click Edit Code Parameters
- If you like the sources to the particular equation being activated - select *from input\_CPOs* ; if you select *OFF* contributions from all sources to this channel will be nullified.  
For active channels you can adjust multipliers for combining contributions from different source modules (array of five space separated values is expected):
  - first position - Data Base sources;
  - second position Gaussian sources;
  - third position HCD sources;
  - fourth position Neutral sources;
  - fifth position Impurity sources.
- save and exit
- Commit



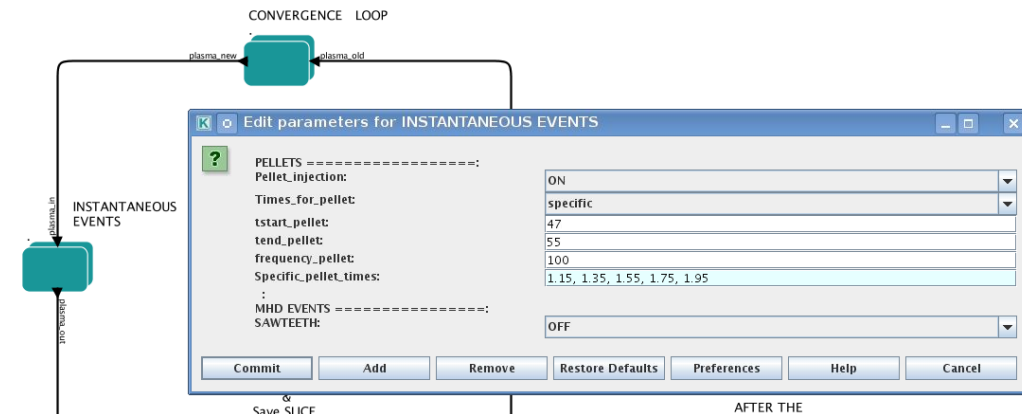
### 1.2.2.4.27 INSTANTANEOUS EVENTS

At the moment, user can switch ON and OFF two types of events: PELLET and SAWTOOTH

### 1.2.2.4.28 PELLET

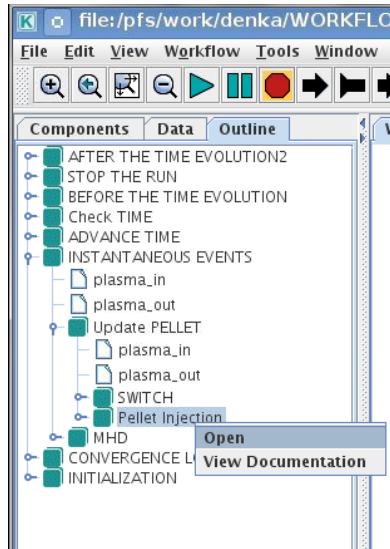
At the top level of the workflow you can configure times for pellet injection

- right click on the box INSTANTANEOUS EVENTS
- select Configure actor to edit settings
- Select Pellet\_injection ON if you like to use pellet in your simulation
- Select mode of operation: specific - pellets will be shut at specific times, you also need to specify array times\_pellet
  - specific - pellets will be shut at exact times specified in array times\_pellet
  - frequency pellets will be shut from tstart\_pellet until tend\_pellet with a frequency\_pellet
- frequency pellets will be shut from tstart\_pellet until tend\_pellet with a frequency\_pellet
- Commit

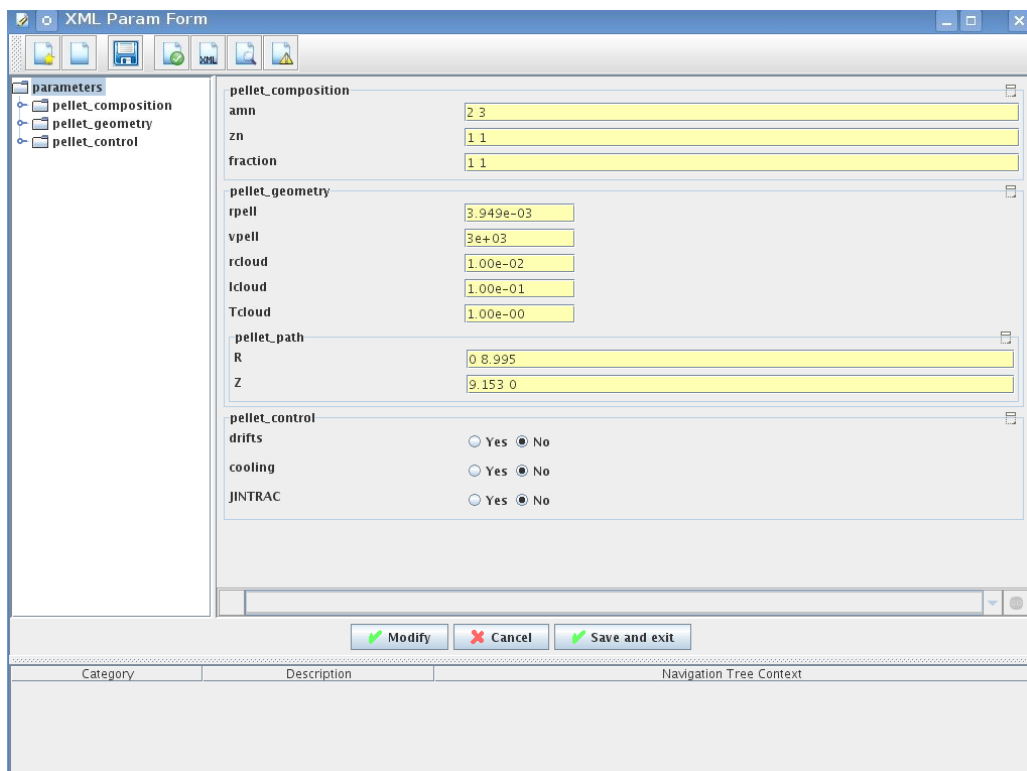


Parameters of individual pellet need to be configured through the icode\_parameters of the PELLET actor. To access it go to 'Outline' on the right upper corner and open the following:





- right click on the actor PELLET
- select Configure actor
- click Edit Code Parameters
- edit parameters and click save and exit
- Commit



**amn** atomic mass number: array of elements separated by space (1:nelements) [-]

**zn** nuclear charge: array of elements separated by space (1:nelements) [-]

**fraction** fraction of each element in the pellet, based on the number of atoms: array of elements separated by space (1:nelements) [-]

**rpell** radius of the pellet [m]

**vpell** velocity of the pellet [m/s]

**rcloud** radius of the pellet cloud [m], radial extension of the cloud = 2\*rp0

*lcloud* length of the pellet cloud along the field line [m]

*Tcloud* temperature of the pellet cloud [eV]

Pellet path is specified by two points, for which R and Z coordinated should be specified

*R* R coordinates of the pivot and second points of the pellet path, separated by space [m]

*Z* Z coordinates of the pivot and second points of the pellet path, separated by space [m]

Control switches allow to activate:

- *drifts* - YES - will activate radial displacement of deposition profile, same for all path points
- *cooling* - YES - will activate cooling of the other side of the plasma due to parallel heat transport (essential for large pellets, which might cross the same flux surface twice)
- *JINTRAC* - YES - will provide temperature reduction consistent with the model used in JETTO

#### 1.2.2.4.29 MHD

At the top level of the workflow you can switch ON/OFF possible MHD events

- right click on the box INSTANTANEOUS EVENTS
- select Configure actor to edit settings
- Select SAWTOOTH ON if you like to use them in your simulation
- Commit

#### 1.2.2.4.30 Visualization during the run

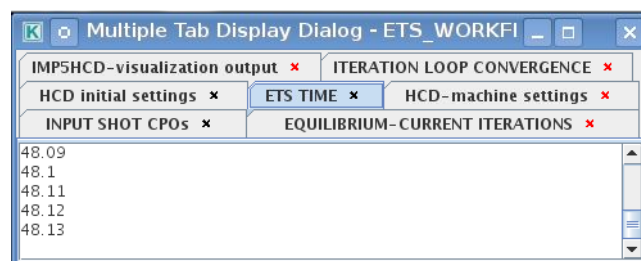
There is a number tools visualizing the ETS run.

#### 1.2.2.4.31 Multiple Tab Display

The display appears automatically when the ETS workflow is launched. It displays diagnostic text messages from the workflow on following topics:

- Input data statement
- Iterations to check the initial convergence between EQUILIBRIUM and CURRENT
- Time evolution
- Convergence of iteratinos within the time step
- IMP5HCD settings
- Power used by IMP5HCD actors during the run

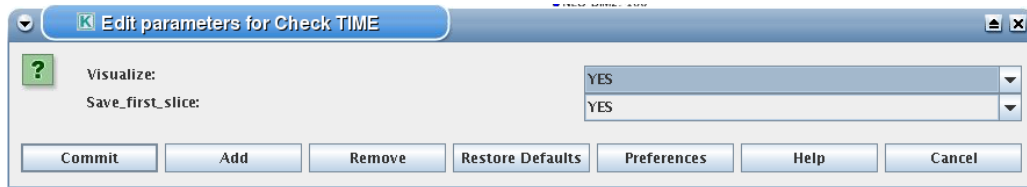
Also the error messages from execution of the workflow will be displayed here.



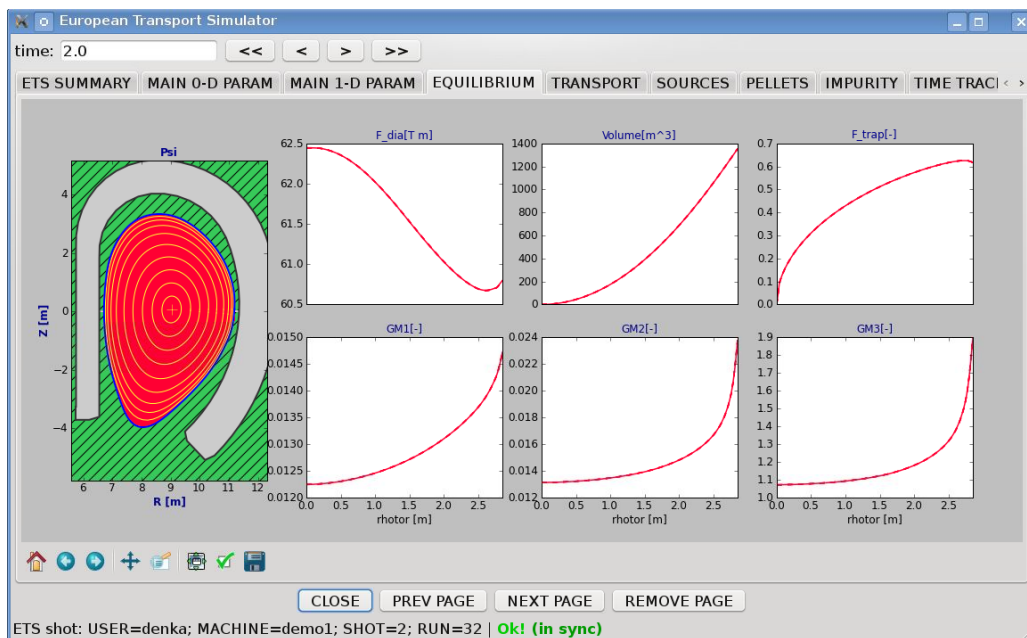
### 1.2.2.4.32 Python Visualization Display

You can activate the graphical visualization of your run evolution:

- right click on the box Check Time & Save Slice
- select Configure actor
- select visualisation YES or NO
- Commit



Then evolution of main discharge parameters will be shown in this window:



### 1.2.3 ETS\_C

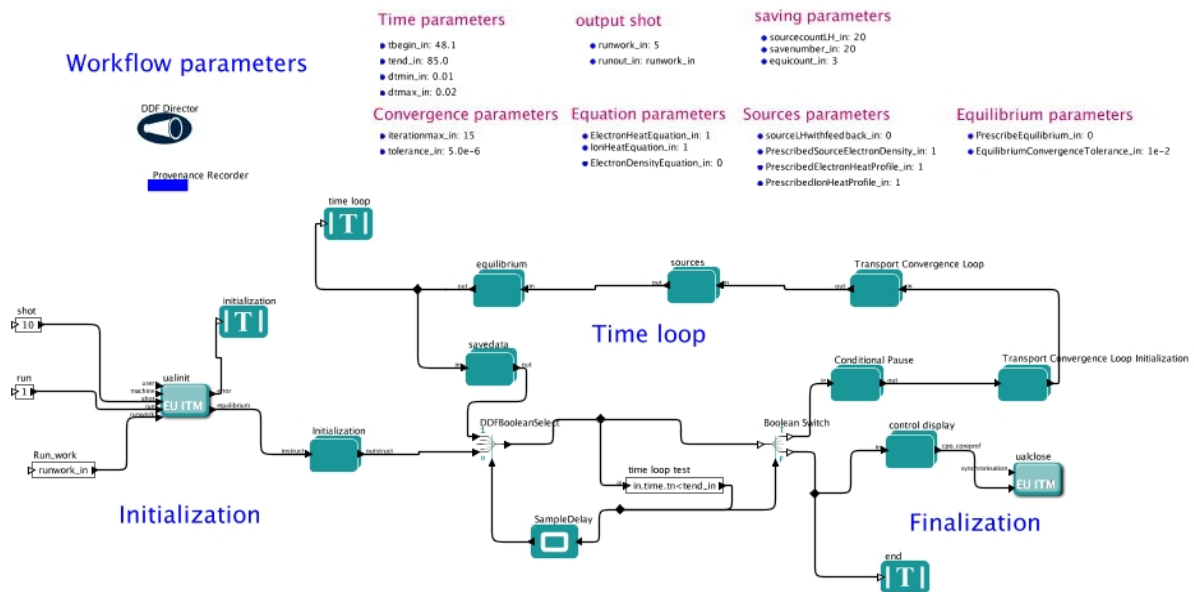
The ETS workflow (IMP3-ACT1) is used for 1-D transport simulation of a tokamak core plasma.

*ETS workflow in KEPLER :*

- uses as actors and composite actors from other IMPs, thus for the most recent versions of them please check with relevant project
- complex, but clearly structured workflow, which offers user friendly interface for configuring the simulation
- allows for easy modifications ( *connecting new modules, or reconnecting the parts of the workflow* ) through the easy graphical interface
- provides users with all updates through the version control system
- still actively developing tool

Contact persons: [vincent.basiuk@cea.fr?subject=ETS%20in%20KEPLER](mailto:vincent.basiuk@cea.fr?subject=ETS%20in%20KEPLER) [philippe.huynh@cea.fr?subject=ETS%20in%20KEPLER](mailto:philippe.huynh@cea.fr?subject=ETS%20in%20KEPLER)

# EUROPEAN TRANSPORT SOLVER



## 1.2.3.1 Trainings

Here is the training given in 2011 at GARCHING : [Introduction training 2011](#), <sup>58</sup>[training 2011](#) <sup>59</sup>

## 1.2.3.2 Download version of ETS.C workflows and actors

- INNSBRUCK 2011, see the README file in ~huynh/public/INNSBRUCK2011
- GARCHING 2011, see the README file in ~huynh/public/GARCHING2011

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last update: 2012-07-18 by coster

## 1.2.4 ETS Status

Package Name / Physics Module	ETS-A <sup>60</sup>	ETS-C <sup>61</sup>
<b>EQILIBRIUM</b>		
<i>fixed boundary:</i>		
BDSEQ	Ready for use	
EMEQ	Ready for use	
SPIDER	Ready for use	
SPIDER_IMP12	Ready for use	
CHEASE	Ready for use	validate
HELENA	Ready for use	
HELENA21		work in 4.09a problem when it doesn't find any equilibrium crash

<sup>58</sup>[https://www.efda-itm.eu/ITM/imports/imp3/public/introduction\\_ETS\\_2011.pdf](https://www.efda-itm.eu/ITM/imports/imp3/public/introduction_ETS_2011.pdf)

<sup>59</sup>[https://www.efda-itm.eu/ITM/imports/imp3/public/ETS\\_C\\_training\\_2011.pdf](https://www.efda-itm.eu/ITM/imports/imp3/public/ETS_C_training_2011.pdf)

<i>Package Name / Physics Module</i>	<i>ETS-A</i> <sup>60</sup>	<i>ETS-C</i> <sup>61</sup>
<i>free boundary:</i>		
CEDRES++	In progress/tests are planned for Nov.2014	validate (static mode, TBD evolution mode)
CREATE-NL		
FIXFREE		
EQFAST		work in 4.09a
FREEBIE		validate
<b>MHD</b>		
NTM	Ready for use	validate
SAWTEETH	Implemented/ Tested/ release date:Nov.2014	
Linear Stability Chain	Stand alone tests/implementation in ETS and release:2015	
<b>TRANSPORT</b>		
<i>analytical &amp; interpretative:</i>		
From DATA BASE (interpretative)	Ready for use	
Edge Transport Barried (analytical)	Ready for use	
<i>anomalous:</i>		
ETAIGB	Ready for use	
BOHM-GYROBOHM	Ready for use	validate, + effect of rotation
GLF23	Implemented/ Tested/ release date:Nov.2014	to be tested (GLF23 installed in previous gateway not validated)
WEILAND	Implemented/ Tested/ release date:Nov.2014	
RITM	Implemented/ Tested/ release date:Nov.2014	
EWDM	Implemented/ Tested/ release date:Nov.2014	
TGLF	In progress/Some initial tests	
KIAUTO		installed (transport model based on scaling law)
<i>neoclassical:</i>		
NEOS	Ready for use	
NEOWES	Ready for use	
NEOART	Ready for use (probably not suggested as being too oscillatory)	
NCLASS	In progress	validate with composition (to be upgrade with compositions)
NCLASS/FORCEBALL		installed (gives the radial electric field)

<i>Package Name / Physics Module</i>	<i>ETS-A</i> <sup>60</sup>	<i>ETS-C</i> <sup>61</sup>
<b>HEAT,PARTICLE SOURCES &amp; CURRENT DRIVE</b>		
<i>analytical &amp; interpretative:</i>		
From DATA BASE (interpretative)	Ready for use	
Gaussian	Ready for use	
<i>impurity and particles:</i>		
IMPURITY	Ready for use	
NEUTRALS	Ready for use	
PELLET	Ready for use	
ZNEUTRES		installed (simple module of CRONOS for neutral source terms)
ZRECYCLE		edge boundary for electron density
<b>ECRH</b>		
GRAY	Ready for use	Installed
TORAY-FOM		In preparation
TRAVIS	Tested	In preparation
TORBEAM		In preparation
<b>ICRH</b>		
TORIC	In progress	In preparation
ICDEP		Installed
FPSIM		Installed
<b>NBI</b>		
NEMO	Ready for use	Installed
BBNBI	Ready for use	In preparation
NBISIM	Ready for use	Installed
ASCOT	Ready for use	
RISK	Ready for use	In preparation
<b>LH</b>		
<i>nuclear sources</i>		
nuclearsim	Ready for use	Installed
<b>CONTROLS</b>		

<i>Package Name / Physics Module</i>	<i>ETS-A</i> <sup>60</sup>	<i>ETS-C</i> <sup>61</sup>
NBI power control	Ready for use	
ECRH power control	Ready for use	
ICRH power control	Ready for use	
Pellet frequency control	Ready for use	
<i>COUPLING TO EDGE</i>		
SOLPS	Tested at Fortran level	
<i>DOCUMENTATION and MANUALS</i>		
Physics Description	Description of the ETS <sup>62</sup>	
Numerics Description	Form of the standardize equations <sup>63</sup>	
Manuals	<ul style="list-style-type: none"> <li>• ETS workflows in KEPLER <sup>64</sup></li> <li>• ETS source in Fortran <sup>65</sup></li> </ul>	

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last update: by

---

last update: 2015-02-03 by denka

### 1.3 Documentation for the ETS

- Current ETS Timeline (PDF) <sup>66</sup>(MS Project) <sup>67</sup>
- Description of the ETS <sup>68</sup>
- Form of the standardize equations <sup>69</sup>
- ETS User Guide <sup>70</sup>
- ETS Status <sup>71</sup>
- ETS Doxygen Documentation (PDF) <sup>72</sup>(HTML) <sup>73</sup>
- Pellets in ETS <sup>74</sup>

### 1.4 Presentations that discuss the ETS

- Presentation at ICNSP-2009 on the ETS <sup>75</sup>
- Movie from the presentation showing the evolution of the flux surfaces <sup>76</sup>

<sup>62</sup>[https://www.efda-itm.eu/ITM/imports/imp3/public/ETS\\_Documentation/ETS\\_TRANSPORT\\_EQUATIONS.pdf](https://www.efda-itm.eu/ITM/imports/imp3/public/ETS_Documentation/ETS_TRANSPORT_EQUATIONS.pdf)

<sup>63</sup>[https://www.efda-itm.eu/ITM/imports/imp3/public/ETS\\_Documentation/STANDARDISED\\_EQUATION.pdf](https://www.efda-itm.eu/ITM/imports/imp3/public/ETS_Documentation/STANDARDISED_EQUATION.pdf)

<sup>64</sup>[https://www.eufus.eu/documentation/ITM/html/ETS\\_in\\_KEPLER.html](https://www.eufus.eu/documentation/ITM/html/ETS_in_KEPLER.html)

<sup>65</sup>[https://www.eufus.eu/documentation/ITM/html/ETS.html#ETS\\_2](https://www.eufus.eu/documentation/ITM/html/ETS.html#ETS_2)

<sup>66</sup>[https://www.efda-itm.eu/ITM/imports/imp3/public/ETS\\_Documentation/ETS\\_timeline.pdf](https://www.efda-itm.eu/ITM/imports/imp3/public/ETS_Documentation/ETS_timeline.pdf)

<sup>67</sup>[https://www.efda-itm.eu/ITM/imports/imp3/public/ETS\\_Documentation/ETS\\_timeline.mpp](https://www.efda-itm.eu/ITM/imports/imp3/public/ETS_Documentation/ETS_timeline.mpp)

<sup>68</sup>[https://www.efda-itm.eu/ITM/imports/imp3/public/ETS\\_Documentation/ETS\\_TRANSPORT\\_EQUATIONS.pdf](https://www.efda-itm.eu/ITM/imports/imp3/public/ETS_Documentation/ETS_TRANSPORT_EQUATIONS.pdf)

<sup>69</sup>[https://www.efda-itm.eu/ITM/imports/imp3/public/ETS\\_Documentation/STANDARDISED\\_EQUATION.pdf](https://www.efda-itm.eu/ITM/imports/imp3/public/ETS_Documentation/STANDARDISED_EQUATION.pdf)

<sup>70</sup>[https://www.efda-itm.eu/ITM/imports/imp3/public/ETS\\_Documentation/ETS\\_User\\_Guide.pdf](https://www.efda-itm.eu/ITM/imports/imp3/public/ETS_Documentation/ETS_User_Guide.pdf)

<sup>71</sup>[https://www.efda-itm.eu/ITM/imports/imp3/public/ETS\\_Documentation/ETS\\_Status.pdf](https://www.efda-itm.eu/ITM/imports/imp3/public/ETS_Documentation/ETS_Status.pdf)

<sup>72</sup>[https://www.efda-itm.eu/ITM/imports/imp3/public/ETS\\_Documentation/ETS\\_Doxygen.pdf](https://www.efda-itm.eu/ITM/imports/imp3/public/ETS_Documentation/ETS_Doxygen.pdf)

<sup>73</sup><https://portal.eufus.eu/documentation/ITM/doxygen/imp3/ets/>

<sup>74</sup><https://www.efda-itm.eu/ITM/html/pellet.html>

<sup>75</sup>[https://www.efda-itm.eu/ITM/imports/imp3/public/ETS\\_Presentations/2009\\_ICNSP/ETS\\_Coster\\_ICNSP-2009\\_v5.ppt](https://www.efda-itm.eu/ITM/imports/imp3/public/ETS_Presentations/2009_ICNSP/ETS_Coster_ICNSP-2009_v5.ppt)

<sup>76</sup>[https://www.efda-itm.eu/ITM/imports/imp3/public/ETS\\_Presentations/2009\\_ICNSP/psi\\_5\\_42.mpg](https://www.efda-itm.eu/ITM/imports/imp3/public/ETS_Presentations/2009_ICNSP/psi_5_42.mpg)

- [Movie from the presentation showing the evolution of the plasma](#) <sup>77</sup>

## 1.5 ETS Verification & Validation <sup>78</sup>

## 1.6 Other ETS related information

- [Visualization of the repository activity \(x264\)](#) <sup>79</sup>
- [Visualization of the repository activity \(wmv2\)](#) <sup>80</sup>

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last update: 2019-01-31 by g2dpc

# 2 Edge Transport Simulator

The goal of this work is to adopt the edge code like SOLPS-B2 to be used within the ITM platform.

## 2.1 IMP3 General Grid Description and Grid Service Library

### 2.1.1 Resources

- [GForge project page](#) <sup>81</sup>
- Linking to library: [general](#) <sup>82</sup>, [specific](#) <sup>83</sup>
- [A tutorial talk.](#) <sup>84</sup> Note: some slides might be out of date, please refer to the documentation.

### 2.1.2 Documentation

- **4.09a** Resources: [Sources](#) <sup>85</sup>, [Fortran Examples](#) <sup>86</sup>  
Documentation:  
– Release v1.2: [Fortran](#) <sup>90</sup> <sup>87</sup>, [Python](#) <sup>88</sup>, [ualconnector](#) <sup>89</sup>,
- **4.10a** Resources: [Sources](#) <sup>90</sup>, [Fortran Examples](#) <sup>91</sup>  
Documentation:  
– Release v1.2: [Fortran](#) <sup>90</sup> <sup>92</sup>, [Python](#) <sup>93</sup>, [ualconnector](#) <sup>94</sup>,

<sup>77</sup>[https://www.efda-itm.eu/ITM/imports/imp3/public/ETS\\_Presentations/2009\\_ICNSP/comb\\_psi\\_5\\_42.900x400.mpg](https://www.efda-itm.eu/ITM/imports/imp3/public/ETS_Presentations/2009_ICNSP/comb_psi_5_42.900x400.mpg)

<sup>78</sup>[https://www.efda-itm.eu/ITM/html/imp3\\_ets\\_vv.html](https://www.efda-itm.eu/ITM/html/imp3_ets_vv.html)

<sup>79</sup><https://www.efda-itm.eu/ITM/imports/imp3/public/ets.mp4>

<sup>80</sup><https://www.efda-itm.eu/ITM/imports/imp3/public/ets.wmv>

<sup>81</sup><https://gforge6.eufus.eu/project/itmggd/>

<sup>82</sup><https://itm.ipp.mpg.de/wiki/ITM/index.php/Libraries>

<sup>83</sup>[https://itm.ipp.mpg.de/wiki/ITM/index.php/AvailableLibraries#itmggd:\\_ITM\\_General\\_Grid\\_Description\\_Service\\_Library](https://itm.ipp.mpg.de/wiki/ITM/index.php/AvailableLibraries#itmggd:_ITM_General_Grid_Description_Service_Library)

<sup>84</sup><https://gforge6.eufus.eu/svn/itmggd/branches/4.10a/inner-documentation/cc2012-1/ggd-tutorial.pdf>

<sup>85</sup><https://gforge6.eufus.eu/svn/itmggd/branches/4.09a/>

<sup>86</sup><https://gforge6.eufus.eu/svn/itmggd/branches/4.09a/f90/src/examples/>

<sup>87</sup>[https://portal.eufus.eu/documentation/ITM/doxygen/imp3/grid\\_service\\_library/1.2/4.09a/f90](https://portal.eufus.eu/documentation/ITM/doxygen/imp3/grid_service_library/1.2/4.09a/f90)

<sup>88</sup>[https://portal.eufus.eu/documentation/ITM/doxygen/imp3/grid\\_service\\_library/1.2/4.09a/python](https://portal.eufus.eu/documentation/ITM/doxygen/imp3/grid_service_library/1.2/4.09a/python)

<sup>89</sup>[https://portal.eufus.eu/documentation/ITM/doxygen/imp3/grid\\_service\\_library/1.2/4.09a/python/ualconnector.html](https://portal.eufus.eu/documentation/ITM/doxygen/imp3/grid_service_library/1.2/4.09a/python/ualconnector.html)

<sup>90</sup><https://gforge6.eufus.eu/svn/itmggd/branches/4.10a/>

<sup>91</sup><https://gforge6.eufus.eu/svn/itmggd/branches/4.10a/f90/src/examples/>

<sup>92</sup>[https://portal.eufus.eu/documentation/ITM/doxygen/imp3/grid\\_service\\_library/1.2/4.10a/f90](https://portal.eufus.eu/documentation/ITM/doxygen/imp3/grid_service_library/1.2/4.10a/f90)

<sup>93</sup>[https://portal.eufus.eu/documentation/ITM/doxygen/imp3/grid\\_service\\_library/1.2/4.10a/python](https://portal.eufus.eu/documentation/ITM/doxygen/imp3/grid_service_library/1.2/4.10a/python)

<sup>94</sup>[https://portal.eufus.eu/documentation/ITM/doxygen/imp3/grid\\_service\\_library/1.2/4.10a/python/ualconnector.html](https://portal.eufus.eu/documentation/ITM/doxygen/imp3/grid_service_library/1.2/4.10a/python/ualconnector.html)



### 2.1.3 Outdated documentation

This section collects information and documentation related to the general grid description.

- Some presentations:
  - [A tutorial talk from 2011](#) <sup>95</sup>,
  - General Meeting 2011: [Short overview talk](#) <sup>96</sup> and [detailed presentation](#) <sup>97</sup>
- [Instructions how to get a copy of the Grid Service Library](#) <sup>98</sup>
- Documentation for the ITM Grid Service Library: [Fortran 90](#) <sup>99</sup>, [Python](#) <sup>100</sup>
- [A short manual for ualconnector and VisIt](#) <sup>101</sup>

Some examples are included in the Grid Service Library distribution.

#### 2.1.3.1 Example grids

##### 2.1.3.1.1 Example grid details

This section describes a number of example grids and gives some examples for specific constructs (object lists, subgrids).

##### 2.1.3.1.2 Example Grid #1: 2d structured R,Z grid

Note: the grids shown here are used in the unit tests of the grid service library implementation, i.e. the automated testing framework.

A 2d grid in (R,Z) constructed by combining two structured one-dimensional spaces. The spaces are defined as follows, they define nodes and edges as subobjects.

---

<sup>95</sup><https://gforge6.eufus.eu/svn/itmaggd/branches/4.10a/inner-documentation/griddescription.pdf>

<sup>96</sup><https://gforge6.eufus.eu/svn/itmaggd/branches/4.10a/inner-documentation/gm2011/ggd-short.pdf>

<sup>97</sup><https://gforge6.eufus.eu/svn/itmaggd/branches/4.10a/inner-documentation/gm2011/ggd-long.pdf>

<sup>98</sup>[https://www.efda-itm.eu/ITM/html/imp3\\_gridservicelibrary.html](https://www.efda-itm.eu/ITM/html/imp3_gridservicelibrary.html)

<sup>99</sup>[https://portal.eufus.eu/documentation/ITM/doxygen/imp3/grid\\_service\\_library/f90/](https://portal.eufus.eu/documentation/ITM/doxygen/imp3/grid_service_library/f90/)

<sup>100</sup>[https://portal.eufus.eu/documentation/ITM/doxygen/imp3/grid\\_service\\_library/python/](https://portal.eufus.eu/documentation/ITM/doxygen/imp3/grid_service_library/python/)

<sup>101</sup>[https://portal.eufus.eu/documentation/ITM/doxygen/imp3/grid\\_service\\_library/python/ualconnector.html](https://portal.eufus.eu/documentation/ITM/doxygen/imp3/grid_service_library/python/ualconnector.html)

The whole grid then looks like this (attention, slightly differing scales in R and Z):

A couple of examples for object descriptor are given. Some explanations:

$((1,1) (4,2))$  = a 2d object (2d cell or face), implicitly created by combining the 1d object (edge) no. 4 from space 1 and the 1d object no. 2 from space 2.

$((1,0) (2,4))$  = a 1d object (edge), implicitly created by combining 1d object (edge) from space 1 with the 0d object (node) no. 4 from space 2.

$((0,0) (2,2))$  = a 0d object (node), implicitly created by combining 0d objects (nodes) no. 2 from space 1 and no. 2 from space 2.

#### 2.1.3.1.3 Object classes

This section shows the different object classes present in the grid. The implicit numbering of the objects in a class is obtained by iterating over all subobjects defining the objects, lowest space first.

Object class (1,1): 2d cells/faces. They have the following implicit numbering:

Object class (1,0): 1d edges, aligned along the R axis ("r-aligned"). They have the following implicit numbering:

Object class (0,1): 1d edges, aligned along the Z axis ("z-aligned"). They have the following implicit numbering:

Object class (0,0): 0d nodes. They have the following implicit numbering:

#### 2.1.3.1.4 Example 2: B2 grid

#### 2.1.3.1.5 Object list examples

Some examples for object lists, to explain the concept and show the notation. All examples refer to the 2d structured R,Z example grid #1 given above.

##### **Object descriptor**

A single object (= and object descriptor), for object with object class (1,1), object index (4,2).

((1,1) (4,2))
---------------

##### **Explicit object lists**

An explicit object list is simply an enumeration of object descriptors. The ordering of the objects is given directly by their position in the list. Note that by definition, all objects in the list must be of the same class (An

implementation of an explicit object list should enforce this. If you need lists of objects with differing class, have a look at subgrids).

An explicit list of 2d cells (faces), listing the four corner cells of the grid in the order bottom-left, bottom-right, top-left, top-right:

```
( ((1,1) (1,1)),  
  ((1,1) (5,1)),  
  ((1,1) (1,4)),  
  ((1,1) (5,4)) )
```

### Implicit object lists

Implicit object lists use the implicit order of (sub)objects to form an efficient representation of (possibly large) sets of objects. They thus avoid explicit enumeration of individual objects as done in the explicit objects lists. The following examples demonstrate the implicit list notation.

Note: the implicit list notation is used in the Python implementation of the grid service library in exactly the form given here.

### Selecting all indices

An implicit object list of all r-aligned edges:

```
((1,0) (0,0))
```

Object and subobject indices in the grid description start counting from 1, i.e. object no. 1 is the first object. The index 0 is special and denotes an undefined index. In this notation, it denotes all possible indices.

An implicit object list of the (z-aligned) boundary edges on the left boundary of the grid:

```
((0,1) (1,0))
```

The first entry of the index tuple denotes the first node in the r-space, the second entry denotes all edges in the z space. The implicit list denotes a total of 4 1d edges. Their implicit numbering is again given by iterating over all defining objects, lowest space first. The list therefore expands to

```
((0,1) (1,1))  
((0,1) (1,2))  
((0,1) (1,3))  
((0,1) (1,4))
```

### Selecting explicit lists of indices

An implicit object list of the (z-aligned) right and left boundary edges:

```
((0,1) ([1,6],0))
```

The first entry of the index tuple denotes a list of nodes in the r-space, more specifically the first and the last (=6th) node. The second entry denotes again all edges in the z space. The implicit list then denotes a total of 8 1d edges in the following order:

```
((0,1) (1,1))  
((0,1) (6,1))  
((0,1) (1,2))  
((0,1) (6,2))  
((0,1) (1,3))  
((0,1) (6,3))  
((0,1) (1,4))  
((0,1) (6,4))
```



### Selecting ranges of indices

An implicit object list of all 2d cells, except the cells on the left and right boundary.

```
((1,1) ((2,4),0))
```

The first entry of the index tuple denotes a range of edges in the r-space, more specifically the edges 2 to 4. The second entry of the index tuple denotes all four edges in the z-space. The implicit list then denotes a total of 12 2d cells in the following order:

```
((1,1) (2,1))
((1,1) (3,1))
((1,1) (4,1))
((1,1) (2,2))
((1,1) (3,2))
((1,1) (4,2))
((1,1) (2,3))
((1,1) (3,3))
((1,1) (4,3))
((1,1) (2,4))
((1,1) (3,4))
((1,1) (4,4))
```

All implementations of the grid service library define the constant `GRID_UNDEFINED=0` to specify an undefined index. Use of `GRID_UNDEFINED` instead of 0 is advised to increase the readability of the code. The following notations are therefore equivalent

```
((1,0) (0,0)) = ((1,0) (GRID_UNDEFINED,GRID_UNDEFINED))
((0,1) (1,0)) = ((0,1) (1,GRID_UNDEFINED))
```

#### 2.1.3.1.6 Subgrid examples

A subgrid is an ordered list of grid objects of a common dimension. The difference to object lists is that they can contain objects of different object classes.

The subgrid concept is central to storing data on grids. To store data, first a subgrid has to be defined. The objects in the grid have a fixed order, which then allows to unambiguously store the data associated with the objects in vectors.

Technically, a subgrid is an ordered list of object lists, of which every individual list is either explicit or implicit. The ordering of the objects in the subgrid is then directly given by the ordering of the object lists and the ordering of the grid objects therein.

#### Subgrid example

The following subgrid consists of all boundary edges of the 2d R,Z example grid #1, given as four implicit object lists.

```
((1,0) (0,1))    ! bottom edges
((0,1) (6,0))    ! right edges
((1,0) (0,5))    ! top edges
((0,1) (1,0))    ! left edges
```

Explicitly listing the objects in the order given by the subgrid gives:

```
1: ((1,0) (1,1))    ! bottom edges
2: ((1,0) (2,1))
3: ((1,0) (3,1))
4: ((1,0) (4,1))
```

```
5: ((1,0) (5,1))
6: ((0,1) (6,1))    ! right edges
7: ((0,1) (6,2))
8: ((0,1) (6,3))
9: ((0,1) (6,4))
10: ((1,0) (1,5))  ! top edges
11: ((1,0) (2,5))
12: ((1,0) (3,5))
13: ((1,0) (4,5))
14: ((1,0) (5,5))
15: ((0,1) (1,1))  ! left edges
16: ((0,1) (1,2))
17: ((0,1) (1,3))
18: ((0,1) (1,4))
```

The number at the beginning of each line is the *local index* of the object, where local means locally in the subgrid. Note that, again, counting starts at 1.

---

last update: 2012-07-18 by coster

### 2.1.3.2 Grid service library

#### 2.1.3.2.1 Using the grid service library

##### 2.1.3.2.2 Setting up the environment

The grid service library requires the ITM data structure version 4.09a (or later). Before using it you have to make sure your environment is set up properly. The following section assumes you are using csh or tcsh on the Gateway.

First, your environment variables have to be set up properly. To check them do

```
echo $TOKAMAKNAME
```

It should return

```
test
```

Also do

```
echo $DATAVERSION
```

It should return

```
4.09a
```

(or some higher version number). If either of them returns something different, run

```
source $ITMSCRIPTDIR/ITMv1 kepler test 4.09a > /dev/null
```

and check the variables again.

Second, you have to ensure your data tree is set up properly. Do

```
ls ~/public/itmdb/itm_trees/$TOKAMAKNAME/$DATAVERSION/mdsplus/0/
```

If you get something like “No such file or directory”, you have to set up the tree first by running

```
$ITMSCRIPTDIR/create_user_itm_dir $TOKAMAKNAME $DATAVERSION
```

and then do the previous check again.

### 2.1.3.2.3 Checking out and testing the grid service library

To be able to get the code of the grid service library, you have to be a member of the ITM General Grid description (itmggd) project (you can apply for this [here](#)<sup>102</sup>).

Once you are a member, you can check out the code by

```
svn co https://gforge6.eufus.eu/svn/itmggd itm-grid
```

Then you can run the unit tests for the grid service library by

```
cd itm-grid  
source setup.csh
```

This will setup environment variables (especially OBJECTCODE) and aliases. Then do

```
testgrid setup
```

This will set up the build system for the individual languages. It will also build and execute a Fortran program that writes a simple 2d example grid stored in an edge CPO into shot 1, run 1.

To actually run the tests do

```
testgrid all
```

This will go through the implementations in the different languages (F90, Python, ...) and run unit tests for every one of them. If all goes well, it should end with the message

```
Test all implementations: OK
```

If this is not the case, something is broken and must be fixed.

### 2.1.3.2.4 Example applications (outdated)

Note: this is a bit outdated. [Have a look here](#).<sup>103</sup>

### 2.1.3.2.5 Plotting 3d wall geometry with VisIt (temporary solution, not required any more)

This example plots a 3d wall representation stored in the edge CPO (in the future, this information will be stored in the wall CPO). The example data used here is generated by a preprocessing tool which is part of the ASCOT code.

1. Check out the grid service library (See above. You don't necessarily have to run the tests)
2. Change to the python/ directory and setup the environment:

```
cd itm-grid/python/; source setup.csh
```

<sup>102</sup><https://gforge6.eufus.eu/project/itmggd/>

<sup>103</sup>[https://portal.eufus.eu/documentation/ITM/doxygen/imp3/grid\\_service\\_library/python/ualconnector.html](https://portal.eufus.eu/documentation/ITM/doxygen/imp3/grid_service_library/python/ualconnector.html)

3. Edit the file itm/examples/write\_xdmf.py to use the right shot number
4. Run it (still in the python/ directory of the service library) with

```
python26 itm/examples/write_xdmf.py
```

This will create two files: wall.xmf and wall.h5

5. Start visit with

```
visit23
```

and open the wall.xmf file. Then select Plot-¿Mesh-¿Triangle and click on the "Draw" button.

### 2.1.3.2.6 Using UALConnector to visualize CPOs using the general grid description

UALConnector allows you to bring data directly from the UAL into VisIt.

1. Check out the grid service library (See above. You don't necessarily have to run the tests)
2. Run UALConnector. Examples:

```
./itm-grid/ualconnector -s 9001,1,1.0 -c edge -u klingshi -t test -v 4.09a
```

```
./itm-grid/ualconnector -s 15,1,1.0 -c edge -u klingshi -t test -v 4.09a
```

3. When finished, close VisIt and terminate the UALConnector by typing 'quit'.

You don't even have to check out the service library. UALConnector is made available at

```
~klingshi/bin/itm-grid/ualconnector
```

, i.e.

```
~klingshi/bin/itm-grid/ualconnector -s 9001,1,1.0 -c edge -u klingshi -t test -v 4.09a
```

```
~klingshi/bin/itm-grid/ualconnector -s 15,1,1.0 -c edge -u klingshi -t test -v 4.09a
```

---

last update: 2019-01-31 by g2dpc

### 2.1.3.3 IMP3 General Grid Description and Grid Service Library - Tutorial

#### 2.1.3.3.1 1. Setup your environment

```
echo $DATAVERSION  
echo $TOKAMAKNAME
```

should give "4.09a" and "test". If not, run

```
source $ITMSCRIPTDIR/ITMv1 kepler test 4.09a > /dev/null
```

To copy the tutorial files:

```
cp -r ~klingshi/bin/itm-grid ~/public
```

Switch to the right version of the PGI compiler:

```
module unload openmpi/1.3.2/pgi-8.0 compilers/pgi/8.0  
module load compilers/pgi/10.2 openmpi/1.4.3/pgi-10.2
```

To set up the environment:

```
cd $HOME/public/itm-grid/f90  
source setup.csh
```

### 2.1.3.3.2 2. Compile & run examples

**2d structured grid write example** Source file is at:

```
src/examples/itm_grid_example1_2dstructured_servicelibrary.f90
```

Compile:

```
make depend  
make $OBJECTCODE/itm_grid_example1_2dstructured_servicelibrary.exe
```

Run:

```
$OBJECTCODE/itm_grid_example1_2dstructured_servicelibrary.exe
```

**2d structured grid read example** Source file is at:

```
src/examples/itm_grid_example1_2dstructured_read.f90
```

Compile:

```
make $OBJECTCODE/itm_grid_example1_2dstructured_read.exe
```

Run:

```
$OBJECTCODE/itm_grid_example1_2dstructured_read.exe
```

### 2.1.3.3.3 3. Visualize

To visualize the data written by the example program

```
~klingshi/bin/itm-grid/ualconnector -s 9001,1,0.0 -c edge
```

To visualize a more complex dataset

```
~klingshi/bin/itm-grid/ualconnector -s 17151,899,1000.0 -c edge -u klingshi -t aug
```

Combining data from two CPOs:

```
~/klingshi/bin/itm-grid/uallconnector -s 17151,898,1000.0 -c edge -s 17151,899,1000.0 -c edge -u klingsh
```

---

last update: 2019-01-31 by g2dpc

### 3 Core-Edge Coupled Transport Simulations

The goal of this work is to implement a direct scheme for coupled core-edge transport simulations. For the core the ETS, the core impurity code and the core neutrals code will be used. For the edge SOLPS-B2 will be used. At the end of 2011, a manual coupling procedure had been implemented, as described in [this document](#)<sup>104</sup>.

#### 3.1 Activities 2012

In 2012 work is ongoing to automate this procedure. The following steps have occurred:

- Modified the main part of SOLPS-B2 to introduce
  - "b2mn\_init", a routine to initialize SOLPS-B2
  - "b2mn\_step", a routine that can be called repeatedly to advance the edge plasma simulation
  - "b2mn\_fin", a routine to finalize SOLPS-B2

These changes involved splitting "b2mndr" into "b2mndr\_0", "b2mndr\_1" and "b2mndr\_2"

- The introduction of a new routine "b2mn\_ets" which is called with input CPOs "coreprof", "coreimpur" and "coreneutrals", and returns output CPOs "coreprof", "coreimpur", "coreneutrals" and "edge". The routine:
  - calls "b2mn\_init" on the first call
  - based on the input core CPOs, alters the SOLPS-B2 boundary conditions before calling "b2mn\_step", and then revises the boundary conditions in the output core CPOs
  - calls "b2mn\_fin" at the end of the calculation
- Changes to many of the input/output routines in SOLPS-B2 so that
  - input data is looked for in the present directory, it's parent, or the sibling "baserun" directory
  - output files that are already present no longer cause the code to stop with an error message

The result of this is that SOLPS-B2 no longer needs to be run by the previously required Makefile which copied input files into a run directory.

- The modification of the ETS Fortran workflow code "eq\_ets\_test" to include calls to "b2mn\_ets".
- The Fortran workflow runs coupled calculations, and verification runs are currently in progress.
  - A problem in the UAL which causes the message "No more slots available for arrays of structures" and the program then to hang has been identified
  - Fixes in the 4.09a ETS were back-ported from 4.10a, and problems with impurity transport coefficients identified and fixed. There may still be a problem with impurity energy losses.
  - D and D+C+Ar+Ne+He runs are both being done

---

last update: 2013-06-18 by denka

### 4 IMP3 DATA (shots available from IMP3 simulations)

Shots stored in the private data base of IMP3 members are generally not validated. Please do not publish without contacting the data provider.

---

<sup>104</sup>[https://www.efda-itm.eu/ITM/imports/imp3/public/core\\_edge\\_coupling\\_via\\_manual\\_intervention.pdf](https://www.efda-itm.eu/ITM/imports/imp3/public/core_edge_coupling_via_manual_intervention.pdf)

## 4.1 TCV shots

Following simulations are available for TCV machine:

### 4.1.1 TCV 4.10a shots

Following simulations are available for TCV machine in UAL 4.10a:

The shots can be accessed from the private data bases of IMP3 contributors by selecting the TOKAMAKNAME = *tcv* and the UAL version = *4.10a*

*There are two ways to copy the data to your local data base:*

You can copy them directly from the data provider data base as it is mentioned in the table:

```
cp ~
\textit{\textbf{user
}}/public/itmdb/itm_tree/tcv/4.10a/mdsplus/0/euitm_
\textit{\textbf{ShotRun
}}.* $MDSPLUS_TREE_BASE_0/.
```

You can check out the data from svn:

```
svn co --force https://gforge6.eufus.eu/svn/keplerworkflows/trunk/4.10a/imp3/DATA/TCV $(MDSPLUS_TREE_B
```

#### 4.1.1.1 ETS interpretative runs

These are ETS simulations, in which the evolution of the main plasma profiles was disabled (usually only EQUILIBRIUM+Current equation were simulated).

Nonetheless, these runs should provide the complete consistent set of data (although some signals might be filled with 0.0) and might be very convenient for testing purposes. Especially, if you need steady state test bed shot.

Shot	Run	CPOs	user	generated with	description
------	-----	------	------	----------------	-------------

#### 4.1.1.2 ETS predictive runs

These are ETS simulations, in which some physics study was done.

Short description of the run configuration is available in the table below. Nonetheless, we strongly advise you to contact the run author for the details.

Shot	Run	CPOs	user	generated with	description
38012	2	equilibrium coreprof coresource coretransp coreimpur	denka	ETS/SPIDER/BGB/GAUSS	ETS predictive ad hoc run [time: <i>0.1-1.1</i> ; composition: <i>e,D</i> ; ip= <i>0.65MA</i> Bt= <i>1.5T</i> ; predictive equations: <i>Jpar,Ti,Te</i> ; sources: <i>GAUSS [0.6 MW to eI]</i> ; Transport: <i>BGB</i> ; Impurity: <i>OFF</i> ]
38012	3	equilibrium coreprof coresource coretransp coreimpur	denka	ETS/CHEASE/BGB/GAUSS/IMPURITIES	ETS predictive ad hoc run [time: <i>0.1-1.1</i> ; composition: <i>e,D,C</i> ; ip= <i>0.65MA</i> Bt= <i>1.5T</i> ; predictive equations: <i>Jpar,Ti,Te,nz</i> ; sources: <i>GAUSS [0.6 MW to eI]</i> ; Transport: <i>BGB</i> ; Impurity: <i>ON</i> ]

---

last update: 2019-01-31 by g2dpc

## 4.2 MAST shots

Following simulations are available for MAST machine

### 4.2.1 MAST 4.10a shots

Following simulations are available for MAST machine in UAL 4.10a:

The shots can be accessed from the private data bases of IMP3 contributors by selecting the TOKAMAKNAME = *mast* and the UAL version = *4.10a*

*There are two ways to copy the data to your local data base:*

You can copy them directly from the data provider data base as it is mentioned in the table:

```
cp ~
\textit{\textbf{user
}}/public/itmdb/itm_tree/mast/4.10a/mdsplus/0/euitm_
\textit{\textbf{ShotRun
}}.* $MDSPLUS_TREE_BASE_0/.
```

You can check out the data from svn:

```
svn co --force https://gforge6.eufus.eu/svn/keplerworkflows/trunk/4.10a/imp3/DATA/MAST $(MDSPLUS_TREE_
```

#### 4.2.1.1 ETS input shots

These are copies of shots, generated originally with other codes or containing the experimental data, which were migrated to the ITM-Gateway machine with the tools like [Exp2ITM](#)<sup>105</sup>

These are used to start the ETS run and, therefore, might not provide the complete set of consistent data.

Shot	Run	CPOs	user	generated with	description
26864	1	equilibrium coreprof coretransp coresource coreimpur coreneutrals	denka	TRANSP	ETS input shot [time: 40.153-40.428 ; composition: <i>e,D,C,H(fast)</i> ; ip= 0.8MA Bt= 0.48T ; upward shifted plasma
28282	1	equilibrium coreprof coretransp coresource coreimpur coreneutrals	denka	TRANSP	ETS input shot [time: 40.203-40.40.353 ; composition: <i>e,D,C,H(fast)</i> ; ip= 0.8MA Bt= 0.48T ; downward shifted plasma

#### 4.2.1.2 ETS interpretative runs

These are ETS simulations, in which the evolution of the main plasma profiles was disabled (usually only EQUILIBRIUM+Current equation were simulated).

Nonetheless, these runs should provide the complete consistent set of data (although some signals might be filled with 0.0) and might be very convenient for testing purposes. Especially, if you need steady state test bed shot.

Shot	Run	CPOs	user	generated with	description
26864	2	equilibrium coreprof coretransp coresource coreimpur coreneutrals	denka	ETS/CHEASE	ETS interpretative shot (single slice) [time: 40.27 ; composition: <i>e,D,C,H(fast)</i> ; ip= 0.8MA Bt= 0.48T ; upward shifted plasma
28282	2	equilibrium coreprof coretransp coresource coreimpur coreneutrals	denka	ETS/CHEASE	ETS interpretative shot (single slice) [time: 40.27 ; composition: <i>e,D,C,H(fast)</i> ; ip= 0.8MA Bt= 0.48T ; downward shifted plasma

<sup>105</sup>[https://www.eufus.eu/documentation/ITM/html/isip\\_databases.html#isip\\_databases\\_2](https://www.eufus.eu/documentation/ITM/html/isip_databases.html#isip_databases_2)



### 4.2.1.3 ETS predictive runs

These are ETS simulations, in which some physics study was done.

Short description of the run configuration is available in the table below. Nonetheless, we strongly advise you to contact the run author for the details.

Shot	Run	CPOs	user	generated with	description
26864	3	equilibrium coreprof coretransp coresource coreimpur coreneutrals	denka	ETS/CHEASE/BGB	ETS predictive run [time: 40.27-40.32 ; composition: $e,D,C,H(fast)$ ; ip= 0.8MA Bt= 0.48T ; upward shifted plasma; predictive equations: $Jpar,Te,Ti$ ; $ni$ evolution from input TRANSP shot; sources: <i>from DataBase</i> ; Transport: <i>BgB</i> ; Impurity: <i>INTERPRETATIVE</i> ]
28282	3	equilibrium coreprof coretransp coresource coreimpur coreneutrals	denka	ETS/CHEASE/BGB	ETS predictive run [time: 40.27-40.32 ; composition: $e,D,C,H(fast)$ ; ip= 0.8MA Bt= 0.48T ; downward shifted plasma; predictive equations: $Jpar,Te,Ti$ ; $ni$ evolution from input TRANSP shot; sources: <i>from DataBase</i> ; Transport: <i>BgB</i> ; Impurity: <i>INTERPRETATIVE</i> ]

## 4.3 AUG shots

Following simulations are available for ASDEX-Upgrade machine:

### 4.3.1 AUG 4.10a shots

Following simulations are available for AUG machine in UAL 4.10a:

The shots can be accessed from the private data bases of IMP3 contributors by selecting the TOKAMAKNAME = *aug* and the UAL version = *4.10a*

*There are two ways to copy the data to your local data base:*

You can copy them directly from the data provider data base as it is mentioned in the table:

```
cp ~
\textit{\textbf{user}}
}/public/itmdb/itm_tree/aug/4.10a/mdsplus/0/euitm_
\textit{\textbf{ShotRun}}
}.* $MDSPLUS_TREE_BASE_0/.
```

You can check out the data from svn:

```
svn co --force https://gforge6.eufus.eu/svn/keplerworkflows/trunk/4.10a/imp3/DATA/AUG $(MDSPLUS_TREE_B
```

#### 4.3.1.1 ETS input shots

These are copies of shots, generated originally with other codes or containing the experimental data, which were migrated to the ITM-Gateway machine with the tools like [Exp2ITM](#)<sup>106</sup>

These are used to start the ETS run and, therefore, might not provide the complete set of consistent data.

Shot	Run	CPOs	user	generated with	description
28906	1	equilibrium coreprof coretransp coresource coreimpur coreneutrals	denka	TRANSP	ETS input shot [time: 41.001-45.0 ; composition: $e,D,C$ ; ip= 0.508MA Bt= 2.48T ; predictive equations: $Jpar,ni,Ti,Te,nz$ ; only fully-stripped C is present]

<sup>106</sup>[https://www.eufus.eu/documentation/ITM/html/isip\\_databases.html#isip\\_databases\\_2](https://www.eufus.eu/documentation/ITM/html/isip_databases.html#isip_databases_2)

### 4.3.1.2 ETS interpretative runs

These are ETS simulations, in which the evolution of the main plasma profiles was disabled (usually only EQUILIBRIUM+Current equation were simulated). Nonetheless, these runs should provide the complete consistent set of data (although some signals might be filled with 0.0) and might be very convenient for testing purposes. Especially, if you need steady state test bed shot.

Shot	Run	CPOs	user	generated with	description
28906	4	equilibrium coreprof coresource coretransp coreimpur	denka	ETS/CHEASE	ETS interpretative run [time: 42.0-43.0 ; composition: <i>e,D,C</i> ; ip= 0.51MA Bt= 2.48T ; predictive equations: <i>Jpar</i> ; sources: OFF ; Transport: OFF ; Impurity: INTERPRETATIVE ]
29072	3	equilibrium coreprof coresource coretransp	denka	ETS/CHEASE	ETS interpretative ad hoc run [time: 0.1-1.0 ; composition: <i>e,D</i> ; ip= 0.51MA Bt= 2.49T ; predictive equations: <i>Jpar</i> ; sources: OFF ; Transport: OFF ]

### 4.3.1.3 ETS predictive runs

These are ETS simulations, in which some physics study was done. Short description of the run configuration is available in the table below. Nonetheless, we strongly advise you to contact the run author for the details.

Shot	Run	CPOs	user	generated with	description
28906	5	equilibrium coreprof coresource coretransp coreimpur	denka	ETS/CHEASE/BgB	ETS predictive run [time: 42.0-43.0 ; composition: <i>e,D,C</i> ; ip= 0.51MA Bt= 2.48T ; predictive equations: <i>Jpar,ni,Te,Ti</i> ; sources: from DataBase ; Transport: BgB ; Impurity: INTERPRETATIVE ]
28906	6	equilibrium coreprof coresource coretransp coreimpur	denka	ETS/CHEASE/BgB/IMPURITY	ETS predictive run [time: 43.0-44.0 ; composition: <i>e,D,C</i> ; ip= 0.51MA Bt= 2.48T ; predictive equations: <i>Jpar,ni,Te,Ti,nz</i> ; sources: from DataBase ; Transport: BgB ; Impurity: ON ]
28906	7	equilibrium coreprof coresource coretransp	denka	ETS/CHEASE/BgB	ETS predictive run [time: 42.0-43.0 ; composition: <i>e,D</i> ; ip= 0.51MA Bt= 2.48T ; predictive equations: <i>Jpar,ni,Te,Ti</i> ; sources: from DataBase ; Transport: BgB ; Impurity: OFF ]
28906	8	equilibrium coreprof coresource coretransp	denka	ETS/SPIDER/BgB	ETS predictive run [time: 42.0-43.0 ; composition: <i>e,D</i> ; ip= 0.51MA Bt= 2.48T ; predictive equations: <i>Jpar,ni,Te,Ti</i> ; sources: from DataBase ; Transport: BgB ; Impurity: OFF ]

### 4.3.2 AUG 4.09a shots

Following simulations are available for ASDEX-Upgrade machine in UAL 4.09a:

The shots can be accessed by setting

<pre>TOKAMAKNAME = aug % \newline % UAL = 4.09a</pre>
-------------------------------------------------------

The following table lists the shot by shot number and run number together with the list of stored CPOs<sup>107</sup>, the user name of the data base, and a short description.

Shot	Run	CPOs	user	generated with	description
17151	0	equilibrium limiter	coster	aug.eq.py	equilibrium and limiter derived from AUG shotfile using aug.eq.py
17151	13	equilibrium coreprof coresource coretransp	coster	ETS with HELENA	HELENA with NP=9

<sup>107</sup>[https://www.efda-itm.eu/ITM/html/itm\\_glossary.html#g\\_cpo](https://www.efda-itm.eu/ITM/html/itm_glossary.html#g_cpo)

Shot	Run	CPOs	user	generated with	description
17151	14	equilibrium coreprof coresource coretransp	coster	ETS with HELENA	HELENA with NP=17
17151	15	equilibrium coreprof coresource coretransp	coster	ETS with HELENA	HELENA with NP=33
17151	16	equilibrium coreprof coresource coretransp	coster	ETS with HELENA	HELENA with NP=65
17151	17	equilibrium coreprof coresource coretransp	coster	ETS with HELENA	HELENA with NP=129
17151	18	equilibrium coreprof coresource coretransp	coster	ETS with HELENA	HELENA with NP=257
17151	400 - 407	equilibrium coreprof coresource coretransp coreimpur	coster	ETS with HELENA	ETS runs for core-edge coupling (D)
17151	500 - 505	equilibrium coreprof coresource coretransp coreimpur	coster	ETS with HELENA	ETS runs for core-edge coupling (D+He + C), NP=9
17151	700 - 702	equilibrium coreprof coresource coretransp coreimpur	coster	ETS with HELENA	ETS runs for core-edge coupling (D+He + C), NP=17
17151	800 - 802	equilibrium coreprof coresource coretransp coreimpur	coster	ETS with HELENA	ETS runs for core-edge coupling (D+He + C), NP=33
17151	20400 - 20407	edge	coster	SOLPS	end states of the SOLPS runs for core-edge coupling (D)
17151	20500 - 20505	edge	coster	SOLPS	end states of the SOLPS runs for core-edge coupling (D+C+He)
17151	20700 - 20702	edge	coster	SOLPS	end states of the SOLPS runs for core-edge coupling (D+C+He)
17151	20800 - 20802	edge	coster	SOLPS	end states of the SOLPS runs for core-edge coupling (D+C+He)

---

last update: 2013-07-31 by denka

## 4.4 JET shots

Following simulations are available for JET machine:

### 4.4.1 JET 4.10a shots

Following simulations are available for JET machine in UAL 4.10a:

The shots can be accessed from the private data bases of IMP3 contributors by selecting the TOKAMAKNAME = *jet* and the UAL version = **4.10a**

*There are two ways to copy the data to your local data base:*

You can copy them directly from the data provider data base as it is mentioned in the table:

```
cp ~
\textit{\textbf{user
}}/public/itmdb/itm_tree/jet/4.10a/mdsplus/0/euitm_
\textit{\textbf{ShotRun
}}.* $MDSPLUS_TREE_BASE_0/.
```

You can check out the data from svn:

```
svn co --force https://gforge6.eufus.eu/svn/keplerworkflows/trunk/4.10a/imp3/DATA/JET $(MDSPLUS_TREE_BASE_0)
```

#### 4.4.1.1 ETS input shots

These are copies of shots, generated originally with other codes or containing the experimental data, which were migrated to the ITM-Gateway machine with the tools like [Exp2ITM](#)<sup>108</sup>

These are used to start the ETS run and, therefore, might not provide the complete set of consistent data.

Shot	Run	CPOs	user	generated with	description
71827	1	equilibrium coreprof	denka	JETTO/EFIT	ETS input shot used to test inputs from experimental profiles
77922	2	equilibrium coreprof	denka	JETTO/EFIT	ETS input shot used to test inputs from experimental profiles
81856	1	equilibrium coreprof	denka	JETTO/EFIT	ETS input shot used to test inputs from experimental profiles
82794	1	equilibrium coreprof	denka	JETTO/EFIT	ETS input shot used to test inputs from experimental profiles

#### 4.4.1.2 ETS interpretative runs

These are ETS simulations, in which the evolution of the main plasma profiles was disabled (usually only EQUILIBRIUM+Current equation were simulated).

Nonetheless, these runs should provide the complete consistent set of data (although some signals might be filled with 0.0) and might be very convenient for testing purposes. Especially, if you need steady state test bed shot.

Shot	Run	CPOs	user	generated with	description
77922	4	equilibrium coreprof coresource coretransp	denka	ETS/EMEQ	ETS interpretative run [time: 48.01-49.01 ; composition: $e,D$ ; ip= 1,7MA Bt= 2.3T, ; predictive equations: $Jpar$ ; sources: <i>OFF</i> ; Transport: <i>OFF</i> ]
77922	5	equilibrium coreprof coresource coretransp	denka	ETS/SPIDER	ETS interpretative run [time: 48.01-49.01 ; composition: $e,D$ ; ip= 1,7MA Bt= 2.3T, ; predictive equations: $Jpar$ ; sources: <i>OFF</i> ; Transport: <i>OFF</i> ]
77922	6	equilibrium coreprof coresource coretransp	denka	ETS/CHEASE	ETS interpretative run [time: 48.01-49.01 ; composition: $e,D$ ; ip= 1,7MA Bt= 2.3T, ; predictive equations: $Jpar$ ; sources: <i>OFF</i> ; Transport: <i>OFF</i> ]

#### 4.4.1.3 ETS predictive runs

These are ETS simulations, in which some physics study was done.

Short description of the run configuration is available in the table below. Nonetheless, we strongly advise you to contact the run author for the details.

<sup>108</sup>[https://www.eufus.eu/documentation/ITM/html/isip\\_databases.html#isip\\_databases\\_2](https://www.eufus.eu/documentation/ITM/html/isip_databases.html#isip_databases_2)

Shot	Run	CPOs	user	generated with	description
76791	11	equilibrium coreprof coresource coretransp coreimpur coreneutrals	denka	ETS/CHEASE/BGB/NTMETS	ETS run with NTM [time: 49.9-50.9 ; composition: $e,D$ ; ip= 1.6MA Bt= 2.0T ; predictive equations: $Jpar,ni,Ti,Te$ ; sources: NBI[10MW] ; Transport: BGB+BG+MHD ]
77922	12	equilibrium coreprof coresource coretransp coreimpur coreneutrals	denka	ETS/CHEASE/GEM/BBNBI/NEUTRALS	ETS run with GEM [time: 48.04-48.22 ; composition: $e,D$ ; ip= 1.7MA Bt= 2.3T ; predictive equations: $Jpar,ni,Ti,Te,n0$ ; sources: NBI[10MW], Neutrals[2*10 1/s] ; Transport: GEM(256 cores)+BG ]
81856	4	equilibrium coreprof coresource coretransp coreimpur coreneutrals	denka	ETS/CEASE/BGB/BBNBI /IMPURITY/NEUTRALS	ETS run with impurity [time: 52.2-53.2 ; composition: $e,D,Be,W$ ; ip= 2.45MA Bt= 2.56T ; predictive equations: $Jpar,ni,Ti,Te,n0,nZ$ ; sources: NBI[10MW] ; Transport: BGB+BG ]
81856	5	equilibrium coreprof coresource coretransp coreimpur coreneutrals	denka	ETS/CEASE/BGB/BBNBI /IMPURITY/NEUTRALS Mgnetic axis: Zmag= +15 cm	ETS run with impurity [time: 52.2-53.2 ; composition: $e,D,Be,W$ ; ip= 2.45MA Bt= 2.56T ; predictive equations: $Jpar,ni,Ti,Te,n0,nZ$ ; sources: NBI[10MW] ; Transport: BGB+BG ]
81856	6	equilibrium coreprof coresource coretransp coreimpur coreneutrals	denka	ETS/SPIDER/BGB/Gauss /IMPURITY/NEUTRALS Mgnetic axis: Zmag= +15 cm	ETS run with impurity [time: 52.2-53.2 ; composition: $e,D,Be,W$ ; ip= 2.45MA Bt= 2.56T ; predictive equations: $Jpar,ni,Ti,Te,n0,nZ$ ; sources: Gauss[10MW] ; Transport: BGB+BG ]

last update: 2019-01-31 by g2dpc

#### 4.4.2 JET 4.09a shots

Following simulations are available for JET machine in UAL 4.09a:

The shots can be accessed by setting

```
TOKAMAKNAME = jet
%
\newline
%
UAL = 4.09a
```

The following table lists the shot by shot number and run number together with the list of stored CPOs<sup>109</sup>, the user name of the data base, and a short description.

Shot	Run	CPOs	user	generated with	description
71827	21	equilibrium coreprof coresource coretransp	coster	ETS with EMEQ	Start from a JET case (no impurities, psi equation only); PSI, BR, BZ, BPHI (R,Z) from equilibrium_augmenter
71827	22	equilibrium coreprof coresource coretransp	coster	ETS with EMEQ	Start from a JET case (no impurities, psi and density equations only); PSI, BR, BZ, BPHI (R,Z) from equilibrium_augmenter
71827	23	equilibrium coreprof coresource coretransp coreimpur	coster	ETS with EMEQ	Start from a JET case (with C as an impurity, psi and density equations only); PSI, BR, BZ, BPHI (R,Z) from equilibrium_augmenter

<sup>109</sup>[https://www.efda-itm.eu/ITM/html/itm\\_glossary.html#g\\_cpo](https://www.efda-itm.eu/ITM/html/itm_glossary.html#g_cpo)

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last update: 2013-06-27 by dpc

### 4.4.3 JET 4.08b shots

Following simulations are available for JET machine in UAL 4.08b:

The shots can be accessed by setting

```
TOKAMAKNAME = jet
%
\newline
%
UAL = 4.08b
```

Shot	Run	CPOs	user	generated with	description
71827	21	equilibrium coreprof coresource coretransp	coster	ETS with EMEQ	Start from a JET case (no impurities, psi equation only); PSI, BR, BZ, BPHI (R,Z) from equilibrium.augmenter
71827	22	equilibrium coreprof coresource coretransp	coster	ETS with EMEQ	Start from a JET case (no impurities, psi and density equations only); PSI, BR, BZ, BPHI (R,Z) from equilibrium.augmenter
71827	23	equilibrium coreprof coresource coretransp coreimpur	coster	ETS with EMEQ	Start from a JET case (with C as an impurity, psi and density equations only); PSI, BR, BZ, BPHI (R,Z) from equilibrium.augmenter
78092	10003	equilibrium	coster	test.equilibrium.augmenter	PSI, BR, BZ, BPHI (R,Z) from equilibrium.augmenter added to konz/78092/3

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last update: 2014-11-12 by dpc

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last update: 2013-06-27 by denka

## 4.5 ITER shots

Following simulations are available for ITER machine:

### 4.5.1 ITER 4.10a shots

Following simulations are available for ITER machine in UAL 4.10a:

The shots can be accessed from the private data bases of IMP3 contributors by selecting the TOKAMAKNAME = *iter* and the UAL version = *4.10a*

*There are two ways to copy the data to your local data base:*

You can copy them directly from the data provider data base as it is mentioned in the table:

```
cp ~
\textit{\textbf{user
}}/public/itmdb/itm_tree/iter/4.10a/mdsplus/0/euitm_
\textit{\textbf{ShotRun
}}.* $MDSPLUS_TREE_BASE_0/.
```

You can check out the data from svn:

```
svn co --force https://gforge6.eufus.eu/svn/keplerworkflows/trunk/4.10a/imp3/DATA/ITER $(MDSPLUS_TREE_
```

#### 4.5.1.1 ETS interpretative runs

These are ETS simulations, in which the evolution of the main plasma profiles was disabled (usually only EQUILIBRIUM+Current equation were simulated).  
Nonetheless, these runs should provide the complete consistent set of data (although some signals might be filled with 0.0) and might be very convenient for testing purposes. Especially, if you need steady state test bed shot.

Shot	Run	CPOs	user	generated with	description
35441	5	equilibrium coreprof coresource coretransp	denka	ETS/CHEASE	ETS interpretative run [time: 1.0-2.0 ; composition: e,D,T,He ; ip= 15MA Bt= 6.2T, ; predictive equations: <i>Jpar</i> ; sources: OFF ; Transport: OFF ]
35441	6	equilibrium coreprof coresource coretransp coreimpur	denka	ETS/CHEASE	ETS interpretative run [time: 0.1-1.0 ; composition: e,D,T,He,Be,Ne,W ; ip= 15MA Bt= 6.2T, ; predictive equations: <i>Jpar</i> ; sources: OFF ; Transport: OFF ; Impurity: <i>coronal</i> ]

#### 4.5.1.2 ETS predictive runs

These are ETS simulations, in which some physics study was done.  
Short description of the run configuration is available in the table below. Nonetheless, we strongly advise you to contact the run author for the details.

Shot	Run	CPOs	user	generated with	description
35441	8	equilibrium coreprof coresource coretransp coreimpur	denka	ETS/CHEASE/BGB/BBNBI	ETS predictive run [time: 1.0-2.0 ; composition: e,D,T,He,Be,Ne,W ; ip= 15MA Bt= 6.2T, ; predictive equations: <i>Jpar,ni,Ti,Te</i> ; sources: NBI{60MW} ; Transport: BGB ; Impurity: <i>coronal</i> ]

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last update: 2019-01-31 by g2dpc

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last update: 2013-07-19 by denka

## 4.6 DEMO1 shots

There are following shots available for DEMO1 [puls] machine  
**!!! PLEASE note that these date are not the official release of DEMO design. It is just a test ITM copy.**

### 4.6.1 DEMO1 4.10a shots

Following simulations are available for DEMO1 machine in UAL 4.10a:

**!!! DATA are based on the ITM test release and can not be used for the scientific publications about DEMO**

The shots can be accessed from the private data bases of IMP3 contributors by selecting the TOKAMAKNAME = *demo1* and the UAL version = **4.10a**

**There are two ways to copy the data to your local data base:**

You can copy them directly from the data provider data base as it is mentioned in the table:

```
cp ~
\textit{\textbf{user
}}/public/itmdb/itm_tree/demo1/4.10a/mdsplus/0/euitm_
\textit{\textbf{ShotRun
}}.* $MDSPLUS_TREE_BASE_0/.
```

You can check out the data from svn:

```
svn co --force https://gforge6.eufus.eu/svn/keplerworkflows/trunk/4.10a/imp3/DATA/DEMO1 $(MDSPLUS_TREE
```

#### 4.6.1.1 ETS input shots

These are copies of shots, generated originally with other codes or containing the experimental data, which were migrated to the ITM-Gateway machine with the tools like [Exp2ITM](#)<sup>110</sup>  
 These are used to start the ETS run and, therefore, might not provide the complete set of consistent data.

Shot	Run	CPOs	user	generated with	description
1	1	equilibrium coreprof	denka	configured manually	ETS input shot, <i>peaked density profile</i> [time: 0.0 ; composition: e,D,T ; ip= 16MA Bt= 6.791T ; plasma boundary is prescribed from earlier FBE simulations / very shaped cross-section - difficult for equilibrium solvers to work with]
1	2	equilibrium coreprof	denka	configured manually	ETS input shot, <i>peaked density profile</i> [time: 0.0 ; composition: e,D,T ; ip= 16MA Bt= 6.791T ; plasma boundary is defined analitically]
1	11	equilibrium coreprof	denka	configured manually	ETS input shot, <i>peaked density profile</i> [time: 0.0 ; composition: e,D,T ; ip= 16MA Bt= 6.791T ; slightly smoothed boundary compared to the run 1]
2	11	equilibrium coreprof	denka	configured manually	ETS input shot, <i>flat density profile</i> [time: 0.0 ; composition: e,D,T ; ip= 16MA Bt= 6.791T ; slightly smoothed boundary compared to the run 1]

#### 4.6.1.2 ETS predictive runs

These are ETS simulations, in which some physics study was done.  
 Short description of the run configuration is available in the table below. Nonetheless, we strongly advise you to contact the run author for the details.

Shot	Run	CPOs	user	generated with	description
1	3	equilibrium coreprof coresource coretransp	denka	ETS/BGB/ETB/GAUSS	ETS predictive ad hoc run / <i>peaked density profile / shaped boundary</i> [time: 0.1-1.0 ; composition: e,D,T ; ip= 16MA Bt= 6.791T ; predictive equations: Jpar,Ti,Te ; sources: GAUSS [10MW to el / 20MW to D / 20 MW to T] ; Transport: BGB+ETB(at 0.97) ; Impurity: OFF ]
1	4	equilibrium coreprof coresource coretransp	denka	ETS/BGB/ETB/GAUSS	ETS predictive ad hoc run / <i>peaked density profile / analytical boundary</i> [time: 0.0-1.0 ; composition: e,D,T ; ip= 16MA Bt= 6.791T ; predictive equations: Jpar,Ti,Te ; sources: GAUSS [10MW to el / 20MW to D / 20 MW to T] ; Transport: BGB+ETB(at 0.97) ; Impurity: OFF ]
1	12	equilibrium coreprof coresource coretransp	denka	ETS/CHEASE/BGB/ETB/GAUSS	ETS predictive ad hoc run / <i>peaked density profile / smoothed boundary</i> [time: 0.0-1.0 ; composition: e,D,T ; ip= 16MA Bt= 6.791T ; predictive equations: Jpar,Ti,Te ; sources: GAUSS [10MW to el / 20MW to D / 20 MW to T] ; Transport: BGB+ETB(at 0.97) ; Impurity: OFF ]
1	13	equilibrium coreprof coresource coretransp	denka	ETS/CHEASE/BGB/ETB/GAUSS	ETS predictive run / <i>peaked density profile / smoothed boundary</i> [time: 0.0-1.0 ; composition: e,D,T,Ar,W ; ip= 16MA Bt= 6.791T ; predictive equations: Jpar,Ti,Te,nz ; sources: GAUSS [26MW to el / 192MW to D / 192 MW to T] ; Transport: BGB+ETB(at 0.97) ; Impurity: ON ; radiation fraction: 50% ; current drive: 35% ; Zeff: 3.0 ]
2	12	equilibrium coreprof coresource coretransp	denka	ETS/CHEASE/BGB/ETB/GAUSS	ETS predictive run / <i>flat density profile / smoothed boundary</i> [time: 0.0-1.0 ; composition: e,D,T,Ar,W ; ip= 16MA Bt= 6.791T ; predictive equations: Jpar,Ti,Te,nz ; sources: GAUSS [26MW to el / 192MW to D / 192 MW to T] ; Transport: BGB+ETB(at 0.97) ; Impurity: ON ; radiation fraction: 50% ; current drive: 35% ; Zeff: 3.0 ]

### 4.7 TEST shots

Following simulations are available for TEST machine:  
 !!! There is no clear defenition of what the TEST machine is !!!

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last update: 2013-06-27 by dpc

<sup>110</sup>[https://www.eufus.eu/documentation/ITM/html/isip\\_databases.html#isip\\_databases\\_2](https://www.eufus.eu/documentation/ITM/html/isip_databases.html#isip_databases_2)



## 5 IMP3 meetings

### 5.1 2014/12 SOLPS Optimization Meeting (Garching)

#### 5.1.1 SOLPS Optimization December 2014, Garching

- *Plans for development and release of SOLPS-ITER* ([ppt](#) <sup>111</sup>), by X. Bonnin
- *Comparison of different iterative schemes in B2 for full-scale ITER cases. (Task WPCD-SOLPS-OPT)* ([pdf](#) <sup>112</sup>) by V. Kotov
- *Convergence and accuracy of coupled FV/MC codes* ([ppt](#) <sup>113</sup>) by M. Baelmans
- *On the modeling of drift fluxes with self-consistent electric field in the SOLPS code* ([pdf](#) <sup>114</sup>) by O. Maj
- *Report: Application of the Parareal Algorithm to SOLPS* ([pdf](#) <sup>115</sup>) by D. Samaddar
- *SoledGE2D-EIRENE Contributions to SOLPS OPTIMIZATION* ([ppt](#) <sup>116</sup>) by Y. Marandet
- *PARSOLPS* ([pdf](#) <sup>117</sup>) by T. Feher
- *Numerical Modeling for the Design of a Divertor for a Tokamak Fusion Reactor* ([ppt](#) <sup>118</sup>) by D. P. Coster

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last update: 2015-08-07 by dpc

### 5.2 2011/03 WS-CC (Cadarache)

#### 5.2.1 WS-CC March 2011, Cadarache

- *Presentation to ISM about the ETS* ([ppt](#) <sup>119</sup>, [ETS Movie](#) <sup>120</sup>, [SOLPS ELM Movie](#) <sup>121</sup>, [SOLPS ELM Movie \(Zoom\)](#) <sup>122</sup>), by D. P. Coster
- *The ITM general grid description: A tutorial* ([pdf](#) <sup>123</sup>) by H.-J. Klingshirn
- *Pictures taken during the ITER tour* ([I](#) <sup>124</sup>, [II](#) <sup>125</sup>)

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last update: 2012-04-26 by coster

### 5.3 2010/09/13-17 ITM General Meeting in Lisbon

#### 5.3.1 Posters

- *Status of Edge Codes on the Gateway* ([ppt](#) <sup>126</sup>), by F. Subba et al.
- *Status of grids in CPOS + edge CPOS* ([ppt](#) <sup>127</sup>), by F. Subba et al.

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<sup>111</sup>[https://www.efda-itm.eu/ITM/imports/imp3/public/meetings/2014-12\\_SOLPS\\_Optimization/SOLPS-ITER\\_plans\\_Presentation\\_12-2014.pptx](https://www.efda-itm.eu/ITM/imports/imp3/public/meetings/2014-12_SOLPS_Optimization/SOLPS-ITER_plans_Presentation_12-2014.pptx)

<sup>112</sup>[https://www.efda-itm.eu/ITM/imports/imp3/public/meetings/2014-12\\_SOLPS\\_Optimization/Kotov\\_WPCD-SOLPS-OPT\\_2014\\_final\\_present.pdf](https://www.efda-itm.eu/ITM/imports/imp3/public/meetings/2014-12_SOLPS_Optimization/Kotov_WPCD-SOLPS-OPT_2014_final_present.pdf)

<sup>113</sup>[https://www.efda-itm.eu/ITM/imports/imp3/public/meetings/2014-12\\_SOLPS\\_Optimization/20141211\\_WPCD\\_2014\\_v6.pptx](https://www.efda-itm.eu/ITM/imports/imp3/public/meetings/2014-12_SOLPS_Optimization/20141211_WPCD_2014_v6.pptx)

<sup>114</sup>[https://www.efda-itm.eu/ITM/imports/imp3/public/meetings/2014-12\\_SOLPS\\_Optimization/Maj\\_SOLPS\\_Dec2014.pdf](https://www.efda-itm.eu/ITM/imports/imp3/public/meetings/2014-12_SOLPS_Optimization/Maj_SOLPS_Dec2014.pdf)

<sup>115</sup>[https://www.efda-itm.eu/ITM/imports/imp3/public/meetings/2014-12\\_SOLPS\\_Optimization/SOLPS\\_report\\_DSamaddar\\_GarchingDec2014.pdf](https://www.efda-itm.eu/ITM/imports/imp3/public/meetings/2014-12_SOLPS_Optimization/SOLPS_report_DSamaddar_GarchingDec2014.pdf)

<sup>116</sup>[https://www.efda-itm.eu/ITM/imports/imp3/public/meetings/2014-12\\_SOLPS\\_Optimization/Yannick\\_WPCD\\_2014.pptx](https://www.efda-itm.eu/ITM/imports/imp3/public/meetings/2014-12_SOLPS_Optimization/Yannick_WPCD_2014.pptx)

<sup>117</sup>[https://www.efda-itm.eu/ITM/imports/imp3/public/meetings/2014-12\\_SOLPS\\_Optimization/tfeher\\_solps\\_WPCD.pdf](https://www.efda-itm.eu/ITM/imports/imp3/public/meetings/2014-12_SOLPS_Optimization/tfeher_solps_WPCD.pdf)

<sup>118</sup>[https://www.efda-itm.eu/ITM/imports/imp3/public/meetings/2014-12\\_SOLPS\\_Optimization/](https://www.efda-itm.eu/ITM/imports/imp3/public/meetings/2014-12_SOLPS_Optimization/)

<sup>119</sup>[https://www.efda-itm.eu/ITM/imports/imp3/public/meetings/2011-03\\_WS-CC/IMP3\\_ETS-v1.ppt](https://www.efda-itm.eu/ITM/imports/imp3/public/meetings/2011-03_WS-CC/IMP3_ETS-v1.ppt)

<sup>120</sup>[https://www.efda-itm.eu/ITM/imports/imp3/public/meetings/2011-03\\_WS-CC/comb\\_psi\\_5\\_42\\_900x400.mpg](https://www.efda-itm.eu/ITM/imports/imp3/public/meetings/2011-03_WS-CC/comb_psi_5_42_900x400.mpg)

<sup>121</sup>[https://www.efda-itm.eu/ITM/imports/imp3/public/meetings/2011-03\\_WS-CC/24204\\_rqahesum.mpg](https://www.efda-itm.eu/ITM/imports/imp3/public/meetings/2011-03_WS-CC/24204_rqahesum.mpg)

<sup>122</sup>[https://www.efda-itm.eu/ITM/imports/imp3/public/meetings/2011-03\\_WS-CC/24204\\_rqahesum\\_div.mpg](https://www.efda-itm.eu/ITM/imports/imp3/public/meetings/2011-03_WS-CC/24204_rqahesum_div.mpg)

<sup>123</sup>[https://www.efda-itm.eu/ITM/imports/imp3/public/meetings/2011-03\\_WS-CC/griddescription.pdf](https://www.efda-itm.eu/ITM/imports/imp3/public/meetings/2011-03_WS-CC/griddescription.pdf)

<sup>124</sup>[https://www.efda-itm.eu/ITM/imports/imp3/public/meetings/2011-03\\_WS-CC/P1200086.JPG](https://www.efda-itm.eu/ITM/imports/imp3/public/meetings/2011-03_WS-CC/P1200086.JPG)

<sup>125</sup>[https://www.efda-itm.eu/ITM/imports/imp3/public/meetings/2011-03\\_WS-CC/P1200088.JPG](https://www.efda-itm.eu/ITM/imports/imp3/public/meetings/2011-03_WS-CC/P1200088.JPG)

<sup>126</sup>[https://www.efda-itm.eu/ITM/imports/imp3/public/meetings/20100913-17\\_Lisbon/Codes-poster-10-09-2010.ppt](https://www.efda-itm.eu/ITM/imports/imp3/public/meetings/20100913-17_Lisbon/Codes-poster-10-09-2010.ppt)

<sup>127</sup>[https://www.efda-itm.eu/ITM/imports/imp3/public/meetings/20100913-17\\_Lisbon/CP0-poster-09-09-2010.ppt](https://www.efda-itm.eu/ITM/imports/imp3/public/meetings/20100913-17_Lisbon/CP0-poster-09-09-2010.ppt)

- *European Transport Workflows - first results, validation and benchmark* ([pdf 128](#)), by V. Basiuk et al.
- *European Transport Solver* ([pdf 129](#)), by D. Coster et al.
- *Validation and verification of the European Transport Solver* ([pdf 130](#)), by D. Kalupin et al.
- *Full tokamak simulation global workflow case study* ([pdf 131](#)), by J. Lister and K. Besseghir

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## 5.4 2010/03 WS-CC (Garching)

### 5.4.1 WS-CC March 2010, Garching

- *Agenda* ([pdf 132](#)), by D. P. Coster
- *Introduction* ([ppt 133](#)), by D. P. Coster
- *Talk given at the JET TF-T Meeting earlier in the year on the ETS* ([ppt 134](#)), ([mpeg 135](#)) ([mpeg 136](#)) by D. P. Coster
- *ETS Status and Standards (reduced)* ([ppt 137](#)), by D. P. Coster
- *ETS Numerics Quality Assessment / Verification* ([pdf 138](#)), by G. Pereverzev
- *Accuracy tests* ([pdf 139](#)), by G. Pereverzev
- *ETS benchmarking and verification: Intermediate report (ASTRA results)* ([pdf 140](#)), by G. Pereverzev
- *Proposal for ETS verification and benchmarking procedure* ([pdf 141](#)), by G. Pereverzev
- *Introduction to ISIP tools* ([ppt 142](#)), by F. Imbeaux
- *Exp2ITM : populate ITM database with experimental data* ([ppt 143](#)), by J. Signoret and F. Imbeaux (presented by Rui Coelho)
- *Introduction to ISE* ([ppt 144](#)), by J. Signoret and P. Huynh
- *Equilibrium Reconstruction with EQUAL* ([ppt 145](#)), by W. Zwingmann
- *AMNS work* ([ppt 146](#)), by L-G Eriksson
- *ITER Integrated Modelling Expert Group - a brief overview* ([pdf 147](#)), by Par Strand

<sup>128</sup>[https://www.efda-itm.eu/ITM/imports/imp3/public/meetings/20100913-17\\_Lisbon/Poster2010-EuropeanTransportSolver-KEPLER.pdf](https://www.efda-itm.eu/ITM/imports/imp3/public/meetings/20100913-17_Lisbon/Poster2010-EuropeanTransportSolver-KEPLER.pdf)

<sup>129</sup>[https://www.efda-itm.eu/ITM/imports/imp3/public/meetings/20100913-17\\_Lisbon/Poster2010-EuropeanTransportSolverv2.pdf](https://www.efda-itm.eu/ITM/imports/imp3/public/meetings/20100913-17_Lisbon/Poster2010-EuropeanTransportSolverv2.pdf)

<sup>130</sup>[https://www.efda-itm.eu/ITM/imports/imp3/public/meetings/20100913-17\\_Lisbon/POSTER\\_ETS\\_V\\_and\\_V.pdf](https://www.efda-itm.eu/ITM/imports/imp3/public/meetings/20100913-17_Lisbon/POSTER_ETS_V_and_V.pdf)

<sup>131</sup>[https://www.efda-itm.eu/ITM/imports/imp3/public/meetings/20100913-17\\_Lisbon/Fulltokamaksimulationworkflowcasestudy-poster.pdf](https://www.efda-itm.eu/ITM/imports/imp3/public/meetings/20100913-17_Lisbon/Fulltokamaksimulationworkflowcasestudy-poster.pdf)

<sup>132</sup>[https://www.efda-itm.eu/ITM/imports/imp3/public/meetings/2010-03\\_WS-CC/Agenda.pdf](https://www.efda-itm.eu/ITM/imports/imp3/public/meetings/2010-03_WS-CC/Agenda.pdf)

<sup>133</sup>[https://www.efda-itm.eu/ITM/imports/imp3/public/meetings/2010-03\\_WS-CC/2010-03\\_WS-CC\\_ETS\\_v1.ppt](https://www.efda-itm.eu/ITM/imports/imp3/public/meetings/2010-03_WS-CC/2010-03_WS-CC_ETS_v1.ppt)

<sup>134</sup>[https://www.efda-itm.eu/ITM/imports/imp3/public/meetings/2010-03\\_WS-CC/TF-T-ETS\\_Coster.ppt](https://www.efda-itm.eu/ITM/imports/imp3/public/meetings/2010-03_WS-CC/TF-T-ETS_Coster.ppt)

<sup>135</sup>[https://www.efda-itm.eu/ITM/imports/imp3/public/psi\\_5\\_42.mpg](https://www.efda-itm.eu/ITM/imports/imp3/public/psi_5_42.mpg)

<sup>136</sup>[https://www.efda-itm.eu/ITM/imports/imp3/public/comb\\_psi\\_5\\_42.900x400.mpg](https://www.efda-itm.eu/ITM/imports/imp3/public/comb_psi_5_42.900x400.mpg)

<sup>137</sup>[https://www.efda-itm.eu/ITM/imports/imp3/public/meetings/2010-03\\_WS-CC/ETS\\_Status\\_and\\_Standards\\_reduced.ppt](https://www.efda-itm.eu/ITM/imports/imp3/public/meetings/2010-03_WS-CC/ETS_Status_and_Standards_reduced.ppt)

<sup>138</sup>[https://www.efda-itm.eu/ITM/imports/imp3/public/meetings/2010-03\\_WS-CC/V\\_and\\_V/CodeCampPereverzev.pdf](https://www.efda-itm.eu/ITM/imports/imp3/public/meetings/2010-03_WS-CC/V_and_V/CodeCampPereverzev.pdf)

<sup>139</sup>[https://www.efda-itm.eu/ITM/imports/imp3/public/meetings/2010-03\\_WS-CC/V\\_and\\_V/AccuracyAssessment.pdf](https://www.efda-itm.eu/ITM/imports/imp3/public/meetings/2010-03_WS-CC/V_and_V/AccuracyAssessment.pdf)

<sup>140</sup>[https://www.efda-itm.eu/ITM/imports/imp3/public/meetings/2010-03\\_WS-CC/V\\_and\\_V/BenchmarkAstra.pdf](https://www.efda-itm.eu/ITM/imports/imp3/public/meetings/2010-03_WS-CC/V_and_V/BenchmarkAstra.pdf)

<sup>141</sup>[https://www.efda-itm.eu/ITM/imports/imp3/public/meetings/2010-03\\_WS-CC/V\\_and\\_V/VandB-1st.pdf](https://www.efda-itm.eu/ITM/imports/imp3/public/meetings/2010-03_WS-CC/V_and_V/VandB-1st.pdf)

<sup>142</sup>[https://www.efda-itm.eu/ITM/imports/imp3/public/meetings/2010-03\\_WS-CC/IntroductionISIP.ppt](https://www.efda-itm.eu/ITM/imports/imp3/public/meetings/2010-03_WS-CC/IntroductionISIP.ppt)

<sup>143</sup>[https://www.efda-itm.eu/ITM/imports/imp3/public/meetings/2010-03\\_WS-CC/Basics\\_on\\_exp2ITM\\_v2.ppt](https://www.efda-itm.eu/ITM/imports/imp3/public/meetings/2010-03_WS-CC/Basics_on_exp2ITM_v2.ppt)

<sup>144</sup>[https://www.efda-itm.eu/ITM/imports/imp3/public/meetings/2010-03\\_WS-CC/IntroductionISE.ppt](https://www.efda-itm.eu/ITM/imports/imp3/public/meetings/2010-03_WS-CC/IntroductionISE.ppt)

<sup>145</sup>[https://www.efda-itm.eu/ITM/imports/imp3/public/meetings/2010-03\\_WS-CC/talk-wz-cc2010-5.ppt](https://www.efda-itm.eu/ITM/imports/imp3/public/meetings/2010-03_WS-CC/talk-wz-cc2010-5.ppt)

<sup>146</sup>[https://www.efda-itm.eu/ITM/imports/imp3/public/meetings/2010-03\\_WS-CC/AMNS\\_work.ppt](https://www.efda-itm.eu/ITM/imports/imp3/public/meetings/2010-03_WS-CC/AMNS_work.ppt)

<sup>147</sup>[https://www.efda-itm.eu/ITM/imports/imp3/public/meetings/2010-03\\_WS-CC/ITER\\_Integrated\\_Modelling\\_Expert\\_Group.pdf](https://www.efda-itm.eu/ITM/imports/imp3/public/meetings/2010-03_WS-CC/ITER_Integrated_Modelling_Expert_Group.pdf)

pdf

- EFDA Transport Topical Group: survey of research activities ([ppt 148](#)), presented by C. Angioni on behalf of C. Hidalgo (Chair), C. Angioni, C. Bourdelle, P. de Vries (co-Chair)

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last update: 2012-04-26 by coster

## 5.5 2009/03-04 WS-CC (Garching)

### 5.5.1 Kick-Off Meeting, 2009-02-06

- ETS Status and Standards (v1) ([pdf 149](#)), by D. P. Coster
- Requests to other projects ([doc 150](#)), by D. P. Coster
- The Universal Access Layer User Guide (2009-03-03) ([pdf 151](#)), by G. Manduchi, F. Imbeaux and M. Haefele
- Work plan and Resources for the ETS in 2009 ([doc 152](#)), by D. P. Coster
- ITM gateway users's guide ([pdf 153](#)), by B. Guillerminet, F. Iannone, F. Imbeaux, G. Manduchi and L. Eriksson
- Current status of the ETS (present at the JET TFT meeting) ([pdf 154](#)), by D. P. Coster, D. Kalupin, V. Basiuk, R. Stankiewicz, R. Zagorski, J.F. Artaud, S. Gowacz, Ph. Huynh, S. Moradi, G. Pereverzev, G. Ramogida, P. Strand M. Tokar and J. Weiland
- ITM plans with respect to Integrated Modelling, in particular with respect to Burn and Particle Control (presented at EFDA meeting on Fuelling and Particle Control, Session: Burn and Particle Control, March 2009) ([pdf 155](#)), by D. P. Coster
- Closure of equilibrium transport set / Data flow ([pdf 156](#)), by G. Pereverzev
- ETS transport equations and list of variables (2008-08-01) ([pdf 157](#)), by D. Kalupin, G. Pereverzev, R. Stankiewicz
- EUFORIA Vision ([pdf 158](#)), by EUFORIA
- Data access for Fusion Simulation ([pdf 159](#)), by EUFORIA
- Benchmark comparison ASTRA JETTO ([pdf 160](#)), by F. Koechl (?)

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last update: 2012-04-26 by coster

<sup>148</sup>[https://www.efda-itm.eu/ITM/imports/imp3/public/meetings/2010-03\\_WS-CC/TTG\\_JET\\_2010\\_ISM.ppt](https://www.efda-itm.eu/ITM/imports/imp3/public/meetings/2010-03_WS-CC/TTG_JET_2010_ISM.ppt)

<sup>149</sup>[https://www.efda-itm.eu/ITM/imports/imp3/public/meetings/2009-03-30\\_-\\_2009-04-03\\_ETS/ETS\\_Status\\_and\\_Standards\\_v1.ppt](https://www.efda-itm.eu/ITM/imports/imp3/public/meetings/2009-03-30_-_2009-04-03_ETS/ETS_Status_and_Standards_v1.ppt)

<sup>150</sup>[https://www.efda-itm.eu/ITM/imports/imp3/public/meetings/2009-03-30\\_-\\_2009-04-03\\_ETS/Requests\\_to\\_other\\_Projects.doc](https://www.efda-itm.eu/ITM/imports/imp3/public/meetings/2009-03-30_-_2009-04-03_ETS/Requests_to_other_Projects.doc)

<sup>151</sup>[https://www.efda-itm.eu/ITM/imports/imp3/public/meetings/2009-03-30\\_-\\_2009-04-03\\_ETS/UAL\\_User\\_Guide.pdf](https://www.efda-itm.eu/ITM/imports/imp3/public/meetings/2009-03-30_-_2009-04-03_ETS/UAL_User_Guide.pdf)

<sup>152</sup>[https://www.efda-itm.eu/ITM/imports/imp3/public/meetings/2009-03-30\\_-\\_2009-04-03\\_ETS/Work\\_plan\\_and\\_Resources\\_for\\_the\\_ETS\\_in\\_2009\\_v3.doc](https://www.efda-itm.eu/ITM/imports/imp3/public/meetings/2009-03-30_-_2009-04-03_ETS/Work_plan_and_Resources_for_the_ETS_in_2009_v3.doc)

<sup>153</sup>[https://www.efda-itm.eu/ITM/imports/imp3/public/meetings/2009-03-30\\_-\\_2009-04-03\\_ETS/ITM\\_gateway\\_users\\_guide\\_v3.pdf](https://www.efda-itm.eu/ITM/imports/imp3/public/meetings/2009-03-30_-_2009-04-03_ETS/ITM_gateway_users_guide_v3.pdf)

<sup>154</sup>[https://www.efda-itm.eu/ITM/imports/imp3/public/meetings/2009-03-30\\_-\\_2009-04-03\\_ETS/2009\\_JET\\_TFT\\_ETS.pdf](https://www.efda-itm.eu/ITM/imports/imp3/public/meetings/2009-03-30_-_2009-04-03_ETS/2009_JET_TFT_ETS.pdf)

<sup>155</sup>[https://www.efda-itm.eu/ITM/imports/imp3/public/meetings/2009-03-30\\_-\\_2009-04-03\\_ETS/ITM\\_Fuelling.ppt](https://www.efda-itm.eu/ITM/imports/imp3/public/meetings/2009-03-30_-_2009-04-03_ETS/ITM_Fuelling.ppt)

<sup>156</sup>[https://www.efda-itm.eu/ITM/imports/imp3/public/meetings/2009-03-30\\_-\\_2009-04-03\\_ETS/EqTrInterface.pdf](https://www.efda-itm.eu/ITM/imports/imp3/public/meetings/2009-03-30_-_2009-04-03_ETS/EqTrInterface.pdf)

<sup>157</sup>[https://www.efda-itm.eu/ITM/imports/imp3/public/meetings/2009-03-30\\_-\\_2009-04-03\\_ETS/ETS\\_TRANSPORT\\_EQUATIONS.pdf](https://www.efda-itm.eu/ITM/imports/imp3/public/meetings/2009-03-30_-_2009-04-03_ETS/ETS_TRANSPORT_EQUATIONS.pdf)

<sup>158</sup>[https://www.efda-itm.eu/ITM/imports/imp3/public/meetings/2009-03-30\\_-\\_2009-04-03\\_ETS/](https://www.efda-itm.eu/ITM/imports/imp3/public/meetings/2009-03-30_-_2009-04-03_ETS/)

<sup>159</sup>[https://www.efda-itm.eu/ITM/imports/imp3/public/meetings/2009-03-30\\_-\\_2009-04-03\\_ETS/EUFORIA\\_Data\\_access.ppt](https://www.efda-itm.eu/ITM/imports/imp3/public/meetings/2009-03-30_-_2009-04-03_ETS/EUFORIA_Data_access.ppt)

<sup>160</sup>[https://www.efda-itm.eu/ITM/imports/imp3/public/meetings/2009-03-30\\_-\\_2009-04-03\\_ETS/Benchmark\\_Comparison\\_ASTRA\\_JETTO-2.pdf](https://www.efda-itm.eu/ITM/imports/imp3/public/meetings/2009-03-30_-_2009-04-03_ETS/Benchmark_Comparison_ASTRA_JETTO-2.pdf)

## 5.6 2009/02 Kick-Off

### 5.6.1 Kick-Off Meeting, 2009-02-06

- *IMP3 2009 Kick-Off* ( [pdf<sup>161</sup>](#)), by D. P. Coster
- *Collaboration Issue: Standards* ( [pdf<sup>162</sup>](#)), by D. P. Coster
- *ETS Road Map (2009)* ( [doc<sup>163</sup>](#)), by D. P. Coster

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last update: 2012-04-26 by coster

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last update: 2015-01-07 by dpc

## 6 IMP3 formal tasks

### 6.1 The list of IMP3 tasks for 2011

#### 6.1.1 WP11-ITM-IMP3-ACT1: Maintenance, continuing development, verification and validation of the ETS

The following tasks are grouped under this activity:

1. Maintenance support for the ETS including the addition of new modules within the Kepler workflows (many of the new modules will come from other IMPs)
2. Release of a number of standard Kepler workflows
3. A free boundary version of the ETS (in strong collaboration with IMP12)
4. Verification of ETS modules and workflows (in collaboration with other IMPs)
5. Validation of ETS modules and workflows (in collaboration with other IMPs)
6. Adaptation and maintenance of OD codes (for fusion reactor studies) in collaboration with ISM

The deliverables for 2011 are:

- Kepler workflows: Release of the workflows
- Free Boundary ETS: Release of the workflow
- Verification report(s): Verification report(s)
- Validation report(s): Validation report(s)
- Integration of 0-D codes: Functioning OD codes with documentation integrated into the Kepler environment and using the UAL

#### 6.1.2 WP11-ITM-IMP3-ACT2: Implementation, integration, verification and validation of edge codes

The following tasks are grouped under this activity:

1. Implementation and release (including verification and validation) of a number of edge codes using CPOs (See appendix A, Phase V of "ITM modules release cycle")
2. Definition, implementation, verification and the start of validation of a number of edge only workflows using the edge codes
3. Further development of edge-core coupled workflow(s) including verification and the start of validation

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<sup>161</sup>[https://www.efda-itm.eu/ITM/imports/imp3/public/meetings/2009-02-06\\_KickOff/IMP3\\_KickOff.pdf](https://www.efda-itm.eu/ITM/imports/imp3/public/meetings/2009-02-06_KickOff/IMP3_KickOff.pdf)

<sup>162</sup>[https://www.efda-itm.eu/ITM/imports/imp3/public/meetings/2009-02-06\\_KickOff/Collaboration\\_Issue\\_Standards\\_v1.pdf](https://www.efda-itm.eu/ITM/imports/imp3/public/meetings/2009-02-06_KickOff/Collaboration_Issue_Standards_v1.pdf)

<sup>163</sup>[https://www.efda-itm.eu/ITM/imports/imp3/public/meetings/2009-02-06\\_KickOff/Road\\_Map\\_ETS\\_2009.doc](https://www.efda-itm.eu/ITM/imports/imp3/public/meetings/2009-02-06_KickOff/Road_Map_ETS_2009.doc)

The deliverables for 2011 are:

- Implementation report: Report on the implementation of the edge codes
- Verification report: Report on the verification of the edge codes
- Validation report: Report on the validation of the edge codes

### 6.1.3 Work Breakdown

<i>Work Description</i>	<i>Associate</i>	<i>Manpower Baseline Support (ppy)</i>	<i>Manpower Priority Support (ppy)</i>	<i>Hardware, Cons., Other Expenditure Priority Support (kEuros)</i>
WP11-ITM-IMP3-ACT1-01/CCFE/BS	CCFE	0.10	0.00	0.00
WP11-ITM-IMP3-ACT1-01/CEA	CEA	0.00	1.10	0.00
WP11-ITM-IMP3-ACT1-01/HAS	HAS	0.00	0.30	0.00
WP11-ITM-IMP3-ACT1-01/Hellenic Republic	Hellenic Republic	0.50	0.00	0.00
WP11-ITM-IMP3-ACT1-01/IPP	IPP	0.00	0.20	0.00
WP11-ITM-IMP3-ACT1-01/IPPLM	IPPLM	0.00	1.00	0.00
WP11-ITM-IMP3-ACT1-01/IST	IST	0.00	0.35	0.00
WP11-ITM-IMP3-ACT1-01/VR	VR	0.30	0.00	0.00
WP11-ITM-IMP3-ACT1-02/CCFE	CCFE	0.00	0.10	0.00
WP11-ITM-IMP3-ACT1-02/CEA	CEA	0.70	0.00	0.00
WP11-ITM-IMP3-ACT1-02/HAS	HAS	0.20	0.00	0.00
WP11-ITM-IMP3-ACT1-02/IST	IST	0.00	0.50	0.00
WP11-ITM-IMP3-ACT1-02/VR	VR	0.00	0.08	0.00
WP11-ITM-IMP3-ACT1-03/IST	IST	0.00	0.45	0.00
WP11-ITM-IMP3-ACT1-03/IST/BS	IST	0.10	0.00	0.00
WP11-ITM-IMP3-ACT2-01/CEA	CEA	0.20	0.00	0.00
WP11-ITM-IMP3-ACT2-01/FOM.Rijnhuizen	FOM.Rijnhuizen	0.20	0.00	0.00
WP11-ITM-IMP3-ACT2-01/FZJ	FZJ	0.20	0.00	0.00
WP11-ITM-IMP3-ACT2-01/IPP/BS	IPP	0.25	0.00	0.00
WP11-ITM-IMP3-ACT2-01/IPPLM	IPPLM	0.00	0.10	0.00
WP11-ITM-IMP3-ACT2-01/TEKES	TEKES	0.00	0.17	0.00
WP11-ITM-IMP3-ACT2-02/IPP	IPP	0.00	0.05	0.00
WP11-ITM-IMP3-ACT2-02/IPP/BS	IPP	0.20	0.00	0.00
WP11-ITM-IMP3-ACT2-02/TEKES/BS	TEKES	0.10	0.00	0.00
WP11-ITM-IMP3-ACT2-03/IPP	IPP	0.00	0.30	0.00
WP11-ITM-IMP3-ACT2-03/IPP/BS	IPP	0.15	0.00	0.00
Total		3.20	4.70	0.00

## 6.2 The list of IMP3 tasks for 2010

Task	Association	Name	Type of support	Manpower (ppy)		Comments from ECOM
				proposed	accepted	
WP10-ITM-IMP3-ACT1-T1: <i>ETS maintenance</i>	CEA	Philippe Huynh	PS	0.17	0.17	Continued with extended scope including WP09-ITM-IMP3-T2 "Maintenance, continuing development, <a href="#">verification</a> <sup>164</sup> and <a href="#">validation</a> <sup>165</sup> of the ETS" Development related to <a href="#">kepler</a> <sup>166</sup> framework, and the <a href="#">UAL</a> <sup>167</sup> softwareComplex workflow inside KEPLERReport on the 0 D code
		Vincent Basiuk	PS	0.25	0.25	
		Jean-François Artaud	PS	0.08	0.08	
		Frédéric Imbeaux	PS	0.08	0.08	
	ENEA Frascati	Massimo Marinucci	PS	0.17	0.17	The proposed activity concerns the point (6) of the "Description of work": "Verification reports describing the comparison of the ETS against and analytic results and existing 1d transport codes". Dr. Marinucci is proposing the porting (eventually in collaboration with other institutions) of the JETTO code on the <a href="#">Gateway</a> <sup>168</sup> , in order to verify the ETS against it.
	IST	Jorge Ferreira	PS	0.25	0.25	<ol style="list-style-type: none"> <li>Code Integration, maintenance and verification of the ETS.</li> <li>Development of standard Kepler workflows.</li> </ol>
		António Figueiredo	PS	0.35	0.35	
WP10-ITM-IMP3-ACT1-T2: <i>Finalization of IMP3 core modules</i>	VR	Pär Strand	BS	0.08	0.08	Introduce and maintain the TCI module covering different anomalous transport modules (Weiland, GLF23, RITM and EDWM) into the ETS framework. Focus on work here is on the code interfaces. In particular, the EDWM component (Extended version of teh WEILAND model provide drift wave based impurity transport coefficients.)
	HAS	Kinga Gál	PS	0.15	0.15	Association-HAS has developed a C++ pellet ablation module for ETS during 2009. This module still needs some testing and it should be implemented in ETS in the beginning of 2010. The pellet module is planed to be used for ITER simulations in the next year.
WP10-ITM-IMP3-ACT1-T3: <i>Free boundary ETS</i>	No proposals have been received		BS	-	-	-
WP10-ITM-IMP3-ACT1-T4: <i>ETS V&amp;V</i>	CCFE	Irina Voitsekhovitch	PS	0,1	0,1	Verification of the ETS transport solver and models implemented in ETS by comparing them with the ASTRA code (GLF23, Coppi-Tang, Bohm-gyroBohm). Participation in the implementation of other transport models in ETS. Development of the coupling with FMC FM interface if requested. Participation in testing of the other modules (NBI, ICRH, current diffusion) can be envisaged. Validation of the ETS code on MAST experimental data. Written validation report describing the comparison of the ETS workflows against MAST experiment or first principles based models. JET can provide datasets (subject to agreement of EFDA JET Leader) for analysis & hardware to run jobs for comparison with ETS solver results. ETS activities will be paralleled by studies of fast transient phenomena on MAST (pellet injection) taking advantage of the new high spatial and temporal resolution Thomson scattering system. NOTE: In the Call it states that Priority and Baseline Support are available for this Task, but only Priority Support is available in ECOM. CCFE could split this proposal between Priority and Baseline if required.
		James Conboy	PS	0,1	0,1	
		Luca Garzotti	PS	0,1	0,1	
		Robert Akers	PS	0,1	0,1	
	IPP	Grigory Pereverzev	PS	0,25	0,25	If not selected as deputy project leader, then Dr Pereverzev will contribute under this task to the development of the ETS (V&V). If he is selected as a deputy project leader, his contribution will not be the full requested 0.25 but somewhat lower (to be negotiated).

<sup>164</sup>[https://www.efda-itm.eu/ITM/html/itm\\_glossary.html#g\\_verification](https://www.efda-itm.eu/ITM/html/itm_glossary.html#g_verification)

<sup>165</sup>[https://www.efda-itm.eu/ITM/html/itm\\_glossary.html#g\\_validation](https://www.efda-itm.eu/ITM/html/itm_glossary.html#g_validation)

<sup>166</sup>[https://www.efda-itm.eu/ITM/html/itm\\_glossary.html#g\\_kepler](https://www.efda-itm.eu/ITM/html/itm_glossary.html#g_kepler)

<sup>167</sup>[https://www.efda-itm.eu/ITM/html/itm\\_glossary.html#g\\_ual](https://www.efda-itm.eu/ITM/html/itm_glossary.html#g_ual)

<sup>168</sup>[https://www.efda-itm.eu/ITM/html/itm\\_glossary.html#g\\_gateway](https://www.efda-itm.eu/ITM/html/itm_glossary.html#g_gateway)

Task	Association	Name	Type of support	Manpower (ppy)		Comments from ECOM
				proposed	accepted	
	IPPLM	Roman Stankiewicz	PS	0.5	0.5	Verification and validation of the ETS for stiff transport problem. Testing of the ETS for stiff transport and barrier dynamics for the analytical transport model for barrier. The task is the continuation of the work done in the frame of WP10-ITM-IMP3. The manufactured method of analytical solution generation was developed for discontinuous model of diffusion coefficients leading to transport barrier. The goal of verification is to check the numerical methods used in the ETS and extend the method of verification to continuous model of diffusion coefficient. The tests will be performed in order to check if the numerical procedure implemented in ETS can reproduce the position of transport barrier and its dynamics given by the analytical solutions. Also the verification of the ETS against the empirical data will be performed. The activity in the task will be carrying on in 2011 with test of the ETS combined with equilibrium and elaborated transport model in context of application to ITER.
		Irena Ivanova-Stanik	PS	0.5	0.5	
		Dariusz Twarog	PS	0.25	0.25	
	VR	Pär Strand	PS	0.04	0.04	-
	IPP	Yuriy Turkin	PS	0	0	Wishes to remain on the IMP3 mailing list.
	IST	João Bizarro	PS	0.25	0.25	<ol style="list-style-type: none"> <li>1. Comparison of the ETS against analytic results and existing 1D transport.</li> <li>2. Comparison of the ETS workflows against experiment or first principles based models.</li> </ol>
		Luís Alves	PS	0.25	0.25	
	Hellenic Republic	HEINZ ISLIKER	BS	0.2	0.2	Further develop the 1D Fokker-Planck solver CHET1, incorporate non-Markovian processes, compare with ETS, verify and validate both codes (a) Continue the comparison of CHET1 (1-D transport code of the pseudo-spectral type, using expansions in terms of Chebyshev polynomials), with the ETS, provide reports on our comparison, verification and validation, as well as on the use of the ETS. Also, investigate various boundary conditions, in particular the case of free boundary conditions. (b) In parallel, development of a Fokker-Planck-type equation in action space which incorporates a time and action dependent diffusion tensor capable of capturing resonant and non-resonant interactions of spatiotemporally limited waves and barely circulating and/or weakly trapped particles. Reduction to 1-D Fokker-Planck inhomogeneous, time dependent diffusion coefficient. Interfacing with CHET1 and further comparison with ETS.
				0.1	0.1	
				0.2	0.2	
YANNIS KOMINIS	BS	0.1	0.1			
THEOFILOS PISOKAS	BS	0.2	0.2			
WP10-ITM-IMP3-ACT1-T5: <i>0-D codes</i>	No proposals have been received		BS	-	-	-
WP10-ITM-IMP3-ACT2-T1: <i>ITER Scenario Modelling</i>	CCFE	Luca Garzotti	BS	0.9	0.9	The activity will focus on the modelling of particle transport and density control in ITER plasma. Until now good results have been obtained with 1.5 dimensional codes and semi-empirical transport models. The activity will continue on the same line and include the use of the GLF23 transport model in presence of pellet fuelling and the analysis of the impact of pellet injection on the boundary conditions. Proposed people to be involved from CCFE are G Corrigan, L Garzotti, R Kemp, V Parail, S Saarelma, M Valovic and I Voitsekhoivitch.
	IPP	Grigory Pereverzev	BS	0.08	0.08	Contribute expertise in core modelling.

Task	Association	Name	Type of support	Manpower (ppy)		Comments from ECOM
				proposed	accepted	
WP10-ITM-IMP3-ACT3-T1: <i>Implementation and integration of edge codes</i>	IST	Jorge Ferreira	BS	0.25	0.25	- Hybrid and Advanced Scenario modelling and rotation <a href="#">prediction</a> <sup>169</sup> for ITER within ETS and JINTRAC modelling suites.- Use EDGE2D/EIRENE, 2D edge transport code, to study the impurity transport that are released from the walls, the seeded impurities and the ash that crosses the last closed flux surface.- Use JETTO/SANCO 1.5 D core transport code, to study the effect of impurity contamination from the SOL and the Helium ash in plasma performance. Finally, if possible, to study all these effects in the whole plasma using the COCONUT code that couples the edge transport code EDGE2D/EIRENE and the core transport code JETTO/SANCO.
		Paula Belo	BS	0.25	0.25	
	IPP	Marco Wischmeier	BS	0.1	0.1	Integrated scenario modelling for ITER - SOL physics – SOLPS5.x
		Joerg Hobirk	BS	0.08	0.08	core modelling
		Emiliano Fable	BS	0.08	0.08	
	FOM Rijnhuizen	Dick Hogeweij	BS	0.3	0.3	Optimization of ITER start-up phase with respect to heating and current drive mix Optimization of ITER hybrid scenario with respect to heating and current drive mix (deliverable: Journal paper published by mid 2010)
		Jonathan Citrin	BS	0.5	0.5	
	FZJ	Derek Harting	BS	0.09	0.09	Density control in the SOL
	Swiss Confederation	Karim Besseghir	BS	0.15	0.15	Contribute to the development of improved set of ITER reference scenarios using DINA-CH and CRONOS, in particular for the strategic optimization of the ramp-up portion of all scenarios. The work will deliver methods for avoidance of high risks areas, respect of absolute constraints and optimization of a variety of terminal cost functions. The DINA-CH/CRONOS suite has already the possibility to save the results into the ITM data-structure.
	TEKES	Johnny Lonroth	BS	0.1	0.1	MHD stability and performance in ITER scenarios modelling by JETTO and MISHKA-1 codes.
	VR	Pär Strand	BS	0.08	0.08	The Chalmers group will support the use of the TCI tools in ISM and will aim to expand to active participation in the modelling activities. The activity is shared between Strand and Nordman and availability/participation in WS and CC is somewhat decided by external factors (teaching and other related activities). Nordmans availability is mainly towards the latter part of 2010.
		Hans Nordman	BS	0.12	0.12	
	ÖAW	Florian Koechl	BS	0.2	0.2	continuation of ISM activities (core and core+edge modelling)
	ENEA - Frascati	Fabio Subba	BS	0.04	0.04	Development of Integrated Scenario edge Modeling using edge plasma codes
Roberto Zanino		BS	0.05	0.05		
	CEA	Xavier Bonnin	PS	0.17	0.17	Continuation of the development and implementation of edge CPOs <sup>170</sup> (including core-edge coupling), continued development/implementation of edge codes.- Progress towards establishment of a wall CPO data structure- Participation in the implementation of the edge CPO data structures into SOLPS- Delivery of an ITM-compatible 2-D field-aligned quadrangular grid generator (CARRE.ITM) for use with SOLPS and other edge codes (work within Kepler and with CPO I/O)

<sup>169</sup>[https://www.efda-itm.eu/ITM/html/itm\\_glossary.html#g\\_prediction](https://www.efda-itm.eu/ITM/html/itm_glossary.html#g_prediction)

<sup>170</sup>[https://www.efda-itm.eu/ITM/html/itm\\_glossary.html#g\\_cpo](https://www.efda-itm.eu/ITM/html/itm_glossary.html#g_cpo)



Task	Association	Name	Type of support	Manpower (ppy)		Comments from ECOM
				proposed	accepted	
	Greece Cyprus	George Georghiou	PS	0.2	0.2	<p>Implementation and integration of edge codes Topical Group/Item number: ITM-10-IMP3-ACT4 Following the implementation of the collisional non-equilibrium plasma model in the context of electro-hydrodynamics, which describes charged particles (electrons-ions) and neutral transport properties coupled to the field and thermal equations [1, 2, 3], we intend to extend our model to handle edge plasma and scrap-off-layer modeling of a Tokamak. The existing model can describe the evolution of non-equilibrium plasma in a three dimensional setting, incorporating adaptive meshing and complex models to account for secondary processes such as photoionisation. The next step is to implement Branginskii's fluid equations coupled with neutral transport in order to characterize the plasma adjacent to material surfaces that comprise the divertor and first wall of magnetic fusion energy devices under normal operation conditions. Existing codes such as SOLPS and/or EDGE2D-NIMBUS are going to be extensively employed and in many cases extended to cope with the above phenomena. Analysis and in depth understanding of the physical problem, close collaboration with research teams working on this topic, understanding of the current limitations and further code development to deal with edge modeling that is related to turbulent transport will form the bulk of this work that addresses the implementation part of the call. A first level of understanding will be approached using simplified edge plasma models, (e.g. pure hydrogenic plasmas, neglecting drift and currents) where time dependent phenomena are included (Edge Localized Modes-ELMs). Then, the influence of impurities on the SOL plasma, in terms of production processes, radiation losses and transport, will be also examined as well as the effects of ExB drift, radial diamagnetic currents that contribute to the local current divergence and the anomalous turbulent transport. Further contribution in this call includes our participation in the integration part which refers to the adaptation of the edge codes in the Gateway. Support on the syntax of CPOs and on the functioning of core-edge coupling in Kepler in close collaboration with the people with expertise in edge codes is intended. Furthering our expertise in the above tasks lies within our priorities and our intention is to contribute actively within the edge plasma modeling framework.[1] Georghiou G E, Papadakis A P, Morrow R and Metaxas A C 2005, Numerical modeling of atmospheric pressure gas discharges leading to plasma production J. Phys. D: Appl. Phys. 38 R30328[2] A P Papadakis, G E Georghiou and A C Metaxas Simulation for the transition from non-thermal to thermal discharges, Plasma Sources Sci. Technol. 14 (2005) 250258[3] L Papageorghiou, E Panousis, J F Loiseau, N Spyrou and B Held, Two-dimensional modelling of a nitrogen dielectric barrier discharge (DBD) at atmospheric pressure: filament dynamics with the dielectric barrier on the cathode, J. Phys. D: Appl. Phys. 42 (2009)</p>
		Lymperis Papageorghiou	PS	0.8	0.8	
	IPP	Hans-Joachim Klingshirn	PS	0.25	0.25	getting the grid storage structure up to speed and whatever is planned on getting the edge codes up and running within the UAL/Kepler framework
		David Coster	PS	0.08	0.08	Work on implementing SOLPS on gateway and coupling core-edge.

Task	Association	Name	Type of support	Manpower (ppy)		Comments from ECOM
				proposed	accepted	
	TEKES	Seppo Sipilä	PS	0.5	0.5	<p>Implementation of CPO I/O in ASCOT</p> <ol style="list-style-type: none"> <li>1. The Monte Carlo orbit-following code ASCOT has been installed on the Gateway. A wrapper code for reading input data to ASCOT from CPO's is under construction, and more than half of the input data required for an axisymmetric case (with 2D magnetic background and wall) have so far been read from available CPO data.</li> <li>2. This work is a continuation of Tekes' 2009 task under ITM-09-IMP3-T7. In 2010, more code will be added for reading the remaining input quantities and inputs for more complicated cases. These include a 3D wall structure, 3D magnetic background, 2D (R,z) neutral n &amp; T data for the main plasma, 2D (R,z) SOL charged particle &amp; neutral n &amp; T data and prescribed radial electric field profile (vs. rho.poloidal). The work will be done as these CPO's are defined and data becomes available.</li> <li>3. As ASCOT can produce a wide variety of outputs (test particle orbit data, numerous distributions in velocity and configuration space, wall loads, neutral particle analyzer simulation data, etc.), it is foreseen that the capability to create the corresponding output in CPO form will be added as the need for them arises, once the required CPO's are defined and added to the data structure.</li> </ol>
		Markus Airila	PS	0.33	0.33	<p>Implementation of CPO I/O in ERO</p> <ol style="list-style-type: none"> <li>1. The 3D Monte Carlo plasma-wall interaction / impurity transport code ERO is running on Gateway. Various transformation routines exist for reading and interpolating 2D fluid code plasma parameters into ERO e.g. from SOLPS and EDGE2D output formats.</li> <li>2. The ERO related work of Tekes 2009 task ITM-09-IMP3-T7 was postponed to 2010 due to the lack of required CPO definitions and is proposed to be implemented within the present activity.</li> <li>3. A wrapper code based on the existing transformation routines will be written to handle the CPO I/O. ERO requires magnetic field, density, temperature and flow velocity data as input. As output, impurity densities and emission intensities can be provided in a 3D Cartesian grid over the simulation volume, and surface related quantities (e.g. net and gross erosion and deposition rates, composition changes) in a 2D Cartesian grid over the surface.</li> <li>4. The activity will be carried out in collaboration with FZJ and start after the edge CPO definitions have been confirmed.</li> </ol>
	ENEA Frascati	Fabio Subba	PS	0.08	0.08	Design of edge data structure, to complete the plasma edge CPO proposal. Collaboration with edge code responsible officers to implement the interaction with the edge CPOs. Additional focus will be given on the coupling of edge codes via the CPO datastructures.
		Roberto Zanino	PS	0.17	0.17	
	ÖAW	David Tskhakaya	PS	0.5	0.5	Implementation and functioning of CPO'ified edge code (BIT1) on Gateway
	FZJ	Dmitriy Borodin	PS	0.1	0.1	Implementation of the 3D-Monte-Carlo Impurity Transport Code ERO on the Gateway.Preparation of CPO Input/Output.
		Andreas Kirschner	PS	0.1	0.1	

Task	Association	Name	Type of support	Manpower (ppy)		Comments from ECOM
				proposed	accepted	
		Petra Börner	BS	0.17	0.17	<ol style="list-style-type: none"> <li>1. Implementation of the 3D Monte-Carlo Transport Code EIRENE on the Gateway. Preparation of CPO Input/Output.</li> <li>2. Maintenance of detailed MC neutral module.</li> <li>3. Extension of edge code simulations to the real wall (continuation)</li> </ol>
WP10-ITM-IMP3-ACT4-T1: <i>Verification and validation of edge codes</i>	ENEA - Frascati	Fabio Subba	BS	0.04	0.04	Contribution to the verification of the ITM edge codes and validation of related edge plasma models.
		Roberto Zanino	BS	0.05	0.05	
	IPP	David Coster	BS	0.08	0.08	Edge code V&V
		Marco Wischmeier	BS	0.3	0.3	Verification and validation of edge codes — particularly as applied to AUG.
	CEA	Xavier Bonnin	BS	0.33	0.33	<ol style="list-style-type: none"> <li>1. V&amp;V of new SOLPS6.0 version with dynamic grid adaptation</li> <li>2. Code/code benchmarking activity between SOLPS4.x, SOLPS5.x and EDGE2D/EIRENE</li> </ol>
		Pascale Monier-Garbet	BS	0.17	0.17	
		Jérôme BUCALOSSI	BS	0.08	0.08	
	FZJ	Sven Wiesen	BS	0.09	0.09	Benchmarking of Edge Transport Codes (Continuation)
		Vladislav Kotov	BS	0.17	0.17	Benchmarking of Edge Transport Codes (Continuation)
	TEKES	Leena Aho-Mantila	BS	0.4	0.4	The fluid plasma / Monte Carlo neutrals code package SOLPS5.0 and the Monte Carlo impurity following code ERO are used to model 13C methane injection experiments carried out in the ITER-relevant vertical outer target of ASDEX Upgrade in 2007-2009. SOLPS solutions for the plasma background are validated against multiple measurements taken along the plasma midplane and outer divertor target, and drift effects are studied in forward and reversed Bt/Ip directions. ERO simulations are compared with the 13C deposition measured by nuclear reaction analysis and spectroscopy. Particular emphasis is given to improve the plasma background description (from SOLPS) in ERO, and comparisons between the 2D SOLPS background and the DIVIMP onion-skin model are foreseen for 2010. The work has been ongoing for 2 years and it is done in close collaboration with the IPP Garching edge plasma physics group (D. Coster), Forschungszentrum Juelich ERO modelling group (A. Kirschner) and the ASDEX Upgrade Team.
Total for WP10-ITM-IMP3		Manpower		BS (ppy)	PS (ppy)	
				9.26	3.79	

last update: 2013-06-18 by denka

**7** [Links to IMP3 private pages](#) <sup>171</sup>

**8** [Links to IMP3 old pages \(before 2008\)](#) <sup>172</sup>

**9** Information about datastructures derived from practicalxml parsing

Data is derived from the schemas.

<sup>171</sup><https://www.efda-itm.eu/IMP3/html/index.html>

<sup>172</sup><https://www.efda-itm.eu/ITM/imports/imp3/public/index.html>

## 9.1 4.08a

### 9.1.1 ITM Types

Generated from the ITM data structure schemas. Time-dependent values are shown in green. Anonymous structure (complex) types in the schemas are given parent element names; a prefix or suffix (eg type\_, \_type, \_t) can be added if required.

#### 9.1.1.1 Primitive Types

Clear definitions required.

##### 9.1.1.1.1 float

##### 9.1.1.1.2 integer

##### 9.1.1.1.3 string

#### 9.1.1.2 Array Types

Clear definitions required.

##### 9.1.1.2.1 array3dflt\_type

Example: [[[1.0,2.0,3.0],[5.0,6.0,7.0]],[[1.0,2.0,3.0],[5.0,6.0,7.0]]]

##### 9.1.1.2.2 array3dint\_type

Example: [[[1,2,3],[5,6,7]],[[1,2,3],[5,6,7]]]

##### 9.1.1.2.3 array4dflt\_type

Example: [[[[1.0,2.0,3.0],[5.0,6.0,7.0]],[[1.0,2.0,3.0],[5.0,6.0,7.0]]],[[[1.0,2.0,3.0],[5.0,6.0,7.0]],[[1.0,2.0,3.0],[5.0,6.0,7.0]]]]]

##### 9.1.1.2.4 array5dflt\_type

Example: [[[[[[1.0,2.0,3.0],[5.0,6.0,7.0]],[[1.0,2.0,3.0],[5.0,6.0,7.0]]],[[1.0,2.0,3.0],[5.0,6.0,7.0]],[[1.0,2.0,3.0],[5.0,6.0,7.0]]]]],[[[1.0,2.0,3.0],[5.0,6.0,7.0]],[[1.0,2.0,3.0],[5.0,6.0,7.0]]]]]

##### 9.1.1.2.5 array6dflt\_type

Example: [[[[[[[[1.0,2.0,3.0],[5.0,6.0,7.0]],[[1.0,2.0,3.0],[5.0,6.0,7.0]]],[[1.0,2.0,3.0],[5.0,6.0,7.0]],[[1.0,2.0,3.0],[5.0,6.0,7.0]]]]],[[1.0,2.0,3.0],[5.0,6.0,7.0]],[[1.0,2.0,3.0],[5.0,6.0,7.0]]]]]

##### 9.1.1.2.6 array7dflt\_type

Example: [[[[[[[[[[1.0,2.0,3.0],[5.0,6.0,7.0]],[[1.0,2.0,3.0],[5.0,6.0,7.0]]],[[1.0,2.0,3.0],[5.0,6.0,7.0]],[[1.0,2.0,3.0],[5.0,6.0,7.0]]]]],[[1.0,2.0,3.0],[5.0,6.0,7.0]],[[1.0,2.0,3.0],[5.0,6.0,7.0]]]]]]]

##### 9.1.1.2.7 matflt\_type

Example: [[1.0,2.0,3.0],[5.0,6.0,7.0]]

##### 9.1.1.2.8 matint\_type

Example: [[1,2,3],[4,5,6]]

##### 9.1.1.2.9 vecflt\_type

Example: [1.0,-3e5,-4.0e-3]

##### 9.1.1.2.10 vecint\_type

Example: [1,2,3]

### 9.1.1.2.11 vecstring\_type

Example: ["aaa", "bb", "cccc"]

## 9.1.1.3 Structure Types

### 9.1.1.3.1 CPO Structures

#### 9.1.1.3.2 amns

Atomic physics data CPO. Each occurrence contains the atomic data for a given element (nuclear charge)

member	type	description
datainfo	datainfo (9.1.1.3.73)	Generic information on a data item
version	string (9.1.1.1.3)	Version of the data.
source	string (9.1.1.1.3)	Source of the data.
zn	integer (9.1.1.1.2)	Nuclear charge [units of elementary charge];
zion	integer (9.1.1.1.2)	Ion charge [units of elementary charge]. If negative value, means it is a bundle of charge state which cannot be described as single value. Vector (nz)
amn	vecflt_type (9.1.1.2.9)	Mass of atom [amu]
state_label	vecstring_type (9.1.1.2.11)	label for charge state (e.g. D0, D1+, ...); Vector(nz)
result_label	vecstring_type (9.1.1.2.11)	description of each result; Vector(nprocs)
result_unit	vecstring_type (9.1.1.2.11)	units of result; Vector(nprocs)
result_trans	vecint_type (9.1.1.2.10)	0 : none; 1 : 10**2; 2 : exp; Vector(nprocs)
bundled	integer (9.1.1.1.2)	0 : none.
proc_label	vecstring_type (9.1.1.2.11)	Label for process (e.g. EI, RC; could also include error estimates); Vector(nprocs)
tables	tables (9.1.1.3.257)	NO DOCS

#### 9.1.1.3.3 antennas

RF antenna list. Time-dependent CPO.

member	type	description
datainfo	datainfo (9.1.1.3.73)	Generic information on a data item
antenna_ec	antenna_ec (9.1.1.3.39)	Electron Cyclotron antennas
antenna_ic	antenna_ic (9.1.1.3.40)	Ion Cyclotron antennas
antenna_lh	antenna_lh (9.1.1.3.41)	Lower Hybrid antennas
codeparam	codeparam (9.1.1.3.55)	Code parameters
time	float (9.1.1.1.1)	Time [s]; Time-dependent; Scalar

#### 9.1.1.3.4 coredelta

Generic instant change of the radial core profiles due to pellet, MHD, ... Time-dependent CPO.

member	type	description
datainfo	datainfo (9.1.1.3.73)	Generic information on a data item
composition	composition (9.1.1.3.57)	Plasma composition (description of ion species).
rho_tor	vecflt_type (9.1.1.2.9)	Toroidal flux coordinate (not normalised, equivalent to rho_tor_norm) [m]; Vector (nrho). Time-dependent.
rho_tor_norm	vecflt_type (9.1.1.2.9)	Normalised toroidal flux coordinate values (= rho_tor normalised to the value at the last grid point); Vector (nrho)
delta_psi	vecflt_type (9.1.1.2.9)	Instant change of the poloidal flux [Wb]. Time-dependent. Vector(nrho).
delta_te	vecflt_type (9.1.1.2.9)	Instant change of the electron temperature [eV]. Time-dependent. Vector(nrho).
delta_ti	matflt_type (9.1.1.2.7)	Instant change of the ion temperature [eV]. Time-dependent. Matrix (nrho, nion).
delta_tz	array3dflt_type (9.1.1.2.1)	Instant change of the impurity (multiple charge states) temperature [eV]. Time-dependent. Array3d (nrho, nimp, max_nzimp).
delta_ne	vecflt_type (9.1.1.2.9)	Instant change of the electron density [m <sup>-3</sup> ]. Time-dependent. Vector(nrho).
delta_ni	matflt_type (9.1.1.2.7)	Instant change of the ion density [m <sup>-3</sup> ]. Time-dependent. Matrix (nrho, nion).
delta_nz	array3dflt_type (9.1.1.2.1)	Instant change of the impurity (multiple charge states) density [m <sup>-3</sup> ]. Time-dependent. Array3d (nrho, nimp, max_nzimp).
delta_vtor	matflt_type (9.1.1.2.7)	Instant change of the toroidal toroidal velocity [m.s <sup>-1</sup> ]. Time-dependent. Matrix (nrho, nion).
codeparam	codeparam (9.1.1.3.55)	Code parameters
time	float (9.1.1.1.1)	Time [s]; Time-dependent; Scalar

### 9.1.1.3.5 coreimpur

Impurity species (i.e. ion species with multiple charge states), radial core profiles. For heavy impurities, some ionisation states can be grouped into "bundles". Can be the result of an impurity transport code or experimental measurements. Time-dependent CPO

member	type	description
datainfo	datainfo (9.1.1.3.73)	Generic information on a data item
rho_tor_norm	vecflt.type (9.1.1.2.9)	Normalised toroidal flux coordinate values (= rho_tor normalised to the value at the last grid point); Vector (nrho)
rho_tor	vecflt.type (9.1.1.2.9)	Toroidal flux coordinate (not normalised, equivalent to rho_tor_norm) [m]; Vector (nrho). Time-dependent.
source	vecstring.type (9.1.1.2.11)	Source of the profile (any comment describing the origin of the impurity profiles : code, path to diagnostic signals, massaging, ...); Array of strings (nimp)
flag	vecint.type (9.1.1.2.10)	Flag describing how the profile has been processed : 0-not calculated; 1-interpretative; 2-calculated by the transport solver; 3-calculated by a separate code : in that case only, description of the code provided in codeparam at the same level; 4-used value from the previous time step; Time-dependent; Vector(nimp)
desc_impur	desc_impur (9.1.1.3.74)	Description of the impurities and their charge states
z	array3dflt.type (9.1.1.2.1)	Impurity ionisation state (averaged for bundle); Time-dependent; Array3D (nrho,nimp,max_nzimp)
zsq	array3dflt.type (9.1.1.2.1)	Z <sup>2</sup> , Square of impurity ionisation state (averaged for bundle); Time-dependent; Array3D (nrho,nimp,max_nzimp)
nz	array3dflt.type (9.1.1.2.1)	Density of impurity in a given charge state [m <sup>-3</sup> ]. Time-dependent; Array3D (nrho,nimp,max_nzimp)
source_term	sourceimp (9.1.1.3.236)	Source term for each charge state. Time-dependent.
boundary	boundaryimp (9.1.1.3.52)	Boundary condition for each charge state. Time-dependent
transp_coef	coretransimp (9.1.1.3.69)	Transport coefficients for each charge state
flux	fluximp (9.1.1.3.117)	Fluxes of impurity particles, two definitions [m <sup>-2</sup> .s <sup>-1</sup> ]. Time-dependent.
time_deriv	array3dflt.type (9.1.1.2.1)	Integral of the time derivative term of the transport equation. Time-dependent. Array3D (nrho,nimp,max_nzimp)
atomic_data	vecstring.type (9.1.1.2.11)	Reference for the atomic data used for each impurity. Array of strings (nimp)
time	float (9.1.1.1.1)	Time [s]; Time-dependent; Scalar.
codeparam	codeparam (9.1.1.3.55)	Code parameters

### 9.1.1.3.6 coreneutrals

Core plasma neutrals description. Time-dependent CPO.

member	type	description
datainfo	datainfo (9.1.1.3.73)	Generic information on a data item
rho_tor	vecflt.type (9.1.1.2.9)	Toroidal flux coordinate (not normalised, equivalent to rho_tor_norm) [m]; Vector (nrho). Time-dependent.
rho_tor_norm	vecflt.type (9.1.1.2.9)	Normalised toroidal flux coordinate values (= rho_tor normalised to the value at the last grid point); Vector (nrho)
composition	composition_neutrals (9.1.1.3.58)	Description of neutrals species
profiles	profiles_neutrals (9.1.1.3.164)	Profiles derived from the fields solved in the transport equations, or from experiment.
coefficients	coefficients_neutrals (9.1.1.3.56)	Recycling and sputtering coefficients used by the neutral solver. The nion index refers to the various ions (and charge states) considered in the simulation. The ion list is deduced from the composition%atomlist. Nion = sum(composition%atomlist%zn). Example, if D and C atoms are declared in the atomlist (in this order), nion would be equal to 7, representing D+,C+,C2+,C3+,C4+,C5+,C6+
codeparam	codeparam (9.1.1.3.55)	Code parameters
time	float (9.1.1.1.1)	Time [s]; Time-dependent; Scalar

### 9.1.1.3.7 coreprof

Core plasma 1D profiles as a function of the toroidal flux coordinate, obtained by solving the core transport equations (can be also fitted profiles from experimental data). The codeparam element here describes the parameters of the transport equation solver and/or those of the fitting program. Time-dependent CPO.

member	type	description
datainfo	datainfo (9.1.1.3.73)	Generic information on a data item
rho_tor_norm	vecflt.type (9.1.1.2.9)	Normalised toroidal flux coordinate values (= rho_tor normalised to the value at the last grid point); Vector (nrho)
rho_tor	vecflt.type (9.1.1.2.9)	Toroidal flux coordinate (not normalised, equivalent to rho_tor_norm) [m]; Vector (nrho). Time-dependent.

member	type	description
drho_dt	vecflt_type (9.1.1.2.9)	Time derivative of rho.tor [m/s]; Vector (nrho). Time-dependent.
toroid_field	toroid_field (9.1.1.3.259)	Toroidal field information entering the definition of rho.tor, for reference only. The physical value of the toroidal field should be taken from the toroidfield CPO. Time-dependent.
composition	composition (9.1.1.3.57)	Plasma composition (description of ion species).
psi	psi (9.1.1.3.166)	Poloidal magnetic flux [Wb]; Time-dependent;
te	corefield (9.1.1.3.60)	Electron temperature [eV]; (source term in [W.m <sup>-3</sup> ]). Time-dependent;
ti	corefieldion (9.1.1.3.61)	Ion temperature [eV]; (source term in [W.m <sup>-3</sup> ]). Time-dependent;
ne	corefield (9.1.1.3.60)	Electron density [m <sup>-3</sup> ]; (source term in [m <sup>-3</sup> ]). Time-dependent;
ni	corefieldion (9.1.1.3.61)	Ion density [m <sup>-3</sup> ]; (source term in [m <sup>-3</sup> ]). Time-dependent;
vtor	corefieldion (9.1.1.3.61)	Toroidal velocity of the various ion species [m.s <sup>-1</sup> ]; Time-dependent;
profiles1d	profiles1d (9.1.1.3.161)	Profiles derived from the fields solved in the transport equations, or from experiment.
globalparam	globalparam (9.1.1.3.122)	Various global quantities calculated from the 1D profiles. Time-dependent
codeparam	codeparam (9.1.1.3.55)	Code parameters
time	float (9.1.1.1.1)	Time [s]; Time-dependent; Scalar

### 9.1.1.3.8 coresource

Generic source term for the core transport equations (radial profile). Time-dependent CPO.

member	type	description
datainfo	datainfo (9.1.1.3.73)	Generic information on a data item
rho_tor	vecflt_type (9.1.1.2.9)	Toroidal flux coordinate (not normalised, equivalent to rho.tor_norm) [m]; Vector (nrho). Time-dependent.
rho_tor_norm	vecflt_type (9.1.1.2.9)	Normalised toroidal flux coordinate values (= rho.tor normalised to the value at the last grid point); Vector (nrho)
composition	composition (9.1.1.3.57)	Plasma composition (description of ion species).
toroid_field	b0r0 (9.1.1.3.45)	Characteristics of the vacuum toroidal field, redundant with the toroidfield CPO, to document the normalisation of j in this CPO.
j	vecflt_type (9.1.1.2.9)	Parallel current source for psi transport equation, = average(j.B) / B0, where B0 = coresource/toroid_field/b0 [A.m <sup>-2</sup> ]. Vector(nrho). Time-dependent.
sigma	vecflt_type (9.1.1.2.9)	Induced parallel conductivity [ohm <sup>-1</sup> .m <sup>-1</sup> ]. EXACT DEFINITION PENDING. Vector(nrho). Time-dependent.
si	source_ion (9.1.1.3.233)	Particle source for ion density transport equation [m <sup>-3</sup> .s <sup>-1</sup> ]. Time-dependent.
se	source_el (9.1.1.3.231)	Particle source for electron density transport equation [m <sup>-3</sup> .s <sup>-1</sup> ]. Time-dependent.
sz	source_imp (9.1.1.3.232)	Particle source for impurity density transport equation [m <sup>-3</sup> .s <sup>-1</sup> ]. Time-dependent.
qi	source_ion (9.1.1.3.233)	Heat source for ion heat transport equations [W.m <sup>-3</sup> ]. Time-dependent.
qe	source_el (9.1.1.3.231)	Heat source for electron heat transport equation [W.m <sup>-3</sup> ]. Time-dependent.
qz	source_imp (9.1.1.3.232)	Heat source for impurity heat transport equations [W.m <sup>-3</sup> ]. Time-dependent.
ui	source_ion (9.1.1.3.233)	Velocity source for toroidal velocity transport equation [kg.m <sup>-1</sup> .s <sup>-2</sup> ]. Vector(nrho). Time-dependent.
codeparam	codeparam (9.1.1.3.55)	Code parameters
time	float (9.1.1.1.1)	Time [s]; Time-dependent; Scalar

### 9.1.1.3.9 coretransp

Generic transport coefficients for the core transport equations (radial profile). Time-dependent CPO

member	type	description
datainfo	datainfo (9.1.1.3.73)	Generic information on a data item
composition	composition (9.1.1.3.57)	Plasma composition (description of ion species).
rho_tor_norm	vecflt_type (9.1.1.2.9)	Normalised toroidal flux coordinate values (= rho.tor normalised to the value at the last grid point); Vector (nrho)
rho_tor	vecflt_type (9.1.1.2.9)	Toroidal flux coordinate (not normalised, equivalent to rho.tor_norm) [m]; Vector (nrho). Time-dependent.
sigma	vecflt_type (9.1.1.2.9)	Parallel conductivity [ohm <sup>-1</sup> .m <sup>-1</sup> ]. Time-dependent. Vector(nrho).
ni_transp	ni_transp (9.1.1.3.140)	Transport coefficients for ion density equation. Time-dependent.
ne_transp	ne_transp (9.1.1.3.138)	Transport coefficients for electron density equation. Time-dependent.
nz_transp	transcoefimp (9.1.1.3.261)	Transport coefficients for impurity (multiple charge state) density equation. Time-dependent.
ti_transp	transcoefion (9.1.1.3.262)	Transport coefficients for ion temperature equation. Time-dependent.
te_transp	transcoefel (9.1.1.3.260)	Transport coefficients for electron temperature equation. Time-dependent.
tz_transp	transcoefimp (9.1.1.3.261)	Transport coefficients for impurity (multiple charge state) temperature equation. Time-dependent.
vtor_transp	transcoefvtor (9.1.1.3.263)	Transport coefficients for toroidal velocity equation. Time-dependent.
codeparam	codeparam (9.1.1.3.55)	Code parameters

member	type	description
time	float (9.1.1.1.1)	Time [s]; Time-dependent; Scalar

### 9.1.1.3.10 cxdiag

Charge Exchange Diagnostic; Time-dependent CPO

member	type	description
datainfo	datainfo (9.1.1.3.73)	Generic information on a data item
setup	cxsetup (9.1.1.3.72)	diagnostic setup information
measure	cxmeasure (9.1.1.3.71)	Measured values
time	float (9.1.1.1.1)	Time [s]; Time-dependent; Scalar

### 9.1.1.3.11 distribution

Distribution function for electron and ion species. Normally output from a Fokker-Planck calculation; Time-dependent CPO

member	type	description
datainfo	datainfo (9.1.1.3.73)	Generic information on a data item
composition	composition (9.1.1.3.57)	Plasma composition (description of ion species).
calc_spec	vecint.type (9.1.1.2.10)	Pointer to the species for which the distribution function(s) is/are calculated and whose characteristics are given in composition (for ions). Value 0 means electrons. Vector of integers (ndist_spec)
nucl_reac	dist_nucl_reac (9.1.1.3.84)	Information on nuclear reactions involving the calculated species.
global_param	dist_glob (9.1.1.3.80)	Global parameters (in most cases volume integrated and surface averaged quantities).
profiles_1d	dist_profiles (9.1.1.3.94)	Profiles (volume integrated and flux surface averaged)
dist_func	dist_func (9.1.1.3.79)	Distribution functions
input_src	dist_input_src (9.1.1.3.83)	Input sources of particles and power for the distribution species (to aid diagnosing the code output).
codeparam	codeparam (9.1.1.3.55)	Code parameters
time	float (9.1.1.1.1)	Time [s]; Time-dependent; Scalar

### 9.1.1.3.12 distsource

Sources of particles for input to kinetic equations, e.g. Fokker-Planck calculation. The sources could originate from e.g. NBI or fusion reactions. Time-dependent CPO

member	type	description
datainfo	datainfo (9.1.1.3.73)	Generic information on a data item
composition	composition (9.1.1.3.57)	Plasma composition (description of ion species).
src_spec	vecint.type (9.1.1.2.10)	Pointer to the source species whose characteristics are given in composition. Vector(nsrc_spec)
global_param	distsource_global_param (9.1.1.3.100)	Global parameters (volume integrated).
profiles_1d	distsource_profiles_1d (9.1.1.3.101)	1D radial profiles
source_4d	source_4d (9.1.1.3.230)	Source of particles in phase space.
source_tp	source_tp (9.1.1.3.234)	Source given as a set of test particles. Note that the test particles are given at the source location and not at the gyrocentre. Note that max_n_particles should be the maximum both over species and time (since the number of test particles can change with time)
codeparam	codeparam (9.1.1.3.55)	Code parameters
time	float (9.1.1.1.1)	Time [s]; Time-dependent; scalar

### 9.1.1.3.13 ecediag

Electron Cyclotron Emission Diagnostic; Time-dependent CPO

member	type	description
datainfo	datainfo (9.1.1.3.73)	Generic information on a data item
setup	ecsetup (9.1.1.3.104)	diagnostic setup information
measure	ecmeasure (9.1.1.3.103)	Measured values
time	float (9.1.1.1.1)	Time [s]; Time-dependent; Scalar



### 9.1.1.3.14 edge

An example of CPO that uses a GRID complex element. For testing purposes only for the moment. Time-dependent CPO

member	type	description
datainfo	datainfo (9.1.1.3.73)	Generic information on a data item
grid	grid_full (9.1.1.3.124)	Grid definition
te	matflt.type (9.1.1.2.7)	Example of a value defined on the GRID nodes. Time-dependent. Matrix (nspace, max_nnode). NOT SURE OF THE DIMENSIONALITY.
ne	matflt.type (9.1.1.2.7)	Example of a value defined on the GRID cells Time-dependent. Matrix (nspace, ncell). THE NOTION OF CELLS HAS DISAPPEARED ? SHOULD WE PUT HERE VALUES FOR OBJECTS ?
time	float (9.1.1.1.1)	Time [s]; Time-dependent; Scalar.
codeparam	codeparam (9.1.1.3.55)	Code parameters

### 9.1.1.3.15 equilibrium

Description of a 2D, axi-symmetric, tokamak equilibrium; result of an equilibrium code. Time-dependent CPO

member	type	description
datainfo	datainfo (9.1.1.3.73)	Generic information on a data item
eqconstraint	eqconstraint (9.1.1.3.106)	measurements to constrain the equilibrium, output values and accuracy of the fit
eqgeometry	eqgeometry (9.1.1.3.107)	Geometry of the plasma boundary
flush	flush (9.1.1.3.114)	FLUSH package coefficients for the mapping of the equilibrium. The time grid of this structure is the same as the equilibrium structure above.
global_param	global_param (9.1.1.3.121)	0d output parameters
profiles_1d	profiles_1d (9.1.1.3.162)	output profiles as a function of the poloidal flux
profiles_2d	profiles_2d (9.1.1.3.163)	output profiles in the poloidal plane
coord_sys	coord_sys (9.1.1.3.59)	flux surface coordinate system on a square grid of flux and angle
time	float (9.1.1.1.1)	Time [s]; Time-dependent; Scalar
codeparam	codeparam (9.1.1.3.55)	Code parameters

### 9.1.1.3.16 interfdiag

General line integral diagnostic

member	type	description
datainfo	datainfo (9.1.1.3.73)	Generic information on a data item
expression	string (9.1.1.1.3)	Formal expression for the line integral to be evaluated as a function of ne, ni, Te, Ti, Zeff, Br, Bz
setup_line	setup_line (9.1.1.3.228)	Geometric description of the lines of sight
measure	exp1D (9.1.1.3.111)	Measured value. Time-dependent; Vector (nchords)
time	float (9.1.1.1.1)	Time [s]; Time-dependent; Scalar

### 9.1.1.3.17 ironmodel

Model of the iron circuit; Time-dependent CPO

member	type	description
datainfo	datainfo (9.1.1.3.73)	Generic information on a data item
desc_iron	desc_iron (9.1.1.3.75)	Description of the iron segments
magnetise	magnetise (9.1.1.3.134)	Magnetisation M of the iron segment, assumed to be constant inside a given iron segment. Reminder : $H = 1/\mu_0 * B - \mu_r * M$ ; [A/m].
time	float (9.1.1.1.1)	Time [s]; Time-dependent; Scalar

### 9.1.1.3.18 launches

RF wave launch conditions. Time-dependent CPO

member	type	description
datainfo	datainfo (9.1.1.3.73)	Generic information on a data item
name	vecstring.type (9.1.1.2.11)	Antenna name, Vector of strings (nantenna)
type	vecstring.type (9.1.1.2.11)	Wave type (LH, EC, IC, ...), Vector of strings (nantenna)
frequency	vecflt.type (9.1.1.2.9)	Wave frequency [Hz], Vector (nantenna).

member	type	description
mode	vecint.type (9.1.1.2.10)	Incoming wave mode (+ 1 : slow wave only; -1 both slow and fast wave modes). Vector of integers (nantenna). Time-dependent
position	rzphiID (9.1.1.3.198)	Reference global position of the antenna. Time-dependent
spectrum	spectrum (9.1.1.3.239)	Spectral properties of the wave.
beam	rf.beam (9.1.1.3.192)	Beam characteristics
codeparam	codeparam (9.1.1.3.55)	Code parameters
time	float (9.1.1.1.1)	Time [s]; Time-dependent; Scalar

### 9.1.1.3.19 limiter

Description of the immobile limiting surface for defining the Last Closed Flux Surface. CPO

member	type	description
datainfo	datainfo (9.1.1.3.73)	Generic information on a data item
position	rzID (9.1.1.3.194)	Position (R,Z coordinates) of the limiter [m]; Vector(npoints)

### 9.1.1.3.20 magdiag

Magnetic diagnostics. Time-dependent CPO

member	type	description
datainfo	datainfo (9.1.1.3.73)	Generic information on a data item
ip	exp0D (9.1.1.3.110)	Plasma current [A]. Positive sign means anti-clockwise when viewed from above. Time-dependent. Scalar
diamagflux	exp0D (9.1.1.3.110)	Diamagnetic flux [Wb]; Time-dependent; Scalar
flux_loops	flux_loops (9.1.1.3.115)	Poloidal flux loops RZ coordinates have 1 component for the full loop and two if there is a negative reference loop
bpol_probes	bpol_probes (9.1.1.3.54)	Poloidal field probes
time	float (9.1.1.1.1)	Time [s]; Time-dependent; Scalar

### 9.1.1.3.21 mhd

MHD linear stability. Time-dependent CPO

member	type	description
datainfo	datainfo (9.1.1.3.73)	Generic information on a data item
n	vecint.type (9.1.1.2.10)	Toroidal mode number; Time-dependent; Vector (nn)
m	matint.type (9.1.1.2.8)	Poloidal mode number; Time-dependent; Matrix (nn,nn)
psi	vecflt.type (9.1.1.2.9)	Position in poloidal flux [Wb] (without 1/2pi and such that $B_p =  \text{grad } \psi  / R/2/\pi$ ). Time-dependent; Vector (npsi)
frequency	vecflt.type (9.1.1.2.9)	Frequency of the mode [Hz]; Time-dependent; Vector (nn)
growthrate	vecflt.type (9.1.1.2.9)	Linear growthrate of the mode [Hz]; Time-dependent; Vector (nn)
disp_perp	array3dfilt.type (9.1.1.2.1)	Perpendicular displacement of the mode [m]; Time-dependent; Array 3D (npsi,nn,nn)
disp_par	array3dfilt.type (9.1.1.2.1)	Parallel displacement of the mode [m]; Time-dependent; Array 3D (npsi,nn,nn)
tau_alfven	vecflt.type (9.1.1.2.9)	Alven time= $R/vA=R0 \sqrt{\mu_0 \rho_0} / B0$ [s]; Definitions of R0, B0, $\mu_0$ , $\rho_0$ to be clarified. rho grid should be included in the MHD CPO ? Time-dependent; Vector (npsi)
tau_resistive	vecflt.type (9.1.1.2.9)	Resistive time = $\mu_0 \rho_0 / 1.22 / \eta_{\text{neo}}$ [s]; Source of $\eta_{\text{neo}}$ to be clarified. Time-dependent; Vector (npsi)
time	float (9.1.1.1.1)	Time [s]; Time-dependent; Scalar.
codeparam	codeparam (9.1.1.3.55)	Code parameters

### 9.1.1.3.22 msediag

MSE Diagnostic; Time-dependent CPO

member	type	description
datainfo	datainfo (9.1.1.3.73)	Generic information on a data item
setup_mse	setup_mse (9.1.1.3.229)	diagnostic setup information
measure	exp1D (9.1.1.3.111)	Measured value (MSE angle gamma [rad]). Time-dependent; Vector (nchords)
time	float (9.1.1.1.1)	Time [s]; Time-dependent; Scalar

### 9.1.1.3.23 nbi

Neutral Beam Injection. Input to NBI source codes; describes the neutrals that are about to be launched into the torus; Time-dependent CPO

member	type	description
datainfo	datainfo (9.1.1.3.73)	Generic information on a data item
composition	composition (9.1.1.3.57)	Plasma composition (description of ion species).
inj_spec	vecint.type (9.1.1.2.10)	Pointer to the to the injected species whose characteristics are given in composition. Vector(ninj_spec)
nunits_spec	vecint.type (9.1.1.2.10)	Number of units injecting a given species; Time-dependent; Vector(ninj_spec).
spec2unit	matint.type (9.1.1.2.8)	Pointer to units injecting a given species; Time-Dependent; Matrix(ninj_spec, max_nunits_spec)
unit2spec	vecint.type (9.1.1.2.10)	Pointer to a species in composition injected by a given unit; Time-dependent; Vector(nunits)
pow_unit	exp1D (9.1.1.3.111)	Power delivered by an NBI unit [W]; Time-dependent; Vector(nunits)
inj_eng_unit	exp1D (9.1.1.3.111)	Full injection energy of a unit [ev]; Time-dependent; Vector(nunits)
halfe_cfr	exp1D (9.1.1.3.111)	Beam current fraction (of total) for half energy component; Time-dependent; Vector(nunits)
thirde_cfr	exp1D (9.1.1.3.111)	Beam current fraction (of total) for the one third energy component. Time-dependent; Vector(nunits)
setup_inject	setup_inject (9.1.1.3.227)	Detailed information on an injection unit.
codeparam	codeparam (9.1.1.3.55)	Code parameters
time	float (9.1.1.1.1)	Time [s]; Time-dependent; Scalar

### 9.1.1.3.24 neoclassic

Neoclassical quantities (including transport coefficients). Time-dependent CPO

member	type	description
datainfo	datainfo (9.1.1.3.73)	Generic information on a data item
rho_tor_norm	vecflt.type (9.1.1.2.9)	Normalised toroidal flux coordinate values (= rho_tor normalised to the value at the last grid point); Vector(nrho)
rho_tor	vecflt.type (9.1.1.2.9)	Toroidal flux coordinate (not normalised, equivalent to rho_tor_norm) [m]; Vector(nrho). Time-dependent.
composition	composition (9.1.1.3.57)	Plasma composition (description of ion species).
ni_neo	transcoefion (9.1.1.3.262)	Neoclassical transport coefficients for ion density equation. Time-dependent.
ne_neo	transcoefel (9.1.1.3.260)	Neoclassical transport coefficients for electron density equation. Time-dependent.
nz_neo	transcoefimp (9.1.1.3.261)	Neoclassical transport coefficients for impurity (multiple charge state) density equation. Time-dependent.
ti_neo	transcoefion (9.1.1.3.262)	Neoclassical transport coefficients for ion temperature equation. Time-dependent.
te_neo	transcoefel (9.1.1.3.260)	Neoclassical transport coefficients for electron temperature equation. Time-dependent.
tz_neo	transcoefimp (9.1.1.3.261)	Neoclassical transport coefficients for impurity (multiple charge state) temperature equation. Time-dependent.
mtor_neo	transcoefel (9.1.1.3.260)	Neoclassical transport coefficients for total toroidal momentum equation. Time-dependent.
sigma	vecflt.type (9.1.1.2.9)	Neoclassical conductivity [ohm <sup>-1</sup> .m <sup>-1</sup> ]. Time-dependent. Vector(nrho).
jboot	vecflt.type (9.1.1.2.9)	Bootstrap current density [A.m <sup>-2</sup> ]. Time-dependent. Vector(nrho).
er	vecflt.type (9.1.1.2.9)	Radial electric field [V/m]. Time-dependent. Vector(nrho).
vpol	matflt.type (9.1.1.2.7)	Neoclassical poloidal rotation of for each ion species [m/s]. Time-dependent. Matrix(nrho,nion).
fext	array3dfilt.type (9.1.1.2.1)	Moments of parallel external force on each ion species [T.j.m <sup>-3</sup> ]. Time-dependent. Array3D(nrho,nion,nmoment).
jext	vecflt.type (9.1.1.2.9)	Current density response to fext [A.m <sup>-2</sup> ]. Time-dependent. Vector(nrho).
time	float (9.1.1.1.1)	Time [s]; Time-dependent; Scalar.
codeparam	codeparam (9.1.1.3.55)	Code parameters

### 9.1.1.3.25 orbit

Orbits for a set of particles. Time-dependent CPO

member	type	description
datainfo	datainfo (9.1.1.3.73)	Generic information on a data item
orbitt_id	orbitt_id (9.1.1.3.146)	Parameters identifying an orbit
orb_trace	orb_trace (9.1.1.3.144)	Position of particle in 5D space (3D in real and 2D in velocity).
orb_glob_dat	orb_glob_dat (9.1.1.3.143)	Global quantities associated with an orbit.
codeparam	codeparam (9.1.1.3.55)	Code parameters
time	float (9.1.1.1.1)	Time [s]; Time-dependent; Scalar

### 9.1.1.3.26 pfsystems

Description of the active poloidal coils, passive conductors, currents flowing in those and mutual electromagnetic effects of the device; Time-dependent CPO

member	type	description
datainfo	datainfo (9.1.1.3.73)	Generic information on a data item
pccoils	pccoils (9.1.1.3.150)	Active poloidal field coils
pfpassive	pfpassive (9.1.1.3.154)	Passive axisymmetric conductor description
pfcircuits	pfcircuits (9.1.1.3.149)	Circuits, connected to multiple coils and to multiple supplies, defining the current and voltage relationships in the system
pfsupplies	pfsupplies (9.1.1.3.155)	PF power supplies
time	float (9.1.1.1.1)	Time [s]; Time-dependent; Scalar

### 9.1.1.3.27 polardiag

General line integral diagnostic

member	type	description
datainfo	datainfo (9.1.1.3.73)	Generic information on a data item
expression	string (9.1.1.1.3)	Formal expression for the line integral to be evaluated as a function of $n_e$ , $n_i$ , $T_e$ , $T_i$ , $Z_{eff}$ , $B_r$ , $B_z$
setup_line	setup_line (9.1.1.3.228)	Geometric description of the lines of sight
measure	exp1D (9.1.1.3.111)	Measured value. Time-dependent; Vector (nchords)
time	float (9.1.1.1.1)	Time [s]; Time-dependent; Scalar

### 9.1.1.3.28 reference

Set of generic reference signals (for input e.g. to a controller); Time-dependent CPO

member	type	description
datainfo	datainfo (9.1.1.3.73)	Generic information on a data item
non_timed	ref.nt (9.1.1.3.171)	Time-independent references (parameters)
timed	ref.t (9.1.1.3.182)	Time-dependent references
time	float (9.1.1.1.1)	Time [s]; Time-dependent; Scalar

### 9.1.1.3.29 sawteeth

Description of sawtooth events. Time-dependent CPO

member	type	description
datainfo	datainfo (9.1.1.3.73)	Generic information on a data item
crash_trig	integer (9.1.1.1.2)	Flag indicating whether a crash condition has been satisfied : 0 = no crash. $N(\zeta_0)$ = crash triggered due to condition $ii=N$ . Integer. Time-dependent.
composition	composition (9.1.1.3.57)	Plasma composition (description of ion species).
rho_tor_norm	vecflt_type (9.1.1.2.9)	Normalised toroidal flux coordinate values (= rho_tor normalised to the value at the last grid point); Vector (nrho)
rho_tor	vecflt_type (9.1.1.2.9)	Toroidal flux coordinate [m] given by $\sqrt{\phi/B_0/\pi}$ , where $B_0 = \text{toroidfield}\%bvac.r\%value / \text{toroidfield}\%r0$ . Vector (nrho). Time-dependent.
profiles1d	sawteeth_profiles1d (9.1.1.3.203)	Core profiles after sawtooth crash
diags	sawteeth_diags (9.1.1.3.202)	NO DOCS
codeparam	codeparam (9.1.1.3.55)	Code parameters
time	float (9.1.1.1.1)	Time [s]; Time-dependent; Scalar

### 9.1.1.3.30 scenario

Scenario characteristics, to be used as input or output of a whole discharge simulator. Time-dependent CPO.

member	type	description
datainfo	datainfo (9.1.1.3.73)	Generic information on a data item
centre	scenario_centre (9.1.1.3.204)	central values of the profiles (at magnetic axis)
composition	scenario_composition (9.1.1.3.205)	Plasma composition (description of ion species).
configs	scenario_configuration (9.1.1.3.206)	Strings describing the tokamak configuration

member	type	description
confinement	scenario_confinement (9.1.1.3.207)	characteristic confinement times
currents	scenario_currents (9.1.1.3.208)	data related to current sources and current diffusion
edge	scenario_edge (9.1.1.3.209)	edge value (@ LCMS)
energy	scenario_energy (9.1.1.3.210)	plasma energy content
eqgeometry	eqgeometry (9.1.1.3.107)	Geometry of the plasma boundary
global_param	scenario_global (9.1.1.3.211)	Global scalar values
heat_power	scenario_heat_power (9.1.1.3.212)	Power delivered to plasma (thermal and non thermal)
itb	scenario_itb (9.1.1.3.214)	Values characteristics of the Internal Transport Barrier
lim_div_wall	scenario_lim_div_wall (9.1.1.3.215)	values on the plate of divertor or on the limiter or on the wall (@ LCMS)
line_ave	scenario_line_ave (9.1.1.3.216)	line averaged value
neutron	scenario_neutron (9.1.1.3.217)	neutron flux for DD and DT reactions
ninety_five	scenario_ninety_five (9.1.1.3.218)	values at 95% of poloidal flux
pedestal	scenario_pedestal (9.1.1.3.219)	Values at the top of the H-mode pedestal
references	scenario_references (9.1.1.3.222)	References
reactor	scenario_reactor (9.1.1.3.220)	reactor data (such as electricity cost ...)
sol	scenario_sol (9.1.1.3.223)	SOL characteristic (@ LCMS)
vol_ave	scenario_vol_ave (9.1.1.3.224)	volume averaged value
codeparam	codeparam (9.1.1.3.55)	Code parameters
time	float (9.1.1.1.1)	Time [s]; Time-dependent; Scalar

### 9.1.1.3.31 summary

Set of reduced data summarising the main simulation parameters for the data base catalogue. CPO.

member	type	description
datainfo	datainfo (9.1.1.3.73)	Generic information on a data item
ip	reduced (9.1.1.3.170)	Plasma current [A]
bvac_r	reduced (9.1.1.3.170)	Vacuum field times radius in the toroidal field magnet [T.m];
geom_axis_r	reduced (9.1.1.3.170)	Major radius of the geometric axis [m]
a_minor	reduced (9.1.1.3.170)	Minor radius of the plasma boundary [m]
elongation	reduced (9.1.1.3.170)	Elongation of the plasma boundary [m]
tria_lower	reduced (9.1.1.3.170)	Lower triangularity of the plasma boundary [m]
tria_upper	reduced (9.1.1.3.170)	Upper triangularity of the plasma boundary [m]
tev	reduced (9.1.1.3.170)	volume averaged electron temperature [eV]
tiv	reduced (9.1.1.3.170)	volume averaged ion temperature [eV]
nev	reduced (9.1.1.3.170)	volume averaged electron density [m <sup>-3</sup> ]
zeffv	reduced (9.1.1.3.170)	volume averaged effective charge
beta_pol	reduced (9.1.1.3.170)	poloidal beta
beta_tor	reduced (9.1.1.3.170)	toroidal beta
beta_normal	reduced (9.1.1.3.170)	normalised beta
li	reduced (9.1.1.3.170)	internal inductance
volume	reduced (9.1.1.3.170)	total plasma volume [m <sup>3</sup> ]
area	reduced (9.1.1.3.170)	area poloidal cross section [m <sup>2</sup> ]
main_ion1_z	reduced (9.1.1.3.170)	Atomic number of the main ion #1 [a.m.u.]
main_ion1_a	reduced (9.1.1.3.170)	Atomic mass of the main ion #1 [a.m.u.]
main_ion2_z	reduced (9.1.1.3.170)	Atomic number of the main ion #2 [a.m.u.]
main_ion2_a	reduced (9.1.1.3.170)	Atomic mass of the main ion #2 [a.m.u.]
impur1_z	reduced (9.1.1.3.170)	Atomic number of the impurity #1 [a.m.u.]
impur1_a	reduced (9.1.1.3.170)	Atomic mass of the impurity #1 [a.m.u.]
time	float (9.1.1.1.1)	Time at which the 0D variables of the summary are taken [s]. Scalar

### 9.1.1.3.32 topinfo

General info about the database entry. CPO.

member	type	description
dataprovider	string (9.1.1.1.3)	Name of the main data provider (the person who filled the original data)
description	string (9.1.1.1.3)	Pulse/Entry description
firstputdate	string (9.1.1.1.3)	Date of the original data submission
lastupdate	string (9.1.1.1.3)	Date of the last data addition in the tree
source	string (9.1.1.1.3)	Exact reference of the data source (e.g. original reference in the native machine data base)
comment	string (9.1.1.1.3)	Any additional comment
dataversion	string (9.1.1.1.3)	Version of the data structure
workflow	string (9.1.1.1.3)	Workflow which has been used to produce the present entry. Exact format to be defined with the platform group. User-specific input files (if allowed) must be stored there as well.
entry	entry_def (9.1.1.3.105)	Definition of this database entry
parent_entry	entry_def (9.1.1.3.105)	Definition of the entry of the direct parent (if any)
mdinfo	mdinfo (9.1.1.3.135)	Information related to machine description for this entry

### 9.1.1.3.33 toroidfield

Toroidal field. Time-dependent CPO

member	type	description
datainfo	datainfo (9.1.1.3.73)	Generic information on a data item
nturns	integer (9.1.1.1.2)	Number of total turns in the toroidal field coil
ncoils	integer (9.1.1.1.2)	Number of packets of coils
current	exp0D (9.1.1.3.110)	Current in the toroidal field coils [A]; Time-dependent. Scalar.
bvac_r	exp0D (9.1.1.3.110)	Vacuum field times radius in the toroidal field magnet [T.m]. Positive sign means anti-clockwise when viewed from above. Time-dependent. Scalar.
r0	float (9.1.1.1.1)	Characteristic major radius of the device (used in publications, usually middle of the vessel at the equatorial midplane) [m]. Scalar.
time	float (9.1.1.1.1)	Time [s]; Time-dependent. Scalar.

### 9.1.1.3.34 tsdiag

Thomson scattering Diagnostic; Time-dependent CPO

member	type	description
datainfo	datainfo (9.1.1.3.73)	Generic information on a data item
setup	tssetup (9.1.1.3.265)	diagnostic setup information
measure	tsmeasure (9.1.1.3.264)	Measured values
time	float (9.1.1.1.1)	Time [s]; Time-dependent; Scalar

### 9.1.1.3.35 vessel

Mechanical structure of the vacuum vessel. CPO.

member	type	description
datainfo	datainfo (9.1.1.3.73)	Generic information on a data item
position	rz1D (9.1.1.3.194)	Vessel wall outline (list of R,Z co-ordinates) [m]; Vector (npoints)

### 9.1.1.3.36 waves

RF wave propagation and deposition. Time-dependent CPO

member	type	description
datainfo	datainfo (9.1.1.3.73)	Generic information on a data item
composition	composition (9.1.1.3.57)	Plasma composition (description of ion species).
global_param	waves_global_param (9.1.1.3.269)	Global wave deposition parameters
grid	waves_grid (9.1.1.3.270)	Grid points for 1D and 2D profiles and for full wave solutions.
profiles_1d	waves_profiles_1d (9.1.1.3.271)	1D radial profiles
profiles_2d	waves_profiles_2d (9.1.1.3.272)	2D profiles in poloidal cross-section

member	type	description
beamtracing	beamtracing (9.1.1.3.47)	Beam-tracing or ray-tracing solver
fullwave	fullwave (9.1.1.3.119)	Solution by full wave code
codeparam	codeparam (9.1.1.3.55)	Code parameters
time	float (9.1.1.1.1)	Time [s]; Time-dependent; Scalar

### 9.1.1.3.37 Utility Structures

#### 9.1.1.3.38 alter\_coord

Alternative coordinate system possibly used to describe the space (e.g. rho\_tor versus rho\_tor\_norm). NB : when specifying straight lines to build cells, these are intended to refer to the primary (main) system and may not be straight on the alternative system.

member	type	description
type_coord	vecint.type (9.1.1.2.10)	Type of coordinates describing the space. Vector of integers (ncoord)
node_value	matflt.type (9.1.1.2.7)	Numerical value of the node coordinates. Matrix (nnode,ncoord)

Type of: grid\_space:alter\_coord (149)

#### 9.1.1.3.39 antenna\_ec

Electron Cyclotron antennas

member	type	description
name	vecstring.type (9.1.1.2.11)	Antenna name, Vector of strings (nantenna_ec)
frequency	vecflt.type (9.1.1.2.9)	Frequency [Hz], Vector (nantenna_ec)
power	exp1D (9.1.1.3.111)	Power [W], Vector (nantenna_ec). Time-dependent
mode	vecint.type (9.1.1.2.10)	Incoming wave mode (+ or -1 for O/X mode), Vector of integers (nantenna_ec). Time-dependent
position	rzphi1D (9.1.1.3.198)	Reference global position of the last mirror. Vectors (nantenna_ec). Time-dependent
launchangles	launchangles (9.1.1.3.129)	Launching angles of the beam
beam	rf.beam (9.1.1.3.192)	Beam characteristics

Type of: antennas:antenna\_ec (28)

#### 9.1.1.3.40 antenna\_ic

Ion Cyclotron antennas

member	type	description
name	vecstring.type (9.1.1.2.11)	Antenna name; Vector of strings (nantenna_ic)
frequency	exp1D (9.1.1.3.111)	Frequency [Hz]; Time-dependent; Vector (nantenna_ic)
power	exp1D (9.1.1.3.111)	Power [W]; Time-dependent; Vector (nantenna_ic)
setup	antennaic_setup (9.1.1.3.42)	Detailed description of IC antennas

Type of: antennas:antenna\_ic (28)

#### 9.1.1.3.41 antenna\_lh

Lower Hybrid antennas

member	type	description
name	vecstring.type (9.1.1.2.11)	Antenna name, Vector of strings (nantenna_lh)
frequency	vecflt.type (9.1.1.2.9)	Frequency [Hz], Vector (nantenna_lh)
power	exp1D (9.1.1.3.111)	Power [W], Vector (nantenna_lh). Time-dependent
position	rzphi1Dexp (9.1.1.3.199)	Reference global antenna position. Vectors (nantenna_lh). Time-dependent
setup	antennalh_setup (9.1.1.3.43)	Detailed description of LH antennas.
plasmaedge	plasmaedge (9.1.1.3.157)	Plasma edge characteristics in front of the antenna.
beam	rf.beam (9.1.1.3.192)	Beam characteristics

Type of: antennas:antenna\_lh (28)

#### 9.1.1.3.42 antennaic\_setup

Detailed description of ICRH antennas

member	type	description
straps	straps (9.1.1.3.245)	Properties of each IC antenna strap

Type of: antenna\_ic:setup (64)

#### 9.1.1.3.43 antennalh\_setup

Detailed description of LH antennas

member	type	description
modules	modules (9.1.1.3.137)	Modules description

Type of: antenna\_lh:setup (65)

#### 9.1.1.3.44 atomlist

List of the atoms that enter the composition of the neutral species

member	type	description
amn	vecflt.type (9.1.1.2.9)	Atomic mass number; Vector (natm)
zn	vecflt.type (9.1.1.2.9)	Nuclear charge; Vector (natm)

Type of: composition\_neutrals:atomlist (82)

#### 9.1.1.3.45 b0r0

Characteristics of the vacuum toroidal field, redundant with the toroidfield CPO, normalisation used by the ETS

member	type	description
r0	float (9.1.1.1.1)	Characteristic major radius of the device (used in publications, usually middle of the vessel at the equatorial midplane) [m]. Scalar.
b0	float (9.1.1.1.1)	Vacuum field at r0 [T]; Positive sign means anti-clockwise when viewed from above. Scalar. Time-dependent.

Type of: coresource:toroid\_field (33) I global\_param:toroid\_field (145) I waves\_global\_param:toroid\_field (293)

#### 9.1.1.3.46 beamlets

Detailed information on beamlets.

member	type	description
nbeamlets	vecint.type (9.1.1.2.10)	Number of beamlets of a unit; Vector(nunits)
position	rzphi2D (9.1.1.3.200)	Position of beamlets. Matrices(nunits, max_nbeamlets)
tang_rad_blt	matflt.type (9.1.1.2.7)	Tangency radius (major radius where the central line of a beamlet is tangent to a circle around the torus) [m]; Matrix(nunits, max_nbeamlets)
angle_blt	matflt.type (9.1.1.2.7)	Angle of inclination between a line at the centre of a beamlet and the horizontal plane [rad]; Matrix(nunits, max_nbeamlets)
pow_frc_blt	matflt.type (9.1.1.2.7)	Fraction of power of a unit injected by a beamlet; Matrix(nunits, max_nbeamlets)

Type of: setup\_inject:beamlets (251)

#### 9.1.1.3.47 beamtracing

Beam-tracing or ray-tracing solver



member	type	description
nbeams	vecint.type (9.1.1.2.10)	Number of rays/beams for each antenna. Vector of integers (nfreq_beam)
npoints	matint.type (9.1.1.2.8)	Number of points along each ray/beam. Matrix of integers (nfreq_beam, max_nbeams)
power	matflt.type (9.1.1.2.7)	Initial power in each ray/beam [W], Matrix (nfreq_beam, max_nbeams). Time-dependent
dnpar	array3dflt.type (9.1.1.2.1)	Spectral width in refractive index associated with each ray/beam, Array (3D) of double precision real (nfreq_beam, max_nbeams, max_npoints). Time-dependent
length	array3dflt.type (9.1.1.2.1)	Ray/beam curvilinear length [m], Array (3D) of double precision real (nfreq_beam, max_nbeams, max_npoints). Time-dependent
position	waves_rtposition (9.1.1.3.273)	Ray/beam position
wavevector	waves_rtwavevector (9.1.1.3.274)	Ray/beam wave vector.
polarization	polarization (9.1.1.3.159)	Wave field polarization along the ray/beam.
powerflow	powerflow (9.1.1.3.160)	Power flow along the ray/beam.

Type of: waves:beamtracing (61)

### 9.1.1.3.48 bezier

Components of the Bezier vectors associated to a node. I WONDER IF THIS IS GENERAL ENOUGH ... WHAT DO WE DO IF A DIFFERENT TYPE OF FINITE ELEMENT IS USED ?

member	type	description
u	matflt.type (9.1.1.2.7)	First Bezier vector components. Matrix(nnode,2)
v	matflt.type (9.1.1.2.7)	Second Bezier vector components. Matrix(nnode,2)
w	matflt.type (9.1.1.2.7)	Third Bezier vector components. Matrix(nnode,2)

Type of: properties:bezier (189)

### 9.1.1.3.49 boundary

Boundary condition for the transport equation. Time-dependent.

member	type	description
value	vecflt.type (9.1.1.2.9)	Value of the boundary condition (in case flag = 2). Unit depends on type, respectively [1-Wb, 2-A, 3-V]. For type 1 to 3, only the first position in the vector is used. For type 5, all three positions are used, meaning respectively a1, a2, a3. Time-dependent. Vector(3).
source	string (9.1.1.1.3)	Source of the boundary condition (any comment describing its origin : code, path to diagnostic signals, massaging); String
type	integer (9.1.1.1.2)	Type of the boundary condition for the transport solver (in case flag = 2). 0- equation not solved; 1- edge value of poloidal flux; 2- total current inside boundary; 3- edge Vloop; 4- not defined; 5- generic boundary condition expressed as $a1*(dpsi.drho.tor)+a2*psi=a3$ . Time-dependent. Scalar
rho	float (9.1.1.1.1)	Position of the boundary condition (in terms of toroidal flux coordinate) for the transport solver [m]. Outside this boundary, the value of the data are considered to be prescribed. Scalar
codeparam	codeparam (9.1.1.3.55)	Code parameters

Type of: psi:boundary (190)

### 9.1.1.3.50 boundary\_neutrals

Structure for the boundary condition of core transport equations (neutrals). Time-dependent;

member	type	description
value	array3dflt.type (9.1.1.2.1)	Value of the boundary condition. Unit depends on type, respectively [1-field, 2-field.m <sup>-1</sup> , 3-m, 4-field.s <sup>-1</sup> ]. For type 1 to 4, only the first position in the vector is used. For type 5, all three positions are used, meaning respectively a1, a2, a3. Time-dependent. Array3D(3,nneut,max_ntype)
type	matint.type (9.1.1.2.8)	Type of the boundary condition for the transport solver. 0- equation not solved; 1- value of the field y; 2-radial derivative of the field (-dy/drho.tor); 3-scale length of the field y/(-dy/drho.tor); 4- flux; 5- generic boundary condition y expressed as $a1y'+a2y=a3$ . Time-dependent. Matrix(nneut,max_ntype)
rho.tor	matint.type (9.1.1.2.8)	Position of the boundary condition (in terms of toroidal flux coordinate) for the transport solver [m]. Outside this boundary, the value of the data are considered to be prescribed. Time-dependent. Matrix(nneut,max_ntype).

Type of: corefieldneutral:boundary (86) I corefieldneutrals:boundary (87) I corefieldneutralv:boundary (88)

### 9.1.1.3.51 boundaryel

Structure for the boundary condition of core transport equations (electrons) Time-dependent;

member	type	description
value	vecflt.type (9.1.1.2.9)	Value of the boundary condition (in case flag = 2). Unit depends on type, respectively [1-field, 2-field.m <sup>-1</sup> , 3-m, 4-field.s <sup>-1</sup> ]. For type 1 to 4, only the first position in the vector is used. For type 5, all three positions are used, meaning respectively a1, a2, a3. Time-dependent. Vector(3).
source	string (9.1.1.1.3)	Source of the boundary condition (any comment describing its origin : code, path to diagnostic signals, massaging); String
type	integer (9.1.1.1.2)	Type of the boundary condition for the transport solver (in case flag = 2). 0- equation not solved; 1- value of the field y; 2-radial derivative of the field (-dy/drho.tor); 3-scale length of the field y/(-dy/drho.tor); 4- flux; 5- generic boundary condition y expressed as a1y'+a2y=a3. Time-dependent. Scalar
rho.tor	float (9.1.1.1.1)	Position of the boundary condition (in terms of toroidal flux coordinate) for the transport solver [m]. Outside this boundary, the value of the data are considered to be prescribed. Time-dependent. Scalar

Type of: corefield:boundary (84)

### 9.1.1.3.52 boundaryimp

Structure for the boundary condition of core transport equations (impurities) Time-dependent

member	type	description
value	array3dflt.type (9.1.1.2.1)	Value of the boundary condition (in case flag = 2). Unit depends on type, respectively [1-field, 2-field.m <sup>-1</sup> , 3-m, 4-field.s <sup>-1</sup> ]. For type 1 to 4, only the first position in the first dimension is used. For type 5, all three positions are used, meaning respectively a1, a2, a3. Time-dependent. Array 3D (3,nimp,max.nzimp)
source	vecstring.type (9.1.1.2.11)	Source of the boundary condition (any comment describing its origin : code, path to diagnostic signals, massaging); Array of strings (nimp)
type	matint.type (9.1.1.2.8)	Type of the boundary condition for the transport solver (in case flag = 2). 0- equation not solved; 1- value of the field y; 2-radial derivative of the field (-dy/drho.tor); 3-scale length of the field y/(-dy/drho.tor); 4- flux; 5- generic boundary condition y expressed as a1y'+a2y=a3. Time-dependent. Matrix(nimp,max.nzimp)
rho	matflt.type (9.1.1.2.7)	Position of the boundary condition (in terms of toroidal flux coordinate) for the transport solver [m]. Outside this boundary, the value of the data are considered to be prescribed. Time-dependent. Matrix(nimp,max.nzimp)
codeparam	codeparam (9.1.1.3.55)	Code parameters

Type of: coreimpur:boundary (30)

### 9.1.1.3.53 boundaryion

Structure for the boundary condition of core transport equations (ions) Time-dependent

member	type	description
value	matflt.type (9.1.1.2.7)	Value of the boundary condition (in case flag = 2). Unit depends on type, respectively [1-field, 2-field.m <sup>-1</sup> , 3-m, 4-field.s <sup>-1</sup> ]. For type 1 to 4, only the first position in the first dimension is used. For type 5, all three positions are used, meaning respectively a1, a2, a3. Time-dependent. Matrix(3,nion)
source	vecstring.type (9.1.1.2.11)	Source of the boundary condition (any comment describing its origin : code, path to diagnostic signals, massaging); Array of strings (nion)
type	vecint.type (9.1.1.2.10)	Type of the boundary condition for the transport solver (in case flag = 2). 0- equation not solved; 1- value of the field y; 2-radial derivative of the field (-dy/drho.tor); 3-scale length of the field y/(-dy/drho.tor); 4- flux; 5- generic boundary condition y expressed as a1y'+a2y=a3. Time-dependent. Vector(nion)
rho.tor	vecflt.type (9.1.1.2.9)	Position of the boundary condition (in terms of toroidal flux coordinate) for the transport solver [m]. Outside this boundary, the value of the data are considered to be prescribed. Time-dependent. Vector(nion)

Type of: corefieldion:boundary (85)

### 9.1.1.3.54 bpol\_probes

Poloidal field probes

member	type	description
setup_bprobe	setup_bprobe (9.1.1.3.225)	diagnostic setup information

member	type	description
measure	exp1D (9.1.1.3.111)	Measured value [T]; Time-dependent; Vector (nprobes)

Type of: magdiag:bpol\_probes (45)

### 9.1.1.3.55 codeparam

Code parameters

member	type	description
codename	string (9.1.1.1.3)	Name of the code
codeversion	string (9.1.1.1.3)	Version of the code (as in the ITM repository)
parameters	string (9.1.1.1.3)	List of the code specific parameters, string expected to be in XML format.
output.diag	string (9.1.1.1.3)	List of the code specific diagnostic/output, string expected to be in XML format.
output.flag	integer (9.1.1.1.2)	Output flag : 0 means the run is successful, other values meaning some difficulty has been encountered, the exact meaning is then code specific. Negative values mean the result shall not be used. Exact rules could discussed and implemented in the module wrapper. Time-dependent.

Type of: antennas:codeparam (28) I boundary:codeparam (73) I boundaryimp:codeparam (76) I coredelta:codeparam (29) I corefield:codeparam (84) I corefieldion:codeparam (85) I coreimpur:codeparam (30) I coreneutrals:codeparam (31) I coreprof:codeparam (32) I coresource:codeparam (33) I coretransp:codeparam (34) I distribution:codeparam (36) I distsource:codeparam (37) I edge:codeparam (39) I equilibrium:codeparam (40) I flush:codeparam (138) I launches:codeparam (43) I mhd:codeparam (46) I nbi:codeparam (48) I neoclassic:codeparam (49) I orbit:codeparam (50) I psi:codeparam (190) I sawteeth:codeparam (54) I scenario:codeparam (55) I waves:codeparam (61)

### 9.1.1.3.56 coefficients\_neutrals

Recycling and sputtering coefficients used by the neutral solver. The nion index refers to the various ions (and charge states) considered in the simulation. The ion list is deduced from the composition%atomlist. Nion = sum(composition%atomlist%zn). Example, if D and C atoms are declared in the atomlist (in this order), nion would be equal to 7, representing D+,C+,C2+,C3+,C4+,C5+,C6+

member	type	description
recycling	recycling_neutrals (9.1.1.3.169)	Recycling coefficients
sputtering	sputtering_neutrals (9.1.1.3.241)	Sputtering coefficients

Type of: coreneutrals:coefficients (31)

### 9.1.1.3.57 composition

Plasma composition (description of ion species).

member	type	description
amn	vecflt.type (9.1.1.2.9)	Atomic mass number (lumped ions are allowed); Vector (nion)
zn	vecflt.type (9.1.1.2.9)	Nuclear charge (lumped ions are allowed); Vector (nion)
zion	vecflt.type (9.1.1.2.9)	Ion charge (of the dominant ionisation state; lumped ions are allowed); Vector (nion)
imp_flag	vecint.type (9.1.1.2.10)	Multiple charge state calculation flag : 0-Only one charge state is considered; 1-Multiple charge state are considered and are described in impurity CPO; Vector (nion)

Type of: coredelta:composition (29) I coreprof:composition (32) I coresource:composition (33) I coretransp:composition (34) I distribution:composition (36) I distsource:composition (37) I nbi:composition (48) I neoclassic:composition (49) I sawteeth:composition (54) I waves:composition (61)

### 9.1.1.3.58 composition\_neutrals

Description of neutrals species

member	type	description
atomlist	atomlist (9.1.1.3.44)	List of the atoms that enter the composition of the neutral species
neutrallist	neutrallist (9.1.1.3.139)	Definition of neutral species

member	type	description
typelist	typelist (9.1.1.3.267)	Definition of types for each neutral species

Type of: coreneutrals:composition (31)

### 9.1.1.3.59 coord\_sys

flux surface coordinate system on a square grid of flux and angle

member	type	description
grid_type	string (9.1.1.1.3)	Type of coordinate system
grid	reggrid (9.1.1.3.191)	Regular grid definition; Time-dependent
jacobian	matflt_type (9.1.1.2.7)	Jacobian of the coordinate system; Time-dependent; Matrix (ndim1, ndim2)
g_11	matflt_type (9.1.1.2.7)	metric coefficients g_11; Time-dependent; Matrix (ndim1, ndim2)
g_12	matflt_type (9.1.1.2.7)	metric coefficients g_12; Time-dependent; Matrix (ndim1, ndim2)
g_13	matflt_type (9.1.1.2.7)	metric coefficients g_13; Time-dependent; Matrix (ndim1, ndim2)
g_22	matflt_type (9.1.1.2.7)	metric coefficients g_22; Time-dependent; Matrix (ndim1, ndim2)
g_23	matflt_type (9.1.1.2.7)	metric coefficients g_23; Time-dependent; Matrix (ndim1, ndim2)
g_33	matflt_type (9.1.1.2.7)	metric coefficients g_33; Time-dependent; Matrix (ndim1, ndim2)
position	rz2D (9.1.1.3.196)	R and Z position of grid points; Time-dependent; Matrix (ndim1, ndim2)

Type of: equilibrium:coord\_sys (40)

### 9.1.1.3.60 corefield

Structure for a main field of core transport equations; Time-dependent;

member	type	description
value	vecflt_type (9.1.1.2.9)	Signal value; Time-dependent; Vector (nrho)
source	string (9.1.1.1.3)	Source of the profile (any comment describing the origin of the profile : code, path to diagnostic signals, massaging, ...); String
flag	integer (9.1.1.1.2)	Flag describing how the profile has been processed : 0-not calculated 1-interpretative; 2-calculated by the transport solver; 3-calculated by a separate code : in that case only, description of the code provided in codeparam at the same level; 4-used value from the previous time step; Time-dependent; Scalar
boundary	boundaryel (9.1.1.3.51)	Boundary condition for the transport equation. Time-dependent.
source_term	sourcecel (9.1.1.3.235)	Total source term for the transport equation. Time-dependent.
transp_coef	coretransel (9.1.1.3.68)	Total transport coefficients. Time-dependent.
flux	fluxel (9.1.1.3.116)	Fluxes of the quantity, two definitions. Time-dependent.
time_deriv	vecflt_type (9.1.1.2.9)	Integral of the time derivative term of the transport equation. Time-dependent. Vector (nrho)
codeparam	codeparam (9.1.1.3.55)	Code parameters

Type of: coreprof:ne (32) I coreprof:te (32)

### 9.1.1.3.61 corefieldion

Structure for an ion field of core transport equations; Time-dependent;

member	type	description
value	matflt_type (9.1.1.2.7)	Signal value; Time-dependent; Vector (nrho,nion)
source	vecstring_type (9.1.1.2.11)	Source of the profile (any comment describing the origin of the profile : code, path to diagnostic signals, massaging, ...); Array of strings (nion)
flag	vecint_type (9.1.1.2.10)	Flag describing how the profile has been processed : 0-not calculated 1-interpretative; 2-calculated by the transport solver; 3-calculated by a separate code : in that case only, description of the code provided in codeparam at the same level; 4-used value from the previous time step; Time-dependent; Vector(nion)
boundary	boundaryion (9.1.1.3.53)	Boundary condition for the transport equation
source_term	sourceion (9.1.1.3.237)	Total source term for the transport equation. Time-dependent.
transp_coef	coretransion (9.1.1.3.70)	Total transport coefficients. Time-dependent.
flux	fluxion (9.1.1.3.118)	Fluxes of the quantity, two definitions. Time-dependent.
time_deriv	matflt_type (9.1.1.2.7)	Integral of the time derivative term of the transport equation. Time-dependent. Matrix (nrho,nion)
codeparam	codeparam (9.1.1.3.55)	Code parameters

Type of: coreprof:ni (32) I coreprof:ti (32) I coreprof:vtor (32)

### 9.1.1.3.62 corefieldneutral

Structure for a main field of core neutral transport equations; Time-dependent;

member	type	description
value	array3dfit.type (9.1.1.2.1)	Signal value; Array3D(nrho,nneut,max_nstype). Time-dependent
flux	array3dfit.type (9.1.1.2.1)	Net neutral flux through the magnetic surface, positive values correspond to the direction from the center to the edge [ $s^{-1}$ ]. Array3D(nrho,nneut,max_nstype). Time-dependent;
boundary	boundary_neutrals (9.1.1.3.50)	Boundary condition for the transport equation. Time-dependent.

Type of: profiles\_neutrals:n0 (188)

### 9.1.1.3.63 corefieldneutrals

Structure for a main field of core neutral transport equations, (Temperature, with flux as energy); Time-dependent;

member	type	description
value	array3dfit.type (9.1.1.2.1)	Signal value; Array3D(nrho,nneut,max_nstype). Time-dependent
flux	array3dfit.type (9.1.1.2.1)	Net flux of the kinetic energy through the magnetic surface ( $3/2 * E * n * V$ ), positive values correspond to the direction from the center to the edge [W]. Array3D(nrho,nneut,max_nstype). Time-dependent;
boundary	boundary_neutrals (9.1.1.3.50)	Boundary condition for the transport equation. Time-dependent.

Type of: profiles\_neutrals:t0 (188)

### 9.1.1.3.64 corefieldneutralv

Structure for a main field of core neutral transport equations (without flux variable); Time-dependent;

member	type	description
value	array3dfit.type (9.1.1.2.1)	Signal value; Array3D(nrho,nneut,max_nstype)Time-dependent;
boundary	boundary_neutrals (9.1.1.3.50)	Boundary condition for the transport equation. Time-dependent.

Type of: corefieldneutralv0:poloidal (89) I corefieldneutralv0:radial (89) I corefieldneutralv0:toroidal (89)

### 9.1.1.3.65 corefieldneutralv0

Neutral velocity

member	type	description
toroidal	corefieldneutralv (9.1.1.3.64)	Neutral velocity in the toroidal direction [ $m.s^{-1}$ ]. Positive is anti-clockwise when viewed from above. Time-dependent;
poloidal	corefieldneutralv (9.1.1.3.64)	Velocity of neutrals in the poloidal direction. 0 is directed towards low field side, pi is towards high field side. Positive is anti-clockwise when viewed with low field side at the right. [ $m.s^{-1}$ ]. Array3D(nrho,nneut,max_nstype). Time-dependent;
radial	corefieldneutralv (9.1.1.3.64)	Neutral velocity in the radial direction (perpendicular to the magnetic surface), positive is from the centre to the edge [ $m.s^{-1}$ ]. Array3D(nrho,nneut,max_nstype). Time-dependent;

Type of: profiles\_neutrals:v0 (188)

### 9.1.1.3.66 coreprofile

Structure for core plasma profile; Time-dependent

member	type	description
value	vecflt.type (9.1.1.2.9)	Signal value; Time-dependent; Vector (nrho)
source	string (9.1.1.1.3)	Source of the profile (any comment describing the origin of the profile : code, path to diagnostic signals, massaging, ...); String

Type of: profiles1d:bpol (185) I profiles1d:dpsidt (185) I profiles1d:dpsidt\_phi (185) I profiles1d:dvprimedt (185) I profiles1d:e.b (185) I profiles1d:eparallel (185) I profiles1d:jni (185) I profiles1d:joh (185) I profiles1d:jtot (185) I profiles1d:pe (185) I profiles1d:pr\_parallel (185) I profiles1d:pr\_perp (185) I profiles1d:pr\_th (185) I profiles1d:q (185) I profiles1d:qoh (185) I profiles1d:shear (185) I profiles1d:sigmapar (185) I profiles1d:vloop (185) I profiles1d:zeff (185) I psi:sigma\_par (190)

### 9.1.1.3.67 coreprofion

Structure for core plasma ion profile; Time-dependent

member	type	description
value	matflt.type (9.1.1.2.7)	Signal value; Time-dependent; Vector (nrho,nion)
source	vecstring.type (9.1.1.2.11)	Source of the profile (any comment describing the origin of the profile : code, path to diagnostic signals, massaging, ...); Array of strings (nion)

Type of: profiles1d:mtor (185) I profiles1d:ns (185) I profiles1d:pi (185) I profiles1d:wtor (185)

### 9.1.1.3.68 coretransel

Structure for the transport coefficients for the transport equation (electrons). Time-dependent;

member	type	description
diff	vecflt.type (9.1.1.2.9)	Diffusion coefficient [ $m^{-2}.s^{-1}$ ]. Time-dependent; Vector (nrho)
vconv	vecflt.type (9.1.1.2.9)	Convection coefficient [ $m.s^{-1}$ ]. Time-dependent; Vector (nrho)
source	string (9.1.1.1.3)	Source of the profile (any comment describing the origin of the profile : code, path to diagnostic signals, massaging, ...); String

Type of: corefield:transp\_coef (84)

### 9.1.1.3.69 coretransimp

Structure for the transport coefficients for the transport equation (impurities). Time-dependent;

member	type	description
diff	array3dflt.type (9.1.1.2.1)	Diffusion coefficient [ $m^{-2}.s^{-1}$ ]. Time-dependent; Array3D(nrho,nimp,max_nzimp)
vconv	array3dflt.type (9.1.1.2.1)	Convection coefficient [ $m.s^{-1}$ ]. Time-dependent; Array3D(nrho,nimp,max_nzimp)
source	vecstring.type (9.1.1.2.11)	Source of the profile (any comment describing the origin of the impurity profiles : code, path to diagnostic signals, massaging, ...); Array of strings (nimp)

Type of: coreimpur:transp\_coef (30)

### 9.1.1.3.70 coretransion

Structure for the transport coefficients for the transport equation (ions). Time-dependent;

member	type	description
diff	matflt.type (9.1.1.2.7)	Diffusion coefficient [ $m^{-2}.s^{-1}$ ]. Time-dependent; Matrix (nrho,nion)
vconv	matflt.type (9.1.1.2.7)	Convection coefficient [ $m.s^{-1}$ ]. Time-dependent; Matrix (nrho,nion)
source	vecstring.type (9.1.1.2.11)	Source of the profile (any comment describing the origin of the profile : code, path to diagnostic signals, massaging, ...); Array of strings (nion)

Type of: corefieldion:transp\_coef (85)

### 9.1.1.3.71 cxmeasure

Measured values

member	type	description
ti	exp1D (9.1.1.3.111)	Ion temperature [eV]. Vector (nchannels)
vtor	exp1D (9.1.1.3.111)	Toroidal velocity [m/s]. Vector (nchannels)
vpol	exp1D (9.1.1.3.111)	Poloidal velocity [m/s]. Vector (nchannels)

Type of: [cxdiag:measure \(35\)](#)

### 9.1.1.3.72 cxsetup

diagnostic setup information

member	type	description
position	rzphiIDexp ( <a href="#">9.1.1.3.199</a> )	Position of the measurement. Time-dependent. Vector (nchannels)

Type of: [cxdiag:setup \(35\)](#)

### 9.1.1.3.73 datainfo

Generic information on a data item

member	type	description
dataproducer	string ( <a href="#">9.1.1.1.3</a> )	Name of the actual data provider (the person who filled the data)
putdate	string ( <a href="#">9.1.1.1.3</a> )	Date at which the data has been put in the DB
source	string ( <a href="#">9.1.1.1.3</a> )	Exact reference of the data source (e.g. original reference in the native machine data base)
comment	string ( <a href="#">9.1.1.1.3</a> )	Any additional comment
isref	integer ( <a href="#">9.1.1.1.2</a> )	1 if the data can be found in the present data base entry; 2 if the data can be found in a parent data base entry; 0 if no data consistent with the present entry can be found.
whatref	whatref ( <a href="#">9.1.1.3.275</a> )	Structure defining a database entry and the CPO occurrence
putinfo	putinfo ( <a href="#">9.1.1.3.167</a> )	Level 2 information describing how to retrieve the actual data for the UAL. Not to be filled/used by the ITM user !

Type of: [amns:datainfo \(27\)](#) | [antennas:datainfo \(28\)](#) | [coredelta:datainfo \(29\)](#) | [coreimpur:datainfo \(30\)](#) | [coreneutrals:datainfo \(31\)](#) | [coreprof:datainfo \(32\)](#) | [coresource:datainfo \(33\)](#) | [coretransp:datainfo \(34\)](#) | [cxdiag:datainfo \(35\)](#) | [distribution:datainfo \(36\)](#) | [distsource:datainfo \(37\)](#) | [ecediag:datainfo \(38\)](#) | [edge:datainfo \(39\)](#) | [equilibrium:datainfo \(40\)](#) | [flush:datainfo \(138\)](#) | [ironmodel:datainfo \(42\)](#) | [launches:datainfo \(43\)](#) | [limiter:datainfo \(44\)](#) | [lineintegraldiag:datainfo \(154\)](#) | [magdiag:datainfo \(45\)](#) | [mhd:datainfo \(46\)](#) | [msediag:datainfo \(47\)](#) | [nbi:datainfo \(48\)](#) | [neoclassic:datainfo \(49\)](#) | [orbit:datainfo \(50\)](#) | [pfsystems:datainfo \(51\)](#) | [reference:datainfo \(53\)](#) | [sawteeth:datainfo \(54\)](#) | [scenario:datainfo \(55\)](#) | [summary:datainfo \(56\)](#) | [toroidfield:datainfo \(58\)](#) | [tsdiag:datainfo \(59\)](#) | [vessel:datainfo \(60\)](#) | [waves:datainfo \(61\)](#)

### 9.1.1.3.74 desc\_impur

Description of the impurities and their charge states

member	type	description
amn	vecflt.type ( <a href="#">9.1.1.2.9</a> )	Atomic mass number of the impurity; Vector (nimp)
zn	vecint.type ( <a href="#">9.1.1.2.10</a> )	Nuclear charge of the impurity; Vector (nimp)
i_ion	vecint.type ( <a href="#">9.1.1.2.10</a> )	Index of the impurity species in the coreprof ion species ordering. Vector (nimp)
nzimp	vecint.type ( <a href="#">9.1.1.2.10</a> )	Number of charge states (or bundles) considered for each impurity species. Vector (nimp)
zmin	matint.type ( <a href="#">9.1.1.2.8</a> )	Minimum Z of impurity ionisation state bundle. Matrix (nimp,max.nzimp)
zmax	matint.type ( <a href="#">9.1.1.2.8</a> )	Maximum Z of impurity ionisation state bundle. If no bundle, zmax=zmin. Matrix (nimp,max.nzimp)

Type of: [coreimpur:desc\\_impur \(30\)](#)

### 9.1.1.3.75 desc\_iron

Description of the iron segments

member	type	description
name	vecstring.type ( <a href="#">9.1.1.2.11</a> )	Name of circuit. Array of strings (ncircuit).
id	vecstring.type ( <a href="#">9.1.1.2.11</a> )	ID of circuit. Array of strings (ncircuit).
permeability	permeability ( <a href="#">9.1.1.3.148</a> )	Permeability model (can be different for each iron segment)
geom_iron	geom_iron ( <a href="#">9.1.1.3.120</a> )	Geometry of the iron segments

Type of: [ironmodel:desc\\_iron \(42\)](#)

### 9.1.1.3.76 desc\_pfcoils

Description of the coils

member	type	description
name	vecstring_type (9.1.1.2.11)	Name of coil. Array of strings (ncoils)
id	vecstring_type (9.1.1.2.11)	ID of coil. Array of strings (ncoils)
res	vecflt_type (9.1.1.2.9)	Coil resistance [Ohm]; Vector (ncoils)
emax	vecflt_type (9.1.1.2.9)	Maximum Energy to be dissipated in coils [J]; Vector (ncoils)
nelement	vecint_type (9.1.1.2.10)	Number of elements used to describe a coil; Vector (ncoils)
pfelement	pfelement (9.1.1.3.151)	Axisymmetric conductor description

Type of: pfcoils:desc\_pfcoils (174)

### 9.1.1.3.77 desc\_supply

Description of the power supplies

member	type	description
name	vecstring_type (9.1.1.2.11)	Name of the supply; Array of strings (nsupplies)
id	vecstring_type (9.1.1.2.11)	ID of the supply; Array of strings (nsupplies)
type	vecstring_type (9.1.1.2.11)	Type of supply; Array of strings (nsupplies)
delay	vecflt_type (9.1.1.2.9)	Pure delay in the supply [s]; Vector (nsupplies)
filter	filter (9.1.1.3.113)	Laplace proper filter
imin	vecflt_type (9.1.1.2.9)	Minimum current [A]; Vector (nsupplies)
imax	vecflt_type (9.1.1.2.9)	Maximum current [A]; Vector (nsupplies)
res	vecflt_type (9.1.1.2.9)	Supply internal resistance [Ohm]; Vector (nsupplies)
umin	vecflt_type (9.1.1.2.9)	Minimum voltage [V]; Vector (nsupplies)
umax	vecflt_type (9.1.1.2.9)	Maximum voltage [V]; Vector (nsupplies)
emax	vecflt_type (9.1.1.2.9)	Maximum Energy to be dissipated in supply [J]; Vector (nsupplies)

Type of: pfsupplies:desc\_supply (179)

### 9.1.1.3.78 dist\_ff

Orbit averaged (or Bounce averaged) zero order distribution function.

member	type	description
grid_type	vecint_type (9.1.1.2.10)	Type of grid. Vector (ndist_spec).
grid	dist_grid (9.1.1.3.82)	Grid on which the distribution function is calculated.
value	array4dfilt_type (9.1.1.2.3)	Orbit (or bounce) averaged distribution function given on a grid [1/m <sup>3</sup> (m/s) <sup>-3</sup> ]; Time-dependent; array 4d(ndist_spec, max_ndim1, max_ndim2, max_ndim3).

Type of: dist\_func:f0 (103) | dist\_func:fullf (103)

### 9.1.1.3.79 dist\_func

Distribution functions

member	type	description
sol_type	vecint_type (9.1.1.2.10)	Solution type: 1 - full-f; 2 - delta-f. For the latter case delta-f is given by the test particles and the unperturbed distribution by the f0 branch; Vector(ndist_spec)
test_part	dist_test_part (9.1.1.3.98)	Distribution given as a set of test particles.
f0	dist_ff (9.1.1.3.78)	Orbit averaged (or Bounce averaged) zero order distribution function.
fullf	dist_ff (9.1.1.3.78)	Orbit averaged (or Bounce averaged) full-f distribution function.

Type of: distribution:dist\_func (36)

### 9.1.1.3.80 dist\_glob

Global parameters (in most cases volume integrated and surface averaged quantities).



member	type	description
enrg	vecflt.type (9.1.1.2.9)	Energy content of of a distribution species [J]; Time-dependent; Vector(ndist_spec)
enrg_para	vecflt.type (9.1.1.2.9)	Parallel energy content of of a distribution species [J] Time-dependent; Vector(ndist_spec)
pow_coll_i	matflt.type (9.1.1.2.7)	Collisional power to ions [W]; Time-dependent; Matrix(ndist_spec, nion)
pow_coll_e	vecflt.type (9.1.1.2.9)	Collisional power to the electrons [W]; Time-dependent; Vector(ndist_spec)
therm_src	dist_src.snk.tot (9.1.1.3.96)	Source particles and power due to particles of the distribution species being thermalised (merging into the thermal plasma).
losses	dist_glob_dist.losses (9.1.1.3.81)	Losses of the distribution species (orbit losses and neutralisation losses).
cur_dr_tor	vecflt.type (9.1.1.2.9)	Toroidal current of non-thermal particles (excluding electron back current for fast ions) [A]; Time-dependent; Vector(ndist_spec).
trq_i	matflt.type (9.1.1.2.7)	Collisional torque to background ions [N.m]; Time dependent; Matrix (ndist_spec, nion)
trq_e	vecflt.type (9.1.1.2.9)	Collisional torque to electrons [N.m]; Time dependent; Vector(ndist_spec)
trq_j_rxb	vecflt.type (9.1.1.2.9)	Torque due to radial currents of non-thermal particles [N.m]; Time-dependent; Vector(ndist_spec).
nucl_reac.th	dist_nucl_reac.th (9.1.1.3.86)	Nuclear reactions between the calculated species and other species assumed to have thermal distributions.
nucl_reac.sf	dist_nucl_reac.sf (9.1.1.3.85)	Nuclear reactions of the calculated species with itself (thermal + non-thermal).

Type of: distribution:global\_param (36)

### 9.1.1.3.81 dist\_glob\_dist.losses

Losses of the distribution species (orbit losses and neutralisation losses).

member	type	description
orb_loss	dist_src.snk.tot (9.1.1.3.96)	Losses due to orbits intersecting a material surface.
neutr_loss	dist_src.snk.tot (9.1.1.3.96)	Losses due to neutralisation of distribution ions (charge exchange etc.)

Type of: dist\_glob:losses (104)

### 9.1.1.3.82 dist\_grid

Grid on which the distribution function is calculated.

member	type	description
dim1	matflt.type (9.1.1.2.7)	First dimension in phase space; Time-dependent; Matrix (ndist_spec, max_ndim1).
ndim1	vecint.type (9.1.1.2.10)	Size of the first dimension in phase space, for each species; Vector (ndist_spec).
dim2	matflt.type (9.1.1.2.7)	Second dimension in phase space; Time-dependent; Matrix (ndist_spec, max_ndim2).
ndim2	vecint.type (9.1.1.2.10)	Size of the second dimension in phase space, for each species; Vector (ndist_spec).
dim3	matflt.type (9.1.1.2.7)	Third dimension in phase space; Time-dependent; Matrix (ndist_spec, max_ndim3).
ndim3	vecint.type (9.1.1.2.10)	Size of the third dimension in phase space, for each species; Vector (ndist_spec).
jacobian	array4dflt.type (9.1.1.2.3)	Jacobian of the transformation of the phase space grid variables; Time-dependent; Array4d(ndist_spec, max_ndim1, max_ndim2, max_ndim3).

Type of: dist\_ff:grid (102)

### 9.1.1.3.83 dist\_input\_src

Input sources of particles and power for the distribution species (to aid diagnosing the code output).

member	type	description
particle_src	dist_particle_src (9.1.1.3.87)	Particle source
wave_src	dist_wave_src (9.1.1.3.99)	Auxiliary wave absorbed by the distribution species

Type of: distribution:input\_src (36)

### 9.1.1.3.84 dist\_nucl\_reac

Information on nuclear reactions involving the calculated species.

member	type	description
nreacs	vecint.type (9.1.1.2.10)	Number of possible nuclear reactions (with background species and for different branches); Vector(ndist_spec)
point_reac	matint.type (9.1.1.2.8)	Pointer to a species in composition who can undergo a nuclear reaction with the calculated species; Matrix(ndist_spec, max_nreac)
id_reac	matint.type (9.1.1.2.8)	Identification of the reaction between the calculated species and a background species (including which branch if applicable); Time-dependent; integer matrix(ndist_spec, max_nreac). Table defining the index of reactions to be provided.

Type of: distribution:nucl\_reac (36)

#### 9.1.1.3.85 dist\_nucl\_reac\_sf

Nuclear reactions of the calculated species with itself (thermal + non-thermal).

member	type	description
rate	vecflt.type (9.1.1.2.9)	Reaction rate [1/s]; Time-dependent; Vector (ndist_spec)
power	vecflt.type (9.1.1.2.9)	Fusion reaction power[W]; Time-dependent; Vector (ndist_spec)

Type of: dist\_glob:nucl\_reac\_sf (104)

#### 9.1.1.3.86 dist\_nucl\_reac\_th

Nuclear reactions between the calculated species and other species assumed to have thermal distributions.

member	type	description
rate	matflt.type (9.1.1.2.7)	Reaction rate [1/s]; Time-dependent; Matrix (ndist_spec, max_nreac)
power	matflt.type (9.1.1.2.7)	Fusion reaction power[W]; Time-dependent; Matrix(ndist_spec, max_nreac)

Type of: dist\_glob:nucl\_reac\_th (104)

#### 9.1.1.3.87 dist\_particle\_src

Particle source

member	type	description
total	dist_src.snk_tot (9.1.1.3.96)	Total source of particles and power (NBI, fusion products, pellets etc.)
volume_intgr	dist_src.snk_vol (9.1.1.3.97)	Volume integrated source of particles and power (NBI, fusion products, pellets etc.)
flux_surf_av	dist_src.snk_surf (9.1.1.3.95)	Flux surface averaged source of particles and power (NBI, fusion products, pellets etc.)

Type of: dist\_input\_src:particle\_src (107)

#### 9.1.1.3.88 dist\_prof\_surf\_dist\_losses

Losses of the distribution species.

member	type	description
orb_loss	dist_src.snk_surf (9.1.1.3.95)	Losses due to orbits intersecting a material surface.
neutr_loss	dist_src.snk_surf (9.1.1.3.95)	Losses due to neutralised ions, e.g. due to charge exchange events.

Type of: dist\_profiles:lossesd (118)

#### 9.1.1.3.89 dist\_prof\_surf\_nucl\_reac\_sf

Nuclear reactions of the calculated species with itself (thermal + non-thermal).

member	type	description
rate	matflt.type (9.1.1.2.7)	Reaction rate [ $s^{-1}.m^{-3}$ ]; Time-dependent; Matrix (ndist_spec, max_npsi)
power	matflt.type (9.1.1.2.7)	Fusion reaction power [ $W.m^{-3}$ ]; Time-dependent; Matrix (ndist_spec, max_npsi)

Type of: dist\_profiles:nucl\_rd\_sf (118)

### 9.1.1.3.90 dist\_prof\_surf\_nucl\_reac\_th

Nuclear reactions between the calculated species and other species assumed to have thermal distributions.

member	type	description
rated	array3dflt.type (9.1.1.2.1)	Reaction rate [ $s^{-1}.m^{-3}$ ]; Time dependent; Array3d(ndist_spec, nreac_max, max_npsi)
powerd	array3dflt.type (9.1.1.2.1)	Nuclear reaction power density [ $W.m^{-3}$ ]; Time dependent; Array3d(ndist_spec, nreac_max, max_npsi)

Type of: dist\_profiles:nucl\_rd.th (118)

### 9.1.1.3.91 dist\_prof\_vol\_dist\_losses

Losses of the distribution species.

member	type	description
orb_loss	dist_src_snk_vol (9.1.1.3.97)	Losses due to orbits intersecting a material surface.
neutr_loss	dist_src_snk_vol (9.1.1.3.97)	Losses due to neutralised ions, e.g. due to charge exchange events.

Type of: dist\_profiles:losses (118)

### 9.1.1.3.92 dist\_prof\_vol\_nucl\_reac\_sf

Nuclear reactions of the calculated species with itself (thermal + non-thermal).

member	type	description
rate	matflt.type (9.1.1.2.7)	Reaction rate [1/s]; Time-dependent; Matrix (ndist_spec, max_npsi)
power	matflt.type (9.1.1.2.7)	Fusion reaction power[W]; Time-dependent; Matrix (ndist_spec, max_npsi)

Type of: dist\_profiles:nucl\_reac\_sf (118)

### 9.1.1.3.93 dist\_prof\_vol\_nucl\_reac\_th

Nuclear reactions between the calculated species and other species assumed to have thermal distributions.

member	type	description
rate	array3dflt.type (9.1.1.2.1)	Reaction rate [1/s]; Time-dependent; Array3D (ndist_spec, max_nreac, max_npsi)
power	array3dflt.type (9.1.1.2.1)	Fusion reaction power[W]; Time-dependent; Array3D(ndist_spec, max_nreac, max_npsi)

Type of: dist\_profiles:nucl\_reac.th (118)

### 9.1.1.3.94 dist\_profiles

Profiles (volume integrated and flux surface averaged)

member	type	description
npsi	vecint.type (9.1.1.2.10)	Number of points of the radial grid for each species. Vector(ndist_spec)
rho_tor_norm	matflt.type (9.1.1.2.7)	Normalised toroidal flux coordinate at the grid points for 1D profiles; Time-dependent; matrix (ndist_spec, max_npsi)
rho_tor	matflt.type (9.1.1.2.7)	Toroidal flux coordinate at the grid points for 1D profiles [m]. Defined as $\sqrt{(\phi/\pi)/B_0}$ , where $B_0 = \text{equilibrium/global\_param/toroid\_field}/b_0$ . Time-dependent; matrix (ndist_spec, max_npsi)
psi	matflt.type (9.1.1.2.7)	Poloidal flux at the grid points for 1D profiles [Wb], without $1/2\pi$ and such that $B_p =  \text{grad } \psi  / R/2/\pi$ . Time-dependent; matrix (ndist_spec, max_npsi)
enrgd_tot	matflt.type (9.1.1.2.7)	Flux surface averaged energy density of a distribution species [ $J/m^3$ ]; Time-dependent; Matrix(ndist_spec, max_npsi)
enrgd_para	matflt.type (9.1.1.2.7)	Flux surface averaged parallel energy density of a distribution species [ $J/m^3$ ] Time-dependent; Matrix(ndist_spec, max_npsi).
powd_coll_i	array3dflt.type (9.1.1.2.1)	Flux surface averaged collisional power to ions [ $W.m^{-3}$ ]; Time-dependent; Array3d(ndist_spec, nion, max_npsi)
powd_coll_e	matflt.type (9.1.1.2.7)	Flux surface averaged collisional power to the electrons [ $W.m^{-3}$ ]; Time-dependent; Matrix(ndist_spec, max_npsi)
therm_srcd	dist_src_snk_surf (9.1.1.3.95)	Flux surface averaged source of particles and power due to particles of the distribution species being thermalised (merging into the thermal plasma).

member	type	description
lossesd	dist_prof_surf_dist.losses (9.1.1.3.88)	Particle loss densities due to charge exchange events with neutrals or orbits intersecting material surfaces.
curd_fp	matflt.type (9.1.1.2.7)	Flux surface averaged toroidal current density of non-thermal (fast) particles of the distribution species (excluding electron back current for fast ions) [ $A \cdot m^{-2}$ ]; Time-dependent; Matrix(ndist_spec, max_npsi).
curd_dr	vecflt.type (9.1.1.2.9)	Total toroidal driven current density (including electron back current in the presence of fast ions) [A]; Time-dependent; Matrix(ndist_spec, max_npsi)
trqd_i	array3dfilt.type (9.1.1.2.1)	Flux surface averaged collisional toroidal torque to background ions [ $N \cdot m^{-2}$ ]; Time dependent; Array3d (ndist_spec, nion, max_npsi)
trqd_e	matflt.type (9.1.1.2.7)	Flux surface averaged collisional toroidal torque density to electrons [ $N \cdot m^{-2}$ ]; Time dependent; Matrix(ndist_spec, max_npsi)
trqd_jrxb	matflt.type (9.1.1.2.7)	Toroidal torque density due to radial currents of non-thermal particles of the distribution species [ $N \cdot m^{-2}$ ]; Time-dependent; Matrix(ndist_spec, max_npsi)
nucl_rd_th	dist_prof_surf_nucl_reac.th (9.1.1.3.90)	Nuclear reaction rate densities for reactions between the calculated species and other species assumed to have thermal distributions.
nucl_rd_sf	dist_prof_surf_nucl_reac.sf (9.1.1.3.89)	Nuclear reaction rate densities for reactions of the calculated species with itself (thermal + non-thermal).
enrg_tot	matflt.type (9.1.1.2.7)	Energy content of a distribution species [J] inside a flux surface; Time-dependent; Matrix(ndist_spec, max_npsi)
enrg_para	matflt.type (9.1.1.2.7)	Parallel energy content of a distribution species [J] inside a flux surface; Time-dependent; Matrix(ndist_spec, max_npsi)
pow_coll_i	array3dfilt.type (9.1.1.2.1)	Collisional power to ions inside a flux surface [W]; Time-dependent; Array3d(ndist_spec, nion, max_npsi)
pow_coll_e	matflt.type (9.1.1.2.7)	Collisional power to the electrons inside a flux surface [W]; Time-dependent; Matrix(ndist_spec, max_npsi)
therm_src	dist_src_snk_vol (9.1.1.3.97)	Source particles and power inside a flux surface due to particles of the distribution species being thermalised (merging into the thermal plasma).
losses	dist_prof_vol_dist.losses (9.1.1.3.91)	Particle loss inside flux surface due to charge exchange events.
cur_fp	matflt.type (9.1.1.2.7)	Toroidal current of non-thermal (fast) particles driven inside a flux surface (does not include electron back current for fast ions) [A]; Time-dependent; Matrix(ndist_spec, max_npsi)
cur_dr	matflt.type (9.1.1.2.7)	Total toroidal current driven inside a flux surface (including electron back current in the presence of fast ions) [A]; Time-dependent; Matrix(ndist_spec, max_npsi).
trq_i	array3dfilt.type (9.1.1.2.1)	Collisional toroidal torque to background ions inside a flux surface [N.m]; Time dependent; Array3d (ndist_spec, nion, max_npsi)
trq_e	matflt.type (9.1.1.2.7)	Collisional toroidal torque to electrons inside a flux surface [N.m]; Time dependent; Matrix(ndist_spec, max_npsi)
trq_j_rxb	matflt.type (9.1.1.2.7)	Toroidal torque due to radial currents of non-thermal particles of the distribution species [N.m]; Time-dependent; Matrix(ndist_spec, max_npsi)
nucl_reac_th	dist_prof_vol_nucl_reac.th (9.1.1.3.93)	Nuclear reactions inside a flux surface involving the distribution species and other species assumed to be thermal.
nucl_reac_sf	dist_prof_vol_nucl_reac.sf (9.1.1.3.92)	Nuclear reactions inside a flux surface of the calculated species with itself (thermal + non-thermal).

Type of: distribution:profiles.1d (36)

### 9.1.1.3.95 dist\_src\_snk\_surf

Losses due to orbits intersecting a material surface.

member	type	description
particlesd	matflt.type (9.1.1.2.7)	Source/sink particles [ $s^{-1} m^{-3}$ ]; Time-dependendent; Matrix(ndist_spec, max_npsi)
powerd	matflt.type (9.1.1.2.7)	Power density associated with the source/sink of particles [ $W \cdot m^{-3}$ ]; Time-dependent; Matrix(ndist_spec, max_npsi)
torqued	matflt.type (9.1.1.2.7)	Torque density due to the source/sink of particles [ $N \cdot m^{-2}$ ]; Time-dependent; Matrix(ndist_spec, max_npsi)

Type of: dist\_particle\_src:flux\_surf\_av (111) I dist\_prof\_surf\_dist.losses:neutr\_loss (112) I dist\_prof\_surf\_dist.losses:orb\_loss (112) I dist\_profiles:therm\_srcd (118)

### 9.1.1.3.96 dist\_src\_snk\_tot

Source particles and power due to particles of the distribution species being thermalised (merging into the thermal plasma).

member	type	description
particles	vecflt.type (9.1.1.2.9)	Source/sink particles [1/s]; Time-dependendent; Vector(ndist_spec)
power	vecflt.type (9.1.1.2.9)	Power associated with the source/sink of particles [W]; Time-dependent; Vector(ndist_spec)

member	type	description
torque	vecflt.type (9.1.1.2.9)	Torque due to the source/sink of particles [N.m]; Time-dependent; Vector (ndist_spec).

Type of: dist\_glob:therm\_src (104) I dist\_glob\_dist\_losses:neutr\_loss (105) I dist\_glob\_dist\_losses:orb\_loss (105) I dist\_particle\_src:total (111)

### 9.1.1.3.97 dist\_src\_snk\_vol

Losses due to orbits intersecting a material surface.

member	type	description
particles	matflt.type (9.1.1.2.7)	Source/sink particles [1/s]; Time-dependendent; Matrix(ndist_spec, max_npsi)
power	matflt.type (9.1.1.2.7)	Power associated with the source/sink of particles [W]; Time-dependent; Matrix(ndist_spec, max_npsi)
torque	matflt.type (9.1.1.2.7)	Torque due to the source/sink of particles [N.m]; Time-dependent; Matrix (ndist_spec, max_npsi)

Type of: dist\_particle\_src:volume\_intgr (111) I dist\_prof\_vol\_dist\_losses:neutr\_loss (115) I dist\_prof\_vol\_dist\_losses:orb\_loss (115) I dist\_profiles:therm\_src (118)

### 9.1.1.3.98 dist\_test\_part

Distribution given as a set of test particles.

member	type	description
nvar	vecflt.type (9.1.1.2.9)	Number of variables associated with a test particle; Vector (ndist_spec)
var_id	matint.type (9.1.1.2.8)	Identification of a variable; Matrix (ndist_spec, 5)
var1	matflt.type (9.1.1.2.7)	Phase space variables one characterising a test particle; Time-dependent; Matrix (ndist_spec, ntpart)
var2	matflt.type (9.1.1.2.7)	Phase space variables two characterising a test particle; Time-dependent; Matrix (ndist_spec, ntpart)
var3	matflt.type (9.1.1.2.7)	Phase space variables three characterising a test particle; Time-dependent; Matrix (ndist_spec, ntpart)
var4	matflt.type (9.1.1.2.7)	Phase space variables four characterising a test particle; Time-dependent; Matrix (ndist_spec, ntpart)
var5	matflt.type (9.1.1.2.7)	Phase space variables five characterising a test particle; Time-dependent; Matrix (ndist_spec, ntpart)
var6	matflt.type (9.1.1.2.7)	Phase space variables six characterising a test particle; Time-dependent; Matrix (ndist_spec, ntpart)
weight	matflt.type (9.1.1.2.7)	Weight of a test particle; Time-dependent; Matrix (ndist_spec, ntpart)

Type of: dist\_func:test\_part (103)

### 9.1.1.3.99 dist\_wave\_src

Auxiliary wave absorbed by the distribution species

member	type	description
type	vecstring.type (9.1.1.2.11)	Wave type (LH, EC, IC, ...), can be a combination of these if several wave types are absorbed by this species. Vector of strings (ndist_spec)
wave_power	vecflt.type (9.1.1.2.9)	Auxiliary wave power absorbed by the distribution species [W]; Time-dependent; Vector (ndist_spec).
wave_powerd	matflt.type (9.1.1.2.7)	Auxiliary flux surface averaged wave power density absorbed by the distribution species [W/m <sup>3</sup> ]; Time-dependent; Matrix (ndist_spec, max_npsi)

Type of: dist\_input\_src:wave\_src (107)

### 9.1.1.3.100 distsource\_global\_param

Global parameters (volume integrated).

member	type	description
src_pow	vecflt.type (9.1.1.2.9)	Total power source [W]; Time-dependent. Vector(nsrc_spec)
src_rate	vecflt.type (9.1.1.2.9)	Particle source rate [1/s]; Time-dependent; Vector(nsrc_spec)

Type of: `distsource:global_param` (37)

### 9.1.1.3.101 `distsource_profiles_1d`

1D radial profiles

member	type	description
<code>npsi</code>	<code>vecint.type</code> (9.1.1.2.10)	Number of points of the radial grid for each species. Vector( <code>nsrc_spec</code> )
<code>rho_tor_norm</code>	<code>matflt.type</code> (9.1.1.2.7)	Normalised toroidal flux coordinate at the grid points for 1D profiles; Time-dependent; Matrix( <code>nsrc_spec</code> , <code>max_npsi</code> )
<code>rho_tor</code>	<code>matflt.type</code> (9.1.1.2.7)	Toroidal flux coordinate at the grid points for 1D profiles [m]. Defined as $\sqrt{\phi/\pi/B_0}$ , where $B_0 = \text{equilibrium}/\text{global\_param}/\text{toroid\_field}/b_0$ . Time-dependent; matrix( <code>nsrc_spec</code> , <code>max_npsi</code> )
<code>psi</code>	<code>matflt.type</code> (9.1.1.2.7)	Poloidal flux at the grid points for 1D profiles [Wb], without $1/2\pi$ and such that $B_p =  \text{grad } \psi  / R/2/\pi$ . Time-dependent; matrix( <code>nsrc_spec</code> , <code>max_npsi</code> )
<code>pow_den</code>	<code>matflt.type</code> (9.1.1.2.7)	Flux surface averaged power density [ $\text{W}/\text{m}^3$ ]; Time-dependent; Matrix( <code>nsrc_spec</code> , <code>max_npsi</code> )
<code>src_rate</code>	<code>matflt.type</code> (9.1.1.2.7)	Flux surface averaged total source density of particles [ $\text{m}^{-3} \text{s}^{-1}$ ]; Time-dependent; Matrix( <code>nsrc_spec</code> , <code>max_npsi</code> )

Type of: `distsource:profiles_1d` (37)

### 9.1.1.3.102 `distsource_rect_grid`

Details of rectangular grids.

member	type	description
<code>ndim1</code>	<code>vecint.type</code> (9.1.1.2.10)	Number of grid points in the first dimension in phase space; vector ( <code>nsrc_spec</code> )
<code>ndim2</code>	<code>vecint.type</code> (9.1.1.2.10)	Number of grid points in the second dimension in phase space; vector ( <code>nsrc_spec</code> )
<code>ndim3</code>	<code>vecint.type</code> (9.1.1.2.10)	Number of grid points in the third dimension in phase space; vector ( <code>nsrc_spec</code> )
<code>ndim4</code>	<code>vecint.type</code> (9.1.1.2.10)	Number of grid points in the fourth dimension in phase space; vector ( <code>nsrc_spec</code> )
<code>dim1</code>	<code>matflt.type</code> (9.1.1.2.7)	Grid in the first dimension in phase space; Time-dependent; matrix( <code>nsrc_spec</code> , <code>max_ndim1</code> )
<code>dim2</code>	<code>matflt.type</code> (9.1.1.2.7)	Grid in the second dimension in phase space; Time-dependent; matrix( <code>nsrc_spec</code> , <code>max_ndim2</code> )
<code>dim3</code>	<code>matflt.type</code> (9.1.1.2.7)	Grid in the third dimension in phase space; Time-dependent; Matrix ( <code>nsrc_spec</code> , <code>max_ndim3</code> )
<code>dim4</code>	<code>matflt.type</code> (9.1.1.2.7)	Grid in the fourth dimension in phase space; Time-dependent; Matrix ( <code>nsrc_spec</code> , <code>max_ndim4</code> )
<code>jacobian</code>	<code>array5dflt.type</code> (9.1.1.2.4)	Jacobian of the transformation of the phase space grid variables; Time-dependent; array5d ( <code>nsrc_spec</code> , <code>max_ndim1</code> , <code>max_ndim2</code> , <code>max_ndim3</code> , <code>max_ndim4</code> )

Type of: `source_4d:rect_grid` (254)

### 9.1.1.3.103 `ecemeasure`

Measured values

member	type	description
<code>te</code>	<code>exp1D</code> (9.1.1.3.111)	Electron temperature [eV]. Vector ( <code>nchannels</code> )

Type of: `ecediag:measure` (38)

### 9.1.1.3.104 `ecesetup`

diagnostic setup information

member	type	description
<code>frequency</code>	<code>vecflt.type</code> (9.1.1.2.9)	Frequency of the ECE channels. Vector ( <code>nchannels</code> )
<code>position</code>	<code>rzphi1Dexp</code> (9.1.1.3.199)	Position of the measurement. Time-dependent. Vector ( <code>nchannels</code> )

Type of: `ecediag:setup` (38)

### 9.1.1.3.105 `entry_def`

Structure defining a database entry

member	type	description
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member	type	description
user	string (9.1.1.1.3)	Name of the user if private data. Value should be ITM if stored in the official common ITM tree
machine	string (9.1.1.1.3)	Name of the device
shot	integer (9.1.1.1.2)	Shot number
run	integer (9.1.1.1.2)	Run number

Type of: mdinfo:md\_entry (159)

### 9.1.1.3.106 eqconstraint

measurements to constrain the equilibrium, output values and accuracy of the fit

member	type	description
bpol	eqmes1D (9.1.1.3.109)	poloidal pickup coils [T]
bvac.r	eqmes0D (9.1.1.3.108)	Vacuum field times radius in the toroidal field magnet [T.m];
faraday	eqmes1D (9.1.1.3.109)	Faraday rotation angles [rad]
flux	eqmes1D (9.1.1.3.109)	Poloidal flux loops [Wb]
i_plasma	eqmes0D (9.1.1.3.108)	Plasma current [A];
isoflux	isoflux (9.1.1.3.127)	Point series at which the flux is considered the same
jsurf	eqmes1D (9.1.1.3.109)	Average of current density on the flux surface [A/m <sup>2</sup> ]
magnet_iron	magnet_iron (9.1.1.3.133)	Magnetisation in iron segments [T]
mse	eqmes1D (9.1.1.3.109)	MSE angles [rad]
ne	eqmes1D (9.1.1.3.109)	Electron density [m <sup>-3</sup> for local measurement, m <sup>-2</sup> if line integrated]
pcurrent	eqmes1D (9.1.1.3.109)	Current in poloidal field coils [A]
pressure	eqmes1D (9.1.1.3.109)	Total pressure [Pa]
q	q (9.1.1.3.168)	Safety factor
xpts	xpts (9.1.1.3.276)	Position of the X-point(s)

Type of: equilibrium:eqconstraint (40)

### 9.1.1.3.107 eqgeometry

Geometry of the plasma boundary

member	type	description
source	string (9.1.1.1.3)	Comment describing the origin of the eqgeometry data; String
boundarytype	integer (9.1.1.1.2)	0 (limiter) or 1 (separatrix); Integer; Time-dependent
boundary	rz1D_npoints (9.1.1.3.195)	RZ description of the plasma boundary; Time-dependent;
geom_axis	rz0D (9.1.1.3.193)	position of the geometric axis [m]; Time-dependent; Scalar
a_minor	float (9.1.1.1.1)	Minor radius of the plasma boundary [m]; Time-dependent; Scalar
elongation	float (9.1.1.1.1)	Elongation of the plasma boundary; Time-dependent; Scalar
tria_upper	float (9.1.1.1.1)	Upper triangularity of the plasma boundary; Time-dependent; Scalar
tria_lower	float (9.1.1.1.1)	Lower triangularity of the plasma boundary; Time-dependent; Scalar
xpts	rz1D (9.1.1.3.194)	Position of the Xpoints, first is the active xpoint if diverted [m]; Time-dependent; Vector (npoint)
left_low_st	rz0D (9.1.1.3.193)	Position of the lower left strike point [m]; Time-dependent; Scalar
right_low_st	rz0D (9.1.1.3.193)	Position of the lower right strike point [m]; Time-dependent; Scalar
left_up_st	rz0D (9.1.1.3.193)	Position of the upper left strike point [m]; Time-dependent; Scalar
right_up_st	rz0D (9.1.1.3.193)	Position of the upper right strike point [m]; Time-dependent; Scalar
active_limit	rz0D (9.1.1.3.193)	Position of the active limiter point (point of the plasma boundary in contact with the limiter) [m]; Set R = 0 for X-point plasma; Time-dependent; Scalar

Type of: equilibrium:eqgeometry (40) I scenario:eqgeometry (55)

### 9.1.1.3.108 eqmes0D

Structure for equilibrium measurement 0D signal

member	type	description
measured	float (9.1.1.1.1)	Measured value of the signal; Time-dependent; Scalar.
source	string (9.1.1.1.3)	Path to the source signal (diagnostic or genprof, from which to read all info on the signal); String
time	float (9.1.1.1.1)	Time (exact time slice used from the time array of the source signal. If the time slice does not exist in the time array of the source signal, it means linear interpolation has been used); Time-dependent; Scalar.
exact	integer (9.1.1.1.2)	1 means exact data, is not fitted; 0 means the equilibrium code does a least square fit; scalar integer
weight	float (9.1.1.1.1)	weight given to the measurement ( $\zeta=0$ ); Time-dependent; Scalar.
sigma	float (9.1.1.1.1)	standard deviation of the measurement; Time-dependent; Scalar.
calculated	float (9.1.1.1.1)	Signal as recalculated by the equilibrium code; Time-dependent; Scalar.
chi2	float (9.1.1.1.1)	chi <sup>2</sup> of (calculated-measured); Time-dependent; Scalar.

Type of: eqconstraint:bvac\_r (130) I eqconstraint:i\_plasma (130)

### 9.1.1.3.109 eqmes1D

Structure for equilibrium measurement 1D signal

member	type	description
measured	vecflt.type (9.1.1.2.9)	Measured value of the signal; Time-dependent; Array(nmeas)
source	string (9.1.1.1.3)	Path to the source signal (diagnostic or genprof, from which to read all info on the signal), e.g. 'magdiag/bpol_probes/measure/value'. String
time	float (9.1.1.1.1)	Exact time slice used from the time array of the source signal. If the time slice does not exist in the time array of the source signal, it means linear interpolation has been used); Time-dependent; Scalar
exact	vecint.type (9.1.1.2.10)	1 means exact data, is not fitted; 0 means the equilibrium code does a least square fit; Time-dependent; Array(nmeas)
weight	vecflt.type (9.1.1.2.9)	weight given to the measurement ( $\zeta=0$ ); Time-dependent; Array(nmeas)
sigma	vecflt.type (9.1.1.2.9)	standard deviation of the measurement; Time-dependent; Array(nmeas)
calculated	vecflt.type (9.1.1.2.9)	Signal as recalculated by the equilibrium code; Time-dependent; Array(nmeas)
chi2	vecflt.type (9.1.1.2.9)	chi <sup>2</sup> of (calculated-measured); Time-dependent; Array(nmeas)

Type of: eqconstraint:bpol (130) I eqconstraint:faraday (130) I eqconstraint:flux (130) I eqconstraint:jsurf (130) I eqconstraint:mse (130) I eqconstraint:ne (130) I eqconstraint:pfcurrent (130) I eqconstraint:pressure (130) I magnet\_iron:mr (157) I magnet\_iron:mz (157)

### 9.1.1.3.110 exp0D

Structure for experimental time-dependent scalar signal

member	type	description
value	float (9.1.1.1.1)	Signal value; Time-dependent; Scalar
abserror	float (9.1.1.1.1)	Absolute error on signal; Time-dependent; Scalar
relerror	float (9.1.1.1.1)	Relative error on signal (normalised to signal value); Time-dependent; Scalar

Type of: magdiag:diamagflux (45) I magdiag:ip (45) I toroidfield:bvac\_r (58) I toroidfield:current (58)

### 9.1.1.3.111 exp1D

Structure for experimental 1D signal

member	type	description
value	vecflt.type (9.1.1.2.9)	Signal value; Time-dependent; Vector
abserror	vecflt.type (9.1.1.2.9)	Absolute error on signal; Time-dependent; Vector
relerror	vecflt.type (9.1.1.2.9)	Relative error on signal (normalised to signal value); Time-dependent; Vector

Type of: antenna\_ec:power (63) I antenna\_ic:frequency (64) I antenna\_ic:power (64) I antenna\_lh:power (65) I bpol\_probes:measure (78) I cxmeasure:ti (95) I cxmeasure:vpol (95) I cxmeasure:vtor (95) I ecemeasure:te (127) I flux\_loops:measure (139) I lineintegraldiag:measure (154) I magnetise:mr (158) I magnetise:mz (158) I msediag:measure (47) I nbi:halfe\_cfr (48) I nbi:inj\_eng\_unit (48) I nbi:pow\_unit (48) I nbi:thirde\_cfr (48) I pf-



coils:coilcurrent (174) I pfcoils:coilvoltage (174) I pfsupplies:current (179) I pfsupplies:voltage (179) I rzphi1Dexp:phi (223) I rzphi1Dexp:r (223) I rzphi1Dexp:z (223) I tsmeasure:ne (288) I tsmeasure:te (288)

### 9.1.1.3.112 exp2D

Structure for experimental 2D signal

member	type	description
value	matflt.type (9.1.1.2.7)	Signal value; Time-dependent; Matrix
abserror	matflt.type (9.1.1.2.7)	Absolute error on signal; Time-dependent; Matrix
relerror	matflt.type (9.1.1.2.7)	Relative error on signal (normalised to signal value); Time-dependent; Matrix

Type of: straps:phase (269)

### 9.1.1.3.113 filter

Laplace proper filter

member	type	description
num	matflt.type (9.1.1.2.7)	Coefficients of the numerator, in increasing order : $a_0 + a_1*s + \dots + a_n*s^n$ ; Matrix (nsupplies,n)
den	matflt.type (9.1.1.2.7)	Coefficients of the denominator, in increasing order : $b_0 + b_1*s + \dots + b_m*s^m$ ; Matrix (nsupplies,m)

Type of: desc\_supply:filter (101)

### 9.1.1.3.114 flush

FLUSH package coefficients for the mapping of the equilibrium. The time grid of this structure is the same as the equilibrium structure above.

member	type	description
datainfo	datainfo (9.1.1.3.73)	Generic information on a data item
position	rz1D (9.1.1.3.194)	Major radius and altitude of the FLUSH grid [m]; Time-dependent; Vectors resp. (nR) and (nZ)
coef	matflt.type (9.1.1.2.7)	Coefficients of the fit; Time-dependent; Matrix 2D (nR,nZ)
codeparam	codeparam (9.1.1.3.55)	Code parameters

Type of: equilibrium:flush (40)

### 9.1.1.3.115 flux\_loops

Poloidal flux loops RZ coordinates have 1 component for the full loop and two if there is a negative reference loop

member	type	description
setup_floops	setup_floops (9.1.1.3.226)	diagnostic setup information
measure	exp1D (9.1.1.3.111)	Measured flux [Wb]; Time-dependent; Vector (nloops)

Type of: magdiag:flux\_loops (45)

### 9.1.1.3.116 fluxel

Structure for the fluxes of a field of the core transport equations (electrons); Time-dependent;

member	type	description
flux_dv	vecflt.type (9.1.1.2.9)	Flux of the field calculated from the transport coefficients. Time-dependent; Vector (nrho)
flux_interp	vecflt.type (9.1.1.2.9)	Interpretative flux deduced from measured data, the integral of the source term, and the time derivative of the field. Time-dependent; Vector (nrho)

Type of: corefield:flux (84)

### 9.1.1.3.117 fluximp

Structure for the fluxes of a field of the core transport equations (impurities); Time-dependent;

member	type	description
flux_dv	array3dflt.type (9.1.1.2.1)	Flux of the field calculated from the transport coefficients. Time-dependent; Array3D (nrho,nion,max_nzimp)
flux_interp	array3dflt.type (9.1.1.2.1)	Interpretative flux deduced from measured data, the integral of the source term, and the time derivative of the field. Time-dependent; Array3D (nrho,nion,max_nzimp)

Type of: coreimpur:flux (30)

### 9.1.1.3.118 fluxion

Structure for the fluxes of a field of the core transport equations (ions); Time-dependent;

member	type	description
flux_dv	matflt.type (9.1.1.2.7)	Flux of the field calculated from the transport coefficients. Time-dependent; Matrix (nrho,nion)
flux_interp	matflt.type (9.1.1.2.7)	Interpretative flux deduced from measured data, the integral of the source term, and the time derivative of the field. Time-dependent; Matrix (nrho,nion)

Type of: corefieldion:flux (85)

### 9.1.1.3.119 fullwave

Solution by full wave code

member	type	description
pol_decomp	pol_decomp (9.1.1.3.158)	Poloidal decomposition of the wave fields
local	local (9.1.1.3.131)	Local description of the wave fields

Type of: waves:fullwave (61)

### 9.1.1.3.120 geom\_iron

Geometry of the iron segments

member	type	description
npoints	vecint.type (9.1.1.2.10)	Number of points describing an element (irregular outline rzcoordinate); Vector (nsegment)
rzcoordinate	rz2D (9.1.1.3.196)	Irregular outline [m]; 2D arrays (nsegment,max_npoints)

Type of: desc\_iron:geom\_iron (99)

### 9.1.1.3.121 global\_param

0d output parameters

member	type	description
beta_pol	float (9.1.1.1.1)	poloidal beta; Time-dependent; Scalar
beta_tor	float (9.1.1.1.1)	toroidal beta; Time-dependent; Scalar
beta_normal	float (9.1.1.1.1)	normalised beta; Time-dependent; Scalar
i_plasma	float (9.1.1.1.1)	total toroidal plasma current [A]; Positive sign means anti-clockwise when viewed from above. Time-dependent; Scalar
li	float (9.1.1.1.1)	internal inductance; Time-dependent; Scalar
volume	float (9.1.1.1.1)	total plasma volume [m <sup>3</sup> ]; Time-dependent; Scalar
area	float (9.1.1.1.1)	area poloidal cross section [m <sup>2</sup> ]; Time-dependent; Scalar
psi_ax	float (9.1.1.1.1)	poloidal flux at the magnetic axis [Wb]; Time-dependent; Scalar
psi_bound	float (9.1.1.1.1)	poloidal flux at the selected plasma boundary (separatrix for a free boundary code; fixed boundary for fixed boundary code) [Wb]; Time-dependent; Scalar
mag_axis	mag_axis (9.1.1.3.132)	Magnetic axis values
q_95	float (9.1.1.1.1)	q at the 95% poloidal flux surface; Time-dependent; Scalar
q_min	float (9.1.1.1.1)	minimum q value in the plasma; Time-dependent; Scalar

member	type	description
toroid_field	b0r0 (9.1.1.3.45)	Characteristics of the vacuum toroidal field, redundant with the toroidfield CPO, to be used by the ETS
w_mhd	float (9.1.1.1.1)	Plasma energy content = $3/2 * \int(p,dV)$ with p being the total pressure (thermal + fast particles). Time-dependent; Scalar

Type of: equilibrium:global\_param (40)

### 9.1.1.3.122 globalparam

Various global quantities calculated from the 1D profiles. Time-dependent

member	type	description
current_tot	float (9.1.1.1.1)	Total plasma current [A]; Time-dependent; Scalar
current_bnd	float (9.1.1.1.1)	Plasma current inside transport solver boundary rho_tor_bnd [A]; Time-dependent; Scalar
vloop	float (9.1.1.1.1)	Toroidal loop voltage [V]; Time-dependent; Scalar
li	float (9.1.1.1.1)	Internal inductance; Time-dependent; Scalar
beta_tor	float (9.1.1.1.1)	toroidal beta; Time-dependent; Scalar
beta_normal	float (9.1.1.1.1)	normalised beta; Time-dependent; Scalar
beta_pol	float (9.1.1.1.1)	poloidal beta; Time-dependent; Scalar
w_dia	float (9.1.1.1.1)	Plasma energy content = $3/2 * \int(p,dV)$ with p being the total pressure (pr.th + pr.perp). Time-dependent; Scalar

Type of: coreprof:globalparam (32)

### 9.1.1.3.123 grid

definition of the 2D grid

member	type	description
dim1	vecflt.type (9.1.1.2.9)	First dimension values; Time-dependent; Vector (ndim1)
dim2	vecflt.type (9.1.1.2.9)	Second dimension values; Time-dependent; Vector (ndim2)
connect	matint.type (9.1.1.2.8)	In case of a finite elemnt representation, lists the points (3 for triangles, 4 for quadrangles) which define a finite element. In this case, ndim1=ndim2 and the value of grid_connect represents the index of the points in the list 1:ndim. E.g. : grid_connect(i,1:4) is a list of four integers [k1 k2 k3 k4] meaning that finite element #i is defined by the points (dim1(k1),dim2(k1)),(dim1(k2),dim2(k2)),(dim1(k3),dim2(k3)) and (dim1(k4),dim2(k4)); Time-dependent; Matrix of integers (nelement,4)

Type of: profiles\_2d:grid (187)

### 9.1.1.3.124 grid\_full

Generic definition of a complex grid

member	type	description
spaces	grid_spaces (9.1.1.3.126)	Definition of the grid spaces.
metric	vecflt.type (9.1.1.2.9)	Grid metric. INSERT HERE CLARIFIED DEFINITION Vector. DIMENSIONALITY ?

Type of: edge:grid (39)

### 9.1.1.3.125 grid\_space

Description of a space in the grid

member	type	description
type_coord	vecint.type (9.1.1.2.10)	Type of coordinates describing the space. Vector of integers (ncoord)
node_value	matflt.type (9.1.1.2.7)	Numerical value of the node coordinates. Matrix (nnode,ncoord)
alter_coord	alter_coord (9.1.1.3.38)	Alternative coordinate system possibly used to describe the space (e.g. rho_tor versus rho_tor_norm). NB : when specifying straight lines to build cells, these are intended to refer to the primary (main) system and may not be straight on the alternative system.
nobject	vecint.type (9.1.1.2.10)	Number of object defined in the space, for each dimension. Vector of integers (ncoord)
nobject_bou	vecint.type (9.1.1.2.10)	Maximum number of boundaries ("faces") of an object, for each dimension. Vector of integers (ncoord)

member	type	description
neighborside	integer (9.1.1.1.2)	Number of neighbors lying on a "face" of a given space object. Integer.
neighbors	matint.type (9.1.1.2.8)	Neighbors of a given object, specified only for the highest dimensionality. Unused slots of the matrix should be set as UNDEFINED. Matrix of integers (nobject(end),nobject.bou(end))
OBJDEF	vecint.type (9.1.1.2.10)	Definition and dimensionality to be provided
properties	properties (9.1.1.3.165)	Space properties

Type of: grid\_spaces:space\_1 (150) I grid\_spaces:space\_2 (150) I grid\_spaces:space\_3 (150) I grid\_spaces:space\_4 (150) I grid\_spaces:space\_5 (150)

### 9.1.1.3.126 grid\_spaces

Definition of the grid spaces.

member	type	description
nspace	integer (9.1.1.1.2)	Number of spaces used. Integer.
space_1	grid_space (9.1.1.3.125)	Description of space #1
space_2	grid_space (9.1.1.3.125)	Description of space #2
space_3	grid_space (9.1.1.3.125)	Description of space #3
space_4	grid_space (9.1.1.3.125)	Description of space #4
space_5	grid_space (9.1.1.3.125)	Description of space #5

Type of: grid\_full:spaces (148)

### 9.1.1.3.127 isoflux

Point series at which the flux is considered the same

member	type	description
position	rz1D (9.1.1.3.194)	Position of the points at which the flux is considered the same; Time-dependent; Vector (nmeas)
source	string (9.1.1.1.3)	Description or path to the source signal (diagnostic or genprof, from which to read all info on the signal), e.g. 'magdiag/bpol.probes/measure/value'. String
weight	vecflt.type (9.1.1.2.9)	weight given to the measurement ( $\zeta=0$ ); -1 if exact data; Time-dependent; Vector (nmeas)
sigma	vecflt.type (9.1.1.2.9)	standard deviation of the measurement; Time-dependent; Vector (nmeas)
calculated	vecflt.type (9.1.1.2.9)	Signal as recalculated by the equilibrium code; Time-dependent; Vector (nmeas)
chi2	vecflt.type (9.1.1.2.9)	chi <sup>2</sup> of (calculated-measured); Time-dependent; Vector (nmeas)

Type of: eqconstraint:isoflux (130)

### 9.1.1.3.128 jni

Non-inductive parallel current density [A/m<sup>2</sup>]; Time-dependent;

member	type	description
value	vecflt.type (9.1.1.2.9)	Value of jni; Time-dependent; Vector (nrho)
integral	vecflt.type (9.1.1.2.9)	Integral from 0 to rho of jni. Time-dependent; Vector (nrho)
source	string (9.1.1.1.3)	Source of the profile (any comment describing the origin of the profile : code, path to diagnostic signals, massaging, ...); String

Type of: psi:jni (190)

### 9.1.1.3.129 launchangles

Launching angles of the beam

member	type	description
alpha	vecflt.type (9.1.1.2.9)	Poloidal launching angle between the horizontal plane and the poloidal component of the nominal beam centerline (trigonometric convention) [rad], Vector (nantenna.ec). Time-dependent
beta	vecflt.type (9.1.1.2.9)	Toroidal launching angle between the horizontal plane and the poloidal component of the nominal beam centerline (trigonometric convention) [rad], Vector (nantenna.ec). Time-dependent

Type of: antenna.ec:launchangles (63)

### 9.1.1.3.130 lineintegraldiag

General line integral diagnostic

member	type	description
datainfo	datainfo (9.1.1.3.73)	Generic information on a data item
expression	string (9.1.1.1.3)	Formal expression for the line integral to be evaluated as a function of ne, ni, Te, Ti, Zeff, Br, Bz
setup_line	setup_line (9.1.1.3.228)	Geometric description of the lines of sight
measure	exp1D (9.1.1.3.111)	Measured value. Time-dependent; Vector (nchords)
time	float (9.1.1.1.1)	Time [s]; Time-dependent; Scalar

### 9.1.1.3.131 local

Local description of the wave fields

member	type	description
e.plus	array4dflt.type (9.1.1.2.3)	Magnitude of left hand polarised component of the wave electric field [V/m]; Time-dependent; Array 4D (nfreq_fw, max_ntor, max_npsi, max_ntheta)
e.plus.ph	array4dflt.type (9.1.1.2.3)	Phase of left hand polarised component of the wave electric field [rad]; Time-dependent; Array 4D (nfreq_fw, max_ntor, max_npsi, max_ntheta)
e.minus	array4dflt.type (9.1.1.2.3)	Magnitude of right hand polarised component of the wave electric field [v/m]; Time-dependent; Array 4D (nfreq_fw, max_ntor, max_npsi, max_ntheta)
e.minus.ph	array4dflt.type (9.1.1.2.3)	Phase of right hand polarised component of the wave electric field [rad]; Time-dependent; Array 4D (nfreq_fw, max_ntor, max_npsi, max_ntheta)
e.norm	array4dflt.type (9.1.1.2.3)	Magnitude of wave electric field normal to a flux surface [V/m]; Time dependent; 4D (nfreq_fw, max_ntor, max_npsi, max_ntheta)
enorm.ph	array4dflt.type (9.1.1.2.3)	Phase of wave electric field normal to a flux surface [rad]; Time dependent; 4D (nfreq_fw, max_ntor, max_npsi, max_ntheta)
e.binorm	array4dflt.type (9.1.1.2.3)	Magnitude of wave electric field tangent to a flux surface [V/m]; Time dependent; 4D (nfreq_fw, max_ntor, max_npsi, max_ntheta)
e.binorm.ph	array4dflt.type (9.1.1.2.3)	Phase of wave electric field tangent to a flux surface [rad]; Time dependent; 4D (nfreq_fw, max_ntor, max_npsi, max_ntheta)
e.para	array4dflt.type (9.1.1.2.3)	Magnitude of parallel wave electric field [V/m]; Time dependent; Array 4D (nfreq_fw, max_ntor, max_npsi, max_ntheta)
e.para.ph	array4dflt.type (9.1.1.2.3)	Phase of parallel wave electric field [rad]; Time dependent; Array 4D (nfreq_fw, max_ntor, max_npsi, max_ntheta)
b.norm	array4dflt.type (9.1.1.2.3)	Magnitude of wave magnetic field normal to a flux surface [T]; Time dependent; Array 4D (nfreq_fw, max_ntor, max_npsi, max_ntheta)
b.norm.ph	array4dflt.type (9.1.1.2.3)	Phase of wave magnetic field normal to a flux surface [rad]; Time dependent; Array 4D (nfreq_fw, max_ntor, max_npsi, max_ntheta)
b.binorm	array4dflt.type (9.1.1.2.3)	Magnitude of wave magnetic field tangent to a flux surface [T]; Time dependent; Array 4D (nfreq_fw, max_ntor, max_npsi, max_ntheta)
b.binorm.ph	array4dflt.type (9.1.1.2.3)	Phase of wave magnetic field tangent to a flux surface [rad]; Time dependent; Array 4D (nfreq_fw, max_ntor, max_npsi, max_ntheta)
b.para	array4dflt.type (9.1.1.2.3)	Magnitude of wave magnetic field parallel to the equilibrium magnetic field [T]; Time dependent; Array 4D (nfreq_fw, max_ntor, max_npsi, max_ntheta)
b.para.ph	array4dflt.type (9.1.1.2.3)	Phase of wave magnetic field parallel to the equilibrium magnetic field [rad]; Time dependent; Array 4D (nfreq_fw, max_ntor, max_npsi, max_ntheta)

Type of: fullwave:local (143)

### 9.1.1.3.132 mag\_axis

Magnetic axis values

member	type	description
position	rz0D (9.1.1.3.193)	Position of the magnetic axis [m]; Time-dependent; Scalar;
bphi	float (9.1.1.1.1)	Total toroidal magnetic field at the magnetic axis [T]; Time-dependent; Scalar
q	float (9.1.1.1.1)	q at the magnetic axis; Time-dependent; Scalar

Type of: global\_param:mag\_axis (145)

### 9.1.1.3.133 magnet\_iron

Magnetisation in iron segments [T]

member	type	description
mr	eqmes1D (9.1.1.3.109)	Magnetisation along the R axis [T];
mz	eqmes1D (9.1.1.3.109)	Magnetisation along the Z axis [T];

Type of: eqconstraint:magnet\_iron (130)

### 9.1.1.3.134 magnetise

Magnetisation M of the iron segment, assumed to be constant inside a given iron segment. Reminder :  $H = 1/\mu_0 * B - \mu_r * M$ ; [A/m].

member	type	description
mr	exp1D (9.1.1.3.111)	Magnetisation along the R axis [T]; Time-dependent; Vector (nsegment)
mz	exp1D (9.1.1.3.111)	Magnetisation along the Z axis [T]; Time-dependent; Vector (nsegment)

Type of: ironmodel:magnetise (42)

### 9.1.1.3.135 mdinfo

Information related to machine description for this entry

member	type	description
shot_min	integer (9.1.1.1.2)	Minimum shot number to which the machine description applies
shot_max	integer (9.1.1.1.2)	Maximum shot number to which the machine description applies
md_entry	entry_def (9.1.1.3.105)	Entry of the machine description used. NB : just for information : for the moment, no guarantee that machine description data have not been modified with respect to the data in md_entry. Machine description data are written explicitly in each CPO.

Type of

### 9.1.1.3.136 midplane

Intersections with the midplane

member	type	description
outer	orbit_pos (9.1.1.3.145)	Position at outer mid-plane
inner	orbit_pos (9.1.1.3.145)	Position at inner mid-plane

Type of: special\_pos:midplane (262)

### 9.1.1.3.137 modules

Modules description

member	type	description
nma_theta	vecint_type (9.1.1.2.10)	Number of modules per antenna in the poloidal direction. Vector of integers (nantenna_lh).
nma_phi	vecint_type (9.1.1.2.10)	Number of modules per antenna in the toroidal direction. Vector of integers (nantenna_lh).
sm_theta	vecflt_type (9.1.1.2.9)	Spacing between poloidally neighboring modules [m], Vector (nantenna_lh)
amplitude	array3dfilt_type (9.1.1.2.1)	Amplitude of the TE10 mode injected in the module [W], Array 3D (nantenna_lh,max_nma_phi,max_nma_theta). Time-dependent
phase	array3dfilt_type (9.1.1.2.1)	Phase of the TE10 mode injected in the module [rd], Array 3D (nantenna_lh, max_nma_phi, max_nma_theta). Time-dependent
waveguides	waveguides (9.1.1.3.268)	Waveguides description

Type of: antennalh\_setup:modules (67)

### 9.1.1.3.138 ne\_transp

Transport coefficients for electron density equation. Time-dependent.

member	type	description
diff_eff	matflt.type (9.1.1.2.7)	Effective diffusivity [ $m^2.s^{-1}$ ]. The last index of the array describes which multiplier should be applied to the particule flux when adding its contribution in the expression of the heat flux : position 1 is multiplied by 0, 2 is multiplied by 3/2, 3 is multiplied by 5/2. The total particle flux (for the particle transport equation) is obtained as the sum over the three positions. Time-dependent. Matrix (nrho,3)
vconv_eff	matflt.type (9.1.1.2.7)	Effective convection [ $m.s^{-1}$ ]. The last index of the array describes which multiplier should be applied to the particule flux when adding its contribution in the expression of the heat flux : position 1 is multiplied by 0, 2 is multiplied by 3/2, 3 is multiplied by 5/2. The total particle flux (for the particle transport equation) is obtained as the sum over the three positions. Time-dependent. Matrix (nrho,3)
flux	vecflt.type (9.1.1.2.9)	Flux. Not used in transport equations [ $field.m.s^{-1},m^{-3}$ if field is not a density itself]. Time-dependent. Vector (nrho)
off_diagonal	offdiagel (9.1.1.3.141)	Details of the transport matrix, just for diagnostic (not used in transport equations). Time-dependent.
flag	integer (9.1.1.1.2)	Flag describing the form of transport produced by the original model : 0- not calculated, 1- D and V, 2- flux, 3- full transport matrix. Scalar.

Type of: coretransp:ne\_transp (34)

### 9.1.1.3.139 neutrallist

Definition of neutral species

member	type	description
ncomp	vecint.type (9.1.1.2.10)	For each neutral species, number of distinct atoms that enter the composition of this species (1 if the neutral is an atom, more for a molecule : 2 for CH4). Vector of integers (nneut)
tatm	matint.type (9.1.1.2.8)	For each neutral species, and each of its atomic component, index of the atom (referring to the atomlist). Matrix of integers (nneut,max_ncomp)
multatm	matint.type (9.1.1.2.8)	For each neutral species, and each of its atomic component, number of such atoms. Matrix of integers (nneut,max_ncomp)

Type of: composition\_neutrals:neutrallist (82)

### 9.1.1.3.140 ni\_transp

Transport coefficients for ion density equation. Time-dependent.

member	type	description
diff_eff	array3dflt.type (9.1.1.2.1)	Effective diffusivity [ $m^2.s^{-1}$ ]. The last index of the array describes which multiplier should be applied to the particule flux when adding its contribution in the expression of the heat flux : position 1 is multiplied by 0, 2 is multiplied by 3/2, 3 is multiplied by 5/2. The total particle flux (for the particle transport equation) is obtained as the sum over the three positions. Time-dependent. Array3d (nrho,nion,3)
vconv_eff	array3dflt.type (9.1.1.2.1)	Effective convection [ $m.s^{-1}$ ]. The last index of the array describes which multiplier should be applied to the particule flux when adding its contribution in the expression of the heat flux : position 1 is multiplied by 0, 2 is multiplied by 3/2, 3 is multiplied by 5/2. The total particle flux (for the particle transport equation) is obtained as the sum over the three positions. Time-dependent. Array3d (nrho,nion,3)
flux	matflt.type (9.1.1.2.7)	Flux. Not used in transport equations [ $field.m.s^{-1},m^{-3}$ if field is not a density itself]. Time-dependent. Matrix (nrho,nion)
off_diagonal	offdiagion (9.1.1.3.142)	Details of the transport matrix, just for diagnostic (not used in transport equations). Time-dependent.
flag	integer (9.1.1.1.2)	Flag describing the form of transport produced by the original model : 0- not calculated, 1- D and V, 2- flux, 3- full transport matrix. Scalar.

Type of: coretransp:ni\_transp (34)

### 9.1.1.3.141 offdiagel

Subtree containing the full transport matrix from a transport model, for the electrons. Time-dependent.

member	type	description
d.ni	matflt.type (9.1.1.2.7)	Off-Diagonal term coupling ion density gradient to the transport equation [ $m^2.s^{-1}$ ]. Time-dependent. Matrix (nrho,nion)
d.ti	matflt.type (9.1.1.2.7)	Off-Diagonal term coupling ion density gradient to the transport equation [ $m^2.s^{-1}$ ]. Time-dependent. Matrix (nrho,nion)

member	type	description
d_ne	vecflt.type (9.1.1.2.9)	Off-Diagonal term coupling electron density gradient to the transport equation [ $m^{-2}s^{-1}$ ]. Time-dependent. Vector (nrho)
d_te	vecflt.type (9.1.1.2.9)	Off-Diagonal term coupling electron temperature gradient to the transport equation [ $m^{-2}s^{-1}$ ]. Time-dependent. Vector (nrho)
d_epar	vecflt.type (9.1.1.2.9)	Off-Diagonal term coupling parallel electric field to the transport equation [ $m^{-2}s^{-1}$ ]. Time-dependent. Vector (nrho)
d_mtor	vecflt.type (9.1.1.2.9)	Off-Diagonal term coupling total toroidal momentum to the transport equation [ $m^{-2}s^{-1}$ ]. Time-dependent. Vector (nrho)

Type of: ne\_transp:off\_diagonal (162) I transcoefel:off\_diagonal (284)

### 9.1.1.3.142 offdiagon

Subtree containing the full transport matrix from a transport model, for the various ion species

member	type	description
d_ni	array3dfilt.type (9.1.1.2.1)	Off-Diagonal term coupling ion density gradient to the transport equation [ $m^{-2}s^{-1}$ ]. Time-dependent. Array3d (nrho,nion,nion)
d_ti	array3dfilt.type (9.1.1.2.1)	Off-Diagonal term coupling ion density gradient to the transport equation [ $m^{-2}s^{-1}$ ]. Time-dependent. Array3d (nrho,nion,nion)
d_ne	matflt.type (9.1.1.2.7)	Off-Diagonal term coupling electron density gradient to the transport equation [ $m^{-2}s^{-1}$ ]. Time-dependent. Matrix (nrho,nion)
d_te	matflt.type (9.1.1.2.7)	Off-Diagonal term coupling electron temperature gradient to the transport equation [ $m^{-2}s^{-1}$ ]. Time-dependent. Matrix (nrho,nion)
d_epar	matflt.type (9.1.1.2.7)	Off-Diagonal term coupling parallel electric field to the transport equation [ $m^{-2}s^{-1}$ ]. Time-dependent. Matrix (nrho,nion)
d_mtor	matflt.type (9.1.1.2.7)	Off-Diagonal term coupling total toroidal momentum to the transport equation [ $m^{-2}s^{-1}$ ]. Time-dependent. Matrix (nrho,nion)

Type of: ni\_transp:off\_diagonal (164) I transcoefion:off\_diagonal (286) I transcoefvtr:off\_diagonal (287)

### 9.1.1.3.143 orb\_glob\_dat

Global quantities associated with an orbit.

member	type	description
orbit.type	vecint.type (9.1.1.2.10)	Identifier of orbit type: 0 trapped, -1 co-passing, + 1 counter-passing ; Time-dependent; Vector (norbits)
omega_b	vecflt.type (9.1.1.2.9)	Bounce angular frequency rad/s; Time-dependent; Vector (norbits)
omega_phi	vecflt.type (9.1.1.2.9)	Toroidal angular precession frequency [rad/s]; Time-dependent; Vector (norbits).
omega_c_av	vecflt.type (9.1.1.2.9)	Orbit averaged cyclotron frequency [rad/a]; Time-dependent; Vector(norbits).
special_pos	special_pos (9.1.1.3.238)	Special positions along an orbit (like turning points).

Type of: orbit:orb\_glob\_dat (50)

### 9.1.1.3.144 orb\_trace

Position of particle in 5D space (3D in real and 2D in velocity).

member	type	description
time_orb	matflt.type (9.1.1.2.7)	Time along the orbit [s]; Time-dependent; Matrix (norbits, max_ntorb)
ntorb	vecint.type (9.1.1.2.10)	Number of time slices along the orbit, for each orbit. Time-dependent; Vector (norbits)
r	matflt.type (9.1.1.2.7)	Major radius of the guiding centre [m], Major radius; Time-dependent; Matrix (norbits, max_ntorb).
z	matflt.type (9.1.1.2.7)	Altitude of the guiding centre [m]; Time-dependent; Matrix (norbits, max_ntorb).
psi	matflt.type (9.1.1.2.7)	Guiding centre position in psi [normalised poloidal flux]; Time-dependent; Matrix (norbits, max_ntorb).
theta_b	matflt.type (9.1.1.2.7)	Position of the guiding centre in poloidal Boozer angle [rad]; Time-dependent; Matrix (norbits, max_ntorb).
v_parallel	matflt.type (9.1.1.2.7)	Parallel velocity along the orbit [m/s]; Time-dependent; Matrix (norbits, max_ntorb).
v_perp	matflt.type (9.1.1.2.7)	Perpendicular velocity along the orbit [m/s]; Time-dependent; Matrix (norbits, max_ntorb).

Type of: orbit:orb\_trace (50)



### 9.1.1.3.145 orbit\_pos

Complex type for orbit position (Vector)

member	type	description
r	vecflt.type (9.1.1.2.9)	Major radius [m]; Time-dependent; Vector (norbits).
z	vecflt.type (9.1.1.2.9)	Altitude [m]; Time-dependent; Vector (norbits).
psi	vecflt.type (9.1.1.2.9)	Position in psi [normalised poloidal flux]; Time-dependent; Vector (norbits).
theta.b	vecflt.type (9.1.1.2.9)	Poloidal Boozer angle [rad]; Time-dependent; Vector (norbits).

Type of: midplane:inner (160) I midplane:outer (160) I turning\_pts:lower (290) I turning\_pts:upper (290)

### 9.1.1.3.146 orbitt\_id

Parameters identifying an orbit

member	type	description
amn	float (9.1.1.1.1)	Atomic mass of the ion; Scalar
zion	float (9.1.1.1.1)	Atomic charge of the ion; Scalar
energy	vecflt.type (9.1.1.2.9)	Energy of the ion [keV]; Time-dependent; Vector (norbits).
magn_mom	vecflt.type (9.1.1.2.9)	Magnetic momentum [kg m <sup>2</sup> / s <sup>2</sup> / T]; Time-dependent, Vector(norbits).
p_phi	vecflt.type (9.1.1.2.9)	toroidal angular momentum [kg m <sup>2</sup> / s]; Time-dependent; Vector(norbits);
sigma	vecint.type (9.1.1.2.10)	Sign of parallel velocity at psi=psi_max along the orbit; Time-dependent; Vector(norbits)

Type of: orbit:orbitt\_id (50)

### 9.1.1.3.147 param

Code parameters block passed from the wrapper to the subroutine. Does not appear as such in the data structure (in fact each string is an instance of codeparam/parameters). This is inserted in utilities.xsd for automatic declaration in the Fortran type definitions.

member	type	description
parameters	string (9.1.1.1.3)	Actual value of the code parameters (instance of coparam/parameters in XML format).
default_param	string (9.1.1.1.3)	Default value of the code parameters (instance of coparam/parameters in XML format).
schema	string (9.1.1.1.3)	Code parameters schema.

Type of

### 9.1.1.3.148 permeability

Permeability model (can be different for each iron segment)

member	type	description
b	matflt.type (9.1.1.2.7)	List of B values for description of the mur(B) dependence [T]; Matrix (nsegment,nB)
mur	matflt.type (9.1.1.2.7)	Relative permeability mur(B) [dimensionless]; Matrix (nsegment,nB)

Type of: desc\_iron:permeability (99)

### 9.1.1.3.149 pfcircuits

Circuits, connected to multiple coils and to multiple supplies, defining the current and voltage relationships in the system

member	type	description
name	vecstring.type (9.1.1.2.11)	Name of circuit, array of strings (ncircuits)
id	vecstring.type (9.1.1.2.11)	ID of circuit, array of strings (ncircuits)
type	vecstring.type (9.1.1.2.11)	Type of circuit, array of strings (ncircuits)
nnodes	vecint.type (9.1.1.2.10)	Number of nodes used to describe a circuit. Vector (ncircuits)

member	type	description
connections	array3dint.type (9.1.1.2.2)	Description of the supplies and coils connections (nodes) across each circuit. Array 3D (ncircuits,max_nnodes,2*ncomponents), describing for each node which component are connected to it (1 if connected, 0 otherwise). There are 2 sides at each component, thus 2*ncomponents as the size of the third dimension, listing first all supplies, then all coils (in the same order as listed in PFSUPPLIES and PFCOILS). An example can be found in the data structure documentation PFconnections.pdf

Type of: pfsystems:pfcircuits (51)

### 9.1.1.3.150 pccoils

Active poloidal field coils

member	type	description
desc_pccoils	desc_pccoils (9.1.1.3.76)	Description of the coils
coilcurrent	exp1D (9.1.1.3.111)	Circuit feed current in the coil , defined positive if it flows from point 1 to point 2 of the component in the pfcircuit description [A]; Time-dependent; Vector (ncoils)
coilvoltage	exp1D (9.1.1.3.111)	Voltage on the full coil [V]; Time-dependent; Vector (ncoils)

Type of: pfsystems:pccoils (51)

### 9.1.1.3.151 pfelement

Axisymmetric conductor description

member	type	description
name	vecstring.type (9.1.1.2.11)	Name of this element. Should be a matrix of strings (ncoils,max_nelements), but not supported by the UAL yet.
id	vecstring.type (9.1.1.2.11)	ID of this element. Should be a matrix of strings (ncoils,max_nelements), but not supported by the UAL yet.
turnsign	matflt.type (9.1.1.2.7)	Sign of turn and fraction of a turn for calculating magnetic field of the Element; Matrix (ncoils,max_nelements)
area	matflt.type (9.1.1.2.7)	Surface area of this element [m <sup>2</sup> ]; Matrix (ncoils,max_nelements)
pfgeometry	pfgeometry (9.1.1.3.152)	Shape of a PF Coil Element

Type of: desc\_pccoils:pfelement (100)

### 9.1.1.3.152 pfgeometry

Shape of a PF Coil Element

member	type	description
type	matint.type (9.1.1.2.8)	Type used to describe a coil shape (0 for 'rzcoordinates' or 1 for 'rzdrdz'); Matrix of integers (ncoils,max_nelements)
npoints	matint.type (9.1.1.2.8)	Number of points describing an element (irregular outline rzcoordinates); Matrix (ncoils,max_nelements)
rzcoordinate	rz3D (9.1.1.3.197)	Irregular outline [m]; 3D arrays (ncoils,max_nelements,max_npoints)
rzdrdz	array3dflt.type (9.1.1.2.1)	4-vector defining Centre R,Z and full extents dR, dZ [m]; 3D Array (ncoils,max_nelements,4)

Type of: pfelement:pfgeometry (175)

### 9.1.1.3.153 ppageometry

Geometry of the passive elements

member	type	description
type	vecint.type (9.1.1.2.10)	Type used to describe the shape (0 for 'rzcoordinates' or 1 for 'rzdrdz'); Vector of integers (nelements)
npoints	vecint.type (9.1.1.2.10)	Number of points describing an element (irregular outline rzcoordinates); Vector of integers (nelements)
rzcoordinate	rz2D (9.1.1.3.196)	Irregular outline [m]; Matrix (nelements,max_npoints)
rzdrdz	matflt.type (9.1.1.2.7)	4-vector defining Centre R,Z and full extents dR, dZ [m]; Matrix (nelements,4)

Type of: pfpasive:pfpgeometry (178)

### 9.1.1.3.154 pfpasive

Passive axisymmetric conductor description

member	type	description
area	vecflt.type (9.1.1.2.9)	Surface area of this passive element [m <sup>2</sup> ]; Vector (nelements)
res	vecflt.type (9.1.1.2.9)	Passive element resistance [Ohm]; Vector (nelements)
pfpgeometry	pfpgeometry (9.1.1.3.153)	Geometry of the passive elements

Type of: pfsystems:pfpasive (51)

### 9.1.1.3.155 pfsupplies

PF power supplies

member	type	description
desc.supply	desc.supply (9.1.1.3.77)	Description of the power supplies
voltage	exp1D (9.1.1.3.111)	Voltage at the supply output [V]; Time-dependent; Vector (nsupplies)
current	exp1D (9.1.1.3.111)	Current at the supply output, defined positive if it flows from point 1 to point 2 of the component in the pfcircuit description [A]; Time-dependent; Vector (nsupplies)

Type of: pfsystems:pfsupplies (51)

### 9.1.1.3.156 phaseellipse

Phase ellipse characteristics of the spot

member	type	description
invcurvrad	matflt.type (9.1.1.2.7)	Inverse curvature radii for the phase ellipse [m <sup>-1</sup> ], Matrix (nantenna,2). Time-dependent
angle	vecflt.type (9.1.1.2.9)	Rotation angle for the phase ellipse [rd], Vector(nantenna). Time-dependent

Type of: rf.beam:phaseellipse (216)

### 9.1.1.3.157 plasmaedge

Plasma edge characteristics in front of the antenna.

member	type	description
npoints	vecint.type (9.1.1.2.10)	Number of points in the distance grid. Vector of integers (nantenna.lh).
distance	matflt.type (9.1.1.2.7)	Grid for electron density, defined as the perpendicular distance to the antenna waveguide plane (the origin being described in the position sub-structure) [m]. Matrix (nantenna.lh,max_npoints). Time-dependent.
density	matflt.type (9.1.1.2.7)	Electron density in front of the antenna [m <sup>-3</sup> ]. Matrix (nantenna.lh,max_npoints). Time-dependent.

Type of: antenna.lh:plasmaedge (65)

### 9.1.1.3.158 pol\_decomp

Poloidal decomposition of the wave fields

member	type	description
nmpol	vecint.type (9.1.1.2.10)	Number of poloidal mode numbers for each frequency; Vector (nfreq_fw)
mpol	matint.type (9.1.1.2.8)	Poloidal mode numbers; Matrix (nfreq_fw, max_nmpol)
e.plus	array4dfilt.type (9.1.1.2.3)	Magnitude of poloidal Fourier decomposition of left hand polarised component of the wave electric field [V/m]; Time-dependent; Array 4D (nfreq_fw, max_ntor, max_npsi, max_nmpol)
e.plus.ph	array4dfilt.type (9.1.1.2.3)	Phase of poloidal Fourier decomposition of left hand polarised component of the wave electric field [rad]; Time-dependent; Array 4D (nfreq_fw, max_ntor, max_npsi, max_nmpol)
e.minus	array4dfilt.type (9.1.1.2.3)	Magnitude of poloidal Fourier decomposition of right hand polarised component of the wave electric field; Time-dependent (V/m); Array 4D (nfreq_fw, max_ntor, max_npsi, max_nmpol)

member	type	description
e.minus.ph	array4dflt.type (9.1.1.2.3)	Phase of poloidal Fourier decomposition of right hand polarised component of the wave electric field [rad]; Time-dependent; Array 4D (nfreq_fw, max_ntor, max_npsi, max_nmpol)
e.norm	array4dflt.type (9.1.1.2.3)	Magnitude of poloidal Fourier decomposition of wave electric field normal to a flux surface [V/m]; Time dependent; Array 4D (nfreq_fw, max_ntor, max_npsi, max_nmpol)
e.norm.ph	array4dflt.type (9.1.1.2.3)	Phase of poloidal Fourier decomposition of wave electric field normal to a flux surface [rad]; Time dependent; Array 4D (nfreq_fw, max_ntor, max_npsi, max_nmpol)
e.binorm	array4dflt.type (9.1.1.2.3)	Magnitude of poloidal Fourier decomposition of wave electric field tangent to a flux surface [V/m]; Time dependent; Array 4D (nfreq_fw, max_ntor, max_npsi, max_nmpol)
e.binorm.ph	array4dflt.type (9.1.1.2.3)	Phase of poloidal Fourier decomposition of wave electric field tangent to a flux surface [rad]; Time dependent; Array 4D (nfreq_fw, max_ntor, max_npsi, max_nmpol)
e.para	array4dflt.type (9.1.1.2.3)	Magnitude of poloidal Fourier decomposition of parallel wave electric field [V/m]; Time dependent; Array 4D (nfreq_fw, max_ntor, max_npsi, max_nmpol)
e.para.ph	array4dflt.type (9.1.1.2.3)	Phase of poloidal Fourier decomposition of parallel wave electric field [rad]; Time dependent; Array 4D (nfreq_fw, max_ntor, max_npsi, max_nmpol)
b.norm	array4dflt.type (9.1.1.2.3)	Magnitude of poloidal Fourier decomposition of wave magnetic field normal to a flux surface [T]; Time dependent; Array 4D (nfreq_fw, max_ntor, max_npsi, max_nmpol)
b.norm.ph	array4dflt.type (9.1.1.2.3)	Phase of poloidal Fourier decomposition of parallel wave electric field [rad]; Time dependent; Array 4D (nfreq_fw, max_ntor, max_npsi, max_nmpol)
b.binorm	array4dflt.type (9.1.1.2.3)	Magnitude of poloidal Fourier decomposition of wave magnetic field tangent to a flux surface [T]; Time dependent; Array 4D (nfreq_fw, max_ntor, max_npsi, max_nmpol)
b.binorm.ph	array4dflt.type (9.1.1.2.3)	Phase of poloidal Fourier decomposition of wave magnetic field tangent to a flux surface [rad]; Time dependent; Array 4D (nfreq_fw, max_ntor, max_npsi, max_nmpol)
b.para	array4dflt.type (9.1.1.2.3)	Magnitude of Fourier decomposition of wave magnetic field parallel to the equilibrium magnetic field [T]; Time dependent; Array 4D (nfreq_fw, max_ntor, max_npsi, max_nmpol)
b.para.ph	array4dflt.type (9.1.1.2.3)	Phase of Fourier decomposition of wave magnetic field parallel to the equilibrium magnetic field [T]; Time dependent; Array 4D (nfreq_fw, max_ntor, max_npsi, max_nmpol)

Type of: fullwave:pol\_decomp (143)

### 9.1.1.3.159 polarization

Wave field polarization along the ray/beam.

member	type	description
epol.p	array3dflt.type (9.1.1.2.1)	Electric field polarization vector in the p rotating coordinates, Array (3D) of double precision real (nfreq_beam, max_nbeams, max_npoints). Time-dependent
epol.m	array3dflt.type (9.1.1.2.1)	Electric field polarization vector in the m rotating coordinates, Array (3D) of double precision real (nfreq_beam, max_nbeams, max_npoints). Time-dependent
epol.par	array3dflt.type (9.1.1.2.1)	Electric field polarization vector in the magnetic field direction, Array (3D) of double precision real (nfreq_beam, max_nbeams, max_npoints). Time-dependent

Type of: beamtracing:polarization (71)

### 9.1.1.3.160 powerflow

Power flow along the ray/beam.

member	type	description
phi.perp	array3dflt.type (9.1.1.2.1)	Normalized power flow in the direction perpendicular to the magnetic field; Array (3D) of double precision real (nfreq_beam, max_nbeams, max_npoints). Time-dependent
phi.par	array3dflt.type (9.1.1.2.1)	Normalized power flow in the direction parallel to the magnetic field; Array (3D) of double precision real (nfreq_beam, max_nbeams, max_npoints). Time-dependent
power.e	array3dflt.type (9.1.1.2.1)	Power absorbed along the beam by electrons [W]; Array (3D) of double precision real (nfreq_beam, max_nbeams, max_npoints). Time-dependent
power.i	array4dflt.type (9.1.1.2.3)	Power absorbed along the beam by an ion species [W]; Array (4D) of double precision real (nfreq_beam, max_nbeams, max_npoints, nion). Time-dependent

Type of: beamtracing:powerflow (71)

### 9.1.1.3.161 profiles1d

Profiles derived from the fields solved in the transport equations, or from experiment.

member	type	description
pe	coreprofile (9.1.1.3.66)	Electron pressure [Pa]; Time-dependent;
pi	corepfion (9.1.1.3.67)	Ion pressure [Pa]; Time-dependent;

member	type	description
pr.th	coreprofile (9.1.1.3.66)	Thermal pressure (electrons+ions) [Pa]; Time-dependent;
pr.perp	coreprofile (9.1.1.3.66)	Total perpendicular pressure (electrons+ions, thermal+non-thermal) [Pa]; Time-dependent;
pr.parallel	coreprofile (9.1.1.3.66)	Total parallel pressure (electrons+ions, thermal+non-thermal) [Pa]; Time-dependent;
jtot	coreprofile (9.1.1.3.66)	total parallel current density = average(jtot.B) / B0, where B0 = coreprof/toroid_field/b0 [A/m <sup>2</sup> ]; Time-dependent;
jni	coreprofile (9.1.1.3.66)	non-inductive parallel current density = average(jni.B) / B0, where B0 = coreprof/toroid_field/b0 [A/m <sup>2</sup> ]; Time-dependent;
joh	coreprofile (9.1.1.3.66)	ohmic parallel current density = average(joh.B) / B0, where B0 = coreprof/toroid_field/b0 [A/m <sup>2</sup> ]; Time-dependent;
vloop	coreprofile (9.1.1.3.66)	Toroidal loop voltage [V]. Time-dependent.
sigmapar	coreprofile (9.1.1.3.66)	Parallel conductivity [ohm <sup>-1</sup> .m <sup>-1</sup> ]. Time-dependent.
qoh	coreprofile (9.1.1.3.66)	ohmic heating [W/m <sup>3</sup> ]; Time-dependent;
eparallel	coreprofile (9.1.1.3.66)	Parallel electric field = average(E.B) / B0, where B0 = coreprof/toroid_field/b0 [V.m <sup>-1</sup> ]. Time-dependent.
e.b	coreprofile (9.1.1.3.66)	Average(E.B) [V.T.m <sup>-1</sup> ]. Time-dependent.
q	coreprofile (9.1.1.3.66)	Safety factor profile; Time-dependent;
shear	coreprofile (9.1.1.3.66)	Magnetic shear profile; Time-dependent;
ns	corepfion (9.1.1.3.67)	Density of fast ions, for the various ion species [m <sup>-3</sup> ]; Time-dependent;
mtor	corepfion (9.1.1.3.67)	Toroidal momentum of the various ion species [UNITS?]; Time-dependent;
wtor	corepfion (9.1.1.3.67)	Angular toroidal rotation frequency of the various ion species [s <sup>-1</sup> ]; Time-dependent;
zeff	coreprofile (9.1.1.3.66)	Effective charge profile; Time-dependent;
bpol	coreprofile (9.1.1.3.66)	Average poloidal magnetic field, defined as sqrt(ave(grad rho <sup>2</sup> /R <sup>2</sup> )).dpsi/drho [T]. Time-dependent.
dpsidt	coreprofile (9.1.1.3.66)	Time derivative of the poloidal flux at constant rho_tor_norm [V]. Time-dependent.
dpsidt_phi	coreprofile (9.1.1.3.66)	Time derivative of the poloidal flux at constant toroidal flux [V]. Time-dependent.
dvprimedt	coreprofile (9.1.1.3.66)	Time derivative of the radial derivative of the volume enclosed in the flux surface, i.e. d/dt(dV/drho_tor) [m <sup>2</sup> .s <sup>-1</sup> ]; Time-dependent.

Type of: coreprof:profiles1d (32)

### 9.1.1.3.162 profiles\_1d

output profiles as a function of the poloidal flux

member	type	description
psi	vecflt_type (9.1.1.2.9)	Poloidal flux [Wb], without 1/2pi and such that Bp= grad psi  /R/2/pi. Time-dependent; Vector (npsi)
phi	vecflt_type (9.1.1.2.9)	toroidal flux [Wb]; Time-dependent; Vector (npsi)
pressure	vecflt_type (9.1.1.2.9)	pressure profile as a function of the poloidal flux [Pa]; Time-dependent; Vector (npsi)
F.dia	vecflt_type (9.1.1.2.9)	diamagnetic profile (R B.phi) [T m]; Time-dependent; Vector (npsi)
pprime	vecflt_type (9.1.1.2.9)	psi derivative of the pressure profile [Pa/Wb]; Time-dependent; Vector (npsi)
ffprime	vecflt_type (9.1.1.2.9)	psi derivative of F.dia multiplied with F.dia [T <sup>2</sup> m <sup>2</sup> /Wb]; Time-dependent; Vector (npsi)
jphi	vecflt_type (9.1.1.2.9)	flux surface averaged toroidal current density = average(jphi/R) / average(1/R) [A/m <sup>2</sup> ]; Time-dependent; Vector (npsi)
jparallel	vecflt_type (9.1.1.2.9)	flux surface averaged parallel current density = average(j.B) / B0, where B0 = equilibrium/global_param/toroid_field/b0 ; [A/m <sup>2</sup> ]; Time-dependent; Vector (npsi)
q	vecflt_type (9.1.1.2.9)	Safety factor = dphi/dpsi [-]; Time-dependent; Vector (npsi)
r.inboard	vecflt_type (9.1.1.2.9)	radial coordinate (major radius) at the height and on the left of the magnetic axis [m]; Time-dependent; Vector (npsi)
r.outboard	vecflt_type (9.1.1.2.9)	radial coordinate (major radius) at the height and on the right of the magnetic axis [m]; Time-dependent; Vector (npsi)
rho.tor	vecflt_type (9.1.1.2.9)	Toroidal flux coordinate [m], to be used by the ETS and in many CPOs (coreprof, ...). Defined as sqrt(phi/pi/B0), where B0 = equilibrium/global_param/toroid_field/b0. Time-dependent; Vector (npsi)
rho.vol	vecflt_type (9.1.1.2.9)	Normalised radial coordinate related to the plasma volume. Defined as sqrt(volume / volume[LCFS]). Time-dependent; Vector (npsi)
beta.pol	vecflt_type (9.1.1.2.9)	poloidal beta (inside the magnetic surface); Time-dependent; Vector (npsi)
li	vecflt_type (9.1.1.2.9)	internal inductance (inside the magnetic surface); Time-dependent; Vector (npsi)
elongation	vecflt_type (9.1.1.2.9)	Elongation; Time-dependent; Vector (npsi)
tria.upper	vecflt_type (9.1.1.2.9)	Upper triangularity profile; Time-dependent; Vector (npsi)
tria.lower	vecflt_type (9.1.1.2.9)	Lower triangularity profile; Time-dependent; Vector (npsi)
volume	vecflt_type (9.1.1.2.9)	Volume enclosed in the flux surface [m <sup>3</sup> ]; Time-dependent; Vector (npsi)
vprime	vecflt_type (9.1.1.2.9)	Radial derivative of the volume enclosed in the flux surface, i.e. dV/drho_tor [m <sup>2</sup> ]; Time-dependent; Vector (npsi)
area	vecflt_type (9.1.1.2.9)	Cross-sectional area of the flux surface [m <sup>2</sup> ]; Time-dependent; Vector (npsi)

member	type	description
aprime	vecflt.type (9.1.1.2.9)	Radial derivative of the cross-sectional area of the flux surface, i.e. $darea/drho.tor$ [ $m^2$ ]; Time-dependent; Vector (npsi)
surface	vecflt.type (9.1.1.2.9)	Surface area of the flux surface [ $m^2$ ]; Time-dependent; Vector (npsi)
fttrap	vecflt.type (9.1.1.2.9)	Trapped particle fraction; Time-dependent; Vector (npsi)
gm1	vecflt.type (9.1.1.2.9)	average( $1/R^2$ ); Time-dependent; Vector (npsi)
gm2	vecflt.type (9.1.1.2.9)	average( $grad.rho^2/R^2$ ); Time-dependent; Vector (npsi)
gm3	vecflt.type (9.1.1.2.9)	average( $grad.rho^2$ ); Time-dependent; Vector (npsi)
gm4	vecflt.type (9.1.1.2.9)	average( $1/B^2$ ) [ $T^{-2}$ ]; Time-dependent; Vector (npsi)
gm5	vecflt.type (9.1.1.2.9)	average( $B^2$ ) [ $T^2$ ]; Time-dependent; Vector (npsi)
gm6	vecflt.type (9.1.1.2.9)	average( $grad.rho^2/B^2$ ) [ $T^{-2}$ ]; Time-dependent; Vector (npsi)
gm7	vecflt.type (9.1.1.2.9)	average( $grad.rho$ ); Time-dependent; Vector (npsi)
gm8	vecflt.type (9.1.1.2.9)	average( $R$ ); Time-dependent; Vector (npsi)
gm9	vecflt.type (9.1.1.2.9)	average( $1/R$ ); Time-dependent; Vector (npsi)

Type of: equilibrium:profiles\_1d (40)

### 9.1.1.3.163 profiles\_2d

output profiles in the poloidal plane

member	type	description
grid_type	string (9.1.1.1.3)	Selection of one of a set of grid types. 1-rectangular (R,Z) grid, in this case the position arrays should not be filled since they are redundant with grid/dim1 and dim2.
grid	grid (9.1.1.3.123)	definition of the 2D grid
psi_grid	matflt.type (9.1.1.2.7)	values of the poloidal flux at the grid in the poloidal plane [Wb]; Time-dependent; Matrix (ndim1, ndim2)
jphi_grid	matflt.type (9.1.1.2.7)	toroidal plasma current density [ $A\ m^{-2}$ ]; Time-dependent; Matrix (ndim1, ndim2)
jpar_grid	matflt.type (9.1.1.2.7)	parallel (to magnetic field) plasma current density [ $A\ m^{-2}$ ]; Time-dependent; Matrix (ndim1, ndim2)
br	matflt.type (9.1.1.2.7)	R component of the poloidal magnetic field at the specified grid [T]; Time-dependent; Matrix (ndim1, ndim2)
bz	matflt.type (9.1.1.2.7)	Z component of the poloidal magnetic field at the specified grid [T]; Time-dependent; Matrix (ndim1, ndim2)
bphi	matflt.type (9.1.1.2.7)	toroidal component of the magnetic field at the specified grid [T]; Time-dependent; Matrix (ndim1, ndim2)
position	rz2D (9.1.1.3.196)	R and Z position of grid points; Time-dependent; Matrix (ndim1, ndim2)

Type of: equilibrium:profiles\_2d (40)

### 9.1.1.3.164 profiles\_neutrals

Profiles derived from the fields solved in the transport equations, or from experiment.

member	type	description
n0	corefieldneutral (9.1.1.3.62)	Neutral density [ $m^{-3}$ ]. Time-dependent;
t0	corefieldneutrale (9.1.1.3.63)	Neutral temperature [eV]. Time-dependent;
v0	corefieldneutralv0 (9.1.1.3.65)	Neutral velocity
prad0	matflt.type (9.1.1.2.7)	Power radiated by neutrals [ $W.m^{-3}$ ]. Matrix (nrho,nneut). Time-dependent.

Type of: coreneutrals:profiles (31)

### 9.1.1.3.165 properties

Space properties

member	type	description
alias	vecint.type (9.1.1.2.10)	Describes the links among grid nodes, primarily in case of periodic grids. If nodes i and j are two instances of the same node, located at the boundaries of a periodic domain, it is intended that ALIAS(I) = J and ALIAS(J) = I. Vector of integers (nnode).
type	vecint.type (9.1.1.2.10)	General purpose signal allowing the user grouping the space nodes according to his/her needs. Vector of integers (nnode).
is_x	vecint.type (9.1.1.2.10)	Location of X points. Vector of integers (nnode).

member	type	description
node_connect	string (9.1.1.1.3)	Lconnection type between two nodes. If its value is STRAIGHT, then two nodes are connected with a straight line (where "straight" is to be intended in the coordinates specified for that space). If the value is BEZIER, then two nodes are connected with BEZIER curves. String
bezier	bezier (9.1.1.3.48)	Components of the Bezier vectors associated to a node. I WONDER IF THIS IS GENERAL ENOUGH ... WHAT DO WE DO IF A DIFFERENT TYPE OF FINITE ELEMENT IS USED ?

Type of: grid\_space:properties (149)

### 9.1.1.3.166 psi

Poloidal magnetic flux [Wb]; Time-dependent;

member	type	description
value	vecflt_type (9.1.1.2.9)	Signal value [Wb]; Time-dependent; Vector (nrho)
source	string (9.1.1.1.3)	Source of the profile (any comment describing the origin of the profile : code, path to diagnostic signals, massaging, ...); String
flag	integer (9.1.1.1.2)	Flag describing how the profile has been processed : 0-not calculated; 1-interpretative; 2-calculated by the transport solver; 3-calculated by a separate code : in that case only, description of the code provided in codeparam at the same level; 4-used value from the previous time step; Time-dependent; Scalar
boundary	boundary (9.1.1.3.49)	Boundary condition for the transport equation. Time-dependent.
jni	jni (9.1.1.3.128)	Non-inductive parallel current density [A/m <sup>2</sup> ]; Time-dependent;
sigma_par	coreprofile (9.1.1.3.66)	Parallel conductivity [ohm <sup>-1</sup> .m <sup>-1</sup> ]. Time-dependent
codeparam	codeparam (9.1.1.3.55)	Code parameters

Type of: coreprof:psi (32)

### 9.1.1.3.167 putinfo

Structure which is type independent, describing the data item

member	type	description
putmethod	string (9.1.1.1.3)	Storage method for this data
putaccess	string (9.1.1.1.3)	Instructions to access the data using this method
putlocation	string (9.1.1.1.3)	Name of this data under this method
rights	string (9.1.1.1.3)	Access rights to this data

Type of: datainfo:putinfo (97)

### 9.1.1.3.168 q

Safety factor

member	type	description
qvalue	vecflt_type (9.1.1.2.9)	Safety factor values; Time-dependent; Vector (nmeas)
position	rz1D (9.1.1.3.194)	Major radius of the given safety factor values [m]; Time-dependent; Vector (nmeas)
source	string (9.1.1.1.3)	Description or path to the source signal (diagnostic or genprof, from which to read all info on the signal), e.g. 'magdiag/bpol_probes/measure/value'. String
exact	integer (9.1.1.1.2)	1 means exact data, is not fitted; 0 means the equilibrium code does a least square fit; scalar integer
weight	vecflt_type (9.1.1.2.9)	weight given to the measurement ( $\lambda=0$ ); Time-dependent; Vector (nmeas)
sigma	vecflt_type (9.1.1.2.9)	standard deviation of the measurement; Time-dependent; Vector (nmeas)
calculated	vecflt_type (9.1.1.2.9)	Signal as recalculated by the equilibrium code; Time-dependent; Vector (nmeas)
chi2	vecflt_type (9.1.1.2.9)	chi <sup>2</sup> of (calculated-measured); Time-dependent; Vector (nmeas)

Type of: eqconstraint:q (130)

### 9.1.1.3.169 recycling\_neutrals

Recycling coefficients

member	type	description
particles	matflt.type (9.1.1.2.7)	Particle recycling coefficient corresponding to the conversion of ion type IION to the neutral type INEUT. Matrix(nneut,nion). Time-dependent.
energy	matflt.type (9.1.1.2.7)	Energy recycling coefficient corresponding to the conversion of ion type IION to the neutral type INEUT. Matrix(nneut,nion). Time-dependent.

Type of: coefficients\_neutrals:recycling (80)

### 9.1.1.3.170 reduced

Structure for a reduced data signal (0D data)

member	type	description
value	float (9.1.1.1.1)	Data value; Real
source	string (9.1.1.1.3)	Path to the source signal (diagnostic or genprof, from which to read all info on the signal); String
time	float (9.1.1.1.1)	Time (exact time slice used from the time array of the source signal); Real

Type of: summary:a\_minor (56) I summary:area (56) I summary:beta\_normal (56) I summary:beta\_pol (56) I summary:beta\_tor (56) I summary:bvac\_r (56) I summary:elongation (56) I summary:geom\_axis\_r (56) I summary:impur1\_a (56) I summary:impur1\_z (56) I summary:ip (56) I summary:li (56) I summary:main\_ion1\_a (56) I summary:main\_ion1\_z (56) I summary:main\_ion2\_a (56) I summary:main\_ion2\_z (56) I summary:nev (56) I summary:tev (56) I summary:tiv (56) I summary:tria\_lower (56) I summary:tria\_upper (56) I summary:volume (56) I summary:zeffv (56)

### 9.1.1.3.171 ref\_nt

set of non-timed references

member	type	description
zerod_real	ref_nt_0dr (9.1.1.3.174)	0d reference of real type
zerod_int	ref_nt_0di (9.1.1.3.172)	0d reference of integer type
zerod_string	ref_nt_0ds (9.1.1.3.176)	0d reference of string type
oned_real	ref_nt_1dr (9.1.1.3.180)	1d reference of real type
oned_int	ref_nt_1di (9.1.1.3.178)	1d reference of integer type

Type of: reference:non\_timed (53)

### 9.1.1.3.172 ref\_nt\_0di

set of non-timed references of integer type

member	type	description
ref1	ref_nt_0di_ref (9.1.1.3.173)	Reference signal #1
ref2	ref_nt_0di_ref (9.1.1.3.173)	Reference signal #2
ref3	ref_nt_0di_ref (9.1.1.3.173)	Reference signal #3
ref4	ref_nt_0di_ref (9.1.1.3.173)	Reference signal #4

Type of: ref\_nt:zerod\_int (195)

### 9.1.1.3.173 ref\_nt\_0di\_ref

a non-timed reference of integer type

member	type	description
value	integer (9.1.1.1.2)	Value of the reference. Integer scalar.
description	string (9.1.1.1.3)	Description of the reference. String.

Type of: ref\_nt\_0di:ref1 (196) I ref\_nt\_0di:ref2 (196) I ref\_nt\_0di:ref3 (196) I ref\_nt\_0di:ref4 (196)



### 9.1.1.3.174 ref\_nt\_0dr

set of non-timed references of real type

member	type	description
ref1	ref_nt_0dr_ref (9.1.1.3.175)	Reference signal #1
ref2	ref_nt_0dr_ref (9.1.1.3.175)	Reference signal #2
ref3	ref_nt_0dr_ref (9.1.1.3.175)	Reference signal #3
ref4	ref_nt_0dr_ref (9.1.1.3.175)	Reference signal #4
ref5	ref_nt_0dr_ref (9.1.1.3.175)	Reference signal #5
ref6	ref_nt_0dr_ref (9.1.1.3.175)	Reference signal #6
ref7	ref_nt_0dr_ref (9.1.1.3.175)	Reference signal #7

Type of: ref\_nt:zerod\_real (195)

### 9.1.1.3.175 ref\_nt\_0dr\_ref

a non-timed reference of real type

member	type	description
value	float (9.1.1.1.1)	Value of the reference. Real scalar.
description	string (9.1.1.1.3)	Description of the reference. String.

Type of: ref\_nt\_0dr:ref1 (198) I ref\_nt\_0dr:ref2 (198) I ref\_nt\_0dr:ref3 (198) I ref\_nt\_0dr:ref4 (198) I ref\_nt\_0dr:ref5 (198) I ref\_nt\_0dr:ref6 (198) I ref\_nt\_0dr:ref7 (198)

### 9.1.1.3.176 ref\_nt\_0ds

set of non-timed references of string type

member	type	description
ref1	ref_nt_0ds_ref (9.1.1.3.177)	Reference signal #1
ref2	ref_nt_0ds_ref (9.1.1.3.177)	Reference signal #2

Type of: ref\_nt:zerod\_string (195)

### 9.1.1.3.177 ref\_nt\_0ds\_ref

a non-timed reference of string type

member	type	description
value	string (9.1.1.1.3)	Value of the reference. String
description	string (9.1.1.1.3)	Description of the reference. String.

Type of: ref\_nt\_0ds:ref1 (200) I ref\_nt\_0ds:ref2 (200)

### 9.1.1.3.178 ref\_nt\_1di

set of non-timed references of vecint type

member	type	description
ref1	ref_nt_1di_ref (9.1.1.3.179)	Reference signal #1
ref2	ref_nt_1di_ref (9.1.1.3.179)	Reference signal #2
ref3	ref_nt_1di_ref (9.1.1.3.179)	Reference signal #3
ref4	ref_nt_1di_ref (9.1.1.3.179)	Reference signal #4

Type of: ref\_nt:oned\_int (195)

### 9.1.1.3.179 ref\_nt\_1di\_ref

a non-timed reference of vecint type

member	type	description
value	vecint.type (9.1.1.2.10)	Value of the reference. Vector of integers.
description	string (9.1.1.1.3)	Description of the reference. String.

Type of: ref\_nt\_1di:ref1 (202) I ref\_nt\_1di:ref2 (202) I ref\_nt\_1di:ref3 (202) I ref\_nt\_1di:ref4 (202)

#### 9.1.1.3.180 ref\_nt\_1dr

set of non-timed references of vecflt type

member	type	description
ref1	ref_nt_1dr_ref (9.1.1.3.181)	Reference signal #1
ref2	ref_nt_1dr_ref (9.1.1.3.181)	Reference signal #2
ref3	ref_nt_1dr_ref (9.1.1.3.181)	Reference signal #3
ref4	ref_nt_1dr_ref (9.1.1.3.181)	Reference signal #4
ref5	ref_nt_1dr_ref (9.1.1.3.181)	Reference signal #5

Type of: ref\_nt:oned\_real (195)

#### 9.1.1.3.181 ref\_nt\_1dr\_ref

a non-timed reference of vecflt type

member	type	description
value	vecflt.type (9.1.1.2.9)	Value of the reference. Vector.
description	string (9.1.1.1.3)	Description of the reference. String.

Type of: ref\_nt\_1dr:ref1 (204) I ref\_nt\_1dr:ref2 (204) I ref\_nt\_1dr:ref3 (204) I ref\_nt\_1dr:ref4 (204) I ref\_nt\_1dr:ref5 (204)

#### 9.1.1.3.182 ref\_t

set of timed references

member	type	description
zerod_real	ref_t_0dr (9.1.1.3.185)	0d reference of real type
zerod_int	ref_t_0di (9.1.1.3.183)	0d reference of integer type
oned_real	ref_t_1dr (9.1.1.3.189)	1d reference of real type
oned_int	ref_t_1di (9.1.1.3.187)	1d reference of integer type

Type of: reference:timed (53)

#### 9.1.1.3.183 ref\_t\_0di

set of timed references of integer type

member	type	description
ref1	ref_t_0di_ref (9.1.1.3.184)	Reference signal #1
ref2	ref_t_0di_ref (9.1.1.3.184)	Reference signal #2
ref3	ref_t_0di_ref (9.1.1.3.184)	Reference signal #3
ref4	ref_t_0di_ref (9.1.1.3.184)	Reference signal #4

Type of: ref\_t:zerod\_int (206)

#### 9.1.1.3.184 ref\_t\_0di\_ref

a timed reference of integer type

member	type	description
value	integer (9.1.1.1.2)	Value of the reference. Integer scalar. Time-dependent.

member	type	description
description	string (9.1.1.1.3)	Description of the reference. String.

Type of: ref\_t\_0di:ref1 (207) I ref\_t\_0di:ref2 (207) I ref\_t\_0di:ref3 (207) I ref\_t\_0di:ref4 (207)

#### 9.1.1.3.185 ref\_t\_0dr

set of timed references of real type

member	type	description
ref1	ref_t_0dr_ref (9.1.1.3.186)	Reference signal #1
ref2	ref_t_0dr_ref (9.1.1.3.186)	Reference signal #2
ref3	ref_t_0dr_ref (9.1.1.3.186)	Reference signal #3
ref4	ref_t_0dr_ref (9.1.1.3.186)	Reference signal #4
ref5	ref_t_0dr_ref (9.1.1.3.186)	Reference signal #5
ref6	ref_t_0dr_ref (9.1.1.3.186)	Reference signal #6
ref7	ref_t_0dr_ref (9.1.1.3.186)	Reference signal #7
ref8	ref_t_0dr_ref (9.1.1.3.186)	Reference signal #8
ref9	ref_t_0dr_ref (9.1.1.3.186)	Reference signal #9
ref10	ref_t_0dr_ref (9.1.1.3.186)	Reference signal #10

Type of: ref\_t:zerod\_real (206)

#### 9.1.1.3.186 ref\_t\_0dr\_ref

a timed reference of real type

member	type	description
value	float (9.1.1.1.1)	Value of the reference. Real scalar. Time-dependent.
description	string (9.1.1.1.3)	Description of the reference. String.

Type of: ref\_t\_0dr:ref1 (209) I ref\_t\_0dr:ref10 (209) I ref\_t\_0dr:ref2 (209) I ref\_t\_0dr:ref3 (209) I ref\_t\_0dr:ref4 (209) I ref\_t\_0dr:ref5 (209) I ref\_t\_0dr:ref6 (209) I ref\_t\_0dr:ref7 (209) I ref\_t\_0dr:ref8 (209) I ref\_t\_0dr:ref9 (209)

#### 9.1.1.3.187 ref\_t\_1di

set of timed references of vecint type

member	type	description
ref1	ref_t_1di_ref (9.1.1.3.188)	Reference signal #1
ref2	ref_t_1di_ref (9.1.1.3.188)	Reference signal #2
ref3	ref_t_1di_ref (9.1.1.3.188)	Reference signal #3
ref4	ref_t_1di_ref (9.1.1.3.188)	Reference signal #4

Type of: ref\_t:oned\_int (206)

#### 9.1.1.3.188 ref\_t\_1di\_ref

a timed reference of vecint type

member	type	description
value	vecint_type (9.1.1.2.10)	Value of the reference. Vector of integers. Time-dependent.
description	string (9.1.1.1.3)	Description of the reference. String.

Type of: ref\_t\_1di:ref1 (211) I ref\_t\_1di:ref2 (211) I ref\_t\_1di:ref3 (211) I ref\_t\_1di:ref4 (211)

#### 9.1.1.3.189 ref\_t\_1dr

set of timed references of vecflt type

member	type	description
ref1	ref.t_1dr_ref (9.1.1.3.190)	Reference signal #1
ref2	ref.t_1dr_ref (9.1.1.3.190)	Reference signal #2
ref3	ref.t_1dr_ref (9.1.1.3.190)	Reference signal #3
ref4	ref.t_1dr_ref (9.1.1.3.190)	Reference signal #4
ref5	ref.t_1dr_ref (9.1.1.3.190)	Reference signal #5

Type of: ref.t:oned\_real (206)

### 9.1.1.3.190 ref.t\_1dr\_ref

a timed reference of vecflt type

member	type	description
value	vecflt_type (9.1.1.2.9)	Value of the reference. Vector. Time-dependent.
description	string (9.1.1.1.3)	Description of the reference. String.

Type of: ref.t\_1dr:ref1 (213) I ref.t\_1dr:ref2 (213) I ref.t\_1dr:ref3 (213) I ref.t\_1dr:ref4 (213) I ref.t\_1dr:ref5 (213)

### 9.1.1.3.191 reggrid

Generic structure for a regular grid

member	type	description
dim1	vecflt_type (9.1.1.2.9)	First dimension values; Vector (ndim1)
dim2	vecflt_type (9.1.1.2.9)	Second dimension values; Vector (ndim2)

Type of: coord.sys:grid (83)

### 9.1.1.3.192 rf.beam

Beam characteristics (RF wave description)

member	type	description
spot	spot (9.1.1.3.240)	Spot characteristics
phaseellipse	phaseellipse (9.1.1.3.156)	Phase ellipse characteristics of the spot

Type of: antenna.ec:beam (63) I antenna.lh:beam (65) I launches:beam (43)

### 9.1.1.3.193 rz0D

Structure for one (R,Z) position (0D)

member	type	description
r	float (9.1.1.1.1)	Major radius [m]
z	float (9.1.1.1.1)	Altitude [m]

Type of: eqgeometry:active\_limit (131) I eqgeometry:geom\_axis (131) I eqgeometry:left\_low\_st (131) I eqgeometry:left\_up\_st (131) I eqgeometry:right\_low\_st (131) I eqgeometry:right\_up\_st (131) I mag\_axis:position (156)

### 9.1.1.3.194 rz1D

Structure for list of R,Z positions (1D)

member	type	description
r	vecflt_type (9.1.1.2.9)	Major radius [m]
z	vecflt_type (9.1.1.2.9)	Altitude [m]

Type of: eqgeometry:xpts (131) I flush:position (138) I isoflux:position (151) I limiter:position (44) I q:position (192) I setup\_bprobe:position (249) I tsetup:position (289) I vessel:position (60) I xpts:position (300)

### 9.1.1.3.195 rz1D\_npoints

Structure for list of R,Z positions (1D)

member	type	description
r	vecflt.type (9.1.1.2.9)	Major radius [m]. Vector(max_npoints). Time-dependent
z	vecflt.type (9.1.1.2.9)	Altitude [m]. Vector(max_npoints). Time-dependent
npoints	integer (9.1.1.1.2)	Number of meaningful points in the above vectors at a given time slice. Time-dependent

Type of: eqgeometry:boundary (131)

### 9.1.1.3.196 rz2D

Structure for list of R,Z positions (2D)

member	type	description
r	matflt.type (9.1.1.2.7)	Major radius [m]
z	matflt.type (9.1.1.2.7)	Altitude [m]

Type of: coord\_sys:position (83) I geom\_iron:rzcoordinate (144) I pfpgeometry:rzcoordinate (177) I profiles\_2d:position (187)

### 9.1.1.3.197 rz3D

Structure for list of R,Z positions (3D)

member	type	description
r	array3dfilt.type (9.1.1.2.1)	Major radius [m]
z	array3dfilt.type (9.1.1.2.1)	Altitude [m]

Type of: pfgeometry:rzcoordinate (176) I straps:coord\_strap (269) I waves\_grid:rz\_position (294)

### 9.1.1.3.198 rzphi1D

Structure for list of R,Z,phi positions (1D)

member	type	description
r	vecflt.type (9.1.1.2.9)	Major radius [m]
z	vecflt.type (9.1.1.2.9)	Altitude [m]
phi	vecflt.type (9.1.1.2.9)	Toroidal angle [rad]

Type of: antenna\_ec:position (63) I launches:position (43) I setup\_inject:position (251) I setup\_line:pivot\_point (252) I setup\_line:second\_point (252) I setup\_line:third\_point (252)

### 9.1.1.3.199 rzphi1Dexp

Structure for list of R,Z,phi positions (1D)

member	type	description
r	exp1D (9.1.1.3.111)	Major radius [m]
z	exp1D (9.1.1.3.111)	Altitude [m]
phi	exp1D (9.1.1.3.111)	Toroidal angle [rad]

Type of: antenna\_lh:position (65) I cxsetup:position (96) I ecesetup:position (128)

### 9.1.1.3.200 rzphi2D

Structure for list of R,Z,phi positions (2D)

member	type	description
r	matflt.type (9.1.1.2.7)	Major radius [m]

member	type	description
z	matflt.type (9.1.1.2.7)	Altitude [m]
phi	matflt.type (9.1.1.2.7)	Toroidal angle [rad]

Type of: beamlets:position (70) I setup\_floops:position (250)

### 9.1.1.3.201 rzphidrdzdphi1D

Structure for list of R,Z,phi positions and width dR dZ dphi (1D)

member	type	description
r	vecflt.type (9.1.1.2.9)	Position : major radius [m]
z	vecflt.type (9.1.1.2.9)	Position : altitude [m]
phi	vecflt.type (9.1.1.2.9)	Position : toroidal angle [rad]
dr	vecflt.type (9.1.1.2.9)	Width : major radius [m]
dz	vecflt.type (9.1.1.2.9)	Width : altitude [m]
dphi	vecflt.type (9.1.1.2.9)	Width : toroidal angle [rad]

Type of: setup\_mse:rzgamma (253)

### 9.1.1.3.202 sawteeth\_diags

Inversion and mixing radii

member	type	description
shear1	float (9.1.1.1.1)	Magnetic shear at $q = 1$ [-]. Time-dependent. Real scalar.
rhotorn_q1	float (9.1.1.1.1)	Rho_tor_norm at $q=1$ radius [-]. Time-dependent. Real scalar.
rhotorn_inv	float (9.1.1.1.1)	Rho_tor_norm at inversion radius [-]. Time-dependent. Real scalar.
rhotorn_mix	float (9.1.1.1.1)	Rho_tor_norm at mixing radius [-]. Time-dependent. Real scalar.

Type of: sawteeth:diags (54)

### 9.1.1.3.203 sawteeth\_profiles1d

Core profiles after sawtooth crash

member	type	description
ne	vecflt.type (9.1.1.2.9)	Electron density [ $m^{-3}$ ]. Time-dependent. Vector (nrho).
ni	matflt.type (9.1.1.2.7)	Ion density [ $m^{-3}$ ]. Time-dependent. Matrix (nrho,nion).
te	vecflt.type (9.1.1.2.9)	Electron temperature [eV]. Time-dependent. Vector (nrho).
ti	matflt.type (9.1.1.2.7)	Ion temperature [eV]. Time-dependent. Matrix (nrho,nion).
psi	vecflt.type (9.1.1.2.9)	Poloidal flux [Wb], without $1/2\pi$ and such that $B_p =  \text{grad } \psi  / R / 2\pi$ . Time-dependent. Vector (nrho).
phi	vecflt.type (9.1.1.2.9)	Toroidal flux [Wb]. Time-dependent. Vector (nrho).
psistar	vecflt.type (9.1.1.2.9)	$\Psi^* = \psi - \phi$ [Wb]. Time-dependent. Vector (nrho).
volume	vecflt.type (9.1.1.2.9)	Volume enclosed in the flux surface [ $m^3$ ]. Required to ensure particle and energy conservation during reconnection process ( $ndV$ and $(nT)dV$ are conserved). Time-dependent. Vector (nrho).
q	vecflt.type (9.1.1.2.9)	Safety factor = $d\phi/d\psi$ [-]. Time-dependent. Vector (nrho).

Type of: sawteeth:profiles1d (54)

### 9.1.1.3.204 scenario\_centre

central values of the profiles (at magnetic axis)

member	type	description
te0	scenario_ref (9.1.1.3.221)	central electron temperature [eV]. Time-dependent.
ti0	scenario_ref (9.1.1.3.221)	central ion temperature [eV]. Time-dependent.
ne0	scenario_ref (9.1.1.3.221)	central electron density [ $m^{-3}$ ]. Time-dependent.
ni0	scenario_ref (9.1.1.3.221)	central ion density [ $m^{-3}$ ]. Time-dependent.
shift0	scenario_ref (9.1.1.3.221)	central value of Shafranov shift [m]. Time-dependent.

member	type	description
psi0	scenario_ref (9.1.1.3.221)	pedestal poloidal flux [Wb]. Time-dependent.
phi0	scenario_ref (9.1.1.3.221)	central toroidal flux [Wb]. Time-dependent.
q0	scenario_ref (9.1.1.3.221)	central safety factor value []. Time-dependent.
Rmag	scenario_ref (9.1.1.3.221)	radius of magnetic axis [R]. Time-dependent.
Zmag	scenario_ref (9.1.1.3.221)	Z coordinate of magnetic axis [R]. Time-dependent.
vtor_0	scenario_ref (9.1.1.3.221)	central rotation velocity of selected impurity [m/s]. Time-dependent.

Type of: scenario:centre (55)

### 9.1.1.3.205 scenario\_composition

Plasma composition (description of ion species).

member	type	description
amn	vecflt_type (9.1.1.2.9)	Atomic mass number (lumped ions are allowed); Vector (nion)
zn	vecflt_type (9.1.1.2.9)	Nuclear charge (lumped ions are allowed); Vector (nion)
zion	vecflt_type (9.1.1.2.9)	Ion charge (of the dominant ionisation state; lumped ions are allowed); Vector (nion)
imp_flag	vecint_type (9.1.1.2.10)	Multiple charge state calculation flag : 0-Only one charge state is considered; 1-Multiple charge state are considered and are described in impurity CPO; Vector (nion)
rot_imp_flag	vecint_type (9.1.1.2.10)	set to 1 for the impurity corresponding at the given toroidal rotation, otherwise = 0
pellet_amn	vecflt_type (9.1.1.2.9)	Atomic mass number (for pellet injector); Vector (nion)
pellet_zn	vecflt_type (9.1.1.2.9)	Nuclear charge (pellet injector); Vector (nion)
nbi_amn	vecflt_type (9.1.1.2.9)	Atomic mass number (for neutral beam injection); Vector (nion)
nbi_zn	vecflt_type (9.1.1.2.9)	Nuclear charge (for neutral beam injection); Vector (nion)

Type of: scenario:composition (55)

### 9.1.1.3.206 scenario\_configuration

Strings describing the tokamak configuration

member	type	description
config	scenario_int (9.1.1.3.213)	plasma configuration (limiter/divertor ...) []. Time-dependent. Possible values : 0 = undetermined; 1 = poloidal limiter (ring); 2 = poloidal limiter (LFS); 3 = poloidal limiter (HFS); 4 = toroidal limiter (ring); 5 = toroidal limiter (segment); 6 = poloidal divertor; 7 = toroidal divertor (single null, ion drift in direction of divertor); 8 = toroidal divertor (single null, ion drift in opposite direction of divertor); 9 = toroidal divertor (double null).
lmode_sc	string (9.1.1.1.3)	name of the L-mode scaling law. String.
hmode_sc	string (9.1.1.1.3)	name of the H-mode scaling law. String.
core_sc	string (9.1.1.1.3)	name of the core plasma energy scaling law. String.
pedestal_sc	string (9.1.1.1.3)	name of the pedestal energy scaling law. String.
helium_sc	string (9.1.1.1.3)	name of the helium confinement time scaling law. String.
impurity_sc	string (9.1.1.1.3)	name of the impurities confinement time scaling law
l2h_sc	string (9.1.1.1.3)	name of the L-mode to H-mode power threshold scaling law. String.
tor_rot_sc	string (9.1.1.1.3)	name of the toroidal spontaneous rotation scaling law. String.
wall_mat	string (9.1.1.1.3)	chemical composition of the wall. String.
evap_mat	string (9.1.1.1.3)	chemical composition evaporated wall conditioning material. String.
lim_mat	string (9.1.1.1.3)	chemical composition of the limiter. String.
div_mat	string (9.1.1.1.3)	chemical composition of the divertor
coordinate	string (9.1.1.1.3)	name/definition of the internal coordinate of the simulator that are given by the data named rho
ecrh_freq	scenario_ref (9.1.1.3.221)	ECRH frequency [Hz]. Time-dependent.
ecrh_loc	scenario_ref (9.1.1.3.221)	position of maximum ECRH deposition on scale of rho [rho]. Time-dependent.
ecrh_mode	scenario_int (9.1.1.3.213)	polarisation of ecrh wave (0 = O mode, 1 = X mode) []. Time-dependent.
ecrh_tor_ang	scenario_ref (9.1.1.3.221)	toroidal angle of ECRH at resonance [rad] Time-dependent.
ecrh_pol_ang	scenario_ref (9.1.1.3.221)	poloidal angle of ECRH resonance position (0= LFS, pi/2 = top, -pi/2 = down, pi = HFS) [rad]. Time-dependent.
ecrh_harm	scenario_int (9.1.1.3.213)	harmonic number of the absorbed ecrh wave []. Time-dependent.
enbi	scenario_ref (9.1.1.3.221)	energy of the neutral beam [eV]. Time-dependent.
r_nbi	scenario_ref (9.1.1.3.221)	Major radius of tangence of NBI [m]. Time-dependent.
grad_b_drift	scenario_int (9.1.1.3.213)	direction of ion grad-B drift (1= to lower divertor, -1 = from lower divertor) []. Time-dependent.
icrh_freq	scenario_ref (9.1.1.3.221)	ICRH frequency [Hz]. Time-dependent.

member	type	description
icrh_scheme	string (9.1.1.1.3)	icrh scheme either : H_min.1; He3_min; T_harm.2; FW; FW_CD; FW_CCD
icrh_phase	scenario_ref (9.1.1.3.221)	ICRH antenna phasing [rad]. Time-dependent.
LH_freq	scenario_ref (9.1.1.3.221)	LHCD frequency [Hz]. Time-dependent.
LH_npar	scenario_ref (9.1.1.3.221)	LHCD parallel indice []. Time-dependent.
pellet_ang	scenario_ref (9.1.1.3.221)	pellet injection positon (0= LFS, pi/2 = top, -pi/2 = down, pi = HFS) [rad]. Time-dependent.
pellet_v	scenario_ref (9.1.1.3.221)	pellet injection velocity [m/s]. Time-dependent.
pellet_nba	scenario_ref (9.1.1.3.221)	initial number of atoms in pellet []. Time-dependent.

Type of: scenario:configs (55)

### 9.1.1.3.207 scenario\_confinement

characteristic confinement times

member	type	description
tau_e	scenario_ref (9.1.1.3.221)	thermal energy confinement time [s]. Time-dependent.
tau_L.sc	scenario_ref (9.1.1.3.221)	confinement time given by the selected L-mode scaling law [s]. Time-dependent.
tau_h.sc	scenario_ref (9.1.1.3.221)	confinement time given by the selected H-mode scaling law [s]. Time-dependent.
tau_he	scenario_ref (9.1.1.3.221)	Helium ashes confinement time [s]. Time-dependent.
tau_e.ee	scenario_ref (9.1.1.3.221)	electron energy confinement time [s]. Time-dependent.
tau_e.ii	scenario_ref (9.1.1.3.221)	ion energy confinement time [s]. Time-dependent.
tau_e.ei	scenario_ref (9.1.1.3.221)	energy equipartition characteristic time [s]. Time-dependent.
tau_cur.diff	scenario_ref (9.1.1.3.221)	characteristic time for current diffusion [s]. Time-dependent.
tau_i.rol	scenario_ref (9.1.1.3.221)	characteristic time for current decrease in tokamak equivalent R/L circuit [s]. Time-dependent.

Type of: scenario:confinement (55)

### 9.1.1.3.208 scenario\_currents

data related to current sources and current diffusion

member	type	description
RR	scenario_ref (9.1.1.3.221)	plasma resistivity [ohm]. Time-dependent.
i_align	scenario_ref (9.1.1.3.221)	current drive alignment quality parameter (1 = good , 0 = bad). Time-dependent.
i_boot	scenario_ref (9.1.1.3.221)	bootstrap current [A]. Time-dependent.
i_cd.tot	scenario_ref (9.1.1.3.221)	total current drive [A]. Time-dependent.
i_eccd	scenario_ref (9.1.1.3.221)	Electron Cyclotron current drive [A]. Time-dependent.
i_fast.ion	scenario_ref (9.1.1.3.221)	fast ions bootstrap like current drive (i.e. fast alpha) [A]. Time-dependent.
i_fwcd	scenario_ref (9.1.1.3.221)	Fast Wave current drive [A]. Time-dependent.
i_lhcd	scenario_ref (9.1.1.3.221)	Lower Hybrid current drive [A]. Time-dependent.
i_nbicd	scenario_ref (9.1.1.3.221)	Neutral Beam Injection current drive [A]. Time-dependent.
i_ni.tot	scenario_ref (9.1.1.3.221)	total non inductive current [A]. Time-dependent.
i_ohm	scenario_ref (9.1.1.3.221)	ohmic current [A]. Time-dependent.
i_par	scenario_ref (9.1.1.3.221)	total plasma current (projected on B : <math>\langle J_z / B_0 \rangle</math> [A]. Time-dependent.
i_runaway	scenario_ref (9.1.1.3.221)	runaway current [A]. Time-dependent.
v_loop	scenario_ref (9.1.1.3.221)	loop voltage @ LCMS / LFS , equatorial point [V]. Time-dependent.
v_meas	scenario_ref (9.1.1.3.221)	loop voltage measured on a coil [V]. Time-dependent.

Type of: scenario:currents (55)

### 9.1.1.3.209 scenario\_edge

edge value (@ LCMS)

member	type	description
te_edge	scenario_ref (9.1.1.3.221)	edge electron temperature [eV]. Time-dependent.
ti_edge	scenario_ref (9.1.1.3.221)	edge ion temperature [eV]. Time-dependent.
ne_edge	scenario_ref (9.1.1.3.221)	edge electron density [m <sup>-3</sup> ]. Time-dependent.
ni_edge	scenario_ref (9.1.1.3.221)	edge ion density [m <sup>-3</sup> ]. Time-dependent.
psi_edge	scenario_ref (9.1.1.3.221)	edge poloidal flux [Wb]. Time-dependent.



member	type	description
phi_edge	scenario_ref (9.1.1.3.221)	edge toroidal flux [Wb]. Time-dependent.
rho_edge	scenario_ref (9.1.1.3.221)	edge value of internal simulator coordinate [m]. Time-dependent.
drho_edge_dt	scenario_ref (9.1.1.3.221)	time derivative of edge value of internal simulator coordinate [m/s]. Time-dependent.
q_edge	scenario_ref (9.1.1.3.221)	edge or effective safety factor value []. Time-dependent.
neutral_flux	scenario_ref (9.1.1.3.221)	number of cold neutral (in equivalent electron for Z $\zeta$ 1) that input in plasma at the edge every second coming from recycling and gaz puff [s <sup>-1</sup> ]. Time-dependent.
phi_plasma	scenario_ref (9.1.1.3.221)	contribution of the plasma to the toroidal flux (used for toroidal coils heat load computation) [Wb]. Time-dependent.
vtor_edge	scenario_ref (9.1.1.3.221)	rotation velocity of selected impurity on the separatrix [m/s]. Time-dependent.

Type of: scenario:edge (55)

### 9.1.1.3.210 scenario\_energy

plasma energy content

member	type	description
w_tot	scenario_ref (9.1.1.3.221)	total plasma energy [J]. Time-dependent.
w_b_pol	scenario_ref (9.1.1.3.221)	poloidal field energy of the plasma [J]. Time-dependent.
w_dia	scenario_ref (9.1.1.3.221)	3/2 perpendicular plasma energy [J]. Time-dependent.
dwdia_dt	scenario_ref (9.1.1.3.221)	time derivative of Wdia [W]. Time-dependent.
w_b_tor_pla	scenario_ref (9.1.1.3.221)	toroidal magnetic plasma energy [J]. Time-dependent.
w_th	scenario_ref (9.1.1.3.221)	thermal plasma energy [J]. Time-dependent.
dwtot_dt	scenario_ref (9.1.1.3.221)	time derivative of total plasma energy [W]. Time-dependent.
dwbpol_dt	scenario_ref (9.1.1.3.221)	time derivative of plasma poloidal field energy [W]. Time-dependent.
dwbtorpla_dt	scenario_ref (9.1.1.3.221)	time derivative of toroidal magnetic plasma energy [W]. Time-dependent.
dwth_dt	scenario_ref (9.1.1.3.221)	time derivative of thermal plasma energy [W]. Time-dependent.
esup_icrhtot	scenario_ref (9.1.1.3.221)	total suprathermal energy of fast ions accelerated by ICRH [J]. Time-dependent.
esup_icrhper	scenario_ref (9.1.1.3.221)	perpendicular part of suprathermal energy of fast ions accelerated by ICRH [J]. Time-dependent.
esup_nbitot	scenario_ref (9.1.1.3.221)	total suprathermal energy of fast ions from NBI ionisation [J]. Time-dependent.
esup_nbiperp	scenario_ref (9.1.1.3.221)	perpendicular part of suprathermal energy of fast ions from NBI ionisation [J]. Time-dependent.
esup_lhcd	scenario_ref (9.1.1.3.221)	total suprathermal energy of fast electron from LHCD [J]. Time-dependent.
esup_alpha	scenario_ref (9.1.1.3.221)	total suprathermal energy of fast alpha particules [J]. Time-dependent.

Type of: scenario:energy (55)

### 9.1.1.3.211 scenario\_global

global scalar value

member	type	description
ip	scenario_ref (9.1.1.3.221)	Plasma current [A]. Time-dependent.
dip_dt	scenario_ref (9.1.1.3.221)	time derivative of plasma current [A/s]. Time-dependent.
beta_pol	scenario_ref (9.1.1.3.221)	poloidal beta []. Time-dependent.
beta_tor	scenario_ref (9.1.1.3.221)	toroidal beta []. Time-dependent.
beta_normal	scenario_ref (9.1.1.3.221)	normalised beta []. Time-dependent.
li	scenario_ref (9.1.1.3.221)	internal inductance (definition 3). Time-dependent.
volume	scenario_ref (9.1.1.3.221)	total plasma volume [m <sup>3</sup> ]. Time-dependent.
area_pol	scenario_ref (9.1.1.3.221)	area poloidal cross section [m <sup>2</sup> ]. Time-dependent.
area_ext	scenario_ref (9.1.1.3.221)	external plasma surface [m <sup>2</sup> ]. Time-dependent.
len_sepa	scenario_ref (9.1.1.3.221)	length of the separatrix [m]. Time-dependent.
beta_pol_th	scenario_ref (9.1.1.3.221)	poloidal beta, thermal contribution []. Time-dependent.
beta_tor_th	scenario_ref (9.1.1.3.221)	toroidal beta, thermal contribution []. Time-dependent.
beta_n_th	scenario_ref (9.1.1.3.221)	normalised beta, thermal contribution []. Time-dependent.
disruption	scenario_ref (9.1.1.3.221)	flag for disruption (set to 1 for disruption, otherwise equal 0) []. Time-dependent.
mode_h	scenario_ref (9.1.1.3.221)	confinement mode verus time: 0 = L-mode et 1 = H-mode []. Time-dependent.
s.alpha	scenario_ref (9.1.1.3.221)	total number of alpha fusion particules from D-T ractions per second [s <sup>-1</sup> ]. Time-dependent.

Type of: scenario:global\_param (55)

### 9.1.1.3.212 scenario\_heat\_power

Power delivered to plasma (thermal and non thermal)

member	type	description
plh	scenario_ref (9.1.1.3.221)	Lower hybrid power [W]. Time-dependent.
pohmic	scenario_ref (9.1.1.3.221)	ohmic power (thermal species contribution only) [W]. Time-dependent.
picrh	scenario_ref (9.1.1.3.221)	Ion cyclotron resonance heating power [W]. Time-dependent.
pecrh	scenario_ref (9.1.1.3.221)	electron cyclotron resonance heating power [W]. Time-dependent.
pnbi	scenario_ref (9.1.1.3.221)	neutral beam injection power [W]. Time-dependent.
pnbi_co_cur	scenario_ref (9.1.1.3.221)	neutral beam injection power injected in co-current direction [W]. Time-dependent.
pnbi_counter	scenario_ref (9.1.1.3.221)	neutral beam injection power injected in counter-current direction [W]. Time-dependent.
plh_th	scenario_ref (9.1.1.3.221)	lower hybrid power deposited on thermal electrons [W]. Time-dependent.
picrh_th	scenario_ref (9.1.1.3.221)	ion cyclotron resonance heating power deposited on thermal species [W]. Time-dependent.
pecrh_th	scenario_ref (9.1.1.3.221)	electron cyclotron resonance heating power deposited on thermal electrons [W]. Time-dependent.
pnbi_th	scenario_ref (9.1.1.3.221)	neutral beam injection power deposited on thermal species [W]. Time-dependent.
ploss_icrh	scenario_ref (9.1.1.3.221)	Ion cyclotron resonance heating power losses [W]. Time-dependent.
ploss_nbi	scenario_ref (9.1.1.3.221)	neutral beam injection power losses (including shine-through) [W]. Time-dependent.
pbrem	scenario_ref (9.1.1.3.221)	Bremsstrahlung radiation losses [W]. Time-dependent.
pcyclo	scenario_ref (9.1.1.3.221)	cyclotron radiation losses [W]. Time-dependent.
prad	scenario_ref (9.1.1.3.221)	impurity radiation losses in core plasma, without Bremsstrahlung [W]. Time-dependent.
pdd_fus	scenario_ref (9.1.1.3.221)	fusion power due to DD reactions [W]. Time-dependent.
pei	scenario_ref (9.1.1.3.221)	power exchange between electron and ion (equipartition) [W]. Time-dependent.
pel_tot	scenario_ref (9.1.1.3.221)	total thermal electron power deposition without equipartition [W]. Time-dependent.
pel_fus	scenario_ref (9.1.1.3.221)	fusion electron power deposition [W]. Time-dependent.
pel_icrh	scenario_ref (9.1.1.3.221)	ICRH electron power deposition [W]. Time-dependent.
pel_nbi	scenario_ref (9.1.1.3.221)	NBI electron power deposition [W]. Time-dependent.
pfus_dt	scenario_ref (9.1.1.3.221)	total D-T fusion power of alpha [W]. Time-dependent.
ploss_fus	scenario_ref (9.1.1.3.221)	D-T fusion power of alpha losses [W]. Time-dependent.
pfus_nbi	scenario_ref (9.1.1.3.221)	NBI induce D-T fusion power of alpha [W]. Time-dependent.
pfus_th	scenario_ref (9.1.1.3.221)	alpha (from DT fusion reaction) power deposited on thermal species [W]. Time-dependent.
padd_tot	scenario_ref (9.1.1.3.221)	total additional power input including ohmic power [W]. Time-dependent.
pion_tot	scenario_ref (9.1.1.3.221)	total thermal ion power deposition without equipartition [W]. Time-dependent.
pion_fus	scenario_ref (9.1.1.3.221)	fusion ion power deposition [W]. Time-dependent.
pion_icrh	scenario_ref (9.1.1.3.221)	ICRH ion power deposition [W]. Time-dependent.
pion_nbi	scenario_ref (9.1.1.3.221)	NBI ion power deposition [W]. Time-dependent.
pioniz	scenario_ref (9.1.1.3.221)	power losses due to cold neutral ionization [W]. Time-dependent.
ploss	scenario_ref (9.1.1.3.221)	plasma losses power, as defined in ITER basis [W]. Time-dependent.
p_wth	scenario_ref (9.1.1.3.221)	thermal power input, defined as $\tau_E \cdot P_{th} = W_{th}$ [W]. Time-dependent.
p_w	scenario_ref (9.1.1.3.221)	effective power defined as $\tau_E \cdot P_w = W_{tot}$ [W]. Time-dependent.
p_l2h_thr	scenario_ref (9.1.1.3.221)	additional power crossing the LCMS; must be compared to $L\text{-}\chi H$ threshold power (Ryter PPCF 2002) [W]. Time-dependent.
p_l2h_sc	scenario_ref (9.1.1.3.221)	threshold power given by the chosen scaling law for transition from L-mode to H-mode [W]. Time-dependent.
p_nbi_icrh	scenario_ref (9.1.1.3.221)	beam power increase due to ICRH effects [W]. Time-dependent.

Type of: scenario:heat\_power (55)

### 9.1.1.3.213 scenario\_int

Structure for scenario integer flag; Time-dependent

member	type	description
value	integer (9.1.1.1.2)	Signal value; Time-dependent; Scalar Integer.
source	string (9.1.1.1.3)	Source of the signal (any comment describing the origin of the signal : code, path to diagnostic signals, messaging, ...); String

Type of: scenario\_configuration:config (230) I scenario\_configuration:ecrh\_harm (230) I scenario\_configuration:ecrh\_mode (230) I scenario\_configuration:grad\_b\_drift (230) I scenario\_itb:itb\_type (238)

### 9.1.1.3.214 scenario\_itb

Values characteristics of the Internal Transport Barrier

member	type	description
q_min	scenario_ref (9.1.1.3.221)	minimal value of safety factor []. Time-dependent.
te_itb	scenario_ref (9.1.1.3.221)	electron temperature @ q = q_min [eV]. Time-dependent.
ti_itb	scenario_ref (9.1.1.3.221)	ion temperature @ q = q_min [eV]. Time-dependent.
ne_itb	scenario_ref (9.1.1.3.221)	electron density @ q = q_min [m <sup>-3</sup> ]. Time-dependent.
ni_itb	scenario_ref (9.1.1.3.221)	ion density @ q = q_min [m <sup>-3</sup> ]. Time-dependent.
psi_itb	scenario_ref (9.1.1.3.221)	poloidal flux @ q = q_min [Wb]. Time-dependent.
phi_itb	scenario_ref (9.1.1.3.221)	toroidal flux @ q = q_min [Wb]. Time-dependent.
rho_itb	scenario_ref (9.1.1.3.221)	value of internal simulator coordinate @ q = q_min [m]. Time-dependent.
h_itb	scenario_ref (9.1.1.3.221)	energy enhancement ITB factor [m]. Time-dependent.
width_itb	scenario_ref (9.1.1.3.221)	width of the high pressure gradient region (on scale of rho_itb) [m]. Time-dependent.
vtor_itb	scenario_ref (9.1.1.3.221)	rotation velocity of selected impurity @ rho_itb [m/s]. Time-dependent.
itb.type	scenario_int (9.1.1.3.213)	itb type []. Time-dependent. Any combinaison of : 0 = none; 1 = on T.i; 2 = on T.e; 4 = on n.e; 8 = reverse shear triggered; 16 = toroidal rotation triggered; 32 = alpha stabilisation triggered; 64 = T.i / T.e triggered; 128 = radiation triggered; 256 = rationnal q triggered

Type of: scenario:itb (55)

### 9.1.1.3.215 scenario\_lim\_div\_wall

values on the plate of divertor or on the limiter or on the wall (@ LCMS)

member	type	description
te_lim_div	scenario_ref (9.1.1.3.221)	limiter/divertor electron temperature [eV]. Time-dependent.
ti_lim_div	scenario_ref (9.1.1.3.221)	limiter/divertor ion temperature [eV]. Time-dependent.
ne_lim_div	scenario_ref (9.1.1.3.221)	limiter/divertor electron density [m <sup>-3</sup> ]. Time-dependent.
ni_lim_div	scenario_ref (9.1.1.3.221)	limiter/divertor ion density [m <sup>-3</sup> ]. Time-dependent.
p_peak_div	scenario_ref (9.1.1.3.221)	peak power on divertor [W]. Time-dependent.
surf_temp	scenario_ref (9.1.1.3.221)	limiter surface or divertor plate temperature [K]. Time-dependent.
p_lim_div	scenario_ref (9.1.1.3.221)	Power flux on limiter or divertor plate [W]. Time-dependent.
p_rad_div	scenario_ref (9.1.1.3.221)	radiative power in the divertor zone [W]. Time-dependent.
wall_temp	scenario_ref (9.1.1.3.221)	wall temperature [K]. Time-dependent.
wall_state	scenario_ref (9.1.1.3.221)	saturation state of the wall (0 = completly pumping wall, 1 = completly saturate wall) []. Time-dependent.
detach_state	scenario_ref (9.1.1.3.221)	plasma detachment state (0= attach plasma, 1 = completely detach plasma) []. Time-dependent.
pump_flux	vecflt_type (9.1.1.2.9)	flux pump out for each ion species [s <sup>-1</sup> ]. Time-dependent.

Type of: scenario:lim\_div\_wall (55)

### 9.1.1.3.216 scenario\_line\_ave

line averaged value

member	type	description
ne_line	scenario_ref (9.1.1.3.221)	line averaged electron density [m <sup>-3</sup> ]. Time-dependent.
zeff_line	scenario_ref (9.1.1.3.221)	line averaged effective charge. Time-dependent.
ne_zeff_line	scenario_ref (9.1.1.3.221)	line averaged electron density * Zeff . Time-dependent.
dne_line_dt	scenario_ref (9.1.1.3.221)	time derivative of line averaged electron density [m <sup>-3</sup> /s]. Time-dependent.

Type of: scenario:line\_ave (55)

### 9.1.1.3.217 scenario\_neutron

neutron flux for DD and DT reactions

member	type	description
ndd_tot	scenario_ref (9.1.1.3.221)	total neutron flux coming from DD reactions [Hz]. Time-dependent.
ndd_th	scenario_ref (9.1.1.3.221)	neutron flux coming from thermal DD reactions [Hz]. Time-dependent.
ndd_nbi_th	scenario_ref (9.1.1.3.221)	neutron flux coming from beam/plasma DD reactions [Hz]. Time-dependent.

member	type	description
ndd_nbi_nbi	scenario_ref (9.1.1.3.221)	neutron flux coming from beam/beam DD reactions [Hz]. Time-dependent.
ndt_tot	scenario_ref (9.1.1.3.221)	total neutron flux coming from DT reactions [Hz]. Time-dependent.
ndt.th	scenario_ref (9.1.1.3.221)	neutron flux coming from thermal DT reactions [Hz]. Time-dependent.

Type of: scenario:neutron (55)

### 9.1.1.3.218 scenario\_ninety\_five

values at 95% of poloidal flux

member	type	description
q_95	scenario_ref (9.1.1.3.221)	safety factor value @ 95 % of poloidal flux span []. Time-dependent.
elong_95	scenario_ref (9.1.1.3.221)	plasma elongation @ 95 % of poloidal flux span []. Time-dependent.
tria_95	scenario_ref (9.1.1.3.221)	averaged plasma triangularity @ 95 % of poloidal flux span []. Time-dependent.
tria_up_95	scenario_ref (9.1.1.3.221)	upper plasma triangularity @ 95 % of poloidal flux span []. Time-dependent.
tria_lo_95	scenario_ref (9.1.1.3.221)	lower plasma triangularity @ 95 % of poloidal flux span []. Time-dependent.
te_95	scenario_ref (9.1.1.3.221)	electron temperature @ 95 % of poloidal flux [eV]. Time-dependent.
ti_95	scenario_ref (9.1.1.3.221)	ion temperature @ 95 % of poloidal flux [eV]. Time-dependent.
ne_95	scenario_ref (9.1.1.3.221)	electron density @ 95 % of poloidal flux [m <sup>-3</sup> ]. Time-dependent.
ni_95	scenario_ref (9.1.1.3.221)	ion density @ 95 % of poloidal flux [m <sup>-3</sup> ]. Time-dependent.
phi_95	scenario_ref (9.1.1.3.221)	toroidal flux @ 95 % of poloidal flux [Wb]. Time-dependent.
rho_95	scenario_ref (9.1.1.3.221)	value of internal simulator coordinate @ 95 % of poloidal flux [m]. Time-dependent.
vtor_95	scenario_ref (9.1.1.3.221)	rotation velocity of selected impurity @ 95 % of poloidal flux [m/s]. Time-dependent.

Type of: scenario:ninety\_five (55)

### 9.1.1.3.219 scenario\_pedestal

Values at the top of the H-mode pedestal

member	type	description
te_ped	scenario_ref (9.1.1.3.221)	pedestal electron temperature [eV]. Time-dependent.
ti_ped	scenario_ref (9.1.1.3.221)	pedestal ion temperature [eV]. Time-dependent.
ne_ped	scenario_ref (9.1.1.3.221)	pedestal electron density [m <sup>-3</sup> ]. Time-dependent.
ni_ped	scenario_ref (9.1.1.3.221)	pedestal ion density [m <sup>-3</sup> ]. Time-dependent.
psi_ped	scenario_ref (9.1.1.3.221)	pedestal poloidal flux [Wb]. Time-dependent.
phi_ped	scenario_ref (9.1.1.3.221)	pedestal toroidal flux [Wb]. Time-dependent.
rho_ped	scenario_ref (9.1.1.3.221)	top pedestal value of internal simulator coordinate [m]. Time-dependent.
q_ped	scenario_ref (9.1.1.3.221)	top pedestal safety factor value []. Time-dependent.
pressure_ped	scenario_ref (9.1.1.3.221)	top pedestal thermal pressure ( $n_e * T_e + n_i * T_i$ ) [Pa]. Time-dependent.
vtor_ped	scenario_ref (9.1.1.3.221)	top pedestal value of rotation velocity of selected impurity [m/s]. Time-dependent.

Type of: scenario:pedestal (55)

### 9.1.1.3.220 scenario\_reactor

reactor data (such as electricity cost ...)

member	type	description
pnetwork	float (9.1.1.1.1)	reactor electric power provide to the network [W].

Type of: scenario:reactor (55)

### 9.1.1.3.221 scenario\_ref

Structure for scenario reference; Time-dependent

member	type	description
value	float (9.1.1.1.1)	Signal value; Time-dependent; Scalar

member	type	description
source	string (9.1.1.1.3)	Source of the signal (any comment describing the origin of the signal : code, path to diagnostic signals, massaging, ...); String

Type of: scenario\_centre:Rmag (228) I scenario\_centre:Zmag (228) I scenario\_centre:ne0 (228) I scenario\_centre:ni0 (228) I scenario\_centre:phi0 (228) I scenario\_centre:psi0 (228) I scenario\_centre:q0 (228) I scenario\_centre:shift0 (228) I scenario\_centre:te0 (228) I scenario\_centre:ti0 (228) I scenario\_centre:vtor\_0 (228) I scenario\_configuration:LH\_freq (230) I scenario\_configuration:LH\_npar (230) I scenario\_configuration:ecrh\_freq (230) I scenario\_configuration:ecrh\_loc (230) I scenario\_configuration:ecrh\_pol\_ang (230) I scenario\_configuration:ecrh\_tor\_ang (230) I scenario\_configuration:enbi (230) I scenario\_configuration:icrh\_freq (230) I scenario\_configuration:icrh\_phase (230) I scenario\_configuration:pellet\_ang (230) I scenario\_configuration:pellet\_nba (230) I scenario\_configuration:pellet\_v (230) I scenario\_configuration:r\_nbi (230) I scenario\_confinement:tau\_cur\_diff (231) I scenario\_confinement:tau\_e (231) I scenario\_confinement:tau\_e\_ee (231) I scenario\_confinement:tau\_e\_ei (231) I scenario\_confinement:tau\_e\_ii (231) I scenario\_confinement:tau\_h\_sc (231) I scenario\_confinement:tau\_he (231) I scenario\_confinement:tau\_i\_rol (231) I scenario\_confinement:tau\_l\_sc (231) I scenario\_currents:RR (232) I scenario\_currents:i\_align (232) I scenario\_currents:i\_boot (232) I scenario\_currents:i\_cd\_tot (232) I scenario\_currents:i\_eccd (232) I scenario\_currents:i\_fast\_ion (232) I scenario\_currents:i\_fwcd (232) I scenario\_currents:i\_lhcd (232) I scenario\_currents:i\_nbicd (232) I scenario\_currents:i\_ni\_tot (232) I scenario\_currents:i\_ohm (232) I scenario\_currents:i\_par (232) I scenario\_currents:i\_runaway (232) I scenario\_currents:v\_loop (232) I scenario\_currents:v\_meas (232) I scenario\_edge:drho\_edge\_dt (233) I scenario\_edge:ne\_edge (233) I scenario\_edge:neutral\_flux (233) I scenario\_edge:ni\_edge (233) I scenario\_edge:phi\_edge (233) I scenario\_edge:phi\_plasma (233) I scenario\_edge:psi\_edge (233) I scenario\_edge:q\_edge (233) I scenario\_edge:rho\_edge (233) I scenario\_edge:te\_edge (233) I scenario\_edge:ti\_edge (233) I scenario\_edge:vtor\_edge (233) I scenario\_energy:dwbpol\_dt (234) I scenario\_energy:dwbtorpla\_dt (234) I scenario\_energy:dwdia\_dt (234) I scenario\_energy:dwth\_dt (234) I scenario\_energy:dwtot\_dt (234) I scenario\_energy:esup\_alp (234) I scenario\_energy:esup\_icrhper (234) I scenario\_energy:esup\_icrhtot (234) I scenario\_energy:esup\_lhcd (234) I scenario\_energy:esup\_nbiperp (234) I scenario\_energy:esup\_nbitot (234) I scenario\_energy:w\_b\_pol (234) I scenario\_energy:w\_b\_tor\_pla (234) I scenario\_energy:w\_dia (234) I scenario\_energy:w\_th (234) I scenario\_energy:w\_tot (234) I scenario\_global:area\_ext (235) I scenario\_global:area\_pol (235) I scenario\_global:beta\_n\_th (235) I scenario\_global:beta\_normal (235) I scenario\_global:beta\_pol (235) I scenario\_global:beta\_pol\_th (235) I scenario\_global:beta\_tor (235) I scenario\_global:beta\_tor\_th (235) I scenario\_global:dip\_dt (235) I scenario\_global:disruption (235) I scenario\_global:ip (235) I scenario\_global:len\_sepa (235) I scenario\_global:li (235) I scenario\_global:mode\_h (235) I scenario\_global:s\_alpha (235) I scenario\_global:volume (235) I scenario\_heat\_power:p\_l2h\_sc (236) I scenario\_heat\_power:p\_l2l (236) I scenario\_heat\_power:p\_nbi\_icrh (236) I scenario\_heat\_power:p\_w (236) I scenario\_heat\_power:p\_wth (236) I scenario\_heat\_power:padd\_tot (236) I scenario\_heat\_power:pbrem (236) I scenario\_heat\_power:pcyclo (236) I scenario\_heat\_power:pdd\_fus (236) I scenario\_heat\_power:pecrh (236) I scenario\_heat\_power:pecrh\_th (236) I scenario\_heat\_power:pei (236) I scenario\_heat\_power:pel\_fus (236) I scenario\_heat\_power:pel\_icrh (236) I scenario\_heat\_power:pel\_nbi (236) I scenario\_heat\_power:pel\_tot (236) I scenario\_heat\_power:pfus\_dt (236) I scenario\_heat\_power:pfus\_nbi (236) I scenario\_heat\_power:pfus\_th (236) I scenario\_heat\_power:picrh (236) I scenario\_heat\_power:picrh\_th (236) I scenario\_heat\_power:pion\_fus (236) I scenario\_heat\_power:pion\_icrh (236) I scenario\_heat\_power:pion\_nbi (236) I scenario\_heat\_power:pion\_tot (236) I scenario\_heat\_power:pioniz (236) I scenario\_heat\_power:plh (236) I scenario\_heat\_power:plh\_th (236) I scenario\_heat\_power:ploss (236) I scenario\_heat\_power:ploss\_fus (236) I scenario\_heat\_power:ploss\_icrh (236) I scenario\_heat\_power:ploss\_nbi (236) I scenario\_heat\_power:pnbi (236) I scenario\_heat\_power:pnbi\_co\_cur (236) I scenario\_heat\_power:pnbi\_counter (236) I scenario\_heat\_power:pnbi\_th (236) I scenario\_heat\_power:pohmic (236) I scenario\_heat\_power:prad (236) I scenario\_itb:h\_itb (238) I scenario\_itb:ne\_itb (238) I scenario\_itb:ni\_itb (238) I scenario\_itb:phi\_itb (238) I scenario\_itb:psi\_itb (238) I scenario\_itb:q\_min (238) I scenario\_itb:rho\_itb (238) I scenario\_itb:te\_itb (238) I scenario\_itb:ti\_itb (238) I scenario\_itb:vtor\_itb (238) I scenario\_itb:width\_itb (238) I scenario\_lim\_div\_wall:detach\_state (239) I scenario\_lim\_div\_wall:ne\_lim\_div (239) I scenario\_lim\_div\_wall:ni\_lim\_div (239) I scenario\_lim\_div\_wall:p\_lim\_div (239) I scenario\_lim\_div\_wall:p\_peak\_div (239) I scenario\_lim\_div\_wall:p\_rad\_div (239) I scenario\_lim\_div\_wall:surf\_temp (239) I scenario\_lim\_div\_wall:te\_lim\_div (239) I scenario\_lim\_div\_wall:ti\_lim\_div (239) I scenario\_lim\_div\_wall:wall\_state (239) I scenario\_lim\_div\_wall:wall\_temp (239) I scenario\_line\_ave:dne\_line\_dt (240) I scenario\_line\_ave:ne\_line (240) I scenario\_line\_ave:ne\_zeff\_line (240) I scenario\_line\_ave:zeff\_line (240) I scenario\_neutron:ndd\_nbi\_nbi (241) I scenario\_neutron:ndd\_nbi\_th (241) I scenario\_neutron:ndd\_th (241) I scenario\_neutron:ndd\_tot (241) I scenario\_neutron:ndt\_th (241) I scenario\_neutron:ndt\_tot (241) I scenario\_ninety\_five:elong\_95 (242) I scenario\_ninety\_five:ne\_95 (242) I scenario\_ninety\_five:ni\_95 (242) I scenario\_ninety\_five:phi\_95 (242) I scenario\_ninety\_five:q\_95 (242) I scenario\_ninety\_five:rho\_95 (242) I scenario\_ninety\_five:te\_95 (242) I scenario\_ninety\_five:ti\_95 (242) I scenario\_ninety\_five:tria\_95 (242) I scenario\_ninety\_five:tria\_lo\_95 (242) I scenario\_ninety\_five:tria\_up\_95 (242) I scenario\_ninety\_five:vtor\_95 (242) I scenario\_pedestal:ne\_ped (243) I scenario\_pedestal:ni\_ped (243) I scenario\_pedestal:phi\_ped (243) I scenario\_pedestal:pressure\_ped (243) I scenario\_pedestal:psi\_ped (243) I scenario\_pedestal:q\_ped (243) I scenario\_pedestal:rho\_ped (243) I scenario\_pedestal:te\_ped (243) I scenario\_pedestal:ti\_ped (243) I scenario\_pedestal:vtor\_ped (243) I scenario\_references:bvac\_r (246) I scenario\_references:enhancement (246) I scenario\_references:ip (246) I scenario\_references:isot (246) I scenario\_references:nbar (246) I scenario\_references:nbi\_td\_ratio (246) I scenario\_references:pecrh (246) I

scenario\_references:picrh (246) I scenario\_references:plh (246) I scenario\_references:pnbi (246) I scenario\_references:pol\_flux (246) I scenario\_references:xecrh (246) I scenario\_references:zeffl (246) I scenario\_sol:l\_ne\_sol (247) I scenario\_sol:l\_ni\_sol (247) I scenario\_sol:l\_qe\_sol (247) I scenario\_sol:l\_qi\_sol (247) I scenario\_sol:l\_te\_sol (247) I scenario\_sol:l\_ti\_sol (247) I scenario\_sol:p\_rad\_sol (247) I scenario\_vol\_ave:dne\_ave\_dt (248) I scenario\_vol\_ave:meff\_ave (248) I scenario\_vol\_ave:ne\_ave (248) I scenario\_vol\_ave:ni\_ave (248) I scenario\_vol\_ave:omega\_ave (248) I scenario\_vol\_ave:pellet\_flux (248) I scenario\_vol\_ave:te\_ave (248) I scenario\_vol\_ave:ti\_ave (248) I scenario\_vol\_ave:ti\_o\_te\_ave (248) I scenario\_vol\_ave:zeff\_ave (248)

### 9.1.1.3.222 scenario\_references

References

member	type	description
plh	scenario_ref (9.1.1.3.221)	Lower hybrid power [W]. Time-dependent.
picrh	scenario_ref (9.1.1.3.221)	Ion cyclotron resonance heating power [W]. Time-dependent.
pecrh	scenario_ref (9.1.1.3.221)	electron cyclotron resonance heating power [W]. Time-dependent.
pnbi	scenario_ref (9.1.1.3.221)	neutral beam injection power [W]. Time-dependent.
ip	scenario_ref (9.1.1.3.221)	Plasma current [A]. Time-dependent.
bvac_r	scenario_ref (9.1.1.3.221)	Vacuum field times radius in the toroidal field magnet [T.m]. Time-dependent.
zeffl	scenario_ref (9.1.1.3.221)	line averaged effective charge []. Time-dependent.
nbar	scenario_ref (9.1.1.3.221)	line averaged electron density [m <sup>-3</sup> ]. Time-dependent.
xecrh	scenario_ref (9.1.1.3.221)	position of maximum (normalized rho coordinate) of electron cyclotron resonance heating power []. Time-dependent.
pol_flux	scenario_ref (9.1.1.3.221)	separatrix poloidal flux [Wb]. Time-dependent.
enhancement	scenario_ref (9.1.1.3.221)	energy enhancement factor []. Time-dependent.
isotopic	scenario_ref (9.1.1.3.221)	ratio between tritium and deuterium density (for burning plasma) []. Time-dependent.
nbi_td_ratio	scenario_ref (9.1.1.3.221)	ratio between tritium and deuterium power in neutral beam injection []. Time-dependent.

Type of: scenario:references (55)

### 9.1.1.3.223 scenario\_sol

SOL characteristic (@ LCMS)

member	type	description
l_te_sol	scenario_ref (9.1.1.3.221)	electron temperature radial decay length [m]. Time-dependent.
l_ti_sol	scenario_ref (9.1.1.3.221)	ion temperature radial decay length [m]. Time-dependent.
l_ne_sol	scenario_ref (9.1.1.3.221)	electron density radial decay length [m]. Time-dependent.
l_ni_sol	scenario_ref (9.1.1.3.221)	ion density radial decay length [m]. Time-dependent.
l_qe_sol	scenario_ref (9.1.1.3.221)	electron heat flux radial decay length [m]. Time-dependent.
l_qi_sol	scenario_ref (9.1.1.3.221)	ion heat flux radial decay length [m]. Time-dependent.
p_rad_sol	scenario_ref (9.1.1.3.221)	radiative power of the SOL [W]. Time-dependent.
gaz_puff	vecflt_type (9.1.1.2.9)	gaz puff flux for each ion species [s <sup>-1</sup> ]. Time-dependent.

Type of: scenario:sol (55)

### 9.1.1.3.224 scenario\_vol\_ave

volume averaged values

member	type	description
te_ave	scenario_ref (9.1.1.3.221)	volume averaged electron temperature [eV]. Time-dependent.
ti_ave	scenario_ref (9.1.1.3.221)	volume averaged ion temperature [eV]. Time-dependent.
ne_ave	scenario_ref (9.1.1.3.221)	volume averaged electron density [m <sup>-3</sup> ]. Time-dependent.
dne_ave_dt	scenario_ref (9.1.1.3.221)	time derivative of volume averaged electron density [m <sup>-3</sup> /s]. Time-dependent.
ni_ave	scenario_ref (9.1.1.3.221)	volume averaged ion density ( $\langle \sum(n_k)_z \rangle$ , k in species) [m <sup>-3</sup> ]. Time-dependent.
zeff_ave	scenario_ref (9.1.1.3.221)	volume averaged effective charge. Time-dependent.
ti_o_te_ave	scenario_ref (9.1.1.3.221)	volume averaged ion temperature over electron temperature ( $\langle T_i/T_e \rangle$ ) []. Time-dependent.
meff_ave	scenario_ref (9.1.1.3.221)	volume averaged effective mass ( $\langle \sum(n_k * m_k)_z \rangle / \langle \sum(n_k)_z \rangle$ ) []. Time-dependent.
pellet_flux	scenario_ref (9.1.1.3.221)	number of electrons fuelling the plasma every second coming from pellet injection [s <sup>-1</sup> ]. Time-dependent.
nions_ave	vecflt_type (9.1.1.2.9)	volume averaged ions densities (vector, one element per ion species) [m <sup>-3</sup> ]. Time-dependent.



member	type	description
omega_ave	scenario_ref (9.1.1.3.221)	bulk volume average toroidal rotation velocity (whole plasma) [rad/s]. Time-dependent.

Type of: scenario:vol\_ave (55)

### 9.1.1.3.225 setup\_bprobe

diagnostic setup information

member	type	description
name	vecstring_type (9.1.1.2.11)	Name of the probe. Array of strings (nprobes).
id	vecstring_type (9.1.1.2.11)	ID of the probe. Array of strings (nprobes).
position	rz1D (9.1.1.3.194)	RZ of coil centre [m]; Vector (nprobes)
polangle	vecflt_type (9.1.1.2.9)	Poloidal angle of coil orientation (w.r.t. horizontal ?? to be checked) [rad]; Vector (nprobes)
torangle	vecflt_type (9.1.1.2.9)	Toroidal angle of coil orientation (0 if fully in the poloidal plane) [rad] ; Vector (nprobes)
area	vecflt_type (9.1.1.2.9)	Area of coil [m <sup>2</sup> ]; Vector (nprobes)
length	vecflt_type (9.1.1.2.9)	Length of coil [m]; Vector (nprobes)
turns	vecint_type (9.1.1.2.10)	Turns in the coil; Vector (nprobes)

Type of: bpol\_probes:setup\_bprobe (78)

### 9.1.1.3.226 setup\_floops

diagnostic setup information

member	type	description
name	vecstring_type (9.1.1.2.11)	Name of loop. Array of strings (nloops).
id	vecstring_type (9.1.1.2.11)	ID of loop. Array of strings (nloops).
position	rzphi2D (9.1.1.3.200)	List of (R,Z,phi) points defining the position of the loop (see data structure documentation FLUXLOOPposition.pdf); Matrices (nloops, max.npoints)
npoints	vecint_type (9.1.1.2.10)	Number of points describing each loop in the "position" matrices. Vector (nloops)

Type of: flux\_loops:setup\_floops (139)

### 9.1.1.3.227 setup\_inject

Detailed information on an injection unit.

member	type	description
position	rzphi1D (9.1.1.3.198)	Position of centre of injection unit surface. Vectors(nunits).
tang_rad	vecflt_type (9.1.1.2.9)	Tagency radius (major radius where the central line of a NBI unit is tangent to a circle around the torus) [m]; Vector(nunits)
angle	vecflt_type (9.1.1.2.9)	Angle of inclination between a line at the centre of the injection unit surface and the horizontal plane [rad]; Vector(nunits)
direction	vecint_type (9.1.1.2.10)	Direction of the beam seen from above the torus: -1 = clockwise; 1 = counter clockwise; Vector(nunits)
div_vert	vecflt_type (9.1.1.2.9)	Beam divergence for a unit in the vertical direction[rad]; Vector(nunits)
div_horiz	vecflt_type (9.1.1.2.9)	Beam divergence for a unit in the horizontal direction[rad]; Vector(nunits)
focal_len_hz	vecflt_type (9.1.1.2.9)	Horizontal focal length along the beam line [m], Vector(nunits)
focal_len_vc	vecflt_type (9.1.1.2.9)	Vertical focal length along the beam line [m], Vector(nunits)
beamlets	beamlets (9.1.1.3.46)	Detailed information on beamlets.

Type of: nbi:setup\_inject (48)

### 9.1.1.3.228 setup\_line

Geometric description of the lines of sight for line integral diagnostic

member	type	description
pivot_point	rzphi1D (9.1.1.3.198)	Pivot point of each line of sight; Vector (nchords)
horchordang1	vecflt_type (9.1.1.2.9)	Angle [rad] of horizontal projection of l.o.s. with poloidal cross section (0 for HFS to LFS chord - see Convention_angles_interfdiag.pdf) [rad]. Vector (nchords)

member	type	description
verchordang1	vecflt.type (9.1.1.2.9)	Angle of chord with vertical axis (0 for bottom-top chord, Pi for top-bottom chord - see Convention_angles_interfdiag.pdf) [rad]; Vector (nchords)
width	vecflt.type (9.1.1.2.9)	Width of the laser beam (1/e) [m]; Vector (nchords)
second_point	rzphi1D (9.1.1.3.198)	Second point defining the line of sight together with the pivot.point. In case the probing wave is reflected, this should be the position of the mirror. This data is redundant with horchordang1 and verchordang1. Vector (nchords).
horchordang2	vecflt.type (9.1.1.2.9)	For reflected l.o.s. only (undefined otherwise) : Angle [rad] of horizontal projection of reflected l.o.s. with poloidal cross section (0 for HFS to LFS chord - see Convention_angles_interfdiag.pdf) [rad]. Vector (nchords)
verchordang2	vecflt.type (9.1.1.2.9)	For reflected l.o.s. only (undefined otherwise) : Angle of reflected chord with vertical axis (0 for bottom-top chord, Pi for top-bottom chord - see Convention_angles_interfdiag.pdf) [rad]; Vector (nchords)
third_point	rzphi1D (9.1.1.3.198)	Third point defining the reflected line of sight together with the second_point (undefined if the probing wave is not reflected). This data is redundant with horchordang2 and verchordang2. Vector (nchords).
nchordpoints	integer (9.1.1.1.2)	Number of points along the viewing chords (used for synthetic diagnostic signal reconstruction)

Type of: lineintegraldiag:setup\_line (154)

### 9.1.1.3.229 setup\_mse

diagnostic setup information

member	type	description
rzgamma	rzphidrzdphi1D (9.1.1.3.201)	Position and width of the intersection between beam and line of sight. Vectors (nchords)
geom_coef	matflt.type (9.1.1.2.7)	Geometric coefficients (9) describing the angle between beam and line of sight; The first dimension contains successively : numerator, coefficients of BZ, BR, Bphi, ER; denominator, coefficients of BZ, BR, Bphi, ER, EZ; Matrix (9,nchords). In versions of the data structure before 4.08, there were only 6 coefficients namely : numerator, coefficients of BZ, BR, Bphi; denominator, coefficients of BZ, BR, Bphi.

Type of: msediag:setup\_mse (47)

### 9.1.1.3.230 source\_4d

Source of particles in phase space.

member	type	description
gyrosrc.type	vecint.type (9.1.1.2.10)	Defines how to interpret the source: 1 = the source is calculated at the particle birth point; 2 = the source is calculated at the gyro centre of the birth point. Vector (nsrc_spec)
grid.type	vecint.type (9.1.1.2.10)	Defines the four grid variables and the grid structure (rectangular, unstructured...): 1 = { R(c), z(c), ksi(c), E(d), rectangular} ; 2 = { R(c), z(c), ksi(c), E(c), rectangular} . Here the variable ksi=v_parallel/v. Here, (c) stands for source continuously distributed over grid (e.g. to treat the continuous energy spectra of alpha sources), (d) stands for discretely distributed source; localised to the grid (e.g. to treat the discrete energies injected with NBI). The dimensions of the variables are: R [m], z [m], E [J], ksi=v_parallel/v [1]. For rectangular grids the grid is defined in rect_grid. Vector (nsrc_spec)
rect_grid	distsource_rect_grid (9.1.1.3.102)	Details of rectangular grids.
source	array5dflt.type (9.1.1.2.4)	Phase space source of particles; the units depend on the grid.type: [m <sup>-3</sup> s <sup>-1</sup> ] if the grid is discrete in energy/velocity and [(m/s) <sup>-3</sup> m <sup>-3</sup> s <sup>-1</sup> ] if continuous; Time-dependent; Array5d (nsrc_spec, ndim1, ndim2, ndim3, ndim4)

Type of: distsource:source\_4d (37)

### 9.1.1.3.231 source\_el

Subtree containing source terms for electrons

member	type	description
exp	vecflt.type (9.1.1.2.9)	Explicit source term [same unit as root quantity]. Time-dependent. Vector (nrho)
imp	vecflt.type (9.1.1.2.9)	Implicit source term [s <sup>-1</sup> .m <sup>-3</sup> ]. Time-dependent. Vector (nrho)

Type of: coresource:qe (33) I coresource:se (33)



### 9.1.1.3.232 source\_imp

Subtree containing source terms for the impurity species

member	type	description
exp	array3dflt.type (9.1.1.2.1)	Explicit source term [same unit as root quantity]. Time-dependent. Array3d (nrho,nimp,max_nzimp)
imp	array3dflt.type (9.1.1.2.1)	Implicit source term [ $s^{-1}.m^{-3}$ ]. Time-dependent. Array3d (nrho,nimp,max_nzimp)

Type of: coresource:qz (33) I coresource:sz (33)

### 9.1.1.3.233 source\_ion

Subtree containing source terms for the various ion species

member	type	description
exp	matflt.type (9.1.1.2.7)	Explicit source term [same unit as root quantity]. Time-dependent. Matrix (nrho,nion)
imp	matflt.type (9.1.1.2.7)	Implicit source term [ $s^{-1}.m^{-3}$ ]. Time-dependent. Matrix (nrho,nion)

Type of: coresource:qi (33) I coresource:si (33) I coresource:ui (33)

### 9.1.1.3.234 source\_tp

Source given as a set of test particles. Note that the test particles are given at the source location and not at the gyrocentre. Note that max\_n\_particles should be the maximum both over species and time (since the number of test particles can change with time)

member	type	description
n_particles	vecint.type (9.1.1.2.10)	Number of test particle for each species; Time-dependent; Vector (nsrc_spec)
var_type	integer (9.1.1.1.2)	Identification of variables: 1 = { R, z, phi, v, ksi, $R^*v_{\phi}$ } ; 2 = { R, z, phi, Energy, ksi, $R^*v_{\phi}$ } ; 3 = { Energy, magnetic momentum, toroidal angular momentum }. Dimensions of variables: R [m], z [m], phi [rad], v [m/s], $v_{\phi}$ [m/s], $ksi=v_{\parallel}/v$ [1].
var1	matflt.type (9.1.1.2.7)	Phase space variable number one characterising a test particle; Time-dependent; Matrix(nsrc_spec, max_n_particles)
var2	matflt.type (9.1.1.2.7)	Phase space variable number two characterising a test particle; Time-dependent; Matrix(nsrc_spec, max_n_particles)
var3	matflt.type (9.1.1.2.7)	Phase space variable number three characterising a test particle; Time-dependent; Matrix(nsrc_spec, max_n_particles)
var4	matflt.type (9.1.1.2.7)	Phase space variable number four characterising a test particle; Time-dependent; Matrix(nsrc_spec, max_n_particles)
var5	matflt.type (9.1.1.2.7)	Phase space variable number five characterising a test particle; Time-dependent; Matrix(nsrc_spec, max_n_particles)
var6	matflt.type (9.1.1.2.7)	Phase space variable number six characterising a test particle; Time-dependent; Matrix(nsrc_spec, max_n_particles)
weight	matflt.type (9.1.1.2.7)	Weight of test particle; Time-dependent; Matrix(nsrc_spec, max_n_particles)

Type of: distsource:source\_tp (37)

### 9.1.1.3.235 sourcecel

Structure for the total source term for the transport equation (electrons). Time-dependent;

member	type	description
value	vecflt.type (9.1.1.2.9)	Value of the source term; Time-dependent; Vector (nrho)
integral	vecflt.type (9.1.1.2.9)	Integral from 0 to rho of the source term. Time-dependent; Vector (nrho)
source	string (9.1.1.1.3)	Source of the profile (any comment describing the origin of the profile : code, path to diagnostic signals, massaging, ...); String

Type of: corefield:source\_term (84)

### 9.1.1.3.236 sourceimp

Structure for the total source term for the transport equation (impurities). Time-dependent;

member	type	description
value	array3dflt.type (9.1.1.2.1)	Value of the source term [ $m^{-3}.s^{-1}$ ]; Time-dependent; Array3D (nrho,nimp,max_nzimp)
integral	array3dflt.type (9.1.1.2.1)	Integral from 0 to rho of the source term. Time-dependent; Array3D(nsourc,nimp,max_nzimp)
source	vecstring.type (9.1.1.2.11)	Source of the profile (any comment describing the origin of the impurity profiles : code, path to diagnostic signals, massaging, ...); Array of strings (nimp)

Type of: coreimpur:source\_term (30)

### 9.1.1.3.237 sourceion

Structure for the total source term for the transport equation (ions). Time-dependent;

member	type	description
value	matflt.type (9.1.1.2.7)	Value of the source term; Time-dependent; Matrix (nrho,nion)
integral	matflt.type (9.1.1.2.7)	Integral from 0 to rho of the source term. Time-dependent; Matrix (nrho,nion)
source	vecstring.type (9.1.1.2.11)	Source of the profile (any comment describing the origin of the profile : code, path to diagnostic signals, massaging, ...); Array of strings (nion)

Type of: corefieldion:source\_term (85)

### 9.1.1.3.238 special\_pos

Special positions along an orbit (like turning points).

member	type	description
midplane	midplane (9.1.1.3.136)	Intersections with the midplane
turning_pts	turning_pts (9.1.1.3.266)	Location of turning points

Type of: orb\_glob\_dat:special\_pos (167)

### 9.1.1.3.239 spectrum

Spectral properties of the wave.

member	type	description
nn_phi	vecint.type (9.1.1.2.10)	Number of points for the discretization of the spectrum in the toroidal direction, Vector of integers (nantenna).
nn_theta	vecint.type (9.1.1.2.10)	Number of points for the discretization of the spectrum in the poloidal direction, Vector of integers (nantenna).
n_phi	matflt.type (9.1.1.2.7)	Refraction index in the toroidal direction, Matrix (nantenna,max_nn_phi).
n_theta	matflt.type (9.1.1.2.7)	Refraction index in poloidal direction, Matrix (nantenna,max_nn_theta).
power	array3dflt.type (9.1.1.2.1)	$W/dNphi/dNtheta$ [W], Array (nantenna, max_nn_phi, max_nn_theta). Time-dependent

Type of: launches:spectrum (43)

### 9.1.1.3.240 spot

Spot characteristics

member	type	description
waist	matflt.type (9.1.1.2.7)	Waist for the spot ellipse [m], Matrix (nantenna,2). Time-dependent
angle	vecflt.type (9.1.1.2.9)	Rotation angle for the spot ellipse [rd], Vector(nantenna). Time-dependent

Type of: rf\_beam:spot (216)

### 9.1.1.3.241 sputtering neutrals

Sputtering coefficients

member	type	description
physical	matflt.type (9.1.1.2.7)	Effective coefficient of physical sputtering of the neutral type INEUT due to ion type IION. Matrix(nneut,nion). Time-dependent.
chemical	matflt.type (9.1.1.2.7)	Effective coefficient of chemical sputtering of the neutral type INEUT due to ion type IION. Matrix(nneut,nion). Time-dependent.

Type of: coefficients\_neutrals:sputtering (80)

#### 9.1.1.3.242 src\_snk\_fav

member	type	description
particles	matflt.type (9.1.1.2.7)	Source/sink particles [ $s^{-1} m^{-3}$ ]; Time-dependendent; Matrix(nsrc_spec, max_npsi)
power	matflt.type (9.1.1.2.7)	Power density associated with the source/sink of particles [ $W/m^3$ ]; Time-dependent; Matrix(nsrc_spec, max_npsi)
torque	matflt.type (9.1.1.2.7)	Torque density due to the source/sink of particles [ $Nm/m^3$ ]; Time dependent; Matrix(nsrc_spec, max_npsi)

#### 9.1.1.3.243 src\_snk\_int

member	type	description
particles	matflt.type (9.1.1.2.7)	Source/sink particles [ $s^{-1} m^{-3}$ ]; Time-dependendent; Vector(nsrc_spec, max_npsi)
power	matflt.type (9.1.1.2.7)	Power associated with the source/sink of particles [ $MW/m^3$ ]; Time-dependent; Vector(nsrc_spec, max_npsi)
torque	matflt.type (9.1.1.2.7)	Torque due to the source/sink of particles [ $Nm/m^3$ ]; Time dependent; Vector(nsrc_spec, max_npsi)

#### 9.1.1.3.244 src\_snk\_tot

member	type	description
particles	vecflt.type (9.1.1.2.9)	Source/sink particles [ $1/s$ ]; Time-dependendent; Vector(nsrc_spec)
power	vecflt.type (9.1.1.2.9)	Power associated with the source/sink of particles [ $W$ ]; Time-dependent; Vector(nsrc_spec)
torque	vecflt.type (9.1.1.2.9)	Torque due to the source/sink of particles [ $Nm$ ]; Time dependent; Vector(nsrc_spec)

#### 9.1.1.3.245 straps

Properties of each IC antenna strap

member	type	description
nstraps	vecint.type (9.1.1.2.10)	Number of straps in each antenna; Vector(nantenna_ic)
phase	exp2D (9.1.1.3.112)	Phase of strap current [rad]; Time-dependent; Matrix(nantenna_ic, max_nstraps)
phi_centre	matflt.type (9.1.1.2.7)	Toroidal angle at the centre of the strap [rad]; Matrix(nantenna_ic, max_nstraps)
width	matflt.type (9.1.1.2.7)	Width of strap in the toroidal direction [m]; Matrix(nantenna_ic, max_nstraps)
dist2wall	matflt.type (9.1.1.2.7)	Distance to conducting wall or other conductor behind the antenna straps [m]; Matrix(nantenna_ic, max_nstraps)
ncoord_strap	matint.type (9.1.1.2.8)	Number of point in the polygon describing the antenna in the poloidal plane; Matrix(nantenna_ic, max_nstraps)
coord_strap	rz3D (9.1.1.3.197)	Coordinates (R,z) of polygon (of length ncoord_strap) describing the antenna in the poloidal plane; rz3d array(nantenna_ic, max_nstraps, max_ncoord_strap)

Type of: antennaic\_setup:straps (66)

#### 9.1.1.3.246 table\_0d

member	type	description
table	matflt.type (9.1.1.2.7)	interpolation data, Array(nz,nproc0d)

Type of: tables:table\_0d (281)

#### 9.1.1.3.247 table\_1d

member	type	description
table_prop	table_info1 (9.1.1.3.252)	Information on the properties of the table and the coordinates.
coord1	vecflt_type (9.1.1.2.9)	value of coordinate; Vector(ncoord1)
table	array3dfilt_type (9.1.1.2.1)	interpolation data, Array(ncoord1, nz, nproc1d)

Type of: tables:table\_1d (281)

#### 9.1.1.3.248 table\_2d

member	type	description
table_prop	table_info2 (9.1.1.3.253)	Information on the properties of the table and the coordinates.
coord1	vecflt_type (9.1.1.2.9)	value of coordinate; Vector(ncoord1)
coord2	vecflt_type (9.1.1.2.9)	value of coordinate; Vector(ncoord2)
table	array4dfilt_type (9.1.1.2.3)	Interpolation data , Array(ncoord1,ncoord2, nz, nproc2d)

Type of: tables:table\_2d (281)

#### 9.1.1.3.249 table\_3d

member	type	description
table_prop	table_info3 (9.1.1.3.254)	Information on the properties of the table and the coordinates.
coord1	vecflt_type (9.1.1.2.9)	value of coordinate; Vector(ncoord1)
coord2	vecflt_type (9.1.1.2.9)	value of coordinate; Vector(ncoord2)
coord3	vecflt_type (9.1.1.2.9)	value of coordinate; Vector(ncoord3)
table	array5dfilt_type (9.1.1.2.4)	interpolation data , Array(ncoord1,ncoord2,ncoord3, nz, nproc3d)

Type of: tables:table\_3d (281)

#### 9.1.1.3.250 table\_4d

member	type	description
table_prop	table_info4 (9.1.1.3.255)	Information on the properties of the table and the coordinates.
coord1	vecflt_type (9.1.1.2.9)	value of coordinate; Vector(ncoord1)
coord2	vecflt_type (9.1.1.2.9)	value of coordinate; Vector(ncoord2)
coord3	vecflt_type (9.1.1.2.9)	value of coordinate; Vector(ncoord3)
coord4	vecflt_type (9.1.1.2.9)	value of coordinate; Vector(ncoord4)
table	array6dfilt_type (9.1.1.2.5)	interpolation data , Array(ncoord1,ncoord2,ncoord3,ncoord4, nz, nproc4d)

Type of: tables:table\_4d (281)

#### 9.1.1.3.251 table\_5d

member	type	description
table_prop	table_info5 (9.1.1.3.256)	Information on the properties of the table and the coordinates.
coord1	vecflt_type (9.1.1.2.9)	value of coordinate; Vector(ncoord1)
coord2	vecflt_type (9.1.1.2.9)	value of coordinate; Vector(ncoord2)
coord3	vecflt_type (9.1.1.2.9)	value of coordinate; Vector(ncoord3)
coord4	vecflt_type (9.1.1.2.9)	value of coordinate; Vector(ncoord4)
coord5	vecflt_type (9.1.1.2.9)	value of coordinate; Vector(ncoord5)
table	array6dfilt_type (9.1.1.2.5)	interpolation data , Array(ncoord1,ncoord2,ncoord3,ncoord4,ncoord5, nz, nproc5d). DECLARED AS 6D ARRAY FOR THE MOMENT UNTIL WE UPDATE UAL TO A 7D.

Type of: tables:table\_5d (281)

#### 9.1.1.3.252 table\_info1

Information on the amns table

member	type	description
coord_extrap	matint.type (9.1.1.2.8)	0 : none, report error; 1 : boundary value; 2: simple; Array(nproc1d, 2)
interp_type	integer (9.1.1.1.2)	1: linear; ... ; Vector(nproc1d)
coord_label	string (9.1.1.1.3)	description of the coordinate, string.
coord_unit	string (9.1.1.1.3)	units of coordinate; string
coord_trans	integer (9.1.1.1.2)	0 : none; 1 : log10; 2 : ln; Integer
unif_spacing	integer (9.1.1.1.2)	for optimization purposes

Type of: table\_1d:table\_prop (271)

### 9.1.1.3.253 table\_info2

Information on the amns table

member	type	description
coord_extrap	array3dint.type (9.1.1.2.2)	0 : none, report error; 1 : boundary value; 2: simple; Array(nproc2d, 2, 2)
interp_type	vecint.type (9.1.1.2.10)	1: linear; ... Vector(nproc2d)
coord_label	vecstring.type (9.1.1.2.11)	description of each coordinate, Vector(2).
coord_unit	vecstring.type (9.1.1.2.11)	units of coordinate; Vector(2)
coord_trans	vecint.type (9.1.1.2.10)	0 : none; 1 : log10; 2 : ln; Vector(2)
unif_spacing	integer (9.1.1.1.2)	for optimization purposes

Type of: table\_2d:table\_prop (272)

### 9.1.1.3.254 table\_info3

Information on the amns table

member	type	description
coord_extrap	array3dint.type (9.1.1.2.2)	0 : none, report error; 1 : boundary value; 2: simple; Array(nproc3d, 2, 3)
interp_type	vecint.type (9.1.1.2.10)	1: linear; ... ; Vector(nproc3d)
coord_label	vecstring.type (9.1.1.2.11)	description of each coordinate, Vector(3).
coord_unit	vecstring.type (9.1.1.2.11)	units of coordinate; Vector(3)
coord_trans	vecint.type (9.1.1.2.10)	0 : none; 1 : log10; 2 : ln; Vector(3)
unif_spacing	integer (9.1.1.1.2)	for optimization purposes

Type of: table\_3d:table\_prop (273)

### 9.1.1.3.255 table\_info4

Information on the amns table

member	type	description
coord_extrap	array3dint.type (9.1.1.2.2)	0 : none, report error; 1 : boundary value; 2: simple; Array(nproc4d, 2, 5)
interp_type	vecint.type (9.1.1.2.10)	1: linear; ... ; Vector(nproc4d)
coord_label	vecstring.type (9.1.1.2.11)	description of each coordinate, Vector(4).
coord_unit	vecstring.type (9.1.1.2.11)	units of coordinate; Vector(4)
coord_trans	vecint.type (9.1.1.2.10)	0 : none; 1 : log10; 2 : ln; Vector(4)
unif_spacing	integer (9.1.1.1.2)	for optimization purposes

Type of: table\_4d:table\_prop (274)

### 9.1.1.3.256 table\_info5

Information on the amns table

member	type	description
coord_extrap	array3dint.type (9.1.1.2.2)	0 : none, report error; 1 : boundary value; 2: simple; Array(nproc5d, 2, 5)
interp_type	vecint.type (9.1.1.2.10)	1: linear; ... ; Vector(nproc5d)
coord_label	vecstring.type (9.1.1.2.11)	description of each coordinate, Vector(5).
coord_unit	vecstring.type (9.1.1.2.11)	units of coordinate; Vector(5)
coord_trans	vecint.type (9.1.1.2.10)	0 : none; 1 : log10; 2 : ln; Vector(5)

member	type	description
unif.spacing	integer (9.1.1.1.2)	for optimization purposes

Type of: table\_5d:table\_prop (275)

### 9.1.1.3.257 tables

member	type	description
id	matint.type (9.1.1.2.8)	Pointer to table: (1,jproc) indicates table dimensionality for process jproc; (2,jproc) indicates position in that table (index of the last element in the array); Matrix(2,nprocs)
table_0d	table_0d (9.1.1.3.246)	NO DOCS
table_1d	table_1d (9.1.1.3.247)	NO DOCS
table_2d	table_2d (9.1.1.3.248)	NO DOCS
table_3d	table_3d (9.1.1.3.249)	NO DOCS
table_4d	table_4d (9.1.1.3.250)	NO DOCS
table_5d	table_5d (9.1.1.3.251)	NO DOCS

Type of: amns:tables (27)

### 9.1.1.3.258 theta\_info

Information on the poloidal angle theta.

member	type	description
angl.type	vecint.type (9.1.1.2.10)	Type of poloidal angle: 1 : same as the poloidal angle in the equilibrium cpo; 2 : normal (geometrical) polar angle; 3 : other. If option three a transformation to the normal poloidal angle is provided in th2th.pol. MORE PRECISE DEFINITION WOULD BE USEFUL. Vector(nfreq)
th2th.pol	matflt.type (9.1.1.2.7)	Polar (geometrical) poloidal angle at grid points in theta, i.e. the transformation from theta to the polar poloidal angle; used only if angl.type=3; Matrix (nfreq, max.ntheta)

Type of: waves\_grid:theta\_info (294)

### 9.1.1.3.259 toroid\_field

Toroidal field information entering the definition of rho\_tor, for reference only. The physical value of the toroidal field should be taken from the toroidfield CPO. Time-dependent.

member	type	description
b0	float (9.1.1.1.1)	Vacuum field at r0 [T]; Time-dependent. Scalar.
b0prime	float (9.1.1.1.1)	Time derivative of the vacuum field at r0 [T/s]; Time-dependent. Scalar.
r0	float (9.1.1.1.1)	Characteristic major radius of the device (used in publications, usually middle of the vessel at the equatorial midplane) [m]. Scalar.
time	float (9.1.1.1.1)	Time [s] (exact time slice used from the time array of the source signal, here the toroidfield CPO. If the time slice does not exist in the time array of the source signal, it means linear interpolation has been used); Time-dependent; Scalar.

Type of: coreprof:toroid\_field (32)

### 9.1.1.3.260 transcoefel

Subtree containing transport coefficients from a transport model, for the electrons

member	type	description
diff_eff	vecflt.type (9.1.1.2.9)	Effective diffusivity [m <sup>2</sup> .s <sup>-1</sup> ]. Time-dependent. Vector (nrho)
vconv_eff	vecflt.type (9.1.1.2.9)	Effective convection [m.s <sup>-1</sup> ]. Time-dependent. Vector (nrho)
flux	vecflt.type (9.1.1.2.9)	Flux. Not used in transport equations [field.m.s <sup>-1</sup> ,m <sup>-3</sup> if field is not a density itself]. Time-dependent. Vector (nrho)
off_diagonal	offdiagel (9.1.1.3.141)	Details of the transport matrix, just for diagnostic (not used in transport equations). Time-dependent.
flag	integer (9.1.1.1.2)	Flag describing the form of transport produced by the original model : 0- not calculated, 1- D and V, 2- flux, 3- full transport matrix. Scalar.

Type of: coretransp:te\_transp (34) I neoclassic:mtor\_neo (49) I neoclassic:ne\_neo (49) I neoclassic:te\_neo (49)

### 9.1.1.3.261 transcoefimp

Subtree containing transport coefficients from a transport model, for the various impurity species (multiple charge states)

member	type	description
diff_eff	array3dflt.type (9.1.1.2.1)	Effective diffusivity [ $m^2.s^{-1}$ ]. Time-dependent. Array3d (nrho,nimp,max_nzimp)
vconv_eff	array3dflt.type (9.1.1.2.1)	Effective convection [ $m.s^{-1}$ ]. Time-dependent. Array3d (nrho,nimp,max_nzimp)
exchange	array3dflt.type (9.1.1.2.1)	Ion to electron energy exchange [ $W.m^{-3}$ ]. Time-dependent. Array3d (nrho,nimp,max_nzimp)
flux	array3dflt.type (9.1.1.2.1)	Flux. Not used in transport equations [ $field.m.s^{-1},m^{-3}$ if field is not a density itself]. Time-dependent. Array3d (nrho,nimp,max_nzimp)
flag	integer (9.1.1.1.2)	Flag describing the form of transport produced by the original model : 0- not calculated, 1- D and V, 2- flux, 3- full transport matrix (off-diagonal subtree not available for impurities for the moment). Scalar.

Type of: coretrans:nz\_transp (34) I coretrans:tz\_transp (34) I neoclassic:nz\_neo (49) I neoclassic:tz\_neo (49)

### 9.1.1.3.262 transcoefion

Subtree containing transport coefficients from a transport model, for the various ion species, including the energy exchange term qgi.

member	type	description
diff_eff	matflt.type (9.1.1.2.7)	Effective diffusivity [ $m^2.s^{-1}$ ]. Time-dependent. Matrix (nrho,nion)
vconv_eff	matflt.type (9.1.1.2.7)	Effective convection [ $m.s^{-1}$ ]. Time-dependent. Matrix (nrho,nion)
exchange	matflt.type (9.1.1.2.7)	Ion to electron energy exchange [ $W.m^{-3}$ ]. Time-dependent. Matrix(nrho,nion).
qgi	matflt.type (9.1.1.2.7)	Energy exchange term due to transport. [ $W.m^{-3}$ ]. Time-dependent. Matrix (nrho,nion)
flux	matflt.type (9.1.1.2.7)	Flux. Not used in transport equations [ $field.m.s^{-1},m^{-3}$ if field is not a density itself]. Time-dependent. Matrix (nrho,nion)
off.diagonal	offdiagion (9.1.1.3.142)	Details of the transport matrix, just for diagnostic (not used in transport equations). Time-dependent.
flag	integer (9.1.1.1.2)	Flag describing the form of transport produced by the original model : 0- not calculated, 1- D and V, 2- flux, 3- full transport matrix. Scalar.

Type of: coretrans:ti\_transp (34) I neoclassic:ni\_neo (49) I neoclassic:ti\_neo (49)

### 9.1.1.3.263 transcoefvtor

Subtree containing transport coefficients from a transport model, for the various ion species

member	type	description
diff_eff	matflt.type (9.1.1.2.7)	Effective diffusivity [ $m^2.s^{-1}$ ]. Time-dependent. Matrix (nrho,nion)
vconv_eff	matflt.type (9.1.1.2.7)	Effective convection [ $m.s^{-1}$ ]. Time-dependent. Matrix (nrho,nion)
flux	matflt.type (9.1.1.2.7)	Flux. Not used in transport equations [ $field.m.s^{-1},m^{-3}$ if field is not a density itself]. Time-dependent. Matrix (nrho,nion)
off.diagonal	offdiagion (9.1.1.3.142)	Details of the transport matrix, just for diagnostic (not used in transport equations). Time-dependent.
flag	integer (9.1.1.1.2)	Flag describing the form of transport produced by the original model : 0- not calculated, 1- D and V, 2- flux, 3- full transport matrix. Scalar.

Type of: coretrans:vtor\_transp (34)

### 9.1.1.3.264 tsmeasure

Measured values (Thomson scattering)

member	type	description
te	exp1D (9.1.1.3.111)	Electron temperature [eV]. Vector (nchords)
ne	exp1D (9.1.1.3.111)	Electron density [ $m^{-3}$ ]. Vector (nchords)

Type of: tsdiag:measure (59)

### 9.1.1.3.265 tssetup

diagnostic setup information

member	type	description
position	rzID (9.1.1.3.194)	RZ of intersection between laser and line of sight [m]; Vector (nchords)

Type of: tsdiag:setup (59)

### 9.1.1.3.266 turning\_pts

Location of turning points

member	type	description
upper	orbit_pos (9.1.1.3.145)	Position at upper turning point
lower	orbit_pos (9.1.1.3.145)	Position at lower turning point

Type of: special\_pos:turning\_pts (262)

### 9.1.1.3.267 typelist

Definition of types for each neutral species

member	type	description
ntype	vecint.type (9.1.1.2.10)	For each neutral species, number of possible types considered (in terms of energy : cold, thermal, fast, NBI, ...). Vector of integers (nneut)
type	matint.type (9.1.1.2.8)	Type of neutral, in terms of energy : 0=cold, 1=thermal, 2= fast, 3=NBI. Matrix of integers (nneut,max_ntype)

Type of: composition\_neutrals:typelist (82)

### 9.1.1.3.268 waveguides

Waveguides description

member	type	description
nwm_theta	vecint.type (9.1.1.2.10)	Number of waveguides per module in the poloidal direction. Vector of integers (nantenna_lh).
nwm_phi	vecint.type (9.1.1.2.10)	Number of waveguides per module in the toroidal direction. Vector of integers (nantenna_lh).
mask	matint.type (9.1.1.2.8)	Mask of passive and active waveguides for an internal module, Matrix of integers (nantenna_lh,max_nwm_phi)
npwbm_phi	vecint.type (9.1.1.2.10)	Number of passive waveguide between modules in the toroidal direction. Vector of integers (nantenna_lh).
npwe_phi	vecint.type (9.1.1.2.10)	Number of passive waveguides on each antenna edge in the toroidal direction. Vector of integers (nantenna_lh).
sw_theta	vecflt.type (9.1.1.2.9)	Spacing between poloidally neighboring waveguides [m], Vector (nantenna_lh)
hw_theta	vecflt.type (9.1.1.2.9)	Height of waveguides in the poloidal direction [m], Vector (nantenna_lh)
bwa	vecflt.type (9.1.1.2.9)	Width of active waveguides [m], Vector (nantenna_lh)
biwp	vecflt.type (9.1.1.2.9)	Width of internal passive waveguides [m], Vector (nantenna_lh)
bewp	vecflt.type (9.1.1.2.9)	Width of edge passive waveguides [m], Vector (nantenna_lh)
e_phi	matflt.type (9.1.1.2.7)	Thickness between waveguides in the toroidal direction [m], Matrix (nantenna_lh,nthick_phi). Reminder : nthick_phi = nmp_phi*nwm_phi + (nmp_phi - 1)*npwbm_phi + 2*npwe_phi
scl	matflt.type (9.1.1.2.7)	Short circuit length for passive waveguides [m], Matrix (nantenna_lh,nshort_phi). Reminder : nshort_phi = nmp_phi* npwm_phi + (nmp_phi - 1)*npwbm_phi + 2*npwe_phi

Type of: modules:waveguides (161)

### 9.1.1.3.269 waves\_global\_param

Global wave deposition parameters

member	type	description
frequency	vecflt.type (9.1.1.2.9)	Wave frequency [Hz]; Time-dependent; Vector (nfreq)
name	vecstring.type (9.1.1.2.11)	Antenna name, Vector of strings (nfreq)



member	type	description
type	vecstring.type (9.1.1.2.11)	Wave type (LH, EC, IC, ...), Vector of strings (nfreq)
nntor	vecint.type (9.1.1.2.10)	Number of toroidal mode numbers for each frequency; Vector (nfreq)
ntor	matint.type (9.1.1.2.8)	Toroidal mode numbers; Time dependent; Matrix (nfreq, max_nntor)
f_assumption	matint.type (9.1.1.2.8)	Assumption on the functions distribution used by the wave solver to calculate the power deposition : 0 = Maxwellian (linear absorption); 1 = quasi-linear (F given by a distribution function CPO). Integer matrix (nfreq, nion+1). The first value of the second index corresponds to the electrons, then to the other ion species. Time-dependent.
power_tot	vecflt.type (9.1.1.2.9)	Total absorbed wave power for each frequency [W]; Time-dependent; Vector (nfreq)
p_frac_ntor	matflt.type (9.1.1.2.7)	Fraction of wave power per toroidal mode number; Time-dependent; Matrix (nfreq, max_nntor)
pow_i	matflt.type (9.1.1.2.7)	Wave power absorbed by an ion species [W]; Time-dependent; Matrix (nfreq, nion)
pow_e	vecflt.type (9.1.1.2.9)	Wave power absorbed by the electrons [W]; Time-dependent; Vector (nfreq)
pow_ntor_i	array3dflt.type (9.1.1.2.1)	Wave power absorbed by an ion species per toroidal mode number [W]; Time-dependent; Array 3D (nfreq, max_nntor, nion)
pow_ntor_e	matflt.type (9.1.1.2.7)	Wave power absorbed by the electrons per toroidal mode number [W]; Time-dependent; Matrix (nfreq, max_nntor)
cur_tor	vecflt.type (9.1.1.2.9)	Wave driven toroidal current from a stand alone calculation (not consistent with other sources) [A]; Time-dependent; Vector (nfreq)
cur_tor_ntor	matflt.type (9.1.1.2.7)	Wave driven toroidal current for each toroidal mode number from a stand alone calculation (not consistent with other sources) [A]; Time-dependent; Matrix (nfreq, max_nntor)
code.type	vecint.type (9.1.1.2.10)	Type of wave deposition code for a given frequency: 1=beam/ray tracing; 2=full wave; Vector(nfreq)
freq_point	vecint.type (9.1.1.2.10)	Pointer to the frequency position in either the beamtracing or full wave branch for each frequency (the branch depends on code.type); Vector (nfreq)
toroid_field	b0r0 (9.1.1.3.45)	Characteristics of the vacuum toroidal field, redundant with the toroidfield CPO, to document the normalisation of parallel current densities in this CPO.

Type of: waves:global\_param (61)

### 9.1.1.3.270 waves\_grid

Grid points for 1D and 2D profiles

member	type	description
rho_tor_norm	matflt.type (9.1.1.2.7)	Normalised toroidal flux coordinate at the grid points for 1D and 2D profiles; Time-dependent; vector(nfreq, max_npsi)
rho_tor	matflt.type (9.1.1.2.7)	Toroidal flux coordinate at the grid points for 1D and 2D profiles [m]; Time-dependent; vector(nfreq, max_npsi)
psi	matflt.type (9.1.1.2.7)	Grid points in poloidal flux function [Wb], without $1/2\pi$ and such that $B_p =  \text{grad } \psi  / R / 2 / \pi$ . Time-dependent; Matrix(nfreq, max_npsi)
theta	matflt.type (9.1.1.2.7)	Grid points of the poloidal angle; Time-dependent; Matrix(nfreq, max_ntheta)
npsi	vecint.type (9.1.1.2.10)	Number of psi points in the grid for each frequency. Time-dependent; Vector (nfreq).
ntheta	vecint.type (9.1.1.2.10)	Number of theta points in the grid for each frequency. Time-dependent; Vector (nfreq).
rz_position	rz3D (9.1.1.3.197)	R (major radius) and Z (altitude) of grid points; Time-dependent; Array 3D (nfreq, max_npsi, max_ntheta)
theta_info	theta_info (9.1.1.3.258)	Information on the poloidal angle theta.

Type of: waves:grid (61)

### 9.1.1.3.271 waves\_profiles\_1d

waves 1D radial profiles

member	type	description
powd_tot	matflt.type (9.1.1.2.7)	Total flux surface averaged wave power density [ $W/m^3$ ]; Time-dependent; Matrix (nfreq, max_npsi)
powd_e	matflt.type (9.1.1.2.7)	Flux surface averaged absorbed wave power density on electrons [ $W/m^3$ ]; Time-dependent; Matrix (nfreq, max_npsi)
powd_i	array3dflt.type (9.1.1.2.1)	Flux surface averaged absorbed wave power density on ion species [ $W/m^3$ ]; Time-dependent; Array3D (nfreq, max_npsi, nion)
powd_ntor	array3dflt.type (9.1.1.2.1)	Flux surface averaged power density for each toroidal mode number [ $W/m^3$ ]; Time-dependent; Array 3D (nfreq, max_npsi, max_nntor)
powd_ntor_e	array3dflt.type (9.1.1.2.1)	Flux surface averaged absorbed power density for each toroidal mode number on electrons [ $W/m^3$ ]; Time-dependent; Array 3D (nfreq, max_npsi, max_nntor)
powd_ntor_i	array4dflt.type (9.1.1.2.3)	Flux surface averaged power density for each toroidal mode number on each ions species [ $W/m^3$ ]; Time-dependent; Array4D (nfreq, max_npsi, max_nntor, nion)
curd_tor	matflt.type (9.1.1.2.7)	Flux surface averaged wave driven toroidal current density = $\text{average}(\psi/R) / \text{average}(1/R)$ [ $A/m^2$ ]; Time-dependent; Matrix (nfreq, max_npsi)

member	type	description
curd_torntor	array3dflt.type (9.1.1.2.1)	Flux surface averaged wave driven toroidal current density for each toroidal mode number = average(jphi/R) / average(1/R) [A/m <sup>2</sup> ]; Time-dependent; Array 3D (nfreq, max_npsi, max_nntor)
pow_tot	matflt.type (9.1.1.2.7)	Volume integrated absorbed wave power density [W]; Time-dependent; Matrix (nfreq, max_npsi)
pow_e	matflt.type (9.1.1.2.7)	Volume integrated absorbed wave power density on electrons [W]; Time-dependent; Matrix (nfreq, max_npsi)
pow_i	array3dflt.type (9.1.1.2.1)	Volume integrated absorbed wave power density on ion species [W]; Time-dependent; Array3D (nfreq, max_npsi, nion)
pow_ntor	array3dflt.type (9.1.1.2.1)	Volume integrated power density for each toroidal mode number [W]; Time-dependent; Array 3D (nfreq, max_npsi, max_nntor)
pow_ntor_e	array3dflt.type (9.1.1.2.1)	Volume integrated power density for each toroidal mode number on the electrons [W]; Time-dependent; Array 3D (nfreq, max_npsi, max_nntor)
pow_ntor_i	array4dflt.type (9.1.1.2.3)	Volume integrated power density for each toroidal mode number on each ions species [W]; Time-dependent; Array4D (nfreq, max_npsi, max_nntor, nion)
curd_par	matflt.type (9.1.1.2.7)	Flux surface averaged wave driven parallel current density = average(j.B) / B0, where B0 is in global_param/toroid.field/b0, from stand alone calculation (not consistent with other sources) ; [A/m <sup>2</sup> ]; Time-dependent; Matrix (nfreq, max_npsi)
curd_parntor	array3dflt.type (9.1.1.2.1)	Flux surface averaged wave driven parallel current density for each toroidal mode number = average(j.B) / B0, where B0 is in global_param/toroid.field/b0, from stand alone calculation (not consistent with other sources) ; [A/m <sup>2</sup> ]; Time-dependent; Array 3D (nfreq, max_npsi, max_nntor)
cur_tor	matflt.type (9.1.1.2.7)	Wave driven toroidal current inside a flux surface from stand alone calculation (not consistent with other sources) [A]; Time-dependent; Matrix (nfreq, max_npsi)
cur_tor_ntor	array3dflt.type (9.1.1.2.1)	Wave driven toroidal current inside a flux surface for each toroidal mode number from a stand alone calculation (not consistent with other sources) [A]; Time-dependent; Array 3D (nfreq, max_npsi, max_nntor)

Type of: waves:profiles\_1d (61)

### 9.1.1.3.272 waves\_profiles\_2d

waves 2D profiles in poloidal cross-section

member	type	description
powd_tot	array3dflt.type (9.1.1.2.1)	Total wave power density; Time-dependent [W/m <sup>3</sup> ]; Array 3D (nfreq, max_npsi, max_ntheta)
powd_e	array3dflt.type (9.1.1.2.1)	Absorbed wave power density on electrons [W/m <sup>3</sup> ]; Time-dependent; Array3D (nfreq, max_npsi, max_ntheta)
powd_i	array4dflt.type (9.1.1.2.3)	Absorbed wave power density on ion species [W/m <sup>3</sup> ]; Time-dependent; Array4D (nfreq, max_npsi, max_ntheta, nion)
powd_ntor	array4dflt.type (9.1.1.2.3)	Absorbed power density for each toroidal mode number [W/m <sup>3</sup> ]; Time-dependent; Array 4D (nfreq, max_npsi, max_ntheta, max_nntor)
powd_ntor_e	array4dflt.type (9.1.1.2.3)	Absorbed power density for each toroidal mode number on electrons [W/m <sup>3</sup> ]; Time-dependent; Array 4D (nfreq, max_npsi, max_ntheta, max_nntor)
powd_ntor_i	array5dflt.type (9.1.1.2.4)	Absorbed power density for each toroidal mode number on each ions species [W/m <sup>3</sup> ]; Time-dependent; Array5D (nfreq, max_npsi, max_ntheta, max_nntor, nion)
powd_iharm	array5dflt.type (9.1.1.2.4)	Power density absorbed by an ion species for each toroidal mode number at a given harmonic cyclotron resonance ; Time-dependent (W/m <sup>3</sup> ); Array6D (nfreq, max_npsi, max_ntheta, max_nntor, nion, max_nharm)

Type of: waves:profiles\_2d (61)

### 9.1.1.3.273 waves\_rtposition

Ray/beam position

member	type	description
r	array3dflt.type (9.1.1.2.1)	Ray/beam major radius location [m]; Time-dependent; Array (3D) of double precision real (nfreq_beam, max_nbeams, max_npoints)
z	array3dflt.type (9.1.1.2.1)	Ray/beam vertical location [m]; Time-dependent; Array (3D) of double precision real (nfreq_beam, max_nbeams, max_npoints)
psi	array3dflt.type (9.1.1.2.1)	Poloidal magnetic flux coordinate of the ray/beam position [Wb], without 1/2pi and such that Bp= grad psi  /R/2/pi; Time-dependent; Array (3D) of double precision real (nfreq_beam, max_nbeams, max_npoints)
theta	array3dflt.type (9.1.1.2.1)	Ray/beam poloidal angle location [rad]; Time-dependent; Array (3D) of double precision real (nfreq_beam, max_nbeams, max_npoints). PRECISE THE DEFINITION OF THE POLOIDAL ANGLE, SEE THE PROFILES/GRID DEFINITIONS.
phi	array3dflt.type (9.1.1.2.1)	Ray/beam toroidal angle location [rdd]; Time-dependent; Array (3D) of double precision real (nfreq_beam, max_nbeams, max_npoints)

Type of: beamtracing:position (71)

### 9.1.1.3.274 waves\_rtwavevector

Ray/beam wave vector

member	type	description
kr	array3dflt.type (9.1.1.2.1)	Ray/beam wave vector in the major radius direction [m-1], Array (3D) of double precision real (nfreq_beam, max_nbeams, max_npoints). Time-dependent
kz	array3dflt.type (9.1.1.2.1)	Ray/beam wave vector in the vertical direction [m], Array (3D) of double precision real (nfreq_beam, max_nbeams, max_npoints). Time-dependent
npar	array3dflt.type (9.1.1.2.1)	Ray/beam parallel refractive index, Array (3D) of double precision real (nfreq_beam, max_nbeams, max_npoints). Time-dependent
nperp	array3dflt.type (9.1.1.2.1)	Ray/beam perpendicular refractive index, Array (3D) of double precision real (nfreq_beam, max_nbeams, max_npoints). Time-dependent
ntor	array3dflt.type (9.1.1.2.1)	Ray/beam toroidal wave number, Array (3D) of double precision real (nfreq_beam, max_nbeams, max_npoints/1). If var_ntor(nfreq_beam)=0, ntor is constant along the ray path and the last dimension is of size 1 in order to avoid useless repetition of ntor constant value. Time-dependent
var_ntor	vecint.type (9.1.1.2.10)	Flag telling whether ntor is constant along the ray path (0) or varying (1). Vector if integer (nfreq_beam).

Type of: beamtracing:wavevector (71)

### 9.1.1.3.275 whatref

Structure defining a database entry and the CPO occurrence

member	type	description
user	string (9.1.1.1.3)	Name of the user if private data, public if public ITM database.
machine	string (9.1.1.1.3)	Name of the device
shot	integer (9.1.1.1.2)	Shot number
run	integer (9.1.1.1.2)	Run number
occurrence	integer (9.1.1.1.2)	Occurrence number of the CPO in the reference entry

Type of: datainfo:whatref (97)

### 9.1.1.3.276 xpts

Position of the X-point(s)

member	type	description
position	rzID (9.1.1.3.194)	Position of the X-point(s); Time-dependent; Vector (nmeas)
source	string (9.1.1.1.3)	Description or path to the source signal (diagnostic or genprof, from which to read all info on the signal), e.g. 'magdiag/bpol_probes/measure/value'. String
weight	vecflt.type (9.1.1.2.9)	weight given to the measurement ( $\zeta=0$ ); -1 if exact data; Time-dependent; Vector (nmeas)
sigma	vecflt.type (9.1.1.2.9)	standard deviation of the measurement; Time-dependent; Vector (nmeas)
calculated	vecflt.type (9.1.1.2.9)	Signal as recalculated by the equilibrium code; Time-dependent; Vector (nmeas)
chi2	vecflt.type (9.1.1.2.9)	chi <sup>2</sup> of (calculated-measured); Time-dependent; Vector (nmeas)

Type of: eqconstraint:xpts (130) [itmtypes](#) <sup>173</sup>

## 9.1.2 CPO Instances

Generated from the ITM data structure schemas.

### 9.1.2.1 Fortran

#### 9.1.2.1.1 amns

datainfo (27)	amns%datainfo (datainfo) (9.1.1.3.73)
dataprovider (97)	amns%datainfo%dataprovider (string) (9.1.1.1.3)

<sup>173</sup>[https://www.efda-itm.eu/ITM/html/itmtypes\\_\\_4.08a.html](https://www.efda-itm.eu/ITM/html/itmtypes__4.08a.html)

putdate (97)	amns%datainfo%putdate (string) (9.1.1.1.3)
source (97)	amns%datainfo%source (string) (9.1.1.1.3)
comment (97)	amns%datainfo%comment (string) (9.1.1.1.3)
isref (97)	amns%datainfo%isref (integer) (9.1.1.1.2)
whatref (97)	amns%datainfo%whatref (whatref) (9.1.1.3.275)
user (299)	amns%datainfo%whatref%user (string) (9.1.1.1.3)
machine (299)	amns%datainfo%whatref%machine (string) (9.1.1.1.3)
shot (299)	amns%datainfo%whatref%shot (integer) (9.1.1.1.2)
run (299)	amns%datainfo%whatref%run (integer) (9.1.1.1.2)
occurrence (299)	amns%datainfo%whatref%occurrence (integer) (9.1.1.1.2)
putinfo (97)	amns%datainfo%putinfo (putinfo) (9.1.1.3.167)
putmethod (191)	amns%datainfo%putinfo%putmethod (string) (9.1.1.1.3)
putaccess (191)	amns%datainfo%putinfo%putaccess (string) (9.1.1.1.3)
putlocation (191)	amns%datainfo%putinfo%putlocation (string) (9.1.1.1.3)
rights (191)	amns%datainfo%putinfo%rights (string) (9.1.1.1.3)
version (27)	amns%version (string) (9.1.1.1.3)
source (27)	amns%source (string) (9.1.1.1.3)
zn (27)	amns%zn (integer) (9.1.1.1.2)
zion (27)	amns%zion (integer) (9.1.1.1.2)
amn (27)	amns%amn (vecflt.type) (9.1.1.2.9)
state_label (27)	amns%state_label (vecstring.type) (9.1.1.2.11)
result_label (27)	amns%result_label (vecstring.type) (9.1.1.2.11)
result_unit (27)	amns%result_unit (vecstring.type) (9.1.1.2.11)
result_trans (27)	amns%result_trans (vecint.type) (9.1.1.2.10)
bundled (27)	amns%bundled (integer) (9.1.1.1.2)
proc_label (27)	amns%proc_label (vecstring.type) (9.1.1.2.11)
tables (27)	amns%tables (tables) (9.1.1.3.257)
id (281)	amns%tables%id (matint.type) (9.1.1.2.8)
table_0d (281)	amns%tables%table_0d (table_0d) (9.1.1.3.246)
table (270)	amns%tables%table_0d%table (matflt.type) (9.1.1.2.7)
table_1d (281)	amns%tables%table_1d (table_1d) (9.1.1.3.247)
table_prop (271)	amns%tables%table_1d%table_prop (table_info1) (9.1.1.3.252)
coord_extrap (276)	amns%tables%table_1d%table_prop%coord_extrap (matint.type) (9.1.1.2.8)
interp_type (276)	amns%tables%table_1d%table_prop%interp_type (integer) (9.1.1.1.2)
coord_label (276)	amns%tables%table_1d%table_prop%coord_label (string) (9.1.1.1.3)
coord_unit (276)	amns%tables%table_1d%table_prop%coord_unit (string) (9.1.1.1.3)
coord_trans (276)	amns%tables%table_1d%table_prop%coord_trans (integer) (9.1.1.1.2)
unif_spacing (276)	amns%tables%table_1d%table_prop%unif_spacing (integer) (9.1.1.1.2)
coord1 (271)	amns%tables%table_1d%coord1 (vecflt.type) (9.1.1.2.9)
table (271)	amns%tables%table_1d%table (array3dflt.type) (9.1.1.2.1)
table_2d (281)	amns%tables%table_2d (table_2d) (9.1.1.3.248)
table_prop (272)	amns%tables%table_2d%table_prop (table_info2) (9.1.1.3.253)
coord_extrap (277)	amns%tables%table_2d%table_prop%coord_extrap (array3dint.type) (9.1.1.2.2)
interp_type (277)	amns%tables%table_2d%table_prop%interp_type (vecint.type) (9.1.1.2.10)
coord_label (277)	amns%tables%table_2d%table_prop%coord_label (vecstring.type) (9.1.1.2.11)
coord_unit (277)	amns%tables%table_2d%table_prop%coord_unit (vecstring.type) (9.1.1.2.11)
coord_trans (277)	amns%tables%table_2d%table_prop%coord_trans (vecint.type) (9.1.1.2.10)
unif_spacing (277)	amns%tables%table_2d%table_prop%unif_spacing (integer) (9.1.1.1.2)
coord1 (272)	amns%tables%table_2d%coord1 (vecflt.type) (9.1.1.2.9)
coord2 (272)	amns%tables%table_2d%coord2 (vecflt.type) (9.1.1.2.9)
table (272)	amns%tables%table_2d%table (array4dflt.type) (9.1.1.2.3)
table_3d (281)	amns%tables%table_3d (table_3d) (9.1.1.3.249)
table_prop (273)	amns%tables%table_3d%table_prop (table_info3) (9.1.1.3.254)
coord_extrap (278)	amns%tables%table_3d%table_prop%coord_extrap (array3dint.type) (9.1.1.2.2)
interp_type (278)	amns%tables%table_3d%table_prop%interp_type (vecint.type) (9.1.1.2.10)
coord_label (278)	amns%tables%table_3d%table_prop%coord_label (vecstring.type) (9.1.1.2.11)
coord_unit (278)	amns%tables%table_3d%table_prop%coord_unit (vecstring.type) (9.1.1.2.11)
coord_trans (278)	amns%tables%table_3d%table_prop%coord_trans (vecint.type) (9.1.1.2.10)
unif_spacing (278)	amns%tables%table_3d%table_prop%unif_spacing (integer) (9.1.1.1.2)
coord1 (273)	amns%tables%table_3d%coord1 (vecflt.type) (9.1.1.2.9)
coord2 (273)	amns%tables%table_3d%coord2 (vecflt.type) (9.1.1.2.9)

coord3 (273)	amns%tables%table_3d%coord3 (vecflt.type) (9.1.1.2.9)
table (273)	amns%tables%table_3d%table (array5dflt.type) (9.1.1.2.4)
table_4d (281)	amns%tables%table_4d (table_4d) (9.1.1.3.250)
table_prop (274)	amns%tables%table_4d%table_prop (table_info4) (9.1.1.3.255)
coord_extrap (279)	amns%tables%table_4d%table_prop%coord_extrap (array3dint.type) (9.1.1.2.2)
interp_type (279)	amns%tables%table_4d%table_prop%interp_type (vecint.type) (9.1.1.2.10)
coord_label (279)	amns%tables%table_4d%table_prop%coord_label (vecstring.type) (9.1.1.2.11)
coord_unit (279)	amns%tables%table_4d%table_prop%coord_unit (vecstring.type) (9.1.1.2.11)
coord_trans (279)	amns%tables%table_4d%table_prop%coord_trans (vecint.type) (9.1.1.2.10)
unif_spacing (279)	amns%tables%table_4d%table_prop%unif_spacing (integer) (9.1.1.1.2)
coord1 (274)	amns%tables%table_4d%coord1 (vecflt.type) (9.1.1.2.9)
coord2 (274)	amns%tables%table_4d%coord2 (vecflt.type) (9.1.1.2.9)
coord3 (274)	amns%tables%table_4d%coord3 (vecflt.type) (9.1.1.2.9)
coord4 (274)	amns%tables%table_4d%coord4 (vecflt.type) (9.1.1.2.9)
table (274)	amns%tables%table_4d%table (array6dflt.type) (9.1.1.2.5)
table_5d (281)	amns%tables%table_5d (table_5d) (9.1.1.3.251)
table_prop (275)	amns%tables%table_5d%table_prop (table_info5) (9.1.1.3.256)
coord_extrap (280)	amns%tables%table_5d%table_prop%coord_extrap (array3dint.type) (9.1.1.2.2)
interp_type (280)	amns%tables%table_5d%table_prop%interp_type (vecint.type) (9.1.1.2.10)
coord_label (280)	amns%tables%table_5d%table_prop%coord_label (vecstring.type) (9.1.1.2.11)
coord_unit (280)	amns%tables%table_5d%table_prop%coord_unit (vecstring.type) (9.1.1.2.11)
coord_trans (280)	amns%tables%table_5d%table_prop%coord_trans (vecint.type) (9.1.1.2.10)
unif_spacing (280)	amns%tables%table_5d%table_prop%unif_spacing (integer) (9.1.1.1.2)
coord1 (275)	amns%tables%table_5d%coord1 (vecflt.type) (9.1.1.2.9)
coord2 (275)	amns%tables%table_5d%coord2 (vecflt.type) (9.1.1.2.9)
coord3 (275)	amns%tables%table_5d%coord3 (vecflt.type) (9.1.1.2.9)
coord4 (275)	amns%tables%table_5d%coord4 (vecflt.type) (9.1.1.2.9)
coord5 (275)	amns%tables%table_5d%coord5 (vecflt.type) (9.1.1.2.9)
table (275)	amns%tables%table_5d%table (array6dflt.type) (9.1.1.2.5)

### 9.1.2.1.2 antennas

datainfo (28)	antennas%datainfo (datainfo) (9.1.1.3.73)
dataprovider (97)	antennas%datainfo%dataprovider (string) (9.1.1.1.3)
putdate (97)	antennas%datainfo%putdate (string) (9.1.1.1.3)
source (97)	antennas%datainfo%source (string) (9.1.1.1.3)
comment (97)	antennas%datainfo%comment (string) (9.1.1.1.3)
isref (97)	antennas%datainfo%isref (integer) (9.1.1.1.2)
whatref (97)	antennas%datainfo%whatref (whatref) (9.1.1.3.275)
user (299)	antennas%datainfo%whatref%user (string) (9.1.1.1.3)
machine (299)	antennas%datainfo%whatref%machine (string) (9.1.1.1.3)
shot (299)	antennas%datainfo%whatref%shot (integer) (9.1.1.1.2)
run (299)	antennas%datainfo%whatref%run (integer) (9.1.1.1.2)
occurrence (299)	antennas%datainfo%whatref%occurrence (integer) (9.1.1.1.2)
putinfo (97)	antennas%datainfo%putinfo (putinfo) (9.1.1.3.167)
putmethod (191)	antennas%datainfo%putinfo%putmethod (string) (9.1.1.1.3)
putaccess (191)	antennas%datainfo%putinfo%putaccess (string) (9.1.1.1.3)
putlocation (191)	antennas%datainfo%putinfo%putlocation (string) (9.1.1.1.3)
rights (191)	antennas%datainfo%putinfo%rights (string) (9.1.1.1.3)
antenna_ec (28)	antennas%antenna_ec (antenna_ec) (9.1.1.3.39)
name (63)	antennas%antenna_ec%name (vecstring.type) (9.1.1.2.11)
frequency (63)	antennas%antenna_ec%frequency (vecflt.type) (9.1.1.2.9)
power (63)	antennas%antenna_ec%power (exp1D) (9.1.1.3.111)
value (135)	antennas%antenna_ec%power%value (vecflt.type) (9.1.1.2.9)
abserror (135)	antennas%antenna_ec%power%abserror (vecflt.type) (9.1.1.2.9)
relerror (135)	antennas%antenna_ec%power%relerror (vecflt.type) (9.1.1.2.9)
mode (63)	antennas%antenna_ec%mode (vecint.type) (9.1.1.2.10)
position (63)	antennas%antenna_ec%position (rzphi1D) (9.1.1.3.198)
r (222)	antennas%antenna_ec%position%r (vecflt.type) (9.1.1.2.9)
z (222)	antennas%antenna_ec%position%z (vecflt.type) (9.1.1.2.9)
phi (222)	antennas%antenna_ec%position%phi (vecflt.type) (9.1.1.2.9)

launchangles (63)	antennas%antenna_ec%launchangles (launchangles) (9.1.1.3.129)
alpha (153)	antennas%antenna_ec%launchangles%alpha (vecflt.type) (9.1.1.2.9)
beta (153)	antennas%antenna_ec%launchangles%beta (vecflt.type) (9.1.1.2.9)
beam (63)	antennas%antenna_ec%beam (rf.beam) (9.1.1.3.192)
spot (216)	antennas%antenna_ec%beam%spot (spot) (9.1.1.3.240)
waist (264)	antennas%antenna_ec%beam%spot%waist (matflt.type) (9.1.1.2.7)
angle (264)	antennas%antenna_ec%beam%spot%angle (vecflt.type) (9.1.1.2.9)
phaseellipse (216)	antennas%antenna_ec%beam%phaseellipse (phaseellipse) (9.1.1.3.156)
invcurvrad (180)	antennas%antenna_ec%beam%phaseellipse%invcurvrad (matflt.type) (9.1.1.2.7)
angle (180)	antennas%antenna_ec%beam%phaseellipse%angle (vecflt.type) (9.1.1.2.9)
antenna_ic (28)	antennas%antenna_ic (antenna_ic) (9.1.1.3.40)
name (64)	antennas%antenna_ic%name (vecstring.type) (9.1.1.2.11)
frequency (64)	antennas%antenna_ic%frequency (exp1D) (9.1.1.3.111)
value (135)	antennas%antenna_ic%frequency%value (vecflt.type) (9.1.1.2.9)
abserror (135)	antennas%antenna_ic%frequency%abserror (vecflt.type) (9.1.1.2.9)
releror (135)	antennas%antenna_ic%frequency%releror (vecflt.type) (9.1.1.2.9)
power (64)	antennas%antenna_ic%power (exp1D) (9.1.1.3.111)
value (135)	antennas%antenna_ic%power%value (vecflt.type) (9.1.1.2.9)
abserror (135)	antennas%antenna_ic%power%abserror (vecflt.type) (9.1.1.2.9)
releror (135)	antennas%antenna_ic%power%releror (vecflt.type) (9.1.1.2.9)
setup (64)	antennas%antenna_ic%setup (antennaic_setup) (9.1.1.3.42)
straps (66)	antennas%antenna_ic%setup%straps (straps) (9.1.1.3.245)
nstraps (269)	antennas%antenna_ic%setup%straps%nstraps (vecint.type) (9.1.1.2.10)
phase (269)	antennas%antenna_ic%setup%straps%phase (exp2D) (9.1.1.3.112)
value (136)	antennas%antenna_ic%setup%straps%phase%value (matflt.type) (9.1.1.2.7)
abserror (136)	antennas%antenna_ic%setup%straps%phase%abserror (matflt.type) (9.1.1.2.7)
releror (136)	antennas%antenna_ic%setup%straps%phase%releror (matflt.type) (9.1.1.2.7)
phi_centre (269)	antennas%antenna_ic%setup%straps%phi_centre (matflt.type) (9.1.1.2.7)
width (269)	antennas%antenna_ic%setup%straps%width (matflt.type) (9.1.1.2.7)
dist2wall (269)	antennas%antenna_ic%setup%straps%dist2wall (matflt.type) (9.1.1.2.7)
ncoord_strap (269)	antennas%antenna_ic%setup%straps%ncoord_strap (matint.type) (9.1.1.2.8)
coord_strap (269)	antennas%antenna_ic%setup%straps%coord_strap (rz3D) (9.1.1.3.197)
r (221)	antennas%antenna_ic%setup%straps%coord_strap%r (array3dflt.type) (9.1.1.2.1)
z (221)	antennas%antenna_ic%setup%straps%coord_strap%z (array3dflt.type) (9.1.1.2.1)
antenna_lh (28)	antennas%antenna_lh (antenna_lh) (9.1.1.3.41)
name (65)	antennas%antenna_lh%name (vecstring.type) (9.1.1.2.11)
frequency (65)	antennas%antenna_lh%frequency (vecflt.type) (9.1.1.2.9)
power (65)	antennas%antenna_lh%power (exp1D) (9.1.1.3.111)
value (135)	antennas%antenna_lh%power%value (vecflt.type) (9.1.1.2.9)
abserror (135)	antennas%antenna_lh%power%abserror (vecflt.type) (9.1.1.2.9)
releror (135)	antennas%antenna_lh%power%releror (vecflt.type) (9.1.1.2.9)
position (65)	antennas%antenna_lh%position (rzphi1Dexp) (9.1.1.3.199)
r (223)	antennas%antenna_lh%position%r (exp1D) (9.1.1.3.111)
value (135)	antennas%antenna_lh%position%r%value (vecflt.type) (9.1.1.2.9)
abserror (135)	antennas%antenna_lh%position%r%abserror (vecflt.type) (9.1.1.2.9)
releror (135)	antennas%antenna_lh%position%r%releror (vecflt.type) (9.1.1.2.9)
z (223)	antennas%antenna_lh%position%z (exp1D) (9.1.1.3.111)
value (135)	antennas%antenna_lh%position%z%value (vecflt.type) (9.1.1.2.9)
abserror (135)	antennas%antenna_lh%position%z%abserror (vecflt.type) (9.1.1.2.9)
releror (135)	antennas%antenna_lh%position%z%releror (vecflt.type) (9.1.1.2.9)
phi (223)	antennas%antenna_lh%position%phi (exp1D) (9.1.1.3.111)
value (135)	antennas%antenna_lh%position%phi%value (vecflt.type) (9.1.1.2.9)
abserror (135)	antennas%antenna_lh%position%phi%abserror (vecflt.type) (9.1.1.2.9)
releror (135)	antennas%antenna_lh%position%phi%releror (vecflt.type) (9.1.1.2.9)
setup (65)	antennas%antenna_lh%setup (antennalh_setup) (9.1.1.3.43)
modules (67)	antennas%antenna_lh%setup%modules (modules) (9.1.1.3.137)
nma_theta (161)	antennas%antenna_lh%setup%modules%nma_theta (vecint.type) (9.1.1.2.10)
nma_phi (161)	antennas%antenna_lh%setup%modules%nma_phi (vecint.type) (9.1.1.2.10)
sm_theta (161)	antennas%antenna_lh%setup%modules%sm_theta (vecflt.type) (9.1.1.2.9)
amplitude (161)	antennas%antenna_lh%setup%modules%amplitude (array3dflt.type) (9.1.1.2.1)
phase (161)	antennas%antenna_lh%setup%modules%phase (array3dflt.type) (9.1.1.2.1)

waveguides (161)	antennas%antenna.lh%setup%modules%waveguides (waveguides) (9.1.1.3.268)
nwm_theta (292)	antennas%antenna.lh%setup%modules%waveguides%nwm_theta (vecint_type) (9.1.1.2.10)
nwm_phi (292)	antennas%antenna.lh%setup%modules%waveguides%nwm_phi (vecint_type) (9.1.1.2.10)
mask (292)	antennas%antenna.lh%setup%modules%waveguides%mask (matint_type) (9.1.1.2.8)
npwbm_phi (292)	antennas%antenna.lh%setup%modules%waveguides%npwbm_phi (vecint_type) (9.1.1.2.10)
npwe_phi (292)	antennas%antenna.lh%setup%modules%waveguides%npwe_phi (vecint_type) (9.1.1.2.10)
sw_theta (292)	antennas%antenna.lh%setup%modules%waveguides%sw_theta (vecflt_type) (9.1.1.2.9)
hw_theta (292)	antennas%antenna.lh%setup%modules%waveguides%hw_theta (vecflt_type) (9.1.1.2.9)
bwa (292)	antennas%antenna.lh%setup%modules%waveguides%bwa (vecflt_type) (9.1.1.2.9)
biwp (292)	antennas%antenna.lh%setup%modules%waveguides%biwp (vecflt_type) (9.1.1.2.9)
bewp (292)	antennas%antenna.lh%setup%modules%waveguides%bewp (vecflt_type) (9.1.1.2.9)
e_phi (292)	antennas%antenna.lh%setup%modules%waveguides%e_phi (matflt_type) (9.1.1.2.7)
scl (292)	antennas%antenna.lh%setup%modules%waveguides%scl (matflt_type) (9.1.1.2.7)
plasmaedge (65)	antennas%antenna.lh%plasmaedge (plasmaedge) (9.1.1.3.157)
npoints (181)	antennas%antenna.lh%plasmaedge%npoints (vecint_type) (9.1.1.2.10)
distance (181)	antennas%antenna.lh%plasmaedge%distance (matflt_type) (9.1.1.2.7)
density (181)	antennas%antenna.lh%plasmaedge%density (matflt_type) (9.1.1.2.7)
beam (65)	antennas%antenna.lh%beam (rf_beam) (9.1.1.3.192)
spot (216)	antennas%antenna.lh%beam%spot (spot) (9.1.1.3.240)
waist (264)	antennas%antenna.lh%beam%spot%waist (matflt_type) (9.1.1.2.7)
angle (264)	antennas%antenna.lh%beam%spot%angle (vecflt_type) (9.1.1.2.9)
phaseellipse (216)	antennas%antenna.lh%beam%phaseellipse (phaseellipse) (9.1.1.3.156)
invcurvrad (180)	antennas%antenna.lh%beam%phaseellipse%invcurvrad (matflt_type) (9.1.1.2.7)
angle (180)	antennas%antenna.lh%beam%phaseellipse%angle (vecflt_type) (9.1.1.2.9)
codeparam (28)	antennas%codeparam (codeparam) (9.1.1.3.55)
codename (79)	antennas%codeparam%codename (string) (9.1.1.1.3)
codeversion (79)	antennas%codeparam%codeversion (string) (9.1.1.1.3)
parameters (79)	antennas%codeparam%parameters (string) (9.1.1.1.3)
output_diag (79)	antennas%codeparam%output_diag (string) (9.1.1.1.3)
output_flag (79)	antennas%codeparam%output_flag (integer) (9.1.1.1.2)
time (28)	antennas%time (float) (9.1.1.1.1)

### 9.1.2.1.3 coredelta

datainfo (29)	coredelta%datainfo (datainfo) (9.1.1.3.73)
dataprovider (97)	coredelta%datainfo%dataprovider (string) (9.1.1.1.3)
putdate (97)	coredelta%datainfo%putdate (string) (9.1.1.1.3)
source (97)	coredelta%datainfo%source (string) (9.1.1.1.3)
comment (97)	coredelta%datainfo%comment (string) (9.1.1.1.3)
isref (97)	coredelta%datainfo%isref (integer) (9.1.1.1.2)
whatref (97)	coredelta%datainfo%whatref (whatref) (9.1.1.3.275)
user (299)	coredelta%datainfo%whatref%user (string) (9.1.1.1.3)
machine (299)	coredelta%datainfo%whatref%machine (string) (9.1.1.1.3)
shot (299)	coredelta%datainfo%whatref%shot (integer) (9.1.1.1.2)
run (299)	coredelta%datainfo%whatref%run (integer) (9.1.1.1.2)
occurrence (299)	coredelta%datainfo%whatref%occurrence (integer) (9.1.1.1.2)
putinfo (97)	coredelta%datainfo%putinfo (putinfo) (9.1.1.3.167)
putmethod (191)	coredelta%datainfo%putinfo%putmethod (string) (9.1.1.1.3)
putaccess (191)	coredelta%datainfo%putinfo%putaccess (string) (9.1.1.1.3)
putlocation (191)	coredelta%datainfo%putinfo%putlocation (string) (9.1.1.1.3)
rights (191)	coredelta%datainfo%putinfo%rights (string) (9.1.1.1.3)
composition (29)	coredelta%composition (composition) (9.1.1.3.57)
amn (81)	coredelta%composition%amn (vecflt_type) (9.1.1.2.9)
zn (81)	coredelta%composition%zn (vecflt_type) (9.1.1.2.9)
zion (81)	coredelta%composition%zion (vecflt_type) (9.1.1.2.9)
imp_flag (81)	coredelta%composition%imp_flag (vecint_type) (9.1.1.2.10)
rho_tor (29)	coredelta%rho_tor (vecflt_type) (9.1.1.2.9)
rho_tor_norm (29)	coredelta%rho_tor_norm (vecflt_type) (9.1.1.2.9)
delta_psi (29)	coredelta%delta_psi (vecflt_type) (9.1.1.2.9)
delta_te (29)	coredelta%delta_te (vecflt_type) (9.1.1.2.9)
delta_ti (29)	coredelta%delta_ti (matflt_type) (9.1.1.2.7)



<a href="#">delta_tz (29)</a>	<code>coredelta%delta_tz</code> (array3dflt.type) (9.1.1.2.1)
<a href="#">delta_ne (29)</a>	<code>coredelta%delta_ne</code> (vecflt.type) (9.1.1.2.9)
<a href="#">delta_ni (29)</a>	<code>coredelta%delta_ni</code> (matflt.type) (9.1.1.2.7)
<a href="#">delta_nz (29)</a>	<code>coredelta%delta_nz</code> (array3dflt.type) (9.1.1.2.1)
<a href="#">delta_vtor (29)</a>	<code>coredelta%delta_vtor</code> (matflt.type) (9.1.1.2.7)
<a href="#">codeparam (29)</a>	<code>coredelta%codeparam</code> (codeparam) (9.1.1.3.55)
<a href="#">codename (79)</a>	<code>coredelta%codeparam%codename</code> (string) (9.1.1.1.3)
<a href="#">codeversion (79)</a>	<code>coredelta%codeparam%codeversion</code> (string) (9.1.1.1.3)
<a href="#">parameters (79)</a>	<code>coredelta%codeparam%parameters</code> (string) (9.1.1.1.3)
<a href="#">output_diag (79)</a>	<code>coredelta%codeparam%output_diag</code> (string) (9.1.1.1.3)
<a href="#">output_flag (79)</a>	<code>coredelta%codeparam%output_flag</code> (integer) (9.1.1.1.2)
<a href="#">time (29)</a>	<code>coredelta%time</code> (float) (9.1.1.1.1)

#### 9.1.2.1.4 coreimpur

<a href="#">datainfo (30)</a>	<code>coreimpur%datainfo</code> (datainfo) (9.1.1.3.73)
<a href="#">dataprovder (97)</a>	<code>coreimpur%datainfo%dataprovder</code> (string) (9.1.1.1.3)
<a href="#">putdate (97)</a>	<code>coreimpur%datainfo%putdate</code> (string) (9.1.1.1.3)
<a href="#">source (97)</a>	<code>coreimpur%datainfo%source</code> (string) (9.1.1.1.3)
<a href="#">comment (97)</a>	<code>coreimpur%datainfo%comment</code> (string) (9.1.1.1.3)
<a href="#">isref (97)</a>	<code>coreimpur%datainfo%isref</code> (integer) (9.1.1.1.2)
<a href="#">whatref (97)</a>	<code>coreimpur%datainfo%whatref</code> (whatref) (9.1.1.3.275)
<a href="#">user (299)</a>	<code>coreimpur%datainfo%whatref%user</code> (string) (9.1.1.1.3)
<a href="#">machine (299)</a>	<code>coreimpur%datainfo%whatref%machine</code> (string) (9.1.1.1.3)
<a href="#">shot (299)</a>	<code>coreimpur%datainfo%whatref%shot</code> (integer) (9.1.1.1.2)
<a href="#">run (299)</a>	<code>coreimpur%datainfo%whatref%run</code> (integer) (9.1.1.1.2)
<a href="#">occurrence (299)</a>	<code>coreimpur%datainfo%whatref%occurrence</code> (integer) (9.1.1.1.2)
<a href="#">putinfo (97)</a>	<code>coreimpur%datainfo%putinfo</code> (putinfo) (9.1.1.3.167)
<a href="#">putmethod (191)</a>	<code>coreimpur%datainfo%putinfo%putmethod</code> (string) (9.1.1.1.3)
<a href="#">putaccess (191)</a>	<code>coreimpur%datainfo%putinfo%putaccess</code> (string) (9.1.1.1.3)
<a href="#">putlocation (191)</a>	<code>coreimpur%datainfo%putinfo%putlocation</code> (string) (9.1.1.1.3)
<a href="#">rights (191)</a>	<code>coreimpur%datainfo%putinfo%rights</code> (string) (9.1.1.1.3)
<a href="#">rho_tor_norm (30)</a>	<code>coreimpur%rho_tor_norm</code> (vecflt.type) (9.1.1.2.9)
<a href="#">rho_tor (30)</a>	<code>coreimpur%rho_tor</code> (vecflt.type) (9.1.1.2.9)
<a href="#">source (30)</a>	<code>coreimpur%source</code> (vecstring.type) (9.1.1.2.11)
<a href="#">flag (30)</a>	<code>coreimpur%flag</code> (vecint.type) (9.1.1.2.10)
<a href="#">desc_impur (30)</a>	<code>coreimpur%desc_impur</code> (desc_impur) (9.1.1.3.74)
<a href="#">amn (98)</a>	<code>coreimpur%desc_impur%amn</code> (vecflt.type) (9.1.1.2.9)
<a href="#">zn (98)</a>	<code>coreimpur%desc_impur%zn</code> (vecint.type) (9.1.1.2.10)
<a href="#">i_ion (98)</a>	<code>coreimpur%desc_impur%i_ion</code> (vecint.type) (9.1.1.2.10)
<a href="#">nzimp (98)</a>	<code>coreimpur%desc_impur%nzimp</code> (vecint.type) (9.1.1.2.10)
<a href="#">zmin (98)</a>	<code>coreimpur%desc_impur%zmin</code> (matint.type) (9.1.1.2.8)
<a href="#">zmax (98)</a>	<code>coreimpur%desc_impur%zmax</code> (matint.type) (9.1.1.2.8)
<a href="#">z (30)</a>	<code>coreimpur%z</code> (array3dflt.type) (9.1.1.2.1)
<a href="#">zsq (30)</a>	<code>coreimpur%zsq</code> (array3dflt.type) (9.1.1.2.1)
<a href="#">nz (30)</a>	<code>coreimpur%nz</code> (array3dflt.type) (9.1.1.2.1)
<a href="#">source_term (30)</a>	<code>coreimpur%source_term</code> (sourceimp) (9.1.1.3.236)
<a href="#">value (260)</a>	<code>coreimpur%source_term%value</code> (array3dflt.type) (9.1.1.2.1)
<a href="#">integral (260)</a>	<code>coreimpur%source_term%integral</code> (array3dflt.type) (9.1.1.2.1)
<a href="#">source (260)</a>	<code>coreimpur%source_term%source</code> (vecstring.type) (9.1.1.2.11)
<a href="#">boundary (30)</a>	<code>coreimpur%boundary</code> (boundaryimp) (9.1.1.3.52)
<a href="#">value (76)</a>	<code>coreimpur%boundary%value</code> (array3dflt.type) (9.1.1.2.1)
<a href="#">source (76)</a>	<code>coreimpur%boundary%source</code> (vecstring.type) (9.1.1.2.11)
<a href="#">type (76)</a>	<code>coreimpur%boundary%type</code> (matint.type) (9.1.1.2.8)
<a href="#">rho (76)</a>	<code>coreimpur%boundary%rho</code> (matflt.type) (9.1.1.2.7)
<a href="#">codeparam (76)</a>	<code>coreimpur%boundary%codeparam</code> (codeparam) (9.1.1.3.55)
<a href="#">codename (79)</a>	<code>coreimpur%boundary%codeparam%codename</code> (string) (9.1.1.1.3)
<a href="#">codeversion (79)</a>	<code>coreimpur%boundary%codeparam%codeversion</code> (string) (9.1.1.1.3)
<a href="#">parameters (79)</a>	<code>coreimpur%boundary%codeparam%parameters</code> (string) (9.1.1.1.3)
<a href="#">output_diag (79)</a>	<code>coreimpur%boundary%codeparam%output_diag</code> (string) (9.1.1.1.3)
<a href="#">output_flag (79)</a>	<code>coreimpur%boundary%codeparam%output_flag</code> (integer) (9.1.1.1.2)



transp_coef (30)	coreimpur%transp_coef (coretransimp) (9.1.1.3.69)
diff (93)	coreimpur%transp_coef%diff (array3dflt_type) (9.1.1.2.1)
vconv (93)	coreimpur%transp_coef%vconv (array3dflt_type) (9.1.1.2.1)
source (93)	coreimpur%transp_coef%source (vecstring_type) (9.1.1.2.11)
flux (30)	coreimpur%flux (fluximp) (9.1.1.3.117)
flux_dv (141)	coreimpur%flux%flux_dv (array3dflt_type) (9.1.1.2.1)
flux_interp (141)	coreimpur%flux%flux_interp (array3dflt_type) (9.1.1.2.1)
time_deriv (30)	coreimpur%time_deriv (array3dflt_type) (9.1.1.2.1)
atomic_data (30)	coreimpur%atomic_data (vecstring_type) (9.1.1.2.11)
time (30)	coreimpur%time (float) (9.1.1.1.1)
codeparam (30)	coreimpur%codeparam (codeparam) (9.1.1.3.55)
codename (79)	coreimpur%codeparam%codename (string) (9.1.1.1.3)
codeversion (79)	coreimpur%codeparam%codeversion (string) (9.1.1.1.3)
parameters (79)	coreimpur%codeparam%parameters (string) (9.1.1.1.3)
output_diag (79)	coreimpur%codeparam%output_diag (string) (9.1.1.1.3)
output_flag (79)	coreimpur%codeparam%output_flag (integer) (9.1.1.1.2)

### 9.1.2.1.5 coreneutrals

datainfo (31)	coreneutrals%datainfo (datainfo) (9.1.1.3.73)
dataprovider (97)	coreneutrals%datainfo%dataprovider (string) (9.1.1.1.3)
putdate (97)	coreneutrals%datainfo%putdate (string) (9.1.1.1.3)
source (97)	coreneutrals%datainfo%source (string) (9.1.1.1.3)
comment (97)	coreneutrals%datainfo%comment (string) (9.1.1.1.3)
isref (97)	coreneutrals%datainfo%isref (integer) (9.1.1.1.2)
whatref (97)	coreneutrals%datainfo%whatref (whatref) (9.1.1.3.275)
user (299)	coreneutrals%datainfo%whatref%user (string) (9.1.1.1.3)
machine (299)	coreneutrals%datainfo%whatref%machine (string) (9.1.1.1.3)
shot (299)	coreneutrals%datainfo%whatref%shot (integer) (9.1.1.1.2)
run (299)	coreneutrals%datainfo%whatref%run (integer) (9.1.1.1.2)
occurrence (299)	coreneutrals%datainfo%whatref%occurrence (integer) (9.1.1.1.2)
putinfo (97)	coreneutrals%datainfo%putinfo (putinfo) (9.1.1.3.167)
putmethod (191)	coreneutrals%datainfo%putinfo%putmethod (string) (9.1.1.1.3)
putaccess (191)	coreneutrals%datainfo%putinfo%putaccess (string) (9.1.1.1.3)
putlocation (191)	coreneutrals%datainfo%putinfo%putlocation (string) (9.1.1.1.3)
rights (191)	coreneutrals%datainfo%putinfo%rights (string) (9.1.1.1.3)
rho_tor (31)	coreneutrals%rho_tor (vecflt_type) (9.1.1.2.9)
rho_tor_norm (31)	coreneutrals%rho_tor_norm (vecflt_type) (9.1.1.2.9)
composition (31)	coreneutrals%composition (composition_neutrals) (9.1.1.3.58)
atomlist (82)	coreneutrals%composition%atomlist (atomlist) (9.1.1.3.44)
amn (68)	coreneutrals%composition%atomlist%amn (vecflt_type) (9.1.1.2.9)
zn (68)	coreneutrals%composition%atomlist%zn (vecflt_type) (9.1.1.2.9)
neutrallist (82)	coreneutrals%composition%neutrallist (neutrallist) (9.1.1.3.139)
ncomp (163)	coreneutrals%composition%neutrallist%ncomp (vecint_type) (9.1.1.2.10)
tatm (163)	coreneutrals%composition%neutrallist%tatm (matint_type) (9.1.1.2.8)
multatm (163)	coreneutrals%composition%neutrallist%multatm (matint_type) (9.1.1.2.8)
typelist (82)	coreneutrals%composition%typelist (typelist) (9.1.1.3.267)
ntype (291)	coreneutrals%composition%typelist%ntype (vecint_type) (9.1.1.2.10)
type (291)	coreneutrals%composition%typelist%type (matint_type) (9.1.1.2.8)
profiles (31)	coreneutrals%profiles (profiles_neutrals) (9.1.1.3.164)
n0 (188)	coreneutrals%profiles%n0 (corefieldneutral) (9.1.1.3.62)
value (86)	coreneutrals%profiles%n0%value (array3dflt_type) (9.1.1.2.1)
flux (86)	coreneutrals%profiles%n0%flux (array3dflt_type) (9.1.1.2.1)
boundary (86)	coreneutrals%profiles%n0%boundary (boundary_neutrals) (9.1.1.3.50)
value (74)	coreneutrals%profiles%n0%boundary%value (array3dflt_type) (9.1.1.2.1)
type (74)	coreneutrals%profiles%n0%boundary%type (matint_type) (9.1.1.2.8)
rho_tor (74)	coreneutrals%profiles%n0%boundary%rho_tor (matint_type) (9.1.1.2.8)
t0 (188)	coreneutrals%profiles%t0 (corefieldneutrals) (9.1.1.3.63)
value (87)	coreneutrals%profiles%t0%value (array3dflt_type) (9.1.1.2.1)
flux (87)	coreneutrals%profiles%t0%flux (array3dflt_type) (9.1.1.2.1)
boundary (87)	coreneutrals%profiles%t0%boundary (boundary_neutrals) (9.1.1.3.50)

value (74)	coreneutrals%profiles%t0%boundary%value (array3dflt_type) (9.1.1.2.1)
type (74)	coreneutrals%profiles%t0%boundary%type (matint_type) (9.1.1.2.8)
rho_tor (74)	coreneutrals%profiles%t0%boundary%rho_tor (matint_type) (9.1.1.2.8)
v0 (188)	coreneutrals%profiles%v0 (corefieldneutralv0) (9.1.1.3.65)
toroidal (89)	coreneutrals%profiles%v0%toroidal (corefieldneutralv) (9.1.1.3.64)
value (88)	coreneutrals%profiles%v0%toroidal%value (array3dflt_type) (9.1.1.2.1)
boundary (88)	coreneutrals%profiles%v0%toroidal%boundary (boundary_neutrals) (9.1.1.3.50)
value (74)	coreneutrals%profiles%v0%toroidal%boundary%value (array3dflt_type) (9.1.1.2.1)
type (74)	coreneutrals%profiles%v0%toroidal%boundary%type (matint_type) (9.1.1.2.8)
rho_tor (74)	coreneutrals%profiles%v0%toroidal%boundary%rho_tor (matint_type) (9.1.1.2.8)
poloidal (89)	coreneutrals%profiles%v0%poloidal (corefieldneutralv) (9.1.1.3.64)
value (88)	coreneutrals%profiles%v0%poloidal%value (array3dflt_type) (9.1.1.2.1)
boundary (88)	coreneutrals%profiles%v0%poloidal%boundary (boundary_neutrals) (9.1.1.3.50)
value (74)	coreneutrals%profiles%v0%poloidal%boundary%value (array3dflt_type) (9.1.1.2.1)
type (74)	coreneutrals%profiles%v0%poloidal%boundary%type (matint_type) (9.1.1.2.8)
rho_tor (74)	coreneutrals%profiles%v0%poloidal%boundary%rho_tor (matint_type) (9.1.1.2.8)
radial (89)	coreneutrals%profiles%v0%radial (corefieldneutralv) (9.1.1.3.64)
value (88)	coreneutrals%profiles%v0%radial%value (array3dflt_type) (9.1.1.2.1)
boundary (88)	coreneutrals%profiles%v0%radial%boundary (boundary_neutrals) (9.1.1.3.50)
value (74)	coreneutrals%profiles%v0%radial%boundary%value (array3dflt_type) (9.1.1.2.1)
type (74)	coreneutrals%profiles%v0%radial%boundary%type (matint_type) (9.1.1.2.8)
rho_tor (74)	coreneutrals%profiles%v0%radial%boundary%rho_tor (matint_type) (9.1.1.2.8)
prad0 (188)	coreneutrals%profiles%prad0 (matflt_type) (9.1.1.2.7)
coefficients (31)	coreneutrals%coefficients (coefficients_neutrals) (9.1.1.3.56)
recycling (80)	coreneutrals%coefficients%recycling (recycling_neutrals) (9.1.1.3.169)
particles (193)	coreneutrals%coefficients%recycling%particles (matflt_type) (9.1.1.2.7)
energy (193)	coreneutrals%coefficients%recycling%energy (matflt_type) (9.1.1.2.7)
sputtering (80)	coreneutrals%coefficients%sputtering (sputtering_neutrals) (9.1.1.3.241)
physical (265)	coreneutrals%coefficients%sputtering%physical (matflt_type) (9.1.1.2.7)
chemical (265)	coreneutrals%coefficients%sputtering%chemical (matflt_type) (9.1.1.2.7)
codeparam (31)	coreneutrals%codeparam (codeparam) (9.1.1.3.55)
codename (79)	coreneutrals%codeparam%codename (string) (9.1.1.1.3)
codeversion (79)	coreneutrals%codeparam%codeversion (string) (9.1.1.1.3)
parameters (79)	coreneutrals%codeparam%parameters (string) (9.1.1.1.3)
output_diag (79)	coreneutrals%codeparam%output_diag (string) (9.1.1.1.3)
output_flag (79)	coreneutrals%codeparam%output_flag (integer) (9.1.1.1.2)
time (31)	coreneutrals%time (float) (9.1.1.1.1)

### 9.1.2.1.6 coreprof

datainfo (32)	coreprof%datainfo (datainfo) (9.1.1.3.73)
dataprovider (97)	coreprof%datainfo%dataprovider (string) (9.1.1.1.3)
putdate (97)	coreprof%datainfo%putdate (string) (9.1.1.1.3)
source (97)	coreprof%datainfo%source (string) (9.1.1.1.3)
comment (97)	coreprof%datainfo%comment (string) (9.1.1.1.3)
isref (97)	coreprof%datainfo%isref (integer) (9.1.1.1.2)
whatref (97)	coreprof%datainfo%whatref (whatref) (9.1.1.3.275)
user (299)	coreprof%datainfo%whatref%user (string) (9.1.1.1.3)
machine (299)	coreprof%datainfo%whatref%machine (string) (9.1.1.1.3)
shot (299)	coreprof%datainfo%whatref%shot (integer) (9.1.1.1.2)
run (299)	coreprof%datainfo%whatref%run (integer) (9.1.1.1.2)
occurrence (299)	coreprof%datainfo%whatref%occurrence (integer) (9.1.1.1.2)
putinfo (97)	coreprof%datainfo%putinfo (putinfo) (9.1.1.3.167)
putmethod (191)	coreprof%datainfo%putinfo%putmethod (string) (9.1.1.1.3)
putaccess (191)	coreprof%datainfo%putinfo%putaccess (string) (9.1.1.1.3)
putlocation (191)	coreprof%datainfo%putinfo%putlocation (string) (9.1.1.1.3)
rights (191)	coreprof%datainfo%putinfo%rights (string) (9.1.1.1.3)
rho_tor_norm (32)	coreprof%rho_tor_norm (vecflt_type) (9.1.1.2.9)
rho_tor (32)	coreprof%rho_tor (vecflt_type) (9.1.1.2.9)
drho_dt (32)	coreprof%drho_dt (vecflt_type) (9.1.1.2.9)
toroid_field (32)	coreprof%toroid_field (toroid_field) (9.1.1.3.259)

b0 (283)	coreprof%toroid.field%b0 (float) (9.1.1.1.1)
b0prime (283)	coreprof%toroid.field%b0prime (float) (9.1.1.1.1)
r0 (283)	coreprof%toroid.field%r0 (float) (9.1.1.1.1)
time (283)	coreprof%toroid.field%time (float) (9.1.1.1.1)
composition (32)	coreprof%composition (composition) (9.1.1.3.57)
amn (81)	coreprof%composition%amn (vecflt.type) (9.1.1.2.9)
zn (81)	coreprof%composition%zn (vecflt.type) (9.1.1.2.9)
zion (81)	coreprof%composition%zion (vecflt.type) (9.1.1.2.9)
imp_flag (81)	coreprof%composition%imp_flag (vecint.type) (9.1.1.2.10)
psi (32)	coreprof%psi (psi) (9.1.1.3.166)
value (190)	coreprof%psi%value (vecflt.type) (9.1.1.2.9)
source (190)	coreprof%psi%source (string) (9.1.1.1.3)
flag (190)	coreprof%psi%flag (integer) (9.1.1.1.2)
boundary (190)	coreprof%psi%boundary (boundary) (9.1.1.3.49)
value (73)	coreprof%psi%boundary%value (vecflt.type) (9.1.1.2.9)
source (73)	coreprof%psi%boundary%source (string) (9.1.1.1.3)
type (73)	coreprof%psi%boundary%type (integer) (9.1.1.1.2)
rho (73)	coreprof%psi%boundary%rho (float) (9.1.1.1.1)
codeparam (73)	coreprof%psi%boundary%codeparam (codeparam) (9.1.1.3.55)
codename (79)	coreprof%psi%boundary%codeparam%codename (string) (9.1.1.1.3)
codeversion (79)	coreprof%psi%boundary%codeparam%codeversion (string) (9.1.1.1.3)
parameters (79)	coreprof%psi%boundary%codeparam%parameters (string) (9.1.1.1.3)
output_diag (79)	coreprof%psi%boundary%codeparam%output_diag (string) (9.1.1.1.3)
output_flag (79)	coreprof%psi%boundary%codeparam%output_flag (integer) (9.1.1.1.2)
jni (190)	coreprof%psi%jni (jni) (9.1.1.3.128)
value (152)	coreprof%psi%jni%value (vecflt.type) (9.1.1.2.9)
integral (152)	coreprof%psi%jni%integral (vecflt.type) (9.1.1.2.9)
source (152)	coreprof%psi%jni%source (string) (9.1.1.1.3)
sigma_par (190)	coreprof%psi%sigma_par (coreprofile) (9.1.1.3.66)
value (90)	coreprof%psi%sigma_par%value (vecflt.type) (9.1.1.2.9)
source (90)	coreprof%psi%sigma_par%source (string) (9.1.1.1.3)
codeparam (190)	coreprof%psi%codeparam (codeparam) (9.1.1.3.55)
codename (79)	coreprof%psi%codeparam%codename (string) (9.1.1.1.3)
codeversion (79)	coreprof%psi%codeparam%codeversion (string) (9.1.1.1.3)
parameters (79)	coreprof%psi%codeparam%parameters (string) (9.1.1.1.3)
output_diag (79)	coreprof%psi%codeparam%output_diag (string) (9.1.1.1.3)
output_flag (79)	coreprof%psi%codeparam%output_flag (integer) (9.1.1.1.2)
te (32)	coreprof%te (corefield) (9.1.1.3.60)
value (84)	coreprof%te%value (vecflt.type) (9.1.1.2.9)
source (84)	coreprof%te%source (string) (9.1.1.1.3)
flag (84)	coreprof%te%flag (integer) (9.1.1.1.2)
boundary (84)	coreprof%te%boundary (boundaryel) (9.1.1.3.51)
value (75)	coreprof%te%boundary%value (vecflt.type) (9.1.1.2.9)
source (75)	coreprof%te%boundary%source (string) (9.1.1.1.3)
type (75)	coreprof%te%boundary%type (integer) (9.1.1.1.2)
rho_tor (75)	coreprof%te%boundary%rho_tor (float) (9.1.1.1.1)
source_term (84)	coreprof%te%source_term (sourceel) (9.1.1.3.235)
value (259)	coreprof%te%source_term%value (vecflt.type) (9.1.1.2.9)
integral (259)	coreprof%te%source_term%integral (vecflt.type) (9.1.1.2.9)
source (259)	coreprof%te%source_term%source (string) (9.1.1.1.3)
transp_coef (84)	coreprof%te%transp_coef (coretransel) (9.1.1.3.68)
diff (92)	coreprof%te%transp_coef%diff (vecflt.type) (9.1.1.2.9)
vconv (92)	coreprof%te%transp_coef%vconv (vecflt.type) (9.1.1.2.9)
source (92)	coreprof%te%transp_coef%source (string) (9.1.1.1.3)
flux (84)	coreprof%te%flux (fluxel) (9.1.1.3.116)
flux_dv (140)	coreprof%te%flux%flux_dv (vecflt.type) (9.1.1.2.9)
flux_interp (140)	coreprof%te%flux%flux_interp (vecflt.type) (9.1.1.2.9)
time_deriv (84)	coreprof%te%time_deriv (vecflt.type) (9.1.1.2.9)
codeparam (84)	coreprof%te%codeparam (codeparam) (9.1.1.3.55)
codename (79)	coreprof%te%codeparam%codename (string) (9.1.1.1.3)
codeversion (79)	coreprof%te%codeparam%codeversion (string) (9.1.1.1.3)

parameters (79)  
 output\_diag (79)  
 output\_flag (79)

**ti** (32)  
 value (85)  
 source (85)  
 flag (85)  
 boundary (85)  
   value (77)  
   source (77)  
   type (77)  
   rho\_tor (77)  
 source\_term (85)  
   value (261)  
   integral (261)  
   source (261)  
 transp\_coef (85)  
   diff (94)  
   vconv (94)  
   source (94)  
 flux (85)  
   flux\_dv (142)  
   flux\_interp (142)  
 time\_deriv (85)  
 codeparam (85)  
   codename (79)  
   codeversion (79)  
   parameters (79)  
   output\_diag (79)  
   output\_flag (79)

**ne** (32)  
 value (84)  
 source (84)  
 flag (84)  
 boundary (84)  
   value (75)  
   source (75)  
   type (75)  
   rho\_tor (75)  
 source\_term (84)  
   value (259)  
   integral (259)  
   source (259)  
 transp\_coef (84)  
   diff (92)  
   vconv (92)  
   source (92)  
 flux (84)  
   flux\_dv (140)  
   flux\_interp (140)  
 time\_deriv (84)  
 codeparam (84)  
   codename (79)  
   codeversion (79)  
   parameters (79)  
   output\_diag (79)  
   output\_flag (79)

**ni** (32)  
 value (85)  
 source (85)  
 flag (85)

coreprof%te%codeparam%parameters (string) (9.1.1.1.3)  
 coreprof%te%codeparam%output\_diag (string) (9.1.1.1.3)  
 coreprof%te%codeparam%output\_flag (integer) (9.1.1.1.2)  
 coreprof%ti (corefieldion) (9.1.1.3.61)  
 coreprof%ti%value (matflt\_type) (9.1.1.2.7)  
 coreprof%ti%source (vecstring\_type) (9.1.1.2.11)  
 coreprof%ti%flag (vecint\_type) (9.1.1.2.10)  
 coreprof%ti%boundary (boundaryion) (9.1.1.3.53)  
 coreprof%ti%boundary%value (matflt\_type) (9.1.1.2.7)  
 coreprof%ti%boundary%source (vecstring\_type) (9.1.1.2.11)  
 coreprof%ti%boundary%type (vecint\_type) (9.1.1.2.10)  
 coreprof%ti%boundary%rho\_tor (vecflt\_type) (9.1.1.2.9)  
 coreprof%ti%source\_term (sourceion) (9.1.1.3.237)  
 coreprof%ti%source\_term%value (matflt\_type) (9.1.1.2.7)  
 coreprof%ti%source\_term%integral (matflt\_type) (9.1.1.2.7)  
 coreprof%ti%source\_term%source (vecstring\_type) (9.1.1.2.11)  
 coreprof%ti%transp\_coef (coretransion) (9.1.1.3.70)  
 coreprof%ti%transp\_coef%diff (matflt\_type) (9.1.1.2.7)  
 coreprof%ti%transp\_coef%vconv (matflt\_type) (9.1.1.2.7)  
 coreprof%ti%transp\_coef%source (vecstring\_type) (9.1.1.2.11)  
 coreprof%ti%flux (fluxion) (9.1.1.3.118)  
 coreprof%ti%flux%flux\_dv (matflt\_type) (9.1.1.2.7)  
 coreprof%ti%flux%flux\_interp (matflt\_type) (9.1.1.2.7)  
 coreprof%ti%time\_deriv (matflt\_type) (9.1.1.2.7)  
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 coreprof%ti%codeparam%codeversion (string) (9.1.1.1.3)  
 coreprof%ti%codeparam%parameters (string) (9.1.1.1.3)  
 coreprof%ti%codeparam%output\_diag (string) (9.1.1.1.3)  
 coreprof%ti%codeparam%output\_flag (integer) (9.1.1.1.2)  
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 coreprof%ne%flag (integer) (9.1.1.1.2)  
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 coreprof%ne%boundary%type (integer) (9.1.1.1.2)  
 coreprof%ne%boundary%rho\_tor (float) (9.1.1.1.1)  
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 coreprof%ne%source\_term%source (string) (9.1.1.1.3)  
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 coreprof%ne%transp\_coef%vconv (vecflt\_type) (9.1.1.2.9)  
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 coreprof%ne%flux%flux\_interp (vecflt\_type) (9.1.1.2.9)  
 coreprof%ne%time\_deriv (vecflt\_type) (9.1.1.2.9)  
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 coreprof%ne%codeparam%codeversion (string) (9.1.1.1.3)  
 coreprof%ne%codeparam%parameters (string) (9.1.1.1.3)  
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 coreprof%ni%value (matflt\_type) (9.1.1.2.7)  
 coreprof%ni%source (vecstring\_type) (9.1.1.2.11)  
 coreprof%ni%flag (vecint\_type) (9.1.1.2.10)

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   source (77)  
   type (77)  
   rho\_tor (77)  
 source\_term (85)  
   value (261)  
   integral (261)  
   source (261)  
 transp\_coef (85)  
   diff (94)  
   vconv (94)  
   source (94)  
 flux (85)  
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 time\_deriv (85)  
 codeparam (85)  
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   output\_flag (79)  
 vtor (32)  
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   flag (85)  
   boundary (85)  
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     source (77)  
     type (77)  
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   flux (85)  
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     codeversion (79)  
     parameters (79)  
     output\_diag (79)  
     output\_flag (79)  
 profiles1d (32)  
   pe (185)  
     value (90)  
     source (90)  
   pi (185)  
     value (91)  
     source (91)  
   pr\_th (185)  
     value (90)  
     source (90)  
   pr\_perp (185)

coreprof%ni%boundary (boundaryion) (9.1.1.3.53)  
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 coreprof%ni%boundary%source (vecstring\_type) (9.1.1.2.11)  
 coreprof%ni%boundary%type (vecint\_type) (9.1.1.2.10)  
 coreprof%ni%boundary%rho\_tor (vecflt\_type) (9.1.1.2.9)  
 coreprof%ni%source\_term (sourceion) (9.1.1.3.237)  
 coreprof%ni%source\_term%value (matflt\_type) (9.1.1.2.7)  
 coreprof%ni%source\_term%integral (matflt\_type) (9.1.1.2.7)  
 coreprof%ni%source\_term%source (vecstring\_type) (9.1.1.2.11)  
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 coreprof%ni%transp\_coef%vconv (matflt\_type) (9.1.1.2.7)  
 coreprof%ni%transp\_coef%source (vecstring\_type) (9.1.1.2.11)  
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 coreprof%ni%flux%flux\_interp (matflt\_type) (9.1.1.2.7)  
 coreprof%ni%time\_deriv (matflt\_type) (9.1.1.2.7)  
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 coreprof%ni%codeparam%codeversion (string) (9.1.1.1.3)  
 coreprof%ni%codeparam%parameters (string) (9.1.1.1.3)  
 coreprof%ni%codeparam%output\_diag (string) (9.1.1.1.3)  
 coreprof%ni%codeparam%output\_flag (integer) (9.1.1.1.2)  
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 coreprof%vtor%flag (vecint\_type) (9.1.1.2.10)  
 coreprof%vtor%boundary (boundaryion) (9.1.1.3.53)  
 coreprof%vtor%boundary%value (matflt\_type) (9.1.1.2.7)  
 coreprof%vtor%boundary%source (vecstring\_type) (9.1.1.2.11)  
 coreprof%vtor%boundary%type (vecint\_type) (9.1.1.2.10)  
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 coreprof%vtor%source\_term%value (matflt\_type) (9.1.1.2.7)  
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 coreprof%vtor%source\_term%source (vecstring\_type) (9.1.1.2.11)  
 coreprof%vtor%transp\_coef (coretransion) (9.1.1.3.70)  
 coreprof%vtor%transp\_coef%diff (matflt\_type) (9.1.1.2.7)  
 coreprof%vtor%transp\_coef%vconv (matflt\_type) (9.1.1.2.7)  
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 coreprof%vtor%codeparam%codeversion (string) (9.1.1.1.3)  
 coreprof%vtor%codeparam%parameters (string) (9.1.1.1.3)  
 coreprof%vtor%codeparam%output\_diag (string) (9.1.1.1.3)  
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 coreprof%profiles1d%pi%value (matflt\_type) (9.1.1.2.7)  
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 coreprof%profiles1d%pr\_th%value (vecflt\_type) (9.1.1.2.9)  
 coreprof%profiles1d%pr\_th%source (string) (9.1.1.1.3)  
 coreprof%profiles1d%pr\_perp (coreprofile) (9.1.1.3.66)

value (90)	coreprof%profiles1d%pr_perp%value (vecflt.type) (9.1.1.2.9)
source (90)	coreprof%profiles1d%pr_perp%source (string) (9.1.1.1.3)
pr_parallel (185)	coreprof%profiles1d%pr_parallel (coreprofile) (9.1.1.3.66)
value (90)	coreprof%profiles1d%pr_parallel%value (vecflt.type) (9.1.1.2.9)
source (90)	coreprof%profiles1d%pr_parallel%source (string) (9.1.1.1.3)
jt看 (185)	coreprof%profiles1d%jt看 (coreprofile) (9.1.1.3.66)
value (90)	coreprof%profiles1d%jt看%value (vecflt.type) (9.1.1.2.9)
source (90)	coreprof%profiles1d%jt看%source (string) (9.1.1.1.3)
jni (185)	coreprof%profiles1d%jni (coreprofile) (9.1.1.3.66)
value (90)	coreprof%profiles1d%jni%value (vecflt.type) (9.1.1.2.9)
source (90)	coreprof%profiles1d%jni%source (string) (9.1.1.1.3)
joh (185)	coreprof%profiles1d%joh (coreprofile) (9.1.1.3.66)
value (90)	coreprof%profiles1d%joh%value (vecflt.type) (9.1.1.2.9)
source (90)	coreprof%profiles1d%joh%source (string) (9.1.1.1.3)
vloop (185)	coreprof%profiles1d%vloop (coreprofile) (9.1.1.3.66)
value (90)	coreprof%profiles1d%vloop%value (vecflt.type) (9.1.1.2.9)
source (90)	coreprof%profiles1d%vloop%source (string) (9.1.1.1.3)
sigmapar (185)	coreprof%profiles1d%sigmapar (coreprofile) (9.1.1.3.66)
value (90)	coreprof%profiles1d%sigmapar%value (vecflt.type) (9.1.1.2.9)
source (90)	coreprof%profiles1d%sigmapar%source (string) (9.1.1.1.3)
qoh (185)	coreprof%profiles1d%qoh (coreprofile) (9.1.1.3.66)
value (90)	coreprof%profiles1d%qoh%value (vecflt.type) (9.1.1.2.9)
source (90)	coreprof%profiles1d%qoh%source (string) (9.1.1.1.3)
eparallel (185)	coreprof%profiles1d%eparallel (coreprofile) (9.1.1.3.66)
value (90)	coreprof%profiles1d%eparallel%value (vecflt.type) (9.1.1.2.9)
source (90)	coreprof%profiles1d%eparallel%source (string) (9.1.1.1.3)
e_b (185)	coreprof%profiles1d%e_b (coreprofile) (9.1.1.3.66)
value (90)	coreprof%profiles1d%e_b%value (vecflt.type) (9.1.1.2.9)
source (90)	coreprof%profiles1d%e_b%source (string) (9.1.1.1.3)
q (185)	coreprof%profiles1d%q (coreprofile) (9.1.1.3.66)
value (90)	coreprof%profiles1d%q%value (vecflt.type) (9.1.1.2.9)
source (90)	coreprof%profiles1d%q%source (string) (9.1.1.1.3)
shear (185)	coreprof%profiles1d%shear (coreprofile) (9.1.1.3.66)
value (90)	coreprof%profiles1d%shear%value (vecflt.type) (9.1.1.2.9)
source (90)	coreprof%profiles1d%shear%source (string) (9.1.1.1.3)
ns (185)	coreprof%profiles1d%ns (coreprofion) (9.1.1.3.67)
value (91)	coreprof%profiles1d%ns%value (matflt.type) (9.1.1.2.7)
source (91)	coreprof%profiles1d%ns%source (vecstring.type) (9.1.1.2.11)
mtor (185)	coreprof%profiles1d%mtor (coreprofion) (9.1.1.3.67)
value (91)	coreprof%profiles1d%mtor%value (matflt.type) (9.1.1.2.7)
source (91)	coreprof%profiles1d%mtor%source (vecstring.type) (9.1.1.2.11)
wtor (185)	coreprof%profiles1d%wtor (coreprofion) (9.1.1.3.67)
value (91)	coreprof%profiles1d%wtor%value (matflt.type) (9.1.1.2.7)
source (91)	coreprof%profiles1d%wtor%source (vecstring.type) (9.1.1.2.11)
zeff (185)	coreprof%profiles1d%zeff (coreprofile) (9.1.1.3.66)
value (90)	coreprof%profiles1d%zeff%value (vecflt.type) (9.1.1.2.9)
source (90)	coreprof%profiles1d%zeff%source (string) (9.1.1.1.3)
bpol (185)	coreprof%profiles1d%bpol (coreprofile) (9.1.1.3.66)
value (90)	coreprof%profiles1d%bpol%value (vecflt.type) (9.1.1.2.9)
source (90)	coreprof%profiles1d%bpol%source (string) (9.1.1.1.3)
dpsidt (185)	coreprof%profiles1d%dpsidt (coreprofile) (9.1.1.3.66)
value (90)	coreprof%profiles1d%dpsidt%value (vecflt.type) (9.1.1.2.9)
source (90)	coreprof%profiles1d%dpsidt%source (string) (9.1.1.1.3)
dpsidt_phi (185)	coreprof%profiles1d%dpsidt_phi (coreprofile) (9.1.1.3.66)
value (90)	coreprof%profiles1d%dpsidt_phi%value (vecflt.type) (9.1.1.2.9)
source (90)	coreprof%profiles1d%dpsidt_phi%source (string) (9.1.1.1.3)
dvprimedt (185)	coreprof%profiles1d%dvprimedt (coreprofile) (9.1.1.3.66)
value (90)	coreprof%profiles1d%dvprimedt%value (vecflt.type) (9.1.1.2.9)
source (90)	coreprof%profiles1d%dvprimedt%source (string) (9.1.1.1.3)
globalparam (32)	coreprof%globalparam (globalparam) (9.1.1.3.122)
current_tot (146)	coreprof%globalparam%current_tot (float) (9.1.1.1.1)

current_bnd (146)	coreprof%globalparam%current_bnd (float) (9.1.1.1.1)
vloop (146)	coreprof%globalparam%vloop (float) (9.1.1.1.1)
li (146)	coreprof%globalparam%li (float) (9.1.1.1.1)
beta_tor (146)	coreprof%globalparam%beta_tor (float) (9.1.1.1.1)
beta_normal (146)	coreprof%globalparam%beta_normal (float) (9.1.1.1.1)
beta_pol (146)	coreprof%globalparam%beta_pol (float) (9.1.1.1.1)
w_dia (146)	coreprof%globalparam%w_dia (float) (9.1.1.1.1)
codeparam (32)	coreprof%codeparam (codeparam) (9.1.1.3.55)
codename (79)	coreprof%codeparam%codename (string) (9.1.1.1.3)
codeversion (79)	coreprof%codeparam%codeversion (string) (9.1.1.1.3)
parameters (79)	coreprof%codeparam%parameters (string) (9.1.1.1.3)
output_diag (79)	coreprof%codeparam%output_diag (string) (9.1.1.1.3)
output_flag (79)	coreprof%codeparam%output_flag (integer) (9.1.1.1.2)
time (32)	coreprof%time (float) (9.1.1.1.1)

### 9.1.2.1.7 coresource

datainfo (33)	coresource%datainfo (datainfo) (9.1.1.3.73)
dataprovider (97)	coresource%datainfo%dataprovider (string) (9.1.1.1.3)
putdate (97)	coresource%datainfo%putdate (string) (9.1.1.1.3)
source (97)	coresource%datainfo%source (string) (9.1.1.1.3)
comment (97)	coresource%datainfo%comment (string) (9.1.1.1.3)
isref (97)	coresource%datainfo%isref (integer) (9.1.1.1.2)
whatref (97)	coresource%datainfo%whatref (whatref) (9.1.1.3.275)
user (299)	coresource%datainfo%whatref%user (string) (9.1.1.1.3)
machine (299)	coresource%datainfo%whatref%machine (string) (9.1.1.1.3)
shot (299)	coresource%datainfo%whatref%shot (integer) (9.1.1.1.2)
run (299)	coresource%datainfo%whatref%run (integer) (9.1.1.1.2)
occurrence (299)	coresource%datainfo%whatref%occurrence (integer) (9.1.1.1.2)
putinfo (97)	coresource%datainfo%putinfo (putinfo) (9.1.1.3.167)
putmethod (191)	coresource%datainfo%putinfo%putmethod (string) (9.1.1.1.3)
putaccess (191)	coresource%datainfo%putinfo%putaccess (string) (9.1.1.1.3)
putlocation (191)	coresource%datainfo%putinfo%putlocation (string) (9.1.1.1.3)
rights (191)	coresource%datainfo%putinfo%rights (string) (9.1.1.1.3)
rho_tor (33)	coresource%rho_tor (vecflt_type) (9.1.1.2.9)
rho_tor_norm (33)	coresource%rho_tor_norm (vecflt_type) (9.1.1.2.9)
composition (33)	coresource%composition (composition) (9.1.1.3.57)
amn (81)	coresource%composition%amn (vecflt_type) (9.1.1.2.9)
zn (81)	coresource%composition%zn (vecflt_type) (9.1.1.2.9)
zion (81)	coresource%composition%zion (vecflt_type) (9.1.1.2.9)
imp_flag (81)	coresource%composition%imp_flag (vecint_type) (9.1.1.2.10)
toroid_field (33)	coresource%toroid_field (b0r0) (9.1.1.3.45)
r0 (69)	coresource%toroid_field%r0 (float) (9.1.1.1.1)
b0 (69)	coresource%toroid_field%b0 (float) (9.1.1.1.1)
j (33)	coresource%j (vecflt_type) (9.1.1.2.9)
sigma (33)	coresource%sigma (vecflt_type) (9.1.1.2.9)
si (33)	coresource%si (source_ion) (9.1.1.3.233)
exp (257)	coresource%si%exp (matflt_type) (9.1.1.2.7)
imp (257)	coresource%si%imp (matflt_type) (9.1.1.2.7)
se (33)	coresource%se (source_el) (9.1.1.3.231)
exp (255)	coresource%se%exp (vecflt_type) (9.1.1.2.9)
imp (255)	coresource%se%imp (vecflt_type) (9.1.1.2.9)
sz (33)	coresource%sz (source_imp) (9.1.1.3.232)
exp (256)	coresource%sz%exp (array3dflt_type) (9.1.1.2.1)
imp (256)	coresource%sz%imp (array3dflt_type) (9.1.1.2.1)
qi (33)	coresource%qi (source_ion) (9.1.1.3.233)
exp (257)	coresource%qi%exp (matflt_type) (9.1.1.2.7)
imp (257)	coresource%qi%imp (matflt_type) (9.1.1.2.7)
qe (33)	coresource%qe (source_el) (9.1.1.3.231)
exp (255)	coresource%qe%exp (vecflt_type) (9.1.1.2.9)
imp (255)	coresource%qe%imp (vecflt_type) (9.1.1.2.9)



qz (33)	coresource%qz (source_imp) (9.1.1.3.232)
exp (256)	coresource%qz%exp (array3dflt.type) (9.1.1.2.1)
imp (256)	coresource%qz%imp (array3dflt.type) (9.1.1.2.1)
ui (33)	coresource%ui (source_ion) (9.1.1.3.233)
exp (257)	coresource%ui%exp (matflt.type) (9.1.1.2.7)
imp (257)	coresource%ui%imp (matflt.type) (9.1.1.2.7)
codeparam (33)	coresource%codeparam (codeparam) (9.1.1.3.55)
codename (79)	coresource%codeparam%codename (string) (9.1.1.1.3)
codeversion (79)	coresource%codeparam%codeversion (string) (9.1.1.1.3)
parameters (79)	coresource%codeparam%parameters (string) (9.1.1.1.3)
output_diag (79)	coresource%codeparam%output_diag (string) (9.1.1.1.3)
output_flag (79)	coresource%codeparam%output_flag (integer) (9.1.1.1.2)
time (33)	coresource%time (float) (9.1.1.1.1)

### 9.1.2.1.8 coretransp

datainfo (34)	coretransp%datainfo (datainfo) (9.1.1.3.73)
dataprovder (97)	coretransp%datainfo%dataprovder (string) (9.1.1.1.3)
putdate (97)	coretransp%datainfo%putdate (string) (9.1.1.1.3)
source (97)	coretransp%datainfo%source (string) (9.1.1.1.3)
comment (97)	coretransp%datainfo%comment (string) (9.1.1.1.3)
isref (97)	coretransp%datainfo%isref (integer) (9.1.1.1.2)
whatref (97)	coretransp%datainfo%whatref (whatref) (9.1.1.3.275)
user (299)	coretransp%datainfo%whatref%user (string) (9.1.1.1.3)
machine (299)	coretransp%datainfo%whatref%machine (string) (9.1.1.1.3)
shot (299)	coretransp%datainfo%whatref%shot (integer) (9.1.1.1.2)
run (299)	coretransp%datainfo%whatref%run (integer) (9.1.1.1.2)
occurrence (299)	coretransp%datainfo%whatref%occurrence (integer) (9.1.1.1.2)
putinfo (97)	coretransp%datainfo%putinfo (putinfo) (9.1.1.3.167)
putmethod (191)	coretransp%datainfo%putinfo%putmethod (string) (9.1.1.1.3)
putaccess (191)	coretransp%datainfo%putinfo%putaccess (string) (9.1.1.1.3)
putlocation (191)	coretransp%datainfo%putinfo%putlocation (string) (9.1.1.1.3)
rights (191)	coretransp%datainfo%putinfo%rights (string) (9.1.1.1.3)
composition (34)	coretransp%composition (composition) (9.1.1.3.57)
amn (81)	coretransp%composition%amn (vecflt.type) (9.1.1.2.9)
zn (81)	coretransp%composition%zn (vecflt.type) (9.1.1.2.9)
zion (81)	coretransp%composition%zion (vecflt.type) (9.1.1.2.9)
imp_flag (81)	coretransp%composition%imp_flag (vecint.type) (9.1.1.2.10)
rho_tor_norm (34)	coretransp%rho_tor_norm (vecflt.type) (9.1.1.2.9)
rho_tor (34)	coretransp%rho_tor (vecflt.type) (9.1.1.2.9)
sigma (34)	coretransp%sigma (vecflt.type) (9.1.1.2.9)
ni_transp (34)	coretransp%ni_transp (ni_transp) (9.1.1.3.140)
diff_eff (164)	coretransp%ni_transp%diff_eff (array3dflt.type) (9.1.1.2.1)
vconv_eff (164)	coretransp%ni_transp%vconv_eff (array3dflt.type) (9.1.1.2.1)
flux (164)	coretransp%ni_transp%flux (matflt.type) (9.1.1.2.7)
off_diagonal (164)	coretransp%ni_transp%off_diagonal (offdiagion) (9.1.1.3.142)
d_ni (166)	coretransp%ni_transp%off_diagonal%d_ni (array3dflt.type) (9.1.1.2.1)
d_ti (166)	coretransp%ni_transp%off_diagonal%d_ti (array3dflt.type) (9.1.1.2.1)
d_ne (166)	coretransp%ni_transp%off_diagonal%d_ne (matflt.type) (9.1.1.2.7)
d_te (166)	coretransp%ni_transp%off_diagonal%d_te (matflt.type) (9.1.1.2.7)
d_epar (166)	coretransp%ni_transp%off_diagonal%d_epar (matflt.type) (9.1.1.2.7)
d_mtor (166)	coretransp%ni_transp%off_diagonal%d_mtor (matflt.type) (9.1.1.2.7)
flag (164)	coretransp%ni_transp%flag (integer) (9.1.1.1.2)
ne_transp (34)	coretransp%ne_transp (ne_transp) (9.1.1.3.138)
diff_eff (162)	coretransp%ne_transp%diff_eff (matflt.type) (9.1.1.2.7)
vconv_eff (162)	coretransp%ne_transp%vconv_eff (matflt.type) (9.1.1.2.7)
flux (162)	coretransp%ne_transp%flux (vecflt.type) (9.1.1.2.9)
off_diagonal (162)	coretransp%ne_transp%off_diagonal (offdiagel) (9.1.1.3.141)
d_ni (165)	coretransp%ne_transp%off_diagonal%d_ni (matflt.type) (9.1.1.2.7)
d_ti (165)	coretransp%ne_transp%off_diagonal%d_ti (matflt.type) (9.1.1.2.7)
d_ne (165)	coretransp%ne_transp%off_diagonal%d_ne (vecflt.type) (9.1.1.2.9)



d_te (165)	coretransp%ne_transp%off_diagonal%d_te (vecflt.type) (9.1.1.2.9)
d_epar (165)	coretransp%ne_transp%off_diagonal%d_epar (vecflt.type) (9.1.1.2.9)
d_mtor (165)	coretransp%ne_transp%off_diagonal%d_mtor (vecflt.type) (9.1.1.2.9)
flag (162)	coretransp%ne_transp%flag (integer) (9.1.1.1.2)
nz_transp (34)	coretransp%nz_transp (transcoefimp) (9.1.1.3.261)
diff_eff (285)	coretransp%nz_transp%diff_eff (array3dflt.type) (9.1.1.2.1)
vconv_eff (285)	coretransp%nz_transp%vconv_eff (array3dflt.type) (9.1.1.2.1)
exchange (285)	coretransp%nz_transp%exchange (array3dflt.type) (9.1.1.2.1)
flux (285)	coretransp%nz_transp%flux (array3dflt.type) (9.1.1.2.1)
flag (285)	coretransp%nz_transp%flag (integer) (9.1.1.1.2)
ti_transp (34)	coretransp%ti_transp (transcoefion) (9.1.1.3.262)
diff_eff (286)	coretransp%ti_transp%diff_eff (matflt.type) (9.1.1.2.7)
vconv_eff (286)	coretransp%ti_transp%vconv_eff (matflt.type) (9.1.1.2.7)
exchange (286)	coretransp%ti_transp%exchange (matflt.type) (9.1.1.2.7)
qgi (286)	coretransp%ti_transp%qgi (matflt.type) (9.1.1.2.7)
flux (286)	coretransp%ti_transp%flux (matflt.type) (9.1.1.2.7)
off_diagonal (286)	coretransp%ti_transp%off_diagonal (offdiagion) (9.1.1.3.142)
d_ni (166)	coretransp%ti_transp%off_diagonal%d_ni (array3dflt.type) (9.1.1.2.1)
d_ti (166)	coretransp%ti_transp%off_diagonal%d_ti (array3dflt.type) (9.1.1.2.1)
d_ne (166)	coretransp%ti_transp%off_diagonal%d_ne (matflt.type) (9.1.1.2.7)
d_te (166)	coretransp%ti_transp%off_diagonal%d_te (matflt.type) (9.1.1.2.7)
d_epar (166)	coretransp%ti_transp%off_diagonal%d_epar (matflt.type) (9.1.1.2.7)
d_mtor (166)	coretransp%ti_transp%off_diagonal%d_mtor (matflt.type) (9.1.1.2.7)
flag (286)	coretransp%ti_transp%flag (integer) (9.1.1.1.2)
te_transp (34)	coretransp%te_transp (transcoefel) (9.1.1.3.260)
diff_eff (284)	coretransp%te_transp%diff_eff (vecflt.type) (9.1.1.2.9)
vconv_eff (284)	coretransp%te_transp%vconv_eff (vecflt.type) (9.1.1.2.9)
flux (284)	coretransp%te_transp%flux (vecflt.type) (9.1.1.2.9)
off_diagonal (284)	coretransp%te_transp%off_diagonal (offdiagel) (9.1.1.3.141)
d_ni (165)	coretransp%te_transp%off_diagonal%d_ni (matflt.type) (9.1.1.2.7)
d_ti (165)	coretransp%te_transp%off_diagonal%d_ti (matflt.type) (9.1.1.2.7)
d_ne (165)	coretransp%te_transp%off_diagonal%d_ne (vecflt.type) (9.1.1.2.9)
d_te (165)	coretransp%te_transp%off_diagonal%d_te (vecflt.type) (9.1.1.2.9)
d_epar (165)	coretransp%te_transp%off_diagonal%d_epar (vecflt.type) (9.1.1.2.9)
d_mtor (165)	coretransp%te_transp%off_diagonal%d_mtor (vecflt.type) (9.1.1.2.9)
flag (284)	coretransp%te_transp%flag (integer) (9.1.1.1.2)
tz_transp (34)	coretransp%tz_transp (transcoefimp) (9.1.1.3.261)
diff_eff (285)	coretransp%tz_transp%diff_eff (array3dflt.type) (9.1.1.2.1)
vconv_eff (285)	coretransp%tz_transp%vconv_eff (array3dflt.type) (9.1.1.2.1)
exchange (285)	coretransp%tz_transp%exchange (array3dflt.type) (9.1.1.2.1)
flux (285)	coretransp%tz_transp%flux (array3dflt.type) (9.1.1.2.1)
flag (285)	coretransp%tz_transp%flag (integer) (9.1.1.1.2)
vtor_transp (34)	coretransp%vtor_transp (transcoefvtor) (9.1.1.3.263)
diff_eff (287)	coretransp%vtor_transp%diff_eff (matflt.type) (9.1.1.2.7)
vconv_eff (287)	coretransp%vtor_transp%vconv_eff (matflt.type) (9.1.1.2.7)
flux (287)	coretransp%vtor_transp%flux (matflt.type) (9.1.1.2.7)
off_diagonal (287)	coretransp%vtor_transp%off_diagonal (offdiagion) (9.1.1.3.142)
d_ni (166)	coretransp%vtor_transp%off_diagonal%d_ni (array3dflt.type) (9.1.1.2.1)
d_ti (166)	coretransp%vtor_transp%off_diagonal%d_ti (array3dflt.type) (9.1.1.2.1)
d_ne (166)	coretransp%vtor_transp%off_diagonal%d_ne (matflt.type) (9.1.1.2.7)
d_te (166)	coretransp%vtor_transp%off_diagonal%d_te (matflt.type) (9.1.1.2.7)
d_epar (166)	coretransp%vtor_transp%off_diagonal%d_epar (matflt.type) (9.1.1.2.7)
d_mtor (166)	coretransp%vtor_transp%off_diagonal%d_mtor (matflt.type) (9.1.1.2.7)
flag (287)	coretransp%vtor_transp%flag (integer) (9.1.1.1.2)
codeparam (34)	coretransp%codeparam (codeparam) (9.1.1.3.55)
codename (79)	coretransp%codeparam%codename (string) (9.1.1.1.3)
codeversion (79)	coretransp%codeparam%codeversion (string) (9.1.1.1.3)
parameters (79)	coretransp%codeparam%parameters (string) (9.1.1.1.3)
output_diag (79)	coretransp%codeparam%output_diag (string) (9.1.1.1.3)
output_flag (79)	coretransp%codeparam%output_flag (integer) (9.1.1.1.2)
time (34)	coretransp%time (float) (9.1.1.1.1)

### 9.1.2.1.9 cxdia

datainfo (35)	cxdiag%datainfo (datainfo) (9.1.1.3.73)
dataprovider (97)	cxdiag%datainfo%dataprovider (string) (9.1.1.1.3)
putdate (97)	cxdiag%datainfo%putdate (string) (9.1.1.1.3)
source (97)	cxdiag%datainfo%source (string) (9.1.1.1.3)
comment (97)	cxdiag%datainfo%comment (string) (9.1.1.1.3)
isref (97)	cxdiag%datainfo%isref (integer) (9.1.1.1.2)
whatref (97)	cxdiag%datainfo%whatref (whatref) (9.1.1.3.275)
user (299)	cxdiag%datainfo%whatref%user (string) (9.1.1.1.3)
machine (299)	cxdiag%datainfo%whatref%machine (string) (9.1.1.1.3)
shot (299)	cxdiag%datainfo%whatref%shot (integer) (9.1.1.1.2)
run (299)	cxdiag%datainfo%whatref%run (integer) (9.1.1.1.2)
occurrence (299)	cxdiag%datainfo%whatref%occurrence (integer) (9.1.1.1.2)
putinfo (97)	cxdiag%datainfo%putinfo (putinfo) (9.1.1.3.167)
putmethod (191)	cxdiag%datainfo%putinfo%putmethod (string) (9.1.1.1.3)
putaccess (191)	cxdiag%datainfo%putinfo%putaccess (string) (9.1.1.1.3)
putlocation (191)	cxdiag%datainfo%putinfo%putlocation (string) (9.1.1.1.3)
rights (191)	cxdiag%datainfo%putinfo%rights (string) (9.1.1.1.3)
setup (35)	cxdiag%setup (cxsetup) (9.1.1.3.72)
position (96)	cxdiag%setup%position (rzphi1Dexp) (9.1.1.3.199)
r (223)	cxdiag%setup%position%r (exp1D) (9.1.1.3.111)
value (135)	cxdiag%setup%position%r%value (vecflt_type) (9.1.1.2.9)
abserror (135)	cxdiag%setup%position%r%abserror (vecflt_type) (9.1.1.2.9)
releror (135)	cxdiag%setup%position%r%releror (vecflt_type) (9.1.1.2.9)
z (223)	cxdiag%setup%position%z (exp1D) (9.1.1.3.111)
value (135)	cxdiag%setup%position%z%value (vecflt_type) (9.1.1.2.9)
abserror (135)	cxdiag%setup%position%z%abserror (vecflt_type) (9.1.1.2.9)
releror (135)	cxdiag%setup%position%z%releror (vecflt_type) (9.1.1.2.9)
phi (223)	cxdiag%setup%position%phi (exp1D) (9.1.1.3.111)
value (135)	cxdiag%setup%position%phi%value (vecflt_type) (9.1.1.2.9)
abserror (135)	cxdiag%setup%position%phi%abserror (vecflt_type) (9.1.1.2.9)
releror (135)	cxdiag%setup%position%phi%releror (vecflt_type) (9.1.1.2.9)
measure (35)	cxdiag%measure (cxmeasure) (9.1.1.3.71)
ti (95)	cxdiag%measure%ti (exp1D) (9.1.1.3.111)
value (135)	cxdiag%measure%ti%value (vecflt_type) (9.1.1.2.9)
abserror (135)	cxdiag%measure%ti%abserror (vecflt_type) (9.1.1.2.9)
releror (135)	cxdiag%measure%ti%releror (vecflt_type) (9.1.1.2.9)
vtr (95)	cxdiag%measure%vtr (exp1D) (9.1.1.3.111)
value (135)	cxdiag%measure%vtr%value (vecflt_type) (9.1.1.2.9)
abserror (135)	cxdiag%measure%vtr%abserror (vecflt_type) (9.1.1.2.9)
releror (135)	cxdiag%measure%vtr%releror (vecflt_type) (9.1.1.2.9)
vppl (95)	cxdiag%measure%vppl (exp1D) (9.1.1.3.111)
value (135)	cxdiag%measure%vppl%value (vecflt_type) (9.1.1.2.9)
abserror (135)	cxdiag%measure%vppl%abserror (vecflt_type) (9.1.1.2.9)
releror (135)	cxdiag%measure%vppl%releror (vecflt_type) (9.1.1.2.9)
time (35)	cxdiag%time (float) (9.1.1.1.1)

### 9.1.2.1.10 distribution

datainfo (36)	distribution%datainfo (datainfo) (9.1.1.3.73)
dataprovider (97)	distribution%datainfo%dataprovider (string) (9.1.1.1.3)
putdate (97)	distribution%datainfo%putdate (string) (9.1.1.1.3)
source (97)	distribution%datainfo%source (string) (9.1.1.1.3)
comment (97)	distribution%datainfo%comment (string) (9.1.1.1.3)
isref (97)	distribution%datainfo%isref (integer) (9.1.1.1.2)
whatref (97)	distribution%datainfo%whatref (whatref) (9.1.1.3.275)
user (299)	distribution%datainfo%whatref%user (string) (9.1.1.1.3)
machine (299)	distribution%datainfo%whatref%machine (string) (9.1.1.1.3)
shot (299)	distribution%datainfo%whatref%shot (integer) (9.1.1.1.2)
run (299)	distribution%datainfo%whatref%run (integer) (9.1.1.1.2)

occurrence (299)	distribution%datainfo%whatref%occurrence (integer) (9.1.1.1.2)
putinfo (97)	distribution%datainfo%putinfo (putinfo) (9.1.1.3.167)
putmethod (191)	distribution%datainfo%putinfo%putmethod (string) (9.1.1.1.3)
putaccess (191)	distribution%datainfo%putinfo%putaccess (string) (9.1.1.1.3)
putlocation (191)	distribution%datainfo%putinfo%putlocation (string) (9.1.1.1.3)
rights (191)	distribution%datainfo%putinfo%rights (string) (9.1.1.1.3)
composition (36)	distribution%composition (composition) (9.1.1.3.57)
amn (81)	distribution%composition%amn (vecflt_type) (9.1.1.2.9)
zn (81)	distribution%composition%zn (vecflt_type) (9.1.1.2.9)
zion (81)	distribution%composition%zion (vecflt_type) (9.1.1.2.9)
imp_flag (81)	distribution%composition%imp_flag (vecint_type) (9.1.1.2.10)
calc_spec (36)	distribution%calc_spec (vecint_type) (9.1.1.2.10)
nucl_reac (36)	distribution%nucl_reac (dist_nucl_reac) (9.1.1.3.84)
nreacs (108)	distribution%nucl_reac%nreacs (vecint_type) (9.1.1.2.10)
point_reac (108)	distribution%nucl_reac%point_reac (matint_type) (9.1.1.2.8)
id_reac (108)	distribution%nucl_reac%id_reac (matint_type) (9.1.1.2.8)
global_param (36)	distribution%global_param (dist_glob) (9.1.1.3.80)
enrg (104)	distribution%global_param%enrg (vecflt_type) (9.1.1.2.9)
enrg_para (104)	distribution%global_param%enrg_para (vecflt_type) (9.1.1.2.9)
pow_coll_i (104)	distribution%global_param%pow_coll_i (matflt_type) (9.1.1.2.7)
pow_coll_e (104)	distribution%global_param%pow_coll_e (vecflt_type) (9.1.1.2.9)
therm_src (104)	distribution%global_param%therm_src (dist_src_snk_tot) (9.1.1.3.96)
particles (120)	distribution%global_param%therm_src%particles (vecflt_type) (9.1.1.2.9)
power (120)	distribution%global_param%therm_src%power (vecflt_type) (9.1.1.2.9)
torque (120)	distribution%global_param%therm_src%torque (vecflt_type) (9.1.1.2.9)
losses (104)	distribution%global_param%losses (dist_glob_dist_losses) (9.1.1.3.81)
orb_loss (105)	distribution%global_param%losses%orb_loss (dist_src_snk_tot) (9.1.1.3.96)
particles (120)	distribution%global_param%losses%orb_loss%particles (vecflt_type) (9.1.1.2.9)
power (120)	distribution%global_param%losses%orb_loss%power (vecflt_type) (9.1.1.2.9)
torque (120)	distribution%global_param%losses%orb_loss%torque (vecflt_type) (9.1.1.2.9)
neutr_loss (105)	distribution%global_param%losses%neutr_loss (dist_src_snk_tot) (9.1.1.3.96)
particles (120)	distribution%global_param%losses%neutr_loss%particles (vecflt_type) (9.1.1.2.9)
power (120)	distribution%global_param%losses%neutr_loss%power (vecflt_type) (9.1.1.2.9)
torque (120)	distribution%global_param%losses%neutr_loss%torque (vecflt_type) (9.1.1.2.9)
cur_dr_tor (104)	distribution%global_param%cur_dr_tor (vecflt_type) (9.1.1.2.9)
trq_i (104)	distribution%global_param%trq_i (matflt_type) (9.1.1.2.7)
trq_e (104)	distribution%global_param%trq_e (vecflt_type) (9.1.1.2.9)
trq_j_rxb (104)	distribution%global_param%trq_j_rxb (vecflt_type) (9.1.1.2.9)
nucl_reac_th (104)	distribution%global_param%nucl_reac_th (dist_nucl_reac_th) (9.1.1.3.86)
rate (110)	distribution%global_param%nucl_reac_th%rate (matflt_type) (9.1.1.2.7)
power (110)	distribution%global_param%nucl_reac_th%power (matflt_type) (9.1.1.2.7)
nucl_reac_sf (104)	distribution%global_param%nucl_reac_sf (dist_nucl_reac_sf) (9.1.1.3.85)
rate (109)	distribution%global_param%nucl_reac_sf%rate (vecflt_type) (9.1.1.2.9)
power (109)	distribution%global_param%nucl_reac_sf%power (vecflt_type) (9.1.1.2.9)
profiles_1d (36)	distribution%profiles_1d (dist_profiles) (9.1.1.3.94)
npsi (118)	distribution%profiles_1d%npsi (vecint_type) (9.1.1.2.10)
rho_tor_norm (118)	distribution%profiles_1d%rho_tor_norm (matflt_type) (9.1.1.2.7)
rho_tor (118)	distribution%profiles_1d%rho_tor (matflt_type) (9.1.1.2.7)
psi (118)	distribution%profiles_1d%psi (matflt_type) (9.1.1.2.7)
enrgd_tot (118)	distribution%profiles_1d%enrgd_tot (matflt_type) (9.1.1.2.7)
enrgd_para (118)	distribution%profiles_1d%enrgd_para (matflt_type) (9.1.1.2.7)
powd_coll_i (118)	distribution%profiles_1d%powd_coll_i (array3dflt_type) (9.1.1.2.1)
powd_coll_e (118)	distribution%profiles_1d%powd_coll_e (matflt_type) (9.1.1.2.7)
therm_srcd (118)	distribution%profiles_1d%therm_srcd (dist_src_snk_surf) (9.1.1.3.95)
particleds (119)	distribution%profiles_1d%therm_srcd%particleds (matflt_type) (9.1.1.2.7)
powerd (119)	distribution%profiles_1d%therm_srcd%powerd (matflt_type) (9.1.1.2.7)
torqued (119)	distribution%profiles_1d%therm_srcd%torqued (matflt_type) (9.1.1.2.7)
lossesd (118)	distribution%profiles_1d%lossesd (dist_prof_surf_dist_losses) (9.1.1.3.88)
orb_loss (112)	distribution%profiles_1d%lossesd%orb_loss (dist_src_snk_surf) (9.1.1.3.95)
particleds (119)	distribution%profiles_1d%lossesd%orb_loss%particleds (matflt_type) (9.1.1.2.7)
powerd (119)	distribution%profiles_1d%lossesd%orb_loss%powerd (matflt_type) (9.1.1.2.7)

torqued (119)	distribution%profiles_1d%lossesd%orb_loss%torqued (matflt.type) (9.1.1.2.7)
neutr_loss (112)	distribution%profiles_1d%lossesd%neutr_loss (dist_src.snk_surf) (9.1.1.3.95)
particlesd (119)	distribution%profiles_1d%lossesd%neutr_loss%particlesd (matflt.type) (9.1.1.2.7)
powerd (119)	distribution%profiles_1d%lossesd%neutr_loss%powerd (matflt.type) (9.1.1.2.7)
torqued (119)	distribution%profiles_1d%lossesd%neutr_loss%torqued (matflt.type) (9.1.1.2.7)
curd_fp (118)	distribution%profiles_1d%curd_fp (matflt.type) (9.1.1.2.7)
curd_dr (118)	distribution%profiles_1d%curd_dr (vecflt.type) (9.1.1.2.9)
trqd_i (118)	distribution%profiles_1d%trqd_i (array3dflt.type) (9.1.1.2.1)
trqd_e (118)	distribution%profiles_1d%trqd_e (matflt.type) (9.1.1.2.7)
trqd_jrxb (118)	distribution%profiles_1d%trqd_jrxb (matflt.type) (9.1.1.2.7)
nucl_rd.th (118)	distribution%profiles_1d%nucl_rd.th (dist_prof_surf.nucl_reac.th) (9.1.1.3.90)
rated (114)	distribution%profiles_1d%nucl_rd.th%rated (array3dflt.type) (9.1.1.2.1)
powerd (114)	distribution%profiles_1d%nucl_rd.th%powerd (array3dflt.type) (9.1.1.2.1)
nucl_rd.sf (118)	distribution%profiles_1d%nucl_rd.sf (dist_prof_surf.nucl_reac.sf) (9.1.1.3.89)
rate (113)	distribution%profiles_1d%nucl_rd.sf%rate (matflt.type) (9.1.1.2.7)
power (113)	distribution%profiles_1d%nucl_rd.sf%power (matflt.type) (9.1.1.2.7)
enrg_tot (118)	distribution%profiles_1d%enrg_tot (matflt.type) (9.1.1.2.7)
enrg_para (118)	distribution%profiles_1d%enrg_para (matflt.type) (9.1.1.2.7)
pow_coll.i (118)	distribution%profiles_1d%pow_coll.i (array3dflt.type) (9.1.1.2.1)
pow_coll.e (118)	distribution%profiles_1d%pow_coll.e (matflt.type) (9.1.1.2.7)
therm_src (118)	distribution%profiles_1d%therm_src (dist_src.snk.vol) (9.1.1.3.97)
particles (121)	distribution%profiles_1d%therm_src%particles (matflt.type) (9.1.1.2.7)
power (121)	distribution%profiles_1d%therm_src%power (matflt.type) (9.1.1.2.7)
torque (121)	distribution%profiles_1d%therm_src%torque (matflt.type) (9.1.1.2.7)
losses (118)	distribution%profiles_1d%losses (dist_prof_vol_dist.losses) (9.1.1.3.91)
orb_loss (115)	distribution%profiles_1d%losses%orb_loss (dist_src.snk.vol) (9.1.1.3.97)
particles (121)	distribution%profiles_1d%losses%orb_loss%particles (matflt.type) (9.1.1.2.7)
power (121)	distribution%profiles_1d%losses%orb_loss%power (matflt.type) (9.1.1.2.7)
torque (121)	distribution%profiles_1d%losses%orb_loss%torque (matflt.type) (9.1.1.2.7)
neutr_loss (115)	distribution%profiles_1d%losses%neutr_loss (dist_src.snk.vol) (9.1.1.3.97)
particles (121)	distribution%profiles_1d%losses%neutr_loss%particles (matflt.type) (9.1.1.2.7)
power (121)	distribution%profiles_1d%losses%neutr_loss%power (matflt.type) (9.1.1.2.7)
torque (121)	distribution%profiles_1d%losses%neutr_loss%torque (matflt.type) (9.1.1.2.7)
cur_fp (118)	distribution%profiles_1d%cur_fp (matflt.type) (9.1.1.2.7)
cur_dr (118)	distribution%profiles_1d%cur_dr (matflt.type) (9.1.1.2.7)
trq_i (118)	distribution%profiles_1d%trq_i (array3dflt.type) (9.1.1.2.1)
trq_e (118)	distribution%profiles_1d%trq_e (matflt.type) (9.1.1.2.7)
trq_jrxb (118)	distribution%profiles_1d%trq_jrxb (matflt.type) (9.1.1.2.7)
nucl_reac.th (118)	distribution%profiles_1d%nucl_reac.th (dist_prof_vol.nucl_reac.th) (9.1.1.3.93)
rate (117)	distribution%profiles_1d%nucl_reac.th%rate (array3dflt.type) (9.1.1.2.1)
power (117)	distribution%profiles_1d%nucl_reac.th%power (array3dflt.type) (9.1.1.2.1)
nucl_reac.sf (118)	distribution%profiles_1d%nucl_reac.sf (dist_prof_vol.nucl_reac.sf) (9.1.1.3.92)
rate (116)	distribution%profiles_1d%nucl_reac.sf%rate (matflt.type) (9.1.1.2.7)
power (116)	distribution%profiles_1d%nucl_reac.sf%power (matflt.type) (9.1.1.2.7)
dist_func (36)	distribution%dist_func (dist_func) (9.1.1.3.79)
sol.type (103)	distribution%dist_func%sol.type (vecint.type) (9.1.1.2.10)
test.part (103)	distribution%dist_func%test.part (dist_test.part) (9.1.1.3.98)
nvar (122)	distribution%dist_func%test.part%nvar (vecflt.type) (9.1.1.2.9)
var_id (122)	distribution%dist_func%test.part%var_id (matint.type) (9.1.1.2.8)
var1 (122)	distribution%dist_func%test.part%var1 (matflt.type) (9.1.1.2.7)
var2 (122)	distribution%dist_func%test.part%var2 (matflt.type) (9.1.1.2.7)
var3 (122)	distribution%dist_func%test.part%var3 (matflt.type) (9.1.1.2.7)
var4 (122)	distribution%dist_func%test.part%var4 (matflt.type) (9.1.1.2.7)
var5 (122)	distribution%dist_func%test.part%var5 (matflt.type) (9.1.1.2.7)
var6 (122)	distribution%dist_func%test.part%var6 (matflt.type) (9.1.1.2.7)
weight (122)	distribution%dist_func%test.part%weight (matflt.type) (9.1.1.2.7)
f0 (103)	distribution%dist_func%f0 (dist_ff) (9.1.1.3.78)
grid.type (102)	distribution%dist_func%f0%grid.type (vecint.type) (9.1.1.2.10)
grid (102)	distribution%dist_func%f0%grid (dist_grid) (9.1.1.3.82)
dim1 (106)	distribution%dist_func%f0%grid%dim1 (matflt.type) (9.1.1.2.7)
ndim1 (106)	distribution%dist_func%f0%grid%ndim1 (vecint.type) (9.1.1.2.10)

dim2 (106)	distribution%dist_func%f0%grid%dim2 (matflt.type) (9.1.1.2.7)
ndim2 (106)	distribution%dist_func%f0%grid%ndim2 (vecint.type) (9.1.1.2.10)
dim3 (106)	distribution%dist_func%f0%grid%dim3 (matflt.type) (9.1.1.2.7)
ndim3 (106)	distribution%dist_func%f0%grid%ndim3 (vecint.type) (9.1.1.2.10)
jacobian (106)	distribution%dist_func%f0%grid%jacobian (array4dflt.type) (9.1.1.2.3)
value (102)	distribution%dist_func%f0%value (array4dflt.type) (9.1.1.2.3)
fullf (103)	distribution%dist_func%fullf (dist_ff) (9.1.1.3.78)
grid.type (102)	distribution%dist_func%fullf%grid.type (vecint.type) (9.1.1.2.10)
grid (102)	distribution%dist_func%fullf%grid (dist_grid) (9.1.1.3.82)
dim1 (106)	distribution%dist_func%fullf%grid%dim1 (matflt.type) (9.1.1.2.7)
ndim1 (106)	distribution%dist_func%fullf%grid%ndim1 (vecint.type) (9.1.1.2.10)
dim2 (106)	distribution%dist_func%fullf%grid%dim2 (matflt.type) (9.1.1.2.7)
ndim2 (106)	distribution%dist_func%fullf%grid%ndim2 (vecint.type) (9.1.1.2.10)
dim3 (106)	distribution%dist_func%fullf%grid%dim3 (matflt.type) (9.1.1.2.7)
ndim3 (106)	distribution%dist_func%fullf%grid%ndim3 (vecint.type) (9.1.1.2.10)
jacobian (106)	distribution%dist_func%fullf%grid%jacobian (array4dflt.type) (9.1.1.2.3)
value (102)	distribution%dist_func%fullf%value (array4dflt.type) (9.1.1.2.3)
input_src (36)	distribution%input_src (dist_input_src) (9.1.1.3.83)
particle_src (107)	distribution%input_src%particle_src (dist_particle_src) (9.1.1.3.87)
total (111)	distribution%input_src%particle_src%total (dist_src_snk_tot) (9.1.1.3.96)
particles (120)	distribution%input_src%particle_src%total%particles (vecflt.type) (9.1.1.2.9)
power (120)	distribution%input_src%particle_src%total%power (vecflt.type) (9.1.1.2.9)
torque (120)	distribution%input_src%particle_src%total%torque (vecflt.type) (9.1.1.2.9)
volume_intgr (111)	distribution%input_src%particle_src%volume_intgr (dist_src_snk_vol) (9.1.1.3.97)
particles (121)	distribution%input_src%particle_src%volume_intgr%particles (matflt.type) (9.1.1.2.7)
power (121)	distribution%input_src%particle_src%volume_intgr%power (matflt.type) (9.1.1.2.7)
torque (121)	distribution%input_src%particle_src%volume_intgr%torque (matflt.type) (9.1.1.2.7)
flux_surf_av (111)	distribution%input_src%particle_src%flux_surf_av (dist_src_snk_surf) (9.1.1.3.95)
particlesd (119)	distribution%input_src%particle_src%flux_surf_av%particlesd (matflt.type) (9.1.1.2.7)
powerd (119)	distribution%input_src%particle_src%flux_surf_av%powerd (matflt.type) (9.1.1.2.7)
torqued (119)	distribution%input_src%particle_src%flux_surf_av%torqued (matflt.type) (9.1.1.2.7)
wave_src (107)	distribution%input_src%wave_src (dist_wave_src) (9.1.1.3.99)
type (123)	distribution%input_src%wave_src%type (vecstring.type) (9.1.1.2.11)
wave_power (123)	distribution%input_src%wave_src%wave_power (vecflt.type) (9.1.1.2.9)
wave_powerd (123)	distribution%input_src%wave_src%wave_powerd (matflt.type) (9.1.1.2.7)
codeparam (36)	distribution%codeparam (codeparam) (9.1.1.3.55)
codename (79)	distribution%codeparam%codename (string) (9.1.1.1.3)
codeversion (79)	distribution%codeparam%codeversion (string) (9.1.1.1.3)
parameters (79)	distribution%codeparam%parameters (string) (9.1.1.1.3)
output_diag (79)	distribution%codeparam%output_diag (string) (9.1.1.1.3)
output_flag (79)	distribution%codeparam%output_flag (integer) (9.1.1.1.2)
time (36)	distribution%time (float) (9.1.1.1.1)

### 9.1.2.1.11 distsource

datainfo (37)	distsource%datainfo (datainfo) (9.1.1.3.73)
dataprovider (97)	distsource%datainfo%dataprovider (string) (9.1.1.1.3)
putdate (97)	distsource%datainfo%putdate (string) (9.1.1.1.3)
source (97)	distsource%datainfo%source (string) (9.1.1.1.3)
comment (97)	distsource%datainfo%comment (string) (9.1.1.1.3)
isref (97)	distsource%datainfo%isref (integer) (9.1.1.1.2)
whatref (97)	distsource%datainfo%whatref (whatref) (9.1.1.3.275)
user (299)	distsource%datainfo%whatref%user (string) (9.1.1.1.3)
machine (299)	distsource%datainfo%whatref%machine (string) (9.1.1.1.3)
shot (299)	distsource%datainfo%whatref%shot (integer) (9.1.1.1.2)
run (299)	distsource%datainfo%whatref%run (integer) (9.1.1.1.2)
occurrence (299)	distsource%datainfo%whatref%occurrence (integer) (9.1.1.1.2)
putinfo (97)	distsource%datainfo%putinfo (putinfo) (9.1.1.3.167)
putmethod (191)	distsource%datainfo%putinfo%putmethod (string) (9.1.1.1.3)
putaccess (191)	distsource%datainfo%putinfo%putaccess (string) (9.1.1.1.3)
putlocation (191)	distsource%datainfo%putinfo%putlocation (string) (9.1.1.1.3)

rights (191)	distsource%datainfo%putinfo%rights (string) (9.1.1.1.3)
composition (37)	distsource%composition (composition) (9.1.1.3.57)
amn (81)	distsource%composition%amn (vecflt.type) (9.1.1.2.9)
zn (81)	distsource%composition%zn (vecflt.type) (9.1.1.2.9)
zion (81)	distsource%composition%zion (vecflt.type) (9.1.1.2.9)
imp_flag (81)	distsource%composition%imp_flag (vecint.type) (9.1.1.2.10)
src_spec (37)	distsource%src_spec (vecint.type) (9.1.1.2.10)
global_param (37)	distsource%global_param (distsource.global_param) (9.1.1.3.100)
src_pow (124)	distsource%global_param%src_pow (vecflt.type) (9.1.1.2.9)
src_rate (124)	distsource%global_param%src_rate (vecflt.type) (9.1.1.2.9)
profiles.1d (37)	distsource%profiles.1d (distsource.profiles.1d) (9.1.1.3.101)
npsi (125)	distsource%profiles.1d%npsi (vecint.type) (9.1.1.2.10)
rho_tor_norm (125)	distsource%profiles.1d%rho_tor_norm (matflt.type) (9.1.1.2.7)
rho_tor (125)	distsource%profiles.1d%rho_tor (matflt.type) (9.1.1.2.7)
psi (125)	distsource%profiles.1d%psi (matflt.type) (9.1.1.2.7)
pow_den (125)	distsource%profiles.1d%pow_den (matflt.type) (9.1.1.2.7)
src_rate (125)	distsource%profiles.1d%src_rate (matflt.type) (9.1.1.2.7)
source.4d (37)	distsource%source.4d (source.4d) (9.1.1.3.230)
gyrosrc.type (254)	distsource%source.4d%gyrosrc.type (vecint.type) (9.1.1.2.10)
grid.type (254)	distsource%source.4d%grid.type (vecint.type) (9.1.1.2.10)
rect.grid (254)	distsource%source.4d%rect.grid (distsource.rect.grid) (9.1.1.3.102)
ndim1 (126)	distsource%source.4d%rect.grid%ndim1 (vecint.type) (9.1.1.2.10)
ndim2 (126)	distsource%source.4d%rect.grid%ndim2 (vecint.type) (9.1.1.2.10)
ndim3 (126)	distsource%source.4d%rect.grid%ndim3 (vecint.type) (9.1.1.2.10)
ndim4 (126)	distsource%source.4d%rect.grid%ndim4 (vecint.type) (9.1.1.2.10)
dim1 (126)	distsource%source.4d%rect.grid%dim1 (matflt.type) (9.1.1.2.7)
dim2 (126)	distsource%source.4d%rect.grid%dim2 (matflt.type) (9.1.1.2.7)
dim3 (126)	distsource%source.4d%rect.grid%dim3 (matflt.type) (9.1.1.2.7)
dim4 (126)	distsource%source.4d%rect.grid%dim4 (matflt.type) (9.1.1.2.7)
jacobian (126)	distsource%source.4d%rect.grid%jacobian (array5dflt.type) (9.1.1.2.4)
source (254)	distsource%source.4d%source (array5dflt.type) (9.1.1.2.4)
source.tp (37)	distsource%source.tp (source.tp) (9.1.1.3.234)
n_particles (258)	distsource%source.tp%n_particles (vecint.type) (9.1.1.2.10)
var.type (258)	distsource%source.tp%var.type (integer) (9.1.1.1.2)
var1 (258)	distsource%source.tp%var1 (matflt.type) (9.1.1.2.7)
var2 (258)	distsource%source.tp%var2 (matflt.type) (9.1.1.2.7)
var3 (258)	distsource%source.tp%var3 (matflt.type) (9.1.1.2.7)
var4 (258)	distsource%source.tp%var4 (matflt.type) (9.1.1.2.7)
var5 (258)	distsource%source.tp%var5 (matflt.type) (9.1.1.2.7)
var6 (258)	distsource%source.tp%var6 (matflt.type) (9.1.1.2.7)
weight (258)	distsource%source.tp%weight (matflt.type) (9.1.1.2.7)
codeparam (37)	distsource%codeparam (codeparam) (9.1.1.3.55)
codename (79)	distsource%codeparam%codename (string) (9.1.1.1.3)
codeversion (79)	distsource%codeparam%codeversion (string) (9.1.1.1.3)
parameters (79)	distsource%codeparam%parameters (string) (9.1.1.1.3)
output_diag (79)	distsource%codeparam%output_diag (string) (9.1.1.1.3)
output_flag (79)	distsource%codeparam%output_flag (integer) (9.1.1.1.2)
time (37)	distsource%time (float) (9.1.1.1.1)

### 9.1.2.1.12 ecediag

datainfo (38)	ecediag%datainfo (datainfo) (9.1.1.3.73)
dataprovider (97)	ecediag%datainfo%dataprovider (string) (9.1.1.1.3)
putdate (97)	ecediag%datainfo%putdate (string) (9.1.1.1.3)
source (97)	ecediag%datainfo%source (string) (9.1.1.1.3)
comment (97)	ecediag%datainfo%comment (string) (9.1.1.1.3)
isref (97)	ecediag%datainfo%isref (integer) (9.1.1.1.2)
whatref (97)	ecediag%datainfo%whatref (whatref) (9.1.1.3.275)
user (299)	ecediag%datainfo%whatref%user (string) (9.1.1.1.3)
machine (299)	ecediag%datainfo%whatref%machine (string) (9.1.1.1.3)
shot (299)	ecediag%datainfo%whatref%shot (integer) (9.1.1.1.2)



run (299)	ecediag%datainfo%whatref%run (integer) (9.1.1.1.2)
occurrence (299)	ecediag%datainfo%whatref%occurrence (integer) (9.1.1.1.2)
putinfo (97)	ecediag%datainfo%putinfo (putinfo) (9.1.1.3.167)
putmethod (191)	ecediag%datainfo%putinfo%putmethod (string) (9.1.1.1.3)
putaccess (191)	ecediag%datainfo%putinfo%putaccess (string) (9.1.1.1.3)
putlocation (191)	ecediag%datainfo%putinfo%putlocation (string) (9.1.1.1.3)
rights (191)	ecediag%datainfo%putinfo%rights (string) (9.1.1.1.3)
setup (38)	ecediag%setup (ecesetup) (9.1.1.3.104)
frequency (128)	ecediag%setup%frequency (vecflt.type) (9.1.1.2.9)
position (128)	ecediag%setup%position (rzphi1Dexp) (9.1.1.3.199)
r (223)	ecediag%setup%position%r (exp1D) (9.1.1.3.111)
value (135)	ecediag%setup%position%r%value (vecflt.type) (9.1.1.2.9)
abserror (135)	ecediag%setup%position%r%abserror (vecflt.type) (9.1.1.2.9)
relerror (135)	ecediag%setup%position%r%relerror (vecflt.type) (9.1.1.2.9)
z (223)	ecediag%setup%position%z (exp1D) (9.1.1.3.111)
value (135)	ecediag%setup%position%z%value (vecflt.type) (9.1.1.2.9)
abserror (135)	ecediag%setup%position%z%abserror (vecflt.type) (9.1.1.2.9)
relerror (135)	ecediag%setup%position%z%relerror (vecflt.type) (9.1.1.2.9)
phi (223)	ecediag%setup%position%phi (exp1D) (9.1.1.3.111)
value (135)	ecediag%setup%position%phi%value (vecflt.type) (9.1.1.2.9)
abserror (135)	ecediag%setup%position%phi%abserror (vecflt.type) (9.1.1.2.9)
relerror (135)	ecediag%setup%position%phi%relerror (vecflt.type) (9.1.1.2.9)
measure (38)	ecediag%measure (ecemeasure) (9.1.1.3.103)
te (127)	ecediag%measure%te (exp1D) (9.1.1.3.111)
value (135)	ecediag%measure%te%value (vecflt.type) (9.1.1.2.9)
abserror (135)	ecediag%measure%te%abserror (vecflt.type) (9.1.1.2.9)
relerror (135)	ecediag%measure%te%relerror (vecflt.type) (9.1.1.2.9)
time (38)	ecediag%time (float) (9.1.1.1.1)

### 9.1.2.1.13 edge

datainfo (39)	edge%datainfo (datainfo) (9.1.1.3.73)
dataprovider (97)	edge%datainfo%dataprovider (string) (9.1.1.1.3)
putdate (97)	edge%datainfo%putdate (string) (9.1.1.1.3)
source (97)	edge%datainfo%source (string) (9.1.1.1.3)
comment (97)	edge%datainfo%comment (string) (9.1.1.1.3)
isref (97)	edge%datainfo%isref (integer) (9.1.1.1.2)
whatref (97)	edge%datainfo%whatref (whatref) (9.1.1.3.275)
user (299)	edge%datainfo%whatref%user (string) (9.1.1.1.3)
machine (299)	edge%datainfo%whatref%machine (string) (9.1.1.1.3)
shot (299)	edge%datainfo%whatref%shot (integer) (9.1.1.1.2)
run (299)	edge%datainfo%whatref%run (integer) (9.1.1.1.2)
occurrence (299)	edge%datainfo%whatref%occurrence (integer) (9.1.1.1.2)
putinfo (97)	edge%datainfo%putinfo (putinfo) (9.1.1.3.167)
putmethod (191)	edge%datainfo%putinfo%putmethod (string) (9.1.1.1.3)
putaccess (191)	edge%datainfo%putinfo%putaccess (string) (9.1.1.1.3)
putlocation (191)	edge%datainfo%putinfo%putlocation (string) (9.1.1.1.3)
rights (191)	edge%datainfo%putinfo%rights (string) (9.1.1.1.3)
grid (39)	edge%grid (grid_full) (9.1.1.3.124)
spaces (148)	edge%grid%spaces (grid_spaces) (9.1.1.3.126)
nspace (150)	edge%grid%spaces%nspace (integer) (9.1.1.1.2)
space_1 (150)	edge%grid%spaces%space_1 (grid_space) (9.1.1.3.125)
type_coord (149)	edge%grid%spaces%space_1%type_coord (vecint.type) (9.1.1.2.10)
node_value (149)	edge%grid%spaces%space_1%node_value (matflt.type) (9.1.1.2.7)
alter_coord (149)	edge%grid%spaces%space_1%alter_coord (alter_coord) (9.1.1.3.38)
type_coord (62)	edge%grid%spaces%space_1%alter_coord%type_coord (vecint.type) (9.1.1.2.10)
node_value (62)	edge%grid%spaces%space_1%alter_coord%node_value (matflt.type) (9.1.1.2.7)
nobject (149)	edge%grid%spaces%space_1%nobject (vecint.type) (9.1.1.2.10)
nobject.bou (149)	edge%grid%spaces%space_1%nobject.bou (vecint.type) (9.1.1.2.10)
neighborside (149)	edge%grid%spaces%space_1%neighborside (integer) (9.1.1.1.2)
neighbors (149)	edge%grid%spaces%space_1%neighbors (matint.type) (9.1.1.2.8)





properties (149)	edge%grid%spaces%space_4%properties (properties) (9.1.1.3.165)
alias (189)	edge%grid%spaces%space_4%properties%alias (vecint.type) (9.1.1.2.10)
type (189)	edge%grid%spaces%space_4%properties%type (vecint.type) (9.1.1.2.10)
is_x (189)	edge%grid%spaces%space_4%properties%is_x (vecint.type) (9.1.1.2.10)
node_connect (189)	edge%grid%spaces%space_4%properties%node_connect (string) (9.1.1.1.3)
bezier (189)	edge%grid%spaces%space_4%properties%bezier (bezier) (9.1.1.3.48)
u (72)	edge%grid%spaces%space_4%properties%bezier%u (matflt.type) (9.1.1.2.7)
v (72)	edge%grid%spaces%space_4%properties%bezier%v (matflt.type) (9.1.1.2.7)
w (72)	edge%grid%spaces%space_4%properties%bezier%w (matflt.type) (9.1.1.2.7)
space_5 (150)	edge%grid%spaces%space_5 (grid.space) (9.1.1.3.125)
type_coord (149)	edge%grid%spaces%space_5%type_coord (vecint.type) (9.1.1.2.10)
node_value (149)	edge%grid%spaces%space_5%node_value (matflt.type) (9.1.1.2.7)
alter_coord (149)	edge%grid%spaces%space_5%alter_coord (alter.coord) (9.1.1.3.38)
type_coord (62)	edge%grid%spaces%space_5%alter_coord%type_coord (vecint.type) (9.1.1.2.10)
node_value (62)	edge%grid%spaces%space_5%alter_coord%node_value (matflt.type) (9.1.1.2.7)
nobject (149)	edge%grid%spaces%space_5%nobject (vecint.type) (9.1.1.2.10)
nobject.bou (149)	edge%grid%spaces%space_5%nobject.bou (vecint.type) (9.1.1.2.10)
neighborside (149)	edge%grid%spaces%space_5%neighborside (integer) (9.1.1.1.2)
neighbors (149)	edge%grid%spaces%space_5%neighbors (matint.type) (9.1.1.2.8)
OBJDEF (149)	edge%grid%spaces%space_5%OBJDEF (vecint.type) (9.1.1.2.10)
properties (149)	edge%grid%spaces%space_5%properties (properties) (9.1.1.3.165)
alias (189)	edge%grid%spaces%space_5%properties%alias (vecint.type) (9.1.1.2.10)
type (189)	edge%grid%spaces%space_5%properties%type (vecint.type) (9.1.1.2.10)
is_x (189)	edge%grid%spaces%space_5%properties%is_x (vecint.type) (9.1.1.2.10)
node_connect (189)	edge%grid%spaces%space_5%properties%node_connect (string) (9.1.1.1.3)
bezier (189)	edge%grid%spaces%space_5%properties%bezier (bezier) (9.1.1.3.48)
u (72)	edge%grid%spaces%space_5%properties%bezier%u (matflt.type) (9.1.1.2.7)
v (72)	edge%grid%spaces%space_5%properties%bezier%v (matflt.type) (9.1.1.2.7)
w (72)	edge%grid%spaces%space_5%properties%bezier%w (matflt.type) (9.1.1.2.7)
metric (148)	edge%grid%metric (vecflt.type) (9.1.1.2.9)
te (39)	edge%te (matflt.type) (9.1.1.2.7)
ne (39)	edge%ne (matflt.type) (9.1.1.2.7)
time (39)	edge%time (float) (9.1.1.1.1)
codeparam (39)	edge%codeparam (codeparam) (9.1.1.3.55)
codename (79)	edge%codeparam%codename (string) (9.1.1.1.3)
codeversion (79)	edge%codeparam%codeversion (string) (9.1.1.1.3)
parameters (79)	edge%codeparam%parameters (string) (9.1.1.1.3)
output_diag (79)	edge%codeparam%output_diag (string) (9.1.1.1.3)
output_flag (79)	edge%codeparam%output_flag (integer) (9.1.1.1.2)

### 9.1.2.1.14 equilibrium

datainfo (40)	equilibrium%datainfo (datainfo) (9.1.1.3.73)
dataprovider (97)	equilibrium%datainfo%dataprovider (string) (9.1.1.1.3)
putdate (97)	equilibrium%datainfo%putdate (string) (9.1.1.1.3)
source (97)	equilibrium%datainfo%source (string) (9.1.1.1.3)
comment (97)	equilibrium%datainfo%comment (string) (9.1.1.1.3)
isref (97)	equilibrium%datainfo%isref (integer) (9.1.1.1.2)
whatref (97)	equilibrium%datainfo%whatref (whatref) (9.1.1.3.275)
user (299)	equilibrium%datainfo%whatref%user (string) (9.1.1.1.3)
machine (299)	equilibrium%datainfo%whatref%machine (string) (9.1.1.1.3)
shot (299)	equilibrium%datainfo%whatref%shot (integer) (9.1.1.1.2)
run (299)	equilibrium%datainfo%whatref%run (integer) (9.1.1.1.2)
occurrence (299)	equilibrium%datainfo%whatref%occurrence (integer) (9.1.1.1.2)
putinfo (97)	equilibrium%datainfo%putinfo (putinfo) (9.1.1.3.167)
putmethod (191)	equilibrium%datainfo%putinfo%putmethod (string) (9.1.1.1.3)
putaccess (191)	equilibrium%datainfo%putinfo%putaccess (string) (9.1.1.1.3)
putlocation (191)	equilibrium%datainfo%putinfo%putlocation (string) (9.1.1.1.3)
rights (191)	equilibrium%datainfo%putinfo%rights (string) (9.1.1.1.3)
eqconstraint (40)	equilibrium%eqconstraint (eqconstraint) (9.1.1.3.106)
bpol (130)	equilibrium%eqconstraint%bpol (eqmes1D) (9.1.1.3.109)

measured (133)	equilibrium%eqconstraint%bpol%measured (vecflt.type) (9.1.1.2.9)
source (133)	equilibrium%eqconstraint%bpol%source (string) (9.1.1.1.3)
time (133)	equilibrium%eqconstraint%bpol%time (float) (9.1.1.1.1)
exact (133)	equilibrium%eqconstraint%bpol%exact (vecint.type) (9.1.1.2.10)
weight (133)	equilibrium%eqconstraint%bpol%weight (vecflt.type) (9.1.1.2.9)
sigma (133)	equilibrium%eqconstraint%bpol%sigma (vecflt.type) (9.1.1.2.9)
calculated (133)	equilibrium%eqconstraint%bpol%calculated (vecflt.type) (9.1.1.2.9)
chi2 (133)	equilibrium%eqconstraint%bpol%chi2 (vecflt.type) (9.1.1.2.9)
bvac_r (130)	equilibrium%eqconstraint%bvac_r (eqmes0D) (9.1.1.3.108)
measured (132)	equilibrium%eqconstraint%bvac_r%measured (float) (9.1.1.1.1)
source (132)	equilibrium%eqconstraint%bvac_r%source (string) (9.1.1.1.3)
time (132)	equilibrium%eqconstraint%bvac_r%time (float) (9.1.1.1.1)
exact (132)	equilibrium%eqconstraint%bvac_r%exact (integer) (9.1.1.1.2)
weight (132)	equilibrium%eqconstraint%bvac_r%weight (float) (9.1.1.1.1)
sigma (132)	equilibrium%eqconstraint%bvac_r%sigma (float) (9.1.1.1.1)
calculated (132)	equilibrium%eqconstraint%bvac_r%calculated (float) (9.1.1.1.1)
chi2 (132)	equilibrium%eqconstraint%bvac_r%chi2 (float) (9.1.1.1.1)
faraday (130)	equilibrium%eqconstraint%faraday (eqmes1D) (9.1.1.3.109)
measured (133)	equilibrium%eqconstraint%faraday%measured (vecflt.type) (9.1.1.2.9)
source (133)	equilibrium%eqconstraint%faraday%source (string) (9.1.1.1.3)
time (133)	equilibrium%eqconstraint%faraday%time (float) (9.1.1.1.1)
exact (133)	equilibrium%eqconstraint%faraday%exact (vecint.type) (9.1.1.2.10)
weight (133)	equilibrium%eqconstraint%faraday%weight (vecflt.type) (9.1.1.2.9)
sigma (133)	equilibrium%eqconstraint%faraday%sigma (vecflt.type) (9.1.1.2.9)
calculated (133)	equilibrium%eqconstraint%faraday%calculated (vecflt.type) (9.1.1.2.9)
chi2 (133)	equilibrium%eqconstraint%faraday%chi2 (vecflt.type) (9.1.1.2.9)
flux (130)	equilibrium%eqconstraint%flux (eqmes1D) (9.1.1.3.109)
measured (133)	equilibrium%eqconstraint%flux%measured (vecflt.type) (9.1.1.2.9)
source (133)	equilibrium%eqconstraint%flux%source (string) (9.1.1.1.3)
time (133)	equilibrium%eqconstraint%flux%time (float) (9.1.1.1.1)
exact (133)	equilibrium%eqconstraint%flux%exact (vecint.type) (9.1.1.2.10)
weight (133)	equilibrium%eqconstraint%flux%weight (vecflt.type) (9.1.1.2.9)
sigma (133)	equilibrium%eqconstraint%flux%sigma (vecflt.type) (9.1.1.2.9)
calculated (133)	equilibrium%eqconstraint%flux%calculated (vecflt.type) (9.1.1.2.9)
chi2 (133)	equilibrium%eqconstraint%flux%chi2 (vecflt.type) (9.1.1.2.9)
i_plasma (130)	equilibrium%eqconstraint%i_plasma (eqmes0D) (9.1.1.3.108)
measured (132)	equilibrium%eqconstraint%i_plasma%measured (float) (9.1.1.1.1)
source (132)	equilibrium%eqconstraint%i_plasma%source (string) (9.1.1.1.3)
time (132)	equilibrium%eqconstraint%i_plasma%time (float) (9.1.1.1.1)
exact (132)	equilibrium%eqconstraint%i_plasma%exact (integer) (9.1.1.1.2)
weight (132)	equilibrium%eqconstraint%i_plasma%weight (float) (9.1.1.1.1)
sigma (132)	equilibrium%eqconstraint%i_plasma%sigma (float) (9.1.1.1.1)
calculated (132)	equilibrium%eqconstraint%i_plasma%calculated (float) (9.1.1.1.1)
chi2 (132)	equilibrium%eqconstraint%i_plasma%chi2 (float) (9.1.1.1.1)
isoflux (130)	equilibrium%eqconstraint%isoflux (isoflux) (9.1.1.3.127)
position (151)	equilibrium%eqconstraint%isoflux%position (rz1D) (9.1.1.3.194)
r (218)	equilibrium%eqconstraint%isoflux%position%r (vecflt.type) (9.1.1.2.9)
z (218)	equilibrium%eqconstraint%isoflux%position%z (vecflt.type) (9.1.1.2.9)
source (151)	equilibrium%eqconstraint%isoflux%source (string) (9.1.1.1.3)
weight (151)	equilibrium%eqconstraint%isoflux%weight (vecflt.type) (9.1.1.2.9)
sigma (151)	equilibrium%eqconstraint%isoflux%sigma (vecflt.type) (9.1.1.2.9)
calculated (151)	equilibrium%eqconstraint%isoflux%calculated (vecflt.type) (9.1.1.2.9)
chi2 (151)	equilibrium%eqconstraint%isoflux%chi2 (vecflt.type) (9.1.1.2.9)
jsurf (130)	equilibrium%eqconstraint%jsurf (eqmes1D) (9.1.1.3.109)
measured (133)	equilibrium%eqconstraint%jsurf%measured (vecflt.type) (9.1.1.2.9)
source (133)	equilibrium%eqconstraint%jsurf%source (string) (9.1.1.1.3)
time (133)	equilibrium%eqconstraint%jsurf%time (float) (9.1.1.1.1)
exact (133)	equilibrium%eqconstraint%jsurf%exact (vecint.type) (9.1.1.2.10)
weight (133)	equilibrium%eqconstraint%jsurf%weight (vecflt.type) (9.1.1.2.9)
sigma (133)	equilibrium%eqconstraint%jsurf%sigma (vecflt.type) (9.1.1.2.9)
calculated (133)	equilibrium%eqconstraint%jsurf%calculated (vecflt.type) (9.1.1.2.9)

chi2 (133)	equilibrium%eqconstraint%jsurf%chi2 (vecflt.type) (9.1.1.2.9)
magnet.iron (130)	equilibrium%eqconstraint%magnet.iron (magnet.iron) (9.1.1.3.133)
mr (157)	equilibrium%eqconstraint%magnet.iron%mr (eqmes1D) (9.1.1.3.109)
measured (133)	equilibrium%eqconstraint%magnet.iron%mr%measured (vecflt.type) (9.1.1.2.9)
source (133)	equilibrium%eqconstraint%magnet.iron%mr%source (string) (9.1.1.1.3)
time (133)	equilibrium%eqconstraint%magnet.iron%mr%time (float) (9.1.1.1.1)
exact (133)	equilibrium%eqconstraint%magnet.iron%mr%exact (vecint.type) (9.1.1.2.10)
weight (133)	equilibrium%eqconstraint%magnet.iron%mr%weight (vecflt.type) (9.1.1.2.9)
sigma (133)	equilibrium%eqconstraint%magnet.iron%mr%sigma (vecflt.type) (9.1.1.2.9)
calculated (133)	equilibrium%eqconstraint%magnet.iron%mr%calculated (vecflt.type) (9.1.1.2.9)
chi2 (133)	equilibrium%eqconstraint%magnet.iron%mr%chi2 (vecflt.type) (9.1.1.2.9)
mz (157)	equilibrium%eqconstraint%magnet.iron%mz (eqmes1D) (9.1.1.3.109)
measured (133)	equilibrium%eqconstraint%magnet.iron%mz%measured (vecflt.type) (9.1.1.2.9)
source (133)	equilibrium%eqconstraint%magnet.iron%mz%source (string) (9.1.1.1.3)
time (133)	equilibrium%eqconstraint%magnet.iron%mz%time (float) (9.1.1.1.1)
exact (133)	equilibrium%eqconstraint%magnet.iron%mz%exact (vecint.type) (9.1.1.2.10)
weight (133)	equilibrium%eqconstraint%magnet.iron%mz%weight (vecflt.type) (9.1.1.2.9)
sigma (133)	equilibrium%eqconstraint%magnet.iron%mz%sigma (vecflt.type) (9.1.1.2.9)
calculated (133)	equilibrium%eqconstraint%magnet.iron%mz%calculated (vecflt.type) (9.1.1.2.9)
chi2 (133)	equilibrium%eqconstraint%magnet.iron%mz%chi2 (vecflt.type) (9.1.1.2.9)
mse (130)	equilibrium%eqconstraint%mse (eqmes1D) (9.1.1.3.109)
measured (133)	equilibrium%eqconstraint%mse%measured (vecflt.type) (9.1.1.2.9)
source (133)	equilibrium%eqconstraint%mse%source (string) (9.1.1.1.3)
time (133)	equilibrium%eqconstraint%mse%time (float) (9.1.1.1.1)
exact (133)	equilibrium%eqconstraint%mse%exact (vecint.type) (9.1.1.2.10)
weight (133)	equilibrium%eqconstraint%mse%weight (vecflt.type) (9.1.1.2.9)
sigma (133)	equilibrium%eqconstraint%mse%sigma (vecflt.type) (9.1.1.2.9)
calculated (133)	equilibrium%eqconstraint%mse%calculated (vecflt.type) (9.1.1.2.9)
chi2 (133)	equilibrium%eqconstraint%mse%chi2 (vecflt.type) (9.1.1.2.9)
ne (130)	equilibrium%eqconstraint%ne (eqmes1D) (9.1.1.3.109)
measured (133)	equilibrium%eqconstraint%ne%measured (vecflt.type) (9.1.1.2.9)
source (133)	equilibrium%eqconstraint%ne%source (string) (9.1.1.1.3)
time (133)	equilibrium%eqconstraint%ne%time (float) (9.1.1.1.1)
exact (133)	equilibrium%eqconstraint%ne%exact (vecint.type) (9.1.1.2.10)
weight (133)	equilibrium%eqconstraint%ne%weight (vecflt.type) (9.1.1.2.9)
sigma (133)	equilibrium%eqconstraint%ne%sigma (vecflt.type) (9.1.1.2.9)
calculated (133)	equilibrium%eqconstraint%ne%calculated (vecflt.type) (9.1.1.2.9)
chi2 (133)	equilibrium%eqconstraint%ne%chi2 (vecflt.type) (9.1.1.2.9)
pfcurrent (130)	equilibrium%eqconstraint%pfcurrent (eqmes1D) (9.1.1.3.109)
measured (133)	equilibrium%eqconstraint%pfcurrent%measured (vecflt.type) (9.1.1.2.9)
source (133)	equilibrium%eqconstraint%pfcurrent%source (string) (9.1.1.1.3)
time (133)	equilibrium%eqconstraint%pfcurrent%time (float) (9.1.1.1.1)
exact (133)	equilibrium%eqconstraint%pfcurrent%exact (vecint.type) (9.1.1.2.10)
weight (133)	equilibrium%eqconstraint%pfcurrent%weight (vecflt.type) (9.1.1.2.9)
sigma (133)	equilibrium%eqconstraint%pfcurrent%sigma (vecflt.type) (9.1.1.2.9)
calculated (133)	equilibrium%eqconstraint%pfcurrent%calculated (vecflt.type) (9.1.1.2.9)
chi2 (133)	equilibrium%eqconstraint%pfcurrent%chi2 (vecflt.type) (9.1.1.2.9)
pressure (130)	equilibrium%eqconstraint%pressure (eqmes1D) (9.1.1.3.109)
measured (133)	equilibrium%eqconstraint%pressure%measured (vecflt.type) (9.1.1.2.9)
source (133)	equilibrium%eqconstraint%pressure%source (string) (9.1.1.1.3)
time (133)	equilibrium%eqconstraint%pressure%time (float) (9.1.1.1.1)
exact (133)	equilibrium%eqconstraint%pressure%exact (vecint.type) (9.1.1.2.10)
weight (133)	equilibrium%eqconstraint%pressure%weight (vecflt.type) (9.1.1.2.9)
sigma (133)	equilibrium%eqconstraint%pressure%sigma (vecflt.type) (9.1.1.2.9)
calculated (133)	equilibrium%eqconstraint%pressure%calculated (vecflt.type) (9.1.1.2.9)
chi2 (133)	equilibrium%eqconstraint%pressure%chi2 (vecflt.type) (9.1.1.2.9)
q (130)	equilibrium%eqconstraint%q (q) (9.1.1.3.168)
qvalue (192)	equilibrium%eqconstraint%q%qvalue (vecflt.type) (9.1.1.2.9)
position (192)	equilibrium%eqconstraint%q%position (rz1D) (9.1.1.3.194)
r (218)	equilibrium%eqconstraint%q%position%r (vecflt.type) (9.1.1.2.9)
z (218)	equilibrium%eqconstraint%q%position%z (vecflt.type) (9.1.1.2.9)

source (192)	equilibrium%eqconstraint%q%source (string) (9.1.1.1.3)
exact (192)	equilibrium%eqconstraint%q%exact (integer) (9.1.1.1.2)
weight (192)	equilibrium%eqconstraint%q%weight (vecflt_type) (9.1.1.2.9)
sigma (192)	equilibrium%eqconstraint%q%sigma (vecflt_type) (9.1.1.2.9)
calculated (192)	equilibrium%eqconstraint%q%calculated (vecflt_type) (9.1.1.2.9)
chi2 (192)	equilibrium%eqconstraint%q%chi2 (vecflt_type) (9.1.1.2.9)
xpts (130)	equilibrium%eqconstraint%xpts (xpts) (9.1.1.3.276)
position (300)	equilibrium%eqconstraint%xpts%position (rz1D) (9.1.1.3.194)
r (218)	equilibrium%eqconstraint%xpts%position%r (vecflt_type) (9.1.1.2.9)
z (218)	equilibrium%eqconstraint%xpts%position%z (vecflt_type) (9.1.1.2.9)
source (300)	equilibrium%eqconstraint%xpts%source (string) (9.1.1.1.3)
weight (300)	equilibrium%eqconstraint%xpts%weight (vecflt_type) (9.1.1.2.9)
sigma (300)	equilibrium%eqconstraint%xpts%sigma (vecflt_type) (9.1.1.2.9)
calculated (300)	equilibrium%eqconstraint%xpts%calculated (vecflt_type) (9.1.1.2.9)
chi2 (300)	equilibrium%eqconstraint%xpts%chi2 (vecflt_type) (9.1.1.2.9)
eqgeometry (40)	equilibrium%eqgeometry (eqgeometry) (9.1.1.3.107)
source (131)	equilibrium%eqgeometry%source (string) (9.1.1.1.3)
boundarytype (131)	equilibrium%eqgeometry%boundarytype (integer) (9.1.1.1.2)
boundary (131)	equilibrium%eqgeometry%boundary (rz1D_npoints) (9.1.1.3.195)
r (219)	equilibrium%eqgeometry%boundary%r (vecflt_type) (9.1.1.2.9)
z (219)	equilibrium%eqgeometry%boundary%z (vecflt_type) (9.1.1.2.9)
npoints (219)	equilibrium%eqgeometry%boundary%npoints (integer) (9.1.1.1.2)
geom_axis (131)	equilibrium%eqgeometry%geom_axis (rz0D) (9.1.1.3.193)
r (217)	equilibrium%eqgeometry%geom_axis%r (float) (9.1.1.1.1)
z (217)	equilibrium%eqgeometry%geom_axis%z (float) (9.1.1.1.1)
a_minor (131)	equilibrium%eqgeometry%a_minor (float) (9.1.1.1.1)
elongation (131)	equilibrium%eqgeometry%elongation (float) (9.1.1.1.1)
tria_upper (131)	equilibrium%eqgeometry%tria_upper (float) (9.1.1.1.1)
tria_lower (131)	equilibrium%eqgeometry%tria_lower (float) (9.1.1.1.1)
xpts (131)	equilibrium%eqgeometry%xpts (rz1D) (9.1.1.3.194)
r (218)	equilibrium%eqgeometry%xpts%r (vecflt_type) (9.1.1.2.9)
z (218)	equilibrium%eqgeometry%xpts%z (vecflt_type) (9.1.1.2.9)
left_low_st (131)	equilibrium%eqgeometry%left_low_st (rz0D) (9.1.1.3.193)
r (217)	equilibrium%eqgeometry%left_low_st%r (float) (9.1.1.1.1)
z (217)	equilibrium%eqgeometry%left_low_st%z (float) (9.1.1.1.1)
right_low_st (131)	equilibrium%eqgeometry%right_low_st (rz0D) (9.1.1.3.193)
r (217)	equilibrium%eqgeometry%right_low_st%r (float) (9.1.1.1.1)
z (217)	equilibrium%eqgeometry%right_low_st%z (float) (9.1.1.1.1)
left_up_st (131)	equilibrium%eqgeometry%left_up_st (rz0D) (9.1.1.3.193)
r (217)	equilibrium%eqgeometry%left_up_st%r (float) (9.1.1.1.1)
z (217)	equilibrium%eqgeometry%left_up_st%z (float) (9.1.1.1.1)
right_up_st (131)	equilibrium%eqgeometry%right_up_st (rz0D) (9.1.1.3.193)
r (217)	equilibrium%eqgeometry%right_up_st%r (float) (9.1.1.1.1)
z (217)	equilibrium%eqgeometry%right_up_st%z (float) (9.1.1.1.1)
active_limit (131)	equilibrium%eqgeometry%active_limit (rz0D) (9.1.1.3.193)
r (217)	equilibrium%eqgeometry%active_limit%r (float) (9.1.1.1.1)
z (217)	equilibrium%eqgeometry%active_limit%z (float) (9.1.1.1.1)
flush (40)	equilibrium%flush (flush) (9.1.1.3.114)
datainfo (138)	equilibrium%flush%datainfo (datainfo) (9.1.1.3.73)
dataprovider (97)	equilibrium%flush%datainfo%dataprovider (string) (9.1.1.1.3)
putdate (97)	equilibrium%flush%datainfo%putdate (string) (9.1.1.1.3)
source (97)	equilibrium%flush%datainfo%source (string) (9.1.1.1.3)
comment (97)	equilibrium%flush%datainfo%comment (string) (9.1.1.1.3)
isref (97)	equilibrium%flush%datainfo%isref (integer) (9.1.1.1.2)
whatref (97)	equilibrium%flush%datainfo%whatref (whatref) (9.1.1.3.275)
user (299)	equilibrium%flush%datainfo%whatref%user (string) (9.1.1.1.3)
machine (299)	equilibrium%flush%datainfo%whatref%machine (string) (9.1.1.1.3)
shot (299)	equilibrium%flush%datainfo%whatref%shot (integer) (9.1.1.1.2)
run (299)	equilibrium%flush%datainfo%whatref%run (integer) (9.1.1.1.2)
occurrence (299)	equilibrium%flush%datainfo%whatref%occurrence (integer) (9.1.1.1.2)
putinfo (97)	equilibrium%flush%datainfo%putinfo (putinfo) (9.1.1.3.167)

putmethod (191)	equilibrium%flush%datainfo%putinfo%putmethod (string) (9.1.1.1.3)
putaccess (191)	equilibrium%flush%datainfo%putinfo%putaccess (string) (9.1.1.1.3)
putlocation (191)	equilibrium%flush%datainfo%putinfo%putlocation (string) (9.1.1.1.3)
rights (191)	equilibrium%flush%datainfo%putinfo%rights (string) (9.1.1.1.3)
position (138)	equilibrium%flush%position (rz1D) (9.1.1.3.194)
r (218)	equilibrium%flush%position%r (vecflt.type) (9.1.1.2.9)
z (218)	equilibrium%flush%position%z (vecflt.type) (9.1.1.2.9)
coef (138)	equilibrium%flush%coef (matflt.type) (9.1.1.2.7)
codeparam (138)	equilibrium%flush%codeparam (codeparam) (9.1.1.3.55)
codename (79)	equilibrium%flush%codeparam%codename (string) (9.1.1.1.3)
codeversion (79)	equilibrium%flush%codeparam%codeversion (string) (9.1.1.1.3)
parameters (79)	equilibrium%flush%codeparam%parameters (string) (9.1.1.1.3)
output_diag (79)	equilibrium%flush%codeparam%output_diag (string) (9.1.1.1.3)
output_flag (79)	equilibrium%flush%codeparam%output_flag (integer) (9.1.1.1.2)
global_param (40)	equilibrium%global_param (global_param) (9.1.1.3.121)
beta_pol (145)	equilibrium%global_param%beta_pol (float) (9.1.1.1.1)
beta_tor (145)	equilibrium%global_param%beta_tor (float) (9.1.1.1.1)
beta_normal (145)	equilibrium%global_param%beta_normal (float) (9.1.1.1.1)
i_plasma (145)	equilibrium%global_param%i_plasma (float) (9.1.1.1.1)
li (145)	equilibrium%global_param%li (float) (9.1.1.1.1)
volume (145)	equilibrium%global_param%volume (float) (9.1.1.1.1)
area (145)	equilibrium%global_param%area (float) (9.1.1.1.1)
psi_ax (145)	equilibrium%global_param%psi_ax (float) (9.1.1.1.1)
psi_bound (145)	equilibrium%global_param%psi_bound (float) (9.1.1.1.1)
mag_axis (145)	equilibrium%global_param%mag_axis (mag_axis) (9.1.1.3.132)
position (156)	equilibrium%global_param%mag_axis%position (rz0D) (9.1.1.3.193)
r (217)	equilibrium%global_param%mag_axis%position%r (float) (9.1.1.1.1)
z (217)	equilibrium%global_param%mag_axis%position%z (float) (9.1.1.1.1)
bphi (156)	equilibrium%global_param%mag_axis%bphi (float) (9.1.1.1.1)
q (156)	equilibrium%global_param%mag_axis%q (float) (9.1.1.1.1)
q_95 (145)	equilibrium%global_param%q_95 (float) (9.1.1.1.1)
q_min (145)	equilibrium%global_param%q_min (float) (9.1.1.1.1)
toroid_field (145)	equilibrium%global_param%toroid_field (b0r0) (9.1.1.3.45)
r0 (69)	equilibrium%global_param%toroid_field%r0 (float) (9.1.1.1.1)
b0 (69)	equilibrium%global_param%toroid_field%b0 (float) (9.1.1.1.1)
w_mhd (145)	equilibrium%global_param%w_mhd (float) (9.1.1.1.1)
profiles_1d (40)	equilibrium%profiles_1d (profiles_1d) (9.1.1.3.162)
psi (186)	equilibrium%profiles_1d%psi (vecflt.type) (9.1.1.2.9)
phi (186)	equilibrium%profiles_1d%phi (vecflt.type) (9.1.1.2.9)
pressure (186)	equilibrium%profiles_1d%pressure (vecflt.type) (9.1.1.2.9)
F_dia (186)	equilibrium%profiles_1d%F_dia (vecflt.type) (9.1.1.2.9)
pprime (186)	equilibrium%profiles_1d%pprime (vecflt.type) (9.1.1.2.9)
ffprime (186)	equilibrium%profiles_1d%ffprime (vecflt.type) (9.1.1.2.9)
jphi (186)	equilibrium%profiles_1d%jphi (vecflt.type) (9.1.1.2.9)
jparallel (186)	equilibrium%profiles_1d%jparallel (vecflt.type) (9.1.1.2.9)
q (186)	equilibrium%profiles_1d%q (vecflt.type) (9.1.1.2.9)
r_inboard (186)	equilibrium%profiles_1d%r_inboard (vecflt.type) (9.1.1.2.9)
r_outboard (186)	equilibrium%profiles_1d%r_outboard (vecflt.type) (9.1.1.2.9)
rho_tor (186)	equilibrium%profiles_1d%rho_tor (vecflt.type) (9.1.1.2.9)
rho_vol (186)	equilibrium%profiles_1d%rho_vol (vecflt.type) (9.1.1.2.9)
beta_pol (186)	equilibrium%profiles_1d%beta_pol (vecflt.type) (9.1.1.2.9)
li (186)	equilibrium%profiles_1d%li (vecflt.type) (9.1.1.2.9)
elongation (186)	equilibrium%profiles_1d%elongation (vecflt.type) (9.1.1.2.9)
tria_upper (186)	equilibrium%profiles_1d%tria_upper (vecflt.type) (9.1.1.2.9)
tria_lower (186)	equilibrium%profiles_1d%tria_lower (vecflt.type) (9.1.1.2.9)
volume (186)	equilibrium%profiles_1d%volume (vecflt.type) (9.1.1.2.9)
vprime (186)	equilibrium%profiles_1d%vprime (vecflt.type) (9.1.1.2.9)
area (186)	equilibrium%profiles_1d%area (vecflt.type) (9.1.1.2.9)
aprime (186)	equilibrium%profiles_1d%aprime (vecflt.type) (9.1.1.2.9)
surface (186)	equilibrium%profiles_1d%surface (vecflt.type) (9.1.1.2.9)
ftrap (186)	equilibrium%profiles_1d%ftrap (vecflt.type) (9.1.1.2.9)

gm1 (186)	equilibrium%profiles_1d%gm1 (vecflt.type) (9.1.1.2.9)
gm2 (186)	equilibrium%profiles_1d%gm2 (vecflt.type) (9.1.1.2.9)
gm3 (186)	equilibrium%profiles_1d%gm3 (vecflt.type) (9.1.1.2.9)
gm4 (186)	equilibrium%profiles_1d%gm4 (vecflt.type) (9.1.1.2.9)
gm5 (186)	equilibrium%profiles_1d%gm5 (vecflt.type) (9.1.1.2.9)
gm6 (186)	equilibrium%profiles_1d%gm6 (vecflt.type) (9.1.1.2.9)
gm7 (186)	equilibrium%profiles_1d%gm7 (vecflt.type) (9.1.1.2.9)
gm8 (186)	equilibrium%profiles_1d%gm8 (vecflt.type) (9.1.1.2.9)
gm9 (186)	equilibrium%profiles_1d%gm9 (vecflt.type) (9.1.1.2.9)
profiles_2d (40)	equilibrium%profiles_2d (profiles_2d) (9.1.1.3.163)
grid.type (187)	equilibrium%profiles_2d%grid.type (string) (9.1.1.1.3)
grid (187)	equilibrium%profiles_2d%grid (grid) (9.1.1.3.123)
dim1 (147)	equilibrium%profiles_2d%grid%dim1 (vecflt.type) (9.1.1.2.9)
dim2 (147)	equilibrium%profiles_2d%grid%dim2 (vecflt.type) (9.1.1.2.9)
connect (147)	equilibrium%profiles_2d%grid%connect (matint.type) (9.1.1.2.8)
psi_grid (187)	equilibrium%profiles_2d%psi_grid (matflt.type) (9.1.1.2.7)
jphi_grid (187)	equilibrium%profiles_2d%jphi_grid (matflt.type) (9.1.1.2.7)
jpar_grid (187)	equilibrium%profiles_2d%jpar_grid (matflt.type) (9.1.1.2.7)
br (187)	equilibrium%profiles_2d%br (matflt.type) (9.1.1.2.7)
bz (187)	equilibrium%profiles_2d%bz (matflt.type) (9.1.1.2.7)
bphi (187)	equilibrium%profiles_2d%bphi (matflt.type) (9.1.1.2.7)
position (187)	equilibrium%profiles_2d%position (rz2D) (9.1.1.3.196)
r (220)	equilibrium%profiles_2d%position%r (matflt.type) (9.1.1.2.7)
z (220)	equilibrium%profiles_2d%position%z (matflt.type) (9.1.1.2.7)
coord_sys (40)	equilibrium%coord_sys (coord_sys) (9.1.1.3.59)
grid.type (83)	equilibrium%coord_sys%grid.type (string) (9.1.1.1.3)
grid (83)	equilibrium%coord_sys%grid (reggrid) (9.1.1.3.191)
dim1 (215)	equilibrium%coord_sys%grid%dim1 (vecflt.type) (9.1.1.2.9)
dim2 (215)	equilibrium%coord_sys%grid%dim2 (vecflt.type) (9.1.1.2.9)
jacobian (83)	equilibrium%coord_sys%jacobian (matflt.type) (9.1.1.2.7)
g_11 (83)	equilibrium%coord_sys%g_11 (matflt.type) (9.1.1.2.7)
g_12 (83)	equilibrium%coord_sys%g_12 (matflt.type) (9.1.1.2.7)
g_13 (83)	equilibrium%coord_sys%g_13 (matflt.type) (9.1.1.2.7)
g_22 (83)	equilibrium%coord_sys%g_22 (matflt.type) (9.1.1.2.7)
g_23 (83)	equilibrium%coord_sys%g_23 (matflt.type) (9.1.1.2.7)
g_33 (83)	equilibrium%coord_sys%g_33 (matflt.type) (9.1.1.2.7)
position (83)	equilibrium%coord_sys%position (rz2D) (9.1.1.3.196)
r (220)	equilibrium%coord_sys%position%r (matflt.type) (9.1.1.2.7)
z (220)	equilibrium%coord_sys%position%z (matflt.type) (9.1.1.2.7)
time (40)	equilibrium%time (float) (9.1.1.1.1)
codeparam (40)	equilibrium%codeparam (codeparam) (9.1.1.3.55)
codename (79)	equilibrium%codeparam%codename (string) (9.1.1.1.3)
codeversion (79)	equilibrium%codeparam%codeversion (string) (9.1.1.1.3)
parameters (79)	equilibrium%codeparam%parameters (string) (9.1.1.1.3)
output_diag (79)	equilibrium%codeparam%output_diag (string) (9.1.1.1.3)
output_flag (79)	equilibrium%codeparam%output_flag (integer) (9.1.1.1.2)

### 9.1.2.1.15 interfdiag

datainfo (154)	lineintegraldiag%datainfo (datainfo) (9.1.1.3.73)
dataprovder (97)	lineintegraldiag%datainfo%dataprovder (string) (9.1.1.1.3)
putdate (97)	lineintegraldiag%datainfo%putdate (string) (9.1.1.1.3)
source (97)	lineintegraldiag%datainfo%source (string) (9.1.1.1.3)
comment (97)	lineintegraldiag%datainfo%comment (string) (9.1.1.1.3)
isref (97)	lineintegraldiag%datainfo%isref (integer) (9.1.1.1.2)
whatref (97)	lineintegraldiag%datainfo%whatref (whatref) (9.1.1.3.275)
user (299)	lineintegraldiag%datainfo%whatref%user (string) (9.1.1.1.3)
machine (299)	lineintegraldiag%datainfo%whatref%machine (string) (9.1.1.1.3)
shot (299)	lineintegraldiag%datainfo%whatref%shot (integer) (9.1.1.1.2)
run (299)	lineintegraldiag%datainfo%whatref%run (integer) (9.1.1.1.2)
occurrence (299)	lineintegraldiag%datainfo%whatref%occurrence (integer) (9.1.1.1.2)



putinfo (97)	lineintegraldiag%datainfo%putinfo (putinfo) (9.1.1.3.167)
putmethod (191)	lineintegraldiag%datainfo%putinfo%putmethod (string) (9.1.1.1.3)
putaccess (191)	lineintegraldiag%datainfo%putinfo%putaccess (string) (9.1.1.1.3)
putlocation (191)	lineintegraldiag%datainfo%putinfo%putlocation (string) (9.1.1.1.3)
rights (191)	lineintegraldiag%datainfo%putinfo%rights (string) (9.1.1.1.3)
expression (154)	lineintegraldiag%expression (string) (9.1.1.1.3)
setup_line (154)	lineintegraldiag%setup_line (setup_line) (9.1.1.3.228)
pivot_point (252)	lineintegraldiag%setup_line%pivot_point (rzphi1D) (9.1.1.3.198)
r (222)	lineintegraldiag%setup_line%pivot_point%r (vecflt.type) (9.1.1.2.9)
z (222)	lineintegraldiag%setup_line%pivot_point%z (vecflt.type) (9.1.1.2.9)
phi (222)	lineintegraldiag%setup_line%pivot_point%phi (vecflt.type) (9.1.1.2.9)
horchordang1 (252)	lineintegraldiag%setup_line%horchordang1 (vecflt.type) (9.1.1.2.9)
verchordang1 (252)	lineintegraldiag%setup_line%verchordang1 (vecflt.type) (9.1.1.2.9)
width (252)	lineintegraldiag%setup_line%width (vecflt.type) (9.1.1.2.9)
second_point (252)	lineintegraldiag%setup_line%second_point (rzphi1D) (9.1.1.3.198)
r (222)	lineintegraldiag%setup_line%second_point%r (vecflt.type) (9.1.1.2.9)
z (222)	lineintegraldiag%setup_line%second_point%z (vecflt.type) (9.1.1.2.9)
phi (222)	lineintegraldiag%setup_line%second_point%phi (vecflt.type) (9.1.1.2.9)
horchordang2 (252)	lineintegraldiag%setup_line%horchordang2 (vecflt.type) (9.1.1.2.9)
verchordang2 (252)	lineintegraldiag%setup_line%verchordang2 (vecflt.type) (9.1.1.2.9)
third_point (252)	lineintegraldiag%setup_line%third_point (rzphi1D) (9.1.1.3.198)
r (222)	lineintegraldiag%setup_line%third_point%r (vecflt.type) (9.1.1.2.9)
z (222)	lineintegraldiag%setup_line%third_point%z (vecflt.type) (9.1.1.2.9)
phi (222)	lineintegraldiag%setup_line%third_point%phi (vecflt.type) (9.1.1.2.9)
nchordpoints (252)	lineintegraldiag%setup_line%nchordpoints (integer) (9.1.1.1.2)
measure (154)	lineintegraldiag%measure (exp1D) (9.1.1.3.111)
value (135)	lineintegraldiag%measure%value (vecflt.type) (9.1.1.2.9)
abserror (135)	lineintegraldiag%measure%abserror (vecflt.type) (9.1.1.2.9)
relerror (135)	lineintegraldiag%measure%relerror (vecflt.type) (9.1.1.2.9)
time (154)	lineintegraldiag%time (float) (9.1.1.1.1)

### 9.1.2.1.16 ironmodel

datainfo (42)	ironmodel%datainfo (datainfo) (9.1.1.3.73)
dataprovider (97)	ironmodel%datainfo%dataprovider (string) (9.1.1.1.3)
putdate (97)	ironmodel%datainfo%putdate (string) (9.1.1.1.3)
source (97)	ironmodel%datainfo%source (string) (9.1.1.1.3)
comment (97)	ironmodel%datainfo%comment (string) (9.1.1.1.3)
isref (97)	ironmodel%datainfo%isref (integer) (9.1.1.1.2)
whatref (97)	ironmodel%datainfo%whatref (whatref) (9.1.1.3.275)
user (299)	ironmodel%datainfo%whatref%user (string) (9.1.1.1.3)
machine (299)	ironmodel%datainfo%whatref%machine (string) (9.1.1.1.3)
shot (299)	ironmodel%datainfo%whatref%shot (integer) (9.1.1.1.2)
run (299)	ironmodel%datainfo%whatref%run (integer) (9.1.1.1.2)
occurrence (299)	ironmodel%datainfo%whatref%occurrence (integer) (9.1.1.1.2)
putinfo (97)	ironmodel%datainfo%putinfo (putinfo) (9.1.1.3.167)
putmethod (191)	ironmodel%datainfo%putinfo%putmethod (string) (9.1.1.1.3)
putaccess (191)	ironmodel%datainfo%putinfo%putaccess (string) (9.1.1.1.3)
putlocation (191)	ironmodel%datainfo%putinfo%putlocation (string) (9.1.1.1.3)
rights (191)	ironmodel%datainfo%putinfo%rights (string) (9.1.1.1.3)
desc_iron (42)	ironmodel%desc_iron (desc_iron) (9.1.1.3.75)
name (99)	ironmodel%desc_iron%name (vecstring.type) (9.1.1.2.11)
id (99)	ironmodel%desc_iron%id (vecstring.type) (9.1.1.2.11)
permeability (99)	ironmodel%desc_iron%permeability (permeability) (9.1.1.3.148)
b (172)	ironmodel%desc_iron%permeability%b (matflt.type) (9.1.1.2.7)
mur (172)	ironmodel%desc_iron%permeability%mur (matflt.type) (9.1.1.2.7)
geom_iron (99)	ironmodel%desc_iron%geom_iron (geom_iron) (9.1.1.3.120)
npoints (144)	ironmodel%desc_iron%geom_iron%npoints (vecint.type) (9.1.1.2.10)
rzcoordinate (144)	ironmodel%desc_iron%geom_iron%rzcoordinate (rz2D) (9.1.1.3.196)
r (220)	ironmodel%desc_iron%geom_iron%rzcoordinate%r (matflt.type) (9.1.1.2.7)
z (220)	ironmodel%desc_iron%geom_iron%rzcoordinate%z (matflt.type) (9.1.1.2.7)

magnetise (42)	ironmodel%magnetise (magnetise) (9.1.1.3.134)
mr (158)	ironmodel%magnetise%mr (exp1D) (9.1.1.3.111)
value (135)	ironmodel%magnetise%mr%value (vecflt_type) (9.1.1.2.9)
abserror (135)	ironmodel%magnetise%mr%abserror (vecflt_type) (9.1.1.2.9)
relerror (135)	ironmodel%magnetise%mr%relerror (vecflt_type) (9.1.1.2.9)
mz (158)	ironmodel%magnetise%mz (exp1D) (9.1.1.3.111)
value (135)	ironmodel%magnetise%mz%value (vecflt_type) (9.1.1.2.9)
abserror (135)	ironmodel%magnetise%mz%abserror (vecflt_type) (9.1.1.2.9)
relerror (135)	ironmodel%magnetise%mz%relerror (vecflt_type) (9.1.1.2.9)
time (42)	ironmodel%time (float) (9.1.1.1.1)

### 9.1.2.1.17 launches

datainfo (43)	launchs%datainfo (datainfo) (9.1.1.3.73)
dataprovider (97)	launchs%datainfo%dataprovider (string) (9.1.1.1.3)
putdate (97)	launchs%datainfo%putdate (string) (9.1.1.1.3)
source (97)	launchs%datainfo%source (string) (9.1.1.1.3)
comment (97)	launchs%datainfo%comment (string) (9.1.1.1.3)
isref (97)	launchs%datainfo%isref (integer) (9.1.1.1.2)
whatref (97)	launchs%datainfo%whatref (whatref) (9.1.1.3.275)
user (299)	launchs%datainfo%whatref%user (string) (9.1.1.1.3)
machine (299)	launchs%datainfo%whatref%machine (string) (9.1.1.1.3)
shot (299)	launchs%datainfo%whatref%shot (integer) (9.1.1.1.2)
run (299)	launchs%datainfo%whatref%run (integer) (9.1.1.1.2)
occurrence (299)	launchs%datainfo%whatref%occurrence (integer) (9.1.1.1.2)
putinfo (97)	launchs%datainfo%putinfo (putinfo) (9.1.1.3.167)
putmethod (191)	launchs%datainfo%putinfo%putmethod (string) (9.1.1.1.3)
putaccess (191)	launchs%datainfo%putinfo%putaccess (string) (9.1.1.1.3)
putlocation (191)	launchs%datainfo%putinfo%putlocation (string) (9.1.1.1.3)
rights (191)	launchs%datainfo%putinfo%rights (string) (9.1.1.1.3)
name (43)	launchs%name (vecstring_type) (9.1.1.2.11)
type (43)	launchs%type (vecstring_type) (9.1.1.2.11)
frequency (43)	launchs%frequency (vecflt_type) (9.1.1.2.9)
mode (43)	launchs%mode (vecint_type) (9.1.1.2.10)
position (43)	launchs%position (rzphi1D) (9.1.1.3.198)
r (222)	launchs%position%r (vecflt_type) (9.1.1.2.9)
z (222)	launchs%position%z (vecflt_type) (9.1.1.2.9)
phi (222)	launchs%position%phi (vecflt_type) (9.1.1.2.9)
spectrum (43)	launchs%spectrum (spectrum) (9.1.1.3.239)
nn_phi (263)	launchs%spectrum%nn_phi (vecint_type) (9.1.1.2.10)
nn_theta (263)	launchs%spectrum%nn_theta (vecint_type) (9.1.1.2.10)
n_phi (263)	launchs%spectrum%n_phi (matflt_type) (9.1.1.2.7)
n_theta (263)	launchs%spectrum%n_theta (matflt_type) (9.1.1.2.7)
power (263)	launchs%spectrum%power (array3dflt_type) (9.1.1.2.1)
beam (43)	launchs%beam (rf.beam) (9.1.1.3.192)
spot (216)	launchs%beam%spot (spot) (9.1.1.3.240)
waist (264)	launchs%beam%spot%waist (matflt_type) (9.1.1.2.7)
angle (264)	launchs%beam%spot%angle (vecflt_type) (9.1.1.2.9)
phaseellipse (216)	launchs%beam%phaseellipse (phaseellipse) (9.1.1.3.156)
invcurvrad (180)	launchs%beam%phaseellipse%invcurvrad (matflt_type) (9.1.1.2.7)
angle (180)	launchs%beam%phaseellipse%angle (vecflt_type) (9.1.1.2.9)
codeparam (43)	launchs%codeparam (codeparam) (9.1.1.3.55)
codename (79)	launchs%codeparam%codename (string) (9.1.1.1.3)
codeversion (79)	launchs%codeparam%codeversion (string) (9.1.1.1.3)
parameters (79)	launchs%codeparam%parameters (string) (9.1.1.1.3)
output_diag (79)	launchs%codeparam%output_diag (string) (9.1.1.1.3)
output_flag (79)	launchs%codeparam%output_flag (integer) (9.1.1.1.2)
time (43)	launchs%time (float) (9.1.1.1.1)

### 9.1.2.1.18 limiter



datainfo (44)	limiter%datainfo (datainfo) (9.1.1.3.73)
dataprovider (97)	limiter%datainfo%dataprovider (string) (9.1.1.1.3)
putdate (97)	limiter%datainfo%putdate (string) (9.1.1.1.3)
source (97)	limiter%datainfo%source (string) (9.1.1.1.3)
comment (97)	limiter%datainfo%comment (string) (9.1.1.1.3)
isref (97)	limiter%datainfo%isref (integer) (9.1.1.1.2)
whatref (97)	limiter%datainfo%whatref (whatref) (9.1.1.3.275)
user (299)	limiter%datainfo%whatref%user (string) (9.1.1.1.3)
machine (299)	limiter%datainfo%whatref%machine (string) (9.1.1.1.3)
shot (299)	limiter%datainfo%whatref%shot (integer) (9.1.1.1.2)
run (299)	limiter%datainfo%whatref%run (integer) (9.1.1.1.2)
occurrence (299)	limiter%datainfo%whatref%occurrence (integer) (9.1.1.1.2)
putinfo (97)	limiter%datainfo%putinfo (putinfo) (9.1.1.3.167)
putmethod (191)	limiter%datainfo%putinfo%putmethod (string) (9.1.1.1.3)
putaccess (191)	limiter%datainfo%putinfo%putaccess (string) (9.1.1.1.3)
putlocation (191)	limiter%datainfo%putinfo%putlocation (string) (9.1.1.1.3)
rights (191)	limiter%datainfo%putinfo%rights (string) (9.1.1.1.3)
position (44)	limiter%position (rz1D) (9.1.1.3.194)
r (218)	limiter%position%r (vecflt.type) (9.1.1.2.9)
z (218)	limiter%position%z (vecflt.type) (9.1.1.2.9)

### 9.1.2.1.19 magdiag

datainfo (45)	magdiag%datainfo (datainfo) (9.1.1.3.73)
dataprovider (97)	magdiag%datainfo%dataprovider (string) (9.1.1.1.3)
putdate (97)	magdiag%datainfo%putdate (string) (9.1.1.1.3)
source (97)	magdiag%datainfo%source (string) (9.1.1.1.3)
comment (97)	magdiag%datainfo%comment (string) (9.1.1.1.3)
isref (97)	magdiag%datainfo%isref (integer) (9.1.1.1.2)
whatref (97)	magdiag%datainfo%whatref (whatref) (9.1.1.3.275)
user (299)	magdiag%datainfo%whatref%user (string) (9.1.1.1.3)
machine (299)	magdiag%datainfo%whatref%machine (string) (9.1.1.1.3)
shot (299)	magdiag%datainfo%whatref%shot (integer) (9.1.1.1.2)
run (299)	magdiag%datainfo%whatref%run (integer) (9.1.1.1.2)
occurrence (299)	magdiag%datainfo%whatref%occurrence (integer) (9.1.1.1.2)
putinfo (97)	magdiag%datainfo%putinfo (putinfo) (9.1.1.3.167)
putmethod (191)	magdiag%datainfo%putinfo%putmethod (string) (9.1.1.1.3)
putaccess (191)	magdiag%datainfo%putinfo%putaccess (string) (9.1.1.1.3)
putlocation (191)	magdiag%datainfo%putinfo%putlocation (string) (9.1.1.1.3)
rights (191)	magdiag%datainfo%putinfo%rights (string) (9.1.1.1.3)
ip (45)	magdiag%ip (exp0D) (9.1.1.3.110)
value (134)	magdiag%ip%value (float) (9.1.1.1.1)
abserror (134)	magdiag%ip%abserror (float) (9.1.1.1.1)
releror (134)	magdiag%ip%releror (float) (9.1.1.1.1)
diamagflux (45)	magdiag%diamagflux (exp0D) (9.1.1.3.110)
value (134)	magdiag%diamagflux%value (float) (9.1.1.1.1)
abserror (134)	magdiag%diamagflux%abserror (float) (9.1.1.1.1)
releror (134)	magdiag%diamagflux%releror (float) (9.1.1.1.1)
flux_loops (45)	magdiag%flux_loops (flux_loops) (9.1.1.3.115)
setup_floops (139)	magdiag%flux_loops%setup_floops (setup_floops) (9.1.1.3.226)
name (250)	magdiag%flux_loops%setup_floops%name (vecstring.type) (9.1.1.2.11)
id (250)	magdiag%flux_loops%setup_floops%id (vecstring.type) (9.1.1.2.11)
position (250)	magdiag%flux_loops%setup_floops%position (rzphi2D) (9.1.1.3.200)
r (224)	magdiag%flux_loops%setup_floops%position%r (matflt.type) (9.1.1.2.7)
z (224)	magdiag%flux_loops%setup_floops%position%z (matflt.type) (9.1.1.2.7)
phi (224)	magdiag%flux_loops%setup_floops%position%phi (matflt.type) (9.1.1.2.7)
npoints (250)	magdiag%flux_loops%setup_floops%npoints (vecint.type) (9.1.1.2.10)
measure (139)	magdiag%flux_loops%measure (exp1D) (9.1.1.3.111)
value (135)	magdiag%flux_loops%measure%value (vecflt.type) (9.1.1.2.9)
abserror (135)	magdiag%flux_loops%measure%abserror (vecflt.type) (9.1.1.2.9)
releror (135)	magdiag%flux_loops%measure%releror (vecflt.type) (9.1.1.2.9)

bpol_probes (45)	magdiag%bpol_probes (bpol_probes) (9.1.1.3.54)
setup_bprobe (78)	magdiag%bpol_probes%setup_bprobe (setup_bprobe) (9.1.1.3.225)
name (249)	magdiag%bpol_probes%setup_bprobe%name (vecstring_type) (9.1.1.2.11)
id (249)	magdiag%bpol_probes%setup_bprobe%id (vecstring_type) (9.1.1.2.11)
position (249)	magdiag%bpol_probes%setup_bprobe%position (rz1D) (9.1.1.3.194)
r (218)	magdiag%bpol_probes%setup_bprobe%position%r (vecflt_type) (9.1.1.2.9)
z (218)	magdiag%bpol_probes%setup_bprobe%position%z (vecflt_type) (9.1.1.2.9)
polangle (249)	magdiag%bpol_probes%setup_bprobe%polangle (vecflt_type) (9.1.1.2.9)
torangle (249)	magdiag%bpol_probes%setup_bprobe%torangle (vecflt_type) (9.1.1.2.9)
area (249)	magdiag%bpol_probes%setup_bprobe%area (vecflt_type) (9.1.1.2.9)
length (249)	magdiag%bpol_probes%setup_bprobe%length (vecflt_type) (9.1.1.2.9)
turns (249)	magdiag%bpol_probes%setup_bprobe%turns (vecint_type) (9.1.1.2.10)
measure (78)	magdiag%bpol_probes%measure (exp1D) (9.1.1.3.111)
value (135)	magdiag%bpol_probes%measure%value (vecflt_type) (9.1.1.2.9)
abserror (135)	magdiag%bpol_probes%measure%abserror (vecflt_type) (9.1.1.2.9)
relerror (135)	magdiag%bpol_probes%measure%relerror (vecflt_type) (9.1.1.2.9)
time (45)	magdiag%time (float) (9.1.1.1.1)

### 9.1.2.1.20 mhd

datainfo (46)	mhd%datainfo (datainfo) (9.1.1.3.73)
dataprovider (97)	mhd%datainfo%dataprovider (string) (9.1.1.1.3)
putdate (97)	mhd%datainfo%putdate (string) (9.1.1.1.3)
source (97)	mhd%datainfo%source (string) (9.1.1.1.3)
comment (97)	mhd%datainfo%comment (string) (9.1.1.1.3)
isref (97)	mhd%datainfo%isref (integer) (9.1.1.1.2)
whatref (97)	mhd%datainfo%whatref (whatref) (9.1.1.3.275)
user (299)	mhd%datainfo%whatref%user (string) (9.1.1.1.3)
machine (299)	mhd%datainfo%whatref%machine (string) (9.1.1.1.3)
shot (299)	mhd%datainfo%whatref%shot (integer) (9.1.1.1.2)
run (299)	mhd%datainfo%whatref%run (integer) (9.1.1.1.2)
occurrence (299)	mhd%datainfo%whatref%occurrence (integer) (9.1.1.1.2)
putinfo (97)	mhd%datainfo%putinfo (putinfo) (9.1.1.3.167)
putmethod (191)	mhd%datainfo%putinfo%putmethod (string) (9.1.1.1.3)
putaccess (191)	mhd%datainfo%putinfo%putaccess (string) (9.1.1.1.3)
putlocation (191)	mhd%datainfo%putinfo%putlocation (string) (9.1.1.1.3)
rights (191)	mhd%datainfo%putinfo%rights (string) (9.1.1.1.3)
n (46)	mhd%n (vecint_type) (9.1.1.2.10)
m (46)	mhd%m (matint_type) (9.1.1.2.8)
psi (46)	mhd%psi (vecflt_type) (9.1.1.2.9)
frequency (46)	mhd%frequency (vecflt_type) (9.1.1.2.9)
growthrate (46)	mhd%growthrate (vecflt_type) (9.1.1.2.9)
disp_perp (46)	mhd%disp_perp (array3dflt_type) (9.1.1.2.1)
disp_par (46)	mhd%disp_par (array3dflt_type) (9.1.1.2.1)
tau_alfven (46)	mhd%tau_alfven (vecflt_type) (9.1.1.2.9)
tau_resistive (46)	mhd%tau_resistive (vecflt_type) (9.1.1.2.9)
time (46)	mhd%time (float) (9.1.1.1.1)
codeparam (46)	mhd%codeparam (codeparam) (9.1.1.3.55)
codename (79)	mhd%codeparam%codename (string) (9.1.1.1.3)
codeversion (79)	mhd%codeparam%codeversion (string) (9.1.1.1.3)
parameters (79)	mhd%codeparam%parameters (string) (9.1.1.1.3)
output_diag (79)	mhd%codeparam%output_diag (string) (9.1.1.1.3)
output_flag (79)	mhd%codeparam%output_flag (integer) (9.1.1.1.2)

### 9.1.2.1.21 msediag

datainfo (47)	msediag%datainfo (datainfo) (9.1.1.3.73)
dataprovider (97)	msediag%datainfo%dataprovider (string) (9.1.1.1.3)
putdate (97)	msediag%datainfo%putdate (string) (9.1.1.1.3)
source (97)	msediag%datainfo%source (string) (9.1.1.1.3)
comment (97)	msediag%datainfo%comment (string) (9.1.1.1.3)

isref (97)	msediag%datainfo%isref (integer) (9.1.1.1.2)
whatref (97)	msediag%datainfo%whatref (whatref) (9.1.1.3.275)
user (299)	msediag%datainfo%whatref%user (string) (9.1.1.1.3)
machine (299)	msediag%datainfo%whatref%machine (string) (9.1.1.1.3)
shot (299)	msediag%datainfo%whatref%shot (integer) (9.1.1.1.2)
run (299)	msediag%datainfo%whatref%run (integer) (9.1.1.1.2)
occurrence (299)	msediag%datainfo%whatref%occurrence (integer) (9.1.1.1.2)
putinfo (97)	msediag%datainfo%putinfo (putinfo) (9.1.1.3.167)
putmethod (191)	msediag%datainfo%putinfo%putmethod (string) (9.1.1.1.3)
putaccess (191)	msediag%datainfo%putinfo%putaccess (string) (9.1.1.1.3)
putlocation (191)	msediag%datainfo%putinfo%putlocation (string) (9.1.1.1.3)
rights (191)	msediag%datainfo%putinfo%rights (string) (9.1.1.1.3)
setup_mse (47)	msediag%setup_mse (setup_mse) (9.1.1.3.229)
rzgamma (253)	msediag%setup_mse%rzgamma (rzphidrdzdphiID) (9.1.1.3.201)
r (225)	msediag%setup_mse%rzgamma%r (vecflt_type) (9.1.1.2.9)
z (225)	msediag%setup_mse%rzgamma%z (vecflt_type) (9.1.1.2.9)
phi (225)	msediag%setup_mse%rzgamma%phi (vecflt_type) (9.1.1.2.9)
dr (225)	msediag%setup_mse%rzgamma%dr (vecflt_type) (9.1.1.2.9)
dz (225)	msediag%setup_mse%rzgamma%dz (vecflt_type) (9.1.1.2.9)
dphi (225)	msediag%setup_mse%rzgamma%dphi (vecflt_type) (9.1.1.2.9)
geom_coef (253)	msediag%setup_mse%geom_coef (matflt_type) (9.1.1.2.7)
measure (47)	msediag%measure (exp1D) (9.1.1.3.111)
value (135)	msediag%measure%value (vecflt_type) (9.1.1.2.9)
abserror (135)	msediag%measure%abserror (vecflt_type) (9.1.1.2.9)
relerror (135)	msediag%measure%relerror (vecflt_type) (9.1.1.2.9)
time (47)	msediag%time (float) (9.1.1.1.1)

### 9.1.2.1.22 nbi

datainfo (48)	nbi%datainfo (datainfo) (9.1.1.3.73)
dataprovider (97)	nbi%datainfo%dataprovider (string) (9.1.1.1.3)
putdate (97)	nbi%datainfo%putdate (string) (9.1.1.1.3)
source (97)	nbi%datainfo%source (string) (9.1.1.1.3)
comment (97)	nbi%datainfo%comment (string) (9.1.1.1.3)
isref (97)	nbi%datainfo%isref (integer) (9.1.1.1.2)
whatref (97)	nbi%datainfo%whatref (whatref) (9.1.1.3.275)
user (299)	nbi%datainfo%whatref%user (string) (9.1.1.1.3)
machine (299)	nbi%datainfo%whatref%machine (string) (9.1.1.1.3)
shot (299)	nbi%datainfo%whatref%shot (integer) (9.1.1.1.2)
run (299)	nbi%datainfo%whatref%run (integer) (9.1.1.1.2)
occurrence (299)	nbi%datainfo%whatref%occurrence (integer) (9.1.1.1.2)
putinfo (97)	nbi%datainfo%putinfo (putinfo) (9.1.1.3.167)
putmethod (191)	nbi%datainfo%putinfo%putmethod (string) (9.1.1.1.3)
putaccess (191)	nbi%datainfo%putinfo%putaccess (string) (9.1.1.1.3)
putlocation (191)	nbi%datainfo%putinfo%putlocation (string) (9.1.1.1.3)
rights (191)	nbi%datainfo%putinfo%rights (string) (9.1.1.1.3)
composition (48)	nbi%composition (composition) (9.1.1.3.57)
amn (81)	nbi%composition%amn (vecflt_type) (9.1.1.2.9)
zn (81)	nbi%composition%zn (vecflt_type) (9.1.1.2.9)
zion (81)	nbi%composition%zion (vecflt_type) (9.1.1.2.9)
imp_flag (81)	nbi%composition%imp_flag (vecint_type) (9.1.1.2.10)
inj_spec (48)	nbi%inj_spec (vecint_type) (9.1.1.2.10)
nunits_spec (48)	nbi%nunits_spec (vecint_type) (9.1.1.2.10)
spec2unit (48)	nbi%spec2unit (matint_type) (9.1.1.2.8)
unit2spec (48)	nbi%unit2spec (vecint_type) (9.1.1.2.10)
pow_unit (48)	nbi%pow_unit (exp1D) (9.1.1.3.111)
value (135)	nbi%pow_unit%value (vecflt_type) (9.1.1.2.9)
abserror (135)	nbi%pow_unit%abserror (vecflt_type) (9.1.1.2.9)
relerror (135)	nbi%pow_unit%relerror (vecflt_type) (9.1.1.2.9)
inj_eng_unit (48)	nbi%inj_eng_unit (exp1D) (9.1.1.3.111)
value (135)	nbi%inj_eng_unit%value (vecflt_type) (9.1.1.2.9)

abserror (135)	nbi%inj_eng_unit%abserror (vecflt.type) (9.1.1.2.9)
relerror (135)	nbi%inj_eng_unit%relerror (vecflt.type) (9.1.1.2.9)
halfe_cfr (48)	nbi%halfe_cfr (exp1D) (9.1.1.3.111)
value (135)	nbi%halfe_cfr%value (vecflt.type) (9.1.1.2.9)
abserror (135)	nbi%halfe_cfr%abserror (vecflt.type) (9.1.1.2.9)
relerror (135)	nbi%halfe_cfr%relerror (vecflt.type) (9.1.1.2.9)
thirde_cfr (48)	nbi%thirde_cfr (exp1D) (9.1.1.3.111)
value (135)	nbi%thirde_cfr%value (vecflt.type) (9.1.1.2.9)
abserror (135)	nbi%thirde_cfr%abserror (vecflt.type) (9.1.1.2.9)
relerror (135)	nbi%thirde_cfr%relerror (vecflt.type) (9.1.1.2.9)
setup_inject (48)	nbi%setup_inject (setup_inject) (9.1.1.3.227)
position (251)	nbi%setup_inject%position (rzphi1D) (9.1.1.3.198)
r (222)	nbi%setup_inject%position%r (vecflt.type) (9.1.1.2.9)
z (222)	nbi%setup_inject%position%z (vecflt.type) (9.1.1.2.9)
phi (222)	nbi%setup_inject%position%phi (vecflt.type) (9.1.1.2.9)
tang_rad (251)	nbi%setup_inject%tang_rad (vecflt.type) (9.1.1.2.9)
angle (251)	nbi%setup_inject%angle (vecflt.type) (9.1.1.2.9)
direction (251)	nbi%setup_inject%direction (vecint.type) (9.1.1.2.10)
div_vert (251)	nbi%setup_inject%div_vert (vecflt.type) (9.1.1.2.9)
div_horiz (251)	nbi%setup_inject%div_horiz (vecflt.type) (9.1.1.2.9)
focal_len_hz (251)	nbi%setup_inject%focal_len_hz (vecflt.type) (9.1.1.2.9)
focal_len_vc (251)	nbi%setup_inject%focal_len_vc (vecflt.type) (9.1.1.2.9)
beamlets (251)	nbi%setup_inject%beamlets (beamlets) (9.1.1.3.46)
nbeamlets (70)	nbi%setup_inject%beamlets%nbeamlets (vecint.type) (9.1.1.2.10)
position (70)	nbi%setup_inject%beamlets%position (rzphi2D) (9.1.1.3.200)
r (224)	nbi%setup_inject%beamlets%position%r (matflt.type) (9.1.1.2.7)
z (224)	nbi%setup_inject%beamlets%position%z (matflt.type) (9.1.1.2.7)
phi (224)	nbi%setup_inject%beamlets%position%phi (matflt.type) (9.1.1.2.7)
tang_rad.bl (70)	nbi%setup_inject%beamlets%tang_rad.bl (matflt.type) (9.1.1.2.7)
angle.bl (70)	nbi%setup_inject%beamlets%angle.bl (matflt.type) (9.1.1.2.7)
pow_frc.bl (70)	nbi%setup_inject%beamlets%pow_frc.bl (matflt.type) (9.1.1.2.7)
codeparam (48)	nbi%codeparam (codeparam) (9.1.1.3.55)
codename (79)	nbi%codeparam%codename (string) (9.1.1.1.3)
codeversion (79)	nbi%codeparam%codeversion (string) (9.1.1.1.3)
parameters (79)	nbi%codeparam%parameters (string) (9.1.1.1.3)
output_diag (79)	nbi%codeparam%output_diag (string) (9.1.1.1.3)
output_flag (79)	nbi%codeparam%output_flag (integer) (9.1.1.1.2)
time (48)	nbi%time (float) (9.1.1.1.1)

### 9.1.2.1.23 neoclassic

datainfo (49)	neoclassic%datainfo (datainfo) (9.1.1.3.73)
dataprovider (97)	neoclassic%datainfo%dataprovider (string) (9.1.1.1.3)
putdate (97)	neoclassic%datainfo%putdate (string) (9.1.1.1.3)
source (97)	neoclassic%datainfo%source (string) (9.1.1.1.3)
comment (97)	neoclassic%datainfo%comment (string) (9.1.1.1.3)
isref (97)	neoclassic%datainfo%isref (integer) (9.1.1.1.2)
whatref (97)	neoclassic%datainfo%whatref (whatref) (9.1.1.3.275)
user (299)	neoclassic%datainfo%whatref%user (string) (9.1.1.1.3)
machine (299)	neoclassic%datainfo%whatref%machine (string) (9.1.1.1.3)
shot (299)	neoclassic%datainfo%whatref%shot (integer) (9.1.1.1.2)
run (299)	neoclassic%datainfo%whatref%run (integer) (9.1.1.1.2)
occurrence (299)	neoclassic%datainfo%whatref%occurrence (integer) (9.1.1.1.2)
putinfo (97)	neoclassic%datainfo%putinfo (putinfo) (9.1.1.3.167)
putmethod (191)	neoclassic%datainfo%putinfo%putmethod (string) (9.1.1.1.3)
putaccess (191)	neoclassic%datainfo%putinfo%putaccess (string) (9.1.1.1.3)
putlocation (191)	neoclassic%datainfo%putinfo%putlocation (string) (9.1.1.1.3)
rights (191)	neoclassic%datainfo%putinfo%rights (string) (9.1.1.1.3)
rho_tor_norm (49)	neoclassic%rho_tor_norm (vecflt.type) (9.1.1.2.9)
rho_tor (49)	neoclassic%rho_tor (vecflt.type) (9.1.1.2.9)
composition (49)	neoclassic%composition (composition) (9.1.1.3.57)

amn (81)	neoclassic%composition%amn (vecflt.type) (9.1.1.2.9)
zn (81)	neoclassic%composition%zn (vecflt.type) (9.1.1.2.9)
zion (81)	neoclassic%composition%zion (vecflt.type) (9.1.1.2.9)
imp_flag (81)	neoclassic%composition%imp_flag (vecint.type) (9.1.1.2.10)
ni_neo (49)	neoclassic%ni_neo (transcoefion) (9.1.1.3.262)
diff_eff (286)	neoclassic%ni_neo%diff_eff (matflt.type) (9.1.1.2.7)
vconv_eff (286)	neoclassic%ni_neo%vconv_eff (matflt.type) (9.1.1.2.7)
exchange (286)	neoclassic%ni_neo%exchange (matflt.type) (9.1.1.2.7)
qgi (286)	neoclassic%ni_neo%qgi (matflt.type) (9.1.1.2.7)
flux (286)	neoclassic%ni_neo%flux (matflt.type) (9.1.1.2.7)
off_diagonal (286)	neoclassic%ni_neo%off_diagonal (offdiagion) (9.1.1.3.142)
d_ni (166)	neoclassic%ni_neo%off_diagonal%d_ni (array3dflt.type) (9.1.1.2.1)
d_ti (166)	neoclassic%ni_neo%off_diagonal%d_ti (array3dflt.type) (9.1.1.2.1)
d_ne (166)	neoclassic%ni_neo%off_diagonal%d_ne (matflt.type) (9.1.1.2.7)
d_te (166)	neoclassic%ni_neo%off_diagonal%d_te (matflt.type) (9.1.1.2.7)
d_epar (166)	neoclassic%ni_neo%off_diagonal%d_epar (matflt.type) (9.1.1.2.7)
d_mtor (166)	neoclassic%ni_neo%off_diagonal%d_mtor (matflt.type) (9.1.1.2.7)
flag (286)	neoclassic%ni_neo%flag (integer) (9.1.1.1.2)
ne_neo (49)	neoclassic%ne_neo (transcoefel) (9.1.1.3.260)
diff_eff (284)	neoclassic%ne_neo%diff_eff (vecflt.type) (9.1.1.2.9)
vconv_eff (284)	neoclassic%ne_neo%vconv_eff (vecflt.type) (9.1.1.2.9)
flux (284)	neoclassic%ne_neo%flux (vecflt.type) (9.1.1.2.9)
off_diagonal (284)	neoclassic%ne_neo%off_diagonal (offdiagel) (9.1.1.3.141)
d_ni (165)	neoclassic%ne_neo%off_diagonal%d_ni (matflt.type) (9.1.1.2.7)
d_ti (165)	neoclassic%ne_neo%off_diagonal%d_ti (matflt.type) (9.1.1.2.7)
d_ne (165)	neoclassic%ne_neo%off_diagonal%d_ne (vecflt.type) (9.1.1.2.9)
d_te (165)	neoclassic%ne_neo%off_diagonal%d_te (vecflt.type) (9.1.1.2.9)
d_epar (165)	neoclassic%ne_neo%off_diagonal%d_epar (vecflt.type) (9.1.1.2.9)
d_mtor (165)	neoclassic%ne_neo%off_diagonal%d_mtor (vecflt.type) (9.1.1.2.9)
flag (284)	neoclassic%ne_neo%flag (integer) (9.1.1.1.2)
nz_neo (49)	neoclassic%nz_neo (transcoefimp) (9.1.1.3.261)
diff_eff (285)	neoclassic%nz_neo%diff_eff (array3dflt.type) (9.1.1.2.1)
vconv_eff (285)	neoclassic%nz_neo%vconv_eff (array3dflt.type) (9.1.1.2.1)
exchange (285)	neoclassic%nz_neo%exchange (array3dflt.type) (9.1.1.2.1)
flux (285)	neoclassic%nz_neo%flux (array3dflt.type) (9.1.1.2.1)
flag (285)	neoclassic%nz_neo%flag (integer) (9.1.1.1.2)
ti_neo (49)	neoclassic%ti_neo (transcoefion) (9.1.1.3.262)
diff_eff (286)	neoclassic%ti_neo%diff_eff (matflt.type) (9.1.1.2.7)
vconv_eff (286)	neoclassic%ti_neo%vconv_eff (matflt.type) (9.1.1.2.7)
exchange (286)	neoclassic%ti_neo%exchange (matflt.type) (9.1.1.2.7)
qgi (286)	neoclassic%ti_neo%qgi (matflt.type) (9.1.1.2.7)
flux (286)	neoclassic%ti_neo%flux (matflt.type) (9.1.1.2.7)
off_diagonal (286)	neoclassic%ti_neo%off_diagonal (offdiagion) (9.1.1.3.142)
d_ni (166)	neoclassic%ti_neo%off_diagonal%d_ni (array3dflt.type) (9.1.1.2.1)
d_ti (166)	neoclassic%ti_neo%off_diagonal%d_ti (array3dflt.type) (9.1.1.2.1)
d_ne (166)	neoclassic%ti_neo%off_diagonal%d_ne (matflt.type) (9.1.1.2.7)
d_te (166)	neoclassic%ti_neo%off_diagonal%d_te (matflt.type) (9.1.1.2.7)
d_epar (166)	neoclassic%ti_neo%off_diagonal%d_epar (matflt.type) (9.1.1.2.7)
d_mtor (166)	neoclassic%ti_neo%off_diagonal%d_mtor (matflt.type) (9.1.1.2.7)
flag (286)	neoclassic%ti_neo%flag (integer) (9.1.1.1.2)
te_neo (49)	neoclassic%te_neo (transcoefel) (9.1.1.3.260)
diff_eff (284)	neoclassic%te_neo%diff_eff (vecflt.type) (9.1.1.2.9)
vconv_eff (284)	neoclassic%te_neo%vconv_eff (vecflt.type) (9.1.1.2.9)
flux (284)	neoclassic%te_neo%flux (vecflt.type) (9.1.1.2.9)
off_diagonal (284)	neoclassic%te_neo%off_diagonal (offdiagel) (9.1.1.3.141)
d_ni (165)	neoclassic%te_neo%off_diagonal%d_ni (matflt.type) (9.1.1.2.7)
d_ti (165)	neoclassic%te_neo%off_diagonal%d_ti (matflt.type) (9.1.1.2.7)
d_ne (165)	neoclassic%te_neo%off_diagonal%d_ne (vecflt.type) (9.1.1.2.9)
d_te (165)	neoclassic%te_neo%off_diagonal%d_te (vecflt.type) (9.1.1.2.9)
d_epar (165)	neoclassic%te_neo%off_diagonal%d_epar (vecflt.type) (9.1.1.2.9)
d_mtor (165)	neoclassic%te_neo%off_diagonal%d_mtor (vecflt.type) (9.1.1.2.9)

flag (284)	neoclassic%te_neo%flag (integer) (9.1.1.1.2)
tz_neo (49)	neoclassic%tz_neo (transcoefimp) (9.1.1.3.261)
diff_eff (285)	neoclassic%tz_neo%diff_eff (array3dflt_type) (9.1.1.2.1)
vconv_eff (285)	neoclassic%tz_neo%vconv_eff (array3dflt_type) (9.1.1.2.1)
exchange (285)	neoclassic%tz_neo%exchange (array3dflt_type) (9.1.1.2.1)
flux (285)	neoclassic%tz_neo%flux (array3dflt_type) (9.1.1.2.1)
flag (285)	neoclassic%tz_neo%flag (integer) (9.1.1.1.2)
mtor_neo (49)	neoclassic%mtor_neo (transcoefel) (9.1.1.3.260)
diff_eff (284)	neoclassic%mtor_neo%diff_eff (vecflt_type) (9.1.1.2.9)
vconv_eff (284)	neoclassic%mtor_neo%vconv_eff (vecflt_type) (9.1.1.2.9)
flux (284)	neoclassic%mtor_neo%flux (vecflt_type) (9.1.1.2.9)
off_diagonal (284)	neoclassic%mtor_neo%off_diagonal (offdiagonal) (9.1.1.3.141)
d_ni (165)	neoclassic%mtor_neo%off_diagonal%d_ni (matflt_type) (9.1.1.2.7)
d_ti (165)	neoclassic%mtor_neo%off_diagonal%d_ti (matflt_type) (9.1.1.2.7)
d_ne (165)	neoclassic%mtor_neo%off_diagonal%d_ne (vecflt_type) (9.1.1.2.9)
d_te (165)	neoclassic%mtor_neo%off_diagonal%d_te (vecflt_type) (9.1.1.2.9)
d_epar (165)	neoclassic%mtor_neo%off_diagonal%d_epar (vecflt_type) (9.1.1.2.9)
d_mtor (165)	neoclassic%mtor_neo%off_diagonal%d_mtor (vecflt_type) (9.1.1.2.9)
flag (284)	neoclassic%mtor_neo%flag (integer) (9.1.1.1.2)
sigma (49)	neoclassic%sigma (vecflt_type) (9.1.1.2.9)
jboot (49)	neoclassic%jboot (vecflt_type) (9.1.1.2.9)
er (49)	neoclassic%er (vecflt_type) (9.1.1.2.9)
vpol (49)	neoclassic%vpol (matflt_type) (9.1.1.2.7)
fext (49)	neoclassic%fext (array3dflt_type) (9.1.1.2.1)
jext (49)	neoclassic%jext (vecflt_type) (9.1.1.2.9)
time (49)	neoclassic%time (float) (9.1.1.1.1)
codeparam (49)	neoclassic%codeparam (codeparam) (9.1.1.3.55)
codename (79)	neoclassic%codeparam%codename (string) (9.1.1.1.3)
codeversion (79)	neoclassic%codeparam%codeversion (string) (9.1.1.1.3)
parameters (79)	neoclassic%codeparam%parameters (string) (9.1.1.1.3)
output_diag (79)	neoclassic%codeparam%output_diag (string) (9.1.1.1.3)
output_flag (79)	neoclassic%codeparam%output_flag (integer) (9.1.1.1.2)

### 9.1.2.1.24 orbit

datainfo (50)	orbit%datainfo (datainfo) (9.1.1.3.73)
dataprovider (97)	orbit%datainfo%dataprovider (string) (9.1.1.1.3)
putdate (97)	orbit%datainfo%putdate (string) (9.1.1.1.3)
source (97)	orbit%datainfo%source (string) (9.1.1.1.3)
comment (97)	orbit%datainfo%comment (string) (9.1.1.1.3)
isref (97)	orbit%datainfo%isref (integer) (9.1.1.1.2)
whatref (97)	orbit%datainfo%whatref (whatref) (9.1.1.3.275)
user (299)	orbit%datainfo%whatref%user (string) (9.1.1.1.3)
machine (299)	orbit%datainfo%whatref%machine (string) (9.1.1.1.3)
shot (299)	orbit%datainfo%whatref%shot (integer) (9.1.1.1.2)
run (299)	orbit%datainfo%whatref%run (integer) (9.1.1.1.2)
occurrence (299)	orbit%datainfo%whatref%occurrence (integer) (9.1.1.1.2)
putinfo (97)	orbit%datainfo%putinfo (putinfo) (9.1.1.3.167)
putmethod (191)	orbit%datainfo%putinfo%putmethod (string) (9.1.1.1.3)
putaccess (191)	orbit%datainfo%putinfo%putaccess (string) (9.1.1.1.3)
putlocation (191)	orbit%datainfo%putinfo%putlocation (string) (9.1.1.1.3)
rights (191)	orbit%datainfo%putinfo%rights (string) (9.1.1.1.3)
orbitt_id (50)	orbit%orbitt_id (orbitt_id) (9.1.1.3.146)
amn (170)	orbit%orbitt_id%amn (float) (9.1.1.1.1)
zion (170)	orbit%orbitt_id%zion (float) (9.1.1.1.1)
energy (170)	orbit%orbitt_id%energy (vecflt_type) (9.1.1.2.9)
magn_mom (170)	orbit%orbitt_id%magn_mom (vecflt_type) (9.1.1.2.9)
p_phi (170)	orbit%orbitt_id%p_phi (vecflt_type) (9.1.1.2.9)
sigma (170)	orbit%orbitt_id%sigma (vecint_type) (9.1.1.2.10)
orb_trace (50)	orbit%orb_trace (orb_trace) (9.1.1.3.144)
time_orb (168)	orbit%orb_trace%time_orb (matflt_type) (9.1.1.2.7)

ntorb (168)	orbit%orb_trace%ntorb (vecint.type) (9.1.1.2.10)
r (168)	orbit%orb_trace%r (matflt.type) (9.1.1.2.7)
z (168)	orbit%orb_trace%z (matflt.type) (9.1.1.2.7)
psi (168)	orbit%orb_trace%psi (matflt.type) (9.1.1.2.7)
theta_b (168)	orbit%orb_trace%theta_b (matflt.type) (9.1.1.2.7)
v_parallel (168)	orbit%orb_trace%v_parallel (matflt.type) (9.1.1.2.7)
v_perp (168)	orbit%orb_trace%v_perp (matflt.type) (9.1.1.2.7)
orb_glob_dat (50)	orbit%orb_glob_dat (orb_glob.dat) (9.1.1.3.143)
orbit_type (167)	orbit%orb_glob_dat%orbit_type (vecint.type) (9.1.1.2.10)
omega_b (167)	orbit%orb_glob_dat%omega_b (vecflt.type) (9.1.1.2.9)
omega_phi (167)	orbit%orb_glob_dat%omega_phi (vecflt.type) (9.1.1.2.9)
omega_c_av (167)	orbit%orb_glob_dat%omega_c_av (vecflt.type) (9.1.1.2.9)
special_pos (167)	orbit%orb_glob_dat%special_pos (special_pos) (9.1.1.3.238)
midplane (262)	orbit%orb_glob_dat%special_pos%midplane (midplane) (9.1.1.3.136)
outer (160)	orbit%orb_glob_dat%special_pos%midplane%outer (orbit_pos) (9.1.1.3.145)
r (169)	orbit%orb_glob_dat%special_pos%midplane%outer%r (vecflt.type) (9.1.1.2.9)
z (169)	orbit%orb_glob_dat%special_pos%midplane%outer%z (vecflt.type) (9.1.1.2.9)
psi (169)	orbit%orb_glob_dat%special_pos%midplane%outer%psi (vecflt.type) (9.1.1.2.9)
theta_b (169)	orbit%orb_glob_dat%special_pos%midplane%outer%theta_b (vecflt.type) (9.1.1.2.9)
inner (160)	orbit%orb_glob_dat%special_pos%midplane%inner (orbit_pos) (9.1.1.3.145)
r (169)	orbit%orb_glob_dat%special_pos%midplane%inner%r (vecflt.type) (9.1.1.2.9)
z (169)	orbit%orb_glob_dat%special_pos%midplane%inner%z (vecflt.type) (9.1.1.2.9)
psi (169)	orbit%orb_glob_dat%special_pos%midplane%inner%psi (vecflt.type) (9.1.1.2.9)
theta_b (169)	orbit%orb_glob_dat%special_pos%midplane%inner%theta_b (vecflt.type) (9.1.1.2.9)
turning_pts (262)	orbit%orb_glob_dat%special_pos%turning_pts (turning_pts) (9.1.1.3.266)
upper (290)	orbit%orb_glob_dat%special_pos%turning_pts%upper (orbit_pos) (9.1.1.3.145)
r (169)	orbit%orb_glob_dat%special_pos%turning_pts%upper%r (vecflt.type) (9.1.1.2.9)
z (169)	orbit%orb_glob_dat%special_pos%turning_pts%upper%z (vecflt.type) (9.1.1.2.9)
psi (169)	orbit%orb_glob_dat%special_pos%turning_pts%upper%psi (vecflt.type) (9.1.1.2.9)
theta_b (169)	orbit%orb_glob_dat%special_pos%turning_pts%upper%theta_b (vecflt.type) (9.1.1.2.9)
lower (290)	orbit%orb_glob_dat%special_pos%turning_pts%lower (orbit_pos) (9.1.1.3.145)
r (169)	orbit%orb_glob_dat%special_pos%turning_pts%lower%r (vecflt.type) (9.1.1.2.9)
z (169)	orbit%orb_glob_dat%special_pos%turning_pts%lower%z (vecflt.type) (9.1.1.2.9)
psi (169)	orbit%orb_glob_dat%special_pos%turning_pts%lower%psi (vecflt.type) (9.1.1.2.9)
theta_b (169)	orbit%orb_glob_dat%special_pos%turning_pts%lower%theta_b (vecflt.type) (9.1.1.2.9)
codeparam (50)	orbit%codeparam (codeparam) (9.1.1.3.55)
codename (79)	orbit%codeparam%codename (string) (9.1.1.1.3)
codeversion (79)	orbit%codeparam%codeversion (string) (9.1.1.1.3)
parameters (79)	orbit%codeparam%parameters (string) (9.1.1.1.3)
output_diag (79)	orbit%codeparam%output_diag (string) (9.1.1.1.3)
output_flag (79)	orbit%codeparam%output_flag (integer) (9.1.1.1.2)
time (50)	orbit%time (float) (9.1.1.1.1)

### 9.1.2.1.25 pfsystems

datainfo (51)	pfsystems%datainfo (datainfo) (9.1.1.3.73)
dataprovider (97)	pfsystems%datainfo%dataprovider (string) (9.1.1.1.3)
putdate (97)	pfsystems%datainfo%putdate (string) (9.1.1.1.3)
source (97)	pfsystems%datainfo%source (string) (9.1.1.1.3)
comment (97)	pfsystems%datainfo%comment (string) (9.1.1.1.3)
isref (97)	pfsystems%datainfo%isref (integer) (9.1.1.1.2)
whatref (97)	pfsystems%datainfo%whatref (whatref) (9.1.1.3.275)
user (299)	pfsystems%datainfo%whatref%user (string) (9.1.1.1.3)
machine (299)	pfsystems%datainfo%whatref%machine (string) (9.1.1.1.3)
shot (299)	pfsystems%datainfo%whatref%shot (integer) (9.1.1.1.2)
run (299)	pfsystems%datainfo%whatref%run (integer) (9.1.1.1.2)
occurrence (299)	pfsystems%datainfo%whatref%occurrence (integer) (9.1.1.1.2)
putinfo (97)	pfsystems%datainfo%putinfo (putinfo) (9.1.1.3.167)
putmethod (191)	pfsystems%datainfo%putinfo%putmethod (string) (9.1.1.1.3)
putaccess (191)	pfsystems%datainfo%putinfo%putaccess (string) (9.1.1.1.3)
putlocation (191)	pfsystems%datainfo%putinfo%putlocation (string) (9.1.1.1.3)



rights (191)	pfsystems%datainfo%putinfo%rights (string) (9.1.1.1.3)
pccoils (51)	pfsystems%pccoils (pccoils) (9.1.1.3.150)
desc_pccoils (174)	pfsystems%pccoils%desc_pccoils (desc_pccoils) (9.1.1.3.76)
name (100)	pfsystems%pccoils%desc_pccoils%name (vecstring_type) (9.1.1.2.11)
id (100)	pfsystems%pccoils%desc_pccoils%id (vecstring_type) (9.1.1.2.11)
res (100)	pfsystems%pccoils%desc_pccoils%res (vecflt_type) (9.1.1.2.9)
emax (100)	pfsystems%pccoils%desc_pccoils%emax (vecflt_type) (9.1.1.2.9)
nelement (100)	pfsystems%pccoils%desc_pccoils%nelement (vecint_type) (9.1.1.2.10)
pfelement (100)	pfsystems%pccoils%desc_pccoils%pfelement (pfelement) (9.1.1.3.151)
name (175)	pfsystems%pccoils%desc_pccoils%pfelement%name (vecstring_type) (9.1.1.2.11)
id (175)	pfsystems%pccoils%desc_pccoils%pfelement%id (vecstring_type) (9.1.1.2.11)
turnsign (175)	pfsystems%pccoils%desc_pccoils%pfelement%turnsign (matflt_type) (9.1.1.2.7)
area (175)	pfsystems%pccoils%desc_pccoils%pfelement%area (matflt_type) (9.1.1.2.7)
pfgeometry (175)	pfsystems%pccoils%desc_pccoils%pfelement%pfgeometry (pfgeometry) (9.1.1.3.152)
type (176)	pfsystems%pccoils%desc_pccoils%pfelement%pfgeometry%type (matint_type) (9.1.1.2.8)
npoints (176)	pfsystems%pccoils%desc_pccoils%pfelement%pfgeometry%npoints (matint_type) (9.1.1.2.8)
rzcoordinate (176)	pfsystems%pccoils%desc_pccoils%pfelement%pfgeometry%rzcoordinate (rz3D) (9.1.1.3.197)
r (221)	pfsystems%pccoils%desc_pccoils%pfelement%pfgeometry%rzcoordinate%r (array3dflt_type) (9.1.1.2.1)
z (221)	pfsystems%pccoils%desc_pccoils%pfelement%pfgeometry%rzcoordinate%z (array3dflt_type) (9.1.1.2.1)
rzdrdz (176)	pfsystems%pccoils%desc_pccoils%pfelement%pfgeometry%rzdrdz (array3dflt_type) (9.1.1.2.1)
coilcurrent (174)	pfsystems%pccoils%coilcurrent (exp1D) (9.1.1.3.111)
value (135)	pfsystems%pccoils%coilcurrent%value (vecflt_type) (9.1.1.2.9)
abserror (135)	pfsystems%pccoils%coilcurrent%abserror (vecflt_type) (9.1.1.2.9)
releror (135)	pfsystems%pccoils%coilcurrent%releror (vecflt_type) (9.1.1.2.9)
coilvoltage (174)	pfsystems%pccoils%coilvoltage (exp1D) (9.1.1.3.111)
value (135)	pfsystems%pccoils%coilvoltage%value (vecflt_type) (9.1.1.2.9)
abserror (135)	pfsystems%pccoils%coilvoltage%abserror (vecflt_type) (9.1.1.2.9)
releror (135)	pfsystems%pccoils%coilvoltage%releror (vecflt_type) (9.1.1.2.9)
pfpasive (51)	pfsystems%pfpasive (pfpasive) (9.1.1.3.154)
area (178)	pfsystems%pfpasive%area (vecflt_type) (9.1.1.2.9)
res (178)	pfsystems%pfpasive%res (vecflt_type) (9.1.1.2.9)
pfpageometry (178)	pfsystems%pfpasive%pfpageometry (pfpageometry) (9.1.1.3.153)
type (177)	pfsystems%pfpasive%pfpageometry%type (vecint_type) (9.1.1.2.10)
npoints (177)	pfsystems%pfpasive%pfpageometry%npoints (vecint_type) (9.1.1.2.10)
rzcoordinate (177)	pfsystems%pfpasive%pfpageometry%rzcoordinate (rz2D) (9.1.1.3.196)
r (220)	pfsystems%pfpasive%pfpageometry%rzcoordinate%r (matflt_type) (9.1.1.2.7)
z (220)	pfsystems%pfpasive%pfpageometry%rzcoordinate%z (matflt_type) (9.1.1.2.7)
rzdrdz (177)	pfsystems%pfpasive%pfpageometry%rzdrdz (matflt_type) (9.1.1.2.7)
pfcircuits (51)	pfsystems%pfcircuits (pfcircuits) (9.1.1.3.149)
name (173)	pfsystems%pfcircuits%name (vecstring_type) (9.1.1.2.11)
id (173)	pfsystems%pfcircuits%id (vecstring_type) (9.1.1.2.11)
type (173)	pfsystems%pfcircuits%type (vecstring_type) (9.1.1.2.11)
nnodes (173)	pfsystems%pfcircuits%nnodes (vecint_type) (9.1.1.2.10)
connections (173)	pfsystems%pfcircuits%connections (array3dint_type) (9.1.1.2.2)
pfsupplies (51)	pfsystems%pfsupplies (pfsupplies) (9.1.1.3.155)
desc_supply (179)	pfsystems%pfsupplies%desc_supply (desc_supply) (9.1.1.3.77)
name (101)	pfsystems%pfsupplies%desc_supply%name (vecstring_type) (9.1.1.2.11)
id (101)	pfsystems%pfsupplies%desc_supply%id (vecstring_type) (9.1.1.2.11)
type (101)	pfsystems%pfsupplies%desc_supply%type (vecstring_type) (9.1.1.2.11)
delay (101)	pfsystems%pfsupplies%desc_supply%delay (vecflt_type) (9.1.1.2.9)
filter (101)	pfsystems%pfsupplies%desc_supply%filter (filter) (9.1.1.3.113)
num (137)	pfsystems%pfsupplies%desc_supply%filter%num (matflt_type) (9.1.1.2.7)
den (137)	pfsystems%pfsupplies%desc_supply%filter%den (matflt_type) (9.1.1.2.7)
imin (101)	pfsystems%pfsupplies%desc_supply%imin (vecflt_type) (9.1.1.2.9)
imax (101)	pfsystems%pfsupplies%desc_supply%imax (vecflt_type) (9.1.1.2.9)
res (101)	pfsystems%pfsupplies%desc_supply%res (vecflt_type) (9.1.1.2.9)
umin (101)	pfsystems%pfsupplies%desc_supply%umin (vecflt_type) (9.1.1.2.9)
umax (101)	pfsystems%pfsupplies%desc_supply%umax (vecflt_type) (9.1.1.2.9)
emax (101)	pfsystems%pfsupplies%desc_supply%emax (vecflt_type) (9.1.1.2.9)



voltage (179)	pfsystems%pfsupplies%voltage (exp1D) (9.1.1.3.111)
value (135)	pfsystems%pfsupplies%voltage%value (vecflt_type) (9.1.1.2.9)
abserror (135)	pfsystems%pfsupplies%voltage%abserror (vecflt_type) (9.1.1.2.9)
releror (135)	pfsystems%pfsupplies%voltage%releror (vecflt_type) (9.1.1.2.9)
current (179)	pfsystems%pfsupplies%current (exp1D) (9.1.1.3.111)
value (135)	pfsystems%pfsupplies%current%value (vecflt_type) (9.1.1.2.9)
abserror (135)	pfsystems%pfsupplies%current%abserror (vecflt_type) (9.1.1.2.9)
releror (135)	pfsystems%pfsupplies%current%releror (vecflt_type) (9.1.1.2.9)
time (51)	pfsystems%time (float) (9.1.1.1.1)

### 9.1.2.1.26 polarddiag

datainfo (154)	lineintegralsdiag%datainfo (datainfo) (9.1.1.3.73)
dataprovder (97)	lineintegralsdiag%datainfo%dataprovder (string) (9.1.1.1.3)
putdate (97)	lineintegralsdiag%datainfo%putdate (string) (9.1.1.1.3)
source (97)	lineintegralsdiag%datainfo%source (string) (9.1.1.1.3)
comment (97)	lineintegralsdiag%datainfo%comment (string) (9.1.1.1.3)
isref (97)	lineintegralsdiag%datainfo%isref (integer) (9.1.1.1.2)
whatref (97)	lineintegralsdiag%datainfo%whatref (whatref) (9.1.1.3.275)
user (299)	lineintegralsdiag%datainfo%whatref%user (string) (9.1.1.1.3)
machine (299)	lineintegralsdiag%datainfo%whatref%machine (string) (9.1.1.1.3)
shot (299)	lineintegralsdiag%datainfo%whatref%shot (integer) (9.1.1.1.2)
run (299)	lineintegralsdiag%datainfo%whatref%run (integer) (9.1.1.1.2)
occurrence (299)	lineintegralsdiag%datainfo%whatref%occurrence (integer) (9.1.1.1.2)
putinfo (97)	lineintegralsdiag%datainfo%putinfo (putinfo) (9.1.1.3.167)
putmethod (191)	lineintegralsdiag%datainfo%putinfo%putmethod (string) (9.1.1.1.3)
putaccess (191)	lineintegralsdiag%datainfo%putinfo%putaccess (string) (9.1.1.1.3)
putlocation (191)	lineintegralsdiag%datainfo%putinfo%putlocation (string) (9.1.1.1.3)
rights (191)	lineintegralsdiag%datainfo%putinfo%rights (string) (9.1.1.1.3)
expression (154)	lineintegralsdiag%expression (string) (9.1.1.1.3)
setup_line (154)	lineintegralsdiag%setup_line (setup_line) (9.1.1.3.228)
pivot_point (252)	lineintegralsdiag%setup_line%pivot_point (rzphiID) (9.1.1.3.198)
r (222)	lineintegralsdiag%setup_line%pivot_point%r (vecflt_type) (9.1.1.2.9)
z (222)	lineintegralsdiag%setup_line%pivot_point%z (vecflt_type) (9.1.1.2.9)
phi (222)	lineintegralsdiag%setup_line%pivot_point%phi (vecflt_type) (9.1.1.2.9)
horchordang1 (252)	lineintegralsdiag%setup_line%horchordang1 (vecflt_type) (9.1.1.2.9)
verchordang1 (252)	lineintegralsdiag%setup_line%verchordang1 (vecflt_type) (9.1.1.2.9)
width (252)	lineintegralsdiag%setup_line%width (vecflt_type) (9.1.1.2.9)
second_point (252)	lineintegralsdiag%setup_line%second_point (rzphiID) (9.1.1.3.198)
r (222)	lineintegralsdiag%setup_line%second_point%r (vecflt_type) (9.1.1.2.9)
z (222)	lineintegralsdiag%setup_line%second_point%z (vecflt_type) (9.1.1.2.9)
phi (222)	lineintegralsdiag%setup_line%second_point%phi (vecflt_type) (9.1.1.2.9)
horchordang2 (252)	lineintegralsdiag%setup_line%horchordang2 (vecflt_type) (9.1.1.2.9)
verchordang2 (252)	lineintegralsdiag%setup_line%verchordang2 (vecflt_type) (9.1.1.2.9)
third_point (252)	lineintegralsdiag%setup_line%third_point (rzphiID) (9.1.1.3.198)
r (222)	lineintegralsdiag%setup_line%third_point%r (vecflt_type) (9.1.1.2.9)
z (222)	lineintegralsdiag%setup_line%third_point%z (vecflt_type) (9.1.1.2.9)
phi (222)	lineintegralsdiag%setup_line%third_point%phi (vecflt_type) (9.1.1.2.9)
nchordpoints (252)	lineintegralsdiag%setup_line%nchordpoints (integer) (9.1.1.1.2)
measure (154)	lineintegralsdiag%measure (exp1D) (9.1.1.3.111)
value (135)	lineintegralsdiag%measure%value (vecflt_type) (9.1.1.2.9)
abserror (135)	lineintegralsdiag%measure%abserror (vecflt_type) (9.1.1.2.9)
releror (135)	lineintegralsdiag%measure%releror (vecflt_type) (9.1.1.2.9)
time (154)	lineintegralsdiag%time (float) (9.1.1.1.1)

### 9.1.2.1.27 reference

datainfo (53)	reference%datainfo (datainfo) (9.1.1.3.73)
dataprovder (97)	reference%datainfo%dataprovder (string) (9.1.1.1.3)
putdate (97)	reference%datainfo%putdate (string) (9.1.1.1.3)
source (97)	reference%datainfo%source (string) (9.1.1.1.3)

comment (97)	reference%datainfo%comment (string) (9.1.1.1.3)
isref (97)	reference%datainfo%isref (integer) (9.1.1.1.2)
whatref (97)	reference%datainfo%whatref (whatref) (9.1.1.3.275)
user (299)	reference%datainfo%whatref%user (string) (9.1.1.1.3)
machine (299)	reference%datainfo%whatref%machine (string) (9.1.1.1.3)
shot (299)	reference%datainfo%whatref%shot (integer) (9.1.1.1.2)
run (299)	reference%datainfo%whatref%run (integer) (9.1.1.1.2)
occurrence (299)	reference%datainfo%whatref%occurrence (integer) (9.1.1.1.2)
putinfo (97)	reference%datainfo%putinfo (putinfo) (9.1.1.3.167)
putmethod (191)	reference%datainfo%putinfo%putmethod (string) (9.1.1.1.3)
putaccess (191)	reference%datainfo%putinfo%putaccess (string) (9.1.1.1.3)
putlocation (191)	reference%datainfo%putinfo%putlocation (string) (9.1.1.1.3)
rights (191)	reference%datainfo%putinfo%rights (string) (9.1.1.1.3)
non_timed (53)	reference%non_timed (ref_nt) (9.1.1.3.171)
zerod_real (195)	reference%non_timed%zerod_real (ref_nt_0dr) (9.1.1.3.174)
ref1 (198)	reference%non_timed%zerod_real%ref1 (ref_nt_0dr_ref) (9.1.1.3.175)
value (199)	reference%non_timed%zerod_real%ref1%value (float) (9.1.1.1.1)
description (199)	reference%non_timed%zerod_real%ref1%description (string) (9.1.1.1.3)
ref2 (198)	reference%non_timed%zerod_real%ref2 (ref_nt_0dr_ref) (9.1.1.3.175)
value (199)	reference%non_timed%zerod_real%ref2%value (float) (9.1.1.1.1)
description (199)	reference%non_timed%zerod_real%ref2%description (string) (9.1.1.1.3)
ref3 (198)	reference%non_timed%zerod_real%ref3 (ref_nt_0dr_ref) (9.1.1.3.175)
value (199)	reference%non_timed%zerod_real%ref3%value (float) (9.1.1.1.1)
description (199)	reference%non_timed%zerod_real%ref3%description (string) (9.1.1.1.3)
ref4 (198)	reference%non_timed%zerod_real%ref4 (ref_nt_0dr_ref) (9.1.1.3.175)
value (199)	reference%non_timed%zerod_real%ref4%value (float) (9.1.1.1.1)
description (199)	reference%non_timed%zerod_real%ref4%description (string) (9.1.1.1.3)
ref5 (198)	reference%non_timed%zerod_real%ref5 (ref_nt_0dr_ref) (9.1.1.3.175)
value (199)	reference%non_timed%zerod_real%ref5%value (float) (9.1.1.1.1)
description (199)	reference%non_timed%zerod_real%ref5%description (string) (9.1.1.1.3)
ref6 (198)	reference%non_timed%zerod_real%ref6 (ref_nt_0dr_ref) (9.1.1.3.175)
value (199)	reference%non_timed%zerod_real%ref6%value (float) (9.1.1.1.1)
description (199)	reference%non_timed%zerod_real%ref6%description (string) (9.1.1.1.3)
ref7 (198)	reference%non_timed%zerod_real%ref7 (ref_nt_0dr_ref) (9.1.1.3.175)
value (199)	reference%non_timed%zerod_real%ref7%value (float) (9.1.1.1.1)
description (199)	reference%non_timed%zerod_real%ref7%description (string) (9.1.1.1.3)
zerod_int (195)	reference%non_timed%zerod_int (ref_nt_0di) (9.1.1.3.172)
ref1 (196)	reference%non_timed%zerod_int%ref1 (ref_nt_0di_ref) (9.1.1.3.173)
value (197)	reference%non_timed%zerod_int%ref1%value (integer) (9.1.1.1.2)
description (197)	reference%non_timed%zerod_int%ref1%description (string) (9.1.1.1.3)
ref2 (196)	reference%non_timed%zerod_int%ref2 (ref_nt_0di_ref) (9.1.1.3.173)
value (197)	reference%non_timed%zerod_int%ref2%value (integer) (9.1.1.1.2)
description (197)	reference%non_timed%zerod_int%ref2%description (string) (9.1.1.1.3)
ref3 (196)	reference%non_timed%zerod_int%ref3 (ref_nt_0di_ref) (9.1.1.3.173)
value (197)	reference%non_timed%zerod_int%ref3%value (integer) (9.1.1.1.2)
description (197)	reference%non_timed%zerod_int%ref3%description (string) (9.1.1.1.3)
ref4 (196)	reference%non_timed%zerod_int%ref4 (ref_nt_0di_ref) (9.1.1.3.173)
value (197)	reference%non_timed%zerod_int%ref4%value (integer) (9.1.1.1.2)
description (197)	reference%non_timed%zerod_int%ref4%description (string) (9.1.1.1.3)
zerod_string (195)	reference%non_timed%zerod_string (ref_nt_0ds) (9.1.1.3.176)
ref1 (200)	reference%non_timed%zerod_string%ref1 (ref_nt_0ds_ref) (9.1.1.3.177)
value (201)	reference%non_timed%zerod_string%ref1%value (string) (9.1.1.1.3)
description (201)	reference%non_timed%zerod_string%ref1%description (string) (9.1.1.1.3)
ref2 (200)	reference%non_timed%zerod_string%ref2 (ref_nt_0ds_ref) (9.1.1.3.177)
value (201)	reference%non_timed%zerod_string%ref2%value (string) (9.1.1.1.3)
description (201)	reference%non_timed%zerod_string%ref2%description (string) (9.1.1.1.3)
oned_real (195)	reference%non_timed%oned_real (ref_nt_1dr) (9.1.1.3.180)
ref1 (204)	reference%non_timed%oned_real%ref1 (ref_nt_1dr_ref) (9.1.1.3.181)
value (205)	reference%non_timed%oned_real%ref1%value (vecflt_type) (9.1.1.2.9)
description (205)	reference%non_timed%oned_real%ref1%description (string) (9.1.1.1.3)
ref2 (204)	reference%non_timed%oned_real%ref2 (ref_nt_1dr_ref) (9.1.1.3.181)

value (205)	reference%non_timed%oned_real%ref2%value (vecflt.type) (9.1.1.2.9)
description (205)	reference%non_timed%oned_real%ref2%description (string) (9.1.1.1.3)
ref3 (204)	reference%non_timed%oned_real%ref3 (ref_nt.1dr_ref) (9.1.1.3.181)
value (205)	reference%non_timed%oned_real%ref3%value (vecflt.type) (9.1.1.2.9)
description (205)	reference%non_timed%oned_real%ref3%description (string) (9.1.1.1.3)
ref4 (204)	reference%non_timed%oned_real%ref4 (ref_nt.1dr_ref) (9.1.1.3.181)
value (205)	reference%non_timed%oned_real%ref4%value (vecflt.type) (9.1.1.2.9)
description (205)	reference%non_timed%oned_real%ref4%description (string) (9.1.1.1.3)
ref5 (204)	reference%non_timed%oned_real%ref5 (ref_nt.1dr_ref) (9.1.1.3.181)
value (205)	reference%non_timed%oned_real%ref5%value (vecflt.type) (9.1.1.2.9)
description (205)	reference%non_timed%oned_real%ref5%description (string) (9.1.1.1.3)
oned_int (195)	reference%non_timed%oned_int (ref_nt.1di) (9.1.1.3.178)
ref1 (202)	reference%non_timed%oned_int%ref1 (ref_nt.1di_ref) (9.1.1.3.179)
value (203)	reference%non_timed%oned_int%ref1%value (vecint.type) (9.1.1.2.10)
description (203)	reference%non_timed%oned_int%ref1%description (string) (9.1.1.1.3)
ref2 (202)	reference%non_timed%oned_int%ref2 (ref_nt.1di_ref) (9.1.1.3.179)
value (203)	reference%non_timed%oned_int%ref2%value (vecint.type) (9.1.1.2.10)
description (203)	reference%non_timed%oned_int%ref2%description (string) (9.1.1.1.3)
ref3 (202)	reference%non_timed%oned_int%ref3 (ref_nt.1di_ref) (9.1.1.3.179)
value (203)	reference%non_timed%oned_int%ref3%value (vecint.type) (9.1.1.2.10)
description (203)	reference%non_timed%oned_int%ref3%description (string) (9.1.1.1.3)
ref4 (202)	reference%non_timed%oned_int%ref4 (ref_nt.1di_ref) (9.1.1.3.179)
value (203)	reference%non_timed%oned_int%ref4%value (vecint.type) (9.1.1.2.10)
description (203)	reference%non_timed%oned_int%ref4%description (string) (9.1.1.1.3)
timed (53)	reference%timed (ref_t) (9.1.1.3.182)
zerod_real (206)	reference%timed%zerod_real (ref_t.0dr) (9.1.1.3.185)
ref1 (209)	reference%timed%zerod_real%ref1 (ref_t.0dr_ref) (9.1.1.3.186)
value (210)	reference%timed%zerod_real%ref1%value (float) (9.1.1.1.1)
description (210)	reference%timed%zerod_real%ref1%description (string) (9.1.1.1.3)
ref2 (209)	reference%timed%zerod_real%ref2 (ref_t.0dr_ref) (9.1.1.3.186)
value (210)	reference%timed%zerod_real%ref2%value (float) (9.1.1.1.1)
description (210)	reference%timed%zerod_real%ref2%description (string) (9.1.1.1.3)
ref3 (209)	reference%timed%zerod_real%ref3 (ref_t.0dr_ref) (9.1.1.3.186)
value (210)	reference%timed%zerod_real%ref3%value (float) (9.1.1.1.1)
description (210)	reference%timed%zerod_real%ref3%description (string) (9.1.1.1.3)
ref4 (209)	reference%timed%zerod_real%ref4 (ref_t.0dr_ref) (9.1.1.3.186)
value (210)	reference%timed%zerod_real%ref4%value (float) (9.1.1.1.1)
description (210)	reference%timed%zerod_real%ref4%description (string) (9.1.1.1.3)
ref5 (209)	reference%timed%zerod_real%ref5 (ref_t.0dr_ref) (9.1.1.3.186)
value (210)	reference%timed%zerod_real%ref5%value (float) (9.1.1.1.1)
description (210)	reference%timed%zerod_real%ref5%description (string) (9.1.1.1.3)
ref6 (209)	reference%timed%zerod_real%ref6 (ref_t.0dr_ref) (9.1.1.3.186)
value (210)	reference%timed%zerod_real%ref6%value (float) (9.1.1.1.1)
description (210)	reference%timed%zerod_real%ref6%description (string) (9.1.1.1.3)
ref7 (209)	reference%timed%zerod_real%ref7 (ref_t.0dr_ref) (9.1.1.3.186)
value (210)	reference%timed%zerod_real%ref7%value (float) (9.1.1.1.1)
description (210)	reference%timed%zerod_real%ref7%description (string) (9.1.1.1.3)
ref8 (209)	reference%timed%zerod_real%ref8 (ref_t.0dr_ref) (9.1.1.3.186)
value (210)	reference%timed%zerod_real%ref8%value (float) (9.1.1.1.1)
description (210)	reference%timed%zerod_real%ref8%description (string) (9.1.1.1.3)
ref9 (209)	reference%timed%zerod_real%ref9 (ref_t.0dr_ref) (9.1.1.3.186)
value (210)	reference%timed%zerod_real%ref9%value (float) (9.1.1.1.1)
description (210)	reference%timed%zerod_real%ref9%description (string) (9.1.1.1.3)
ref10 (209)	reference%timed%zerod_real%ref10 (ref_t.0dr_ref) (9.1.1.3.186)
value (210)	reference%timed%zerod_real%ref10%value (float) (9.1.1.1.1)
description (210)	reference%timed%zerod_real%ref10%description (string) (9.1.1.1.3)
zerod_int (206)	reference%timed%zerod_int (ref_t.0di) (9.1.1.3.183)
ref1 (207)	reference%timed%zerod_int%ref1 (ref_t.0di_ref) (9.1.1.3.184)
value (208)	reference%timed%zerod_int%ref1%value (integer) (9.1.1.1.2)
description (208)	reference%timed%zerod_int%ref1%description (string) (9.1.1.1.3)
ref2 (207)	reference%timed%zerod_int%ref2 (ref_t.0di_ref) (9.1.1.3.184)

value (208)	reference%timed%zerod_int%ref2%value (integer) (9.1.1.1.2)
description (208)	reference%timed%zerod_int%ref2%description (string) (9.1.1.1.3)
ref3 (207)	reference%timed%zerod_int%ref3 (ref.t.0di_ref) (9.1.1.3.184)
value (208)	reference%timed%zerod_int%ref3%value (integer) (9.1.1.1.2)
description (208)	reference%timed%zerod_int%ref3%description (string) (9.1.1.1.3)
ref4 (207)	reference%timed%zerod_int%ref4 (ref.t.0di_ref) (9.1.1.3.184)
value (208)	reference%timed%zerod_int%ref4%value (integer) (9.1.1.1.2)
description (208)	reference%timed%zerod_int%ref4%description (string) (9.1.1.1.3)
oned_real (206)	reference%timed%oned_real (ref.t.1dr) (9.1.1.3.189)
ref1 (213)	reference%timed%oned_real%ref1 (ref.t.1dr_ref) (9.1.1.3.190)
value (214)	reference%timed%oned_real%ref1%value (vecflt_type) (9.1.1.2.9)
description (214)	reference%timed%oned_real%ref1%description (string) (9.1.1.1.3)
ref2 (213)	reference%timed%oned_real%ref2 (ref.t.1dr_ref) (9.1.1.3.190)
value (214)	reference%timed%oned_real%ref2%value (vecflt_type) (9.1.1.2.9)
description (214)	reference%timed%oned_real%ref2%description (string) (9.1.1.1.3)
ref3 (213)	reference%timed%oned_real%ref3 (ref.t.1dr_ref) (9.1.1.3.190)
value (214)	reference%timed%oned_real%ref3%value (vecflt_type) (9.1.1.2.9)
description (214)	reference%timed%oned_real%ref3%description (string) (9.1.1.1.3)
ref4 (213)	reference%timed%oned_real%ref4 (ref.t.1dr_ref) (9.1.1.3.190)
value (214)	reference%timed%oned_real%ref4%value (vecflt_type) (9.1.1.2.9)
description (214)	reference%timed%oned_real%ref4%description (string) (9.1.1.1.3)
ref5 (213)	reference%timed%oned_real%ref5 (ref.t.1dr_ref) (9.1.1.3.190)
value (214)	reference%timed%oned_real%ref5%value (vecflt_type) (9.1.1.2.9)
description (214)	reference%timed%oned_real%ref5%description (string) (9.1.1.1.3)
oned_int (206)	reference%timed%oned_int (ref.t.1di) (9.1.1.3.187)
ref1 (211)	reference%timed%oned_int%ref1 (ref.t.1di_ref) (9.1.1.3.188)
value (212)	reference%timed%oned_int%ref1%value (vecint_type) (9.1.1.2.10)
description (212)	reference%timed%oned_int%ref1%description (string) (9.1.1.1.3)
ref2 (211)	reference%timed%oned_int%ref2 (ref.t.1di_ref) (9.1.1.3.188)
value (212)	reference%timed%oned_int%ref2%value (vecint_type) (9.1.1.2.10)
description (212)	reference%timed%oned_int%ref2%description (string) (9.1.1.1.3)
ref3 (211)	reference%timed%oned_int%ref3 (ref.t.1di_ref) (9.1.1.3.188)
value (212)	reference%timed%oned_int%ref3%value (vecint_type) (9.1.1.2.10)
description (212)	reference%timed%oned_int%ref3%description (string) (9.1.1.1.3)
ref4 (211)	reference%timed%oned_int%ref4 (ref.t.1di_ref) (9.1.1.3.188)
value (212)	reference%timed%oned_int%ref4%value (vecint_type) (9.1.1.2.10)
description (212)	reference%timed%oned_int%ref4%description (string) (9.1.1.1.3)
time (53)	reference%time (float) (9.1.1.1.1)

### 9.1.2.1.28 sawteeth

datainfo (54)	sawteeth%datainfo (datainfo) (9.1.1.3.73)
dataprovider (97)	sawteeth%datainfo%dataprovider (string) (9.1.1.1.3)
putdate (97)	sawteeth%datainfo%putdate (string) (9.1.1.1.3)
source (97)	sawteeth%datainfo%source (string) (9.1.1.1.3)
comment (97)	sawteeth%datainfo%comment (string) (9.1.1.1.3)
isref (97)	sawteeth%datainfo%isref (integer) (9.1.1.1.2)
whatref (97)	sawteeth%datainfo%whatref (whatref) (9.1.1.3.275)
user (299)	sawteeth%datainfo%whatref%user (string) (9.1.1.1.3)
machine (299)	sawteeth%datainfo%whatref%machine (string) (9.1.1.1.3)
shot (299)	sawteeth%datainfo%whatref%shot (integer) (9.1.1.1.2)
run (299)	sawteeth%datainfo%whatref%run (integer) (9.1.1.1.2)
occurrence (299)	sawteeth%datainfo%whatref%occurrence (integer) (9.1.1.1.2)
putinfo (97)	sawteeth%datainfo%putinfo (putinfo) (9.1.1.3.167)
putmethod (191)	sawteeth%datainfo%putinfo%putmethod (string) (9.1.1.1.3)
putaccess (191)	sawteeth%datainfo%putinfo%putaccess (string) (9.1.1.1.3)
putlocation (191)	sawteeth%datainfo%putinfo%putlocation (string) (9.1.1.1.3)
rights (191)	sawteeth%datainfo%putinfo%rights (string) (9.1.1.1.3)
crash_trig (54)	sawteeth%crash_trig (integer) (9.1.1.1.2)
composition (54)	sawteeth%composition (composition) (9.1.1.3.57)
amn (81)	sawteeth%composition%amn (vecflt_type) (9.1.1.2.9)

zn (81)	sawteeth%composition%zn (vecflt_type) (9.1.1.2.9)
zion (81)	sawteeth%composition%zion (vecflt_type) (9.1.1.2.9)
imp_flag (81)	sawteeth%composition%imp_flag (vecint_type) (9.1.1.2.10)
rho_tor_norm (54)	sawteeth%rho_tor_norm (vecflt_type) (9.1.1.2.9)
rho_tor (54)	sawteeth%rho_tor (vecflt_type) (9.1.1.2.9)
profiles1d (54)	sawteeth%profiles1d (sawteeth_profiles1d) (9.1.1.3.203)
ne (227)	sawteeth%profiles1d%ne (vecflt_type) (9.1.1.2.9)
ni (227)	sawteeth%profiles1d%ni (matflt_type) (9.1.1.2.7)
te (227)	sawteeth%profiles1d%te (vecflt_type) (9.1.1.2.9)
ti (227)	sawteeth%profiles1d%ti (matflt_type) (9.1.1.2.7)
psi (227)	sawteeth%profiles1d%psi (vecflt_type) (9.1.1.2.9)
phi (227)	sawteeth%profiles1d%phi (vecflt_type) (9.1.1.2.9)
psistar (227)	sawteeth%profiles1d%psistar (vecflt_type) (9.1.1.2.9)
volume (227)	sawteeth%profiles1d%volume (vecflt_type) (9.1.1.2.9)
q (227)	sawteeth%profiles1d%q (vecflt_type) (9.1.1.2.9)
diags (54)	sawteeth%diags (sawteeth_diags) (9.1.1.3.202)
shear1 (226)	sawteeth%diags%shear1 (float) (9.1.1.1.1)
rhotorn_q1 (226)	sawteeth%diags%rhotorn_q1 (float) (9.1.1.1.1)
rhotorn_inv (226)	sawteeth%diags%rhotorn_inv (float) (9.1.1.1.1)
rhotorn_mix (226)	sawteeth%diags%rhotorn_mix (float) (9.1.1.1.1)
codeparam (54)	sawteeth%codeparam (codeparam) (9.1.1.3.55)
codename (79)	sawteeth%codeparam%codename (string) (9.1.1.1.3)
codeversion (79)	sawteeth%codeparam%codeversion (string) (9.1.1.1.3)
parameters (79)	sawteeth%codeparam%parameters (string) (9.1.1.1.3)
output_diag (79)	sawteeth%codeparam%output_diag (string) (9.1.1.1.3)
output_flag (79)	sawteeth%codeparam%output_flag (integer) (9.1.1.1.2)
time (54)	sawteeth%time (float) (9.1.1.1.1)

### 9.1.2.1.29 scenario

datainfo (55)	scenario%datainfo (datainfo) (9.1.1.3.73)
dataprovider (97)	scenario%datainfo%dataprovider (string) (9.1.1.1.3)
putdate (97)	scenario%datainfo%putdate (string) (9.1.1.1.3)
source (97)	scenario%datainfo%source (string) (9.1.1.1.3)
comment (97)	scenario%datainfo%comment (string) (9.1.1.1.3)
isref (97)	scenario%datainfo%isref (integer) (9.1.1.1.2)
whatref (97)	scenario%datainfo%whatref (whatref) (9.1.1.3.275)
user (299)	scenario%datainfo%whatref%user (string) (9.1.1.1.3)
machine (299)	scenario%datainfo%whatref%machine (string) (9.1.1.1.3)
shot (299)	scenario%datainfo%whatref%shot (integer) (9.1.1.1.2)
run (299)	scenario%datainfo%whatref%run (integer) (9.1.1.1.2)
occurrence (299)	scenario%datainfo%whatref%occurrence (integer) (9.1.1.1.2)
putinfo (97)	scenario%datainfo%putinfo (putinfo) (9.1.1.3.167)
putmethod (191)	scenario%datainfo%putinfo%putmethod (string) (9.1.1.1.3)
putaccess (191)	scenario%datainfo%putinfo%putaccess (string) (9.1.1.1.3)
putlocation (191)	scenario%datainfo%putinfo%putlocation (string) (9.1.1.1.3)
rights (191)	scenario%datainfo%putinfo%rights (string) (9.1.1.1.3)
centre (55)	scenario%centre (scenario_centre) (9.1.1.3.204)
te0 (228)	scenario%centre%te0 (scenario_ref) (9.1.1.3.221)
value (245)	scenario%centre%te0%value (float) (9.1.1.1.1)
source (245)	scenario%centre%te0%source (string) (9.1.1.1.3)
ti0 (228)	scenario%centre%ti0 (scenario_ref) (9.1.1.3.221)
value (245)	scenario%centre%ti0%value (float) (9.1.1.1.1)
source (245)	scenario%centre%ti0%source (string) (9.1.1.1.3)
ne0 (228)	scenario%centre%ne0 (scenario_ref) (9.1.1.3.221)
value (245)	scenario%centre%ne0%value (float) (9.1.1.1.1)
source (245)	scenario%centre%ne0%source (string) (9.1.1.1.3)
ni0 (228)	scenario%centre%ni0 (scenario_ref) (9.1.1.3.221)
value (245)	scenario%centre%ni0%value (float) (9.1.1.1.1)
source (245)	scenario%centre%ni0%source (string) (9.1.1.1.3)
shift0 (228)	scenario%centre%shift0 (scenario_ref) (9.1.1.3.221)

value (245)	scenario%centre%shift0%value (float) (9.1.1.1.1)
source (245)	scenario%centre%shift0%source (string) (9.1.1.1.3)
psi0 (228)	scenario%centre%psi0 (scenario_ref) (9.1.1.3.221)
value (245)	scenario%centre%psi0%value (float) (9.1.1.1.1)
source (245)	scenario%centre%psi0%source (string) (9.1.1.1.3)
phi0 (228)	scenario%centre%phi0 (scenario_ref) (9.1.1.3.221)
value (245)	scenario%centre%phi0%value (float) (9.1.1.1.1)
source (245)	scenario%centre%phi0%source (string) (9.1.1.1.3)
q0 (228)	scenario%centre%q0 (scenario_ref) (9.1.1.3.221)
value (245)	scenario%centre%q0%value (float) (9.1.1.1.1)
source (245)	scenario%centre%q0%source (string) (9.1.1.1.3)
Rmag (228)	scenario%centre%Rmag (scenario_ref) (9.1.1.3.221)
value (245)	scenario%centre%Rmag%value (float) (9.1.1.1.1)
source (245)	scenario%centre%Rmag%source (string) (9.1.1.1.3)
Zmag (228)	scenario%centre%Zmag (scenario_ref) (9.1.1.3.221)
value (245)	scenario%centre%Zmag%value (float) (9.1.1.1.1)
source (245)	scenario%centre%Zmag%source (string) (9.1.1.1.3)
vtor.0 (228)	scenario%centre%vtor.0 (scenario_ref) (9.1.1.3.221)
value (245)	scenario%centre%vtor.0%value (float) (9.1.1.1.1)
source (245)	scenario%centre%vtor.0%source (string) (9.1.1.1.3)
composition (55)	scenario%composition (scenario_composition) (9.1.1.3.205)
amn (229)	scenario%composition%amn (vecflt_type) (9.1.1.2.9)
zn (229)	scenario%composition%zn (vecflt_type) (9.1.1.2.9)
zion (229)	scenario%composition%zion (vecflt_type) (9.1.1.2.9)
imp_flag (229)	scenario%composition%imp_flag (vecint_type) (9.1.1.2.10)
rot_imp_flag (229)	scenario%composition%rot_imp_flag (vecint_type) (9.1.1.2.10)
pellet.amn (229)	scenario%composition%pellet.amn (vecflt_type) (9.1.1.2.9)
pellet.zn (229)	scenario%composition%pellet.zn (vecflt_type) (9.1.1.2.9)
nbi.amn (229)	scenario%composition%nbi.amn (vecflt_type) (9.1.1.2.9)
nbi.zn (229)	scenario%composition%nbi.zn (vecflt_type) (9.1.1.2.9)
configs (55)	scenario%configs (scenario_configuration) (9.1.1.3.206)
config (230)	scenario%configs%config (scenario_int) (9.1.1.3.213)
value (237)	scenario%configs%config%value (integer) (9.1.1.1.2)
source (237)	scenario%configs%config%source (string) (9.1.1.1.3)
lmode.sc (230)	scenario%configs%lmode.sc (string) (9.1.1.1.3)
hmode.sc (230)	scenario%configs%hmode.sc (string) (9.1.1.1.3)
core.sc (230)	scenario%configs%core.sc (string) (9.1.1.1.3)
pedestal.sc (230)	scenario%configs%pedestal.sc (string) (9.1.1.1.3)
helium.sc (230)	scenario%configs%helium.sc (string) (9.1.1.1.3)
impurity.sc (230)	scenario%configs%impurity.sc (string) (9.1.1.1.3)
l2h.sc (230)	scenario%configs%l2h.sc (string) (9.1.1.1.3)
tor_rot.sc (230)	scenario%configs%tor_rot.sc (string) (9.1.1.1.3)
wall.mat (230)	scenario%configs%wall.mat (string) (9.1.1.1.3)
evap.mat (230)	scenario%configs%evap.mat (string) (9.1.1.1.3)
lim.mat (230)	scenario%configs%lim.mat (string) (9.1.1.1.3)
div.mat (230)	scenario%configs%div.mat (string) (9.1.1.1.3)
coordinate (230)	scenario%configs%coordinate (string) (9.1.1.1.3)
ecrh_freq (230)	scenario%configs%ecrh_freq (scenario_ref) (9.1.1.3.221)
value (245)	scenario%configs%ecrh_freq%value (float) (9.1.1.1.1)
source (245)	scenario%configs%ecrh_freq%source (string) (9.1.1.1.3)
ecrh_loc (230)	scenario%configs%ecrh_loc (scenario_ref) (9.1.1.3.221)
value (245)	scenario%configs%ecrh_loc%value (float) (9.1.1.1.1)
source (245)	scenario%configs%ecrh_loc%source (string) (9.1.1.1.3)
ecrh_mode (230)	scenario%configs%ecrh_mode (scenario_int) (9.1.1.3.213)
value (237)	scenario%configs%ecrh_mode%value (integer) (9.1.1.1.2)
source (237)	scenario%configs%ecrh_mode%source (string) (9.1.1.1.3)
ecrh_tor_ang (230)	scenario%configs%ecrh_tor_ang (scenario_ref) (9.1.1.3.221)
value (245)	scenario%configs%ecrh_tor_ang%value (float) (9.1.1.1.1)
source (245)	scenario%configs%ecrh_tor_ang%source (string) (9.1.1.1.3)
ecrh_pol_ang (230)	scenario%configs%ecrh_pol_ang (scenario_ref) (9.1.1.3.221)
value (245)	scenario%configs%ecrh_pol_ang%value (float) (9.1.1.1.1)



source (245)	scenario%configs%ecrh_pol.ang%source (string) (9.1.1.1.3)
ecrh_harm (230)	scenario%configs%ecrh_harm (scenario_int) (9.1.1.3.213)
value (237)	scenario%configs%ecrh_harm%value (integer) (9.1.1.1.2)
source (237)	scenario%configs%ecrh_harm%source (string) (9.1.1.1.3)
enbi (230)	scenario%configs%enbi (scenario_ref) (9.1.1.3.221)
value (245)	scenario%configs%enbi%value (float) (9.1.1.1.1)
source (245)	scenario%configs%enbi%source (string) (9.1.1.1.3)
r_nbi (230)	scenario%configs%r_nbi (scenario_ref) (9.1.1.3.221)
value (245)	scenario%configs%r_nbi%value (float) (9.1.1.1.1)
source (245)	scenario%configs%r_nbi%source (string) (9.1.1.1.3)
grad_b_drift (230)	scenario%configs%grad_b_drift (scenario_int) (9.1.1.3.213)
value (237)	scenario%configs%grad_b_drift%value (integer) (9.1.1.1.2)
source (237)	scenario%configs%grad_b_drift%source (string) (9.1.1.1.3)
icrh_freq (230)	scenario%configs%icrh_freq (scenario_ref) (9.1.1.3.221)
value (245)	scenario%configs%icrh_freq%value (float) (9.1.1.1.1)
source (245)	scenario%configs%icrh_freq%source (string) (9.1.1.1.3)
icrh_scheme (230)	scenario%configs%icrh_scheme (string) (9.1.1.1.3)
icrh_phase (230)	scenario%configs%icrh_phase (scenario_ref) (9.1.1.3.221)
value (245)	scenario%configs%icrh_phase%value (float) (9.1.1.1.1)
source (245)	scenario%configs%icrh_phase%source (string) (9.1.1.1.3)
LH_freq (230)	scenario%configs%LH_freq (scenario_ref) (9.1.1.3.221)
value (245)	scenario%configs%LH_freq%value (float) (9.1.1.1.1)
source (245)	scenario%configs%LH_freq%source (string) (9.1.1.1.3)
LH_npar (230)	scenario%configs%LH_npar (scenario_ref) (9.1.1.3.221)
value (245)	scenario%configs%LH_npar%value (float) (9.1.1.1.1)
source (245)	scenario%configs%LH_npar%source (string) (9.1.1.1.3)
pellet_ang (230)	scenario%configs%pellet_ang (scenario_ref) (9.1.1.3.221)
value (245)	scenario%configs%pellet_ang%value (float) (9.1.1.1.1)
source (245)	scenario%configs%pellet_ang%source (string) (9.1.1.1.3)
pellet_v (230)	scenario%configs%pellet_v (scenario_ref) (9.1.1.3.221)
value (245)	scenario%configs%pellet_v%value (float) (9.1.1.1.1)
source (245)	scenario%configs%pellet_v%source (string) (9.1.1.1.3)
pellet_nba (230)	scenario%configs%pellet_nba (scenario_ref) (9.1.1.3.221)
value (245)	scenario%configs%pellet_nba%value (float) (9.1.1.1.1)
source (245)	scenario%configs%pellet_nba%source (string) (9.1.1.1.3)
confinement (55)	scenario%confinement (scenario_confinement) (9.1.1.3.207)
tau_e (231)	scenario%confinement%tau_e (scenario_ref) (9.1.1.3.221)
value (245)	scenario%confinement%tau_e%value (float) (9.1.1.1.1)
source (245)	scenario%confinement%tau_e%source (string) (9.1.1.1.3)
tau_l_sc (231)	scenario%confinement%tau_l_sc (scenario_ref) (9.1.1.3.221)
value (245)	scenario%confinement%tau_l_sc%value (float) (9.1.1.1.1)
source (245)	scenario%confinement%tau_l_sc%source (string) (9.1.1.1.3)
tau_h_sc (231)	scenario%confinement%tau_h_sc (scenario_ref) (9.1.1.3.221)
value (245)	scenario%confinement%tau_h_sc%value (float) (9.1.1.1.1)
source (245)	scenario%confinement%tau_h_sc%source (string) (9.1.1.1.3)
tau_he (231)	scenario%confinement%tau_he (scenario_ref) (9.1.1.3.221)
value (245)	scenario%confinement%tau_he%value (float) (9.1.1.1.1)
source (245)	scenario%confinement%tau_he%source (string) (9.1.1.1.3)
tau_e_ee (231)	scenario%confinement%tau_e_ee (scenario_ref) (9.1.1.3.221)
value (245)	scenario%confinement%tau_e_ee%value (float) (9.1.1.1.1)
source (245)	scenario%confinement%tau_e_ee%source (string) (9.1.1.1.3)
tau_e_ii (231)	scenario%confinement%tau_e_ii (scenario_ref) (9.1.1.3.221)
value (245)	scenario%confinement%tau_e_ii%value (float) (9.1.1.1.1)
source (245)	scenario%confinement%tau_e_ii%source (string) (9.1.1.1.3)
tau_e_ei (231)	scenario%confinement%tau_e_ei (scenario_ref) (9.1.1.3.221)
value (245)	scenario%confinement%tau_e_ei%value (float) (9.1.1.1.1)
source (245)	scenario%confinement%tau_e_ei%source (string) (9.1.1.1.3)
tau_cur_diff (231)	scenario%confinement%tau_cur_diff (scenario_ref) (9.1.1.3.221)
value (245)	scenario%confinement%tau_cur_diff%value (float) (9.1.1.1.1)
source (245)	scenario%confinement%tau_cur_diff%source (string) (9.1.1.1.3)
tau_i_rol (231)	scenario%confinement%tau_i_rol (scenario_ref) (9.1.1.3.221)

value (245)	scenario%confinement%tau.i.rol%value (float) (9.1.1.1.1)
source (245)	scenario%confinement%tau.i.rol%source (string) (9.1.1.1.3)
currents (55)	scenario%currents (scenario_currents) (9.1.1.3.208)
RR (232)	scenario%currents%RR (scenario_ref) (9.1.1.3.221)
value (245)	scenario%currents%RR%value (float) (9.1.1.1.1)
source (245)	scenario%currents%RR%source (string) (9.1.1.1.3)
i.align (232)	scenario%currents%i.align (scenario_ref) (9.1.1.3.221)
value (245)	scenario%currents%i.align%value (float) (9.1.1.1.1)
source (245)	scenario%currents%i.align%source (string) (9.1.1.1.3)
i.boot (232)	scenario%currents%i.boot (scenario_ref) (9.1.1.3.221)
value (245)	scenario%currents%i.boot%value (float) (9.1.1.1.1)
source (245)	scenario%currents%i.boot%source (string) (9.1.1.1.3)
i.cd.tot (232)	scenario%currents%i.cd.tot (scenario_ref) (9.1.1.3.221)
value (245)	scenario%currents%i.cd.tot%value (float) (9.1.1.1.1)
source (245)	scenario%currents%i.cd.tot%source (string) (9.1.1.1.3)
i.eccd (232)	scenario%currents%i.eccd (scenario_ref) (9.1.1.3.221)
value (245)	scenario%currents%i.eccd%value (float) (9.1.1.1.1)
source (245)	scenario%currents%i.eccd%source (string) (9.1.1.1.3)
i.fast.ion (232)	scenario%currents%i.fast.ion (scenario_ref) (9.1.1.3.221)
value (245)	scenario%currents%i.fast.ion%value (float) (9.1.1.1.1)
source (245)	scenario%currents%i.fast.ion%source (string) (9.1.1.1.3)
i.fwcd (232)	scenario%currents%i.fwcd (scenario_ref) (9.1.1.3.221)
value (245)	scenario%currents%i.fwcd%value (float) (9.1.1.1.1)
source (245)	scenario%currents%i.fwcd%source (string) (9.1.1.1.3)
i.lhcd (232)	scenario%currents%i.lhcd (scenario_ref) (9.1.1.3.221)
value (245)	scenario%currents%i.lhcd%value (float) (9.1.1.1.1)
source (245)	scenario%currents%i.lhcd%source (string) (9.1.1.1.3)
i.nbicd (232)	scenario%currents%i.nbicd (scenario_ref) (9.1.1.3.221)
value (245)	scenario%currents%i.nbicd%value (float) (9.1.1.1.1)
source (245)	scenario%currents%i.nbicd%source (string) (9.1.1.1.3)
i.ni.tot (232)	scenario%currents%i.ni.tot (scenario_ref) (9.1.1.3.221)
value (245)	scenario%currents%i.ni.tot%value (float) (9.1.1.1.1)
source (245)	scenario%currents%i.ni.tot%source (string) (9.1.1.1.3)
i.ohm (232)	scenario%currents%i.ohm (scenario_ref) (9.1.1.3.221)
value (245)	scenario%currents%i.ohm%value (float) (9.1.1.1.1)
source (245)	scenario%currents%i.ohm%source (string) (9.1.1.1.3)
i.par (232)	scenario%currents%i.par (scenario_ref) (9.1.1.3.221)
value (245)	scenario%currents%i.par%value (float) (9.1.1.1.1)
source (245)	scenario%currents%i.par%source (string) (9.1.1.1.3)
i.runaway (232)	scenario%currents%i.runaway (scenario_ref) (9.1.1.3.221)
value (245)	scenario%currents%i.runaway%value (float) (9.1.1.1.1)
source (245)	scenario%currents%i.runaway%source (string) (9.1.1.1.3)
v.loop (232)	scenario%currents%v.loop (scenario_ref) (9.1.1.3.221)
value (245)	scenario%currents%v.loop%value (float) (9.1.1.1.1)
source (245)	scenario%currents%v.loop%source (string) (9.1.1.1.3)
v.meas (232)	scenario%currents%v.meas (scenario_ref) (9.1.1.3.221)
value (245)	scenario%currents%v.meas%value (float) (9.1.1.1.1)
source (245)	scenario%currents%v.meas%source (string) (9.1.1.1.3)
edge (55)	scenario%edge (scenario_edge) (9.1.1.3.209)
te.edge (233)	scenario%edge%te.edge (scenario_ref) (9.1.1.3.221)
value (245)	scenario%edge%te.edge%value (float) (9.1.1.1.1)
source (245)	scenario%edge%te.edge%source (string) (9.1.1.1.3)
ti.edge (233)	scenario%edge%ti.edge (scenario_ref) (9.1.1.3.221)
value (245)	scenario%edge%ti.edge%value (float) (9.1.1.1.1)
source (245)	scenario%edge%ti.edge%source (string) (9.1.1.1.3)
ne.edge (233)	scenario%edge%ne.edge (scenario_ref) (9.1.1.3.221)
value (245)	scenario%edge%ne.edge%value (float) (9.1.1.1.1)
source (245)	scenario%edge%ne.edge%source (string) (9.1.1.1.3)
ni.edge (233)	scenario%edge%ni.edge (scenario_ref) (9.1.1.3.221)
value (245)	scenario%edge%ni.edge%value (float) (9.1.1.1.1)
source (245)	scenario%edge%ni.edge%source (string) (9.1.1.1.3)



psi_edge (233)	scenario%edge%psi_edge (scenario_ref) (9.1.1.3.221)
value (245)	scenario%edge%psi_edge%value (float) (9.1.1.1.1)
source (245)	scenario%edge%psi_edge%source (string) (9.1.1.1.3)
phi_edge (233)	scenario%edge%phi_edge (scenario_ref) (9.1.1.3.221)
value (245)	scenario%edge%phi_edge%value (float) (9.1.1.1.1)
source (245)	scenario%edge%phi_edge%source (string) (9.1.1.1.3)
rho_edge (233)	scenario%edge%rho_edge (scenario_ref) (9.1.1.3.221)
value (245)	scenario%edge%rho_edge%value (float) (9.1.1.1.1)
source (245)	scenario%edge%rho_edge%source (string) (9.1.1.1.3)
drho_edge_dt (233)	scenario%edge%drho_edge_dt (scenario_ref) (9.1.1.3.221)
value (245)	scenario%edge%drho_edge_dt%value (float) (9.1.1.1.1)
source (245)	scenario%edge%drho_edge_dt%source (string) (9.1.1.1.3)
q_edge (233)	scenario%edge%q_edge (scenario_ref) (9.1.1.3.221)
value (245)	scenario%edge%q_edge%value (float) (9.1.1.1.1)
source (245)	scenario%edge%q_edge%source (string) (9.1.1.1.3)
neutral_flux (233)	scenario%edge%neutral_flux (scenario_ref) (9.1.1.3.221)
value (245)	scenario%edge%neutral_flux%value (float) (9.1.1.1.1)
source (245)	scenario%edge%neutral_flux%source (string) (9.1.1.1.3)
phi_plasma (233)	scenario%edge%phi_plasma (scenario_ref) (9.1.1.3.221)
value (245)	scenario%edge%phi_plasma%value (float) (9.1.1.1.1)
source (245)	scenario%edge%phi_plasma%source (string) (9.1.1.1.3)
vtor_edge (233)	scenario%edge%vtor_edge (scenario_ref) (9.1.1.3.221)
value (245)	scenario%edge%vtor_edge%value (float) (9.1.1.1.1)
source (245)	scenario%edge%vtor_edge%source (string) (9.1.1.1.3)
energy (55)	scenario%energy (scenario_energy) (9.1.1.3.210)
w_tot (234)	scenario%energy%w_tot (scenario_ref) (9.1.1.3.221)
value (245)	scenario%energy%w_tot%value (float) (9.1.1.1.1)
source (245)	scenario%energy%w_tot%source (string) (9.1.1.1.3)
w_b.pol (234)	scenario%energy%w_b.pol (scenario_ref) (9.1.1.3.221)
value (245)	scenario%energy%w_b.pol%value (float) (9.1.1.1.1)
source (245)	scenario%energy%w_b.pol%source (string) (9.1.1.1.3)
w_dia (234)	scenario%energy%w_dia (scenario_ref) (9.1.1.3.221)
value (245)	scenario%energy%w_dia%value (float) (9.1.1.1.1)
source (245)	scenario%energy%w_dia%source (string) (9.1.1.1.3)
dwdia_dt (234)	scenario%energy%dwdia_dt (scenario_ref) (9.1.1.3.221)
value (245)	scenario%energy%dwdia_dt%value (float) (9.1.1.1.1)
source (245)	scenario%energy%dwdia_dt%source (string) (9.1.1.1.3)
w_b.tor.pla (234)	scenario%energy%w_b.tor.pla (scenario_ref) (9.1.1.3.221)
value (245)	scenario%energy%w_b.tor.pla%value (float) (9.1.1.1.1)
source (245)	scenario%energy%w_b.tor.pla%source (string) (9.1.1.1.3)
w_th (234)	scenario%energy%w_th (scenario_ref) (9.1.1.3.221)
value (245)	scenario%energy%w_th%value (float) (9.1.1.1.1)
source (245)	scenario%energy%w_th%source (string) (9.1.1.1.3)
dwtot_dt (234)	scenario%energy%dwtot_dt (scenario_ref) (9.1.1.3.221)
value (245)	scenario%energy%dwtot_dt%value (float) (9.1.1.1.1)
source (245)	scenario%energy%dwtot_dt%source (string) (9.1.1.1.3)
dwbpol_dt (234)	scenario%energy%dwbpol_dt (scenario_ref) (9.1.1.3.221)
value (245)	scenario%energy%dwbpol_dt%value (float) (9.1.1.1.1)
source (245)	scenario%energy%dwbpol_dt%source (string) (9.1.1.1.3)
dwbtorpla_dt (234)	scenario%energy%dwbtorpla_dt (scenario_ref) (9.1.1.3.221)
value (245)	scenario%energy%dwbtorpla_dt%value (float) (9.1.1.1.1)
source (245)	scenario%energy%dwbtorpla_dt%source (string) (9.1.1.1.3)
dwth_dt (234)	scenario%energy%dwth_dt (scenario_ref) (9.1.1.3.221)
value (245)	scenario%energy%dwth_dt%value (float) (9.1.1.1.1)
source (245)	scenario%energy%dwth_dt%source (string) (9.1.1.1.3)
esup_icrhtot (234)	scenario%energy%esup_icrhtot (scenario_ref) (9.1.1.3.221)
value (245)	scenario%energy%esup_icrhtot%value (float) (9.1.1.1.1)
source (245)	scenario%energy%esup_icrhtot%source (string) (9.1.1.1.3)
esup_icrhper (234)	scenario%energy%esup_icrhper (scenario_ref) (9.1.1.3.221)
value (245)	scenario%energy%esup_icrhper%value (float) (9.1.1.1.1)
source (245)	scenario%energy%esup_icrhper%source (string) (9.1.1.1.3)

esup_nbitot (234)	scenario%energy%esup_nbitot (scenario_ref) (9.1.1.3.221)
value (245)	scenario%energy%esup_nbitot%value (float) (9.1.1.1.1)
source (245)	scenario%energy%esup_nbitot%source (string) (9.1.1.1.3)
esup_nbiperp (234)	scenario%energy%esup_nbiperp (scenario_ref) (9.1.1.3.221)
value (245)	scenario%energy%esup_nbiperp%value (float) (9.1.1.1.1)
source (245)	scenario%energy%esup_nbiperp%source (string) (9.1.1.1.3)
esup_lhcd (234)	scenario%energy%esup_lhcd (scenario_ref) (9.1.1.3.221)
value (245)	scenario%energy%esup_lhcd%value (float) (9.1.1.1.1)
source (245)	scenario%energy%esup_lhcd%source (string) (9.1.1.1.3)
esup_alpha (234)	scenario%energy%esup_alpha (scenario_ref) (9.1.1.3.221)
value (245)	scenario%energy%esup_alpha%value (float) (9.1.1.1.1)
source (245)	scenario%energy%esup_alpha%source (string) (9.1.1.1.3)
eqgeometry (55)	scenario%eqgeometry (eqgeometry) (9.1.1.3.107)
source (131)	scenario%eqgeometry%source (string) (9.1.1.1.3)
boundarytype (131)	scenario%eqgeometry%boundarytype (integer) (9.1.1.1.2)
boundary (131)	scenario%eqgeometry%boundary (rz1D_npoints) (9.1.1.3.195)
r (219)	scenario%eqgeometry%boundary%r (vecflt.type) (9.1.1.2.9)
z (219)	scenario%eqgeometry%boundary%z (vecflt.type) (9.1.1.2.9)
npoints (219)	scenario%eqgeometry%boundary%npoints (integer) (9.1.1.1.2)
geom.axis (131)	scenario%eqgeometry%geom.axis (rz0D) (9.1.1.3.193)
r (217)	scenario%eqgeometry%geom.axis%r (float) (9.1.1.1.1)
z (217)	scenario%eqgeometry%geom.axis%z (float) (9.1.1.1.1)
a_minor (131)	scenario%eqgeometry%a_minor (float) (9.1.1.1.1)
elongation (131)	scenario%eqgeometry%elongation (float) (9.1.1.1.1)
tria_upper (131)	scenario%eqgeometry%tria_upper (float) (9.1.1.1.1)
tria_lower (131)	scenario%eqgeometry%tria_lower (float) (9.1.1.1.1)
xpts (131)	scenario%eqgeometry%xpts (rz1D) (9.1.1.3.194)
r (218)	scenario%eqgeometry%xpts%r (vecflt.type) (9.1.1.2.9)
z (218)	scenario%eqgeometry%xpts%z (vecflt.type) (9.1.1.2.9)
left_low_st (131)	scenario%eqgeometry%left_low_st (rz0D) (9.1.1.3.193)
r (217)	scenario%eqgeometry%left_low_st%r (float) (9.1.1.1.1)
z (217)	scenario%eqgeometry%left_low_st%z (float) (9.1.1.1.1)
right_low_st (131)	scenario%eqgeometry%right_low_st (rz0D) (9.1.1.3.193)
r (217)	scenario%eqgeometry%right_low_st%r (float) (9.1.1.1.1)
z (217)	scenario%eqgeometry%right_low_st%z (float) (9.1.1.1.1)
left_up_st (131)	scenario%eqgeometry%left_up_st (rz0D) (9.1.1.3.193)
r (217)	scenario%eqgeometry%left_up_st%r (float) (9.1.1.1.1)
z (217)	scenario%eqgeometry%left_up_st%z (float) (9.1.1.1.1)
right_up_st (131)	scenario%eqgeometry%right_up_st (rz0D) (9.1.1.3.193)
r (217)	scenario%eqgeometry%right_up_st%r (float) (9.1.1.1.1)
z (217)	scenario%eqgeometry%right_up_st%z (float) (9.1.1.1.1)
active_limit (131)	scenario%eqgeometry%active_limit (rz0D) (9.1.1.3.193)
r (217)	scenario%eqgeometry%active_limit%r (float) (9.1.1.1.1)
z (217)	scenario%eqgeometry%active_limit%z (float) (9.1.1.1.1)
global_param (55)	scenario%global_param (scenario_global) (9.1.1.3.211)
ip (235)	scenario%global_param%ip (scenario_ref) (9.1.1.3.221)
value (245)	scenario%global_param%ip%value (float) (9.1.1.1.1)
source (245)	scenario%global_param%ip%source (string) (9.1.1.1.3)
dip_dt (235)	scenario%global_param%dip_dt (scenario_ref) (9.1.1.3.221)
value (245)	scenario%global_param%dip_dt%value (float) (9.1.1.1.1)
source (245)	scenario%global_param%dip_dt%source (string) (9.1.1.1.3)
beta_pol (235)	scenario%global_param%beta_pol (scenario_ref) (9.1.1.3.221)
value (245)	scenario%global_param%beta_pol%value (float) (9.1.1.1.1)
source (245)	scenario%global_param%beta_pol%source (string) (9.1.1.1.3)
beta_tor (235)	scenario%global_param%beta_tor (scenario_ref) (9.1.1.3.221)
value (245)	scenario%global_param%beta_tor%value (float) (9.1.1.1.1)
source (245)	scenario%global_param%beta_tor%source (string) (9.1.1.1.3)
beta_normal (235)	scenario%global_param%beta_normal (scenario_ref) (9.1.1.3.221)
value (245)	scenario%global_param%beta_normal%value (float) (9.1.1.1.1)
source (245)	scenario%global_param%beta_normal%source (string) (9.1.1.1.3)
li (235)	scenario%global_param%li (scenario_ref) (9.1.1.3.221)

value (245)	scenario%global_param%li%value (float) (9.1.1.1.1)
source (245)	scenario%global_param%li%source (string) (9.1.1.1.3)
volume (235)	scenario%global_param%volume (scenario_ref) (9.1.1.3.221)
value (245)	scenario%global_param%volume%value (float) (9.1.1.1.1)
source (245)	scenario%global_param%volume%source (string) (9.1.1.1.3)
area_pol (235)	scenario%global_param%area_pol (scenario_ref) (9.1.1.3.221)
value (245)	scenario%global_param%area_pol%value (float) (9.1.1.1.1)
source (245)	scenario%global_param%area_pol%source (string) (9.1.1.1.3)
area_ext (235)	scenario%global_param%area_ext (scenario_ref) (9.1.1.3.221)
value (245)	scenario%global_param%area_ext%value (float) (9.1.1.1.1)
source (245)	scenario%global_param%area_ext%source (string) (9.1.1.1.3)
len_sepa (235)	scenario%global_param%len_sepa (scenario_ref) (9.1.1.3.221)
value (245)	scenario%global_param%len_sepa%value (float) (9.1.1.1.1)
source (245)	scenario%global_param%len_sepa%source (string) (9.1.1.1.3)
beta_pol_th (235)	scenario%global_param%beta_pol.th (scenario_ref) (9.1.1.3.221)
value (245)	scenario%global_param%beta_pol.th%value (float) (9.1.1.1.1)
source (245)	scenario%global_param%beta_pol.th%source (string) (9.1.1.1.3)
beta_tor_th (235)	scenario%global_param%beta_tor.th (scenario_ref) (9.1.1.3.221)
value (245)	scenario%global_param%beta_tor.th%value (float) (9.1.1.1.1)
source (245)	scenario%global_param%beta_tor.th%source (string) (9.1.1.1.3)
beta_n_th (235)	scenario%global_param%beta_n.th (scenario_ref) (9.1.1.3.221)
value (245)	scenario%global_param%beta_n.th%value (float) (9.1.1.1.1)
source (245)	scenario%global_param%beta_n.th%source (string) (9.1.1.1.3)
disruption (235)	scenario%global_param%disruption (scenario_ref) (9.1.1.3.221)
value (245)	scenario%global_param%disruption%value (float) (9.1.1.1.1)
source (245)	scenario%global_param%disruption%source (string) (9.1.1.1.3)
mode_h (235)	scenario%global_param%mode_h (scenario_ref) (9.1.1.3.221)
value (245)	scenario%global_param%mode_h%value (float) (9.1.1.1.1)
source (245)	scenario%global_param%mode_h%source (string) (9.1.1.1.3)
s_alpha (235)	scenario%global_param%s.alpha (scenario_ref) (9.1.1.3.221)
value (245)	scenario%global_param%s.alpha%value (float) (9.1.1.1.1)
source (245)	scenario%global_param%s.alpha%source (string) (9.1.1.1.3)
heat.power (55)	scenario%heat.power (scenario_heat.power) (9.1.1.3.212)
plh (236)	scenario%heat.power%plh (scenario_ref) (9.1.1.3.221)
value (245)	scenario%heat.power%plh%value (float) (9.1.1.1.1)
source (245)	scenario%heat.power%plh%source (string) (9.1.1.1.3)
pohmic (236)	scenario%heat.power%pohmic (scenario_ref) (9.1.1.3.221)
value (245)	scenario%heat.power%pohmic%value (float) (9.1.1.1.1)
source (245)	scenario%heat.power%pohmic%source (string) (9.1.1.1.3)
picrh (236)	scenario%heat.power%picrh (scenario_ref) (9.1.1.3.221)
value (245)	scenario%heat.power%picrh%value (float) (9.1.1.1.1)
source (245)	scenario%heat.power%picrh%source (string) (9.1.1.1.3)
pecrh (236)	scenario%heat.power%pecrh (scenario_ref) (9.1.1.3.221)
value (245)	scenario%heat.power%pecrh%value (float) (9.1.1.1.1)
source (245)	scenario%heat.power%pecrh%source (string) (9.1.1.1.3)
pnbi (236)	scenario%heat.power%pnbi (scenario_ref) (9.1.1.3.221)
value (245)	scenario%heat.power%pnbi%value (float) (9.1.1.1.1)
source (245)	scenario%heat.power%pnbi%source (string) (9.1.1.1.3)
pnbi.co.cur (236)	scenario%heat.power%pnbi.co.cur (scenario_ref) (9.1.1.3.221)
value (245)	scenario%heat.power%pnbi.co.cur%value (float) (9.1.1.1.1)
source (245)	scenario%heat.power%pnbi.co.cur%source (string) (9.1.1.1.3)
pnbi.counter (236)	scenario%heat.power%pnbi.counter (scenario_ref) (9.1.1.3.221)
value (245)	scenario%heat.power%pnbi.counter%value (float) (9.1.1.1.1)
source (245)	scenario%heat.power%pnbi.counter%source (string) (9.1.1.1.3)
plh.th (236)	scenario%heat.power%plh.th (scenario_ref) (9.1.1.3.221)
value (245)	scenario%heat.power%plh.th%value (float) (9.1.1.1.1)
source (245)	scenario%heat.power%plh.th%source (string) (9.1.1.1.3)
picrh.th (236)	scenario%heat.power%picrh.th (scenario_ref) (9.1.1.3.221)
value (245)	scenario%heat.power%picrh.th%value (float) (9.1.1.1.1)
source (245)	scenario%heat.power%picrh.th%source (string) (9.1.1.1.3)
pecrh.th (236)	scenario%heat.power%pecrh.th (scenario_ref) (9.1.1.3.221)

value (245)	scenario%heat_power%pecrh.th%value (float) (9.1.1.1.1)
source (245)	scenario%heat_power%pecrh.th%source (string) (9.1.1.1.3)
pnbi.th (236)	scenario%heat_power%pnbi.th (scenario_ref) (9.1.1.3.221)
value (245)	scenario%heat_power%pnbi.th%value (float) (9.1.1.1.1)
source (245)	scenario%heat_power%pnbi.th%source (string) (9.1.1.1.3)
ploss.icrh (236)	scenario%heat_power%ploss.icrh (scenario_ref) (9.1.1.3.221)
value (245)	scenario%heat_power%ploss.icrh%value (float) (9.1.1.1.1)
source (245)	scenario%heat_power%ploss.icrh%source (string) (9.1.1.1.3)
ploss.nbi (236)	scenario%heat_power%ploss.nbi (scenario_ref) (9.1.1.3.221)
value (245)	scenario%heat_power%ploss.nbi%value (float) (9.1.1.1.1)
source (245)	scenario%heat_power%ploss.nbi%source (string) (9.1.1.1.3)
pbrem (236)	scenario%heat_power%pbrem (scenario_ref) (9.1.1.3.221)
value (245)	scenario%heat_power%pbrem%value (float) (9.1.1.1.1)
source (245)	scenario%heat_power%pbrem%source (string) (9.1.1.1.3)
pcyclo (236)	scenario%heat_power%pcyclo (scenario_ref) (9.1.1.3.221)
value (245)	scenario%heat_power%pcyclo%value (float) (9.1.1.1.1)
source (245)	scenario%heat_power%pcyclo%source (string) (9.1.1.1.3)
prad (236)	scenario%heat_power%prad (scenario_ref) (9.1.1.3.221)
value (245)	scenario%heat_power%prad%value (float) (9.1.1.1.1)
source (245)	scenario%heat_power%prad%source (string) (9.1.1.1.3)
pdd.fus (236)	scenario%heat_power%pdd.fus (scenario_ref) (9.1.1.3.221)
value (245)	scenario%heat_power%pdd.fus%value (float) (9.1.1.1.1)
source (245)	scenario%heat_power%pdd.fus%source (string) (9.1.1.1.3)
pei (236)	scenario%heat_power%pei (scenario_ref) (9.1.1.3.221)
value (245)	scenario%heat_power%pei%value (float) (9.1.1.1.1)
source (245)	scenario%heat_power%pei%source (string) (9.1.1.1.3)
pel.tot (236)	scenario%heat_power%pel.tot (scenario_ref) (9.1.1.3.221)
value (245)	scenario%heat_power%pel.tot%value (float) (9.1.1.1.1)
source (245)	scenario%heat_power%pel.tot%source (string) (9.1.1.1.3)
pel.fus (236)	scenario%heat_power%pel.fus (scenario_ref) (9.1.1.3.221)
value (245)	scenario%heat_power%pel.fus%value (float) (9.1.1.1.1)
source (245)	scenario%heat_power%pel.fus%source (string) (9.1.1.1.3)
pel.icrh (236)	scenario%heat_power%pel.icrh (scenario_ref) (9.1.1.3.221)
value (245)	scenario%heat_power%pel.icrh%value (float) (9.1.1.1.1)
source (245)	scenario%heat_power%pel.icrh%source (string) (9.1.1.1.3)
pel.nbi (236)	scenario%heat_power%pel.nbi (scenario_ref) (9.1.1.3.221)
value (245)	scenario%heat_power%pel.nbi%value (float) (9.1.1.1.1)
source (245)	scenario%heat_power%pel.nbi%source (string) (9.1.1.1.3)
pfus.dt (236)	scenario%heat_power%pfus.dt (scenario_ref) (9.1.1.3.221)
value (245)	scenario%heat_power%pfus.dt%value (float) (9.1.1.1.1)
source (245)	scenario%heat_power%pfus.dt%source (string) (9.1.1.1.3)
ploss.fus (236)	scenario%heat_power%ploss.fus (scenario_ref) (9.1.1.3.221)
value (245)	scenario%heat_power%ploss.fus%value (float) (9.1.1.1.1)
source (245)	scenario%heat_power%ploss.fus%source (string) (9.1.1.1.3)
pfus.nbi (236)	scenario%heat_power%pfus.nbi (scenario_ref) (9.1.1.3.221)
value (245)	scenario%heat_power%pfus.nbi%value (float) (9.1.1.1.1)
source (245)	scenario%heat_power%pfus.nbi%source (string) (9.1.1.1.3)
pfus.th (236)	scenario%heat_power%pfus.th (scenario_ref) (9.1.1.3.221)
value (245)	scenario%heat_power%pfus.th%value (float) (9.1.1.1.1)
source (245)	scenario%heat_power%pfus.th%source (string) (9.1.1.1.3)
padd.tot (236)	scenario%heat_power%padd.tot (scenario_ref) (9.1.1.3.221)
value (245)	scenario%heat_power%padd.tot%value (float) (9.1.1.1.1)
source (245)	scenario%heat_power%padd.tot%source (string) (9.1.1.1.3)
pion.tot (236)	scenario%heat_power%pion.tot (scenario_ref) (9.1.1.3.221)
value (245)	scenario%heat_power%pion.tot%value (float) (9.1.1.1.1)
source (245)	scenario%heat_power%pion.tot%source (string) (9.1.1.1.3)
pion.fus (236)	scenario%heat_power%pion.fus (scenario_ref) (9.1.1.3.221)
value (245)	scenario%heat_power%pion.fus%value (float) (9.1.1.1.1)
source (245)	scenario%heat_power%pion.fus%source (string) (9.1.1.1.3)
pion.icrh (236)	scenario%heat_power%pion.icrh (scenario_ref) (9.1.1.3.221)
value (245)	scenario%heat_power%pion.icrh%value (float) (9.1.1.1.1)

source (245)	scenario%heat_power%pion.icrh%source (string) (9.1.1.1.3)
pion_nbi (236)	scenario%heat_power%pion_nbi (scenario_ref) (9.1.1.3.221)
value (245)	scenario%heat_power%pion_nbi%value (float) (9.1.1.1.1)
source (245)	scenario%heat_power%pion_nbi%source (string) (9.1.1.1.3)
pioniz (236)	scenario%heat_power%pioniz (scenario_ref) (9.1.1.3.221)
value (245)	scenario%heat_power%pioniz%value (float) (9.1.1.1.1)
source (245)	scenario%heat_power%pioniz%source (string) (9.1.1.1.3)
ploss (236)	scenario%heat_power%ploss (scenario_ref) (9.1.1.3.221)
value (245)	scenario%heat_power%ploss%value (float) (9.1.1.1.1)
source (245)	scenario%heat_power%ploss%source (string) (9.1.1.1.3)
p_wth (236)	scenario%heat_power%p_wth (scenario_ref) (9.1.1.3.221)
value (245)	scenario%heat_power%p_wth%value (float) (9.1.1.1.1)
source (245)	scenario%heat_power%p_wth%source (string) (9.1.1.1.3)
p_w (236)	scenario%heat_power%p_w (scenario_ref) (9.1.1.3.221)
value (245)	scenario%heat_power%p_w%value (float) (9.1.1.1.1)
source (245)	scenario%heat_power%p_w%source (string) (9.1.1.1.3)
p_l2h_thr (236)	scenario%heat_power%p_l2h_thr (scenario_ref) (9.1.1.3.221)
value (245)	scenario%heat_power%p_l2h_thr%value (float) (9.1.1.1.1)
source (245)	scenario%heat_power%p_l2h_thr%source (string) (9.1.1.1.3)
p_l2h_sc (236)	scenario%heat_power%p_l2h_sc (scenario_ref) (9.1.1.3.221)
value (245)	scenario%heat_power%p_l2h_sc%value (float) (9.1.1.1.1)
source (245)	scenario%heat_power%p_l2h_sc%source (string) (9.1.1.1.3)
p_nbi_icrh (236)	scenario%heat_power%p_nbi_icrh (scenario_ref) (9.1.1.3.221)
value (245)	scenario%heat_power%p_nbi_icrh%value (float) (9.1.1.1.1)
source (245)	scenario%heat_power%p_nbi_icrh%source (string) (9.1.1.1.3)
itb (55)	scenario%itb (scenario_itb) (9.1.1.3.214)
q_min (238)	scenario%itb%q_min (scenario_ref) (9.1.1.3.221)
value (245)	scenario%itb%q_min%value (float) (9.1.1.1.1)
source (245)	scenario%itb%q_min%source (string) (9.1.1.1.3)
te_itb (238)	scenario%itb%te_itb (scenario_ref) (9.1.1.3.221)
value (245)	scenario%itb%te_itb%value (float) (9.1.1.1.1)
source (245)	scenario%itb%te_itb%source (string) (9.1.1.1.3)
ti_itb (238)	scenario%itb%ti_itb (scenario_ref) (9.1.1.3.221)
value (245)	scenario%itb%ti_itb%value (float) (9.1.1.1.1)
source (245)	scenario%itb%ti_itb%source (string) (9.1.1.1.3)
ne_itb (238)	scenario%itb%ne_itb (scenario_ref) (9.1.1.3.221)
value (245)	scenario%itb%ne_itb%value (float) (9.1.1.1.1)
source (245)	scenario%itb%ne_itb%source (string) (9.1.1.1.3)
ni_itb (238)	scenario%itb%ni_itb (scenario_ref) (9.1.1.3.221)
value (245)	scenario%itb%ni_itb%value (float) (9.1.1.1.1)
source (245)	scenario%itb%ni_itb%source (string) (9.1.1.1.3)
psi_itb (238)	scenario%itb%psi_itb (scenario_ref) (9.1.1.3.221)
value (245)	scenario%itb%psi_itb%value (float) (9.1.1.1.1)
source (245)	scenario%itb%psi_itb%source (string) (9.1.1.1.3)
phi_itb (238)	scenario%itb%phi_itb (scenario_ref) (9.1.1.3.221)
value (245)	scenario%itb%phi_itb%value (float) (9.1.1.1.1)
source (245)	scenario%itb%phi_itb%source (string) (9.1.1.1.3)
rho_itb (238)	scenario%itb%rho_itb (scenario_ref) (9.1.1.3.221)
value (245)	scenario%itb%rho_itb%value (float) (9.1.1.1.1)
source (245)	scenario%itb%rho_itb%source (string) (9.1.1.1.3)
h_itb (238)	scenario%itb%h_itb (scenario_ref) (9.1.1.3.221)
value (245)	scenario%itb%h_itb%value (float) (9.1.1.1.1)
source (245)	scenario%itb%h_itb%source (string) (9.1.1.1.3)
width_itb (238)	scenario%itb%width_itb (scenario_ref) (9.1.1.3.221)
value (245)	scenario%itb%width_itb%value (float) (9.1.1.1.1)
source (245)	scenario%itb%width_itb%source (string) (9.1.1.1.3)
vtor_itb (238)	scenario%itb%vtor_itb (scenario_ref) (9.1.1.3.221)
value (245)	scenario%itb%vtor_itb%value (float) (9.1.1.1.1)
source (245)	scenario%itb%vtor_itb%source (string) (9.1.1.1.3)
itb_type (238)	scenario%itb%itb_type (scenario_int) (9.1.1.3.213)
value (237)	scenario%itb%itb_type%value (integer) (9.1.1.1.2)

source (237)	scenario%itb%itb_type%source (string) (9.1.1.1.3)
lim_div_wall (55)	scenario%lim_div_wall (scenario.lim_div_wall) (9.1.1.3.215)
te_lim_div (239)	scenario%lim_div_wall%te_lim_div (scenario_ref) (9.1.1.3.221)
value (245)	scenario%lim_div_wall%te_lim_div%value (float) (9.1.1.1.1)
source (245)	scenario%lim_div_wall%te_lim_div%source (string) (9.1.1.1.3)
ti_lim_div (239)	scenario%lim_div_wall%ti_lim_div (scenario_ref) (9.1.1.3.221)
value (245)	scenario%lim_div_wall%ti_lim_div%value (float) (9.1.1.1.1)
source (245)	scenario%lim_div_wall%ti_lim_div%source (string) (9.1.1.1.3)
ne_lim_div (239)	scenario%lim_div_wall%ne_lim_div (scenario_ref) (9.1.1.3.221)
value (245)	scenario%lim_div_wall%ne_lim_div%value (float) (9.1.1.1.1)
source (245)	scenario%lim_div_wall%ne_lim_div%source (string) (9.1.1.1.3)
ni_lim_div (239)	scenario%lim_div_wall%ni_lim_div (scenario_ref) (9.1.1.3.221)
value (245)	scenario%lim_div_wall%ni_lim_div%value (float) (9.1.1.1.1)
source (245)	scenario%lim_div_wall%ni_lim_div%source (string) (9.1.1.1.3)
p_peak_div (239)	scenario%lim_div_wall%p_peak_div (scenario_ref) (9.1.1.3.221)
value (245)	scenario%lim_div_wall%p_peak_div%value (float) (9.1.1.1.1)
source (245)	scenario%lim_div_wall%p_peak_div%source (string) (9.1.1.1.3)
surf_temp (239)	scenario%lim_div_wall%surf_temp (scenario_ref) (9.1.1.3.221)
value (245)	scenario%lim_div_wall%surf_temp%value (float) (9.1.1.1.1)
source (245)	scenario%lim_div_wall%surf_temp%source (string) (9.1.1.1.3)
p_lim_div (239)	scenario%lim_div_wall%p_lim_div (scenario_ref) (9.1.1.3.221)
value (245)	scenario%lim_div_wall%p_lim_div%value (float) (9.1.1.1.1)
source (245)	scenario%lim_div_wall%p_lim_div%source (string) (9.1.1.1.3)
p_rad_div (239)	scenario%lim_div_wall%p_rad_div (scenario_ref) (9.1.1.3.221)
value (245)	scenario%lim_div_wall%p_rad_div%value (float) (9.1.1.1.1)
source (245)	scenario%lim_div_wall%p_rad_div%source (string) (9.1.1.1.3)
wall_temp (239)	scenario%lim_div_wall%wall_temp (scenario_ref) (9.1.1.3.221)
value (245)	scenario%lim_div_wall%wall_temp%value (float) (9.1.1.1.1)
source (245)	scenario%lim_div_wall%wall_temp%source (string) (9.1.1.1.3)
wall_state (239)	scenario%lim_div_wall%wall_state (scenario_ref) (9.1.1.3.221)
value (245)	scenario%lim_div_wall%wall_state%value (float) (9.1.1.1.1)
source (245)	scenario%lim_div_wall%wall_state%source (string) (9.1.1.1.3)
detach_state (239)	scenario%lim_div_wall%detach_state (scenario_ref) (9.1.1.3.221)
value (245)	scenario%lim_div_wall%detach_state%value (float) (9.1.1.1.1)
source (245)	scenario%lim_div_wall%detach_state%source (string) (9.1.1.1.3)
pump_flux (239)	scenario%lim_div_wall%pump_flux (vecflt_type) (9.1.1.2.9)
line_ave (55)	scenario%line_ave (scenario.line_ave) (9.1.1.3.216)
ne_line (240)	scenario%line_ave%ne_line (scenario_ref) (9.1.1.3.221)
value (245)	scenario%line_ave%ne_line%value (float) (9.1.1.1.1)
source (245)	scenario%line_ave%ne_line%source (string) (9.1.1.1.3)
zeff_line (240)	scenario%line_ave%zeff_line (scenario_ref) (9.1.1.3.221)
value (245)	scenario%line_ave%zeff_line%value (float) (9.1.1.1.1)
source (245)	scenario%line_ave%zeff_line%source (string) (9.1.1.1.3)
ne_zeff_line (240)	scenario%line_ave%ne_zeff_line (scenario_ref) (9.1.1.3.221)
value (245)	scenario%line_ave%ne_zeff_line%value (float) (9.1.1.1.1)
source (245)	scenario%line_ave%ne_zeff_line%source (string) (9.1.1.1.3)
dne_line_dt (240)	scenario%line_ave%dne_line_dt (scenario_ref) (9.1.1.3.221)
value (245)	scenario%line_ave%dne_line_dt%value (float) (9.1.1.1.1)
source (245)	scenario%line_ave%dne_line_dt%source (string) (9.1.1.1.3)
neutron (55)	scenario%neutron (scenario.neutron) (9.1.1.3.217)
ndd_tot (241)	scenario%neutron%ndd_tot (scenario_ref) (9.1.1.3.221)
value (245)	scenario%neutron%ndd_tot%value (float) (9.1.1.1.1)
source (245)	scenario%neutron%ndd_tot%source (string) (9.1.1.1.3)
ndd_th (241)	scenario%neutron%ndd_th (scenario_ref) (9.1.1.3.221)
value (245)	scenario%neutron%ndd_th%value (float) (9.1.1.1.1)
source (245)	scenario%neutron%ndd_th%source (string) (9.1.1.1.3)
ndd_nbi_th (241)	scenario%neutron%ndd_nbi_th (scenario_ref) (9.1.1.3.221)
value (245)	scenario%neutron%ndd_nbi_th%value (float) (9.1.1.1.1)
source (245)	scenario%neutron%ndd_nbi_th%source (string) (9.1.1.1.3)
ndd_nbi_nbi (241)	scenario%neutron%ndd_nbi_nbi (scenario_ref) (9.1.1.3.221)
value (245)	scenario%neutron%ndd_nbi_nbi%value (float) (9.1.1.1.1)



source (245)	scenario%neutron%ndd_nbi_nbi%source (string) (9.1.1.1.3)
ndt_tot (241)	scenario%neutron%ndt_tot (scenario_ref) (9.1.1.3.221)
value (245)	scenario%neutron%ndt_tot%value (float) (9.1.1.1.1)
source (245)	scenario%neutron%ndt_tot%source (string) (9.1.1.1.3)
ndt_th (241)	scenario%neutron%ndt_th (scenario_ref) (9.1.1.3.221)
value (245)	scenario%neutron%ndt_th%value (float) (9.1.1.1.1)
source (245)	scenario%neutron%ndt_th%source (string) (9.1.1.1.3)
ninety_five (55)	scenario%ninety_five (scenario_ninety_five) (9.1.1.3.218)
q_95 (242)	scenario%ninety_five%q_95 (scenario_ref) (9.1.1.3.221)
value (245)	scenario%ninety_five%q_95%value (float) (9.1.1.1.1)
source (245)	scenario%ninety_five%q_95%source (string) (9.1.1.1.3)
elong_95 (242)	scenario%ninety_five%elong_95 (scenario_ref) (9.1.1.3.221)
value (245)	scenario%ninety_five%elong_95%value (float) (9.1.1.1.1)
source (245)	scenario%ninety_five%elong_95%source (string) (9.1.1.1.3)
tria_95 (242)	scenario%ninety_five%tria_95 (scenario_ref) (9.1.1.3.221)
value (245)	scenario%ninety_five%tria_95%value (float) (9.1.1.1.1)
source (245)	scenario%ninety_five%tria_95%source (string) (9.1.1.1.3)
tria_up_95 (242)	scenario%ninety_five%tria_up_95 (scenario_ref) (9.1.1.3.221)
value (245)	scenario%ninety_five%tria_up_95%value (float) (9.1.1.1.1)
source (245)	scenario%ninety_five%tria_up_95%source (string) (9.1.1.1.3)
tria_lo_95 (242)	scenario%ninety_five%tria_lo_95 (scenario_ref) (9.1.1.3.221)
value (245)	scenario%ninety_five%tria_lo_95%value (float) (9.1.1.1.1)
source (245)	scenario%ninety_five%tria_lo_95%source (string) (9.1.1.1.3)
te_95 (242)	scenario%ninety_five%te_95 (scenario_ref) (9.1.1.3.221)
value (245)	scenario%ninety_five%te_95%value (float) (9.1.1.1.1)
source (245)	scenario%ninety_five%te_95%source (string) (9.1.1.1.3)
ti_95 (242)	scenario%ninety_five%ti_95 (scenario_ref) (9.1.1.3.221)
value (245)	scenario%ninety_five%ti_95%value (float) (9.1.1.1.1)
source (245)	scenario%ninety_five%ti_95%source (string) (9.1.1.1.3)
ne_95 (242)	scenario%ninety_five%ne_95 (scenario_ref) (9.1.1.3.221)
value (245)	scenario%ninety_five%ne_95%value (float) (9.1.1.1.1)
source (245)	scenario%ninety_five%ne_95%source (string) (9.1.1.1.3)
ni_95 (242)	scenario%ninety_five%ni_95 (scenario_ref) (9.1.1.3.221)
value (245)	scenario%ninety_five%ni_95%value (float) (9.1.1.1.1)
source (245)	scenario%ninety_five%ni_95%source (string) (9.1.1.1.3)
phi_95 (242)	scenario%ninety_five%phi_95 (scenario_ref) (9.1.1.3.221)
value (245)	scenario%ninety_five%phi_95%value (float) (9.1.1.1.1)
source (245)	scenario%ninety_five%phi_95%source (string) (9.1.1.1.3)
rho_95 (242)	scenario%ninety_five%rho_95 (scenario_ref) (9.1.1.3.221)
value (245)	scenario%ninety_five%rho_95%value (float) (9.1.1.1.1)
source (245)	scenario%ninety_five%rho_95%source (string) (9.1.1.1.3)
vtr_95 (242)	scenario%ninety_five%vtr_95 (scenario_ref) (9.1.1.3.221)
value (245)	scenario%ninety_five%vtr_95%value (float) (9.1.1.1.1)
source (245)	scenario%ninety_five%vtr_95%source (string) (9.1.1.1.3)
pedestal (55)	scenario%pedestal (scenario_pedestal) (9.1.1.3.219)
te_ped (243)	scenario%pedestal%te_ped (scenario_ref) (9.1.1.3.221)
value (245)	scenario%pedestal%te_ped%value (float) (9.1.1.1.1)
source (245)	scenario%pedestal%te_ped%source (string) (9.1.1.1.3)
ti_ped (243)	scenario%pedestal%ti_ped (scenario_ref) (9.1.1.3.221)
value (245)	scenario%pedestal%ti_ped%value (float) (9.1.1.1.1)
source (245)	scenario%pedestal%ti_ped%source (string) (9.1.1.1.3)
ne_ped (243)	scenario%pedestal%ne_ped (scenario_ref) (9.1.1.3.221)
value (245)	scenario%pedestal%ne_ped%value (float) (9.1.1.1.1)
source (245)	scenario%pedestal%ne_ped%source (string) (9.1.1.1.3)
ni_ped (243)	scenario%pedestal%ni_ped (scenario_ref) (9.1.1.3.221)
value (245)	scenario%pedestal%ni_ped%value (float) (9.1.1.1.1)
source (245)	scenario%pedestal%ni_ped%source (string) (9.1.1.1.3)
psi_ped (243)	scenario%pedestal%psi_ped (scenario_ref) (9.1.1.3.221)
value (245)	scenario%pedestal%psi_ped%value (float) (9.1.1.1.1)
source (245)	scenario%pedestal%psi_ped%source (string) (9.1.1.1.3)
phi_ped (243)	scenario%pedestal%phi_ped (scenario_ref) (9.1.1.3.221)

value (245)	scenario%pedestal%phi_ped%value (float) (9.1.1.1.1)
source (245)	scenario%pedestal%phi_ped%source (string) (9.1.1.1.3)
rho_ped (243)	scenario%pedestal%rho_ped (scenario_ref) (9.1.1.3.221)
value (245)	scenario%pedestal%rho_ped%value (float) (9.1.1.1.1)
source (245)	scenario%pedestal%rho_ped%source (string) (9.1.1.1.3)
q_ped (243)	scenario%pedestal%q_ped (scenario_ref) (9.1.1.3.221)
value (245)	scenario%pedestal%q_ped%value (float) (9.1.1.1.1)
source (245)	scenario%pedestal%q_ped%source (string) (9.1.1.1.3)
pressure_ped (243)	scenario%pedestal%pressure_ped (scenario_ref) (9.1.1.3.221)
value (245)	scenario%pedestal%pressure_ped%value (float) (9.1.1.1.1)
source (245)	scenario%pedestal%pressure_ped%source (string) (9.1.1.1.3)
vtor_ped (243)	scenario%pedestal%vtor_ped (scenario_ref) (9.1.1.3.221)
value (245)	scenario%pedestal%vtor_ped%value (float) (9.1.1.1.1)
source (245)	scenario%pedestal%vtor_ped%source (string) (9.1.1.1.3)
references (55)	scenario%references (scenario_references) (9.1.1.3.222)
plh (246)	scenario%references%plh (scenario_ref) (9.1.1.3.221)
value (245)	scenario%references%plh%value (float) (9.1.1.1.1)
source (245)	scenario%references%plh%source (string) (9.1.1.1.3)
picrh (246)	scenario%references%picrh (scenario_ref) (9.1.1.3.221)
value (245)	scenario%references%picrh%value (float) (9.1.1.1.1)
source (245)	scenario%references%picrh%source (string) (9.1.1.1.3)
pecrh (246)	scenario%references%pecrh (scenario_ref) (9.1.1.3.221)
value (245)	scenario%references%pecrh%value (float) (9.1.1.1.1)
source (245)	scenario%references%pecrh%source (string) (9.1.1.1.3)
pnbi (246)	scenario%references%pnbi (scenario_ref) (9.1.1.3.221)
value (245)	scenario%references%pnbi%value (float) (9.1.1.1.1)
source (245)	scenario%references%pnbi%source (string) (9.1.1.1.3)
ip (246)	scenario%references%ip (scenario_ref) (9.1.1.3.221)
value (245)	scenario%references%ip%value (float) (9.1.1.1.1)
source (245)	scenario%references%ip%source (string) (9.1.1.1.3)
bvac_r (246)	scenario%references%bvac_r (scenario_ref) (9.1.1.3.221)
value (245)	scenario%references%bvac_r%value (float) (9.1.1.1.1)
source (245)	scenario%references%bvac_r%source (string) (9.1.1.1.3)
zeffl (246)	scenario%references%zeffl (scenario_ref) (9.1.1.3.221)
value (245)	scenario%references%zeffl%value (float) (9.1.1.1.1)
source (245)	scenario%references%zeffl%source (string) (9.1.1.1.3)
nbar (246)	scenario%references%nbar (scenario_ref) (9.1.1.3.221)
value (245)	scenario%references%nbar%value (float) (9.1.1.1.1)
source (245)	scenario%references%nbar%source (string) (9.1.1.1.3)
xecrh (246)	scenario%references%xecrh (scenario_ref) (9.1.1.3.221)
value (245)	scenario%references%xecrh%value (float) (9.1.1.1.1)
source (245)	scenario%references%xecrh%source (string) (9.1.1.1.3)
pol_flux (246)	scenario%references%pol_flux (scenario_ref) (9.1.1.3.221)
value (245)	scenario%references%pol_flux%value (float) (9.1.1.1.1)
source (245)	scenario%references%pol_flux%source (string) (9.1.1.1.3)
enhancement (246)	scenario%references%enhancement (scenario_ref) (9.1.1.3.221)
value (245)	scenario%references%enhancement%value (float) (9.1.1.1.1)
source (245)	scenario%references%enhancement%source (string) (9.1.1.1.3)
isotopic (246)	scenario%references%isotopic (scenario_ref) (9.1.1.3.221)
value (245)	scenario%references%isotopic%value (float) (9.1.1.1.1)
source (245)	scenario%references%isotopic%source (string) (9.1.1.1.3)
nbi_td_ratio (246)	scenario%references%nbi_td_ratio (scenario_ref) (9.1.1.3.221)
value (245)	scenario%references%nbi_td_ratio%value (float) (9.1.1.1.1)
source (245)	scenario%references%nbi_td_ratio%source (string) (9.1.1.1.3)
reactor (55)	scenario%reactor (scenario_reactor) (9.1.1.3.220)
pnetwork (244)	scenario%reactor%pnetwork (float) (9.1.1.1.1)
sol (55)	scenario%sol (scenario_sol) (9.1.1.3.223)
l_te_sol (247)	scenario%sol%l_te_sol (scenario_ref) (9.1.1.3.221)
value (245)	scenario%sol%l_te_sol%value (float) (9.1.1.1.1)
source (245)	scenario%sol%l_te_sol%source (string) (9.1.1.1.3)
l_ti_sol (247)	scenario%sol%l_ti_sol (scenario_ref) (9.1.1.3.221)



value (245)	scenario%sol%l_ti_sol%value (float) (9.1.1.1.1)
source (245)	scenario%sol%l_ti_sol%source (string) (9.1.1.1.3)
l_ne_sol (247)	scenario%sol%l_ne_sol (scenario_ref) (9.1.1.3.221)
value (245)	scenario%sol%l_ne_sol%value (float) (9.1.1.1.1)
source (245)	scenario%sol%l_ne_sol%source (string) (9.1.1.1.3)
l_ni_sol (247)	scenario%sol%l_ni_sol (scenario_ref) (9.1.1.3.221)
value (245)	scenario%sol%l_ni_sol%value (float) (9.1.1.1.1)
source (245)	scenario%sol%l_ni_sol%source (string) (9.1.1.1.3)
l_qe_sol (247)	scenario%sol%l_qe_sol (scenario_ref) (9.1.1.3.221)
value (245)	scenario%sol%l_qe_sol%value (float) (9.1.1.1.1)
source (245)	scenario%sol%l_qe_sol%source (string) (9.1.1.1.3)
l_qi_sol (247)	scenario%sol%l_qi_sol (scenario_ref) (9.1.1.3.221)
value (245)	scenario%sol%l_qi_sol%value (float) (9.1.1.1.1)
source (245)	scenario%sol%l_qi_sol%source (string) (9.1.1.1.3)
p_rad_sol (247)	scenario%sol%p_rad_sol (scenario_ref) (9.1.1.3.221)
value (245)	scenario%sol%p_rad_sol%value (float) (9.1.1.1.1)
source (245)	scenario%sol%p_rad_sol%source (string) (9.1.1.1.3)
gaz_puff (247)	scenario%sol%gaz_puff (vecflt.type) (9.1.1.2.9)
vol_ave (55)	scenario%vol_ave (scenario_vol_ave) (9.1.1.3.224)
te_ave (248)	scenario%vol_ave%te_ave (scenario_ref) (9.1.1.3.221)
value (245)	scenario%vol_ave%te_ave%value (float) (9.1.1.1.1)
source (245)	scenario%vol_ave%te_ave%source (string) (9.1.1.1.3)
ti_ave (248)	scenario%vol_ave%ti_ave (scenario_ref) (9.1.1.3.221)
value (245)	scenario%vol_ave%ti_ave%value (float) (9.1.1.1.1)
source (245)	scenario%vol_ave%ti_ave%source (string) (9.1.1.1.3)
ne_ave (248)	scenario%vol_ave%ne_ave (scenario_ref) (9.1.1.3.221)
value (245)	scenario%vol_ave%ne_ave%value (float) (9.1.1.1.1)
source (245)	scenario%vol_ave%ne_ave%source (string) (9.1.1.1.3)
dne_ave_dt (248)	scenario%vol_ave%dne_ave_dt (scenario_ref) (9.1.1.3.221)
value (245)	scenario%vol_ave%dne_ave_dt%value (float) (9.1.1.1.1)
source (245)	scenario%vol_ave%dne_ave_dt%source (string) (9.1.1.1.3)
ni_ave (248)	scenario%vol_ave%ni_ave (scenario_ref) (9.1.1.3.221)
value (245)	scenario%vol_ave%ni_ave%value (float) (9.1.1.1.1)
source (245)	scenario%vol_ave%ni_ave%source (string) (9.1.1.1.3)
zeff_ave (248)	scenario%vol_ave%zeff_ave (scenario_ref) (9.1.1.3.221)
value (245)	scenario%vol_ave%zeff_ave%value (float) (9.1.1.1.1)
source (245)	scenario%vol_ave%zeff_ave%source (string) (9.1.1.1.3)
ti_o_te_ave (248)	scenario%vol_ave%ti_o_te_ave (scenario_ref) (9.1.1.3.221)
value (245)	scenario%vol_ave%ti_o_te_ave%value (float) (9.1.1.1.1)
source (245)	scenario%vol_ave%ti_o_te_ave%source (string) (9.1.1.1.3)
meff_ave (248)	scenario%vol_ave%meff_ave (scenario_ref) (9.1.1.3.221)
value (245)	scenario%vol_ave%meff_ave%value (float) (9.1.1.1.1)
source (245)	scenario%vol_ave%meff_ave%source (string) (9.1.1.1.3)
pellet_flux (248)	scenario%vol_ave%pellet_flux (scenario_ref) (9.1.1.3.221)
value (245)	scenario%vol_ave%pellet_flux%value (float) (9.1.1.1.1)
source (245)	scenario%vol_ave%pellet_flux%source (string) (9.1.1.1.3)
nions_ave (248)	scenario%vol_ave%nions_ave (vecflt.type) (9.1.1.2.9)
omega_ave (248)	scenario%vol_ave%omega_ave (scenario_ref) (9.1.1.3.221)
value (245)	scenario%vol_ave%omega_ave%value (float) (9.1.1.1.1)
source (245)	scenario%vol_ave%omega_ave%source (string) (9.1.1.1.3)
codeparam (55)	scenario%codeparam (codeparam) (9.1.1.3.55)
codename (79)	scenario%codeparam%codename (string) (9.1.1.1.3)
codeversion (79)	scenario%codeparam%codeversion (string) (9.1.1.1.3)
parameters (79)	scenario%codeparam%parameters (string) (9.1.1.1.3)
output_diag (79)	scenario%codeparam%output_diag (string) (9.1.1.1.3)
output_flag (79)	scenario%codeparam%output_flag (integer) (9.1.1.1.2)
time (55)	scenario%time (float) (9.1.1.1.1)

### 9.1.2.1.30 summary

datainfo (56)	summary%datainfo (datainfo) (9.1.1.3.73)
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dataprovder (97)	summary%datainfo%dataprovder (string) (9.1.1.1.3)
putdate (97)	summary%datainfo%putdate (string) (9.1.1.1.3)
source (97)	summary%datainfo%source (string) (9.1.1.1.3)
comment (97)	summary%datainfo%comment (string) (9.1.1.1.3)
isref (97)	summary%datainfo%isref (integer) (9.1.1.1.2)
whatref (97)	summary%datainfo%whatref (whatref) (9.1.1.3.275)
user (299)	summary%datainfo%whatref%user (string) (9.1.1.1.3)
machine (299)	summary%datainfo%whatref%machine (string) (9.1.1.1.3)
shot (299)	summary%datainfo%whatref%shot (integer) (9.1.1.1.2)
run (299)	summary%datainfo%whatref%run (integer) (9.1.1.1.2)
occurrence (299)	summary%datainfo%whatref%occurrence (integer) (9.1.1.1.2)
putinfo (97)	summary%datainfo%putinfo (putinfo) (9.1.1.3.167)
putmethod (191)	summary%datainfo%putinfo%putmethod (string) (9.1.1.1.3)
putaccess (191)	summary%datainfo%putinfo%putaccess (string) (9.1.1.1.3)
putlocation (191)	summary%datainfo%putinfo%putlocation (string) (9.1.1.1.3)
rights (191)	summary%datainfo%putinfo%rights (string) (9.1.1.1.3)
ip (56)	summary%ip (reduced) (9.1.1.3.170)
value (194)	summary%ip%value (float) (9.1.1.1.1)
source (194)	summary%ip%source (string) (9.1.1.1.3)
time (194)	summary%ip%time (float) (9.1.1.1.1)
bvac.r (56)	summary%bvac.r (reduced) (9.1.1.3.170)
value (194)	summary%bvac.r%value (float) (9.1.1.1.1)
source (194)	summary%bvac.r%source (string) (9.1.1.1.3)
time (194)	summary%bvac.r%time (float) (9.1.1.1.1)
geom.axis.r (56)	summary%geom.axis.r (reduced) (9.1.1.3.170)
value (194)	summary%geom.axis.r%value (float) (9.1.1.1.1)
source (194)	summary%geom.axis.r%source (string) (9.1.1.1.3)
time (194)	summary%geom.axis.r%time (float) (9.1.1.1.1)
a_minor (56)	summary%a_minor (reduced) (9.1.1.3.170)
value (194)	summary%a_minor%value (float) (9.1.1.1.1)
source (194)	summary%a_minor%source (string) (9.1.1.1.3)
time (194)	summary%a_minor%time (float) (9.1.1.1.1)
elongation (56)	summary%elongation (reduced) (9.1.1.3.170)
value (194)	summary%elongation%value (float) (9.1.1.1.1)
source (194)	summary%elongation%source (string) (9.1.1.1.3)
time (194)	summary%elongation%time (float) (9.1.1.1.1)
tria_lower (56)	summary%tria_lower (reduced) (9.1.1.3.170)
value (194)	summary%tria_lower%value (float) (9.1.1.1.1)
source (194)	summary%tria_lower%source (string) (9.1.1.1.3)
time (194)	summary%tria_lower%time (float) (9.1.1.1.1)
tria_upper (56)	summary%tria_upper (reduced) (9.1.1.3.170)
value (194)	summary%tria_upper%value (float) (9.1.1.1.1)
source (194)	summary%tria_upper%source (string) (9.1.1.1.3)
time (194)	summary%tria_upper%time (float) (9.1.1.1.1)
tev (56)	summary%tev (reduced) (9.1.1.3.170)
value (194)	summary%tev%value (float) (9.1.1.1.1)
source (194)	summary%tev%source (string) (9.1.1.1.3)
time (194)	summary%tev%time (float) (9.1.1.1.1)
tiv (56)	summary%tiv (reduced) (9.1.1.3.170)
value (194)	summary%tiv%value (float) (9.1.1.1.1)
source (194)	summary%tiv%source (string) (9.1.1.1.3)
time (194)	summary%tiv%time (float) (9.1.1.1.1)
nev (56)	summary%nev (reduced) (9.1.1.3.170)
value (194)	summary%nev%value (float) (9.1.1.1.1)
source (194)	summary%nev%source (string) (9.1.1.1.3)
time (194)	summary%nev%time (float) (9.1.1.1.1)
zeffv (56)	summary%zeffv (reduced) (9.1.1.3.170)
value (194)	summary%zeffv%value (float) (9.1.1.1.1)
source (194)	summary%zeffv%source (string) (9.1.1.1.3)
time (194)	summary%zeffv%time (float) (9.1.1.1.1)
beta_pol (56)	summary%beta_pol (reduced) (9.1.1.3.170)

value (194)	summary%beta_pol%value (float) (9.1.1.1.1)
source (194)	summary%beta_pol%source (string) (9.1.1.1.3)
time (194)	summary%beta_pol%time (float) (9.1.1.1.1)
beta_tor (56)	summary%beta_tor (reduced) (9.1.1.3.170)
value (194)	summary%beta_tor%value (float) (9.1.1.1.1)
source (194)	summary%beta_tor%source (string) (9.1.1.1.3)
time (194)	summary%beta_tor%time (float) (9.1.1.1.1)
beta_normal (56)	summary%beta_normal (reduced) (9.1.1.3.170)
value (194)	summary%beta_normal%value (float) (9.1.1.1.1)
source (194)	summary%beta_normal%source (string) (9.1.1.1.3)
time (194)	summary%beta_normal%time (float) (9.1.1.1.1)
li (56)	summary%li (reduced) (9.1.1.3.170)
value (194)	summary%li%value (float) (9.1.1.1.1)
source (194)	summary%li%source (string) (9.1.1.1.3)
time (194)	summary%li%time (float) (9.1.1.1.1)
volume (56)	summary%volume (reduced) (9.1.1.3.170)
value (194)	summary%volume%value (float) (9.1.1.1.1)
source (194)	summary%volume%source (string) (9.1.1.1.3)
time (194)	summary%volume%time (float) (9.1.1.1.1)
area (56)	summary%area (reduced) (9.1.1.3.170)
value (194)	summary%area%value (float) (9.1.1.1.1)
source (194)	summary%area%source (string) (9.1.1.1.3)
time (194)	summary%area%time (float) (9.1.1.1.1)
main_ion1_z (56)	summary%main_ion1_z (reduced) (9.1.1.3.170)
value (194)	summary%main_ion1_z%value (float) (9.1.1.1.1)
source (194)	summary%main_ion1_z%source (string) (9.1.1.1.3)
time (194)	summary%main_ion1_z%time (float) (9.1.1.1.1)
main_ion1_a (56)	summary%main_ion1_a (reduced) (9.1.1.3.170)
value (194)	summary%main_ion1_a%value (float) (9.1.1.1.1)
source (194)	summary%main_ion1_a%source (string) (9.1.1.1.3)
time (194)	summary%main_ion1_a%time (float) (9.1.1.1.1)
main_ion2_z (56)	summary%main_ion2_z (reduced) (9.1.1.3.170)
value (194)	summary%main_ion2_z%value (float) (9.1.1.1.1)
source (194)	summary%main_ion2_z%source (string) (9.1.1.1.3)
time (194)	summary%main_ion2_z%time (float) (9.1.1.1.1)
main_ion2_a (56)	summary%main_ion2_a (reduced) (9.1.1.3.170)
value (194)	summary%main_ion2_a%value (float) (9.1.1.1.1)
source (194)	summary%main_ion2_a%source (string) (9.1.1.1.3)
time (194)	summary%main_ion2_a%time (float) (9.1.1.1.1)
impur1_z (56)	summary%impur1_z (reduced) (9.1.1.3.170)
value (194)	summary%impur1_z%value (float) (9.1.1.1.1)
source (194)	summary%impur1_z%source (string) (9.1.1.1.3)
time (194)	summary%impur1_z%time (float) (9.1.1.1.1)
impur1_a (56)	summary%impur1_a (reduced) (9.1.1.3.170)
value (194)	summary%impur1_a%value (float) (9.1.1.1.1)
source (194)	summary%impur1_a%source (string) (9.1.1.1.3)
time (194)	summary%impur1_a%time (float) (9.1.1.1.1)
time (56)	summary%time (float) (9.1.1.1.1)

### 9.1.2.1.31 topinfo

dataprovder (57)	topinfo%dataprovder (string) (9.1.1.1.3)
description (57)	topinfo%description (string) (9.1.1.1.3)
firstputdate (57)	topinfo%firstputdate (string) (9.1.1.1.3)
lastupdate (57)	topinfo%lastupdate (string) (9.1.1.1.3)
source (57)	topinfo%source (string) (9.1.1.1.3)
comment (57)	topinfo%comment (string) (9.1.1.1.3)
dataversion (57)	topinfo%dataversion (string) (9.1.1.1.3)
workflow (57)	topinfo%workflow (string) (9.1.1.1.3)
entry (57)	topinfo%entry (entry_def) (9.1.1.3.105)
user (129)	topinfo%entry%user (string) (9.1.1.1.3)

machine (129)	topinfo%entry%machine (string) (9.1.1.1.3)
shot (129)	topinfo%entry%shot (integer) (9.1.1.1.2)
run (129)	topinfo%entry%run (integer) (9.1.1.1.2)
parent_entry (57)	topinfo%parent_entry (entry_def) (9.1.1.3.105)
user (129)	topinfo%parent_entry%user (string) (9.1.1.1.3)
machine (129)	topinfo%parent_entry%machine (string) (9.1.1.1.3)
shot (129)	topinfo%parent_entry%shot (integer) (9.1.1.1.2)
run (129)	topinfo%parent_entry%run (integer) (9.1.1.1.2)
mdinfo (57)	topinfo%mdinfo (mdinfo) (9.1.1.3.135)
shot_min (159)	topinfo%mdinfo%shot_min (integer) (9.1.1.1.2)
shot_max (159)	topinfo%mdinfo%shot_max (integer) (9.1.1.1.2)
md_entry (159)	topinfo%mdinfo%md_entry (entry_def) (9.1.1.3.105)
user (129)	topinfo%mdinfo%md_entry%user (string) (9.1.1.1.3)
machine (129)	topinfo%mdinfo%md_entry%machine (string) (9.1.1.1.3)
shot (129)	topinfo%mdinfo%md_entry%shot (integer) (9.1.1.1.2)
run (129)	topinfo%mdinfo%md_entry%run (integer) (9.1.1.1.2)

### 9.1.2.1.32 toroidfield

datainfo (58)	toroidfield%datainfo (datainfo) (9.1.1.3.73)
dataprovider (97)	toroidfield%datainfo%dataprovider (string) (9.1.1.1.3)
putdate (97)	toroidfield%datainfo%putdate (string) (9.1.1.1.3)
source (97)	toroidfield%datainfo%source (string) (9.1.1.1.3)
comment (97)	toroidfield%datainfo%comment (string) (9.1.1.1.3)
isref (97)	toroidfield%datainfo%isref (integer) (9.1.1.1.2)
whatref (97)	toroidfield%datainfo%whatref (whatref) (9.1.1.3.275)
user (299)	toroidfield%datainfo%whatref%user (string) (9.1.1.1.3)
machine (299)	toroidfield%datainfo%whatref%machine (string) (9.1.1.1.3)
shot (299)	toroidfield%datainfo%whatref%shot (integer) (9.1.1.1.2)
run (299)	toroidfield%datainfo%whatref%run (integer) (9.1.1.1.2)
occurrence (299)	toroidfield%datainfo%whatref%occurrence (integer) (9.1.1.1.2)
putinfo (97)	toroidfield%datainfo%putinfo (putinfo) (9.1.1.3.167)
putmethod (191)	toroidfield%datainfo%putinfo%putmethod (string) (9.1.1.1.3)
putaccess (191)	toroidfield%datainfo%putinfo%putaccess (string) (9.1.1.1.3)
putlocation (191)	toroidfield%datainfo%putinfo%putlocation (string) (9.1.1.1.3)
rights (191)	toroidfield%datainfo%putinfo%rights (string) (9.1.1.1.3)
nturns (58)	toroidfield%nturns (integer) (9.1.1.1.2)
ncoils (58)	toroidfield%ncoils (integer) (9.1.1.1.2)
current (58)	toroidfield%current (exp0D) (9.1.1.3.110)
value (134)	toroidfield%current%value (float) (9.1.1.1.1)
abserror (134)	toroidfield%current%abserror (float) (9.1.1.1.1)
relerror (134)	toroidfield%current%relerror (float) (9.1.1.1.1)
bvac_r (58)	toroidfield%bvac_r (exp0D) (9.1.1.3.110)
value (134)	toroidfield%bvac_r%value (float) (9.1.1.1.1)
abserror (134)	toroidfield%bvac_r%abserror (float) (9.1.1.1.1)
relerror (134)	toroidfield%bvac_r%relerror (float) (9.1.1.1.1)
r0 (58)	toroidfield%r0 (float) (9.1.1.1.1)
time (58)	toroidfield%time (float) (9.1.1.1.1)

### 9.1.2.1.33 tsdiag

datainfo (59)	tsdiag%datainfo (datainfo) (9.1.1.3.73)
dataprovider (97)	tsdiag%datainfo%dataprovider (string) (9.1.1.1.3)
putdate (97)	tsdiag%datainfo%putdate (string) (9.1.1.1.3)
source (97)	tsdiag%datainfo%source (string) (9.1.1.1.3)
comment (97)	tsdiag%datainfo%comment (string) (9.1.1.1.3)
isref (97)	tsdiag%datainfo%isref (integer) (9.1.1.1.2)
whatref (97)	tsdiag%datainfo%whatref (whatref) (9.1.1.3.275)
user (299)	tsdiag%datainfo%whatref%user (string) (9.1.1.1.3)
machine (299)	tsdiag%datainfo%whatref%machine (string) (9.1.1.1.3)
shot (299)	tsdiag%datainfo%whatref%shot (integer) (9.1.1.1.2)

run (299)	tsdiag%datainfo%whatref%run (integer) (9.1.1.1.2)
occurrence (299)	tsdiag%datainfo%whatref%occurrence (integer) (9.1.1.1.2)
putinfo (97)	tsdiag%datainfo%putinfo (putinfo) (9.1.1.3.167)
putmethod (191)	tsdiag%datainfo%putinfo%putmethod (string) (9.1.1.1.3)
putaccess (191)	tsdiag%datainfo%putinfo%putaccess (string) (9.1.1.1.3)
putlocation (191)	tsdiag%datainfo%putinfo%putlocation (string) (9.1.1.1.3)
rights (191)	tsdiag%datainfo%putinfo%rights (string) (9.1.1.1.3)
setup (59)	tsdiag%setup (tssetup) (9.1.1.3.265)
position (289)	tsdiag%setup%position (rz1D) (9.1.1.3.194)
r (218)	tsdiag%setup%position%r (vecflt_type) (9.1.1.2.9)
z (218)	tsdiag%setup%position%z (vecflt_type) (9.1.1.2.9)
measure (59)	tsdiag%measure (tsmeasure) (9.1.1.3.264)
te (288)	tsdiag%measure%te (exp1D) (9.1.1.3.111)
value (135)	tsdiag%measure%te%value (vecflt_type) (9.1.1.2.9)
abserror (135)	tsdiag%measure%te%abserror (vecflt_type) (9.1.1.2.9)
releror (135)	tsdiag%measure%te%releror (vecflt_type) (9.1.1.2.9)
ne (288)	tsdiag%measure%ne (exp1D) (9.1.1.3.111)
value (135)	tsdiag%measure%ne%value (vecflt_type) (9.1.1.2.9)
abserror (135)	tsdiag%measure%ne%abserror (vecflt_type) (9.1.1.2.9)
releror (135)	tsdiag%measure%ne%releror (vecflt_type) (9.1.1.2.9)
time (59)	tsdiag%time (float) (9.1.1.1.1)

### 9.1.2.1.34 vessel

datainfo (60)	vessel%datainfo (datainfo) (9.1.1.3.73)
dataprovider (97)	vessel%datainfo%dataprovider (string) (9.1.1.1.3)
putdate (97)	vessel%datainfo%putdate (string) (9.1.1.1.3)
source (97)	vessel%datainfo%source (string) (9.1.1.1.3)
comment (97)	vessel%datainfo%comment (string) (9.1.1.1.3)
isref (97)	vessel%datainfo%isref (integer) (9.1.1.1.2)
whatref (97)	vessel%datainfo%whatref (whatref) (9.1.1.3.275)
user (299)	vessel%datainfo%whatref%user (string) (9.1.1.1.3)
machine (299)	vessel%datainfo%whatref%machine (string) (9.1.1.1.3)
shot (299)	vessel%datainfo%whatref%shot (integer) (9.1.1.1.2)
run (299)	vessel%datainfo%whatref%run (integer) (9.1.1.1.2)
occurrence (299)	vessel%datainfo%whatref%occurrence (integer) (9.1.1.1.2)
putinfo (97)	vessel%datainfo%putinfo (putinfo) (9.1.1.3.167)
putmethod (191)	vessel%datainfo%putinfo%putmethod (string) (9.1.1.1.3)
putaccess (191)	vessel%datainfo%putinfo%putaccess (string) (9.1.1.1.3)
putlocation (191)	vessel%datainfo%putinfo%putlocation (string) (9.1.1.1.3)
rights (191)	vessel%datainfo%putinfo%rights (string) (9.1.1.1.3)
position (60)	vessel%position (rz1D) (9.1.1.3.194)
r (218)	vessel%position%r (vecflt_type) (9.1.1.2.9)
z (218)	vessel%position%z (vecflt_type) (9.1.1.2.9)

### 9.1.2.1.35 waves

datainfo (61)	waves%datainfo (datainfo) (9.1.1.3.73)
dataprovider (97)	waves%datainfo%dataprovider (string) (9.1.1.1.3)
putdate (97)	waves%datainfo%putdate (string) (9.1.1.1.3)
source (97)	waves%datainfo%source (string) (9.1.1.1.3)
comment (97)	waves%datainfo%comment (string) (9.1.1.1.3)
isref (97)	waves%datainfo%isref (integer) (9.1.1.1.2)
whatref (97)	waves%datainfo%whatref (whatref) (9.1.1.3.275)
user (299)	waves%datainfo%whatref%user (string) (9.1.1.1.3)
machine (299)	waves%datainfo%whatref%machine (string) (9.1.1.1.3)
shot (299)	waves%datainfo%whatref%shot (integer) (9.1.1.1.2)
run (299)	waves%datainfo%whatref%run (integer) (9.1.1.1.2)
occurrence (299)	waves%datainfo%whatref%occurrence (integer) (9.1.1.1.2)
putinfo (97)	waves%datainfo%putinfo (putinfo) (9.1.1.3.167)
putmethod (191)	waves%datainfo%putinfo%putmethod (string) (9.1.1.1.3)

putaccess (191)	waves%datainfo%putinfo%putaccess (string) (9.1.1.1.3)
putlocation (191)	waves%datainfo%putinfo%putlocation (string) (9.1.1.1.3)
rights (191)	waves%datainfo%putinfo%rights (string) (9.1.1.1.3)
composition (61)	waves%composition (composition) (9.1.1.3.57)
amn (81)	waves%composition%amn (vecflt_type) (9.1.1.2.9)
zn (81)	waves%composition%zn (vecflt_type) (9.1.1.2.9)
zion (81)	waves%composition%zion (vecflt_type) (9.1.1.2.9)
imp_flag (81)	waves%composition%imp_flag (vecint_type) (9.1.1.2.10)
global_param (61)	waves%global_param (waves_global_param) (9.1.1.3.269)
frequency (293)	waves%global_param%frequency (vecflt_type) (9.1.1.2.9)
name (293)	waves%global_param%name (vecstring_type) (9.1.1.2.11)
type (293)	waves%global_param%type (vecstring_type) (9.1.1.2.11)
nntor (293)	waves%global_param%nntor (vecint_type) (9.1.1.2.10)
ntor (293)	waves%global_param%ntor (matint_type) (9.1.1.2.8)
f_assumption (293)	waves%global_param%f_assumption (matint_type) (9.1.1.2.8)
power_tot (293)	waves%global_param%power_tot (vecflt_type) (9.1.1.2.9)
p_frac_ntor (293)	waves%global_param%p_frac_ntor (matflt_type) (9.1.1.2.7)
pow_i (293)	waves%global_param%pow_i (matflt_type) (9.1.1.2.7)
pow_e (293)	waves%global_param%pow_e (vecflt_type) (9.1.1.2.9)
pow_ntor_i (293)	waves%global_param%pow_ntor_i (array3dflt_type) (9.1.1.2.1)
pow_ntor_e (293)	waves%global_param%pow_ntor_e (matflt_type) (9.1.1.2.7)
cur_tor (293)	waves%global_param%cur_tor (vecflt_type) (9.1.1.2.9)
cur_tor_ntor (293)	waves%global_param%cur_tor_ntor (matflt_type) (9.1.1.2.7)
code_type (293)	waves%global_param%code_type (vecint_type) (9.1.1.2.10)
freq_point (293)	waves%global_param%freq_point (vecint_type) (9.1.1.2.10)
toroid_field (293)	waves%global_param%toroid_field (b0r0) (9.1.1.3.45)
r0 (69)	waves%global_param%toroid_field%r0 (float) (9.1.1.1.1)
b0 (69)	waves%global_param%toroid_field%b0 (float) (9.1.1.1.1)
grid (61)	waves%grid (waves_grid) (9.1.1.3.270)
rho_tor_norm (294)	waves%grid%rho_tor_norm (matflt_type) (9.1.1.2.7)
rho_tor (294)	waves%grid%rho_tor (matflt_type) (9.1.1.2.7)
psi (294)	waves%grid%psi (matflt_type) (9.1.1.2.7)
theta (294)	waves%grid%theta (matflt_type) (9.1.1.2.7)
npsi (294)	waves%grid%npsi (vecint_type) (9.1.1.2.10)
ntheta (294)	waves%grid%ntheta (vecint_type) (9.1.1.2.10)
rz_position (294)	waves%grid%rz_position (rz3D) (9.1.1.3.197)
r (221)	waves%grid%rz_position%r (array3dflt_type) (9.1.1.2.1)
z (221)	waves%grid%rz_position%z (array3dflt_type) (9.1.1.2.1)
theta_info (294)	waves%grid%theta_info (theta_info) (9.1.1.3.258)
angl_type (282)	waves%grid%theta_info%angl_type (vecint_type) (9.1.1.2.10)
th2th_pol (282)	waves%grid%theta_info%th2th_pol (matflt_type) (9.1.1.2.7)
profiles_1d (61)	waves%profiles_1d (waves_profiles_1d) (9.1.1.3.271)
powd_tot (295)	waves%profiles_1d%powd_tot (matflt_type) (9.1.1.2.7)
powd_e (295)	waves%profiles_1d%powd_e (matflt_type) (9.1.1.2.7)
powd_i (295)	waves%profiles_1d%powd_i (array3dflt_type) (9.1.1.2.1)
powd_ntor (295)	waves%profiles_1d%powd_ntor (array3dflt_type) (9.1.1.2.1)
powd_ntor_e (295)	waves%profiles_1d%powd_ntor_e (array3dflt_type) (9.1.1.2.1)
powd_ntor_i (295)	waves%profiles_1d%powd_ntor_i (array4dflt_type) (9.1.1.2.3)
curd_tor (295)	waves%profiles_1d%curd_tor (matflt_type) (9.1.1.2.7)
curd_torntor (295)	waves%profiles_1d%curd_torntor (array3dflt_type) (9.1.1.2.1)
pow_tot (295)	waves%profiles_1d%pow_tot (matflt_type) (9.1.1.2.7)
pow_e (295)	waves%profiles_1d%pow_e (matflt_type) (9.1.1.2.7)
pow_i (295)	waves%profiles_1d%pow_i (array3dflt_type) (9.1.1.2.1)
pow_ntor (295)	waves%profiles_1d%pow_ntor (array3dflt_type) (9.1.1.2.1)
pow_ntor_e (295)	waves%profiles_1d%pow_ntor_e (array3dflt_type) (9.1.1.2.1)
pow_ntor_i (295)	waves%profiles_1d%pow_ntor_i (array4dflt_type) (9.1.1.2.3)
curd_par (295)	waves%profiles_1d%curd_par (matflt_type) (9.1.1.2.7)
curd_parntor (295)	waves%profiles_1d%curd_parntor (array3dflt_type) (9.1.1.2.1)
cur_tor (295)	waves%profiles_1d%cur_tor (matflt_type) (9.1.1.2.7)
cur_tor_ntor (295)	waves%profiles_1d%cur_tor_ntor (array3dflt_type) (9.1.1.2.1)
profiles_2d (61)	waves%profiles_2d (waves_profiles_2d) (9.1.1.3.272)

powd.tot (296)	waves%profiles_2d%powd.tot (array3dfft.type) (9.1.1.2.1)
powd.e (296)	waves%profiles_2d%powd.e (array3dfft.type) (9.1.1.2.1)
powd.i (296)	waves%profiles_2d%powd.i (array4dfft.type) (9.1.1.2.3)
powd.ntonr (296)	waves%profiles_2d%powd.ntonr (array4dfft.type) (9.1.1.2.3)
powd.ntonr.e (296)	waves%profiles_2d%powd.ntonr.e (array4dfft.type) (9.1.1.2.3)
powd.ntonr.i (296)	waves%profiles_2d%powd.ntonr.i (array5dfft.type) (9.1.1.2.4)
powd.iharm (296)	waves%profiles_2d%powd.iharm (array5dfft.type) (9.1.1.2.4)
beamtracing (61)	waves%beamtracing (beamtracing) (9.1.1.3.47)
nbeams (71)	waves%beamtracing%nbeams (vecint.type) (9.1.1.2.10)
npoints (71)	waves%beamtracing%npoints (matint.type) (9.1.1.2.8)
power (71)	waves%beamtracing%power (matfft.type) (9.1.1.2.7)
dnpar (71)	waves%beamtracing%dnpar (array3dfft.type) (9.1.1.2.1)
length (71)	waves%beamtracing%length (array3dfft.type) (9.1.1.2.1)
position (71)	waves%beamtracing%position (waves_rtposition) (9.1.1.3.273)
r (297)	waves%beamtracing%position%r (array3dfft.type) (9.1.1.2.1)
z (297)	waves%beamtracing%position%z (array3dfft.type) (9.1.1.2.1)
psi (297)	waves%beamtracing%position%psi (array3dfft.type) (9.1.1.2.1)
theta (297)	waves%beamtracing%position%theta (array3dfft.type) (9.1.1.2.1)
phi (297)	waves%beamtracing%position%phi (array3dfft.type) (9.1.1.2.1)
wavevector (71)	waves%beamtracing%wavevector (waves_rtwavevector) (9.1.1.3.274)
kr (298)	waves%beamtracing%wavevector%kr (array3dfft.type) (9.1.1.2.1)
kz (298)	waves%beamtracing%wavevector%kz (array3dfft.type) (9.1.1.2.1)
npar (298)	waves%beamtracing%wavevector%npar (array3dfft.type) (9.1.1.2.1)
nperp (298)	waves%beamtracing%wavevector%nperp (array3dfft.type) (9.1.1.2.1)
ntonr (298)	waves%beamtracing%wavevector%ntonr (array3dfft.type) (9.1.1.2.1)
var_ntonr (298)	waves%beamtracing%wavevector%var_ntonr (vecint.type) (9.1.1.2.10)
polarization (71)	waves%beamtracing%polarization (polarization) (9.1.1.3.159)
epol.p (183)	waves%beamtracing%polarization%epol.p (array3dfft.type) (9.1.1.2.1)
epol.m (183)	waves%beamtracing%polarization%epol.m (array3dfft.type) (9.1.1.2.1)
epol.par (183)	waves%beamtracing%polarization%epol.par (array3dfft.type) (9.1.1.2.1)
powerflow (71)	waves%beamtracing%powerflow (powerflow) (9.1.1.3.160)
phi_perp (184)	waves%beamtracing%powerflow%phi_perp (array3dfft.type) (9.1.1.2.1)
phi_par (184)	waves%beamtracing%powerflow%phi_par (array3dfft.type) (9.1.1.2.1)
power.e (184)	waves%beamtracing%powerflow%power.e (array3dfft.type) (9.1.1.2.1)
power.i (184)	waves%beamtracing%powerflow%power.i (array4dfft.type) (9.1.1.2.3)
fullwave (61)	waves%fullwave (fullwave) (9.1.1.3.119)
pol.decomp (143)	waves%fullwave%pol.decomp (pol.decomp) (9.1.1.3.158)
nmpol (182)	waves%fullwave%pol.decomp%nmpol (vecint.type) (9.1.1.2.10)
mpol (182)	waves%fullwave%pol.decomp%mpol (matint.type) (9.1.1.2.8)
e.plus (182)	waves%fullwave%pol.decomp%e.plus (array4dfft.type) (9.1.1.2.3)
e.plus.ph (182)	waves%fullwave%pol.decomp%e.plus.ph (array4dfft.type) (9.1.1.2.3)
e.minus (182)	waves%fullwave%pol.decomp%e.minus (array4dfft.type) (9.1.1.2.3)
e.minus.ph (182)	waves%fullwave%pol.decomp%e.minus.ph (array4dfft.type) (9.1.1.2.3)
e.norm (182)	waves%fullwave%pol.decomp%e.norm (array4dfft.type) (9.1.1.2.3)
e.norm.ph (182)	waves%fullwave%pol.decomp%e.norm.ph (array4dfft.type) (9.1.1.2.3)
e.binorm (182)	waves%fullwave%pol.decomp%e.binorm (array4dfft.type) (9.1.1.2.3)
e.binorm.ph (182)	waves%fullwave%pol.decomp%e.binorm.ph (array4dfft.type) (9.1.1.2.3)
e.para (182)	waves%fullwave%pol.decomp%e.para (array4dfft.type) (9.1.1.2.3)
e.para.ph (182)	waves%fullwave%pol.decomp%e.para.ph (array4dfft.type) (9.1.1.2.3)
b.norm (182)	waves%fullwave%pol.decomp%b.norm (array4dfft.type) (9.1.1.2.3)
b.norm.ph (182)	waves%fullwave%pol.decomp%b.norm.ph (array4dfft.type) (9.1.1.2.3)
b.binorm (182)	waves%fullwave%pol.decomp%b.binorm (array4dfft.type) (9.1.1.2.3)
b.binorm.ph (182)	waves%fullwave%pol.decomp%b.binorm.ph (array4dfft.type) (9.1.1.2.3)
b.para (182)	waves%fullwave%pol.decomp%b.para (array4dfft.type) (9.1.1.2.3)
b.para.ph (182)	waves%fullwave%pol.decomp%b.para.ph (array4dfft.type) (9.1.1.2.3)
local (143)	waves%fullwave%local (local) (9.1.1.3.131)
e.plus (155)	waves%fullwave%local%e.plus (array4dfft.type) (9.1.1.2.3)
e.plus.ph (155)	waves%fullwave%local%e.plus.ph (array4dfft.type) (9.1.1.2.3)
e.minus (155)	waves%fullwave%local%e.minus (array4dfft.type) (9.1.1.2.3)
e.minus.ph (155)	waves%fullwave%local%e.minus.ph (array4dfft.type) (9.1.1.2.3)
e.norm (155)	waves%fullwave%local%e.norm (array4dfft.type) (9.1.1.2.3)



enorm_ph (155)	waves%fullwave%local%enorm_ph (array4dflt.type) (9.1.1.2.3)
e_binorm (155)	waves%fullwave%local%e_binorm (array4dflt.type) (9.1.1.2.3)
e_binorm_ph (155)	waves%fullwave%local%e_binorm_ph (array4dflt.type) (9.1.1.2.3)
e_para (155)	waves%fullwave%local%e_para (array4dflt.type) (9.1.1.2.3)
e_para_ph (155)	waves%fullwave%local%e_para_ph (array4dflt.type) (9.1.1.2.3)
b_norm (155)	waves%fullwave%local%b_norm (array4dflt.type) (9.1.1.2.3)
b_norm_ph (155)	waves%fullwave%local%b_norm_ph (array4dflt.type) (9.1.1.2.3)
b_binorm (155)	waves%fullwave%local%b_binorm (array4dflt.type) (9.1.1.2.3)
b_binorm_ph (155)	waves%fullwave%local%b_binorm_ph (array4dflt.type) (9.1.1.2.3)
b_para (155)	waves%fullwave%local%b_para (array4dflt.type) (9.1.1.2.3)
b_para_ph (155)	waves%fullwave%local%b_para_ph (array4dflt.type) (9.1.1.2.3)
codeparam (61)	waves%codeparam (codeparam) (9.1.1.3.55)
codename (79)	waves%codeparam%codename (string) (9.1.1.1.3)
codeversion (79)	waves%codeparam%codeversion (string) (9.1.1.1.3)
parameters (79)	waves%codeparam%parameters (string) (9.1.1.1.3)
output_diag (79)	waves%codeparam%output_diag (string) (9.1.1.1.3)
output_flag (79)	waves%codeparam%output_flag (integer) (9.1.1.1.2)
time (61)	waves%time (float) (9.1.1.1.1)

[cpoinstances](#) <sup>174</sup>

## 9.2 4.08b

### 9.2.1 ITM Types

Generated from the ITM data structure schemas. Time-dependent values are shown in green. Anonymous structure (complex) types in the schemas are given parent element names; a prefix or suffix (eg type\_, \_type, \_t) can be added if required.

#### 9.2.1.1 Primitive Types

Clear definitions required.

##### 9.2.1.1.1 float

##### 9.2.1.1.2 integer

##### 9.2.1.1.3 string

#### 9.2.1.2 Array Types

Clear definitions required.

##### 9.2.1.2.1 array3dflt\_type

Example: [[[1.0,2.0,3.0],[5.0,6.0,7.0]],[[1.0,2.0,3.0],[5.0,6.0,7.0]]]

##### 9.2.1.2.2 array3dint\_type

Example: [[[1,2,3],[5,6,7]],[[1,2,3],[5,6,7]]]

##### 9.2.1.2.3 array4dflt\_type

Example: [[[[[1.0,2.0,3.0],[5.0,6.0,7.0]],[[1.0,2.0,3.0],[5.0,6.0,7.0]]],[[[[1.0,2.0,3.0],[5.0,6.0,7.0]],[[1.0,2.0,3.0],[5.0,6.0,7.0]]]]]]]

##### 9.2.1.2.4 array5dflt\_type

Example: [[[[[[[1.0,2.0,3.0],[5.0,6.0,7.0]],[[1.0,2.0,3.0],[5.0,6.0,7.0]]],[[1.0,2.0,3.0],[5.0,6.0,7.0]]],[[1.0,2.0,3.0],[5.0,6.0,7.0]]]]]]]

<sup>174</sup>[https://www.efda-itm.eu/ITM/html/cpoinstances\\_\\_4.08a.html](https://www.efda-itm.eu/ITM/html/cpoinstances__4.08a.html)



### 9.2.1.2.5 array6dflt\_type

Example: [[[[[[[1.0,2.0,3.0],[5.0,6.0,7.0]],[1.0,2.0,3.0],[5.0,6.0,7.0]],[[1.0,2.0,3.0],[5.0,6.0,7.0]],[1.0,2.0,3.0],[5.0,6.0,7.0]]],[[[[1.0,2.0,3.0],[5.0,6.0,7.0]],[1.0,2.0,3.0],[5.0,6.0,7.0]]],[[[[1.0,2.0,3.0],[5.0,6.0,7.0]],[1.0,2.0,3.0],[5.0,6.0,7.0]]],[[[[1.0,2.0,3.0],[5.0,6.0,7.0]],[1.0,2.0,3.0],[5.0,6.0,7.0]]]]]]]]

### 9.2.1.2.6 array7dflt\_type

Example: [[[[[[[[[1.0,2.0,3.0],[5.0,6.0,7.0]],[1.0,2.0,3.0],[5.0,6.0,7.0]],[[1.0,2.0,3.0],[5.0,6.0,7.0]],[1.0,2.0,3.0],[5.0,6.0,7.0]]],[[[[1.0,2.0,3.0],[5.0,6.0,7.0]],[1.0,2.0,3.0],[5.0,6.0,7.0]]],[[[[1.0,2.0,3.0],[5.0,6.0,7.0]],[1.0,2.0,3.0],[5.0,6.0,7.0]]],[[[[1.0,2.0,3.0],[5.0,6.0,7.0]],[1.0,2.0,3.0],[5.0,6.0,7.0]]]]]]]]]]

### 9.2.1.2.7 matflt\_type

Example: [[1.0,2.0,3.0],[5.0,6.0,7.0]]

### 9.2.1.2.8 matint\_type

Example: [[1,2,3],[4,5,6]]

### 9.2.1.2.9 vecflt\_type

Example: [1.0,-3e5,-4.0e-3]

### 9.2.1.2.10 vecint\_type

Example: [1,2,3]

### 9.2.1.2.11 vecstring\_type

Example: ["aaa","bb","cccc"]

## 9.2.1.3 Structure Types

### 9.2.1.3.1 CPO Structures

#### 9.2.1.3.2 amns

Atomic physics data CPO. Each occurrence contains the atomic data for a given element (nuclear charge)

member	type	description
datainfo	datainfo (9.2.1.3.75)	Generic information on a data item
version	string (9.2.1.1.3)	Version of the data.
source	string (9.2.1.1.3)	Source of the data.
zn	integer (9.2.1.1.2)	Nuclear charge [units of elementary charge];
zion	vecint.type (9.2.1.2.10)	Ion charge [units of elementary charge]. If negative value, means it is a bundle of charge state which cannot be described as single value. Vector of integers (nz)
amn	float (9.2.1.1.1)	Mass of atom [amu]
state_label	vecstring.type (9.2.1.2.11)	label for charge state (e.g. D0, D1+, ...); Vector(nz)
result_label	vecstring.type (9.2.1.2.11)	description of each result; Vector(nprocs)
result_unit	vecstring.type (9.2.1.2.11)	units of result; Vector(nprocs)
result_trans	vecint.type (9.2.1.2.10)	0 : none; 1 : 10**2; 2 : exp; Vector(nprocs)
bundled	integer (9.2.1.1.2)	0 : none.
proc_label	vecstring.type (9.2.1.2.11)	Label for process (e.g. EI, RC; could also include error estimates); Vector(nprocs)
tables	tables (9.2.1.3.278)	NO DOCS

#### 9.2.1.3.3 antennas

RF antenna list. Time-dependent CPO.

member	type	description
datainfo	datainfo (9.2.1.3.75)	Generic information on a data item
antenna_ec	antenna_ec (9.2.1.3.40)	Electron Cyclotron antennas
antenna_ic	antenna_ic (9.2.1.3.41)	Ion Cyclotron antennas
antenna_lh	antenna_lh (9.2.1.3.42)	Lower Hybrid antennas
codeparam	codeparam (9.2.1.3.56)	Code parameters

member	type	description
time	float (9.2.1.1.1)	Time [s]; Time-dependent; Scalar

#### 9.2.1.3.4 coredelta

Generic instant change of the radial core profiles due to pellet, MHD, ... Time-dependent CPO.

member	type	description
datainfo	datainfo (9.2.1.3.75)	Generic information on a data item
composition	composition (9.2.1.3.59)	Plasma composition (description of ion species).
rho_tor	vecflt.type (9.2.1.2.9)	Toroidal flux coordinate (not normalised, equivalent to rho.tor.norm) [m]; Vector (nrho). Time-dependent.
rho_tor_norm	vecflt.type (9.2.1.2.9)	Normalised toroidal flux coordinate values (= rho_tor normalised to the value at the last grid point); Vector (nrho)
delta_psi	vecflt.type (9.2.1.2.9)	Instant change of the poloidal flux [Wb]. Time-dependent. Vector(nrho).
delta_te	vecflt.type (9.2.1.2.9)	Instant change of the electron temperature [eV]. Time-dependent. Vector(nrho).
delta_ti	matflt.type (9.2.1.2.7)	Instant change of the ion temperature [eV]. Time-dependent. Matrix (nrho,nion).
delta_tz	array3dflt.type (9.2.1.2.1)	Instant change of the impurity (multiple charge states) temperature [eV]. Time-dependent. Array3d (nrho,nimp,max_nzimp).
delta_ne	vecflt.type (9.2.1.2.9)	Instant change of the electron density [m <sup>-3</sup> ]. Time-dependent. Vector(nrho).
delta_ni	matflt.type (9.2.1.2.7)	Instant change of the ion density [m <sup>-3</sup> ]. Time-dependent. Matrix (nrho,nion).
delta_nz	array3dflt.type (9.2.1.2.1)	Instant change of the impurity (multiple charge states) density [m <sup>-3</sup> ]. Time-dependent. Array3d (nrho,nimp,max_nzimp).
delta_vtor	matflt.type (9.2.1.2.7)	Instant change of the toroidal toroidal velocity [m.s <sup>-1</sup> ]. Time-dependent. Matrix (nrho,nion).
codeparam	codeparam (9.2.1.3.56)	Code parameters
time	float (9.2.1.1.1)	Time [s]; Time-dependent; Scalar

#### 9.2.1.3.5 coreimpur

Impurity species (i.e. ion species with multiple charge states), radial core profiles. For heavy impurities, some ionisation states can be grouped into "bundles". Can be the result of an impurity transport code or experimental measurements. Time-dependent CPO

member	type	description
datainfo	datainfo (9.2.1.3.75)	Generic information on a data item
rho_tor_norm	vecflt.type (9.2.1.2.9)	Normalised toroidal flux coordinate values (= rho_tor normalised to the value at the last grid point); Vector (nrho)
rho_tor	vecflt.type (9.2.1.2.9)	Toroidal flux coordinate (not normalised, equivalent to rho.tor.norm) [m]; Vector (nrho). Time-dependent.
source	vecstring.type (9.2.1.2.11)	Source of the profile (any comment describing the origin of the impurity profiles : code, path to diagnostic signals, massaging, ...); Array of strings (nimp)
flag	vecint.type (9.2.1.2.10)	Flag describing how the profile has been processed : 0-not calculated; 1-interpretative; 2-calculated by the transport solver; 3-calculated by a separate code : in that case only, description of the code provided in codeparam at the same level; 4-used value from the previous time step; Time-dependent; Vector(nimp)
desc_impur	desc_impur (9.2.1.3.76)	Description of the impurities (list of ion species and possibly different charge states)
z	array3dflt.type (9.2.1.2.1)	Impurity ionisation state (averaged for bundle); Time-dependent; Array3D (nrho,nimp,max_nzimp)
zsq	array3dflt.type (9.2.1.2.1)	Z <sup>2</sup> , Square of impurity ionisation state (averaged for bundle); Time-dependent; Array3D (nrho,nimp,max_nzimp)
nz	array3dflt.type (9.2.1.2.1)	Density of impurity in a given charge state [m <sup>-3</sup> ]. Time-dependent; Array3D (nrho,nimp,max_nzimp)
source_term	sourceimp (9.2.1.3.257)	Source term for each charge state. Time-dependent.
boundary	boundaryimp (9.2.1.3.53)	Boundary condition for each charge state. Time-dependent
transp_coef	coretransimp (9.2.1.3.71)	Transport coefficients for each charge state
flux	fluximp (9.2.1.3.119)	Fluxes of impurity particles, two definitions [m <sup>-2</sup> .s <sup>-1</sup> ]. Time-dependent.
time.deriv	array3dflt.type (9.2.1.2.1)	Integral of the time derivative term of the transport equation. Time-dependent. Array3D (nrho,nimp,max_nzimp)
atomic_data	vecstring.type (9.2.1.2.11)	Reference for the atomic data used for each impurity. Array of strings (nimp)
time	float (9.2.1.1.1)	Time [s]; Time-dependent; Scalar.
codeparam	codeparam (9.2.1.3.56)	Code parameters

#### 9.2.1.3.6 coreneutrals

Core plasma neutrals description. Time-dependent CPO.

member	type	description
datainfo	datainfo (9.2.1.3.75)	Generic information on a data item
rho_tor	vecflt.type (9.2.1.2.9)	Toroidal flux coordinate (not normalised, equivalent to rho_tor_norm) [m]; Vector (nrho). Time-dependent.
rho_tor_norm	vecflt.type (9.2.1.2.9)	Normalised toroidal flux coordinate values (= rho_tor normalised to the value at the last grid point); Vector (nrho)
composition	composition_neutrals (9.2.1.3.60)	Description of neutrals species
profiles	profiles_neutrals (9.2.1.3.184)	Profiles derived from the fields solved in the transport equations, or from experiment.
coefficients	coefficients_neutrals (9.2.1.3.57)	Recycling and sputtering coefficients used by the neutral solver. The nion index refers to the various ions (and charge states) considered in the simulation. The ion list is deduced from the composition%atomlist. Nion = sum(composition%atomlist%zn). Example, if D and C atoms are declared in the atomlist (in this order), nion would be equal to 7, representing D+,C+,C2+,C3+,C4+,C5+,C6+
codeparam	codeparam (9.2.1.3.56)	Code parameters
time	float (9.2.1.1.1)	Time [s]; Time-dependent; Scalar

### 9.2.1.3.7 coreprof

Core plasma 1D profiles as a function of the toroidal flux coordinate, obtained by solving the core transport equations (can be also fitted profiles from experimental data). The codeparam element here describes the parameters of the transport equation solver and/or those of the fitting program. Time-dependent CPO.

member	type	description
datainfo	datainfo (9.2.1.3.75)	Generic information on a data item
rho_tor_norm	vecflt.type (9.2.1.2.9)	Normalised toroidal flux coordinate values (= rho_tor normalised to the value at the last grid point); Vector (nrho)
rho_tor	vecflt.type (9.2.1.2.9)	Toroidal flux coordinate (not normalised, equivalent to rho_tor_norm) [m]; Vector (nrho). Time-dependent.
drho_dt	vecflt.type (9.2.1.2.9)	Time derivative of rho_tor [m/s]; Vector (nrho). Time-dependent.
toroid_field	toroid_field (9.2.1.3.280)	Toroidal field information entering the definition of rho_tor, for reference only. The physical value of the toroidal field should be taken from the toroidfield CPO. Time-dependent.
composition	composition (9.2.1.3.59)	Plasma composition (description of ion species).
psi	psi (9.2.1.3.186)	Poloidal magnetic flux [Wb]; Time-dependent;
te	corefield (9.2.1.3.62)	Electron temperature [eV]; (source term in [W.m <sup>-3</sup> ]). Time-dependent;
ti	corefieldion (9.2.1.3.63)	Ion temperature [eV]; (source term in [W.m <sup>-3</sup> ]). Time-dependent;
ne	corefield (9.2.1.3.62)	Electron density [m <sup>-3</sup> ]; (source term in [m <sup>-3</sup> ]). Time-dependent;
ni	corefieldion (9.2.1.3.63)	Ion density [m <sup>-3</sup> ]; (source term in [m <sup>-3</sup> ]). Time-dependent;
vtor	corefieldion (9.2.1.3.63)	Toroidal velocity of the various ion species [m.s <sup>-1</sup> ]; Time-dependent;
profiles1d	profiles1d (9.2.1.3.181)	Profiles derived from the fields solved in the transport equations, or from experiment.
globalparam	globalparam (9.2.1.3.124)	Various global quantities calculated from the 1D profiles. Time-dependent
codeparam	codeparam (9.2.1.3.56)	Code parameters
time	float (9.2.1.1.1)	Time [s]; Time-dependent; Scalar

### 9.2.1.3.8 coresource

Generic source term for the core transport equations (radial profile). Time-dependent CPO.

member	type	description
datainfo	datainfo (9.2.1.3.75)	Generic information on a data item
rho_tor	vecflt.type (9.2.1.2.9)	Toroidal flux coordinate (not normalised, equivalent to rho_tor_norm) [m]; Vector (nrho). Time-dependent.
rho_tor_norm	vecflt.type (9.2.1.2.9)	Normalised toroidal flux coordinate values (= rho_tor normalised to the value at the last grid point); Vector (nrho)
composition	composition (9.2.1.3.59)	Plasma composition (description of ion species).
toroid_field	b0r0 (9.2.1.3.46)	Characteristics of the vacuum toroidal field, redundant with the toroidfield CPO, to document the normalisation of j in this CPO.
j	vecflt.type (9.2.1.2.9)	Parallel current source for psi transport equation, = average(j.B) / B0, where B0 = core-source/toroid_field/b0 [A.m <sup>-2</sup> ]. Vector(nrho). Time-dependent.
sigma	vecflt.type (9.2.1.2.9)	Induced parallel conductivity [ohm <sup>-1</sup> .m <sup>-1</sup> ]. EXACT DEFINITION PENDING. Vector(nrho). Time-dependent.
si	source_ion (9.2.1.3.254)	Particle source for ion density transport equation [m <sup>-3</sup> .s <sup>-1</sup> ]. Time-dependent.
se	source_el (9.2.1.3.252)	Particle source for electron density transport equation [m <sup>-3</sup> .s <sup>-1</sup> ]. Time-dependent.
sz	source_imp (9.2.1.3.253)	Particle source for impurity density transport equation [m <sup>-3</sup> .s <sup>-1</sup> ]. Time-dependent.
qi	source_ion (9.2.1.3.254)	Heat source for ion heat transport equations [W.m <sup>-3</sup> ]. Time-dependent.
qe	source_el (9.2.1.3.252)	Heat source for electron heat transport equation [W.m <sup>-3</sup> ]. Time-dependent.

member	type	description
qz	source_imp (9.2.1.3.253)	Heat source for impurity heat transport equations [ $\text{W}\cdot\text{m}^{-3}$ ]. Time-dependent.
ui	source_ion (9.2.1.3.254)	Velocity source for toroidal velocity transport equation [ $\text{kg}\cdot\text{m}^{-1}\cdot\text{s}^{-2}$ ]. Vector(nrho). Time-dependent.
codeparam	codeparam (9.2.1.3.56)	Code parameters
time	float (9.2.1.1.1)	Time [s]; Time-dependent; Scalar

### 9.2.1.3.9 coretransp

Generic transport coefficients for the core transport equations (radial profile). Time-dependent CPO

member	type	description
datainfo	datainfo (9.2.1.3.75)	Generic information on a data item
composition	composition (9.2.1.3.59)	Plasma composition (description of ion species).
rho_tor_norm	vecflt_type (9.2.1.2.9)	Normalised toroidal flux coordinate values (= rho_tor normalised to the value at the last grid point); Vector (nrho)
rho_tor	vecflt_type (9.2.1.2.9)	Toroidal flux coordinate (not normalised, equivalent to rho_tor_norm) [m]; Vector (nrho). Time-dependent.
sigma	vecflt_type (9.2.1.2.9)	Parallel conductivity [ $\text{ohm}^{-1}\cdot\text{m}^{-1}$ ]. Time-dependent. Vector(nrho).
ni_transp	ni_transp (9.2.1.3.160)	Transport coefficients for ion density equation. Time-dependent.
ne_transp	ne_transp (9.2.1.3.158)	Transport coefficients for electron density equation. Time-dependent.
nz_transp	transcoefimp (9.2.1.3.282)	Transport coefficients for impurity (multiple charge state) density equation. Time-dependent.
ti_transp	transcoefion (9.2.1.3.283)	Transport coefficients for ion temperature equation. Time-dependent.
te_transp	transcoefel (9.2.1.3.281)	Transport coefficients for electron temperature equation. Time-dependent.
tz_transp	transcoefimp (9.2.1.3.282)	Transport coefficients for impurity (multiple charge state) temperature equation. Time-dependent.
vtor_transp	transcoefvtor (9.2.1.3.284)	Transport coefficients for toroidal velocity equation. Time-dependent.
codeparam	codeparam (9.2.1.3.56)	Code parameters
time	float (9.2.1.1.1)	Time [s]; Time-dependent; Scalar

### 9.2.1.3.10 cxdiag

Charge Exchange Diagnostic; Time-dependent CPO

member	type	description
datainfo	datainfo (9.2.1.3.75)	Generic information on a data item
setup	cxsetup (9.2.1.3.74)	diagnostic setup information
measure	cxmeasure (9.2.1.3.73)	Measured values
time	float (9.2.1.1.1)	Time [s]; Time-dependent; Scalar

### 9.2.1.3.11 distribution

Distribution function for electron and ion species. Normally output from a Fokker-Planck calculation; Time-dependent CPO

member	type	description
datainfo	datainfo (9.2.1.3.75)	Generic information on a data item
composition	composition (9.2.1.3.59)	Plasma composition (description of ion species).
calc_spec	vecint_type (9.2.1.2.10)	Pointer to the species for which the distribution function(s) is/are calculated and whose characteristics are given in composition (for ions). Value 0 means electrons. Vector of integers (ndist_spec)
nucl_reac	dist_nucl_reac (9.2.1.3.86)	Information on nuclear reactions involving the calculated species.
global_param	dist_glob (9.2.1.3.82)	Global parameters (in most cases volume integrated and surface averaged quantities).
profiles_1d	dist_profiles (9.2.1.3.96)	Profiles (volume integrated and flux surface averaged)
dist_func	dist_func (9.2.1.3.81)	Distribution functions
input_src	dist_input_src (9.2.1.3.85)	Input sources of particles and power for the distribution species (to aid diagnosing the code output).
codeparam	codeparam (9.2.1.3.56)	Code parameters
time	float (9.2.1.1.1)	Time [s]; Time-dependent; Scalar

### 9.2.1.3.12 distsource

Sources of particles for input to kinetic equations, e.g. Fokker-Planck calculation. The sources could originate from e.g. NBI or fusion reactions. Time-dependent CPO

member	type	description
datainfo	datainfo (9.2.1.3.75)	Generic information on a data item
composition	composition (9.2.1.3.59)	Plasma composition (description of ion species).
src_spec	vecint.type (9.2.1.2.10)	Pointer to the source species whose characteristics are given in composition. Vector(nsrc_spec)
global_param	distsource_global_param (9.2.1.3.102)	Global parameters (volume integrated).
profiles_1d	distsource_profiles_1d (9.2.1.3.103)	1D radial profiles
source_4d	source_4d (9.2.1.3.251)	Source of particles in phase space.
source_tp	source_tp (9.2.1.3.255)	Source given as a set of test particles. Note that the test particles are given at the source location and not at the gyrocentre. Note that max_n_particles should be the maximum both over species and time (since the number of test particles can change with time)
codeparam	codeparam (9.2.1.3.56)	Code parameters
time	float (9.2.1.1.1)	Time [s]; Time-dependent; scalar

### 9.2.1.3.13 ecediag

Electron Cyclotron Emission Diagnostic; Time-dependent CPO

member	type	description
datainfo	datainfo (9.2.1.3.75)	Generic information on a data item
setup	ecsetup (9.2.1.3.106)	diagnostic setup information
measure	ecmeasure (9.2.1.3.105)	Measured values
time	float (9.2.1.1.1)	Time [s]; Time-dependent; Scalar

### 9.2.1.3.14 edge

An example of CPO that uses a GRID complex element. For testing purposes only for the moment. Time-dependent CPO

member	type	description
datainfo	datainfo (9.2.1.3.75)	Generic information on a data item
grid	grid_full (9.2.1.3.133)	Grid definition
desc_impur	desc_impur (9.2.1.3.76)	Description of the impurities (list of ion species and possibly different charge states)
fluid	grid_fluid (9.2.1.3.128)	Fluid quantities
time	float (9.2.1.1.1)	Time [s]; Time-dependent; Scalar.
codeparam	codeparam (9.2.1.3.56)	Code parameters

### 9.2.1.3.15 equilibrium

Description of a 2D, axi-symmetric, tokamak equilibrium; result of an equilibrium code. Time-dependent CPO

member	type	description
datainfo	datainfo (9.2.1.3.75)	Generic information on a data item
eqconstraint	eqconstraint (9.2.1.3.108)	measurements to constrain the equilibrium, output values and accuracy of the fit
eqgeometry	eqgeometry (9.2.1.3.109)	Geometry of the plasma boundary
flush	flush (9.2.1.3.116)	FLUSH package coefficients for the mapping of the equilibrium. The time grid of this structure is the same as the equilibrium structure above.
global_param	global_param (9.2.1.3.123)	0d output parameters
profiles_1d	profiles_1d (9.2.1.3.182)	output profiles as a function of the poloidal flux
profiles_2d	profiles_2d (9.2.1.3.183)	output profiles in the poloidal plane
coord_sys	coord_sys (9.2.1.3.61)	flux surface coordinate system on a square grid of flux and angle
time	float (9.2.1.1.1)	Time [s]; Time-dependent; Scalar
codeparam	codeparam (9.2.1.3.56)	Code parameters

### 9.2.1.3.16 interfdiag

General line integral diagnostic

member	type	description
datainfo	datainfo (9.2.1.3.75)	Generic information on a data item
expression	string (9.2.1.1.3)	Formal expression for the line integral to be evaluated as a function of ne, ni, Te, Ti, Zeff, Br, Bz
setup_line	setup_line (9.2.1.3.249)	Geometric description of the lines of sight
measure	expID (9.2.1.3.113)	Measured value. Time-dependent; Vector (nchords)
time	float (9.2.1.1.1)	Time [s]; Time-dependent; Scalar

### 9.2.1.3.17 ironmodel

Model of the iron circuit; Time-dependent CPO

member	type	description
datainfo	datainfo (9.2.1.3.75)	Generic information on a data item
desc_iron	desc_iron (9.2.1.3.77)	Description of the iron segments
magnetise	magnetise (9.2.1.3.151)	Magnetisation M of the iron segment, assumed to be constant inside a given iron segment. Reminder : $H = 1/\mu_0 * B - \text{mur} * M$ ; [A/m].
time	float (9.2.1.1.1)	Time [s]; Time-dependent; Scalar

### 9.2.1.3.18 launches

RF wave launch conditions. Time-dependent CPO

member	type	description
datainfo	datainfo (9.2.1.3.75)	Generic information on a data item
name	vecstring_type (9.2.1.2.11)	Antenna name, Vector of strings (nantenna)
type	vecstring_type (9.2.1.2.11)	Wave type (LH, EC, IC, ...), Vector of strings (nantenna)
frequency	vecflt_type (9.2.1.2.9)	Wave frequency [Hz], Vector (nantenna).
mode	vecint_type (9.2.1.2.10)	Incoming wave mode (+ 1 : slow wave only; -1 both slow and fast wave modes). Vector of integers (nantenna). Time-dependent
position	rzphiID (9.2.1.3.218)	Reference global position of the antenna. Time-dependent
spectrum	spectrum (9.2.1.3.260)	Spectral properties of the wave.
beam	rf_beam (9.2.1.3.212)	Beam characteristics
codeparam	codeparam (9.2.1.3.56)	Code parameters
time	float (9.2.1.1.1)	Time [s]; Time-dependent; Scalar

### 9.2.1.3.19 limiter

Description of the immobile limiting surface for defining the Last Closed Flux Surface. CPO

member	type	description
datainfo	datainfo (9.2.1.3.75)	Generic information on a data item
position	rzID (9.2.1.3.214)	Position (R,Z coordinates) of the limiter [m]; Vector(npoints)

### 9.2.1.3.20 magdiag

Magnetic diagnostics. Time-dependent CPO

member	type	description
datainfo	datainfo (9.2.1.3.75)	Generic information on a data item
ip	exp0D (9.2.1.3.112)	Plasma current [A]. Positive sign means anti-clockwise when viewed from above. Time-dependent. Scalar
diamagflux	exp0D (9.2.1.3.112)	Diamagnetic flux [Wb]; Time-dependent; Scalar
flux_loops	flux_loops (9.2.1.3.117)	Poloidal flux loops RZ coordinates have 1 component for the full loop and two if there is a negative reference loop
bpol_probes	bpol_probes (9.2.1.3.55)	Poloidal field probes
time	float (9.2.1.1.1)	Time [s]; Time-dependent; Scalar

### 9.2.1.3.21 mhd

MHD linear stability. Time-dependent CPO

member	type	description
datainfo	datainfo (9.2.1.3.75)	Generic information on a data item

member	type	description
n	vecint.type (9.2.1.2.10)	Toroidal mode number; Time-dependent; Vector (nn)
frequency	vecflt.type (9.2.1.2.9)	Frequency of the mode [Hz]; Time-dependent; Vector (nn)
growthrate	vecflt.type (9.2.1.2.9)	Linear growthrate of the mode [Hz]; Time-dependent; Vector (nn)
plasma	mhd_plasma (9.2.1.3.153)	MHD modes in the confined plasma
vaccum	mhd_vaccum (9.2.1.3.154)	External modes
time	float (9.2.1.1.1)	Time [s]; Time-dependent; Scalar.
codeparam	codeparam (9.2.1.3.56)	Code parameters

### 9.2.1.3.22 msediag

MSE Diagnostic; Time-dependent CPO

member	type	description
datainfo	datainfo (9.2.1.3.75)	Generic information on a data item
setup_mse	setup_mse (9.2.1.3.250)	diagnostic setup information
measure	exp1D (9.2.1.3.113)	Measured value (MSE angle gamma [rad]). Time-dependent; Vector (nchords)
time	float (9.2.1.1.1)	Time [s]; Time-dependent; Scalar

### 9.2.1.3.23 nbi

Neutral Beam Injection. Input to NBI source codes; describes the neutrals that are about to be launched into the torus; Time-dependent CPO

member	type	description
datainfo	datainfo (9.2.1.3.75)	Generic information on a data item
inj_spec	inj_spec (9.2.1.3.141)	Injected species
pow_unit	exp1D (9.2.1.3.113)	Power delivered by an NBI unit [W]; Time-dependent; Vector(nunits)
inj_eng_unit	exp1D (9.2.1.3.113)	Full injection energy of a unit [ev]; Time-dependent; Vector(nunits)
halfe_cfr	exp1D (9.2.1.3.113)	Beam current fraction (of total) for half energy component; Time-dependent; Vector(nunits)
thirde_cfr	exp1D (9.2.1.3.113)	Beam current fraction (of total) for the one third energy component. Time-dependent; Vector(nunits)
setup_inject	setup_inject (9.2.1.3.248)	Detailed information on an injection unit.
codeparam	codeparam (9.2.1.3.56)	Code parameters
time	float (9.2.1.1.1)	Time [s]; Time-dependent; Scalar

### 9.2.1.3.24 neoclassic

Neoclassical quantities (including transport coefficients). Time-dependent CPO

member	type	description
datainfo	datainfo (9.2.1.3.75)	Generic information on a data item
rho_tor_norm	vecflt.type (9.2.1.2.9)	Normalised toroidal flux coordinate values (= rho_tor normalised to the value at the last grid point); Vector (nrho)
rho_tor	vecflt.type (9.2.1.2.9)	Toroidal flux coordinate (not normalised, equivalent to rho_tor_norm) [m]; Vector (nrho). Time-dependent.
composition	composition (9.2.1.3.59)	Plasma composition (description of ion species).
ni_neo	transcoefion (9.2.1.3.283)	Neoclassical transport coefficients for ion density equation. Time-dependent.
ne_neo	transcoefel (9.2.1.3.281)	Neoclassical transport coefficients for electron density equation. Time-dependent.
nz_neo	transcoefimp (9.2.1.3.282)	Neoclassical transport coefficients for impurity (multiple charge state) density equation. Time-dependent.
ti_neo	transcoefion (9.2.1.3.283)	Neoclassical transport coefficients for ion temperature equation. Time-dependent.
te_neo	transcoefel (9.2.1.3.281)	Neoclassical transport coefficients for electron temperature equation. Time-dependent.
tz_neo	transcoefimp (9.2.1.3.282)	Neoclassical transport coefficients for impurity (multiple charge state) temperature equation. Time-dependent.
mtor_neo	transcoefel (9.2.1.3.281)	Neoclassical transport coefficients for total toroidal momentum equation. Time-dependent.
sigma	vecflt.type (9.2.1.2.9)	Neoclassical conductivity [ $\text{ohm}^{-1} \cdot \text{m}^{-1}$ ]. Time-dependent. Vector(nrho).
jboot	vecflt.type (9.2.1.2.9)	Bootstrap current density [ $\text{A} \cdot \text{m}^{-2}$ ]. Time-dependent. Vector(nrho).
er	vecflt.type (9.2.1.2.9)	Radial electric field [V/m]. Time-dependent. Vector(nrho).
vpol	matflt.type (9.2.1.2.7)	Neoclassical poloidal rotation of for each ion species [m/s]. Time-dependent. Matrix(nrho,nion).
fext	array3dflt.type (9.2.1.2.1)	Moments of parallel external force on each ion species [ $\text{T} \cdot \text{J} \cdot \text{m}^{-3}$ ]. Time-dependent. Array3D(nrho,nion,nmoment).
jext	vecflt.type (9.2.1.2.9)	Current density response to fext [ $\text{A} \cdot \text{m}^{-2}$ ]. Time-dependent. Vector(nrho).

member	type	description
time	float (9.2.1.1.1)	Time [s]; Time-dependent; Scalar.
codeparam	codeparam (9.2.1.3.56)	Code parameters

### 9.2.1.3.25 orbit

Orbits for a set of particles. Time-dependent CPO

member	type	description
datainfo	datainfo (9.2.1.3.75)	Generic information on a data item
orbitt_id	orbitt_id (9.2.1.3.166)	Parameters identifying an orbit
orb_trace	orb_trace (9.2.1.3.164)	Position of particle in 5D space (3D in real and 2D in velocity).
orb_glob_dat	orb_glob_dat (9.2.1.3.163)	Global quantities associated with an orbit.
codeparam	codeparam (9.2.1.3.56)	Code parameters
time	float (9.2.1.1.1)	Time [s]; Time-dependent; Scalar

### 9.2.1.3.26 pfsystems

Description of the active poloidal coils, passive conductors, currents flowing in those and mutual electromagnetic effects of the device; Time-dependent CPO

member	type	description
datainfo	datainfo (9.2.1.3.75)	Generic information on a data item
pfcoils	pfcoils (9.2.1.3.170)	Active poloidal field coils
pfpassive	pfpassive (9.2.1.3.174)	Passive axisymmetric conductor description
pfcircuits	pfcircuits (9.2.1.3.169)	Circuits, connected to multiple coils and to multiple supplies, defining the current and voltage relationships in the system
pfsupplies	pfsupplies (9.2.1.3.175)	PF power supplies
time	float (9.2.1.1.1)	Time [s]; Time-dependent; Scalar

### 9.2.1.3.27 polardiag

General line integral diagnostic

member	type	description
datainfo	datainfo (9.2.1.3.75)	Generic information on a data item
expression	string (9.2.1.1.3)	Formal expression for the line integral to be evaluated as a function of $n_e$ , $n_i$ , $T_e$ , $T_i$ , $Z_{eff}$ , $B_r$ , $B_z$
setup_line	setup_line (9.2.1.3.249)	Geometric description of the lines of sight
measure	exp1D (9.2.1.3.113)	Measured value. Time-dependent; Vector (nchords)
time	float (9.2.1.1.1)	Time [s]; Time-dependent; Scalar

### 9.2.1.3.28 reference

Set of generic reference signals (for input e.g. to a controller); Time-dependent CPO

member	type	description
datainfo	datainfo (9.2.1.3.75)	Generic information on a data item
non_timed	ref_nt (9.2.1.3.191)	Time-independent references (parameters)
timed	ref_t (9.2.1.3.202)	Time-dependent references
time	float (9.2.1.1.1)	Time [s]; Time-dependent; Scalar

### 9.2.1.3.29 sawteeth

Description of sawtooth events. Time-dependent CPO

member	type	description
datainfo	datainfo (9.2.1.3.75)	Generic information on a data item
crash_trig	integer (9.2.1.1.2)	Flag indicating whether a crash condition has been satisfied : 0 = no crash. $N(\zeta_0)$ = crash triggered due to condition $ii=N$ . Integer. Time-dependent.
composition	composition (9.2.1.3.59)	Plasma composition (description of ion species).
rho_tor_norm	vecflt_type (9.2.1.2.9)	Normalised toroidal flux coordinate values (= rho_tor normalised to the value at the last grid point); Vector (nrho)



member	type	description
rho_tor	vecflt_type (9.2.1.2.9)	Toroidal flux coordinate [m] given by $\sqrt{\phi/B_0/\pi}$ , where $B_0 = \text{toroidfield}\%bvac.r\%value / \text{toroidfield}\%r0$ . Vector (nrho). Time-dependent.
profiles1d	sawteeth_profiles1d (9.2.1.3.224)	Core profiles after sawtooth crash
diags	sawteeth_diags (9.2.1.3.223)	NO DOCS
codeparam	codeparam (9.2.1.3.56)	Code parameters
time	float (9.2.1.1.1)	Time [s]; Time-dependent; Scalar

### 9.2.1.3.30 scenario

Scenario characteristics, to be used as input or output of a whole discharge simulator. Time-dependent CPO.

member	type	description
datainfo	datainfo (9.2.1.3.75)	Generic information on a data item
centre	scenario_centre (9.2.1.3.225)	central values of the profiles (at magnetic axis)
composition	scenario_composition (9.2.1.3.226)	Plasma composition (description of ion species).
configs	scenario_configuration (9.2.1.3.227)	Strings describing the tokamak configuration
confinement	scenario_confinement (9.2.1.3.228)	characteristic confinement times
currents	scenario_currents (9.2.1.3.229)	data related to current sources and current diffusion
edge	scenario_edge (9.2.1.3.230)	edge value (@ LCMS)
energy	scenario_energy (9.2.1.3.231)	plasma energy content
eqgeometry	eqgeometry (9.2.1.3.109)	Geometry of the plasma boundary
global_param	scenario_global (9.2.1.3.232)	Global scalar values
heat_power	scenario_heat_power (9.2.1.3.233)	Power delivered to plasma (thermal and non thermal)
itb	scenario_itb (9.2.1.3.235)	Values characteristics of the Internal Transport Barrier
lim_div_wall	scenario_lim_div_wall (9.2.1.3.236)	values on the plate of divertor or on the limiter or on the wall (@ LCMS)
line_ave	scenario_line_ave (9.2.1.3.237)	line averaged value
neutron	scenario_neutron (9.2.1.3.238)	neutron flux for DD and DT reactions
ninety_five	scenario_ninety_five (9.2.1.3.239)	values at 95% of poloidal flux
pedestal	scenario_pedestal (9.2.1.3.240)	Values at the top of the H-mode pedestal
references	scenario_references (9.2.1.3.243)	References
reactor	scenario_reactor (9.2.1.3.241)	reactor data (such as electricity cost ...)
sol	scenario_sol (9.2.1.3.244)	SOL characteristic (@ LCMS)
vol_ave	scenario_vol_ave (9.2.1.3.245)	volume averaged value
codeparam	codeparam (9.2.1.3.56)	Code parameters
time	float (9.2.1.1.1)	Time [s]; Time-dependent; Scalar

### 9.2.1.3.31 summary

Set of reduced data summarising the main simulation parameters for the data base catalogue. CPO.

member	type	description
datainfo	datainfo (9.2.1.3.75)	Generic information on a data item
ip	reduced (9.2.1.3.190)	Plasma current [A]
bvac_r	reduced (9.2.1.3.190)	Vacuum field times radius in the toroidal field magnet [T.m];
geom_axis_r	reduced (9.2.1.3.190)	Major radius of the geometric axis [m]
a_minor	reduced (9.2.1.3.190)	Minor radius of the plasma boundary [m]
elongation	reduced (9.2.1.3.190)	Elongation of the plasma boundary [m]
tria_lower	reduced (9.2.1.3.190)	Lower triangularity of the plasma boundary [m]
tria_upper	reduced (9.2.1.3.190)	Upper triangularity of the plasma boundary [m]
tev	reduced (9.2.1.3.190)	volume averaged electron temperature [eV]
tiv	reduced (9.2.1.3.190)	volume averaged ion temperature [eV]

member	type	description
nev	reduced (9.2.1.3.190)	volume averaged electron density [m <sup>-3</sup> ]
zeffv	reduced (9.2.1.3.190)	volume averaged effective charge
beta_pol	reduced (9.2.1.3.190)	poloidal beta
beta_tor	reduced (9.2.1.3.190)	toroidal beta
beta_normal	reduced (9.2.1.3.190)	normalised beta
li	reduced (9.2.1.3.190)	internal inductance
volume	reduced (9.2.1.3.190)	total plasma volume [m <sup>3</sup> ]
area	reduced (9.2.1.3.190)	area poloidal cross section [m <sup>2</sup> ]
main_ion1_z	reduced (9.2.1.3.190)	Atomic number of the main ion #1 [a.m.u.]
main_ion1_a	reduced (9.2.1.3.190)	Atomic mass of the main ion #1 [a.m.u.]
main_ion2_z	reduced (9.2.1.3.190)	Atomic number of the main ion #2 [a.m.u.]
main_ion2_a	reduced (9.2.1.3.190)	Atomic mass of the main ion #2 [a.m.u.]
impur1_z	reduced (9.2.1.3.190)	Atomic number of the impurity #1 [a.m.u.]
impur1_a	reduced (9.2.1.3.190)	Atomic mass of the impurity #1 [a.m.u.]
time	float (9.2.1.1.1)	Time at which the 0D variables of the summary are taken [s]. Scalar

### 9.2.1.3.32 topinfo

General info about the database entry. CPO.

member	type	description
dataprovider	string (9.2.1.1.3)	Name of the main data provider (the person who filled the original data)
description	string (9.2.1.1.3)	Pulse/Entry description
firstputdate	string (9.2.1.1.3)	Date of the original data submission
lastupdate	string (9.2.1.1.3)	Date of the last data addition in the tree
source	string (9.2.1.1.3)	Exact reference of the data source (e.g. original reference in the native machine data base)
comment	string (9.2.1.1.3)	Any additional comment
dataversion	string (9.2.1.1.3)	Version of the data structure
workflow	string (9.2.1.1.3)	Workflow which has been used to produce the present entry. Exact format to be defined with the platform group. User-specific input files (if allowed) must be stored there as well.
entry	entry_def (9.2.1.3.107)	Definition of this database entry
parent_entry	entry_def (9.2.1.3.107)	Definition of the entry of the direct parent (if any)
mdinfo	mdinfo (9.2.1.3.152)	Information related to machine description for this entry

### 9.2.1.3.33 toroidfield

Toroidal field. Time-dependent CPO

member	type	description
datainfo	datainfo (9.2.1.3.75)	Generic information on a data item
nturns	integer (9.2.1.1.2)	Number of total turns in the toroidal field coil
ncoils	integer (9.2.1.1.2)	Number of packets of coils
current	exp0D (9.2.1.3.112)	Current in the toroidal field coils [A]; Time-dependent. Scalar.
bvac_r	exp0D (9.2.1.3.112)	Vacuum field times radius in the toroidal field magnet [T.m]. Positive sign means anti-clockwise when viewed from above. Time-dependent. Scalar.
r0	float (9.2.1.1.1)	Characteristic major radius of the device (used in publications, usually middle of the vessel at the equatorial midplane) [m]. Scalar.
time	float (9.2.1.1.1)	Time [s]; Time-dependent. Scalar.

### 9.2.1.3.34 tsdiag

Thomson scattering Diagnostic; Time-dependent CPO

member	type	description
datainfo	datainfo (9.2.1.3.75)	Generic information on a data item
setup	tssetup (9.2.1.3.286)	diagnostic setup information
measure	tsmeasure (9.2.1.3.285)	Measured values
time	float (9.2.1.1.1)	Time [s]; Time-dependent; Scalar

### 9.2.1.3.35 turbulence

Turbulence; Time-dependent CPO.

member	type	description
datainfo	datainfo (9.2.1.3.75)	Generic information on a data item
composition	composition (9.2.1.3.59)	Plasma composition (description of ion species).
coordsys	turbcoordsys (9.2.1.3.287)	Description of the coordinates and metric used by the codes.
var0d	turbvar0d (9.2.1.3.291)	Diagnostic fast time traces.
var1d	turbvar1d (9.2.1.3.292)	Dependent variable radial profile.
var2d	turbvar2d (9.2.1.3.293)	Dependent variable axisymmetric.
var3d	turbvar3d (9.2.1.3.294)	Dependent variable morphology. Grid is defined in coord_sys/turbgrid.
spec1d	turbpec1d (9.2.1.3.290)	Toroidal mode number spectra.
env1d	turbenv1d (9.2.1.3.288)	Parallel fluctuation envelope.
codeparam	codeparam (9.2.1.3.56)	Code parameters
time	float (9.2.1.1.1)	Time [s]; Time-dependent; Scalar.

### 9.2.1.3.36 vessel

Mechanical structure of the vacuum vessel. CPO.

member	type	description
datainfo	datainfo (9.2.1.3.75)	Generic information on a data item
position	rz1D (9.2.1.3.214)	Vessel wall outline (list of R,Z co-ordinates) [m]; Vector (npoints)

### 9.2.1.3.37 waves

RF wave propagation and deposition. Time-dependent CPO

member	type	description
datainfo	datainfo (9.2.1.3.75)	Generic information on a data item
coherentwave(:)	coherentwave (9.2.1.3.58)	Wave description for each frequency. Time-dependent. Structure array(nfreq)
codeparam	codeparam (9.2.1.3.56)	Code parameters
time	float (9.2.1.1.1)	Time [s]; Time-dependent; Scalar

### 9.2.1.3.38 Utility Structures

#### 9.2.1.3.39 alter\_coord

Alternative coordinate system possibly used to describe the space (e.g. rho\_tor versus rho\_tor\_norm). NB : when specifying straight lines to build cells, these are intended to refer to the primary (main) system and may not be straight on the alternative system.

member	type	description
type_coord	vecint_type (9.2.1.2.10)	Type of coordinates describing the space. Vector of integers (ncoord)
node_value	matflt_type (9.2.1.2.7)	Numerical value of the node coordinates. Matrix (nnode,ncoord)

Type of: grid\_space:alter\_coord (469)

#### 9.2.1.3.40 antenna\_ec

Electron Cyclotron antennas

member	type	description
name	vecstring_type (9.2.1.2.11)	Antenna name, Vector of strings (nantenna_ec)
frequency	vecflt_type (9.2.1.2.9)	Frequency [Hz], Vector (nantenna_ec)
power	exp1D (9.2.1.3.113)	Power [W], Vector (nantenna_ec). Time-dependent
mode	vecint_type (9.2.1.2.10)	Incoming wave mode (+ or -1 for O/X mode), Vector of integers (nantenna_ec). Time-dependent
position	rzphi1D (9.2.1.3.218)	Reference global position of the last mirror. Vectors (nantenna_ec). Time-dependent
launchangles	launchangles (9.2.1.3.144)	Launching angles of the beam
beam	rf.beam (9.2.1.3.212)	Beam characteristics

Type of: antennas:antenna\_ec (337)

#### 9.2.1.3.41 antenna\_ic

Ion Cyclotron antennas

member	type	description
name	vecstring_type (9.2.1.2.11)	Antenna name; Vector of strings (nantenna_ic)
frequency	exp1D (9.2.1.3.113)	Frequency [Hz]; Time-dependent; Vector (nantenna_ic)
power	exp1D (9.2.1.3.113)	Power [W]; Time-dependent; Vector (nantenna_ic)
setup	antennaic_setup (9.2.1.3.43)	Detailed description of IC antennas

Type of: antennas:antenna\_ic (337)

#### 9.2.1.3.42 antenna\_lh

Lower Hybrid antennas

member	type	description
name	vecstring_type (9.2.1.2.11)	Antenna name, Vector of strings (nantenna_lh)
frequency	vecflt_type (9.2.1.2.9)	Frequency [Hz], Vector (nantenna_lh)
power	exp1D (9.2.1.3.113)	Power [W], Vector (nantenna_lh). Time-dependent
n_par	vecflt_type (9.2.1.2.9)	Main parallel refractive index of the launched spectrum, for multi-junction antennas. Vectors (nantenna_lh). Time-dependent
position	rzphi1Dexp (9.2.1.3.219)	Reference global antenna position. Vectors (nantenna_lh). Time-dependent
setup	antennalh_setup (9.2.1.3.44)	Detailed description of LH antennas.
plasmaedge	plasmaedge (9.2.1.3.177)	Plasma edge characteristics in front of the antenna.
beam	rf_beam (9.2.1.3.212)	Beam characteristics

Type of: antennas:antenna\_lh (337)

#### 9.2.1.3.43 antennaic\_setup

Detailed description of ICRH antennas

member	type	description
straps	straps (9.2.1.3.266)	Properties of each IC antenna strap

Type of: antenna\_ic:setup (374)

#### 9.2.1.3.44 antennalh\_setup

Detailed description of LH antennas

member	type	description
modules	modules (9.2.1.3.157)	Modules description. NB there are nmodules per antenna, distributed among nma_phi toroidal positions and nma_theta poloidal positions

Type of: antenna\_lh:setup (375)

#### 9.2.1.3.45 atomlist

List of the atoms that enter the composition of the neutral species

member	type	description
amn	vecflt_type (9.2.1.2.9)	Atomic mass number; Vector (natm)
zn	vecflt_type (9.2.1.2.9)	Nuclear charge; Vector (natm)

Type of: composition\_neutrals:atomlist (393)

#### 9.2.1.3.46 b0r0

Characteristics of the vacuum toroidal field, redundant with the toroidfield CPO, normalisation used by the ETS

member	type	description
r0	float (9.2.1.1.1)	Characteristic major radius of the device (used in publications, usually middle of the vessel at the equatorial midplane) [m]. Scalar.
b0	float (9.2.1.1.1)	Vacuum field at r0 [T]; Positive sign means anti-clockwise when viewed from above. Scalar. Time-dependent.

Type of: coresource:toroid\_field (342) | global\_param:toroid\_field (456) | waves\_global\_param:toroid\_field (631)

#### 9.2.1.3.47 beamlets

Detailed information on beamlets.

member	type	description
nbeamlets	vecint.type (9.2.1.2.10)	Number of beamlets of a unit; Vector(nunits)
position	rzphi2D (9.2.1.3.220)	Position of beamlets. Matrices(nunits, max_nbeamlets)
tang_rad.bl	matflt.type (9.2.1.2.7)	Tangency radius (major radius where the central line of a beamlet is tangent to a circle around the torus) [m]; Matrix(nunits, max_nbeamlets)
angle.bl	matflt.type (9.2.1.2.7)	Angle of inclination between a line at the centre of a beamlet and the horizontal plane [rad]; Matrix(nunits, max_nbeamlets)
pow_frc.bl	matflt.type (9.2.1.2.7)	Fraction of power of a unit injected by a beamlet; Matrix(nunits, max_nbeamlets)

Type of: setup\_inject:beamlets (581)

#### 9.2.1.3.48 beamtracing

Beam-tracing or ray-tracing solver

member	type	description
npoints	vecint.type (9.2.1.2.10)	Number of points along each ray/beam. Vector of integers (nbeams)
power	vecflt.type (9.2.1.2.9)	Initial power in each ray/beam [W], Vector (nbeams). Time-dependent
dnpar	matflt.type (9.2.1.2.7)	Spectral width in refractive index associated with each ray/beam, Matrix of double precision real (nbeams, max_npoints). Time-dependent
length	matflt.type (9.2.1.2.7)	Ray/beam curvilinear length [m], Matrix of double precision real (nbeams, max_npoints). Time-dependent
position	waves_rtposition (9.2.1.3.303)	Ray/beam position
wavevector	waves_rtwavevector (9.2.1.3.304)	Ray/beam wave vector.
polarization	polarization (9.2.1.3.179)	Wave field polarization along the ray/beam.
powerflow	powerflow (9.2.1.3.180)	Power flow along the ray/beam.

Type of: coherentwave:beamtracing (391)

#### 9.2.1.3.49 bezier

Components of the Bezier vectors associated to a node. I WONDER IF THIS IS GENERAL ENOUGH ... WHAT DO WE DO IF A DIFFERENT TYPE OF FINITE ELEMENT IS USED ?

member	type	description
u	matflt.type (9.2.1.2.7)	First Bezier vector components. Matrix(nnode,2)
v	matflt.type (9.2.1.2.7)	Second Bezier vector components. Matrix(nnode,2)
w	matflt.type (9.2.1.2.7)	Third Bezier vector components. Matrix(nnode,2)

Type of: properties:bezier (518)

#### 9.2.1.3.50 boundary

Boundary condition for the transport equation. Time-dependent.

member	type	description
value	vecflt.type (9.2.1.2.9)	Value of the boundary condition (in case flag = 2). Unit depends on type, respectively [1-Wb, 2-A, 3-V]. For type 1 to 3, only the first position in the vector is used. For type 5, all three positions are used, meaning respectively a1, a2, a3. Time-dependent. Vector(3).
source	string (9.2.1.1.3)	Source of the boundary condition (any comment describing its origin : code, path to diagnostic signals, massaging); String
type	integer (9.2.1.1.2)	Type of the boundary condition for the transport solver (in case flag = 2). 0- equation not solved; 1- edge value of poloidal flux; 2- total current inside boundary; 3- edge Vloop; 4- not defined; 5- generic boundary condition expressed as $a1*(dpsi.drho.tor)+a2*psi=a3$ . Time-dependent. Scalar
rho	float (9.2.1.1.1)	Position of the boundary condition (in terms of toroidal flux coordinate) for the transport solver [m]. Outside this boundary, the value of the data are considered to be prescribed. Scalar
codeparam	codeparam (9.2.1.3.56)	Code parameters

Type of: psi:boundary (519)

### 9.2.1.3.51 boundary\_neutrals

Structure for the boundary condition of core transport equations (neutrals). Time-dependent;

member	type	description
value	array3dflt.type (9.2.1.2.1)	Value of the boundary condition. Unit depends on type, respectively [1-field, 2-field.m <sup>-1</sup> , 3-m, 4-field.s <sup>-1</sup> ]. For type 1 to 4, only the first position in the vector is used. For type 5, all three positions are used, meaning respectively a1, a2, a3. Time-dependent. Array3D(3,nneut,max_ntype)
type	matint.type (9.2.1.2.8)	Type of the boundary condition for the transport solver. 0- equation not solved; 1- value of the field y; 2-radial derivative of the field (-dy/drho.tor); 3-scale length of the field y/(-dy/drho.tor); 4- flux; 5- generic boundary condition y expressed as $a1y'+a2y=a3$ . Time-dependent. Matrix(nneut,max_ntype)
rho.tor	matint.type (9.2.1.2.8)	Position of the boundary condition (in terms of toroidal flux coordinate) for the transport solver [m]. Outside this boundary, the value of the data are considered to be prescribed. Time-dependent. Matrix(nneut,max_ntype).

Type of: corefieldneutral:boundary (397) | corefieldneutrals:boundary (398) | corefieldneutralv:boundary (399)

### 9.2.1.3.52 boundaryel

Structure for the boundary condition of core transport equations (electrons) Time-dependent;

member	type	description
value	vecflt.type (9.2.1.2.9)	Value of the boundary condition (in case flag = 2). Unit depends on type, respectively [1-field, 2-field.m <sup>-1</sup> , 3-m, 4-field.s <sup>-1</sup> ]. For type 1 to 4, only the first position in the vector is used. For type 5, all three positions are used, meaning respectively a1, a2, a3. Time-dependent. Vector(3).
source	string (9.2.1.1.3)	Source of the boundary condition (any comment describing its origin : code, path to diagnostic signals, massaging); String
type	integer (9.2.1.1.2)	Type of the boundary condition for the transport solver (in case flag = 2). 0- equation not solved; 1- value of the field y; 2-radial derivative of the field (-dy/drho.tor); 3-scale length of the field y/(-dy/drho.tor); 4- flux; 5- generic boundary condition y expressed as $a1y'+a2y=a3$ . Time-dependent. Scalar
rho.tor	float (9.2.1.1.1)	Position of the boundary condition (in terms of toroidal flux coordinate) for the transport solver [m]. Outside this boundary, the value of the data are considered to be prescribed. Time-dependent. Scalar

Type of: corefield:boundary (395)

### 9.2.1.3.53 boundaryimp

Structure for the boundary condition of core transport equations (impurities) Time-dependent

member	type	description
value	array3dflt.type (9.2.1.2.1)	Value of the boundary condition (in case flag = 2). Unit depends on type, respectively [1-field, 2-field.m <sup>-1</sup> , 3-m, 4-field.s <sup>-1</sup> ]. For type 1 to 4, only the first position in the first dimension is used. For type 5, all three positions are used, meaning respectively a1, a2, a3. Time-dependent. Array 3D (3,nimp,max_nzimp)
source	vecstring.type (9.2.1.2.11)	Source of the boundary condition (any comment describing its origin : code, path to diagnostic signals, massaging); Array of strings (nimp)
type	matint.type (9.2.1.2.8)	Type of the boundary condition for the transport solver (in case flag = 2). 0- equation not solved; 1- value of the field y; 2-radial derivative of the field (-dy/drho.tor); 3-scale length of the field y/(-dy/drho.tor); 4- flux; 5- generic boundary condition y expressed as $a1y'+a2y=a3$ . Time-dependent. Matrix(nimp,max_nzimp)

member	type	description
rho	matflt.type (9.2.1.2.7)	Position of the boundary condition (in terms of toroidal flux coordinate) for the transport solver [m]. Outside this boundary, the value of the data are considered to be prescribed. Time-dependent. Matrix(nimp,max_nzimp)
codeparam	codeparam (9.2.1.3.56)	Code parameters

Type of: coreimpur:boundary (339)

#### 9.2.1.3.54 boundaryion

Structure for the boundary condition of core transport equations (ions) Time-dependent

member	type	description
value	matflt.type (9.2.1.2.7)	Value of the boundary condition (in case flag = 2). Unit depends on type, respectively [1-field, 2-field.m <sup>-1</sup> , 3-m, 4-field.s <sup>-1</sup> ]. For type 1 to 4, only the first position in the first dimension is used. For type 5, all three positions are used, meaning respectively a1, a2, a3. Time-dependent. Matrix(3,nion)
source	vecstring.type (9.2.1.2.11)	Source of the boundary condition (any comment describing its origin : code, path to diagnostic signals, massaging); Array of strings (nion)
type	vecint.type (9.2.1.2.10)	Type of the boundary condition for the transport solver (in case flag = 2). 0- equation not solved; 1- value of the field y; 2-radial derivative of the field (-dy/drho_tor); 3-scale length of the field y/(-dy/drho_tor); 4- flux; 5- generic boundary condition y expressed as aly'+a2y=a3. Time-dependent. Vector(nion)
rho_tor	vecflt.type (9.2.1.2.9)	Position of the boundary condition (in terms of toroidal flux coordinate) for the transport solver [m]. Outside this boundary, the value of the data are considered to be prescribed. Time-dependent. Vector(nion)

Type of: corefieldion:boundary (396)

#### 9.2.1.3.55 bpol\_probes

Poloidal field probes

member	type	description
setup_bprobe	setup_bprobe (9.2.1.3.246)	diagnostic setup information
measure	exp1D (9.2.1.3.113)	Measured value [T]; Time-dependent; Vector (nprobes)

Type of: magdiag:bpol\_probes (354)

#### 9.2.1.3.56 codeparam

Code parameters

member	type	description
codename	string (9.2.1.1.3)	Name of the code
codeversion	string (9.2.1.1.3)	Version of the code (as in the ITM repository)
parameters	string (9.2.1.1.3)	List of the code specific parameters, string expected to be in XML format.
output.diag	string (9.2.1.1.3)	List of the code specific diagnostic/output, string expected to be in XML format.
output.flag	integer (9.2.1.1.2)	Output flag : 0 means the run is successful, other values meaning some difficulty has been encountered, the exact meaning is then code specific. Negative values mean the result shall not be used. Exact rules could discussed and implemented in the module wrapper. Time-dependent.

Type of: antennas:codeparam (337) | boundary:codeparam (383) | boundaryimp:codeparam (386) | coherent-wave:codeparam (391) | coredelta:codeparam (338) | corefield:codeparam (395) | corefieldion:codeparam (396) | coreimpur:codeparam (339) | coreneutrals:codeparam (340) | coreprof:codeparam (341) | coresource:codeparam (342) | coretransp:codeparam (343) | distribution:codeparam (345) | distsource:codeparam (346) | edge:codeparam (348) | equilibrium:codeparam (349) | flush:codeparam (449) | launches:codeparam (352) | mhd:codeparam (355) | nbi:codeparam (357) | neoclassic:codeparam (358) | orbit:codeparam (359) | psi:codeparam (519) | saw-teeth:codeparam (363) | scenario:codeparam (364) | turbulence:codeparam (369) | waves:codeparam (371)

#### 9.2.1.3.57 coefficients\_neutrals

Recycling and sputtering coefficients used by the neutral solver. The nion index refers to the various ions (and charge states) considered in the simulation. The ion list is deduced from the composition%atomlist. Nion =

sum(composition%atomlist%zn). Example, if D and C atoms are declared in the atomlist (in this order), nion would be equal to 7, representing D+,C+,C2+,C3+,C4+,C5+,C6+

member	type	description
recycling	recycling_neutrals (9.2.1.3.189)	Recycling coefficients
sputtering	sputtering_neutrals (9.2.1.3.262)	Sputtering coefficients

Type of: coreneutrals:coefficients (340)

### 9.2.1.3.58 coherentwave

Wave description for each frequency. Time-dependent. Structure array(nfreq)

member	type	description
composition	composition (9.2.1.3.59)	Plasma composition (description of ion species).
global_param	waves_global_param (9.2.1.3.298)	Global wave deposition parameters
grid_1d	waves_grid_1d (9.2.1.3.299)	Grid points for 1D profiles.
grid_2d	waves_grid_2d (9.2.1.3.300)	Grid points for 2D profiles and for full wave solutions.
profiles_1d	waves_profiles_1d (9.2.1.3.301)	1D radial profiles
profiles_2d	waves_profiles_2d (9.2.1.3.302)	2D profiles in poloidal cross-section
beamtracing	beamtracing (9.2.1.3.48)	Beam-tracing or ray-tracing solver
fullwave	fullwave (9.2.1.3.121)	Solution by full wave code
codeparam	codeparam (9.2.1.3.56)	Code parameters

Type of: waves:coherentwave (371)

### 9.2.1.3.59 composition

Plasma composition (description of ion species).

member	type	description
amn	vecflt_type (9.2.1.2.9)	Atomic mass number (lumped ions are allowed); Vector (nion)
zn	vecflt_type (9.2.1.2.9)	Nuclear charge (lumped ions are allowed); Vector (nion)
zion	vecflt_type (9.2.1.2.9)	Ion charge (of the dominant ionisation state; lumped ions are allowed); Vector (nion)
imp_flag	vecint_type (9.2.1.2.10)	Multiple charge state calculation flag : 0-Only one charge state is considered; 1-Multiple charge state are considered and are described in impurity CPO; Vector (nion)

Type of: coherentwave:composition (391) I coredelta:composition (338) I coreprof:composition (341) I core-source:composition (342) I coretransp:composition (343) I distribution:composition (345) I distsource:composition (346) I neoclassic:composition (358) I sawteeth:composition (363) I turbulence:composition (369)

### 9.2.1.3.60 composition\_neutrals

Description of neutrals species

member	type	description
atomlist	atomlist (9.2.1.3.45)	List of the atoms that enter the composition of the neutral species
neutrallist	neutrallist (9.2.1.3.159)	Definition of neutral species
typelist	typelist (9.2.1.3.296)	Definition of types for each neutral species

Type of: coreneutrals:composition (340)

### 9.2.1.3.61 coord\_sys

flux surface coordinate system on a square grid of flux and angle



member	type	description
grid_type	string (9.2.1.1.3)	Type of coordinate system
grid	reggrid (9.2.1.3.211)	Regular grid definition; Time-dependent
jacobian	matflt_type (9.2.1.2.7)	Jacobian of the coordinate system; Time-dependent; Matrix (ndim1, ndim2)
g_11	matflt_type (9.2.1.2.7)	metric coefficients g_11; Time-dependent; Matrix (ndim1, ndim2)
g_12	matflt_type (9.2.1.2.7)	metric coefficients g_12; Time-dependent; Matrix (ndim1, ndim2)
g_13	matflt_type (9.2.1.2.7)	metric coefficients g_13; Time-dependent; Matrix (ndim1, ndim2)
g_22	matflt_type (9.2.1.2.7)	metric coefficients g_22; Time-dependent; Matrix (ndim1, ndim2)
g_23	matflt_type (9.2.1.2.7)	metric coefficients g_23; Time-dependent; Matrix (ndim1, ndim2)
g_33	matflt_type (9.2.1.2.7)	metric coefficients g_33; Time-dependent; Matrix (ndim1, ndim2)
position	rz2D (9.2.1.3.216)	R and Z position of grid points; Time-dependent; Matrix (ndim1, ndim2)

Type of: equilibrium:coord\_sys (349) I mhd\_plasma:coord\_sys (486) I mhd\_vaccum:coord\_sys (487)

### 9.2.1.3.62 corefield

Structure for a main field of core transport equations; Time-dependent;

member	type	description
value	vecflt_type (9.2.1.2.9)	Signal value; Time-dependent; Vector (nrho)
derivative	vecflt_type (9.2.1.2.9)	Radial derivative (dvalue/drho_tor) [signal.value.unit.m <sup>-1</sup> ]; Time-dependent; Vector (nrho)
source	string (9.2.1.1.3)	Source of the profile (any comment describing the origin of the profile : code, path to diagnostic signals, massaging, ...); String
flag	integer (9.2.1.1.2)	Flag describing how the profile has been processed : 0-not calculated 1-interpretative; 2-calculated by the transport solver; 3-calculated by a separate code : in that case only, description of the code provided in codeparam at the same level; 4-used value from the previous time step; Time-dependent; Scalar
boundary	boundaryel (9.2.1.3.52)	Boundary condition for the transport equation. Time-dependent.
source_term	sourceel (9.2.1.3.256)	Total source term for the transport equation. Time-dependent.
transp_coef	coretransel (9.2.1.3.70)	Total transport coefficients. Time-dependent.
flux	fluxel (9.2.1.3.118)	Fluxes of the quantity, two definitions. Time-dependent.
time_deriv	vecflt_type (9.2.1.2.9)	Integral of the time derivative term of the transport equation. Time-dependent. Vector (nrho)
codeparam	codeparam (9.2.1.3.56)	Code parameters

Type of: coreprof:ne (341) I coreprof:te (341)

### 9.2.1.3.63 corefieldion

Structure for an ion field of core transport equations; Time-dependent;

member	type	description
value	matflt_type (9.2.1.2.7)	Signal value; Time-dependent; Matrix (nrho,nion)
derivative	matflt_type (9.2.1.2.7)	Radial derivative (dvalue/drho_tor) [signal.value.unit.m <sup>-1</sup> ]; Time-dependent; Matrix (nrho,nion)
source	vecstring_type (9.2.1.2.11)	Source of the profile (any comment describing the origin of the profile : code, path to diagnostic signals, massaging, ...); Array of strings (nion)
flag	vecint_type (9.2.1.2.10)	Flag describing how the profile has been processed : 0-not calculated 1-interpretative; 2-calculated by the transport solver; 3-calculated by a separate code : in that case only, description of the code provided in codeparam at the same level; 4-used value from the previous time step; Time-dependent; Vector(nion)
boundary	boundaryion (9.2.1.3.54)	Boundary condition for the transport equation
source_term	sourceion (9.2.1.3.258)	Total source term for the transport equation. Time-dependent.
transp_coef	coretransion (9.2.1.3.72)	Total transport coefficients. Time-dependent.
flux	fluxion (9.2.1.3.120)	Fluxes of the quantity, two definitions. Time-dependent.
time_deriv	matflt_type (9.2.1.2.7)	Integral of the time derivative term of the transport equation. Time-dependent. Matrix (nrho,nion)
codeparam	codeparam (9.2.1.3.56)	Code parameters

Type of: coreprof:ni (341) I coreprof:ti (341) I coreprof:vtor (341)

### 9.2.1.3.64 corefieldneutral

Structure for a main field of core neutral transport equations; Time-dependent;

member	type	description
value	array3dflt.type (9.2.1.2.1)	Signal value; Array3D(nrho,nneut,max_ntype). Time-dependent
flux	array3dflt.type (9.2.1.2.1)	Net neutral flux through the magnetic surface, positive values correspond to the direction from the center to the edge [ $s^{-1}$ ]. Array3D(nrho,nneut,max_ntype). Time-dependent;
boundary	boundary_neutrals (9.2.1.3.51)	Boundary condition for the transport equation. Time-dependent.

Type of: profiles\_neutrals:n0 (517)

### 9.2.1.3.65 corefieldneutrals

Structure for a main field of core neutral transport equations, (Temperature, with flux as energy); Time-dependent;

member	type	description
value	array3dflt.type (9.2.1.2.1)	Signal value; Array3D(nrho,nneut,max_ntype). Time-dependent
flux	array3dflt.type (9.2.1.2.1)	Net flux of the kinetic energy through the magnetic surface ( $3/2 * E * n * V$ ), positive values correspond to the direction from the center to the edge [W]. Array3D(nrho,nneut,max_ntype). Time-dependent;
boundary	boundary_neutrals (9.2.1.3.51)	Boundary condition for the transport equation. Time-dependent.

Type of: profiles\_neutrals:t0 (517)

### 9.2.1.3.66 corefieldneutralv

Structure for a main field of core neutral transport equations (without flux variable); Time-dependent;

member	type	description
value	array3dflt.type (9.2.1.2.1)	Signal value; Array3D(nrho,nneut,max_ntype)Time-dependent;
boundary	boundary_neutrals (9.2.1.3.51)	Boundary condition for the transport equation. Time-dependent.

Type of: corefieldneutralv0:poloidal (400) I corefieldneutralv0:radial (400) I corefieldneutralv0:toroidal (400)

### 9.2.1.3.67 corefieldneutralv0

Neutral velocity

member	type	description
toroidal	corefieldneutralv (9.2.1.3.66)	Neutral velocity in the toroidal direction [ $m.s^{-1}$ ]. Positive is anti-clockwise when viewed from above. Time-dependent;
poloidal	corefieldneutralv (9.2.1.3.66)	Velocity of neutrals in the poloidal direction. 0 is directed towards low field side, pi is towards high field side. Positive is anti-clockwise when viewed with low field side at the right. [ $m.s^{-1}$ ]. Array3D(nrho,nneut,max_ntype). Time-dependent;
radial	corefieldneutralv (9.2.1.3.66)	Neutral velocity in the radial direction (perpendicular to the magnetic surface), positive is from the centre to the edge [ $m.s^{-1}$ ]. Array3D(nrho,nneut,max_ntype). Time-dependent;

Type of: profiles\_neutrals:v0 (517)

### 9.2.1.3.68 coreprofile

Structure for core plasma profile; Time-dependent

member	type	description
value	vecflt.type (9.2.1.2.9)	Signal value; Time-dependent; Vector (nrho)
source	string (9.2.1.1.3)	Source of the profile (any comment describing the origin of the profile : code, path to diagnostic signals, massaging, ...); String

Type of: profiles1d:bpol (514) I profiles1d:dpsidt (514) I profiles1d:dpsidt\_phi (514) I profiles1d:dvprimedt (514) I profiles1d:e.b (514) I profiles1d:eparallel (514) I profiles1d:jni (514) I profiles1d:joh (514) I profiles1d:jtot (514) I profiles1d:pe (514) I profiles1d:pr\_parallel (514) I profiles1d:pr\_perp (514) I profiles1d:pr\_th (514) I profiles1d:q

(514) I profiles1d:qoh (514) I profiles1d:shear (514) I profiles1d:sigmapar (514) I profiles1d:vloop (514) I profiles1d:zeff (514) I psi:sigma\_par (519)

### 9.2.1.3.69 coreprofion

Structure for core plasma ion profile; Time-dependent

member	type	description
value	matflt.type (9.2.1.2.7)	Signal value; Time-dependent; Vector (nrho,nion)
source	vecstring.type (9.2.1.2.11)	Source of the profile (any comment describing the origin of the profile : code, path to diagnostic signals, massaging, ...); Array of strings (nion)

Type of: profiles1d:mtor (514) I profiles1d:ns (514) I profiles1d:pi (514) I profiles1d:wtor (514)

### 9.2.1.3.70 coretransel

Structure for the transport coefficients for the transport equation (electrons). Time-dependent;

member	type	description
diff	vecflt.type (9.2.1.2.9)	Diffusion coefficient [ $m^{-2}.s^{-1}$ ]. Time-dependent; Vector (nrho)
vconv	vecflt.type (9.2.1.2.9)	Convection coefficient [ $m.s^{-1}$ ]. Time-dependent; Vector (nrho)
source	string (9.2.1.1.3)	Source of the profile (any comment describing the origin of the profile : code, path to diagnostic signals, massaging, ...); String

Type of: corefield:transp\_coef (395)

### 9.2.1.3.71 coretransimp

Structure for the transport coefficients for the transport equation (impurities). Time-dependent;

member	type	description
diff	array3dflt.type (9.2.1.2.1)	Diffusion coefficient [ $m^{-2}.s^{-1}$ ]. Time-dependent; Array3D(nrho,nimp,max_nzimp)
vconv	array3dflt.type (9.2.1.2.1)	Convection coefficient [ $m.s^{-1}$ ]. Time-dependent; Array3D(nrho,nimp,max_nzimp)
source	vecstring.type (9.2.1.2.11)	Source of the profile (any comment describing the origin of the impurity profiles : code, path to diagnostic signals, massaging, ...); Array of strings (nimp)

Type of: coreimpur:transp\_coef (339)

### 9.2.1.3.72 coretransion

Structure for the transport coefficients for the transport equation (ions). Time-dependent;

member	type	description
diff	matflt.type (9.2.1.2.7)	Diffusion coefficient [ $m^{-2}.s^{-1}$ ]. Time-dependent; Matrix (nrho,nion)
vconv	matflt.type (9.2.1.2.7)	Convection coefficient [ $m.s^{-1}$ ]. Time-dependent; Matrix (nrho,nion)
source	vecstring.type (9.2.1.2.11)	Source of the profile (any comment describing the origin of the profile : code, path to diagnostic signals, massaging, ...); Array of strings (nion)

Type of: corefieldion:transp\_coef (396)

### 9.2.1.3.73 cxmeasure

Measured values

member	type	description
ti	exp1D (9.2.1.3.113)	Ion temperature [eV]. Vector (nchannels)
vtor	exp1D (9.2.1.3.113)	Toroidal velocity [m/s]. Vector (nchannels)
vpol	exp1D (9.2.1.3.113)	Poloidal velocity [m/s]. Vector (nchannels)

Type of: cxdiag:measure (344)

### 9.2.1.3.74 cxsetup

diagnostic setup information

member	type	description
position	rzphiIDexp (9.2.1.3.219)	Position of the measurement. Time-dependent. Vector (nchannels)

Type of: cxdiag:setup (344)

### 9.2.1.3.75 datainfo

Generic information on a data item

member	type	description
dataproducer	string (9.2.1.1.3)	Name of the actual data provider (the person who filled the data)
putdate	string (9.2.1.1.3)	Date at which the data has been put in the DB
source	string (9.2.1.1.3)	Exact reference of the data source (e.g. original reference in the native machine data base)
comment	string (9.2.1.1.3)	Any additional comment
isref	integer (9.2.1.1.2)	1 if the data can be found in the present data base entry; 2 if the data can be found in a parent data base entry; 0 if no data consistent with the present entry can be found.
whatref	whatref (9.2.1.3.305)	Structure defining a database entry and the CPO occurrence
putinfo	putinfo (9.2.1.3.187)	Level 2 information describing how to retrieve the actual data for the UAL. Not to be filled/used by the ITM user !

Type of: amns:datainfo (336) I antennas:datainfo (337) I coredelta:datainfo (338) I coreimpur:datainfo (339) I coreneutrals:datainfo (340) I coreprof:datainfo (341) I coresource:datainfo (342) I coretransp:datainfo (343) I cxdiag:datainfo (344) I distribution:datainfo (345) I distsource:datainfo (346) I ecediag:datainfo (347) I edge:datainfo (348) I equilibrium:datainfo (349) I flush:datainfo (449) I ironmodel:datainfo (351) I launches:datainfo (352) I limiter:datainfo (353) I lineintegraldiag:datainfo (480) I magdiag:datainfo (354) I mhd:datainfo (355) I mse-diag:datainfo (356) I nbi:datainfo (357) I neoclassic:datainfo (358) I orbit:datainfo (359) I pfsystems:datainfo (360) I reference:datainfo (362) I sawteeth:datainfo (363) I scenario:datainfo (364) I summary:datainfo (365) I toroidfield:datainfo (367) I tsdiag:datainfo (368) I turbulence:datainfo (369) I vessel:datainfo (370) I waves:datainfo (371)

### 9.2.1.3.76 desc\_impur

Description of the impurities (list of ion species and possibly different charge states)

member	type	description
amn	vecflt_type (9.2.1.2.9)	Atomic mass number of the impurity; Vector (nimp)
zn	vecint_type (9.2.1.2.10)	Nuclear charge of the impurity; Vector (nimp)
i_ion	vecint_type (9.2.1.2.10)	Index of the impurity species in the coreprof ion species ordering. Vector (nimp)
nzimp	vecint_type (9.2.1.2.10)	Number of charge states (or bundles) considered for each impurity species. Vector (nimp)
zmin	matint_type (9.2.1.2.8)	Minimum Z of impurity ionisation state bundle. Matrix (nimp,max.nzimp)
zmax	matint_type (9.2.1.2.8)	Maximum Z of impurity ionisation state bundle. If no bundle, zmax=zmin. Matrix (nimp,max.nzimp)

Type of: coreimpur:desc\_impur (339) I edge:desc\_impur (348)

### 9.2.1.3.77 desc\_iron

Description of the iron segments

member	type	description
name	vecstring_type (9.2.1.2.11)	Name of circuit. Array of strings (ncircuit).
id	vecstring_type (9.2.1.2.11)	ID of circuit. Array of strings (ncircuit).
permeability	permeability (9.2.1.3.168)	Permeability model (can be different for each iron segment)
geom_iron	geom_iron (9.2.1.3.122)	Geometry of the iron segments

Type of: ironmodel:desc\_iron (351)

### 9.2.1.3.78 desc\_pfcoils

Description of the coils

member	type	description
name	vecstring_type (9.2.1.2.11)	Name of coil. Array of strings (ncoils)
id	vecstring_type (9.2.1.2.11)	ID of coil. Array of strings (ncoils)
res	vecflt_type (9.2.1.2.9)	Coil resistance [Ohm]; Vector (ncoils)
emax	vecflt_type (9.2.1.2.9)	Maximum Energy to be dissipated in coils [J]; Vector (ncoils)
nelement	vecint_type (9.2.1.2.10)	Number of elements used to describe a coil; Vector (ncoils)
pfelement	pfelement (9.2.1.3.171)	Axisymmetric conductor description

Type of: pfcoils:desc\_pfcoils (503)

### 9.2.1.3.79 desc\_supply

Description of the power supplies

member	type	description
name	vecstring_type (9.2.1.2.11)	Name of the supply; Array of strings (nsupplies)
id	vecstring_type (9.2.1.2.11)	ID of the supply; Array of strings (nsupplies)
type	vecstring_type (9.2.1.2.11)	Type of supply; Array of strings (nsupplies)
delay	vecflt_type (9.2.1.2.9)	Pure delay in the supply [s]; Vector (nsupplies)
filter	filter (9.2.1.3.115)	Laplace proper filter
imin	vecflt_type (9.2.1.2.9)	Minimum current [A]; Vector (nsupplies)
imax	vecflt_type (9.2.1.2.9)	Maximum current [A]; Vector (nsupplies)
res	vecflt_type (9.2.1.2.9)	Supply internal resistance [Ohm]; Vector (nsupplies)
umin	vecflt_type (9.2.1.2.9)	Minimum voltage [V]; Vector (nsupplies)
umax	vecflt_type (9.2.1.2.9)	Maximum voltage [V]; Vector (nsupplies)
emax	vecflt_type (9.2.1.2.9)	Maximum Energy to be dissipated in supply [J]; Vector (nsupplies)

Type of: pfsupplies:desc\_supply (508)

### 9.2.1.3.80 dist\_ff

Orbit averaged (or Bounce averaged) zero order distribution function.

member	type	description
grid_type	vecint_type (9.2.1.2.10)	Type of grid. Vector (ndist_spec).
grid	dist_grid (9.2.1.3.84)	Grid on which the distribution function is calculated.
value	array4dfilt_type (9.2.1.2.3)	Orbit (or bounce) averaged distribution function given on a grid [1/m <sup>3</sup> (m/s) <sup>-3</sup> ]; Time-dependent; array 4d(ndist_spec, max_ndim1, max_ndim2, max_ndim3).

Type of: dist\_func:f0 (414) I dist\_func:fullf (414)

### 9.2.1.3.81 dist\_func

Distribution functions

member	type	description
sol_type	vecint_type (9.2.1.2.10)	Solution type: 1 - full-f; 2 - delta-f. For the latter case delta-f is given by the test particles and the unperturbed distribution by the f0 branch; Vector(ndist_spec)
test_part	dist_test_part (9.2.1.3.100)	Distribution given as a set of test particles.
f0	dist_ff (9.2.1.3.80)	Orbit averaged (or Bounce averaged) zero order distribution function.
fullf	dist_ff (9.2.1.3.80)	Orbit averaged (or Bounce averaged) full-f distribution function.

Type of: distribution:dist\_func (345)

### 9.2.1.3.82 dist\_glob

Global parameters (in most cases volume integrated and surface averaged quantities).

member	type	description
enrg	vecflt.type (9.2.1.2.9)	Energy content of of a distribution species [J]; Time-dependent; Vector(ndist_spec)
enrg_para	vecflt.type (9.2.1.2.9)	Parallel energy content of of a distribution species [J] Time-dependent; Vector(ndist_spec)
pow_coll_i	matflt.type (9.2.1.2.7)	Collisional power to ions [W]; Time-dependent; Matrix(ndist_spec, nion)
pow_coll_e	vecflt.type (9.2.1.2.9)	Collisional power to the electrons [W]; Time-dependent; Vector(ndist_spec)
therm_src	dist_src.snk.tot (9.2.1.3.98)	Source particles and power due to particles of the distribution species being thermalised (merging into the thermal plasma).
losses	dist_glob_dist.losses (9.2.1.3.83)	Losses of the distribution species (orbit losses and neutralisation losses).
cur_dr_tor	vecflt.type (9.2.1.2.9)	Toroidal current of non-thermal particles (excluding electron back current for fast ions) [A]; Time-dependent; Vector(ndist_spec).
trq_i	matflt.type (9.2.1.2.7)	Collisional torque to background ions [N.m]; Time dependent; Matrix (ndist_spec, nion)
trq_e	vecflt.type (9.2.1.2.9)	Collisional torque to electrons [N.m]; Time dependent; Vector(ndist_spec)
trq_j_rxb	vecflt.type (9.2.1.2.9)	Torque due to radial currents of non-thermal particles [N.m]; Time-dependent; Vector(ndist_spec).
nucl_reac.th	dist_nucl_reac.th (9.2.1.3.88)	Nuclear reactions between the calculated species and other species assumed to have thermal distributions.
nucl_reac.sf	dist_nucl_reac.sf (9.2.1.3.87)	Nuclear reactions of the calculated species with itself (thermal + non-thermal).

Type of: distribution:global\_param (345)

### 9.2.1.3.83 dist\_glob\_dist.losses

Losses of the distribution species (orbit losses and neutralisation losses).

member	type	description
orb_loss	dist_src.snk.tot (9.2.1.3.98)	Losses due to orbits intersecting a material surface.
neutr_loss	dist_src.snk.tot (9.2.1.3.98)	Losses due to neutralisation of distribution ions (charge exchange etc.)

Type of: dist\_glob:losses (415)

### 9.2.1.3.84 dist\_grid

Grid on which the distribution function is calculated.

member	type	description
dim1	matflt.type (9.2.1.2.7)	First dimension in phase space; Time-dependent; Matrix (ndist_spec, max_ndim1).
ndim1	vecint.type (9.2.1.2.10)	Size of the first dimension in phase space, for each species; Vector (ndist_spec).
dim2	matflt.type (9.2.1.2.7)	Second dimension in phase space; Time-dependent; Matrix (ndist_spec, max_ndim2).
ndim2	vecint.type (9.2.1.2.10)	Size of the second dimension in phase space, for each species; Vector (ndist_spec).
dim3	matflt.type (9.2.1.2.7)	Third dimension in phase space; Time-dependent; Matrix (ndist_spec, max_ndim3).
ndim3	vecint.type (9.2.1.2.10)	Size of the third dimension in phase space, for each species; Vector (ndist_spec).
jacobian	array4dflt.type (9.2.1.2.3)	Jacobian of the transformation of the phase space grid variables; Time-dependent; Array4d(ndist_spec, max_ndim1, max_ndim2, max_ndim3).

Type of: dist\_ff:grid (413)

### 9.2.1.3.85 dist\_input\_src

Input sources of particles and power for the distribution species (to aid diagnosing the code output).

member	type	description
particle_src	dist_particle_src (9.2.1.3.89)	Particle source
wave_src	dist_wave_src (9.2.1.3.101)	Auxiliary wave absorbed by the distribution species

Type of: distribution:input\_src (345)

### 9.2.1.3.86 dist\_nucl\_reac

Information on nuclear reactions involving the calculated species.

member	type	description
nreacs	vecint.type (9.2.1.2.10)	Number of possible nuclear reactions (with background species and for different branches); Vector(ndist_spec)
point_reac	matint.type (9.2.1.2.8)	Pointer to a species in composition who can undergo a nuclear reaction with the calculated species; Matrix(ndist_spec, max_nreac)
id_reac	matint.type (9.2.1.2.8)	Identification of the reaction between the calculated species and a background species (including which branch if applicable); Time-dependent; integer matrix(ndist_spec, max_nreac). Table defining the index of reactions to be provided.

Type of: distribution:nucl\_reac (345)

### 9.2.1.3.87 dist\_nucl\_reac\_sf

Nuclear reactions of the calculated species with itself (thermal + non-thermal).

member	type	description
rate	vecflt.type (9.2.1.2.9)	Reaction rate [1/s]; Time-dependent; Vector (ndist_spec)
power	vecflt.type (9.2.1.2.9)	Fusion reaction power[W]; Time-dependent; Vector (ndist_spec)

Type of: dist\_glob:nucl\_reac\_sf (415)

### 9.2.1.3.88 dist\_nucl\_reac\_th

Nuclear reactions between the calculated species and other species assumed to have thermal distributions.

member	type	description
rate	matflt.type (9.2.1.2.7)	Reaction rate [1/s]; Time-dependent; Matrix (ndist_spec, max_nreac)
power	matflt.type (9.2.1.2.7)	Fusion reaction power[W]; Time-dependent; Matrix(ndist_spec, max_nreac)

Type of: dist\_glob:nucl\_reac\_th (415)

### 9.2.1.3.89 dist\_particle\_src

Particle source

member	type	description
total	dist_src.snk_tot (9.2.1.3.98)	Total source of particles and power (NBI, fusion products, pellets etc.)
volume_intgr	dist_src.snk_vol (9.2.1.3.99)	Volume integrated source of particles and power (NBI, fusion products, pellets etc.)
flux_surf_av	dist_src.snk_surf (9.2.1.3.97)	Flux surface averaged source of particles and power (NBI, fusion products, pellets etc.)

Type of: dist\_input\_src:particle\_src (418)

### 9.2.1.3.90 dist\_prof\_surf\_dist\_losses

Losses of the distribution species.

member	type	description
orb_loss	dist_src.snk_surf (9.2.1.3.97)	Losses due to orbits intersecting a material surface.
neutr_loss	dist_src.snk_surf (9.2.1.3.97)	Losses due to neutralised ions, e.g. due to charge exchange events.

Type of: dist\_profiles:lossesd (429)

### 9.2.1.3.91 dist\_prof\_surf\_nucl\_reac\_sf

Nuclear reactions of the calculated species with itself (thermal + non-thermal).

member	type	description
rate	matflt.type (9.2.1.2.7)	Reaction rate [ $s^{-1}.m^{-3}$ ]; Time-dependent; Matrix (ndist_spec, max_npsi)
power	matflt.type (9.2.1.2.7)	Fusion reaction power [ $W.m^{-3}$ ]; Time-dependent; Matrix (ndist_spec, max_npsi)

Type of: dist\_profiles:nucl\_rd\_sf (429)

### 9.2.1.3.92 dist\_prof\_surf\_nucl\_reac\_th

Nuclear reactions between the calculated species and other species assumed to have thermal distributions.

member	type	description
rated	array3dflt.type (9.2.1.2.1)	Reaction rate [ $s^{-1}.m^{-3}$ ]; Time dependent; Array3d(ndist_spec, nreac_max, max_npsi)
powerd	array3dflt.type (9.2.1.2.1)	Nuclear reaction power density [ $W.m^{-3}$ ]; Time dependent; Array3d(ndist_spec, nreac_max, max_npsi)

Type of: dist\_profiles:nucl\_rd.th (429)

### 9.2.1.3.93 dist\_prof\_vol\_dist\_losses

Losses of the distribution species.

member	type	description
orb_loss	dist_src_snk_vol (9.2.1.3.99)	Losses due to orbits intersecting a material surface.
neutr_loss	dist_src_snk_vol (9.2.1.3.99)	Losses due to neutralised ions, e.g. due to charge exchange events.

Type of: dist\_profiles:losses (429)

### 9.2.1.3.94 dist\_prof\_vol\_nucl\_reac\_sf

Nuclear reactions of the calculated species with itself (thermal + non-thermal).

member	type	description
rate	matflt.type (9.2.1.2.7)	Reaction rate [1/s]; Time-dependent; Matrix (ndist_spec, max_npsi)
power	matflt.type (9.2.1.2.7)	Fusion reaction power[W]; Time-dependent; Matrix (ndist_spec, max_npsi)

Type of: dist\_profiles:nucl\_reac\_sf (429)

### 9.2.1.3.95 dist\_prof\_vol\_nucl\_reac\_th

Nuclear reactions between the calculated species and other species assumed to have thermal distributions.

member	type	description
rate	array3dflt.type (9.2.1.2.1)	Reaction rate [1/s]; Time-dependent; Array3D (ndist_spec, max_nreac, max_npsi)
power	array3dflt.type (9.2.1.2.1)	Fusion reaction power[W]; Time-dependent; Array3D(ndist_spec, max_nreac, max_npsi)

Type of: dist\_profiles:nucl\_reac.th (429)

### 9.2.1.3.96 dist\_profiles

Profiles (volume integrated and flux surface averaged)

member	type	description
npsi	vecint.type (9.2.1.2.10)	Number of points of the radial grid for each species. Vector(ndist_spec)
rho_tor_norm	matflt.type (9.2.1.2.7)	Normalised toroidal flux coordinate at the grid points for 1D profiles; Time-dependent; matrix (ndist_spec, max_npsi)
rho_tor	matflt.type (9.2.1.2.7)	Toroidal flux coordinate at the grid points for 1D profiles [m]. Defined as $\sqrt{\phi/\pi/B_0}$ , where $B_0 = \text{equilibrium/global\_param/toroid\_field}/b_0$ . Time-dependent; matrix (ndist_spec, max_npsi)
psi	matflt.type (9.2.1.2.7)	Poloidal flux at the grid points for 1D profiles [Wb], without $1/2\pi$ and such that $B_p =  \text{grad } \psi  / R/2/\pi$ . Time-dependent; matrix (ndist_spec, max_npsi)
enrgd_tot	matflt.type (9.2.1.2.7)	Flux surface averaged energy density of a distribution species [ $J/m^3$ ]; Time-dependent; Matrix(ndist_spec, max_npsi)
enrgd_para	matflt.type (9.2.1.2.7)	Flux surface averaged parallel energy density of a distribution species [ $J/m^3$ ] Time-dependent; Matrix(ndist_spec, max_npsi).
powd_coll_i	array3dflt.type (9.2.1.2.1)	Flux surface averaged collisional power to ions [ $W.m^{-3}$ ]; Time-dependent; Array3d(ndist_spec, nion, max_npsi)
powd_coll_e	matflt.type (9.2.1.2.7)	Flux surface averaged collisional power to the electrons [ $W.m^{-3}$ ]; Time-dependent; Matrix(ndist_spec, max_npsi)
therm_srcd	dist_src_snk_surf (9.2.1.3.97)	Flux surface averaged source of particles and power due to particles of the distribution species being thermalised (merging into the thermal plasma).



member	type	description
lossesd	dist_prof_surf_dist.losses (9.2.1.3.90)	Particle loss densities due to charge exchange events with neutrals or orbits intersecting material surfaces.
curd_fp	matflt.type (9.2.1.2.7)	Flux surface averaged toroidal current density of non-thermal (fast) particles of the distribution species (excluding electron back current for fast ions) [ $A.m^{-2}$ ]; Time-dependent; Matrix(ndist_spec, max_npsi).
curd_dr	vecflt.type (9.2.1.2.9)	Total toroidal driven current density (including electron back current in the presence of fast ions) [A]; Time-dependent; Matrix(ndist_spec, max_npsi)
trqd_i	array3dflt.type (9.2.1.2.1)	Flux surface averaged collisional toroidal torque to background ions [ $N.m^{-2}$ ]; Time dependent; Array3d (ndist_spec, nion, max_npsi)
trqd_e	matflt.type (9.2.1.2.7)	Flux surface averaged collisional toroidal torque density to electrons [ $N.m^{-2}$ ]; Time dependent; Matrix(ndist_spec, max_npsi)
trqd_jrxb	matflt.type (9.2.1.2.7)	Toroidal torque density due to radial currents of non-thermal particles of the distribution species [ $N.m^{-2}$ ]; Time-dependent; Matrix(ndist_spec, max_npsi)
nucl_rd.th	dist_prof_surf_nucl_reac.th (9.2.1.3.92)	Nuclear reaction rate densities for reactions between the calculated species and other species assumed to have thermal distributions.
nucl_rd.sf	dist_prof_surf_nucl_reac.sf (9.2.1.3.91)	Nuclear reaction rate densities for reactions of the calculated species with itself (thermal + non-thermal).
enrg_tot	matflt.type (9.2.1.2.7)	Energy content of a distribution species [J] inside a flux surface; Time-dependent; Matrix(ndist_spec, max_npsi)
enrg_para	matflt.type (9.2.1.2.7)	Parallel energy content of a distribution species [J] inside a flux surface; Time-dependent; Matrix(ndist_spec, max_npsi)
pow_coll.i	array3dflt.type (9.2.1.2.1)	Collisional power to ions inside a flux surface [W]; Time-dependent; Array3d(ndist_spec, nion, max_npsi)
pow_coll.e	matflt.type (9.2.1.2.7)	Collisional power to the electrons inside a flux surface [W]; Time-dependent; Matrix(ndist_spec, max_npsi)
therm_src	dist_src_snk_vol (9.2.1.3.99)	Source particles and power inside a flux surface due to particles of the distribution species being thermalised (merging into the thermal plasma).
losses	dist_prof_vol_dist.losses (9.2.1.3.93)	Particle loss inside flux surface due to charge exchange events.
cur_fp	matflt.type (9.2.1.2.7)	Toroidal current of non-thermal (fast) particles driven inside a flux surface (does not include electron back current for fast ions) [A]; Time-dependent; Matrix(ndist_spec, max_npsi)
cur_dr	matflt.type (9.2.1.2.7)	Total toroidal current driven inside a flux surface (including electron back current in the presence of fast ions) [A]; Time-dependent; Matrix(ndist_spec, max_npsi).
trq_i	array3dflt.type (9.2.1.2.1)	Collisional toroidal torque to background ions inside a flux surface [N.m]; Time dependent; Array3d (ndist_spec, nion, max_npsi)
trq_e	matflt.type (9.2.1.2.7)	Collisional toroidal torque to electrons inside a flux surface [N.m]; Time dependent; Matrix(ndist_spec, max_npsi)
trq_j_rxb	matflt.type (9.2.1.2.7)	Toroidal torque due to radial currents of non-thermal particles of the distribution species [N.m]; Time-dependent; Matrix(ndist_spec, max_npsi)
nucl_reac.th	dist_prof_vol_nucl_reac.th (9.2.1.3.95)	Nuclear reactions inside a flux surface involving the distribution species and other species assumed to be thermal.
nucl_reac.sf	dist_prof_vol_nucl_reac.sf (9.2.1.3.94)	Nuclear reactions inside a flux surface of the calculated species with itself (thermal + non-thermal).

Type of: distribution:profiles\_1d (345)

### 9.2.1.3.97 dist\_src\_snk\_surf

Losses due to orbits intersecting a material surface.

member	type	description
particlesd	matflt.type (9.2.1.2.7)	Source/sink particles [ $s^{-1} m^{-3}$ ]; Time-dependendent; Matrix(ndist_spec, max_npsi)
powerd	matflt.type (9.2.1.2.7)	Power density associated with the source/sink of particles [ $W.m^{-3}$ ]; Time-dependent; Matrix(ndist_spec, max_npsi)
torqued	matflt.type (9.2.1.2.7)	Torque density due to the source/sink of particles [ $N.m^{-2}$ ]; Time-dependent; Matrix(ndist_spec, max_npsi)

Type of: dist\_particle\_src:flux\_surf\_av (422) I dist\_prof\_surf\_dist.losses:neutr\_loss (423) I dist\_prof\_surf\_dist.losses:orb\_loss (423) I dist\_profiles:therm\_srcd (429)

### 9.2.1.3.98 dist\_src\_snk\_tot

Source particles and power due to particles of the distribution species being thermalised (merging into the thermal plasma).

member	type	description
particles	vecflt.type (9.2.1.2.9)	Source/sink particles [1/s]; Time-dependendent; Vector(ndist_spec)
power	vecflt.type (9.2.1.2.9)	Power associated with the source/sink of particles [W]; Time-dependent; Vector(ndist_spec)

member	type	description
torque	vecflt.type (9.2.1.2.9)	Torque due to the source/sink of particles [N.m]; Time-dependent; Vector (ndist_spec).

Type of: dist\_glob:therm\_src (415) I dist\_glob\_dist\_losses:neutr\_loss (416) I dist\_glob\_dist\_losses:orb\_loss (416) I dist\_particle\_src:total (422)

### 9.2.1.3.99 dist\_src\_snk\_vol

Losses due to orbits intersecting a material surface.

member	type	description
particles	matflt.type (9.2.1.2.7)	Source/sink particles [1/s]; Time-dependendent; Matrix(ndist_spec, max_npsi)
power	matflt.type (9.2.1.2.7)	Power associated with the source/sink of particles [W]; Time-dependent; Matrix(ndist_spec, max_npsi)
torque	matflt.type (9.2.1.2.7)	Torque due to the source/sink of particles [N.m]; Time-dependent; Matrix (ndist_spec, max_npsi)

Type of: dist\_particle\_src:volume\_intgr (422) I dist\_prof\_vol\_dist\_losses:neutr\_loss (426) I dist\_prof\_vol\_dist\_losses:orb\_loss (426) I dist\_profiles:therm\_src (429)

### 9.2.1.3.100 dist\_test\_part

Distribution given as a set of test particles.

member	type	description
nvar	vecflt.type (9.2.1.2.9)	Number of variables associated with a test particle; Vector (ndist_spec)
var_id	matint.type (9.2.1.2.8)	Identification of a variable; Matrix (ndist_spec, 5)
var1	matflt.type (9.2.1.2.7)	Phase space variables one characterising a test particle; Time-dependent; Matrix (ndist_spec, ntpart)
var2	matflt.type (9.2.1.2.7)	Phase space variables two characterising a test particle; Time-dependent; Matrix (ndist_spec, ntpart)
var3	matflt.type (9.2.1.2.7)	Phase space variables three characterising a test particle; Time-dependent; Matrix (ndist_spec, ntpart)
var4	matflt.type (9.2.1.2.7)	Phase space variables four characterising a test particle; Time-dependent; Matrix (ndist_spec, ntpart)
var5	matflt.type (9.2.1.2.7)	Phase space variables five characterising a test particle; Time-dependent; Matrix (ndist_spec, ntpart)
var6	matflt.type (9.2.1.2.7)	Phase space variables six characterising a test particle; Time-dependent; Matrix (ndist_spec, ntpart)
weight	matflt.type (9.2.1.2.7)	Weight of a test particle; Time-dependent; Matrix (ndist_spec, ntpart)

Type of: dist\_func:test\_part (414)

### 9.2.1.3.101 dist\_wave\_src

Auxiliary wave absorbed by the distribution species

member	type	description
type	vecstring.type (9.2.1.2.11)	Wave type (LH, EC, IC, ...), can be a combination of these if several wave types are absorbed by this species. Vector of strings (ndist_spec)
wave_power	vecflt.type (9.2.1.2.9)	Auxiliary wave power absorbed by the distribution species [W]; Time-dependent; Vector (ndist_spec).
wave_powerd	matflt.type (9.2.1.2.7)	Auxiliary flux surface averaged wave power density absorbed by the distribution species [ $W/m^3$ ]; Time-dependent; Matrix (ndist_spec, max_npsi)

Type of: dist\_input\_src:wave\_src (418)

### 9.2.1.3.102 distsource\_global\_param

Global parameters (volume integrated).

member	type	description
src_pow	vecflt.type (9.2.1.2.9)	Total power source [W]; Time-dependent. Vector(nsrc_spec)
src_rate	vecflt.type (9.2.1.2.9)	Particle source rate [1/s]; Time-dependent; Vector(nsrc_spec)

Type of: `distsource:global_param` (346)

### 9.2.1.3.103 `distsource_profiles_1d`

1D radial profiles

member	type	description
<code>npsi</code>	<code>vecint.type</code> (9.2.1.2.10)	Number of points of the radial grid for each species. Vector( <code>nsrc_spec</code> )
<code>rho_tor_norm</code>	<code>matflt.type</code> (9.2.1.2.7)	Normalised toroidal flux coordinate at the grid points for 1D profiles; Time-dependent; Matrix( <code>nsrc_spec</code> , <code>max_npsi</code> )
<code>rho_tor</code>	<code>matflt.type</code> (9.2.1.2.7)	Toroidal flux coordinate at the grid points for 1D profiles [m]. Defined as $\sqrt{\phi/\pi/B_0}$ , where $B_0 = \text{equilibrium}/\text{global\_param}/\text{toroid\_field}/b_0$ . Time-dependent; matrix( <code>nsrc_spec</code> , <code>max_npsi</code> )
<code>psi</code>	<code>matflt.type</code> (9.2.1.2.7)	Poloidal flux at the grid points for 1D profiles [Wb], without $1/2\pi$ and such that $B_p =  \text{grad } \psi  / R/2/\pi$ . Time-dependent; matrix( <code>nsrc_spec</code> , <code>max_npsi</code> )
<code>pow_den</code>	<code>matflt.type</code> (9.2.1.2.7)	Flux surface averaged power density [ $\text{W}/\text{m}^3$ ]; Time-dependent; Matrix( <code>nsrc_spec</code> , <code>max_npsi</code> )
<code>src_rate</code>	<code>matflt.type</code> (9.2.1.2.7)	Flux surface averaged total source density of particles [ $\text{m}^{-3} \text{s}^{-1}$ ]; Time-dependent; Matrix( <code>nsrc_spec</code> , <code>max_npsi</code> )

Type of: `distsource:profiles_1d` (346)

### 9.2.1.3.104 `distsource_rect_grid`

Details of rectangular grids.

member	type	description
<code>ndim1</code>	<code>vecint.type</code> (9.2.1.2.10)	Number of grid points in the first dimension in phase space; vector ( <code>nsrc_spec</code> )
<code>ndim2</code>	<code>vecint.type</code> (9.2.1.2.10)	Number of grid points in the second dimension in phase space; vector ( <code>nsrc_spec</code> )
<code>ndim3</code>	<code>vecint.type</code> (9.2.1.2.10)	Number of grid points in the third dimension in phase space; vector ( <code>nsrc_spec</code> )
<code>ndim4</code>	<code>vecint.type</code> (9.2.1.2.10)	Number of grid points in the fourth dimension in phase space; vector ( <code>nsrc_spec</code> )
<code>dim1</code>	<code>matflt.type</code> (9.2.1.2.7)	Grid in the first dimension in phase space; Time-dependent; matrix( <code>nsrc_spec</code> , <code>max_ndim1</code> )
<code>dim2</code>	<code>matflt.type</code> (9.2.1.2.7)	Grid in the second dimension in phase space; Time-dependent; matrix( <code>nsrc_spec</code> , <code>max_ndim2</code> )
<code>dim3</code>	<code>matflt.type</code> (9.2.1.2.7)	Grid in the third dimension in phase space; Time-dependent; Matrix ( <code>nsrc_spec</code> , <code>max_ndim3</code> )
<code>dim4</code>	<code>matflt.type</code> (9.2.1.2.7)	Grid in the fourth dimension in phase space; Time-dependent; Matrix ( <code>nsrc_spec</code> , <code>max_ndim4</code> )
<code>jacobian</code>	<code>array5dflt.type</code> (9.2.1.2.4)	Jacobian of the transformation of the phase space grid variables; Time-dependent; array5d ( <code>nsrc_spec</code> , <code>max_ndim1</code> , <code>max_ndim2</code> , <code>max_ndim3</code> , <code>max_ndim4</code> )

Type of: `source_4d:rect_grid` (584)

### 9.2.1.3.105 `ecemeasure`

Measured values

member	type	description
<code>te</code>	<code>exp1D</code> (9.2.1.3.113)	Electron temperature [eV]. Vector ( <code>nchannels</code> )

Type of: `ecediag:measure` (347)

### 9.2.1.3.106 `ecesetup`

diagnostic setup information

member	type	description
<code>frequency</code>	<code>vecflt.type</code> (9.2.1.2.9)	Frequency of the ECE channels. Vector ( <code>nchannels</code> )
<code>position</code>	<code>rzphi1Dexp</code> (9.2.1.3.219)	Position of the measurement. Time-dependent. Vector ( <code>nchannels</code> )

Type of: `ecediag:setup` (347)

### 9.2.1.3.107 `entry_def`

Structure defining a database entry

member	type	description
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member	type	description
user	string (9.2.1.1.3)	Name of the user if private data. Value should be ITM if stored in the official common ITM tree
machine	string (9.2.1.1.3)	Name of the device
shot	integer (9.2.1.1.2)	Shot number
run	integer (9.2.1.1.2)	Run number

Type of: mdinfo:md\_entry (485)

### 9.2.1.3.108 eqconstraint

measurements to constrain the equilibrium, output values and accuracy of the fit

member	type	description
bpol	eqmes1D (9.2.1.3.111)	poloidal pickup coils [T]
bvac.r	eqmes0D (9.2.1.3.110)	Vacuum field times radius in the toroidal field magnet [T.m];
faraday	eqmes1D (9.2.1.3.111)	Faraday rotation angles [rad]
flux	eqmes1D (9.2.1.3.111)	Poloidal flux loops [Wb]
i_plasma	eqmes0D (9.2.1.3.110)	Plasma current [A];
isoflux	isoflux (9.2.1.3.142)	Point series at which the flux is considered the same
jsurf	eqmes1D (9.2.1.3.111)	Average of current density on the flux surface [A/m <sup>2</sup> ]
magnet_iron	magnet_iron (9.2.1.3.150)	Magnetisation in iron segments [T]
mse	eqmes1D (9.2.1.3.111)	MSE angles [rad]
ne	eqmes1D (9.2.1.3.111)	Electron density [m <sup>-3</sup> for local measurement, m <sup>-2</sup> if line integrated]
pfcurrent	eqmes1D (9.2.1.3.111)	Current in poloidal field coils [A]
pressure	eqmes1D (9.2.1.3.111)	Total pressure [Pa]
q	q (9.2.1.3.188)	Safety factor
xpts	xpts (9.2.1.3.306)	Position of the X-point(s)

Type of: equilibrium:eqconstraint (349)

### 9.2.1.3.109 eqgeometry

Geometry of the plasma boundary

member	type	description
source	string (9.2.1.1.3)	Comment describing the origin of the eqgeometry data; String
boundarytype	integer (9.2.1.1.2)	0 (limiter) or 1 (separatrix); Integer; Time-dependent
boundary	rz1D_npnts (9.2.1.3.215)	RZ description of the plasma boundary; Time-dependent;
geom_axis	rz0D (9.2.1.3.213)	position of the geometric axis [m]; Time-dependent; Scalar
a_minor	float (9.2.1.1.1)	Minor radius of the plasma boundary [m]; Time-dependent; Scalar
elongation	float (9.2.1.1.1)	Elongation of the plasma boundary; Time-dependent; Scalar
tria_upper	float (9.2.1.1.1)	Upper triangularity of the plasma boundary; Time-dependent; Scalar
tria_lower	float (9.2.1.1.1)	Lower triangularity of the plasma boundary; Time-dependent; Scalar
xpts	rz1D (9.2.1.3.214)	Position of the Xpoints, first is the active xpoint if diverted [m]; Time-dependent; Vector (npoint)
left_low_st	rz0D (9.2.1.3.213)	Position of the lower left strike point [m]; Time-dependent; Scalar
right_low_st	rz0D (9.2.1.3.213)	Position of the lower right strike point [m]; Time-dependent; Scalar
left_up_st	rz0D (9.2.1.3.213)	Position of the upper left strike point [m]; Time-dependent; Scalar
right_up_st	rz0D (9.2.1.3.213)	Position of the upper right strike point [m]; Time-dependent; Scalar
active_limit	rz0D (9.2.1.3.213)	Position of the active limiter point (point of the plasma boundary in contact with the limiter) [m]; Set R = 0 for X-point plasma; Time-dependent; Scalar

Type of: equilibrium:eqgeometry (349) I scenario:eqgeometry (364)

### 9.2.1.3.110 eqmes0D

Structure for equilibrium measurement 0D signal

member	type	description
measured	float (9.2.1.1.1)	Measured value of the signal; Time-dependent; Scalar.
source	string (9.2.1.1.3)	Path to the source signal (diagnostic or genprof, from which to read all info on the signal); String
time	float (9.2.1.1.1)	Time (exact time slice used from the time array of the source signal. If the time slice does not exist in the time array of the source signal, it means linear interpolation has been used); Time-dependent; Scalar.
exact	integer (9.2.1.1.2)	1 means exact data, is not fitted; 0 means the equilibrium code does a least square fit; scalar integer
weight	float (9.2.1.1.1)	weight given to the measurement ( $\zeta=0$ ); Time-dependent; Scalar.
sigma	float (9.2.1.1.1)	standard deviation of the measurement; Time-dependent; Scalar.
calculated	float (9.2.1.1.1)	Signal as recalculated by the equilibrium code; Time-dependent; Scalar.
chi2	float (9.2.1.1.1)	chi <sup>2</sup> of (calculated-measured); Time-dependent; Scalar.

Type of: eqconstraint:bvac\_r (441) I eqconstraint:i\_plasma (441)

### 9.2.1.3.111 eqmes1D

Structure for equilibrium measurement 1D signal

member	type	description
measured	vecflt.type (9.2.1.2.9)	Measured value of the signal; Time-dependent; Array(nmeas)
source	string (9.2.1.1.3)	Path to the source signal (diagnostic or genprof, from which to read all info on the signal), e.g. 'magdiag/bpol_probes/measure/value'. String
time	float (9.2.1.1.1)	Exact time slice used from the time array of the source signal. If the time slice does not exist in the time array of the source signal, it means linear interpolation has been used); Time-dependent; Scalar
exact	vecint.type (9.2.1.2.10)	1 means exact data, is not fitted; 0 means the equilibrium code does a least square fit; Time-dependent; Array(nmeas)
weight	vecflt.type (9.2.1.2.9)	weight given to the measurement ( $\zeta=0$ ); Time-dependent; Array(nmeas)
sigma	vecflt.type (9.2.1.2.9)	standard deviation of the measurement; Time-dependent; Array(nmeas)
calculated	vecflt.type (9.2.1.2.9)	Signal as recalculated by the equilibrium code; Time-dependent; Array(nmeas)
chi2	vecflt.type (9.2.1.2.9)	chi <sup>2</sup> of (calculated-measured); Time-dependent; Array(nmeas)

Type of: eqconstraint:bpol (441) I eqconstraint:faraday (441) I eqconstraint:flux (441) I eqconstraint:jsurf (441) I eqconstraint:mse (441) I eqconstraint:ne (441) I eqconstraint:pfcurrent (441) I eqconstraint:pressure (441) I magnet\_iron:mr (483) I magnet\_iron:mz (483)

### 9.2.1.3.112 exp0D

Structure for experimental time-dependent scalar signal

member	type	description
value	float (9.2.1.1.1)	Signal value; Time-dependent; Scalar
abserror	float (9.2.1.1.1)	Absolute error on signal; Time-dependent; Scalar
relerror	float (9.2.1.1.1)	Relative error on signal (normalised to signal value); Time-dependent; Scalar

Type of: magdiag:diamagflux (354) I magdiag:ip (354) I toroidfield:bvac\_r (367) I toroidfield:current (367)

### 9.2.1.3.113 exp1D

Structure for experimental 1D signal

member	type	description
value	vecflt.type (9.2.1.2.9)	Signal value; Time-dependent; Vector
abserror	vecflt.type (9.2.1.2.9)	Absolute error on signal; Time-dependent; Vector
relerror	vecflt.type (9.2.1.2.9)	Relative error on signal (normalised to signal value); Time-dependent; Vector

Type of: antenna\_ec:power (373) I antenna\_ic:frequency (374) I antenna\_ic:power (374) I antenna\_lh:power (375) I bpol\_probes:measure (388) I cxmeasure:ti (406) I cxmeasure:vpol (406) I cxmeasure:vtor (406) I ecemeasure:te (438) I flux\_loops:measure (450) I lineintegraldiag:measure (480) I magnetise:mr (484) I magnetise:mz (484) I msdiag:measure (356) I nbi:halfe.cfr (357) I nbi:inj\_eng\_unit (357) I nbi:pow\_unit (357) I nbi:thirde.cfr

(357) I pfcoids:coilcurrent (503) I pfcoids:coilvoltage (503) I pfsupplies:current (508) I pfsupplies:voltage (508) I rzphi1Dexp:phi (552) I rzphi1Dexp:r (552) I rzphi1Dexp:z (552) I tsmeasure:ne (618) I tsmeasure:te (618)

#### 9.2.1.3.114 exp2D

Structure for experimental 2D signal

member	type	description
value	matflt.type (9.2.1.2.7)	Signal value; Time-dependent; Matrix
abserror	matflt.type (9.2.1.2.7)	Absolute error on signal; Time-dependent; Matrix
relerror	matflt.type (9.2.1.2.7)	Relative error on signal (normalised to signal value); Time-dependent; Matrix

Type of: modules:amplitude (490) I modules:phase (490) I straps:phase (599)

#### 9.2.1.3.115 filter

Laplace proper filter

member	type	description
num	matflt.type (9.2.1.2.7)	Coefficients of the numerator, in increasing order : $a_0 + a_1*s + \dots + a_n*s^n$ ; Matrix (nsupplies,n)
den	matflt.type (9.2.1.2.7)	Coefficients of the denominator, in increasing order : $b_0 + b_1*s + \dots + b_m*s^m$ ; Matrix (nsupplies,m)

Type of: desc\_supply:filter (412)

#### 9.2.1.3.116 flush

FLUSH package coefficients for the mapping of the equilibrium. The time grid of this structure is the same as the equilibrium structure above.

member	type	description
datainfo	datainfo (9.2.1.3.75)	Generic information on a data item
position	rz1D (9.2.1.3.214)	Major radius and altitude of the FLUSH grid [m]; Time-dependent; Vectors resp. (nR) and (nZ)
coef	matflt.type (9.2.1.2.7)	Coefficients of the fit; Time-dependent; Matrix 2D (nR,nZ)
codeparam	codeparam (9.2.1.3.56)	Code parameters

Type of: equilibrium:flush (349)

#### 9.2.1.3.117 flux\_loops

Poloidal flux loops RZ coordinates have 1 component for the full loop and two if there is a negative reference loop

member	type	description
setup_floops	setup_floops (9.2.1.3.247)	diagnostic setup information
measure	exp1D (9.2.1.3.113)	Measured flux [Wb]; Time-dependent; Vector (nloops)

Type of: magdiag:flux\_loops (354)

#### 9.2.1.3.118 fluxel

Structure for the fluxes of a field of the core transport equations (electrons); Time-dependent;

member	type	description
flux_dv	vecflt.type (9.2.1.2.9)	Flux of the field calculated from the transport coefficients. Time-dependent; Vector (nrho)
flux_interp	vecflt.type (9.2.1.2.9)	Interpretative flux deduced from measured data, the integral of the source term, and the time derivative of the field. Time-dependent; Vector (nrho)

Type of: corefield:flux (395)

### 9.2.1.3.119 fluximp

Structure for the fluxes of a field of the core transport equations (impurities); Time-dependent;

member	type	description
flux_dv	array3dflt.type (9.2.1.2.1)	Flux of the field calculated from the transport coefficients. Time-dependent; Array3D (nrho,nion,max_nzimp)
flux_interp	array3dflt.type (9.2.1.2.1)	Interpretative flux deduced from measured data, the integral of the source term, and the time derivative of the field. Time-dependent; Array3D (nrho,nion,max_nzimp)

Type of: coreimpur:flux (339)

### 9.2.1.3.120 fluxion

Structure for the fluxes of a field of the core transport equations (ions); Time-dependent;

member	type	description
flux_dv	matflt.type (9.2.1.2.7)	Flux of the field calculated from the transport coefficients. Time-dependent; Matrix (nrho,nion)
flux_interp	matflt.type (9.2.1.2.7)	Interpretative flux deduced from measured data, the integral of the source term, and the time derivative of the field. Time-dependent; Matrix (nrho,nion)

Type of: corefieldion:flux (396)

### 9.2.1.3.121 fullwave

Solution by full wave code

member	type	description
pol_decomp	pol_decomp (9.2.1.3.178)	Poloidal decomposition of the wave fields. Uses the flux surface grid in grid_1d.
local	local (9.2.1.3.148)	Local description of the wave fields. Uses the grid in grid_2d.

Type of: coherentwave:fullwave (391)

### 9.2.1.3.122 geom\_iron

Geometry of the iron segments

member	type	description
npoints	vecint.type (9.2.1.2.10)	Number of points describing an element (irregular outline rzcoordinate); Vector (nsegment)
rzcoordinate	rz2D (9.2.1.3.216)	Irregular outline [m]; 2D arrays (nsegment,max_npoints)

Type of: desc\_iron:geom\_iron (410)

### 9.2.1.3.123 global\_param

0d output parameters

member	type	description
beta_pol	float (9.2.1.1.1)	poloidal beta; Time-dependent; Scalar
beta_tor	float (9.2.1.1.1)	toroidal beta; Time-dependent; Scalar
beta_normal	float (9.2.1.1.1)	normalised beta; Time-dependent; Scalar
i_plasma	float (9.2.1.1.1)	total toroidal plasma current [A]; Positive sign means anti-clockwise when viewed from above. Time-dependent; Scalar
li	float (9.2.1.1.1)	internal inductance; Time-dependent; Scalar
volume	float (9.2.1.1.1)	total plasma volume [m <sup>3</sup> ]; Time-dependent; Scalar
area	float (9.2.1.1.1)	area poloidal cross section [m <sup>2</sup> ]; Time-dependent; Scalar
psi_ax	float (9.2.1.1.1)	poloidal flux at the magnetic axis [Wb]; Time-dependent; Scalar
psi_bound	float (9.2.1.1.1)	poloidal flux at the selected plasma boundary (separatrix for a free boundary code; fixed boundary for fixed boundary code) [Wb]; Time-dependent; Scalar
mag_axis	mag_axis (9.2.1.3.149)	Magnetic axis values
q_95	float (9.2.1.1.1)	q at the 95% poloidal flux surface; Time-dependent; Scalar
q_min	float (9.2.1.1.1)	minimum q value in the plasma; Time-dependent; Scalar

member	type	description
toroid_field	b0r0 (9.2.1.3.46)	Characteristics of the vacuum toroidal field, redundant with the toroidfield CPO, to be used by the ETS
w_mhd	float (9.2.1.1.1)	Plasma energy content = $3/2 * \int(p,dV)$ with p being the total pressure (thermal + fast particles) [J]. Time-dependent; Scalar
gamma	float (9.2.1.1.1)	Adiabatic index. Time-dependent; Scalar

Type of: equilibrium:global\_param (349)

### 9.2.1.3.124 globalparam

Various global quantities calculated from the 1D profiles. Time-dependent

member	type	description
current_tot	float (9.2.1.1.1)	Total plasma current [A]; Time-dependent; Scalar
current_bnd	float (9.2.1.1.1)	Plasma current inside transport solver boundary rho_tor_bnd [A]; Time-dependent; Scalar
current_ni	float (9.2.1.1.1)	Total non-inductive parallel current [A]; Time-dependent; Scalar
vloop	float (9.2.1.1.1)	Toroidal loop voltage [V]; Time-dependent; Scalar
li	float (9.2.1.1.1)	Internal inductance; Time-dependent; Scalar
beta_tor	float (9.2.1.1.1)	toroidal beta; Time-dependent; Scalar
beta_normal	float (9.2.1.1.1)	normalised beta; Time-dependent; Scalar
beta_pol	float (9.2.1.1.1)	poloidal beta; Time-dependent; Scalar
w_dia	float (9.2.1.1.1)	Plasma energy content = $3/2 * \int(p,dV)$ with p being the total pressure (pr.th + pr.perp). Time-dependent; Scalar

Type of: coreprof:globalparam (341)

### 9.2.1.3.125 grid

definition of the 2D grid

member	type	description
dim1	vecflt.type (9.2.1.2.9)	First dimension values; Time-dependent; Vector (ndim1)
dim2	vecflt.type (9.2.1.2.9)	Second dimension values; Time-dependent; Vector (ndim2)
connect	matint.type (9.2.1.2.8)	In case of a finite elemnt representation, lists the points (3 for triangles, 4 for quadrangles) which define a finite element. In this case, ndim1=ndim2 and the value of grid_connect represents the index of the points in the list 1:ndim. E.g. : grid_connect(i,1:4) is a list of four integers [k1 k2 k3 k4] meaning that finite element #i is defined by the points (dim1(k1),dim2(k1)),(dim1(k2),dim2(k2)),(dim1(k3),dim2(k3)) and (dim1(k4),dim2(k4)); Time-dependent; Matrix of integers (nelement,4)

Type of: profiles\_2d:grid (516)

### 9.2.1.3.126 grid\_field\_el

Physical field defined on a complex grid, for electron quantities

member	type	description
gridlink	vecint.type (9.2.1.2.10)	For each space, dimension of the objects that is used to form the grid for this physical quantity. Vector of integers (nspace).
pointer	matint.type (9.2.1.2.8)	For each value, points to the object index in each space. Matrix of integers (nspace, nvalue)
value	vecflt.type (9.2.1.2.9)	Value of the physical quantity given on each super-object (tensorial product of all objects in spaces defined by gridlink). Vector (nvalue). Time-dependent. NB the maximum nvalue is equal to product.on_spaces(nobject(gridlink(ispace)))).

Type of: grid\_fluid:potential (461) | grid\_ne:main\_field (467) | grid\_te:main\_field (470)

### 9.2.1.3.127 grid\_field\_ion

Physical field defined on a complex grid, for ion quantities

member	type	description
gridlink	vecint.type (9.2.1.2.10)	For each space, dimension of the objects that is used to form the grid for this physical quantity. Vector of integers (nspace).



member	type	description
pointer	matint.type (9.2.1.2.8)	For each value, points to the object index in each space. Matrix of integers (nspace, nvalue)
value	matflt.type (9.2.1.2.7)	Value of the physical quantity given on each super-object (tensorial product of all objects in spaces defined by gridlink), for each ion/impurity species. Matrix (nvalue, nimp). Time-dependent. NB the maximum nvalue is equal to product.on_spaces(nobject(gridlink(ispace))).

Type of: grid\_ni:main\_field (468) | grid\_ti:main\_field (471)

### 9.2.1.3.128 grid fluid

Fluid quantities

member	type	description
ne	grid_ne (9.2.1.3.134)	Electron density [m <sup>-3</sup> ]
te	grid_te (9.2.1.3.137)	Electron temperature [eV]
te_perp	grid_te (9.2.1.3.137)	Electron perpendicular temperature [eV]
ve_dia	grid_ne (9.2.1.3.134)	Electron diamagnetic velocity [m/s]
ve_par	grid_ne (9.2.1.3.134)	Electron parallel velocity [m/s]
ve_rad	grid_ne (9.2.1.3.134)	Electron radial velocity [m/s]
ni	grid_ni (9.2.1.3.135)	Ion density [m <sup>-3</sup> ]
ti	grid_ti (9.2.1.3.138)	Ion temperature [eV]
ti_perp	grid_ti (9.2.1.3.138)	Ion perpendicular temperature [eV]
vi_dia	grid_ni (9.2.1.3.135)	Ion diamagnetic velocity [m/s]
vi_par	grid_ni (9.2.1.3.135)	Ion parallel velocity [m/s]
vi_rad	grid_ni (9.2.1.3.135)	Ion radial velocity [m/s]
potential	grid_field.el (9.2.1.3.126)	Electric potential [V]

Type of: edge:fluid (348)

### 9.2.1.3.129 grid fluxes heat.el

Fluxes

member	type	description
gridlink	vecint.type (9.2.1.2.10)	For each space, dimension of the objects that is used to form the grid for this physical quantity. Vector of integers (nspace).
pointer	matint.type (9.2.1.2.8)	For each value, points to the object index in each space. Matrix of integers (nspace, nvalue)
heat_par	vecflt.type (9.2.1.2.9)	Parallel heat flux. Time-dependent. Vector(nvalue)
heat_dia	vecflt.type (9.2.1.2.9)	Diamagnetic heat flux. Time-dependent. Vector (nvalue)
heat_rad	vecflt.type (9.2.1.2.9)	Radial heat flux. Time-dependent. Vector(nvalue)

Type of: grid\_te:fluxes (470)

### 9.2.1.3.130 grid fluxes heat ion

Fluxes, heat and energy, ion

member	type	description
gridlink	vecint.type (9.2.1.2.10)	For each space, dimension of the objects that is used to form the grid for this physical quantity. Vector of integers (nspace).
pointer	matint.type (9.2.1.2.8)	For each value, points to the object index in each space. Matrix of integers (nspace, nvalue)
heat_par	matflt.type (9.2.1.2.7)	Parallel heat flux. Matrix(nvalue,nimp)
heat_dia	matflt.type (9.2.1.2.7)	Diamagnetic heat flux. Matrix(nvalue,nimp)
heat_rad	matflt.type (9.2.1.2.7)	Radial heat flux. Matrix(nvalue,nimp)

Type of: grid\_ti:fluxes (471)

### 9.2.1.3.131 grid fluxes part.el

Fluxes

member	type	description
gridlink	vecint.type (9.2.1.2.10)	For each space, dimension of the objects that is used to form the grid for this physical quantity. Vector of integers (nspace).
pointer	matint.type (9.2.1.2.8)	For each value, points to the object index in each space. Matrix of integers (nspace, nvalue)
flux_par	vecflt.type (9.2.1.2.9)	Parallel flux. Time-dependent. Vector(nvalue)
flux_dia	vecflt.type (9.2.1.2.9)	Diamagnetic flux. Time-dependent. Vector (nvalue)
flux_rad	vecflt.type (9.2.1.2.9)	Radial flux. Time-dependent. Vector(nvalue)

Type of: grid\_ne:fluxes (467)

### 9.2.1.3.132 grid\_fluxes\_part\_ion

Fluxes, heat and energy, ion

member	type	description
gridlink	vecint.type (9.2.1.2.10)	For each space, dimension of the objects that is used to form the grid for this physical quantity. Vector of integers (nspace).
pointer	matint.type (9.2.1.2.8)	For each value, points to the object index in each space. Matrix of integers (nspace, nvalue)
flux_par	matflt.type (9.2.1.2.7)	Parallel flux. Time-dependent. Matrix(nvalue,nimp)
flux_dia	matflt.type (9.2.1.2.7)	Diamagnetic flux. Time-dependent. Matrix(nvalue,nimp)
flux_rad	matflt.type (9.2.1.2.7)	Radial flux. Time-dependent. Matrix(nvalue,nimp)

Type of: grid\_ni:fluxes (468)

### 9.2.1.3.133 grid\_full

Generic definition of a complex grid

member	type	description
spaces(:)	grid_space (9.2.1.3.136)	Definition of the grid spaces. Structure array(nspace).
metric	vecflt.type (9.2.1.2.9)	Grid metric. INSERT HERE CLARIFIED DEFINITION Vector. DIMENSIONALITY ?

Type of: edge:grid (348)

### 9.2.1.3.134 grid\_ne

Electron density

member	type	description
main_field	grid_field.el (9.2.1.3.126)	Main physical quantity
fluxes	grid_fluxes_part.el (9.2.1.3.131)	Fluxes
transp_coef	grid_transp_coef.el (9.2.1.3.139)	Transport coefficients

Type of: grid\_fluid:ne (461) I grid\_fluid:ve\_dia (461) I grid\_fluid:ve\_par (461) I grid\_fluid:ve\_rad (461)

### 9.2.1.3.135 grid\_ni

Ion density

member	type	description
main_field	grid_field.ion (9.2.1.3.127)	Main physical quantity
fluxes	grid_fluxes_part.ion (9.2.1.3.132)	Fluxes
transp_coef	grid_transp_coef.ion (9.2.1.3.140)	Transport coefficients

Type of: grid\_fluid:ni (461) I grid\_fluid:vi\_dia (461) I grid\_fluid:vi\_par (461) I grid\_fluid:vi\_rad (461)

### 9.2.1.3.136 grid\_space

Description of a space in the grid

member	type	description
type.coord	vecint.type (9.2.1.2.10)	Type of coordinates describing the space. Vector of integers (ncoord)
node.value	matflt.type (9.2.1.2.7)	Numerical value of the node coordinates. Matrix (nnode,ncoord)
alter.coord	alter.coord (9.2.1.3.39)	Alternative coordinate system possibly used to describe the space (e.g. rho_tor versus rho_tor.norm). NB : when specifying straight lines to build cells, these are intended to refer to the primary (main) system and may not be straight on the alternative system.
nobject	vecint.type (9.2.1.2.10)	Number of object defined in the space, for each dimension. Vector of integers (ncoord)
nobject.bou	vecint.type (9.2.1.2.10)	Maximum number of boundaries ("faces") of an object, for each dimension. Vector of integers (ncoord)
neighborside	vecint.type (9.2.1.2.10)	Maximum number of neighbors lying on a "face" of objects for each dimension. Vector of integers (ncoord)
objdef	array3dint.type (9.2.1.2.2)	Object definition for each dimensionality (last index). Each object is defined recursively by listing its boundaries, which are objects of lower (dim-1) dimensionality. The first index refers to the objects listed, the second one points to the objects of lower dimensionality, the third one refers to the dimensionality of the list. Unused slots of the matrix should be set as UNDEFINED. Array3D of integers (max_nobject(icoord), max_nobjectbou_(icoord), ncoord). Max being here over icoord.
neighbors	array3dint.type (9.2.1.2.2)	Neighbors of a given object, specified only for the highest dimensionality. Unused slots of the matrix should be set as UNDEFINED. Array3D of integers (max_nobject,max_nobject.bou, ncoord). Max being here over icoord.
properties	properties (9.2.1.3.185)	Space properties

Type of: grid\_full:spaces (466)

### 9.2.1.3.137 grid\_te

Electron temperature [eV], heat fluxes

member	type	description
main_field	grid_field.el (9.2.1.3.126)	Main physical quantity
fluxes	grid_fluxes_heat.el (9.2.1.3.129)	Fluxes
transp_coef	grid_transp_coef.el (9.2.1.3.139)	Transport coefficients

Type of: grid\_fluid:te (461) I grid\_fluid:te\_perp (461)

### 9.2.1.3.138 grid\_ti

Ion temperature [eV], heat fluxes

member	type	description
main_field	grid_field_ion (9.2.1.3.127)	Main physical quantity
fluxes	grid_fluxes_heat_ion (9.2.1.3.130)	Fluxes
transp_coef	grid_transp_coef_ion (9.2.1.3.140)	Transport coefficients

Type of: grid\_fluid:ti (461) I grid\_fluid:ti\_perp (461)

### 9.2.1.3.139 grid\_transp\_coef\_el

Transport coefficients for electron quantities

member	type	description
gridlink	vecint.type (9.2.1.2.10)	For each space, dimension of the objects that is used to form the grid for this physical quantity. Vector of integers (nspace).
pointer	matint.type (9.2.1.2.8)	For each value, points to the object index in each space. Matrix of integers (nspace, nvalue)
diff_dia	vecflt.type (9.2.1.2.9)	Diamagnetic diffusivity [m <sup>2</sup> /s]. Time-dependent. Vector(nvalue).
diff_rad	vecflt.type (9.2.1.2.9)	Radial diffusivity [m <sup>2</sup> /s]. Time-dependent. Vector(nvalue).

Type of: grid\_ne:transp\_coef (467) I grid\_te:transp\_coef (470)

### 9.2.1.3.140 grid\_transp\_coef\_ion

Transport coefficients for ion quantities

member	type	description
gridlink	vecint.type (9.2.1.2.10)	For each space, dimension of the objects that is used to form the grid for this physical quantity. Vector of integers (nspace).
pointer	matint.type (9.2.1.2.8)	For each value, points to the object index in each space. Matrix of integers (nspace, nvalue)
diff_dia	matflt.type (9.2.1.2.7)	Diamagnetic diffusivity [m <sup>2</sup> /s]. Time-dependent. Matrix(nvalue, nimp).
diff_rad	matflt.type (9.2.1.2.7)	Radial diffusivity [m <sup>2</sup> /s]. Time-dependent. Matrix(nvalue, nimp).

Type of: grid\_ni:transp\_coef (468) | grid\_ti:transp\_coef (471)

### 9.2.1.3.141 inj\_spec

Injected species

member	type	description
amn	vecflt.type (9.2.1.2.9)	Atomic mass number; Vector (nunits)
zn	vecflt.type (9.2.1.2.9)	Nuclear charge; Vector (nunits)
zion	vecflt.type (9.2.1.2.9)	Ion charge; Vector (nunits)

Type of: nbi:inj\_spec (357)

### 9.2.1.3.142 isoflux

Point series at which the flux is considered the same

member	type	description
position	rz1D (9.2.1.3.214)	Position of the points at which the flux is considered the same; Time-dependent; Vector (nmeas)
source	string (9.2.1.1.3)	Description or path to the source signal (diagnostic or genprof, from which to read all info on the signal), e.g. 'magdiag/bpol_probes/measure/value'. String
weight	vecflt.type (9.2.1.2.9)	weight given to the measurement ( $\zeta=0$ ); -1 if exact data; Time-dependent; Vector (nmeas)
sigma	vecflt.type (9.2.1.2.9)	standard deviation of the measurement; Time-dependent; Vector (nmeas)
calculated	vecflt.type (9.2.1.2.9)	Signal as recalculated by the equilibrium code; Time-dependent; Vector (nmeas)
chi2	vecflt.type (9.2.1.2.9)	chi <sup>2</sup> of (calculated-measured); Time-dependent; Vector (nmeas)

Type of: eqconstraint:isoflux (441)

### 9.2.1.3.143 jni

Non-inductive parallel current density [A/m<sup>2</sup>]; Time-dependent;

member	type	description
value	vecflt.type (9.2.1.2.9)	Value of jni; Time-dependent; Vector (nrho)
integral	vecflt.type (9.2.1.2.9)	Integral from 0 to rho of jni. Time-dependent; Vector (nrho)
source	string (9.2.1.1.3)	Source of the profile (any comment describing the origin of the profile : code, path to diagnostic signals, massaging, ...); String

Type of: psi:jni (519)

### 9.2.1.3.144 launchangles

Launching angles of the beam

member	type	description
alpha	vecflt.type (9.2.1.2.9)	Poloidal launching angle between the horizontal plane and the poloidal component of the nominal beam centerline (trigonometric convention) [rad], Vector (nantenna.ec). Time-dependent
beta	vecflt.type (9.2.1.2.9)	Toroidal launching angle between the horizontal plane and the poloidal component of the nominal beam centerline (trigonometric convention) [rad], Vector (nantenna.ec). Time-dependent

Type of: antenna.ec:launchangles (373)

### 9.2.1.3.145 launches\_parallel

Power spectrum as a function of the parallel refractive index.

member	type	description
nn_par	vecint_type (9.2.1.2.10)	Number of points for the discretization of the spectrum in the poloidal direction, Vector of integers (nantenna).
n_par	matflt_type (9.2.1.2.7)	Refraction index in the parallel direction, Matrix (nantenna,max_nn_par).
power	vecflt_type (9.2.1.2.9)	$W/dN_{par}$ [W], Matrix(nantenna, max_nn_par). Time-dependent

Type of: spectrum:parallel (593)

### 9.2.1.3.146 launches\_phi\_theta

Power spectrum as a function of the refractive index in the toroidal and poloidal directions.

member	type	description
nn_phi	vecint_type (9.2.1.2.10)	Number of points for the discretization of the spectrum in the toroidal direction, Vector of integers (nantenna).
nn_theta	vecint_type (9.2.1.2.10)	Number of points for the discretization of the spectrum in the poloidal direction, Vector of integers (nantenna).
n_phi	matflt_type (9.2.1.2.7)	Refraction index in the toroidal direction, Matrix (nantenna,max_nn_phi).
n_theta	matflt_type (9.2.1.2.7)	Refraction index in poloidal direction, Matrix (nantenna,max_nn_theta).
power	array3dflt_type (9.2.1.2.1)	$W/dN_{phi}/dN_{theta}$ [W], Array (nantenna, max_nn_phi, max_nn_theta). Time-dependent

Type of: spectrum:phi\_theta (593)

### 9.2.1.3.147 lineintegraldiag

General line integral diagnostic

member	type	description
datainfo	datainfo (9.2.1.3.75)	Generic information on a data item
expression	string (9.2.1.1.3)	Formal expression for the line integral to be evaluated as a function of $n_e$ , $n_i$ , $T_e$ , $T_i$ , $Z_{eff}$ , $B_r$ , $B_z$
setup_line	setup_line (9.2.1.3.249)	Geometric description of the lines of sight
measure	exp1D (9.2.1.3.113)	Measured value. Time-dependent; Vector (nchords)
time	float (9.2.1.1.1)	Time [s]; Time-dependent; Scalar

### 9.2.1.3.148 local

Local description of the wave fields. Uses the grid in grid\_2d.

member	type	description
e_plus	array3dflt_type (9.2.1.2.1)	Magnitude of left hand polarised component of the wave electric field [V/m]; Time-dependent; Array 3D (ntor, ndim1, ndim2)
e_plus_ph	array3dflt_type (9.2.1.2.1)	Phase of left hand polarised component of the wave electric field [rad]; Time-dependent; Array 3D (ntor, ndim1, ndim2)
e_minus	array3dflt_type (9.2.1.2.1)	Magnitude of right hand polarised component of the wave electric field [v/m]; Time-dependent; Array 3D (ntor, ndim1, ndim2)
e_minus_ph	array3dflt_type (9.2.1.2.1)	Phase of right hand polarised component of the wave electric field [rad]; Time-dependent; Array 3D (ntor, ndim1, ndim2)
e_norm	array3dint_type (9.2.1.2.2)	Magnitude of wave electric field normal to a flux surface [V/m]; Time dependent; 3D (ntor, ndim1, ndim2)
enorm_ph	array3dflt_type (9.2.1.2.1)	Phase of wave electric field normal to a flux surface [rad]; Time dependent; 3D (ntor, ndim1, ndim2)
e_binorm	array3dflt_type (9.2.1.2.1)	Magnitude of wave electric field tangent to a flux surface [V/m]; Time dependent; 3D (ntor, ndim1, ndim2)
e_binorm_ph	array3dflt_type (9.2.1.2.1)	Phase of wave electric field tangent to a flux surface [rad]; Time dependent; 3D (ntor, ndim1, ndim2)
e_para	array3dflt_type (9.2.1.2.1)	Magnitude of parallel wave electric field [V/m]; Time dependent; Array 3D (ntor, ndim1, ndim2)
e_para_ph	array3dflt_type (9.2.1.2.1)	Phase of parallel wave electric field [rad]; Time dependent; Array 3D (ntor, ndim1, ndim2)
b_norm	array3dflt_type (9.2.1.2.1)	Magnitude of wave magnetic field normal to a flux surface [T]; Time dependent; Array 3D (ntor, ndim1, ndim2)
b_norm_ph	array3dflt_type (9.2.1.2.1)	Phase of wave magnetic field normal to a flux surface [rad]; Time dependent; Array 3D (ntor, ndim1, ndim2)

member	type	description
b.binorm	array3dflt.type (9.2.1.2.1)	Magnitude of wave magnetic field tangent to a flux surface [T]; Time dependent; Array 3D (ntor, ndim1, ndim2)
b.binorm.ph	array3dflt.type (9.2.1.2.1)	Phase of wave magnetic field tangent to a flux surface [rad]; Time dependent; Array 3D (ntor, ndim1, ndim2)
b.para	array3dflt.type (9.2.1.2.1)	Magnitude of wave magnetic field parallel to the equilibrium magnetic field [T]; Time dependent; Array 3D (ntor, ndim1, ndim2)
b.para.ph	array3dflt.type (9.2.1.2.1)	Phase of wave magnetic field parallel to the equilibrium magnetic field [rad]; Time dependent; Array 3D (ntor, ndim1, ndim2)

Type of: fullwave:local (454)

### 9.2.1.3.149 mag\_axis

Magnetic axis values

member	type	description
position	rz0D (9.2.1.3.213)	Position of the magnetic axis [m]; Time-dependent; Scalar;
bphi	float (9.2.1.1.1)	Total toroidal magnetic field at the magnetic axis [T]; Time-dependent; Scalar
q	float (9.2.1.1.1)	q at the magnetic axis; Time-dependent; Scalar

Type of: global\_param:mag\_axis (456)

### 9.2.1.3.150 magnet\_iron

Magnetisation in iron segments [T]

member	type	description
mr	eqmes1D (9.2.1.3.111)	Magnetisation along the R axis [T];
mz	eqmes1D (9.2.1.3.111)	Magnetisation along the Z axis [T];

Type of: eqconstraint:magnet\_iron (441)

### 9.2.1.3.151 magnetise

Magnetisation M of the iron segment, assumed to be constant inside a given iron segment. Reminder :  $H = 1/\mu_0 * B - \mu_r * M$ ; [A/m].

member	type	description
mr	exp1D (9.2.1.3.113)	Magnetisation along the R axis [T]; Time-dependent; Vector (nsegment)
mz	exp1D (9.2.1.3.113)	Magnetisation along the Z axis [T]; Time-dependent; Vector (nsegment)

Type of: ironmodel:magnetise (351)

### 9.2.1.3.152 mdinfo

Information related to machine description for this entry

member	type	description
shot_min	integer (9.2.1.1.2)	Minimum shot number to which the machine description applies
shot_max	integer (9.2.1.1.2)	Maximum shot number to which the machine description applies
md_entry	entry_def (9.2.1.3.107)	Entry of the machine description used. NB : just for information : for the moment, no guarantee that machine description data have not been modified with respect to the data in md_entry. Machine description data are written explicitly in each CPO.

Type of

### 9.2.1.3.153 mhd\_plasma

MHD modes in the confined plasma

member	type	description
psi	vecflt.type (9.2.1.2.9)	Position in poloidal flux [Wb] (without $1/2\pi$ and such that $B_p =  \text{grad } \psi  / R/2/\pi$ ). Time-dependent; Vector (npsi)
m	array3dflt.type (9.2.1.2.1)	Poloidal mode number; Time-dependent; Array3D (npsi,nn,nm)
disp_perp	array3dflt.type (9.2.1.2.1)	Perpendicular displacement of the mode [m]; Time-dependent; Array 3D (npsi,nn,nm)
disp_par	array3dflt.type (9.2.1.2.1)	Parallel displacement of the mode [m]; Time-dependent; Array 3D (npsi,nn,nm)
tau_alfven	vecflt.type (9.2.1.2.9)	Alven time= $R/vA=R0 \sqrt{\mu_0 \rho_0} / B_0$ [s]; Definitions of $R_0$ , $B_0$ , $\mu_0$ , $\rho_0$ to be clarified. rho grid should be included in the MHD CPO ? Time-dependent; Vector (npsi)
tau_resistive	vecflt.type (9.2.1.2.9)	Resistive time = $\mu_0 \rho_0 / \eta_{\text{neo}}$ [s]; Source of $\eta_{\text{neo}}$ to be clarified. Time-dependent; Vector (npsi)
coord_sys	coord_sys (9.2.1.3.61)	flux surface coordinate system on a square grid of flux and angle
a_pert	mhd_vector (9.2.1.3.155)	Perturbed vector potential
b_pert	mhd_vector (9.2.1.3.155)	Perturbed magnetic field [T]
v_pert	mhd_vector (9.2.1.3.155)	Perturbed velocity [m/s]
rho_masspert	array3dflt.type (9.2.1.2.1)	Perturbed mass density [ $\text{kg}/\text{m}^3$ ]; Time-dependent; Array 3D (npsi,nn,nm)
temp_pert	array3dflt.type (9.2.1.2.1)	Perturbed temperature [eV]; Time-dependent; Array 3D (npsi,nn,nm)

Type of: mhd:plasma (355)

### 9.2.1.3.154 mhd\_vaccum

External modes

member	type	description
m	array3dflt.type (9.2.1.2.1)	Poloidal mode number; Time-dependent; Array3D (npsi,nn,nm)
coord_sys	coord_sys (9.2.1.3.61)	flux surface coordinate system on a square grid of flux and angle
a_pert	mhd_vector (9.2.1.3.155)	Perturbed vector potential
b_pert	mhd_vector (9.2.1.3.155)	Perturbed magnetic field [T]

Type of: mhd:vaccum (355)

### 9.2.1.3.155 mhd\_vector

Vector structure for MHD CPO

member	type	description
coord1	array3dflt.type (9.2.1.2.1)	First coordinate; Time-dependent; Array 3D (npsi,nn,nm)
coord2	array3dflt.type (9.2.1.2.1)	Second coordinate; Time-dependent; Array 3D (npsi,nn,nm)
coord3	array3dflt.type (9.2.1.2.1)	Third coordinate; Time-dependent; Array 3D (npsi,nn,nm)

Type of: mhd\_plasma:a\_pert (486) | mhd\_plasma:b\_pert (486) | mhd\_plasma:v\_pert (486) | mhd\_vaccum:a\_pert (487) | mhd\_vaccum:b\_pert (487)

### 9.2.1.3.156 midplane

Intersections with the midplane

member	type	description
outer	orbit_pos (9.2.1.3.165)	Position at outer mid-plane
inner	orbit_pos (9.2.1.3.165)	Position at inner mid-plane

Type of: special\_pos:midplane (592)

### 9.2.1.3.157 modules

Modules description. NB there are nmodules per antenna, distributed among nma\_phi toroidal positions and nma\_theta poloidal positions

member	type	description
nma_theta	vecint.type (9.2.1.2.10)	Number of modules per antenna in the poloidal direction. Vector of integers (nantenna_lh).
nma_phi	vecint.type (9.2.1.2.10)	Number of modules per antenna in the toroidal direction. Vector of integers (nantenna_lh).
ima_theta	matint.type (9.2.1.2.8)	Position index of the module in the poloidal direction (from low theta to high theta, i.e. from bottom to top if the antenna is on LFS). Matrix of integers (nantenna_lh, max_nmodules).

member	type	description
ima_phi	matint.type (9.2.1.2.8)	Position index of the module in the toroidal direction (from low phi to high phi, counter-clockwise when seen from above). Matrix of integers (nantenna.lh, max_nmodules).
sm.theta	vecflt.type (9.2.1.2.9)	Spacing between poloidally neighboring modules [m], Vector (nantenna.lh)
amplitude	exp2D (9.2.1.3.114)	Amplitude of the TE10 mode injected in the module [W], Matrix (nantenna.lh,max_nmodules). Time-dependent
phase	exp2D (9.2.1.3.114)	Phase of the TE10 mode injected in the module [rd], Matrix (nantenna.lh, max_nmodules). Time-dependent
waveguides	waveguides (9.2.1.3.297)	Waveguides description

Type of: antennalh\_setup:modules (377)

### 9.2.1.3.158 ne\_transp

Transport coefficients for electron density equation. Time-dependent.

member	type	description
diff_eff	matflt.type (9.2.1.2.7)	Effective diffusivity [ $m^2.s^{-1}$ ]. The last index of the array describes which multiplier should be applied to the particule flux when adding its contribution in the expression of the heat flux : position 1 is multiplied by 0, 2 is multiplied by 3/2, 3 is multiplied by 5/2. The total particle flux (for the particle transport equation) is obtained as the sum over the three positions. Time-dependent. Matrix (nrho,3)
vconv_eff	matflt.type (9.2.1.2.7)	Effective convection [ $m.s^{-1}$ ]. The last index of the array describes which multiplier should be applied to the particule flux when adding its contribution in the expression of the heat flux : position 1 is multiplied by 0, 2 is multiplied by 3/2, 3 is multiplied by 5/2. The total particle flux (for the particle transport equation) is obtained as the sum over the three positions. Time-dependent. Matrix (nrho,3)
flux	vecflt.type (9.2.1.2.9)	Flux. Not used in transport equations [ $field.m.s^{-1},m^{-3}$ if field is not a density itself]. Time-dependent. Vector (nrho)
off.diagonal	offdiagel (9.2.1.3.161)	Details of the transport matrix, just for diagnostic (not used in transport equations). Time-dependent.
flag	integer (9.2.1.1.2)	Flag describing the form of transport produced by the original model : 0- not calculated, 1- D and V, 2- flux, 3- full transport matrix. Scalar.

Type of: coretransp:ne\_transp (343)

### 9.2.1.3.159 neutrallist

Definition of neutral species

member	type	description
ncomp	vecint.type (9.2.1.2.10)	For each neutral species, number of distinct atoms that enter the composition of this species (1 if the neutral is an atom, more for a molecule : 2 for CH <sub>4</sub> ). Vector of integers (nneut)
tatm	matint.type (9.2.1.2.8)	For each neutral species, and each of its atomic component, index of the atom (referring to the atomlist). Matrix of integers (nneut,max_ncomp)
multatm	matint.type (9.2.1.2.8)	For each neutral species, and each of its atomic component, number of such atoms. Matrix of integers (nneut,max_ncomp)

Type of: composition\_neutrals:neutrallist (393)

### 9.2.1.3.160 ni\_transp

Transport coefficients for ion density equation. Time-dependent.

member	type	description
diff_eff	array3dflt.type (9.2.1.2.1)	Effective diffusivity [ $m^2.s^{-1}$ ]. The last index of the array describes which multiplier should be applied to the particule flux when adding its contribution in the expression of the heat flux : position 1 is multiplied by 0, 2 is multiplied by 3/2, 3 is multiplied by 5/2. The total particle flux (for the particle transport equation) is obtained as the sum over the three positions. Time-dependent. Array3d (nrho,nion,3)
vconv_eff	array3dflt.type (9.2.1.2.1)	Effective convection [ $m.s^{-1}$ ]. The last index of the array describes which multiplier should be applied to the particule flux when adding its contribution in the expression of the heat flux : position 1 is multiplied by 0, 2 is multiplied by 3/2, 3 is multiplied by 5/2. The total particle flux (for the particle transport equation) is obtained as the sum over the three positions. Time-dependent. Array3d (nrho,nion,3)
flux	matflt.type (9.2.1.2.7)	Flux. Not used in transport equations [ $field.m.s^{-1},m^{-3}$ if field is not a density itself]. Time-dependent. Matrix (nrho,nion)
off.diagonal	offdiagion (9.2.1.3.162)	Details of the transport matrix, just for diagnostic (not used in transport equations). Time-dependent.



member	type	description
flag	integer (9.2.1.1.2)	Flag describing the form of transport produced by the original model : 0- not calculated, 1- D and V, 2- flux, 3- full transport matrix. Scalar.

Type of: coretransp:ni\_transp (343)

### 9.2.1.3.161 offdiagal

Subtree containing the full transport matrix from a transport model, for the electrons. Time-dependent.

member	type	description
d.ni	matflt.type (9.2.1.2.7)	Off-Diagonal term coupling ion density gradient to the transport equation [m. <sup>-2</sup> .s <sup>-1</sup> ]. Time-dependent. Matrix (nrho,nion)
d.ti	matflt.type (9.2.1.2.7)	Off-Diagonal term coupling ion density gradient to the transport equation [m. <sup>-2</sup> .s <sup>-1</sup> ]. Time-dependent. Matrix (nrho,nion)
d.ne	vecflt.type (9.2.1.2.9)	Off-Diagonal term coupling electron density gradient to the transport equation [m. <sup>-2</sup> .s <sup>-1</sup> ]. Time-dependent. Vector (nrho)
d.te	vecflt.type (9.2.1.2.9)	Off-Diagonal term coupling electron temperature gradient to the transport equation [m. <sup>-2</sup> .s <sup>-1</sup> ]. Time-dependent. Vector (nrho)
d.epar	vecflt.type (9.2.1.2.9)	Off-Diagonal term coupling parallel electric field to the transport equation [m. <sup>-2</sup> .s <sup>-1</sup> ]. Time-dependent. Vector (nrho)
d.mtor	vecflt.type (9.2.1.2.9)	Off-Diagonal term coupling total toroidal momentum to the transport equation [m. <sup>-2</sup> .s <sup>-1</sup> ]. Time-dependent. Vector (nrho)

Type of: ne\_transp:off\_diagonal (491) I transcoefel:off\_diagonal (614)

### 9.2.1.3.162 offdiagion

Subtree containing the full transport matrix from a transport model, for the various ion species

member	type	description
d.ni	array3dfilt.type (9.2.1.2.1)	Off-Diagonal term coupling ion density gradient to the transport equation [m. <sup>-2</sup> .s <sup>-1</sup> ]. Time-dependent. Array3d (nrho,nion,nion)
d.ti	array3dfilt.type (9.2.1.2.1)	Off-Diagonal term coupling ion density gradient to the transport equation [m. <sup>-2</sup> .s <sup>-1</sup> ]. Time-dependent. Array3d (nrho,nion,nion)
d.ne	matflt.type (9.2.1.2.7)	Off-Diagonal term coupling electron density gradient to the transport equation [m. <sup>-2</sup> .s <sup>-1</sup> ]. Time-dependent. Matrix (nrho,nion)
d.te	matflt.type (9.2.1.2.7)	Off-Diagonal term coupling electron temperature gradient to the transport equation [m. <sup>-2</sup> .s <sup>-1</sup> ]. Time-dependent. Matrix (nrho,nion)
d.epar	matflt.type (9.2.1.2.7)	Off-Diagonal term coupling parallel electric field to the transport equation [m. <sup>-2</sup> .s <sup>-1</sup> ]. Time-dependent. Matrix (nrho,nion)
d.mtor	matflt.type (9.2.1.2.7)	Off-Diagonal term coupling total toroidal momentum to the transport equation [m. <sup>-2</sup> .s <sup>-1</sup> ]. Time-dependent. Matrix (nrho,nion)

Type of: ni\_transp:off\_diagonal (493) I transcoefion:off\_diagonal (616) I transcoefvtor:off\_diagonal (617)

### 9.2.1.3.163 orb\_glob\_dat

Global quantities associated with an orbit.

member	type	description
orbit.type	vecint.type (9.2.1.2.10)	Identifier of orbit type: 0 trapped, -1 co-passing, + 1 counter-passing ; Time-dependent; Vector (norbits)
omega.b	vecflt.type (9.2.1.2.9)	Bounce angular frequency rad/s; Time-dependent; Vector (norbits)
omega.phi	vecflt.type (9.2.1.2.9)	Toroidal angular precession frequency [rad/s]; Time-dependent; Vector (norbits).
omega.c.av	vecflt.type (9.2.1.2.9)	Orbit averaged cyclotron frequency [rad/a]; Time-dependent; Vector(norbits).
special.pos	special_pos (9.2.1.3.259)	Special positions along an orbit (like turning points).

Type of: orbit:orb\_glob\_dat (359)

### 9.2.1.3.164 orb\_trace

Position of particle in 5D space (3D in real and 2D in velocity).

member	type	description
time_orb	matflt.type (9.2.1.2.7)	Time along the orbit [s]; Time-dependent; Matrix (norbits, max_ntorb)
ntorb	vecint.type (9.2.1.2.10)	Number of time slices along the orbit, for each orbit. Time-dependent; Vector (norbits)
r	matflt.type (9.2.1.2.7)	Major radius of the guiding centre [m], Major radius; Time-dependent; Matrix (norbits, max_ntorb).
z	matflt.type (9.2.1.2.7)	Altitude of the guiding centre [m]; Time-dependent; Matrix (norbits, max_ntorb).
psi	matflt.type (9.2.1.2.7)	Guiding centre position in psi [normalised poloidal flux]; Time-dependent; Matrix (norbits, max_ntorb).
theta_b	matflt.type (9.2.1.2.7)	Position of the guiding centre in poloidal Boozer angle [rad]; Time-dependent; Matrix (norbits, max_ntorb).
v_parallel	matflt.type (9.2.1.2.7)	Parallel velocity along the orbit [m/s]; Time-dependent; Matrix (norbits, max_ntorb).
v_perp	matflt.type (9.2.1.2.7)	Perpendicular velocity along the orbit [m/s]; Time-dependent; Matrix (norbits, max_ntorb).

Type of: orbit:orb\_trace (359)

### 9.2.1.3.165 orbit\_pos

Complex type for orbit position (Vector)

member	type	description
r	vecflt.type (9.2.1.2.9)	Major radius [m]; Time-dependent; Vector (norbits).
z	vecflt.type (9.2.1.2.9)	Altitude [m]; Time-dependent; Vector (norbits).
psi	vecflt.type (9.2.1.2.9)	Position in psi [normalised poloidal flux]; Time-dependent; Vector (norbits).
theta_b	vecflt.type (9.2.1.2.9)	Poloidal Boozer angle [rad]; Time-dependent; Vector (norbits).

Type of: midplane:inner (489) I midplane:outer (489) I turning\_pts:lower (628) I turning\_pts:upper (628)

### 9.2.1.3.166 orbitt\_id

Parameters identifying an orbit

member	type	description
amn	float (9.2.1.1.1)	Atomic mass of the ion; Scalar
zion	float (9.2.1.1.1)	Atomic charge of the ion; Scalar
energy	vecflt.type (9.2.1.2.9)	Energy of the ion [keV]; Time-dependent; Vector (norbits).
magn_mom	vecflt.type (9.2.1.2.9)	Magnetic momentum [ $\text{kg m}^{-2} / \text{s}^2 / \text{T}$ ]; Time-dependent, Vector(norbits).
p_phi	vecflt.type (9.2.1.2.9)	toroidal angular momentum [ $\text{kg m}^{-2} / \text{s}$ ]; Time-dependent; Vector(norbits);
sigma	vecint.type (9.2.1.2.10)	Sign of parallel velocity at psi=psi_max along the orbit; Time-dependent; Vector(norbits)

Type of: orbit:orbitt\_id (359)

### 9.2.1.3.167 param

Code parameters block passed from the wrapper to the subroutine. Does not appear as such in the data structure (in fact each string is an instance of coparam/parameters). This is inserted in utilities.xsd for automatic declaration in the Fortran type definitions.

member	type	description
parameters	string (9.2.1.1.3)	Actual value of the code parameters (instance of coparam/parameters in XML format).
default_param	string (9.2.1.1.3)	Default value of the code parameters (instance of coparam/parameters in XML format).
schema	string (9.2.1.1.3)	Code parameters schema.

Type of

### 9.2.1.3.168 permeability

Permeability model (can be different for each iron segment)

member	type	description
b	matflt.type (9.2.1.2.7)	List of B values for description of the mur(B) dependence [T]; Matrix (nsegment,nB)

member	type	description
mur	matflt.type (9.2.1.2.7)	Relative permeability mur(B) [dimensionless]; Matrix (nsegment,nB)

Type of: desc\_iron:permeability (410)

### 9.2.1.3.169 pfcircuits

Circuits, connected to multiple coils and to multiple supplies, defining the current and voltage relationships in the system

member	type	description
name	vecstring.type (9.2.1.2.11)	Name of circuit, array of strings (ncircuits)
id	vecstring.type (9.2.1.2.11)	ID of circuit, array of strings (ncircuits)
type	vecstring.type (9.2.1.2.11)	Type of circuit, array of strings (ncircuits)
nnodes	vecint.type (9.2.1.2.10)	Number of nodes used to describe a circuit. Vector (ncircuits)
connections	array3dint.type (9.2.1.2.2)	Description of the supplies and coils connections (nodes) across each circuit. Array 3D (ncircuits,max_nnodes,2*ncomponents), describing for each node which component are connected to it (1 if connected, 0 otherwise). There are 2 sides at each component, thus 2*ncomponents as the size of the third dimension, listing first all supplies, then all coils (in the same order as listed in PFSUPPLIES and PFCOILS). An example can be found in the data structure documentation PFconnections.pdf

Type of: pfsystems:pfcircuits (360)

### 9.2.1.3.170 pccoils

Active poloidal field coils

member	type	description
desc_pccoils	desc_pccoils (9.2.1.3.78)	Description of the coils
coilcurrent	expID (9.2.1.3.113)	Circuit feed current in the coil, defined positive if it flows from point 1 to point 2 of the component in the pfcircuit description [A]; Time-dependent; Vector (ncoils)
coilvoltage	expID (9.2.1.3.113)	Voltage on the full coil [V]; Time-dependent; Vector (ncoils)

Type of: pfsystems:pccoils (360)

### 9.2.1.3.171 pfelement

Axisymmetric conductor description

member	type	description
name	vecstring.type (9.2.1.2.11)	Name of this element. Should be a matrix of strings (ncoils,max_nelements), but not supported by the UAL yet.
id	vecstring.type (9.2.1.2.11)	ID of this element. Should be a matrix of strings (ncoils,max_nelements), but not supported by the UAL yet.
turnsign	matflt.type (9.2.1.2.7)	Sign of turn and fraction of a turn for calculating magnetic field of the Element; Matrix (ncoils,max_nelements)
area	matflt.type (9.2.1.2.7)	Surface area of this element [m <sup>2</sup> ]; Matrix (ncoils,max_nelements)
pfgeometry	pfgeometry (9.2.1.3.172)	Shape of a PF Coil Element

Type of: desc\_pccoils:pfelement (411)

### 9.2.1.3.172 pfgeometry

Shape of a PF Coil Element

member	type	description
type	matint.type (9.2.1.2.8)	Type used to describe a coil shape (0 for 'rzcoordinates' or 1 for 'rzdrdz'); Matrix of integers (ncoils,max_nelements)
npoints	matint.type (9.2.1.2.8)	Number of points describing an element (irregular outline rzcoordinates); Matrix (ncoils,max_nelements)
rzcoordinate	rz3D (9.2.1.3.217)	Irregular outline [m]; 3D arrays (ncoils,max_nelements,max_npoints)
rzdrdz	array3dfilt.type (9.2.1.2.1)	4-vector defining Centre R,Z and full extents dR, dZ [m]; 3D Array (ncoils,max_nelements,4)

Type of: pfelement:pfgeometry (504)

### 9.2.1.3.173 pfpageometry

Geometry of the passive elements

member	type	description
type	vecint.type (9.2.1.2.10)	Type used to describe the shape (0 for 'rzcoordinates' or 1 for 'rzdrdz'); Vector of integers (nelements)
npoints	vecint.type (9.2.1.2.10)	Number of points describing an element (irregular outline rzcoordinates); Vector of integers (nelements)
rzcoordinate	rz2D (9.2.1.3.216)	Irregular outline [m]; Matrix (nelements,max_npoints)
rzdrdz	matflt.type (9.2.1.2.7)	4-vector defining Centre R,Z and full extents dR, dZ [m]; Matrix (nelements,4)

Type of: pfpassive:pfpageometry (507)

### 9.2.1.3.174 pfpassive

Passive axisymmetric conductor description

member	type	description
area	vecflt.type (9.2.1.2.9)	Surface area of this passive element [m <sup>2</sup> ]; Vector (nelements)
res	vecflt.type (9.2.1.2.9)	Passive element resistance [Ohm]; Vector (nelements)
pfpageometry	pfpageometry (9.2.1.3.173)	Geometry of the passive elements

Type of: pfsystems:pfpassive (360)

### 9.2.1.3.175 pfsupplies

PF power supplies

member	type	description
desc_supply	desc_supply (9.2.1.3.79)	Description of the power supplies
voltage	exp1D (9.2.1.3.113)	Voltage at the supply output [V]; Time-dependent; Vector (nsupplies)
current	exp1D (9.2.1.3.113)	Current at the supply output, defined positive if it flows from point 1 to point 2 of the component in the pfcircuit description [A]; Time-dependent; Vector (nsupplies)

Type of: pfsystems:pfsupplies (360)

### 9.2.1.3.176 phaseellipse

Phase ellipse characteristics of the spot

member	type	description
invcurvrad	matflt.type (9.2.1.2.7)	Inverse curvature radii for the phase ellipse [m <sup>-1</sup> ], Matrix (nantenna,2). Time-dependent
angle	vecflt.type (9.2.1.2.9)	Rotation angle for the phase ellipse [rd], Vector(nantenna). Time-dependent

Type of: rf\_beam:phaseellipse (545)

### 9.2.1.3.177 plasmaedge

Plasma edge characteristics in front of the antenna.

member	type	description
npoints	vecint.type (9.2.1.2.10)	Number of points in the distance grid. Vector of integers (nantenna_lh).
distance	matflt.type (9.2.1.2.7)	Grid for electron density, defined as the perpendicular distance to the antenna waveguide plane (the origin being described in the position sub-structure) [m]. Matrix (nantenna_lh,max_npoints). Time-dependent.
density	matflt.type (9.2.1.2.7)	Electron density in front of the antenna [m <sup>-3</sup> ]. Matrix (nantenna_lh,max_npoints). Time-dependent.

Type of: antenna\_lh:plasmaedge (375)

### 9.2.1.3.178 pol\_decomp

Poloidal decomposition of the wave fields. Uses the flux surface grid in grid\_1d.

member	type	description
mpol	vecint.type (9.2.1.2.10)	Poloidal mode numbers; Vector (nmpol)
e.plus	array3dflt.type (9.2.1.2.1)	Magnitude of poloidal Fourier decomposition of left hand polarised component of the wave electric field [V/m]; Time-dependent; Array 3D (ntor, npsi, nmpol)
e.plus.ph	array3dflt.type (9.2.1.2.1)	Phase of poloidal Fourier decomposition of left hand polarised component of the wave electric field [rad]; Time-dependent; Array 3D (ntor, npsi, nmpol)
e.minus	array3dflt.type (9.2.1.2.1)	Magnitude of poloidal Fourier decomposition of right hand polarised component of the wave electric field; Time-dependent (V/m); Array 3D (ntor, npsi, nmpol)
e.minus.ph	array3dflt.type (9.2.1.2.1)	Phase of poloidal Fourier decomposition of right hand polarised component of the wave electric field [rad]; Time-dependent; Array 3D (ntor, npsi, nmpol)
e.norm	array3dflt.type (9.2.1.2.1)	Magnitude of poloidal Fourier decomposition of wave electric field normal to a flux surface [V/m]; Time dependent; Array 3D (ntor, npsi, nmpol)
e.norm.ph	array3dflt.type (9.2.1.2.1)	Phase of poloidal Fourier decomposition of wave electric field normal to a flux surface [rad]; Time dependent; Array 3D (ntor, npsi, nmpol)
e.binorm	array3dflt.type (9.2.1.2.1)	Magnitude of poloidal Fourier decomposition of wave electric field tangent to a flux surface [V/m]; Time dependent; Array 3D (ntor, npsi, nmpol)
e.binorm.ph	array3dflt.type (9.2.1.2.1)	Phase of poloidal Fourier decomposition of wave electric field tangent to a flux surface [rad]; Time dependent; Array 3D (ntor, npsi, nmpol)
e.para	array3dflt.type (9.2.1.2.1)	Magnitude of poloidal Fourier decomposition of parallel wave electric field [V/m]; Time dependent; Array 3D (ntor, npsi, nmpol)
e.para.ph	array3dflt.type (9.2.1.2.1)	Phase of poloidal Fourier decomposition of parallel wave electric field [rad]; Time dependent; Array 3D (ntor, npsi, nmpol)
b.norm	array3dflt.type (9.2.1.2.1)	Magnitude of poloidal Fourier decomposition of wave magnetic field normal to a flux surface [T]; Time dependent; Array 3D (ntor, npsi, nmpol)
b.norm.ph	array3dflt.type (9.2.1.2.1)	Phase of poloidal Fourier decomposition of parallel wave electric field [rad]; Time dependent; Array 3D (ntor, npsi, nmpol)
b.binorm	array3dflt.type (9.2.1.2.1)	Magnitude of poloidal Fourier decomposition of wave magnetic field tangent to a flux surface [T]; Time dependent; Array 3D (ntor, npsi, nmpol)
b.binorm.ph	array4dflt.type (9.2.1.2.3)	Phase of poloidal Fourier decomposition of wave magnetic field tangent to a flux surface [rad]; Time dependent; Array 3D (ntor, npsi, nmpol)
b.para	array3dflt.type (9.2.1.2.1)	Magnitude of Fourier decomposition of wave magnetic field parallel to the equilibrium magnetic field [T]; Time dependent; Array 3D (ntor, npsi, nmpol)
b.para.ph	array3dflt.type (9.2.1.2.1)	Phase of Fourier decomposition of wave magnetic field parallel to the equilibrium magnetic field [T]; Time dependent; Array 3D (ntor, npsi, nmpol)

Type of: fullwave:pol\_decomp (454)

### 9.2.1.3.179 polarization

Wave field polarization along the ray/beam.

member	type	description
epol_p	matflt.type (9.2.1.2.7)	Electric field polarization vector in the p rotating coordinates, Matrix of double precision real (nbeams, max_npoints). Time-dependent
epol_m	matflt.type (9.2.1.2.7)	Electric field polarization vector in the m rotating coordinates, Matrix of double precision real (nbeams, max_npoints). Time-dependent
epol_par	matflt.type (9.2.1.2.7)	Electric field polarization vector in the magnetic field direction, Matrix of double precision real (nbeams, max_npoints). Time-dependent

Type of: beamtracing:polarization (381)

### 9.2.1.3.180 powerflow

Power flow along the ray/beam.

member	type	description
phi_perp	matflt.type (9.2.1.2.7)	Normalized power flow in the direction perpendicular to the magnetic field; Matrix of double precision real (nbeams, max_npoints). Time-dependent
phi_par	matflt.type (9.2.1.2.7)	Normalized power flow in the direction parallel to the magnetic field; Matrix of double precision real (nbeams, max_npoints). Time-dependent
power.e	matflt.type (9.2.1.2.7)	Power absorbed along the beam by electrons [W]; Matrix of double precision real (nbeams, max_npoints). Time-dependent

member	type	description
power.i	array3dflt.type (9.2.1.2.1)	Power absorbed along the beam by an ion species [W]; Array (3D) of double precision real (nbeams, max_npoints, nion). Time-dependent

Type of: beamtracing:powerflow (381)

### 9.2.1.3.181 profiles1d

Profiles derived from the fields solved in the transport equations, or from experiment.

member	type	description
pe	coreprofile (9.2.1.3.68)	Electron pressure [Pa]; Time-dependent;
pi	corepfion (9.2.1.3.69)	Ion pressure [Pa]; Time-dependent;
pr.th	coreprofile (9.2.1.3.68)	Thermal pressure (electrons+ions) [Pa]; Time-dependent;
pr.perp	coreprofile (9.2.1.3.68)	Total perpendicular pressure (electrons+ions, thermal+non-thermal) [Pa]; Time-dependent;
pr.parallel	coreprofile (9.2.1.3.68)	Total parallel pressure (electrons+ions, thermal+non-thermal) [Pa]; Time-dependent;
jtot	coreprofile (9.2.1.3.68)	total parallel current density = average(jtot.B) / B0, where B0 = coreprof/toroid.field/b0 [A/m <sup>2</sup> ]; Time-dependent;
jni	coreprofile (9.2.1.3.68)	non-inductive parallel current density = average(jni.B) / B0, where B0 = coreprof/toroid.field/b0 [A/m <sup>2</sup> ]; Time-dependent;
joh	coreprofile (9.2.1.3.68)	ohmic parallel current density = average(joh.B) / B0, where B0 = coreprof/toroid.field/b0 [A/m <sup>2</sup> ]; Time-dependent;
vloop	coreprofile (9.2.1.3.68)	Toroidal loop voltage [V]. Time-dependent.
sigmapar	coreprofile (9.2.1.3.68)	Parallel conductivity [ohm <sup>-1</sup> .m <sup>-1</sup> ]. Time-dependent.
qoh	coreprofile (9.2.1.3.68)	ohmic heating [W/m <sup>3</sup> ]; Time-dependent;
eparallel	coreprofile (9.2.1.3.68)	Parallel electric field = average(E.B) / B0, where B0 = coreprof/toroid.field/b0 [V.m <sup>-1</sup> ]. Time-dependent.
e.b	coreprofile (9.2.1.3.68)	Average(E.B) [V.T.m <sup>-1</sup> ]. Time-dependent.
q	coreprofile (9.2.1.3.68)	Safety factor profile; Time-dependent;
shear	coreprofile (9.2.1.3.68)	Magnetic shear profile; Time-dependent;
ns	corepfion (9.2.1.3.69)	Density of fast ions, for the various ion species [m <sup>-3</sup> ]; Time-dependent;
mtor	corepfion (9.2.1.3.69)	Toroidal momentum of the various ion species [UNITS?]; Time-dependent;
wtor	corepfion (9.2.1.3.69)	Angular toroidal rotation frequency of the various ion species [s <sup>-1</sup> ]; Time-dependent;
zeff	coreprofile (9.2.1.3.68)	Effective charge profile; Time-dependent;
bpol	coreprofile (9.2.1.3.68)	Average poloidal magnetic field, defined as sqrt(ave(grad rho <sup>2</sup> /R <sup>2</sup> )).dpsi/drho [T]. Time-dependent.
dpsidt	coreprofile (9.2.1.3.68)	Time derivative of the poloidal flux at constant rho_tor_norm [V]. Time-dependent.
dpsidt_phi	coreprofile (9.2.1.3.68)	Time derivative of the poloidal flux at constant toroidal flux [V]. Time-dependent.
dvprimedt	coreprofile (9.2.1.3.68)	Time derivative of the radial derivative of the volume enclosed in the flux surface, i.e. d/dt(dV/drho.tor) [m <sup>2</sup> .s <sup>-1</sup> ]; Time-dependent.

Type of: coreprof:profiles1d (341)

### 9.2.1.3.182 profiles\_1d

output profiles as a function of the poloidal flux

member	type	description
psi	vecflt.type (9.2.1.2.9)	Poloidal flux [Wb], without 1/2pi and such that Bp= grad psi  /R/2/pi. Time-dependent; Vector (npsi)
phi	vecflt.type (9.2.1.2.9)	toroidal flux [Wb]; Time-dependent; Vector (npsi)
pressure	vecflt.type (9.2.1.2.9)	pressure profile as a function of the poloidal flux [Pa]; Time-dependent; Vector (npsi)
F.dia	vecflt.type (9.2.1.2.9)	diamagnetic profile (R B.phi) [T m]; Time-dependent; Vector (npsi)
pprime	vecflt.type (9.2.1.2.9)	psi derivative of the pressure profile [Pa/Wb]; Time-dependent; Vector (npsi)
ffprime	vecflt.type (9.2.1.2.9)	psi derivative of F.dia multiplied with F.dia [T <sup>2</sup> m <sup>2</sup> /Wb]; Time-dependent; Vector (npsi)
jphi	vecflt.type (9.2.1.2.9)	flux surface averaged toroidal current density = average(jphi/R) / average(1/R) [A/m <sup>2</sup> ]; Time-dependent; Vector (npsi)
jparallel	vecflt.type (9.2.1.2.9)	flux surface averaged parallel current density = average(j.B) / B0, where B0 = equilibrium/global.param/toroid.field/b0 ; [A/m <sup>2</sup> ]; Time-dependent; Vector (npsi)
q	vecflt.type (9.2.1.2.9)	Safety factor = dphi/dpsi [-]; Time-dependent; Vector (npsi)
r.inboard	vecflt.type (9.2.1.2.9)	radial coordinate (major radius) at the height and on the left of the magnetic axis [m]; Time-dependent; Vector (npsi)
r.outboard	vecflt.type (9.2.1.2.9)	radial coordinate (major radius) at the height and on the right of the magnetic axis [m]; Time-dependent; Vector (npsi)

member	type	description
rho_tor	vecflt_type (9.2.1.2.9)	Toroidal flux coordinate [m], to be used by the ETS and in many CPOs (coreprof, ...). Defined as $\sqrt{\phi/\pi/B_0}$ , where $B_0 = \text{equilibrium/global\_param/toroid\_field}/b_0$ . Time-dependent; Vector (npsi)
dpsidrho_tor	vecflt_type (9.2.1.2.9)	$d\psi/d\rho_{\text{tor}}$ [Wb/m]; Time-dependent; Vector (npsi)
rho_vol	vecflt_type (9.2.1.2.9)	Normalised radial coordinate related to the plasma volume. Defined as $\sqrt{\text{volume} / \text{volume[LCFS]}}$ . Time-dependent; Vector (npsi)
beta_pol	vecflt_type (9.2.1.2.9)	poloidal beta (inside the magnetic surface); Time-dependent; Vector (npsi)
li	vecflt_type (9.2.1.2.9)	internal inductance (inside the magnetic surface); Time-dependent; Vector (npsi)
elongation	vecflt_type (9.2.1.2.9)	Elongation; Time-dependent; Vector (npsi)
tria_upper	vecflt_type (9.2.1.2.9)	Upper triangularity profile; Time-dependent; Vector (npsi)
tria_lower	vecflt_type (9.2.1.2.9)	Lower triangularity profile; Time-dependent; Vector (npsi)
volume	vecflt_type (9.2.1.2.9)	Volume enclosed in the flux surface [m <sup>3</sup> ]; Time-dependent; Vector (npsi)
vprime	vecflt_type (9.2.1.2.9)	Radial derivative of the volume enclosed in the flux surface with respect to psi, i.e. $dV/d\psi$ [m <sup>3</sup> /Wb]; Time-dependent; Vector (npsi)
area	vecflt_type (9.2.1.2.9)	Cross-sectional area of the flux surface [m <sup>2</sup> ]; Time-dependent; Vector (npsi)
aprime	vecflt_type (9.2.1.2.9)	Radial derivative of the cross-sectional area of the flux surface with respect to psi, i.e. $d\text{area}/d\psi$ [m <sup>2</sup> /Wb]; Time-dependent; Vector (npsi)
surface	vecflt_type (9.2.1.2.9)	Surface area of the flux surface [m <sup>2</sup> ]; Time-dependent; Vector (npsi)
fttrap	vecflt_type (9.2.1.2.9)	Trapped particle fraction; Time-dependent; Vector (npsi)
gm1	vecflt_type (9.2.1.2.9)	$\text{average}(1/R^2)$ ; Time-dependent; Vector (npsi)
gm2	vecflt_type (9.2.1.2.9)	$\text{average}(\text{grad\_rho}^2/R^2)$ ; Time-dependent; Vector (npsi)
gm3	vecflt_type (9.2.1.2.9)	$\text{average}(\text{grad\_rho}^2)$ ; Time-dependent; Vector (npsi)
gm4	vecflt_type (9.2.1.2.9)	$\text{average}(1/B^2)$ [T <sup>-2</sup> ]; Time-dependent; Vector (npsi)
gm5	vecflt_type (9.2.1.2.9)	$\text{average}(B^2)$ [T <sup>2</sup> ]; Time-dependent; Vector (npsi)
gm6	vecflt_type (9.2.1.2.9)	$\text{average}(\text{grad\_rho}^2/B^2)$ [T <sup>-2</sup> ]; Time-dependent; Vector (npsi)
gm7	vecflt_type (9.2.1.2.9)	$\text{average}(\text{grad\_rho})$ ; Time-dependent; Vector (npsi)
gm8	vecflt_type (9.2.1.2.9)	$\text{average}(R)$ ; Time-dependent; Vector (npsi)
gm9	vecflt_type (9.2.1.2.9)	$\text{average}(1/R)$ ; Time-dependent; Vector (npsi)
b_av	vecflt_type (9.2.1.2.9)	$\text{average}(B)$ ; Time-dependent; Vector (npsi)
b_min	vecflt_type (9.2.1.2.9)	minimum(B) on the flux surface; Time-dependent; Vector (npsi)
b_max	vecflt_type (9.2.1.2.9)	maximum(B) on the flux surface; Time-dependent; Vector (npsi)
omega	vecflt_type (9.2.1.2.9)	Toroidal rotation angular frequency (assumed constant on the flux surface) [rad/s]; Time-dependent; Vector (npsi)
omegaprime	vecflt_type (9.2.1.2.9)	Psi derivative of the toroidal rotation angular frequency (assumed constant on the flux surface) [rad/(s.Wb)]; Time-dependent; Vector (npsi)
mach_a	vecflt_type (9.2.1.2.9)	Alfvénic Mach number; Time-dependent; Vector (npsi)
phi_flow	vecflt_type (9.2.1.2.9)	Definition to be provided; Time-dependent; Vector (npsi)
s_flow	vecflt_type (9.2.1.2.9)	Definition to be provided; Time-dependent; Vector (npsi)
h_flow	vecflt_type (9.2.1.2.9)	Definition to be provided; Time-dependent; Vector (npsi)

Type of: equilibrium:profiles.1d (349)

### 9.2.1.3.183 profiles.2d

output profiles in the poloidal plane

member	type	description
grid.type	string (9.2.1.1.3)	Selection of one of a set of grid types. 1-rectangular (R,Z) grid, in this case the position arrays should not be filled since they are redundant with grid/dim1 and dim2.
grid	grid (9.2.1.3.125)	definition of the 2D grid
r	matflt_type (9.2.1.2.7)	values of the major radius on the grid [m]; Time-dependent; Matrix (ndim1, ndim2)
z	matflt_type (9.2.1.2.7)	values of the altitude on the grid [m]; Time-dependent; Matrix (ndim1, ndim2)
psi	matflt_type (9.2.1.2.7)	values of the poloidal flux at the grid in the poloidal plane [Wb]; Time-dependent; Matrix (ndim1, ndim2)
theta	matflt_type (9.2.1.2.7)	values of the poloidal angle on the grid [rad]; Time-dependent; Matrix (ndim1, ndim2)
jphi	matflt_type (9.2.1.2.7)	toroidal plasma current density [A m <sup>-2</sup> ]; Time-dependent; Matrix (ndim1, ndim2)
jpar	matflt_type (9.2.1.2.7)	parallel (to magnetic field) plasma current density [A m <sup>-2</sup> ]; Time-dependent; Matrix (ndim1, ndim2)
br	matflt_type (9.2.1.2.7)	R component of the poloidal magnetic field at the specified grid [T]; Time-dependent; Matrix (ndim1, ndim2)
bz	matflt_type (9.2.1.2.7)	Z component of the poloidal magnetic field at the specified grid [T]; Time-dependent; Matrix (ndim1, ndim2)
bphi	matflt_type (9.2.1.2.7)	toroidal component of the magnetic field at the specified grid [T]; Time-dependent; Matrix (ndim1, ndim2)

member	type	description
vphi	matflt_type (9.2.1.2.7)	toroidal flow velocity [m/s]; Time-dependent; Matrix (ndim1, ndim2)
vtheta	matflt_type (9.2.1.2.7)	Poloidal flow velocity [m/s]; Time-dependent; Matrix (ndim1, ndim2)
rho_mass	matflt_type (9.2.1.2.7)	Mass density [kg/m <sup>3</sup> ]; Time-dependent; Matrix (ndim1, ndim2)
pressure	matflt_type (9.2.1.2.7)	Pressure [Pa]; Time-dependent; Matrix (ndim1, ndim2)
temperature	matflt_type (9.2.1.2.7)	Temperature [eV]; Time-dependent; Matrix (ndim1, ndim2)

Type of: equilibrium:profiles\_2d (349)

### 9.2.1.3.184 profiles\_neutrals

Profiles derived from the fields solved in the transport equations, or from experiment.

member	type	description
n0	corefieldneutral (9.2.1.3.64)	Neutral density [m <sup>-3</sup> ]. Time-dependent;
t0	corefieldneutrale (9.2.1.3.65)	Neutral temperature [eV]. Time-dependent;
v0	corefieldneutralv0 (9.2.1.3.67)	Neutral velocity
prad0	matflt_type (9.2.1.2.7)	Power radiated by neutrals [W.m <sup>-3</sup> ]. Matrix (nrho,nneut). Time-dependent.

Type of: coreneutrals:profiles (340)

### 9.2.1.3.185 properties

Space properties

member	type	description
alias	vecint_type (9.2.1.2.10)	Describes the links among grid nodes, primarily in case of periodic grids. If nodes i and j are two instances of the same node, located at the boundaries of a periodic domain, it is intended that ALIAS(I) = J and ALIAS(J) = I. Vector of integers (nnode).
type	vecint_type (9.2.1.2.10)	General purpose signal allowing the user grouping the space nodes according to his/her needs. Vector of integers (nnode).
is_x	vecint_type (9.2.1.2.10)	Location of X points. Vector of integers (nnode).
node.connect	string (9.2.1.1.3)	Lconnection type between two nodes. If its value is STRAIGHT, then two nodes are connected with a straight line (where "straight" is to be intended in the coordinates specified for that space). If the value is BEZIER, then two nodes are connected with BEZIER curves. String
bezier	bezier (9.2.1.3.49)	Components of the Bezier vectors associated to a node. I WONDER IF THIS IS GENERAL ENOUGH ... WHAT DO WE DO IF A DIFFERENT TYPE OF FINITE ELEMENT IS USED ?

Type of: grid\_space:properties (469)

### 9.2.1.3.186 psi

Poloidal magnetic flux [Wb]; Time-dependent;

member	type	description
value	vecflt_type (9.2.1.2.9)	Signal value [Wb]; Time-dependent; Vector (nrho)
derivative	vecflt_type (9.2.1.2.9)	Radial derivative (dvalue/drho_tor) [Wb.m <sup>-1</sup> ]; Time-dependent; Vector (nrho)
source	string (9.2.1.1.3)	Source of the profile (any comment describing the origin of the profile : code, path to diagnostic signals, massaging, ...); String
flag	integer (9.2.1.1.2)	Flag describing how the profile has been processed : 0-not calculated; 1-interpretative; 2-calculated by the transport solver; 3-calculated by a separate code : in that case only, description of the code provided in codeparam at the same level; 4-used value from the previous time step; Time-dependent; Scalar
boundary	boundary (9.2.1.3.50)	Boundary condition for the transport equation. Time-dependent.
jni	jni (9.2.1.3.143)	Non-inductive parallel current density [A/m <sup>2</sup> ]; Time-dependent;
sigma_par	coreprofile (9.2.1.3.68)	Parallel conductivity [ohm <sup>-1</sup> .m <sup>-1</sup> ]. Time-dependent
codeparam	codeparam (9.2.1.3.56)	Code parameters

Type of: coreprof:psi (341)



### 9.2.1.3.187 putinfo

Structure which is type independent, describing the data item

member	type	description
putmethod	string (9.2.1.1.3)	Storage method for this data
putaccess	string (9.2.1.1.3)	Instructions to access the data using this method
putlocation	string (9.2.1.1.3)	Name of this data under this method
rights	string (9.2.1.1.3)	Access rights to this data

Type of: datainfo:putinfo (408)

### 9.2.1.3.188 q

Safety factor

member	type	description
qvalue	vecflt_type (9.2.1.2.9)	Safety factor values; Time-dependent; Vector (nmeas)
position	rz1D (9.2.1.3.214)	Major radius of the given safety factor values [m]; Time-dependent; Vector (nmeas)
source	string (9.2.1.1.3)	Description or path to the source signal (diagnostic or genprof, from which to read all info on the signal), e.g. 'magdiag/bpol_probes/measure/value'. String
exact	integer (9.2.1.1.2)	1 means exact data, is not fitted; 0 means the equilibrium code does a least square fit; scalar integer
weight	vecflt_type (9.2.1.2.9)	weight given to the measurement ( $\zeta=0$ ); Time-dependent; Vector (nmeas)
sigma	vecflt_type (9.2.1.2.9)	standard deviation of the measurement; Time-dependent; Vector (nmeas)
calculated	vecflt_type (9.2.1.2.9)	Signal as recalculated by the equilibrium code; Time-dependent; Vector (nmeas)
chi2	vecflt_type (9.2.1.2.9)	chi <sup>2</sup> of (calculated-measured); Time-dependent; Vector (nmeas)

Type of: eqconstraint:q (441)

### 9.2.1.3.189 recycling\_neutrals

Recycling coefficients

member	type	description
particles	matflt_type (9.2.1.2.7)	Particle recycling coefficient corresponding to the conversion of ion type IION to the neutral type INEUT. Matrix(nneut,nion). Time-dependent.
energy	matflt_type (9.2.1.2.7)	Energy recycling coefficient corresponding to the conversion of ion type IION to the neutral type INEUT. Matrix(nneut,nion). Time-dependent.

Type of: coefficients\_neutrals:recycling (390)

### 9.2.1.3.190 reduced

Structure for a reduced data signal (0D data)

member	type	description
value	float (9.2.1.1.1)	Data value; Real
source	string (9.2.1.1.3)	Path to the source signal (diagnostic or genprof, from which to read all info on the signal); String
time	float (9.2.1.1.1)	Time (exact time slice used from the time array of the source signal); Real

Type of: summary:a\_minor (365) I summary:area (365) I summary:beta\_normal (365) I summary:beta\_pol (365) I summary:beta\_tor (365) I summary:bvac\_r (365) I summary:elongation (365) I summary:geom\_axis\_r (365) I summary:impur1\_a (365) I summary:impur1\_z (365) I summary:ip (365) I summary:li (365) I summary:main\_ion1\_a (365) I summary:main\_ion1\_z (365) I summary:main\_ion2\_a (365) I summary:main\_ion2\_z (365) I summary:nev (365) I summary:tev (365) I summary:tiv (365) I summary:tria\_lower (365) I summary:tria\_upper (365) I summary:volume (365) I summary:zeffv (365)

### 9.2.1.3.191 ref\_nt

set of non-timed references

member	type	description
zerod_real	ref_nt_0dr (9.2.1.3.194)	0d reference of real type
zerod_int	ref_nt_0di (9.2.1.3.192)	0d reference of integer type
zerod_string	ref_nt_0ds (9.2.1.3.196)	0d reference of string type
oned_real	ref_nt_1dr (9.2.1.3.200)	1d reference of real type
oned_int	ref_nt_1di (9.2.1.3.198)	1d reference of integer type

Type of: reference:non\_timed (362)

### 9.2.1.3.192 ref\_nt\_0di

set of non-timed references of integer type

member	type	description
ref1	ref_nt_0di_ref (9.2.1.3.193)	Reference signal #1
ref2	ref_nt_0di_ref (9.2.1.3.193)	Reference signal #2
ref3	ref_nt_0di_ref (9.2.1.3.193)	Reference signal #3
ref4	ref_nt_0di_ref (9.2.1.3.193)	Reference signal #4

Type of: ref\_nt:zerod\_int (524)

### 9.2.1.3.193 ref\_nt\_0di\_ref

a non-timed reference of integer type

member	type	description
value	integer (9.2.1.1.2)	Value of the reference. Integer scalar.
description	string (9.2.1.1.3)	Description of the reference. String.

Type of: ref\_nt\_0di:ref1 (525) | ref\_nt\_0di:ref2 (525) | ref\_nt\_0di:ref3 (525) | ref\_nt\_0di:ref4 (525)

### 9.2.1.3.194 ref\_nt\_0dr

set of non-timed references of real type

member	type	description
ref1	ref_nt_0dr_ref (9.2.1.3.195)	Reference signal #1
ref2	ref_nt_0dr_ref (9.2.1.3.195)	Reference signal #2
ref3	ref_nt_0dr_ref (9.2.1.3.195)	Reference signal #3
ref4	ref_nt_0dr_ref (9.2.1.3.195)	Reference signal #4
ref5	ref_nt_0dr_ref (9.2.1.3.195)	Reference signal #5
ref6	ref_nt_0dr_ref (9.2.1.3.195)	Reference signal #6
ref7	ref_nt_0dr_ref (9.2.1.3.195)	Reference signal #7

Type of: ref\_nt:zerod\_real (524)

### 9.2.1.3.195 ref\_nt\_0dr\_ref

a non-timed reference of real type

member	type	description
value	float (9.2.1.1.1)	Value of the reference. Real scalar.
description	string (9.2.1.1.3)	Description of the reference. String.

Type of: ref\_nt\_0dr:ref1 (527) | ref\_nt\_0dr:ref2 (527) | ref\_nt\_0dr:ref3 (527) | ref\_nt\_0dr:ref4 (527) | ref\_nt\_0dr:ref5 (527) | ref\_nt\_0dr:ref6 (527) | ref\_nt\_0dr:ref7 (527)

### 9.2.1.3.196 ref\_nt\_0ds

set of non-timed references of string type

member	type	description
ref1	ref_nt_0ds_ref (9.2.1.3.197)	Reference signal #1
ref2	ref_nt_0ds_ref (9.2.1.3.197)	Reference signal #2

Type of: ref\_nt:zerod\_string (524)

### 9.2.1.3.197 ref\_nt\_0ds\_ref

a non-timed reference of string type

member	type	description
value	string (9.2.1.1.3)	Value of the reference. String
description	string (9.2.1.1.3)	Description of the reference. String.

Type of: ref\_nt\_0ds:ref1 (529) I ref\_nt\_0ds:ref2 (529)

### 9.2.1.3.198 ref\_nt\_1di

set of non-timed references of vecint type

member	type	description
ref1	ref_nt_1di_ref (9.2.1.3.199)	Reference signal #1
ref2	ref_nt_1di_ref (9.2.1.3.199)	Reference signal #2
ref3	ref_nt_1di_ref (9.2.1.3.199)	Reference signal #3
ref4	ref_nt_1di_ref (9.2.1.3.199)	Reference signal #4

Type of: ref\_nt:oned\_int (524)

### 9.2.1.3.199 ref\_nt\_1di\_ref

a non-timed reference of vecint type

member	type	description
value	vecint_type (9.2.1.2.10)	Value of the reference. Vector of integers.
description	string (9.2.1.1.3)	Description of the reference. String.

Type of: ref\_nt\_1di:ref1 (531) I ref\_nt\_1di:ref2 (531) I ref\_nt\_1di:ref3 (531) I ref\_nt\_1di:ref4 (531)

### 9.2.1.3.200 ref\_nt\_1dr

set of non-timed references of vecflt type

member	type	description
ref1	ref_nt_1dr_ref (9.2.1.3.201)	Reference signal #1
ref2	ref_nt_1dr_ref (9.2.1.3.201)	Reference signal #2
ref3	ref_nt_1dr_ref (9.2.1.3.201)	Reference signal #3
ref4	ref_nt_1dr_ref (9.2.1.3.201)	Reference signal #4
ref5	ref_nt_1dr_ref (9.2.1.3.201)	Reference signal #5

Type of: ref\_nt:oned\_real (524)

### 9.2.1.3.201 ref\_nt\_1dr\_ref

a non-timed reference of vecflt type

member	type	description
value	vecflt_type (9.2.1.2.9)	Value of the reference. Vector.
description	string (9.2.1.1.3)	Description of the reference. String.

Type of: ref\_nt\_1dr:ref1 (533) I ref\_nt\_1dr:ref2 (533) I ref\_nt\_1dr:ref3 (533) I ref\_nt\_1dr:ref4 (533) I ref\_nt\_1dr:ref5

(533)

### 9.2.1.3.202 ref\_t

set of timed references

member	type	description
zerod_real	ref.t.0dr (9.2.1.3.205)	0d reference of real type
zerod_int	ref.t.0di (9.2.1.3.203)	0d reference of integer type
oned_real	ref.t.1dr (9.2.1.3.209)	1d reference of real type
oned_int	ref.t.1di (9.2.1.3.207)	1d reference of integer type

Type of: reference:timed (362)

### 9.2.1.3.203 ref\_t.0di

set of timed references of integer type

member	type	description
ref1	ref.t.0di.ref (9.2.1.3.204)	Reference signal #1
ref2	ref.t.0di.ref (9.2.1.3.204)	Reference signal #2
ref3	ref.t.0di.ref (9.2.1.3.204)	Reference signal #3
ref4	ref.t.0di.ref (9.2.1.3.204)	Reference signal #4

Type of: ref\_t:zerod\_int (535)

### 9.2.1.3.204 ref\_t.0di.ref

a timed reference of integer type

member	type	description
value	integer (9.2.1.1.2)	Value of the reference. Integer scalar. Time-dependent.
description	string (9.2.1.1.3)	Description of the reference. String.

Type of: ref\_t.0di:ref1 (536) I ref\_t.0di:ref2 (536) I ref\_t.0di:ref3 (536) I ref\_t.0di:ref4 (536)

### 9.2.1.3.205 ref\_t.0dr

set of timed references of real type

member	type	description
ref1	ref.t.0dr.ref (9.2.1.3.206)	Reference signal #1
ref2	ref.t.0dr.ref (9.2.1.3.206)	Reference signal #2
ref3	ref.t.0dr.ref (9.2.1.3.206)	Reference signal #3
ref4	ref.t.0dr.ref (9.2.1.3.206)	Reference signal #4
ref5	ref.t.0dr.ref (9.2.1.3.206)	Reference signal #5
ref6	ref.t.0dr.ref (9.2.1.3.206)	Reference signal #6
ref7	ref.t.0dr.ref (9.2.1.3.206)	Reference signal #7
ref8	ref.t.0dr.ref (9.2.1.3.206)	Reference signal #8
ref9	ref.t.0dr.ref (9.2.1.3.206)	Reference signal #9
ref10	ref.t.0dr.ref (9.2.1.3.206)	Reference signal #10

Type of: ref\_t:zerod\_real (535)

### 9.2.1.3.206 ref\_t.0dr.ref

a timed reference of real type

member	type	description
value	float (9.2.1.1.1)	Value of the reference. Real scalar. Time-dependent.
description	string (9.2.1.1.3)	Description of the reference. String.

Type of: [ref.t.0dr:ref1 \(538\)](#) | [ref.t.0dr:ref10 \(538\)](#) | [ref.t.0dr:ref2 \(538\)](#) | [ref.t.0dr:ref3 \(538\)](#) | [ref.t.0dr:ref4 \(538\)](#) | [ref.t.0dr:ref5 \(538\)](#) | [ref.t.0dr:ref6 \(538\)](#) | [ref.t.0dr:ref7 \(538\)](#) | [ref.t.0dr:ref8 \(538\)](#) | [ref.t.0dr:ref9 \(538\)](#)

### 9.2.1.3.207 **ref.t.1di**

set of timed references of vecint type

member	type	description
ref1	<a href="#">ref.t.1di.ref (9.2.1.3.208)</a>	Reference signal #1
ref2	<a href="#">ref.t.1di.ref (9.2.1.3.208)</a>	Reference signal #2
ref3	<a href="#">ref.t.1di.ref (9.2.1.3.208)</a>	Reference signal #3
ref4	<a href="#">ref.t.1di.ref (9.2.1.3.208)</a>	Reference signal #4

Type of: [ref.t.oned\\_int \(535\)](#)

### 9.2.1.3.208 **ref.t.1di\_ref**

a timed reference of vecint type

member	type	description
value	<a href="#">vecint.type (9.2.1.2.10)</a>	Value of the reference. Vector of integers. Time-dependent.
description	<a href="#">string (9.2.1.1.3)</a>	Description of the reference. String.

Type of: [ref.t.1di:ref1 \(540\)](#) | [ref.t.1di:ref2 \(540\)](#) | [ref.t.1di:ref3 \(540\)](#) | [ref.t.1di:ref4 \(540\)](#)

### 9.2.1.3.209 **ref.t.1dr**

set of timed references of vecflt type

member	type	description
ref1	<a href="#">ref.t.1dr.ref (9.2.1.3.210)</a>	Reference signal #1
ref2	<a href="#">ref.t.1dr.ref (9.2.1.3.210)</a>	Reference signal #2
ref3	<a href="#">ref.t.1dr.ref (9.2.1.3.210)</a>	Reference signal #3
ref4	<a href="#">ref.t.1dr.ref (9.2.1.3.210)</a>	Reference signal #4
ref5	<a href="#">ref.t.1dr.ref (9.2.1.3.210)</a>	Reference signal #5

Type of: [ref.t.oned\\_real \(535\)](#)

### 9.2.1.3.210 **ref.t.1dr\_ref**

a timed reference of vecflt type

member	type	description
value	<a href="#">vecflt.type (9.2.1.2.9)</a>	Value of the reference. Vector. Time-dependent.
description	<a href="#">string (9.2.1.1.3)</a>	Description of the reference. String.

Type of: [ref.t.1dr:ref1 \(542\)](#) | [ref.t.1dr:ref2 \(542\)](#) | [ref.t.1dr:ref3 \(542\)](#) | [ref.t.1dr:ref4 \(542\)](#) | [ref.t.1dr:ref5 \(542\)](#)

### 9.2.1.3.211 **reggrid**

Generic structure for a regular grid

member	type	description
dim1	<a href="#">vecflt.type (9.2.1.2.9)</a>	First dimension values; Vector (ndim1)
dim2	<a href="#">vecflt.type (9.2.1.2.9)</a>	Second dimension values; Vector (ndim2)

Type of: [coord\\_sys:grid \(394\)](#)

### 9.2.1.3.212 **rf.beam**

Beam characteristics (RF wave description)

member	type	description
spot	spot (9.2.1.3.261)	Spot characteristics
phaseellipse	phaseellipse (9.2.1.3.176)	Phase ellipse characteristics of the spot

Type of: antenna\_ec:beam (373) I antenna\_lh:beam (375) I launches:beam (352)

#### 9.2.1.3.213 rz0D

Structure for one (R,Z) position (0D)

member	type	description
r	float (9.2.1.1.1)	Major radius [m]
z	float (9.2.1.1.1)	Altitude [m]

Type of: eqgeometry:active\_limit (442) I eqgeometry:geom\_axis (442) I eqgeometry:left\_low\_st (442) I eqgeometry:left\_up\_st (442) I eqgeometry:right\_low\_st (442) I eqgeometry:right\_up\_st (442) I mag\_axis:position (482)

#### 9.2.1.3.214 rz1D

Structure for list of R,Z positions (1D)

member	type	description
r	vecflt.type (9.2.1.2.9)	Major radius [m]
z	vecflt.type (9.2.1.2.9)	Altitude [m]

Type of: eqgeometry:xpts (442) I flush:position (449) I isoflux:position (475) I limiter:position (353) I q:position (521) I setup\_bprobe:position (579) I tsetup:position (619) I vessel:position (370) I xpts:position (639)

#### 9.2.1.3.215 rz1D\_npoints

Structure for list of R,Z positions (1D)

member	type	description
r	vecflt.type (9.2.1.2.9)	Major radius [m]. Vector(max_npoints). Time-dependent
z	vecflt.type (9.2.1.2.9)	Altitude [m]. Vector(max_npoints). Time-dependent
npoints	integer (9.2.1.1.2)	Number of meaningful points in the above vectors at a given time slice. Time-dependent

Type of: eqgeometry:boundary (442)

#### 9.2.1.3.216 rz2D

Structure for list of R,Z positions (2D)

member	type	description
r	matflt.type (9.2.1.2.7)	Major radius [m]
z	matflt.type (9.2.1.2.7)	Altitude [m]

Type of: coord\_sys:position (394) I geom\_iron:rzcoordinate (455) I pfpgeometry:rzcoordinate (506)

#### 9.2.1.3.217 rz3D

Structure for list of R,Z positions (3D)

member	type	description
r	array3dfilt.type (9.2.1.2.1)	Major radius [m]
z	array3dfilt.type (9.2.1.2.1)	Altitude [m]

Type of: pfpgeometry:rzcoordinate (505) I straps:coord\_strap (599)

### 9.2.1.3.218 rzphi1D

Structure for list of R,Z,phi positions (1D)

member	type	description
r	vecflt.type (9.2.1.2.9)	Major radius [m]
z	vecflt.type (9.2.1.2.9)	Altitude [m]
phi	vecflt.type (9.2.1.2.9)	Toroidal angle [rad]

Type of: antenna\_ec:position (373) I launches:position (352) I setup\_inject:position (581) I setup\_line:pivot\_point (582) I setup\_line:second\_point (582) I setup\_line:third\_point (582)

### 9.2.1.3.219 rzphi1Dexp

Structure for list of R,Z,phi positions (1D)

member	type	description
r	exp1D (9.2.1.3.113)	Major radius [m]
z	exp1D (9.2.1.3.113)	Altitude [m]
phi	exp1D (9.2.1.3.113)	Toroidal angle [rad]

Type of: antenna\_lh:position (375) I cxsetup:position (407) I ecsetup:position (439)

### 9.2.1.3.220 rzphi2D

Structure for list of R,Z,phi positions (2D)

member	type	description
r	matflt.type (9.2.1.2.7)	Major radius [m]
z	matflt.type (9.2.1.2.7)	Altitude [m]
phi	matflt.type (9.2.1.2.7)	Toroidal angle [rad]

Type of: beamlets:position (380) I setup\_floops:position (580)

### 9.2.1.3.221 rzphi3D

Structure for list of R,Z,phi positions (3D)

member	type	description
r	array3dfilt.type (9.2.1.2.1)	Major radius [m]
z	array3dfilt.type (9.2.1.2.1)	Altitude [m]
phi	array3dfilt.type (9.2.1.2.1)	Toroidal angle [rad]

Type of: turbcoordsys:position (620)

### 9.2.1.3.222 rzphidrdzdphi1D

Structure for list of R,Z,phi positions and width dR dZ dphi (1D)

member	type	description
r	vecflt.type (9.2.1.2.9)	Position : major radius [m]
z	vecflt.type (9.2.1.2.9)	Position : altitude [m]
phi	vecflt.type (9.2.1.2.9)	Position : toroidal angle [rad]
dr	vecflt.type (9.2.1.2.9)	Width : major radius [m]
dz	vecflt.type (9.2.1.2.9)	Width : altitude [m]
dphi	vecflt.type (9.2.1.2.9)	Width : toroidal angle [rad]

Type of: setup\_mse:rzgamma (583)

### 9.2.1.3.223 sawteeth\_diags

Inversion and mixing radii

member	type	description
shear1	float (9.2.1.1.1)	Magnetic shear at $q = 1$ [-]. Time-dependent. Real scalar.
rhotorn_q1	float (9.2.1.1.1)	Rho_tor_norm at $q=1$ radius [-]. Time-dependent. Real scalar.
rhotorn_inv	float (9.2.1.1.1)	Rho_tor_norm at inversion radius [-]. Time-dependent. Real scalar.
rhotorn_mix	float (9.2.1.1.1)	Rho_tor_norm at mixing radius [-]. Time-dependent. Real scalar.

Type of: sawteeth:diags (363)

### 9.2.1.3.224 sawteeth\_profiles1d

Core profiles after sawtooth crash

member	type	description
ne	vecflt.type (9.2.1.2.9)	Electron density [ $m^{-3}$ ]. Time-dependent. Vector (nrho).
ni	matflt.type (9.2.1.2.7)	Ion density [ $m^{-3}$ ]. Time-dependent. Matrix (nrho,nion).
te	vecflt.type (9.2.1.2.9)	Electron temperature [eV]. Time-dependent. Vector (nrho).
ti	matflt.type (9.2.1.2.7)	Ion temperature [eV]. Time-dependent. Matrix (nrho,nion).
psi	vecflt.type (9.2.1.2.9)	Poloidal flux [Wb], without $1/2\pi$ and such that $B_p =  \text{grad } \psi  / R / 2 / \pi$ . Time-dependent. Vector (nrho).
phi	vecflt.type (9.2.1.2.9)	Toroidal flux [Wb]. Time-dependent. Vector (nrho).
psistar	vecflt.type (9.2.1.2.9)	$\Psi^* = \psi - \phi$ [Wb]. Time-dependent. Vector (nrho).
volume	vecflt.type (9.2.1.2.9)	Volume enclosed in the flux surface [ $m^3$ ]. Required to ensure particle and energy conservation during reconnection process (ndV and (nT)dV are conserved). Time-dependent. Vector (nrho).
q	vecflt.type (9.2.1.2.9)	Safety factor = $d\phi/d\psi$ [-]. Time-dependent. Vector (nrho).

Type of: sawteeth:profiles1d (363)

### 9.2.1.3.225 scenario\_centre

central values of the profiles (at magnetic axis)

member	type	description
te0	scenario.ref (9.2.1.3.242)	central electron temperature [eV]. Time-dependent.
ti0	scenario.ref (9.2.1.3.242)	central ion temperature [eV]. Time-dependent.
ne0	scenario.ref (9.2.1.3.242)	central electron density [ $m^{-3}$ ]. Time-dependent.
ni0	scenario.ref (9.2.1.3.242)	central ion density [ $m^{-3}$ ]. Time-dependent.
shift0	scenario.ref (9.2.1.3.242)	central value of Shafranov shift [m]. Time-dependent.
psi0	scenario.ref (9.2.1.3.242)	pedestal poloidal flux [Wb]. Time-dependent.
phi0	scenario.ref (9.2.1.3.242)	central toroidal flux [Wb]. Time-dependent.
q0	scenario.ref (9.2.1.3.242)	central safety factor value []. Time-dependent.
Rmag	scenario.ref (9.2.1.3.242)	radius of magnetic axis [R]. Time-dependent.
Zmag	scenario.ref (9.2.1.3.242)	Z coordinate of magnetic axis [R]. Time-dependent.
vtor_0	scenario.ref (9.2.1.3.242)	central rotation velocity of selected impurity [m/s]. Time-dependent.

Type of: scenario:centre (364)

### 9.2.1.3.226 scenario\_composition

Plasma composition (description of ion species).

member	type	description
amn	vecflt.type (9.2.1.2.9)	Atomic mass number (lumped ions are allowed); Vector (nion)
zn	vecflt.type (9.2.1.2.9)	Nuclear charge (lumped ions are allowed); Vector (nion)
zion	vecflt.type (9.2.1.2.9)	Ion charge (of the dominant ionisation state; lumped ions are allowed); Vector (nion)
imp_flag	vecint.type (9.2.1.2.10)	Multiple charge state calculation flag : 0-Only one charge state is considered; 1-Multiple charge state are considered and are described in impurity CPO; Vector (nion)
rot_imp_flag	vecint.type (9.2.1.2.10)	set to 1 for the impurity corresponding at the given toroidal rotation, otherwise = 0
pellet.amn	vecflt.type (9.2.1.2.9)	Atomic mass number (for pellet injector); Vector (nion)



member	type	description
pellet_zn	vecflt_type (9.2.1.2.9)	Nuclear charge (pellet injector); Vector (nion)
nbi_amn	vecflt_type (9.2.1.2.9)	Atomic mass number (for neutral beam injection); Vector (nion)
nbi_zn	vecflt_type (9.2.1.2.9)	Nuclear charge (for neutral beam injection); Vector (nion)

Type of: scenario:composition (364)

### 9.2.1.3.227 scenario\_configuration

Strings describing the tokamak configuration

member	type	description
config	scenario_int (9.2.1.3.234)	plasma configuration (limiter/divertor ...) []. Time-dependent. Possible values : 0 = undetermined; 1 = poloidal limiter (ring); 2 = poloidal limiter (LFS); 3 = poloidal limiter (HFS); 4 = toroidal limiter (ring); 5 = toroidal limiter (segment); 6 = poloidal divertor; 7 = toroidal divertor (single null, ion drift in direction of divertor); 8 = toroidal divertor (single null, ion drift in opposite direction of divertor); 9 = toroidal divertor (double null).
lmode_sc	string (9.2.1.1.3)	name of the L-mode scaling law. String.
hmode_sc	string (9.2.1.1.3)	name of the H-mode scaling law. String.
core_sc	string (9.2.1.1.3)	name of the core plasma energy scaling law. String.
pedestal_sc	string (9.2.1.1.3)	name of the pedestal energy scaling law. String.
helium_sc	string (9.2.1.1.3)	name of the helium confinement time scaling law. String.
impurity_sc	string (9.2.1.1.3)	name of the impurities confinement time scaling law
l2h_sc	string (9.2.1.1.3)	name of the L-mode to H-mode power threshold scaling law. String.
tor_rot_sc	string (9.2.1.1.3)	name of the toroidal spontaneous rotation scaling law. String.
wall_mat	string (9.2.1.1.3)	chemical composition of the wall. String.
evap_mat	string (9.2.1.1.3)	chemical composition evaporated wall conditioning material. String.
lim_mat	string (9.2.1.1.3)	chemical composition of the limiter. String.
div_mat	string (9.2.1.1.3)	chemical composition of the divertor
coordinate	string (9.2.1.1.3)	name/definition of the internal coordinate of the simulator that are given by the data named rho
ecrh_freq	scenario_ref (9.2.1.3.242)	ECRH frequency [Hz]. Time-dependent.
ecrh_loc	scenario_ref (9.2.1.3.242)	position of maximum ECRH deposition on scale of rho [rho]. Time-dependent.
ecrh_mode	scenario_int (9.2.1.3.234)	polarisation of ecrh wave (0 = O mode, 1 = X mode) []. Time-dependent.
ecrh_tor_ang	scenario_ref (9.2.1.3.242)	toroidal angle of ECRH at resonance [rad] Time-dependent.
ecrh_pol_ang	scenario_ref (9.2.1.3.242)	poloidal angle of ECRH resonance position (0= LFS, pi/2 = top, -pi/2 = down, pi = HFS) [rad]. Time-dependent.
ecrh_harm	scenario_int (9.2.1.3.234)	harmonic number of the absorbed ecrh wave []. Time-dependent.
enbi	scenario_ref (9.2.1.3.242)	energy of the neutral beam [eV]. Time-dependent.
r_nbi	scenario_ref (9.2.1.3.242)	Major radius of tencance of NBI [m]. Time-dependent.
grad_b_drift	scenario_int (9.2.1.3.234)	direction of ion grad-B drift (1= to lower divertor, -1 = from lower divertor) []. Time-dependent.
icrh_freq	scenario_ref (9.2.1.3.242)	ICRH frequency [Hz]. Time-dependent.
icrh_scheme	string (9.2.1.1.3)	icrh scheme either : H_min_1; He3_min; T_harm_2; FW; FW_CD; FW_CCD
icrh_phase	scenario_ref (9.2.1.3.242)	ICRH antenna phasing [rad]. Time-dependent.
LH_freq	scenario_ref (9.2.1.3.242)	LHCD frequency [Hz]. Time-dependent.
LH_npar	scenario_ref (9.2.1.3.242)	LHCD parallel indice []. Time-dependent.
pellet_ang	scenario_ref (9.2.1.3.242)	pellet injection position (0= LFS, pi/2 = top, -pi/2 = down, pi = HFS) [rad]. Time-dependent.
pellet_v	scenario_ref (9.2.1.3.242)	pellet injection velocity [m/s]. Time-dependent.
pellet_nba	scenario_ref (9.2.1.3.242)	initial number of atoms in pellet []. Time-dependent.

Type of: scenario:configs (364)

### 9.2.1.3.228 scenario\_confinement

characteristic confinement times

member	type	description
tau_e	scenario_ref (9.2.1.3.242)	thermal energy confinement time [s]. Time-dependent.
tau_l_sc	scenario_ref (9.2.1.3.242)	confinement time given by the selected L-mode scaling law [s]. Time-dependent.
tau_h_sc	scenario_ref (9.2.1.3.242)	confinement time given by the selected H-mode scaling law [s]. Time-dependent.
tau_he	scenario_ref (9.2.1.3.242)	Helium ashes confinement time [s]. Time-dependent.
tau_e_ee	scenario_ref (9.2.1.3.242)	electron energy confinement time [s]. Time-dependent.
tau_e_ii	scenario_ref (9.2.1.3.242)	ion energy confinement time [s]. Time-dependent.

member	type	description
tau_e_ei	scenario_ref (9.2.1.3.242)	energy equipartition characteristic time [s]. Time-dependent.
tau_cur_diff	scenario_ref (9.2.1.3.242)	characteristic time for current diffusion [s]. Time-dependent.
tau_i_rol	scenario_ref (9.2.1.3.242)	characteristic time for current decrease in tokamak equivalent R/L circuit [s]. Time-dependent.

Type of: scenario:confinement (364)

### 9.2.1.3.229 scenario\_currents

data related to current sources and current diffusion

member	type	description
RR	scenario_ref (9.2.1.3.242)	plasma resistivity [ohm]. Time-dependent.
i_align	scenario_ref (9.2.1.3.242)	current drive alignment quality parameter (1 = good , 0 = bad). Time-dependent.
i_boot	scenario_ref (9.2.1.3.242)	bootstrap current [A]. Time-dependent.
i_cd_tot	scenario_ref (9.2.1.3.242)	total current drive [A]. Time-dependent.
i_eccd	scenario_ref (9.2.1.3.242)	Electron Cyclotron current drive [A]. Time-dependent.
i_fast_ion	scenario_ref (9.2.1.3.242)	fast ions bootstrap like current drive (i.e. fast alpha) [A]. Time-dependent.
i_fwcd	scenario_ref (9.2.1.3.242)	Fast Wave current drive [A]. Time-dependent.
i_lhcd	scenario_ref (9.2.1.3.242)	Lower Hybrid current drive [A]. Time-dependent.
i_nbicd	scenario_ref (9.2.1.3.242)	Neutral Beam Injection current drive [A]. Time-dependent.
i_ni_tot	scenario_ref (9.2.1.3.242)	total non inductive current [A]. Time-dependent.
i_ohm	scenario_ref (9.2.1.3.242)	ohmic current [A]. Time-dependent.
i_par	scenario_ref (9.2.1.3.242)	total plasma current (projected on B : <J.B <sub>z</sub> /B <sub>0</sub> ) [A]. Time-dependent.
i_runaway	scenario_ref (9.2.1.3.242)	runaway current [A]. Time-dependent.
v_loop	scenario_ref (9.2.1.3.242)	loop voltage @ LCMS / LFS , equatorial point [V]. Time-dependent.
v_meas	scenario_ref (9.2.1.3.242)	loop voltage measured on a coil [V]. Time-dependent.

Type of: scenario:currents (364)

### 9.2.1.3.230 scenario\_edge

edge value (@ LCMS)

member	type	description
te_edge	scenario_ref (9.2.1.3.242)	edge electron temperature [eV]. Time-dependent.
ti_edge	scenario_ref (9.2.1.3.242)	edge ion temperature [eV]. Time-dependent.
ne_edge	scenario_ref (9.2.1.3.242)	edge electron density [m <sup>-3</sup> ]. Time-dependent.
ni_edge	scenario_ref (9.2.1.3.242)	edge ion density [m <sup>-3</sup> ]. Time-dependent.
psi_edge	scenario_ref (9.2.1.3.242)	edge poloidal flux [Wb]. Time-dependent.
phi_edge	scenario_ref (9.2.1.3.242)	edge toroidal flux [Wb]. Time-dependent.
rho_edge	scenario_ref (9.2.1.3.242)	edge value of internal simulator coordinate [m]. Time-dependent.
drho_edge_dt	scenario_ref (9.2.1.3.242)	time derivative of edge value of internal simulator coordinate [m/s]. Time-dependent.
q_edge	scenario_ref (9.2.1.3.242)	edge or effective safety factor value []. Time-dependent.
neutral_flux	scenario_ref (9.2.1.3.242)	number of cold neutral (in equivalent electron for Z < 1) that input in plasma at the edge every second coming from recycling and gaz puff [s <sup>-1</sup> ]. Time-dependent.
phi_plasma	scenario_ref (9.2.1.3.242)	contribution of the plasma to the toroidal flux (used for toroidal coils heat load computation) [Wb]. Time-dependent.
vtor_edge	scenario_ref (9.2.1.3.242)	rotation velocity of selected impurity on the separatrix [m/s]. Time-dependent.

Type of: scenario:edge (364)

### 9.2.1.3.231 scenario\_energy

plasma energy content

member	type	description
w_tot	scenario_ref (9.2.1.3.242)	total plasma energy [J]. Time-dependent.
w_b_pol	scenario_ref (9.2.1.3.242)	poloidal field energy of the plasma [J]. Time-dependent.
w_dia	scenario_ref (9.2.1.3.242)	3/2 perpendicular plasma energy [J]. Time-dependent.
dwdia_dt	scenario_ref (9.2.1.3.242)	time derivative of Wdia [W]. Time-dependent.

member	type	description
w_b_tor_pla	scenario_ref (9.2.1.3.242)	toroidal magnetic plasma energy [J]. Time-dependent.
w_th	scenario_ref (9.2.1.3.242)	thermal plasma energy [J]. Time-dependent.
dwtot_dt	scenario_ref (9.2.1.3.242)	time derivative of total plasma energy [W]. Time-dependent.
dwbpol_dt	scenario_ref (9.2.1.3.242)	time derivative of plasma poloidal field energy [W]. Time-dependent.
dwbtorpla_dt	scenario_ref (9.2.1.3.242)	time derivative of toroidal magnetic plasma energy [W]. Time-dependent.
dwth_dt	scenario_ref (9.2.1.3.242)	time derivative of thermal plasma energy [W]. Time-dependent.
esup_icrhtot	scenario_ref (9.2.1.3.242)	total suprathermal energy of fast ions accelerated by ICRH [J]. Time-dependent.
esup_icrhper	scenario_ref (9.2.1.3.242)	perpendicular part of suprathermal energy of fast ions accelerated by ICRH [J]. Time-dependent.
esup_nbitot	scenario_ref (9.2.1.3.242)	total suprathermal energy of fast ions from NBI ionisation [J]. Time-dependent.
esup_nbiperp	scenario_ref (9.2.1.3.242)	perpendicular part of suprathermal energy of fast ions from NBI ionisation [J]. Time-dependent.
esup_lhcd	scenario_ref (9.2.1.3.242)	total suprathermal energy of fast electron from LHCD [J]. Time-dependent.
esup_alpha	scenario_ref (9.2.1.3.242)	total suprathermal energy of fast alpha particules [J]. Time-dependent.

Type of: scenario:energy (364)

### 9.2.1.3.232 scenario\_global

global scalar value

member	type	description
ip	scenario_ref (9.2.1.3.242)	Plasma current [A]. Time-dependent.
dip_dt	scenario_ref (9.2.1.3.242)	time derivative of plasma current [A/s]. Time-dependent.
beta_pol	scenario_ref (9.2.1.3.242)	poloidal beta []. Time-dependent.
beta_tor	scenario_ref (9.2.1.3.242)	toroidal beta []. Time-dependent.
beta_normal	scenario_ref (9.2.1.3.242)	normalised beta []. Time-dependent.
li	scenario_ref (9.2.1.3.242)	internal inductance (definition 3). Time-dependent.
volume	scenario_ref (9.2.1.3.242)	total plasma volume [m <sup>3</sup> ]. Time-dependent.
area_pol	scenario_ref (9.2.1.3.242)	area poloidal cross section [m <sup>2</sup> ]. Time-dependent.
area_ext	scenario_ref (9.2.1.3.242)	external plasma surface [m <sup>2</sup> ]. Time-dependent.
len_sepa	scenario_ref (9.2.1.3.242)	length of the separatrix [m]. Time-dependent.
beta_pol_th	scenario_ref (9.2.1.3.242)	poloidal beta, thermal contribution []. Time-dependent.
beta_tor_th	scenario_ref (9.2.1.3.242)	toroidal beta, thermal contribution []. Time-dependent.
beta_n_th	scenario_ref (9.2.1.3.242)	normalised beta, thermal contribution []. Time-dependent.
disruption	scenario_ref (9.2.1.3.242)	flag for disruption (set to 1 for disruption, otherwise equal 0) []. Time-dependent.
mode_h	scenario_ref (9.2.1.3.242)	confinement mode versus time: 0 = L-mode et 1 = H-mode []. Time-dependent.
s_alpha	scenario_ref (9.2.1.3.242)	total number of alpha fusion particules from D-T ractions per second [s <sup>-1</sup> ]. Time-dependent.

Type of: scenario:global\_param (364)

### 9.2.1.3.233 scenario\_heat\_power

Power delivred to plasma (thermal an non thermal)

member	type	description
plh	scenario_ref (9.2.1.3.242)	Lower hybrid power [W]. Time-dependent.
pohmic	scenario_ref (9.2.1.3.242)	ohmic power (thermal species contribution only) [W]. Time-dependent.
picrh	scenario_ref (9.2.1.3.242)	Ion cyclotron resonance heating power [W]. Time-dependent.
pecrh	scenario_ref (9.2.1.3.242)	electron cyclotron resonance heating power [W]. Time-dependent.
pnbi	scenario_ref (9.2.1.3.242)	neutral beam injection power [W]. Time-dependent.
pnbi_co_cur	scenario_ref (9.2.1.3.242)	neutral beam injection power injeted in co-current direction [W]. Time-dependent.
pnbi_counter	scenario_ref (9.2.1.3.242)	neutral beam injection power injeted in counter-current direction [W]. Time-dependent.
plh_th	scenario_ref (9.2.1.3.242)	lower hybrid power deposited on thermal electrons [W]. Time-dependent.
picrh_th	scenario_ref (9.2.1.3.242)	ion cyclotron resonance heating power deposited on thermal species [W]. Time-dependent.
pecrh_th	scenario_ref (9.2.1.3.242)	electron cyclotron resonance heating power deposited on thermal electrons [W]. Time-dependent.
pnbi_th	scenario_ref (9.2.1.3.242)	neutral beam injection power deposited on thermal species [W]. Time-dependent.
ploss_icrh	scenario_ref (9.2.1.3.242)	Ion cyclotron resonance heating power losses [W]. Time-dependent.
ploss_nbi	scenario_ref (9.2.1.3.242)	neutral beam injection power losses (including shine-through) [W]. Time-dependent.
pbrem	scenario_ref (9.2.1.3.242)	Bremsstrahlung radition losses [W]. Time-dependent.

member	type	description
pcyclo	scenario_ref (9.2.1.3.242)	cyclotron radiation losses [W]. Time-dependent.
prad	scenario_ref (9.2.1.3.242)	impurity radiation losses in core plasma, without Bremsstrahlung [W]. Time-dependent.
pdd_fus	scenario_ref (9.2.1.3.242)	fusion power due to DD reactions [W]. Time-dependent.
pei	scenario_ref (9.2.1.3.242)	power exchange between electron and ion (equipartition) [W]. Time-dependent.
pel_tot	scenario_ref (9.2.1.3.242)	total thermal electron power deposition without equipartition [W]. Time-dependent.
pel_fus	scenario_ref (9.2.1.3.242)	fusion electron power deposition [W]. Time-dependent.
pel_icrh	scenario_ref (9.2.1.3.242)	ICRH electron power deposition [W]. Time-dependent.
pel_nbi	scenario_ref (9.2.1.3.242)	NBI electron power deposition [W]. Time-dependent.
pfus_dt	scenario_ref (9.2.1.3.242)	total D-T fusion power of alpha [W]. Time-dependent.
ploss_fus	scenario_ref (9.2.1.3.242)	D-T fusion power of alpha losses [W]. Time-dependent.
pfus_nbi	scenario_ref (9.2.1.3.242)	NBI induce D-T fusion power of alpha [W]. Time-dependent.
pfus_th	scenario_ref (9.2.1.3.242)	alpha (from DT fusion reaction) power deposited on thermal species [W]. Time-dependent.
padd_tot	scenario_ref (9.2.1.3.242)	total additional power input including ohmic power [W]. Time-dependent.
pion_tot	scenario_ref (9.2.1.3.242)	total thermal ion power deposition without equipartition [W]. Time-dependent.
pion_fus	scenario_ref (9.2.1.3.242)	fusion ion power deposition [W]. Time-dependent.
pion_icrh	scenario_ref (9.2.1.3.242)	ICRH ion power deposition [W]. Time-dependent.
pion_nbi	scenario_ref (9.2.1.3.242)	NBI ion power deposition [W]. Time-dependent.
pioniz	scenario_ref (9.2.1.3.242)	power losses due to cold neutral ionization [W]. Time-dependent.
ploss	scenario_ref (9.2.1.3.242)	plasma losses power, as define in ITER basis [W]. Time-dependent.
p_wth	scenario_ref (9.2.1.3.242)	thermal power input, define as $\tau_e \cdot P_{th} = W_{th}$ [W]. Time-dependent.
p_w	scenario_ref (9.2.1.3.242)	effective power define as $\tau_e \cdot P_w = W_{tot}$ [W]. Time-dependent.
p_l2h_thr	scenario_ref (9.2.1.3.242)	additional power crossing the LCMS; must be compare to L- $\alpha$ H threshold power (Ryter PPCF 2002) [W]. Time-dependent.
p_l2h_sc	scenario_ref (9.2.1.3.242)	threshold power given by the choosen scaling law for transition from L-mode to H-mode [W]. Time-dependent.
p_nbi_icrh	scenario_ref (9.2.1.3.242)	beam power increase due to ICRH effects [W]. Time-dependent.

Type of: scenario:heat\_power (364)

### 9.2.1.3.234 scenario\_int

Structure for scenario integer flag; Time-dependent

member	type	description
value	integer (9.2.1.1.2)	Signal value; Time-dependent; Scalar Integer.
source	string (9.2.1.1.3)	Source of the signal (any comment describing the origin of the signal : code, path to diagnostic signals, massaging, ...); String

Type of: scenario\_configuration:config (560) I scenario\_configuration:ecrh\_harm (560) I scenario\_configuration:ecrh\_mode (560) I scenario\_configuration:grad\_b\_drift (560) I scenario\_itb:itb\_type (568)

### 9.2.1.3.235 scenario\_itb

Values characteristics of the Internal Transport Barrier

member	type	description
q_min	scenario_ref (9.2.1.3.242)	minimal value of safety factor []. Time-dependent.
te_itb	scenario_ref (9.2.1.3.242)	electron temperature @ $q = q_{min}$ [eV]. Time-dependent.
ti_itb	scenario_ref (9.2.1.3.242)	ion temperature @ $q = q_{min}$ [eV]. Time-dependent.
ne_itb	scenario_ref (9.2.1.3.242)	electron density @ $q = q_{min}$ [ $m^{-3}$ ]. Time-dependent.
ni_itb	scenario_ref (9.2.1.3.242)	ion density @ $q = q_{min}$ [ $m^{-3}$ ]. Time-dependent.
psi_itb	scenario_ref (9.2.1.3.242)	poloidal flux @ $q = q_{min}$ [Wb]. Time-dependent.
phi_itb	scenario_ref (9.2.1.3.242)	toroidal flux @ $q = q_{min}$ [Wb]. Time-dependent.
rho_itb	scenario_ref (9.2.1.3.242)	value of internal simulator coordinate @ $q = q_{min}$ [m]. Time-dependent.
h_itb	scenario_ref (9.2.1.3.242)	energy enhancement ITB factor [m]. Time-dependent.
width_itb	scenario_ref (9.2.1.3.242)	width of the high pressure gradient region (on scale of rho_itb) [m]. Time-dependent.
vtor_itb	scenario_ref (9.2.1.3.242)	rotation velocity of selected impurity @ rho_itb [m/s]. Time-dependent.
itb_type	scenario_int (9.2.1.3.234)	itb type []. Time-dependent. Any combinaison of : 0 = none; 1 = on T <sub>i</sub> ; 2 = on T <sub>e</sub> ; 4 = on n <sub>e</sub> ; 8 = reverse shear triggered; 16 = toroidal rotation triggered; 32 = alpha stabilisation triggered; 64 = T <sub>i</sub> / T <sub>e</sub> triggered; 128 = radiation triggered; 256 = rationnal q triggered

Type of: scenario:itb (364)

### 9.2.1.3.236 scenario\_lim\_div\_wall

values on the plate of divertor or on the limiter or on the wall (@ LCMS)

member	type	description
te_lim_div	scenario_ref (9.2.1.3.242)	limiter/divertor electron temperature [eV]. Time-dependent.
ti_lim_div	scenario_ref (9.2.1.3.242)	limiter/divertor ion temperature [eV]. Time-dependent.
ne_lim_div	scenario_ref (9.2.1.3.242)	limiter/divertor electron density [ $m^{-3}$ ]. Time-dependent.
ni_lim_div	scenario_ref (9.2.1.3.242)	limiter/divertor ion density [ $m^{-3}$ ]. Time-dependent.
p_peak_div	scenario_ref (9.2.1.3.242)	peak power on divertor [W]. Time-dependent.
surf_temp	scenario_ref (9.2.1.3.242)	limiter surface or divertor plate temperature [K]. Time-dependent.
p_lim_div	scenario_ref (9.2.1.3.242)	Power flux on limiter or divertor plate [W]. Time-dependent.
p_rad_div	scenario_ref (9.2.1.3.242)	radiative power in the divertor zone [W]. Time-dependent.
wall_temp	scenario_ref (9.2.1.3.242)	wall temperature [K]. Time-dependent.
wall_state	scenario_ref (9.2.1.3.242)	saturation state of the wall (0 = completely pumping wall, 1 = completely saturate wall) []. Time-dependent.
detach_state	scenario_ref (9.2.1.3.242)	plasma detachment state (0= attach plasma, 1 = completely detach plasma) []. Time-dependent.
pump_flux	vecflt_type (9.2.1.2.9)	flux pump out for each ion species [ $s^{-1}$ ]. Time-dependent.

Type of: scenario:lim\_div\_wall (364)

### 9.2.1.3.237 scenario\_line\_ave

line averaged value

member	type	description
ne_line	scenario_ref (9.2.1.3.242)	line averaged electron density [ $m^{-3}$ ]. Time-dependent.
zeff_line	scenario_ref (9.2.1.3.242)	line averaged effective charge. Time-dependent.
ne_zeff_line	scenario_ref (9.2.1.3.242)	line averaged electron density * Zeff . Time-dependent.
dne_line.dt	scenario_ref (9.2.1.3.242)	time derivative of line averaged electron density [ $m^{-3}/s$ ]. Time-dependent.

Type of: scenario:line\_ave (364)

### 9.2.1.3.238 scenario\_neutron

neutron flux for DD and DT reactions

member	type	description
ndd_tot	scenario_ref (9.2.1.3.242)	total neutron flux coming from DD reactions [Hz]. Time-dependent.
ndd_th	scenario_ref (9.2.1.3.242)	neutron flux coming from thermal DD reactions [Hz]. Time-dependent.
ndd_nbi_th	scenario_ref (9.2.1.3.242)	neutron flux coming from beam/plasma DD reactions [Hz]. Time-dependent.
ndd_nbi_nbi	scenario_ref (9.2.1.3.242)	neutron flux coming from beam/beam DD reactions [Hz]. Time-dependent.
ndt_tot	scenario_ref (9.2.1.3.242)	total neutron flux coming from DT reactions [Hz]. Time-dependent.
ndt_th	scenario_ref (9.2.1.3.242)	neutron flux coming from thermal DT reactions [Hz]. Time-dependent.

Type of: scenario:neutron (364)

### 9.2.1.3.239 scenario\_ninety\_five

values at 95% of poloidal flux

member	type	description
q_95	scenario_ref (9.2.1.3.242)	safety factor value @ 95 % of poloidal flux span []. Time-dependent.
elong_95	scenario_ref (9.2.1.3.242)	plasma elongation @ 95 % of poloidal flux span []. Time-dependent.
tria_95	scenario_ref (9.2.1.3.242)	averaged plasma triangularity @ 95 % of poloidal flux span []. Time-dependent.
tria_up_95	scenario_ref (9.2.1.3.242)	upper plasma triangularity @ 95 % of poloidal flux span []. Time-dependent.
tria_lo_95	scenario_ref (9.2.1.3.242)	lower plasma triangularity @ 95 % of poloidal flux span []. Time-dependent.
te_95	scenario_ref (9.2.1.3.242)	electron temperature @ 95 % of poloidal flux [eV]. Time-dependent.
ti_95	scenario_ref (9.2.1.3.242)	ion temperature @ 95 % of poloidal flux [eV]. Time-dependent.

member	type	description
ne_95	scenario_ref (9.2.1.3.242)	electron density @ 95 % of poloidal flux [m <sup>-3</sup> ]. Time-dependent.
ni_95	scenario_ref (9.2.1.3.242)	ion density @ 95 % of poloidal flux [m <sup>-3</sup> ]. Time-dependent.
phi_95	scenario_ref (9.2.1.3.242)	toroidal flux @ 95 % of poloidal flux [Wb]. Time-dependent.
rho_95	scenario_ref (9.2.1.3.242)	value of internal simulator coordinate @ 95 % of poloidal flux [m]. Time-dependent.
vtor_95	scenario_ref (9.2.1.3.242)	rotation velocity of selected impurity @ 95 % of poloidal flux [m/s]. Time-dependent.

Type of: scenario:ninety\_five (364)

### 9.2.1.3.240 scenario\_pedestal

Values at the top of the H-mode pedestal

member	type	description
te_ped	scenario_ref (9.2.1.3.242)	pedestal electron temperature [eV]. Time-dependent.
ti_ped	scenario_ref (9.2.1.3.242)	pedestal ion temperature [eV]. Time-dependent.
ne_ped	scenario_ref (9.2.1.3.242)	pedestal electron density [m <sup>-3</sup> ]. Time-dependent.
ni_ped	scenario_ref (9.2.1.3.242)	pedestal ion density [m <sup>-3</sup> ]. Time-dependent.
psi_ped	scenario_ref (9.2.1.3.242)	pedestal poloidal flux [Wb]. Time-dependent.
phi_ped	scenario_ref (9.2.1.3.242)	pedestal toroidal flux [Wb]. Time-dependent.
rho_ped	scenario_ref (9.2.1.3.242)	top pedestal value of internal simulator coordinate [m]. Time-dependent.
q_ped	scenario_ref (9.2.1.3.242)	top pedestal safety factor value []. Time-dependent.
pressure_ped	scenario_ref (9.2.1.3.242)	top pedestal thermal pressure (n.e * T.e + n.i * T.i) [Pa]. Time-dependent.
vtor_ped	scenario_ref (9.2.1.3.242)	top pedestal value of rotation velocity of selected impurity [m/s]. Time-dependent.

Type of: scenario:pedestal (364)

### 9.2.1.3.241 scenario\_reactor

reactor data (such as electricity cost ...)

member	type	description
pnetwork	float (9.2.1.1.1)	reactor electric power provide to the network [W].

Type of: scenario:reactor (364)

### 9.2.1.3.242 scenario\_ref

Structure for scenario reference; Time-dependent

member	type	description
value	float (9.2.1.1.1)	Signal value; Time-dependent; Scalar
source	string (9.2.1.1.3)	Source of the signal (any comment describing the origin of the signal : code, path to diagnostic signals, massaging, ...); String

Type of: scenario\_centre:Rmag (558) I scenario\_centre:Zmag (558) I scenario\_centre:ne0 (558) I scenario\_centre:ni0 (558) I scenario\_centre:phi0 (558) I scenario\_centre:psi0 (558) I scenario\_centre:q0 (558) I scenario\_centre:shift0 (558) I scenario\_centre:te0 (558) I scenario\_centre:ti0 (558) I scenario\_centre:vtor\_0 (558) I scenario\_configuration:LH\_freq (560) I scenario\_configuration:LH\_npar (560) I scenario\_configuration:ecrh\_freq (560) I scenario\_configuration:ecrh\_loc (560) I scenario\_configuration:ecrh\_pol\_ang (560) I scenario\_configuration:ecrh\_tor\_ang (560) I scenario\_configuration:enbi (560) I scenario\_configuration:icrh\_freq (560) I scenario\_configuration:icrh\_phase (560) I scenario\_configuration:pellet\_ang (560) I scenario\_configuration:pellet\_nba (560) I scenario\_configuration:pellet\_v (560) I scenario\_configuration:r\_nbi (560) I scenario\_confinement:tau\_cur\_diff (561) I scenario\_confinement:tau\_e (561) I scenario\_confinement:tau\_e\_ee (561) I scenario\_confinement:tau\_e\_ei (561) I scenario\_confinement:tau\_e\_ii (561) I scenario\_confinement:tau\_h\_sc (561) I scenario\_confinement:tau\_he (561) I scenario\_confinement:tau\_i\_rol (561) I scenario\_confinement:tau\_l\_sc (561) I scenario\_currents:RR (562) I scenario\_currents:i\_align (562) I scenario\_currents:i\_boot (562) I scenario\_currents:i\_cd\_tot (562) I scenario\_currents:i\_eccd (562) I scenario\_currents:i\_fast\_ion (562) I scenario\_currents:i\_fwcd (562) I scenario\_currents:i\_lhcd (562) I scenario\_currents:i\_nbicd (562) I scenario\_currents:i\_ni\_tot (562) I scenario\_currents:i\_ohm (562) I scenario\_currents:i\_par (562) I scenario\_currents:i\_runaway (562) I scenario\_currents:v\_loop (562) I scenario\_currents:v\_meas (562) I scenario\_edge:drho\_edge\_dt (563) I scenario\_edge:ne\_edge (563) I scenario\_edge:neutral\_flux



(563) I scenario\_edge:ni\_edge (563) I scenario\_edge:phi\_edge (563) I scenario\_edge:phi\_plasma (563) I scenario\_edge:psi\_edge (563) I scenario\_edge:q\_edge (563) I scenario\_edge:rho\_edge (563) I scenario\_edge:te\_edge (563) I scenario\_edge:ti\_edge (563) I scenario\_edge:vtor\_edge (563) I scenario\_energy:dwbpol\_dt (564) I scenario\_energy:dwbtorpla\_dt (564) I scenario\_energy:dwdia\_dt (564) I scenario\_energy:dwth\_dt (564) I scenario\_energy:dwtot\_dt (564) I scenario\_energy:esup\_alp (564) I scenario\_energy:esup\_ichper (564) I scenario\_energy:esup\_ichrtot (564) I scenario\_energy:esup\_lhcd (564) I scenario\_energy:esup\_nbiperp (564) I scenario\_energy:esup\_nbitot (564) I scenario\_energy:w\_b\_pol (564) I scenario\_energy:w\_b\_tor\_pla (564) I scenario\_energy:w\_dia (564) I scenario\_energy:w\_th (564) I scenario\_energy:w\_tot (564) I scenario\_global:area\_ext (565) I scenario\_global:area\_pol (565) I scenario\_global:beta\_n\_th (565) I scenario\_global:beta\_normal (565) I scenario\_global:beta\_pol (565) I scenario\_global:beta\_pol\_th (565) I scenario\_global:beta\_tor (565) I scenario\_global:beta\_tor\_th (565) I scenario\_global:dip\_dt (565) I scenario\_global:disruption (565) I scenario\_global:ip (565) I scenario\_global:len\_sepa (565) I scenario\_global:li (565) I scenario\_global:mode\_h (565) I scenario\_global:s\_alpha (565) I scenario\_global:volume (565) I scenario\_heat\_power:p\_l2h\_sc (566) I scenario\_heat\_power:p\_l2h (566) I scenario\_heat\_power:p\_nbi\_ich (566) I scenario\_heat\_power:p\_w (566) I scenario\_heat\_power:p\_wth (566) I scenario\_heat\_power:padd\_tot (566) I scenario\_heat\_power:pbrem (566) I scenario\_heat\_power:pcyclo (566) I scenario\_heat\_power:pdd\_fus (566) I scenario\_heat\_power:pcrth (566) I scenario\_heat\_power:pcrth\_th (566) I scenario\_heat\_power:pei (566) I scenario\_heat\_power:pel\_fus (566) I scenario\_heat\_power:pel\_ich (566) I scenario\_heat\_power:pel\_nbi (566) I scenario\_heat\_power:pel\_tot (566) I scenario\_heat\_power:pfus\_dt (566) I scenario\_heat\_power:pfus\_nbi (566) I scenario\_heat\_power:pfus\_th (566) I scenario\_heat\_power:picrh (566) I scenario\_heat\_power:picrh\_th (566) I scenario\_heat\_power:pion\_fus (566) I scenario\_heat\_power:pion\_ich (566) I scenario\_heat\_power:pion\_nbi (566) I scenario\_heat\_power:pion\_tot (566) I scenario\_heat\_power:pioniz (566) I scenario\_heat\_power:plh (566) I scenario\_heat\_power:plh\_th (566) I scenario\_heat\_power:ploss (566) I scenario\_heat\_power:ploss\_fus (566) I scenario\_heat\_power:ploss\_ich (566) I scenario\_heat\_power:ploss\_nbi (566) I scenario\_heat\_power:pnbi (566) I scenario\_heat\_power:pnbi\_co\_cur (566) I scenario\_heat\_power:pnbi\_counter (566) I scenario\_heat\_power:pnbi\_th (566) I scenario\_heat\_power:pohmic (566) I scenario\_heat\_power:prad (566) I scenario\_itb:h\_itb (568) I scenario\_itb:ne\_itb (568) I scenario\_itb:ni\_itb (568) I scenario\_itb:phi\_itb (568) I scenario\_itb:psi\_itb (568) I scenario\_itb:q\_min (568) I scenario\_itb:rho\_itb (568) I scenario\_itb:te\_itb (568) I scenario\_itb:ti\_itb (568) I scenario\_itb:vtor\_itb (568) I scenario\_itb:width\_itb (568) I scenario\_lim\_div\_wall:detach\_state (569) I scenario\_lim\_div\_wall:ne\_lim\_div (569) I scenario\_lim\_div\_wall:ni\_lim\_div (569) I scenario\_lim\_div\_wall:p\_lim\_div (569) I scenario\_lim\_div\_wall:p\_peak\_div (569) I scenario\_lim\_div\_wall:p\_rad\_div (569) I scenario\_lim\_div\_wall:surf\_temp (569) I scenario\_lim\_div\_wall:te\_lim\_div (569) I scenario\_lim\_div\_wall:ti\_lim\_div (569) I scenario\_lim\_div\_wall:wall\_state (569) I scenario\_lim\_div\_wall:wall\_temp (569) I scenario\_line\_ave:dne\_line\_dt (570) I scenario\_line\_ave:ne\_line (570) I scenario\_line\_ave:ne\_zeff\_line (570) I scenario\_line\_ave:zeff\_line (570) I scenario\_neutron:ndd\_nbi\_nbi (571) I scenario\_neutron:ndd\_nbi\_th (571) I scenario\_neutron:ndd\_th (571) I scenario\_neutron:ndd\_tot (571) I scenario\_neutron:ndt\_th (571) I scenario\_neutron:ndt\_tot (571) I scenario\_ninety\_five:elong\_95 (572) I scenario\_ninety\_five:ne\_95 (572) I scenario\_ninety\_five:ni\_95 (572) I scenario\_ninety\_five:phi\_95 (572) I scenario\_ninety\_five:q\_95 (572) I scenario\_ninety\_five:rho\_95 (572) I scenario\_ninety\_five:te\_95 (572) I scenario\_ninety\_five:ti\_95 (572) I scenario\_ninety\_five:tria\_95 (572) I scenario\_ninety\_five:tria\_lo\_95 (572) I scenario\_ninety\_five:tria\_up\_95 (572) I scenario\_ninety\_five:vtor\_95 (572) I scenario\_pedestal:ne\_ped (573) I scenario\_pedestal:ni\_ped (573) I scenario\_pedestal:phi\_ped (573) I scenario\_pedestal:pressure\_ped (573) I scenario\_pedestal:psi\_ped (573) I scenario\_pedestal:q\_ped (573) I scenario\_pedestal:rho\_ped (573) I scenario\_pedestal:te\_ped (573) I scenario\_pedestal:ti\_ped (573) I scenario\_pedestal:vtor\_ped (573) I scenario\_references:bvac\_r (576) I scenario\_references:enhancement (576) I scenario\_references:ip (576) I scenario\_references:isot (576) I scenario\_references:nbar (576) I scenario\_references:nbi\_td\_ratio (576) I scenario\_references:pcrth (576) I scenario\_references:picrh (576) I scenario\_references:plh (576) I scenario\_references:pnbi (576) I scenario\_references:pol\_flux (576) I scenario\_references:xcrh (576) I scenario\_references:zeffl (576) I scenario\_sol:l\_ne\_sol (577) I scenario\_sol:l\_ni\_sol (577) I scenario\_sol:l\_qe\_sol (577) I scenario\_sol:l\_qi\_sol (577) I scenario\_sol:l\_te\_sol (577) I scenario\_sol:l\_ti\_sol (577) I scenario\_sol:p\_rad\_sol (577) I scenario\_vol\_ave:dne\_ave\_dt (578) I scenario\_vol\_ave:meff\_ave (578) I scenario\_vol\_ave:ne\_ave (578) I scenario\_vol\_ave:ni\_ave (578) I scenario\_vol\_ave:omega\_ave (578) I scenario\_vol\_ave:pellet\_flux (578) I scenario\_vol\_ave:te\_ave (578) I scenario\_vol\_ave:ti\_ave (578) I scenario\_vol\_ave:ti\_o\_te\_ave (578) I scenario\_vol\_ave:zeff\_ave (578)

### 9.2.1.3.243 scenario\_references

#### References

member	type	description
plh	scenario_ref (9.2.1.3.242)	Lower hybrid power [W]. Time-dependent.
picrh	scenario_ref (9.2.1.3.242)	Ion cyclotron resonance heating power [W]. Time-dependent.
pcrth	scenario_ref (9.2.1.3.242)	electron cyclotron resonance heating power [W]. Time-dependent.
pnbi	scenario_ref (9.2.1.3.242)	neutral beam injection power [W]. Time-dependent.
ip	scenario_ref (9.2.1.3.242)	Plasma current [A]. Time-dependent.
bvac_r	scenario_ref (9.2.1.3.242)	Vacuum field times radius in the toroidal field magnet [T.m]. Time-dependent.
zeffl	scenario_ref (9.2.1.3.242)	line averaged effective charge []. Time-dependent.

member	type	description
nbar	scenario_ref (9.2.1.3.242)	line averaged electron density [m <sup>-3</sup> ]. Time-dependent.
xecrh	scenario_ref (9.2.1.3.242)	position of maximum (normalized rho coordinate) of electron cyclotron resonance heating power []. Time-dependent.
pol_flux	scenario_ref (9.2.1.3.242)	separatrix poloidal flux [Wb]. Time-dependent.
enhancement	scenario_ref (9.2.1.3.242)	energy enhancement factor []. Time-dependent.
isotopic	scenario_ref (9.2.1.3.242)	ratio between tritium and deuterium density (for burning plasma) []. Time-dependent.
nbi_td_ratio	scenario_ref (9.2.1.3.242)	ratio between tritium and deuterium power in neutral beam injection []. Time-dependent.

Type of: scenario:references (364)

### 9.2.1.3.244 scenario\_sol

SOL characteristic (@ LCMS)

member	type	description
lte_sol	scenario_ref (9.2.1.3.242)	electron temperature radial decay length [m]. Time-dependent.
lти_sol	scenario_ref (9.2.1.3.242)	ion temperature radial decay length [m]. Time-dependent.
lne_sol	scenario_ref (9.2.1.3.242)	electron density radial decay length [m]. Time-dependent.
lni_sol	scenario_ref (9.2.1.3.242)	ion density radial decay length [m]. Time-dependent.
lqe_sol	scenario_ref (9.2.1.3.242)	electron heat flux radial decay length [m]. Time-dependent.
lqi_sol	scenario_ref (9.2.1.3.242)	ion heat flux radial decay length [m]. Time-dependent.
p_rad_sol	scenario_ref (9.2.1.3.242)	radiative power of the SOL [W]. Time-dependent.
gaz_puff	vecflt_type (9.2.1.2.9)	gaz puff flux for each ion species [s <sup>-1</sup> ]. Time-dependent.

Type of: scenario:sol (364)

### 9.2.1.3.245 scenario\_vol\_ave

volume averaged values

member	type	description
te_ave	scenario_ref (9.2.1.3.242)	volume averaged electron temperature [eV]. Time-dependent.
ti_ave	scenario_ref (9.2.1.3.242)	volume averaged ion temperature [eV]. Time-dependent.
ne_ave	scenario_ref (9.2.1.3.242)	volume averaged electron density [m <sup>-3</sup> ]. Time-dependent.
dne_ave_dt	scenario_ref (9.2.1.3.242)	time derivative of volume averaged electron density [m <sup>-3</sup> /s]. Time-dependent.
ni_ave	scenario_ref (9.2.1.3.242)	volume averaged ion density ( $\langle \sum(n.k)_z \rangle$ , k in species) [m <sup>-3</sup> ]. Time-dependent.
zeff_ave	scenario_ref (9.2.1.3.242)	volume averaged effective charge. Time-dependent.
ti_o_te_ave	scenario_ref (9.2.1.3.242)	volume averaged ion temperature over electron temperature ( $\langle Ti/Te \rangle$ ) []. Time-dependent.
meff_ave	scenario_ref (9.2.1.3.242)	volume averaged effective mass ( $\langle \sum(n.k * m.k)_z \rangle / \langle \sum(n.k)_z \rangle$ ) []. Time-dependent.
pellet_flux	scenario_ref (9.2.1.3.242)	number of electrons fuelling the plasma every second coming from pellet injection [s <sup>-1</sup> ]. Time-dependent.
nions_ave	vecflt_type (9.2.1.2.9)	volume averaged ions densities (vector, one element per ion species) [m <sup>-3</sup> ]. Time-dependent.
omega_ave	scenario_ref (9.2.1.3.242)	bulk volume average toroidal rotation velocity (whole plasma) [rad/s]. Time-dependent.

Type of: scenario:vol\_ave (364)

### 9.2.1.3.246 setup\_bprobe

diagnostic setup information

member	type	description
name	vecstring_type (9.2.1.2.11)	Name of the probe. Array of strings (nprobes).
id	vecstring_type (9.2.1.2.11)	ID of the probe. Array of strings (nprobes).
position	rzID (9.2.1.3.214)	RZ of coil centre [m]; Vector (nprobes)
polangle	vecflt_type (9.2.1.2.9)	Poloidal angle of coil orientation (w.r.t. horizontal ?? to be checked) [rad]; Vector (nprobes)
torangle	vecflt_type (9.2.1.2.9)	Toroidal angle of coil orientation (0 if fully in the poloidal plane) [rad] ; Vector (nprobes)
area	vecflt_type (9.2.1.2.9)	Area of coil [m <sup>2</sup> ]; Vector (nprobes)
length	vecflt_type (9.2.1.2.9)	Length of coil [m]; Vector (nprobes)
turns	vecint_type (9.2.1.2.10)	Turns in the coil; Vector (nprobes)



Type of: bpol\_probes:setup\_bprobe (388)

### 9.2.1.3.247 setup\_floops

diagnostic setup information

member	type	description
name	vecstring.type (9.2.1.2.11)	Name of loop. Array of strings (nloops).
id	vecstring.type (9.2.1.2.11)	ID of loop. Array of strings (nloops).
position	rzphi2D (9.2.1.3.220)	List of (R,Z,phi) points defining the position of the loop (see data structure documentation FLUXLOOPposition.pdf); Matrices (nloops, max.npoints)
npoints	vecint.type (9.2.1.2.10)	Number of points describing each loop in the "position" matrices. Vector (nloops)

Type of: flux\_loops:setup\_floops (450)

### 9.2.1.3.248 setup\_inject

Detailed information on an injection unit.

member	type	description
position	rzphi1D (9.2.1.3.218)	Position of centre of injection unit surface. Vectors(nunits).
tang_rad	vecflt.type (9.2.1.2.9)	Tagency radius (major radius where the central line of a NBI unit is tangent to a circle around the torus) [m]; Vector(nunits)
angle	vecflt.type (9.2.1.2.9)	Angle of inclination between a line at the centre of the injection unit surface and the horizontal plane [rad]; Vector(nunits)
direction	vecint.type (9.2.1.2.10)	Direction of the beam seen from above the torus: -1 = clockwise; 1 = counter clockwise; Vector(nunits)
div_vert	vecflt.type (9.2.1.2.9)	Beam divergence for a unit in the vertical direction[rad]; Vector(nunits)
div_horiz	vecflt.type (9.2.1.2.9)	Beam divergence for a unit in the horizontal direction[rad]; Vector(nunits)
focal_len_hz	vecflt.type (9.2.1.2.9)	Horizontal focal length along the beam line [m], Vector(nunits)
focal_len_vc	vecflt.type (9.2.1.2.9)	Vertical focal length along the beam line [m], Vector(nunits)
beamlets	beamlets (9.2.1.3.47)	Detailed information on beamlets.

Type of: nbi:setup\_inject (357)

### 9.2.1.3.249 setup\_line

Geometric description of the lines of sight for line integral diagnostic

member	type	description
pivot_point	rzphi1D (9.2.1.3.218)	Pivot point of each line of sight; Vector (nchords)
horchordang1	vecflt.type (9.2.1.2.9)	Angle [rad] of horizontal projection of l.o.s. with poloidal cross section (0 for HFS to LFS chord - see Convention.angles.interfdiag.pdf) [rad]. Vector (nchords)
verchordang1	vecflt.type (9.2.1.2.9)	Angle of chord with vertical axis (0 for bottom-top chord, Pi for top-bottom chord - see Convention.angles.interfdiag.pdf) [rad]; Vector (nchords)
width	vecflt.type (9.2.1.2.9)	Width of the laser beam (1/e) [m]; Vector (nchords)
second_point	rzphi1D (9.2.1.3.218)	Second point defining the line of sight together with the pivot_point. In case the probing wave is reflected, this should be the position of the mirror. This data is redundant with horchordang1 and verchordang1. Vector (nchords).
horchordang2	vecflt.type (9.2.1.2.9)	For reflected l.o.s. only (undefined otherwise) : Angle [rad] of horizontal projection of reflected l.o.s. with poloidal cross section (0 for HFS to LFS chord - see Convention.angles.interfdiag.pdf) [rad]. Vector (nchords)
verchordang2	vecflt.type (9.2.1.2.9)	For reflected l.o.s. only (undefined otherwise) : Angle of reflected chord with vertical axis (0 for bottom-top chord, Pi for top-bottom chord - see Convention.angles.interfdiag.pdf) [rad]; Vector (nchords)
third_point	rzphi1D (9.2.1.3.218)	Third point defining the reflected line of sight together with the second_point (undefined if the probing wave is not reflected). This data is redundant with horchordang2 and verchordang2. Vector (nchords).
nchordpoints	integer (9.2.1.1.2)	Number of points along the viewing chords (used for synthetic diagnostic signal reconstruction)

Type of: lineintegraldiag:setup\_line (480)

### 9.2.1.3.250 setup\_mse

diagnostic setup information

member	type	description
rzgamma	rzphidrzdphi1D (9.2.1.3.222)	Position and width of the intersection between beam and line of sight. Vectors (nchords)
geom_coef	matflt.type (9.2.1.2.7)	Geometric coefficients (9) describing the angle between beam and line of sight; The first dimension contains successively : numerator, coefficients of BZ, BR, Bphi, ER; denominator, coefficients of BZ, BR, Bphi, ER, EZ; Matrix (9,nchords). In versions of the data structure before 4.08, there were only 6 coefficients namely : numerator, coefficients of BZ, BR, Bphi; denominator, coefficients of BZ, BR, Bphi.

Type of: msediag:setup\_mse (356)

### 9.2.1.3.251 source\_4d

Source of particles in phase space.

member	type	description
gyrosrc.type	vecint.type (9.2.1.2.10)	Defines how to interpret the source: 1 = the source is calculated at the particle birth point; 2 = the source is calculated at the gyro centre of the birth point. Vector(nsrc_spec)
grid.type	vecint.type (9.2.1.2.10)	Defines the four grid variables and the grid structure (rectangular, unstructured...): 1 = { R(c), z(c), ksi(c), E(d), rectangular} ; 2 = { R(c), z(c), ksi(c), E(c), rectangular} . Here the variable ksi=v_parallel/v. Here, (c) stands for source continuously distributed over grid (e.g. to treat the continuous energy spectra of alpha sources), (d) stands for discretely distributed source; localised to the grid (e.g. to treat the discrete energies injected with NBI). The dimensions of the variables are: R [m], z [m], E [J], ksi=v_parallel/v [1]. For rectangular grids the grid is defined in rect_grid. Vector(nsrc_spec)
rect_grid	distsource_rect_grid (9.2.1.3.104)	Details of rectangular grids.
source	array5dflt.type (9.2.1.2.4)	Phase space source of particles; the units depend on the grid.type: [m <sup>-3</sup> s <sup>-1</sup> ] if the grid is discrete in energy/velocity and [(m/s) <sup>-3</sup> m <sup>-3</sup> s <sup>-1</sup> ] if continuous; Time-dependent; Array5d (nsrc_spec, ndim1, ndim2, ndim3, ndim4)

Type of: distsource:source\_4d (346)

### 9.2.1.3.252 source\_el

Subtree containing source terms for electrons

member	type	description
exp	vecflt.type (9.2.1.2.9)	Explicit source term [same unit as root quantity]. Time-dependent. Vector (nrho)
imp	vecflt.type (9.2.1.2.9)	Implicit source term [s <sup>-1</sup> .m <sup>-3</sup> ]. Time-dependent. Vector (nrho)

Type of: coresource:qe (342) I coresource:se (342)

### 9.2.1.3.253 source\_imp

Subtree containing source terms for the impurity species

member	type	description
exp	array3dflt.type (9.2.1.2.1)	Explicit source term [same unit as root quantity]. Time-dependent. Array3d (nrho,nimp,max_nzimp)
imp	array3dflt.type (9.2.1.2.1)	Implicit source term [s <sup>-1</sup> .m <sup>-3</sup> ]. Time-dependent. Array3d (nrho,nimp,max_nzimp)

Type of: coresource:qz (342) I coresource:sz (342)

### 9.2.1.3.254 source\_ion

Subtree containing source terms for the various ion species

member	type	description
exp	matflt.type (9.2.1.2.7)	Explicit source term [same unit as root quantity]. Time-dependent. Matrix (nrho,nion)
imp	matflt.type (9.2.1.2.7)	Implicit source term [s <sup>-1</sup> .m <sup>-3</sup> ]. Time-dependent. Matrix (nrho,nion)

Type of: coresource:qi (342) I coresource:si (342) I coresource:ui (342)

### 9.2.1.3.255 source\_tp

Source given as a set of test particles. Note that the test particles are given at the source location and not at the gyrocentre. Note that max\_n\_particles should be the maximum both over species and time (since the number of test particles can change with time)

member	type	description
n_particles	vecint.type (9.2.1.2.10)	Number of test particle for each species; Time-dependent; Vector (nsrc_spec)
var_type	integer (9.2.1.1.2)	Identification of variables: 1 = { R, z, phi, v, ksi, R*v_phi } ; 2 = { R, z, phi, Energy, ksi, R*v_phi } ; 3 = { Energy, magnetic momentum, toroidal angular momentum }. Dimensions of variables: R [m], z [m], phi [rad], v [m/s], v_phi[m/s], ksi=v_parallel/v [1].
var1	matflt.type (9.2.1.2.7)	Phase space variable number one characterising a test particle; Time-dependent; Matrix(nsrc_spec, max_n_particles)
var2	matflt.type (9.2.1.2.7)	Phase space variable number two characterising a test particle; Time-dependent; Matrix(nsrc_spec, max_n_particles)
var3	matflt.type (9.2.1.2.7)	Phase space variable number three characterising a test particle; Time-dependent; Matrix(nsrc_spec, max_n_particles)
var4	matflt.type (9.2.1.2.7)	Phase space variable number four characterising a test particle; Time-dependent; Matrix(nsrc_spec, max_n_particles)
var5	matflt.type (9.2.1.2.7)	Phase space variable number five characterising a test particle; Time-dependent; Matrix(nsrc_spec, max_n_particles)
var6	matflt.type (9.2.1.2.7)	Phase space variable number six characterising a test particle; Time-dependent; Matrix(nsrc_spec, max_n_particles)
weight	matflt.type (9.2.1.2.7)	Weight of test particle; Time-dependent; Matrix(nsrc_spec, max_n_particles)

Type of: distsource:source\_tp (346)

### 9.2.1.3.256 sourceel

Structure for the total source term for the transport equation (electrons). Time-dependent;

member	type	description
value	vecflt.type (9.2.1.2.9)	Value of the source term; Time-dependent; Vector (nrho)
integral	vecflt.type (9.2.1.2.9)	Integral from 0 to rho of the source term. Time-dependent; Vector (nrho)
source	string (9.2.1.1.3)	Source of the profile (any comment describing the origin of the profile : code, path to diagnostic signals, massaging, ...); String

Type of: corefield:source\_term (395)

### 9.2.1.3.257 sourceimp

Structure for the total source term for the transport equation (impurities). Time-dependent;

member	type	description
value	array3dflt.type (9.2.1.2.1)	Value of the source term [ $m^{-3}.s^{-1}$ ]; Time-dependent; Array3D (nrho,nimp,max_nzimp)
integral	array3dflt.type (9.2.1.2.1)	Integral from 0 to rho of the source term. Time-dependent; Array3D(nsource,nimp,max_nzimp)
source	vecstring.type (9.2.1.2.11)	Source of the profile (any comment describing the origin of the impurity profiles : code, path to diagnostic signals, massaging, ...); Array of strings (nimp)

Type of: coreimpur:source\_term (339)

### 9.2.1.3.258 sourceion

Structure for the total source term for the transport equation (ions). Time-dependent;

member	type	description
value	matflt.type (9.2.1.2.7)	Value of the source term; Time-dependent; Matrix (nrho,nion)
integral	matflt.type (9.2.1.2.7)	Integral from 0 to rho of the source term. Time-dependent; Matrix (nrho,nion)
source	vecstring.type (9.2.1.2.11)	Source of the profile (any comment describing the origin of the profile : code, path to diagnostic signals, massaging, ...); Array of strings (nion)

Type of: corefieldion:source\_term (396)

### 9.2.1.3.259 special\_pos

Special positions along an orbit (like turning points).

member	type	description
midplane	midplane (9.2.1.3.156)	Intersections with the midplane
turning_pts	turning_pts (9.2.1.3.295)	Location of turning points

Type of: orb\_glob\_dat:special\_pos (496)

### 9.2.1.3.260 spectrum

Spectral properties of the wave.

member	type	description
phi_theta	launchs_phi_theta (9.2.1.3.146)	Power spectrum as a function of the refractive index in the toroidal and poloidal directions.
parallel	launchs_parallel (9.2.1.3.145)	Power spectrum as a function of the parallel refractive index.

Type of: launchs:spectrum (352)

### 9.2.1.3.261 spot

Spot characteristics

member	type	description
waist	matflt.type (9.2.1.2.7)	Waist for the spot ellipse [m], Matrix (nantenna,2). Time-dependent
angle	vecflt.type (9.2.1.2.9)	Rotation angle for the spot ellipse [rd], Vector(nantenna). Time-dependent

Type of: rf\_beam:spot (545)

### 9.2.1.3.262 sputtering\_neutrals

Sputtering coefficients

member	type	description
physical	matflt.type (9.2.1.2.7)	Effective coefficient of physical sputtering of the neutral type INEUT due to ion type IION. Matrix(nneut,nion). Time-dependent.
chemical	matflt.type (9.2.1.2.7)	Effective coefficient of chemical sputtering of the neutral type INEUT due to ion type IION. Matrix(nneut,nion). Time-dependent.

Type of: coefficients\_neutrals:sputtering (390)

### 9.2.1.3.263 src\_snk\_fav

member	type	description
particles	matflt.type (9.2.1.2.7)	Source/sink particles [ $s^{-1} m^{-3}$ ]; Time-dependendent; Matrix(nsrc_spec, max_npsi)
power	matflt.type (9.2.1.2.7)	Power density associated with the source/sink of particles [ $W/m^3$ ]; Time-dependent; Matrix(nsrc_spec, max_npsi)
torque	matflt.type (9.2.1.2.7)	Torque density due to the source/sink of particles [ $Nm/m^3$ ]; Time dependent; Matrix(nsrc_spec, max_npsi)

### 9.2.1.3.264 src\_snk\_int

member	type	description
particles	matflt.type (9.2.1.2.7)	Source/sink particles [ $s^{-1} m^{-3}$ ]; Time-dependendent; Vector(nsrc_spec, max_npsi)
power	matflt.type (9.2.1.2.7)	Power associated with the source/sink of particles [ $MW/m^3$ ]; Time-dependent; Vector(nsrc_spec, max_npsi)
torque	matflt.type (9.2.1.2.7)	Torque due to the source/sink of particles [ $Nm/m^3$ ]; Time dependent; Vector(nsrc_spec, max_npsi)

### 9.2.1.3.265 src\_snk\_tot

member	type	description
particles	vecflt.type (9.2.1.2.9)	Source/sink particles [1/s]; Time-dependendent; Vector(nsrc_spec)
power	vecflt.type (9.2.1.2.9)	Power associated with the source/sink of particles [W]; Time-dependent; Vector(nsrc_spec)
torque	vecflt.type (9.2.1.2.9)	Torque due to the source/sink of particles [Nm]; Time dependent; Vector (nsrc_spec)

### 9.2.1.3.266 straps

Properties of each IC antenna strap

member	type	description
nstraps	vecint.type (9.2.1.2.10)	Number of straps in each antenna; Vector (nantenna_ic)
phase	exp2D (9.2.1.3.114)	Phase of strap current [rad]; Time-dependent; Matrix (nantenna_ic, max_nstraps)
phi_centre	matflt.type (9.2.1.2.7)	Toroidal angle at the centre of the strap [rad]; Matrix (nantenna_ic, max_nstraps)
width	matflt.type (9.2.1.2.7)	Width of strap in the toroidal direction [m]; Matrix (nantenna_ic, max_nstraps)
dist2wall	matflt.type (9.2.1.2.7)	Distance to conducting wall or other conductor behind the antenna straps [m]; Matrix (nantenna_ic, max_nstraps)
ncoord_strap	matint.type (9.2.1.2.8)	Number of point in the polygon describing the antenna in the poloidal plane; Matrix (nantenna_ic, max_nstraps)
coord_strap	rz3D (9.2.1.3.217)	Coordinates (R,z) of polygon (of length ncoord_strap) describing the antenna in the poloidal plane; rz3d array (nantenna_ic, max_nstraps, max_ncoord_strap)

Type of: antennaic\_setup:straps (376)

### 9.2.1.3.267 table\_0d

member	type	description
table	matflt.type (9.2.1.2.7)	interpolation data, Array(nz,nproc0d)

Type of: tables:table\_0d (611)

### 9.2.1.3.268 table\_1d

member	type	description
table_prop	table_info1 (9.2.1.3.273)	Information on the properties of the table and the coordinates.
coord1	vecflt.type (9.2.1.2.9)	value of coordinate; Vector(ncoord1)
table	array3dfilt.type (9.2.1.2.1)	interpolation data, Array(ncoord1, nz, nproc1d)

Type of: tables:table\_1d (611)

### 9.2.1.3.269 table\_2d

member	type	description
table_prop	table_info2 (9.2.1.3.274)	Information on the properties of the table and the coordinates.
coord1	vecflt.type (9.2.1.2.9)	value of coordinate; Vector(ncoord1)
coord2	vecflt.type (9.2.1.2.9)	value of coordinate; Vector(ncoord2)
table	array4dfilt.type (9.2.1.2.3)	Interpolation data , Array(ncoord1,ncoord2, nz, nproc2d)

Type of: tables:table\_2d (611)

### 9.2.1.3.270 table\_3d

member	type	description
table_prop	table_info3 (9.2.1.3.275)	Information on the properties of the table and the coordinates.
coord1	vecflt.type (9.2.1.2.9)	value of coordinate; Vector(ncoord1)
coord2	vecflt.type (9.2.1.2.9)	value of coordinate; Vector(ncoord2)
coord3	vecflt.type (9.2.1.2.9)	value of coordinate; Vector(ncoord3)
table	array5dfilt.type (9.2.1.2.4)	interpolation data , Array(ncoord1,ncoord2,ncoord3, nz, nproc3d)

Type of: tables:table\_3d (611)

### 9.2.1.3.271 table\_4d

member	type	description
table_prop	table_info4 (9.2.1.3.276)	Information on the properties of the table and the coordinates.
coord1	vecflt_type (9.2.1.2.9)	value of coordinate; Vector(ncoord1)
coord2	vecflt_type (9.2.1.2.9)	value of coordinate; Vector(ncoord2)
coord3	vecflt_type (9.2.1.2.9)	value of coordinate; Vector(ncoord3)
coord4	vecflt_type (9.2.1.2.9)	value of coordinate; Vector(ncoord4)
table	array6dfilt_type (9.2.1.2.5)	interpolation data , Array(ncoord1,ncoord2,ncoord3,ncoord4, nz, nproc4d)

Type of: tables:table\_4d (611)

### 9.2.1.3.272 table\_5d

member	type	description
table_prop	table_info5 (9.2.1.3.277)	Information on the properties of the table and the coordinates.
coord1	vecflt_type (9.2.1.2.9)	value of coordinate; Vector(ncoord1)
coord2	vecflt_type (9.2.1.2.9)	value of coordinate; Vector(ncoord2)
coord3	vecflt_type (9.2.1.2.9)	value of coordinate; Vector(ncoord3)
coord4	vecflt_type (9.2.1.2.9)	value of coordinate; Vector(ncoord4)
coord5	vecflt_type (9.2.1.2.9)	value of coordinate; Vector(ncoord5)
table	array6dfilt_type (9.2.1.2.5)	interpolation data , Array(ncoord1,ncoord2,ncoord3,ncoord4,ncoord5, nz, nproc5d). DECLARED AS 6D ARRAY FOR THE MOMENT UNTIL WE UPDATE UAL TO A 7D.

Type of: tables:table\_5d (611)

### 9.2.1.3.273 table\_info1

Information on the amns table

member	type	description
coord_extrap	matint_type (9.2.1.2.8)	0 : none, report error; 1 : boundary value; 2: simple; Array(nproc1d, 2)
interp_type	integer (9.2.1.1.2)	1: linear; ... ; Vector(nproc1d)
coord_label	string (9.2.1.1.3)	description of the coordinate, string.
coord_unit	string (9.2.1.1.3)	units of coordinate; string
coord_trans	integer (9.2.1.1.2)	0 : none; 1 : log10; 2 : ln; Integer
unif_spacing	integer (9.2.1.1.2)	for optimization purposes

Type of: table\_1d:table\_prop (601)

### 9.2.1.3.274 table\_info2

Information on the amns table

member	type	description
coord_extrap	array3dint_type (9.2.1.2.2)	0 : none, report error; 1 : boundary value; 2: simple; Array(nproc2d, 2, 2)
interp_type	vecint_type (9.2.1.2.10)	1: linear; ... Vector(nproc2d)
coord_label	vecstring_type (9.2.1.2.11)	description of each coordinate, Vector(2).
coord_unit	vecstring_type (9.2.1.2.11)	units of coordinate; Vector(2)
coord_trans	vecint_type (9.2.1.2.10)	0 : none; 1 : log10; 2 : ln; Vector(2)
unif_spacing	integer (9.2.1.1.2)	for optimization purposes

Type of: table\_2d:table\_prop (602)

### 9.2.1.3.275 table\_info3

Information on the amns table

member	type	description
coord_extrap	array3dint.type (9.2.1.2.2)	0 : none, report error; 1 : boundary value; 2: simple; Array(nproc3d, 2, 3)
interp_type	vecint.type (9.2.1.2.10)	1: linear; ... ; Vector(nproc3d)
coord_label	vecstring.type (9.2.1.2.11)	description of each coordinate, Vector(3).
coord_unit	vecstring.type (9.2.1.2.11)	units of coordinate; Vector(3)
coord_trans	vecint.type (9.2.1.2.10)	0 : none; 1 : log10; 2 : ln; Vector(3)
unif_spacing	integer (9.2.1.1.2)	for optimization purposes

Type of: table\_3d:table\_prop (603)

#### 9.2.1.3.276 table\_info4

Information on the amns table

member	type	description
coord_extrap	array3dint.type (9.2.1.2.2)	0 : none, report error; 1 : boundary value; 2: simple; Array(nproc4d, 2, 5)
interp_type	vecint.type (9.2.1.2.10)	1: linear; ... ; Vector(nproc4d)
coord_label	vecstring.type (9.2.1.2.11)	description of each coordinate, Vector(4).
coord_unit	vecstring.type (9.2.1.2.11)	units of coordinate; Vector(4)
coord_trans	vecint.type (9.2.1.2.10)	0 : none; 1 : log10; 2 : ln; Vector(4)
unif_spacing	integer (9.2.1.1.2)	for optimization purposes

Type of: table\_4d:table\_prop (604)

#### 9.2.1.3.277 table\_info5

Information on the amns table

member	type	description
coord_extrap	array3dint.type (9.2.1.2.2)	0 : none, report error; 1 : boundary value; 2: simple; Array(nproc5d, 2, 5)
interp_type	vecint.type (9.2.1.2.10)	1: linear; ... ; Vector(nproc5d)
coord_label	vecstring.type (9.2.1.2.11)	description of each coordinate, Vector(5).
coord_unit	vecstring.type (9.2.1.2.11)	units of coordinate; Vector(5)
coord_trans	vecint.type (9.2.1.2.10)	0 : none; 1 : log10; 2 : ln; Vector(5)
unif_spacing	integer (9.2.1.1.2)	for optimization purposes

Type of: table\_5d:table\_prop (605)

#### 9.2.1.3.278 tables

member	type	description
id	matint.type (9.2.1.2.8)	Pointer to table: (1,jproc) indicates table dimensionality for process jproc; (2,jproc) indicates position in that table (index of the last element in the array); Matrix(2,nprocs)
table_0d	table_0d (9.2.1.3.267)	NO DOCS
table_1d	table_1d (9.2.1.3.268)	NO DOCS
table_2d	table_2d (9.2.1.3.269)	NO DOCS
table_3d	table_3d (9.2.1.3.270)	NO DOCS
table_4d	table_4d (9.2.1.3.271)	NO DOCS
table_5d	table_5d (9.2.1.3.272)	NO DOCS

Type of: amns:tables (336)

#### 9.2.1.3.279 theta\_info

Information on the poloidal angle theta.

member	type	description
angl.type	integer (9.2.1.1.2)	Type of poloidal angle: 1 : same as the poloidal angle in the equilibrium cpo; 2 : normal (geometrical) polar angle; 3 : other. If option 3, a transformation to the normal poloidal angle is provided in th2th.pol. MORE PRECISE DEFINITION WOULD BE USEFUL.

member	type	description
th2th_pol	matflt.type (9.2.1.2.7)	Polar (geometrical) poloidal angle at grid points in theta, i.e. the transformation from theta to the polar poloidal angle; used only if angl.type=3; Time-dependent; Matrix (ndim1, ndim2)

Type of: waves\_grid\_2d:theta\_info (633)

### 9.2.1.3.280 toroid\_field

Toroidal field information entering the definition of rho\_tor, for reference only. The physical value of the toroidal field should be taken from the toroidfield CPO. Time-dependent.

member	type	description
b0	float (9.2.1.1.1)	Vacuum field at r0 [T]; Time-dependent. Scalar.
b0prime	float (9.2.1.1.1)	Time derivative of the vacuum field at r0 [T/s]; Time-dependent. Scalar.
r0	float (9.2.1.1.1)	Characteristic major radius of the device (used in publications, usually middle of the vessel at the equatorial midplane) [m]. Scalar.
time	float (9.2.1.1.1)	Time [s] (exact time slice used from the time array of the source signal, here the toroidfield CPO. If the time slice does not exist in the time array of the source signal, it means linear interpolation has been used); Time-dependent; Scalar.

Type of: coreprof:toroid\_field (341)

### 9.2.1.3.281 transcoefel

Subtree containing transport coefficients from a transport model, for the electrons

member	type	description
diff_eff	vecflt.type (9.2.1.2.9)	Effective diffusivity [ $m^2.s^{-1}$ ]. Time-dependent. Vector (nrho)
vconv_eff	vecflt.type (9.2.1.2.9)	Effective convection [ $m.s^{-1}$ ]. Time-dependent. Vector (nrho)
flux	vecflt.type (9.2.1.2.9)	Flux. Not used in transport equations [ $field.m.s^{-1}, m^{-3}$ if field is not a density itself]. Time-dependent. Vector (nrho)
off_diagonal	offdiagel (9.2.1.3.161)	Details of the transport matrix, just for diagnostic (not used in transport equations). Time-dependent.
flag	integer (9.2.1.1.2)	Flag describing the form of transport produced by the original model : 0- not calculated, 1- D and V, 2- flux, 3- full transport matrix. Scalar.

Type of: coretransp:te\_transp (343) I neoclassic:mtor\_neo (358) I neoclassic:ne\_neo (358) I neoclassic:te\_neo (358)

### 9.2.1.3.282 transcoefimp

Subtree containing transport coefficients from a transport model, for the various impurity species (multiple charge states)

member	type	description
diff_eff	array3dflt.type (9.2.1.2.1)	Effective diffusivity [ $m^2.s^{-1}$ ]. Time-dependent. Array3d (nrho,nimp,max_nzimp)
vconv_eff	array3dflt.type (9.2.1.2.1)	Effective convection [ $m.s^{-1}$ ]. Time-dependent. Array3d (nrho,nimp,max_nzimp)
exchange	array3dflt.type (9.2.1.2.1)	Ion to electron energy exchange [ $W.m^{-3}$ ]. Time-dependent. Array3d (nrho,nimp,max_nzimp)
flux	array3dflt.type (9.2.1.2.1)	Flux. Not used in transport equations [ $field.m.s^{-1}, m^{-3}$ if field is not a density itself]. Time-dependent. Array3d (nrho,nimp,max_nzimp)
flag	integer (9.2.1.1.2)	Flag describing the form of transport produced by the original model : 0- not calculated, 1- D and V, 2- flux, 3- full transport matrix (off-diagonal subtree not available for impurities for the moment). Scalar.

Type of: coretransp:nz\_transp (343) I coretransp:tz\_transp (343) I neoclassic:nz\_neo (358) I neoclassic:tz\_neo (358)

### 9.2.1.3.283 transcoefion

Subtree containing transport coefficients from a transport model, for the various ion species, including the energy exchange term qgi.

member	type	description
diff_eff	matflt.type (9.2.1.2.7)	Effective diffusivity [ $m^2.s^{-1}$ ]. Time-dependent. Matrix (nrho,nion)
vconv_eff	matflt.type (9.2.1.2.7)	Effective convection [ $m.s^{-1}$ ]. Time-dependent. Matrix (nrho,nion)



member	type	description
exchange	matflt.type (9.2.1.2.7)	Ion to electron energy exchange [W.m <sup>-3</sup> ]. Time-dependent. Matrix(nrho,nion).
qgi	matflt.type (9.2.1.2.7)	Energy exchange term due to transport. [W.m <sup>-3</sup> ]. Time-dependent. Matrix (nrho,nion)
flux	matflt.type (9.2.1.2.7)	Flux. Not used in transport equations [field.m.s <sup>-1</sup> ,m <sup>-3</sup> if field is not a density itself]. Time-dependent. Matrix (nrho,nion)
off_diagonal	offdiagion (9.2.1.3.162)	Details of the transport matrix, just for diagnostic (not used in transport equations). Time-dependent.
flag	integer (9.2.1.1.2)	Flag describing the form of transport produced by the original model : 0- not calculated, 1- D and V, 2- flux, 3- full transport matrix. Scalar.

Type of: coretransp:ti\_transp (343) I neoclassic:ni\_neo (358) I neoclassic:ti\_neo (358)

#### 9.2.1.3.284 transcoefvtr

Subtree containing transport coefficients from a transport model, for the various ion species

member	type	description
diff_eff	matflt.type (9.2.1.2.7)	Effective diffusivity [m <sup>2</sup> .s <sup>-1</sup> ]. Time-dependent. Matrix (nrho,nion)
vconv_eff	matflt.type (9.2.1.2.7)	Effective convection [m.s <sup>-1</sup> ]. Time-dependent. Matrix (nrho,nion)
flux	matflt.type (9.2.1.2.7)	Flux. Not used in transport equations [field.m.s <sup>-1</sup> ,m <sup>-3</sup> if field is not a density itself]. Time-dependent. Matrix (nrho,nion)
off_diagonal	offdiagion (9.2.1.3.162)	Details of the transport matrix, just for diagnostic (not used in transport equations). Time-dependent.
flag	integer (9.2.1.1.2)	Flag describing the form of transport produced by the original model : 0- not calculated, 1- D and V, 2- flux, 3- full transport matrix. Scalar.

Type of: coretransp:vtr\_transp (343)

#### 9.2.1.3.285 tsmeasure

Measured values (Thomson scattering)

member	type	description
te	exp1D (9.2.1.3.113)	Electron temperature [eV]. Vector (nchords)
ne	exp1D (9.2.1.3.113)	Electron density [m <sup>-3</sup> ]. Vector (nchords)

Type of: tsdiag:measure (368)

#### 9.2.1.3.286 tssetup

diagnostic setup information

member	type	description
position	rz1D (9.2.1.3.214)	RZ of intersection between laser and line of sight [m]; Vector (nchords)

Type of: tsdiag:setup (368)

#### 9.2.1.3.287 turbcoordsys

Description of the coordinates and metric.

member	type	description
grid_type	string (9.2.1.1.3)	Type of coordinate system.
turbgrid	turbgrid (9.2.1.3.289)	Turbulence grid used by the codes; Time-dependent.
jacobian	matflt.type (9.2.1.2.7)	Jacobian of the coordinate system; Time-dependent; Matrix (ndim1, ndim2).
g.11	matflt.type (9.2.1.2.7)	metric coefficients g.11; Time-dependent; Matrix (ndim1, ndim2).
g.12	matflt.type (9.2.1.2.7)	metric coefficients g.12; Time-dependent; Matrix (ndim1, ndim2).
g.13	matflt.type (9.2.1.2.7)	metric coefficients g.13; Time-dependent; Matrix (ndim1, ndim2).
g.22	matflt.type (9.2.1.2.7)	metric coefficients g.22; Time-dependent; Matrix (ndim1, ndim2).
g.33	matflt.type (9.2.1.2.7)	metric coefficients g.33; Time-dependent; Matrix (ndim1, ndim2).
position	rzphi3D (9.2.1.3.221)	R Z phi positions of grid points; Time-dependent; Array3D (ndim1, ndim2, ndim3).

Type of: turbulence:coordsys (369)

### 9.2.1.3.288 turbenv1d

Parallel fluctuation envelope.

member	type	description
theta	vecflt_type (9.2.1.2.9)	Straight field line poloidal angle; Vector (ntheta_env).
phi	vecflt_type (9.2.1.2.9)	Electrostatic potential [V <sup>2</sup> ]; Time-dependent; Vector (ntheta_env).
vor	vecflt_type (9.2.1.2.9)	Vorticity [coulomb <sup>2</sup> /m <sup>6</sup> ]; Time-dependent; Vector (ntheta_env).
jpl	vecflt_type (9.2.1.2.9)	Parallel current [A <sup>2</sup> /m <sup>4</sup> ]; Time-dependent; Vector (ntheta_env).
ne	vecflt_type (9.2.1.2.9)	Electron density [m <sup>-6</sup> ]; Time-dependent; Vector (ntheta_env).
he	vecflt_type (9.2.1.2.9)	Nonadiabatic electron density [m <sup>-6</sup> ]; Time-dependent; Vector (ntheta_env).
te	vecflt_type (9.2.1.2.9)	Electron temperature [eV <sup>2</sup> ]; Time-dependent; Vector (ntheta_env).
ni	matflt_type (9.2.1.2.7)	Ion density [m <sup>-6</sup> ]; Time-dependent; Matrix(ntheta_env,nion).
ti	matflt_type (9.2.1.2.7)	Ion temperature [eV <sup>2</sup> ]; Time-dependent; Matrix(ntheta_env,nion).
ui	matflt_type (9.2.1.2.7)	Ion parallel velocity [m <sup>2</sup> /s <sup>2</sup> ]; Time-dependent; Matrix (ntheta_env,nion).
fe	vecflt_type (9.2.1.2.9)	Electron particle flux [m <sup>-2</sup> /s per mode]; Time-dependent; Vector (ntheta_env).
qe	vecflt_type (9.2.1.2.9)	Electron conductive heat flux [eV m <sup>-2</sup> /s per mode]; Time-dependent; Vector (ntheta_env).
qi	matflt_type (9.2.1.2.7)	Ion conductive heat flux [eV m <sup>-2</sup> /s per mode]; Time-dependent; Matrix(ntheta_env,nion).
me	vecflt_type (9.2.1.2.9)	Magnetic electron heat flux [eV m <sup>-2</sup> /s per mode]; Time-dependent; Vector (ntheta_env).
mi	matflt_type (9.2.1.2.7)	Magnetic ion heat flux [eV m <sup>-2</sup> /s per mode]; Time-dependent; Matrix(ntheta_env,nion).

Type of: turbulence:env1d (369)

### 9.2.1.3.289 turbgrid

Generic structure for a turbulence grid.

member	type	description
dim1	vecflt_type (9.2.1.2.9)	First dimension values; Vector (ndim1).
dim2	vecflt_type (9.2.1.2.9)	Second dimension values; Vector (ndim2).
dim3	vecflt_type (9.2.1.2.9)	Third dimension values; Vector (ndim3).
dim.v1	vecflt_type (9.2.1.2.9)	First v-space dimension values; Vector (ndim.v1).
dim.v2	vecflt_type (9.2.1.2.9)	Second v-space dimension values; Vector (ndim.v2).

Type of: turbcoordsys:turbgrid (620)

### 9.2.1.3.290 turbspec1d

Toroidal mode number spectra.

member	type	description
dim_spec	vecflt_type (9.2.1.2.9)	Perp Wavenumber Spectrum values; Vector (ndim_spec).
phi	vecflt_type (9.2.1.2.9)	Electrostatic potential [V <sup>2</sup> per mode]; Time-dependent; Vector (ndim_spec).
vor	vecflt_type (9.2.1.2.9)	Vorticity [s <sup>-2</sup> per mode]; Time-dependent; Vector (ndim_spec).
b	vecflt_type (9.2.1.2.9)	Magnetic energy [T <sup>2</sup> per mode]; Time-dependent; Vector (ndim_spec).
jpl	vecflt_type (9.2.1.2.9)	Current [A <sup>2</sup> /m <sup>4</sup> per mode]; Time-dependent; Vector (ndim_spec).
ne	vecflt_type (9.2.1.2.9)	Electron density [m <sup>-6</sup> per mode]; Time-dependent; Vector (ndim_spec).
te	vecflt_type (9.2.1.2.9)	Electron temperature [eV <sup>2</sup> per mode]; Time-dependent; Vector (ndim_spec).
ti	matflt_type (9.2.1.2.7)	Ion temperature [eV <sup>2</sup> per mode]; Time-dependent; Matrix (ndim_spec,nion).
fe	vecflt_type (9.2.1.2.9)	Electron particle flux [m <sup>-2</sup> /s per mode]; Time-dependent; Vector (ndim_spec).
qe	vecflt_type (9.2.1.2.9)	Electron conductive heat flux [eV m/s per mode]; Time-dependent; Vector (ndim_spec).
qi	matflt_type (9.2.1.2.7)	Ion conductive heat flux [eV m/s per mode]; Time-dependent; Matrix(ndim_spec,nion).
me	vecflt_type (9.2.1.2.9)	Magnetic electron heat flux [eV m/s per mode]; Time-dependent; Matrix (ndim_spec).
mi	matflt_type (9.2.1.2.7)	Magnetic ion heat flux [eV m/s per mode]; Time-dependent; Matrix (ndim_spec,nion).

Type of: turbulence:spec1d (369)

### 9.2.1.3.291 turbvar0d

Time traces.

member	type	description
dtime_type	string (9.2.1.1.3)	Description of time trace e.g. last ndtime points.
dtime	vecflt.type (9.2.1.2.9)	Fast diagnostic time [s]; Time-dependent; Vector (ndtime).
en_exb	vecflt.type (9.2.1.2.9)	ExB energy [J/m <sup>3</sup> ]; Time-dependent; Vector (ndtime).
en_mag	vecflt.type (9.2.1.2.9)	Magnetic energy [J/m <sup>3</sup> ]; Time-dependent; Vector (ndtime).
en_el_th	vecflt.type (9.2.1.2.9)	electron thermal energy or free energy [J/m <sup>3</sup> ]; Time-dependent.
en_ion_th	matflt.type (9.2.1.2.7)	Ion thermal energy or free energy [J/m <sup>3</sup> ]; Time-dependent; Matrix (ndtime, nion).
en_el_par	vecflt.type (9.2.1.2.9)	Electron parallel energy [J/m <sup>3</sup> ]; Time-dependent; Vector (ndtime).
en_ion_par	matflt.type (9.2.1.2.7)	Ion parallel energy [J/m <sup>3</sup> ]; Time-dependent; Matrix (ndtime, nion).
en_tot	vecflt.type (9.2.1.2.9)	Total energy or free energy [J/m <sup>3</sup> ]; Time-dependent; Vector (ndtime).
fl_el	vecflt.type (9.2.1.2.9)	Electron flux [m <sup>-2</sup> s <sup>-1</sup> ]; Time-dependent; Vector (ndtime).
fl_heatel	vecflt.type (9.2.1.2.9)	Conductive electron heat flux [eV m <sup>-2</sup> s <sup>-1</sup> ]; Time-dependent; Vector (ndtime).
fl_ion	matflt.type (9.2.1.2.7)	Ion flux [m <sup>-2</sup> s <sup>-1</sup> ]; Time-dependent; Matrix (ndtime, nion).
fl_heation	matflt.type (9.2.1.2.7)	Conductive ion heat flux [eV m <sup>-2</sup> s <sup>-1</sup> ]; Time-dependent; Matrix (ndtime, nion).
fl_magel	vecflt.type (9.2.1.2.9)	Electron flux [m <sup>-2</sup> s <sup>-1</sup> ]; Time-dependent; Vector (ndtime).
fl_magheatel	vecflt.type (9.2.1.2.9)	Conductive electron heat flux [eV m <sup>-2</sup> s <sup>-1</sup> ]; Time-dependent; Vector (ndtime).
fl_magion	matflt.type (9.2.1.2.7)	Ion flux [m <sup>-2</sup> s <sup>-1</sup> ]; Time-dependent; Matrix (ndtime, nion).
flmagheation	matflt.type (9.2.1.2.7)	Conductive ion heat flux [eV m <sup>-2</sup> s <sup>-1</sup> ]; Time-dependent; Matrix (ndtime, nion).

Type of: turbulence:var0d (369)

### 9.2.1.3.292 turbvar1d

Dependent variable radial profile.

member	type	description
rho_tor_norm	vecflt.type (9.2.1.2.9)	Normalised toroidal flux coordinate for the var1d structure. Vector(nrho1d)
phi	vecflt.type (9.2.1.2.9)	Electrostatic potential [V]; Time-dependent; Vector (nrho1d).
er	vecflt.type (9.2.1.2.9)	Radial electric field [V/m]; Time-dependent; Vector (nrho1d).
vor	vecflt.type (9.2.1.2.9)	Vorticity [s <sup>-1</sup> ]; Time-dependent; Vector (nrho1d).
apl	vecflt.type (9.2.1.2.9)	Parallel magnetic potential divided by B [m]; Time-dependent; Vector (nrho1d).
jpl	vecflt.type (9.2.1.2.9)	Parallel current divided by B [A/m <sup>2</sup> per T]; Time-dependent; Vector (nrho1d).
ne	vecflt.type (9.2.1.2.9)	Electron density [m <sup>-3</sup> ]; Time-dependent; Vector (nrho1d).
te	vecflt.type (9.2.1.2.9)	Electron temperature [eV]; Time-dependent; Vector (nrho1d).
ni	matflt.type (9.2.1.2.7)	Ion density [m <sup>-3</sup> ]; Time-dependent; Matrix (nrho1d, nion).
ti	matflt.type (9.2.1.2.7)	Ion temperature [eV]; Time-dependent; Matrix (nrho1d, nion).
ui	matflt.type (9.2.1.2.7)	Ion parallel velocity divided by B [m/s per T]; Time-dependent; Matrix (nrho1d, nion).

Type of: turbulence:var1d (369)

### 9.2.1.3.293 turbvar2d

Dependent variable axisymmetric.

member	type	description
rho_tor_norm	vecflt.type (9.2.1.2.9)	Normalised toroidal flux coordinate for the var2d structure. Vector(nrho2d)
theta	vecflt.type (9.2.1.2.9)	Straight field line poloidal angle for the var2d structure. Vector(ntheta2d)
phi	matflt.type (9.2.1.2.7)	Electrostatic potential [V]; Time-dependent; Matrix (nrho2d, ntheta2d).
apl	matflt.type (9.2.1.2.7)	Parallel magnetic potential divided by B [m]; Time-dependent; Matrix (nrho2d, ntheta2d).
jpl	matflt.type (9.2.1.2.7)	Parallel current divided by B [A/m <sup>2</sup> per T]; Time-dependent; Matrix (nrho2d, ntheta2d).
vor	matflt.type (9.2.1.2.7)	Vorticity [s <sup>-1</sup> ]; Time-dependent; Matrix (nrho2d, ntheta2d).
ne	matflt.type (9.2.1.2.7)	Electron density [m <sup>-3</sup> ]; Time-dependent; Matrix (nrho2d, ntheta2d).
te	matflt.type (9.2.1.2.7)	Electron temperature [eV]; Time-dependent; Matrix (nrho2d, ntheta2d).
ni	array3dflt.type (9.2.1.2.1)	Ion density [m <sup>-3</sup> ]; Time-dependent; Array3D (nrho2d, ntheta2d, nion).
ti	array3dflt.type (9.2.1.2.1)	Ion temperature [eV]; Time-dependent; Array3D (nrho2d, ntheta2d, nion).
ui	array3dflt.type (9.2.1.2.1)	Ion parallel velocity divided by B [m/s per T]; Time-dependent; Array3D (nrho2d, ntheta2d, nion).

Type of: turbulence:var2d (369)

### 9.2.1.3.294 turbvar3d

Dependent variable morphology (on the internal grid code coord\_sys/turbgrid).

member	type	description
phi	array3dflt.type (9.2.1.2.1)	Electrostatic potential [V]; Time-dependent; Array3D(ndim1,ndim2,ndim3).
vor	array3dflt.type (9.2.1.2.1)	Vorticity [ $s^{-1}$ ]; Time-dependent; Array3D(ndim1,ndim2,ndim3).
jpl	array3dflt.type (9.2.1.2.1)	Parallel current [ $A/m^2$ ]; Time-dependent; Array3D(ndim1,ndim2,ndim3).
ne	array3dflt.type (9.2.1.2.1)	Electron density [ $m^{-3}$ ]; Time-dependent; Array3D(ndim1,ndim2,ndim3).

Type of: turbulence:var3d (369)

### 9.2.1.3.295 turning\_pts

Location of turning points

member	type	description
upper	orbit_pos (9.2.1.3.165)	Position at upper turning point
lower	orbit_pos (9.2.1.3.165)	Position at lower turning point

Type of: special\_pos:turning\_pts (592)

### 9.2.1.3.296 typelist

Definition of types for each neutral species

member	type	description
nstype	vecint.type (9.2.1.2.10)	For each neutral species, number of possible types considered (in terms of energy : cold, thermal, fast, NBI, ...). Vector of integers (nneut)
type	matint.type (9.2.1.2.8)	Type of neutral, in terms of energy : 0=cold, 1=thermal, 2= fast, 3=NBI. Matrix of integers (nneut,max_nstype)

Type of: composition\_neutrals:typelist (393)

### 9.2.1.3.297 waveguides

Waveguides description

member	type	description
nwm_theta	vecint.type (9.2.1.2.10)	Number of waveguides per module in the poloidal direction. Vector of integers (nantenna_lh).
nwm_phi	vecint.type (9.2.1.2.10)	Number of waveguides per module in the toroidal direction. Vector of integers (nantenna_lh).
mask	matint.type (9.2.1.2.8)	Mask of passive and active waveguides for an internal module, Matrix of integers (nantenna_lh,max_nwm_phi)
npwbm_phi	vecint.type (9.2.1.2.10)	Number of passive waveguide between modules in the toroidal direction. Vector of integers (nantenna_lh).
npwe_phi	vecint.type (9.2.1.2.10)	Number of passive waveguides on each antenna edge in the toroidal direction. Vector of integers (nantenna_lh).
sw_theta	vecflt.type (9.2.1.2.9)	Spacing between poloidally neighboring waveguides [m], Vector (nantenna_lh)
hw_theta	vecflt.type (9.2.1.2.9)	Height of waveguides in the poloidal direction [m], Vector (nantenna_lh)
bwa	vecflt.type (9.2.1.2.9)	Width of active waveguides [m], Vector (nantenna_lh)
biwp	vecflt.type (9.2.1.2.9)	Width of internal passive waveguides [m], Vector (nantenna_lh)
bewp	vecflt.type (9.2.1.2.9)	Width of edge passive waveguides [m], Vector (nantenna_lh)
e_phi	matflt.type (9.2.1.2.7)	Thickness between waveguides in the toroidal direction [m], Matrix (nantenna_lh,nthick_phi). Reminder : nthick_phi = nmp_phi*nwm_phi + (nmp_phi - 1)*npwbm_phi + 2*npwe_phi
scl	matflt.type (9.2.1.2.7)	Short circuit length for passive waveguides [m], Matrix (nantenna_lh,nshort_phi). Reminder : nshort_phi = nmp_phi* npwm_phi + (nmp_phi - 1)*npwbm_phi + 2*npwe_phi

Type of: modules:waveguides (490)

### 9.2.1.3.298 waves\_global\_param

Global wave deposition parameters

member	type	description
frequency	float (9.2.1.1.1)	Wave frequency [Hz]; Time-dependent, floating
name	string (9.2.1.1.3)	Antenna name, String
type	string (9.2.1.1.3)	Wave type (LH, EC, IC, ...), String
ntor	vecint_type (9.2.1.2.10)	Toroidal mode numbers; Time-dependent; Vector (ntor)
f.assumption	vecint_type (9.2.1.2.10)	Assumption on the functions distribution used by the wave solver to calculate the power deposition : 0 = Maxwellian (linear absorption); 1 = quasi-linear (F given by a distribution function CPO). Integer vector (nion+1). The first value corresponds to the electrons, then to the other ion species. Time-dependent.
power_tot	float (9.2.1.1.1)	Total absorbed wave power [W]; Time-dependent
p_frac_ntor	vecflt_type (9.2.1.2.9)	Fraction of wave power per toroidal mode number; Time-dependent; Vector (ntor)
pow_i	vecflt_type (9.2.1.2.9)	Wave power absorbed by an ion species [W]; Time-dependent; Vector (nion)
pow_e	float (9.2.1.1.1)	Wave power absorbed by the electrons [W]; Time-dependent; Float
pow_ntor_i	matflt_type (9.2.1.2.7)	Wave power absorbed by an ion species per toroidal mode number [W]; Time-dependent; Matrix (ntor,nion)
pow_ntor_e	vecflt_type (9.2.1.2.9)	Wave power absorbed by the electrons per toroidal mode number [W]; Time-dependent; Vector (ntor)
cur_tor	float (9.2.1.1.1)	Wave driven toroidal current from a stand alone calculation (not consistent with other sources) [A]; Time-dependent, Float
cur_tor_ntor	vecflt_type (9.2.1.2.9)	Wave driven toroidal current for each toroidal mode number from a stand alone calculation (not consistent with other sources) [A]; Time-dependent; Vector (ntor)
code_type	integer (9.2.1.1.2)	Type of wave deposition code for a given frequency: 1=beam/ray tracing; 2=full wave; Integer
toroid_field	b0r0 (9.2.1.3.46)	Characteristics of the vacuum toroidal field, redundant with the toroidfield CPO, to document the normalisation of parallel current densities in this CPO; Float.

Type of: coherentwave:global\_param (391)

### 9.2.1.3.299 waves\_grid\_1d

Grid points for profiles

member	type	description
rho_tor_norm	vecflt_type (9.2.1.2.9)	Normalised toroidal flux coordinate at the grid points for 1D profiles; Time-dependent; Vector (npsi)
rho_tor	vecflt_type (9.2.1.2.9)	Toroidal flux coordinate at the grid points for 1D profiles [m]; Time-dependent; Vector (npsi)
psi	vecflt_type (9.2.1.2.9)	Grid points in poloidal flux function [Wb], without 1/2pi and such that $B_p =  \text{grad } \psi  / R / 2 / \pi$ . Time-dependent; Vector (npsi)

Type of: coherentwave:grid.1d (391)

### 9.2.1.3.300 waves\_grid\_2d

Grid points for 2D profiles

member	type	description
grid_type	integer (9.2.1.1.2)	Grid type. 1: rectangular grid in R,Z. 2: rectangular grid in psi, theta. 3: unstructured grid. Integer.
rho_tor_norm	matflt_type (9.2.1.2.7)	Normalised toroidal flux coordinate at the grid points for 1D and 2D profiles; Time-dependent; Matrix (ndim1, ndim2)
rho_tor	matflt_type (9.2.1.2.7)	Toroidal flux coordinate at the grid points for 1D and 2D profiles [m]; Time-dependent; Matrix (ndim1, ndim2)
psi	matflt_type (9.2.1.2.7)	Grid points in poloidal flux function [Wb], without 1/2pi and such that $B_p =  \text{grad } \psi  / R / 2 / \pi$ . Time-dependent; Matrix (ndim1, ndim2)
theta	matflt_type (9.2.1.2.7)	Grid points of the poloidal angle; Time-dependent; Matrix (ndim1, ndim2)
r	matflt_type (9.2.1.2.7)	R (major radius) of grid points; Time-dependent; Matrix(ndim1, ndim2)
z	matflt_type (9.2.1.2.7)	Z (altitude) of grid points; Time-dependent; Matrix (ndim1, ndim2)
theta_info	theta_info (9.2.1.3.279)	Information on the poloidal angle theta.

Type of: coherentwave:grid.2d (391)

### 9.2.1.3.301 waves\_profiles\_1d

waves 1D radial profiles

member	type	description
powd.tot	vecflt.type (9.2.1.2.9)	Total flux surface averaged wave power density [W/m <sup>3</sup> ]; Time-dependent; Vector (npsi)
powd.e	vecflt.type (9.2.1.2.9)	Flux surface averaged absorbed wave power density on electrons [W/m <sup>3</sup> ]; Time-dependent; Vector (npsi)
powd.i	matflt.type (9.2.1.2.7)	Flux surface averaged absorbed wave power density on ion species [W/m <sup>3</sup> ]; Time-dependent; Matrix (npsi, nion)
powd.ntor	matflt.type (9.2.1.2.7)	Flux surface averaged power density for each toroidal mode number [W/m <sup>3</sup> ]; Time-dependent; Matrix(npsi, ntor)
powd.ntor.e	matflt.type (9.2.1.2.7)	Flux surface averaged absorbed power density for each toroidal mode number on electrons [W/m <sup>3</sup> ]; Time-dependent; Matrix (npsi, ntor)
powd.ntor.i	array3dflt.type (9.2.1.2.1)	Flux surface averaged power density for each toroidal mode number on each ions species [W/m <sup>3</sup> ]; Time-dependent; Array3D (npsi, ntor, nion)
curd.tor	vecflt.type (9.2.1.2.9)	Flux surface averaged wave driven toroidal current density = average(jphi/R) / average(1/R) [A/m <sup>2</sup> ]; Time-dependent; Vector (npsi)
curd.torntor	matflt.type (9.2.1.2.7)	Flux surface averaged wave driven toroidal current density for each toroidal mode number = average(jphi/R) / average(1/R) [A/m <sup>2</sup> ]; Time-dependent; Matrix (npsi, ntor)
pow.tot	vecflt.type (9.2.1.2.9)	Volume integrated absorbed wave power density [W]; Time-dependent; Vector (npsi)
pow.e	vecflt.type (9.2.1.2.9)	Volume integrated absorbed wave power density on electrons [W]; Time-dependent; Vector (npsi)
pow.i	matflt.type (9.2.1.2.7)	Volume integrated absorbed wave power density on ion species [W]; Time-dependent; Matrix (npsi, nion)
pow.ntor	array3dflt.type (9.2.1.2.1)	Volume integrated power density for each toroidal mode number [W]; Time-dependent; Matrix (npsi, ntor)
pow.ntor.e	matflt.type (9.2.1.2.7)	Volume integrated power density for each toroidal mode number on the electrons [W]; Time-dependent; Matrix (npsi, ntor)
pow.ntor.i	array3dflt.type (9.2.1.2.1)	Volume integrated power density for each toroidal mode number on each ions species [W]; Time-dependent; Array3D (npsi, ntor, nion)
curd.par	vecflt.type (9.2.1.2.9)	Flux surface averaged wave driven parallel current density = average(j.B) / B0, where B0 is in global.param/toroid.field/b0, from stand alone calculation (not consistent with other sources) ; [A/m <sup>2</sup> ]; Time-dependent; Vector (npsi)
curd.parntor	matflt.type (9.2.1.2.7)	Flux surface averaged wave driven parallel current density for each toroidal mode number = average(j.B) / B0, where B0 is in global.param/toroid.field/b0, from stand alone calculation (not consistent with other sources) ; [A/m <sup>2</sup> ]; Time-dependent; Matrix (npsi, ntor)
cur.tor	vecflt.type (9.2.1.2.9)	Wave driven toroidal current inside a flux surface from stand alone calculation (not consistent with other sources) [A]; Time-dependent; Vector (npsi)
cur.tor.ntor	matflt.type (9.2.1.2.7)	Wave driven toroidal current inside a flux surface for each toroidal mode number from a stand alone calculation (not consistent with other sources) [A]; Time-dependent; Matrix (npsi, ntor)

Type of: coherentwave:profiles\_1d (391)

### 9.2.1.3.302 waves\_profiles\_2d

waves 2D profiles in poloidal cross-section

member	type	description
powd.tot	matflt.type (9.2.1.2.7)	Total wave power density; Time-dependent [W/m <sup>3</sup> ]; Matrix (ndim1, ndim2)
powd.e	matflt.type (9.2.1.2.7)	Absorbed wave power density on electrons [W/m <sup>3</sup> ]; Time-dependent; Matrix (ndim1, ndim2)
powd.i	array3dflt.type (9.2.1.2.1)	Absorbed wave power density on ion species [W/m <sup>3</sup> ]; Time-dependent; Array3D (ndim1, ndim2, nion)
powd.ntor	array3dflt.type (9.2.1.2.1)	Absorbed power density for each toroidal mode number [W/m <sup>3</sup> ]; Time-dependent; Array 3D (ndim1, ndim2, ntor)
powd.ntor.e	array3dflt.type (9.2.1.2.1)	Absorbed power density for each toroidal mode number on electrons [W/m <sup>3</sup> ]; Time-dependent; Array 3D (ndim1, ndim2, ntor)
powd.ntor.i	array4dflt.type (9.2.1.2.3)	Absorbed power density for each toroidal mode number on each ions species [W/m <sup>3</sup> ]; Time-dependent; Array4D (ndim1, ndim2, ntor, nion)
powd.iharm	array5dflt.type (9.2.1.2.4)	Power density absorbed by an ion species for each toroidal mode number at a given harmonic cyclotron resonance ; Time-dependent (W/m <sup>3</sup> ); Array5D (ndim1, ndim2, ntor, nion, nharm)

Type of: coherentwave:profiles\_2d (391)

### 9.2.1.3.303 waves\_rtposition

Ray/beam position

member	type	description
r	matflt.type (9.2.1.2.7)	Ray/beam major radius location [m]; Time-dependent; Matrix of double precision real (nbeams, max_npoints)
z	matflt.type (9.2.1.2.7)	Ray/beam vertical location [m]; Time-dependent; Matrix of double precision real (nbeams, max_npoints)
psi	matflt.type (9.2.1.2.7)	Poloidal magnetic flux coordinate of the ray/beam position [Wb], without $1/2\pi$ and such that $B_p =  grad\ psi  / R/2/\pi$ ; Time-dependent; Matrix of double precision real (nbeams, max_npoints)
theta	matflt.type (9.2.1.2.7)	Ray/beam poloidal angle location [rad]; Time-dependent; Matrix of double precision real (nbeams, max_npoints). PRECISE THE DEFINITION OF THE POLOIDAL ANGLE, SEE THE PROFILES/GRID DEFINITIONS.
phi	matflt.type (9.2.1.2.7)	Ray/beam toroidal angle location [rad]; Time-dependent; Matrix of double precision real (nbeams, max_npoints)

Type of: beamtracing:position (381)

### 9.2.1.3.304 waves\_rtwavevector

Ray/beam wave vector

member	type	description
kr	matflt.type (9.2.1.2.7)	Ray/beam wave vector in the major radius direction [m <sup>-1</sup> ], Matrix of double precision real (nbeams, max_npoints). Time-dependent
kz	matflt.type (9.2.1.2.7)	Ray/beam wave vector in the vertical direction [m], Matrix of double precision real (nbeams, max_npoints). Time-dependent
npar	matflt.type (9.2.1.2.7)	Ray/beam parallel refractive index, Matrix of double precision real (nbeams, max_npoints). Time-dependent
nperp	matflt.type (9.2.1.2.7)	Ray/beam perpendicular refractive index, Matrix of double precision real (nbeams, max_npoints). Time-dependent
ntor	matflt.type (9.2.1.2.7)	Ray/beam toroidal wave number, Matrix of double precision real (nbeams, max_npoints/1). If var_ntor=0, ntor is constant along the ray path and the last dimension is of size 1 in order to avoid useless repetition of ntor constant value. Time-dependent
var_ntor	integer (9.2.1.1.2)	Flag telling whether ntor is constant along the ray path (0) or varying (1). Integer

Type of: beamtracing:wavevector (381)

### 9.2.1.3.305 whatref

Structure defining a database entry and the CPO occurrence

member	type	description
user	string (9.2.1.1.3)	Name of the user if private data, public if public ITM database.
machine	string (9.2.1.1.3)	Name of the device
shot	integer (9.2.1.1.2)	Shot number
run	integer (9.2.1.1.2)	Run number
occurrence	integer (9.2.1.1.2)	Occurrence number of the CPO in the reference entry

Type of: datainfo:whatref (408)

### 9.2.1.3.306 xpts

Position of the X-point(s)

member	type	description
position	rz1D (9.2.1.3.214)	Position of the X-point(s); Time-dependent; Vector (nmeas)
source	string (9.2.1.1.3)	Description or path to the source signal (diagnostic or genprof, from which to read all info on the signal), e.g. 'magdiag/bpol.probes/measure/value'. String
weight	vecflt_type (9.2.1.2.9)	weight given to the measurement ( $i=0$ ); -1 if exact data; Time-dependent; Vector (nmeas)
sigma	vecflt_type (9.2.1.2.9)	standard deviation of the measurement; Time-dependent; Vector (nmeas)
calculated	vecflt_type (9.2.1.2.9)	Signal as recalculated by the equilibrium code; Time-dependent; Vector (nmeas)
chi2	vecflt_type (9.2.1.2.9)	$\chi^2$ of (calculated-measured); Time-dependent; Vector (nmeas)

Type of: eqconstraint:xpts (441) [itmtypes](#) <sup>175</sup>

<sup>175</sup>[https://www.efda-itm.eu/ITM/html/itmtypes\\_\\_4.08b.html](https://www.efda-itm.eu/ITM/html/itmtypes__4.08b.html)

## 9.2.2 CPO Instances

Generated from the ITM data structure schemas.

### 9.2.2.1 Fortran

#### 9.2.2.1.1 amns

datainfo (336)	amns%datainfo (datainfo) (9.2.1.3.75)
dataprovder (408)	amns%datainfo%dataprovder (string) (9.2.1.1.3)
putdate (408)	amns%datainfo%putdate (string) (9.2.1.1.3)
source (408)	amns%datainfo%source (string) (9.2.1.1.3)
comment (408)	amns%datainfo%comment (string) (9.2.1.1.3)
isref (408)	amns%datainfo%isref (integer) (9.2.1.1.2)
whatref (408)	amns%datainfo%whatref (whatref) (9.2.1.3.305)
user (638)	amns%datainfo%whatref%user (string) (9.2.1.1.3)
machine (638)	amns%datainfo%whatref%machine (string) (9.2.1.1.3)
shot (638)	amns%datainfo%whatref%shot (integer) (9.2.1.1.2)
run (638)	amns%datainfo%whatref%run (integer) (9.2.1.1.2)
occurrence (638)	amns%datainfo%whatref%occurrence (integer) (9.2.1.1.2)
putinfo (408)	amns%datainfo%putinfo (putinfo) (9.2.1.3.187)
putmethod (520)	amns%datainfo%putinfo%putmethod (string) (9.2.1.1.3)
putaccess (520)	amns%datainfo%putinfo%putaccess (string) (9.2.1.1.3)
putlocation (520)	amns%datainfo%putinfo%putlocation (string) (9.2.1.1.3)
rights (520)	amns%datainfo%putinfo%rights (string) (9.2.1.1.3)
version (336)	amns%version (string) (9.2.1.1.3)
source (336)	amns%source (string) (9.2.1.1.3)
zn (336)	amns%zn (integer) (9.2.1.1.2)
zion (336)	amns%zion (vecint_type) (9.2.1.2.10)
amn (336)	amns%amn (float) (9.2.1.1.1)
state_label (336)	amns%state_label (vecstring_type) (9.2.1.2.11)
result_label (336)	amns%result_label (vecstring_type) (9.2.1.2.11)
result_unit (336)	amns%result_unit (vecstring_type) (9.2.1.2.11)
result_trans (336)	amns%result_trans (vecint_type) (9.2.1.2.10)
bundled (336)	amns%bundled (integer) (9.2.1.1.2)
proc_label (336)	amns%proc_label (vecstring_type) (9.2.1.2.11)
tables (336)	amns%tables (tables) (9.2.1.3.278)
id (611)	amns%tables%id (matint_type) (9.2.1.2.8)
table_0d (611)	amns%tables%table_0d (table_0d) (9.2.1.3.267)
table (600)	amns%tables%table_0d%table (matflt_type) (9.2.1.2.7)
table_1d (611)	amns%tables%table_1d (table_1d) (9.2.1.3.268)
table_prop (601)	amns%tables%table_1d%table_prop (table_info1) (9.2.1.3.273)
coord_extrap (606)	amns%tables%table_1d%table_prop%coord_extrap (matint_type) (9.2.1.2.8)
interp_type (606)	amns%tables%table_1d%table_prop%interp_type (integer) (9.2.1.1.2)
coord_label (606)	amns%tables%table_1d%table_prop%coord_label (string) (9.2.1.1.3)
coord_unit (606)	amns%tables%table_1d%table_prop%coord_unit (string) (9.2.1.1.3)
coord_trans (606)	amns%tables%table_1d%table_prop%coord_trans (integer) (9.2.1.1.2)
unif_spacing (606)	amns%tables%table_1d%table_prop%unif_spacing (integer) (9.2.1.1.2)
coord1 (601)	amns%tables%table_1d%coord1 (vecflt_type) (9.2.1.2.9)
table (601)	amns%tables%table_1d%table (array3dflt_type) (9.2.1.2.1)
table_2d (611)	amns%tables%table_2d (table_2d) (9.2.1.3.269)
table_prop (602)	amns%tables%table_2d%table_prop (table_info2) (9.2.1.3.274)
coord_extrap (607)	amns%tables%table_2d%table_prop%coord_extrap (array3dint_type) (9.2.1.2.2)
interp_type (607)	amns%tables%table_2d%table_prop%interp_type (vecint_type) (9.2.1.2.10)
coord_label (607)	amns%tables%table_2d%table_prop%coord_label (vecstring_type) (9.2.1.2.11)
coord_unit (607)	amns%tables%table_2d%table_prop%coord_unit (vecstring_type) (9.2.1.2.11)
coord_trans (607)	amns%tables%table_2d%table_prop%coord_trans (vecint_type) (9.2.1.2.10)
unif_spacing (607)	amns%tables%table_2d%table_prop%unif_spacing (integer) (9.2.1.1.2)
coord1 (602)	amns%tables%table_2d%coord1 (vecflt_type) (9.2.1.2.9)
coord2 (602)	amns%tables%table_2d%coord2 (vecflt_type) (9.2.1.2.9)
table (602)	amns%tables%table_2d%table (array4dflt_type) (9.2.1.2.3)
table_3d (611)	amns%tables%table_3d (table_3d) (9.2.1.3.270)



table_prop (603)	amns%tables%table.3d%table_prop (table_info3) (9.2.1.3.275)
coord_extrap (608)	amns%tables%table.3d%table_prop%coord_extrap (array3dint.type) (9.2.1.2.2)
interp_type (608)	amns%tables%table.3d%table_prop%interp_type (vecint.type) (9.2.1.2.10)
coord_label (608)	amns%tables%table.3d%table_prop%coord_label (vecstring.type) (9.2.1.2.11)
coord_unit (608)	amns%tables%table.3d%table_prop%coord_unit (vecstring.type) (9.2.1.2.11)
coord_trans (608)	amns%tables%table.3d%table_prop%coord_trans (vecint.type) (9.2.1.2.10)
unif_spacing (608)	amns%tables%table.3d%table_prop%unif_spacing (integer) (9.2.1.1.2)
coord1 (603)	amns%tables%table.3d%coord1 (vecflt.type) (9.2.1.2.9)
coord2 (603)	amns%tables%table.3d%coord2 (vecflt.type) (9.2.1.2.9)
coord3 (603)	amns%tables%table.3d%coord3 (vecflt.type) (9.2.1.2.9)
table (603)	amns%tables%table.3d%table (array5dflt.type) (9.2.1.2.4)
table_4d (611)	amns%tables%table.4d (table.4d) (9.2.1.3.271)
table_prop (604)	amns%tables%table.4d%table_prop (table_info4) (9.2.1.3.276)
coord_extrap (609)	amns%tables%table.4d%table_prop%coord_extrap (array3dint.type) (9.2.1.2.2)
interp_type (609)	amns%tables%table.4d%table_prop%interp_type (vecint.type) (9.2.1.2.10)
coord_label (609)	amns%tables%table.4d%table_prop%coord_label (vecstring.type) (9.2.1.2.11)
coord_unit (609)	amns%tables%table.4d%table_prop%coord_unit (vecstring.type) (9.2.1.2.11)
coord_trans (609)	amns%tables%table.4d%table_prop%coord_trans (vecint.type) (9.2.1.2.10)
unif_spacing (609)	amns%tables%table.4d%table_prop%unif_spacing (integer) (9.2.1.1.2)
coord1 (604)	amns%tables%table.4d%coord1 (vecflt.type) (9.2.1.2.9)
coord2 (604)	amns%tables%table.4d%coord2 (vecflt.type) (9.2.1.2.9)
coord3 (604)	amns%tables%table.4d%coord3 (vecflt.type) (9.2.1.2.9)
coord4 (604)	amns%tables%table.4d%coord4 (vecflt.type) (9.2.1.2.9)
table (604)	amns%tables%table.4d%table (array6dflt.type) (9.2.1.2.5)
table_5d (611)	amns%tables%table.5d (table.5d) (9.2.1.3.272)
table_prop (605)	amns%tables%table.5d%table_prop (table_info5) (9.2.1.3.277)
coord_extrap (610)	amns%tables%table.5d%table_prop%coord_extrap (array3dint.type) (9.2.1.2.2)
interp_type (610)	amns%tables%table.5d%table_prop%interp_type (vecint.type) (9.2.1.2.10)
coord_label (610)	amns%tables%table.5d%table_prop%coord_label (vecstring.type) (9.2.1.2.11)
coord_unit (610)	amns%tables%table.5d%table_prop%coord_unit (vecstring.type) (9.2.1.2.11)
coord_trans (610)	amns%tables%table.5d%table_prop%coord_trans (vecint.type) (9.2.1.2.10)
unif_spacing (610)	amns%tables%table.5d%table_prop%unif_spacing (integer) (9.2.1.1.2)
coord1 (605)	amns%tables%table.5d%coord1 (vecflt.type) (9.2.1.2.9)
coord2 (605)	amns%tables%table.5d%coord2 (vecflt.type) (9.2.1.2.9)
coord3 (605)	amns%tables%table.5d%coord3 (vecflt.type) (9.2.1.2.9)
coord4 (605)	amns%tables%table.5d%coord4 (vecflt.type) (9.2.1.2.9)
coord5 (605)	amns%tables%table.5d%coord5 (vecflt.type) (9.2.1.2.9)
table (605)	amns%tables%table.5d%table (array6dflt.type) (9.2.1.2.5)

### 9.2.2.1.2 antennas

datainfo (337)	antennas%datainfo (datainfo) (9.2.1.3.75)
dataprovider (408)	antennas%datainfo%dataprovider (string) (9.2.1.1.3)
putdate (408)	antennas%datainfo%putdate (string) (9.2.1.1.3)
source (408)	antennas%datainfo%source (string) (9.2.1.1.3)
comment (408)	antennas%datainfo%comment (string) (9.2.1.1.3)
isref (408)	antennas%datainfo%isref (integer) (9.2.1.1.2)
whatref (408)	antennas%datainfo%whatref (whatref) (9.2.1.3.305)
user (638)	antennas%datainfo%whatref%user (string) (9.2.1.1.3)
machine (638)	antennas%datainfo%whatref%machine (string) (9.2.1.1.3)
shot (638)	antennas%datainfo%whatref%shot (integer) (9.2.1.1.2)
run (638)	antennas%datainfo%whatref%run (integer) (9.2.1.1.2)
occurrence (638)	antennas%datainfo%whatref%occurrence (integer) (9.2.1.1.2)
putinfo (408)	antennas%datainfo%putinfo (putinfo) (9.2.1.3.187)
putmethod (520)	antennas%datainfo%putinfo%putmethod (string) (9.2.1.1.3)
putaccess (520)	antennas%datainfo%putinfo%putaccess (string) (9.2.1.1.3)
putlocation (520)	antennas%datainfo%putinfo%putlocation (string) (9.2.1.1.3)
rights (520)	antennas%datainfo%putinfo%rights (string) (9.2.1.1.3)
antenna_ec (337)	antennas%antenna_ec (antenna_ec) (9.2.1.3.40)
name (373)	antennas%antenna_ec%name (vecstring.type) (9.2.1.2.11)
frequency (373)	antennas%antenna_ec%frequency (vecflt.type) (9.2.1.2.9)

power (373)	antennas%antenna_ec%power (exp1D) (9.2.1.3.113)
value (446)	antennas%antenna_ec%power%value (vecflt.type) (9.2.1.2.9)
abserror (446)	antennas%antenna_ec%power%abserror (vecflt.type) (9.2.1.2.9)
relerror (446)	antennas%antenna_ec%power%relerror (vecflt.type) (9.2.1.2.9)
mode (373)	antennas%antenna_ec%mode (vecint.type) (9.2.1.2.10)
position (373)	antennas%antenna_ec%position (rzphi1D) (9.2.1.3.218)
r (551)	antennas%antenna_ec%position%r (vecflt.type) (9.2.1.2.9)
z (551)	antennas%antenna_ec%position%z (vecflt.type) (9.2.1.2.9)
phi (551)	antennas%antenna_ec%position%phi (vecflt.type) (9.2.1.2.9)
launchangles (373)	antennas%antenna_ec%launchangles (launchangles) (9.2.1.3.144)
alpha (477)	antennas%antenna_ec%launchangles%alpha (vecflt.type) (9.2.1.2.9)
beta (477)	antennas%antenna_ec%launchangles%beta (vecflt.type) (9.2.1.2.9)
beam (373)	antennas%antenna_ec%beam (rf_beam) (9.2.1.3.212)
spot (545)	antennas%antenna_ec%beam%spot (spot) (9.2.1.3.261)
waist (594)	antennas%antenna_ec%beam%spot%waist (matflt.type) (9.2.1.2.7)
angle (594)	antennas%antenna_ec%beam%spot%angle (vecflt.type) (9.2.1.2.9)
phaseellipse (545)	antennas%antenna_ec%beam%phaseellipse (phaseellipse) (9.2.1.3.176)
invcurvrad (509)	antennas%antenna_ec%beam%phaseellipse%invcurvrad (matflt.type) (9.2.1.2.7)
angle (509)	antennas%antenna_ec%beam%phaseellipse%angle (vecflt.type) (9.2.1.2.9)
antenna_ic (337)	antennas%antenna_ic (antenna_ic) (9.2.1.3.41)
name (374)	antennas%antenna_ic%name (vecstring.type) (9.2.1.2.11)
frequency (374)	antennas%antenna_ic%frequency (exp1D) (9.2.1.3.113)
value (446)	antennas%antenna_ic%frequency%value (vecflt.type) (9.2.1.2.9)
abserror (446)	antennas%antenna_ic%frequency%abserror (vecflt.type) (9.2.1.2.9)
relerror (446)	antennas%antenna_ic%frequency%relerror (vecflt.type) (9.2.1.2.9)
power (374)	antennas%antenna_ic%power (exp1D) (9.2.1.3.113)
value (446)	antennas%antenna_ic%power%value (vecflt.type) (9.2.1.2.9)
abserror (446)	antennas%antenna_ic%power%abserror (vecflt.type) (9.2.1.2.9)
relerror (446)	antennas%antenna_ic%power%relerror (vecflt.type) (9.2.1.2.9)
setup (374)	antennas%antenna_ic%setup (antennaic_setup) (9.2.1.3.43)
straps (376)	antennas%antenna_ic%setup%straps (straps) (9.2.1.3.266)
nstraps (599)	antennas%antenna_ic%setup%straps%nstraps (vecint.type) (9.2.1.2.10)
phase (599)	antennas%antenna_ic%setup%straps%phase (exp2D) (9.2.1.3.114)
value (447)	antennas%antenna_ic%setup%straps%phase%value (matflt.type) (9.2.1.2.7)
abserror (447)	antennas%antenna_ic%setup%straps%phase%abserror (matflt.type) (9.2.1.2.7)
relerror (447)	antennas%antenna_ic%setup%straps%phase%relerror (matflt.type) (9.2.1.2.7)
phi_centre (599)	antennas%antenna_ic%setup%straps%phi_centre (matflt.type) (9.2.1.2.7)
width (599)	antennas%antenna_ic%setup%straps%width (matflt.type) (9.2.1.2.7)
dist2wall (599)	antennas%antenna_ic%setup%straps%dist2wall (matflt.type) (9.2.1.2.7)
ncoord_strap (599)	antennas%antenna_ic%setup%straps%ncoord_strap (matint.type) (9.2.1.2.8)
coord_strap (599)	antennas%antenna_ic%setup%straps%coord_strap (rz3D) (9.2.1.3.217)
r (550)	antennas%antenna_ic%setup%straps%coord_strap%r (array3dflt.type) (9.2.1.2.1)
z (550)	antennas%antenna_ic%setup%straps%coord_strap%z (array3dflt.type) (9.2.1.2.1)
antenna_lh (337)	antennas%antenna_lh (antenna_lh) (9.2.1.3.42)
name (375)	antennas%antenna_lh%name (vecstring.type) (9.2.1.2.11)
frequency (375)	antennas%antenna_lh%frequency (vecflt.type) (9.2.1.2.9)
power (375)	antennas%antenna_lh%power (exp1D) (9.2.1.3.113)
value (446)	antennas%antenna_lh%power%value (vecflt.type) (9.2.1.2.9)
abserror (446)	antennas%antenna_lh%power%abserror (vecflt.type) (9.2.1.2.9)
relerror (446)	antennas%antenna_lh%power%relerror (vecflt.type) (9.2.1.2.9)
n_par (375)	antennas%antenna_lh%n_par (vecflt.type) (9.2.1.2.9)
position (375)	antennas%antenna_lh%position (rzphi1Dexp) (9.2.1.3.219)
r (552)	antennas%antenna_lh%position%r (exp1D) (9.2.1.3.113)
value (446)	antennas%antenna_lh%position%r%value (vecflt.type) (9.2.1.2.9)
abserror (446)	antennas%antenna_lh%position%r%abserror (vecflt.type) (9.2.1.2.9)
relerror (446)	antennas%antenna_lh%position%r%relerror (vecflt.type) (9.2.1.2.9)
z (552)	antennas%antenna_lh%position%z (exp1D) (9.2.1.3.113)
value (446)	antennas%antenna_lh%position%z%value (vecflt.type) (9.2.1.2.9)
abserror (446)	antennas%antenna_lh%position%z%abserror (vecflt.type) (9.2.1.2.9)
relerror (446)	antennas%antenna_lh%position%z%relerror (vecflt.type) (9.2.1.2.9)
phi (552)	antennas%antenna_lh%position%phi (exp1D) (9.2.1.3.113)

value (446)	antennas%antenna.lh%position%phi%value (vecflt.type) (9.2.1.2.9)
abserror (446)	antennas%antenna.lh%position%phi%abserror (vecflt.type) (9.2.1.2.9)
releror (446)	antennas%antenna.lh%position%phi%releror (vecflt.type) (9.2.1.2.9)
setup (375)	antennas%antenna.lh%setup (antennalh_setup) (9.2.1.3.44)
modules (377)	antennas%antenna.lh%setup%modules (modules) (9.2.1.3.157)
nma_theta (490)	antennas%antenna.lh%setup%modules%nma_theta (vecint.type) (9.2.1.2.10)
nma_phi (490)	antennas%antenna.lh%setup%modules%nma_phi (vecint.type) (9.2.1.2.10)
ima_theta (490)	antennas%antenna.lh%setup%modules%ima_theta (matint.type) (9.2.1.2.8)
ima_phi (490)	antennas%antenna.lh%setup%modules%ima_phi (matint.type) (9.2.1.2.8)
sm_theta (490)	antennas%antenna.lh%setup%modules%sm_theta (vecflt.type) (9.2.1.2.9)
amplitude (490)	antennas%antenna.lh%setup%modules%amplitude (exp2D) (9.2.1.3.114)
value (447)	antennas%antenna.lh%setup%modules%amplitude%value (matflt.type) (9.2.1.2.7)
abserror (447)	antennas%antenna.lh%setup%modules%amplitude%abserror (matflt.type) (9.2.1.2.7)
releror (447)	antennas%antenna.lh%setup%modules%amplitude%releror (matflt.type) (9.2.1.2.7)
phase (490)	antennas%antenna.lh%setup%modules%phase (exp2D) (9.2.1.3.114)
value (447)	antennas%antenna.lh%setup%modules%phase%value (matflt.type) (9.2.1.2.7)
abserror (447)	antennas%antenna.lh%setup%modules%phase%abserror (matflt.type) (9.2.1.2.7)
releror (447)	antennas%antenna.lh%setup%modules%phase%releror (matflt.type) (9.2.1.2.7)
waveguides (490)	antennas%antenna.lh%setup%modules%waveguides (waveguides) (9.2.1.3.297)
nwm_theta (630)	antennas%antenna.lh%setup%modules%waveguides%nwm_theta (vecint.type) (9.2.1.2.10)
nwm_phi (630)	antennas%antenna.lh%setup%modules%waveguides%nwm_phi (vecint.type) (9.2.1.2.10)
mask (630)	antennas%antenna.lh%setup%modules%waveguides%mask (matint.type) (9.2.1.2.8)
npwbm_phi (630)	antennas%antenna.lh%setup%modules%waveguides%npwbm_phi (vecint.type) (9.2.1.2.10)
npwe_phi (630)	antennas%antenna.lh%setup%modules%waveguides%npwe_phi (vecint.type) (9.2.1.2.10)
sw_theta (630)	antennas%antenna.lh%setup%modules%waveguides%sw_theta (vecflt.type) (9.2.1.2.9)
hw_theta (630)	antennas%antenna.lh%setup%modules%waveguides%hw_theta (vecflt.type) (9.2.1.2.9)
bwa (630)	antennas%antenna.lh%setup%modules%waveguides%bwa (vecflt.type) (9.2.1.2.9)
biwp (630)	antennas%antenna.lh%setup%modules%waveguides%biwp (vecflt.type) (9.2.1.2.9)
bewp (630)	antennas%antenna.lh%setup%modules%waveguides%bewp (vecflt.type) (9.2.1.2.9)
e_phi (630)	antennas%antenna.lh%setup%modules%waveguides%e_phi (matflt.type) (9.2.1.2.7)
scl (630)	antennas%antenna.lh%setup%modules%waveguides%scl (matflt.type) (9.2.1.2.7)
plasmaedge (375)	antennas%antenna.lh%plasmaedge (plasmaedge) (9.2.1.3.177)
npoints (510)	antennas%antenna.lh%plasmaedge%npoints (vecint.type) (9.2.1.2.10)
distance (510)	antennas%antenna.lh%plasmaedge%distance (matflt.type) (9.2.1.2.7)
density (510)	antennas%antenna.lh%plasmaedge%density (matflt.type) (9.2.1.2.7)
beam (375)	antennas%antenna.lh%beam (rf_beam) (9.2.1.3.212)
spot (545)	antennas%antenna.lh%beam%spot (spot) (9.2.1.3.261)
waist (594)	antennas%antenna.lh%beam%spot%waist (matflt.type) (9.2.1.2.7)
angle (594)	antennas%antenna.lh%beam%spot%angle (vecflt.type) (9.2.1.2.9)
phaseellipse (545)	antennas%antenna.lh%beam%phaseellipse (phaseellipse) (9.2.1.3.176)
invcurvrad (509)	antennas%antenna.lh%beam%phaseellipse%invcurvrad (matflt.type) (9.2.1.2.7)
angle (509)	antennas%antenna.lh%beam%phaseellipse%angle (vecflt.type) (9.2.1.2.9)
codeparam (337)	antennas%codeparam (codeparam) (9.2.1.3.56)
codename (389)	antennas%codeparam%codename (string) (9.2.1.1.3)
codeversion (389)	antennas%codeparam%codeversion (string) (9.2.1.1.3)
parameters (389)	antennas%codeparam%parameters (string) (9.2.1.1.3)
output_diag (389)	antennas%codeparam%output_diag (string) (9.2.1.1.3)
output_flag (389)	antennas%codeparam%output_flag (integer) (9.2.1.1.2)
time (337)	antennas%time (float) (9.2.1.1.1)

### 9.2.2.1.3 coredelta

datainfo (338)	coredelta%datainfo (datainfo) (9.2.1.3.75)
dataprovider (408)	coredelta%datainfo%dataprovider (string) (9.2.1.1.3)
putdate (408)	coredelta%datainfo%putdate (string) (9.2.1.1.3)
source (408)	coredelta%datainfo%source (string) (9.2.1.1.3)
comment (408)	coredelta%datainfo%comment (string) (9.2.1.1.3)
isref (408)	coredelta%datainfo%isref (integer) (9.2.1.1.2)
whatref (408)	coredelta%datainfo%whatref (whatref) (9.2.1.3.305)
user (638)	coredelta%datainfo%whatref%user (string) (9.2.1.1.3)
machine (638)	coredelta%datainfo%whatref%machine (string) (9.2.1.1.3)

shot (638)	coredelta%datainfo%whatref%shot (integer) (9.2.1.1.2)
run (638)	coredelta%datainfo%whatref%run (integer) (9.2.1.1.2)
occurrence (638)	coredelta%datainfo%whatref%occurrence (integer) (9.2.1.1.2)
putinfo (408)	coredelta%datainfo%putinfo (putinfo) (9.2.1.3.187)
putmethod (520)	coredelta%datainfo%putinfo%putmethod (string) (9.2.1.1.3)
putaccess (520)	coredelta%datainfo%putinfo%putaccess (string) (9.2.1.1.3)
putlocation (520)	coredelta%datainfo%putinfo%putlocation (string) (9.2.1.1.3)
rights (520)	coredelta%datainfo%putinfo%rights (string) (9.2.1.1.3)
composition (338)	coredelta%composition (composition) (9.2.1.3.59)
amn (392)	coredelta%composition%amn (vecflt_type) (9.2.1.2.9)
zn (392)	coredelta%composition%zn (vecflt_type) (9.2.1.2.9)
zion (392)	coredelta%composition%zion (vecflt_type) (9.2.1.2.9)
imp_flag (392)	coredelta%composition%imp_flag (vecint_type) (9.2.1.2.10)
rho_tor (338)	coredelta%rho_tor (vecflt_type) (9.2.1.2.9)
rho_tor_norm (338)	coredelta%rho_tor_norm (vecflt_type) (9.2.1.2.9)
delta_psi (338)	coredelta%delta_psi (vecflt_type) (9.2.1.2.9)
delta_te (338)	coredelta%delta_te (vecflt_type) (9.2.1.2.9)
delta_ti (338)	coredelta%delta_ti (matflt_type) (9.2.1.2.7)
delta_tz (338)	coredelta%delta_tz (array3dflt_type) (9.2.1.2.1)
delta_ne (338)	coredelta%delta_ne (vecflt_type) (9.2.1.2.9)
delta_ni (338)	coredelta%delta_ni (matflt_type) (9.2.1.2.7)
delta_nz (338)	coredelta%delta_nz (array3dflt_type) (9.2.1.2.1)
delta_vtor (338)	coredelta%delta_vtor (matflt_type) (9.2.1.2.7)
codeparam (338)	coredelta%codeparam (codeparam) (9.2.1.3.56)
codename (389)	coredelta%codeparam%codename (string) (9.2.1.1.3)
codeversion (389)	coredelta%codeparam%codeversion (string) (9.2.1.1.3)
parameters (389)	coredelta%codeparam%parameters (string) (9.2.1.1.3)
output_diag (389)	coredelta%codeparam%output_diag (string) (9.2.1.1.3)
output_flag (389)	coredelta%codeparam%output_flag (integer) (9.2.1.1.2)
time (338)	coredelta%time (float) (9.2.1.1.1)

#### 9.2.2.1.4 coreimpur

datainfo (339)	coreimpur%datainfo (datainfo) (9.2.1.3.75)
dataprovider (408)	coreimpur%datainfo%dataprovider (string) (9.2.1.1.3)
putdate (408)	coreimpur%datainfo%putdate (string) (9.2.1.1.3)
source (408)	coreimpur%datainfo%source (string) (9.2.1.1.3)
comment (408)	coreimpur%datainfo%comment (string) (9.2.1.1.3)
isref (408)	coreimpur%datainfo%isref (integer) (9.2.1.1.2)
whatref (408)	coreimpur%datainfo%whatref (whatref) (9.2.1.3.305)
user (638)	coreimpur%datainfo%whatref%user (string) (9.2.1.1.3)
machine (638)	coreimpur%datainfo%whatref%machine (string) (9.2.1.1.3)
shot (638)	coreimpur%datainfo%whatref%shot (integer) (9.2.1.1.2)
run (638)	coreimpur%datainfo%whatref%run (integer) (9.2.1.1.2)
occurrence (638)	coreimpur%datainfo%whatref%occurrence (integer) (9.2.1.1.2)
putinfo (408)	coreimpur%datainfo%putinfo (putinfo) (9.2.1.3.187)
putmethod (520)	coreimpur%datainfo%putinfo%putmethod (string) (9.2.1.1.3)
putaccess (520)	coreimpur%datainfo%putinfo%putaccess (string) (9.2.1.1.3)
putlocation (520)	coreimpur%datainfo%putinfo%putlocation (string) (9.2.1.1.3)
rights (520)	coreimpur%datainfo%putinfo%rights (string) (9.2.1.1.3)
rho_tor_norm (339)	coreimpur%rho_tor_norm (vecflt_type) (9.2.1.2.9)
rho_tor (339)	coreimpur%rho_tor (vecflt_type) (9.2.1.2.9)
source (339)	coreimpur%source (vecstring_type) (9.2.1.2.11)
flag (339)	coreimpur%flag (vecint_type) (9.2.1.2.10)
desc_impur (339)	coreimpur%desc_impur (desc_impur) (9.2.1.3.76)
amn (409)	coreimpur%desc_impur%amn (vecflt_type) (9.2.1.2.9)
zn (409)	coreimpur%desc_impur%zn (vecint_type) (9.2.1.2.10)
i_ion (409)	coreimpur%desc_impur%i_ion (vecint_type) (9.2.1.2.10)
nzimp (409)	coreimpur%desc_impur%nzimp (vecint_type) (9.2.1.2.10)
zmin (409)	coreimpur%desc_impur%zmin (matint_type) (9.2.1.2.8)
zmax (409)	coreimpur%desc_impur%zmax (matint_type) (9.2.1.2.8)

z (339)	coreimpur%z (array3dflt_type) (9.2.1.2.1)
zsq (339)	coreimpur%zsq (array3dflt_type) (9.2.1.2.1)
nz (339)	coreimpur%nz (array3dflt_type) (9.2.1.2.1)
source_term (339)	coreimpur%source_term (sourceimp) (9.2.1.3.257)
value (590)	coreimpur%source_term%value (array3dflt_type) (9.2.1.2.1)
integral (590)	coreimpur%source_term%integral (array3dflt_type) (9.2.1.2.1)
source (590)	coreimpur%source_term%source (vecstring_type) (9.2.1.2.11)
boundary (339)	coreimpur%boundary (boundaryimp) (9.2.1.3.53)
value (386)	coreimpur%boundary%value (array3dflt_type) (9.2.1.2.1)
source (386)	coreimpur%boundary%source (vecstring_type) (9.2.1.2.11)
type (386)	coreimpur%boundary%type (matint_type) (9.2.1.2.8)
rho (386)	coreimpur%boundary%rho (matflt_type) (9.2.1.2.7)
codeparam (386)	coreimpur%boundary%codeparam (codeparam) (9.2.1.3.56)
codename (389)	coreimpur%boundary%codeparam%codename (string) (9.2.1.1.3)
codeversion (389)	coreimpur%boundary%codeparam%codeversion (string) (9.2.1.1.3)
parameters (389)	coreimpur%boundary%codeparam%parameters (string) (9.2.1.1.3)
output_diag (389)	coreimpur%boundary%codeparam%output_diag (string) (9.2.1.1.3)
output_flag (389)	coreimpur%boundary%codeparam%output_flag (integer) (9.2.1.1.2)
transp_coef (339)	coreimpur%transp_coef (coretransimp) (9.2.1.3.71)
diff (404)	coreimpur%transp_coef%diff (array3dflt_type) (9.2.1.2.1)
vconv (404)	coreimpur%transp_coef%vconv (array3dflt_type) (9.2.1.2.1)
source (404)	coreimpur%transp_coef%source (vecstring_type) (9.2.1.2.11)
flux (339)	coreimpur%flux (fluximp) (9.2.1.3.119)
flux_dv (452)	coreimpur%flux%flux_dv (array3dflt_type) (9.2.1.2.1)
flux_interp (452)	coreimpur%flux%flux_interp (array3dflt_type) (9.2.1.2.1)
time_deriv (339)	coreimpur%time_deriv (array3dflt_type) (9.2.1.2.1)
atomic_data (339)	coreimpur%atomic_data (vecstring_type) (9.2.1.2.11)
time (339)	coreimpur%time (float) (9.2.1.1.1)
codeparam (339)	coreimpur%codeparam (codeparam) (9.2.1.3.56)
codename (389)	coreimpur%codeparam%codename (string) (9.2.1.1.3)
codeversion (389)	coreimpur%codeparam%codeversion (string) (9.2.1.1.3)
parameters (389)	coreimpur%codeparam%parameters (string) (9.2.1.1.3)
output_diag (389)	coreimpur%codeparam%output_diag (string) (9.2.1.1.3)
output_flag (389)	coreimpur%codeparam%output_flag (integer) (9.2.1.1.2)

### 9.2.2.1.5 coreneutrals

datainfo (340)	coreneutrals%datainfo (datainfo) (9.2.1.3.75)
dataprovider (408)	coreneutrals%datainfo%dataprovider (string) (9.2.1.1.3)
putdate (408)	coreneutrals%datainfo%putdate (string) (9.2.1.1.3)
source (408)	coreneutrals%datainfo%source (string) (9.2.1.1.3)
comment (408)	coreneutrals%datainfo%comment (string) (9.2.1.1.3)
isref (408)	coreneutrals%datainfo%isref (integer) (9.2.1.1.2)
whatref (408)	coreneutrals%datainfo%whatref (whatref) (9.2.1.3.305)
user (638)	coreneutrals%datainfo%whatref%user (string) (9.2.1.1.3)
machine (638)	coreneutrals%datainfo%whatref%machine (string) (9.2.1.1.3)
shot (638)	coreneutrals%datainfo%whatref%shot (integer) (9.2.1.1.2)
run (638)	coreneutrals%datainfo%whatref%run (integer) (9.2.1.1.2)
occurrence (638)	coreneutrals%datainfo%whatref%occurrence (integer) (9.2.1.1.2)
putinfo (408)	coreneutrals%datainfo%putinfo (putinfo) (9.2.1.3.187)
putmethod (520)	coreneutrals%datainfo%putinfo%putmethod (string) (9.2.1.1.3)
putaccess (520)	coreneutrals%datainfo%putinfo%putaccess (string) (9.2.1.1.3)
putlocation (520)	coreneutrals%datainfo%putinfo%putlocation (string) (9.2.1.1.3)
rights (520)	coreneutrals%datainfo%putinfo%rights (string) (9.2.1.1.3)
rho_tor (340)	coreneutrals%rho_tor (vecflt_type) (9.2.1.2.9)
rho_tor_norm (340)	coreneutrals%rho_tor_norm (vecflt_type) (9.2.1.2.9)
composition (340)	coreneutrals%composition (composition_neutrals) (9.2.1.3.60)
atomlist (393)	coreneutrals%composition%atomlist (atomlist) (9.2.1.3.45)
amn (378)	coreneutrals%composition%atomlist%amn (vecflt_type) (9.2.1.2.9)
zn (378)	coreneutrals%composition%atomlist%zn (vecflt_type) (9.2.1.2.9)
neutrallist (393)	coreneutrals%composition%neutrallist (neutrallist) (9.2.1.3.159)

ncomp (492)	coreneutrals%composition%neutrallist%ncomp (vecint.type) (9.2.1.2.10)
tatm (492)	coreneutrals%composition%neutrallist%tatm (matint.type) (9.2.1.2.8)
multatm (492)	coreneutrals%composition%neutrallist%multatm (matint.type) (9.2.1.2.8)
typelist (393)	coreneutrals%composition%typelist (typelist) (9.2.1.3.296)
ntype (629)	coreneutrals%composition%typelist%ntype (vecint.type) (9.2.1.2.10)
type (629)	coreneutrals%composition%typelist%type (matint.type) (9.2.1.2.8)
profiles (340)	coreneutrals%profiles (profiles_neutrals) (9.2.1.3.184)
n0 (517)	coreneutrals%profiles%n0 (corefieldneutral) (9.2.1.3.64)
value (397)	coreneutrals%profiles%n0%value (array3dflt.type) (9.2.1.2.1)
flux (397)	coreneutrals%profiles%n0%flux (array3dflt.type) (9.2.1.2.1)
boundary (397)	coreneutrals%profiles%n0%boundary (boundary_neutrals) (9.2.1.3.51)
value (384)	coreneutrals%profiles%n0%boundary%value (array3dflt.type) (9.2.1.2.1)
type (384)	coreneutrals%profiles%n0%boundary%type (matint.type) (9.2.1.2.8)
rho.tor (384)	coreneutrals%profiles%n0%boundary%rho.tor (matint.type) (9.2.1.2.8)
t0 (517)	coreneutrals%profiles%t0 (corefieldneutrale) (9.2.1.3.65)
value (398)	coreneutrals%profiles%t0%value (array3dflt.type) (9.2.1.2.1)
flux (398)	coreneutrals%profiles%t0%flux (array3dflt.type) (9.2.1.2.1)
boundary (398)	coreneutrals%profiles%t0%boundary (boundary_neutrals) (9.2.1.3.51)
value (384)	coreneutrals%profiles%t0%boundary%value (array3dflt.type) (9.2.1.2.1)
type (384)	coreneutrals%profiles%t0%boundary%type (matint.type) (9.2.1.2.8)
rho.tor (384)	coreneutrals%profiles%t0%boundary%rho.tor (matint.type) (9.2.1.2.8)
v0 (517)	coreneutrals%profiles%v0 (corefieldneutralv0) (9.2.1.3.67)
toroidal (400)	coreneutrals%profiles%v0%toroidal (corefieldneutralv) (9.2.1.3.66)
value (399)	coreneutrals%profiles%v0%toroidal%value (array3dflt.type) (9.2.1.2.1)
boundary (399)	coreneutrals%profiles%v0%toroidal%boundary (boundary_neutrals) (9.2.1.3.51)
value (384)	coreneutrals%profiles%v0%toroidal%boundary%value (array3dflt.type) (9.2.1.2.1)
type (384)	coreneutrals%profiles%v0%toroidal%boundary%type (matint.type) (9.2.1.2.8)
rho.tor (384)	coreneutrals%profiles%v0%toroidal%boundary%rho.tor (matint.type) (9.2.1.2.8)
poloidal (400)	coreneutrals%profiles%v0%poloidal (corefieldneutralv) (9.2.1.3.66)
value (399)	coreneutrals%profiles%v0%poloidal%value (array3dflt.type) (9.2.1.2.1)
boundary (399)	coreneutrals%profiles%v0%poloidal%boundary (boundary_neutrals) (9.2.1.3.51)
value (384)	coreneutrals%profiles%v0%poloidal%boundary%value (array3dflt.type) (9.2.1.2.1)
type (384)	coreneutrals%profiles%v0%poloidal%boundary%type (matint.type) (9.2.1.2.8)
rho.tor (384)	coreneutrals%profiles%v0%poloidal%boundary%rho.tor (matint.type) (9.2.1.2.8)
radial (400)	coreneutrals%profiles%v0%radial (corefieldneutralv) (9.2.1.3.66)
value (399)	coreneutrals%profiles%v0%radial%value (array3dflt.type) (9.2.1.2.1)
boundary (399)	coreneutrals%profiles%v0%radial%boundary (boundary_neutrals) (9.2.1.3.51)
value (384)	coreneutrals%profiles%v0%radial%boundary%value (array3dflt.type) (9.2.1.2.1)
type (384)	coreneutrals%profiles%v0%radial%boundary%type (matint.type) (9.2.1.2.8)
rho.tor (384)	coreneutrals%profiles%v0%radial%boundary%rho.tor (matint.type) (9.2.1.2.8)
prad0 (517)	coreneutrals%profiles%prad0 (matflt.type) (9.2.1.2.7)
coefficients (340)	coreneutrals%coefficients (coefficients_neutrals) (9.2.1.3.57)
recycling (390)	coreneutrals%coefficients%recycling (recycling_neutrals) (9.2.1.3.189)
particles (522)	coreneutrals%coefficients%recycling%particles (matflt.type) (9.2.1.2.7)
energy (522)	coreneutrals%coefficients%recycling%energy (matflt.type) (9.2.1.2.7)
sputtering (390)	coreneutrals%coefficients%sputtering (sputtering_neutrals) (9.2.1.3.262)
physical (595)	coreneutrals%coefficients%sputtering%physical (matflt.type) (9.2.1.2.7)
chemical (595)	coreneutrals%coefficients%sputtering%chemical (matflt.type) (9.2.1.2.7)
codeparam (340)	coreneutrals%codeparam (codeparam) (9.2.1.3.56)
codename (389)	coreneutrals%codeparam%codename (string) (9.2.1.1.3)
codeversion (389)	coreneutrals%codeparam%codeversion (string) (9.2.1.1.3)
parameters (389)	coreneutrals%codeparam%parameters (string) (9.2.1.1.3)
output_diag (389)	coreneutrals%codeparam%output_diag (string) (9.2.1.1.3)
output_flag (389)	coreneutrals%codeparam%output_flag (integer) (9.2.1.1.2)
time (340)	coreneutrals%time (float) (9.2.1.1.1)

### 9.2.2.1.6 coreprof

datainfo (341)	coreprof%datainfo (datainfo) (9.2.1.3.75)
dataprovder (408)	coreprof%datainfo%dataprovder (string) (9.2.1.1.3)
putdate (408)	coreprof%datainfo%putdate (string) (9.2.1.1.3)



source (408)	coreprof%datainfo%source (string) (9.2.1.1.3)
comment (408)	coreprof%datainfo%comment (string) (9.2.1.1.3)
isref (408)	coreprof%datainfo%isref (integer) (9.2.1.1.2)
whatref (408)	coreprof%datainfo%whatref (whatref) (9.2.1.3.305)
user (638)	coreprof%datainfo%whatref%user (string) (9.2.1.1.3)
machine (638)	coreprof%datainfo%whatref%machine (string) (9.2.1.1.3)
shot (638)	coreprof%datainfo%whatref%shot (integer) (9.2.1.1.2)
run (638)	coreprof%datainfo%whatref%run (integer) (9.2.1.1.2)
occurrence (638)	coreprof%datainfo%whatref%occurrence (integer) (9.2.1.1.2)
putinfo (408)	coreprof%datainfo%putinfo (putinfo) (9.2.1.3.187)
putmethod (520)	coreprof%datainfo%putinfo%putmethod (string) (9.2.1.1.3)
putaccess (520)	coreprof%datainfo%putinfo%putaccess (string) (9.2.1.1.3)
putlocation (520)	coreprof%datainfo%putinfo%putlocation (string) (9.2.1.1.3)
rights (520)	coreprof%datainfo%putinfo%rights (string) (9.2.1.1.3)
rho_tor_norm (341)	coreprof%rho_tor_norm (vecflt.type) (9.2.1.2.9)
rho_tor (341)	coreprof%rho_tor (vecflt.type) (9.2.1.2.9)
drho_dt (341)	coreprof%drho_dt (vecflt.type) (9.2.1.2.9)
toroid_field (341)	coreprof%toroid_field (toroid_field) (9.2.1.3.280)
b0 (613)	coreprof%toroid_field%b0 (float) (9.2.1.1.1)
b0prime (613)	coreprof%toroid_field%b0prime (float) (9.2.1.1.1)
r0 (613)	coreprof%toroid_field%r0 (float) (9.2.1.1.1)
time (613)	coreprof%toroid_field%time (float) (9.2.1.1.1)
composition (341)	coreprof%composition (composition) (9.2.1.3.59)
amn (392)	coreprof%composition%amn (vecflt.type) (9.2.1.2.9)
zn (392)	coreprof%composition%zn (vecflt.type) (9.2.1.2.9)
zion (392)	coreprof%composition%zion (vecflt.type) (9.2.1.2.9)
imp_flag (392)	coreprof%composition%imp_flag (vecint.type) (9.2.1.2.10)
psi (341)	coreprof%psi (psi) (9.2.1.3.186)
value (519)	coreprof%psi%value (vecflt.type) (9.2.1.2.9)
derivative (519)	coreprof%psi%derivative (vecflt.type) (9.2.1.2.9)
source (519)	coreprof%psi%source (string) (9.2.1.1.3)
flag (519)	coreprof%psi%flag (integer) (9.2.1.1.2)
boundary (519)	coreprof%psi%boundary (boundary) (9.2.1.3.50)
value (383)	coreprof%psi%boundary%value (vecflt.type) (9.2.1.2.9)
source (383)	coreprof%psi%boundary%source (string) (9.2.1.1.3)
type (383)	coreprof%psi%boundary%type (integer) (9.2.1.1.2)
rho (383)	coreprof%psi%boundary%rho (float) (9.2.1.1.1)
codeparam (383)	coreprof%psi%boundary%codeparam (codeparam) (9.2.1.3.56)
codename (389)	coreprof%psi%boundary%codeparam%codename (string) (9.2.1.1.3)
codeversion (389)	coreprof%psi%boundary%codeparam%codeversion (string) (9.2.1.1.3)
parameters (389)	coreprof%psi%boundary%codeparam%parameters (string) (9.2.1.1.3)
output_diag (389)	coreprof%psi%boundary%codeparam%output_diag (string) (9.2.1.1.3)
output_flag (389)	coreprof%psi%boundary%codeparam%output_flag (integer) (9.2.1.1.2)
jni (519)	coreprof%psi%jni (jni) (9.2.1.3.143)
value (476)	coreprof%psi%jni%value (vecflt.type) (9.2.1.2.9)
integral (476)	coreprof%psi%jni%integral (vecflt.type) (9.2.1.2.9)
source (476)	coreprof%psi%jni%source (string) (9.2.1.1.3)
sigma_par (519)	coreprof%psi%sigma_par (coreprofile) (9.2.1.3.68)
value (401)	coreprof%psi%sigma_par%value (vecflt.type) (9.2.1.2.9)
source (401)	coreprof%psi%sigma_par%source (string) (9.2.1.1.3)
codeparam (519)	coreprof%psi%codeparam (codeparam) (9.2.1.3.56)
codename (389)	coreprof%psi%codeparam%codename (string) (9.2.1.1.3)
codeversion (389)	coreprof%psi%codeparam%codeversion (string) (9.2.1.1.3)
parameters (389)	coreprof%psi%codeparam%parameters (string) (9.2.1.1.3)
output_diag (389)	coreprof%psi%codeparam%output_diag (string) (9.2.1.1.3)
output_flag (389)	coreprof%psi%codeparam%output_flag (integer) (9.2.1.1.2)
te (341)	coreprof%te (corefield) (9.2.1.3.62)
value (395)	coreprof%te%value (vecflt.type) (9.2.1.2.9)
derivative (395)	coreprof%te%derivative (vecflt.type) (9.2.1.2.9)
source (395)	coreprof%te%source (string) (9.2.1.1.3)
flag (395)	coreprof%te%flag (integer) (9.2.1.1.2)

boundary (395)  
   value (385)  
   source (385)  
   type (385)  
   rho\_tor (385)  
 source\_term (395)  
   value (589)  
   integral (589)  
   source (589)  
 transp\_coef (395)  
   diff (403)  
   vconv (403)  
   source (403)  
 flux (395)  
   flux\_dv (451)  
   flux\_interp (451)  
 time\_deriv (395)  
 codeparam (395)  
   codename (389)  
   codeversion (389)  
   parameters (389)  
   output\_diag (389)  
   output\_flag (389)  
 ti (341)  
   value (396)  
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   codeparam (396)  
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     codeversion (389)  
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 ne (341)  
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   derivative (395)  
   source (395)  
   flag (395)  
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     type (385)  
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   coreprof%te%source\_term (sourceel) (9.2.1.3.256)  
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   coreprof%te%transp\_coef (coretransel) (9.2.1.3.70)  
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   coreprof%te%flux%flux\_interp (vecflt\_type) (9.2.1.2.9)  
   coreprof%te%time\_deriv (vecflt\_type) (9.2.1.2.9)  
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   coreprof%ti%derivative (matflt\_type) (9.2.1.2.7)  
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   coreprof%ne (corefield) (9.2.1.3.62)  
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   coreprof%ne%boundary%rho\_tor (float) (9.2.1.1.1)



source\_term (395)  
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   source (589)

transp\_coef (395)  
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   source (403)

flux (395)  
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   flux\_interp (451)

time\_deriv (395)

codeparam (395)  
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   output\_flag (389)

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   boundary (396)  
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     type (387)  
     rho\_tor (387)

source\_term (396)  
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   integral (591)  
   source (591)

transp\_coef (396)  
   diff (405)  
   vconv (405)  
   source (405)

flux (396)  
   flux\_dv (453)  
   flux\_interp (453)

time\_deriv (396)

codeparam (396)  
   codename (389)  
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   output\_flag (389)

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 coreprof%ne%transp\_coef%vconv (vecflt.type) (9.2.1.2.9)  
 coreprof%ne%transp\_coef%source (string) (9.2.1.1.3)  
 coreprof%ne%flux (fluxel) (9.2.1.3.118)  
 coreprof%ne%flux%flux\_dv (vecflt.type) (9.2.1.2.9)  
 coreprof%ne%flux%flux\_interp (vecflt.type) (9.2.1.2.9)  
 coreprof%ne%time\_deriv (vecflt.type) (9.2.1.2.9)  
 coreprof%ne%codeparam (codeparam) (9.2.1.3.56)  
 coreprof%ne%codeparam%codename (string) (9.2.1.1.3)  
 coreprof%ne%codeparam%codeversion (string) (9.2.1.1.3)  
 coreprof%ne%codeparam%parameters (string) (9.2.1.1.3)  
 coreprof%ne%codeparam%output\_diag (string) (9.2.1.1.3)  
 coreprof%ne%codeparam%output\_flag (integer) (9.2.1.1.2)  
 coreprof%ni (corefieldion) (9.2.1.3.63)  
 coreprof%ni%value (matflt.type) (9.2.1.2.7)  
 coreprof%ni%derivative (matflt.type) (9.2.1.2.7)  
 coreprof%ni%source (vecstring.type) (9.2.1.2.11)  
 coreprof%ni%flag (vecint.type) (9.2.1.2.10)  
 coreprof%ni%boundary (boundaryion) (9.2.1.3.54)  
 coreprof%ni%boundary%value (matflt.type) (9.2.1.2.7)  
 coreprof%ni%boundary%source (vecstring.type) (9.2.1.2.11)  
 coreprof%ni%boundary%type (vecint.type) (9.2.1.2.10)  
 coreprof%ni%boundary%rho\_tor (vecflt.type) (9.2.1.2.9)  
 coreprof%ni%source\_term (sourceion) (9.2.1.3.258)  
 coreprof%ni%source\_term%value (matflt.type) (9.2.1.2.7)  
 coreprof%ni%source\_term%integral (matflt.type) (9.2.1.2.7)  
 coreprof%ni%source\_term%source (vecstring.type) (9.2.1.2.11)  
 coreprof%ni%transp\_coef (coretransion) (9.2.1.3.72)  
 coreprof%ni%transp\_coef%diff (matflt.type) (9.2.1.2.7)  
 coreprof%ni%transp\_coef%vconv (matflt.type) (9.2.1.2.7)  
 coreprof%ni%transp\_coef%source (vecstring.type) (9.2.1.2.11)  
 coreprof%ni%flux (fluxion) (9.2.1.3.120)  
 coreprof%ni%flux%flux\_dv (matflt.type) (9.2.1.2.7)  
 coreprof%ni%flux%flux\_interp (matflt.type) (9.2.1.2.7)  
 coreprof%ni%time\_deriv (matflt.type) (9.2.1.2.7)  
 coreprof%ni%codeparam (codeparam) (9.2.1.3.56)  
 coreprof%ni%codeparam%codename (string) (9.2.1.1.3)  
 coreprof%ni%codeparam%codeversion (string) (9.2.1.1.3)  
 coreprof%ni%codeparam%parameters (string) (9.2.1.1.3)  
 coreprof%ni%codeparam%output\_diag (string) (9.2.1.1.3)  
 coreprof%ni%codeparam%output\_flag (integer) (9.2.1.1.2)  
 coreprof%vtor (corefieldion) (9.2.1.3.63)  
 coreprof%vtor%value (matflt.type) (9.2.1.2.7)  
 coreprof%vtor%derivative (matflt.type) (9.2.1.2.7)  
 coreprof%vtor%source (vecstring.type) (9.2.1.2.11)  
 coreprof%vtor%flag (vecint.type) (9.2.1.2.10)  
 coreprof%vtor%boundary (boundaryion) (9.2.1.3.54)  
 coreprof%vtor%boundary%value (matflt.type) (9.2.1.2.7)  
 coreprof%vtor%boundary%source (vecstring.type) (9.2.1.2.11)  
 coreprof%vtor%boundary%type (vecint.type) (9.2.1.2.10)  
 coreprof%vtor%boundary%rho\_tor (vecflt.type) (9.2.1.2.9)  
 coreprof%vtor%source\_term (sourceion) (9.2.1.3.258)  
 coreprof%vtor%source\_term%value (matflt.type) (9.2.1.2.7)  
 coreprof%vtor%source\_term%integral (matflt.type) (9.2.1.2.7)  
 coreprof%vtor%source\_term%source (vecstring.type) (9.2.1.2.11)  
 coreprof%vtor%transp\_coef (coretransion) (9.2.1.3.72)

diff (405)	coreprof%vtor%transp_coef%diff (matflt_type) (9.2.1.2.7)
vconv (405)	coreprof%vtor%transp_coef%vconv (matflt_type) (9.2.1.2.7)
source (405)	coreprof%vtor%transp_coef%source (vecstring_type) (9.2.1.2.11)
flux (396)	coreprof%vtor%flux (fluxion) (9.2.1.3.120)
flux_dv (453)	coreprof%vtor%flux%flux_dv (matflt_type) (9.2.1.2.7)
flux_interp (453)	coreprof%vtor%flux%flux_interp (matflt_type) (9.2.1.2.7)
time_deriv (396)	coreprof%vtor%time_deriv (matflt_type) (9.2.1.2.7)
codeparam (396)	coreprof%vtor%codeparam (codeparam) (9.2.1.3.56)
codename (389)	coreprof%vtor%codeparam%codename (string) (9.2.1.1.3)
codeversion (389)	coreprof%vtor%codeparam%codeversion (string) (9.2.1.1.3)
parameters (389)	coreprof%vtor%codeparam%parameters (string) (9.2.1.1.3)
output_diag (389)	coreprof%vtor%codeparam%output_diag (string) (9.2.1.1.3)
output_flag (389)	coreprof%vtor%codeparam%output_flag (integer) (9.2.1.1.2)
profiles1d (341)	coreprof%profiles1d (profiles1d) (9.2.1.3.181)
pe (514)	coreprof%profiles1d%pe (coreprofile) (9.2.1.3.68)
value (401)	coreprof%profiles1d%pe%value (vecflt_type) (9.2.1.2.9)
source (401)	coreprof%profiles1d%pe%source (string) (9.2.1.1.3)
pi (514)	coreprof%profiles1d%pi (coreprofion) (9.2.1.3.69)
value (402)	coreprof%profiles1d%pi%value (matflt_type) (9.2.1.2.7)
source (402)	coreprof%profiles1d%pi%source (vecstring_type) (9.2.1.2.11)
pr.th (514)	coreprof%profiles1d%pr.th (coreprofile) (9.2.1.3.68)
value (401)	coreprof%profiles1d%pr.th%value (vecflt_type) (9.2.1.2.9)
source (401)	coreprof%profiles1d%pr.th%source (string) (9.2.1.1.3)
pr.perp (514)	coreprof%profiles1d%pr.perp (coreprofile) (9.2.1.3.68)
value (401)	coreprof%profiles1d%pr.perp%value (vecflt_type) (9.2.1.2.9)
source (401)	coreprof%profiles1d%pr.perp%source (string) (9.2.1.1.3)
pr.parallel (514)	coreprof%profiles1d%pr.parallel (coreprofile) (9.2.1.3.68)
value (401)	coreprof%profiles1d%pr.parallel%value (vecflt_type) (9.2.1.2.9)
source (401)	coreprof%profiles1d%pr.parallel%source (string) (9.2.1.1.3)
jtot (514)	coreprof%profiles1d%jtot (coreprofile) (9.2.1.3.68)
value (401)	coreprof%profiles1d%jtot%value (vecflt_type) (9.2.1.2.9)
source (401)	coreprof%profiles1d%jtot%source (string) (9.2.1.1.3)
jini (514)	coreprof%profiles1d%jini (coreprofile) (9.2.1.3.68)
value (401)	coreprof%profiles1d%jini%value (vecflt_type) (9.2.1.2.9)
source (401)	coreprof%profiles1d%jini%source (string) (9.2.1.1.3)
joh (514)	coreprof%profiles1d%joh (coreprofile) (9.2.1.3.68)
value (401)	coreprof%profiles1d%joh%value (vecflt_type) (9.2.1.2.9)
source (401)	coreprof%profiles1d%joh%source (string) (9.2.1.1.3)
vloop (514)	coreprof%profiles1d%vloop (coreprofile) (9.2.1.3.68)
value (401)	coreprof%profiles1d%vloop%value (vecflt_type) (9.2.1.2.9)
source (401)	coreprof%profiles1d%vloop%source (string) (9.2.1.1.3)
sigmapar (514)	coreprof%profiles1d%sigmapar (coreprofile) (9.2.1.3.68)
value (401)	coreprof%profiles1d%sigmapar%value (vecflt_type) (9.2.1.2.9)
source (401)	coreprof%profiles1d%sigmapar%source (string) (9.2.1.1.3)
qoh (514)	coreprof%profiles1d%qoh (coreprofile) (9.2.1.3.68)
value (401)	coreprof%profiles1d%qoh%value (vecflt_type) (9.2.1.2.9)
source (401)	coreprof%profiles1d%qoh%source (string) (9.2.1.1.3)
eparallel (514)	coreprof%profiles1d%eparallel (coreprofile) (9.2.1.3.68)
value (401)	coreprof%profiles1d%eparallel%value (vecflt_type) (9.2.1.2.9)
source (401)	coreprof%profiles1d%eparallel%source (string) (9.2.1.1.3)
e.b (514)	coreprof%profiles1d%e.b (coreprofile) (9.2.1.3.68)
value (401)	coreprof%profiles1d%e.b%value (vecflt_type) (9.2.1.2.9)
source (401)	coreprof%profiles1d%e.b%source (string) (9.2.1.1.3)
q (514)	coreprof%profiles1d%q (coreprofile) (9.2.1.3.68)
value (401)	coreprof%profiles1d%q%value (vecflt_type) (9.2.1.2.9)
source (401)	coreprof%profiles1d%q%source (string) (9.2.1.1.3)
shear (514)	coreprof%profiles1d%shear (coreprofile) (9.2.1.3.68)
value (401)	coreprof%profiles1d%shear%value (vecflt_type) (9.2.1.2.9)
source (401)	coreprof%profiles1d%shear%source (string) (9.2.1.1.3)
ns (514)	coreprof%profiles1d%ns (coreprofion) (9.2.1.3.69)
value (402)	coreprof%profiles1d%ns%value (matflt_type) (9.2.1.2.7)

source (402)	coreprof%profiles1d%ns%source (vecstring_type) (9.2.1.2.11)
mtor (514)	coreprof%profiles1d%mtor (coreprofion) (9.2.1.3.69)
value (402)	coreprof%profiles1d%mtor%value (matflt_type) (9.2.1.2.7)
source (402)	coreprof%profiles1d%mtor%source (vecstring_type) (9.2.1.2.11)
wtor (514)	coreprof%profiles1d%wtor (coreprofion) (9.2.1.3.69)
value (402)	coreprof%profiles1d%wtor%value (matflt_type) (9.2.1.2.7)
source (402)	coreprof%profiles1d%wtor%source (vecstring_type) (9.2.1.2.11)
zeff (514)	coreprof%profiles1d%zeff (coreprofile) (9.2.1.3.68)
value (401)	coreprof%profiles1d%zeff%value (vecflt_type) (9.2.1.2.9)
source (401)	coreprof%profiles1d%zeff%source (string) (9.2.1.1.3)
bpol (514)	coreprof%profiles1d%bpol (coreprofile) (9.2.1.3.68)
value (401)	coreprof%profiles1d%bpol%value (vecflt_type) (9.2.1.2.9)
source (401)	coreprof%profiles1d%bpol%source (string) (9.2.1.1.3)
dpsidt (514)	coreprof%profiles1d%dpsidt (coreprofile) (9.2.1.3.68)
value (401)	coreprof%profiles1d%dpsidt%value (vecflt_type) (9.2.1.2.9)
source (401)	coreprof%profiles1d%dpsidt%source (string) (9.2.1.1.3)
dpsidt_phi (514)	coreprof%profiles1d%dpsidt_phi (coreprofile) (9.2.1.3.68)
value (401)	coreprof%profiles1d%dpsidt_phi%value (vecflt_type) (9.2.1.2.9)
source (401)	coreprof%profiles1d%dpsidt_phi%source (string) (9.2.1.1.3)
dvprimedt (514)	coreprof%profiles1d%dvprimedt (coreprofile) (9.2.1.3.68)
value (401)	coreprof%profiles1d%dvprimedt%value (vecflt_type) (9.2.1.2.9)
source (401)	coreprof%profiles1d%dvprimedt%source (string) (9.2.1.1.3)
globalparam (341)	coreprof%globalparam (globalparam) (9.2.1.3.124)
current_tot (457)	coreprof%globalparam%current_tot (float) (9.2.1.1.1)
current_bnd (457)	coreprof%globalparam%current_bnd (float) (9.2.1.1.1)
current_ni (457)	coreprof%globalparam%current_ni (float) (9.2.1.1.1)
vloop (457)	coreprof%globalparam%vloop (float) (9.2.1.1.1)
li (457)	coreprof%globalparam%li (float) (9.2.1.1.1)
beta_tor (457)	coreprof%globalparam%beta_tor (float) (9.2.1.1.1)
beta_normal (457)	coreprof%globalparam%beta_normal (float) (9.2.1.1.1)
beta_pol (457)	coreprof%globalparam%beta_pol (float) (9.2.1.1.1)
w_dia (457)	coreprof%globalparam%w_dia (float) (9.2.1.1.1)
codeparam (341)	coreprof%codeparam (codeparam) (9.2.1.3.56)
codename (389)	coreprof%codeparam%codename (string) (9.2.1.1.3)
codeversion (389)	coreprof%codeparam%codeversion (string) (9.2.1.1.3)
parameters (389)	coreprof%codeparam%parameters (string) (9.2.1.1.3)
output_diag (389)	coreprof%codeparam%output_diag (string) (9.2.1.1.3)
output_flag (389)	coreprof%codeparam%output_flag (integer) (9.2.1.1.2)
time (341)	coreprof%time (float) (9.2.1.1.1)

### 9.2.2.1.7 coresource

datainfo (342)	coresource%datainfo (datainfo) (9.2.1.3.75)
dataprovider (408)	coresource%datainfo%dataprovider (string) (9.2.1.1.3)
putdate (408)	coresource%datainfo%putdate (string) (9.2.1.1.3)
source (408)	coresource%datainfo%source (string) (9.2.1.1.3)
comment (408)	coresource%datainfo%comment (string) (9.2.1.1.3)
isref (408)	coresource%datainfo%isref (integer) (9.2.1.1.2)
whatref (408)	coresource%datainfo%whatref (whatref) (9.2.1.3.305)
user (638)	coresource%datainfo%whatref%user (string) (9.2.1.1.3)
machine (638)	coresource%datainfo%whatref%machine (string) (9.2.1.1.3)
shot (638)	coresource%datainfo%whatref%shot (integer) (9.2.1.1.2)
run (638)	coresource%datainfo%whatref%run (integer) (9.2.1.1.2)
occurrence (638)	coresource%datainfo%whatref%occurrence (integer) (9.2.1.1.2)
putinfo (408)	coresource%datainfo%putinfo (putinfo) (9.2.1.3.187)
putmethod (520)	coresource%datainfo%putinfo%putmethod (string) (9.2.1.1.3)
putaccess (520)	coresource%datainfo%putinfo%putaccess (string) (9.2.1.1.3)
putlocation (520)	coresource%datainfo%putinfo%putlocation (string) (9.2.1.1.3)
rights (520)	coresource%datainfo%putinfo%rights (string) (9.2.1.1.3)
rho_tor (342)	coresource%rho_tor (vecflt_type) (9.2.1.2.9)
rho_tor_norm (342)	coresource%rho_tor_norm (vecflt_type) (9.2.1.2.9)

composition (342)	coresource%composition (composition) (9.2.1.3.59)
amn (392)	coresource%composition%amn (vecflt.type) (9.2.1.2.9)
zn (392)	coresource%composition%zn (vecflt.type) (9.2.1.2.9)
zion (392)	coresource%composition%zion (vecflt.type) (9.2.1.2.9)
imp_flag (392)	coresource%composition%imp_flag (vecint.type) (9.2.1.2.10)
toroid_field (342)	coresource%toroid_field (b0r0) (9.2.1.3.46)
r0 (379)	coresource%toroid_field%r0 (float) (9.2.1.1.1)
b0 (379)	coresource%toroid_field%b0 (float) (9.2.1.1.1)
j (342)	coresource%j (vecflt.type) (9.2.1.2.9)
sigma (342)	coresource%sigma (vecflt.type) (9.2.1.2.9)
si (342)	coresource%si (source_ion) (9.2.1.3.254)
exp (587)	coresource%si%exp (matflt.type) (9.2.1.2.7)
imp (587)	coresource%si%imp (matflt.type) (9.2.1.2.7)
se (342)	coresource%se (source_el) (9.2.1.3.252)
exp (585)	coresource%se%exp (vecflt.type) (9.2.1.2.9)
imp (585)	coresource%se%imp (vecflt.type) (9.2.1.2.9)
sz (342)	coresource%sz (source_imp) (9.2.1.3.253)
exp (586)	coresource%sz%exp (array3dflt.type) (9.2.1.2.1)
imp (586)	coresource%sz%imp (array3dflt.type) (9.2.1.2.1)
qi (342)	coresource%qi (source_ion) (9.2.1.3.254)
exp (587)	coresource%qi%exp (matflt.type) (9.2.1.2.7)
imp (587)	coresource%qi%imp (matflt.type) (9.2.1.2.7)
qe (342)	coresource%qe (source_el) (9.2.1.3.252)
exp (585)	coresource%qe%exp (vecflt.type) (9.2.1.2.9)
imp (585)	coresource%qe%imp (vecflt.type) (9.2.1.2.9)
qz (342)	coresource%qz (source_imp) (9.2.1.3.253)
exp (586)	coresource%qz%exp (array3dflt.type) (9.2.1.2.1)
imp (586)	coresource%qz%imp (array3dflt.type) (9.2.1.2.1)
ui (342)	coresource%ui (source_ion) (9.2.1.3.254)
exp (587)	coresource%ui%exp (matflt.type) (9.2.1.2.7)
imp (587)	coresource%ui%imp (matflt.type) (9.2.1.2.7)
codeparam (342)	coresource%codeparam (codeparam) (9.2.1.3.56)
codename (389)	coresource%codeparam%codename (string) (9.2.1.1.3)
codeversion (389)	coresource%codeparam%codeversion (string) (9.2.1.1.3)
parameters (389)	coresource%codeparam%parameters (string) (9.2.1.1.3)
output_diag (389)	coresource%codeparam%output_diag (string) (9.2.1.1.3)
output_flag (389)	coresource%codeparam%output_flag (integer) (9.2.1.1.2)
time (342)	coresource%time (float) (9.2.1.1.1)

### 9.2.2.1.8 coretransp

datainfo (343)	coretransp%datainfo (datainfo) (9.2.1.3.75)
dataprovider (408)	coretransp%datainfo%dataprovider (string) (9.2.1.1.3)
putdate (408)	coretransp%datainfo%putdate (string) (9.2.1.1.3)
source (408)	coretransp%datainfo%source (string) (9.2.1.1.3)
comment (408)	coretransp%datainfo%comment (string) (9.2.1.1.3)
isref (408)	coretransp%datainfo%isref (integer) (9.2.1.1.2)
whatref (408)	coretransp%datainfo%whatref (whatref) (9.2.1.3.305)
user (638)	coretransp%datainfo%whatref%user (string) (9.2.1.1.3)
machine (638)	coretransp%datainfo%whatref%machine (string) (9.2.1.1.3)
shot (638)	coretransp%datainfo%whatref%shot (integer) (9.2.1.1.2)
run (638)	coretransp%datainfo%whatref%run (integer) (9.2.1.1.2)
occurrence (638)	coretransp%datainfo%whatref%occurrence (integer) (9.2.1.1.2)
putinfo (408)	coretransp%datainfo%putinfo (putinfo) (9.2.1.3.187)
putmethod (520)	coretransp%datainfo%putinfo%putmethod (string) (9.2.1.1.3)
putaccess (520)	coretransp%datainfo%putinfo%putaccess (string) (9.2.1.1.3)
putlocation (520)	coretransp%datainfo%putinfo%putlocation (string) (9.2.1.1.3)
rights (520)	coretransp%datainfo%putinfo%rights (string) (9.2.1.1.3)
composition (343)	coretransp%composition (composition) (9.2.1.3.59)
amn (392)	coretransp%composition%amn (vecflt.type) (9.2.1.2.9)
zn (392)	coretransp%composition%zn (vecflt.type) (9.2.1.2.9)

zion (392)	coretransp%composition%zion (vecflt.type) (9.2.1.2.9)
imp_flag (392)	coretransp%composition%imp_flag (vecint.type) (9.2.1.2.10)
rho_tor_norm (343)	coretransp%rho_tor_norm (vecflt.type) (9.2.1.2.9)
rho_tor (343)	coretransp%rho_tor (vecflt.type) (9.2.1.2.9)
sigma (343)	coretransp%sigma (vecflt.type) (9.2.1.2.9)
ni_transp (343)	coretransp%ni_transp (ni_transp) (9.2.1.3.160)
diff_eff (493)	coretransp%ni_transp%diff_eff (array3dflt.type) (9.2.1.2.1)
vconv_eff (493)	coretransp%ni_transp%vconv_eff (array3dflt.type) (9.2.1.2.1)
flux (493)	coretransp%ni_transp%flux (matflt.type) (9.2.1.2.7)
off_diagonal (493)	coretransp%ni_transp%off_diagonal (offdiagion) (9.2.1.3.162)
d_ni (495)	coretransp%ni_transp%off_diagonal%d_ni (array3dflt.type) (9.2.1.2.1)
d_ti (495)	coretransp%ni_transp%off_diagonal%d_ti (array3dflt.type) (9.2.1.2.1)
d_ne (495)	coretransp%ni_transp%off_diagonal%d_ne (matflt.type) (9.2.1.2.7)
d_te (495)	coretransp%ni_transp%off_diagonal%d_te (matflt.type) (9.2.1.2.7)
d_epar (495)	coretransp%ni_transp%off_diagonal%d_epar (matflt.type) (9.2.1.2.7)
d_mtor (495)	coretransp%ni_transp%off_diagonal%d_mtor (matflt.type) (9.2.1.2.7)
flag (493)	coretransp%ni_transp%flag (integer) (9.2.1.1.2)
ne_transp (343)	coretransp%ne_transp (ne_transp) (9.2.1.3.158)
diff_eff (491)	coretransp%ne_transp%diff_eff (matflt.type) (9.2.1.2.7)
vconv_eff (491)	coretransp%ne_transp%vconv_eff (matflt.type) (9.2.1.2.7)
flux (491)	coretransp%ne_transp%flux (vecflt.type) (9.2.1.2.9)
off_diagonal (491)	coretransp%ne_transp%off_diagonal (offdiagel) (9.2.1.3.161)
d_ni (494)	coretransp%ne_transp%off_diagonal%d_ni (matflt.type) (9.2.1.2.7)
d_ti (494)	coretransp%ne_transp%off_diagonal%d_ti (matflt.type) (9.2.1.2.7)
d_ne (494)	coretransp%ne_transp%off_diagonal%d_ne (vecflt.type) (9.2.1.2.9)
d_te (494)	coretransp%ne_transp%off_diagonal%d_te (vecflt.type) (9.2.1.2.9)
d_epar (494)	coretransp%ne_transp%off_diagonal%d_epar (vecflt.type) (9.2.1.2.9)
d_mtor (494)	coretransp%ne_transp%off_diagonal%d_mtor (vecflt.type) (9.2.1.2.9)
flag (491)	coretransp%ne_transp%flag (integer) (9.2.1.1.2)
nz_transp (343)	coretransp%nz_transp (transcoefimp) (9.2.1.3.282)
diff_eff (615)	coretransp%nz_transp%diff_eff (array3dflt.type) (9.2.1.2.1)
vconv_eff (615)	coretransp%nz_transp%vconv_eff (array3dflt.type) (9.2.1.2.1)
exchange (615)	coretransp%nz_transp%exchange (array3dflt.type) (9.2.1.2.1)
flux (615)	coretransp%nz_transp%flux (array3dflt.type) (9.2.1.2.1)
flag (615)	coretransp%nz_transp%flag (integer) (9.2.1.1.2)
ti_transp (343)	coretransp%ti_transp (transcoefion) (9.2.1.3.283)
diff_eff (616)	coretransp%ti_transp%diff_eff (matflt.type) (9.2.1.2.7)
vconv_eff (616)	coretransp%ti_transp%vconv_eff (matflt.type) (9.2.1.2.7)
exchange (616)	coretransp%ti_transp%exchange (matflt.type) (9.2.1.2.7)
qgi (616)	coretransp%ti_transp%qgi (matflt.type) (9.2.1.2.7)
flux (616)	coretransp%ti_transp%flux (matflt.type) (9.2.1.2.7)
off_diagonal (616)	coretransp%ti_transp%off_diagonal (offdiagion) (9.2.1.3.162)
d_ni (495)	coretransp%ti_transp%off_diagonal%d_ni (array3dflt.type) (9.2.1.2.1)
d_ti (495)	coretransp%ti_transp%off_diagonal%d_ti (array3dflt.type) (9.2.1.2.1)
d_ne (495)	coretransp%ti_transp%off_diagonal%d_ne (matflt.type) (9.2.1.2.7)
d_te (495)	coretransp%ti_transp%off_diagonal%d_te (matflt.type) (9.2.1.2.7)
d_epar (495)	coretransp%ti_transp%off_diagonal%d_epar (matflt.type) (9.2.1.2.7)
d_mtor (495)	coretransp%ti_transp%off_diagonal%d_mtor (matflt.type) (9.2.1.2.7)
flag (616)	coretransp%ti_transp%flag (integer) (9.2.1.1.2)
te_transp (343)	coretransp%te_transp (transcoefel) (9.2.1.3.281)
diff_eff (614)	coretransp%te_transp%diff_eff (vecflt.type) (9.2.1.2.9)
vconv_eff (614)	coretransp%te_transp%vconv_eff (vecflt.type) (9.2.1.2.9)
flux (614)	coretransp%te_transp%flux (vecflt.type) (9.2.1.2.9)
off_diagonal (614)	coretransp%te_transp%off_diagonal (offdiagel) (9.2.1.3.161)
d_ni (494)	coretransp%te_transp%off_diagonal%d_ni (matflt.type) (9.2.1.2.7)
d_ti (494)	coretransp%te_transp%off_diagonal%d_ti (matflt.type) (9.2.1.2.7)
d_ne (494)	coretransp%te_transp%off_diagonal%d_ne (vecflt.type) (9.2.1.2.9)
d_te (494)	coretransp%te_transp%off_diagonal%d_te (vecflt.type) (9.2.1.2.9)
d_epar (494)	coretransp%te_transp%off_diagonal%d_epar (vecflt.type) (9.2.1.2.9)
d_mtor (494)	coretransp%te_transp%off_diagonal%d_mtor (vecflt.type) (9.2.1.2.9)
flag (614)	coretransp%te_transp%flag (integer) (9.2.1.1.2)

tz_transp (343)	coretransp%tz_transp (transcoefimp) (9.2.1.3.282)
diff_eff (615)	coretransp%tz_transp%diff_eff (array3dflt_type) (9.2.1.2.1)
vconv_eff (615)	coretransp%tz_transp%vconv_eff (array3dflt_type) (9.2.1.2.1)
exchange (615)	coretransp%tz_transp%exchange (array3dflt_type) (9.2.1.2.1)
flux (615)	coretransp%tz_transp%flux (array3dflt_type) (9.2.1.2.1)
flag (615)	coretransp%tz_transp%flag (integer) (9.2.1.1.2)
vtor_transp (343)	coretransp%vtor_transp (transcoefvtor) (9.2.1.3.284)
diff_eff (617)	coretransp%vtor_transp%diff_eff (matflt_type) (9.2.1.2.7)
vconv_eff (617)	coretransp%vtor_transp%vconv_eff (matflt_type) (9.2.1.2.7)
flux (617)	coretransp%vtor_transp%flux (matflt_type) (9.2.1.2.7)
off_diagonal (617)	coretransp%vtor_transp%off_diagonal (offdiagion) (9.2.1.3.162)
d_ni (495)	coretransp%vtor_transp%off_diagonal%d_ni (array3dflt_type) (9.2.1.2.1)
d_ti (495)	coretransp%vtor_transp%off_diagonal%d_ti (array3dflt_type) (9.2.1.2.1)
d_ne (495)	coretransp%vtor_transp%off_diagonal%d_ne (matflt_type) (9.2.1.2.7)
d_te (495)	coretransp%vtor_transp%off_diagonal%d_te (matflt_type) (9.2.1.2.7)
d_eapar (495)	coretransp%vtor_transp%off_diagonal%d_eapar (matflt_type) (9.2.1.2.7)
d_mtor (495)	coretransp%vtor_transp%off_diagonal%d_mtor (matflt_type) (9.2.1.2.7)
flag (617)	coretransp%vtor_transp%flag (integer) (9.2.1.1.2)
codeparam (343)	coretransp%codeparam (codeparam) (9.2.1.3.56)
codename (389)	coretransp%codeparam%codename (string) (9.2.1.1.3)
codeversion (389)	coretransp%codeparam%codeversion (string) (9.2.1.1.3)
parameters (389)	coretransp%codeparam%parameters (string) (9.2.1.1.3)
output_diag (389)	coretransp%codeparam%output_diag (string) (9.2.1.1.3)
output_flag (389)	coretransp%codeparam%output_flag (integer) (9.2.1.1.2)
time (343)	coretransp%time (float) (9.2.1.1.1)

### 9.2.2.1.9 cxdia

datainfo (344)	cxdiag%datainfo (datainfo) (9.2.1.3.75)
dataprovider (408)	cxdiag%datainfo%dataprovider (string) (9.2.1.1.3)
putdate (408)	cxdiag%datainfo%putdate (string) (9.2.1.1.3)
source (408)	cxdiag%datainfo%source (string) (9.2.1.1.3)
comment (408)	cxdiag%datainfo%comment (string) (9.2.1.1.3)
isref (408)	cxdiag%datainfo%isref (integer) (9.2.1.1.2)
whatref (408)	cxdiag%datainfo%whatref (whatref) (9.2.1.3.305)
user (638)	cxdiag%datainfo%whatref%user (string) (9.2.1.1.3)
machine (638)	cxdiag%datainfo%whatref%machine (string) (9.2.1.1.3)
shot (638)	cxdiag%datainfo%whatref%shot (integer) (9.2.1.1.2)
run (638)	cxdiag%datainfo%whatref%run (integer) (9.2.1.1.2)
occurrence (638)	cxdiag%datainfo%whatref%occurrence (integer) (9.2.1.1.2)
putinfo (408)	cxdiag%datainfo%putinfo (putinfo) (9.2.1.3.187)
putmethod (520)	cxdiag%datainfo%putinfo%putmethod (string) (9.2.1.1.3)
putaccess (520)	cxdiag%datainfo%putinfo%putaccess (string) (9.2.1.1.3)
putlocation (520)	cxdiag%datainfo%putinfo%putlocation (string) (9.2.1.1.3)
rights (520)	cxdiag%datainfo%putinfo%rights (string) (9.2.1.1.3)
setup (344)	cxdiag%setup (cxsetup) (9.2.1.3.74)
position (407)	cxdiag%setup%position (rzphi1Dexp) (9.2.1.3.219)
r (552)	cxdiag%setup%position%r (exp1D) (9.2.1.3.113)
value (446)	cxdiag%setup%position%r%value (vecflt_type) (9.2.1.2.9)
abserror (446)	cxdiag%setup%position%r%abserror (vecflt_type) (9.2.1.2.9)
releror (446)	cxdiag%setup%position%r%releror (vecflt_type) (9.2.1.2.9)
z (552)	cxdiag%setup%position%z (exp1D) (9.2.1.3.113)
value (446)	cxdiag%setup%position%z%value (vecflt_type) (9.2.1.2.9)
abserror (446)	cxdiag%setup%position%z%abserror (vecflt_type) (9.2.1.2.9)
releror (446)	cxdiag%setup%position%z%releror (vecflt_type) (9.2.1.2.9)
phi (552)	cxdiag%setup%position%phi (exp1D) (9.2.1.3.113)
value (446)	cxdiag%setup%position%phi%value (vecflt_type) (9.2.1.2.9)
abserror (446)	cxdiag%setup%position%phi%abserror (vecflt_type) (9.2.1.2.9)
releror (446)	cxdiag%setup%position%phi%releror (vecflt_type) (9.2.1.2.9)
measure (344)	cxdiag%measure (cxmeasure) (9.2.1.3.73)
ti (406)	cxdiag%measure%ti (exp1D) (9.2.1.3.113)



value (446)	cxdiag%measure%ti%value (vecflt.type) (9.2.1.2.9)
abserror (446)	cxdiag%measure%ti%abserror (vecflt.type) (9.2.1.2.9)
relelor (446)	cxdiag%measure%ti%relelor (vecflt.type) (9.2.1.2.9)
vtor (406)	cxdiag%measure%vtor (exp1D) (9.2.1.3.113)
value (446)	cxdiag%measure%vtor%value (vecflt.type) (9.2.1.2.9)
abserror (446)	cxdiag%measure%vtor%abserror (vecflt.type) (9.2.1.2.9)
relelor (446)	cxdiag%measure%vtor%relelor (vecflt.type) (9.2.1.2.9)
vpol (406)	cxdiag%measure%vpol (exp1D) (9.2.1.3.113)
value (446)	cxdiag%measure%vpol%value (vecflt.type) (9.2.1.2.9)
abserror (446)	cxdiag%measure%vpol%abserror (vecflt.type) (9.2.1.2.9)
relelor (446)	cxdiag%measure%vpol%relelor (vecflt.type) (9.2.1.2.9)
time (344)	cxdiag%time (float) (9.2.1.1.1)

### 9.2.2.1.10 distribution

datainfo (345)	distribution%datainfo (datainfo) (9.2.1.3.75)
dataprovider (408)	distribution%datainfo%dataprovider (string) (9.2.1.1.3)
putdate (408)	distribution%datainfo%putdate (string) (9.2.1.1.3)
source (408)	distribution%datainfo%source (string) (9.2.1.1.3)
comment (408)	distribution%datainfo%comment (string) (9.2.1.1.3)
isref (408)	distribution%datainfo%isref (integer) (9.2.1.1.2)
whatref (408)	distribution%datainfo%whatref (whatref) (9.2.1.3.305)
user (638)	distribution%datainfo%whatref%user (string) (9.2.1.1.3)
machine (638)	distribution%datainfo%whatref%machine (string) (9.2.1.1.3)
shot (638)	distribution%datainfo%whatref%shot (integer) (9.2.1.1.2)
run (638)	distribution%datainfo%whatref%run (integer) (9.2.1.1.2)
occurrence (638)	distribution%datainfo%whatref%occurrence (integer) (9.2.1.1.2)
putinfo (408)	distribution%datainfo%putinfo (putinfo) (9.2.1.3.187)
putmethod (520)	distribution%datainfo%putinfo%putmethod (string) (9.2.1.1.3)
putaccess (520)	distribution%datainfo%putinfo%putaccess (string) (9.2.1.1.3)
putlocation (520)	distribution%datainfo%putinfo%putlocation (string) (9.2.1.1.3)
rights (520)	distribution%datainfo%putinfo%rights (string) (9.2.1.1.3)
composition (345)	distribution%composition (composition) (9.2.1.3.59)
amn (392)	distribution%composition%amn (vecflt.type) (9.2.1.2.9)
zn (392)	distribution%composition%zn (vecflt.type) (9.2.1.2.9)
zion (392)	distribution%composition%zion (vecflt.type) (9.2.1.2.9)
imp_flag (392)	distribution%composition%imp_flag (vecint.type) (9.2.1.2.10)
calc_spec (345)	distribution%calc_spec (vecint.type) (9.2.1.2.10)
nucl_reac (345)	distribution%nucl_reac (dist_nucl_reac) (9.2.1.3.86)
nreacs (419)	distribution%nucl_reac%nreacs (vecint.type) (9.2.1.2.10)
point_reac (419)	distribution%nucl_reac%point_reac (matint.type) (9.2.1.2.8)
id_reac (419)	distribution%nucl_reac%id_reac (matint.type) (9.2.1.2.8)
global_param (345)	distribution%global_param (dist_glob) (9.2.1.3.82)
enrg (415)	distribution%global_param%enrg (vecflt.type) (9.2.1.2.9)
enrg_para (415)	distribution%global_param%enrg_para (vecflt.type) (9.2.1.2.9)
pow_coll_i (415)	distribution%global_param%pow_coll_i (matflt.type) (9.2.1.2.7)
pow_coll_e (415)	distribution%global_param%pow_coll_e (vecflt.type) (9.2.1.2.9)
therm_src (415)	distribution%global_param%therm_src (dist_src_snk_tot) (9.2.1.3.98)
particles (431)	distribution%global_param%therm_src%particles (vecflt.type) (9.2.1.2.9)
power (431)	distribution%global_param%therm_src%power (vecflt.type) (9.2.1.2.9)
torque (431)	distribution%global_param%therm_src%torque (vecflt.type) (9.2.1.2.9)
losses (415)	distribution%global_param%losses (dist_glob_dist_losses) (9.2.1.3.83)
orb_loss (416)	distribution%global_param%losses%orb_loss (dist_src_snk_tot) (9.2.1.3.98)
particles (431)	distribution%global_param%losses%orb_loss%particles (vecflt.type) (9.2.1.2.9)
power (431)	distribution%global_param%losses%orb_loss%power (vecflt.type) (9.2.1.2.9)
torque (431)	distribution%global_param%losses%orb_loss%torque (vecflt.type) (9.2.1.2.9)
neutr_loss (416)	distribution%global_param%losses%neutr_loss (dist_src_snk_tot) (9.2.1.3.98)
particles (431)	distribution%global_param%losses%neutr_loss%particles (vecflt.type) (9.2.1.2.9)
power (431)	distribution%global_param%losses%neutr_loss%power (vecflt.type) (9.2.1.2.9)
torque (431)	distribution%global_param%losses%neutr_loss%torque (vecflt.type) (9.2.1.2.9)
cur_dr_tor (415)	distribution%global_param%cur_dr_tor (vecflt.type) (9.2.1.2.9)

trq_i (415)	distribution%global_param%trq_i (matflt.type) (9.2.1.2.7)
trq_e (415)	distribution%global_param%trq_e (vecflt.type) (9.2.1.2.9)
trq_j_rxb (415)	distribution%global_param%trq_j_rxb (vecflt.type) (9.2.1.2.9)
nucl_reac.th (415)	distribution%global_param%nucl_reac.th (dist_nucl_reac.th) (9.2.1.3.88)
rate (421)	distribution%global_param%nucl_reac.th%rate (matflt.type) (9.2.1.2.7)
power (421)	distribution%global_param%nucl_reac.th%power (matflt.type) (9.2.1.2.7)
nucl_reac.sf (415)	distribution%global_param%nucl_reac_sf (dist_nucl_reac_sf) (9.2.1.3.87)
rate (420)	distribution%global_param%nucl_reac_sf%rate (vecflt.type) (9.2.1.2.9)
power (420)	distribution%global_param%nucl_reac_sf%power (vecflt.type) (9.2.1.2.9)
profiles.1d (345)	distribution%profiles.1d (dist_profiles) (9.2.1.3.96)
npsi (429)	distribution%profiles.1d%npsi (vecint.type) (9.2.1.2.10)
rho.tor.norm (429)	distribution%profiles.1d%rho.tor.norm (matflt.type) (9.2.1.2.7)
rho.tor (429)	distribution%profiles.1d%rho.tor (matflt.type) (9.2.1.2.7)
psi (429)	distribution%profiles.1d%psi (matflt.type) (9.2.1.2.7)
enrgd.tot (429)	distribution%profiles.1d%enrgd.tot (matflt.type) (9.2.1.2.7)
enrgd.para (429)	distribution%profiles.1d%enrgd.para (matflt.type) (9.2.1.2.7)
powd.coll.i (429)	distribution%profiles.1d%powd.coll.i (array3dflt.type) (9.2.1.2.1)
powd.coll.e (429)	distribution%profiles.1d%powd.coll.e (matflt.type) (9.2.1.2.7)
therm_srcd (429)	distribution%profiles.1d%therm_srcd (dist_src_snk_surf) (9.2.1.3.97)
particlesd (430)	distribution%profiles.1d%therm_srcd%particlesd (matflt.type) (9.2.1.2.7)
powerd (430)	distribution%profiles.1d%therm_srcd%powerd (matflt.type) (9.2.1.2.7)
torqued (430)	distribution%profiles.1d%therm_srcd%torqued (matflt.type) (9.2.1.2.7)
lossesd (429)	distribution%profiles.1d%lossesd (dist_prof_surf_dist_losses) (9.2.1.3.90)
orb_loss (423)	distribution%profiles.1d%lossesd%orb_loss (dist_src_snk_surf) (9.2.1.3.97)
particlesd (430)	distribution%profiles.1d%lossesd%orb_loss%particlesd (matflt.type) (9.2.1.2.7)
powerd (430)	distribution%profiles.1d%lossesd%orb_loss%powerd (matflt.type) (9.2.1.2.7)
torqued (430)	distribution%profiles.1d%lossesd%orb_loss%torqued (matflt.type) (9.2.1.2.7)
neutr_loss (423)	distribution%profiles.1d%lossesd%neutr_loss (dist_src_snk_surf) (9.2.1.3.97)
particlesd (430)	distribution%profiles.1d%lossesd%neutr_loss%particlesd (matflt.type) (9.2.1.2.7)
powerd (430)	distribution%profiles.1d%lossesd%neutr_loss%powerd (matflt.type) (9.2.1.2.7)
torqued (430)	distribution%profiles.1d%lossesd%neutr_loss%torqued (matflt.type) (9.2.1.2.7)
curd.fp (429)	distribution%profiles.1d%curd.fp (matflt.type) (9.2.1.2.7)
curd.dr (429)	distribution%profiles.1d%curd.dr (vecflt.type) (9.2.1.2.9)
trqd.i (429)	distribution%profiles.1d%trqd.i (array3dflt.type) (9.2.1.2.1)
trqd.e (429)	distribution%profiles.1d%trqd.e (matflt.type) (9.2.1.2.7)
trqd.j_rxb (429)	distribution%profiles.1d%trqd.j_rxb (matflt.type) (9.2.1.2.7)
nucl.rd.th (429)	distribution%profiles.1d%nucl.rd.th (dist_prof_surf_nucl_reac.th) (9.2.1.3.92)
rated (425)	distribution%profiles.1d%nucl.rd.th%rated (array3dflt.type) (9.2.1.2.1)
powerd (425)	distribution%profiles.1d%nucl.rd.th%powerd (array3dflt.type) (9.2.1.2.1)
nucl.rd.sf (429)	distribution%profiles.1d%nucl.rd.sf (dist_prof_surf_nucl_reac.sf) (9.2.1.3.91)
rate (424)	distribution%profiles.1d%nucl.rd.sf%rate (matflt.type) (9.2.1.2.7)
power (424)	distribution%profiles.1d%nucl.rd.sf%power (matflt.type) (9.2.1.2.7)
enrg.tot (429)	distribution%profiles.1d%enrg.tot (matflt.type) (9.2.1.2.7)
enrg.para (429)	distribution%profiles.1d%enrg.para (matflt.type) (9.2.1.2.7)
pow_coll.i (429)	distribution%profiles.1d%pow_coll.i (array3dflt.type) (9.2.1.2.1)
pow_coll.e (429)	distribution%profiles.1d%pow_coll.e (matflt.type) (9.2.1.2.7)
therm_src (429)	distribution%profiles.1d%therm_src (dist_src_snk_vol) (9.2.1.3.99)
particles (432)	distribution%profiles.1d%therm_src%particles (matflt.type) (9.2.1.2.7)
power (432)	distribution%profiles.1d%therm_src%power (matflt.type) (9.2.1.2.7)
torque (432)	distribution%profiles.1d%therm_src%torque (matflt.type) (9.2.1.2.7)
losses (429)	distribution%profiles.1d%losses (dist_prof_vol_dist_losses) (9.2.1.3.93)
orb_loss (426)	distribution%profiles.1d%losses%orb_loss (dist_src_snk_vol) (9.2.1.3.99)
particles (432)	distribution%profiles.1d%losses%orb_loss%particles (matflt.type) (9.2.1.2.7)
power (432)	distribution%profiles.1d%losses%orb_loss%power (matflt.type) (9.2.1.2.7)
torque (432)	distribution%profiles.1d%losses%orb_loss%torque (matflt.type) (9.2.1.2.7)
neutr_loss (426)	distribution%profiles.1d%losses%neutr_loss (dist_src_snk_vol) (9.2.1.3.99)
particles (432)	distribution%profiles.1d%losses%neutr_loss%particles (matflt.type) (9.2.1.2.7)
power (432)	distribution%profiles.1d%losses%neutr_loss%power (matflt.type) (9.2.1.2.7)
torque (432)	distribution%profiles.1d%losses%neutr_loss%torque (matflt.type) (9.2.1.2.7)
cur.fp (429)	distribution%profiles.1d%cur.fp (matflt.type) (9.2.1.2.7)
cur.dr (429)	distribution%profiles.1d%cur.dr (matflt.type) (9.2.1.2.7)



trq_i (429)	distribution%profiles_1d%trq_i (array3dflt_type) (9.2.1.2.1)
trq_e (429)	distribution%profiles_1d%trq_e (matflt_type) (9.2.1.2.7)
trq_j_rxb (429)	distribution%profiles_1d%trq_j_rxb (matflt_type) (9.2.1.2.7)
nucl_reac.th (429)	distribution%profiles_1d%nucl_reac.th (dist_prof.vol_nucl_reac.th) (9.2.1.3.95)
rate (428)	distribution%profiles_1d%nucl_reac.th%rate (array3dflt_type) (9.2.1.2.1)
power (428)	distribution%profiles_1d%nucl_reac.th%power (array3dflt_type) (9.2.1.2.1)
nucl_reac.sf (429)	distribution%profiles_1d%nucl_reac.sf (dist_prof.vol_nucl_reac.sf) (9.2.1.3.94)
rate (427)	distribution%profiles_1d%nucl_reac.sf%rate (matflt_type) (9.2.1.2.7)
power (427)	distribution%profiles_1d%nucl_reac.sf%power (matflt_type) (9.2.1.2.7)
dist_func (345)	distribution%dist_func (dist_func) (9.2.1.3.81)
sol_type (414)	distribution%dist_func%sol_type (vecint_type) (9.2.1.2.10)
test_part (414)	distribution%dist_func%test_part (dist_test_part) (9.2.1.3.100)
nvar (433)	distribution%dist_func%test_part%nvar (vecflt_type) (9.2.1.2.9)
var_id (433)	distribution%dist_func%test_part%var_id (matint_type) (9.2.1.2.8)
var1 (433)	distribution%dist_func%test_part%var1 (matflt_type) (9.2.1.2.7)
var2 (433)	distribution%dist_func%test_part%var2 (matflt_type) (9.2.1.2.7)
var3 (433)	distribution%dist_func%test_part%var3 (matflt_type) (9.2.1.2.7)
var4 (433)	distribution%dist_func%test_part%var4 (matflt_type) (9.2.1.2.7)
var5 (433)	distribution%dist_func%test_part%var5 (matflt_type) (9.2.1.2.7)
var6 (433)	distribution%dist_func%test_part%var6 (matflt_type) (9.2.1.2.7)
weight (433)	distribution%dist_func%test_part%weight (matflt_type) (9.2.1.2.7)
f0 (414)	distribution%dist_func%f0 (dist_ff) (9.2.1.3.80)
grid_type (413)	distribution%dist_func%f0%grid_type (vecint_type) (9.2.1.2.10)
grid (413)	distribution%dist_func%f0%grid (dist_grid) (9.2.1.3.84)
dim1 (417)	distribution%dist_func%f0%grid%dim1 (matflt_type) (9.2.1.2.7)
ndim1 (417)	distribution%dist_func%f0%grid%ndim1 (vecint_type) (9.2.1.2.10)
dim2 (417)	distribution%dist_func%f0%grid%dim2 (matflt_type) (9.2.1.2.7)
ndim2 (417)	distribution%dist_func%f0%grid%ndim2 (vecint_type) (9.2.1.2.10)
dim3 (417)	distribution%dist_func%f0%grid%dim3 (matflt_type) (9.2.1.2.7)
ndim3 (417)	distribution%dist_func%f0%grid%ndim3 (vecint_type) (9.2.1.2.10)
jacobian (417)	distribution%dist_func%f0%grid%jacobian (array4dflt_type) (9.2.1.2.3)
value (413)	distribution%dist_func%f0%value (array4dflt_type) (9.2.1.2.3)
fullf (414)	distribution%dist_func%fullf (dist_ff) (9.2.1.3.80)
grid_type (413)	distribution%dist_func%fullf%grid_type (vecint_type) (9.2.1.2.10)
grid (413)	distribution%dist_func%fullf%grid (dist_grid) (9.2.1.3.84)
dim1 (417)	distribution%dist_func%fullf%grid%dim1 (matflt_type) (9.2.1.2.7)
ndim1 (417)	distribution%dist_func%fullf%grid%ndim1 (vecint_type) (9.2.1.2.10)
dim2 (417)	distribution%dist_func%fullf%grid%dim2 (matflt_type) (9.2.1.2.7)
ndim2 (417)	distribution%dist_func%fullf%grid%ndim2 (vecint_type) (9.2.1.2.10)
dim3 (417)	distribution%dist_func%fullf%grid%dim3 (matflt_type) (9.2.1.2.7)
ndim3 (417)	distribution%dist_func%fullf%grid%ndim3 (vecint_type) (9.2.1.2.10)
jacobian (417)	distribution%dist_func%fullf%grid%jacobian (array4dflt_type) (9.2.1.2.3)
value (413)	distribution%dist_func%fullf%value (array4dflt_type) (9.2.1.2.3)
input_src (345)	distribution%input_src (dist_input_src) (9.2.1.3.85)
particle_src (418)	distribution%input_src%particle_src (dist_particle_src) (9.2.1.3.89)
total (422)	distribution%input_src%particle_src%total (dist_src_snk_tot) (9.2.1.3.98)
particles (431)	distribution%input_src%particle_src%total%particles (vecflt_type) (9.2.1.2.9)
power (431)	distribution%input_src%particle_src%total%power (vecflt_type) (9.2.1.2.9)
torque (431)	distribution%input_src%particle_src%total%torque (vecflt_type) (9.2.1.2.9)
volume_intgr (422)	distribution%input_src%particle_src%volume_intgr (dist_src_snk_vol) (9.2.1.3.99)
particles (432)	distribution%input_src%particle_src%volume_intgr%particles (matflt_type) (9.2.1.2.7)
power (432)	distribution%input_src%particle_src%volume_intgr%power (matflt_type) (9.2.1.2.7)
torque (432)	distribution%input_src%particle_src%volume_intgr%torque (matflt_type) (9.2.1.2.7)
flux_surf_av (422)	distribution%input_src%particle_src%flux_surf_av (dist_src_snk_surf) (9.2.1.3.97)
particlesd (430)	distribution%input_src%particle_src%flux_surf_av%particlesd (matflt_type) (9.2.1.2.7)
powerd (430)	distribution%input_src%particle_src%flux_surf_av%powerd (matflt_type) (9.2.1.2.7)
torqued (430)	distribution%input_src%particle_src%flux_surf_av%torqued (matflt_type) (9.2.1.2.7)
wave_src (418)	distribution%input_src%wave_src (dist_wave_src) (9.2.1.3.101)
type (434)	distribution%input_src%wave_src%type (vecstring_type) (9.2.1.2.11)
wave_power (434)	distribution%input_src%wave_src%wave_power (vecflt_type) (9.2.1.2.9)
wave_powerd (434)	distribution%input_src%wave_src%wave_powerd (matflt_type) (9.2.1.2.7)

codeparam (345)	distribution%codeparam (codeparam) (9.2.1.3.56)
codename (389)	distribution%codeparam%codename (string) (9.2.1.1.3)
codeversion (389)	distribution%codeparam%codeversion (string) (9.2.1.1.3)
parameters (389)	distribution%codeparam%parameters (string) (9.2.1.1.3)
output_diag (389)	distribution%codeparam%output_diag (string) (9.2.1.1.3)
output_flag (389)	distribution%codeparam%output_flag (integer) (9.2.1.1.2)
time (345)	distribution%time (float) (9.2.1.1.1)

### 9.2.2.1.11 distsource

datainfo (346)	distsource%datainfo (datainfo) (9.2.1.3.75)
dataprovider (408)	distsource%datainfo%dataprovider (string) (9.2.1.1.3)
putdate (408)	distsource%datainfo%putdate (string) (9.2.1.1.3)
source (408)	distsource%datainfo%source (string) (9.2.1.1.3)
comment (408)	distsource%datainfo%comment (string) (9.2.1.1.3)
isref (408)	distsource%datainfo%isref (integer) (9.2.1.1.2)
whatref (408)	distsource%datainfo%whatref (whatref) (9.2.1.3.305)
user (638)	distsource%datainfo%whatref%user (string) (9.2.1.1.3)
machine (638)	distsource%datainfo%whatref%machine (string) (9.2.1.1.3)
shot (638)	distsource%datainfo%whatref%shot (integer) (9.2.1.1.2)
run (638)	distsource%datainfo%whatref%run (integer) (9.2.1.1.2)
occurrence (638)	distsource%datainfo%whatref%occurrence (integer) (9.2.1.1.2)
putinfo (408)	distsource%datainfo%putinfo (putinfo) (9.2.1.3.187)
putmethod (520)	distsource%datainfo%putinfo%putmethod (string) (9.2.1.1.3)
putaccess (520)	distsource%datainfo%putinfo%putaccess (string) (9.2.1.1.3)
putlocation (520)	distsource%datainfo%putinfo%putlocation (string) (9.2.1.1.3)
rights (520)	distsource%datainfo%putinfo%rights (string) (9.2.1.1.3)
composition (346)	distsource%composition (composition) (9.2.1.3.59)
amn (392)	distsource%composition%amn (vecflt.type) (9.2.1.2.9)
zn (392)	distsource%composition%zn (vecflt.type) (9.2.1.2.9)
zion (392)	distsource%composition%zion (vecflt.type) (9.2.1.2.9)
imp_flag (392)	distsource%composition%imp_flag (vecint.type) (9.2.1.2.10)
src_spec (346)	distsource%src_spec (vecint.type) (9.2.1.2.10)
global_param (346)	distsource%global_param (distsource_global_param) (9.2.1.3.102)
src_pow (435)	distsource%global_param%src_pow (vecflt.type) (9.2.1.2.9)
src_rate (435)	distsource%global_param%src_rate (vecflt.type) (9.2.1.2.9)
profiles_1d (346)	distsource%profiles_1d (distsource_profiles_1d) (9.2.1.3.103)
npsi (436)	distsource%profiles_1d%npsi (vecint.type) (9.2.1.2.10)
rho_tor_norm (436)	distsource%profiles_1d%rho_tor_norm (matflt.type) (9.2.1.2.7)
rho_tor (436)	distsource%profiles_1d%rho_tor (matflt.type) (9.2.1.2.7)
psi (436)	distsource%profiles_1d%psi (matflt.type) (9.2.1.2.7)
pow_den (436)	distsource%profiles_1d%pow_den (matflt.type) (9.2.1.2.7)
src_rate (436)	distsource%profiles_1d%src_rate (matflt.type) (9.2.1.2.7)
source_4d (346)	distsource%source_4d (source_4d) (9.2.1.3.251)
gyrosrc_type (584)	distsource%source_4d%gyrosrc_type (vecint.type) (9.2.1.2.10)
grid_type (584)	distsource%source_4d%grid_type (vecint.type) (9.2.1.2.10)
rect_grid (584)	distsource%source_4d%rect_grid (distsource_rect_grid) (9.2.1.3.104)
ndim1 (437)	distsource%source_4d%rect_grid%ndim1 (vecint.type) (9.2.1.2.10)
ndim2 (437)	distsource%source_4d%rect_grid%ndim2 (vecint.type) (9.2.1.2.10)
ndim3 (437)	distsource%source_4d%rect_grid%ndim3 (vecint.type) (9.2.1.2.10)
ndim4 (437)	distsource%source_4d%rect_grid%ndim4 (vecint.type) (9.2.1.2.10)
dim1 (437)	distsource%source_4d%rect_grid%dim1 (matflt.type) (9.2.1.2.7)
dim2 (437)	distsource%source_4d%rect_grid%dim2 (matflt.type) (9.2.1.2.7)
dim3 (437)	distsource%source_4d%rect_grid%dim3 (matflt.type) (9.2.1.2.7)
dim4 (437)	distsource%source_4d%rect_grid%dim4 (matflt.type) (9.2.1.2.7)
jacobian (437)	distsource%source_4d%rect_grid%jacobian (array5dflt.type) (9.2.1.2.4)
source (584)	distsource%source_4d%source (array5dflt.type) (9.2.1.2.4)
source_tp (346)	distsource%source_tp (source_tp) (9.2.1.3.255)
n_particles (588)	distsource%source_tp%n_particles (vecint.type) (9.2.1.2.10)
var_type (588)	distsource%source_tp%var_type (integer) (9.2.1.1.2)
var1 (588)	distsource%source_tp%var1 (matflt.type) (9.2.1.2.7)

var2 (588)	distsource%source.tp%var2 (matflt.type) (9.2.1.2.7)
var3 (588)	distsource%source.tp%var3 (matflt.type) (9.2.1.2.7)
var4 (588)	distsource%source.tp%var4 (matflt.type) (9.2.1.2.7)
var5 (588)	distsource%source.tp%var5 (matflt.type) (9.2.1.2.7)
var6 (588)	distsource%source.tp%var6 (matflt.type) (9.2.1.2.7)
weight (588)	distsource%source.tp%weight (matflt.type) (9.2.1.2.7)
codeparam (346)	distsource%codeparam (codeparam) (9.2.1.3.56)
codename (389)	distsource%codeparam%codename (string) (9.2.1.1.3)
codeversion (389)	distsource%codeparam%codeversion (string) (9.2.1.1.3)
parameters (389)	distsource%codeparam%parameters (string) (9.2.1.1.3)
output.diag (389)	distsource%codeparam%output.diag (string) (9.2.1.1.3)
output.flag (389)	distsource%codeparam%output.flag (integer) (9.2.1.1.2)
time (346)	distsource%time (float) (9.2.1.1.1)

### 9.2.2.1.12 ecediag

datainfo (347)	ecediag%datainfo (datainfo) (9.2.1.3.75)
dataprovider (408)	ecediag%datainfo%dataprovider (string) (9.2.1.1.3)
putdate (408)	ecediag%datainfo%putdate (string) (9.2.1.1.3)
source (408)	ecediag%datainfo%source (string) (9.2.1.1.3)
comment (408)	ecediag%datainfo%comment (string) (9.2.1.1.3)
isref (408)	ecediag%datainfo%isref (integer) (9.2.1.1.2)
whatref (408)	ecediag%datainfo%whatref (whatref) (9.2.1.3.305)
user (638)	ecediag%datainfo%whatref%user (string) (9.2.1.1.3)
machine (638)	ecediag%datainfo%whatref%machine (string) (9.2.1.1.3)
shot (638)	ecediag%datainfo%whatref%shot (integer) (9.2.1.1.2)
run (638)	ecediag%datainfo%whatref%run (integer) (9.2.1.1.2)
occurrence (638)	ecediag%datainfo%whatref%occurrence (integer) (9.2.1.1.2)
putinfo (408)	ecediag%datainfo%putinfo (putinfo) (9.2.1.3.187)
putmethod (520)	ecediag%datainfo%putinfo%putmethod (string) (9.2.1.1.3)
putaccess (520)	ecediag%datainfo%putinfo%putaccess (string) (9.2.1.1.3)
putlocation (520)	ecediag%datainfo%putinfo%putlocation (string) (9.2.1.1.3)
rights (520)	ecediag%datainfo%putinfo%rights (string) (9.2.1.1.3)
setup (347)	ecediag%setup (ecesetup) (9.2.1.3.106)
frequency (439)	ecediag%setup%frequency (vecflt.type) (9.2.1.2.9)
position (439)	ecediag%setup%position (rzphi1Dexp) (9.2.1.3.219)
r (552)	ecediag%setup%position%r (exp1D) (9.2.1.3.113)
value (446)	ecediag%setup%position%r%value (vecflt.type) (9.2.1.2.9)
abserror (446)	ecediag%setup%position%r%abserror (vecflt.type) (9.2.1.2.9)
releror (446)	ecediag%setup%position%r%releror (vecflt.type) (9.2.1.2.9)
z (552)	ecediag%setup%position%z (exp1D) (9.2.1.3.113)
value (446)	ecediag%setup%position%z%value (vecflt.type) (9.2.1.2.9)
abserror (446)	ecediag%setup%position%z%abserror (vecflt.type) (9.2.1.2.9)
releror (446)	ecediag%setup%position%z%releror (vecflt.type) (9.2.1.2.9)
phi (552)	ecediag%setup%position%phi (exp1D) (9.2.1.3.113)
value (446)	ecediag%setup%position%phi%value (vecflt.type) (9.2.1.2.9)
abserror (446)	ecediag%setup%position%phi%abserror (vecflt.type) (9.2.1.2.9)
releror (446)	ecediag%setup%position%phi%releror (vecflt.type) (9.2.1.2.9)
measure (347)	ecediag%measure (ecemeasure) (9.2.1.3.105)
te (438)	ecediag%measure%te (exp1D) (9.2.1.3.113)
value (446)	ecediag%measure%te%value (vecflt.type) (9.2.1.2.9)
abserror (446)	ecediag%measure%te%abserror (vecflt.type) (9.2.1.2.9)
releror (446)	ecediag%measure%te%releror (vecflt.type) (9.2.1.2.9)
time (347)	ecediag%time (float) (9.2.1.1.1)

### 9.2.2.1.13 edge

datainfo (348)	edge%datainfo (datainfo) (9.2.1.3.75)
dataprovider (408)	edge%datainfo%dataprovider (string) (9.2.1.1.3)
putdate (408)	edge%datainfo%putdate (string) (9.2.1.1.3)
source (408)	edge%datainfo%source (string) (9.2.1.1.3)

comment (408)	edge%datainfo%comment (string) (9.2.1.1.3)
isref (408)	edge%datainfo%isref (integer) (9.2.1.1.2)
whatref (408)	edge%datainfo%whatref (whatref) (9.2.1.3.305)
user (638)	edge%datainfo%whatref%user (string) (9.2.1.1.3)
machine (638)	edge%datainfo%whatref%machine (string) (9.2.1.1.3)
shot (638)	edge%datainfo%whatref%shot (integer) (9.2.1.1.2)
run (638)	edge%datainfo%whatref%run (integer) (9.2.1.1.2)
occurrence (638)	edge%datainfo%whatref%occurrence (integer) (9.2.1.1.2)
putinfo (408)	edge%datainfo%putinfo (putinfo) (9.2.1.3.187)
putmethod (520)	edge%datainfo%putinfo%putmethod (string) (9.2.1.1.3)
putaccess (520)	edge%datainfo%putinfo%putaccess (string) (9.2.1.1.3)
putlocation (520)	edge%datainfo%putinfo%putlocation (string) (9.2.1.1.3)
rights (520)	edge%datainfo%putinfo%rights (string) (9.2.1.1.3)
grid (348)	edge%grid (grid_full) (9.2.1.3.133)
spaces (466)	edge%grid%spaces(:) (grid_space) (9.2.1.3.136)
type.coord (469)	edge%grid%spaces(:)%type.coord (vecint.type) (9.2.1.2.10)
node.value (469)	edge%grid%spaces(:)%node.value (matflt.type) (9.2.1.2.7)
alter.coord (469)	edge%grid%spaces(:)%alter.coord (alter_coord) (9.2.1.3.39)
type.coord (372)	edge%grid%spaces(:)%alter.coord%type.coord (vecint.type) (9.2.1.2.10)
node.value (372)	edge%grid%spaces(:)%alter.coord%node.value (matflt.type) (9.2.1.2.7)
nobject (469)	edge%grid%spaces(:)%nobject (vecint.type) (9.2.1.2.10)
nobject.bou (469)	edge%grid%spaces(:)%nobject.bou (vecint.type) (9.2.1.2.10)
neighborside (469)	edge%grid%spaces(:)%neighborside (vecint.type) (9.2.1.2.10)
objdef (469)	edge%grid%spaces(:)%objdef (array3dint.type) (9.2.1.2.2)
neighbors (469)	edge%grid%spaces(:)%neighbors (array3dint.type) (9.2.1.2.2)
properties (469)	edge%grid%spaces(:)%properties (properties) (9.2.1.3.185)
alias (518)	edge%grid%spaces(:)%properties%alias (vecint.type) (9.2.1.2.10)
type (518)	edge%grid%spaces(:)%properties%type (vecint.type) (9.2.1.2.10)
is.x (518)	edge%grid%spaces(:)%properties%is.x (vecint.type) (9.2.1.2.10)
node.connect (518)	edge%grid%spaces(:)%properties%node.connect (string) (9.2.1.1.3)
bezier (518)	edge%grid%spaces(:)%properties%bezier (bezier) (9.2.1.3.49)
u (382)	edge%grid%spaces(:)%properties%bezier%u (matflt.type) (9.2.1.2.7)
v (382)	edge%grid%spaces(:)%properties%bezier%v (matflt.type) (9.2.1.2.7)
w (382)	edge%grid%spaces(:)%properties%bezier%w (matflt.type) (9.2.1.2.7)
metric (466)	edge%grid%metric (vecflt.type) (9.2.1.2.9)
desc_impur (348)	edge%desc_impur (desc_impur) (9.2.1.3.76)
amn (409)	edge%desc_impur%amn (vecflt.type) (9.2.1.2.9)
zn (409)	edge%desc_impur%zn (vecint.type) (9.2.1.2.10)
i.ion (409)	edge%desc_impur%i.ion (vecint.type) (9.2.1.2.10)
nzimp (409)	edge%desc_impur%nzimp (vecint.type) (9.2.1.2.10)
zmin (409)	edge%desc_impur%zmin (matint.type) (9.2.1.2.8)
zmax (409)	edge%desc_impur%zmax (matint.type) (9.2.1.2.8)
fluid (348)	edge%fluid (grid_fluid) (9.2.1.3.128)
ne (461)	edge%fluid%ne (grid_ne) (9.2.1.3.134)
main_field (467)	edge%fluid%ne%main_field (grid_field_el) (9.2.1.3.126)
gridlink (459)	edge%fluid%ne%main_field%gridlink (vecint.type) (9.2.1.2.10)
pointer (459)	edge%fluid%ne%main_field%pointer (matint.type) (9.2.1.2.8)
value (459)	edge%fluid%ne%main_field%value (vecflt.type) (9.2.1.2.9)
fluxes (467)	edge%fluid%ne%fluxes (grid_fluxes_part_el) (9.2.1.3.131)
gridlink (464)	edge%fluid%ne%fluxes%gridlink (vecint.type) (9.2.1.2.10)
pointer (464)	edge%fluid%ne%fluxes%pointer (matint.type) (9.2.1.2.8)
flux_par (464)	edge%fluid%ne%fluxes%flux_par (vecflt.type) (9.2.1.2.9)
flux_dia (464)	edge%fluid%ne%fluxes%flux_dia (vecflt.type) (9.2.1.2.9)
flux_rad (464)	edge%fluid%ne%fluxes%flux_rad (vecflt.type) (9.2.1.2.9)
transp_coef (467)	edge%fluid%ne%transp_coef (grid_transp_coef_el) (9.2.1.3.139)
gridlink (472)	edge%fluid%ne%transp_coef%gridlink (vecint.type) (9.2.1.2.10)
pointer (472)	edge%fluid%ne%transp_coef%pointer (matint.type) (9.2.1.2.8)
diff_dia (472)	edge%fluid%ne%transp_coef%diff_dia (vecflt.type) (9.2.1.2.9)
diff_rad (472)	edge%fluid%ne%transp_coef%diff_rad (vecflt.type) (9.2.1.2.9)
te (461)	edge%fluid%te (grid_te) (9.2.1.3.137)
main_field (470)	edge%fluid%te%main_field (grid_field_el) (9.2.1.3.126)

gridlink (459)	edge%fluid%te%main_field%gridlink (vecint.type) (9.2.1.2.10)
pointer (459)	edge%fluid%te%main_field%pointer (matint.type) (9.2.1.2.8)
value (459)	edge%fluid%te%main_field%value (vecflt.type) (9.2.1.2.9)
fluxes (470)	edge%fluid%te%fluxes (grid_fluxes_heat_el) (9.2.1.3.129)
gridlink (462)	edge%fluid%te%fluxes%gridlink (vecint.type) (9.2.1.2.10)
pointer (462)	edge%fluid%te%fluxes%pointer (matint.type) (9.2.1.2.8)
heat_par (462)	edge%fluid%te%fluxes%heat_par (vecflt.type) (9.2.1.2.9)
heat_dia (462)	edge%fluid%te%fluxes%heat_dia (vecflt.type) (9.2.1.2.9)
heat_rad (462)	edge%fluid%te%fluxes%heat_rad (vecflt.type) (9.2.1.2.9)
transp_coef (470)	edge%fluid%te%transp_coef (grid_transp_coef_el) (9.2.1.3.139)
gridlink (472)	edge%fluid%te%transp_coef%gridlink (vecint.type) (9.2.1.2.10)
pointer (472)	edge%fluid%te%transp_coef%pointer (matint.type) (9.2.1.2.8)
diff_dia (472)	edge%fluid%te%transp_coef%diff_dia (vecflt.type) (9.2.1.2.9)
diff_rad (472)	edge%fluid%te%transp_coef%diff_rad (vecflt.type) (9.2.1.2.9)
te_perp (461)	edge%fluid%te_perp (grid.te) (9.2.1.3.137)
main_field (470)	edge%fluid%te_perp%main_field (grid_field_el) (9.2.1.3.126)
gridlink (459)	edge%fluid%te_perp%main_field%gridlink (vecint.type) (9.2.1.2.10)
pointer (459)	edge%fluid%te_perp%main_field%pointer (matint.type) (9.2.1.2.8)
value (459)	edge%fluid%te_perp%main_field%value (vecflt.type) (9.2.1.2.9)
fluxes (470)	edge%fluid%te_perp%fluxes (grid_fluxes_heat_el) (9.2.1.3.129)
gridlink (462)	edge%fluid%te_perp%fluxes%gridlink (vecint.type) (9.2.1.2.10)
pointer (462)	edge%fluid%te_perp%fluxes%pointer (matint.type) (9.2.1.2.8)
heat_par (462)	edge%fluid%te_perp%fluxes%heat_par (vecflt.type) (9.2.1.2.9)
heat_dia (462)	edge%fluid%te_perp%fluxes%heat_dia (vecflt.type) (9.2.1.2.9)
heat_rad (462)	edge%fluid%te_perp%fluxes%heat_rad (vecflt.type) (9.2.1.2.9)
transp_coef (470)	edge%fluid%te_perp%transp_coef (grid_transp_coef_el) (9.2.1.3.139)
gridlink (472)	edge%fluid%te_perp%transp_coef%gridlink (vecint.type) (9.2.1.2.10)
pointer (472)	edge%fluid%te_perp%transp_coef%pointer (matint.type) (9.2.1.2.8)
diff_dia (472)	edge%fluid%te_perp%transp_coef%diff_dia (vecflt.type) (9.2.1.2.9)
diff_rad (472)	edge%fluid%te_perp%transp_coef%diff_rad (vecflt.type) (9.2.1.2.9)
ve_dia (461)	edge%fluid%ve_dia (grid.ne) (9.2.1.3.134)
main_field (467)	edge%fluid%ve_dia%main_field (grid_field_el) (9.2.1.3.126)
gridlink (459)	edge%fluid%ve_dia%main_field%gridlink (vecint.type) (9.2.1.2.10)
pointer (459)	edge%fluid%ve_dia%main_field%pointer (matint.type) (9.2.1.2.8)
value (459)	edge%fluid%ve_dia%main_field%value (vecflt.type) (9.2.1.2.9)
fluxes (467)	edge%fluid%ve_dia%fluxes (grid_fluxes_part_el) (9.2.1.3.131)
gridlink (464)	edge%fluid%ve_dia%fluxes%gridlink (vecint.type) (9.2.1.2.10)
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flux_rad (464)	edge%fluid%ve_dia%fluxes%flux_rad (vecflt.type) (9.2.1.2.9)
transp_coef (467)	edge%fluid%ve_dia%transp_coef (grid_transp_coef_el) (9.2.1.3.139)
gridlink (472)	edge%fluid%ve_dia%transp_coef%gridlink (vecint.type) (9.2.1.2.10)
pointer (472)	edge%fluid%ve_dia%transp_coef%pointer (matint.type) (9.2.1.2.8)
diff_dia (472)	edge%fluid%ve_dia%transp_coef%diff_dia (vecflt.type) (9.2.1.2.9)
diff_rad (472)	edge%fluid%ve_dia%transp_coef%diff_rad (vecflt.type) (9.2.1.2.9)
ve_par (461)	edge%fluid%ve_par (grid.ne) (9.2.1.3.134)
main_field (467)	edge%fluid%ve_par%main_field (grid_field_el) (9.2.1.3.126)
gridlink (459)	edge%fluid%ve_par%main_field%gridlink (vecint.type) (9.2.1.2.10)
pointer (459)	edge%fluid%ve_par%main_field%pointer (matint.type) (9.2.1.2.8)
value (459)	edge%fluid%ve_par%main_field%value (vecflt.type) (9.2.1.2.9)
fluxes (467)	edge%fluid%ve_par%fluxes (grid_fluxes_part_el) (9.2.1.3.131)
gridlink (464)	edge%fluid%ve_par%fluxes%gridlink (vecint.type) (9.2.1.2.10)
pointer (464)	edge%fluid%ve_par%fluxes%pointer (matint.type) (9.2.1.2.8)
flux_par (464)	edge%fluid%ve_par%fluxes%flux_par (vecflt.type) (9.2.1.2.9)
flux_dia (464)	edge%fluid%ve_par%fluxes%flux_dia (vecflt.type) (9.2.1.2.9)
flux_rad (464)	edge%fluid%ve_par%fluxes%flux_rad (vecflt.type) (9.2.1.2.9)
transp_coef (467)	edge%fluid%ve_par%transp_coef (grid_transp_coef_el) (9.2.1.3.139)
gridlink (472)	edge%fluid%ve_par%transp_coef%gridlink (vecint.type) (9.2.1.2.10)
pointer (472)	edge%fluid%ve_par%transp_coef%pointer (matint.type) (9.2.1.2.8)
diff_dia (472)	edge%fluid%ve_par%transp_coef%diff_dia (vecflt.type) (9.2.1.2.9)

diff_rad (472)	edge%fluid%ve_par%transp_coef%diff_rad (vecflt.type) (9.2.1.2.9)
ve_rad (461)	edge%fluid%ve_rad (grid.ne) (9.2.1.3.134)
main_field (467)	edge%fluid%ve_rad%main_field (grid_field.el) (9.2.1.3.126)
gridlink (459)	edge%fluid%ve_rad%main_field%gridlink (vecint.type) (9.2.1.2.10)
pointer (459)	edge%fluid%ve_rad%main_field%pointer (matint.type) (9.2.1.2.8)
value (459)	edge%fluid%ve_rad%main_field%value (vecflt.type) (9.2.1.2.9)
fluxes (467)	edge%fluid%ve_rad%fluxes (grid_fluxes_part.el) (9.2.1.3.131)
gridlink (464)	edge%fluid%ve_rad%fluxes%gridlink (vecint.type) (9.2.1.2.10)
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flux_dia (464)	edge%fluid%ve_rad%fluxes%flux_dia (vecflt.type) (9.2.1.2.9)
flux_rad (464)	edge%fluid%ve_rad%fluxes%flux_rad (vecflt.type) (9.2.1.2.9)
transp_coef (467)	edge%fluid%ve_rad%transp_coef (grid_transp_coef.el) (9.2.1.3.139)
gridlink (472)	edge%fluid%ve_rad%transp_coef%gridlink (vecint.type) (9.2.1.2.10)
pointer (472)	edge%fluid%ve_rad%transp_coef%pointer (matint.type) (9.2.1.2.8)
diff_dia (472)	edge%fluid%ve_rad%transp_coef%diff_dia (vecflt.type) (9.2.1.2.9)
diff_rad (472)	edge%fluid%ve_rad%transp_coef%diff_rad (vecflt.type) (9.2.1.2.9)
ni (461)	edge%fluid%ni (grid.ni) (9.2.1.3.135)
main_field (468)	edge%fluid%ni%main_field (grid_field_ion) (9.2.1.3.127)
gridlink (460)	edge%fluid%ni%main_field%gridlink (vecint.type) (9.2.1.2.10)
pointer (460)	edge%fluid%ni%main_field%pointer (matint.type) (9.2.1.2.8)
value (460)	edge%fluid%ni%main_field%value (matflt.type) (9.2.1.2.7)
fluxes (468)	edge%fluid%ni%fluxes (grid_fluxes_part_ion) (9.2.1.3.132)
gridlink (465)	edge%fluid%ni%fluxes%gridlink (vecint.type) (9.2.1.2.10)
pointer (465)	edge%fluid%ni%fluxes%pointer (matint.type) (9.2.1.2.8)
flux_par (465)	edge%fluid%ni%fluxes%flux_par (matflt.type) (9.2.1.2.7)
flux_dia (465)	edge%fluid%ni%fluxes%flux_dia (matflt.type) (9.2.1.2.7)
flux_rad (465)	edge%fluid%ni%fluxes%flux_rad (matflt.type) (9.2.1.2.7)
transp_coef (468)	edge%fluid%ni%transp_coef (grid_transp_coef_ion) (9.2.1.3.140)
gridlink (473)	edge%fluid%ni%transp_coef%gridlink (vecint.type) (9.2.1.2.10)
pointer (473)	edge%fluid%ni%transp_coef%pointer (matint.type) (9.2.1.2.8)
diff_dia (473)	edge%fluid%ni%transp_coef%diff_dia (matflt.type) (9.2.1.2.7)
diff_rad (473)	edge%fluid%ni%transp_coef%diff_rad (matflt.type) (9.2.1.2.7)
ti (461)	edge%fluid%ti (grid.ti) (9.2.1.3.138)
main_field (471)	edge%fluid%ti%main_field (grid_field_ion) (9.2.1.3.127)
gridlink (460)	edge%fluid%ti%main_field%gridlink (vecint.type) (9.2.1.2.10)
pointer (460)	edge%fluid%ti%main_field%pointer (matint.type) (9.2.1.2.8)
value (460)	edge%fluid%ti%main_field%value (matflt.type) (9.2.1.2.7)
fluxes (471)	edge%fluid%ti%fluxes (grid_fluxes_heat_ion) (9.2.1.3.130)
gridlink (463)	edge%fluid%ti%fluxes%gridlink (vecint.type) (9.2.1.2.10)
pointer (463)	edge%fluid%ti%fluxes%pointer (matint.type) (9.2.1.2.8)
heat_par (463)	edge%fluid%ti%fluxes%heat_par (matflt.type) (9.2.1.2.7)
heat_dia (463)	edge%fluid%ti%fluxes%heat_dia (matflt.type) (9.2.1.2.7)
heat_rad (463)	edge%fluid%ti%fluxes%heat_rad (matflt.type) (9.2.1.2.7)
transp_coef (471)	edge%fluid%ti%transp_coef (grid_transp_coef_ion) (9.2.1.3.140)
gridlink (473)	edge%fluid%ti%transp_coef%gridlink (vecint.type) (9.2.1.2.10)
pointer (473)	edge%fluid%ti%transp_coef%pointer (matint.type) (9.2.1.2.8)
diff_dia (473)	edge%fluid%ti%transp_coef%diff_dia (matflt.type) (9.2.1.2.7)
diff_rad (473)	edge%fluid%ti%transp_coef%diff_rad (matflt.type) (9.2.1.2.7)
ti_perp (461)	edge%fluid%ti_perp (grid.ti) (9.2.1.3.138)
main_field (471)	edge%fluid%ti_perp%main_field (grid_field_ion) (9.2.1.3.127)
gridlink (460)	edge%fluid%ti_perp%main_field%gridlink (vecint.type) (9.2.1.2.10)
pointer (460)	edge%fluid%ti_perp%main_field%pointer (matint.type) (9.2.1.2.8)
value (460)	edge%fluid%ti_perp%main_field%value (matflt.type) (9.2.1.2.7)
fluxes (471)	edge%fluid%ti_perp%fluxes (grid_fluxes_heat_ion) (9.2.1.3.130)
gridlink (463)	edge%fluid%ti_perp%fluxes%gridlink (vecint.type) (9.2.1.2.10)
pointer (463)	edge%fluid%ti_perp%fluxes%pointer (matint.type) (9.2.1.2.8)
heat_par (463)	edge%fluid%ti_perp%fluxes%heat_par (matflt.type) (9.2.1.2.7)
heat_dia (463)	edge%fluid%ti_perp%fluxes%heat_dia (matflt.type) (9.2.1.2.7)
heat_rad (463)	edge%fluid%ti_perp%fluxes%heat_rad (matflt.type) (9.2.1.2.7)
transp_coef (471)	edge%fluid%ti_perp%transp_coef (grid_transp_coef_ion) (9.2.1.3.140)



gridlink (473)  
 pointer (473)  
 diff\_dia (473)  
 diff\_rad (473)

**vi\_dia (461)**  
 main\_field (468)  
   gridlink (460)  
   pointer (460)  
   value (460)  
 fluxes (468)  
   gridlink (465)  
   pointer (465)  
   flux\_par (465)  
   flux\_dia (465)  
   flux\_rad (465)  
 transp\_coef (468)  
   gridlink (473)  
   pointer (473)  
   diff\_dia (473)  
   diff\_rad (473)

**vi\_par (461)**  
 main\_field (468)  
   gridlink (460)  
   pointer (460)  
   value (460)  
 fluxes (468)  
   gridlink (465)  
   pointer (465)  
   flux\_par (465)  
   flux\_dia (465)  
   flux\_rad (465)  
 transp\_coef (468)  
   gridlink (473)  
   pointer (473)  
   diff\_dia (473)  
   diff\_rad (473)

**vi\_rad (461)**  
 main\_field (468)  
   gridlink (460)  
   pointer (460)  
   value (460)  
 fluxes (468)  
   gridlink (465)  
   pointer (465)  
   flux\_par (465)  
   flux\_dia (465)  
   flux\_rad (465)  
 transp\_coef (468)  
   gridlink (473)  
   pointer (473)  
   diff\_dia (473)  
   diff\_rad (473)

**potential (461)**  
   gridlink (459)  
   pointer (459)  
   value (459)

**time (348)**

**codeparam (348)**  
   codename (389)  
   codeversion (389)  
   parameters (389)

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 edge%fluid%vi\_dia%fluxes (grid\_fluxes\_part\_ion) (9.2.1.3.132)  
 edge%fluid%vi\_dia%fluxes%gridlink (vecint.type) (9.2.1.2.10)  
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 edge%fluid%vi\_dia%transp\_coef%pointer (matint.type) (9.2.1.2.8)  
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 edge%fluid%vi\_dia%transp\_coef%diff\_rad (matflt.type) (9.2.1.2.7)  
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 edge%fluid%vi\_par%main\_field%gridlink (vecint.type) (9.2.1.2.10)  
 edge%fluid%vi\_par%main\_field%pointer (matint.type) (9.2.1.2.8)  
 edge%fluid%vi\_par%main\_field%value (matflt.type) (9.2.1.2.7)  
 edge%fluid%vi\_par%fluxes (grid\_fluxes\_part\_ion) (9.2.1.3.132)  
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 edge%fluid%vi\_par%fluxes%pointer (matint.type) (9.2.1.2.8)  
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 edge%fluid%vi\_par%transp\_coef%diff\_rad (matflt.type) (9.2.1.2.7)  
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 edge%fluid%vi\_rad%main\_field%value (matflt.type) (9.2.1.2.7)  
 edge%fluid%vi\_rad%fluxes (grid\_fluxes\_part\_ion) (9.2.1.3.132)  
 edge%fluid%vi\_rad%fluxes%gridlink (vecint.type) (9.2.1.2.10)  
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 edge%fluid%vi\_rad%fluxes%flux\_dia (matflt.type) (9.2.1.2.7)  
 edge%fluid%vi\_rad%fluxes%flux\_rad (matflt.type) (9.2.1.2.7)  
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 edge%fluid%vi\_rad%transp\_coef%diff\_rad (matflt.type) (9.2.1.2.7)  
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output\_diag (389)  
output\_flag (389)

edge%codeparam%output\_diag (string) (9.2.1.1.3)  
edge%codeparam%output\_flag (integer) (9.2.1.1.2)

## 9.2.2.1.14 equilibrium

datainfo (349)	equilibrium%datainfo (datainfo) (9.2.1.3.75)
dataprovider (408)	equilibrium%datainfo%dataprovider (string) (9.2.1.1.3)
putdate (408)	equilibrium%datainfo%putdate (string) (9.2.1.1.3)
source (408)	equilibrium%datainfo%source (string) (9.2.1.1.3)
comment (408)	equilibrium%datainfo%comment (string) (9.2.1.1.3)
isref (408)	equilibrium%datainfo%isref (integer) (9.2.1.1.2)
whatref (408)	equilibrium%datainfo%whatref (whatref) (9.2.1.3.305)
user (638)	equilibrium%datainfo%whatref%user (string) (9.2.1.1.3)
machine (638)	equilibrium%datainfo%whatref%machine (string) (9.2.1.1.3)
shot (638)	equilibrium%datainfo%whatref%shot (integer) (9.2.1.1.2)
run (638)	equilibrium%datainfo%whatref%run (integer) (9.2.1.1.2)
occurrence (638)	equilibrium%datainfo%whatref%occurrence (integer) (9.2.1.1.2)
putinfo (408)	equilibrium%datainfo%putinfo (putinfo) (9.2.1.3.187)
putmethod (520)	equilibrium%datainfo%putinfo%putmethod (string) (9.2.1.1.3)
putaccess (520)	equilibrium%datainfo%putinfo%putaccess (string) (9.2.1.1.3)
putlocation (520)	equilibrium%datainfo%putinfo%putlocation (string) (9.2.1.1.3)
rights (520)	equilibrium%datainfo%putinfo%rights (string) (9.2.1.1.3)
eqconstraint (349)	equilibrium%eqconstraint (eqconstraint) (9.2.1.3.108)
bpol (441)	equilibrium%eqconstraint%bpol (eqmes1D) (9.2.1.3.111)
measured (444)	equilibrium%eqconstraint%bpol%measured (vecflt_type) (9.2.1.2.9)
source (444)	equilibrium%eqconstraint%bpol%source (string) (9.2.1.1.3)
time (444)	equilibrium%eqconstraint%bpol%time (float) (9.2.1.1.1)
exact (444)	equilibrium%eqconstraint%bpol%exact (vecint_type) (9.2.1.2.10)
weight (444)	equilibrium%eqconstraint%bpol%weight (vecflt_type) (9.2.1.2.9)
sigma (444)	equilibrium%eqconstraint%bpol%sigma (vecflt_type) (9.2.1.2.9)
calculated (444)	equilibrium%eqconstraint%bpol%calculated (vecflt_type) (9.2.1.2.9)
chi2 (444)	equilibrium%eqconstraint%bpol%chi2 (vecflt_type) (9.2.1.2.9)
bvac_r (441)	equilibrium%eqconstraint%bvac_r (eqmes0D) (9.2.1.3.110)
measured (443)	equilibrium%eqconstraint%bvac_r%measured (float) (9.2.1.1.1)
source (443)	equilibrium%eqconstraint%bvac_r%source (string) (9.2.1.1.3)
time (443)	equilibrium%eqconstraint%bvac_r%time (float) (9.2.1.1.1)
exact (443)	equilibrium%eqconstraint%bvac_r%exact (integer) (9.2.1.1.2)
weight (443)	equilibrium%eqconstraint%bvac_r%weight (float) (9.2.1.1.1)
sigma (443)	equilibrium%eqconstraint%bvac_r%sigma (float) (9.2.1.1.1)
calculated (443)	equilibrium%eqconstraint%bvac_r%calculated (float) (9.2.1.1.1)
chi2 (443)	equilibrium%eqconstraint%bvac_r%chi2 (float) (9.2.1.1.1)
faraday (441)	equilibrium%eqconstraint%faraday (eqmes1D) (9.2.1.3.111)
measured (444)	equilibrium%eqconstraint%faraday%measured (vecflt_type) (9.2.1.2.9)
source (444)	equilibrium%eqconstraint%faraday%source (string) (9.2.1.1.3)
time (444)	equilibrium%eqconstraint%faraday%time (float) (9.2.1.1.1)
exact (444)	equilibrium%eqconstraint%faraday%exact (vecint_type) (9.2.1.2.10)
weight (444)	equilibrium%eqconstraint%faraday%weight (vecflt_type) (9.2.1.2.9)
sigma (444)	equilibrium%eqconstraint%faraday%sigma (vecflt_type) (9.2.1.2.9)
calculated (444)	equilibrium%eqconstraint%faraday%calculated (vecflt_type) (9.2.1.2.9)
chi2 (444)	equilibrium%eqconstraint%faraday%chi2 (vecflt_type) (9.2.1.2.9)
flux (441)	equilibrium%eqconstraint%flux (eqmes1D) (9.2.1.3.111)
measured (444)	equilibrium%eqconstraint%flux%measured (vecflt_type) (9.2.1.2.9)
source (444)	equilibrium%eqconstraint%flux%source (string) (9.2.1.1.3)
time (444)	equilibrium%eqconstraint%flux%time (float) (9.2.1.1.1)
exact (444)	equilibrium%eqconstraint%flux%exact (vecint_type) (9.2.1.2.10)
weight (444)	equilibrium%eqconstraint%flux%weight (vecflt_type) (9.2.1.2.9)
sigma (444)	equilibrium%eqconstraint%flux%sigma (vecflt_type) (9.2.1.2.9)
calculated (444)	equilibrium%eqconstraint%flux%calculated (vecflt_type) (9.2.1.2.9)
chi2 (444)	equilibrium%eqconstraint%flux%chi2 (vecflt_type) (9.2.1.2.9)
i_plasma (441)	equilibrium%eqconstraint%i_plasma (eqmes0D) (9.2.1.3.110)
measured (443)	equilibrium%eqconstraint%i_plasma%measured (float) (9.2.1.1.1)



source (443)  
 time (443)  
 exact (443)  
 weight (443)  
 sigma (443)  
 calculated (443)  
 chi2 (443)

isoflux (441)
 

- position (475)
  - r (547)
  - z (547)
- source (475)
- weight (475)
- sigma (475)
- calculated (475)
- chi2 (475)

jsurf (441)
 

- measured (444)
- source (444)
- time (444)
- exact (444)
- weight (444)
- sigma (444)
- calculated (444)
- chi2 (444)

magnet\_iron (441)
 

- mr (483)
  - measured (444)
  - source (444)
  - time (444)
  - exact (444)
  - weight (444)
  - sigma (444)
  - calculated (444)
  - chi2 (444)
- mz (483)
  - measured (444)
  - source (444)
  - time (444)
  - exact (444)
  - weight (444)
  - sigma (444)
  - calculated (444)
  - chi2 (444)

mse (441)
 

- measured (444)
- source (444)
- time (444)
- exact (444)
- weight (444)
- sigma (444)
- calculated (444)
- chi2 (444)

ne (441)
 

- measured (444)
- source (444)
- time (444)
- exact (444)
- weight (444)
- sigma (444)
- calculated (444)

equilibrium%eqconstraint%i\_plasma%source (string) (9.2.1.1.3)  
 equilibrium%eqconstraint%i\_plasma%time (float) (9.2.1.1.1)  
 equilibrium%eqconstraint%i\_plasma%exact (integer) (9.2.1.1.2)  
 equilibrium%eqconstraint%i\_plasma%weight (float) (9.2.1.1.1)  
 equilibrium%eqconstraint%i\_plasma%sigma (float) (9.2.1.1.1)  
 equilibrium%eqconstraint%i\_plasma%calculated (float) (9.2.1.1.1)  
 equilibrium%eqconstraint%i\_plasma%chi2 (float) (9.2.1.1.1)  
 equilibrium%eqconstraint%isoflux (isoflux) (9.2.1.3.142)  
 equilibrium%eqconstraint%isoflux%position (rz1D) (9.2.1.3.214)  
 equilibrium%eqconstraint%isoflux%position%r (vecflt.type) (9.2.1.2.9)  
 equilibrium%eqconstraint%isoflux%position%z (vecflt.type) (9.2.1.2.9)  
 equilibrium%eqconstraint%isoflux%source (string) (9.2.1.1.3)  
 equilibrium%eqconstraint%isoflux%weight (vecflt.type) (9.2.1.2.9)  
 equilibrium%eqconstraint%isoflux%sigma (vecflt.type) (9.2.1.2.9)  
 equilibrium%eqconstraint%isoflux%calculated (vecflt.type) (9.2.1.2.9)  
 equilibrium%eqconstraint%isoflux%chi2 (vecflt.type) (9.2.1.2.9)  
 equilibrium%eqconstraint%jsurf (eqmes1D) (9.2.1.3.111)  
 equilibrium%eqconstraint%jsurf%measured (vecflt.type) (9.2.1.2.9)  
 equilibrium%eqconstraint%jsurf%source (string) (9.2.1.1.3)  
 equilibrium%eqconstraint%jsurf%time (float) (9.2.1.1.1)  
 equilibrium%eqconstraint%jsurf%exact (vecint.type) (9.2.1.2.10)  
 equilibrium%eqconstraint%jsurf%weight (vecflt.type) (9.2.1.2.9)  
 equilibrium%eqconstraint%jsurf%sigma (vecflt.type) (9.2.1.2.9)  
 equilibrium%eqconstraint%jsurf%calculated (vecflt.type) (9.2.1.2.9)  
 equilibrium%eqconstraint%jsurf%chi2 (vecflt.type) (9.2.1.2.9)  
 equilibrium%eqconstraint%magnet\_iron (magnet\_iron) (9.2.1.3.150)  
 equilibrium%eqconstraint%magnet\_iron%mr (eqmes1D) (9.2.1.3.111)  
 equilibrium%eqconstraint%magnet\_iron%mr%measured (vecflt.type) (9.2.1.2.9)  
 equilibrium%eqconstraint%magnet\_iron%mr%source (string) (9.2.1.1.3)  
 equilibrium%eqconstraint%magnet\_iron%mr%time (float) (9.2.1.1.1)  
 equilibrium%eqconstraint%magnet\_iron%mr%exact (vecint.type) (9.2.1.2.10)  
 equilibrium%eqconstraint%magnet\_iron%mr%weight (vecflt.type) (9.2.1.2.9)  
 equilibrium%eqconstraint%magnet\_iron%mr%sigma (vecflt.type) (9.2.1.2.9)  
 equilibrium%eqconstraint%magnet\_iron%mr%calculated (vecflt.type) (9.2.1.2.9)  
 equilibrium%eqconstraint%magnet\_iron%mr%chi2 (vecflt.type) (9.2.1.2.9)  
 equilibrium%eqconstraint%magnet\_iron%mz (eqmes1D) (9.2.1.3.111)  
 equilibrium%eqconstraint%magnet\_iron%mz%measured (vecflt.type) (9.2.1.2.9)  
 equilibrium%eqconstraint%magnet\_iron%mz%source (string) (9.2.1.1.3)  
 equilibrium%eqconstraint%magnet\_iron%mz%time (float) (9.2.1.1.1)  
 equilibrium%eqconstraint%magnet\_iron%mz%exact (vecint.type) (9.2.1.2.10)  
 equilibrium%eqconstraint%magnet\_iron%mz%weight (vecflt.type) (9.2.1.2.9)  
 equilibrium%eqconstraint%magnet\_iron%mz%sigma (vecflt.type) (9.2.1.2.9)  
 equilibrium%eqconstraint%magnet\_iron%mz%calculated (vecflt.type) (9.2.1.2.9)  
 equilibrium%eqconstraint%magnet\_iron%mz%chi2 (vecflt.type) (9.2.1.2.9)  
 equilibrium%eqconstraint%mse (eqmes1D) (9.2.1.3.111)  
 equilibrium%eqconstraint%mse%measured (vecflt.type) (9.2.1.2.9)  
 equilibrium%eqconstraint%mse%source (string) (9.2.1.1.3)  
 equilibrium%eqconstraint%mse%time (float) (9.2.1.1.1)  
 equilibrium%eqconstraint%mse%exact (vecint.type) (9.2.1.2.10)  
 equilibrium%eqconstraint%mse%weight (vecflt.type) (9.2.1.2.9)  
 equilibrium%eqconstraint%mse%sigma (vecflt.type) (9.2.1.2.9)  
 equilibrium%eqconstraint%mse%calculated (vecflt.type) (9.2.1.2.9)  
 equilibrium%eqconstraint%mse%chi2 (vecflt.type) (9.2.1.2.9)  
 equilibrium%eqconstraint%ne (eqmes1D) (9.2.1.3.111)  
 equilibrium%eqconstraint%ne%measured (vecflt.type) (9.2.1.2.9)  
 equilibrium%eqconstraint%ne%source (string) (9.2.1.1.3)  
 equilibrium%eqconstraint%ne%time (float) (9.2.1.1.1)  
 equilibrium%eqconstraint%ne%exact (vecint.type) (9.2.1.2.10)  
 equilibrium%eqconstraint%ne%weight (vecflt.type) (9.2.1.2.9)  
 equilibrium%eqconstraint%ne%sigma (vecflt.type) (9.2.1.2.9)  
 equilibrium%eqconstraint%ne%calculated (vecflt.type) (9.2.1.2.9)

chi2 (444)	equilibrium%eqconstraint%ne%chi2 (vecflt.type) (9.2.1.2.9)
pfcurrent (441)	equilibrium%eqconstraint%pfcurrent (eqmes1D) (9.2.1.3.111)
measured (444)	equilibrium%eqconstraint%pfcurrent%measured (vecflt.type) (9.2.1.2.9)
source (444)	equilibrium%eqconstraint%pfcurrent%source (string) (9.2.1.1.3)
time (444)	equilibrium%eqconstraint%pfcurrent%time (float) (9.2.1.1.1)
exact (444)	equilibrium%eqconstraint%pfcurrent%exact (vecint.type) (9.2.1.2.10)
weight (444)	equilibrium%eqconstraint%pfcurrent%weight (vecflt.type) (9.2.1.2.9)
sigma (444)	equilibrium%eqconstraint%pfcurrent%sigma (vecflt.type) (9.2.1.2.9)
calculated (444)	equilibrium%eqconstraint%pfcurrent%calculated (vecflt.type) (9.2.1.2.9)
chi2 (444)	equilibrium%eqconstraint%pfcurrent%chi2 (vecflt.type) (9.2.1.2.9)
pressure (441)	equilibrium%eqconstraint%pressure (eqmes1D) (9.2.1.3.111)
measured (444)	equilibrium%eqconstraint%pressure%measured (vecflt.type) (9.2.1.2.9)
source (444)	equilibrium%eqconstraint%pressure%source (string) (9.2.1.1.3)
time (444)	equilibrium%eqconstraint%pressure%time (float) (9.2.1.1.1)
exact (444)	equilibrium%eqconstraint%pressure%exact (vecint.type) (9.2.1.2.10)
weight (444)	equilibrium%eqconstraint%pressure%weight (vecflt.type) (9.2.1.2.9)
sigma (444)	equilibrium%eqconstraint%pressure%sigma (vecflt.type) (9.2.1.2.9)
calculated (444)	equilibrium%eqconstraint%pressure%calculated (vecflt.type) (9.2.1.2.9)
chi2 (444)	equilibrium%eqconstraint%pressure%chi2 (vecflt.type) (9.2.1.2.9)
q (441)	equilibrium%eqconstraint%q (q) (9.2.1.3.188)
qvalue (521)	equilibrium%eqconstraint%q%qvalue (vecflt.type) (9.2.1.2.9)
position (521)	equilibrium%eqconstraint%q%position (rz1D) (9.2.1.3.214)
r (547)	equilibrium%eqconstraint%q%position%r (vecflt.type) (9.2.1.2.9)
z (547)	equilibrium%eqconstraint%q%position%z (vecflt.type) (9.2.1.2.9)
source (521)	equilibrium%eqconstraint%q%source (string) (9.2.1.1.3)
exact (521)	equilibrium%eqconstraint%q%exact (integer) (9.2.1.1.2)
weight (521)	equilibrium%eqconstraint%q%weight (vecflt.type) (9.2.1.2.9)
sigma (521)	equilibrium%eqconstraint%q%sigma (vecflt.type) (9.2.1.2.9)
calculated (521)	equilibrium%eqconstraint%q%calculated (vecflt.type) (9.2.1.2.9)
chi2 (521)	equilibrium%eqconstraint%q%chi2 (vecflt.type) (9.2.1.2.9)
xpts (441)	equilibrium%eqconstraint%xpts (xpts) (9.2.1.3.306)
position (639)	equilibrium%eqconstraint%xpts%position (rz1D) (9.2.1.3.214)
r (547)	equilibrium%eqconstraint%xpts%position%r (vecflt.type) (9.2.1.2.9)
z (547)	equilibrium%eqconstraint%xpts%position%z (vecflt.type) (9.2.1.2.9)
source (639)	equilibrium%eqconstraint%xpts%source (string) (9.2.1.1.3)
weight (639)	equilibrium%eqconstraint%xpts%weight (vecflt.type) (9.2.1.2.9)
sigma (639)	equilibrium%eqconstraint%xpts%sigma (vecflt.type) (9.2.1.2.9)
calculated (639)	equilibrium%eqconstraint%xpts%calculated (vecflt.type) (9.2.1.2.9)
chi2 (639)	equilibrium%eqconstraint%xpts%chi2 (vecflt.type) (9.2.1.2.9)
eqgeometry (349)	equilibrium%eqgeometry (eqgeometry) (9.2.1.3.109)
source (442)	equilibrium%eqgeometry%source (string) (9.2.1.1.3)
boundarytype (442)	equilibrium%eqgeometry%boundarytype (integer) (9.2.1.1.2)
boundary (442)	equilibrium%eqgeometry%boundary (rz1D_npoints) (9.2.1.3.215)
r (548)	equilibrium%eqgeometry%boundary%r (vecflt.type) (9.2.1.2.9)
z (548)	equilibrium%eqgeometry%boundary%z (vecflt.type) (9.2.1.2.9)
npoints (548)	equilibrium%eqgeometry%boundary%npoints (integer) (9.2.1.1.2)
geom_axis (442)	equilibrium%eqgeometry%geom_axis (rz0D) (9.2.1.3.213)
r (546)	equilibrium%eqgeometry%geom_axis%r (float) (9.2.1.1.1)
z (546)	equilibrium%eqgeometry%geom_axis%z (float) (9.2.1.1.1)
a_minor (442)	equilibrium%eqgeometry%a_minor (float) (9.2.1.1.1)
elongation (442)	equilibrium%eqgeometry%elongation (float) (9.2.1.1.1)
tria_upper (442)	equilibrium%eqgeometry%tria_upper (float) (9.2.1.1.1)
tria_lower (442)	equilibrium%eqgeometry%tria_lower (float) (9.2.1.1.1)
xpts (442)	equilibrium%eqgeometry%xpts (rz1D) (9.2.1.3.214)
r (547)	equilibrium%eqgeometry%xpts%r (vecflt.type) (9.2.1.2.9)
z (547)	equilibrium%eqgeometry%xpts%z (vecflt.type) (9.2.1.2.9)
left_low_st (442)	equilibrium%eqgeometry%left_low_st (rz0D) (9.2.1.3.213)
r (546)	equilibrium%eqgeometry%left_low_st%r (float) (9.2.1.1.1)
z (546)	equilibrium%eqgeometry%left_low_st%z (float) (9.2.1.1.1)
right_low_st (442)	equilibrium%eqgeometry%right_low_st (rz0D) (9.2.1.3.213)
r (546)	equilibrium%eqgeometry%right_low_st%r (float) (9.2.1.1.1)

z (546)	equilibrium%eqgeometry%right_low_st%z (float) (9.2.1.1.1)
left_up_st (442)	equilibrium%eqgeometry%left_up_st (rz0D) (9.2.1.3.213)
r (546)	equilibrium%eqgeometry%left_up_st%r (float) (9.2.1.1.1)
z (546)	equilibrium%eqgeometry%left_up_st%z (float) (9.2.1.1.1)
right_up_st (442)	equilibrium%eqgeometry%right_up_st (rz0D) (9.2.1.3.213)
r (546)	equilibrium%eqgeometry%right_up_st%r (float) (9.2.1.1.1)
z (546)	equilibrium%eqgeometry%right_up_st%z (float) (9.2.1.1.1)
active_limit (442)	equilibrium%eqgeometry%active_limit (rz0D) (9.2.1.3.213)
r (546)	equilibrium%eqgeometry%active_limit%r (float) (9.2.1.1.1)
z (546)	equilibrium%eqgeometry%active_limit%z (float) (9.2.1.1.1)
flush (349)	equilibrium%flush (flush) (9.2.1.3.116)
datainfo (449)	equilibrium%flush%datainfo (datainfo) (9.2.1.3.75)
dataprovider (408)	equilibrium%flush%datainfo%dataprovider (string) (9.2.1.1.3)
putdate (408)	equilibrium%flush%datainfo%putdate (string) (9.2.1.1.3)
source (408)	equilibrium%flush%datainfo%source (string) (9.2.1.1.3)
comment (408)	equilibrium%flush%datainfo%comment (string) (9.2.1.1.3)
isref (408)	equilibrium%flush%datainfo%isref (integer) (9.2.1.1.2)
whatref (408)	equilibrium%flush%datainfo%whatref (whatref) (9.2.1.3.305)
user (638)	equilibrium%flush%datainfo%whatref%user (string) (9.2.1.1.3)
machine (638)	equilibrium%flush%datainfo%whatref%machine (string) (9.2.1.1.3)
shot (638)	equilibrium%flush%datainfo%whatref%shot (integer) (9.2.1.1.2)
run (638)	equilibrium%flush%datainfo%whatref%run (integer) (9.2.1.1.2)
occurrence (638)	equilibrium%flush%datainfo%whatref%occurrence (integer) (9.2.1.1.2)
putinfo (408)	equilibrium%flush%datainfo%putinfo (putinfo) (9.2.1.3.187)
putmethod (520)	equilibrium%flush%datainfo%putinfo%putmethod (string) (9.2.1.1.3)
putaccess (520)	equilibrium%flush%datainfo%putinfo%putaccess (string) (9.2.1.1.3)
putlocation (520)	equilibrium%flush%datainfo%putinfo%putlocation (string) (9.2.1.1.3)
rights (520)	equilibrium%flush%datainfo%putinfo%rights (string) (9.2.1.1.3)
position (449)	equilibrium%flush%position (rz1D) (9.2.1.3.214)
r (547)	equilibrium%flush%position%r (vecflt_type) (9.2.1.2.9)
z (547)	equilibrium%flush%position%z (vecflt_type) (9.2.1.2.9)
coef (449)	equilibrium%flush%coef (matflt_type) (9.2.1.2.7)
codeparam (449)	equilibrium%flush%codeparam (codeparam) (9.2.1.3.56)
codename (389)	equilibrium%flush%codeparam%codename (string) (9.2.1.1.3)
codeversion (389)	equilibrium%flush%codeparam%codeversion (string) (9.2.1.1.3)
parameters (389)	equilibrium%flush%codeparam%parameters (string) (9.2.1.1.3)
output_diag (389)	equilibrium%flush%codeparam%output_diag (string) (9.2.1.1.3)
output_flag (389)	equilibrium%flush%codeparam%output_flag (integer) (9.2.1.1.2)
global_param (349)	equilibrium%global_param (global_param) (9.2.1.3.123)
beta_pol (456)	equilibrium%global_param%beta_pol (float) (9.2.1.1.1)
beta_tor (456)	equilibrium%global_param%beta_tor (float) (9.2.1.1.1)
beta_normal (456)	equilibrium%global_param%beta_normal (float) (9.2.1.1.1)
i_plasma (456)	equilibrium%global_param%i_plasma (float) (9.2.1.1.1)
li (456)	equilibrium%global_param%li (float) (9.2.1.1.1)
volume (456)	equilibrium%global_param%volume (float) (9.2.1.1.1)
area (456)	equilibrium%global_param%area (float) (9.2.1.1.1)
psi_ax (456)	equilibrium%global_param%psi_ax (float) (9.2.1.1.1)
psi_bound (456)	equilibrium%global_param%psi_bound (float) (9.2.1.1.1)
mag_axis (456)	equilibrium%global_param%mag_axis (mag_axis) (9.2.1.3.149)
position (482)	equilibrium%global_param%mag_axis%position (rz0D) (9.2.1.3.213)
r (546)	equilibrium%global_param%mag_axis%position%r (float) (9.2.1.1.1)
z (546)	equilibrium%global_param%mag_axis%position%z (float) (9.2.1.1.1)
bphi (482)	equilibrium%global_param%mag_axis%bphi (float) (9.2.1.1.1)
q (482)	equilibrium%global_param%mag_axis%q (float) (9.2.1.1.1)
q_95 (456)	equilibrium%global_param%q_95 (float) (9.2.1.1.1)
q_min (456)	equilibrium%global_param%q_min (float) (9.2.1.1.1)
toroid_field (456)	equilibrium%global_param%toroid_field (b0r0) (9.2.1.3.46)
r0 (379)	equilibrium%global_param%toroid_field%r0 (float) (9.2.1.1.1)
b0 (379)	equilibrium%global_param%toroid_field%b0 (float) (9.2.1.1.1)
w_mhd (456)	equilibrium%global_param%w_mhd (float) (9.2.1.1.1)
gamma (456)	equilibrium%global_param%gamma (float) (9.2.1.1.1)

profiles.1d (349)  
   psi (515)  
   phi (515)  
   pressure (515)  
   F.dia (515)  
   pprime (515)  
   ffprime (515)  
   jphi (515)  
   jparallel (515)  
   q (515)  
   r\_inboard (515)  
   r\_outboard (515)  
   rho.tor (515)  
   dpsidrho.tor (515)  
   rho.vol (515)  
   beta.pol (515)  
   li (515)  
   elongation (515)  
   tria.upper (515)  
   tria.lower (515)  
   volume (515)  
   vprime (515)  
   area (515)  
   aprime (515)  
   surface (515)  
   ftrap (515)  
   gm1 (515)  
   gm2 (515)  
   gm3 (515)  
   gm4 (515)  
   gm5 (515)  
   gm6 (515)  
   gm7 (515)  
   gm8 (515)  
   gm9 (515)  
   b\_av (515)  
   b\_min (515)  
   b\_max (515)  
   omega (515)  
   omegaprime (515)  
   mach.a (515)  
   phi.flow (515)  
   s.flow (515)  
   h.flow (515)  
 profiles.2d (349)  
   grid.type (516)  
   grid (516)  
     dim1 (458)  
     dim2 (458)  
     connect (458)  
   r (516)  
   z (516)  
   psi (516)  
   theta (516)  
   jphi (516)  
   jpar (516)  
   br (516)  
   bz (516)  
   bphi (516)  
   vphi (516)  
   vtheta (516)  
   equilibrium%profiles.1d (profiles.1d) (9.2.1.3.182)  
   equilibrium%profiles.1d%psi (vecflt.type) (9.2.1.2.9)  
   equilibrium%profiles.1d%phi (vecflt.type) (9.2.1.2.9)  
   equilibrium%profiles.1d%pressure (vecflt.type) (9.2.1.2.9)  
   equilibrium%profiles.1d%F.dia (vecflt.type) (9.2.1.2.9)  
   equilibrium%profiles.1d%pprime (vecflt.type) (9.2.1.2.9)  
   equilibrium%profiles.1d%ffprime (vecflt.type) (9.2.1.2.9)  
   equilibrium%profiles.1d%jphi (vecflt.type) (9.2.1.2.9)  
   equilibrium%profiles.1d%jparallel (vecflt.type) (9.2.1.2.9)  
   equilibrium%profiles.1d%q (vecflt.type) (9.2.1.2.9)  
   equilibrium%profiles.1d%r\_inboard (vecflt.type) (9.2.1.2.9)  
   equilibrium%profiles.1d%r\_outboard (vecflt.type) (9.2.1.2.9)  
   equilibrium%profiles.1d%rho.tor (vecflt.type) (9.2.1.2.9)  
   equilibrium%profiles.1d%dpsidrho.tor (vecflt.type) (9.2.1.2.9)  
   equilibrium%profiles.1d%rho.vol (vecflt.type) (9.2.1.2.9)  
   equilibrium%profiles.1d%beta.pol (vecflt.type) (9.2.1.2.9)  
   equilibrium%profiles.1d%li (vecflt.type) (9.2.1.2.9)  
   equilibrium%profiles.1d%elongation (vecflt.type) (9.2.1.2.9)  
   equilibrium%profiles.1d%tria.upper (vecflt.type) (9.2.1.2.9)  
   equilibrium%profiles.1d%tria.lower (vecflt.type) (9.2.1.2.9)  
   equilibrium%profiles.1d%volume (vecflt.type) (9.2.1.2.9)  
   equilibrium%profiles.1d%vprime (vecflt.type) (9.2.1.2.9)  
   equilibrium%profiles.1d%area (vecflt.type) (9.2.1.2.9)  
   equilibrium%profiles.1d%aprime (vecflt.type) (9.2.1.2.9)  
   equilibrium%profiles.1d%surface (vecflt.type) (9.2.1.2.9)  
   equilibrium%profiles.1d%ftrap (vecflt.type) (9.2.1.2.9)  
   equilibrium%profiles.1d%gm1 (vecflt.type) (9.2.1.2.9)  
   equilibrium%profiles.1d%gm2 (vecflt.type) (9.2.1.2.9)  
   equilibrium%profiles.1d%gm3 (vecflt.type) (9.2.1.2.9)  
   equilibrium%profiles.1d%gm4 (vecflt.type) (9.2.1.2.9)  
   equilibrium%profiles.1d%gm5 (vecflt.type) (9.2.1.2.9)  
   equilibrium%profiles.1d%gm6 (vecflt.type) (9.2.1.2.9)  
   equilibrium%profiles.1d%gm7 (vecflt.type) (9.2.1.2.9)  
   equilibrium%profiles.1d%gm8 (vecflt.type) (9.2.1.2.9)  
   equilibrium%profiles.1d%gm9 (vecflt.type) (9.2.1.2.9)  
   equilibrium%profiles.1d%b\_av (vecflt.type) (9.2.1.2.9)  
   equilibrium%profiles.1d%b\_min (vecflt.type) (9.2.1.2.9)  
   equilibrium%profiles.1d%b\_max (vecflt.type) (9.2.1.2.9)  
   equilibrium%profiles.1d%omega (vecflt.type) (9.2.1.2.9)  
   equilibrium%profiles.1d%omegaprime (vecflt.type) (9.2.1.2.9)  
   equilibrium%profiles.1d%mach.a (vecflt.type) (9.2.1.2.9)  
   equilibrium%profiles.1d%phi.flow (vecflt.type) (9.2.1.2.9)  
   equilibrium%profiles.1d%s.flow (vecflt.type) (9.2.1.2.9)  
   equilibrium%profiles.1d%h.flow (vecflt.type) (9.2.1.2.9)  
   equilibrium%profiles.2d (profiles.2d) (9.2.1.3.183)  
   equilibrium%profiles.2d%grid.type (string) (9.2.1.1.3)  
   equilibrium%profiles.2d%grid (grid) (9.2.1.3.125)  
   equilibrium%profiles.2d%grid%dim1 (vecflt.type) (9.2.1.2.9)  
   equilibrium%profiles.2d%grid%dim2 (vecflt.type) (9.2.1.2.9)  
   equilibrium%profiles.2d%grid%connect (matint.type) (9.2.1.2.8)  
   equilibrium%profiles.2d%r (matflt.type) (9.2.1.2.7)  
   equilibrium%profiles.2d%z (matflt.type) (9.2.1.2.7)  
   equilibrium%profiles.2d%psi (matflt.type) (9.2.1.2.7)  
   equilibrium%profiles.2d%theta (matflt.type) (9.2.1.2.7)  
   equilibrium%profiles.2d%jphi (matflt.type) (9.2.1.2.7)  
   equilibrium%profiles.2d%jpar (matflt.type) (9.2.1.2.7)  
   equilibrium%profiles.2d%br (matflt.type) (9.2.1.2.7)  
   equilibrium%profiles.2d%bz (matflt.type) (9.2.1.2.7)  
   equilibrium%profiles.2d%bphi (matflt.type) (9.2.1.2.7)  
   equilibrium%profiles.2d%vphi (matflt.type) (9.2.1.2.7)  
   equilibrium%profiles.2d%vtheta (matflt.type) (9.2.1.2.7)

rho.mass (516)	equilibrium%profiles_2d%rho.mass (matflt.type) (9.2.1.2.7)
pressure (516)	equilibrium%profiles_2d%pressure (matflt.type) (9.2.1.2.7)
temperature (516)	equilibrium%profiles_2d%temperature (matflt.type) (9.2.1.2.7)
coord_sys (349)	equilibrium%coord_sys (coord_sys) (9.2.1.3.61)
grid_type (394)	equilibrium%coord_sys%grid_type (string) (9.2.1.1.3)
grid (394)	equilibrium%coord_sys%grid (reggrid) (9.2.1.3.211)
dim1 (544)	equilibrium%coord_sys%grid%dim1 (vecflt.type) (9.2.1.2.9)
dim2 (544)	equilibrium%coord_sys%grid%dim2 (vecflt.type) (9.2.1.2.9)
jacobian (394)	equilibrium%coord_sys%jacobian (matflt.type) (9.2.1.2.7)
g_11 (394)	equilibrium%coord_sys%g_11 (matflt.type) (9.2.1.2.7)
g_12 (394)	equilibrium%coord_sys%g_12 (matflt.type) (9.2.1.2.7)
g_13 (394)	equilibrium%coord_sys%g_13 (matflt.type) (9.2.1.2.7)
g_22 (394)	equilibrium%coord_sys%g_22 (matflt.type) (9.2.1.2.7)
g_23 (394)	equilibrium%coord_sys%g_23 (matflt.type) (9.2.1.2.7)
g_33 (394)	equilibrium%coord_sys%g_33 (matflt.type) (9.2.1.2.7)
position (394)	equilibrium%coord_sys%position (rz2D) (9.2.1.3.216)
r (549)	equilibrium%coord_sys%position%r (matflt.type) (9.2.1.2.7)
z (549)	equilibrium%coord_sys%position%z (matflt.type) (9.2.1.2.7)
time (349)	equilibrium%time (float) (9.2.1.1.1)
codeparam (349)	equilibrium%codeparam (codeparam) (9.2.1.3.56)
codename (389)	equilibrium%codeparam%codename (string) (9.2.1.1.3)
codeversion (389)	equilibrium%codeparam%codeversion (string) (9.2.1.1.3)
parameters (389)	equilibrium%codeparam%parameters (string) (9.2.1.1.3)
output_diag (389)	equilibrium%codeparam%output_diag (string) (9.2.1.1.3)
output_flag (389)	equilibrium%codeparam%output_flag (integer) (9.2.1.1.2)

### 9.2.2.1.15 interfdiag

datainfo (480)	lineintegralsdiag%datainfo (datainfo) (9.2.1.3.75)
dataprovder (408)	lineintegralsdiag%datainfo%dataprovder (string) (9.2.1.1.3)
putdate (408)	lineintegralsdiag%datainfo%putdate (string) (9.2.1.1.3)
source (408)	lineintegralsdiag%datainfo%source (string) (9.2.1.1.3)
comment (408)	lineintegralsdiag%datainfo%comment (string) (9.2.1.1.3)
isref (408)	lineintegralsdiag%datainfo%isref (integer) (9.2.1.1.2)
whatref (408)	lineintegralsdiag%datainfo%whatref (whatref) (9.2.1.3.305)
user (638)	lineintegralsdiag%datainfo%whatref%user (string) (9.2.1.1.3)
machine (638)	lineintegralsdiag%datainfo%whatref%machine (string) (9.2.1.1.3)
shot (638)	lineintegralsdiag%datainfo%whatref%shot (integer) (9.2.1.1.2)
run (638)	lineintegralsdiag%datainfo%whatref%run (integer) (9.2.1.1.2)
occurrence (638)	lineintegralsdiag%datainfo%whatref%occurrence (integer) (9.2.1.1.2)
putinfo (408)	lineintegralsdiag%datainfo%putinfo (putinfo) (9.2.1.3.187)
putmethod (520)	lineintegralsdiag%datainfo%putinfo%putmethod (string) (9.2.1.1.3)
putaccess (520)	lineintegralsdiag%datainfo%putinfo%putaccess (string) (9.2.1.1.3)
putlocation (520)	lineintegralsdiag%datainfo%putinfo%putlocation (string) (9.2.1.1.3)
rights (520)	lineintegralsdiag%datainfo%putinfo%rights (string) (9.2.1.1.3)
expression (480)	lineintegralsdiag%expression (string) (9.2.1.1.3)
setup_line (480)	lineintegralsdiag%setup_line (setup_line) (9.2.1.3.249)
pivot_point (582)	lineintegralsdiag%setup_line%pivot_point (rzphi1D) (9.2.1.3.218)
r (551)	lineintegralsdiag%setup_line%pivot_point%r (vecflt.type) (9.2.1.2.9)
z (551)	lineintegralsdiag%setup_line%pivot_point%z (vecflt.type) (9.2.1.2.9)
phi (551)	lineintegralsdiag%setup_line%pivot_point%phi (vecflt.type) (9.2.1.2.9)
horchordang1 (582)	lineintegralsdiag%setup_line%horchordang1 (vecflt.type) (9.2.1.2.9)
verchordang1 (582)	lineintegralsdiag%setup_line%verchordang1 (vecflt.type) (9.2.1.2.9)
width (582)	lineintegralsdiag%setup_line%width (vecflt.type) (9.2.1.2.9)
second_point (582)	lineintegralsdiag%setup_line%second_point (rzphi1D) (9.2.1.3.218)
r (551)	lineintegralsdiag%setup_line%second_point%r (vecflt.type) (9.2.1.2.9)
z (551)	lineintegralsdiag%setup_line%second_point%z (vecflt.type) (9.2.1.2.9)
phi (551)	lineintegralsdiag%setup_line%second_point%phi (vecflt.type) (9.2.1.2.9)
horchordang2 (582)	lineintegralsdiag%setup_line%horchordang2 (vecflt.type) (9.2.1.2.9)
verchordang2 (582)	lineintegralsdiag%setup_line%verchordang2 (vecflt.type) (9.2.1.2.9)
third_point (582)	lineintegralsdiag%setup_line%third_point (rzphi1D) (9.2.1.3.218)

r (551)	lineintegraldiag%setup_line%third_point%r (vecflt.type) (9.2.1.2.9)
z (551)	lineintegraldiag%setup_line%third_point%z (vecflt.type) (9.2.1.2.9)
phi (551)	lineintegraldiag%setup_line%third_point%phi (vecflt.type) (9.2.1.2.9)
nchordpoints (582)	lineintegraldiag%setup_line%nchordpoints (integer) (9.2.1.1.2)
measure (480)	lineintegraldiag%measure (exp1D) (9.2.1.3.113)
value (446)	lineintegraldiag%measure%value (vecflt.type) (9.2.1.2.9)
abserror (446)	lineintegraldiag%measure%abserror (vecflt.type) (9.2.1.2.9)
releror (446)	lineintegraldiag%measure%releror (vecflt.type) (9.2.1.2.9)
time (480)	lineintegraldiag%time (float) (9.2.1.1.1)

### 9.2.2.1.16 ironmodel

datainfo (351)	ironmodel%datainfo (datainfo) (9.2.1.3.75)
dataprovider (408)	ironmodel%datainfo%dataprovider (string) (9.2.1.1.3)
putdate (408)	ironmodel%datainfo%putdate (string) (9.2.1.1.3)
source (408)	ironmodel%datainfo%source (string) (9.2.1.1.3)
comment (408)	ironmodel%datainfo%comment (string) (9.2.1.1.3)
isref (408)	ironmodel%datainfo%isref (integer) (9.2.1.1.2)
whatref (408)	ironmodel%datainfo%whatref (whatref) (9.2.1.3.305)
user (638)	ironmodel%datainfo%whatref%user (string) (9.2.1.1.3)
machine (638)	ironmodel%datainfo%whatref%machine (string) (9.2.1.1.3)
shot (638)	ironmodel%datainfo%whatref%shot (integer) (9.2.1.1.2)
run (638)	ironmodel%datainfo%whatref%run (integer) (9.2.1.1.2)
occurrence (638)	ironmodel%datainfo%whatref%occurrence (integer) (9.2.1.1.2)
putinfo (408)	ironmodel%datainfo%putinfo (putinfo) (9.2.1.3.187)
putmethod (520)	ironmodel%datainfo%putinfo%putmethod (string) (9.2.1.1.3)
putaccess (520)	ironmodel%datainfo%putinfo%putaccess (string) (9.2.1.1.3)
putlocation (520)	ironmodel%datainfo%putinfo%putlocation (string) (9.2.1.1.3)
rights (520)	ironmodel%datainfo%putinfo%rights (string) (9.2.1.1.3)
desc_iron (351)	ironmodel%desc_iron (desc_iron) (9.2.1.3.77)
name (410)	ironmodel%desc_iron%name (vecstring.type) (9.2.1.2.11)
id (410)	ironmodel%desc_iron%id (vecstring.type) (9.2.1.2.11)
permeability (410)	ironmodel%desc_iron%permeability (permeability) (9.2.1.3.168)
b (501)	ironmodel%desc_iron%permeability%b (matflt.type) (9.2.1.2.7)
mur (501)	ironmodel%desc_iron%permeability%mur (matflt.type) (9.2.1.2.7)
geom_iron (410)	ironmodel%desc_iron%geom_iron (geom_iron) (9.2.1.3.122)
npoints (455)	ironmodel%desc_iron%geom_iron%npoints (vecint.type) (9.2.1.2.10)
rzcoordinate (455)	ironmodel%desc_iron%geom_iron%rzcoordinate (rz2D) (9.2.1.3.216)
r (549)	ironmodel%desc_iron%geom_iron%rzcoordinate%r (matflt.type) (9.2.1.2.7)
z (549)	ironmodel%desc_iron%geom_iron%rzcoordinate%z (matflt.type) (9.2.1.2.7)
magnetise (351)	ironmodel%magnetise (magnetise) (9.2.1.3.151)
mr (484)	ironmodel%magnetise%mr (exp1D) (9.2.1.3.113)
value (446)	ironmodel%magnetise%mr%value (vecflt.type) (9.2.1.2.9)
abserror (446)	ironmodel%magnetise%mr%abserror (vecflt.type) (9.2.1.2.9)
releror (446)	ironmodel%magnetise%mr%releror (vecflt.type) (9.2.1.2.9)
mz (484)	ironmodel%magnetise%mz (exp1D) (9.2.1.3.113)
value (446)	ironmodel%magnetise%mz%value (vecflt.type) (9.2.1.2.9)
abserror (446)	ironmodel%magnetise%mz%abserror (vecflt.type) (9.2.1.2.9)
releror (446)	ironmodel%magnetise%mz%releror (vecflt.type) (9.2.1.2.9)
time (351)	ironmodel%time (float) (9.2.1.1.1)

### 9.2.2.1.17 launches

datainfo (352)	launches%datainfo (datainfo) (9.2.1.3.75)
dataprovider (408)	launches%datainfo%dataprovider (string) (9.2.1.1.3)
putdate (408)	launches%datainfo%putdate (string) (9.2.1.1.3)
source (408)	launches%datainfo%source (string) (9.2.1.1.3)
comment (408)	launches%datainfo%comment (string) (9.2.1.1.3)
isref (408)	launches%datainfo%isref (integer) (9.2.1.1.2)
whatref (408)	launches%datainfo%whatref (whatref) (9.2.1.3.305)
user (638)	launches%datainfo%whatref%user (string) (9.2.1.1.3)



machine (638)	launchs%datainfo%whatref%machine (string) (9.2.1.1.3)
shot (638)	launchs%datainfo%whatref%shot (integer) (9.2.1.1.2)
run (638)	launchs%datainfo%whatref%run (integer) (9.2.1.1.2)
occurrence (638)	launchs%datainfo%whatref%occurrence (integer) (9.2.1.1.2)
putinfo (408)	launchs%datainfo%putinfo (putinfo) (9.2.1.3.187)
putmethod (520)	launchs%datainfo%putinfo%putmethod (string) (9.2.1.1.3)
putaccess (520)	launchs%datainfo%putinfo%putaccess (string) (9.2.1.1.3)
putlocation (520)	launchs%datainfo%putinfo%putlocation (string) (9.2.1.1.3)
rights (520)	launchs%datainfo%putinfo%rights (string) (9.2.1.1.3)
name (352)	launchs%name (vecstring_type) (9.2.1.2.11)
type (352)	launchs%type (vecstring_type) (9.2.1.2.11)
frequency (352)	launchs%frequency (vecflt_type) (9.2.1.2.9)
mode (352)	launchs%mode (vecint_type) (9.2.1.2.10)
position (352)	launchs%position (rzphi1D) (9.2.1.3.218)
r (551)	launchs%position%r (vecflt_type) (9.2.1.2.9)
z (551)	launchs%position%z (vecflt_type) (9.2.1.2.9)
phi (551)	launchs%position%phi (vecflt_type) (9.2.1.2.9)
spectrum (352)	launchs%spectrum (spectrum) (9.2.1.3.260)
phi_theta (593)	launchs%spectrum%phi_theta (launchs_phi_theta) (9.2.1.3.146)
nn_phi (479)	launchs%spectrum%phi_theta%nn_phi (vecint_type) (9.2.1.2.10)
nn_theta (479)	launchs%spectrum%phi_theta%nn_theta (vecint_type) (9.2.1.2.10)
n_phi (479)	launchs%spectrum%phi_theta%n_phi (matflt_type) (9.2.1.2.7)
n_theta (479)	launchs%spectrum%phi_theta%n_theta (matflt_type) (9.2.1.2.7)
power (479)	launchs%spectrum%phi_theta%power (array3dflt_type) (9.2.1.2.1)
parallel (593)	launchs%spectrum%parallel (launchs_parallel) (9.2.1.3.145)
nn_par (478)	launchs%spectrum%parallel%nn_par (vecint_type) (9.2.1.2.10)
n_par (478)	launchs%spectrum%parallel%n_par (matflt_type) (9.2.1.2.7)
power (478)	launchs%spectrum%parallel%power (vecflt_type) (9.2.1.2.9)
beam (352)	launchs%beam (rf_beam) (9.2.1.3.212)
spot (545)	launchs%beam%spot (spot) (9.2.1.3.261)
waist (594)	launchs%beam%spot%waist (matflt_type) (9.2.1.2.7)
angle (594)	launchs%beam%spot%angle (vecflt_type) (9.2.1.2.9)
phaseellipse (545)	launchs%beam%phaseellipse (phaseellipse) (9.2.1.3.176)
incurvrad (509)	launchs%beam%phaseellipse%incurvrad (matflt_type) (9.2.1.2.7)
angle (509)	launchs%beam%phaseellipse%angle (vecflt_type) (9.2.1.2.9)
codeparam (352)	launchs%codeparam (codeparam) (9.2.1.3.56)
codename (389)	launchs%codeparam%codename (string) (9.2.1.1.3)
codeversion (389)	launchs%codeparam%codeversion (string) (9.2.1.1.3)
parameters (389)	launchs%codeparam%parameters (string) (9.2.1.1.3)
output.diag (389)	launchs%codeparam%output.diag (string) (9.2.1.1.3)
output.flag (389)	launchs%codeparam%output.flag (integer) (9.2.1.1.2)
time (352)	launchs%time (float) (9.2.1.1.1)

### 9.2.2.1.18 limiter

datainfo (353)	limiter%datainfo (datainfo) (9.2.1.3.75)
dataprovider (408)	limiter%datainfo%dataprovider (string) (9.2.1.1.3)
putdate (408)	limiter%datainfo%putdate (string) (9.2.1.1.3)
source (408)	limiter%datainfo%source (string) (9.2.1.1.3)
comment (408)	limiter%datainfo%comment (string) (9.2.1.1.3)
isref (408)	limiter%datainfo%isref (integer) (9.2.1.1.2)
whatref (408)	limiter%datainfo%whatref (whatref) (9.2.1.3.305)
user (638)	limiter%datainfo%whatref%user (string) (9.2.1.1.3)
machine (638)	limiter%datainfo%whatref%machine (string) (9.2.1.1.3)
shot (638)	limiter%datainfo%whatref%shot (integer) (9.2.1.1.2)
run (638)	limiter%datainfo%whatref%run (integer) (9.2.1.1.2)
occurrence (638)	limiter%datainfo%whatref%occurrence (integer) (9.2.1.1.2)
putinfo (408)	limiter%datainfo%putinfo (putinfo) (9.2.1.3.187)
putmethod (520)	limiter%datainfo%putinfo%putmethod (string) (9.2.1.1.3)
putaccess (520)	limiter%datainfo%putinfo%putaccess (string) (9.2.1.1.3)
putlocation (520)	limiter%datainfo%putinfo%putlocation (string) (9.2.1.1.3)

rights (520)	limiter%datainfo%putinfo%rights (string) (9.2.1.1.3)
position (353)	limiter%position (rz1D) (9.2.1.3.214)
r (547)	limiter%position%r (vecflt.type) (9.2.1.2.9)
z (547)	limiter%position%z (vecflt.type) (9.2.1.2.9)

### 9.2.2.1.19 magdiag

datainfo (354)	magdiag%datainfo (datainfo) (9.2.1.3.75)
dataprovider (408)	magdiag%datainfo%dataprovider (string) (9.2.1.1.3)
putdate (408)	magdiag%datainfo%putdate (string) (9.2.1.1.3)
source (408)	magdiag%datainfo%source (string) (9.2.1.1.3)
comment (408)	magdiag%datainfo%comment (string) (9.2.1.1.3)
isref (408)	magdiag%datainfo%isref (integer) (9.2.1.1.2)
whatref (408)	magdiag%datainfo%whatref (whatref) (9.2.1.3.305)
user (638)	magdiag%datainfo%whatref%user (string) (9.2.1.1.3)
machine (638)	magdiag%datainfo%whatref%machine (string) (9.2.1.1.3)
shot (638)	magdiag%datainfo%whatref%shot (integer) (9.2.1.1.2)
run (638)	magdiag%datainfo%whatref%run (integer) (9.2.1.1.2)
occurrence (638)	magdiag%datainfo%whatref%occurrence (integer) (9.2.1.1.2)
putinfo (408)	magdiag%datainfo%putinfo (putinfo) (9.2.1.3.187)
putmethod (520)	magdiag%datainfo%putinfo%putmethod (string) (9.2.1.1.3)
putaccess (520)	magdiag%datainfo%putinfo%putaccess (string) (9.2.1.1.3)
putlocation (520)	magdiag%datainfo%putinfo%putlocation (string) (9.2.1.1.3)
rights (520)	magdiag%datainfo%putinfo%rights (string) (9.2.1.1.3)
ip (354)	magdiag%ip (exp0D) (9.2.1.3.112)
value (445)	magdiag%ip%value (float) (9.2.1.1.1)
abserror (445)	magdiag%ip%abserror (float) (9.2.1.1.1)
releror (445)	magdiag%ip%releror (float) (9.2.1.1.1)
diamagflux (354)	magdiag%diamagflux (exp0D) (9.2.1.3.112)
value (445)	magdiag%diamagflux%value (float) (9.2.1.1.1)
abserror (445)	magdiag%diamagflux%abserror (float) (9.2.1.1.1)
releror (445)	magdiag%diamagflux%releror (float) (9.2.1.1.1)
flux_loops (354)	magdiag%flux_loops (flux_loops) (9.2.1.3.117)
setup_floops (450)	magdiag%flux_loops%setup_floops (setup_floops) (9.2.1.3.247)
name (580)	magdiag%flux_loops%setup_floops%name (vecstring.type) (9.2.1.2.11)
id (580)	magdiag%flux_loops%setup_floops%id (vecstring.type) (9.2.1.2.11)
position (580)	magdiag%flux_loops%setup_floops%position (rzphi2D) (9.2.1.3.220)
r (553)	magdiag%flux_loops%setup_floops%position%r (matflt.type) (9.2.1.2.7)
z (553)	magdiag%flux_loops%setup_floops%position%z (matflt.type) (9.2.1.2.7)
phi (553)	magdiag%flux_loops%setup_floops%position%phi (matflt.type) (9.2.1.2.7)
npoints (580)	magdiag%flux_loops%setup_floops%npoints (vecint.type) (9.2.1.2.10)
measure (450)	magdiag%flux_loops%measure (exp1D) (9.2.1.3.113)
value (446)	magdiag%flux_loops%measure%value (vecflt.type) (9.2.1.2.9)
abserror (446)	magdiag%flux_loops%measure%abserror (vecflt.type) (9.2.1.2.9)
releror (446)	magdiag%flux_loops%measure%releror (vecflt.type) (9.2.1.2.9)
bpol_probes (354)	magdiag%bpol_probes (bpol_probes) (9.2.1.3.55)
setup_bprobe (388)	magdiag%bpol_probes%setup_bprobe (setup_bprobe) (9.2.1.3.246)
name (579)	magdiag%bpol_probes%setup_bprobe%name (vecstring.type) (9.2.1.2.11)
id (579)	magdiag%bpol_probes%setup_bprobe%id (vecstring.type) (9.2.1.2.11)
position (579)	magdiag%bpol_probes%setup_bprobe%position (rz1D) (9.2.1.3.214)
r (547)	magdiag%bpol_probes%setup_bprobe%position%r (vecflt.type) (9.2.1.2.9)
z (547)	magdiag%bpol_probes%setup_bprobe%position%z (vecflt.type) (9.2.1.2.9)
polangle (579)	magdiag%bpol_probes%setup_bprobe%polangle (vecflt.type) (9.2.1.2.9)
torangle (579)	magdiag%bpol_probes%setup_bprobe%torangle (vecflt.type) (9.2.1.2.9)
area (579)	magdiag%bpol_probes%setup_bprobe%area (vecflt.type) (9.2.1.2.9)
length (579)	magdiag%bpol_probes%setup_bprobe%length (vecflt.type) (9.2.1.2.9)
turns (579)	magdiag%bpol_probes%setup_bprobe%turns (vecint.type) (9.2.1.2.10)
measure (388)	magdiag%bpol_probes%measure (exp1D) (9.2.1.3.113)
value (446)	magdiag%bpol_probes%measure%value (vecflt.type) (9.2.1.2.9)
abserror (446)	magdiag%bpol_probes%measure%abserror (vecflt.type) (9.2.1.2.9)
releror (446)	magdiag%bpol_probes%measure%releror (vecflt.type) (9.2.1.2.9)



## 9.2.2.1.20 mhd

datainfo (355)	mhd%datainfo (datainfo) (9.2.1.3.75)
dataprovider (408)	mhd%datainfo%dataprovider (string) (9.2.1.1.3)
putdate (408)	mhd%datainfo%putdate (string) (9.2.1.1.3)
source (408)	mhd%datainfo%source (string) (9.2.1.1.3)
comment (408)	mhd%datainfo%comment (string) (9.2.1.1.3)
isref (408)	mhd%datainfo%isref (integer) (9.2.1.1.2)
whatref (408)	mhd%datainfo%whatref (whatref) (9.2.1.3.305)
user (638)	mhd%datainfo%whatref%user (string) (9.2.1.1.3)
machine (638)	mhd%datainfo%whatref%machine (string) (9.2.1.1.3)
shot (638)	mhd%datainfo%whatref%shot (integer) (9.2.1.1.2)
run (638)	mhd%datainfo%whatref%run (integer) (9.2.1.1.2)
occurrence (638)	mhd%datainfo%whatref%occurrence (integer) (9.2.1.1.2)
putinfo (408)	mhd%datainfo%putinfo (putinfo) (9.2.1.3.187)
putmethod (520)	mhd%datainfo%putinfo%putmethod (string) (9.2.1.1.3)
putaccess (520)	mhd%datainfo%putinfo%putaccess (string) (9.2.1.1.3)
putlocation (520)	mhd%datainfo%putinfo%putlocation (string) (9.2.1.1.3)
rights (520)	mhd%datainfo%putinfo%rights (string) (9.2.1.1.3)
n (355)	mhd%n (vecint_type) (9.2.1.2.10)
frequency (355)	mhd%frequency (vecflt_type) (9.2.1.2.9)
growthrate (355)	mhd%growthrate (vecflt_type) (9.2.1.2.9)
plasma (355)	mhd%plasma (mhd_plasma) (9.2.1.3.153)
psi (486)	mhd%plasma%psi (vecflt_type) (9.2.1.2.9)
m (486)	mhd%plasma%m (array3dflt_type) (9.2.1.2.1)
disp_perp (486)	mhd%plasma%disp_perp (array3dflt_type) (9.2.1.2.1)
disp_par (486)	mhd%plasma%disp_par (array3dflt_type) (9.2.1.2.1)
tau_alfven (486)	mhd%plasma%tau_alfven (vecflt_type) (9.2.1.2.9)
tau_resistive (486)	mhd%plasma%tau_resistive (vecflt_type) (9.2.1.2.9)
coord_sys (486)	mhd%plasma%coord_sys (coord_sys) (9.2.1.3.61)
grid_type (394)	mhd%plasma%coord_sys%grid_type (string) (9.2.1.1.3)
grid (394)	mhd%plasma%coord_sys%grid (reggrid) (9.2.1.3.211)
dim1 (544)	mhd%plasma%coord_sys%grid%dim1 (vecflt_type) (9.2.1.2.9)
dim2 (544)	mhd%plasma%coord_sys%grid%dim2 (vecflt_type) (9.2.1.2.9)
jacobian (394)	mhd%plasma%coord_sys%jacobian (matflt_type) (9.2.1.2.7)
g_11 (394)	mhd%plasma%coord_sys%g_11 (matflt_type) (9.2.1.2.7)
g_12 (394)	mhd%plasma%coord_sys%g_12 (matflt_type) (9.2.1.2.7)
g_13 (394)	mhd%plasma%coord_sys%g_13 (matflt_type) (9.2.1.2.7)
g_22 (394)	mhd%plasma%coord_sys%g_22 (matflt_type) (9.2.1.2.7)
g_23 (394)	mhd%plasma%coord_sys%g_23 (matflt_type) (9.2.1.2.7)
g_33 (394)	mhd%plasma%coord_sys%g_33 (matflt_type) (9.2.1.2.7)
position (394)	mhd%plasma%coord_sys%position (rz2D) (9.2.1.3.216)
r (549)	mhd%plasma%coord_sys%position%r (matflt_type) (9.2.1.2.7)
z (549)	mhd%plasma%coord_sys%position%z (matflt_type) (9.2.1.2.7)
a_pert (486)	mhd%plasma%a_pert (mhd_vector) (9.2.1.3.155)
coord1 (488)	mhd%plasma%a_pert%coord1 (array3dflt_type) (9.2.1.2.1)
coord2 (488)	mhd%plasma%a_pert%coord2 (array3dflt_type) (9.2.1.2.1)
coord3 (488)	mhd%plasma%a_pert%coord3 (array3dflt_type) (9.2.1.2.1)
b_pert (486)	mhd%plasma%b_pert (mhd_vector) (9.2.1.3.155)
coord1 (488)	mhd%plasma%b_pert%coord1 (array3dflt_type) (9.2.1.2.1)
coord2 (488)	mhd%plasma%b_pert%coord2 (array3dflt_type) (9.2.1.2.1)
coord3 (488)	mhd%plasma%b_pert%coord3 (array3dflt_type) (9.2.1.2.1)
v_pert (486)	mhd%plasma%v_pert (mhd_vector) (9.2.1.3.155)
coord1 (488)	mhd%plasma%v_pert%coord1 (array3dflt_type) (9.2.1.2.1)
coord2 (488)	mhd%plasma%v_pert%coord2 (array3dflt_type) (9.2.1.2.1)
coord3 (488)	mhd%plasma%v_pert%coord3 (array3dflt_type) (9.2.1.2.1)
rho_masspert (486)	mhd%plasma%rho_masspert (array3dflt_type) (9.2.1.2.1)
temp_pert (486)	mhd%plasma%temp_pert (array3dflt_type) (9.2.1.2.1)
vaccum (355)	mhd%vaccum (mhd_vaccum) (9.2.1.3.154)

m (487)	mhd%vaccum%m (array3dflt.type) (9.2.1.2.1)
coord_sys (487)	mhd%vaccum%coord_sys (coord_sys) (9.2.1.3.61)
grid.type (394)	mhd%vaccum%coord_sys%grid.type (string) (9.2.1.1.3)
grid (394)	mhd%vaccum%coord_sys%grid (reggrid) (9.2.1.3.211)
dim1 (544)	mhd%vaccum%coord_sys%grid%dim1 (vecflt.type) (9.2.1.2.9)
dim2 (544)	mhd%vaccum%coord_sys%grid%dim2 (vecflt.type) (9.2.1.2.9)
jacobian (394)	mhd%vaccum%coord_sys%jacobian (matflt.type) (9.2.1.2.7)
g_11 (394)	mhd%vaccum%coord_sys%g_11 (matflt.type) (9.2.1.2.7)
g_12 (394)	mhd%vaccum%coord_sys%g_12 (matflt.type) (9.2.1.2.7)
g_13 (394)	mhd%vaccum%coord_sys%g_13 (matflt.type) (9.2.1.2.7)
g_22 (394)	mhd%vaccum%coord_sys%g_22 (matflt.type) (9.2.1.2.7)
g_23 (394)	mhd%vaccum%coord_sys%g_23 (matflt.type) (9.2.1.2.7)
g_33 (394)	mhd%vaccum%coord_sys%g_33 (matflt.type) (9.2.1.2.7)
position (394)	mhd%vaccum%coord_sys%position (rz2D) (9.2.1.3.216)
r (549)	mhd%vaccum%coord_sys%position%r (matflt.type) (9.2.1.2.7)
z (549)	mhd%vaccum%coord_sys%position%z (matflt.type) (9.2.1.2.7)
a_pert (487)	mhd%vaccum%a_pert (mhd_vector) (9.2.1.3.155)
coord1 (488)	mhd%vaccum%a_pert%coord1 (array3dflt.type) (9.2.1.2.1)
coord2 (488)	mhd%vaccum%a_pert%coord2 (array3dflt.type) (9.2.1.2.1)
coord3 (488)	mhd%vaccum%a_pert%coord3 (array3dflt.type) (9.2.1.2.1)
b_pert (487)	mhd%vaccum%b_pert (mhd_vector) (9.2.1.3.155)
coord1 (488)	mhd%vaccum%b_pert%coord1 (array3dflt.type) (9.2.1.2.1)
coord2 (488)	mhd%vaccum%b_pert%coord2 (array3dflt.type) (9.2.1.2.1)
coord3 (488)	mhd%vaccum%b_pert%coord3 (array3dflt.type) (9.2.1.2.1)
time (355)	mhd%time (float) (9.2.1.1.1)
codeparam (355)	mhd%codeparam (codeparam) (9.2.1.3.56)
codename (389)	mhd%codeparam%codename (string) (9.2.1.1.3)
codeversion (389)	mhd%codeparam%codeversion (string) (9.2.1.1.3)
parameters (389)	mhd%codeparam%parameters (string) (9.2.1.1.3)
output_diag (389)	mhd%codeparam%output_diag (string) (9.2.1.1.3)
output_flag (389)	mhd%codeparam%output_flag (integer) (9.2.1.1.2)

### 9.2.2.1.21 msediag

datainfo (356)	msediag%datainfo (datainfo) (9.2.1.3.75)
dataprovider (408)	msediag%datainfo%dataprovider (string) (9.2.1.1.3)
putdate (408)	msediag%datainfo%putdate (string) (9.2.1.1.3)
source (408)	msediag%datainfo%source (string) (9.2.1.1.3)
comment (408)	msediag%datainfo%comment (string) (9.2.1.1.3)
isref (408)	msediag%datainfo%isref (integer) (9.2.1.1.2)
whatref (408)	msediag%datainfo%whatref (whatref) (9.2.1.3.305)
user (638)	msediag%datainfo%whatref%user (string) (9.2.1.1.3)
machine (638)	msediag%datainfo%whatref%machine (string) (9.2.1.1.3)
shot (638)	msediag%datainfo%whatref%shot (integer) (9.2.1.1.2)
run (638)	msediag%datainfo%whatref%run (integer) (9.2.1.1.2)
occurrence (638)	msediag%datainfo%whatref%occurrence (integer) (9.2.1.1.2)
putinfo (408)	msediag%datainfo%putinfo (putinfo) (9.2.1.3.187)
putmethod (520)	msediag%datainfo%putinfo%putmethod (string) (9.2.1.1.3)
putaccess (520)	msediag%datainfo%putinfo%putaccess (string) (9.2.1.1.3)
putlocation (520)	msediag%datainfo%putinfo%putlocation (string) (9.2.1.1.3)
rights (520)	msediag%datainfo%putinfo%rights (string) (9.2.1.1.3)
setup_mse (356)	msediag%setup_mse (setup_mse) (9.2.1.3.250)
rzgamma (583)	msediag%setup_mse%orzgamma (rzphidrdzphi1D) (9.2.1.3.222)
r (555)	msediag%setup_mse%orzgamma%r (vecflt.type) (9.2.1.2.9)
z (555)	msediag%setup_mse%orzgamma%z (vecflt.type) (9.2.1.2.9)
phi (555)	msediag%setup_mse%orzgamma%phi (vecflt.type) (9.2.1.2.9)
dr (555)	msediag%setup_mse%orzgamma%dr (vecflt.type) (9.2.1.2.9)
dz (555)	msediag%setup_mse%orzgamma%dz (vecflt.type) (9.2.1.2.9)
dphi (555)	msediag%setup_mse%orzgamma%dphi (vecflt.type) (9.2.1.2.9)
geom_coef (583)	msediag%setup_mse%geom_coef (matflt.type) (9.2.1.2.7)
measure (356)	msediag%measure (exp1D) (9.2.1.3.113)

value (446)	msediag%measure%value (vecflt.type) (9.2.1.2.9)
abserror (446)	msediag%measure%abserror (vecflt.type) (9.2.1.2.9)
releror (446)	msediag%measure%releror (vecflt.type) (9.2.1.2.9)
time (356)	msediag%time (float) (9.2.1.1.1)

### 9.2.2.1.22 nbi

datainfo (357)	nbi%datainfo (datainfo) (9.2.1.3.75)
dataprovider (408)	nbi%datainfo%dataprovider (string) (9.2.1.1.3)
putdate (408)	nbi%datainfo%putdate (string) (9.2.1.1.3)
source (408)	nbi%datainfo%source (string) (9.2.1.1.3)
comment (408)	nbi%datainfo%comment (string) (9.2.1.1.3)
isref (408)	nbi%datainfo%isref (integer) (9.2.1.1.2)
whatref (408)	nbi%datainfo%whatref (whatref) (9.2.1.3.305)
user (638)	nbi%datainfo%whatref%user (string) (9.2.1.1.3)
machine (638)	nbi%datainfo%whatref%machine (string) (9.2.1.1.3)
shot (638)	nbi%datainfo%whatref%shot (integer) (9.2.1.1.2)
run (638)	nbi%datainfo%whatref%run (integer) (9.2.1.1.2)
occurrence (638)	nbi%datainfo%whatref%occurrence (integer) (9.2.1.1.2)
putinfo (408)	nbi%datainfo%putinfo (putinfo) (9.2.1.3.187)
putmethod (520)	nbi%datainfo%putinfo%putmethod (string) (9.2.1.1.3)
putaccess (520)	nbi%datainfo%putinfo%putaccess (string) (9.2.1.1.3)
putlocation (520)	nbi%datainfo%putinfo%putlocation (string) (9.2.1.1.3)
rights (520)	nbi%datainfo%putinfo%rights (string) (9.2.1.1.3)
inj_spec (357)	nbi%inj_spec (inj_spec) (9.2.1.3.141)
amn (474)	nbi%inj_spec%amn (vecflt.type) (9.2.1.2.9)
zn (474)	nbi%inj_spec%zn (vecflt.type) (9.2.1.2.9)
zion (474)	nbi%inj_spec%zion (vecflt.type) (9.2.1.2.9)
pow_unit (357)	nbi%pow_unit (exp1D) (9.2.1.3.113)
value (446)	nbi%pow_unit%value (vecflt.type) (9.2.1.2.9)
abserror (446)	nbi%pow_unit%abserror (vecflt.type) (9.2.1.2.9)
releror (446)	nbi%pow_unit%releror (vecflt.type) (9.2.1.2.9)
inj_eng_unit (357)	nbi%inj_eng_unit (exp1D) (9.2.1.3.113)
value (446)	nbi%inj_eng_unit%value (vecflt.type) (9.2.1.2.9)
abserror (446)	nbi%inj_eng_unit%abserror (vecflt.type) (9.2.1.2.9)
releror (446)	nbi%inj_eng_unit%releror (vecflt.type) (9.2.1.2.9)
halfe_cfr (357)	nbi%halfe_cfr (exp1D) (9.2.1.3.113)
value (446)	nbi%halfe_cfr%value (vecflt.type) (9.2.1.2.9)
abserror (446)	nbi%halfe_cfr%abserror (vecflt.type) (9.2.1.2.9)
releror (446)	nbi%halfe_cfr%releror (vecflt.type) (9.2.1.2.9)
thirde_cfr (357)	nbi%thirde_cfr (exp1D) (9.2.1.3.113)
value (446)	nbi%thirde_cfr%value (vecflt.type) (9.2.1.2.9)
abserror (446)	nbi%thirde_cfr%abserror (vecflt.type) (9.2.1.2.9)
releror (446)	nbi%thirde_cfr%releror (vecflt.type) (9.2.1.2.9)
setup_inject (357)	nbi%setup_inject (setup_inject) (9.2.1.3.248)
position (581)	nbi%setup_inject%position (rzphi1D) (9.2.1.3.218)
r (551)	nbi%setup_inject%position%r (vecflt.type) (9.2.1.2.9)
z (551)	nbi%setup_inject%position%z (vecflt.type) (9.2.1.2.9)
phi (551)	nbi%setup_inject%position%phi (vecflt.type) (9.2.1.2.9)
tang_rad (581)	nbi%setup_inject%tang_rad (vecflt.type) (9.2.1.2.9)
angle (581)	nbi%setup_inject%angle (vecflt.type) (9.2.1.2.9)
direction (581)	nbi%setup_inject%direction (vecint.type) (9.2.1.2.10)
div_vert (581)	nbi%setup_inject%div_vert (vecflt.type) (9.2.1.2.9)
div_horiz (581)	nbi%setup_inject%div_horiz (vecflt.type) (9.2.1.2.9)
focal_len_hz (581)	nbi%setup_inject%focal_len_hz (vecflt.type) (9.2.1.2.9)
focal_len_vc (581)	nbi%setup_inject%focal_len_vc (vecflt.type) (9.2.1.2.9)
beamlets (581)	nbi%setup_inject%beamlets (beamlets) (9.2.1.3.47)
nbeamlets (380)	nbi%setup_inject%beamlets%nbeamlets (vecint.type) (9.2.1.2.10)
position (380)	nbi%setup_inject%beamlets%position (rzphi2D) (9.2.1.3.220)
r (553)	nbi%setup_inject%beamlets%position%r (matflt.type) (9.2.1.2.7)
z (553)	nbi%setup_inject%beamlets%position%z (matflt.type) (9.2.1.2.7)

phi (553)	nbi%setup_inject%beamlets%position%phi (matflt_type) (9.2.1.2.7)
tang_rad.blk (380)	nbi%setup_inject%beamlets%tang_rad.blk (matflt_type) (9.2.1.2.7)
angle.blk (380)	nbi%setup_inject%beamlets%angle.blk (matflt_type) (9.2.1.2.7)
pow_frc.blk (380)	nbi%setup_inject%beamlets%pow_frc.blk (matflt_type) (9.2.1.2.7)
codeparam (357)	nbi%codeparam (codeparam) (9.2.1.3.56)
codename (389)	nbi%codeparam%codename (string) (9.2.1.1.3)
codeversion (389)	nbi%codeparam%codeversion (string) (9.2.1.1.3)
parameters (389)	nbi%codeparam%parameters (string) (9.2.1.1.3)
output_diag (389)	nbi%codeparam%output_diag (string) (9.2.1.1.3)
output_flag (389)	nbi%codeparam%output_flag (integer) (9.2.1.1.2)
time (357)	nbi%time (float) (9.2.1.1.1)

### 9.2.2.1.23 neoclassic

datainfo (358)	neoclassic%datainfo (datainfo) (9.2.1.3.75)
dataprovider (408)	neoclassic%datainfo%dataprovider (string) (9.2.1.1.3)
putdate (408)	neoclassic%datainfo%putdate (string) (9.2.1.1.3)
source (408)	neoclassic%datainfo%source (string) (9.2.1.1.3)
comment (408)	neoclassic%datainfo%comment (string) (9.2.1.1.3)
isref (408)	neoclassic%datainfo%isref (integer) (9.2.1.1.2)
whatref (408)	neoclassic%datainfo%whatref (whatref) (9.2.1.3.305)
user (638)	neoclassic%datainfo%whatref%user (string) (9.2.1.1.3)
machine (638)	neoclassic%datainfo%whatref%machine (string) (9.2.1.1.3)
shot (638)	neoclassic%datainfo%whatref%shot (integer) (9.2.1.1.2)
run (638)	neoclassic%datainfo%whatref%run (integer) (9.2.1.1.2)
occurrence (638)	neoclassic%datainfo%whatref%occurrence (integer) (9.2.1.1.2)
putinfo (408)	neoclassic%datainfo%putinfo (putinfo) (9.2.1.3.187)
putmethod (520)	neoclassic%datainfo%putinfo%putmethod (string) (9.2.1.1.3)
putaccess (520)	neoclassic%datainfo%putinfo%putaccess (string) (9.2.1.1.3)
putlocation (520)	neoclassic%datainfo%putinfo%putlocation (string) (9.2.1.1.3)
rights (520)	neoclassic%datainfo%putinfo%rights (string) (9.2.1.1.3)
rho_tor_norm (358)	neoclassic%rho_tor_norm (vecflt_type) (9.2.1.2.9)
rho_tor (358)	neoclassic%rho_tor (vecflt_type) (9.2.1.2.9)
composition (358)	neoclassic%composition (composition) (9.2.1.3.59)
amn (392)	neoclassic%composition%amn (vecflt_type) (9.2.1.2.9)
zn (392)	neoclassic%composition%zn (vecflt_type) (9.2.1.2.9)
zion (392)	neoclassic%composition%zion (vecflt_type) (9.2.1.2.9)
imp_flag (392)	neoclassic%composition%imp_flag (vecint_type) (9.2.1.2.10)
ni_neo (358)	neoclassic%ni_neo (transcoefion) (9.2.1.3.283)
diff_eff (616)	neoclassic%ni_neo%diff_eff (matflt_type) (9.2.1.2.7)
vconv_eff (616)	neoclassic%ni_neo%vconv_eff (matflt_type) (9.2.1.2.7)
exchange (616)	neoclassic%ni_neo%exchange (matflt_type) (9.2.1.2.7)
qgi (616)	neoclassic%ni_neo%qgi (matflt_type) (9.2.1.2.7)
flux (616)	neoclassic%ni_neo%flux (matflt_type) (9.2.1.2.7)
off_diagonal (616)	neoclassic%ni_neo%off_diagonal (offdiagion) (9.2.1.3.162)
d_ni (495)	neoclassic%ni_neo%off_diagonal%d_ni (array3dflt_type) (9.2.1.2.1)
d_ti (495)	neoclassic%ni_neo%off_diagonal%d_ti (array3dflt_type) (9.2.1.2.1)
d_ne (495)	neoclassic%ni_neo%off_diagonal%d_ne (matflt_type) (9.2.1.2.7)
d_te (495)	neoclassic%ni_neo%off_diagonal%d_te (matflt_type) (9.2.1.2.7)
d_epar (495)	neoclassic%ni_neo%off_diagonal%d_epar (matflt_type) (9.2.1.2.7)
d_mtor (495)	neoclassic%ni_neo%off_diagonal%d_mtor (matflt_type) (9.2.1.2.7)
flag (616)	neoclassic%ni_neo%flag (integer) (9.2.1.1.2)
ne_neo (358)	neoclassic%ne_neo (transcoefel) (9.2.1.3.281)
diff_eff (614)	neoclassic%ne_neo%diff_eff (vecflt_type) (9.2.1.2.9)
vconv_eff (614)	neoclassic%ne_neo%vconv_eff (vecflt_type) (9.2.1.2.9)
flux (614)	neoclassic%ne_neo%flux (vecflt_type) (9.2.1.2.9)
off_diagonal (614)	neoclassic%ne_neo%off_diagonal (offdiagel) (9.2.1.3.161)
d_ni (494)	neoclassic%ne_neo%off_diagonal%d_ni (matflt_type) (9.2.1.2.7)
d_ti (494)	neoclassic%ne_neo%off_diagonal%d_ti (matflt_type) (9.2.1.2.7)
d_ne (494)	neoclassic%ne_neo%off_diagonal%d_ne (vecflt_type) (9.2.1.2.9)
d_te (494)	neoclassic%ne_neo%off_diagonal%d_te (vecflt_type) (9.2.1.2.9)

d_epar (494)	neoclassic%ne_neo%off_diagonal%d_epar (vecflt.type) (9.2.1.2.9)
d_mtor (494)	neoclassic%ne_neo%off_diagonal%d_mtor (vecflt.type) (9.2.1.2.9)
flag (614)	neoclassic%ne_neo%flag (integer) (9.2.1.1.2)
nz_neo (358)	neoclassic%nz_neo (transcoefimp) (9.2.1.3.282)
diff_eff (615)	neoclassic%nz_neo%diff_eff (array3dflt.type) (9.2.1.2.1)
vconv_eff (615)	neoclassic%nz_neo%vconv_eff (array3dflt.type) (9.2.1.2.1)
exchange (615)	neoclassic%nz_neo%exchange (array3dflt.type) (9.2.1.2.1)
flux (615)	neoclassic%nz_neo%flux (array3dflt.type) (9.2.1.2.1)
flag (615)	neoclassic%nz_neo%flag (integer) (9.2.1.1.2)
ti_neo (358)	neoclassic%ti_neo (transcoefion) (9.2.1.3.283)
diff_eff (616)	neoclassic%ti_neo%diff_eff (matflt.type) (9.2.1.2.7)
vconv_eff (616)	neoclassic%ti_neo%vconv_eff (matflt.type) (9.2.1.2.7)
exchange (616)	neoclassic%ti_neo%exchange (matflt.type) (9.2.1.2.7)
qgi (616)	neoclassic%ti_neo%qgi (matflt.type) (9.2.1.2.7)
flux (616)	neoclassic%ti_neo%flux (matflt.type) (9.2.1.2.7)
off_diagonal (616)	neoclassic%ti_neo%off_diagonal (offdiagion) (9.2.1.3.162)
d_ni (495)	neoclassic%ti_neo%off_diagonal%d_ni (array3dflt.type) (9.2.1.2.1)
d_ti (495)	neoclassic%ti_neo%off_diagonal%d_ti (array3dflt.type) (9.2.1.2.1)
d_ne (495)	neoclassic%ti_neo%off_diagonal%d_ne (matflt.type) (9.2.1.2.7)
d_te (495)	neoclassic%ti_neo%off_diagonal%d_te (matflt.type) (9.2.1.2.7)
d_epar (495)	neoclassic%ti_neo%off_diagonal%d_epar (matflt.type) (9.2.1.2.7)
d_mtor (495)	neoclassic%ti_neo%off_diagonal%d_mtor (matflt.type) (9.2.1.2.7)
flag (616)	neoclassic%ti_neo%flag (integer) (9.2.1.1.2)
te_neo (358)	neoclassic%te_neo (transcoefel) (9.2.1.3.281)
diff_eff (614)	neoclassic%te_neo%diff_eff (vecflt.type) (9.2.1.2.9)
vconv_eff (614)	neoclassic%te_neo%vconv_eff (vecflt.type) (9.2.1.2.9)
flux (614)	neoclassic%te_neo%flux (vecflt.type) (9.2.1.2.9)
off_diagonal (614)	neoclassic%te_neo%off_diagonal (offdiagel) (9.2.1.3.161)
d_ni (494)	neoclassic%te_neo%off_diagonal%d_ni (matflt.type) (9.2.1.2.7)
d_ti (494)	neoclassic%te_neo%off_diagonal%d_ti (matflt.type) (9.2.1.2.7)
d_ne (494)	neoclassic%te_neo%off_diagonal%d_ne (vecflt.type) (9.2.1.2.9)
d_te (494)	neoclassic%te_neo%off_diagonal%d_te (vecflt.type) (9.2.1.2.9)
d_epar (494)	neoclassic%te_neo%off_diagonal%d_epar (vecflt.type) (9.2.1.2.9)
d_mtor (494)	neoclassic%te_neo%off_diagonal%d_mtor (vecflt.type) (9.2.1.2.9)
flag (614)	neoclassic%te_neo%flag (integer) (9.2.1.1.2)
tz_neo (358)	neoclassic%tz_neo (transcoefimp) (9.2.1.3.282)
diff_eff (615)	neoclassic%tz_neo%diff_eff (array3dflt.type) (9.2.1.2.1)
vconv_eff (615)	neoclassic%tz_neo%vconv_eff (array3dflt.type) (9.2.1.2.1)
exchange (615)	neoclassic%tz_neo%exchange (array3dflt.type) (9.2.1.2.1)
flux (615)	neoclassic%tz_neo%flux (array3dflt.type) (9.2.1.2.1)
flag (615)	neoclassic%tz_neo%flag (integer) (9.2.1.1.2)
mtor_neo (358)	neoclassic%mtor_neo (transcoefel) (9.2.1.3.281)
diff_eff (614)	neoclassic%mtor_neo%diff_eff (vecflt.type) (9.2.1.2.9)
vconv_eff (614)	neoclassic%mtor_neo%vconv_eff (vecflt.type) (9.2.1.2.9)
flux (614)	neoclassic%mtor_neo%flux (vecflt.type) (9.2.1.2.9)
off_diagonal (614)	neoclassic%mtor_neo%off_diagonal (offdiagel) (9.2.1.3.161)
d_ni (494)	neoclassic%mtor_neo%off_diagonal%d_ni (matflt.type) (9.2.1.2.7)
d_ti (494)	neoclassic%mtor_neo%off_diagonal%d_ti (matflt.type) (9.2.1.2.7)
d_ne (494)	neoclassic%mtor_neo%off_diagonal%d_ne (vecflt.type) (9.2.1.2.9)
d_te (494)	neoclassic%mtor_neo%off_diagonal%d_te (vecflt.type) (9.2.1.2.9)
d_epar (494)	neoclassic%mtor_neo%off_diagonal%d_epar (vecflt.type) (9.2.1.2.9)
d_mtor (494)	neoclassic%mtor_neo%off_diagonal%d_mtor (vecflt.type) (9.2.1.2.9)
flag (614)	neoclassic%mtor_neo%flag (integer) (9.2.1.1.2)
sigma (358)	neoclassic%sigma (vecflt.type) (9.2.1.2.9)
jboot (358)	neoclassic%jboot (vecflt.type) (9.2.1.2.9)
er (358)	neoclassic%er (vecflt.type) (9.2.1.2.9)
vpol (358)	neoclassic%vpol (matflt.type) (9.2.1.2.7)
fext (358)	neoclassic%fext (array3dflt.type) (9.2.1.2.1)
jext (358)	neoclassic%jext (vecflt.type) (9.2.1.2.9)
time (358)	neoclassic%time (float) (9.2.1.1.1)
codeparam (358)	neoclassic%codeparam (codeparam) (9.2.1.3.56)

codename (389)	neoclassic%codeparam%codename (string) (9.2.1.1.3)
codeversion (389)	neoclassic%codeparam%codeversion (string) (9.2.1.1.3)
parameters (389)	neoclassic%codeparam%parameters (string) (9.2.1.1.3)
output_diag (389)	neoclassic%codeparam%output_diag (string) (9.2.1.1.3)
output_flag (389)	neoclassic%codeparam%output_flag (integer) (9.2.1.1.2)

### 9.2.2.1.24 orbit

datainfo (359)	orbit%datainfo (datainfo) (9.2.1.3.75)
dataprovider (408)	orbit%datainfo%dataprovider (string) (9.2.1.1.3)
putdate (408)	orbit%datainfo%putdate (string) (9.2.1.1.3)
source (408)	orbit%datainfo%source (string) (9.2.1.1.3)
comment (408)	orbit%datainfo%comment (string) (9.2.1.1.3)
isref (408)	orbit%datainfo%isref (integer) (9.2.1.1.2)
whatref (408)	orbit%datainfo%whatref (whatref) (9.2.1.3.305)
user (638)	orbit%datainfo%whatref%user (string) (9.2.1.1.3)
machine (638)	orbit%datainfo%whatref%machine (string) (9.2.1.1.3)
shot (638)	orbit%datainfo%whatref%shot (integer) (9.2.1.1.2)
run (638)	orbit%datainfo%whatref%run (integer) (9.2.1.1.2)
occurrence (638)	orbit%datainfo%whatref%occurrence (integer) (9.2.1.1.2)
putinfo (408)	orbit%datainfo%putinfo (putinfo) (9.2.1.3.187)
putmethod (520)	orbit%datainfo%putinfo%putmethod (string) (9.2.1.1.3)
putaccess (520)	orbit%datainfo%putinfo%putaccess (string) (9.2.1.1.3)
putlocation (520)	orbit%datainfo%putinfo%putlocation (string) (9.2.1.1.3)
rights (520)	orbit%datainfo%putinfo%rights (string) (9.2.1.1.3)
orbitt_id (359)	orbit%orbitt_id (orbitt_id) (9.2.1.3.166)
amn (499)	orbit%orbitt_id%amn (float) (9.2.1.1.1)
zion (499)	orbit%orbitt_id%zion (float) (9.2.1.1.1)
energy (499)	orbit%orbitt_id%energy (vecflt_type) (9.2.1.2.9)
magn_mom (499)	orbit%orbitt_id%magn_mom (vecflt_type) (9.2.1.2.9)
p_phi (499)	orbit%orbitt_id%p_phi (vecflt_type) (9.2.1.2.9)
sigma (499)	orbit%orbitt_id%sigma (vecint_type) (9.2.1.2.10)
orb_trace (359)	orbit%orb_trace (orb_trace) (9.2.1.3.164)
time_orb (497)	orbit%orb_trace%time_orb (matflt_type) (9.2.1.2.7)
ntorb (497)	orbit%orb_trace%ntorb (vecint_type) (9.2.1.2.10)
r (497)	orbit%orb_trace%r (matflt_type) (9.2.1.2.7)
z (497)	orbit%orb_trace%z (matflt_type) (9.2.1.2.7)
psi (497)	orbit%orb_trace%psi (matflt_type) (9.2.1.2.7)
theta_b (497)	orbit%orb_trace%theta_b (matflt_type) (9.2.1.2.7)
v_parallel (497)	orbit%orb_trace%v_parallel (matflt_type) (9.2.1.2.7)
v_perp (497)	orbit%orb_trace%v_perp (matflt_type) (9.2.1.2.7)
orb_glob_dat (359)	orbit%orb_glob_dat (orb_glob_dat) (9.2.1.3.163)
orbit_type (496)	orbit%orb_glob_dat%orbit_type (vecint_type) (9.2.1.2.10)
omega_b (496)	orbit%orb_glob_dat%omega_b (vecflt_type) (9.2.1.2.9)
omega_phi (496)	orbit%orb_glob_dat%omega_phi (vecflt_type) (9.2.1.2.9)
omega_c_av (496)	orbit%orb_glob_dat%omega_c_av (vecflt_type) (9.2.1.2.9)
special_pos (496)	orbit%orb_glob_dat%special_pos (special_pos) (9.2.1.3.259)
midplane (592)	orbit%orb_glob_dat%special_pos%midplane (midplane) (9.2.1.3.156)
outer (489)	orbit%orb_glob_dat%special_pos%midplane%outer (orbit_pos) (9.2.1.3.165)
r (498)	orbit%orb_glob_dat%special_pos%midplane%outer%r (vecflt_type) (9.2.1.2.9)
z (498)	orbit%orb_glob_dat%special_pos%midplane%outer%z (vecflt_type) (9.2.1.2.9)
psi (498)	orbit%orb_glob_dat%special_pos%midplane%outer%psi (vecflt_type) (9.2.1.2.9)
theta_b (498)	orbit%orb_glob_dat%special_pos%midplane%outer%theta_b (vecflt_type) (9.2.1.2.9)
inner (489)	orbit%orb_glob_dat%special_pos%midplane%inner (orbit_pos) (9.2.1.3.165)
r (498)	orbit%orb_glob_dat%special_pos%midplane%inner%r (vecflt_type) (9.2.1.2.9)
z (498)	orbit%orb_glob_dat%special_pos%midplane%inner%z (vecflt_type) (9.2.1.2.9)
psi (498)	orbit%orb_glob_dat%special_pos%midplane%inner%psi (vecflt_type) (9.2.1.2.9)
theta_b (498)	orbit%orb_glob_dat%special_pos%midplane%inner%theta_b (vecflt_type) (9.2.1.2.9)
turning_pts (592)	orbit%orb_glob_dat%special_pos%turning_pts (turning_pts) (9.2.1.3.295)
upper (628)	orbit%orb_glob_dat%special_pos%turning_pts%upper (orbit_pos) (9.2.1.3.165)
r (498)	orbit%orb_glob_dat%special_pos%turning_pts%upper%r (vecflt_type) (9.2.1.2.9)



z (498)	orbit%orb_glob_dat%special_pos%turning_pts%upper%z (vecflt.type) (9.2.1.2.9)
psi (498)	orbit%orb_glob_dat%special_pos%turning_pts%upper%psi (vecflt.type) (9.2.1.2.9)
theta_b (498)	orbit%orb_glob_dat%special_pos%turning_pts%upper%theta_b (vecflt.type) (9.2.1.2.9)
lower (628)	orbit%orb_glob_dat%special_pos%turning_pts%lower (orbit_pos) (9.2.1.3.165)
r (498)	orbit%orb_glob_dat%special_pos%turning_pts%lower%r (vecflt.type) (9.2.1.2.9)
z (498)	orbit%orb_glob_dat%special_pos%turning_pts%lower%z (vecflt.type) (9.2.1.2.9)
psi (498)	orbit%orb_glob_dat%special_pos%turning_pts%lower%psi (vecflt.type) (9.2.1.2.9)
theta_b (498)	orbit%orb_glob_dat%special_pos%turning_pts%lower%theta_b (vecflt.type) (9.2.1.2.9)
codeparam (359)	orbit%codeparam (codeparam) (9.2.1.3.56)
codename (389)	orbit%codeparam%codename (string) (9.2.1.1.3)
codeversion (389)	orbit%codeparam%codeversion (string) (9.2.1.1.3)
parameters (389)	orbit%codeparam%parameters (string) (9.2.1.1.3)
output_diag (389)	orbit%codeparam%output_diag (string) (9.2.1.1.3)
output_flag (389)	orbit%codeparam%output_flag (integer) (9.2.1.1.2)
time (359)	orbit%time (float) (9.2.1.1.1)

### 9.2.2.1.25 pfsystems

datainfo (360)	pfsystems%datainfo (datainfo) (9.2.1.3.75)
dataprovider (408)	pfsystems%datainfo%dataprovider (string) (9.2.1.1.3)
putdate (408)	pfsystems%datainfo%putdate (string) (9.2.1.1.3)
source (408)	pfsystems%datainfo%source (string) (9.2.1.1.3)
comment (408)	pfsystems%datainfo%comment (string) (9.2.1.1.3)
isref (408)	pfsystems%datainfo%isref (integer) (9.2.1.1.2)
whatref (408)	pfsystems%datainfo%whatref (whatref) (9.2.1.3.305)
user (638)	pfsystems%datainfo%whatref%user (string) (9.2.1.1.3)
machine (638)	pfsystems%datainfo%whatref%machine (string) (9.2.1.1.3)
shot (638)	pfsystems%datainfo%whatref%shot (integer) (9.2.1.1.2)
run (638)	pfsystems%datainfo%whatref%run (integer) (9.2.1.1.2)
occurrence (638)	pfsystems%datainfo%whatref%occurrence (integer) (9.2.1.1.2)
putinfo (408)	pfsystems%datainfo%putinfo (putinfo) (9.2.1.3.187)
putmethod (520)	pfsystems%datainfo%putinfo%putmethod (string) (9.2.1.1.3)
putaccess (520)	pfsystems%datainfo%putinfo%putaccess (string) (9.2.1.1.3)
putlocation (520)	pfsystems%datainfo%putinfo%putlocation (string) (9.2.1.1.3)
rights (520)	pfsystems%datainfo%putinfo%rights (string) (9.2.1.1.3)
pfcoils (360)	pfsystems%pfcoils (pfcoils) (9.2.1.3.170)
desc_pfcoils (503)	pfsystems%pfcoils%desc_pfcoils (desc_pfcoils) (9.2.1.3.78)
name (411)	pfsystems%pfcoils%desc_pfcoils%name (vecstring.type) (9.2.1.2.11)
id (411)	pfsystems%pfcoils%desc_pfcoils%id (vecstring.type) (9.2.1.2.11)
res (411)	pfsystems%pfcoils%desc_pfcoils%res (vecflt.type) (9.2.1.2.9)
emax (411)	pfsystems%pfcoils%desc_pfcoils%emax (vecflt.type) (9.2.1.2.9)
nelement (411)	pfsystems%pfcoils%desc_pfcoils%nelement (vecint.type) (9.2.1.2.10)
pfelement (411)	pfsystems%pfcoils%desc_pfcoils%pfelement (pfelement) (9.2.1.3.171)
name (504)	pfsystems%pfcoils%desc_pfcoils%pfelement%name (vecstring.type) (9.2.1.2.11)
id (504)	pfsystems%pfcoils%desc_pfcoils%pfelement%id (vecstring.type) (9.2.1.2.11)
turnsign (504)	pfsystems%pfcoils%desc_pfcoils%pfelement%turnsign (matflt.type) (9.2.1.2.7)
area (504)	pfsystems%pfcoils%desc_pfcoils%pfelement%area (matflt.type) (9.2.1.2.7)
pfgeometry (504)	pfsystems%pfcoils%desc_pfcoils%pfelement%pfgeometry (pfgeometry) (9.2.1.3.172)
type (505)	pfsystems%pfcoils%desc_pfcoils%pfelement%pfgeometry%type (matint.type) (9.2.1.2.8)
npoints (505)	pfsystems%pfcoils%desc_pfcoils%pfelement%pfgeometry%npoints (matint.type) (9.2.1.2.8)
rzcoordinate (505)	pfsystems%pfcoils%desc_pfcoils%pfelement%pfgeometry%rzcoordinate (rz3D) (9.2.1.3.217)
r (550)	pfsystems%pfcoils%desc_pfcoils%pfelement%pfgeometry%rzcoordinate%r (array3dflt.type) (9.2.1.2.1)
z (550)	pfsystems%pfcoils%desc_pfcoils%pfelement%pfgeometry%rzcoordinate%z (array3dflt.type) (9.2.1.2.1)
rzdrdz (505)	pfsystems%pfcoils%desc_pfcoils%pfelement%pfgeometry%rzdrdz (array3dflt.type) (9.2.1.2.1)
coilcurrent (503)	pfsystems%pfcoils%coilcurrent (exp1D) (9.2.1.3.113)
value (446)	pfsystems%pfcoils%coilcurrent%value (vecflt.type) (9.2.1.2.9)
abserror (446)	pfsystems%pfcoils%coilcurrent%abserror (vecflt.type) (9.2.1.2.9)
relerror (446)	pfsystems%pfcoils%coilcurrent%relerror (vecflt.type) (9.2.1.2.9)
coilvoltage (503)	pfsystems%pfcoils%coilvoltage (exp1D) (9.2.1.3.113)

value (446)	pfsystems%pfcoils%coilvoltage%value (vecflt.type) (9.2.1.2.9)
abserror (446)	pfsystems%pfcoils%coilvoltage%abserror (vecflt.type) (9.2.1.2.9)
releror (446)	pfsystems%pfcoils%coilvoltage%releror (vecflt.type) (9.2.1.2.9)
pfpassive (360)	pfsystems%pfpassive (pfpassive) (9.2.1.3.174)
area (507)	pfsystems%pfpassive%area (vecflt.type) (9.2.1.2.9)
res (507)	pfsystems%pfpassive%res (vecflt.type) (9.2.1.2.9)
pfpageometry (507)	pfsystems%pfpassive%pfpageometry (pfpageometry) (9.2.1.3.173)
type (506)	pfsystems%pfpassive%pfpageometry%type (vecint.type) (9.2.1.2.10)
npoints (506)	pfsystems%pfpassive%pfpageometry%npoints (vecint.type) (9.2.1.2.10)
rzcoordinate (506)	pfsystems%pfpassive%pfpageometry%rzcoordinate (rz2D) (9.2.1.3.216)
r (549)	pfsystems%pfpassive%pfpageometry%rzcoordinate%r (matflt.type) (9.2.1.2.7)
z (549)	pfsystems%pfpassive%pfpageometry%rzcoordinate%z (matflt.type) (9.2.1.2.7)
rzdrdz (506)	pfsystems%pfpassive%pfpageometry%rzdrdz (matflt.type) (9.2.1.2.7)
pfcircuits (360)	pfsystems%pfcircuits (pfcircuits) (9.2.1.3.169)
name (502)	pfsystems%pfcircuits%name (vecstring.type) (9.2.1.2.11)
id (502)	pfsystems%pfcircuits%id (vecstring.type) (9.2.1.2.11)
type (502)	pfsystems%pfcircuits%type (vecstring.type) (9.2.1.2.11)
nnodes (502)	pfsystems%pfcircuits%nnodes (vecint.type) (9.2.1.2.10)
connections (502)	pfsystems%pfcircuits%connections (array3dint.type) (9.2.1.2.2)
pfsupplies (360)	pfsystems%pfsupplies (pfsupplies) (9.2.1.3.175)
desc_supply (508)	pfsystems%pfsupplies%desc_supply (desc_supply) (9.2.1.3.79)
name (412)	pfsystems%pfsupplies%desc_supply%name (vecstring.type) (9.2.1.2.11)
id (412)	pfsystems%pfsupplies%desc_supply%id (vecstring.type) (9.2.1.2.11)
type (412)	pfsystems%pfsupplies%desc_supply%type (vecstring.type) (9.2.1.2.11)
delay (412)	pfsystems%pfsupplies%desc_supply%delay (vecflt.type) (9.2.1.2.9)
filter (412)	pfsystems%pfsupplies%desc_supply%filter (filter) (9.2.1.3.115)
num (448)	pfsystems%pfsupplies%desc_supply%filter%num (matflt.type) (9.2.1.2.7)
den (448)	pfsystems%pfsupplies%desc_supply%filter%den (matflt.type) (9.2.1.2.7)
imin (412)	pfsystems%pfsupplies%desc_supply%imin (vecflt.type) (9.2.1.2.9)
imax (412)	pfsystems%pfsupplies%desc_supply%imax (vecflt.type) (9.2.1.2.9)
res (412)	pfsystems%pfsupplies%desc_supply%res (vecflt.type) (9.2.1.2.9)
umin (412)	pfsystems%pfsupplies%desc_supply%umin (vecflt.type) (9.2.1.2.9)
umax (412)	pfsystems%pfsupplies%desc_supply%umax (vecflt.type) (9.2.1.2.9)
emax (412)	pfsystems%pfsupplies%desc_supply%emax (vecflt.type) (9.2.1.2.9)
voltage (508)	pfsystems%pfsupplies%voltage (exp1D) (9.2.1.3.113)
value (446)	pfsystems%pfsupplies%voltage%value (vecflt.type) (9.2.1.2.9)
abserror (446)	pfsystems%pfsupplies%voltage%abserror (vecflt.type) (9.2.1.2.9)
releror (446)	pfsystems%pfsupplies%voltage%releror (vecflt.type) (9.2.1.2.9)
current (508)	pfsystems%pfsupplies%current (exp1D) (9.2.1.3.113)
value (446)	pfsystems%pfsupplies%current%value (vecflt.type) (9.2.1.2.9)
abserror (446)	pfsystems%pfsupplies%current%abserror (vecflt.type) (9.2.1.2.9)
releror (446)	pfsystems%pfsupplies%current%releror (vecflt.type) (9.2.1.2.9)
time (360)	pfsystems%time (float) (9.2.1.1.1)

### 9.2.2.1.26 polardiag

datainfo (480)	lineintegraldiag%datainfo (datainfo) (9.2.1.3.75)
dataprovider (408)	lineintegraldiag%datainfo%dataprovider (string) (9.2.1.1.3)
putdate (408)	lineintegraldiag%datainfo%putdate (string) (9.2.1.1.3)
source (408)	lineintegraldiag%datainfo%source (string) (9.2.1.1.3)
comment (408)	lineintegraldiag%datainfo%comment (string) (9.2.1.1.3)
isref (408)	lineintegraldiag%datainfo%isref (integer) (9.2.1.1.2)
whatref (408)	lineintegraldiag%datainfo%whatref (whatref) (9.2.1.3.305)
user (638)	lineintegraldiag%datainfo%whatref%user (string) (9.2.1.1.3)
machine (638)	lineintegraldiag%datainfo%whatref%machine (string) (9.2.1.1.3)
shot (638)	lineintegraldiag%datainfo%whatref%shot (integer) (9.2.1.1.2)
run (638)	lineintegraldiag%datainfo%whatref%run (integer) (9.2.1.1.2)
occurrence (638)	lineintegraldiag%datainfo%whatref%occurrence (integer) (9.2.1.1.2)
putinfo (408)	lineintegraldiag%datainfo%putinfo (putinfo) (9.2.1.3.187)
putmethod (520)	lineintegraldiag%datainfo%putinfo%putmethod (string) (9.2.1.1.3)
putaccess (520)	lineintegraldiag%datainfo%putinfo%putaccess (string) (9.2.1.1.3)



putlocation (520)	lineintegraldiag%datainfo%putinfo%putlocation (string) (9.2.1.1.3)
rights (520)	lineintegraldiag%datainfo%putinfo%rights (string) (9.2.1.1.3)
expression (480)	lineintegraldiag%expression (string) (9.2.1.1.3)
setup_line (480)	lineintegraldiag%setup_line (setup_line) (9.2.1.3.249)
pivot_point (582)	lineintegraldiag%setup_line%pivot_point (rzphi1D) (9.2.1.3.218)
r (551)	lineintegraldiag%setup_line%pivot_point%r (vecflt.type) (9.2.1.2.9)
z (551)	lineintegraldiag%setup_line%pivot_point%z (vecflt.type) (9.2.1.2.9)
phi (551)	lineintegraldiag%setup_line%pivot_point%phi (vecflt.type) (9.2.1.2.9)
horchordang1 (582)	lineintegraldiag%setup_line%horchordang1 (vecflt.type) (9.2.1.2.9)
verchordang1 (582)	lineintegraldiag%setup_line%verchordang1 (vecflt.type) (9.2.1.2.9)
width (582)	lineintegraldiag%setup_line%width (vecflt.type) (9.2.1.2.9)
second_point (582)	lineintegraldiag%setup_line%second_point (rzphi1D) (9.2.1.3.218)
r (551)	lineintegraldiag%setup_line%second_point%r (vecflt.type) (9.2.1.2.9)
z (551)	lineintegraldiag%setup_line%second_point%z (vecflt.type) (9.2.1.2.9)
phi (551)	lineintegraldiag%setup_line%second_point%phi (vecflt.type) (9.2.1.2.9)
horchordang2 (582)	lineintegraldiag%setup_line%horchordang2 (vecflt.type) (9.2.1.2.9)
verchordang2 (582)	lineintegraldiag%setup_line%verchordang2 (vecflt.type) (9.2.1.2.9)
third_point (582)	lineintegraldiag%setup_line%third_point (rzphi1D) (9.2.1.3.218)
r (551)	lineintegraldiag%setup_line%third_point%r (vecflt.type) (9.2.1.2.9)
z (551)	lineintegraldiag%setup_line%third_point%z (vecflt.type) (9.2.1.2.9)
phi (551)	lineintegraldiag%setup_line%third_point%phi (vecflt.type) (9.2.1.2.9)
nchordpoints (582)	lineintegraldiag%setup_line%nchordpoints (integer) (9.2.1.1.2)
measure (480)	lineintegraldiag%measure (exp1D) (9.2.1.3.113)
value (446)	lineintegraldiag%measure%value (vecflt.type) (9.2.1.2.9)
abserror (446)	lineintegraldiag%measure%abserror (vecflt.type) (9.2.1.2.9)
relerror (446)	lineintegraldiag%measure%relerror (vecflt.type) (9.2.1.2.9)
time (480)	lineintegraldiag%time (float) (9.2.1.1.1)

### 9.2.2.1.27 reference

datainfo (362)	reference%datainfo (datainfo) (9.2.1.3.75)
dataprovider (408)	reference%datainfo%dataprovider (string) (9.2.1.1.3)
putdate (408)	reference%datainfo%putdate (string) (9.2.1.1.3)
source (408)	reference%datainfo%source (string) (9.2.1.1.3)
comment (408)	reference%datainfo%comment (string) (9.2.1.1.3)
isref (408)	reference%datainfo%isref (integer) (9.2.1.1.2)
whatref (408)	reference%datainfo%whatref (whatref) (9.2.1.3.305)
user (638)	reference%datainfo%whatref%user (string) (9.2.1.1.3)
machine (638)	reference%datainfo%whatref%machine (string) (9.2.1.1.3)
shot (638)	reference%datainfo%whatref%shot (integer) (9.2.1.1.2)
run (638)	reference%datainfo%whatref%run (integer) (9.2.1.1.2)
occurrence (638)	reference%datainfo%whatref%occurrence (integer) (9.2.1.1.2)
putinfo (408)	reference%datainfo%putinfo (putinfo) (9.2.1.3.187)
putmethod (520)	reference%datainfo%putinfo%putmethod (string) (9.2.1.1.3)
putaccess (520)	reference%datainfo%putinfo%putaccess (string) (9.2.1.1.3)
putlocation (520)	reference%datainfo%putinfo%putlocation (string) (9.2.1.1.3)
rights (520)	reference%datainfo%putinfo%rights (string) (9.2.1.1.3)
non_timed (362)	reference%non_timed (ref_nt) (9.2.1.3.191)
zerod_real (524)	reference%non_timed%zerod_real (ref_nt_0dr) (9.2.1.3.194)
ref1 (527)	reference%non_timed%zerod_real%ref1 (ref_nt_0dr_ref) (9.2.1.3.195)
value (528)	reference%non_timed%zerod_real%ref1%value (float) (9.2.1.1.1)
description (528)	reference%non_timed%zerod_real%ref1%description (string) (9.2.1.1.3)
ref2 (527)	reference%non_timed%zerod_real%ref2 (ref_nt_0dr_ref) (9.2.1.3.195)
value (528)	reference%non_timed%zerod_real%ref2%value (float) (9.2.1.1.1)
description (528)	reference%non_timed%zerod_real%ref2%description (string) (9.2.1.1.3)
ref3 (527)	reference%non_timed%zerod_real%ref3 (ref_nt_0dr_ref) (9.2.1.3.195)
value (528)	reference%non_timed%zerod_real%ref3%value (float) (9.2.1.1.1)
description (528)	reference%non_timed%zerod_real%ref3%description (string) (9.2.1.1.3)
ref4 (527)	reference%non_timed%zerod_real%ref4 (ref_nt_0dr_ref) (9.2.1.3.195)
value (528)	reference%non_timed%zerod_real%ref4%value (float) (9.2.1.1.1)
description (528)	reference%non_timed%zerod_real%ref4%description (string) (9.2.1.1.3)

ref5 (527)	reference%non_timed%zerod_real%ref5 (ref_nt_0dr_ref) (9.2.1.3.195)
value (528)	reference%non_timed%zerod_real%ref5%value (float) (9.2.1.1.1)
description (528)	reference%non_timed%zerod_real%ref5%description (string) (9.2.1.1.3)
ref6 (527)	reference%non_timed%zerod_real%ref6 (ref_nt_0dr_ref) (9.2.1.3.195)
value (528)	reference%non_timed%zerod_real%ref6%value (float) (9.2.1.1.1)
description (528)	reference%non_timed%zerod_real%ref6%description (string) (9.2.1.1.3)
ref7 (527)	reference%non_timed%zerod_real%ref7 (ref_nt_0dr_ref) (9.2.1.3.195)
value (528)	reference%non_timed%zerod_real%ref7%value (float) (9.2.1.1.1)
description (528)	reference%non_timed%zerod_real%ref7%description (string) (9.2.1.1.3)
zerod_int (524)	reference%non_timed%zerod_int (ref_nt_0di) (9.2.1.3.192)
ref1 (525)	reference%non_timed%zerod_int%ref1 (ref_nt_0di_ref) (9.2.1.3.193)
value (526)	reference%non_timed%zerod_int%ref1%value (integer) (9.2.1.1.2)
description (526)	reference%non_timed%zerod_int%ref1%description (string) (9.2.1.1.3)
ref2 (525)	reference%non_timed%zerod_int%ref2 (ref_nt_0di_ref) (9.2.1.3.193)
value (526)	reference%non_timed%zerod_int%ref2%value (integer) (9.2.1.1.2)
description (526)	reference%non_timed%zerod_int%ref2%description (string) (9.2.1.1.3)
ref3 (525)	reference%non_timed%zerod_int%ref3 (ref_nt_0di_ref) (9.2.1.3.193)
value (526)	reference%non_timed%zerod_int%ref3%value (integer) (9.2.1.1.2)
description (526)	reference%non_timed%zerod_int%ref3%description (string) (9.2.1.1.3)
ref4 (525)	reference%non_timed%zerod_int%ref4 (ref_nt_0di_ref) (9.2.1.3.193)
value (526)	reference%non_timed%zerod_int%ref4%value (integer) (9.2.1.1.2)
description (526)	reference%non_timed%zerod_int%ref4%description (string) (9.2.1.1.3)
zerod_string (524)	reference%non_timed%zerod_string (ref_nt_0ds) (9.2.1.3.196)
ref1 (529)	reference%non_timed%zerod_string%ref1 (ref_nt_0ds_ref) (9.2.1.3.197)
value (530)	reference%non_timed%zerod_string%ref1%value (string) (9.2.1.1.3)
description (530)	reference%non_timed%zerod_string%ref1%description (string) (9.2.1.1.3)
ref2 (529)	reference%non_timed%zerod_string%ref2 (ref_nt_0ds_ref) (9.2.1.3.197)
value (530)	reference%non_timed%zerod_string%ref2%value (string) (9.2.1.1.3)
description (530)	reference%non_timed%zerod_string%ref2%description (string) (9.2.1.1.3)
oned_real (524)	reference%non_timed%oned_real (ref_nt_1dr) (9.2.1.3.200)
ref1 (533)	reference%non_timed%oned_real%ref1 (ref_nt_1dr_ref) (9.2.1.3.201)
value (534)	reference%non_timed%oned_real%ref1%value (vecflt_type) (9.2.1.2.9)
description (534)	reference%non_timed%oned_real%ref1%description (string) (9.2.1.1.3)
ref2 (533)	reference%non_timed%oned_real%ref2 (ref_nt_1dr_ref) (9.2.1.3.201)
value (534)	reference%non_timed%oned_real%ref2%value (vecflt_type) (9.2.1.2.9)
description (534)	reference%non_timed%oned_real%ref2%description (string) (9.2.1.1.3)
ref3 (533)	reference%non_timed%oned_real%ref3 (ref_nt_1dr_ref) (9.2.1.3.201)
value (534)	reference%non_timed%oned_real%ref3%value (vecflt_type) (9.2.1.2.9)
description (534)	reference%non_timed%oned_real%ref3%description (string) (9.2.1.1.3)
ref4 (533)	reference%non_timed%oned_real%ref4 (ref_nt_1dr_ref) (9.2.1.3.201)
value (534)	reference%non_timed%oned_real%ref4%value (vecflt_type) (9.2.1.2.9)
description (534)	reference%non_timed%oned_real%ref4%description (string) (9.2.1.1.3)
ref5 (533)	reference%non_timed%oned_real%ref5 (ref_nt_1dr_ref) (9.2.1.3.201)
value (534)	reference%non_timed%oned_real%ref5%value (vecflt_type) (9.2.1.2.9)
description (534)	reference%non_timed%oned_real%ref5%description (string) (9.2.1.1.3)
oned_int (524)	reference%non_timed%oned_int (ref_nt_1di) (9.2.1.3.198)
ref1 (531)	reference%non_timed%oned_int%ref1 (ref_nt_1di_ref) (9.2.1.3.199)
value (532)	reference%non_timed%oned_int%ref1%value (vecint_type) (9.2.1.2.10)
description (532)	reference%non_timed%oned_int%ref1%description (string) (9.2.1.1.3)
ref2 (531)	reference%non_timed%oned_int%ref2 (ref_nt_1di_ref) (9.2.1.3.199)
value (532)	reference%non_timed%oned_int%ref2%value (vecint_type) (9.2.1.2.10)
description (532)	reference%non_timed%oned_int%ref2%description (string) (9.2.1.1.3)
ref3 (531)	reference%non_timed%oned_int%ref3 (ref_nt_1di_ref) (9.2.1.3.199)
value (532)	reference%non_timed%oned_int%ref3%value (vecint_type) (9.2.1.2.10)
description (532)	reference%non_timed%oned_int%ref3%description (string) (9.2.1.1.3)
ref4 (531)	reference%non_timed%oned_int%ref4 (ref_nt_1di_ref) (9.2.1.3.199)
value (532)	reference%non_timed%oned_int%ref4%value (vecint_type) (9.2.1.2.10)
description (532)	reference%non_timed%oned_int%ref4%description (string) (9.2.1.1.3)
timed (362)	reference%timed (ref_t) (9.2.1.3.202)
zerod_real (535)	reference%timed%zerod_real (ref_t_0dr) (9.2.1.3.205)
ref1 (538)	reference%timed%zerod_real%ref1 (ref_t_0dr_ref) (9.2.1.3.206)



description (541)	reference%timed%oned.int%ref1%description (string) (9.2.1.1.3)
ref2 (540)	reference%timed%oned.int%ref2 (ref.t.1di.ref) (9.2.1.3.208)
value (541)	reference%timed%oned.int%ref2%value (vecint.type) (9.2.1.2.10)
description (541)	reference%timed%oned.int%ref2%description (string) (9.2.1.1.3)
ref3 (540)	reference%timed%oned.int%ref3 (ref.t.1di.ref) (9.2.1.3.208)
value (541)	reference%timed%oned.int%ref3%value (vecint.type) (9.2.1.2.10)
description (541)	reference%timed%oned.int%ref3%description (string) (9.2.1.1.3)
ref4 (540)	reference%timed%oned.int%ref4 (ref.t.1di.ref) (9.2.1.3.208)
value (541)	reference%timed%oned.int%ref4%value (vecint.type) (9.2.1.2.10)
description (541)	reference%timed%oned.int%ref4%description (string) (9.2.1.1.3)
time (362)	reference%time (float) (9.2.1.1.1)

### 9.2.2.1.28 sawteeth

datainfo (363)	sawteeth%datainfo (datainfo) (9.2.1.3.75)
dataprovider (408)	sawteeth%datainfo%dataprovider (string) (9.2.1.1.3)
putdate (408)	sawteeth%datainfo%putdate (string) (9.2.1.1.3)
source (408)	sawteeth%datainfo%source (string) (9.2.1.1.3)
comment (408)	sawteeth%datainfo%comment (string) (9.2.1.1.3)
isref (408)	sawteeth%datainfo%isref (integer) (9.2.1.1.2)
whatref (408)	sawteeth%datainfo%whatref (whatref) (9.2.1.3.305)
user (638)	sawteeth%datainfo%whatref%user (string) (9.2.1.1.3)
machine (638)	sawteeth%datainfo%whatref%machine (string) (9.2.1.1.3)
shot (638)	sawteeth%datainfo%whatref%shot (integer) (9.2.1.1.2)
run (638)	sawteeth%datainfo%whatref%run (integer) (9.2.1.1.2)
occurrence (638)	sawteeth%datainfo%whatref%occurrence (integer) (9.2.1.1.2)
putinfo (408)	sawteeth%datainfo%putinfo (putinfo) (9.2.1.3.187)
putmethod (520)	sawteeth%datainfo%putinfo%putmethod (string) (9.2.1.1.3)
putaccess (520)	sawteeth%datainfo%putinfo%putaccess (string) (9.2.1.1.3)
putlocation (520)	sawteeth%datainfo%putinfo%putlocation (string) (9.2.1.1.3)
rights (520)	sawteeth%datainfo%putinfo%rights (string) (9.2.1.1.3)
crash_trig (363)	sawteeth%crash_trig (integer) (9.2.1.1.2)
composition (363)	sawteeth%composition (composition) (9.2.1.3.59)
amn (392)	sawteeth%composition%amn (vecflt.type) (9.2.1.2.9)
zn (392)	sawteeth%composition%zn (vecflt.type) (9.2.1.2.9)
zion (392)	sawteeth%composition%zion (vecflt.type) (9.2.1.2.9)
imp_flag (392)	sawteeth%composition%imp_flag (vecint.type) (9.2.1.2.10)
rho_tor_norm (363)	sawteeth%rho_tor_norm (vecflt.type) (9.2.1.2.9)
rho_tor (363)	sawteeth%rho_tor (vecflt.type) (9.2.1.2.9)
profiles1d (363)	sawteeth%profiles1d (sawteeth_profiles1d) (9.2.1.3.224)
ne (557)	sawteeth%profiles1d%ne (vecflt.type) (9.2.1.2.9)
ni (557)	sawteeth%profiles1d%ni (matflt.type) (9.2.1.2.7)
te (557)	sawteeth%profiles1d%te (vecflt.type) (9.2.1.2.9)
ti (557)	sawteeth%profiles1d%ti (matflt.type) (9.2.1.2.7)
psi (557)	sawteeth%profiles1d%psi (vecflt.type) (9.2.1.2.9)
phi (557)	sawteeth%profiles1d%phi (vecflt.type) (9.2.1.2.9)
psistar (557)	sawteeth%profiles1d%psistar (vecflt.type) (9.2.1.2.9)
volume (557)	sawteeth%profiles1d%volume (vecflt.type) (9.2.1.2.9)
q (557)	sawteeth%profiles1d%q (vecflt.type) (9.2.1.2.9)
diags (363)	sawteeth%diags (sawteeth_diags) (9.2.1.3.223)
shear1 (556)	sawteeth%diags%shear1 (float) (9.2.1.1.1)
rhotorn_q1 (556)	sawteeth%diags%rhotorn_q1 (float) (9.2.1.1.1)
rhotorn_inv (556)	sawteeth%diags%rhotorn_inv (float) (9.2.1.1.1)
rhotorn_mix (556)	sawteeth%diags%rhotorn_mix (float) (9.2.1.1.1)
codeparam (363)	sawteeth%codeparam (codeparam) (9.2.1.3.56)
codename (389)	sawteeth%codeparam%codename (string) (9.2.1.1.3)
codeversion (389)	sawteeth%codeparam%codeversion (string) (9.2.1.1.3)
parameters (389)	sawteeth%codeparam%parameters (string) (9.2.1.1.3)
output_diag (389)	sawteeth%codeparam%output_diag (string) (9.2.1.1.3)
output_flag (389)	sawteeth%codeparam%output_flag (integer) (9.2.1.1.2)
time (363)	sawteeth%time (float) (9.2.1.1.1)

## 9.2.2.1.29 scenario

datainfo (364)	scenario%datainfo (datainfo) (9.2.1.3.75)
dataprovider (408)	scenario%datainfo%dataprovider (string) (9.2.1.1.3)
putdate (408)	scenario%datainfo%putdate (string) (9.2.1.1.3)
source (408)	scenario%datainfo%source (string) (9.2.1.1.3)
comment (408)	scenario%datainfo%comment (string) (9.2.1.1.3)
isref (408)	scenario%datainfo%isref (integer) (9.2.1.1.2)
whatref (408)	scenario%datainfo%whatref (whatref) (9.2.1.3.305)
user (638)	scenario%datainfo%whatref%user (string) (9.2.1.1.3)
machine (638)	scenario%datainfo%whatref%machine (string) (9.2.1.1.3)
shot (638)	scenario%datainfo%whatref%shot (integer) (9.2.1.1.2)
run (638)	scenario%datainfo%whatref%run (integer) (9.2.1.1.2)
occurrence (638)	scenario%datainfo%whatref%occurrence (integer) (9.2.1.1.2)
putinfo (408)	scenario%datainfo%putinfo (putinfo) (9.2.1.3.187)
putmethod (520)	scenario%datainfo%putinfo%putmethod (string) (9.2.1.1.3)
putaccess (520)	scenario%datainfo%putinfo%putaccess (string) (9.2.1.1.3)
putlocation (520)	scenario%datainfo%putinfo%putlocation (string) (9.2.1.1.3)
rights (520)	scenario%datainfo%putinfo%rights (string) (9.2.1.1.3)
centre (364)	scenario%centre (scenario_centre) (9.2.1.3.225)
te0 (558)	scenario%centre%te0 (scenario_ref) (9.2.1.3.242)
value (575)	scenario%centre%te0%value (float) (9.2.1.1.1)
source (575)	scenario%centre%te0%source (string) (9.2.1.1.3)
ti0 (558)	scenario%centre%ti0 (scenario_ref) (9.2.1.3.242)
value (575)	scenario%centre%ti0%value (float) (9.2.1.1.1)
source (575)	scenario%centre%ti0%source (string) (9.2.1.1.3)
ne0 (558)	scenario%centre%ne0 (scenario_ref) (9.2.1.3.242)
value (575)	scenario%centre%ne0%value (float) (9.2.1.1.1)
source (575)	scenario%centre%ne0%source (string) (9.2.1.1.3)
ni0 (558)	scenario%centre%ni0 (scenario_ref) (9.2.1.3.242)
value (575)	scenario%centre%ni0%value (float) (9.2.1.1.1)
source (575)	scenario%centre%ni0%source (string) (9.2.1.1.3)
shift0 (558)	scenario%centre%shift0 (scenario_ref) (9.2.1.3.242)
value (575)	scenario%centre%shift0%value (float) (9.2.1.1.1)
source (575)	scenario%centre%shift0%source (string) (9.2.1.1.3)
psi0 (558)	scenario%centre%psi0 (scenario_ref) (9.2.1.3.242)
value (575)	scenario%centre%psi0%value (float) (9.2.1.1.1)
source (575)	scenario%centre%psi0%source (string) (9.2.1.1.3)
phi0 (558)	scenario%centre%phi0 (scenario_ref) (9.2.1.3.242)
value (575)	scenario%centre%phi0%value (float) (9.2.1.1.1)
source (575)	scenario%centre%phi0%source (string) (9.2.1.1.3)
q0 (558)	scenario%centre%q0 (scenario_ref) (9.2.1.3.242)
value (575)	scenario%centre%q0%value (float) (9.2.1.1.1)
source (575)	scenario%centre%q0%source (string) (9.2.1.1.3)
Rmag (558)	scenario%centre%Rmag (scenario_ref) (9.2.1.3.242)
value (575)	scenario%centre%Rmag%value (float) (9.2.1.1.1)
source (575)	scenario%centre%Rmag%source (string) (9.2.1.1.3)
Zmag (558)	scenario%centre%Zmag (scenario_ref) (9.2.1.3.242)
value (575)	scenario%centre%Zmag%value (float) (9.2.1.1.1)
source (575)	scenario%centre%Zmag%source (string) (9.2.1.1.3)
vtor_0 (558)	scenario%centre%vtor_0 (scenario_ref) (9.2.1.3.242)
value (575)	scenario%centre%vtor_0%value (float) (9.2.1.1.1)
source (575)	scenario%centre%vtor_0%source (string) (9.2.1.1.3)
composition (364)	scenario%composition (scenario_composition) (9.2.1.3.226)
amn (559)	scenario%composition%amn (vecflt_type) (9.2.1.2.9)
zn (559)	scenario%composition%zn (vecflt_type) (9.2.1.2.9)
zion (559)	scenario%composition%zion (vecflt_type) (9.2.1.2.9)
imp_flag (559)	scenario%composition%imp_flag (vecint_type) (9.2.1.2.10)
rot_imp_flag (559)	scenario%composition%rot_imp_flag (vecint_type) (9.2.1.2.10)
pellet.amn (559)	scenario%composition%pellet.amn (vecflt_type) (9.2.1.2.9)
pellet.zn (559)	scenario%composition%pellet.zn (vecflt_type) (9.2.1.2.9)
nbi.amn (559)	scenario%composition%nbi.amn (vecflt_type) (9.2.1.2.9)

nbi_zn (559)	scenario%composition%nbi_zn (vecflt.type) (9.2.1.2.9)
configs (364)	scenario%configs (scenario_configuration) (9.2.1.3.227)
config (560)	scenario%configs%config (scenario_int) (9.2.1.3.234)
value (567)	scenario%configs%config%value (integer) (9.2.1.1.2)
source (567)	scenario%configs%config%source (string) (9.2.1.1.3)
lmode_sc (560)	scenario%configs%lmode_sc (string) (9.2.1.1.3)
hmode_sc (560)	scenario%configs%hmode_sc (string) (9.2.1.1.3)
core_sc (560)	scenario%configs%core_sc (string) (9.2.1.1.3)
pedestal_sc (560)	scenario%configs%pedestal_sc (string) (9.2.1.1.3)
helium_sc (560)	scenario%configs%helium_sc (string) (9.2.1.1.3)
impurity_sc (560)	scenario%configs%impurity_sc (string) (9.2.1.1.3)
l2h_sc (560)	scenario%configs%l2h_sc (string) (9.2.1.1.3)
tor_rot_sc (560)	scenario%configs%tor_rot_sc (string) (9.2.1.1.3)
wall_mat (560)	scenario%configs%wall_mat (string) (9.2.1.1.3)
evap_mat (560)	scenario%configs%evap_mat (string) (9.2.1.1.3)
lim_mat (560)	scenario%configs%lim_mat (string) (9.2.1.1.3)
div_mat (560)	scenario%configs%div_mat (string) (9.2.1.1.3)
coordinate (560)	scenario%configs%coordinate (string) (9.2.1.1.3)
ecrh_freq (560)	scenario%configs%ecrh_freq (scenario_ref) (9.2.1.3.242)
value (575)	scenario%configs%ecrh_freq%value (float) (9.2.1.1.1)
source (575)	scenario%configs%ecrh_freq%source (string) (9.2.1.1.3)
ecrh_loc (560)	scenario%configs%ecrh_loc (scenario_ref) (9.2.1.3.242)
value (575)	scenario%configs%ecrh_loc%value (float) (9.2.1.1.1)
source (575)	scenario%configs%ecrh_loc%source (string) (9.2.1.1.3)
ecrh_mode (560)	scenario%configs%ecrh_mode (scenario_int) (9.2.1.3.234)
value (567)	scenario%configs%ecrh_mode%value (integer) (9.2.1.1.2)
source (567)	scenario%configs%ecrh_mode%source (string) (9.2.1.1.3)
ecrh_tor_ang (560)	scenario%configs%ecrh_tor_ang (scenario_ref) (9.2.1.3.242)
value (575)	scenario%configs%ecrh_tor_ang%value (float) (9.2.1.1.1)
source (575)	scenario%configs%ecrh_tor_ang%source (string) (9.2.1.1.3)
ecrh_pol_ang (560)	scenario%configs%ecrh_pol_ang (scenario_ref) (9.2.1.3.242)
value (575)	scenario%configs%ecrh_pol_ang%value (float) (9.2.1.1.1)
source (575)	scenario%configs%ecrh_pol_ang%source (string) (9.2.1.1.3)
ecrh_harm (560)	scenario%configs%ecrh_harm (scenario_int) (9.2.1.3.234)
value (567)	scenario%configs%ecrh_harm%value (integer) (9.2.1.1.2)
source (567)	scenario%configs%ecrh_harm%source (string) (9.2.1.1.3)
enbi (560)	scenario%configs%enbi (scenario_ref) (9.2.1.3.242)
value (575)	scenario%configs%enbi%value (float) (9.2.1.1.1)
source (575)	scenario%configs%enbi%source (string) (9.2.1.1.3)
r_nbi (560)	scenario%configs%r_nbi (scenario_ref) (9.2.1.3.242)
value (575)	scenario%configs%r_nbi%value (float) (9.2.1.1.1)
source (575)	scenario%configs%r_nbi%source (string) (9.2.1.1.3)
grad_b_drift (560)	scenario%configs%grad_b_drift (scenario_int) (9.2.1.3.234)
value (567)	scenario%configs%grad_b_drift%value (integer) (9.2.1.1.2)
source (567)	scenario%configs%grad_b_drift%source (string) (9.2.1.1.3)
icrh_freq (560)	scenario%configs%icrh_freq (scenario_ref) (9.2.1.3.242)
value (575)	scenario%configs%icrh_freq%value (float) (9.2.1.1.1)
source (575)	scenario%configs%icrh_freq%source (string) (9.2.1.1.3)
icrh_scheme (560)	scenario%configs%icrh_scheme (string) (9.2.1.1.3)
icrh_phase (560)	scenario%configs%icrh_phase (scenario_ref) (9.2.1.3.242)
value (575)	scenario%configs%icrh_phase%value (float) (9.2.1.1.1)
source (575)	scenario%configs%icrh_phase%source (string) (9.2.1.1.3)
LH_freq (560)	scenario%configs%LH_freq (scenario_ref) (9.2.1.3.242)
value (575)	scenario%configs%LH_freq%value (float) (9.2.1.1.1)
source (575)	scenario%configs%LH_freq%source (string) (9.2.1.1.3)
LH_npar (560)	scenario%configs%LH_npar (scenario_ref) (9.2.1.3.242)
value (575)	scenario%configs%LH_npar%value (float) (9.2.1.1.1)
source (575)	scenario%configs%LH_npar%source (string) (9.2.1.1.3)
pellet_ang (560)	scenario%configs%pellet_ang (scenario_ref) (9.2.1.3.242)
value (575)	scenario%configs%pellet_ang%value (float) (9.2.1.1.1)
source (575)	scenario%configs%pellet_ang%source (string) (9.2.1.1.3)



pellet.v (560)	scenario%configs%pellet.v (scenario_ref) (9.2.1.3.242)
value (575)	scenario%configs%pellet.v%value (float) (9.2.1.1.1)
source (575)	scenario%configs%pellet.v%source (string) (9.2.1.1.3)
pellet.nba (560)	scenario%configs%pellet.nba (scenario_ref) (9.2.1.3.242)
value (575)	scenario%configs%pellet.nba%value (float) (9.2.1.1.1)
source (575)	scenario%configs%pellet.nba%source (string) (9.2.1.1.3)
confinement (364)	scenario%confinement (scenario_confinement) (9.2.1.3.228)
tau.e (561)	scenario%confinement%tau.e (scenario_ref) (9.2.1.3.242)
value (575)	scenario%confinement%tau.e%value (float) (9.2.1.1.1)
source (575)	scenario%confinement%tau.e%source (string) (9.2.1.1.3)
tau.l.sc (561)	scenario%confinement%tau.l.sc (scenario_ref) (9.2.1.3.242)
value (575)	scenario%confinement%tau.l.sc%value (float) (9.2.1.1.1)
source (575)	scenario%confinement%tau.l.sc%source (string) (9.2.1.1.3)
tau.h.sc (561)	scenario%confinement%tau.h.sc (scenario_ref) (9.2.1.3.242)
value (575)	scenario%confinement%tau.h.sc%value (float) (9.2.1.1.1)
source (575)	scenario%confinement%tau.h.sc%source (string) (9.2.1.1.3)
tau.he (561)	scenario%confinement%tau.he (scenario_ref) (9.2.1.3.242)
value (575)	scenario%confinement%tau.he%value (float) (9.2.1.1.1)
source (575)	scenario%confinement%tau.he%source (string) (9.2.1.1.3)
tau.e.ee (561)	scenario%confinement%tau.e.ee (scenario_ref) (9.2.1.3.242)
value (575)	scenario%confinement%tau.e.ee%value (float) (9.2.1.1.1)
source (575)	scenario%confinement%tau.e.ee%source (string) (9.2.1.1.3)
tau.e.ii (561)	scenario%confinement%tau.e.ii (scenario_ref) (9.2.1.3.242)
value (575)	scenario%confinement%tau.e.ii%value (float) (9.2.1.1.1)
source (575)	scenario%confinement%tau.e.ii%source (string) (9.2.1.1.3)
tau.e.ei (561)	scenario%confinement%tau.e.ei (scenario_ref) (9.2.1.3.242)
value (575)	scenario%confinement%tau.e.ei%value (float) (9.2.1.1.1)
source (575)	scenario%confinement%tau.e.ei%source (string) (9.2.1.1.3)
tau.cur.diff (561)	scenario%confinement%tau.cur.diff (scenario_ref) (9.2.1.3.242)
value (575)	scenario%confinement%tau.cur.diff%value (float) (9.2.1.1.1)
source (575)	scenario%confinement%tau.cur.diff%source (string) (9.2.1.1.3)
tau.i.rol (561)	scenario%confinement%tau.i.rol (scenario_ref) (9.2.1.3.242)
value (575)	scenario%confinement%tau.i.rol%value (float) (9.2.1.1.1)
source (575)	scenario%confinement%tau.i.rol%source (string) (9.2.1.1.3)
currents (364)	scenario%currents (scenario_currents) (9.2.1.3.229)
RR (562)	scenario%currents%RR (scenario_ref) (9.2.1.3.242)
value (575)	scenario%currents%RR%value (float) (9.2.1.1.1)
source (575)	scenario%currents%RR%source (string) (9.2.1.1.3)
i.align (562)	scenario%currents%i.align (scenario_ref) (9.2.1.3.242)
value (575)	scenario%currents%i.align%value (float) (9.2.1.1.1)
source (575)	scenario%currents%i.align%source (string) (9.2.1.1.3)
i.boot (562)	scenario%currents%i.boot (scenario_ref) (9.2.1.3.242)
value (575)	scenario%currents%i.boot%value (float) (9.2.1.1.1)
source (575)	scenario%currents%i.boot%source (string) (9.2.1.1.3)
i.cd.tot (562)	scenario%currents%i.cd.tot (scenario_ref) (9.2.1.3.242)
value (575)	scenario%currents%i.cd.tot%value (float) (9.2.1.1.1)
source (575)	scenario%currents%i.cd.tot%source (string) (9.2.1.1.3)
i.eccd (562)	scenario%currents%i.eccd (scenario_ref) (9.2.1.3.242)
value (575)	scenario%currents%i.eccd%value (float) (9.2.1.1.1)
source (575)	scenario%currents%i.eccd%source (string) (9.2.1.1.3)
i.fast.ion (562)	scenario%currents%i.fast.ion (scenario_ref) (9.2.1.3.242)
value (575)	scenario%currents%i.fast.ion%value (float) (9.2.1.1.1)
source (575)	scenario%currents%i.fast.ion%source (string) (9.2.1.1.3)
i.fwcd (562)	scenario%currents%i.fwcd (scenario_ref) (9.2.1.3.242)
value (575)	scenario%currents%i.fwcd%value (float) (9.2.1.1.1)
source (575)	scenario%currents%i.fwcd%source (string) (9.2.1.1.3)
i.lhcd (562)	scenario%currents%i.lhcd (scenario_ref) (9.2.1.3.242)
value (575)	scenario%currents%i.lhcd%value (float) (9.2.1.1.1)
source (575)	scenario%currents%i.lhcd%source (string) (9.2.1.1.3)
i.nbcd (562)	scenario%currents%i.nbcd (scenario_ref) (9.2.1.3.242)
value (575)	scenario%currents%i.nbcd%value (float) (9.2.1.1.1)

source (575)	scenario%currents%i_nbicd%source (string) (9.2.1.1.3)
i_ni_tot (562)	scenario%currents%i_ni_tot (scenario_ref) (9.2.1.3.242)
value (575)	scenario%currents%i_ni_tot%value (float) (9.2.1.1.1)
source (575)	scenario%currents%i_ni_tot%source (string) (9.2.1.1.3)
i_ohm (562)	scenario%currents%i_ohm (scenario_ref) (9.2.1.3.242)
value (575)	scenario%currents%i_ohm%value (float) (9.2.1.1.1)
source (575)	scenario%currents%i_ohm%source (string) (9.2.1.1.3)
i_par (562)	scenario%currents%i_par (scenario_ref) (9.2.1.3.242)
value (575)	scenario%currents%i_par%value (float) (9.2.1.1.1)
source (575)	scenario%currents%i_par%source (string) (9.2.1.1.3)
i_runaway (562)	scenario%currents%i_runaway (scenario_ref) (9.2.1.3.242)
value (575)	scenario%currents%i_runaway%value (float) (9.2.1.1.1)
source (575)	scenario%currents%i_runaway%source (string) (9.2.1.1.3)
v_loop (562)	scenario%currents%v_loop (scenario_ref) (9.2.1.3.242)
value (575)	scenario%currents%v_loop%value (float) (9.2.1.1.1)
source (575)	scenario%currents%v_loop%source (string) (9.2.1.1.3)
v_meas (562)	scenario%currents%v_meas (scenario_ref) (9.2.1.3.242)
value (575)	scenario%currents%v_meas%value (float) (9.2.1.1.1)
source (575)	scenario%currents%v_meas%source (string) (9.2.1.1.3)
edge (364)	scenario%edge (scenario_edge) (9.2.1.3.230)
te_edge (563)	scenario%edge%te_edge (scenario_ref) (9.2.1.3.242)
value (575)	scenario%edge%te_edge%value (float) (9.2.1.1.1)
source (575)	scenario%edge%te_edge%source (string) (9.2.1.1.3)
ti_edge (563)	scenario%edge%ti_edge (scenario_ref) (9.2.1.3.242)
value (575)	scenario%edge%ti_edge%value (float) (9.2.1.1.1)
source (575)	scenario%edge%ti_edge%source (string) (9.2.1.1.3)
ne_edge (563)	scenario%edge%ne_edge (scenario_ref) (9.2.1.3.242)
value (575)	scenario%edge%ne_edge%value (float) (9.2.1.1.1)
source (575)	scenario%edge%ne_edge%source (string) (9.2.1.1.3)
ni_edge (563)	scenario%edge%ni_edge (scenario_ref) (9.2.1.3.242)
value (575)	scenario%edge%ni_edge%value (float) (9.2.1.1.1)
source (575)	scenario%edge%ni_edge%source (string) (9.2.1.1.3)
psi_edge (563)	scenario%edge%psi_edge (scenario_ref) (9.2.1.3.242)
value (575)	scenario%edge%psi_edge%value (float) (9.2.1.1.1)
source (575)	scenario%edge%psi_edge%source (string) (9.2.1.1.3)
phi_edge (563)	scenario%edge%phi_edge (scenario_ref) (9.2.1.3.242)
value (575)	scenario%edge%phi_edge%value (float) (9.2.1.1.1)
source (575)	scenario%edge%phi_edge%source (string) (9.2.1.1.3)
rho_edge (563)	scenario%edge%rho_edge (scenario_ref) (9.2.1.3.242)
value (575)	scenario%edge%rho_edge%value (float) (9.2.1.1.1)
source (575)	scenario%edge%rho_edge%source (string) (9.2.1.1.3)
drho_edge_dt (563)	scenario%edge%drho_edge_dt (scenario_ref) (9.2.1.3.242)
value (575)	scenario%edge%drho_edge_dt%value (float) (9.2.1.1.1)
source (575)	scenario%edge%drho_edge_dt%source (string) (9.2.1.1.3)
q_edge (563)	scenario%edge%q_edge (scenario_ref) (9.2.1.3.242)
value (575)	scenario%edge%q_edge%value (float) (9.2.1.1.1)
source (575)	scenario%edge%q_edge%source (string) (9.2.1.1.3)
neutral_flux (563)	scenario%edge%neutral_flux (scenario_ref) (9.2.1.3.242)
value (575)	scenario%edge%neutral_flux%value (float) (9.2.1.1.1)
source (575)	scenario%edge%neutral_flux%source (string) (9.2.1.1.3)
phi_plasma (563)	scenario%edge%phi_plasma (scenario_ref) (9.2.1.3.242)
value (575)	scenario%edge%phi_plasma%value (float) (9.2.1.1.1)
source (575)	scenario%edge%phi_plasma%source (string) (9.2.1.1.3)
vtor_edge (563)	scenario%edge%vtor_edge (scenario_ref) (9.2.1.3.242)
value (575)	scenario%edge%vtor_edge%value (float) (9.2.1.1.1)
source (575)	scenario%edge%vtor_edge%source (string) (9.2.1.1.3)
energy (364)	scenario%energy (scenario_energy) (9.2.1.3.231)
w_tot (564)	scenario%energy%w_tot (scenario_ref) (9.2.1.3.242)
value (575)	scenario%energy%w_tot%value (float) (9.2.1.1.1)
source (575)	scenario%energy%w_tot%source (string) (9.2.1.1.3)
w_b_pol (564)	scenario%energy%w_b_pol (scenario_ref) (9.2.1.3.242)



value (575)	scenario%energy%w_b_pol%value (float) (9.2.1.1.1)
source (575)	scenario%energy%w_b_pol%source (string) (9.2.1.1.3)
w_dia (564)	scenario%energy%w_dia (scenario_ref) (9.2.1.3.242)
value (575)	scenario%energy%w_dia%value (float) (9.2.1.1.1)
source (575)	scenario%energy%w_dia%source (string) (9.2.1.1.3)
dwdia_dt (564)	scenario%energy%dwdia_dt (scenario_ref) (9.2.1.3.242)
value (575)	scenario%energy%dwdia_dt%value (float) (9.2.1.1.1)
source (575)	scenario%energy%dwdia_dt%source (string) (9.2.1.1.3)
w_b_tor_pla (564)	scenario%energy%w_b_tor_pla (scenario_ref) (9.2.1.3.242)
value (575)	scenario%energy%w_b_tor_pla%value (float) (9.2.1.1.1)
source (575)	scenario%energy%w_b_tor_pla%source (string) (9.2.1.1.3)
w_th (564)	scenario%energy%w_th (scenario_ref) (9.2.1.3.242)
value (575)	scenario%energy%w_th%value (float) (9.2.1.1.1)
source (575)	scenario%energy%w_th%source (string) (9.2.1.1.3)
dwtot_dt (564)	scenario%energy%dwtot_dt (scenario_ref) (9.2.1.3.242)
value (575)	scenario%energy%dwtot_dt%value (float) (9.2.1.1.1)
source (575)	scenario%energy%dwtot_dt%source (string) (9.2.1.1.3)
dwbpol_dt (564)	scenario%energy%dwbpol_dt (scenario_ref) (9.2.1.3.242)
value (575)	scenario%energy%dwbpol_dt%value (float) (9.2.1.1.1)
source (575)	scenario%energy%dwbpol_dt%source (string) (9.2.1.1.3)
dwbtorpla_dt (564)	scenario%energy%dwbtorpla_dt (scenario_ref) (9.2.1.3.242)
value (575)	scenario%energy%dwbtorpla_dt%value (float) (9.2.1.1.1)
source (575)	scenario%energy%dwbtorpla_dt%source (string) (9.2.1.1.3)
dwth_dt (564)	scenario%energy%dwth_dt (scenario_ref) (9.2.1.3.242)
value (575)	scenario%energy%dwth_dt%value (float) (9.2.1.1.1)
source (575)	scenario%energy%dwth_dt%source (string) (9.2.1.1.3)
esup_ichrtot (564)	scenario%energy%esup_ichrtot (scenario_ref) (9.2.1.3.242)
value (575)	scenario%energy%esup_ichrtot%value (float) (9.2.1.1.1)
source (575)	scenario%energy%esup_ichrtot%source (string) (9.2.1.1.3)
esup_ichper (564)	scenario%energy%esup_ichper (scenario_ref) (9.2.1.3.242)
value (575)	scenario%energy%esup_ichper%value (float) (9.2.1.1.1)
source (575)	scenario%energy%esup_ichper%source (string) (9.2.1.1.3)
esup_nbitot (564)	scenario%energy%esup_nbitot (scenario_ref) (9.2.1.3.242)
value (575)	scenario%energy%esup_nbitot%value (float) (9.2.1.1.1)
source (575)	scenario%energy%esup_nbitot%source (string) (9.2.1.1.3)
esup_nbiperp (564)	scenario%energy%esup_nbiperp (scenario_ref) (9.2.1.3.242)
value (575)	scenario%energy%esup_nbiperp%value (float) (9.2.1.1.1)
source (575)	scenario%energy%esup_nbiperp%source (string) (9.2.1.1.3)
esup_lhcd (564)	scenario%energy%esup_lhcd (scenario_ref) (9.2.1.3.242)
value (575)	scenario%energy%esup_lhcd%value (float) (9.2.1.1.1)
source (575)	scenario%energy%esup_lhcd%source (string) (9.2.1.1.3)
esup_alpha (564)	scenario%energy%esup_alpha (scenario_ref) (9.2.1.3.242)
value (575)	scenario%energy%esup_alpha%value (float) (9.2.1.1.1)
source (575)	scenario%energy%esup_alpha%source (string) (9.2.1.1.3)
eqgeometry (364)	scenario%eqgeometry (eqgeometry) (9.2.1.3.109)
source (442)	scenario%eqgeometry%source (string) (9.2.1.1.3)
boundarytype (442)	scenario%eqgeometry%boundarytype (integer) (9.2.1.1.2)
boundary (442)	scenario%eqgeometry%boundary (rz1D_npoints) (9.2.1.3.215)
r (548)	scenario%eqgeometry%boundary%r (vecflt.type) (9.2.1.2.9)
z (548)	scenario%eqgeometry%boundary%z (vecflt.type) (9.2.1.2.9)
npoints (548)	scenario%eqgeometry%boundary%npoints (integer) (9.2.1.1.2)
geom_axis (442)	scenario%eqgeometry%geom_axis (rz0D) (9.2.1.3.213)
r (546)	scenario%eqgeometry%geom_axis%r (float) (9.2.1.1.1)
z (546)	scenario%eqgeometry%geom_axis%z (float) (9.2.1.1.1)
a_minor (442)	scenario%eqgeometry%a_minor (float) (9.2.1.1.1)
elongation (442)	scenario%eqgeometry%elongation (float) (9.2.1.1.1)
tria_upper (442)	scenario%eqgeometry%tria_upper (float) (9.2.1.1.1)
tria_lower (442)	scenario%eqgeometry%tria_lower (float) (9.2.1.1.1)
xpts (442)	scenario%eqgeometry%xpts (rz1D) (9.2.1.3.214)
r (547)	scenario%eqgeometry%xpts%r (vecflt.type) (9.2.1.2.9)
z (547)	scenario%eqgeometry%xpts%z (vecflt.type) (9.2.1.2.9)

left_low_st (442)	scenario%eqgeometry%left_low_st (rz0D) (9.2.1.3.213)
r (546)	scenario%eqgeometry%left_low_st%r (float) (9.2.1.1.1)
z (546)	scenario%eqgeometry%left_low_st%z (float) (9.2.1.1.1)
right_low_st (442)	scenario%eqgeometry%right_low_st (rz0D) (9.2.1.3.213)
r (546)	scenario%eqgeometry%right_low_st%r (float) (9.2.1.1.1)
z (546)	scenario%eqgeometry%right_low_st%z (float) (9.2.1.1.1)
left_up_st (442)	scenario%eqgeometry%left_up_st (rz0D) (9.2.1.3.213)
r (546)	scenario%eqgeometry%left_up_st%r (float) (9.2.1.1.1)
z (546)	scenario%eqgeometry%left_up_st%z (float) (9.2.1.1.1)
right_up_st (442)	scenario%eqgeometry%right_up_st (rz0D) (9.2.1.3.213)
r (546)	scenario%eqgeometry%right_up_st%r (float) (9.2.1.1.1)
z (546)	scenario%eqgeometry%right_up_st%z (float) (9.2.1.1.1)
active_limit (442)	scenario%eqgeometry%active_limit (rz0D) (9.2.1.3.213)
r (546)	scenario%eqgeometry%active_limit%r (float) (9.2.1.1.1)
z (546)	scenario%eqgeometry%active_limit%z (float) (9.2.1.1.1)
global_param (364)	scenario%global_param (scenario_global) (9.2.1.3.232)
ip (565)	scenario%global_param%ip (scenario_ref) (9.2.1.3.242)
value (575)	scenario%global_param%ip%value (float) (9.2.1.1.1)
source (575)	scenario%global_param%ip%source (string) (9.2.1.1.3)
dip_dt (565)	scenario%global_param%dip_dt (scenario_ref) (9.2.1.3.242)
value (575)	scenario%global_param%dip_dt%value (float) (9.2.1.1.1)
source (575)	scenario%global_param%dip_dt%source (string) (9.2.1.1.3)
beta_pol (565)	scenario%global_param%beta_pol (scenario_ref) (9.2.1.3.242)
value (575)	scenario%global_param%beta_pol%value (float) (9.2.1.1.1)
source (575)	scenario%global_param%beta_pol%source (string) (9.2.1.1.3)
beta_tor (565)	scenario%global_param%beta_tor (scenario_ref) (9.2.1.3.242)
value (575)	scenario%global_param%beta_tor%value (float) (9.2.1.1.1)
source (575)	scenario%global_param%beta_tor%source (string) (9.2.1.1.3)
beta_normal (565)	scenario%global_param%beta_normal (scenario_ref) (9.2.1.3.242)
value (575)	scenario%global_param%beta_normal%value (float) (9.2.1.1.1)
source (575)	scenario%global_param%beta_normal%source (string) (9.2.1.1.3)
li (565)	scenario%global_param%li (scenario_ref) (9.2.1.3.242)
value (575)	scenario%global_param%li%value (float) (9.2.1.1.1)
source (575)	scenario%global_param%li%source (string) (9.2.1.1.3)
volume (565)	scenario%global_param%volume (scenario_ref) (9.2.1.3.242)
value (575)	scenario%global_param%volume%value (float) (9.2.1.1.1)
source (575)	scenario%global_param%volume%source (string) (9.2.1.1.3)
area_pol (565)	scenario%global_param%area_pol (scenario_ref) (9.2.1.3.242)
value (575)	scenario%global_param%area_pol%value (float) (9.2.1.1.1)
source (575)	scenario%global_param%area_pol%source (string) (9.2.1.1.3)
area_ext (565)	scenario%global_param%area_ext (scenario_ref) (9.2.1.3.242)
value (575)	scenario%global_param%area_ext%value (float) (9.2.1.1.1)
source (575)	scenario%global_param%area_ext%source (string) (9.2.1.1.3)
len_sepa (565)	scenario%global_param%len_sepa (scenario_ref) (9.2.1.3.242)
value (575)	scenario%global_param%len_sepa%value (float) (9.2.1.1.1)
source (575)	scenario%global_param%len_sepa%source (string) (9.2.1.1.3)
beta_pol_th (565)	scenario%global_param%beta_pol_th (scenario_ref) (9.2.1.3.242)
value (575)	scenario%global_param%beta_pol_th%value (float) (9.2.1.1.1)
source (575)	scenario%global_param%beta_pol_th%source (string) (9.2.1.1.3)
beta_tor_th (565)	scenario%global_param%beta_tor_th (scenario_ref) (9.2.1.3.242)
value (575)	scenario%global_param%beta_tor_th%value (float) (9.2.1.1.1)
source (575)	scenario%global_param%beta_tor_th%source (string) (9.2.1.1.3)
beta_n_th (565)	scenario%global_param%beta_n_th (scenario_ref) (9.2.1.3.242)
value (575)	scenario%global_param%beta_n_th%value (float) (9.2.1.1.1)
source (575)	scenario%global_param%beta_n_th%source (string) (9.2.1.1.3)
disruption (565)	scenario%global_param%disruption (scenario_ref) (9.2.1.3.242)
value (575)	scenario%global_param%disruption%value (float) (9.2.1.1.1)
source (575)	scenario%global_param%disruption%source (string) (9.2.1.1.3)
mode_h (565)	scenario%global_param%mode_h (scenario_ref) (9.2.1.3.242)
value (575)	scenario%global_param%mode_h%value (float) (9.2.1.1.1)
source (575)	scenario%global_param%mode_h%source (string) (9.2.1.1.3)

s.alpha (565)	scenario%global_param%s.alpha (scenario_ref) (9.2.1.3.242)
value (575)	scenario%global_param%s.alpha%value (float) (9.2.1.1.1)
source (575)	scenario%global_param%s.alpha%source (string) (9.2.1.1.3)
heat.power (364)	scenario%heat.power (scenario_heat_power) (9.2.1.3.233)
plh (566)	scenario%heat.power%plh (scenario_ref) (9.2.1.3.242)
value (575)	scenario%heat.power%plh%value (float) (9.2.1.1.1)
source (575)	scenario%heat.power%plh%source (string) (9.2.1.1.3)
pohmic (566)	scenario%heat.power%pohmic (scenario_ref) (9.2.1.3.242)
value (575)	scenario%heat.power%pohmic%value (float) (9.2.1.1.1)
source (575)	scenario%heat.power%pohmic%source (string) (9.2.1.1.3)
picrh (566)	scenario%heat.power%picrh (scenario_ref) (9.2.1.3.242)
value (575)	scenario%heat.power%picrh%value (float) (9.2.1.1.1)
source (575)	scenario%heat.power%picrh%source (string) (9.2.1.1.3)
pecrh (566)	scenario%heat.power%pecrh (scenario_ref) (9.2.1.3.242)
value (575)	scenario%heat.power%pecrh%value (float) (9.2.1.1.1)
source (575)	scenario%heat.power%pecrh%source (string) (9.2.1.1.3)
pnbi (566)	scenario%heat.power%pnbi (scenario_ref) (9.2.1.3.242)
value (575)	scenario%heat.power%pnbi%value (float) (9.2.1.1.1)
source (575)	scenario%heat.power%pnbi%source (string) (9.2.1.1.3)
pnbi.co.cur (566)	scenario%heat.power%pnbi.co.cur (scenario_ref) (9.2.1.3.242)
value (575)	scenario%heat.power%pnbi.co.cur%value (float) (9.2.1.1.1)
source (575)	scenario%heat.power%pnbi.co.cur%source (string) (9.2.1.1.3)
pnbi.counter (566)	scenario%heat.power%pnbi.counter (scenario_ref) (9.2.1.3.242)
value (575)	scenario%heat.power%pnbi.counter%value (float) (9.2.1.1.1)
source (575)	scenario%heat.power%pnbi.counter%source (string) (9.2.1.1.3)
plh.th (566)	scenario%heat.power%plh.th (scenario_ref) (9.2.1.3.242)
value (575)	scenario%heat.power%plh.th%value (float) (9.2.1.1.1)
source (575)	scenario%heat.power%plh.th%source (string) (9.2.1.1.3)
picrh.th (566)	scenario%heat.power%picrh.th (scenario_ref) (9.2.1.3.242)
value (575)	scenario%heat.power%picrh.th%value (float) (9.2.1.1.1)
source (575)	scenario%heat.power%picrh.th%source (string) (9.2.1.1.3)
pecrh.th (566)	scenario%heat.power%pecrh.th (scenario_ref) (9.2.1.3.242)
value (575)	scenario%heat.power%pecrh.th%value (float) (9.2.1.1.1)
source (575)	scenario%heat.power%pecrh.th%source (string) (9.2.1.1.3)
pnbi.th (566)	scenario%heat.power%pnbi.th (scenario_ref) (9.2.1.3.242)
value (575)	scenario%heat.power%pnbi.th%value (float) (9.2.1.1.1)
source (575)	scenario%heat.power%pnbi.th%source (string) (9.2.1.1.3)
ploss.icrh (566)	scenario%heat.power%ploss.icrh (scenario_ref) (9.2.1.3.242)
value (575)	scenario%heat.power%ploss.icrh%value (float) (9.2.1.1.1)
source (575)	scenario%heat.power%ploss.icrh%source (string) (9.2.1.1.3)
ploss.nbi (566)	scenario%heat.power%ploss.nbi (scenario_ref) (9.2.1.3.242)
value (575)	scenario%heat.power%ploss.nbi%value (float) (9.2.1.1.1)
source (575)	scenario%heat.power%ploss.nbi%source (string) (9.2.1.1.3)
pbrem (566)	scenario%heat.power%pbrem (scenario_ref) (9.2.1.3.242)
value (575)	scenario%heat.power%pbrem%value (float) (9.2.1.1.1)
source (575)	scenario%heat.power%pbrem%source (string) (9.2.1.1.3)
pcyclo (566)	scenario%heat.power%pcyclo (scenario_ref) (9.2.1.3.242)
value (575)	scenario%heat.power%pcyclo%value (float) (9.2.1.1.1)
source (575)	scenario%heat.power%pcyclo%source (string) (9.2.1.1.3)
prad (566)	scenario%heat.power%prad (scenario_ref) (9.2.1.3.242)
value (575)	scenario%heat.power%prad%value (float) (9.2.1.1.1)
source (575)	scenario%heat.power%prad%source (string) (9.2.1.1.3)
pdd.fus (566)	scenario%heat.power%pdd.fus (scenario_ref) (9.2.1.3.242)
value (575)	scenario%heat.power%pdd.fus%value (float) (9.2.1.1.1)
source (575)	scenario%heat.power%pdd.fus%source (string) (9.2.1.1.3)
pei (566)	scenario%heat.power%pei (scenario_ref) (9.2.1.3.242)
value (575)	scenario%heat.power%pei%value (float) (9.2.1.1.1)
source (575)	scenario%heat.power%pei%source (string) (9.2.1.1.3)
pel.tot (566)	scenario%heat.power%pel.tot (scenario_ref) (9.2.1.3.242)
value (575)	scenario%heat.power%pel.tot%value (float) (9.2.1.1.1)
source (575)	scenario%heat.power%pel.tot%source (string) (9.2.1.1.3)

pel_fus (566)	scenario%heat_power%pel_fus (scenario_ref) (9.2.1.3.242)
value (575)	scenario%heat_power%pel_fus%value (float) (9.2.1.1.1)
source (575)	scenario%heat_power%pel_fus%source (string) (9.2.1.1.3)
pel_ichr (566)	scenario%heat_power%pel_ichr (scenario_ref) (9.2.1.3.242)
value (575)	scenario%heat_power%pel_ichr%value (float) (9.2.1.1.1)
source (575)	scenario%heat_power%pel_ichr%source (string) (9.2.1.1.3)
pel_nbi (566)	scenario%heat_power%pel_nbi (scenario_ref) (9.2.1.3.242)
value (575)	scenario%heat_power%pel_nbi%value (float) (9.2.1.1.1)
source (575)	scenario%heat_power%pel_nbi%source (string) (9.2.1.1.3)
p_fus_dt (566)	scenario%heat_power%p_fus_dt (scenario_ref) (9.2.1.3.242)
value (575)	scenario%heat_power%p_fus_dt%value (float) (9.2.1.1.1)
source (575)	scenario%heat_power%p_fus_dt%source (string) (9.2.1.1.3)
p_loss_fus (566)	scenario%heat_power%p_loss_fus (scenario_ref) (9.2.1.3.242)
value (575)	scenario%heat_power%p_loss_fus%value (float) (9.2.1.1.1)
source (575)	scenario%heat_power%p_loss_fus%source (string) (9.2.1.1.3)
p_fus_nbi (566)	scenario%heat_power%p_fus_nbi (scenario_ref) (9.2.1.3.242)
value (575)	scenario%heat_power%p_fus_nbi%value (float) (9.2.1.1.1)
source (575)	scenario%heat_power%p_fus_nbi%source (string) (9.2.1.1.3)
p_fus_th (566)	scenario%heat_power%p_fus_th (scenario_ref) (9.2.1.3.242)
value (575)	scenario%heat_power%p_fus_th%value (float) (9.2.1.1.1)
source (575)	scenario%heat_power%p_fus_th%source (string) (9.2.1.1.3)
p_add_tot (566)	scenario%heat_power%p_add_tot (scenario_ref) (9.2.1.3.242)
value (575)	scenario%heat_power%p_add_tot%value (float) (9.2.1.1.1)
source (575)	scenario%heat_power%p_add_tot%source (string) (9.2.1.1.3)
p_ion_tot (566)	scenario%heat_power%p_ion_tot (scenario_ref) (9.2.1.3.242)
value (575)	scenario%heat_power%p_ion_tot%value (float) (9.2.1.1.1)
source (575)	scenario%heat_power%p_ion_tot%source (string) (9.2.1.1.3)
p_ion_fus (566)	scenario%heat_power%p_ion_fus (scenario_ref) (9.2.1.3.242)
value (575)	scenario%heat_power%p_ion_fus%value (float) (9.2.1.1.1)
source (575)	scenario%heat_power%p_ion_fus%source (string) (9.2.1.1.3)
p_ion_ichr (566)	scenario%heat_power%p_ion_ichr (scenario_ref) (9.2.1.3.242)
value (575)	scenario%heat_power%p_ion_ichr%value (float) (9.2.1.1.1)
source (575)	scenario%heat_power%p_ion_ichr%source (string) (9.2.1.1.3)
p_ion_nbi (566)	scenario%heat_power%p_ion_nbi (scenario_ref) (9.2.1.3.242)
value (575)	scenario%heat_power%p_ion_nbi%value (float) (9.2.1.1.1)
source (575)	scenario%heat_power%p_ion_nbi%source (string) (9.2.1.1.3)
p_ioniz (566)	scenario%heat_power%p_ioniz (scenario_ref) (9.2.1.3.242)
value (575)	scenario%heat_power%p_ioniz%value (float) (9.2.1.1.1)
source (575)	scenario%heat_power%p_ioniz%source (string) (9.2.1.1.3)
p_loss (566)	scenario%heat_power%p_loss (scenario_ref) (9.2.1.3.242)
value (575)	scenario%heat_power%p_loss%value (float) (9.2.1.1.1)
source (575)	scenario%heat_power%p_loss%source (string) (9.2.1.1.3)
p_wth (566)	scenario%heat_power%p_wth (scenario_ref) (9.2.1.3.242)
value (575)	scenario%heat_power%p_wth%value (float) (9.2.1.1.1)
source (575)	scenario%heat_power%p_wth%source (string) (9.2.1.1.3)
p_w (566)	scenario%heat_power%p_w (scenario_ref) (9.2.1.3.242)
value (575)	scenario%heat_power%p_w%value (float) (9.2.1.1.1)
source (575)	scenario%heat_power%p_w%source (string) (9.2.1.1.3)
p_l2h_thr (566)	scenario%heat_power%p_l2h_thr (scenario_ref) (9.2.1.3.242)
value (575)	scenario%heat_power%p_l2h_thr%value (float) (9.2.1.1.1)
source (575)	scenario%heat_power%p_l2h_thr%source (string) (9.2.1.1.3)
p_l2h_sc (566)	scenario%heat_power%p_l2h_sc (scenario_ref) (9.2.1.3.242)
value (575)	scenario%heat_power%p_l2h_sc%value (float) (9.2.1.1.1)
source (575)	scenario%heat_power%p_l2h_sc%source (string) (9.2.1.1.3)
p_nbi_ichr (566)	scenario%heat_power%p_nbi_ichr (scenario_ref) (9.2.1.3.242)
value (575)	scenario%heat_power%p_nbi_ichr%value (float) (9.2.1.1.1)
source (575)	scenario%heat_power%p_nbi_ichr%source (string) (9.2.1.1.3)
itb (364)	scenario%itb (scenario_itb) (9.2.1.3.235)
q_min (568)	scenario%itb%q_min (scenario_ref) (9.2.1.3.242)
value (575)	scenario%itb%q_min%value (float) (9.2.1.1.1)
source (575)	scenario%itb%q_min%source (string) (9.2.1.1.3)

te_itb (568)	scenario%itb%te_itb (scenario_ref) (9.2.1.3.242)
value (575)	scenario%itb%te_itb%value (float) (9.2.1.1.1)
source (575)	scenario%itb%te_itb%source (string) (9.2.1.1.3)
ti_itb (568)	scenario%itb%ti_itb (scenario_ref) (9.2.1.3.242)
value (575)	scenario%itb%ti_itb%value (float) (9.2.1.1.1)
source (575)	scenario%itb%ti_itb%source (string) (9.2.1.1.3)
ne_itb (568)	scenario%itb%ne_itb (scenario_ref) (9.2.1.3.242)
value (575)	scenario%itb%ne_itb%value (float) (9.2.1.1.1)
source (575)	scenario%itb%ne_itb%source (string) (9.2.1.1.3)
ni_itb (568)	scenario%itb%ni_itb (scenario_ref) (9.2.1.3.242)
value (575)	scenario%itb%ni_itb%value (float) (9.2.1.1.1)
source (575)	scenario%itb%ni_itb%source (string) (9.2.1.1.3)
psi_itb (568)	scenario%itb%psi_itb (scenario_ref) (9.2.1.3.242)
value (575)	scenario%itb%psi_itb%value (float) (9.2.1.1.1)
source (575)	scenario%itb%psi_itb%source (string) (9.2.1.1.3)
phi_itb (568)	scenario%itb%phi_itb (scenario_ref) (9.2.1.3.242)
value (575)	scenario%itb%phi_itb%value (float) (9.2.1.1.1)
source (575)	scenario%itb%phi_itb%source (string) (9.2.1.1.3)
rho_itb (568)	scenario%itb%rho_itb (scenario_ref) (9.2.1.3.242)
value (575)	scenario%itb%rho_itb%value (float) (9.2.1.1.1)
source (575)	scenario%itb%rho_itb%source (string) (9.2.1.1.3)
h_itb (568)	scenario%itb%h_itb (scenario_ref) (9.2.1.3.242)
value (575)	scenario%itb%h_itb%value (float) (9.2.1.1.1)
source (575)	scenario%itb%h_itb%source (string) (9.2.1.1.3)
width_itb (568)	scenario%itb%width_itb (scenario_ref) (9.2.1.3.242)
value (575)	scenario%itb%width_itb%value (float) (9.2.1.1.1)
source (575)	scenario%itb%width_itb%source (string) (9.2.1.1.3)
vtor_itb (568)	scenario%itb%vtor_itb (scenario_ref) (9.2.1.3.242)
value (575)	scenario%itb%vtor_itb%value (float) (9.2.1.1.1)
source (575)	scenario%itb%vtor_itb%source (string) (9.2.1.1.3)
itb_type (568)	scenario%itb%itb_type (scenario_int) (9.2.1.3.234)
value (567)	scenario%itb%itb_type%value (integer) (9.2.1.1.2)
source (567)	scenario%itb%itb_type%source (string) (9.2.1.1.3)
lim_div_wall (364)	scenario%lim_div_wall (scenario_lim_div_wall) (9.2.1.3.236)
te_lim_div (569)	scenario%lim_div_wall%te_lim_div (scenario_ref) (9.2.1.3.242)
value (575)	scenario%lim_div_wall%te_lim_div%value (float) (9.2.1.1.1)
source (575)	scenario%lim_div_wall%te_lim_div%source (string) (9.2.1.1.3)
ti_lim_div (569)	scenario%lim_div_wall%ti_lim_div (scenario_ref) (9.2.1.3.242)
value (575)	scenario%lim_div_wall%ti_lim_div%value (float) (9.2.1.1.1)
source (575)	scenario%lim_div_wall%ti_lim_div%source (string) (9.2.1.1.3)
ne_lim_div (569)	scenario%lim_div_wall%ne_lim_div (scenario_ref) (9.2.1.3.242)
value (575)	scenario%lim_div_wall%ne_lim_div%value (float) (9.2.1.1.1)
source (575)	scenario%lim_div_wall%ne_lim_div%source (string) (9.2.1.1.3)
ni_lim_div (569)	scenario%lim_div_wall%ni_lim_div (scenario_ref) (9.2.1.3.242)
value (575)	scenario%lim_div_wall%ni_lim_div%value (float) (9.2.1.1.1)
source (575)	scenario%lim_div_wall%ni_lim_div%source (string) (9.2.1.1.3)
p_peak_div (569)	scenario%lim_div_wall%p_peak_div (scenario_ref) (9.2.1.3.242)
value (575)	scenario%lim_div_wall%p_peak_div%value (float) (9.2.1.1.1)
source (575)	scenario%lim_div_wall%p_peak_div%source (string) (9.2.1.1.3)
surf_temp (569)	scenario%lim_div_wall%surf_temp (scenario_ref) (9.2.1.3.242)
value (575)	scenario%lim_div_wall%surf_temp%value (float) (9.2.1.1.1)
source (575)	scenario%lim_div_wall%surf_temp%source (string) (9.2.1.1.3)
p_lim_div (569)	scenario%lim_div_wall%p_lim_div (scenario_ref) (9.2.1.3.242)
value (575)	scenario%lim_div_wall%p_lim_div%value (float) (9.2.1.1.1)
source (575)	scenario%lim_div_wall%p_lim_div%source (string) (9.2.1.1.3)
p_rad_div (569)	scenario%lim_div_wall%p_rad_div (scenario_ref) (9.2.1.3.242)
value (575)	scenario%lim_div_wall%p_rad_div%value (float) (9.2.1.1.1)
source (575)	scenario%lim_div_wall%p_rad_div%source (string) (9.2.1.1.3)
wall_temp (569)	scenario%lim_div_wall%wall_temp (scenario_ref) (9.2.1.3.242)
value (575)	scenario%lim_div_wall%wall_temp%value (float) (9.2.1.1.1)
source (575)	scenario%lim_div_wall%wall_temp%source (string) (9.2.1.1.3)

wall_state (569)	scenario%lim_div_wall%wall_state (scenario_ref) (9.2.1.3.242)
value (575)	scenario%lim_div_wall%wall_state%value (float) (9.2.1.1.1)
source (575)	scenario%lim_div_wall%wall_state%source (string) (9.2.1.1.3)
detach_state (569)	scenario%lim_div_wall%detach_state (scenario_ref) (9.2.1.3.242)
value (575)	scenario%lim_div_wall%detach_state%value (float) (9.2.1.1.1)
source (575)	scenario%lim_div_wall%detach_state%source (string) (9.2.1.1.3)
pump_flux (569)	scenario%lim_div_wall%pump_flux (vecflt_type) (9.2.1.2.9)
line_ave (364)	scenario%line_ave (scenario_line_ave) (9.2.1.3.237)
ne_line (570)	scenario%line_ave%ne_line (scenario_ref) (9.2.1.3.242)
value (575)	scenario%line_ave%ne_line%value (float) (9.2.1.1.1)
source (575)	scenario%line_ave%ne_line%source (string) (9.2.1.1.3)
zeff_line (570)	scenario%line_ave%zeff_line (scenario_ref) (9.2.1.3.242)
value (575)	scenario%line_ave%zeff_line%value (float) (9.2.1.1.1)
source (575)	scenario%line_ave%zeff_line%source (string) (9.2.1.1.3)
ne_zeff_line (570)	scenario%line_ave%ne_zeff_line (scenario_ref) (9.2.1.3.242)
value (575)	scenario%line_ave%ne_zeff_line%value (float) (9.2.1.1.1)
source (575)	scenario%line_ave%ne_zeff_line%source (string) (9.2.1.1.3)
dne_line_dt (570)	scenario%line_ave%dne_line_dt (scenario_ref) (9.2.1.3.242)
value (575)	scenario%line_ave%dne_line_dt%value (float) (9.2.1.1.1)
source (575)	scenario%line_ave%dne_line_dt%source (string) (9.2.1.1.3)
neutron (364)	scenario%neutron (scenario_neutron) (9.2.1.3.238)
nnd_tot (571)	scenario%neutron%nnd_tot (scenario_ref) (9.2.1.3.242)
value (575)	scenario%neutron%nnd_tot%value (float) (9.2.1.1.1)
source (575)	scenario%neutron%nnd_tot%source (string) (9.2.1.1.3)
nnd_th (571)	scenario%neutron%nnd_th (scenario_ref) (9.2.1.3.242)
value (575)	scenario%neutron%nnd_th%value (float) (9.2.1.1.1)
source (575)	scenario%neutron%nnd_th%source (string) (9.2.1.1.3)
nnd_nbi_th (571)	scenario%neutron%nnd_nbi_th (scenario_ref) (9.2.1.3.242)
value (575)	scenario%neutron%nnd_nbi_th%value (float) (9.2.1.1.1)
source (575)	scenario%neutron%nnd_nbi_th%source (string) (9.2.1.1.3)
nnd_nbi_nbi (571)	scenario%neutron%nnd_nbi_nbi (scenario_ref) (9.2.1.3.242)
value (575)	scenario%neutron%nnd_nbi_nbi%value (float) (9.2.1.1.1)
source (575)	scenario%neutron%nnd_nbi_nbi%source (string) (9.2.1.1.3)
ndt_tot (571)	scenario%neutron%ndt_tot (scenario_ref) (9.2.1.3.242)
value (575)	scenario%neutron%ndt_tot%value (float) (9.2.1.1.1)
source (575)	scenario%neutron%ndt_tot%source (string) (9.2.1.1.3)
ndt_th (571)	scenario%neutron%ndt_th (scenario_ref) (9.2.1.3.242)
value (575)	scenario%neutron%ndt_th%value (float) (9.2.1.1.1)
source (575)	scenario%neutron%ndt_th%source (string) (9.2.1.1.3)
ninety_five (364)	scenario%ninety_five (scenario_ninety_five) (9.2.1.3.239)
q_95 (572)	scenario%ninety_five%q_95 (scenario_ref) (9.2.1.3.242)
value (575)	scenario%ninety_five%q_95%value (float) (9.2.1.1.1)
source (575)	scenario%ninety_five%q_95%source (string) (9.2.1.1.3)
elong_95 (572)	scenario%ninety_five%elong_95 (scenario_ref) (9.2.1.3.242)
value (575)	scenario%ninety_five%elong_95%value (float) (9.2.1.1.1)
source (575)	scenario%ninety_five%elong_95%source (string) (9.2.1.1.3)
tria_95 (572)	scenario%ninety_five%tria_95 (scenario_ref) (9.2.1.3.242)
value (575)	scenario%ninety_five%tria_95%value (float) (9.2.1.1.1)
source (575)	scenario%ninety_five%tria_95%source (string) (9.2.1.1.3)
tria_up_95 (572)	scenario%ninety_five%tria_up_95 (scenario_ref) (9.2.1.3.242)
value (575)	scenario%ninety_five%tria_up_95%value (float) (9.2.1.1.1)
source (575)	scenario%ninety_five%tria_up_95%source (string) (9.2.1.1.3)
tria_lo_95 (572)	scenario%ninety_five%tria_lo_95 (scenario_ref) (9.2.1.3.242)
value (575)	scenario%ninety_five%tria_lo_95%value (float) (9.2.1.1.1)
source (575)	scenario%ninety_five%tria_lo_95%source (string) (9.2.1.1.3)
te_95 (572)	scenario%ninety_five%te_95 (scenario_ref) (9.2.1.3.242)
value (575)	scenario%ninety_five%te_95%value (float) (9.2.1.1.1)
source (575)	scenario%ninety_five%te_95%source (string) (9.2.1.1.3)
ti_95 (572)	scenario%ninety_five%ti_95 (scenario_ref) (9.2.1.3.242)
value (575)	scenario%ninety_five%ti_95%value (float) (9.2.1.1.1)
source (575)	scenario%ninety_five%ti_95%source (string) (9.2.1.1.3)



ne_95 (572)	scenario%ninety_five%ne_95 (scenario_ref) (9.2.1.3.242)
value (575)	scenario%ninety_five%ne_95%value (float) (9.2.1.1.1)
source (575)	scenario%ninety_five%ne_95%source (string) (9.2.1.1.3)
ni_95 (572)	scenario%ninety_five%ni_95 (scenario_ref) (9.2.1.3.242)
value (575)	scenario%ninety_five%ni_95%value (float) (9.2.1.1.1)
source (575)	scenario%ninety_five%ni_95%source (string) (9.2.1.1.3)
phi_95 (572)	scenario%ninety_five%phi_95 (scenario_ref) (9.2.1.3.242)
value (575)	scenario%ninety_five%phi_95%value (float) (9.2.1.1.1)
source (575)	scenario%ninety_five%phi_95%source (string) (9.2.1.1.3)
rho_95 (572)	scenario%ninety_five%rho_95 (scenario_ref) (9.2.1.3.242)
value (575)	scenario%ninety_five%rho_95%value (float) (9.2.1.1.1)
source (575)	scenario%ninety_five%rho_95%source (string) (9.2.1.1.3)
vtor_95 (572)	scenario%ninety_five%vtor_95 (scenario_ref) (9.2.1.3.242)
value (575)	scenario%ninety_five%vtor_95%value (float) (9.2.1.1.1)
source (575)	scenario%ninety_five%vtor_95%source (string) (9.2.1.1.3)
pedestal (364)	scenario%pedestal (scenario_pedestal) (9.2.1.3.240)
te_ped (573)	scenario%pedestal%te_ped (scenario_ref) (9.2.1.3.242)
value (575)	scenario%pedestal%te_ped%value (float) (9.2.1.1.1)
source (575)	scenario%pedestal%te_ped%source (string) (9.2.1.1.3)
ti_ped (573)	scenario%pedestal%ti_ped (scenario_ref) (9.2.1.3.242)
value (575)	scenario%pedestal%ti_ped%value (float) (9.2.1.1.1)
source (575)	scenario%pedestal%ti_ped%source (string) (9.2.1.1.3)
ne_ped (573)	scenario%pedestal%ne_ped (scenario_ref) (9.2.1.3.242)
value (575)	scenario%pedestal%ne_ped%value (float) (9.2.1.1.1)
source (575)	scenario%pedestal%ne_ped%source (string) (9.2.1.1.3)
ni_ped (573)	scenario%pedestal%ni_ped (scenario_ref) (9.2.1.3.242)
value (575)	scenario%pedestal%ni_ped%value (float) (9.2.1.1.1)
source (575)	scenario%pedestal%ni_ped%source (string) (9.2.1.1.3)
psi_ped (573)	scenario%pedestal%psi_ped (scenario_ref) (9.2.1.3.242)
value (575)	scenario%pedestal%psi_ped%value (float) (9.2.1.1.1)
source (575)	scenario%pedestal%psi_ped%source (string) (9.2.1.1.3)
phi_ped (573)	scenario%pedestal%phi_ped (scenario_ref) (9.2.1.3.242)
value (575)	scenario%pedestal%phi_ped%value (float) (9.2.1.1.1)
source (575)	scenario%pedestal%phi_ped%source (string) (9.2.1.1.3)
rho_ped (573)	scenario%pedestal%rho_ped (scenario_ref) (9.2.1.3.242)
value (575)	scenario%pedestal%rho_ped%value (float) (9.2.1.1.1)
source (575)	scenario%pedestal%rho_ped%source (string) (9.2.1.1.3)
q_ped (573)	scenario%pedestal%q_ped (scenario_ref) (9.2.1.3.242)
value (575)	scenario%pedestal%q_ped%value (float) (9.2.1.1.1)
source (575)	scenario%pedestal%q_ped%source (string) (9.2.1.1.3)
pressure_ped (573)	scenario%pedestal%pressure_ped (scenario_ref) (9.2.1.3.242)
value (575)	scenario%pedestal%pressure_ped%value (float) (9.2.1.1.1)
source (575)	scenario%pedestal%pressure_ped%source (string) (9.2.1.1.3)
vtor_ped (573)	scenario%pedestal%vtor_ped (scenario_ref) (9.2.1.3.242)
value (575)	scenario%pedestal%vtor_ped%value (float) (9.2.1.1.1)
source (575)	scenario%pedestal%vtor_ped%source (string) (9.2.1.1.3)
references (364)	scenario%references (scenario_references) (9.2.1.3.243)
plh (576)	scenario%references%plh (scenario_ref) (9.2.1.3.242)
value (575)	scenario%references%plh%value (float) (9.2.1.1.1)
source (575)	scenario%references%plh%source (string) (9.2.1.1.3)
picrh (576)	scenario%references%picrh (scenario_ref) (9.2.1.3.242)
value (575)	scenario%references%picrh%value (float) (9.2.1.1.1)
source (575)	scenario%references%picrh%source (string) (9.2.1.1.3)
pecrh (576)	scenario%references%pecrh (scenario_ref) (9.2.1.3.242)
value (575)	scenario%references%pecrh%value (float) (9.2.1.1.1)
source (575)	scenario%references%pecrh%source (string) (9.2.1.1.3)
pnbi (576)	scenario%references%pnbi (scenario_ref) (9.2.1.3.242)
value (575)	scenario%references%pnbi%value (float) (9.2.1.1.1)
source (575)	scenario%references%pnbi%source (string) (9.2.1.1.3)
ip (576)	scenario%references%ip (scenario_ref) (9.2.1.3.242)
value (575)	scenario%references%ip%value (float) (9.2.1.1.1)

source (575)	scenario%references%ip%source (string) (9.2.1.1.3)
bvac_r (576)	scenario%references%bvac_r (scenario_ref) (9.2.1.3.242)
value (575)	scenario%references%bvac_r%value (float) (9.2.1.1.1)
source (575)	scenario%references%bvac_r%source (string) (9.2.1.1.3)
zeffl (576)	scenario%references%zeffl (scenario_ref) (9.2.1.3.242)
value (575)	scenario%references%zeffl%value (float) (9.2.1.1.1)
source (575)	scenario%references%zeffl%source (string) (9.2.1.1.3)
nbar (576)	scenario%references%nbar (scenario_ref) (9.2.1.3.242)
value (575)	scenario%references%nbar%value (float) (9.2.1.1.1)
source (575)	scenario%references%nbar%source (string) (9.2.1.1.3)
xecrh (576)	scenario%references%xecrh (scenario_ref) (9.2.1.3.242)
value (575)	scenario%references%xecrh%value (float) (9.2.1.1.1)
source (575)	scenario%references%xecrh%source (string) (9.2.1.1.3)
pol_flux (576)	scenario%references%pol_flux (scenario_ref) (9.2.1.3.242)
value (575)	scenario%references%pol_flux%value (float) (9.2.1.1.1)
source (575)	scenario%references%pol_flux%source (string) (9.2.1.1.3)
enhancement (576)	scenario%references%enhancement (scenario_ref) (9.2.1.3.242)
value (575)	scenario%references%enhancement%value (float) (9.2.1.1.1)
source (575)	scenario%references%enhancement%source (string) (9.2.1.1.3)
isotopic (576)	scenario%references%isotopic (scenario_ref) (9.2.1.3.242)
value (575)	scenario%references%isotopic%value (float) (9.2.1.1.1)
source (575)	scenario%references%isotopic%source (string) (9.2.1.1.3)
nbi_td_ratio (576)	scenario%references%nbi_td_ratio (scenario_ref) (9.2.1.3.242)
value (575)	scenario%references%nbi_td_ratio%value (float) (9.2.1.1.1)
source (575)	scenario%references%nbi_td_ratio%source (string) (9.2.1.1.3)
reactor (364)	scenario%reactor (scenario_reactor) (9.2.1.3.241)
pnetwork (574)	scenario%reactor%pnetwork (float) (9.2.1.1.1)
sol (364)	scenario%sol (scenario_sol) (9.2.1.3.244)
l.te_sol (577)	scenario%sol%l.te_sol (scenario_ref) (9.2.1.3.242)
value (575)	scenario%sol%l.te_sol%value (float) (9.2.1.1.1)
source (575)	scenario%sol%l.te_sol%source (string) (9.2.1.1.3)
l.ti_sol (577)	scenario%sol%l.ti_sol (scenario_ref) (9.2.1.3.242)
value (575)	scenario%sol%l.ti_sol%value (float) (9.2.1.1.1)
source (575)	scenario%sol%l.ti_sol%source (string) (9.2.1.1.3)
l.ne_sol (577)	scenario%sol%l.ne_sol (scenario_ref) (9.2.1.3.242)
value (575)	scenario%sol%l.ne_sol%value (float) (9.2.1.1.1)
source (575)	scenario%sol%l.ne_sol%source (string) (9.2.1.1.3)
l.ni_sol (577)	scenario%sol%l.ni_sol (scenario_ref) (9.2.1.3.242)
value (575)	scenario%sol%l.ni_sol%value (float) (9.2.1.1.1)
source (575)	scenario%sol%l.ni_sol%source (string) (9.2.1.1.3)
l.qe_sol (577)	scenario%sol%l.qe_sol (scenario_ref) (9.2.1.3.242)
value (575)	scenario%sol%l.qe_sol%value (float) (9.2.1.1.1)
source (575)	scenario%sol%l.qe_sol%source (string) (9.2.1.1.3)
l.qi_sol (577)	scenario%sol%l.qi_sol (scenario_ref) (9.2.1.3.242)
value (575)	scenario%sol%l.qi_sol%value (float) (9.2.1.1.1)
source (575)	scenario%sol%l.qi_sol%source (string) (9.2.1.1.3)
p_rad_sol (577)	scenario%sol%p_rad_sol (scenario_ref) (9.2.1.3.242)
value (575)	scenario%sol%p_rad_sol%value (float) (9.2.1.1.1)
source (575)	scenario%sol%p_rad_sol%source (string) (9.2.1.1.3)
gaz_puff (577)	scenario%sol%gaz_puff (vecflt.type) (9.2.1.2.9)
vol_ave (364)	scenario%vol_ave (scenario_vol_ave) (9.2.1.3.245)
te_ave (578)	scenario%vol_ave%te_ave (scenario_ref) (9.2.1.3.242)
value (575)	scenario%vol_ave%te_ave%value (float) (9.2.1.1.1)
source (575)	scenario%vol_ave%te_ave%source (string) (9.2.1.1.3)
ti_ave (578)	scenario%vol_ave%ti_ave (scenario_ref) (9.2.1.3.242)
value (575)	scenario%vol_ave%ti_ave%value (float) (9.2.1.1.1)
source (575)	scenario%vol_ave%ti_ave%source (string) (9.2.1.1.3)
ne_ave (578)	scenario%vol_ave%ne_ave (scenario_ref) (9.2.1.3.242)
value (575)	scenario%vol_ave%ne_ave%value (float) (9.2.1.1.1)
source (575)	scenario%vol_ave%ne_ave%source (string) (9.2.1.1.3)
dne_ave_dt (578)	scenario%vol_ave%dne_ave_dt (scenario_ref) (9.2.1.3.242)



value (575)	scenario%vol.ave%dne.ave.dt%value (float) (9.2.1.1.1)
source (575)	scenario%vol.ave%dne.ave.dt%source (string) (9.2.1.1.3)
ni.ave (578)	scenario%vol.ave%ni.ave (scenario_ref) (9.2.1.3.242)
value (575)	scenario%vol.ave%ni.ave%value (float) (9.2.1.1.1)
source (575)	scenario%vol.ave%ni.ave%source (string) (9.2.1.1.3)
zeff.ave (578)	scenario%vol.ave%zeff.ave (scenario_ref) (9.2.1.3.242)
value (575)	scenario%vol.ave%zeff.ave%value (float) (9.2.1.1.1)
source (575)	scenario%vol.ave%zeff.ave%source (string) (9.2.1.1.3)
ti.o.te.ave (578)	scenario%vol.ave%ti.o.te.ave (scenario_ref) (9.2.1.3.242)
value (575)	scenario%vol.ave%ti.o.te.ave%value (float) (9.2.1.1.1)
source (575)	scenario%vol.ave%ti.o.te.ave%source (string) (9.2.1.1.3)
meff.ave (578)	scenario%vol.ave%meff.ave (scenario_ref) (9.2.1.3.242)
value (575)	scenario%vol.ave%meff.ave%value (float) (9.2.1.1.1)
source (575)	scenario%vol.ave%meff.ave%source (string) (9.2.1.1.3)
pellet.flux (578)	scenario%vol.ave%pellet.flux (scenario_ref) (9.2.1.3.242)
value (575)	scenario%vol.ave%pellet.flux%value (float) (9.2.1.1.1)
source (575)	scenario%vol.ave%pellet.flux%source (string) (9.2.1.1.3)
nions.ave (578)	scenario%vol.ave%nions.ave (vecflt.type) (9.2.1.2.9)
omega.ave (578)	scenario%vol.ave%omega.ave (scenario_ref) (9.2.1.3.242)
value (575)	scenario%vol.ave%omega.ave%value (float) (9.2.1.1.1)
source (575)	scenario%vol.ave%omega.ave%source (string) (9.2.1.1.3)
codeparam (364)	scenario%codeparam (codeparam) (9.2.1.3.56)
codename (389)	scenario%codeparam%codename (string) (9.2.1.1.3)
codeversion (389)	scenario%codeparam%codeversion (string) (9.2.1.1.3)
parameters (389)	scenario%codeparam%parameters (string) (9.2.1.1.3)
output.diag (389)	scenario%codeparam%output.diag (string) (9.2.1.1.3)
output.flag (389)	scenario%codeparam%output.flag (integer) (9.2.1.1.2)
time (364)	scenario%time (float) (9.2.1.1.1)

### 9.2.2.1.30 summary

datainfo (365)	summary%datainfo (datainfo) (9.2.1.3.75)
dataprovider (408)	summary%datainfo%dataprovider (string) (9.2.1.1.3)
putdate (408)	summary%datainfo%putdate (string) (9.2.1.1.3)
source (408)	summary%datainfo%source (string) (9.2.1.1.3)
comment (408)	summary%datainfo%comment (string) (9.2.1.1.3)
isref (408)	summary%datainfo%isref (integer) (9.2.1.1.2)
whatref (408)	summary%datainfo%whatref (whatref) (9.2.1.3.305)
user (638)	summary%datainfo%whatref%user (string) (9.2.1.1.3)
machine (638)	summary%datainfo%whatref%machine (string) (9.2.1.1.3)
shot (638)	summary%datainfo%whatref%shot (integer) (9.2.1.1.2)
run (638)	summary%datainfo%whatref%run (integer) (9.2.1.1.2)
occurrence (638)	summary%datainfo%whatref%occurrence (integer) (9.2.1.1.2)
putinfo (408)	summary%datainfo%putinfo (putinfo) (9.2.1.3.187)
putmethod (520)	summary%datainfo%putinfo%putmethod (string) (9.2.1.1.3)
putaccess (520)	summary%datainfo%putinfo%putaccess (string) (9.2.1.1.3)
putlocation (520)	summary%datainfo%putinfo%putlocation (string) (9.2.1.1.3)
rights (520)	summary%datainfo%putinfo%rights (string) (9.2.1.1.3)
ip (365)	summary%ip (reduced) (9.2.1.3.190)
value (523)	summary%ip%value (float) (9.2.1.1.1)
source (523)	summary%ip%source (string) (9.2.1.1.3)
time (523)	summary%ip%time (float) (9.2.1.1.1)
bvac.r (365)	summary%bvac.r (reduced) (9.2.1.3.190)
value (523)	summary%bvac.r%value (float) (9.2.1.1.1)
source (523)	summary%bvac.r%source (string) (9.2.1.1.3)
time (523)	summary%bvac.r%time (float) (9.2.1.1.1)
geom.axis.r (365)	summary%geom.axis.r (reduced) (9.2.1.3.190)
value (523)	summary%geom.axis.r%value (float) (9.2.1.1.1)
source (523)	summary%geom.axis.r%source (string) (9.2.1.1.3)
time (523)	summary%geom.axis.r%time (float) (9.2.1.1.1)
a.minor (365)	summary%a.minor (reduced) (9.2.1.3.190)

value (523)	summary%a_minor%value (float) (9.2.1.1.1)
source (523)	summary%a_minor%source (string) (9.2.1.1.3)
time (523)	summary%a_minor%time (float) (9.2.1.1.1)
elongation (365)	summary%elongation (reduced) (9.2.1.3.190)
value (523)	summary%elongation%value (float) (9.2.1.1.1)
source (523)	summary%elongation%source (string) (9.2.1.1.3)
time (523)	summary%elongation%time (float) (9.2.1.1.1)
tria_lower (365)	summary%tria_lower (reduced) (9.2.1.3.190)
value (523)	summary%tria_lower%value (float) (9.2.1.1.1)
source (523)	summary%tria_lower%source (string) (9.2.1.1.3)
time (523)	summary%tria_lower%time (float) (9.2.1.1.1)
tria_upper (365)	summary%tria_upper (reduced) (9.2.1.3.190)
value (523)	summary%tria_upper%value (float) (9.2.1.1.1)
source (523)	summary%tria_upper%source (string) (9.2.1.1.3)
time (523)	summary%tria_upper%time (float) (9.2.1.1.1)
tev (365)	summary%tev (reduced) (9.2.1.3.190)
value (523)	summary%tev%value (float) (9.2.1.1.1)
source (523)	summary%tev%source (string) (9.2.1.1.3)
time (523)	summary%tev%time (float) (9.2.1.1.1)
tiv (365)	summary%tiv (reduced) (9.2.1.3.190)
value (523)	summary%tiv%value (float) (9.2.1.1.1)
source (523)	summary%tiv%source (string) (9.2.1.1.3)
time (523)	summary%tiv%time (float) (9.2.1.1.1)
nev (365)	summary%nev (reduced) (9.2.1.3.190)
value (523)	summary%nev%value (float) (9.2.1.1.1)
source (523)	summary%nev%source (string) (9.2.1.1.3)
time (523)	summary%nev%time (float) (9.2.1.1.1)
zeffv (365)	summary%zeffv (reduced) (9.2.1.3.190)
value (523)	summary%zeffv%value (float) (9.2.1.1.1)
source (523)	summary%zeffv%source (string) (9.2.1.1.3)
time (523)	summary%zeffv%time (float) (9.2.1.1.1)
beta_pol (365)	summary%beta_pol (reduced) (9.2.1.3.190)
value (523)	summary%beta_pol%value (float) (9.2.1.1.1)
source (523)	summary%beta_pol%source (string) (9.2.1.1.3)
time (523)	summary%beta_pol%time (float) (9.2.1.1.1)
beta_tor (365)	summary%beta_tor (reduced) (9.2.1.3.190)
value (523)	summary%beta_tor%value (float) (9.2.1.1.1)
source (523)	summary%beta_tor%source (string) (9.2.1.1.3)
time (523)	summary%beta_tor%time (float) (9.2.1.1.1)
beta_normal (365)	summary%beta_normal (reduced) (9.2.1.3.190)
value (523)	summary%beta_normal%value (float) (9.2.1.1.1)
source (523)	summary%beta_normal%source (string) (9.2.1.1.3)
time (523)	summary%beta_normal%time (float) (9.2.1.1.1)
li (365)	summary%li (reduced) (9.2.1.3.190)
value (523)	summary%li%value (float) (9.2.1.1.1)
source (523)	summary%li%source (string) (9.2.1.1.3)
time (523)	summary%li%time (float) (9.2.1.1.1)
volume (365)	summary%volume (reduced) (9.2.1.3.190)
value (523)	summary%volume%value (float) (9.2.1.1.1)
source (523)	summary%volume%source (string) (9.2.1.1.3)
time (523)	summary%volume%time (float) (9.2.1.1.1)
area (365)	summary%area (reduced) (9.2.1.3.190)
value (523)	summary%area%value (float) (9.2.1.1.1)
source (523)	summary%area%source (string) (9.2.1.1.3)
time (523)	summary%area%time (float) (9.2.1.1.1)
main_ion1_z (365)	summary%main_ion1_z (reduced) (9.2.1.3.190)
value (523)	summary%main_ion1_z%value (float) (9.2.1.1.1)
source (523)	summary%main_ion1_z%source (string) (9.2.1.1.3)
time (523)	summary%main_ion1_z%time (float) (9.2.1.1.1)
main_ion1_a (365)	summary%main_ion1_a (reduced) (9.2.1.3.190)
value (523)	summary%main_ion1_a%value (float) (9.2.1.1.1)

source (523)	summary%main_ion1_a%source (string) (9.2.1.1.3)
time (523)	summary%main_ion1_a%time (float) (9.2.1.1.1)
main_ion2_z (365)	summary%main_ion2_z (reduced) (9.2.1.3.190)
value (523)	summary%main_ion2_z%value (float) (9.2.1.1.1)
source (523)	summary%main_ion2_z%source (string) (9.2.1.1.3)
time (523)	summary%main_ion2_z%time (float) (9.2.1.1.1)
main_ion2_a (365)	summary%main_ion2_a (reduced) (9.2.1.3.190)
value (523)	summary%main_ion2_a%value (float) (9.2.1.1.1)
source (523)	summary%main_ion2_a%source (string) (9.2.1.1.3)
time (523)	summary%main_ion2_a%time (float) (9.2.1.1.1)
impur1_z (365)	summary%impur1_z (reduced) (9.2.1.3.190)
value (523)	summary%impur1_z%value (float) (9.2.1.1.1)
source (523)	summary%impur1_z%source (string) (9.2.1.1.3)
time (523)	summary%impur1_z%time (float) (9.2.1.1.1)
impur1_a (365)	summary%impur1_a (reduced) (9.2.1.3.190)
value (523)	summary%impur1_a%value (float) (9.2.1.1.1)
source (523)	summary%impur1_a%source (string) (9.2.1.1.3)
time (523)	summary%impur1_a%time (float) (9.2.1.1.1)
time (365)	summary%time (float) (9.2.1.1.1)

### 9.2.2.1.31 topinfo

dataprovder (366)	topinfo%dataprovder (string) (9.2.1.1.3)
description (366)	topinfo%description (string) (9.2.1.1.3)
firstputdate (366)	topinfo%firstputdate (string) (9.2.1.1.3)
lastupdate (366)	topinfo%lastupdate (string) (9.2.1.1.3)
source (366)	topinfo%source (string) (9.2.1.1.3)
comment (366)	topinfo%comment (string) (9.2.1.1.3)
dataversion (366)	topinfo%dataversion (string) (9.2.1.1.3)
workflow (366)	topinfo%workflow (string) (9.2.1.1.3)
entry (366)	topinfo%entry (entry_def) (9.2.1.3.107)
user (440)	topinfo%entry%user (string) (9.2.1.1.3)
machine (440)	topinfo%entry%machine (string) (9.2.1.1.3)
shot (440)	topinfo%entry%shot (integer) (9.2.1.1.2)
run (440)	topinfo%entry%run (integer) (9.2.1.1.2)
parent_entry (366)	topinfo%parent_entry (entry_def) (9.2.1.3.107)
user (440)	topinfo%parent_entry%user (string) (9.2.1.1.3)
machine (440)	topinfo%parent_entry%machine (string) (9.2.1.1.3)
shot (440)	topinfo%parent_entry%shot (integer) (9.2.1.1.2)
run (440)	topinfo%parent_entry%run (integer) (9.2.1.1.2)
mdinfo (366)	topinfo%mdinfo (mdinfo) (9.2.1.3.152)
shot_min (485)	topinfo%mdinfo%shot_min (integer) (9.2.1.1.2)
shot_max (485)	topinfo%mdinfo%shot_max (integer) (9.2.1.1.2)
md_entry (485)	topinfo%mdinfo%md_entry (entry_def) (9.2.1.3.107)
user (440)	topinfo%mdinfo%md_entry%user (string) (9.2.1.1.3)
machine (440)	topinfo%mdinfo%md_entry%machine (string) (9.2.1.1.3)
shot (440)	topinfo%mdinfo%md_entry%shot (integer) (9.2.1.1.2)
run (440)	topinfo%mdinfo%md_entry%run (integer) (9.2.1.1.2)

### 9.2.2.1.32 toroidfield

datainfo (367)	toroidfield%datainfo (datainfo) (9.2.1.3.75)
dataprovder (408)	toroidfield%datainfo%dataprovder (string) (9.2.1.1.3)
putdate (408)	toroidfield%datainfo%putdate (string) (9.2.1.1.3)
source (408)	toroidfield%datainfo%source (string) (9.2.1.1.3)
comment (408)	toroidfield%datainfo%comment (string) (9.2.1.1.3)
isref (408)	toroidfield%datainfo%isref (integer) (9.2.1.1.2)
whatref (408)	toroidfield%datainfo%whatref (whatref) (9.2.1.3.305)
user (638)	toroidfield%datainfo%whatref%user (string) (9.2.1.1.3)
machine (638)	toroidfield%datainfo%whatref%machine (string) (9.2.1.1.3)
shot (638)	toroidfield%datainfo%whatref%shot (integer) (9.2.1.1.2)

run (638)	toroidfield%datainfo%whatref%run (integer) (9.2.1.1.2)
occurrence (638)	toroidfield%datainfo%whatref%occurrence (integer) (9.2.1.1.2)
putinfo (408)	toroidfield%datainfo%putinfo (putinfo) (9.2.1.3.187)
putmethod (520)	toroidfield%datainfo%putinfo%putmethod (string) (9.2.1.1.3)
putaccess (520)	toroidfield%datainfo%putinfo%putaccess (string) (9.2.1.1.3)
putlocation (520)	toroidfield%datainfo%putinfo%putlocation (string) (9.2.1.1.3)
rights (520)	toroidfield%datainfo%putinfo%rights (string) (9.2.1.1.3)
nturns (367)	toroidfield%nturns (integer) (9.2.1.1.2)
ncoils (367)	toroidfield%ncoils (integer) (9.2.1.1.2)
current (367)	toroidfield%current (exp0D) (9.2.1.3.112)
value (445)	toroidfield%current%value (float) (9.2.1.1.1)
abserror (445)	toroidfield%current%abserror (float) (9.2.1.1.1)
releror (445)	toroidfield%current%releror (float) (9.2.1.1.1)
bvac.r (367)	toroidfield%bvac.r (exp0D) (9.2.1.3.112)
value (445)	toroidfield%bvac.r%value (float) (9.2.1.1.1)
abserror (445)	toroidfield%bvac.r%abserror (float) (9.2.1.1.1)
releror (445)	toroidfield%bvac.r%releror (float) (9.2.1.1.1)
r0 (367)	toroidfield%r0 (float) (9.2.1.1.1)
time (367)	toroidfield%time (float) (9.2.1.1.1)

### 9.2.2.1.33 tsdiag

datainfo (368)	tsdiag%datainfo (datainfo) (9.2.1.3.75)
dataprovider (408)	tsdiag%datainfo%dataprovider (string) (9.2.1.1.3)
putdate (408)	tsdiag%datainfo%putdate (string) (9.2.1.1.3)
source (408)	tsdiag%datainfo%source (string) (9.2.1.1.3)
comment (408)	tsdiag%datainfo%comment (string) (9.2.1.1.3)
isref (408)	tsdiag%datainfo%isref (integer) (9.2.1.1.2)
whatref (408)	tsdiag%datainfo%whatref (whatref) (9.2.1.3.305)
user (638)	tsdiag%datainfo%whatref%user (string) (9.2.1.1.3)
machine (638)	tsdiag%datainfo%whatref%machine (string) (9.2.1.1.3)
shot (638)	tsdiag%datainfo%whatref%shot (integer) (9.2.1.1.2)
run (638)	tsdiag%datainfo%whatref%run (integer) (9.2.1.1.2)
occurrence (638)	tsdiag%datainfo%whatref%occurrence (integer) (9.2.1.1.2)
putinfo (408)	tsdiag%datainfo%putinfo (putinfo) (9.2.1.3.187)
putmethod (520)	tsdiag%datainfo%putinfo%putmethod (string) (9.2.1.1.3)
putaccess (520)	tsdiag%datainfo%putinfo%putaccess (string) (9.2.1.1.3)
putlocation (520)	tsdiag%datainfo%putinfo%putlocation (string) (9.2.1.1.3)
rights (520)	tsdiag%datainfo%putinfo%rights (string) (9.2.1.1.3)
setup (368)	tsdiag%setup (tsetup) (9.2.1.3.286)
position (619)	tsdiag%setup%position (rz1D) (9.2.1.3.214)
r (547)	tsdiag%setup%position%r (vecflt.type) (9.2.1.2.9)
z (547)	tsdiag%setup%position%z (vecflt.type) (9.2.1.2.9)
measure (368)	tsdiag%measure (tsmeasure) (9.2.1.3.285)
te (618)	tsdiag%measure%te (exp1D) (9.2.1.3.113)
value (446)	tsdiag%measure%te%value (vecflt.type) (9.2.1.2.9)
abserror (446)	tsdiag%measure%te%abserror (vecflt.type) (9.2.1.2.9)
releror (446)	tsdiag%measure%te%releror (vecflt.type) (9.2.1.2.9)
ne (618)	tsdiag%measure%ne (exp1D) (9.2.1.3.113)
value (446)	tsdiag%measure%ne%value (vecflt.type) (9.2.1.2.9)
abserror (446)	tsdiag%measure%ne%abserror (vecflt.type) (9.2.1.2.9)
releror (446)	tsdiag%measure%ne%releror (vecflt.type) (9.2.1.2.9)
time (368)	tsdiag%time (float) (9.2.1.1.1)

### 9.2.2.1.34 turbulence

datainfo (369)	turbulence%datainfo (datainfo) (9.2.1.3.75)
dataprovider (408)	turbulence%datainfo%dataprovider (string) (9.2.1.1.3)
putdate (408)	turbulence%datainfo%putdate (string) (9.2.1.1.3)
source (408)	turbulence%datainfo%source (string) (9.2.1.1.3)
comment (408)	turbulence%datainfo%comment (string) (9.2.1.1.3)

isref (408)	turbulence%datainfo%isref (integer) (9.2.1.1.2)
whatref (408)	turbulence%datainfo%whatref (whatref) (9.2.1.3.305)
user (638)	turbulence%datainfo%whatref%user (string) (9.2.1.1.3)
machine (638)	turbulence%datainfo%whatref%machine (string) (9.2.1.1.3)
shot (638)	turbulence%datainfo%whatref%shot (integer) (9.2.1.1.2)
run (638)	turbulence%datainfo%whatref%run (integer) (9.2.1.1.2)
occurrence (638)	turbulence%datainfo%whatref%occurrence (integer) (9.2.1.1.2)
putinfo (408)	turbulence%datainfo%putinfo (putinfo) (9.2.1.3.187)
putmethod (520)	turbulence%datainfo%putinfo%putmethod (string) (9.2.1.1.3)
putaccess (520)	turbulence%datainfo%putinfo%putaccess (string) (9.2.1.1.3)
putlocation (520)	turbulence%datainfo%putinfo%putlocation (string) (9.2.1.1.3)
rights (520)	turbulence%datainfo%putinfo%rights (string) (9.2.1.1.3)
composition (369)	turbulence%composition (composition) (9.2.1.3.59)
amn (392)	turbulence%composition%amn (vecflt.type) (9.2.1.2.9)
zn (392)	turbulence%composition%zn (vecflt.type) (9.2.1.2.9)
zion (392)	turbulence%composition%zion (vecflt.type) (9.2.1.2.9)
imp_flag (392)	turbulence%composition%imp_flag (vecint.type) (9.2.1.2.10)
coordsys (369)	turbulence%coordsys (turbcoordsys) (9.2.1.3.287)
grid_type (620)	turbulence%coordsys%grid_type (string) (9.2.1.1.3)
turbgrid (620)	turbulence%coordsys%turbgrid (turbgrid) (9.2.1.3.289)
dim1 (622)	turbulence%coordsys%turbgrid%dim1 (vecflt.type) (9.2.1.2.9)
dim2 (622)	turbulence%coordsys%turbgrid%dim2 (vecflt.type) (9.2.1.2.9)
dim3 (622)	turbulence%coordsys%turbgrid%dim3 (vecflt.type) (9.2.1.2.9)
dim.v1 (622)	turbulence%coordsys%turbgrid%dim.v1 (vecflt.type) (9.2.1.2.9)
dim.v2 (622)	turbulence%coordsys%turbgrid%dim.v2 (vecflt.type) (9.2.1.2.9)
jacobian (620)	turbulence%coordsys%jacobian (matflt.type) (9.2.1.2.7)
g_11 (620)	turbulence%coordsys%g_11 (matflt.type) (9.2.1.2.7)
g_12 (620)	turbulence%coordsys%g_12 (matflt.type) (9.2.1.2.7)
g_13 (620)	turbulence%coordsys%g_13 (matflt.type) (9.2.1.2.7)
g_22 (620)	turbulence%coordsys%g_22 (matflt.type) (9.2.1.2.7)
g_33 (620)	turbulence%coordsys%g_33 (matflt.type) (9.2.1.2.7)
position (620)	turbulence%coordsys%position (rzphi3D) (9.2.1.3.221)
r (554)	turbulence%coordsys%position%r (array3dflt.type) (9.2.1.2.1)
z (554)	turbulence%coordsys%position%z (array3dflt.type) (9.2.1.2.1)
phi (554)	turbulence%coordsys%position%phi (array3dflt.type) (9.2.1.2.1)
var0d (369)	turbulence%var0d (turbvar0d) (9.2.1.3.291)
dtime_type (624)	turbulence%var0d%dtime_type (string) (9.2.1.1.3)
dtime (624)	turbulence%var0d%dtime (vecflt.type) (9.2.1.2.9)
en_exb (624)	turbulence%var0d%en_exb (vecflt.type) (9.2.1.2.9)
en_mag (624)	turbulence%var0d%en_mag (vecflt.type) (9.2.1.2.9)
en_el_th (624)	turbulence%var0d%en_el_th (vecflt.type) (9.2.1.2.9)
en_ion_th (624)	turbulence%var0d%en_ion_th (matflt.type) (9.2.1.2.7)
en_el_par (624)	turbulence%var0d%en_el_par (vecflt.type) (9.2.1.2.9)
en_ion_par (624)	turbulence%var0d%en_ion_par (matflt.type) (9.2.1.2.7)
en_tot (624)	turbulence%var0d%en_tot (vecflt.type) (9.2.1.2.9)
fl_el (624)	turbulence%var0d%fl_el (vecflt.type) (9.2.1.2.9)
fl_heatel (624)	turbulence%var0d%fl_heatel (vecflt.type) (9.2.1.2.9)
fl_ion (624)	turbulence%var0d%fl_ion (matflt.type) (9.2.1.2.7)
fl_heation (624)	turbulence%var0d%fl_heation (matflt.type) (9.2.1.2.7)
fl_magel (624)	turbulence%var0d%fl_magel (vecflt.type) (9.2.1.2.9)
fl_magheatel (624)	turbulence%var0d%fl_magheatel (vecflt.type) (9.2.1.2.9)
fl_magion (624)	turbulence%var0d%fl_magion (matflt.type) (9.2.1.2.7)
flmagheation (624)	turbulence%var0d%flmagheation (matflt.type) (9.2.1.2.7)
var1d (369)	turbulence%var1d (turbvar1d) (9.2.1.3.292)
rho_tor_norm (625)	turbulence%var1d%rho_tor_norm (vecflt.type) (9.2.1.2.9)
phi (625)	turbulence%var1d%phi (vecflt.type) (9.2.1.2.9)
er (625)	turbulence%var1d%er (vecflt.type) (9.2.1.2.9)
vor (625)	turbulence%var1d%vor (vecflt.type) (9.2.1.2.9)
apl (625)	turbulence%var1d%apl (vecflt.type) (9.2.1.2.9)
jpl (625)	turbulence%var1d%jpl (vecflt.type) (9.2.1.2.9)
ne (625)	turbulence%var1d%ne (vecflt.type) (9.2.1.2.9)

te (625)	turbulence%var1d%te (vecflt.type) (9.2.1.2.9)
ni (625)	turbulence%var1d%ni (matflt.type) (9.2.1.2.7)
ti (625)	turbulence%var1d%ti (matflt.type) (9.2.1.2.7)
ui (625)	turbulence%var1d%ui (matflt.type) (9.2.1.2.7)
var2d (369)	turbulence%var2d (turbvar2d) (9.2.1.3.293)
rho_tor_norm (626)	turbulence%var2d%rho_tor_norm (vecflt.type) (9.2.1.2.9)
theta (626)	turbulence%var2d%theta (vecflt.type) (9.2.1.2.9)
phi (626)	turbulence%var2d%phi (matflt.type) (9.2.1.2.7)
apl (626)	turbulence%var2d%apl (matflt.type) (9.2.1.2.7)
jpl (626)	turbulence%var2d%jpl (matflt.type) (9.2.1.2.7)
vor (626)	turbulence%var2d%vor (matflt.type) (9.2.1.2.7)
ne (626)	turbulence%var2d%ne (matflt.type) (9.2.1.2.7)
te (626)	turbulence%var2d%te (matflt.type) (9.2.1.2.7)
ni (626)	turbulence%var2d%ni (array3dflt.type) (9.2.1.2.1)
ti (626)	turbulence%var2d%ti (array3dflt.type) (9.2.1.2.1)
ui (626)	turbulence%var2d%ui (array3dflt.type) (9.2.1.2.1)
var3d (369)	turbulence%var3d (turbvar3d) (9.2.1.3.294)
phi (627)	turbulence%var3d%phi (array3dflt.type) (9.2.1.2.1)
vor (627)	turbulence%var3d%vor (array3dflt.type) (9.2.1.2.1)
jpl (627)	turbulence%var3d%jpl (array3dflt.type) (9.2.1.2.1)
ne (627)	turbulence%var3d%ne (array3dflt.type) (9.2.1.2.1)
spec1d (369)	turbulence%spec1d (turbspec1d) (9.2.1.3.290)
dim_spec (623)	turbulence%spec1d%dim_spec (vecflt.type) (9.2.1.2.9)
phi (623)	turbulence%spec1d%phi (vecflt.type) (9.2.1.2.9)
vor (623)	turbulence%spec1d%vor (vecflt.type) (9.2.1.2.9)
b (623)	turbulence%spec1d%b (vecflt.type) (9.2.1.2.9)
jpl (623)	turbulence%spec1d%jpl (vecflt.type) (9.2.1.2.9)
ne (623)	turbulence%spec1d%ne (vecflt.type) (9.2.1.2.9)
te (623)	turbulence%spec1d%te (vecflt.type) (9.2.1.2.9)
ti (623)	turbulence%spec1d%ti (matflt.type) (9.2.1.2.7)
fe (623)	turbulence%spec1d%fe (vecflt.type) (9.2.1.2.9)
qe (623)	turbulence%spec1d%qe (vecflt.type) (9.2.1.2.9)
qi (623)	turbulence%spec1d%qi (matflt.type) (9.2.1.2.7)
me (623)	turbulence%spec1d%me (vecflt.type) (9.2.1.2.9)
mi (623)	turbulence%spec1d%mi (matflt.type) (9.2.1.2.7)
env1d (369)	turbulence%env1d (turbenv1d) (9.2.1.3.288)
theta (621)	turbulence%env1d%theta (vecflt.type) (9.2.1.2.9)
phi (621)	turbulence%env1d%phi (vecflt.type) (9.2.1.2.9)
vor (621)	turbulence%env1d%vor (vecflt.type) (9.2.1.2.9)
jpl (621)	turbulence%env1d%jpl (vecflt.type) (9.2.1.2.9)
ne (621)	turbulence%env1d%ne (vecflt.type) (9.2.1.2.9)
he (621)	turbulence%env1d%he (vecflt.type) (9.2.1.2.9)
te (621)	turbulence%env1d%te (vecflt.type) (9.2.1.2.9)
ni (621)	turbulence%env1d%ni (matflt.type) (9.2.1.2.7)
ti (621)	turbulence%env1d%ti (matflt.type) (9.2.1.2.7)
ui (621)	turbulence%env1d%ui (matflt.type) (9.2.1.2.7)
fe (621)	turbulence%env1d%fe (vecflt.type) (9.2.1.2.9)
qe (621)	turbulence%env1d%qe (vecflt.type) (9.2.1.2.9)
qi (621)	turbulence%env1d%qi (matflt.type) (9.2.1.2.7)
me (621)	turbulence%env1d%me (vecflt.type) (9.2.1.2.9)
mi (621)	turbulence%env1d%mi (matflt.type) (9.2.1.2.7)
codeparam (369)	turbulence%codeparam (codeparam) (9.2.1.3.56)
codename (389)	turbulence%codeparam%codename (string) (9.2.1.1.3)
codeversion (389)	turbulence%codeparam%codeversion (string) (9.2.1.1.3)
parameters (389)	turbulence%codeparam%parameters (string) (9.2.1.1.3)
output_diag (389)	turbulence%codeparam%output_diag (string) (9.2.1.1.3)
output_flag (389)	turbulence%codeparam%output_flag (integer) (9.2.1.1.2)
time (369)	turbulence%time (float) (9.2.1.1.1)

### 9.2.2.1.35 vessel

<code>datainfo</code> (370)	<code>vessel%datainfo</code> ( <code>datainfo</code> ) (9.2.1.3.75)
<code>dataprovder</code> (408)	<code>vessel%datainfo%dataprovder</code> (string) (9.2.1.1.3)
<code>putdate</code> (408)	<code>vessel%datainfo%putdate</code> (string) (9.2.1.1.3)
<code>source</code> (408)	<code>vessel%datainfo%source</code> (string) (9.2.1.1.3)
<code>comment</code> (408)	<code>vessel%datainfo%comment</code> (string) (9.2.1.1.3)
<code>isref</code> (408)	<code>vessel%datainfo%isref</code> (integer) (9.2.1.1.2)
<code>whatref</code> (408)	<code>vessel%datainfo%whatref</code> ( <code>whatref</code> ) (9.2.1.3.305)
<code>user</code> (638)	<code>vessel%datainfo%whatref%user</code> (string) (9.2.1.1.3)
<code>machine</code> (638)	<code>vessel%datainfo%whatref%machine</code> (string) (9.2.1.1.3)
<code>shot</code> (638)	<code>vessel%datainfo%whatref%shot</code> (integer) (9.2.1.1.2)
<code>run</code> (638)	<code>vessel%datainfo%whatref%run</code> (integer) (9.2.1.1.2)
<code>occurrence</code> (638)	<code>vessel%datainfo%whatref%occurrence</code> (integer) (9.2.1.1.2)
<code>putinfo</code> (408)	<code>vessel%datainfo%putinfo</code> ( <code>putinfo</code> ) (9.2.1.3.187)
<code>putmethod</code> (520)	<code>vessel%datainfo%putinfo%putmethod</code> (string) (9.2.1.1.3)
<code>putaccess</code> (520)	<code>vessel%datainfo%putinfo%putaccess</code> (string) (9.2.1.1.3)
<code>putlocation</code> (520)	<code>vessel%datainfo%putinfo%putlocation</code> (string) (9.2.1.1.3)
<code>rights</code> (520)	<code>vessel%datainfo%putinfo%rights</code> (string) (9.2.1.1.3)
<code>position</code> (370)	<code>vessel%position</code> ( <code>rz1D</code> ) (9.2.1.3.214)
<code>r</code> (547)	<code>vessel%position%r</code> ( <code>vecflt_type</code> ) (9.2.1.2.9)
<code>z</code> (547)	<code>vessel%position%z</code> ( <code>vecflt_type</code> ) (9.2.1.2.9)

### 9.2.2.1.36 waves

<code>datainfo</code> (371)	<code>waves%datainfo</code> ( <code>datainfo</code> ) (9.2.1.3.75)
<code>dataprovder</code> (408)	<code>waves%datainfo%dataprovder</code> (string) (9.2.1.1.3)
<code>putdate</code> (408)	<code>waves%datainfo%putdate</code> (string) (9.2.1.1.3)
<code>source</code> (408)	<code>waves%datainfo%source</code> (string) (9.2.1.1.3)
<code>comment</code> (408)	<code>waves%datainfo%comment</code> (string) (9.2.1.1.3)
<code>isref</code> (408)	<code>waves%datainfo%isref</code> (integer) (9.2.1.1.2)
<code>whatref</code> (408)	<code>waves%datainfo%whatref</code> ( <code>whatref</code> ) (9.2.1.3.305)
<code>user</code> (638)	<code>waves%datainfo%whatref%user</code> (string) (9.2.1.1.3)
<code>machine</code> (638)	<code>waves%datainfo%whatref%machine</code> (string) (9.2.1.1.3)
<code>shot</code> (638)	<code>waves%datainfo%whatref%shot</code> (integer) (9.2.1.1.2)
<code>run</code> (638)	<code>waves%datainfo%whatref%run</code> (integer) (9.2.1.1.2)
<code>occurrence</code> (638)	<code>waves%datainfo%whatref%occurrence</code> (integer) (9.2.1.1.2)
<code>putinfo</code> (408)	<code>waves%datainfo%putinfo</code> ( <code>putinfo</code> ) (9.2.1.3.187)
<code>putmethod</code> (520)	<code>waves%datainfo%putinfo%putmethod</code> (string) (9.2.1.1.3)
<code>putaccess</code> (520)	<code>waves%datainfo%putinfo%putaccess</code> (string) (9.2.1.1.3)
<code>putlocation</code> (520)	<code>waves%datainfo%putinfo%putlocation</code> (string) (9.2.1.1.3)
<code>rights</code> (520)	<code>waves%datainfo%putinfo%rights</code> (string) (9.2.1.1.3)
<code>coherentwave</code> (371)	<code>waves%coherentwave(:)</code> ( <code>coherentwave</code> ) (9.2.1.3.58)
<code>composition</code> (391)	<code>waves%coherentwave(:)%composition</code> ( <code>composition</code> ) (9.2.1.3.59)
<code>amn</code> (392)	<code>waves%coherentwave(:)%composition%amn</code> ( <code>vecflt_type</code> ) (9.2.1.2.9)
<code>zn</code> (392)	<code>waves%coherentwave(:)%composition%zn</code> ( <code>vecflt_type</code> ) (9.2.1.2.9)
<code>zion</code> (392)	<code>waves%coherentwave(:)%composition%zion</code> ( <code>vecflt_type</code> ) (9.2.1.2.9)
<code>imp_flag</code> (392)	<code>waves%coherentwave(:)%composition%imp_flag</code> ( <code>vecint_type</code> ) (9.2.1.2.10)
<code>global_param</code> (391)	<code>waves%coherentwave(:)%global_param</code> ( <code>waves_global_param</code> ) (9.2.1.3.298)
<code>frequency</code> (631)	<code>waves%coherentwave(:)%global_param%frequency</code> (float) (9.2.1.1.1)
<code>name</code> (631)	<code>waves%coherentwave(:)%global_param%name</code> (string) (9.2.1.1.3)
<code>type</code> (631)	<code>waves%coherentwave(:)%global_param%type</code> (string) (9.2.1.1.3)
<code>ntor</code> (631)	<code>waves%coherentwave(:)%global_param%ntor</code> ( <code>vecint_type</code> ) (9.2.1.2.10)
<code>f_assumption</code> (631)	<code>waves%coherentwave(:)%global_param%f_assumption</code> ( <code>vecint_type</code> ) (9.2.1.2.10)
<code>power_tot</code> (631)	<code>waves%coherentwave(:)%global_param%power_tot</code> (float) (9.2.1.1.1)
<code>p_frac_ntor</code> (631)	<code>waves%coherentwave(:)%global_param%p_frac_ntor</code> ( <code>vecflt_type</code> ) (9.2.1.2.9)
<code>pow_i</code> (631)	<code>waves%coherentwave(:)%global_param%pow_i</code> ( <code>vecflt_type</code> ) (9.2.1.2.9)
<code>pow_e</code> (631)	<code>waves%coherentwave(:)%global_param%pow_e</code> (float) (9.2.1.1.1)
<code>pow_ntor_i</code> (631)	<code>waves%coherentwave(:)%global_param%pow_ntor_i</code> ( <code>matflt_type</code> ) (9.2.1.2.7)
<code>pow_ntor_e</code> (631)	<code>waves%coherentwave(:)%global_param%pow_ntor_e</code> ( <code>vecflt_type</code> ) (9.2.1.2.9)
<code>cur_tor</code> (631)	<code>waves%coherentwave(:)%global_param%cur_tor</code> (float) (9.2.1.1.1)
<code>cur_tor_ntor</code> (631)	<code>waves%coherentwave(:)%global_param%cur_tor_ntor</code> ( <code>vecflt_type</code> ) (9.2.1.2.9)
<code>code_type</code> (631)	<code>waves%coherentwave(:)%global_param%code_type</code> (integer) (9.2.1.1.2)



toroid_field (631)	waves%coherentwave(:)%global_param%toroid_field (b0r0) (9.2.1.3.46)
r0 (379)	waves%coherentwave(:)%global_param%toroid_field%r0 (float) (9.2.1.1.1)
b0 (379)	waves%coherentwave(:)%global_param%toroid_field%b0 (float) (9.2.1.1.1)
grid_1d (391)	waves%coherentwave(:)%grid_1d (waves_grid_1d) (9.2.1.3.299)
rho_tor_norm (632)	waves%coherentwave(:)%grid_1d%rho_tor_norm (vecflt_type) (9.2.1.2.9)
rho_tor (632)	waves%coherentwave(:)%grid_1d%rho_tor (vecflt_type) (9.2.1.2.9)
psi (632)	waves%coherentwave(:)%grid_1d%psi (vecflt_type) (9.2.1.2.9)
grid_2d (391)	waves%coherentwave(:)%grid_2d (waves_grid_2d) (9.2.1.3.300)
grid_type (633)	waves%coherentwave(:)%grid_2d%grid_type (integer) (9.2.1.1.2)
rho_tor_norm (633)	waves%coherentwave(:)%grid_2d%rho_tor_norm (matflt_type) (9.2.1.2.7)
rho_tor (633)	waves%coherentwave(:)%grid_2d%rho_tor (matflt_type) (9.2.1.2.7)
psi (633)	waves%coherentwave(:)%grid_2d%psi (matflt_type) (9.2.1.2.7)
theta (633)	waves%coherentwave(:)%grid_2d%theta (matflt_type) (9.2.1.2.7)
r (633)	waves%coherentwave(:)%grid_2d%r (matflt_type) (9.2.1.2.7)
z (633)	waves%coherentwave(:)%grid_2d%z (matflt_type) (9.2.1.2.7)
theta_info (633)	waves%coherentwave(:)%grid_2d%theta_info (theta_info) (9.2.1.3.279)
angl_type (612)	waves%coherentwave(:)%grid_2d%theta_info%angl_type (integer) (9.2.1.1.2)
th2th_pol (612)	waves%coherentwave(:)%grid_2d%theta_info%th2th_pol (matflt_type) (9.2.1.2.7)
profiles_1d (391)	waves%coherentwave(:)%profiles_1d (waves_profiles_1d) (9.2.1.3.301)
powd_tot (634)	waves%coherentwave(:)%profiles_1d%powd_tot (vecflt_type) (9.2.1.2.9)
powd_e (634)	waves%coherentwave(:)%profiles_1d%powd_e (vecflt_type) (9.2.1.2.9)
powd_i (634)	waves%coherentwave(:)%profiles_1d%powd_i (matflt_type) (9.2.1.2.7)
powd_ntor (634)	waves%coherentwave(:)%profiles_1d%powd_ntor (matflt_type) (9.2.1.2.7)
powd_ntor_e (634)	waves%coherentwave(:)%profiles_1d%powd_ntor_e (matflt_type) (9.2.1.2.7)
powd_ntor_i (634)	waves%coherentwave(:)%profiles_1d%powd_ntor_i (array3dflt_type) (9.2.1.2.1)
curd_tor (634)	waves%coherentwave(:)%profiles_1d%curd_tor (vecflt_type) (9.2.1.2.9)
curd_torntor (634)	waves%coherentwave(:)%profiles_1d%curd_torntor (matflt_type) (9.2.1.2.7)
pow_tot (634)	waves%coherentwave(:)%profiles_1d%pow_tot (vecflt_type) (9.2.1.2.9)
pow_e (634)	waves%coherentwave(:)%profiles_1d%pow_e (vecflt_type) (9.2.1.2.9)
pow_i (634)	waves%coherentwave(:)%profiles_1d%pow_i (matflt_type) (9.2.1.2.7)
pow_ntor (634)	waves%coherentwave(:)%profiles_1d%pow_ntor (array3dflt_type) (9.2.1.2.1)
pow_ntor_e (634)	waves%coherentwave(:)%profiles_1d%pow_ntor_e (matflt_type) (9.2.1.2.7)
pow_ntor_i (634)	waves%coherentwave(:)%profiles_1d%pow_ntor_i (array3dflt_type) (9.2.1.2.1)
curd_par (634)	waves%coherentwave(:)%profiles_1d%curd_par (vecflt_type) (9.2.1.2.9)
curd_parnotor (634)	waves%coherentwave(:)%profiles_1d%curd_parnotor (matflt_type) (9.2.1.2.7)
cur_tor (634)	waves%coherentwave(:)%profiles_1d%cur_tor (vecflt_type) (9.2.1.2.9)
cur_tor_ntor (634)	waves%coherentwave(:)%profiles_1d%cur_tor_ntor (matflt_type) (9.2.1.2.7)
profiles_2d (391)	waves%coherentwave(:)%profiles_2d (waves_profiles_2d) (9.2.1.3.302)
powd_tot (635)	waves%coherentwave(:)%profiles_2d%powd_tot (matflt_type) (9.2.1.2.7)
powd_e (635)	waves%coherentwave(:)%profiles_2d%powd_e (matflt_type) (9.2.1.2.7)
powd_i (635)	waves%coherentwave(:)%profiles_2d%powd_i (array3dflt_type) (9.2.1.2.1)
powd_ntor (635)	waves%coherentwave(:)%profiles_2d%powd_ntor (array3dflt_type) (9.2.1.2.1)
powd_ntor_e (635)	waves%coherentwave(:)%profiles_2d%powd_ntor_e (array3dflt_type) (9.2.1.2.1)
powd_ntor_i (635)	waves%coherentwave(:)%profiles_2d%powd_ntor_i (array4dflt_type) (9.2.1.2.3)
powd_iharm (635)	waves%coherentwave(:)%profiles_2d%powd_iharm (array5dflt_type) (9.2.1.2.4)
beamtracing (391)	waves%coherentwave(:)%beamtracing (beamtracing) (9.2.1.3.48)
npoints (381)	waves%coherentwave(:)%beamtracing%npoints (vecint_type) (9.2.1.2.10)
power (381)	waves%coherentwave(:)%beamtracing%power (vecflt_type) (9.2.1.2.9)
dnpar (381)	waves%coherentwave(:)%beamtracing%dnpar (matflt_type) (9.2.1.2.7)
length (381)	waves%coherentwave(:)%beamtracing%length (matflt_type) (9.2.1.2.7)
position (381)	waves%coherentwave(:)%beamtracing%position (waves_rtposition) (9.2.1.3.303)
r (636)	waves%coherentwave(:)%beamtracing%position%r (matflt_type) (9.2.1.2.7)
z (636)	waves%coherentwave(:)%beamtracing%position%z (matflt_type) (9.2.1.2.7)
psi (636)	waves%coherentwave(:)%beamtracing%position%psi (matflt_type) (9.2.1.2.7)
theta (636)	waves%coherentwave(:)%beamtracing%position%theta (matflt_type) (9.2.1.2.7)
phi (636)	waves%coherentwave(:)%beamtracing%position%phi (matflt_type) (9.2.1.2.7)
wavevector (381)	waves%coherentwave(:)%beamtracing%wavevector (waves_rtwavevector) (9.2.1.3.304)
kr (637)	waves%coherentwave(:)%beamtracing%wavevector%kr (matflt_type) (9.2.1.2.7)
kz (637)	waves%coherentwave(:)%beamtracing%wavevector%kz (matflt_type) (9.2.1.2.7)
npar (637)	waves%coherentwave(:)%beamtracing%wavevector%npar (matflt_type) (9.2.1.2.7)
nperp (637)	waves%coherentwave(:)%beamtracing%wavevector%nperp (matflt_type) (9.2.1.2.7)



ntor (637)	waves%coherentwave(:)%beamtracing%wavevector%ntor (matflt_type) (9.2.1.2.7)
var_ntor (637)	waves%coherentwave(:)%beamtracing%wavevector%var_ntor (integer) (9.2.1.1.2)
polarization (381)	waves%coherentwave(:)%beamtracing%polarization (polarization) (9.2.1.3.179)
epol_p (512)	waves%coherentwave(:)%beamtracing%polarization%epol_p (matflt_type) (9.2.1.2.7)
epol_m (512)	waves%coherentwave(:)%beamtracing%polarization%epol_m (matflt_type) (9.2.1.2.7)
epol_par (512)	waves%coherentwave(:)%beamtracing%polarization%epol_par (matflt_type) (9.2.1.2.7)
powerflow (381)	waves%coherentwave(:)%beamtracing%powerflow (powerflow) (9.2.1.3.180)
phi_perp (513)	waves%coherentwave(:)%beamtracing%powerflow%phi_perp (matflt_type) (9.2.1.2.7)
phi_par (513)	waves%coherentwave(:)%beamtracing%powerflow%phi_par (matflt_type) (9.2.1.2.7)
power_e (513)	waves%coherentwave(:)%beamtracing%powerflow%power_e (matflt_type) (9.2.1.2.7)
power_i (513)	waves%coherentwave(:)%beamtracing%powerflow%power_i (array3dflt_type) (9.2.1.2.1)
fullwave (391)	waves%coherentwave(:)%fullwave (fullwave) (9.2.1.3.121)
pol_decomp (454)	waves%coherentwave(:)%fullwave%pol_decomp (pol_decomp) (9.2.1.3.178)
mpol (511)	waves%coherentwave(:)%fullwave%pol_decomp%mpol (vecint_type) (9.2.1.2.10)
e_plus (511)	waves%coherentwave(:)%fullwave%pol_decomp%e_plus (array3dflt_type) (9.2.1.2.1)
e_plus_ph (511)	waves%coherentwave(:)%fullwave%pol_decomp%e_plus_ph (array3dflt_type) (9.2.1.2.1)
e_minus (511)	waves%coherentwave(:)%fullwave%pol_decomp%e_minus (array3dflt_type) (9.2.1.2.1)
e_minus_ph (511)	waves%coherentwave(:)%fullwave%pol_decomp%e_minus_ph (array3dflt_type) (9.2.1.2.1)
e_norm (511)	waves%coherentwave(:)%fullwave%pol_decomp%e_norm (array3dflt_type) (9.2.1.2.1)
e_norm_ph (511)	waves%coherentwave(:)%fullwave%pol_decomp%e_norm_ph (array3dflt_type) (9.2.1.2.1)
e_binorm (511)	waves%coherentwave(:)%fullwave%pol_decomp%e_binorm (array3dflt_type) (9.2.1.2.1)
e_binorm_ph (511)	waves%coherentwave(:)%fullwave%pol_decomp%e_binorm_ph (array3dflt_type) (9.2.1.2.1)
e_para (511)	waves%coherentwave(:)%fullwave%pol_decomp%e_para (array3dflt_type) (9.2.1.2.1)
e_para_ph (511)	waves%coherentwave(:)%fullwave%pol_decomp%e_para_ph (array3dflt_type) (9.2.1.2.1)
b_norm (511)	waves%coherentwave(:)%fullwave%pol_decomp%b_norm (array3dflt_type) (9.2.1.2.1)
b_norm_ph (511)	waves%coherentwave(:)%fullwave%pol_decomp%b_norm_ph (array3dflt_type) (9.2.1.2.1)
b_binorm (511)	waves%coherentwave(:)%fullwave%pol_decomp%b_binorm (array3dflt_type) (9.2.1.2.1)
b_binorm_ph (511)	waves%coherentwave(:)%fullwave%pol_decomp%b_binorm_ph (array4dflt_type) (9.2.1.2.3)
b_para (511)	waves%coherentwave(:)%fullwave%pol_decomp%b_para (array3dflt_type) (9.2.1.2.1)
b_para_ph (511)	waves%coherentwave(:)%fullwave%pol_decomp%b_para_ph (array3dflt_type) (9.2.1.2.1)
local (454)	waves%coherentwave(:)%fullwave%local (local) (9.2.1.3.148)
e_plus (481)	waves%coherentwave(:)%fullwave%local%e_plus (array3dflt_type) (9.2.1.2.1)
e_plus_ph (481)	waves%coherentwave(:)%fullwave%local%e_plus_ph (array3dflt_type) (9.2.1.2.1)
e_minus (481)	waves%coherentwave(:)%fullwave%local%e_minus (array3dflt_type) (9.2.1.2.1)
e_minus_ph (481)	waves%coherentwave(:)%fullwave%local%e_minus_ph (array3dflt_type) (9.2.1.2.1)
e_norm (481)	waves%coherentwave(:)%fullwave%local%e_norm (array3dint_type) (9.2.1.2.2)
enorm_ph (481)	waves%coherentwave(:)%fullwave%local%enorm_ph (array3dflt_type) (9.2.1.2.1)
e_binorm (481)	waves%coherentwave(:)%fullwave%local%e_binorm (array3dflt_type) (9.2.1.2.1)
e_binorm_ph (481)	waves%coherentwave(:)%fullwave%local%e_binorm_ph (array3dflt_type) (9.2.1.2.1)
e_para (481)	waves%coherentwave(:)%fullwave%local%e_para (array3dflt_type) (9.2.1.2.1)
e_para_ph (481)	waves%coherentwave(:)%fullwave%local%e_para_ph (array3dflt_type) (9.2.1.2.1)
b_norm (481)	waves%coherentwave(:)%fullwave%local%b_norm (array3dflt_type) (9.2.1.2.1)
b_norm_ph (481)	waves%coherentwave(:)%fullwave%local%b_norm_ph (array3dflt_type) (9.2.1.2.1)
b_binorm (481)	waves%coherentwave(:)%fullwave%local%b_binorm (array3dflt_type) (9.2.1.2.1)
b_binorm_ph (481)	waves%coherentwave(:)%fullwave%local%b_binorm_ph (array3dflt_type) (9.2.1.2.1)
b_para (481)	waves%coherentwave(:)%fullwave%local%b_para (array3dflt_type) (9.2.1.2.1)
b_para_ph (481)	waves%coherentwave(:)%fullwave%local%b_para_ph (array3dflt_type) (9.2.1.2.1)
codeparam (391)	waves%coherentwave(:)%codeparam (codeparam) (9.2.1.3.56)
codename (389)	waves%coherentwave(:)%codeparam%codename (string) (9.2.1.1.3)
codeversion (389)	waves%coherentwave(:)%codeparam%codeversion (string) (9.2.1.1.3)
parameters (389)	waves%coherentwave(:)%codeparam%parameters (string) (9.2.1.1.3)
output_diag (389)	waves%coherentwave(:)%codeparam%output_diag (string) (9.2.1.1.3)
output_flag (389)	waves%coherentwave(:)%codeparam%output_flag (integer) (9.2.1.1.2)
codeparam (371)	waves%codeparam (codeparam) (9.2.1.3.56)
codename (389)	waves%codeparam%codename (string) (9.2.1.1.3)
codeversion (389)	waves%codeparam%codeversion (string) (9.2.1.1.3)
parameters (389)	waves%codeparam%parameters (string) (9.2.1.1.3)
output_diag (389)	waves%codeparam%output_diag (string) (9.2.1.1.3)
output_flag (389)	waves%codeparam%output_flag (integer) (9.2.1.1.2)
time (371)	waves%time (float) (9.2.1.1.1)

## 9.3 4.09a

### 9.3.1 ITM Types

Generated from the ITM data structure schemas. Time-dependent values are shown in green. Anonymous structure (complex) types in the schemas are given parent element names; a prefix or suffix (eg type\_, \_type, \_t) can be added if required.

#### 9.3.1.1 Primitive Types

Clear definitions required.

##### 9.3.1.1.1 float

##### 9.3.1.1.2 integer

##### 9.3.1.1.3 string

#### 9.3.1.2 Array Types

Clear definitions required.

##### 9.3.1.2.1 array3dflt\_type

Example: [[[1.0,2.0,3.0],[5.0,6.0,7.0]],[[1.0,2.0,3.0],[5.0,6.0,7.0]]]

##### 9.3.1.2.2 array3dint\_type

Example: [[[1,2,3],[5,6,7]],[[1,2,3],[5,6,7]]]

##### 9.3.1.2.3 array4dflt\_type

Example: [[[[1.0,2.0,3.0],[5.0,6.0,7.0]],[[1.0,2.0,3.0],[5.0,6.0,7.0]]],[[[1.0,2.0,3.0],[5.0,6.0,7.0]],[[1.0,2.0,3.0],[5.0,6.0,7.0]]]]]

##### 9.3.1.2.4 array5dflt\_type

Example: [[[[[[1.0,2.0,3.0],[5.0,6.0,7.0]],[[1.0,2.0,3.0],[5.0,6.0,7.0]]],[[1.0,2.0,3.0],[5.0,6.0,7.0]],[[1.0,2.0,3.0],[5.0,6.0,7.0]]]]],[[[1.0,2.0,3.0],[5.0,6.0,7.0]],[[1.0,2.0,3.0],[5.0,6.0,7.0]]]]]

##### 9.3.1.2.5 array6dflt\_type

Example: [[[[[[[[1.0,2.0,3.0],[5.0,6.0,7.0]],[[1.0,2.0,3.0],[5.0,6.0,7.0]]],[[1.0,2.0,3.0],[5.0,6.0,7.0]],[[1.0,2.0,3.0],[5.0,6.0,7.0]]]]],[[[1.0,2.0,3.0],[5.0,6.0,7.0]],[[1.0,2.0,3.0],[5.0,6.0,7.0]]]]]]]

##### 9.3.1.2.6 array7dflt\_type

Example: [[[[[[[[[[1.0,2.0,3.0],[5.0,6.0,7.0]],[[1.0,2.0,3.0],[5.0,6.0,7.0]]],[[1.0,2.0,3.0],[5.0,6.0,7.0]],[[1.0,2.0,3.0],[5.0,6.0,7.0]]]]],[[[1.0,2.0,3.0],[5.0,6.0,7.0]],[[1.0,2.0,3.0],[5.0,6.0,7.0]]]]]]]]]

##### 9.3.1.2.7 matflt\_type

Example: [[1.0,2.0,3.0],[5.0,6.0,7.0]]

##### 9.3.1.2.8 matint\_type

Example: [[1,2,3],[4,5,6]]

##### 9.3.1.2.9 vecflt\_type

Example: [1.0,-3e5,-4.0e-3]

<sup>176</sup>[https://www.efda-itm.eu/ITM/html/cpoinstances\\_\\_4.08b.html](https://www.efda-itm.eu/ITM/html/cpoinstances__4.08b.html)

### 9.3.1.2.10 vecint\_type

Example: [1,2,3]

### 9.3.1.2.11 vecstring\_type

Example: ["aaa","bb","cccc"]

## 9.3.1.3 Structure Types

### 9.3.1.3.1 CPO Structures

#### 9.3.1.3.2 amns

Description of AMNS processes for one species.

member	type	description
datainfo	datainfo (9.3.1.3.92)	Generic information on a data item
version	string (9.3.1.1.3)	Version of the data.
source	string (9.3.1.1.3)	Source of the data.
zn	integer (9.3.1.1.2)	Nuclear charge [units of elementary charge];
amn	float (9.3.1.1.1)	Mass of atom [amu]
zion	vecint_type (9.3.1.2.10)	Ion charge [units of elementary charge]. If negative value, means it is a bundle of charge state which cannot be described as single value. Vector of integers (nchargestates)
state_label	vecstring_type (9.3.1.2.11)	Label for charge state (e.g. D0, D1+, ...); Vector(nchargestates)
bundled	integer (9.3.1.1.2)	Flag indicating bundling status. Integer flag: 0=no bundling.
proc_label	vecstring_type (9.3.1.2.11)	Label for process (e.g. EI, RC; could also include error estimates); Vector(nprocs)
tables	tables (9.3.1.3.299)	Rate tables for processes. Vector(nprocs)
tables_coord	tables_coord (9.3.1.3.300)	Array of possible coordinate systems for tables. Vector(ncoordbases)

### 9.3.1.3.3 antennas

RF antenna list. Time-dependent CPO.

member	type	description
datainfo	datainfo (9.3.1.3.92)	Generic information on a data item
antenna_unit	antenna_unit (9.3.1.3.44)	Vector of antennas. Each antenna should include information about one (and only one) of the three possible types; EC, LH and IC. Time-dependent. Array of structures(nantenna)
codeparam	codeparam (9.3.1.3.58)	Code parameters
time	float (9.3.1.1.1)	Time [s]; Time-dependent; Scalar

### 9.3.1.3.4 coredelta

Generic instant change of the radial core profiles due to pellet, MHD, ... Time-dependent CPO.

member	type	description
datainfo	datainfo (9.3.1.3.92)	Generic information on a data item
composition	composition (9.3.1.3.74)	Plasma composition (description of ion species).
rho_tor	vecflt_type (9.3.1.2.9)	Toroidal flux coordinate (not normalised, equivalent to rho_tor_norm) [m]; Vector(nrho). Time-dependent.
rho_tor_norm	vecflt_type (9.3.1.2.9)	Normalised toroidal flux coordinate values (= rho_tor normalised to the value at the last grid point); Vector(nrho)
delta_psi	vecflt_type (9.3.1.2.9)	Instant change of the poloidal flux [Wb]. Time-dependent. Vector(nrho).
delta_te	vecflt_type (9.3.1.2.9)	Instant change of the electron temperature [eV]. Time-dependent. Vector(nrho).
delta_ti	matflt_type (9.3.1.2.7)	Instant change of the ion temperature [eV]. Time-dependent. Matrix(nrho,nion).
delta_tz	array3dflt_type (9.3.1.2.1)	Instant change of the impurity (multiple charge states) temperature [eV]. Time-dependent. Array3d(nrho,nimp,max_nzimp).
delta_ne	vecflt_type (9.3.1.2.9)	Instant change of the electron density [m <sup>-3</sup> ]. Time-dependent. Vector(nrho).
delta_ni	matflt_type (9.3.1.2.7)	Instant change of the ion density [m <sup>-3</sup> ]. Time-dependent. Matrix(nrho,nion).
delta_nz	array3dflt_type (9.3.1.2.1)	Instant change of the impurity (multiple charge states) density [m <sup>-3</sup> ]. Time-dependent. Array3d(nrho,nimp,max_nzimp).
delta_vtor	matflt_type (9.3.1.2.7)	Instant change of the toroidal toroidal velocity [m.s <sup>-1</sup> ]. Time-dependent. Matrix(nrho,nion).
codeparam	codeparam (9.3.1.3.58)	Code parameters
time	float (9.3.1.1.1)	Time [s]; Time-dependent; Scalar

### 9.3.1.3.5 coreimpur

Impurity species (i.e. ion species with multiple charge states), radial core profiles. For heavy impurities, some ionisation states can be grouped into "bundles". Can be the result of an impurity transport code or experimental measurements. Time-dependent CPO

member	type	description
datainfo	datainfo (9.3.1.3.92)	Generic information on a data item
rho_tor_norm	vecflt.type (9.3.1.2.9)	Normalised toroidal flux coordinate values (= rho_tor normalised to the value at the last grid point); Vector (nrho)
rho_tor	vecflt.type (9.3.1.2.9)	Toroidal flux coordinate (not normalised, equivalent to rho_tor_norm) [m]; Vector (nrho). Time-dependent.
source	vecstring.type (9.3.1.2.11)	Source of the profile (any comment describing the origin of the impurity profiles : code, path to diagnostic signals, massaging, ...); Array of strings (nimp)
flag	vecint.type (9.3.1.2.10)	Flag describing how the profile has been processed : 0-not calculated; 1-interpretative; 2-calculated by the transport solver; 3-calculated by a separate code : in that case only, description of the code provided in codeparam at the same level; 4-used value from the previous time step; Time-dependent; Vector(nimp)
desc_impur	desc_impur (9.3.1.3.93)	Description of the impurities (list of ion species and possibly different charge states)
z	array3dflt.type (9.3.1.2.1)	Impurity ionisation state (averaged for bundle); Time-dependent; Array3D (nrho,nimp,max_nzimp)
zsq	array3dflt.type (9.3.1.2.1)	Z <sup>2</sup> , Square of impurity ionisation state (averaged for bundle); Time-dependent; Array3D (nrho,nimp,max_nzimp)
nz	array3dflt.type (9.3.1.2.1)	Density of impurity in a given charge state [m <sup>-3</sup> ]. Time-dependent; Array3D (nrho,nimp,max_nzimp)
source_term	sourceimp (9.3.1.3.287)	Source term for each charge state. Time-dependent.
boundary	boundaryimp (9.3.1.3.54)	Boundary condition for each charge state. Time-dependent
transp_coef	coretransimp (9.3.1.3.87)	Transport coefficients for each charge state
flux	fluximp (9.3.1.3.149)	Fluxes of impurity particles, two definitions [m <sup>-2</sup> .s <sup>-1</sup> ]. Time-dependent.
time_deriv	array3dflt.type (9.3.1.2.1)	Integral of the time derivative term of the transport equation. Time-dependent. Array3D (nrho,nimp,max_nzimp)
atomic_data	vecstring.type (9.3.1.2.11)	Reference for the atomic data used for each impurity. Array of strings (nimp)
time	float (9.3.1.1.1)	Time [s]; Time-dependent; Scalar.
codeparam	codeparam (9.3.1.3.58)	Code parameters

### 9.3.1.3.6 coreneutrals

Core plasma neutrals description. Time-dependent CPO.

member	type	description
datainfo	datainfo (9.3.1.3.92)	Generic information on a data item
rho_tor	vecflt.type (9.3.1.2.9)	Toroidal flux coordinate (not normalised, equivalent to rho_tor_norm) [m]; Vector (nrho). Time-dependent.
rho_tor_norm	vecflt.type (9.3.1.2.9)	Normalised toroidal flux coordinate values (= rho_tor normalised to the value at the last grid point); Vector (nrho)
composition	composition_neutrals (9.3.1.3.75)	Description of neutrals species
profiles	profiles_neutrals (9.3.1.3.213)	Profiles derived from the fields solved in the transport equations, or from experiment.
coefficients	coefficients_neutrals (9.3.1.3.59)	Recycling and sputtering coefficients used by the neutral solver. The nion index refers to the various ions (and charge states) considered in the simulation. The ion list is deduced from the composition%atomlist. Nion = sum(composition%atomlist%zn). Example, if D and C atoms are declared in the atomlist (in this order), nion would be equal to 7, representing D+,C+,C2+,C3+,C4+,C5+,C6+
codeparam	codeparam (9.3.1.3.58)	Code parameters
time	float (9.3.1.1.1)	Time [s]; Time-dependent; Scalar

### 9.3.1.3.7 coreprof

Core plasma 1D profiles as a function of the toroidal flux coordinate, obtained by solving the core transport equations (can be also fitted profiles from experimental data). The codeparam element here describes the parameters of the transport equation solver and/or those of the fitting program. Time-dependent CPO.

member	type	description
datainfo	datainfo (9.3.1.3.92)	Generic information on a data item
rho_tor_norm	vecflt.type (9.3.1.2.9)	Normalised toroidal flux coordinate values (= rho_tor normalised to the value at the last grid point); Vector (nrho)
rho_tor	vecflt.type (9.3.1.2.9)	Toroidal flux coordinate (not normalised, equivalent to rho_tor_norm) [m]; Vector (nrho). Time-dependent.

member	type	description
drho_dt	vecflt_type (9.3.1.2.9)	Time derivative of rho.tor [m/s]; Vector (nrho). Time-dependent.
toroid_field	toroid_field (9.3.1.3.305)	Toroidal field information entering the definition of rho.tor, for reference only. The physical value of the toroidal field should be taken from the toroidfield CPO. Time-dependent.
composition	composition (9.3.1.3.74)	Plasma composition (description of ion species).
psi	psi (9.3.1.3.214)	Poloidal magnetic flux [Wb]; Time-dependent;
te	corefield (9.3.1.3.78)	Electron temperature [eV]; (source term in [W.m <sup>-3</sup> ]). Time-dependent;
ti	corefieldion (9.3.1.3.79)	Ion temperature [eV]; (source term in [W.m <sup>-3</sup> ]). Time-dependent;
ne	corefield (9.3.1.3.78)	Electron density [m <sup>-3</sup> ]; (source term in [m <sup>-3</sup> ]). Time-dependent;
ni	corefieldion (9.3.1.3.79)	Ion density [m <sup>-3</sup> ]; (source term in [m <sup>-3</sup> ]). Time-dependent;
vtor	corefieldion (9.3.1.3.79)	Toroidal velocity of the various ion species [m.s <sup>-1</sup> ]; Time-dependent;
profiles1d	profiles1d (9.3.1.3.210)	Profiles derived from the fields solved in the transport equations, or from experiment.
globalparam	globalparam (9.3.1.3.154)	Various global quantities calculated from the 1D profiles. Time-dependent
codeparam	codeparam (9.3.1.3.58)	Code parameters
time	float (9.3.1.1.1)	Time [s]; Time-dependent; Scalar

### 9.3.1.3.8 coresource

Generic source term for the core transport equations (radial profile). Time-dependent CPO.

member	type	description
datainfo	datainfo (9.3.1.3.92)	Generic information on a data item
rho_tor	vecflt_type (9.3.1.2.9)	Toroidal flux coordinate (not normalised, equivalent to rho.tor_norm) [m]; Vector (nrho). Time-dependent.
rho_tor_norm	vecflt_type (9.3.1.2.9)	Normalised toroidal flux coordinate values (= rho.tor normalised to the value at the last grid point); Vector (nrho)
composition	composition (9.3.1.3.74)	Plasma composition (description of ion species).
toroid_field	b0r0 (9.3.1.3.48)	Characteristics of the vacuum toroidal field, redundant with the toroidfield CPO, to document the normalisation of j in this CPO.
j	vecflt_type (9.3.1.2.9)	Parallel current source for psi transport equation, = average(j.B) / B0, where B0 = coresource/toroid_field/b0 [A.m <sup>-2</sup> ]. Vector(nrho). Time-dependent.
sigma	vecflt_type (9.3.1.2.9)	Induced parallel conductivity [ohm <sup>-1</sup> .m <sup>-1</sup> ]. EXACT DEFINITION PENDING. Vector(nrho). Time-dependent.
si	source_ion (9.3.1.3.284)	Particle source for ion density transport equation [m <sup>-3</sup> .s <sup>-1</sup> ]. Time-dependent.
se	source_el (9.3.1.3.281)	Particle source for electron density transport equation [m <sup>-3</sup> .s <sup>-1</sup> ]. Time-dependent.
sz	source_imp (9.3.1.3.283)	Particle source for impurity density transport equation [m <sup>-3</sup> .s <sup>-1</sup> ]. Time-dependent.
qi	source_ion (9.3.1.3.284)	Heat source for ion heat transport equations [W.m <sup>-3</sup> ]. Time-dependent.
qe	source_el (9.3.1.3.281)	Heat source for electron heat transport equation [W.m <sup>-3</sup> ]. Time-dependent.
qz	source_imp (9.3.1.3.283)	Heat source for impurity heat transport equations [W.m <sup>-3</sup> ]. Time-dependent.
ui	source_ion (9.3.1.3.284)	Velocity source for toroidal velocity transport equation [kg.m <sup>-1</sup> .s <sup>-2</sup> ]. Vector(nrho). Time-dependent.
codeparam	codeparam (9.3.1.3.58)	Code parameters
time	float (9.3.1.1.1)	Time [s]; Time-dependent; Scalar

### 9.3.1.3.9 coretransp

Generic transport coefficients for the core transport equations (radial profile). Time-dependent CPO

member	type	description
datainfo	datainfo (9.3.1.3.92)	Generic information on a data item
composition	composition (9.3.1.3.74)	Plasma composition (description of ion species).
rho_tor_norm	vecflt_type (9.3.1.2.9)	Normalised toroidal flux coordinate values (= rho.tor normalised to the value at the last grid point); Vector (nrho)
rho_tor	vecflt_type (9.3.1.2.9)	Toroidal flux coordinate (not normalised, equivalent to rho.tor_norm) [m]; Vector (nrho). Time-dependent.
sigma	vecflt_type (9.3.1.2.9)	Parallel conductivity [ohm <sup>-1</sup> .m <sup>-1</sup> ]. Time-dependent. Vector(nrho).
ni_transp	ni_transp (9.3.1.3.186)	Transport coefficients for ion density equation. Time-dependent.
ne_transp	ne_transp (9.3.1.3.184)	Transport coefficients for electron density equation. Time-dependent.
nz_transp	transcoefimp (9.3.1.3.307)	Transport coefficients for impurity (multiple charge state) density equation. Time-dependent.
ti_transp	transcoefion (9.3.1.3.308)	Transport coefficients for ion temperature equation. Time-dependent.
te_transp	transcoefel (9.3.1.3.306)	Transport coefficients for electron temperature equation. Time-dependent.
tz_transp	transcoefimp (9.3.1.3.307)	Transport coefficients for impurity (multiple charge state) temperature equation. Time-dependent.
vtor_transp	transcoefvtor (9.3.1.3.309)	Transport coefficients for toroidal velocity equation. Time-dependent.
codeparam	codeparam (9.3.1.3.58)	Code parameters

member	type	description
time	float (9.3.1.1.1)	Time [s]; Time-dependent; Scalar

### 9.3.1.3.10 cxdiag

Charge Exchange Diagnostic; Time-dependent CPO

member	type	description
datainfo	datainfo (9.3.1.3.92)	Generic information on a data item
setup	cxsetup (9.3.1.3.91)	diagnostic setup information
measure	cxmeasure (9.3.1.3.90)	Measured values
time	float (9.3.1.1.1)	Time [s]; Time-dependent; Scalar

### 9.3.1.3.11 distribution

Distribution function for electron and ion species. Normally output from a Fokker-Planck calculation; Time-dependent CPO

member	type	description
datainfo	datainfo (9.3.1.3.92)	Generic information on a data item
composition	composition (9.3.1.3.74)	Plasma composition (description of ion species).
distri_vec	distri_vec (9.3.1.3.119)	Vector over all distribution functions; Time-dependent. Structure array(ndist_spec)
codeparam	codeparam (9.3.1.3.58)	Code parameters
time	float (9.3.1.1.1)	Time [s]; Time-dependent; Scalar

### 9.3.1.3.12 distsource

Sources of particles for input to kinetic equations, e.g. Fokker-Planck calculation. The sources could originate from e.g. NBI or fusion reactions. Time-dependent CPO

member	type	description
datainfo	datainfo (9.3.1.3.92)	Generic information on a data item
composition	composition (9.3.1.3.74)	Plasma composition (description of ion species).
source	distsource_source (9.3.1.3.123)	Source. Time-dependent. Structure array(nsrc_spec)
codeparam	codeparam (9.3.1.3.58)	Code parameters
time	float (9.3.1.1.1)	Time [s]; Time-dependent; scalar

### 9.3.1.3.13 ecediag

Electron Cyclotron Emission Diagnostic; Time-dependent CPO

member	type	description
datainfo	datainfo (9.3.1.3.92)	Generic information on a data item
setup	ecsetup (9.3.1.3.126)	diagnostic setup information
measure	ecmeasure (9.3.1.3.125)	Measured values
time	float (9.3.1.1.1)	Time [s]; Time-dependent; Scalar

### 9.3.1.3.14 edge

CPO for edge/SOL plasma description. Time-dependent CPO

member	type	description
datainfo	datainfo (9.3.1.3.92)	Generic information on a data item
grid	complexgrid (9.3.1.3.61)	Grid description
species	species_desc (9.3.1.3.290)	Description of ion species. Array of structures(nspecies)
fluid	edge_fluid (9.3.1.3.127)	Fluid description of edge plasma. Time-dependent.
kinetic	edge_kinetic (9.3.1.3.133)	Kinetic description of edge plasma. Time-dependent.
codeparam	codeparam (9.3.1.3.58)	Code parameters
time	float (9.3.1.1.1)	Time [s]; Time-dependent; Scalar

### 9.3.1.3.15 equilibrium

Description of a 2D, axi-symmetric, tokamak equilibrium; result of an equilibrium code. Time-dependent CPO

member	type	description
datainfo	datainfo (9.3.1.3.92)	Generic information on a data item
eqconstraint	eqconstraint (9.3.1.3.138)	measurements to constrain the equilibrium, output values and accuracy of the fit
eggeometry	eggeometry (9.3.1.3.139)	Geometry of the plasma boundary
flush	flush (9.3.1.3.146)	FLUSH package coefficients for the mapping of the equilibrium. The time grid of this structure is the same as the equilibrium structure above.
global_param	global_param (9.3.1.3.153)	0d output parameters
profiles_1d	profiles_1d (9.3.1.3.211)	output profiles as a function of the poloidal flux
profiles_2d	profiles_2d (9.3.1.3.212)	output profiles in the poloidal plane
coord_sys	coord_sys (9.3.1.3.76)	flux surface coordinate system on a square grid of flux and angle
time	float (9.3.1.1.1)	Time [s]; Time-dependent; Scalar
codeparam	codeparam (9.3.1.3.58)	Code parameters

### 9.3.1.3.16 fusiondiag

Fusion product diagnostics; Time-dependent CPO

member	type	description
datainfo	datainfo (9.3.1.3.92)	Generic information on a data item
source	source (9.3.1.3.280)	Source. Time-dependent. Structure array. Replicate this source structure for each neutron or gamma with a particular energy.
codeparam	codeparam (9.3.1.3.58)	Code parameters
time	float (9.3.1.1.1)	Time [s]; Time-dependent; Scalar

### 9.3.1.3.17 interfdiag

General line integral diagnostic

member	type	description
datainfo	datainfo (9.3.1.3.92)	Generic information on a data item
expression	string (9.3.1.1.3)	Formal expression for the line integral to be evaluated as a function of $n_e$ , $n_i$ , $T_e$ , $T_i$ , $Z_{eff}$ , $B_r$ , $B_z$
setup_line	setup_line (9.3.1.3.278)	Geometric description of the lines of sight
measure	exp1D (9.3.1.3.143)	Measured value. Time-dependent; Vector (nchords)
time	float (9.3.1.1.1)	Time [s]; Time-dependent; Scalar

### 9.3.1.3.18 ironmodel

Model of the iron circuit; Time-dependent CPO

member	type	description
datainfo	datainfo (9.3.1.3.92)	Generic information on a data item
desc_iron	desc_iron (9.3.1.3.94)	Description of the iron segments
magnetise	magnetise (9.3.1.3.173)	Magnetisation $M$ of the iron segment, assumed to be constant inside a given iron segment. Reminder : $H = 1/\mu_0 * B - \text{mur} * M$ ; [A/m].
time	float (9.3.1.1.1)	Time [s]; Time-dependent; Scalar

### 9.3.1.3.19 langmuirdiag

Langmuir probes; Time-dependent CPO

member	type	description
datainfo	datainfo (9.3.1.3.92)	Generic information on a data item
potential	lang_measure (9.3.1.3.161)	Floating potential [V]. All children are vectors(npot)
bias	lang_measure (9.3.1.3.161)	Biasing potential [V]. All children are vectors(bias)
jsat	lang_measure (9.3.1.3.161)	Ion saturation current [A/m <sup>2</sup> ]. All children are vectors(njsat)
ne	lang_derived (9.3.1.3.160)	Electron density [m <sup>-3</sup> ]. All children are vectors(ndensity).
te	lang_derived (9.3.1.3.160)	Electron Temperature [eV]. All children are vectors(nte)
machpar	lang_derived (9.3.1.3.160)	Parallel Mach number. All children are vectors(nmach)
codeparam	codeparam (9.3.1.3.58)	Code parameters

member	type	description
time	float (9.3.1.1.1)	Time [s]; Time-dependent; Scalar

### 9.3.1.3.20 launches

RF wave launch conditions. Time-dependent CPO

member	type	description
datainfo	datainfo (9.3.1.3.92)	Generic information on a data item
name	vecstring_type (9.3.1.2.11)	Antenna name, Vector of strings (nantenna)
type	vecstring_type (9.3.1.2.11)	Wave type (LH, EC, IC, ...), Vector of strings (nantenna)
frequency	vecflt_type (9.3.1.2.9)	Wave frequency [Hz], Vector (nantenna).
mode	vecint_type (9.3.1.2.10)	Incoming wave mode (+ 1 : slow wave only; -1 both slow and fast wave modes). Vector of integers (nantenna). Time-dependent
position	rzphi1D (9.3.1.3.247)	Reference global position of the antenna. Time-dependent
spectrum	spectrum (9.3.1.3.291)	Spectral properties of the wave.
beam	launchs_rfbeam (9.3.1.3.165)	Beam characteristics
codeparam	codeparam (9.3.1.3.58)	Code parameters
time	float (9.3.1.1.1)	Time [s]; Time-dependent; Scalar

### 9.3.1.3.21 limiter

Description of the immobile limiting surface(s) or plasma facing components for defining the Last Closed Flux Surface. CPO

member	type	description
datainfo	datainfo (9.3.1.3.92)	Generic information on a data item
limiter_unit	limiter_unit (9.3.1.3.168)	Vector of limiting surfaces. Replicate this limiter_unit element ncomponents times. Each unit contains a plasma facing component that can have dedicated number of points. Array of structures (ncomponents)

### 9.3.1.3.22 magdiag

Magnetic diagnostics. Time-dependent CPO

member	type	description
datainfo	datainfo (9.3.1.3.92)	Generic information on a data item
ip	exp0D (9.3.1.3.142)	Plasma current [A]. Positive sign means anti-clockwise when viewed from above. Time-dependent. Scalar
diamagflux	exp0D (9.3.1.3.142)	Diamagnetic flux [Wb]; Time-dependent; Scalar
flux_loops	flux_loops (9.3.1.3.147)	Poloidal flux loops RZ coordinates have 1 component for the full loop and two if there is a negative reference loop
bpol_probes	bpol_probes (9.3.1.3.56)	Poloidal field probes
time	float (9.3.1.1.1)	Time [s]; Time-dependent; Scalar

### 9.3.1.3.23 mhd

MHD linear stability. Time-dependent CPO

member	type	description
datainfo	datainfo (9.3.1.3.92)	Generic information on a data item
n	vecint_type (9.3.1.2.10)	Toroidal mode number; Time-dependent; Vector (nn)
frequency	vecflt_type (9.3.1.2.9)	Frequency of the mode [Hz]; Time-dependent; Vector (nn)
growthrate	vecflt_type (9.3.1.2.9)	Linear growthrate of the mode [Hz]; Time-dependent; Vector (nn)
plasma	mhd_plasma (9.3.1.3.176)	MHD modes in the confined plasma
vacuum	mhd_vacuum (9.3.1.3.178)	External modes
walls	mhd_walls2d (9.3.1.3.180)	2D Walls
time	float (9.3.1.1.1)	Time [s]; Time-dependent; Scalar.
codeparam	codeparam (9.3.1.3.58)	Code parameters

### 9.3.1.3.24 msediag

MSE Diagnostic; Time-dependent CPO



member	type	description
datainfo	datainfo (9.3.1.3.92)	Generic information on a data item
setup_mse	setup_mse (9.3.1.3.279)	diagnostic setup information
measure	exp1D (9.3.1.3.143)	Measured value (MSE angle gamma [rad]). Time-dependent; Vector (nchords)
time	float (9.3.1.1.1)	Time [s]; Time-dependent; Scalar

### 9.3.1.3.25 nbi

Neutral Beam Injection. Input to NBI source codes; describes the neutrals that are about to be launched into the torus; Time-dependent CPO

member	type	description
datainfo	datainfo (9.3.1.3.92)	Generic information on a data item
nbi_unit	nbi_unit (9.3.1.3.183)	Injector unit. Structure array(nunits). Time-dependent
codeparam	codeparam (9.3.1.3.58)	Code parameters
time	float (9.3.1.1.1)	Time [s]; Time-dependent; Scalar

### 9.3.1.3.26 neoclassic

Neoclassical quantities (including transport coefficients). Time-dependent CPO

member	type	description
datainfo	datainfo (9.3.1.3.92)	Generic information on a data item
rho_tor_norm	vecflt_type (9.3.1.2.9)	Normalised toroidal flux coordinate values (= rho_tor normalised to the value at the last grid point); Vector (nrho)
rho_tor	vecflt_type (9.3.1.2.9)	Toroidal flux coordinate (not normalised, equivalent to rho_tor_norm) [m]; Vector (nrho). Time-dependent.
composition	composition (9.3.1.3.74)	Plasma composition (description of ion species).
ni_neo	transcoefion (9.3.1.3.308)	Neoclassical transport coefficients for ion density equation. Time-dependent.
ne_neo	transcoefel (9.3.1.3.306)	Neoclassical transport coefficients for electron density equation. Time-dependent.
nz_neo	transcoefimp (9.3.1.3.307)	Neoclassical transport coefficients for impurity (multiple charge state) density equation. Time-dependent.
ti_neo	transcoefion (9.3.1.3.308)	Neoclassical transport coefficients for ion temperature equation. Time-dependent.
te_neo	transcoefel (9.3.1.3.306)	Neoclassical transport coefficients for electron temperature equation. Time-dependent.
tz_neo	transcoefimp (9.3.1.3.307)	Neoclassical transport coefficients for impurity (multiple charge state) temperature equation. Time-dependent.
mtor_neo	transcoefel (9.3.1.3.306)	Neoclassical transport coefficients for total toroidal momentum equation. Time-dependent.
sigma	vecflt_type (9.3.1.2.9)	Neoclassical conductivity [ $\text{ohm}^{-1} \cdot \text{m}^{-1}$ ]. Time-dependent. Vector(nrho).
jboot	vecflt_type (9.3.1.2.9)	Bootstrap current density [ $\text{A} \cdot \text{m}^{-2}$ ]. Time-dependent. Vector(nrho).
er	vecflt_type (9.3.1.2.9)	Radial electric field [V/m]. Time-dependent. Vector(nrho).
vpol	matflt_type (9.3.1.2.7)	Neoclassical poloidal rotation of for each ion species [m/s]. Time-dependent. Matrix(nrho,nion).
fext	array3dflt_type (9.3.1.2.1)	Moments of parallel external force on each ion species [ $\text{T} \cdot \text{J} \cdot \text{m}^{-3}$ ]. Time-dependent. Array3D(nrho,nion,nmoment).
jext	vecflt_type (9.3.1.2.9)	Current density response to fext [ $\text{A} \cdot \text{m}^{-2}$ ]. Time-dependent. Vector(nrho).
time	float (9.3.1.1.1)	Time [s]; Time-dependent; Scalar.
codeparam	codeparam (9.3.1.3.58)	Code parameters

### 9.3.1.3.27 orbit

Orbits for a set of particles. Time-dependent CPO

member	type	description
datainfo	datainfo (9.3.1.3.92)	Generic information on a data item
orbitt_id	orbitt_id (9.3.1.3.194)	Parameters identifying an orbit
orb_trace	orb_trace (9.3.1.3.192)	Position of particle in 5D space (3D in real and 2D in velocity).
orb_glob_dat	orb_glob_dat (9.3.1.3.191)	Global quantities associated with an orbit.
codeparam	codeparam (9.3.1.3.58)	Code parameters
time	float (9.3.1.1.1)	Time [s]; Time-dependent; Scalar

### 9.3.1.3.28 pfsystems

Description of the active poloidal coils, passive conductors, currents flowing in those and mutual electromagnetic effects of the device; Time-dependent CPO

member	type	description
datainfo	datainfo (9.3.1.3.92)	Generic information on a data item
pccoils	pccoils (9.3.1.3.198)	Active poloidal field coils
pfpassive	pfpassive (9.3.1.3.202)	Passive axisymmetric conductor description
pfcircuits	pfcircuits (9.3.1.3.197)	Circuits, connected to multiple coils and to multiple supplies, defining the current and voltage relationships in the system
pfsupplies	pfsupplies (9.3.1.3.203)	PF power supplies
time	float (9.3.1.1.1)	Time [s]; Time-dependent; Scalar

### 9.3.1.3.29 polardiag

General line integral diagnostic

member	type	description
datainfo	datainfo (9.3.1.3.92)	Generic information on a data item
expression	string (9.3.1.1.3)	Formal expression for the line integral to be evaluated as a function of $n_e$ , $n_i$ , $T_e$ , $T_i$ , $Z_{eff}$ , $B_r$ , $B_z$
setup_line	setup_line (9.3.1.3.278)	Geometric description of the lines of sight
measure	exp1D (9.3.1.3.143)	Measured value. Time-dependent; Vector (nchords)
time	float (9.3.1.1.1)	Time [s]; Time-dependent; Scalar

### 9.3.1.3.30 reference

Set of generic reference signals (for input e.g. to a controller); Time-dependent CPO

member	type	description
datainfo	datainfo (9.3.1.3.92)	Generic information on a data item
non_timed	ref.nt (9.3.1.3.219)	Time-independent references (parameters)
timed	ref.t (9.3.1.3.230)	Time-dependent references
time	float (9.3.1.1.1)	Time [s]; Time-dependent; Scalar

### 9.3.1.3.31 sawteeth

Description of sawtooth events. Time-dependent CPO

member	type	description
datainfo	datainfo (9.3.1.3.92)	Generic information on a data item
crash_trig	integer (9.3.1.1.2)	Flag indicating whether a crash condition has been satisfied : 0 = no crash. $N(\zeta_0)$ = crash triggered due to condition $ii=N$ . Integer. Time-dependent.
composition	composition (9.3.1.3.74)	Plasma composition (description of ion species).
rho_tor_norm	vecflt_type (9.3.1.2.9)	Normalised toroidal flux coordinate values (= rho_tor normalised to the value at the last grid point); Vector (nrho)
rho_tor	vecflt_type (9.3.1.2.9)	Toroidal flux coordinate [m] given by $\sqrt{\phi/B_0/\pi}$ , where $B_0 = \text{toroidfield}\%bvac.r\%value / \text{toroidfield}\%r0$ . Vector (nrho). Time-dependent.
profiles1d	sawteeth_profiles1d (9.3.1.3.253)	Core profiles after sawtooth crash
diags	sawteeth_diags (9.3.1.3.252)	NO DOCS
codeparam	codeparam (9.3.1.3.58)	Code parameters
time	float (9.3.1.1.1)	Time [s]; Time-dependent; Scalar

### 9.3.1.3.32 scenario

Scenario characteristics, to be used as input or output of a whole discharge simulator. Time-dependent CPO.

member	type	description
datainfo	datainfo (9.3.1.3.92)	Generic information on a data item
centre	scenario_centre (9.3.1.3.254)	central values of the profiles (at magnetic axis)
composition	scenario_composition (9.3.1.3.255)	Plasma composition (description of ion species).
configs	scenario_configuration (9.3.1.3.256)	Strings describing the tokamak configuration

member	type	description
confinement	scenario_confinement (9.3.1.3.257)	characteristic confinement times
currents	scenario_currents (9.3.1.3.258)	data related to current sources and current diffusion
edge	scenario_edge (9.3.1.3.259)	edge value (@ LCMS)
energy	scenario_energy (9.3.1.3.260)	plasma energy content
eqgeometry	eqgeometry (9.3.1.3.139)	Geometry of the plasma boundary
global_param	scenario_global (9.3.1.3.261)	Global scalar values
heat_power	scenario_heat_power (9.3.1.3.262)	Power delivered to plasma (thermal and non thermal)
itb	scenario_itb (9.3.1.3.264)	Values characteristics of the Internal Transport Barrier
lim_div_wall	scenario_lim_div_wall (9.3.1.3.265)	values on the plate of divertor or on the limiter or on the wall (@ LCMS)
line_ave	scenario_line_ave (9.3.1.3.266)	line averaged value
neutron	scenario_neutron (9.3.1.3.267)	neutron flux for DD and DT reactions
ninety_five	scenario_ninety_five (9.3.1.3.268)	values at 95% of poloidal flux
pedestal	scenario_pedestal (9.3.1.3.269)	Values at the top of the H-mode pedestal
references	scenario_references (9.3.1.3.272)	References
reactor	scenario_reactor (9.3.1.3.270)	reactor data (such as electricity cost ...)
sol	scenario_sol (9.3.1.3.273)	SOL characteristic (@ LCMS)
vol_ave	scenario_vol_ave (9.3.1.3.274)	volume averaged value
codeparam	codeparam (9.3.1.3.58)	Code parameters
time	float (9.3.1.1.1)	Time [s]; Time-dependent; Scalar

### 9.3.1.3.33 summary

Set of reduced data summarising the main simulation parameters for the data base catalogue. CPO.

member	type	description
datainfo	datainfo (9.3.1.3.92)	Generic information on a data item
ip	reduced (9.3.1.3.218)	Plasma current [A]
bvac_r	reduced (9.3.1.3.218)	Vacuum field times radius in the toroidal field magnet [T.m];
geom_axis_r	reduced (9.3.1.3.218)	Major radius of the geometric axis [m]
a_minor	reduced (9.3.1.3.218)	Minor radius of the plasma boundary [m]
elongation	reduced (9.3.1.3.218)	Elongation of the plasma boundary [m]
tria_lower	reduced (9.3.1.3.218)	Lower triangularity of the plasma boundary [m]
tria_upper	reduced (9.3.1.3.218)	Upper triangularity of the plasma boundary [m]
tev	reduced (9.3.1.3.218)	volume averaged electron temperature [eV]
tiv	reduced (9.3.1.3.218)	volume averaged ion temperature [eV]
nev	reduced (9.3.1.3.218)	volume averaged electron density [m <sup>-3</sup> ]
zeffv	reduced (9.3.1.3.218)	volume averaged effective charge
beta_pol	reduced (9.3.1.3.218)	poloidal beta
beta_tor	reduced (9.3.1.3.218)	toroidal beta
beta_normal	reduced (9.3.1.3.218)	normalised beta
li	reduced (9.3.1.3.218)	internal inductance
volume	reduced (9.3.1.3.218)	total plasma volume [m <sup>3</sup> ]
area	reduced (9.3.1.3.218)	area poloidal cross section [m <sup>2</sup> ]
main_ion1_z	reduced (9.3.1.3.218)	Atomic number of the main ion #1 [a.m.u.]
main_ion1_a	reduced (9.3.1.3.218)	Atomic mass of the main ion #1 [a.m.u.]
main_ion2_z	reduced (9.3.1.3.218)	Atomic number of the main ion #2 [a.m.u.]
main_ion2_a	reduced (9.3.1.3.218)	Atomic mass of the main ion #2 [a.m.u.]
impur1_z	reduced (9.3.1.3.218)	Atomic number of the impurity #1 [a.m.u.]
impur1_a	reduced (9.3.1.3.218)	Atomic mass of the impurity #1 [a.m.u.]
time	float (9.3.1.1.1)	Time at which the 0D variables of the summary are taken [s]. Scalar

### 9.3.1.3.34 topinfo

General info about the database entry. CPO.

member	type	description
dataprovider	string (9.3.1.1.3)	Name of the main data provider (the person who filled the original data)
description	string (9.3.1.1.3)	Pulse/Entry description
firstputdate	string (9.3.1.1.3)	Date of the original data submission
lastupdate	string (9.3.1.1.3)	Date of the last data addition in the tree
source	string (9.3.1.1.3)	Exact reference of the data source (e.g. original reference in the native machine data base)
comment	string (9.3.1.1.3)	Any additional comment
dataversion	string (9.3.1.1.3)	Version of the data structure
workflow	string (9.3.1.1.3)	Workflow which has been used to produce the present entry. Exact format to be defined with the platform group. User-specific input files (if allowed) must be stored there as well.
entry	entry_def (9.3.1.3.137)	Definition of this database entry
parent_entry	entry_def (9.3.1.3.137)	Definition of the entry of the direct parent (if any)
mdinfo	mdinfo (9.3.1.3.174)	Information related to machine description for this entry

### 9.3.1.3.35 toroidfield

Toroidal field. Time-dependent CPO

member	type	description
datainfo	datainfo (9.3.1.3.92)	Generic information on a data item
desc_tfcoils	tf_desc_tfcoils (9.3.1.3.301)	Description of the toroidal field coils
nturns	integer (9.3.1.1.2)	Number of total turns in the toroidal field coil
ncoils	integer (9.3.1.1.2)	Number of packets of coils
current	exp0D (9.3.1.3.142)	Current in the toroidal field coils [A]; Time-dependent. Scalar.
bvac_r	exp0D (9.3.1.3.142)	Vacuum field times radius in the toroidal field magnet [T.m]. Positive sign means anti-clockwise when viewed from above. Time-dependent. Scalar.
r0	float (9.3.1.1.1)	Characteristic major radius of the device (used in publications, usually middle of the vessel at the equatorial midplane) [m]. Scalar.
time	float (9.3.1.1.1)	Time [s]; Time-dependent. Scalar.

### 9.3.1.3.36 tsdiag

Thomson scattering Diagnostic; Time-dependent CPO

member	type	description
datainfo	datainfo (9.3.1.3.92)	Generic information on a data item
setup	tssetup (9.3.1.3.311)	diagnostic setup information
measure	tsmeasure (9.3.1.3.310)	Measured values
time	float (9.3.1.1.1)	Time [s]; Time-dependent; Scalar

### 9.3.1.3.37 turbulence

Turbulence; Time-dependent CPO.

member	type	description
datainfo	datainfo (9.3.1.3.92)	Generic information on a data item
composition	turbcomposition (9.3.1.3.312)	Plasma composition (description of ion species).
coordsys	turbcoordsys (9.3.1.3.313)	Description of the coordinates and metric used by the codes.
var0d	turbvar0d (9.3.1.3.317)	Diagnostic fast time traces.
var1d	turbvar1d (9.3.1.3.318)	Dependent variable radial profile.
var2d	turbvar2d (9.3.1.3.319)	Dependent variable axisymmetric.
var3d	turbvar3d (9.3.1.3.320)	Dependent variable morphology. Grid is defined in coord_sys/turbgrid.
var4d	turbvar4d (9.3.1.3.321)	Gyrokinetic distribution function, axisymmetric component. Grid is defined in coord_sys/turbgrid.
var5d	turbvar5d (9.3.1.3.322)	Gyrokinetic distribution function. Grid is defined in coord_sys/turbgrid.
spec1d	turbpec1d (9.3.1.3.316)	Toroidal mode number spectra.
env1d	turbenv1d (9.3.1.3.314)	Parallel fluctuation envelope.
codeparam	codeparam (9.3.1.3.58)	Code parameters

member	type	description
time	float (9.3.1.1.1)	Time [s]; Time-dependent; Scalar.

### 9.3.1.3.38 vessel

Mechanical structure of the vacuum vessel. CPO.

member	type	description
datainfo	datainfo (9.3.1.3.92)	Generic information on a data item
position	rz1D (9.3.1.3.242)	Vessel wall outline (list of R,Z co-ordinates) [m]; Vector (npoints)

### 9.3.1.3.39 waves

RF wave propagation and deposition. Time-dependent CPO

member	type	description
datainfo	datainfo (9.3.1.3.92)	Generic information on a data item
coherentwave	coherentwave (9.3.1.3.60)	Wave description for each frequency. Time-dependent. Structure array(nfreq)
codeparam	codeparam (9.3.1.3.58)	Code parameters
time	float (9.3.1.1.1)	Time [s]; Time-dependent; Scalar

### 9.3.1.3.40 Utility Structures

#### 9.3.1.3.41 antenna\_ec

Electron Cyclotron antenna

member	type	description
name	string (9.3.1.1.3)	Antenna name
frequency	float (9.3.1.1.1)	Frequency [Hz]
power	exp0D (9.3.1.3.142)	Power [W]; Time-dependent
mode	integer (9.3.1.1.2)	Incoming wave mode (+ or -1 for O/X mode); Time-dependent
position	rzphi0D (9.3.1.3.246)	Reference global position of the last mirror; Time-dependent
launchangles	launchangles (9.3.1.3.162)	Launching angles of the beam
beam	rfbeam (9.3.1.3.240)	Beam characteristics

Type of: antenna\_unit:antenna\_ec (717)

#### 9.3.1.3.42 antenna\_ic

Ion Cyclotron antenna

member	type	description
name	string (9.3.1.1.3)	Antenna name; String
frequency	exp0D (9.3.1.3.142)	Frequency [Hz]; Time-dependent; Exp0d
power	exp0D (9.3.1.3.142)	Power [W]; Time-dependent; Exp0d
setup	antennaic_setup (9.3.1.3.45)	Detailed description of IC antennas

Type of: antenna\_unit:antenna\_ic (717)

#### 9.3.1.3.43 antenna\_lh

Lower Hybrid antenna

member	type	description
name	string (9.3.1.1.3)	Antenna name, String
frequency	float (9.3.1.1.1)	Frequency [Hz]
power	exp0D (9.3.1.3.142)	Power [W]; Exp0d. Time-dependent
n_par	float (9.3.1.1.1)	Main parallel refractive index of the launched spectrum, for multi-junction antennas. Time-dependent
position	rzphi0D (9.3.1.3.246)	Reference global antenna position. Time-dependent
setup	antennalh_setup (9.3.1.3.46)	Detailed description of LH antennas.

member	type	description
plasmaedge	plasmaedge (9.3.1.3.206)	Plasma edge characteristics in front of the antenna.
beam	rfbeam (9.3.1.3.240)	Beam characteristics

Type of: antenna\_unit:antenna\_lh (717)

#### 9.3.1.3.44 antenna\_unit

Vector of antennas. Each antenna should include information about one (and only one) of the three possible types; EC, LH and IC. Time-dependent. Array of structures(nantenna)

member	type	description
antenna_ec	antenna_ec (9.3.1.3.41)	Electron Cyclotron antenna
antenna_ic	antenna_ic (9.3.1.3.42)	Ion Cyclotron antenna
antenna_lh	antenna_lh (9.3.1.3.43)	Lower Hybrid antenna
codeparam	codeparam (9.3.1.3.58)	Code parameters

Type of: antennas:antenna\_unit (677)

#### 9.3.1.3.45 antennaic\_setup

Detailed description of ICRH antennas

member	type	description
straps	straps (9.3.1.3.297)	Properties of the IC antenna strap; Time-dependent; Vector(nstraps)

Type of: antenna\_ic:setup (715)

#### 9.3.1.3.46 antennalh\_setup

Detailed description of LH antennas

member	type	description
modules	modules (9.3.1.3.182)	Modules description. NB there are nmodules per antenna, distributed among nma.phi toroidal positions and nma.theta poloidal positions

Type of: antenna\_lh:setup (716)

#### 9.3.1.3.47 atomlist

List of the atoms that enter the composition of the neutral species

member	type	description
amn	vecflt_type (9.3.1.2.9)	Atomic mass number; Vector (natm)
zn	vecflt_type (9.3.1.2.9)	Nuclear charge; Vector (natm)

Type of: composition\_neutrals:atomlist (748)

#### 9.3.1.3.48 b0r0

Characteristics of the vacuum toroidal field, redundant with the toroidfield CPO, normalisation used by the ETS

member	type	description
r0	float (9.3.1.1.1)	Characteristic major radius of the device (used in publications, usually middle of the vessel at the equatorial midplane) [m]. Scalar.
b0	float (9.3.1.1.1)	Vacuum field at r0 [T]; Positive sign means anti-clockwise when viewed from above. Scalar. Time-dependent.

Type of: coresource:toroid\_field (682) | global\_param:toroid\_field (826) | waves\_global\_param:toroid\_field (999)

### 9.3.1.3.49 beamlets

Detailed information on beamlets.

member	type	description
position	rzphi1D (9.3.1.3.247)	Position of beamlets. Vector rzphi1D (nbeamlets)
tang_rad.bl	vecflt.type (9.3.1.2.9)	Tangency radius (major radius where the central line of a beamlet is tangent to a circle around the torus) [m]; Vector(nbeamlets)
angle.bl	vecflt.type (9.3.1.2.9)	Angle of inclination between a line at the centre of a beamlet and the horizontal plane [rad]; Vector(nbeamlets)
pow_frc.bl	vecflt.type (9.3.1.2.9)	Fraction of power of a unit injected by a beamlet; Vector(nbeamlets)

Type of: setup\_inject:beamlets (950)

### 9.3.1.3.50 beamtracing

Beam-tracing or ray-tracing solver. Vector(nbeams). Time-dependent

member	type	description
npoints	integer (9.3.1.1.2)	Number of points along each ray/beam. Integer
power	float (9.3.1.1.1)	Initial power in each ray/beam [W]. Float. Time-dependent
dnpar	vecflt.type (9.3.1.2.9)	Spectral width in refractive index associated with each ray/beam, Vector (npoints). Time-dependent
length	vecflt.type (9.3.1.2.9)	Ray/beam curvilinear length [m], Vector (npoints). Time-dependent
position	waves_rtposition (9.3.1.3.331)	Ray/beam position
wavevector	waves_rtwavevector (9.3.1.3.332)	Ray/beam wave vector.
polarization	polarization (9.3.1.3.208)	Wave field polarization along the ray/beam.
powerflow	powerflow (9.3.1.3.209)	Power flow along the ray/beam.

Type of: coherentwave:beamtracing (733)

### 9.3.1.3.51 boundary

Boundary condition for the transport equation. Time-dependent.

member	type	description
value	vecflt.type (9.3.1.2.9)	Value of the boundary condition (in case flag = 2). Unit depends on type, respectively [1-Wb, 2-A, 3-V]. For type 1 to 3, only the first position in the vector is used. For type 5, all three positions are used, meaning respectively a1, a2, a3. Time-dependent. Vector(3).
source	string (9.3.1.1.3)	Source of the boundary condition (any comment describing its origin : code, path to diagnostic signals, massaging); String
type	integer (9.3.1.1.2)	Type of the boundary condition for the transport solver (in case flag = 2). 0- equation not solved; 1- edge value of poloidal flux; 2- total current inside boundary; 3- edge Vloop; 4- not defined; 5- generic boundary condition expressed as $a1*(dpsi.drho.tor)+a2*psi=a3$ . Time-dependent. Scalar
rho	float (9.3.1.1.1)	Position of the boundary condition (in terms of toroidal flux coordinate) for the transport solver [m]. Outside this boundary, the value of the data are considered to be prescribed. Scalar
codeparam	codeparam (9.3.1.3.58)	Code parameters

Type of: psi:boundary (887)

### 9.3.1.3.52 boundary\_neutrals

Structure for the boundary condition of core transport equations (neutrals). Time-dependent;

member	type	description
value	array3dfilt.type (9.3.1.2.1)	Value of the boundary condition. Unit depends on type, respectively [1-field, 2-field.m <sup>-1</sup> , 3-m, 4-field.s <sup>-1</sup> ]. For type 1 to 4, only the first position in the vector is used. For type 5, all three positions are used, meaning respectively a1, a2, a3. Time-dependent. Array3D(3,nneut,max_ntype)
type	matint.type (9.3.1.2.8)	Type of the boundary condition for the transport solver. 0- equation not solved; 1- value of the field y; 2-radial derivative of the field (-dy/drho.tor); 3-scale length of the field y/(-dy/drho.tor); 4- flux; 5- generic boundary condition y expressed as $a1y'+a2y=a3$ . Time-dependent. Matrix(nneut,max_ntype)

member	type	description
rho_tor	matflt.type (9.3.1.2.7)	Position of the boundary condition (in terms of toroidal flux coordinate) for the transport solver [m]. Outside this boundary, the value of the data are considered to be prescribed. Time-dependent. Matrix(nneut,max_ntype).

Type of: corefieldneutral:boundary (753) I corefieldneutrals:boundary (754) I corefieldneutralv:boundary (755)

### 9.3.1.3.53 boundaryel

Structure for the boundary condition of core transport equations (electrons) Time-dependent;

member	type	description
value	vecflt.type (9.3.1.2.9)	Value of the boundary condition (in case flag = 2). Unit depends on type, respectively [1-field, 2-field.m <sup>-1</sup> , 3-m, 4-field.s <sup>-1</sup> ]. For type 1 to 4, only the first position in the vector is used. For type 5, all three positions are used, meaning respectively a1, a2, a3. Time-dependent. Vector(3).
source	string (9.3.1.1.3)	Source of the boundary condition (any comment describing its origin : code, path to diagnostic signals, massaging); String
type	integer (9.3.1.1.2)	Type of the boundary condition for the transport solver (in case flag = 2). 0- equation not solved; 1- value of the field y; 2-radial derivative of the field (-dy/drho_tor); 3-scale length of the field y/(-dy/drho_tor); 4- flux; 5- generic boundary condition y expressed as a1y'+a2y=a3. Time-dependent. Scalar
rho_tor	float (9.3.1.1.1)	Position of the boundary condition (in terms of toroidal flux coordinate) for the transport solver [m]. Outside this boundary, the value of the data are considered to be prescribed. Time-dependent. Scalar

Type of: corefield:boundary (751)

### 9.3.1.3.54 boundaryimp

Structure for the boundary condition of core transport equations (impurities) Time-dependent

member	type	description
value	array3dfilt.type (9.3.1.2.1)	Value of the boundary condition (in case flag = 2). Unit depends on type, respectively [1-field, 2-field.m <sup>-1</sup> , 3-m, 4-field.s <sup>-1</sup> ]. For type 1 to 4, only the first position in the first dimension is used. For type 5, all three positions are used, meaning respectively a1, a2, a3. Time-dependent. Array 3D (3,nimp,max_nzimp)
source	vecstring.type (9.3.1.2.11)	Source of the boundary condition (any comment describing its origin : code, path to diagnostic signals, massaging); Array of strings (nimp)
type	matint.type (9.3.1.2.8)	Type of the boundary condition for the transport solver (in case flag = 2). 0- equation not solved; 1- value of the field y; 2-radial derivative of the field (-dy/drho_tor); 3-scale length of the field y/(-dy/drho_tor); 4- flux; 5- generic boundary condition y expressed as a1y'+a2y=a3. Time-dependent. Matrix(nimp,max_nzimp)
rho	matflt.type (9.3.1.2.7)	Position of the boundary condition (in terms of toroidal flux coordinate) for the transport solver [m]. Outside this boundary, the value of the data are considered to be prescribed. Time-dependent. Matrix(nimp,max_nzimp)
codeparam	codeparam (9.3.1.3.58)	Code parameters

Type of: coreimpur:boundary (679)

### 9.3.1.3.55 boundaryion

Structure for the boundary condition of core transport equations (ions) Time-dependent

member	type	description
value	matflt.type (9.3.1.2.7)	Value of the boundary condition (in case flag = 2). Unit depends on type, respectively [1-field, 2-field.m <sup>-1</sup> , 3-m, 4-field.s <sup>-1</sup> ]. For type 1 to 4, only the first position in the first dimension is used. For type 5, all three positions are used, meaning respectively a1, a2, a3. Time-dependent. Matrix(3,nion)
source	vecstring.type (9.3.1.2.11)	Source of the boundary condition (any comment describing its origin : code, path to diagnostic signals, massaging); Array of strings (nion)
type	vecint.type (9.3.1.2.10)	Type of the boundary condition for the transport solver (in case flag = 2). 0- equation not solved; 1- value of the field y; 2-radial derivative of the field (-dy/drho_tor); 3-scale length of the field y/(-dy/drho_tor); 4- flux; 5- generic boundary condition y expressed as a1y'+a2y=a3. Time-dependent. Vector(nion)
rho_tor	vecflt.type (9.3.1.2.9)	Position of the boundary condition (in terms of toroidal flux coordinate) for the transport solver [m]. Outside this boundary, the value of the data are considered to be prescribed. Time-dependent. Vector(nion)

Type of: corefieldion:boundary (752)



### 9.3.1.3.56 bpol\_probes

Poloidal field probes

member	type	description
setup_bprobe	setup_bprobe (9.3.1.3.275)	diagnostic setup information
measure	expID (9.3.1.3.143)	Measured value [T]; Time-dependent; Vector (nprobes)

Type of: magdiag:bpol\_probes (696)

### 9.3.1.3.57 circularcoil

Circular coil description

member	type	description
centre	rz0D (9.3.1.3.241)	Circular coil centre
hlength	float (9.3.1.1.1)	Half length along coil axis [m]
radialwidth	float (9.3.1.1.1)	Half width, (outer radius-inner radius)/2 [m]

Type of: tf\_desc\_tfcoils:circularcoil (974)

### 9.3.1.3.58 codeparam

Code parameters

member	type	description
codename	string (9.3.1.1.3)	Name of the code
codeversion	string (9.3.1.1.3)	Version of the code (as in the ITM repository)
parameters	string (9.3.1.1.3)	List of the code specific parameters, string expected to be in XML format.
output_diag	string (9.3.1.1.3)	List of the code specific diagnostic/output, string expected to be in XML format.
output_flag	integer (9.3.1.1.2)	Output flag : 0 means the run is successful, other values meaning some difficulty has been encountered, the exact meaning is then code specific. Negative values mean the result shall not be used. Exact rules could discussed and implemented in the module wrapper. Time-dependent.

Type of: antenna\_unit:codeparam (717) I antennas:codeparam (677) I boundary:codeparam (724) I boundary-imp:codeparam (727) I coherentwave:codeparam (733) I coredelta:codeparam (678) I corefield:codeparam (751) I corefieldion:codeparam (752) I coreimpur:codeparam (679) I coreneutrals:codeparam (680) I coreprof:codeparam (681) I coresource:codeparam (682) I coretransp:codeparam (683) I distri\_vec:codeparam (792) I distribution:codeparam (685) I distsource:codeparam (686) I distsource\_source:codeparam (796) I edge:codeparam (688) I equilibrium:codeparam (689) I flush:codeparam (819) I fusiondiag:codeparam (690) I langmuirdiag:codeparam (693) I launches:codeparam (694) I mhd:codeparam (697) I nbi:codeparam (699) I nbi\_unit:codeparam (856) I neoclassic:codeparam (700) I orbit:codeparam (701) I psi:codeparam (887) I sawteeth:codeparam (705) I scenario:codeparam (706) I source:codeparam (953) I turbulence:codeparam (711) I waves:codeparam (713)

### 9.3.1.3.59 coefficients\_neutrals

Recycling and sputtering coefficients used by the neutral solver. The nion index refers to the various ions (and charge states) considered in the simulation. The ion list is deduced from the composition%atomlist. Nion = sum(composition%atomlist%zn). Example, if D and C atoms are declared in the atomlist (in this order), nion would be equal to 7, representing D+,C+,C2+,C3+,C4+,C5+,C6+

member	type	description
recycling	recycling_neutrals (9.3.1.3.217)	Recycling coefficients
sputtering	sputtering_neutrals (9.3.1.3.293)	Sputtering coefficients

Type of: coreneutrals:coefficients (680)

### 9.3.1.3.60 coherentwave

Wave description for each frequency. Time-dependent. Structure array(nfreq)

member	type	description
composition	composition (9.3.1.3.74)	Plasma composition (description of ion species).
global_param	waves_global_param (9.3.1.3.326)	Global wave deposition parameters
grid_1d	waves_grid_1d (9.3.1.3.327)	Grid points for 1D profiles.
grid_2d	waves_grid_2d (9.3.1.3.328)	Grid points for 2D profiles and for full wave solutions.
profiles_1d	waves_profiles_1d (9.3.1.3.329)	1D radial profiles
profiles_2d	waves_profiles_2d (9.3.1.3.330)	2D profiles in poloidal cross-section
beamtracing	beamtracing (9.3.1.3.50)	Beam-tracing or ray-tracing solver. Vector(nbeams). Time-dependent
fullwave	fullwave (9.3.1.3.151)	Solution by full wave code
codeparam	codeparam (9.3.1.3.58)	Code parameters

Type of: waves:coherentwave (713)

### 9.3.1.3.61 complexgrid

Generic definition of a complex grid

member	type	description
spaces	complexgrid_space (9.3.1.3.69)	Definitions of grid spaces. Structure array(nspace).
subgrids	complexgrid_subgrid (9.3.1.3.71)	Definitions of subgrids. Structure array(nsubgrids).
metric	complexgrid_metric (9.3.1.3.64)	Metric coefficients. Array of structures (nsubgrids). Metric information for every subgrid.

Type of: edge:grid (688)

### 9.3.1.3.62 complexgrid\_altgeo

(Possibly multiple) alternative geometry information for nodes. Structure array(naltgeometries). Mainly intended for plotting.

member	type	description
coordtype	vecint_type (9.3.1.2.10)	Coordinate axis types for alternate coordinate system. Vector(nspacedim).
geo	array3dfilt_type (9.3.1.2.1)	Alternate geometry data matrix associated with every node. 3d float array(nnodesinspace, ngeo1, ngeo2). See documentation of nodes.geo one level up.

Type of: complexgrid\_nodes:altgeo (738)

### 9.3.1.3.63 complexgrid\_indexlist

An index list describing a range of indices or a list of indices.; If the explicit index list ind is defined and has size  $\neq 0$ , the list is assumed to be an explicit index list.; Otherwise it is assumed to be a range of indices.; A single index can either be defined by using an explicit list with a single entry or as a range with identical; start and end index.

member	type	description
range	vecint_type (9.3.1.2.10)	Defines an index range enumerating from range[1] to range[2] (with both range[1] and range[2] included). Vector(2)
ind	vecint_type (9.3.1.2.10)	An explicit list of indices. If this member is defined and has size $\neq 0$ , the list is assumed to be explicit. Vector(nindices)

Type of: complexgrid\_objectlist:indset (739)

### 9.3.1.3.64 complexgrid\_metric

Metric information for a subgrid.

member	type	description
measure	complexgrid_scalar_simplestruct (9.3.1.3.68)	Measure of object, i.e. physical size (length for 1d, area for 2d, volume for 3d objects). [m <sup>dim</sup> ]. Use this field to store measures of implicitly defined grid objects.

member	type	description
g11	<a href="#">complexgrid_scalar_simplestructure (9.3.1.3.68)</a>	Metric coefficients g11. Structure array(nsubgrid.coefficient)
g12	<a href="#">complexgrid_scalar_simplestructure (9.3.1.3.68)</a>	Metric coefficients g12. Structure array(nsubgrid.coefficient)
g13	<a href="#">complexgrid_scalar_simplestructure (9.3.1.3.68)</a>	Metric coefficients g13. Structure array(nsubgrid.coefficient)
g22	<a href="#">complexgrid_scalar_simplestructure (9.3.1.3.68)</a>	Metric coefficients g22. Structure array(nsubgrid.coefficient)
g23	<a href="#">complexgrid_scalar_simplestructure (9.3.1.3.68)</a>	Metric coefficients g23. Structure array(nsubgrid.coefficient)
g33	<a href="#">complexgrid_scalar_simplestructure (9.3.1.3.68)</a>	Metric coefficients g33. Structure array(nsubgrid.coefficient)
jacobian	<a href="#">complexgrid_scalar_simplestructure (9.3.1.3.68)</a>	Jacobian. Structure array(nsubgrid.coefficient)

Type of: [complexgrid:metric \(734\)](#)

### 9.3.1.3.65 complexgrid\_nodes

Definition of nodes in the space

member	type	description
geo	<a href="#">array3dflt.type (9.3.1.2.1)</a>	Geometry data matrix associated with every node. 3d float array(nnodesinspace, ngeo1, ngeo2). Meaning depends on the value of <code>grid.space.properties.geotype</code> ; First dimension: object index, second+third dimension: matrix row+column.; In the default case ( <code>grid.space.properties.geotype=undefined</code> ), this field has dimensions (nnodeinspace, nspacedim, 1) and simply holds the coordinates for every node, where nspacedim is the dimension of the space. The j-th component of the coordinate vector; of the i-th node is thus <code>geo(i,j,1)</code> .
xpoints	<a href="#">vecint.type (9.3.1.2.10)</a>	List of indices of all nodes which are x-points. Vector(nxpoints)
altgeo	<a href="#">complexgrid_altgeo (9.3.1.3.62)</a>	(Possibly multiple) alternative geometry information for nodes. Structure array(naltgeometries). Mainly intended for plotting.
alias	<a href="#">vecint.type (9.3.1.2.10)</a>	Alias list. Vector(nnodesinspace). If this vector is defined, it holds one entry per node. If an entry <code>alias(i)=j</code> with <code>j != 0 (=GRID.UNDEFINED)</code> ; this means that the nodes with index i and j are aliased, i.e. are identical. If <code>alias(i)=0 (=GRID.UNDEFINED)</code> , the node is not aliased to another node. This mechanism can be used to indicate periodic boundaries.

Type of: [complexgrid\\_space:nodes \(742\)](#)

### 9.3.1.3.66 complexgrid\_objectlist

A list of grid objects with a common class, either in explicit or implicit form.; The list is explicit if the matrix `ind` is given and has nonzero size, in this case the index tuples are listed in `ind`.; Otherwise the list is implicit and the index tuples are described by `indset`.

member	type	description
cls	<a href="#">vecint.type (9.3.1.2.10)</a>	Class tuple of the objects in the list. Vector(nspace)
indset	<a href="#">complexgrid_indexlist (9.3.1.3.63)</a>	Index set for implicit definition of the object indices. List of indexlists. Structure Array(nspace)
ind	<a href="#">matint.type (9.3.1.2.8)</a>	Explicit list of index tuples. Matrix(nobject, nspace). First dimension: object index, second dimension: index tuple index.; If this field is defined and has size $\zeta > 0$ , the object list is understood to be explicit.

Type of: [complexgrid\\_subgrid:list \(744\)](#)

### 9.3.1.3.67 complexgrid\_scalar

A quantity stored on a grid. The data is given either as a vector of scalars, vectors or matrices.; Note that the vector and matrix storage methods are not meant for multidimensional data, but; for complex data representations with multiple degrees of freedom.; To be used as arrays of structure; FIXME: add non-time-dependent element "label" of type string

member	type	description
subgrid	<a href="#">integer (9.3.1.1.2)</a>	Index of the subgrid (as stored in <code>grid.subgrids</code> ) the data is stored on.
scalar	<a href="#">vecflt.type (9.3.1.2.9)</a>	Scalar representation of data. One scalar entry is stored per object in the subgrid.; The order is implicitly defined by the subgrid.; Float Vector(nobjects_subgrid). First dimension: object index.

member	type	description
vector	matflt.type (9.3.1.2.7)	Vector representation of data. One vector is stored per object in the subgrid. The order is implicitly defined by the subgrid.; Float matrix(nobjects.subgrid, ndata).First dimension: object index, second dimension: index of data vector.
matrix	array3dflt.type (9.3.1.2.1)	Matrix representation of data. One matrix is stored per object in the subgrid. The order is implicitly defined by the subgrid.; 3d float array(nobjects.subgrid,ndata1,ndata2). First dimension: object index, second dimension: matrix row, third dimension: matrix column.

Type of: [complexgrid\\_vector:comp \(745\)](#) [I complexgrid\\_vector\\_simplestruct:comp \(746\)](#) [I edge\\_fluid\\_scalar:bnvalue \(801\)](#) [I edge\\_fluid\\_scalar:source \(801\)](#) [I edge\\_fluid\\_scalar:value \(801\)](#) [I edge\\_fluid\\_scalar\\_simplestruct:bnvalue \(802\)](#) [I edge\\_fluid\\_scalar\\_simplestruct:source \(802\)](#) [I edge\\_fluid\\_scalar\\_simplestruct:value \(802\)](#) [I edge\\_kinetic\\_distribution:bnvalue \(807\)](#) [I edge\\_kinetic\\_distribution:source \(807\)](#) [I edge\\_kinetic\\_distribution:value \(807\)](#)

### 9.3.1.3.68 complexgrid\_scalar\_simplestruct

A quantity stored on a grid. The data is given either as a vector of scalars, vectors or matrices.; Note that the vector and matrix storage methods are not meant for multidimensional data, but; for complex data representations with multiple degrees of freedom.; To be used as a simple structure; FIXME: add non-timedependent element "label" of type string

member	type	description
subgrid	integer (9.3.1.1.2)	Index of the subgrid (as stored in grid.subgrids) the data is stored on.
scalar	vecflt.type (9.3.1.2.9)	Scalar representation of data. One scalar entry is stored per object in the subgrid.; The order is implicitly defined by the subgrid.; Float Vector(nobjects.subgrid). First dimension: object index.
vector	matflt.type (9.3.1.2.7)	Vector representation of data. One vector is stored per object in the subgrid. The order is implicitly defined by the subgrid.; Float matrix(nobjects.subgrid, ndata).First dimension: object index, second dimension: index of data vector.
matrix	array3dflt.type (9.3.1.2.1)	Matrix representation of data. One matrix is stored per object in the subgrid. The order is implicitly defined by the subgrid.; 3d float array(nobjects.subgrid,ndata1,ndata2). First dimension: object index, second dimension: matrix row, third dimension: matrix column.

Type of: [complexgrid\\_metric:g11 \(737\)](#) [I complexgrid\\_metric:g12 \(737\)](#) [I complexgrid\\_metric:g13 \(737\)](#) [I complexgrid\\_metric:g22 \(737\)](#) [I complexgrid\\_metric:g23 \(737\)](#) [I complexgrid\\_metric:g33 \(737\)](#) [I complexgrid\\_metric:jacobian \(737\)](#) [I complexgrid\\_metric:measure \(737\)](#)

### 9.3.1.3.69 complexgrid\_space

Description of a grid space.

member	type	description
coordtype	vecint.type (9.3.1.2.10)	Type of coordinates describing the physical space. Vector(nspacedim); The size of coordtype defines the dimension of the space.; For predefined integer constants for standard coordinates see; the documentation of the grid service library.
properties	complexgrid_space_properties (9.3.1.3.70)	Space properties.
objects	objects (9.3.1.3.187)	Definition of the higher-dimensional objects in the space.; Structure Array(1:nspacedim). First dimension: dimension of the objects (1=edges, 2=faces, 3=cells/volumes, etc...)
nodes	complexgrid_nodes (9.3.1.3.65)	Definition of the nodes in the space.

Type of: [complexgrid:spaces \(734\)](#)

### 9.3.1.3.70 complexgrid\_space\_properties

Some specific properties of a space.

member	type	description
geotype	integer (9.3.1.1.2)	Type of space geometry (id flag). A flag defining how the geometry (geo) fields associated with; grid nodes and objects are to be interpreted. If the field is undefined (0=GRID_UNDEFINED), the standard interpretation for; the given coordinate types is assumed.
geotypeid	string (9.3.1.1.3)	Type of space geometry (id string). A string defining how the geometry (geo) fields associated with; grid nodes and objects are to be interpreted. If the field is undefined, the standard interpretation for; the given coordinate types is assumed.

Type of: [complexgrid\\_space:properties \(742\)](#)

### 9.3.1.3.71 complexgrid\_subgrid

Subgrid definition. A subgrid is a list of explicit or implicit object lists.

member	type	description
id	string (9.3.1.1.3)	ID string (name) of the subgrid. Freely chosen by user, possibly used for plotting.
list	complexgrid_objectlist (9.3.1.3.66)	List of object lists. Structure array(nobjectlists).

Type of: complexgrid:subgrids (734)

### 9.3.1.3.72 complexgrid\_vector

A vector quantity stored on a grid, with components possibly explicitly aligned to a coordinate direction. To be used as array of structure.

member	type	description
label	string (9.3.1.1.3)	Label describing the data
comp	complexgrid_scalar (9.3.1.3.67)	Components of the vector. Vector of griddata(ndim). Time-dependent; FIXME: inherit time-dependence for this element
align	vecint.type (9.3.1.2.10)	Alignment of vector components, numerical flag. Int vector(ndim)
alignid	vecstring.type (9.3.1.2.11)	Alignment of vector components, string description. String vector(ndim)

Type of: edge\_fluid\_scalar:bnflux (801) I edge\_fluid\_scalar:flux (801) I edge\_fluid\_scalar\_simplestruct:bnflux (802) I edge\_fluid\_scalar\_simplestruct:flux (802) I edge\_kinetic\_distribution:fluxes (807)

### 9.3.1.3.73 complexgrid\_vector\_simplestruct

A vector quantity stored on a grid, with components possibly explicitly aligned to a coordinate direction. To be used as simple structure

member	type	description
label	string (9.3.1.1.3)	Label describing the data
comp	complexgrid_scalar (9.3.1.3.67)	Components of the vector. Vector of griddata(ndim). Time-dependent; FIXME: inherit time-dependence for this element
align	vecint.type (9.3.1.2.10)	Alignment of vector components, numerical flag. Int vector(ndim)
alignid	vecstring.type (9.3.1.2.11)	Alignment of vector components, string description. String vector(ndim)

Type of: edge\_fluid\_scalar\_transpcoeff:d (803) I edge\_fluid\_scalar\_transpcoeff:v (803)

### 9.3.1.3.74 composition

Plasma composition (description of ion species).

member	type	description
amn	vecflt.type (9.3.1.2.9)	Atomic mass number (lumped ions are allowed); Vector (nion)
zn	vecflt.type (9.3.1.2.9)	Nuclear charge (lumped ions are allowed); Vector (nion)
zion	vecflt.type (9.3.1.2.9)	Ion charge (of the dominant ionisation state; lumped ions are allowed); Vector (nion)
imp_flag	vecint.type (9.3.1.2.10)	Multiple charge state calculation flag : 0-Only one charge state is considered; 1-Multiple charge state are considered and are described in impurity CPO; Vector (nion)

Type of: coherentwave:composition (733) I coredelta:composition (678) I coreprof:composition (681) I core-source:composition (682) I coretransp:composition (683) I distribution:composition (685) I distsource:composition (686) I neoclassic:composition (700) I sawteeth:composition (705)

### 9.3.1.3.75 composition\_neutrals

Description of neutrals species

member	type	description
atomlist	atomlist (9.3.1.3.47)	List of the atoms that enter the composition of the neutral species
neutrallist	neutrallist (9.3.1.3.185)	Definition of neutral species

member	type	description
typelist	typelist (9.3.1.3.324)	Definition of types for each neutral species

Type of: coreneutrals:composition (680)

### 9.3.1.3.76 coord\_sys

flux surface coordinate system on a square grid of flux and angle

member	type	description
grid_type	string (9.3.1.1.3)	Type of coordinate system
grid	reggrid (9.3.1.3.239)	Regular grid definition; Time-dependent
jacobian	matflt_type (9.3.1.2.7)	Jacobian of the coordinate system; Time-dependent; Matrix (ndim1, ndim2)
g_11	matflt_type (9.3.1.2.7)	metric coefficients g_11; Time-dependent; Matrix (ndim1, ndim2)
g_12	matflt_type (9.3.1.2.7)	metric coefficients g_12; Time-dependent; Matrix (ndim1, ndim2)
g_13	matflt_type (9.3.1.2.7)	metric coefficients g_13; Time-dependent; Matrix (ndim1, ndim2)
g_22	matflt_type (9.3.1.2.7)	metric coefficients g_22; Time-dependent; Matrix (ndim1, ndim2)
g_23	matflt_type (9.3.1.2.7)	metric coefficients g_23; Time-dependent; Matrix (ndim1, ndim2)
g_33	matflt_type (9.3.1.2.7)	metric coefficients g_33; Time-dependent; Matrix (ndim1, ndim2)
position	rz2D (9.3.1.3.244)	R and Z position of grid points; Time-dependent; Matrix (ndim1, ndim2)

Type of: equilibrium:coord\_sys (689) I mhd\_plasma:coord\_sys (849) I mhd\_vacuum:coord\_sys (851)

### 9.3.1.3.77 coords

Specification of coordinates in one dimension. Can be either a range of real values or a set of discrete values (if interp\_type=0).

member	type	description
coord	vecflt_type (9.3.1.2.9)	Coordinate values. Vector(npoints).
coord_label	vecstring_type (9.3.1.2.11)	String description of discrete coordinate values (if interp_type=0). Vector(npoints). E.g., for spectroscopic lines, the spectroscopic description of the transition.
extrap_type	vecint_type (9.3.1.2.10)	Extrapolation strategy when leaving the domain. Vector(2). Entry 1: behaviour at lower bound, entry 2: behaviour at upper bound.; Possible values: 0=none, report error; 1=boundary value; 2=linear extrapolation;
interp_type	integer (9.3.1.1.2)	Interpolation strategy in this coordinate direction. Integer flag: 0=discrete (no interpolation); 1=linear; ...
label	string (9.3.1.1.3)	Description of coordinate (e.g. "Electron temperature")
unit	string (9.3.1.1.3)	Units of coordinate (e.g. [eV])
transform	integer (9.3.1.1.2)	Coordinate transformation applied to coordinate values stored in coord. Integer flag: 0=none; 1=log10; 2=ln
spacing	integer (9.3.1.1.2)	Flag for specific coordinate spacing (for optimization purposes). Integer flag: 0=undefined; 1=uniform; ...

Type of: tables\_coord:coords (973)

### 9.3.1.3.78 corefield

Structure for a main field of core transport equations; Time-dependent;

member	type	description
value	vecflt_type (9.3.1.2.9)	Signal value; Time-dependent; Vector (nrho)
derivative	vecflt_type (9.3.1.2.9)	Radial derivative (dvalue/drho_tor) [signal_value.unit.m <sup>-1</sup> ]; Time-dependent; Vector (nrho)
source	string (9.3.1.1.3)	Source of the profile (any comment describing the origin of the profile : code, path to diagnostic signals, massaging, ...); String
flag	integer (9.3.1.1.2)	Flag describing how the profile has been processed : 0-not calculated 1-interpretative; 2-calculated by the transport solver; 3-calculated by a separate code : in that case only, description of the code provided in codeparam at the same level; 4-used value from the previous time step; Time-dependent; Scalar
boundary	boundaryel (9.3.1.3.53)	Boundary condition for the transport equation. Time-dependent.
source_term	sourcecel (9.3.1.3.286)	Total source term for the transport equation. Time-dependent.
transp_coef	coretransel (9.3.1.3.86)	Total transport coefficients. Time-dependent.
flux	fluxel (9.3.1.3.148)	Fluxes of the quantity, two definitions. Time-dependent.
time_deriv	vecflt_type (9.3.1.2.9)	Integral of the time derivative term of the transport equation. Time-dependent. Vector (nrho)

member	type	description
codeparam	codeparam (9.3.1.3.58)	Code parameters

Type of: coreprof:ne (681) I coreprof:te (681)

### 9.3.1.3.79 corefieldion

Structure for an ion field of core transport equations; Time-dependent;

member	type	description
value	matflt.type (9.3.1.2.7)	Signal value; Time-dependent; Matrix (nrho,nion)
derivative	matflt.type (9.3.1.2.7)	Radial derivative (dvalue/drho_tor) [signal.value.unit.m <sup>-1</sup> ]; Time-dependent; Matrix (nrho,nion)
source	vecstring.type (9.3.1.2.11)	Source of the profile (any comment describing the origin of the profile : code, path to diagnostic signals, massaging, ...); Array of strings (nion)
flag	vecint.type (9.3.1.2.10)	Flag describing how the profile has been processed : 0-not calculated 1-interpretative; 2-calculated by the transport solver; 3-calculated by a separate code : in that case only, description of the code provided in codeparam at the same level; 4-used value from the previous time step; Time-dependent; Vector(nion)
boundary	boundaryion (9.3.1.3.55)	Boundary condition for the transport equation
source_term	sourceion (9.3.1.3.288)	Total source term for the transport equation. Time-dependent.
transp_coef	coretransion (9.3.1.3.88)	Total transport coefficients. Time-dependent.
flux	fluxion (9.3.1.3.150)	Fluxes of the quantity, two definitions. Time-dependent.
time_deriv	matflt.type (9.3.1.2.7)	Integral of the time derivative term of the transport equation. Time-dependent. Matrix (nrho,nion)
codeparam	codeparam (9.3.1.3.58)	Code parameters

Type of: coreprof:ni (681) I coreprof:ti (681) I coreprof:vtor (681)

### 9.3.1.3.80 corefieldneutral

Structure for a main field of core neutral transport equations; Time-dependent;

member	type	description
value	array3dflt.type (9.3.1.2.1)	Signal value; Array3D(nrho,nneut,max_ntype). Time-dependent
flux	array3dflt.type (9.3.1.2.1)	Net neutral flux through the magnetic surface, positive values correspond to the direction from the center to the edge [s <sup>-1</sup> ]. Array3D(nrho,nneut,max_ntype). Time-dependent;
boundary	boundary_neutrals (9.3.1.3.52)	Boundary condition for the transport equation. Time-dependent.

Type of: profiles\_neutrals:n0 (886)

### 9.3.1.3.81 corefieldneutrals

Structure for a main field of core neutral transport equations, (Temperature, with flux as energy); Time-dependent;

member	type	description
value	array3dflt.type (9.3.1.2.1)	Signal value; Array3D(nrho,nneut,max_ntype). Time-dependent
flux	array3dflt.type (9.3.1.2.1)	Net flux of the kinetic energy through the magnetic surface (3/2*E*n*V), positive values correspond to the direction from the center to the edge [W]. Array3D(nrho,nneut,max_ntype). Time-dependent;
boundary	boundary_neutrals (9.3.1.3.52)	Boundary condition for the transport equation. Time-dependent.

Type of: profiles\_neutrals:t0 (886)

### 9.3.1.3.82 corefieldneutralv

Structure for a main field of core neutral transport equations (without flux variable); Time-dependent;

member	type	description
value	array3dflt.type (9.3.1.2.1)	Signal value; Array3D(nrho,nneut,max_ntype)Time-dependent;
boundary	boundary_neutrals (9.3.1.3.52)	Boundary condition for the transport equation. Time-dependent.

Type of: [corefieldneutralv0:poloidal \(756\)](#) | [corefieldneutralv0:radial \(756\)](#) | [corefieldneutralv0:toroidal \(756\)](#)

### 9.3.1.3.83 corefieldneutralv0

Neutral velocity

member	type	description
toroidal	<a href="#">corefieldneutralv (9.3.1.3.82)</a>	Neutral velocity in the toroidal direction [m.s <sup>-1</sup> ]. Positive is anti-clockwise when viewed from above. Time-dependent;
poloidal	<a href="#">corefieldneutralv (9.3.1.3.82)</a>	Velocity of neutrals in the poloidal direction. 0 is directed towards low field side, pi is towards high field side. Positive is anti-clockwise when viewed with low field side at the right. [m.s <sup>-1</sup> ]. Array3D(nrho,nneut,max_ntype). Time-dependent;
radial	<a href="#">corefieldneutralv (9.3.1.3.82)</a>	Neutral velocity in the radial direction (perpendicular to the magnetic surface), positive is from the centre to the edge [m.s <sup>-1</sup> ]. Array3D(nrho,nneut,max_ntype). Time-dependent;

Type of: [profiles\\_neutrals:v0 \(886\)](#)

### 9.3.1.3.84 coreprofile

Structure for core plasma profile; Time-dependent

member	type	description
value	<a href="#">vecflt.type (9.3.1.2.9)</a>	Signal value; Time-dependent; Vector (nrho)
source	<a href="#">string (9.3.1.1.3)</a>	Source of the profile (any comment describing the origin of the profile : code, path to diagnostic signals, massaging, ...); String

Type of: [profiles1d:bpol \(883\)](#) | [profiles1d:dpsidt \(883\)](#) | [profiles1d:dpsidt\\_phi \(883\)](#) | [profiles1d:dvprimedt \(883\)](#) | [profiles1d:e\\_b \(883\)](#) | [profiles1d:eparallel \(883\)](#) | [profiles1d:jni \(883\)](#) | [profiles1d:joh \(883\)](#) | [profiles1d:jtot \(883\)](#) | [profiles1d:pe \(883\)](#) | [profiles1d:pr\\_parallel \(883\)](#) | [profiles1d:pr\\_perp \(883\)](#) | [profiles1d:pr\\_th \(883\)](#) | [profiles1d:q \(883\)](#) | [profiles1d:qoh \(883\)](#) | [profiles1d:shear \(883\)](#) | [profiles1d:sigmapar \(883\)](#) | [profiles1d:vloop \(883\)](#) | [profiles1d:zeff \(883\)](#) | [psi:sigma\\_par \(887\)](#)

### 9.3.1.3.85 coreprofion

Structure for core plasma ion profile; Time-dependent

member	type	description
value	<a href="#">matflt.type (9.3.1.2.7)</a>	Signal value; Time-dependent; Vector (nrho,nion)
source	<a href="#">vecstring.type (9.3.1.2.11)</a>	Source of the profile (any comment describing the origin of the profile : code, path to diagnostic signals, massaging, ...); Array of strings (nion)

Type of: [profiles1d:mtor \(883\)](#) | [profiles1d:ns \(883\)](#) | [profiles1d:pi \(883\)](#) | [profiles1d:wtor \(883\)](#)

### 9.3.1.3.86 coretransel

Structure for the transport coefficients for the transport equation (electrons). Time-dependent;

member	type	description
diff	<a href="#">vecflt.type (9.3.1.2.9)</a>	Diffusion coefficient [m <sup>2</sup> .s <sup>-1</sup> ]. Time-dependent; Vector (nrho)
vconv	<a href="#">vecflt.type (9.3.1.2.9)</a>	Convection coefficient [m.s <sup>-1</sup> ]. Time-dependent; Vector (nrho)
source	<a href="#">string (9.3.1.1.3)</a>	Source of the profile (any comment describing the origin of the profile : code, path to diagnostic signals, massaging, ...); String

Type of: [corefield:transp\\_coef \(751\)](#)

### 9.3.1.3.87 coretransimp

Structure for the transport coefficients for the transport equation (impurities). Time-dependent;

member	type	description
diff	<a href="#">array3dflt.type (9.3.1.2.1)</a>	Diffusion coefficient [m <sup>2</sup> .s <sup>-1</sup> ]. Time-dependent; Array3D(nrho,nimp,max_nzimp)
vconv	<a href="#">array3dflt.type (9.3.1.2.1)</a>	Convection coefficient [m.s <sup>-1</sup> ]. Time-dependent; Array3D (nrho,nimp,max_nzimp)



member	type	description
source	vecstring.type (9.3.1.2.11)	Source of the profile (any comment describing the origin of the impurity profiles : code, path to diagnostic signals, massaging, ...); Array of strings (nimp)

Type of: coreimpur:transp\_coef (679)

### 9.3.1.3.88 coretransion

Structure for the transport coefficients for the transport equation (ions). Time-dependent;

member	type	description
diff	matflt.type (9.3.1.2.7)	Diffusion coefficient [ $m^{-2}.s^{-1}$ ]. Time-dependent; Matrix (nrho,nion)
vconv	matflt.type (9.3.1.2.7)	Convection coefficient [ $m.s^{-1}$ ]. Time-dependent; Matrix (nrho,nion)
source	vecstring.type (9.3.1.2.11)	Source of the profile (any comment describing the origin of the profile : code, path to diagnostic signals, massaging, ...); Array of strings (nion)

Type of: corefieldion:transp\_coef (752)

### 9.3.1.3.89 counts

Integrated emissivity [ $m^{-2}.s^{-1}$ ].

member	type	description
expression	string (9.3.1.1.3)	Formal expression for the line integral to be evaluated as a function of the involved physical quantities
setup_line	setup_line (9.3.1.3.278)	Geometric description of the lines of sight
measure	expID (9.3.1.3.143)	Counts of particles on detector. Vector (nchords)

Type of: source:counts (953)

### 9.3.1.3.90 cxmeasure

Measured values

member	type	description
ti	expID (9.3.1.3.143)	Ion temperature [eV]. Vector (nchannels)
vtor	expID (9.3.1.3.143)	Toroidal velocity [m/s]. Vector (nchannels)
vpol	expID (9.3.1.3.143)	Poloidal velocity [m/s]. Vector (nchannels)

Type of: cxdiag:measure (684)

### 9.3.1.3.91 cxsetup

diagnostic setup information

member	type	description
position	rzphiIDexp (9.3.1.3.248)	Position of the measurement. Time-dependent. Vector (nchannels)

Type of: cxdiag:setup (684)

### 9.3.1.3.92 datainfo

Generic information on a data item

member	type	description
dataproducer	string (9.3.1.1.3)	Name of the actual data provider (the person who filled the data)
putdate	string (9.3.1.1.3)	Date at which the data has been put in the DB
source	string (9.3.1.1.3)	Exact reference of the data source (e.g. original reference in the native machine data base)
comment	string (9.3.1.1.3)	Any additional comment
isref	integer (9.3.1.1.2)	1 if the data can be found in the present data base entry; 2 if the data can be found in a parent data base entry; 0 if no data consistent with the present entry can be found.
whatref	whatref (9.3.1.3.333)	Structure defining a database entry and the CPO occurrence

member	type	description
putinfo	putinfo (9.3.1.3.215)	Level 2 information describing how to retrieve the actual data for the UAL. Not to be filled/used by the ITM user !

Type of: amns:datainfo (676) I antennas:datainfo (677) I coredelta:datainfo (678) I coreimpur:datainfo (679) I coreneutrals:datainfo (680) I coreprof:datainfo (681) I coresource:datainfo (682) I coretransp:datainfo (683) I cxdiag:datainfo (684) I distribution:datainfo (685) I distsource:datainfo (686) I ecediag:datainfo (687) I edge:datainfo (688) I equilibrium:datainfo (689) I flush:datainfo (819) I fusiondiag:datainfo (690) I ironmodel:datainfo (692) I langmuirdiag:datainfo (693) I launches:datainfo (694) I limiter:datainfo (695) I lineintegraldiag:datainfo (842) I magdiag:datainfo (696) I mhd:datainfo (697) I msediag:datainfo (698) I nbi:datainfo (699) I neoclassic:datainfo (700) I orbit:datainfo (701) I pfsystems:datainfo (702) I reference:datainfo (704) I sawteeth:datainfo (705) I scenario:datainfo (706) I summary:datainfo (707) I toroidfield:datainfo (709) I tsdiag:datainfo (710) I turbulence:datainfo (711) I vessel:datainfo (712) I waves:datainfo (713)

### 9.3.1.3.93 desc\_impur

Description of the impurities (list of ion species and possibly different charge states)

member	type	description
amn	vecflt_type (9.3.1.2.9)	Atomic mass number of the impurity; Vector (nimp)
zn	vecint_type (9.3.1.2.10)	Nuclear charge of the impurity; Vector (nimp)
i_ion	vecint_type (9.3.1.2.10)	Index of the impurity species in the coreprof ion species ordering. Vector (nimp)
nzimp	vecint_type (9.3.1.2.10)	Number of charge states (or bundles) considered for each impurity species. Vector (nimp)
zmin	matint_type (9.3.1.2.8)	Minimum Z of impurity ionisation state bundle. Matrix (nimp,max_nzimp)
zmax	matint_type (9.3.1.2.8)	Maximum Z of impurity ionisation state bundle. If no bundle, zmax=zmin. Matrix (nimp,max_nzimp)

Type of: coreimpur:desc\_impur (679)

### 9.3.1.3.94 desc\_iron

Description of the iron segments

member	type	description
name	vecstring_type (9.3.1.2.11)	Name of circuit. Array of strings (ncircuit).
id	vecstring_type (9.3.1.2.11)	ID of circuit. Array of strings (ncircuit).
permeability	permeability (9.3.1.3.196)	Permeability model (can be different for each iron segment)
geom_iron	geom_iron (9.3.1.3.152)	Geometry of the iron segments

Type of: ironmodel:desc\_iron (692)

### 9.3.1.3.95 desc\_pfcoils

Description of the coils

member	type	description
name	vecstring_type (9.3.1.2.11)	Name of coil. Array of strings (ncoils)
id	vecstring_type (9.3.1.2.11)	ID of coil. Array of strings (ncoils)
res	vecflt_type (9.3.1.2.9)	Coil resistance [Ohm]; Vector (ncoils)
emax	vecflt_type (9.3.1.2.9)	Maximum Energy to be dissipated in coils [J]; Vector (ncoils)
nelement	vecint_type (9.3.1.2.10)	Number of elements used to describe a coil; Vector (ncoils)
pfelement	pfelement (9.3.1.3.199)	Axisymmetric conductor description

Type of: pfcoils:desc\_pfcoils (871)

### 9.3.1.3.96 desc\_supply

Description of the power supplies

member	type	description
name	vecstring_type (9.3.1.2.11)	Name of the supply; Array of strings (nsupplies)

member	type	description
id	vecstring_type (9.3.1.2.11)	ID of the supply; Array of strings (nsupplies)
type	vecstring_type (9.3.1.2.11)	Type of supply; Array of strings (nsupplies)
delay	vecflt_type (9.3.1.2.9)	Pure delay in the supply [s]; Vector (nsupplies)
filter	filter (9.3.1.3.145)	Laplace proper filter
imin	vecflt_type (9.3.1.2.9)	Minimum current [A]; Vector (nsupplies)
imax	vecflt_type (9.3.1.2.9)	Maximum current [A]; Vector (nsupplies)
res	vecflt_type (9.3.1.2.9)	Supply internal resistance [Ohm]; Vector (nsupplies)
umin	vecflt_type (9.3.1.2.9)	Minimum voltage [V]; Vector (nsupplies)
umax	vecflt_type (9.3.1.2.9)	Maximum voltage [V]; Vector (nsupplies)
emax	vecflt_type (9.3.1.2.9)	Maximum Energy to be dissipated in supply [J]; Vector (nsupplies)

Type of: pfsupplies:desc\_supply (876)

### 9.3.1.3.97 dist\_ff

Distribution function of e.g. ions, or electrons; the density of particles in the velocity space, the real space and spin state. The grid is split into topological regions, which could overlap in coordinate space (i.e. one coordinate can correspond to more than one orbit). The number of topological region is given by nregion\_topo. For nregion\_topo=2 the topology should be that of a high aspect ratio tokamak with two topological regions, where the passing orbits moving counter to the plasma current are stored in region\_topo=2 and all other orbits are stored in nregion\_topo=1. For nregion\_topo  $\geq 2$  (e.g. for spherical tokamaks) the topology should be described in the field topology.

member	type	description
grid_info	dist_grid_info (9.3.1.3.101)	Specification of grids used in topo_regions. Grid coordinates could either be invariants of motion, or information at single point along orbit, e.g. xi and s for grid_coord=3. This point should always be on a so-called omnigenous surface (a generalised equatorial plane); $\text{grad}(\psi) \times \text{grad}(B) = 0$ . All closed orbits cross omnigenous surfaces at least two times. The omnigenous surfaces are described in omnigen_surf.
topo_regions	topo_regions (9.3.1.3.304)	List with distribution function in each topological region; Time-dependent. Structure array(nregion_topo)

Type of: dist\_func:f\_expansion (771)

### 9.3.1.3.98 dist\_func

Distribution functions. The total distribution total distribution can either be given by a set of markers/test particles (in markers), or by a gridded function (dist\_expand). Note that the gridded distribution can be written as sum of successive approximations, where each term is given by an element in the vector dist\_expand. Finally, the distribution can be written as a sum of a marker distribution and a gridded distribution, e.g. for delta-f Monte Carlo solution.

member	type	description
markers	dist_markers (9.3.1.3.103)	Distribution given as a set of test particles, or markers.
f_expansion	dist_ff (9.3.1.3.97)	Distribution function, f, expanded into a vector of successive approximations. The first element in the vector (f_expansion(1)) is the zeroth order distribution function, while the K-th element in the vector (f_expansion(K)) is the K-th correction, such that the total distribution function is a sum over all elements in the f_expansion vector. Time-dependent. Structure array(Nf_expansion)

Type of: distri\_vec:dist\_func (792)

### 9.3.1.3.99 dist\_glob

Global parameters (in most cases volume integrated and surface averaged quantities).

member	type	description
enrg	float (9.3.1.1.1)	Energy content of a distribution species [J]; Time-dependent
enrg_para	float (9.3.1.1.1)	Parallel energy content of a distribution species [J]; Time-dependent
pow_coll_i	vecflt_type (9.3.1.2.9)	Collisional power to ions [W]; Time-dependent; Matrix(nion)
pow_coll_e	float (9.3.1.1.1)	Collisional power to the electrons [W]; Time-dependent
therm_src	dist_src_snk_tot (9.3.1.3.116)	Source particles and power due to particles of the distribution species being thermalised (merging into the thermal plasma).

member	type	description
losses	dist_glob_dist_losses (9.3.1.3.100)	Losses of the distribution species (orbit losses and neutralisation losses).
cur_dr_tor	float (9.3.1.1.1)	Toroidal current of non-thermal particles (excluding electron back current for fast ions) [A]; Time-dependent.
trq_i	vecflt_type (9.3.1.2.9)	Collisional torque to background ions [N.m]; Time-dependent; Vector (nion)
trq_e	float (9.3.1.1.1)	Collisional torque to electrons [N.m]; Time-dependent
trq_j_rxb	float (9.3.1.1.1)	Torque due to radial currents of non-thermal particles [N.m]; Time-dependent.
nucl_reac_th	dist_nucl_reac_th (9.3.1.3.106)	Nuclear reactions between the calculated species and other species assumed to have thermal distributions.
nucl_reac_sf	dist_nucl_reac_sf (9.3.1.3.105)	Nuclear reactions of the calculated species with itself (thermal + non-thermal).

Type of: distri\_vec:global\_param (792)

### 9.3.1.3.100 dist\_glob\_dist\_losses

Losses of the distribution species (orbit losses and neutralisation losses).

member	type	description
orb_loss	dist_src_snk_tot (9.3.1.3.116)	Losses due to orbits intersecting a material surface.
neutr_loss	dist_src_snk_tot (9.3.1.3.116)	Losses due to neutralisation of distribution ions (charge exchange etc.)

Type of: dist\_glob:losses (772)

### 9.3.1.3.101 dist\_grid\_info

Specification of grids used in topo\_regions. Grid coordinates could either be invariants of motion, or information at single point along orbit, e.g. xi and s for grid\_coord=3. This point should always be on a so-called omnigenous surface (a generalised equatorial plane);  $\text{grad}(\psi) \times \text{grad}(B) = 0$ . All closed orbits cross omnigenous surfaces at least two times. The omnigenous surfaces are described in omnigen\_surf.

member	type	description
grid_type	integer (9.3.1.1.2)	Type of grid: 1=unstructured grid; 2=structured non-rectangular grid, here ndim11=ndim12=ndim13, ndim21=ndim22=ndim23, ndim31=ndim32=ndim33; 3=rectangular grid, where grid coordinates are stored in the vectors dim1(1:ndim1,1,1), dim2(1,1:ndim2,1), dim3(1,1,1:ndim3)
ngriddim	integer (9.3.1.1.2)	Number of grid dimension. For ngriddim=2 the grid is specified by dim1 and dim2 only, while dim3, dim4, dim5, dim6 can be ignored (should not be allocated). For ngriddim=3 also dim3 is used to describe the grid etc. E.g. if your distribution is given by the three variables the poloidal flux, perpendicular and parallel velocities, then ngriddim=3 and grid_coord(1)=15, grid_coord(1)=16, grid_coord(3)=6.
grid_coord	vecint_type (9.3.1.2.10)	Identifies the coordinates specified in dim1, dim2, dim3, dim4, dim5, and dim6. grid_coord(K) describes the coordinate represented in dimK, for K=1,2,...6. The possible coordinates are: 1=R, Major radius [m]; 2=Z, Vertical position [m]; 3=X, first cartesian coordinate in the horizontal plane [m]; 4=Y, second cartesian coordinate in the horizontal plane ( $\text{grad}(X) \times \text{grad}(Y) = \text{grad}(Z)$ ) [m]; 5=phi, toroidal angle [rad]; 6=psi, poloidal magnetic flux [T/m <sup>2</sup> ]; 7=rhotor, the square root of the toroidal flux; 8=theta, geometrical poloidal angle [rad]; 9=theta_b, Boozer poloidal angle [rad]; 10=vx, velocity in the x-direction [m/s]; 11=vy, velocity in the y-direction [m/s]; 12=vz, velocity in the z-direction [m/s]; 13=vel, total velocity [m/s]; 14=vphi, velocity in the phi-direction [m/s]; 15=vpar, velocity in the parallel direction [m/s]; 16=vperp, velocity in the perpendicular direction [m/s]; 17=E, Hamiltonian energy [J]; 18=Pphi, canonical toroidal angular momentum [kg m <sup>2</sup> /s]; 19=mu, magnetic moment [J/T]; 20=Lambda=mu/E [1/T]; 21=pitch=vpar/v [-]; 22=s, the position of the omnigenous plane (generalised equatorial plane) as described by the fields omnigen_surf%s and omnigen_surf%rz; 23=particle spin; 24=n.Legendre, the index of the Legendre polynomial of the pitch, e.g. if the k:th component of dim3(1,1,k,1,1)=5 then this refers to the 5:th Legendre polynomial P_5(xi). Vector (6)
thin_orbits	integer (9.3.1.1.2)	Specifies if guiding centre orbits are thin. Note: only used for orbit averaged distribution functions. For thin_orbits=1 the orbit are considered thin, i.e. each orbit is bound to follow a single flux surface; for thin_orbits=0 the orbits are assumed to follow guiding centre trajectories. E.g. thin_orbits=0 using constants of motion as given in a generalised equatorial plane, then the orbit outside the equatorial plane are described by the guiding centre equations of motion.
topology	string (9.3.1.1.3)	Description of the topology of the grid. NOTE: only used for nregion_topo>2.
omnigen_surf	omnigen_surf (9.3.1.3.190)	List of omnigenous magnetic surfaces to which the s-coordinates in grid_coord refer. NOTE: only used for grid_coord=3. NOTE: all guiding centre orbits intersect at least one omnigenous (or stagnation) surfaces, i.e. the omnigenous generalised equatorial plane (the midplane). nsurfs=Number of omnigenous surfaces. Structure array(nregion_topo)

Type of: dist\_ff:grid\_info (770)

### 9.3.1.3.102 dist\_input\_src

Input sources of particles and power for the distribution species (to aid diagnosing the code output).

member	type	description
particle_src	dist_particle_src (9.3.1.3.107)	Particle source
wave_src	dist_wave_src (9.3.1.3.118)	Auxiliary wave absorbed by the distribution species

Type of: distri\_vec:input\_src (792)

### 9.3.1.3.103 dist\_markers

Distribution given as a set of markers (test particles).

member	type	description
nvar	float (9.3.1.1.1)	Number of variables associated with a marker (test particle)
var_id	vecint.type (9.3.1.2.10)	Identification of phase space variables. var_id(K) describe the variable represented in varK, for K=1,2,...7. The possible variables are: 1=R, Major radius [m]; 2=Z, Vertical position [m]; 3=X, first cartesian coordinate in the horizontal plane [m]; 4=Y, second cartesian coordinate in the horizontal plane (grad(X) x grad(Y) = grad(Z)) [m]; 5=phi, toroidal angle [rad]; 6=psi, poloidal magnetic flux [T/m <sup>2</sup> ]; 7=rhotor, the square root of the toroidal flux; 8=theta, geometrical poloidal angle [rad]; 9=theta_b, Boozer poloidal angle [rad]; 10=vx, velocity in the x-direction [m/s]; 11=vy, velocity in the y-direction [m/s]; 12=vz, velocity in the z-direction [m/s]; 13=vel, total velocity [m/s]; 14=vphi, velocity in the phi-direction [m/s]; 15=vpar, velocity in the parallel direction [m/s]; 16=vperp, velocity in the perpendicular direction [m/s]; 17=E, Hamiltonian energy [J]; 18=Pphi, canonical toroidal angular momentum [kg m <sup>2</sup> /s]; 19=mu, magnetic moment [J/T]; 20=Lambda=mu/E [1/T]; 21=pitch=vpar/v [-]; 22=s, the position of the omnigenous plane (generalised equatorial plane) as described by the fields omnigen_surf% and omnigen_surf%rz; 23=particle spin. Vector (7)
var1	vecflt.type (9.3.1.2.9)	Phase space variables one characterising the markers; Time-dependent; Vector (npart)
var2	vecflt.type (9.3.1.2.9)	Phase space variables two characterising the markers; Time-dependent; Vector (npart)
var3	vecflt.type (9.3.1.2.9)	Phase space variables three characterising the markers; Time-dependent; Vector (npart)
var4	vecflt.type (9.3.1.2.9)	Phase space variables four characterising the markers; Time-dependent; Vector (npart)
var5	vecflt.type (9.3.1.2.9)	Phase space variables five characterising the markers; Time-dependent; Vector (npart)
var6	vecflt.type (9.3.1.2.9)	Phase space variables six characterising the markers; Time-dependent; Vector (npart)
var7	vecflt.type (9.3.1.2.9)	Phase space variables seven characterising the markers; Time-dependent; Vector (npart)
weight	vecflt.type (9.3.1.2.9)	Weight of the markers; Time-dependent; Vector (npart)

Type of: dist\_func:markers (771)

### 9.3.1.3.104 dist\_nucl\_reac

Information on nuclear reactions involving the calculated species.

member	type	description
point_reac	vecint.type (9.3.1.2.10)	Pointer to a species in composition who can undergo a nuclear reaction with the calculated species; Vector (nreac)
id_reac	vecint.type (9.3.1.2.10)	Identification of the reaction between the calculated species and a background species (including which branch if applicable); Time-dependent; Vector (nreac). Table defining the index of reactions to be provided.

Type of: distri\_vec:nucl\_reac (792)

### 9.3.1.3.105 dist\_nucl\_reac\_sf

Nuclear reactions of the calculated species with itself (thermal + non-thermal).

member	type	description
rate	float (9.3.1.1.1)	Reaction rate [1/s]; Time-dependent
power	float (9.3.1.1.1)	Fusion reaction power[W]; Time-dependent

Type of: dist\_glob:nucl\_reac.sf (772)

### 9.3.1.3.106 dist\_nucl\_reac\_th

Nuclear reactions between the calculated species and other species assumed to have thermal distributions.

member	type	description
rate	vecflt.type (9.3.1.2.9)	Reaction rate [1/s]; Time-dependent; Vector (nreac)
power	vecflt.type (9.3.1.2.9)	Fusion reaction power[W]; Time-dependent; Vector (nreac)

Type of: dist\_glob:nucl\_reac.th (772)

### 9.3.1.3.107 dist\_particle\_src

Particle source

member	type	description
total	dist_src.snk_tot (9.3.1.3.116)	Total source of particles and power (NBI, fusion products, pellets etc.)
volume_intgr	dist_src.snk_vol (9.3.1.3.117)	Volume integrated source of particles and power (NBI, fusion products, pellets etc.)
flux_surf_av	dist_src.snk_surf (9.3.1.3.115)	Flux surface averaged source of particles and power (NBI, fusion products, pellets etc.)

Type of: dist\_input\_src:particle\_src (775)

### 9.3.1.3.108 dist\_prof\_surf\_dist\_losses

Losses of the distribution species.

member	type	description
orb_loss	dist_src.snk_surf (9.3.1.3.115)	Losses due to orbits intersecting a material surface.
neutr_loss	dist_src.snk_surf (9.3.1.3.115)	Losses due to neutralised ions, e.g. due to charge exchange events.

Type of: dist\_profiles:lossesd (787)

### 9.3.1.3.109 dist\_prof\_surf\_nucl\_reac\_sf

Nuclear reactions of the calculated species with itself (thermal + non-thermal).

member	type	description
rate	vecflt.type (9.3.1.2.9)	Reaction rate [ $s^{-1}.m^{-3}$ ]; Time-dependent; Matrix (npsi)
power	vecflt.type (9.3.1.2.9)	Fusion reaction power [ $W.m^{-3}$ ]; Time-dependent; Matrix (npsi)

Type of: dist\_profiles:nucl\_rd\_sf (787)

### 9.3.1.3.110 dist\_prof\_surf\_nucl\_reac\_th

Nuclear reactions between the calculated species and other species assumed to have thermal distributions.

member	type	description
rated	matflt.type (9.3.1.2.7)	Reaction rate [ $s^{-1}.m^{-3}$ ]; Time-dependent; Matrix (nreac, max_npsi)
powerd	matflt.type (9.3.1.2.7)	Nuclear reaction power density [ $W.m^{-3}$ ]; Time-dependent; Matrix (nreac, max_npsi)

Type of: dist\_profiles:nucl\_rd.th (787)

### 9.3.1.3.111 dist\_prof\_vol\_dist\_losses

Losses of the distribution species.

member	type	description
orb_loss	dist_src.snk_vol (9.3.1.3.117)	Losses due to orbits intersecting a material surface.
neutr_loss	dist_src.snk_vol (9.3.1.3.117)	Losses due to neutralised ions, e.g. due to charge exchange events.

Type of: dist\_profiles:losses (787)

### 9.3.1.3.112 dist\_prof\_vol\_nucl\_reac\_sf

Nuclear reactions of the calculated species with itself (thermal + non-thermal).

member	type	description
rate	vecflt_type (9.3.1.2.9)	Reaction rate [1/s]; Time-dependent; Vector (npsi)
power	vecflt_type (9.3.1.2.9)	Fusion reaction power[W]; Time-dependent; Vector (npsi)

Type of: dist\_profiles:nucl\_reac\_sf (787)

### 9.3.1.3.113 dist\_prof\_vol\_nucl\_reac\_th

Nuclear reactions between the calculated species and other species assumed to have thermal distributions.

member	type	description
rate	matflt_type (9.3.1.2.7)	Reaction rate [1/s]; Time-dependent; Matrix (nreac, npsi)
power	matflt_type (9.3.1.2.7)	Fusion reaction power[W]; Time-dependent; Matrix (nreac, npsi)

Type of: dist\_profiles:nucl\_reac\_th (787)

### 9.3.1.3.114 dist\_profiles

Profiles (volume integrated and flux surface averaged)

member	type	description
npsi	integer (9.3.1.1.2)	Number of points of the radial grid for each species.
rho_tor_norm	vecflt_type (9.3.1.2.9)	Normalised toroidal flux coordinate at the grid points for 1D profiles; Time-dependent; Vector (npsi)
rho_tor	vecflt_type (9.3.1.2.9)	Toroidal flux coordinate at the grid points for 1D profiles [m]. Defined as $\sqrt{\phi/\pi/B_0}$ , where $B_0 = \text{equilibrium/global\_param/toroid\_field}/b_0$ . Time-dependent; Vector (npsi)
psi	vecflt_type (9.3.1.2.9)	Poloidal flux at the grid points for 1D profiles [Wb], without $1/2\pi$ and such that $B_p =  \text{grad } \psi  / R/2/\pi$ . Time-dependent; Vector (npsi)
enrgd_tot	vecflt_type (9.3.1.2.9)	Flux surface averaged energy density of a distribution species [ $J/m^3$ ]; Time-dependent; Vector (npsi)
enrgd_para	vecflt_type (9.3.1.2.9)	Flux surface averaged parallel energy density of a distribution species [ $J/m^3$ ]; Time-dependent; Vector (npsi).
powd_coll_i	matflt_type (9.3.1.2.7)	Flux surface averaged collisional power to ions [ $W.m^{-3}$ ]; Time-dependent; Matrix (nion, npsi)
powd_coll_e	vecflt_type (9.3.1.2.9)	Flux surface averaged collisional power to the electrons [ $W.m^{-3}$ ]; Time-dependent; Vector(npsi)
therm_srcd	dist_src_snk_surf (9.3.1.3.115)	Flux surface averaged source of particles and power due to particles of the distribution species being thermalised (merging into the thermal plasma).
lossesd	dist_prof_surf_dist_losses (9.3.1.3.108)	Particle loss densities due to charge exchange events with neutrals or orbits intersecting material surfaces.
curd_fp	vecflt_type (9.3.1.2.9)	Flux surface averaged toroidal current density of non-thermal (fast) particles of the distribution species (excluding electron back current for fast ions) [ $A.m^{-2}$ ]; Time-dependent; Vector (npsi).
curd_dr	vecflt_type (9.3.1.2.9)	Total toroidal driven current density (including electron back current in the presence of fast ions) [A]; Time-dependent; Vector (npsi)
trqd_i	matflt_type (9.3.1.2.7)	Flux surface averaged collisional toroidal torque to background ions [ $N.m^{-2}$ ]; Time-dependent; Matrix (nion, npsi)
trqd_e	vecflt_type (9.3.1.2.9)	Flux surface averaged collisional toroidal torque density to electrons [ $N.m^{-2}$ ]; Time-dependent; Vector (npsi)
trqd_jrxb	vecflt_type (9.3.1.2.9)	Toroidal torque density due to radial currents of non-thermal particles of the distribution species [ $N.m^{-2}$ ]; Time-dependent; Vector (npsi)
nucl_rd_th	dist_prof_surf_nucl_reac_th (9.3.1.3.110)	Nuclear reaction rate densities for reactions between the cacluated species and other species assumed to have thermal distributions.
nucl_rd_sf	dist_prof_surf_nucl_reac_sf (9.3.1.3.109)	Nuclear reaction rate densities for reactions of the calculated species with itself (thermal + non-thermal).
enrg_tot	vecflt_type (9.3.1.2.9)	Energy content of of a distribution species [J] inside a flux surface; Time-dependent; Vector (npsi)
enrg_para	vecflt_type (9.3.1.2.9)	Parallel energy content of a distribution species [J] inside a flux surface; Time-dependent; Vector (npsi)
pow_coll_i	matflt_type (9.3.1.2.7)	Collisional power to ions inside a flux surface [W]; Time-dependent; Matrix(nion, npsi)
pow_coll_e	vecflt_type (9.3.1.2.9)	Collisional power to the electrons inside a flux surface [W]; Time-dependent; Vector(npsi)
therm_src	dist_src_snk_vol (9.3.1.3.117)	Source particles and power inside a flux surface due to particles of the distribution species being thermalised (merging into the thermal plasma).
losses	dist_prof_vol_dist_losses (9.3.1.3.111)	Particle loss inside flux surface due to charge exchange events.

member	type	description
cur.fp	vecflt.type (9.3.1.2.9)	Toroidal current of non-thermal (fast) particles driven inside a flux surface (does not include electron back current for fast ions) [A]; Time-dependent; Vector (npsi)
cur.dr	vecflt.type (9.3.1.2.9)	Total toroidal current driven inside a flux surface (including electron back current in the presence of fast ions) [A]; Time-dependent; Vector (npsi).
trq.i	matflt.type (9.3.1.2.7)	Collisional toroidal torque to background ions inside a flux surface [N.m]; Time-dependent; Matrix (nion, npsi)
trq.e	vecflt.type (9.3.1.2.9)	Collisional toroidal torque to electrons inside a flux surface [N.m]; Time-dependent; Vector (npsi)
trq.j.rxb	vecflt.type (9.3.1.2.9)	Toroidal torque due to radial currents of non-thermal particles of the distribution species [N.m]; Time-dependent; Vector (npsi)
nucl_reac.th	dist_prof_vol_nucl_reac.th (9.3.1.3.113)	Nuclear reactions inside a flux surface involving the distribution species and other species assumed to be thermal.
nucl_reac.sf	dist_prof_vol_nucl_reac.sf (9.3.1.3.112)	Nuclear reactions inside a flux surface of the calculated species with itself (thermal + non-thermal).

Type of: `distri_vec:profiles_1d` (792)

### 9.3.1.3.115 `dist_src_snk_surf`

Losses due to orbits intersecting a material surface.

member	type	description
particlesd	vecflt.type (9.3.1.2.9)	Source/sink particles [ $s^{-1} m^{-3}$ ]; Time-dependendent; Vector (npsi)
powerd	vecflt.type (9.3.1.2.9)	Power density associated with the source/sink of particles [ $W.m^{-3}$ ]; Time-dependent; Vector (npsi)
torqued	vecflt.type (9.3.1.2.9)	Torque density due to the source/sink of particles [ $N.m^{-2}$ ]; Time-dependent; Vector (npsi)

Type of: `dist_particle_src:flux_surf_av` (780) I `dist_prof_surf_dist_losses:neutr_loss` (781) I `dist_prof_surf_dist_losses:orb_loss` (781) I `dist_profiles:therm_srcd` (787)

### 9.3.1.3.116 `dist_src_snk_tot`

Source particles and power due to particles of the distribution species being thermalised (merging into the thermal plasma).

member	type	description
particles	float (9.3.1.1.1)	Source/sink particles [1/s]; Time-dependendent
power	float (9.3.1.1.1)	Power associated with the source/sink of particles [W]; Time-dependent
torque	float (9.3.1.1.1)	Torque due to the source/sink of particles [N.m]; Time-dependent

Type of: `dist_glob:therm_src` (772) I `dist_glob_dist_losses:neutr_loss` (773) I `dist_glob_dist_losses:orb_loss` (773) I `dist_particle_src:total` (780)

### 9.3.1.3.117 `dist_src_snk_vol`

Losses due to orbits intersecting a material surface.

member	type	description
particles	vecflt.type (9.3.1.2.9)	Source/sink particles [1/s]; Time-dependendent; Vector (npsi)
power	vecflt.type (9.3.1.2.9)	Power associated with the source/sink of particles [W]; Time-dependent; Vector (npsi)
torque	vecflt.type (9.3.1.2.9)	Torque due to the source/sink of particles [N.m]; Time-dependent; Vector (npsi)

Type of: `dist_particle_src:volume_intgr` (780) I `dist_prof_vol_dist_losses:neutr_loss` (784) I `dist_prof_vol_dist_losses:orb_loss` (784) I `dist_profiles:therm_src` (787)

### 9.3.1.3.118 `dist_wave_src`

Auxiliary wave absorbed by the distribution species

member	type	description
type	string (9.3.1.1.3)	Wave type (LH, EC, IC, ...), can be a combination of these if several wave types are absorbed by this species.
wave.power	float (9.3.1.1.1)	Auxiliary wave power absorbed by the distribution species [W]; Time-dependent.



member	type	description
wave_powerd	vecflt.type (9.3.1.2.9)	Auxiliary flux surface averaged wave power density absorbed by the distribution species [W/m <sup>3</sup> ]; Time-dependent; Vector (npsi)

Type of: dist\_input\_src:wave\_src (775)

### 9.3.1.3.119 distri\_vec

Vector over all distribution functions; Time-dependent. Structure array(ndist\_spec)

member	type	description
calc_spec	integer (9.3.1.1.2)	Pointer to the species for which the distribution function(s) is/are calculated and whose characteristics are given in composition (for ions). Value 0 means electrons.
nucl_reac	dist_nucl_reac (9.3.1.3.104)	Information on nuclear reactions involving the calculated species.
global_param	dist_glob (9.3.1.3.99)	Global parameters (in most cases volume integrated and surface averaged quantities).
profiles_1d	dist_profiles (9.3.1.3.114)	Profiles (volume integrated and flux surface averaged)
dist_func	dist_func (9.3.1.3.98)	Distribution functions. The total distribution total distribution can either be given by the a set of markers/test particles (in markers), or by a gridded function (dist.expand). Note that the gridded distribution can be written as sum of successive approximations, where each term is given by an element in the vector dist.expand. Finally, the distribution can be written as a sum of a marker distribution and a gridded distribution, e.g. for delta-f Monte Carlo solution.
input_src	dist_input_src (9.3.1.3.102)	Input sources of particles and power for the distribution species (to aid diagnosing the code output).
codeparam	codeparam (9.3.1.3.58)	Code parameters

Type of: distribution:distri\_vec (685)

### 9.3.1.3.120 distsource\_global\_param

Global parameters (volume integrated).

member	type	description
src_pow	exp0D (9.3.1.3.142)	Total power source [W]; Time-dependent.
src_rate	exp0D (9.3.1.3.142)	Particle source rate [1/s]; Time-dependent.

Type of: distsource\_source:global\_param (796)

### 9.3.1.3.121 distsource\_profiles\_1d

1D radial profiles

member	type	description
rho_tor_norm	vecflt.type (9.3.1.2.9)	Normalised toroidal flux coordinate at the grid points for 1D profiles; Time-dependent; Vector (npsi)
rho_tor	vecflt.type (9.3.1.2.9)	Toroidal flux coordinate at the grid points for 1D profiles [m]. Defined as $\sqrt{\phi/\pi/B_0}$ , where $B_0 = \text{equilibrium/global\_param/toroid\_field}/b_0$ . Time-dependent; Vector (npsi)
psi	vecflt.type (9.3.1.2.9)	Poloidal flux at the grid points for 1D profiles [Wb], without $1/2\pi$ and such that $B_p =  \text{grad } \psi  / R / 2 / \pi$ . Time-dependent; Vector (npsi)
pow_den	exp1D (9.3.1.3.143)	Flux surface averaged power density [W/m <sup>3</sup> ]; Time-dependent; Vector (npsi)
src_rate	exp1D (9.3.1.3.143)	Flux surface averaged total source density of particles [m <sup>-3</sup> s <sup>-1</sup> ]; Time-dependent; Vector (npsi)

Type of: distsource\_source:profiles\_1d (796)

### 9.3.1.3.122 distsource\_profiles\_2d

2D source profiles in terms of two phase space coordinates

member	type	description
grid_coord	vecint.type (9.3.1.2.10)	Identifies the coordinates specifies in dim1 and dim2. grid_coord(1) and grid_coord(2) describe the coordinate represented in dim1 and dim2. The possible coordinates are: 1=R, Major radius [m]; 2=Z, Vertical position [m]; 3=X, first cartesian coordinate in the horizontal plane [m]; 4=Y, second cartesian coordinate in the horizontal plane ( $\text{grad}(X) \times \text{grad}(Y) = \text{grad}(Z)$ ) [m]; 5=phi, toroidal angle [rad]; 6=psi, poloidal magnetic flux [ $T/m^2$ ]; 7=rhotor, the square root of the toroidal flux; 8=theta, geometrical poloidal angle [rad]; 9=theta_b, Boozer poloidal angle [rad]; 10=vx, velocity in the x-direction [m/s]; 11=vy, velocity in the y-direction [m/s]; 12=vz, velocity in the z-direction [m/s]; 13=vel, total velocity [m/s]; 14=vphi, velocity in the phi-direction [m/s]; 15=vpar, velocity in the parallel direction [m/s]; 16=vperp, velocity in the perpendicular direction [m/s]; 17=E, Hamiltonian energy [J]; 18=Pphi, canonical toroidal angular momentum [ $kg\ m^2/s$ ]; 19=mu, magnetic moment [J/T]; 20=Lambda=mu/E [1/T]. Vector (2)
dim1	matflt.type (9.3.1.2.7)	First coordinate of 2D grid. Time-dependent; Vector (ndim1,ndim2)
dim2	matflt.type (9.3.1.2.7)	Second coordinate of 2D grid. Time-dependent; Vector (ndim1,ndim2)
g11	matflt.type (9.3.1.2.7)	11 component of the covariant metric tensor in the (dim1, dim2) coordiante system. Time-dependent; Vector (ndim1,ndim2)
g12	matflt.type (9.3.1.2.7)	12 component of the covariant metric tensor in the (dim1, dim2) coordiante system. Time-dependent; Vector (ndim1,ndim2)
g21	matflt.type (9.3.1.2.7)	21 component of the covariant metric tensor in the (dim1, dim2) coordiante system. Time-dependent; Vector (ndim1,ndim2)
g22	matflt.type (9.3.1.2.7)	22 component of the covariant metric tensor in the (dim1, dim2) coordiante system. Time-dependent; Vector (ndim1,ndim2)
pow_den	exp2D (9.3.1.3.144)	Source power density. Here $\text{sum}(M,N=1,2; \text{pow\_den} * g_{NM} * \text{dimN} * \text{dimM})$ have unit [W]. Time-dependent; Vector (ndim1,ndim2)
src_rate	exp2D (9.3.1.3.144)	Source density of particles. Here $\text{sum}(M,N=1,2; \text{src\_rate} * g_{NM} * \text{dimN} * \text{dimM})$ have unit [1/s]. Time-dependent; Vector (ndim1,ndim2)

Type of: distsource\_source:profiles\_2d (796)

### 9.3.1.3.123 distsource\_source

Source

member	type	description
src_spec	integer (9.3.1.1.2)	Pointer to the source species whose characteristics are given in composition.
global_param	distsource_global_param (9.3.1.3.120)	Global parameters.
profiles_1d	distsource_profiles_1d (9.3.1.3.121)	1D radial profiles
profiles_2d	distsource_profiles_2d (9.3.1.3.122)	2D source profiles in terms of two phase space coordinates
source_grid	source_grid (9.3.1.3.282)	Source density of particles in phase space (real space, velocity space, spin state).
source_mark	source_mark (9.3.1.3.285)	Source given as a set of markers (test particles)
codeparam	codeparam (9.3.1.3.58)	Code parameters

Type of: distsource:source (686)

### 9.3.1.3.124 divergence

Detailed information on beamlet divergence. Divergens is described as a super position of Gaussian profiles with amplitude "frac\_divcomp" and vertical/horizontal divergence "div\_vert"/"div\_horiz". Note that for positive ion NBI the divergence is well described by a single Gaussian.

member	type	description
frac_divcomp	vecflt.type (9.3.1.2.9)	Fraction of injected particles. Vector(ndiv_comp)
div_vert	vecflt.type (9.3.1.2.9)	Beam divergence for a unit in the vertical direction[rad]. Vector(ndiv_comp)
div_horiz	vecflt.type (9.3.1.2.9)	Beam divergence for a unit in the horizontal direction[rad]. Vector(ndiv_comp)

Type of: setup\_inject:divergence (950)

### 9.3.1.3.125 ecemeasure

Measured values

member	type	description
te	exp1D (9.3.1.3.143)	Electron temperature [eV]. Vector (nchannels)

Type of: `ecediag:measure` (687)

### 9.3.1.3.126 `ecsetup`

diagnostic setup information

member	type	description
frequency	<code>vecflt.type</code> (9.3.1.2.9)	Frequency of the ECE channels. Vector (nchannels)
position	<code>rzphiIDexp</code> (9.3.1.3.248)	Position of the measurement. Time-dependent. Vector (nchannels)

Type of: `ecediag:setup` (687)

### 9.3.1.3.127 `edge_fluid`

Fluid quantities

member	type	description
ne	<code>edge_fluid_scalar_simplestruct</code> (9.3.1.3.129)	Electron density [ $1/m^3$ ]; Time-dependent;
ni	<code>edge_fluid_scalar</code> (9.3.1.3.128)	Ion density [ $1/m^3$ ] (per species). Array of structures(nspecies); Time-dependent;
ve	<code>edge_fluid_vector_simplestruct</code> (9.3.1.3.132)	Electron velocity [m/s]; Time-dependent;
vi	<code>edge_fluid_vector</code> (9.3.1.3.131)	Ion velocity [m/s] (per species).Array of structures(nspecies); Time-dependent;
te	<code>edge_fluid_scalar_simplestruct</code> (9.3.1.3.129)	Electron temperature [eV]; Time-dependent;
ti	<code>edge_fluid_scalar</code> (9.3.1.3.128)	Ion temperature [eV] (per species). Array of structures(nspecies); Time-dependent;
te.aniso	<code>edge_fluid_vector_simplestruct</code> (9.3.1.3.132)	Anisotropic electron temperature [eV]; Time-dependent;
ti.aniso	<code>edge_fluid_vector</code> (9.3.1.3.131)	Anisotropic ion temperature [eV] (per species). Array of structures(nspecies); Time-dependent;
po	<code>edge_fluid_scalar_simplestruct</code> (9.3.1.3.129)	Electric potential [V]; Time-dependent;
j	<code>edge_fluid_vector_simplestruct</code> (9.3.1.3.132)	Electric current [A]; Time-dependent;

Type of: `edge:fluid` (688)

### 9.3.1.3.128 `edge_fluid_scalar`

A scalar fluid quantity. To be used as array of structure

member	type	description
value	<code>complexgrid_scalar</code> (9.3.1.3.67)	Value of the quantity. Possibly stored on multiple subgrids.; Time-dependent; Array of structures (nsubgrid.quantity)
bndvalue	<code>complexgrid_scalar</code> (9.3.1.3.67)	Boundary values of the quantity. Possibly stored on multiple (boundary) subgrids.; Time-dependent; Array of structures (nsubgrid.quantity)
flux	<code>complexgrid_vector</code> (9.3.1.3.72)	Flux of the quantity. Possibly stored on multiple subgrids.; Time-dependent; Array of structures (nsubgrid.quantity)
bndflux	<code>complexgrid_vector</code> (9.3.1.3.72)	Flux of the quantity. Possibly stored on multiple (boundary) subgrids.; Time-dependent; Array of structures (nsubgrid.quantity)
transpcoeff	<code>edge_fluid_scalar_transpcoeff</code> (9.3.1.3.130)	Transport coefficients; Time-dependent; Array of structures (nsubgrid.quantity)
source	<code>complexgrid_scalar</code> (9.3.1.3.67)	Source; Time-dependent; Array of structures (nsubgrid.quantity)

Type of: `edge_fluid:ni` (800) | `edge_fluid:ti` (800) | `edge_fluid_vector:comps` (804) | `edge_fluid_vector_simplestruct:comps` (805)

### 9.3.1.3.129 `edge_fluid_scalar_simplestruct`

A scalar fluid quantity. To be used as simple structure.

member	type	description
value	complexgrid_scalar (9.3.1.3.67)	Value of the quantity. Possibly stored on multiple subgrids.; Time-dependent; Array of structures (nsubgrid_quantity)
bndvalue	complexgrid_scalar (9.3.1.3.67)	Boundary values of the quantity. Possibly stored on multiple (boundary) subgrids.; Time-dependent; Array of structures (nsubgrid_quantity)
flux	complexgrid_vector (9.3.1.3.72)	Flux of the quantity. Possibly stored on multiple subgrids.; Time-dependent; Array of structures (nsubgrid_quantity)
bndflux	complexgrid_vector (9.3.1.3.72)	Flux of the quantity. Possibly stored on multiple (boundary) subgrids.; Time-dependent; Array of structures (nsubgrid_quantity)
transpcoeff	edge_fluid_scalar_transpcoeff (9.3.1.3.130)	Transport coefficients; Time-dependent; Array of structures (nsubgrid_quantity)
source	complexgrid_scalar (9.3.1.3.67)	Source; Time-dependent; Array of structures (nsubgrid_quantity)

Type of: edge\_fluid:ne (800) I edge\_fluid:po (800) I edge\_fluid:te (800)

### 9.3.1.3.130 edge\_fluid\_scalar\_transpcoeff

Transport coefficients; Time-dependent; Array of structures (nsubgrid\_quantity)

member	type	description
d	complexgrid_vector_simplestruct (9.3.1.3.73)	Diffusivity [ $m^2/s$ ]; Time-dependent;
v	complexgrid_vector_simplestruct (9.3.1.3.73)	Velocity [ $m/s$ ]; Time-dependent;

Type of: edge\_fluid\_scalar:transpcoeff (801) I edge\_fluid\_scalar\_simplestruct:transpcoeff (802)

### 9.3.1.3.131 edge\_fluid\_vector

A fluid vector quantity, with components possibly explicitly aligned to a coordinate direction. To be used as array of structure

member	type	description
comps	edge_fluid_scalar (9.3.1.3.128)	Components of the vector. Array of structures(ndim); Time-dependent;
align	vecint_type (9.3.1.2.10)	Alignment of vector components, numerical flag. Int vector(ndim);
alignid	vecstring_type (9.3.1.2.11)	Alignment of vector components, string description. String vector(ndim);

Type of: edge\_fluid:ti\_aniso (800) I edge\_fluid:vi (800)

### 9.3.1.3.132 edge\_fluid\_vector\_simplestruct

A fluid vector quantity, with components possibly explicitly aligned to a coordinate direction. To be used as simple structure.

member	type	description
comps	edge_fluid_scalar (9.3.1.3.128)	Components of the vector. Array of structures(ndim); Time-dependent;
align	vecint_type (9.3.1.2.10)	Alignment of vector components, numerical flag. Int vector(ndim);
alignid	vecstring_type (9.3.1.2.11)	Alignment of vector components, string description. String vector(ndim);

Type of: edge\_fluid:j (800) I edge\_fluid:te\_aniso (800) I edge\_fluid:ve (800)

### 9.3.1.3.133 edge\_kinetic

Kinetic quantities

member	type	description
f	edge_kinetic_distribution (9.3.1.3.134)	Distribution function [ $1/m^3 (m/s)^{-3}$ ]. Array of structures(nspecies); Time-dependent;

Type of: edge:kinetic (688)

### 9.3.1.3.134 edge\_kinetic\_distribution

Distribution function [ $1/m^3 (m/s)^{-3}$ ]. Array of structuresr(nspecies); Time-dependent;

member	type	description
value	complexgrid_scalar (9.3.1.3.67)	Value of distribution function. Possibly stored on multiple subgrids.; Vector (nsubgrid_quantity). Time-dependent;
bndvalue	complexgrid_scalar (9.3.1.3.67)	Boundary value of distribution function. Possibly stored on multiple subgrids.; Vector (nsubgrid_quantity). Time-dependent;
fluxes	complexgrid_vector (9.3.1.3.72)	Fluxes in phase space. Possibly stored on multiple subgrids.; Vector (nsubgrid_quantity). Time-dependent;
source	complexgrid_scalar (9.3.1.3.67)	Sources in phase space. Possibly stored on multiple subgrids.; Vector (nsubgrid_quantity). Time-dependent;

Type of: edge\_kinetic:f (806)

### 9.3.1.3.135 emissivity1d

Reconstructed 1D emissivity [ $counts.m^{-3}.s^{-1}$ ].

member	type	description
r	exp1D (9.3.1.3.143)	horizontal grid. Vector (dim)
z	exp1D (9.3.1.3.143)	vertical grid. Vector (dim)
measure	exp1D (9.3.1.3.143)	reconstruction. Vector (dim)

Type of: source:emissivity1d (953)

### 9.3.1.3.136 emissivity2d

Reconstructed 2D emissivity [ $counts.m^{-3}.s^{-1}$ ].

member	type	description
r	exp2D (9.3.1.3.144)	radial grid. Vector (dim1,dim2)
z	exp2D (9.3.1.3.144)	vertical grid. Vector (dim1,dim2)
measure	exp2D (9.3.1.3.144)	Reconstruction. Vector (dim1,dim2)

Type of: source:emissivity2d (953)

### 9.3.1.3.137 entry\_def

Structure defining a database entry

member	type	description
user	string (9.3.1.1.3)	Name of the user if private data. Value should be ITM if stored in the official common ITM tree
machine	string (9.3.1.1.3)	Name of the device
shot	integer (9.3.1.1.2)	Shot number
run	integer (9.3.1.1.2)	Run number

Type of: mdinfo:md\_entry (847)

### 9.3.1.3.138 eqconstraint

measurements to constrain the equilibrium, output values and accuracy of the fit

member	type	description
bpol	eqmes1D (9.3.1.3.141)	poloidal pickup coils [T]
bvac_r	eqmes0D (9.3.1.3.140)	Vacuum field times radius in the toroidal field magnet [T.m];
diamagflux	eqmes0D (9.3.1.3.140)	Diamagnetic flux [Wb], defined as integral (Btor - Btor,vac) dS where the integral is over the poloidal cross section of the plasma. It is measured by a single wire loop around the cross section of the torus (e.g. Wesson, Tokamaks, 1997, p.473). It gives information about the separation of the two source profiles p' and FF' of the Grad-Shafranov equation.
faraday	eqmes1D (9.3.1.3.141)	Faraday rotation angles [rad]
flux	eqmes1D (9.3.1.3.141)	Poloidal flux loops [Wb]

member	type	description
i_plasma	eqmes0D (9.3.1.3.140)	Plasma current [A];
isoflux	isoflux (9.3.1.3.158)	Point series at which the flux is considered the same
jsurf	eqmes1D (9.3.1.3.141)	Average of current density on the flux surface [A/m <sup>2</sup> ]
magnet_iron	magnet_iron (9.3.1.3.172)	Magnetisation in iron segments [T]
mse	eqmes1D (9.3.1.3.141)	MSE angles [rad]
ne	eqmes1D (9.3.1.3.141)	Electron density [m <sup>-3</sup> for local measurement, m <sup>-2</sup> if line integrated]
pfcurrent	eqmes1D (9.3.1.3.141)	Current in poloidal field coils [A]
pressure	eqmes1D (9.3.1.3.141)	Total pressure [Pa]
q	q (9.3.1.3.216)	Safety factor
xpts	xpts (9.3.1.3.334)	Position of the X-point(s)

Type of: equilibrium:eqconstraint (689)

### 9.3.1.3.139 eqgeometry

Geometry of the plasma boundary

member	type	description
source	string (9.3.1.1.3)	Comment describing the origin of the eqgeometry data; String
boundarytype	integer (9.3.1.1.2)	0 (limiter) or 1 (separatrix); Integer; Time-dependent
boundary	rz1D_npoints (9.3.1.3.243)	RZ description of the plasma boundary; Time-dependent;
geom_axis	rz0D (9.3.1.3.241)	position of the geometric axis [m]; Time-dependent; Scalar
a_minor	float (9.3.1.1.1)	Minor radius of the plasma boundary [m]; Time-dependent; Scalar
elongation	float (9.3.1.1.1)	Elongation of the plasma boundary; Time-dependent; Scalar
tria_upper	float (9.3.1.1.1)	Upper triangularity of the plasma boundary; Time-dependent; Scalar
tria_lower	float (9.3.1.1.1)	Lower triangularity of the plasma boundary; Time-dependent; Scalar
xpts	rz1D (9.3.1.3.242)	Position of the Xpoints, first is the active xpoint if diverted [m]; Time-dependent; Vector (npoint)
left_low_st	rz0D (9.3.1.3.241)	Position of the lower left strike point [m]; Time-dependent; Scalar
right_low_st	rz0D (9.3.1.3.241)	Position of the lower right strike point [m]; Time-dependent; Scalar
left_up_st	rz0D (9.3.1.3.241)	Position of the upper left strike point [m]; Time-dependent; Scalar
right_up_st	rz0D (9.3.1.3.241)	Position of the upper right strike point [m]; Time-dependent; Scalar
active_limit	rz0D (9.3.1.3.241)	Position of the active limiter point (point of the plasma boundary in contact with the limiter) [m]; Set R = 0 for X-point plasma; Time-dependent; Scalar

Type of: equilibrium:eqgeometry (689) I scenario:eqgeometry (706)

### 9.3.1.3.140 eqmes0D

Structure for equilibrium measurement 0D signal

member	type	description
measured	float (9.3.1.1.1)	Measured value of the signal; Time-dependent; Scalar.
source	string (9.3.1.1.3)	Path to the source signal (diagnostic or genprof, from which to read all info on the signal); String
time	float (9.3.1.1.1)	Time (exact time slice used from the time array of the source signal. If the time slice does not exist in the time array of the source signal, it means linear interpolation has been used); Time-dependent; Scalar.
exact	integer (9.3.1.1.2)	1 means exact data, is not fitted; 0 means the equilibrium code does a least square fit; scalar integer
weight	float (9.3.1.1.1)	weight given to the measurement ( $\chi=0$ ); Time-dependent; Scalar.
sigma	float (9.3.1.1.1)	standard deviation of the measurement; Time-dependent; Scalar.
calculated	float (9.3.1.1.1)	Signal as recalculated by the equilibrium code; Time-dependent; Scalar.
chi2	float (9.3.1.1.1)	$\chi^2$ of (calculated-measured); Time-dependent; Scalar.

Type of: eqconstraint:bvac.r (811) I eqconstraint:diamagflux (811) I eqconstraint:i\_plasma (811)

### 9.3.1.3.141 eqmes1D

Structure for equilibrium measurement 1D signal

member	type	description
measured	vecflt_type (9.3.1.2.9)	Measured value of the signal; Time-dependent; Array(nmeas)
source	string (9.3.1.1.3)	Path to the source signal (diagnostic or genprof, from which to read all info on the signal), e.g. 'magdiag/bpol_probes/measure/value'. String
time	float (9.3.1.1.1)	Exact time slice used from the time array of the source signal. If the time slice does not exist in the time array of the source signal, it means linear interpolation has been used); Time-dependent; Scalar
exact	vecint_type (9.3.1.2.10)	1 means exact data, is not fitted; 0 means the equilibrium code does a least square fit; Time-dependent; Array(nmeas)
weight	vecflt_type (9.3.1.2.9)	weight given to the measurement ( $\zeta=0$ ); Time-dependent; Array(nmeas)
sigma	vecflt_type (9.3.1.2.9)	standard deviation of the measurement; Time-dependent; Array(nmeas)
calculated	vecflt_type (9.3.1.2.9)	Signal as recalculated by the equilibrium code; Time-dependent; Array(nmeas)
chi2	vecflt_type (9.3.1.2.9)	chi <sup>2</sup> of (calculated-measured); Time-dependent; Array(nmeas)

Type of: eqconstraint:bpol (811) I eqconstraint:faraday (811) I eqconstraint:flux (811) I eqconstraint:jsurf (811) I eqconstraint:mse (811) I eqconstraint:ne (811) I eqconstraint:pfcurrent (811) I eqconstraint:pressure (811) I magnet\_iron:mr (845) I magnet\_iron:mz (845)

### 9.3.1.3.142 exp0D

Structure for experimental time-dependent scalar signal

member	type	description
value	float (9.3.1.1.1)	Signal value; Time-dependent; Scalar
abserror	float (9.3.1.1.1)	Absolute error on signal; Time-dependent; Scalar
relerror	float (9.3.1.1.1)	Relative error on signal (normalised to signal value); Time-dependent; Scalar

Type of: antenna\_ec:power (714) I antenna\_ic:frequency (715) I antenna\_ic:power (715) I antenna\_lh:power (716) I distsource\_global\_param:src\_pow (793) I distsource\_global\_param:src\_rate (793) I magdiag:diamagflux (696) I magdiag:ip (696) I nbi\_unit:inj\_eng\_unit (856) I nbi\_unit:pow\_unit (856) I straps:phase (970) I toroidfield:bvac\_r (709) I toroidfield:current (709)

### 9.3.1.3.143 exp1D

Structure for experimental 1D signal

member	type	description
value	vecflt_type (9.3.1.2.9)	Signal value; Time-dependent; Vector
abserror	vecflt_type (9.3.1.2.9)	Absolute error on signal; Time-dependent; Vector
relerror	vecflt_type (9.3.1.2.9)	Relative error on signal (normalised to signal value); Time-dependent; Vector

Type of: bpol\_probes:measure (729) I counts:measure (762) I cxmeasure:ti (763) I cxmeasure:vpol (763) I cxmeasure:vtor (763) I distsource\_profiles\_1d:pow\_den (794) I distsource\_profiles\_1d:src\_rate (794) I ecmeasure:te (798) I emissivity1d:measure (808) I emissivity1d:r (808) I emissivity1d:z (808) I flux\_loops:measure (820) I lang\_derived:measure (833) I lang\_measure:area (834) I lang\_measure:measure (834) I lineintegraldiag:measure (842) I magnetise:mr (846) I magnetise:mz (846) I modules:amplitude (855) I modules:phase (855) I msdiag:measure (698) I nbi\_unit:beamcurfrac (856) I nbi\_unit:beampowfrac (856) I pfcoils:coilcurrent (871) I pfcoils:coilvoltage (871) I pfsupplies:current (876) I pfsupplies:voltage (876) I rzphi1Dexp:phi (921) I rzphi1Dexp:r (921) I rzphi1Dexp:z (921) I tsmeasure:ne (983) I tsmeasure:te (983)

### 9.3.1.3.144 exp2D

Structure for experimental 2D signal

member	type	description
value	matflt_type (9.3.1.2.7)	Signal value; Time-dependent; Matrix
abserror	matflt_type (9.3.1.2.7)	Absolute error on signal; Time-dependent; Matrix
relerror	matflt_type (9.3.1.2.7)	Relative error on signal (normalised to signal value); Time-dependent; Matrix

Type of: distsource\_profiles\_2d:pow\_den (795) I distsource\_profiles\_2d:src\_rate (795) I emissivity2d:measure (809) I emissivity2d:r (809) I emissivity2d:z (809)

### 9.3.1.3.145 filter

Laplace proper filter

member	type	description
num	matflt.type (9.3.1.2.7)	Coefficients of the numerator, in increasing order : $a_0 + a_1*s + \dots + a_n*s^n$ ; Matrix (nsupplies,n)
den	matflt.type (9.3.1.2.7)	Coefficients of the denominator, in increasing order : $b_0 + b_1*s + \dots + b_m*s^m$ ; Matrix (nsupplies,m)

Type of: desc\_supply:filter (769)

### 9.3.1.3.146 flush

FLUSH package coefficients for the mapping of the equilibrium. The time grid of this structure is the same as the equilibrium structure above.

member	type	description
datainfo	datainfo (9.3.1.3.92)	Generic information on a data item
position	rz1D (9.3.1.3.242)	Major radius and altitude of the FLUSH grid [m]; Time-dependent; Vectors resp. (nR) and (nZ)
coef	matflt.type (9.3.1.2.7)	Coefficients of the fit; Time-dependent; Matrix 2D (nR,nZ)
codeparam	codeparam (9.3.1.3.58)	Code parameters

Type of: equilibrium:flush (689)

### 9.3.1.3.147 flux\_loops

Poloidal flux loops RZ coordinates have 1 component for the full loop and two if there is a negative reference loop

member	type	description
setup_floops	setup_floops (9.3.1.3.276)	diagnostic setup information
measure	exp1D (9.3.1.3.143)	Measured flux [Wb]; Time-dependent; Vector (nloops)

Type of: magdiag:flux\_loops (696)

### 9.3.1.3.148 fluxel

Structure for the fluxes of a field of the core transport equations (electrons); Time-dependent;

member	type	description
flux_dv	vecflt.type (9.3.1.2.9)	Flux of the field calculated from the transport coefficients. Time-dependent; Vector (nrho)
flux_interp	vecflt.type (9.3.1.2.9)	Interpretative flux deduced from measured data, the integral of the source term, and the time derivative of the field. Time-dependent; Vector (nrho)

Type of: corefield:flux (751)

### 9.3.1.3.149 fluximp

Structure for the fluxes of a field of the core transport equations (impurities); Time-dependent;

member	type	description
flux_dv	array3dflt.type (9.3.1.2.1)	Flux of the field calculated from the transport coefficients. Time-dependent; Array3D (nrho,nion,max.nzimp)
flux_interp	array3dflt.type (9.3.1.2.1)	Interpretative flux deduced from measured data, the integral of the source term, and the time derivative of the field. Time-dependent; Array3D (nrho,nion,max.nzimp)

Type of: coreimpur:flux (679)

### 9.3.1.3.150 fluxion

Structure for the fluxes of a field of the core transport equations (ions); Time-dependent;



member	type	description
flux_dv	matflt.type (9.3.1.2.7)	Flux of the field calculated from the transport coefficients. Time-dependent; Matrix (nrho,nion)
flux_interp	matflt.type (9.3.1.2.7)	Interpretative flux deduced from measured data, the integral of the source term, and the time derivative of the field. Time-dependent; Matrix (nrho,nion)

Type of: corefieldion:flux (752)

### 9.3.1.3.151 fullwave

Solution by full wave code

member	type	description
pol_decomp	pol_decomp (9.3.1.3.207)	Poloidal decomposition of the wave fields. Uses the flux surface grid in grid_1d.
local	local (9.3.1.3.170)	Local description of the wave fields. Uses the grid in grid_2d.

Type of: coherentwave:fullwave (733)

### 9.3.1.3.152 geom\_iron

Geometry of the iron segments

member	type	description
npoints	vecint.type (9.3.1.2.10)	Number of points describing an element (irregular outline rzcoordinate); Vector (nsegment)
rzcoordinate	rz2D (9.3.1.3.244)	Irregular outline [m]; 2D arrays (nsegment,max_npoints)

Type of: desc\_iron:geom\_iron (767)

### 9.3.1.3.153 global\_param

0d output parameters

member	type	description
beta_pol	float (9.3.1.1.1)	poloidal beta; Time-dependent; Scalar
beta_tor	float (9.3.1.1.1)	toroidal beta; Time-dependent; Scalar
beta_normal	float (9.3.1.1.1)	normalised beta; Time-dependent; Scalar
i_plasma	float (9.3.1.1.1)	total toroidal plasma current [A]; Positive sign means anti-clockwise when viewed from above. Time-dependent; Scalar
li	float (9.3.1.1.1)	internal inductance; Time-dependent; Scalar
volume	float (9.3.1.1.1)	total plasma volume [m <sup>3</sup> ]; Time-dependent; Scalar
area	float (9.3.1.1.1)	area poloidal cross section [m <sup>2</sup> ]; Time-dependent; Scalar
psi_ax	float (9.3.1.1.1)	poloidal flux at the magnetic axis [Wb]; Time-dependent; Scalar
psi_bound	float (9.3.1.1.1)	poloidal flux at the selected plasma boundary (separatrix for a free boundary code; fixed boundary for fixed boundary code) [Wb]; Time-dependent; Scalar
mag_axis	mag_axis (9.3.1.3.171)	Magnetic axis values
q_95	float (9.3.1.1.1)	q at the 95% poloidal flux surface; Time-dependent; Scalar
q_min	float (9.3.1.1.1)	minimum q value in the plasma; Time-dependent; Scalar
toroid_field	b0r0 (9.3.1.3.48)	Characteristics of the vacuum toroidal field, redundant with the toroidfield CPO, to be used by the ETS
w_mhd	float (9.3.1.1.1)	Plasma energy content = 3/2 * int(p,dV) with p being the total pressure (thermal + fast particles) [J]. Time-dependent; Scalar
gamma	float (9.3.1.1.1)	Adiabatic index. Time-dependent; Scalar

Type of: equilibrium:global\_param (689)

### 9.3.1.3.154 globalparam

Various global quantities calculated from the 1D profiles. Time-dependent

member	type	description
current_tot	float (9.3.1.1.1)	Total plasma current [A]; Time-dependent; Scalar
current_bnd	float (9.3.1.1.1)	Plasma current inside transport solver boundary rho_tor_bnd [A]; Time-dependent; Scalar
current_ni	float (9.3.1.1.1)	Total non-inductive parallel current [A]; Time-dependent; Scalar

member	type	description
vloop	float (9.3.1.1.1)	Toroidal loop voltage [V]; Time-dependent; Scalar
li	float (9.3.1.1.1)	Internal inductance; Time-dependent; Scalar
beta_tor	float (9.3.1.1.1)	toroidal beta; Time-dependent; Scalar
beta_normal	float (9.3.1.1.1)	normalised beta; Time-dependent; Scalar
beta_pol	float (9.3.1.1.1)	poloidal beta; Time-dependent; Scalar
w_dia	float (9.3.1.1.1)	Plasma energy content = $3/2 * \int(p,dV)$ with p being the total pressure (pr.th + pr.perp). Time-dependent; Scalar

Type of: coreprof:globalparam (681)

### 9.3.1.3.155 grid

definition of the 2D grid

member	type	description
dim1	vecflt_type (9.3.1.2.9)	First dimension values; Time-dependent; Vector (ndim1)
dim2	vecflt_type (9.3.1.2.9)	Second dimension values; Time-dependent; Vector (ndim2)
connect	matint_type (9.3.1.2.8)	In case of a finite elemnt representation, lists the points (3 for triangles, 4 for quadrangles) which define a finite element. In this case, ndim1=ndim2 and the value of grid_connect represents the index of the points in the list 1:ndim. E.g. : grid_connect(i,1:4) is a list of four integers [k1 k2 k3 k4] meaning that finite element #i is defined by the points (dim1(k1),dim2(k1)),(dim1(k2),dim2(k2)),(dim1(k3),dim2(k3)) and (dim1(k4),dim2(k4)); Time-dependent; Matrix of integers (nelement,4)

Type of: profiles\_2d:grid (885)

### 9.3.1.3.156 grid\_info

Specifying the grid; type of the grid (unstructured/structured/rectangular), the grid coordiante, in what variables the source is continuous/discrete, if the source is given at gyrocentre or real particle position.

member	type	description
grid_type	integer (9.3.1.1.2)	Type of grid in continuous dimensions: 1=unstructured grid, 2=structured non-rectangular grid, 3=rectangular. For rectangular grids, and/or dimensions with discrete source, the grid coordinates dim1,dim2,... is stored in vectors dim1(1:ndim1,1,1,1), dim1(1,1:ndim2,1,1),...
ngriddim	integer (9.3.1.1.2)	Number of grid dimension. For ngriddim=2 the grid is specified by dim1 and dim2 only, while dim3, dim4, dim5, and dim6 can be ignored (should not be allocated). For ngriddim=3 also dim3 is used to describe the grid etc. E.g. if your distribution is given by the three variables the poloidal flux, perpendicular and parallel velocities, then ngriddim=3 and grid.coord(1)=15, grid.coord(1)=16, grid.coord(3)=6.
grid_coord	vecint_type (9.3.1.2.10)	Identifies the coordinates specifies in dim1, dim2, dim3, dim4, dim5, and dim6. grid_coord(K) describe the coordinate represented in dimK, for K=1,2...6. The possible coordinates are: 1=R, Major radius [m]; 2=Z, Vertical position [m]; 3=X, first cartesian coordinate in the horizontal plane [m]; 4=Y, second cartesian coordinate in the horizontal plane (grad(X) x grad(Y) = grad(Z)) [m]; 5=phi, toroidal angle [rad]; 6=psi, poloidal magnetic flux [T/m^2]; 7=rhotor, the square root of the toroidal flux; 8=theta, geometrical poloidal angle [rad]; 9=theta_b, Boozer poloidal angle [rad]; 10=vx, velocity in the x-direction [m/s]; 11=vy, velocity in the y-direction [m/s]; 12=vz, velocity in the z-direction [m/s]; 13=vel, total velocity [m/s]; 14=vphi, velocity in the phi-direction [m/s]; 15=vpar, velocity in the parallel direction [m/s]; 16=vperp, velocity in the perpendicular direction [m/s]; 17=E, Hamiltonian energy [J]; 18=Pphi, canonical toroidal angular momentum [kg m^2/s]; 19=mu, magnetic moment [J/T]; 20=Lambda=mu/E [1/T]; 21=pitch=vpar/v [-]; 22=s, the position of the omnigenous plane (generalised equatorial plane) as described by the fields omnigen_surf% <i>s</i> and omnigen_surf% <i>rz</i> ; 23=particle spin; 24=n.Legendre, the index of the Legendre polynomial of the pitch, e.g. if the k:th component of dim3(1,1,k,1,1,1)=5 then this refer to the 5:th Legendre polynomial P_5(xi). Vector (6)
discrete_dims	vecint_type (9.3.1.2.10)	Specifies discrete or continuous grid in each dimension separately. For discrete_dims(K)=1, K=1,2...6: the source is discretely distributed at the grid points of the dimK-grid (e.g. to treat the discrete energies injected with NBI); for discrete_dims(K)=0: continuous source, i.e. the source is distributed over the continuous variable dimK (e.g. the source density is a continuous function of the major radius). Vector (6)
gyrosrc_type	integer (9.3.1.1.2)	Defines how to interpret the source: 1 = the source is calculated at the particle birth point; 2 = the source is calculated at the gyro centre of the birth point.

Type of: source\_grid:grid\_info (955)

### 9.3.1.3.157 inj\_spec

Injected species

member	type	description
amn	float (9.3.1.1.1)	Atomic mass number
zn	float (9.3.1.1.1)	Nuclear charge

Type of: nbi\_unit:inj\_spec (856)

### 9.3.1.3.158 isoflux

Point series at which the flux is considered the same

member	type	description
position	rz1D (9.3.1.3.242)	Position of the points at which the flux is considered the same; Time-dependent; Vector (nmeas)
source	string (9.3.1.1.3)	Description or path to the source signal (diagnostic or genprof, from which to read all info on the signal), e.g. 'magdiag/bpol_probes/measure/value'. String
weight	vecflt_type (9.3.1.2.9)	weight given to the measurement ( $\zeta=0$ ); -1 if exact data; Time-dependent; Vector (nmeas)
sigma	vecflt_type (9.3.1.2.9)	standard deviation of the measurement; Time-dependent; Vector (nmeas)
calculated	vecflt_type (9.3.1.2.9)	Signal as recalculated by the equilibrium code; Time-dependent; Vector (nmeas)
chi2	vecflt_type (9.3.1.2.9)	chi <sup>2</sup> of (calculated-measured); Time-dependent; Vector (nmeas)

Type of: eqconstraint:isoflux (811)

### 9.3.1.3.159 jni

Non-inductive parallel current density [A/m<sup>2</sup>]; Time-dependent;

member	type	description
value	vecflt_type (9.3.1.2.9)	Value of jni; Time-dependent; Vector (nrho)
integral	vecflt_type (9.3.1.2.9)	Integral from 0 to rho of jni. Time-dependent; Vector (nrho)
source	string (9.3.1.1.3)	Source of the profile (any comment describing the origin of the profile : code, path to diagnostic signals, massaging, ...); String

Type of: psi:jni (887)

### 9.3.1.3.160 lang\_derived

Structure for physics quantities derived from Langmuir probe measurements

member	type	description
source	vecstring_type (9.3.1.2.11)	Probes in probe holder used to derive measure. String vector
position	rzphi1Dexp (9.3.1.3.248)	Position of the measurement. Time-dependent.
measure	exp1D (9.3.1.3.143)	Measured quantity. Time-dependent.

Type of: langmuirdiag:machpar (693) I langmuirdiag:ne (693) I langmuirdiag:te (693)

### 9.3.1.3.161 lang\_measure

Structure for elementary Langmuir probe measurement

member	type	description
name	vecstring_type (9.3.1.2.11)	Name of the probe e.g. Jsatur1,Vfloat1). String vector
direction	vecstring_type (9.3.1.2.11)	Direction of the probe w.r.t. magnetic field. For Mach arrangement use 'co' (co-field) and 'ct' (counter field) for the pair, otherwise use 'both'. String vector
area	exp1D (9.3.1.3.143)	Effective area of probe [m <sup>2</sup> ]. Time-dependent.
position	rzphi1Dexp (9.3.1.3.248)	Position of the measurement. Time-dependent.
measure	exp1D (9.3.1.3.143)	Measured quantity. Time-dependent.

Type of: langmuirdiag:bias (693) I langmuirdiag:jsat (693) I langmuirdiag:potential (693)

### 9.3.1.3.162 launchangles

Launching angles of the beam

member	type	description
alpha	float (9.3.1.1.1)	Poloidal launching angle between the horizontal plane and the poloidal component of the nominal beam centerline (trigonometric convention) [rad]; Time-dependent
beta	float (9.3.1.1.1)	Toroidal launching angle between the horizontal plane and the poloidal component of the nominal beam centerline (trigonometric convention) [rad]; Time-dependent

Type of: antenna.ec:launchangles (714)

### 9.3.1.3.163 launches\_parallel

Power spectrum as a function of the parallel refractive index.

member	type	description
nn_par	vecint.type (9.3.1.2.10)	Number of points for the discretization of the spectrum in the poloidal direction, Vector of integers (nantenna).
n_par	matflt.type (9.3.1.2.7)	Refraction index in the parallel direction, Matrix (nantenna,max_nn_par).
power	vecflt.type (9.3.1.2.9)	$W/dN_{par}$ [W], Matrix(nantenna, max_nn_par). Time-dependent

Type of: spectrum:parallel (964)

### 9.3.1.3.164 launches\_phi\_theta

Power spectrum as a function of the refractive index in the toroidal and poloidal directions.

member	type	description
nn_phi	vecint.type (9.3.1.2.10)	Number of points for the discretization of the spectrum in the toroidal direction, Vector of integers (nantenna).
nn_theta	vecint.type (9.3.1.2.10)	Number of points for the discretization of the spectrum in the poloidal direction, Vector of integers (nantenna).
n_phi	matflt.type (9.3.1.2.7)	Refraction index in the toroidal direction, Matrix (nantenna,max_nn_phi).
n_theta	matflt.type (9.3.1.2.7)	Refraction index in poloidal direction, Matrix (nantenna,max_nn_theta).
power	array3dflt.type (9.3.1.2.1)	$W/dN_{phi}/dN_{theta}$ [W], Array (nantenna, max_nn_phi, max_nn_theta). Time-dependent

Type of: spectrum:phi\_theta (964)

### 9.3.1.3.165 launches\_rfbeam

Beam characteristics (RF wave description)

member	type	description
spot	launchs_rfbeam_spot (9.3.1.3.167)	Spot characteristics
phaseellipse	launchs_rfbeam_phaseellipse (9.3.1.3.166)	Phase ellipse characteristics of the spot

Type of: launchs:beam (694)

### 9.3.1.3.166 launches\_rfbeam\_phaseellipse

Phase ellipse characteristics of the spot

member	type	description
invcurvrad	matflt.type (9.3.1.2.7)	Inverse curvature radii for the phase ellipse [m-1], Matrix (nantenna,2). Time-dependent
angle	vecflt.type (9.3.1.2.9)	Rotation angle for the phase ellipse [rd], Vector(nantenna). Time-dependent

Type of: launchs\_rfbeam:phaseellipse (838)

### 9.3.1.3.167 launches\_rfbeam\_spot

Spot characteristics

member	type	description
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member	type	description
waist	matflt_type (9.3.1.2.7)	Waist for the spot ellipse [m], Matrix (nantenna,2). Time-dependent
angle	vecflt_type (9.3.1.2.9)	Rotation angle for the spot ellipse [rd], Vector(nantenna). Time-dependent

Type of: launches\_rfbeam:spot (838)

### 9.3.1.3.168 limiter\_unit

Vector of limiting surfaces. Replicate this limiter\_unit element ncomponents times. Each unit contains a plasma facing component that can have dedicated number of points. Array of structures (ncomponents)

member	type	description
name	string (9.3.1.1.3)	Name or description of the limiter_unit
closed	string (9.3.1.1.3)	Identify whether the contour is closed (y) or open (n)
position	rz1D (9.3.1.3.242)	Position (R,Z coordinates) of a limiting surface. No need to repeat first point for closed contours [m]; Vector(npoints)

Type of: limiter:limiter\_unit (695)

### 9.3.1.3.169 lineintegraldiag

General line integral diagnostic

member	type	description
datainfo	datainfo (9.3.1.3.92)	Generic information on a data item
expression	string (9.3.1.1.3)	Formal expression for the line integral to be evaluated as a function of ne, ni, Te, Ti, Zeff, Br, Bz
setup_line	setup_line (9.3.1.3.278)	Geometric description of the lines of sight
measure	exp1D (9.3.1.3.143)	Measured value. Time-dependent; Vector (nchords)
time	float (9.3.1.1.1)	Time [s]; Time-dependent; Scalar

### 9.3.1.3.170 local

Local description of the wave fields. Uses the grid in grid\_2d.

member	type	description
e.plus	array3dfilt_type (9.3.1.2.1)	Magnitude of left hand polarised component of the wave electric field [V/m]; Time-dependent; Array 3D (ntor, ndim1, ndim2)
e.plus.ph	array3dfilt_type (9.3.1.2.1)	Phase of left hand polarised component of the wave electric field [rad]; Time-dependent; Array 3D (ntor, ndim1, ndim2)
e.minus	array3dfilt_type (9.3.1.2.1)	Magnitude of right hand polarised component of the wave electric field [v/m]; Time-dependent; Array 3D (ntor, ndim1, ndim2)
e.minus.ph	array3dfilt_type (9.3.1.2.1)	Phase of right hand polarised component of the wave electric field [rad]; Time-dependent; Array 3D (ntor, ndim1, ndim2)
e.norm	array3dint_type (9.3.1.2.2)	Magnitude of wave electric field normal to a flux surface [V/m]; Time-dependent; 3D (ntor, ndim1, ndim2)
enorm.ph	array3dfilt_type (9.3.1.2.1)	Phase of wave electric field normal to a flux surface [rad]; Time-dependent; 3D (ntor, ndim1, ndim2)
e.binorm	array3dfilt_type (9.3.1.2.1)	Magnitude of wave electric field tangent to a flux surface [V/m]; Time-dependent; 3D (ntor, ndim1, ndim2)
e.binorm.ph	array3dfilt_type (9.3.1.2.1)	Phase of wave electric field tangent to a flux surface [rad]; Time-dependent; 3D (ntor, ndim1, ndim2)
e.para	array3dfilt_type (9.3.1.2.1)	Magnitude of parallel wave electric field [V/m]; Time-dependent; Array 3D (ntor, ndim1, ndim2)
e.para.ph	array3dfilt_type (9.3.1.2.1)	Phase of parallel wave electric field [rad]; Time-dependent; Array 3D (ntor, ndim1, ndim2)
b.norm	array3dfilt_type (9.3.1.2.1)	Magnitude of wave magnetic field normal to a flux surface [T]; Time-dependent; Array 3D (ntor, ndim1, ndim2)
b.norm.ph	array3dfilt_type (9.3.1.2.1)	Phase of wave magnetic field normal to a flux surface [rad]; Time-dependent; Array 3D (ntor, ndim1, ndim2)
b.binorm	array3dfilt_type (9.3.1.2.1)	Magnitude of wave magnetic field tangent to a flux surface [T]; Time-dependent; Array 3D (ntor, ndim1, ndim2)
b.binorm.ph	array3dfilt_type (9.3.1.2.1)	Phase of wave magnetic field tangent to a flux surface [rad]; Time-dependent; Array 3D (ntor, ndim1, ndim2)
b.para	array3dfilt_type (9.3.1.2.1)	Magnitude of wave magnetic field parallel to the equilibrium magnetic field [T]; Time-dependent; Array 3D (ntor, ndim1, ndim2)

member	type	description
b_para_ph	array3dflt.type (9.3.1.2.1)	Phase of wave magnetic field parallel to the equilibrium magnetic field [rad]; Time-dependent; Array 3D (ntor, ndim1, ndim2)

Type of: fullwave:local (824)

### 9.3.1.3.171 mag\_axis

Magnetic axis values

member	type	description
position	rz0D (9.3.1.3.241)	Position of the magnetic axis [m]; Time-dependent; Scalar;
bphi	float (9.3.1.1.1)	Total toroidal magnetic field at the magnetic axis [T]; Time-dependent; Scalar
q	float (9.3.1.1.1)	q at the magnetic axis; Time-dependent; Scalar

Type of: global\_param:mag\_axis (826)

### 9.3.1.3.172 magnet\_iron

Magnetisation in iron segments [T]

member	type	description
mr	eqmes1D (9.3.1.3.141)	Magnetisation along the R axis [T];
mz	eqmes1D (9.3.1.3.141)	Magnetisation along the Z axis [T];

Type of: eqconstraint:magnet\_iron (811)

### 9.3.1.3.173 magnetise

Magnetisation M of the iron segment, assumed to be constant inside a given iron segment. Reminder :  $H = 1/\mu_0 * B - \mu_r * M$ ; [A/m].

member	type	description
mr	exp1D (9.3.1.3.143)	Magnetisation along the R axis [T]; Time-dependent; Vector (nsegment)
mz	exp1D (9.3.1.3.143)	Magnetisation along the Z axis [T]; Time-dependent; Vector (nsegment)

Type of: ironmodel:magnetise (692)

### 9.3.1.3.174 mdinfo

Information related to machine description for this entry

member	type	description
shot_min	integer (9.3.1.1.2)	Minimum shot number to which the machine description applies
shot_max	integer (9.3.1.1.2)	Maximum shot number to which the machine description applies
md_entry	entry_def (9.3.1.3.137)	Entry of the machine description used. NB : just for information : for the moment, no guarantee that machine description data have not been modified with respect to the data in md_entry. Machine description data are written explicitly in each CPO.

Type of

### 9.3.1.3.175 mhd\_ideal\_wall2d

Ideal wall

member	type	description
walltype	integer (9.3.1.1.2)	0 (conformal) or 1 (free); Integer; Time-dependent;
position	rz1D (9.3.1.3.242)	RZ description of the wall; Time-dependent;

Type of: mhd\_walls2d:ideal.wall (853)

### 9.3.1.3.176 mhd\_plasma

MHD modes in the confined plasma

member	type	description
psi	vecflt.type (9.3.1.2.9)	Position in poloidal flux [Wb] (without $1/2\pi$ and such that $B_p =  \text{grad } \psi  / R/2/\pi$ ). Time-dependent; Vector (npsi)
m	array3dflt.type (9.3.1.2.1)	Poloidal mode number; Time-dependent; Array3D (npsi,nn,nm)
disp_perp	array3dflt.type (9.3.1.2.1)	Perpendicular displacement of the mode (in Fourier space) [m]; Time-dependent; Array 3D (npsi,nn,nm)
disp_par	array3dflt.type (9.3.1.2.1)	Parallel displacement of the mode (in Fourier space) [m]; Time-dependent; Array 3D (npsi,nn,nm)
tau_alfven	vecflt.type (9.3.1.2.9)	Alven time= $R/vA=R0 \sqrt{\mu_0 \rho_0} / B0$ [s]; Definitions of $R0$ , $B0$ , $\mu_0$ , $\rho_0$ to be clarified. $\rho_0$ grid should be included in the MHD CPO ? Time-dependent; Vector (npsi)
tau_resistive	vecflt.type (9.3.1.2.9)	Resistive time = $\mu_0 \rho_0 / 1.22 / \eta_{\text{neo}}$ [s]; Source of $\eta_{\text{neo}}$ to be clarified. Time-dependent; Vector (npsi)
coord_sys	coord_sys (9.3.1.3.76)	flux surface coordinate system on a square grid of flux and angle
a_pert	mhd_vector (9.3.1.3.179)	Perturbed vector potential (in Fourier space) [T.m]
b_pert	mhd_vector (9.3.1.3.179)	Perturbed magnetic field (in Fourier space) [T]
v_pert	mhd_vector (9.3.1.3.179)	Perturbed velocity (in Fourier space) [m/s]
p_pert	array3dflt.type (9.3.1.2.1)	Perturbed pressure (in Fourier space) [Pa]; Time-dependent; Array 3D (npsi,nn,nm)
rho_mass_pert	array3dflt.type (9.3.1.2.1)	Perturbed mass density (in Fourier space) [ $\text{kg}/\text{m}^3$ ]; Time-dependent; Array 3D (npsi,nn,nm)
temp_pert	array3dflt.type (9.3.1.2.1)	Perturbed temperature (in Fourier space) [eV]; Time-dependent; Array 3D (npsi,nn,nm)

Type of: mhd:plasma (697)

### 9.3.1.3.177 mhd\_res\_wall2d

Resistive wall

member	type	description
walltype	integer (9.3.1.1.2)	0 (conformal) or 1 (free); Integer; Time-dependent;
delta	float (9.3.1.1.1)	Wall thickness [m]; Time-dependent; Scalar
eta	float (9.3.1.1.1)	Wall resistivity [ohm.m]; Time-dependent; Scalar
position	rz1D (9.3.1.3.242)	RZ description of the wall; Time-dependent;

Type of: mhd\_walls2d:res\_wall (853)

### 9.3.1.3.178 mhd\_vacuum

External modes

member	type	description
m	array3dflt.type (9.3.1.2.1)	Poloidal mode number; Time-dependent; Array3D (npsi,nn,nm)
coord_sys	coord_sys (9.3.1.3.76)	flux surface coordinate system on a square grid of flux and angle
a_pert	mhd_vector (9.3.1.3.179)	Perturbed vector potential (in Fourier space) [T.m]
b_pert	mhd_vector (9.3.1.3.179)	Perturbed magnetic field (in Fourier space) [T]

Type of: mhd:vacuum (697)

### 9.3.1.3.179 mhd\_vector

Vector structure for MHD CPO

member	type	description
coord1	array3dflt.type (9.3.1.2.1)	Fourier components of first coordinate; Time-dependent; Array 3D (npsi,nn,nm)
coord2	array3dflt.type (9.3.1.2.1)	Fourier components of second coordinate; Time-dependent; Array 3D (npsi,nn,nm)
coord3	array3dflt.type (9.3.1.2.1)	Fourier components of third coordinate; Time-dependent; Array 3D (npsi,nn,nm)

Type of: mhd\_plasma:a\_pert (849) | mhd\_plasma:b\_pert (849) | mhd\_plasma:v\_pert (849) | mhd\_vacuum:a\_pert (851) | mhd\_vacuum:b\_pert (851)

### 9.3.1.3.180 mhd\_walls2d

#### 2D Walls

member	type	description
ideal_wall	mhd_ideal_wall2d (9.3.1.3.175)	Ideal wall
res_wall	mhd_res_wall2d (9.3.1.3.177)	Resistive Wall(s). Time-dependent

Type of: mhd:walls (697)

### 9.3.1.3.181 midplane

#### Intersections with the midplane

member	type	description
outer	orbit_pos (9.3.1.3.193)	Position at outer mid-plane
inner	orbit_pos (9.3.1.3.193)	Position at inner mid-plane

Type of: special\_pos:midplane (962)

### 9.3.1.3.182 modules

Modules description. NB there are nmodules per antenna, distributed among nma\_phi toroidal positions and nma\_theta poloidal positions

member	type	description
nma_theta	integer (9.3.1.1.2)	Number of modules per antenna in the poloidal direction.
nma_phi	integer (9.3.1.1.2)	Number of modules per antenna in the toroidal direction.
ima_theta	vecint_type (9.3.1.2.10)	Position index of the module in the poloidal direction (from low theta to high theta, i.e. from bottom to top if the antenna is on LFS). Vector of integers (nmodules).
ima_phi	vecint_type (9.3.1.2.10)	Position index of the module in the toroidal direction (from low phi to high phi, counter-clockwise when seen from above). Vector of integers (nmodules).
sm_theta	float (9.3.1.1.1)	Spacing between poloidally neighboring modules [m]
amplitude	exp1D (9.3.1.3.143)	Amplitude of the TE10 mode injected in the module [W], Vector exp1d (nmodules). Time-dependent
phase	exp1D (9.3.1.3.143)	Phase of the TE10 mode injected in the module [radians], Vector exp1d (nmodules). Time-dependent
waveguides	waveguides (9.3.1.3.325)	Waveguides description

Type of: antennalh\_setup:modules (719)

### 9.3.1.3.183 nbi\_unit

Injector unit. Structure array(nunits). Time-dependent

member	type	description
inj_spec	inj_spec (9.3.1.3.157)	Injected species
pow_unit	exp0D (9.3.1.3.142)	Power delivered by an NBI unit [W]; Time-dependent
inj_eng_unit	exp0D (9.3.1.3.142)	Full injection energy of a unit [ev]; Time-dependent
beamcurfrac	exp1D (9.3.1.3.143)	Beam current fractions; beamcurfrac(j) is the fraction of the beam current from beam neutrals with the j:th harmonic energy, inj_eng_unit. Vector(3); Time-dependent
beampowfrac	exp1D (9.3.1.3.143)	Beam power fractions; beampowfrac(j) is the fraction of the beam power from beam neutrals with the j:th harmonic energy, inj_eng_unit. Vector(3); Time-dependent
setup_inject	setup_inject (9.3.1.3.277)	Detailed information on an injection unit.
codeparam	codeparam (9.3.1.3.58)	Code parameters

Type of: nbi:nbi\_unit (699)

### 9.3.1.3.184 ne\_transp

Transport coefficients for electron density equation. Time-dependent.



member	type	description
diff_eff	matflt.type (9.3.1.2.7)	Effective diffusivity [ $m^2.s^{-1}$ ]. The last index of the array describes which multiplier should be applied to the particule flux when adding its contribution in the expression of the heat flux : position 1 is multiplied by 0, 2 is multiplied by 3/2, 3 is multiplied by 5/2. The total particle flux (for the particle transport equation) is obtained as the sum over the three positions. Time-dependent. Matrix (nrho,3)
vconv_eff	matflt.type (9.3.1.2.7)	Effective convection [ $m.s^{-1}$ ]. The last index of the array describes which multiplier should be applied to the particule flux when adding its contribution in the expression of the heat flux : position 1 is multiplied by 0, 2 is multiplied by 3/2, 3 is multiplied by 5/2. The total particle flux (for the particle transport equation) is obtained as the sum over the three positions. Time-dependent. Matrix (nrho,3)
flux	vecflt.type (9.3.1.2.9)	Flux. Not used in transport equations [ $field.m.s^{-1},m^{-3}$ if field is not a density itself]. Time-dependent. Vector (nrho)
off_diagonal	offdiagel (9.3.1.3.188)	Details of the transport matrix, just for diagnostic (not used in transport equations). Time-dependent.
flag	integer (9.3.1.1.2)	Flag describing the form of transport produced by the original model : 0- not calculated, 1- D and V, 2- flux, 3- full transport matrix. Scalar.

Type of: coretransp:ne\_transp (683)

### 9.3.1.3.185 neutrallist

Definition of neutral species

member	type	description
ncomp	vecint.type (9.3.1.2.10)	For each neutral species, number of distinct atoms that enter the composition of this species (1 if the neutral is an atom, more for a molecule : 2 for CH <sub>4</sub> ). Vector of integers (nneut)
tatm	matint.type (9.3.1.2.8)	For each neutral species, and each of its atomic component, index of the atom (referring to the atomlist). Matrix of integers (nneut,max_ncomp)
multatm	matint.type (9.3.1.2.8)	For each neutral species, and each of its atomic component, number of such atoms. Matrix of integers (nneut,max_ncomp)

Type of: composition\_neutrals:neutrallist (748)

### 9.3.1.3.186 ni\_transp

Transport coefficients for ion density equation. Time-dependent.

member	type	description
diff_eff	array3dflt.type (9.3.1.2.1)	Effective diffusivity [ $m^2.s^{-1}$ ]. The last index of the array describes which multiplier should be applied to the particule flux when adding its contribution in the expression of the heat flux : position 1 is multiplied by 0, 2 is multiplied by 3/2, 3 is multiplied by 5/2. The total particle flux (for the particle transport equation) is obtained as the sum over the three positions. Time-dependent. Array3d (nrho,nion,3)
vconv_eff	array3dflt.type (9.3.1.2.1)	Effective convection [ $m.s^{-1}$ ]. The last index of the array describes which multiplier should be applied to the particule flux when adding its contribution in the expression of the heat flux : position 1 is multiplied by 0, 2 is multiplied by 3/2, 3 is multiplied by 5/2. The total particle flux (for the particle transport equation) is obtained as the sum over the three positions. Time-dependent. Array3d (nrho,nion,3)
flux	matflt.type (9.3.1.2.7)	Flux. Not used in transport equations [ $field.m.s^{-1},m^{-3}$ if field is not a density itself]. Time-dependent. Matrix (nrho,nion)
off_diagonal	offdiagion (9.3.1.3.189)	Details of the transport matrix, just for diagnostic (not used in transport equations). Time-dependent.
flag	integer (9.3.1.1.2)	Flag describing the form of transport produced by the original model : 0- not calculated, 1- D and V, 2- flux, 3- full transport matrix. Scalar.

Type of: coretransp:ni\_transp (683)

### 9.3.1.3.187 objects

Definition of higher-dimensional objects ( $\zeta = 1d$ ) in the grid space (e.g. edges, faces, cells). An object of dimension  $n$  is defined; by enumerating the  $(n-1)$ -dimensional objects defining its boundaries.

member	type	description
boundary	matint.type (9.3.1.2.8)	Lists of $(n-1)$ -dimensional objects defining the boundary of an $n$ -dimensional object. Matrix(nobject,nmaxobjectboundary);First dimension: object index, second index: boundary object index

member	type	description
neighbour	array3dint.type (9.3.1.2.2)	Connectivity information. 3d array of integers(nobject, nmaxobjectboundaries, nmaxneighboursperboundary); Stores the indices of the n-dimensional objects adjacent to a given n-dimensional object.;An object can possibly have multiple neighbours on every boundary. ;First dimension: object index, second dimension: boundary index, third dimension: neighbour index on the boundary.
geo	array3dflt.type (9.3.1.2.1)	Geometry data matrix associated with an object. 3d float array(nobject,ngeo1,ngeo2). Meaning depends on the value of grid.space.properties.geotype.; First dimension: object index, second+third dimension: matrix row+column.
measure	vecflt.type (9.3.1.2.9)	Measure of object, i.e. physical size (length for 1d, area for 2d, volume for 3d objects). [m <sup>dim</sup> ]. Use this field to store measures for (sub)objects explicitly defined in spaces.

Type of: complexgrid\_space:objects (742)

### 9.3.1.3.188 offdiagel

Subtree containing the full transport matrix from a transport model, for the electrons. Time-dependent.

member	type	description
d.ni	matflt.type (9.3.1.2.7)	Off-Diagonal term coupling ion density gradient to the transport equation [m. <sup>2</sup> .s <sup>-1</sup> ]. Time-dependent. Matrix (nrho,nion)
d.ti	matflt.type (9.3.1.2.7)	Off-Diagonal term coupling ion density gradient to the transport equation [m. <sup>2</sup> .s <sup>-1</sup> ]. Time-dependent. Matrix (nrho,nion)
d.ne	vecflt.type (9.3.1.2.9)	Off-Diagonal term coupling electron density gradient to the transport equation [m. <sup>2</sup> .s <sup>-1</sup> ]. Time-dependent. Vector (nrho)
d.te	vecflt.type (9.3.1.2.9)	Off-Diagonal term coupling electron temperature gradient to the transport equation [m. <sup>2</sup> .s <sup>-1</sup> ]. Time-dependent. Vector (nrho)
d.epar	vecflt.type (9.3.1.2.9)	Off-Diagonal term coupling parallel electric field to the transport equation [m. <sup>2</sup> .s <sup>-1</sup> ]. Time-dependent. Vector (nrho)
d.mtor	vecflt.type (9.3.1.2.9)	Off-Diagonal term coupling total toroidal momentum to the transport equation [m. <sup>2</sup> .s <sup>-1</sup> ]. Time-dependent. Vector (nrho)

Type of: ne\_transp:off\_diagonal (857) I transcoefel:off\_diagonal (979)

### 9.3.1.3.189 offdiagion

Subtree containing the full transport matrix from a transport model, for the various ion species

member	type	description
d.ni	array3dflt.type (9.3.1.2.1)	Off-Diagonal term coupling ion density gradient to the transport equation [m. <sup>2</sup> .s <sup>-1</sup> ]. Time-dependent. Array3d (nrho,nion,nion)
d.ti	array3dflt.type (9.3.1.2.1)	Off-Diagonal term coupling ion density gradient to the transport equation [m. <sup>2</sup> .s <sup>-1</sup> ]. Time-dependent. Array3d (nrho,nion,nion)
d.ne	matflt.type (9.3.1.2.7)	Off-Diagonal term coupling electron density gradient to the transport equation [m. <sup>2</sup> .s <sup>-1</sup> ]. Time-dependent. Matrix (nrho,nion)
d.te	matflt.type (9.3.1.2.7)	Off-Diagonal term coupling electron temperature gradient to the transport equation [m. <sup>2</sup> .s <sup>-1</sup> ]. Time-dependent. Matrix (nrho,nion)
d.epar	matflt.type (9.3.1.2.7)	Off-Diagonal term coupling parallel electric field to the transport equation [m. <sup>2</sup> .s <sup>-1</sup> ]. Time-dependent. Matrix (nrho,nion)
d.mtor	matflt.type (9.3.1.2.7)	Off-Diagonal term coupling total toroidal momentum to the transport equation [m. <sup>2</sup> .s <sup>-1</sup> ]. Time-dependent. Matrix (nrho,nion)

Type of: ni\_transp:off\_diagonal (859) I transcoefion:off\_diagonal (981) I transcoefvtor:off\_diagonal (982)

### 9.3.1.3.190 omnigen\_surf

List of omnigeuous magnetic surfaces to which the s-coordinates in grid.coord refer. NOTE: only used for gridcoord=3. NOTE: all guiding centre orbits intersect at least one omnigeuous (or stagnation) surfaces, i.e. the omnigeuous generalised the equitorial plane (the midplane). nsurfs=Number of omnigenous surfaces. Structure array(nregion.topo)

member	type	description
rz	rz1D (9.3.1.3.242)	(R,z) coordinates of the omnigeuous magnetic surfaces (generalised equitorial plane). NOTE: only used for gridcoord=3. Vector rz1d (nsurfs)
s	vecflt.type (9.3.1.2.9)	Coordinates which uniquely maps the omnigeuous magnetic surfaces (generalised equitorial plane). NOTE: only used for gridcoord=3. Vector (nsurfs)

Type of: `dist_grid_info:omnigen_surf` (774)

### 9.3.1.3.191 orb\_glob\_dat

Global quantities associated with an orbit.

member	type	description
orbit_type	vecint_type (9.3.1.2.10)	Identifier of orbit type: 0 trapped, -1 co-passing, + 1 counter-passing ; Time-dependent; Vector (norbits)
omega_b	vecflt_type (9.3.1.2.9)	Bounce angular frequency rad/s; Time-dependent; Vector (norbits)
omega_phi	vecflt_type (9.3.1.2.9)	Toroidal angular precession frequency [rad/s]; Time-dependent; Vector (norbits).
omega_c_av	vecflt_type (9.3.1.2.9)	Orbit averaged cyclotron frequency [rad/a]; Time-dependent; Vector(norbits).
special_pos	special_pos (9.3.1.3.289)	Special positions along an orbit (like turning points).

Type of: `orbit:orb_glob_dat` (701)

### 9.3.1.3.192 orb\_trace

Position of particle in 5D space (3D in real and 2D in velocity).

member	type	description
time_orb	matflt_type (9.3.1.2.7)	Time along the orbit [s]; Time-dependent; Matrix (norbits, max_ntorb)
ntorb	vecint_type (9.3.1.2.10)	Number of time slices along the orbit, for each orbit. Time-dependent; Vector (norbits)
r	matflt_type (9.3.1.2.7)	Major radius of the guiding centre [m], Major radius; Time-dependent; Matrix (norbits, max_ntorb).
z	matflt_type (9.3.1.2.7)	Altitude of the guiding centre [m]; Time-dependent; Matrix (norbits, max_ntorb).
psi	matflt_type (9.3.1.2.7)	Guiding centre position in psi [normalised poloidal flux]; Time-dependent; Matrix (norbits, max_ntorb).
theta_b	matflt_type (9.3.1.2.7)	Position of the guiding centre in poloidal Boozer angle [rad]; Time-dependent; Matrix (norbits, max_ntorb).
v_parallel	matflt_type (9.3.1.2.7)	Parallel velocity along the orbit [m/s]; Time-dependent; Matrix (norbits, max_ntorb).
v_perp	matflt_type (9.3.1.2.7)	Perpendicular velocity along the orbit [m/s]; Time-dependent; Matrix (norbits, max_ntorb).

Type of: `orbit:orb_trace` (701)

### 9.3.1.3.193 orbit\_pos

Complex type for orbit position (Vector)

member	type	description
r	vecflt_type (9.3.1.2.9)	Major radius [m]; Time-dependent; Vector (norbits).
z	vecflt_type (9.3.1.2.9)	Altitude [m]; Time-dependent; Vector (norbits).
psi	vecflt_type (9.3.1.2.9)	Position in psi [normalised poloidal flux]; Time-dependent; Vector (norbits).
theta_b	vecflt_type (9.3.1.2.9)	Poloidal Boozer angle [rad]; Time-dependent; Vector (norbits).

Type of: `midplane:inner` (854) | `midplane:outer` (854) | `turning_pts:lower` (996) | `turning_pts:upper` (996)

### 9.3.1.3.194 orbitt\_id

Parameters identifying an orbit

member	type	description
amn	float (9.3.1.1.1)	Atomic mass of the ion; Scalar
zion	float (9.3.1.1.1)	Atomic charge of the ion; Scalar
energy	vecflt_type (9.3.1.2.9)	Energy of the ion [keV]; Time-dependent; Vector (norbits).
magn_mom	vecflt_type (9.3.1.2.9)	Magnetic momentum [ $\text{kg m}^2 / \text{s}^2 / \text{T}$ ]; Time-dependent, Vector(norbits).
p_phi	vecflt_type (9.3.1.2.9)	toroidal angular momentum [ $\text{kg m}^2 / \text{s}$ ]; Time-dependent; Vector(norbits);
sigma	vecint_type (9.3.1.2.10)	Sign of parallel velocity at $\text{psi}=\text{psi}_{\text{max}}$ along the orbit; Time-dependent; Vector(norbits)

Type of: `orbit:orbitt_id` (701)

### 9.3.1.3.195 param

Code parameters block passed from the wrapper to the subroutine. Does not appear as such in the data structure (in fact each string is an instance of coparam/parameters). This is inserted in utilities.xsd for automatic declaration in the Fortran type definitions.

member	type	description
parameters	string (9.3.1.1.3)	Actual value of the code parameters (instance of coparam/parameters in XML format).
default_param	string (9.3.1.1.3)	Default value of the code parameters (instance of coparam/parameters in XML format).
schema	string (9.3.1.1.3)	Code parameters schema.

Type of

### 9.3.1.3.196 permeability

Permeability model (can be different for each iron segment)

member	type	description
b	matflt.type (9.3.1.2.7)	List of B values for description of the mur(B) dependence [T]; Matrix (nsegment,nB)
mur	matflt.type (9.3.1.2.7)	Relative permeability mur(B) [dimensionless]; Matrix (nsegment,nB)

Type of: desc\_iron:permeability (767)

### 9.3.1.3.197 pfcircuits

Circuits, connected to multiple coils and to multiple supplies, defining the current and voltage relationships in the system

member	type	description
name	vecstring.type (9.3.1.2.11)	Name of circuit, array of strings (ncircuits)
id	vecstring.type (9.3.1.2.11)	ID of circuit, array of strings (ncircuits)
type	vecstring.type (9.3.1.2.11)	Type of circuit, array of strings (ncircuits)
nnodes	vecint.type (9.3.1.2.10)	Number of nodes used to describe a circuit. Vector (ncircuits)
connections	array3dint.type (9.3.1.2.2)	Description of the supplies and coils connections (nodes) across each circuit. Array 3D (ncircuits,max_nnodes,2*ncomponents), describing for each node which component are connected to it (1 if connected, 0 otherwise). There are 2 sides at each component, thus 2*ncomponents as the size of the third dimension, listing first all supplies, then all coils (in the same order as listed in PFSUPPLIES and PFCOILS). An example can be found in the data structure documentation PFconnections.pdf

Type of: pfsystems:pfcircuits (702)

### 9.3.1.3.198 pccoils

Active poloidal field coils

member	type	description
desc_pccoils	desc_pccoils (9.3.1.3.95)	Description of the coils
coilcurrent	exp1D (9.3.1.3.143)	Circuit feed current in the coil, defined positive if it flows from point 1 to point 2 of the component in the pfcircuit description [A]; Time-dependent; Vector (ncoils)
coilvoltage	exp1D (9.3.1.3.143)	Voltage on the full coil [V]; Time-dependent; Vector (ncoils)

Type of: pfsystems:pccoils (702)

### 9.3.1.3.199 pfelement

Axisymmetric conductor description

member	type	description
name	vecstring.type (9.3.1.2.11)	Name of this element. Should be a matrix of strings (ncoils,max_nelements), but not supported by the UAL yet.
id	vecstring.type (9.3.1.2.11)	ID of this element. Should be a matrix of strings (ncoils,max_nelements), but not supported by the UAL yet.

member	type	description
turnsign	matflt.type (9.3.1.2.7)	Sign of turn and fraction of a turn for calculating magnetic field of the Element; Matrix (ncoils,max_nelements)
area	matflt.type (9.3.1.2.7)	Surface area of this element [m <sup>2</sup> ]; Matrix (ncoils,max_nelements)
pfgeometry	pfgeometry (9.3.1.3.200)	Shape of a PF Coil Element

Type of: desc\_pfcoids:pfelement (768)

### 9.3.1.3.200 pfgeometry

Shape of a PF Coil Element

member	type	description
type	matint.type (9.3.1.2.8)	Type used to describe a coil shape (0 for 'rzcoordinates' or 1 for 'rzdrdz'); Matrix of integers (ncoils,max_nelements)
npoints	matint.type (9.3.1.2.8)	Number of points describing an element (irregular outline rzcoordinates); Matrix (ncoils,max_nelements)
rzcoordinate	rz3D (9.3.1.3.245)	Irregular outline [m]; 3D arrays (ncoils,max_nelements,max_npoints)
rzdrdz	array3dflt.type (9.3.1.2.1)	4-vector defining Centre R,Z and full extents dR, dZ [m]; 3D Array (ncoils,max_nelements,4)

Type of: pfelement:pfgeometry (872)

### 9.3.1.3.201 pfpageometry

Geometry of the passive elements

member	type	description
type	vecint.type (9.3.1.2.10)	Type used to describe the shape (0 for 'rzcoordinates' or 1 for 'rzdrdz'); Vector of integers (nelements)
npoints	vecint.type (9.3.1.2.10)	Number of points describing an element (irregular outline rzcoordinates); Vector of integers (nelements)
rzcoordinate	rz2D (9.3.1.3.244)	Irregular outline [m]; Matrix (nelements,max_npoints)
rzdrdz	matflt.type (9.3.1.2.7)	4-vector defining Centre R,Z and full extents dR, dZ [m]; Matrix (nelements,4)

Type of: pfpassive:pfpageometry (875)

### 9.3.1.3.202 pfpassive

Passive axisymmetric conductor description

member	type	description
area	vecflt.type (9.3.1.2.9)	Surface area of this passive element [m <sup>2</sup> ]; Vector (nelements)
res	vecflt.type (9.3.1.2.9)	Passive element resistance [Ohm]; Vector (nelements)
pfpageometry	pfpageometry (9.3.1.3.201)	Geometry of the passive elements

Type of: pfsystems:pfpassive (702)

### 9.3.1.3.203 pfsupplies

PF power supplies

member	type	description
desc_supply	desc_supply (9.3.1.3.96)	Description of the power supplies
voltage	exp1D (9.3.1.3.143)	Voltage at the supply output [V]; Time-dependent; Vector (nsupplies)
current	exp1D (9.3.1.3.143)	Current at the supply output, defined positive if it flows from point 1 to point 2 of the component in the pfcircuit description [A]; Time-dependent; Vector (nsupplies)

Type of: pfsystems:pfsupplies (702)

### 9.3.1.3.204 phaseellipse

Phase ellipse characteristics of the spot

member	type	description
invcurvrad	vecflt_type (9.3.1.2.9)	Inverse curvature radii for the phase ellipse [m <sup>-1</sup> ], Vector (2). Time-dependent
angle	float (9.3.1.1.1)	Rotation angle for the phase ellipse [rd], Float. Time-dependent

Type of: rfbeam:phaseellipse (913)

### 9.3.1.3.205 planecoil

Plane coil description

member	type	description
coordinates	rz1D (9.3.1.3.242)	Coordinate points of centre of conductor; vectors(nelements)
hlength	vecflt_type (9.3.1.2.9)	Half length perpendicular to plane where coil is defined; vector(nelements) [m].
radialwidth	vecflt_type (9.3.1.2.9)	Half width, (outer contour-inner contour)/2; vector(nelements) [m].

Type of: tf\_desc\_tfcoils:planecoil (974)

### 9.3.1.3.206 plasmaedge

Plasma edge characteristics in front of the antenna.

member	type	description
npoints	integer (9.3.1.1.2)	Number of points in the distance grid. Integer
distance	vecflt_type (9.3.1.2.9)	Grid for electron density, defined as the perpendicular distance to the antenna waveguide plane (the origin being described in the position sub-structure) [m]. Vector (npoints). Time-dependent.
density	vecflt_type (9.3.1.2.9)	Electron density in front of the antenna [m <sup>-3</sup> ]. Vector (npoints). Time-dependent.

Type of: antenna\_lh:plasmaedge (716)

### 9.3.1.3.207 pol\_decomp

Poloidal decomposition of the wave fields. Uses the flux surface grid in grid\_1d.

member	type	description
mpol	vecint_type (9.3.1.2.10)	Poloidal mode numbers; Vector (nmpol)
e_plus	array3dfilt_type (9.3.1.2.1)	Magnitude of poloidal Fourier decomposition of left hand polarised component of the wave electric field [V/m]; Time-dependent; Array 3D (ntor, npsi, nmpol)
e_plus.ph	array3dfilt_type (9.3.1.2.1)	Phase of poloidal Fourier decomposition of left hand polarised component of the wave electric field [rad]; Time-dependent; Array 3D (ntor, npsi, nmpol)
e_minus	array3dfilt_type (9.3.1.2.1)	Magnitude of poloidal Fourier decomposition of right hand polarised component of the wave electric field; Time-dependent (V/m); Array 3D (ntor, npsi, nmpol)
e_minus.ph	array3dfilt_type (9.3.1.2.1)	Phase of poloidal Fourier decomposition of right hand polarised component of the wave electric field [rad]; Time-dependent; Array 3D (ntor, npsi, nmpol)
e_norm	array3dfilt_type (9.3.1.2.1)	Magnitude of poloidal Fourier decomposition of wave electric field normal to a flux surface [V/m]; Time-dependent; Array 3D (ntor, npsi, nmpol)
e_norm.ph	array3dfilt_type (9.3.1.2.1)	Phase of poloidal Fourier decomposition of wave electric field normal to a flux surface [rad]; Time-dependent; Array 3D (ntor, npsi, nmpol)
e_binorm	array3dfilt_type (9.3.1.2.1)	Magnitude of poloidal Fourier decomposition of wave electric field tangent to a flux surface [V/m]; Time-dependent; Array 3D (ntor, npsi, nmpol)
e_binorm.ph	array3dfilt_type (9.3.1.2.1)	Phase of poloidal Fourier decomposition of wave electric field tangent to a flux surface [rad]; Time-dependent; Array 3D (ntor, npsi, nmpol)
e_para	array3dfilt_type (9.3.1.2.1)	Magnitude of poloidal Fourier decomposition of parallel wave electric field [V/m]; Time-dependent; Array 3D (ntor, npsi, nmpol)
e_para.ph	array3dfilt_type (9.3.1.2.1)	Phase of poloidal Fourier decomposition of parallel wave electric field [rad]; Time-dependent; Array 3D (ntor, npsi, nmpol)
b_norm	array3dfilt_type (9.3.1.2.1)	Magnitude of poloidal Fourier decomposition of wave magnetic field normal to a flux surface [T]; Time-dependent; Array 3D (ntor, npsi, nmpol)
b_norm.ph	array3dfilt_type (9.3.1.2.1)	Phase of poloidal Fourier decomposition of parallel wave electric field [rad]; Time-dependent; Array 3D (ntor, npsi, nmpol)
b_binorm	array3dfilt_type (9.3.1.2.1)	Magnitude of poloidal Fourier decomposition of wave magnetic field tangent to a flux surface [T]; Time-dependent; Array 3D (ntor, npsi, nmpol)

member	type	description
b.binorm.ph	array4dflt.type (9.3.1.2.3)	Phase of poloidal Fourier decomposition of wave magnetic field tangent to a flux surface [rad]; Time-dependent; Array 3D (ntor, npsi, nmpol)
b.para	array3dflt.type (9.3.1.2.1)	Magnitude of Fourier decomposition of wave magnetic field parallel to the equilibrium magnetic field [T]; Time-dependent; Array 3D (ntor, npsi, nmpol)
b.para.ph	array3dflt.type (9.3.1.2.1)	Phase of Fourier decomposition of wave magnetic field parallel to the equilibrium magnetic field [T]; Time-dependent; Array 3D (ntor, npsi, nmpol)

Type of: fullwave:pol\_decomp (824)

### 9.3.1.3.208 polarization

Wave field polarization along the ray/beam.

member	type	description
epol.p.re	vecflt.type (9.3.1.2.9)	Real part of the left hand polarized electric field (rotating with the ions), Vector (npoints). Time-dependent
epol.p.im	vecflt.type (9.3.1.2.9)	Imaginary part of the left hand polarized electric field (rotating with the ions), Vector (npoints). Time-dependent
epol.m.re	vecflt.type (9.3.1.2.9)	Real part of the right hand polarized electric field (rotating with the electrons), Vector (npoints). Time-dependent
epol.m.im	vecflt.type (9.3.1.2.9)	Imaginary part of the right hand polarized electric field (rotating with the electrons), Vector (npoints). Time-dependent
epol.par.re	vecflt.type (9.3.1.2.9)	Real part of the electric field polarization vector in the magnetic field direction, Vector (npoints). Time-dependent
epol.par.im	vecflt.type (9.3.1.2.9)	Imaginary part of the electric field polarization vector in the magnetic field direction, Vector (npoints). Time-dependent

Type of: beamtracing:polarization (723)

### 9.3.1.3.209 powerflow

Power flow along the ray/beam.

member	type	description
phi.perp	vecflt.type (9.3.1.2.9)	Normalized power flow in the direction perpendicular to the magnetic field; Vector (npoints). Time-dependent
phi.par	vecflt.type (9.3.1.2.9)	Normalized power flow in the direction parallel to the magnetic field; Vector (npoints). Time-dependent
power.e	vecflt.type (9.3.1.2.9)	Power absorbed along the beam by electrons [W]; Vector (npoints). Time-dependent
power.i	matflt.type (9.3.1.2.7)	Power absorbed along the beam by an ion species [W]; Matrix (npoints, nion). Time-dependent

Type of: beamtracing:powerflow (723)

### 9.3.1.3.210 profiles1d

Profiles derived from the fields solved in the transport equations, or from experiment.

member	type	description
pe	coreprofile (9.3.1.3.84)	Electron pressure [Pa]; Time-dependent;
pi	coreprofion (9.3.1.3.85)	Ion pressure [Pa]; Time-dependent;
pr.th	coreprofile (9.3.1.3.84)	Thermal pressure (electrons+ions) [Pa]; Time-dependent;
pr.perp	coreprofile (9.3.1.3.84)	Total perpendicular pressure (electrons+ions, thermal+non-thermal) [Pa]; Time-dependent;
pr.parallel	coreprofile (9.3.1.3.84)	Total parallel pressure (electrons+ions, thermal+non-thermal) [Pa]; Time-dependent;
jtot	coreprofile (9.3.1.3.84)	total parallel current density = average(jtot.B) / B0, where B0 = coreprof/toroid.field/b0 [A/m <sup>2</sup> ]; Time-dependent;
jni	coreprofile (9.3.1.3.84)	non-inductive parallel current density = average(jni.B) / B0, where B0 = coreprof/toroid.field/b0 [A/m <sup>2</sup> ]; Time-dependent;
joh	coreprofile (9.3.1.3.84)	ohmic parallel current density = average(joh.B) / B0, where B0 = coreprof/toroid.field/b0 [A/m <sup>2</sup> ]; Time-dependent;
vloop	coreprofile (9.3.1.3.84)	Toroidal loop voltage [V]. Time-dependent.
sigmapar	coreprofile (9.3.1.3.84)	Parallel conductivity [ohm <sup>-1</sup> .m <sup>-1</sup> ]. Time-dependent.
qoh	coreprofile (9.3.1.3.84)	ohmic heating [W/m <sup>3</sup> ]; Time-dependent;
eparallel	coreprofile (9.3.1.3.84)	Parallel electric field = average(E.B) / B0, where B0 = coreprof/toroid.field/b0 [V.m <sup>-1</sup> ]. Time-dependent.

member	type	description
e.b	coreprofile (9.3.1.3.84)	Average(E.B) [V.T.m <sup>-1</sup> ]. Time-dependent.
q	coreprofile (9.3.1.3.84)	Safety factor profile; Time-dependent;
shear	coreprofile (9.3.1.3.84)	Magnetic shear profile; Time-dependent;
ns	coreprofion (9.3.1.3.85)	Density of fast ions, for the various ion species [m <sup>-3</sup> ]; Time-dependent;
mtor	coreprofion (9.3.1.3.85)	Toroidal momentum of the various ion species [UNITS?]; Time-dependent;
wtor	coreprofion (9.3.1.3.85)	Angular toroidal rotation frequency of the various ion species [s <sup>-1</sup> ]; Time-dependent;
zeff	coreprofile (9.3.1.3.84)	Effective charge profile; Time-dependent;
bpol	coreprofile (9.3.1.3.84)	Average poloidal magnetic field, defined as sqrt(ave(grad rho <sup>2</sup> /R <sup>2</sup> )).dpsi/drho [T]. Time-dependent.
dpsidt	coreprofile (9.3.1.3.84)	Time derivative of the poloidal flux at constant rho_tor_norm [V]. Time-dependent.
dpsidt_phi	coreprofile (9.3.1.3.84)	Time derivative of the poloidal flux at constant toroidal flux [V]. Time-dependent.
dvprimedt	coreprofile (9.3.1.3.84)	Time derivative of the radial derivative of the volume enclosed in the flux surface, i.e. d/dt(dV/drho.tor) [m <sup>2</sup> .s <sup>-1</sup> ]; Time-dependent.

Type of: coreprof:profiles1d (681)

### 9.3.1.3.211 profiles\_1d

output profiles as a function of the poloidal flux

member	type	description
psi	vecflt_type (9.3.1.2.9)	Poloidal flux [Wb], without 1/2pi and such that Bp= grad psi  /R/2/pi. Time-dependent; Vector (npsi)
phi	vecflt_type (9.3.1.2.9)	toroidal flux [Wb]; Time-dependent; Vector (npsi)
pressure	vecflt_type (9.3.1.2.9)	pressure profile as a function of the poloidal flux [Pa]; Time-dependent; Vector (npsi)
F.dia	vecflt_type (9.3.1.2.9)	diamagnetic profile (R B_phi) [T m]; Time-dependent; Vector (npsi)
pprime	vecflt_type (9.3.1.2.9)	psi derivative of the pressure profile [Pa/Wb]; Time-dependent; Vector (npsi)
ffprime	vecflt_type (9.3.1.2.9)	psi derivative of F.dia multiplied with F.dia [T <sup>2</sup> m <sup>2</sup> /Wb]; Time-dependent; Vector (npsi)
jphi	vecflt_type (9.3.1.2.9)	flux surface averaged toroidal current density = average(jphi/R) / average(1/R) [A/m <sup>2</sup> ]; Time-dependent; Vector (npsi)
jparallel	vecflt_type (9.3.1.2.9)	flux surface averaged parallel current density = average(j.B) / B0, where B0 = equilibrium/global.param/toroid.field/b0 ; [A/m <sup>2</sup> ]; Time-dependent; Vector (npsi)
q	vecflt_type (9.3.1.2.9)	Safety factor = dphi/dpsi [-]; Time-dependent; Vector (npsi)
r.inboard	vecflt_type (9.3.1.2.9)	radial coordinate (major radius) at the height and on the left of the magnetic axis [m]; Time-dependent; Vector (npsi)
r.outboard	vecflt_type (9.3.1.2.9)	radial coordinate (major radius) at the height and on the right of the magnetic axis [m]; Time-dependent; Vector (npsi)
rho.tor	vecflt_type (9.3.1.2.9)	Toroidal flux coordinate [m], to be used by the ETS and in many CPOs (coreprof, ...). Defined as sqrt(phi/pi/B0), where B0 = equilibrium/global.param/toroid.field/b0. Time-dependent; Vector (npsi)
dpsidrho.tor	vecflt_type (9.3.1.2.9)	dpsi/drho.tor [Wb/m]; Time-dependent; Vector (npsi)
rho.vol	vecflt_type (9.3.1.2.9)	Normalised radial coordinate related to the plasma volume. Defined as sqrt(volume / volume[LCFS]). Time-dependent; Vector (npsi)
beta.pol	vecflt_type (9.3.1.2.9)	poloidal beta (inside the magnetic surface); Time-dependent; Vector (npsi)
li	vecflt_type (9.3.1.2.9)	internal inductance (inside the magnetic surface); Time-dependent; Vector (npsi)
elongation	vecflt_type (9.3.1.2.9)	Elongation; Time-dependent; Vector (npsi)
tria.upper	vecflt_type (9.3.1.2.9)	Upper triangularity profile; Time-dependent; Vector (npsi)
tria.lower	vecflt_type (9.3.1.2.9)	Lower triangularity profile; Time-dependent; Vector (npsi)
volume	vecflt_type (9.3.1.2.9)	Volume enclosed in the flux surface [m <sup>3</sup> ]; Time-dependent; Vector (npsi)
vprime	vecflt_type (9.3.1.2.9)	Radial derivative of the volume enclosed in the flux surface with respect to psi, i.e. dV/dpsi [m <sup>3</sup> /Wb]; Time-dependent; Vector (npsi)
area	vecflt_type (9.3.1.2.9)	Cross-sectional area of the flux surface [m <sup>2</sup> ]; Time-dependent; Vector (npsi)
aprime	vecflt_type (9.3.1.2.9)	Radial derivative of the cross-sectional area of the flux surface with respect to psi, i.e. darea/dpsi [m <sup>2</sup> /Wb]; Time-dependent; Vector (npsi)
surface	vecflt_type (9.3.1.2.9)	Surface area of the flux surface [m <sup>2</sup> ]; Time-dependent; Vector (npsi)
fttrap	vecflt_type (9.3.1.2.9)	Trapped particle fraction; Time-dependent; Vector (npsi)
gm1	vecflt_type (9.3.1.2.9)	average(1/R <sup>2</sup> ); Time-dependent; Vector (npsi)
gm2	vecflt_type (9.3.1.2.9)	average(grad_rho <sup>2</sup> /R <sup>2</sup> ); Time-dependent; Vector (npsi)
gm3	vecflt_type (9.3.1.2.9)	average(grad_rho <sup>2</sup> ); Time-dependent; Vector (npsi)
gm4	vecflt_type (9.3.1.2.9)	average(1/B <sup>2</sup> ) [T <sup>-2</sup> ]; Time-dependent; Vector (npsi)
gm5	vecflt_type (9.3.1.2.9)	average(B <sup>2</sup> ) [T <sup>2</sup> ]; Time-dependent; Vector (npsi)
gm6	vecflt_type (9.3.1.2.9)	average(grad_rho <sup>2</sup> /B <sup>2</sup> ) [T <sup>-2</sup> ]; Time-dependent; Vector (npsi)
gm7	vecflt_type (9.3.1.2.9)	average(grad_rho); Time-dependent; Vector (npsi)
gm8	vecflt_type (9.3.1.2.9)	average(R); Time-dependent; Vector (npsi)



member	type	description
gm9	vecflt_type (9.3.1.2.9)	average(1/R); Time-dependent; Vector (npsi)
b_av	vecflt_type (9.3.1.2.9)	average(B); Time-dependent; Vector (npsi)
b_min	vecflt_type (9.3.1.2.9)	minimum(B) on the flux surface; Time-dependent; Vector (npsi)
b_max	vecflt_type (9.3.1.2.9)	maximum(B) on the flux surface; Time-dependent; Vector (npsi)
omega	vecflt_type (9.3.1.2.9)	Toroidal rotation angular frequency (assumed constant on the flux surface) [rad/s]; Time-dependent; Vector (npsi)
omegaprime	vecflt_type (9.3.1.2.9)	Psi derivative of the toroidal rotation angular frequency (assumed constant on the flux surface) [rad/(s.Wb)]; Time-dependent; Vector (npsi)
mach.a	vecflt_type (9.3.1.2.9)	Alfvenic Mach number; Time-dependent; Vector (npsi)
phi_flow	vecflt_type (9.3.1.2.9)	Poloidal flow function $\phi_{flow} = \rho \cdot v_{pol} \cdot B_{pol}$ [kg/(V.s <sup>2</sup> )]; Time-dependent; Vector (npsi)
s.flow	vecflt_type (9.3.1.2.9)	Definition to be provided; Time-dependent; Vector (npsi)
h.flow	vecflt_type (9.3.1.2.9)	flow function $h_{flow} = \frac{\gamma}{\gamma-1} \cdot s_{flow} \cdot \rho^{\gamma-1} + 0.5 \cdot (\phi_{flow} \cdot B / \rho)^2 - 0.5 \cdot (R \cdot \omega)^2$ [m <sup>2</sup> /s <sup>2</sup> ]; Time-dependent; Vector (npsi)

Type of: equilibrium:profiles.1d (689)

### 9.3.1.3.212 profiles\_2d

output profiles in the poloidal plane

member	type	description
grid.type	string (9.3.1.1.3)	Selection of one of a set of grid types. 1-rectangular (R,Z) grid, in this case the position arrays should not be filled since they are redundant with grid/dim1 and dim2.
grid	grid (9.3.1.3.155)	definition of the 2D grid
r	matflt_type (9.3.1.2.7)	values of the major radius on the grid [m]; Time-dependent; Matrix (ndim1, ndim2)
z	matflt_type (9.3.1.2.7)	values of the altitude on the grid [m]; Time-dependent; Matrix (ndim1, ndim2)
psi	matflt_type (9.3.1.2.7)	values of the poloidal flux at the grid in the poloidal plane [Wb]; Time-dependent; Matrix (ndim1, ndim2)
theta	matflt_type (9.3.1.2.7)	values of the poloidal angle on the grid [rad]; Time-dependent; Matrix (ndim1, ndim2)
jphi	matflt_type (9.3.1.2.7)	toroidal plasma current density [A m <sup>-2</sup> ]; Time-dependent; Matrix (ndim1, ndim2)
jpar	matflt_type (9.3.1.2.7)	parallel (to magnetic field) plasma current density [A m <sup>-2</sup> ]; Time-dependent; Matrix (ndim1, ndim2)
br	matflt_type (9.3.1.2.7)	R component of the poloidal magnetic field at the specified grid [T]; Time-dependent; Matrix (ndim1, ndim2)
bz	matflt_type (9.3.1.2.7)	Z component of the poloidal magnetic field at the specified grid [T]; Time-dependent; Matrix (ndim1, ndim2)
bphi	matflt_type (9.3.1.2.7)	toroidal component of the magnetic field at the specified grid [T]; Time-dependent; Matrix (ndim1, ndim2)
vphi	matflt_type (9.3.1.2.7)	toroidal flow velocity [m/s]; Time-dependent; Matrix (ndim1, ndim2)
vtheta	matflt_type (9.3.1.2.7)	Poloidal flow velocity [m/s]; Time-dependent; Matrix (ndim1, ndim2)
rho.mass	matflt_type (9.3.1.2.7)	Mass density [kg/m <sup>3</sup> ]; Time-dependent; Matrix (ndim1, ndim2)
pressure	matflt_type (9.3.1.2.7)	Pressure [Pa]; Time-dependent; Matrix (ndim1, ndim2)
temperature	matflt_type (9.3.1.2.7)	Temperature [eV]; Time-dependent; Matrix (ndim1, ndim2)

Type of: equilibrium:profiles.2d (689)

### 9.3.1.3.213 profiles\_neutrals

Profiles derived from the fields solved in the transport equations, or from experiment.

member	type	description
n0	corefieldneutral (9.3.1.3.80)	Neutral density [m <sup>-3</sup> ]. Time-dependent;
t0	corefieldneutrale (9.3.1.3.81)	Neutral temperature [eV]. Time-dependent;
v0	corefieldneutralv0 (9.3.1.3.83)	Neutral velocity
prad0	matflt_type (9.3.1.2.7)	Power radiated by neutrals [W.m <sup>-3</sup> ]. Matrix (nrho,nneut). Time-dependent.

Type of: coreneutrals:profiles (680)

### 9.3.1.3.214 psi

Poloidal magnetic flux [Wb]; Time-dependent;

member	type	description
value	vecflt_type (9.3.1.2.9)	Signal value [Wb]; Time-dependent; Vector (nrho)
derivative	vecflt_type (9.3.1.2.9)	Radial derivative (dvalue/drho_tor) [Wb.m <sup>-1</sup> ]; Time-dependent; Vector (nrho)
source	string (9.3.1.1.3)	Source of the profile (any comment describing the origin of the profile : code, path to diagnostic signals, massaging, ...); String
flag	integer (9.3.1.1.2)	Flag describing how the profile has been processed : 0-not calculated; 1-interpretative; 2-calculated by the transport solver; 3-calculated by a separate code : in that case only, description of the code provided in codeparam at the same level; 4-used value from the previous time step; Time-dependent; Scalar
boundary	boundary (9.3.1.3.51)	Boundary condition for the transport equation. Time-dependent.
jni	jni (9.3.1.3.159)	Non-inductive parallel current density [A/m <sup>2</sup> ]; Time-dependent;
sigma_par	coreprofile (9.3.1.3.84)	Parallel conductivity [ohm <sup>-1</sup> .m <sup>-1</sup> ]. Time-dependent
codeparam	codeparam (9.3.1.3.58)	Code parameters

Type of: coreprof:psi (681)

### 9.3.1.3.215 putinfo

Structure which is type independent, describing the data item

member	type	description
putmethod	string (9.3.1.1.3)	Storage method for this data
putaccess	string (9.3.1.1.3)	Instructions to access the data using this method
putlocation	string (9.3.1.1.3)	Name of this data under this method
rights	string (9.3.1.1.3)	Access rights to this data

Type of: datainfo:putinfo (765)

### 9.3.1.3.216 q

Safety factor

member	type	description
qvalue	vecflt_type (9.3.1.2.9)	Safety factor values; Time-dependent; Vector (nmeas)
position	rz1D (9.3.1.3.242)	Major radius of the given safety factor values [m]; Time-dependent; Vector (nmeas)
source	string (9.3.1.1.3)	Description or path to the source signal (diagnostic or genprof, from which to read all info on the signal), e.g. 'magdiag/bpol_probes/measure/value'. String
exact	integer (9.3.1.1.2)	1 means exact data, is not fitted; 0 means the equilibrium code does a least square fit; scalar integer
weight	vecflt_type (9.3.1.2.9)	weight given to the measurement ( $\zeta=0$ ); Time-dependent; Vector (nmeas)
sigma	vecflt_type (9.3.1.2.9)	standard deviation of the measurement; Time-dependent; Vector (nmeas)
calculated	vecflt_type (9.3.1.2.9)	Signal as recalculated by the equilibrium code; Time-dependent; Vector (nmeas)
chi2	vecflt_type (9.3.1.2.9)	chi <sup>2</sup> of (calculated-measured); Time-dependent; Vector (nmeas)

Type of: eqconstraint:q (811)

### 9.3.1.3.217 recycling\_neutrals

Recycling coefficients

member	type	description
particles	matflt_type (9.3.1.2.7)	Particle recycling coefficient corresponding to the conversion of ion type IION to the neutral type INEUT. Matrix(nneut,nion). Time-dependent.
energy	matflt_type (9.3.1.2.7)	Energy recycling coefficient corresponding to the conversion of ion type IION to the neutral type INEUT. Matrix(nneut,nion). Time-dependent.

Type of: coefficients\_neutrals:recycling (732)

### 9.3.1.3.218 reduced

Structure for a reduced data signal (0D data)

member	type	description
value	float (9.3.1.1.1)	Data value; Real
source	string (9.3.1.1.3)	Path to the source signal (diagnostic or genprof, from which to read all info on the signal); String
time	float (9.3.1.1.1)	Time (exact time slice used from the time array of the source signal); Real

Type of: summary:a\_minor (707) I summary:area (707) I summary:beta\_normal (707) I summary:beta\_pol (707) I summary:beta\_tor (707) I summary:bvac\_r (707) I summary:elongation (707) I summary:geom\_axis\_r (707) I summary:impur1\_a (707) I summary:impur1\_z (707) I summary:ip (707) I summary:li (707) I summary:main\_ion1\_a (707) I summary:main\_ion1\_z (707) I summary:main\_ion2\_a (707) I summary:main\_ion2\_z (707) I summary:nev (707) I summary:tev (707) I summary:tiv (707) I summary:tria\_lower (707) I summary:tria\_upper (707) I summary:volume (707) I summary:zeffv (707)

### 9.3.1.3.219 ref\_nt

set of non-timed references

member	type	description
zerod_real	ref_nt_0dr (9.3.1.3.222)	0d reference of real type
zerod_int	ref_nt_0di (9.3.1.3.220)	0d reference of integer type
zerod_string	ref_nt_0ds (9.3.1.3.224)	0d reference of string type
oned_real	ref_nt_1dr (9.3.1.3.228)	1d reference of real type
oned_int	ref_nt_1di (9.3.1.3.226)	1d reference of integer type

Type of: reference:non\_timed (704)

### 9.3.1.3.220 ref\_nt\_0di

set of non-timed references of integer type

member	type	description
ref1	ref_nt_0di_ref (9.3.1.3.221)	Reference signal #1
ref2	ref_nt_0di_ref (9.3.1.3.221)	Reference signal #2
ref3	ref_nt_0di_ref (9.3.1.3.221)	Reference signal #3
ref4	ref_nt_0di_ref (9.3.1.3.221)	Reference signal #4

Type of: ref\_nt:zerod\_int (892)

### 9.3.1.3.221 ref\_nt\_0di\_ref

a non-timed reference of integer type

member	type	description
value	integer (9.3.1.1.2)	Value of the reference. Integer scalar.
description	string (9.3.1.1.3)	Description of the reference. String.

Type of: ref\_nt\_0di:ref1 (893) I ref\_nt\_0di:ref2 (893) I ref\_nt\_0di:ref3 (893) I ref\_nt\_0di:ref4 (893)

### 9.3.1.3.222 ref\_nt\_0dr

set of non-timed references of real type

member	type	description
ref1	ref_nt_0dr_ref (9.3.1.3.223)	Reference signal #1
ref2	ref_nt_0dr_ref (9.3.1.3.223)	Reference signal #2
ref3	ref_nt_0dr_ref (9.3.1.3.223)	Reference signal #3
ref4	ref_nt_0dr_ref (9.3.1.3.223)	Reference signal #4
ref5	ref_nt_0dr_ref (9.3.1.3.223)	Reference signal #5
ref6	ref_nt_0dr_ref (9.3.1.3.223)	Reference signal #6
ref7	ref_nt_0dr_ref (9.3.1.3.223)	Reference signal #7

Type of: ref\_nt:zerod\_real (892)

### 9.3.1.3.223 ref\_nt\_0dr\_ref

a non-timed reference of real type

member	type	description
value	float (9.3.1.1.1)	Value of the reference. Real scalar.
description	string (9.3.1.1.3)	Description of the reference. String.

Type of: ref\_nt\_0dr:ref1 (895) I ref\_nt\_0dr:ref2 (895) I ref\_nt\_0dr:ref3 (895) I ref\_nt\_0dr:ref4 (895) I ref\_nt\_0dr:ref5 (895) I ref\_nt\_0dr:ref6 (895) I ref\_nt\_0dr:ref7 (895)

### 9.3.1.3.224 ref\_nt\_0ds

set of non-timed references of string type

member	type	description
ref1	ref_nt_0ds_ref (9.3.1.3.225)	Reference signal #1
ref2	ref_nt_0ds_ref (9.3.1.3.225)	Reference signal #2

Type of: ref\_nt:zerod\_string (892)

### 9.3.1.3.225 ref\_nt\_0ds\_ref

a non-timed reference of string type

member	type	description
value	string (9.3.1.1.3)	Value of the reference. String
description	string (9.3.1.1.3)	Description of the reference. String.

Type of: ref\_nt\_0ds:ref1 (897) I ref\_nt\_0ds:ref2 (897)

### 9.3.1.3.226 ref\_nt\_1di

set of non-timed references of vecint type

member	type	description
ref1	ref_nt_1di_ref (9.3.1.3.227)	Reference signal #1
ref2	ref_nt_1di_ref (9.3.1.3.227)	Reference signal #2
ref3	ref_nt_1di_ref (9.3.1.3.227)	Reference signal #3
ref4	ref_nt_1di_ref (9.3.1.3.227)	Reference signal #4

Type of: ref\_nt:oned\_int (892)

### 9.3.1.3.227 ref\_nt\_1di\_ref

a non-timed reference of vecint type

member	type	description
value	vecint_type (9.3.1.2.10)	Value of the reference. Vector of integers.
description	string (9.3.1.1.3)	Description of the reference. String.

Type of: ref\_nt\_1di:ref1 (899) I ref\_nt\_1di:ref2 (899) I ref\_nt\_1di:ref3 (899) I ref\_nt\_1di:ref4 (899)

### 9.3.1.3.228 ref\_nt\_1dr

set of non-timed references of vecflt type

member	type	description
ref1	ref_nt_1dr_ref (9.3.1.3.229)	Reference signal #1

member	type	description
ref2	ref_nt_1dr_ref (9.3.1.3.229)	Reference signal #2
ref3	ref_nt_1dr_ref (9.3.1.3.229)	Reference signal #3
ref4	ref_nt_1dr_ref (9.3.1.3.229)	Reference signal #4
ref5	ref_nt_1dr_ref (9.3.1.3.229)	Reference signal #5

Type of: ref\_nt:oned\_real (892)

### 9.3.1.3.229 ref\_nt\_1dr\_ref

a non-timed reference of vecflt type

member	type	description
value	vecflt_type (9.3.1.2.9)	Value of the reference. Vector.
description	string (9.3.1.1.3)	Description of the reference. String.

Type of: ref\_nt\_1dr:ref1 (901) I ref\_nt\_1dr:ref2 (901) I ref\_nt\_1dr:ref3 (901) I ref\_nt\_1dr:ref4 (901) I ref\_nt\_1dr:ref5 (901)

### 9.3.1.3.230 ref\_t

set of timed references

member	type	description
zerod_real	ref_t_0dr (9.3.1.3.233)	0d reference of real type
zerod_int	ref_t_0di (9.3.1.3.231)	0d reference of integer type
oned_real	ref_t_1dr (9.3.1.3.237)	1d reference of real type
oned_int	ref_t_1di (9.3.1.3.235)	1d reference of integer type

Type of: reference:timed (704)

### 9.3.1.3.231 ref\_t\_0di

set of timed references of integer type

member	type	description
ref1	ref_t_0di_ref (9.3.1.3.232)	Reference signal #1
ref2	ref_t_0di_ref (9.3.1.3.232)	Reference signal #2
ref3	ref_t_0di_ref (9.3.1.3.232)	Reference signal #3
ref4	ref_t_0di_ref (9.3.1.3.232)	Reference signal #4

Type of: ref\_t:zerod\_int (903)

### 9.3.1.3.232 ref\_t\_0di\_ref

a timed reference of integer type

member	type	description
value	integer (9.3.1.1.2)	Value of the reference. Integer scalar. Time-dependent.
description	string (9.3.1.1.3)	Description of the reference. String.

Type of: ref\_t\_0di:ref1 (904) I ref\_t\_0di:ref2 (904) I ref\_t\_0di:ref3 (904) I ref\_t\_0di:ref4 (904)

### 9.3.1.3.233 ref\_t\_0dr

set of timed references of real type

member	type	description
ref1	ref_t_0dr_ref (9.3.1.3.234)	Reference signal #1
ref2	ref_t_0dr_ref (9.3.1.3.234)	Reference signal #2
ref3	ref_t_0dr_ref (9.3.1.3.234)	Reference signal #3

member	type	description
ref4	ref.t_0dr_ref (9.3.1.3.234)	Reference signal #4
ref5	ref.t_0dr_ref (9.3.1.3.234)	Reference signal #5
ref6	ref.t_0dr_ref (9.3.1.3.234)	Reference signal #6
ref7	ref.t_0dr_ref (9.3.1.3.234)	Reference signal #7
ref8	ref.t_0dr_ref (9.3.1.3.234)	Reference signal #8
ref9	ref.t_0dr_ref (9.3.1.3.234)	Reference signal #9
ref10	ref.t_0dr_ref (9.3.1.3.234)	Reference signal #10

Type of: ref.t:zerod\_real (903)

### 9.3.1.3.234 ref.t\_0dr\_ref

a timed reference of real type

member	type	description
value	float (9.3.1.1.1)	Value of the reference. Real scalar. Time-dependent.
description	string (9.3.1.1.3)	Description of the reference. String.

Type of: ref.t\_0dr:ref1 (906) I ref.t\_0dr:ref10 (906) I ref.t\_0dr:ref2 (906) I ref.t\_0dr:ref3 (906) I ref.t\_0dr:ref4 (906) I ref.t\_0dr:ref5 (906) I ref.t\_0dr:ref6 (906) I ref.t\_0dr:ref7 (906) I ref.t\_0dr:ref8 (906) I ref.t\_0dr:ref9 (906)

### 9.3.1.3.235 ref.t\_1di

set of timed references of vecint type

member	type	description
ref1	ref.t_1di_ref (9.3.1.3.236)	Reference signal #1
ref2	ref.t_1di_ref (9.3.1.3.236)	Reference signal #2
ref3	ref.t_1di_ref (9.3.1.3.236)	Reference signal #3
ref4	ref.t_1di_ref (9.3.1.3.236)	Reference signal #4

Type of: ref.t:oned\_int (903)

### 9.3.1.3.236 ref.t\_1di\_ref

a timed reference of vecint type

member	type	description
value	vecint.type (9.3.1.2.10)	Value of the reference. Vector of integers. Time-dependent.
description	string (9.3.1.1.3)	Description of the reference. String.

Type of: ref.t\_1di:ref1 (908) I ref.t\_1di:ref2 (908) I ref.t\_1di:ref3 (908) I ref.t\_1di:ref4 (908)

### 9.3.1.3.237 ref.t\_1dr

set of timed references of vecflt type

member	type	description
ref1	ref.t_1dr_ref (9.3.1.3.238)	Reference signal #1
ref2	ref.t_1dr_ref (9.3.1.3.238)	Reference signal #2
ref3	ref.t_1dr_ref (9.3.1.3.238)	Reference signal #3
ref4	ref.t_1dr_ref (9.3.1.3.238)	Reference signal #4
ref5	ref.t_1dr_ref (9.3.1.3.238)	Reference signal #5

Type of: ref.t:oned\_real (903)

### 9.3.1.3.238 ref.t\_1dr\_ref

a timed reference of vecflt type

member	type	description
value	vecflt_type (9.3.1.2.9)	Value of the reference. Vector. Time-dependent.
description	string (9.3.1.1.3)	Description of the reference. String.

Type of: ref\_t.1dr:ref1 (910) I ref\_t.1dr:ref2 (910) I ref\_t.1dr:ref3 (910) I ref\_t.1dr:ref4 (910) I ref\_t.1dr:ref5 (910)

### 9.3.1.3.239 reggrid

Generic structure for a regular grid

member	type	description
dim1	vecflt_type (9.3.1.2.9)	First dimension values; Vector (ndim1)
dim2	vecflt_type (9.3.1.2.9)	Second dimension values; Vector (ndim2)

Type of: coord\_sys:grid (749)

### 9.3.1.3.240 rfbeam

Beam characteristics

member	type	description
spot	spot (9.3.1.3.292)	Spot characteristics
phaseellipse	phaseellipse (9.3.1.3.204)	Phase ellipse characteristics of the spot

Type of: antenna.ec:beam (714) I antenna.lh:beam (716)

### 9.3.1.3.241 rz0D

Structure for one (R,Z) position (0D)

member	type	description
r	float (9.3.1.1.1)	Major radius [m]
z	float (9.3.1.1.1)	Altitude [m]

Type of: circularcoil:centre (730) I eqgeometry:active\_limit (812) I eqgeometry:geom\_axis (812) I eqgeometry:left\_low\_st (812) I eqgeometry:left\_up\_st (812) I eqgeometry:right\_low\_st (812) I eqgeometry:right\_up\_st (812) I mag\_axis:position (844)

### 9.3.1.3.242 rz1D

Structure for list of R,Z positions (1D)

member	type	description
r	vecflt_type (9.3.1.2.9)	Major radius [m]
z	vecflt_type (9.3.1.2.9)	Altitude [m]

Type of: eqgeometry:xpts (812) I flush:position (819) I isoflux:position (831) I limiter\_unit:position (841) I mhd\_ideal\_wall2d:p (848) I mhd\_res\_wall2d:position (850) I omnigen\_surf:rz (863) I planecoil:coordinates (878) I q:position (889) I setup\_bprobe:position (948) I straps:coord\_strap (970) I vessel:position (712) I xpts:position (1007)

### 9.3.1.3.243 rz1D\_npoints

Structure for list of R,Z positions (1D)

member	type	description
r	vecflt_type (9.3.1.2.9)	Major radius [m]. Vector(max_npoints). Time-dependent
z	vecflt_type (9.3.1.2.9)	Altitude [m]. Vector(max_npoints). Time-dependent
npoints	integer (9.3.1.1.2)	Number of meaningful points in the above vectors at a given time slice. Time-dependent

Type of: eqgeometry:boundary (812)

### 9.3.1.3.244 rz2D

Structure for list of R,Z positions (2D)

member	type	description
r	matflt.type (9.3.1.2.7)	Major radius [m]
z	matflt.type (9.3.1.2.7)	Altitude [m]

Type of: coord\_sys:position (749) I geom\_iron:rzcoordinate (825) I pfpageometry:rzcoordinate (874)

### 9.3.1.3.245 rz3D

Structure for list of R,Z positions (3D)

member	type	description
r	array3dflt.type (9.3.1.2.1)	Major radius [m]
z	array3dflt.type (9.3.1.2.1)	Altitude [m]

Type of: pfgeometry:rzcoordinate (873)

### 9.3.1.3.246 rzphi0D

Structure for a single R,Z,phi position (0D)

member	type	description
r	float (9.3.1.1.1)	Major radius [m]
z	float (9.3.1.1.1)	Altitude [m]
phi	float (9.3.1.1.1)	Toroidal angle [rad]

Type of: antenna.ec:position (714) I antenna.lh:position (716) I setup\_inject:position (950)

### 9.3.1.3.247 rzphi1D

Structure for list of R,Z,phi positions (1D)

member	type	description
r	vecflt.type (9.3.1.2.9)	Major radius [m]
z	vecflt.type (9.3.1.2.9)	Altitude [m]
phi	vecflt.type (9.3.1.2.9)	Toroidal angle [rad]

Type of: beamlets:position (722) I launches:position (694) I setup\_line:pivot\_point (951) I setup\_line:second\_point (951) I setup\_line:third\_point (951) I tsetup:position (984)

### 9.3.1.3.248 rzphi1Dexp

Structure for list of R,Z,phi positions (1D)

member	type	description
r	exp1D (9.3.1.3.143)	Major radius [m]
z	exp1D (9.3.1.3.143)	Altitude [m]
phi	exp1D (9.3.1.3.143)	Toroidal angle [rad]

Type of: cxsetup:position (764) I ecesetup:position (799) I lang\_derived:position (833) I lang\_measure:position (834)

### 9.3.1.3.249 rzphi2D

Structure for list of R,Z,phi positions (2D)

member	type	description
r	matflt.type (9.3.1.2.7)	Major radius [m]



member	type	description
z	matflt.type (9.3.1.2.7)	Altitude [m]
phi	matflt.type (9.3.1.2.7)	Toroidal angle [rad]

Type of: setup\_floops:position (949)

### 9.3.1.3.250 rzphi3D

Structure for list of R,Z,phi positions (3D)

member	type	description
r	array3dflt.type (9.3.1.2.1)	Major radius [m]
z	array3dflt.type (9.3.1.2.1)	Altitude [m]
phi	array3dflt.type (9.3.1.2.1)	Toroidal angle [rad]

Type of: turbcoordsys:position (986)

### 9.3.1.3.251 rzphidrdzdphi1D

Structure for list of R,Z,phi positions and width dR dZ dphi (1D)

member	type	description
r	vecflt.type (9.3.1.2.9)	Position : major radius [m]
z	vecflt.type (9.3.1.2.9)	Position : altitude [m]
phi	vecflt.type (9.3.1.2.9)	Position : toroidal angle [rad]
dr	vecflt.type (9.3.1.2.9)	Width : major radius [m]
dz	vecflt.type (9.3.1.2.9)	Width : altitude [m]
dphi	vecflt.type (9.3.1.2.9)	Width : toroidal angle [rad]

Type of: setup\_mse:rzgamma (952)

### 9.3.1.3.252 sawteeth\_diags

Inversion and mixing radii

member	type	description
shear1	float (9.3.1.1.1)	Magnetic shear at $q = 1$ [-]. Time-dependent. Real scalar.
rhotorn_q1	float (9.3.1.1.1)	Rho_tor_norm at $q=1$ radius [-]. Time-dependent. Real scalar.
rhotorn_inv	float (9.3.1.1.1)	Rho_tor_norm at inversion radius [-]. Time-dependent. Real scalar.
rhotorn_mix	float (9.3.1.1.1)	Rho_tor_norm at mixing radius [-]. Time-dependent. Real scalar.

Type of: sawteeth:diags (705)

### 9.3.1.3.253 sawteeth\_profiles1d

Core profiles after sawtooth crash

member	type	description
ne	vecflt.type (9.3.1.2.9)	Electron density [ $m^{-3}$ ]. Time-dependent. Vector (nrho).
ni	matflt.type (9.3.1.2.7)	Ion density [ $m^{-3}$ ]. Time-dependent. Matrix (nrho,nion).
te	vecflt.type (9.3.1.2.9)	Electron temperature [eV]. Time-dependent. Vector (nrho).
ti	matflt.type (9.3.1.2.7)	Ion temperature [eV]. Time-dependent. Matrix (nrho,nion).
psi	vecflt.type (9.3.1.2.9)	Poloidal flux [Wb], without $1/2\pi$ and such that $B_p =  \text{grad } \psi  / R/2/\pi$ . Time-dependent. Vector (nrho).
phi	vecflt.type (9.3.1.2.9)	Toroidal flux [Wb]. Time-dependent. Vector (nrho).
psistar	vecflt.type (9.3.1.2.9)	$\Psi^* = \psi - \phi$ [Wb]. Time-dependent. Vector (nrho).
volume	vecflt.type (9.3.1.2.9)	Volume enclosed in the flux surface [ $m^3$ ]. Required to ensure particle and energy conservation during reconnection process ( $ndV$ and $(nT)dV$ are conserved). Time-dependent. Vector (nrho).
q	vecflt.type (9.3.1.2.9)	Safety factor = $d\phi/d\psi$ [-]. Time-dependent. Vector (nrho).

Type of: sawteeth:profiles1d (705)

### 9.3.1.3.254 scenario\_centre

central values of the profiles (at magnetic axis)

member	type	description
te0	scenario_ref (9.3.1.3.271)	central electron temperature [eV]. Time-dependent.
ti0	scenario_ref (9.3.1.3.271)	central ion temperature [eV]. Time-dependent.
ne0	scenario_ref (9.3.1.3.271)	central electron density [ $m^{-3}$ ]. Time-dependent.
ni0	scenario_ref (9.3.1.3.271)	central ion density [ $m^{-3}$ ]. Time-dependent.
shift0	scenario_ref (9.3.1.3.271)	central value of Shafranov shift [m]. Time-dependent.
psi0	scenario_ref (9.3.1.3.271)	pedestal poloidal flux [Wb]. Time-dependent.
phi0	scenario_ref (9.3.1.3.271)	central toroidal flux [Wb]. Time-dependent.
q0	scenario_ref (9.3.1.3.271)	central safety factor value []. Time-dependent.
Rmag	scenario_ref (9.3.1.3.271)	radius of magnetic axis [R]. Time-dependent.
Zmag	scenario_ref (9.3.1.3.271)	Z coordinate of magnetic axis [R]. Time-dependent.
vtor_0	scenario_ref (9.3.1.3.271)	central rotation velocity of selected impurity [m/s]. Time-dependent.

Type of: scenario:centre (706)

### 9.3.1.3.255 scenario\_composition

Plasma composition (description of ion species).

member	type	description
amn	vecflt_type (9.3.1.2.9)	Atomic mass number (lumped ions are allowed); Vector (nion)
zn	vecflt_type (9.3.1.2.9)	Nuclear charge (lumped ions are allowed); Vector (nion)
zion	vecflt_type (9.3.1.2.9)	Ion charge (of the dominant ionisation state; lumped ions are allowed); Vector (nion)
imp_flag	vecint_type (9.3.1.2.10)	Multiple charge state calculation flag : 0-Only one charge state is considered; 1-Multiple charge state are considered and are described in impurity CPO; Vector (nion)
rot_imp_flag	vecint_type (9.3.1.2.10)	set to 1 for the impurity corresponding at the given toroidal rotation, otherwise = 0
pellet_amn	vecflt_type (9.3.1.2.9)	Atomic mass number (for pellet injector); Vector (nion)
pellet_zn	vecflt_type (9.3.1.2.9)	Nuclear charge (pellet injector); Vector (nion)
nbi_amn	vecflt_type (9.3.1.2.9)	Atomic mass number (for neutral beam injection); Vector (nion)
nbi_zn	vecflt_type (9.3.1.2.9)	Nuclear charge (for neutral beam injection); Vector (nion)

Type of: scenario:composition (706)

### 9.3.1.3.256 scenario\_configuration

Strings describing the tokamak configuration

member	type	description
config	scenario_int (9.3.1.3.263)	plasma configuration (limiter/divertor ...) []. Time-dependent. Possible values : 0 = undetermined; 1 = poloidal limiter (ring); 2 = poloidal limiter (LFS); 3 = poloidal limiter (HFS); 4 = toroidal limiter (ring); 5 = toroidal limiter (segment); 6 = poloidal divertor; 7 = toroidal divertor (single null, ion drift in direction of divertor); 8 = toroidal divertor (single null, ion drift in opposite direction of divertor); 9 = toroidal divertor (double null).
lmode_sc	string (9.3.1.1.3)	name of the L-mode scaling law. String.
hmode_sc	string (9.3.1.1.3)	name of the H-mode scaling law. String.
core_sc	string (9.3.1.1.3)	name of the core plasma energy scaling law. String.
pedestal_sc	string (9.3.1.1.3)	name of the pedestal energy scaling law. String.
helium_sc	string (9.3.1.1.3)	name of the helium confinement time scaling law. String.
impurity_sc	string (9.3.1.1.3)	name of the impurities confinement time scaling law
l2h_sc	string (9.3.1.1.3)	name of the L-mode to H-mode power threshold scaling law. String.
tor_rot_sc	string (9.3.1.1.3)	name of the toroidal spontaneous rotation scaling law. String.
wall_mat	string (9.3.1.1.3)	chemical composition of the wall. String.
evap_mat	string (9.3.1.1.3)	chemical composition evaporated wall conditioning material. String.
lim_mat	string (9.3.1.1.3)	chemical composition of the limiter. String.
div_mat	string (9.3.1.1.3)	chemical composition of the divertor
coordinate	string (9.3.1.1.3)	name/definition of the internal coordinate of the simulator that are given by the data named rho

member	type	description
ecrh_freq	scenario_ref (9.3.1.3.271)	ECRH frequency [Hz]. Time-dependent.
ecrh_loc	scenario_ref (9.3.1.3.271)	position of maximum ECRH deposition on scale of rho [rho]. Time-dependent.
ecrh_mode	scenario_int (9.3.1.3.263)	polarisation of ecrh wave (0 = O mode, 1 = X mode) []. Time-dependent.
ecrh_tor_ang	scenario_ref (9.3.1.3.271)	toroidal angle of ECRH at resonance [rad] Time-dependent.
ecrh_pol_ang	scenario_ref (9.3.1.3.271)	poloidal angle of ECRH resonance position (0= LFS, pi/2 = top, -pi/2 = down, pi = HFS) [rad]. Time-dependent.
ecrh_harm	scenario_int (9.3.1.3.263)	harmonic number of the absorbed ecrh wave []. Time-dependent.
enbi	scenario_ref (9.3.1.3.271)	energy of the neutral beam [eV]. Time-dependent.
r_nbi	scenario_ref (9.3.1.3.271)	Major radius of tangence of NBI [m]. Time-dependent.
grad_b_drift	scenario_int (9.3.1.3.263)	direction of ion grad-B drift (1= to lower divertor, -1 = from lower divertor) []. Time-dependent.
icrh_freq	scenario_ref (9.3.1.3.271)	ICRH frequency [Hz]. Time-dependent.
icrh_scheme	string (9.3.1.1.3)	icrh scheme either : H.min_1; He3.min; T_harm_2; FW; FW_CD; FW_CCD
icrh_phase	scenario_ref (9.3.1.3.271)	ICRH antenna phasing [rad]. Time-dependent.
LH_freq	scenario_ref (9.3.1.3.271)	LHCD frequency [Hz]. Time-dependent.
LH_npar	scenario_ref (9.3.1.3.271)	LHCD parallel indice []. Time-dependent.
pellet_ang	scenario_ref (9.3.1.3.271)	pellet injection position (0= LFS, pi/2 = top, -pi/2 = down, pi = HFS) [rad]. Time-dependent.
pellet_v	scenario_ref (9.3.1.3.271)	pellet injection velocity [m/s]. Time-dependent.
pellet_nba	scenario_ref (9.3.1.3.271)	initial number of atoms in pellet []. Time-dependent.

Type of: scenario:configs (706)

### 9.3.1.3.257 scenario\_confinement

characteristic confinement times

member	type	description
tau_e	scenario_ref (9.3.1.3.271)	thermal energy confinement time [s]. Time-dependent.
tau_l_sc	scenario_ref (9.3.1.3.271)	confinement time given by the selected L-mode scaling law [s]. Time-dependent.
tau_h_sc	scenario_ref (9.3.1.3.271)	confinement time given by the selected H-mode scaling law [s]. Time-dependent.
tau_he	scenario_ref (9.3.1.3.271)	Helium ashes confinement time [s]. Time-dependent.
tau_e_ee	scenario_ref (9.3.1.3.271)	electron energy confinement time [s]. Time-dependent.
tau_e_ii	scenario_ref (9.3.1.3.271)	ion energy confinement time [s]. Time-dependent.
tau_e_ei	scenario_ref (9.3.1.3.271)	energy equipartition characteristic time [s]. Time-dependent.
tau_cur_diff	scenario_ref (9.3.1.3.271)	characteristic time for current diffusion [s]. Time-dependent.
tau_i_rol	scenario_ref (9.3.1.3.271)	characteristic time for current decrease in tokamak equivalent R/L circuit [s]. Time-dependent.

Type of: scenario:confinement (706)

### 9.3.1.3.258 scenario\_currents

data related to current sources and current diffusion

member	type	description
RR	scenario_ref (9.3.1.3.271)	plasma resistivity [ohm]. Time-dependent.
i_align	scenario_ref (9.3.1.3.271)	current drive alignment quality parameter (1 = good , 0 = bad). Time-dependent.
i_boot	scenario_ref (9.3.1.3.271)	bootstrap current [A]. Time-dependent.
i_cd_tot	scenario_ref (9.3.1.3.271)	total current drive [A]. Time-dependent.
i_eccd	scenario_ref (9.3.1.3.271)	Electron Cyclotron current drive [A]. Time-dependent.
i_fast_ion	scenario_ref (9.3.1.3.271)	fast ions bootstrap like current drive (i.e. fast alpha) [A]. Time-dependent.
i_fwcd	scenario_ref (9.3.1.3.271)	Fast Wave current drive [A]. Time-dependent.
i_lhcd	scenario_ref (9.3.1.3.271)	Lower Hybrid current drive [A]. Time-dependent.
i_nbicd	scenario_ref (9.3.1.3.271)	Neutral Beam Injection current drive [A]. Time-dependent.
i_ni_tot	scenario_ref (9.3.1.3.271)	total non inductive current [A]. Time-dependent.
i_ohm	scenario_ref (9.3.1.3.271)	ohmic current [A]. Time-dependent.
i_par	scenario_ref (9.3.1.3.271)	total plasma current (projected on B : <math>J_z/B_0</math>) [A]. Time-dependent.
i_runaway	scenario_ref (9.3.1.3.271)	runaway current [A]. Time-dependent.
v_loop	scenario_ref (9.3.1.3.271)	loop voltage @ LCMS / LFS , equatorial point [V]. Time-dependent.
v_meas	scenario_ref (9.3.1.3.271)	loop voltage measured on a coil [V]. Time-dependent.

Type of: scenario:currents (706)

### 9.3.1.3.259 scenario\_edge

edge value (@ LCMS)

member	type	description
te_edge	scenario_ref (9.3.1.3.271)	edge electron temperature [eV]. Time-dependent.
ti_edge	scenario_ref (9.3.1.3.271)	edge ion temperature [eV]. Time-dependent.
ne_edge	scenario_ref (9.3.1.3.271)	edge electron density [ $m^{-3}$ ]. Time-dependent.
ni_edge	scenario_ref (9.3.1.3.271)	edge ion density [ $m^{-3}$ ]. Time-dependent.
psi_edge	scenario_ref (9.3.1.3.271)	edge poloidal flux [Wb]. Time-dependent.
phi_edge	scenario_ref (9.3.1.3.271)	edge toroidal flux [Wb]. Time-dependent.
rho_edge	scenario_ref (9.3.1.3.271)	edge value of internal simulator coordinate [m]. Time-dependent.
drho_edge_dt	scenario_ref (9.3.1.3.271)	time derivative of edge value of internal simulator coordinate [m/s]. Time-dependent.
q_edge	scenario_ref (9.3.1.3.271)	edge or effective safety factor value []. Time-dependent.
neutral_flux	scenario_ref (9.3.1.3.271)	number of cold neutral (in equivalent electron for $Z_{\zeta 1}$ ) that input in plasma at the edge every second coming from recycling and gaz puff [ $s^{-1}$ ]. Time-dependent.
phi_plasma	scenario_ref (9.3.1.3.271)	contribution of the plasma to the toroidal flux (used for toroidal coils heat load computation) [Wb]. Time-dependent.
vtor_edge	scenario_ref (9.3.1.3.271)	rotation velocity of selected impurity on the separatrix [m/s]. Time-dependent.

Type of: scenario:edge (706)

### 9.3.1.3.260 scenario\_energy

plasma energy content

member	type	description
w_tot	scenario_ref (9.3.1.3.271)	total plasma energy [J]. Time-dependent.
w_b_pol	scenario_ref (9.3.1.3.271)	poloidal field energy of the plasma [J]. Time-dependent.
w_dia	scenario_ref (9.3.1.3.271)	3/2 perpendicular plasma energy [J]. Time-dependent.
dwdia_dt	scenario_ref (9.3.1.3.271)	time derivative of Wdia [W]. Time-dependent.
w_b_tor_pla	scenario_ref (9.3.1.3.271)	toroidal magnetic plasma energy [J]. Time-dependent.
w_th	scenario_ref (9.3.1.3.271)	thermal plasma energy [J]. Time-dependent.
dwtot_dt	scenario_ref (9.3.1.3.271)	time derivative of total plasma energy [W]. Time-dependent.
dwbpol_dt	scenario_ref (9.3.1.3.271)	time derivative of plasma poloidal field energy [W]. Time-dependent.
dwbtorpla_dt	scenario_ref (9.3.1.3.271)	time derivative of toroidal magnetic plasma energy [W]. Time-dependent.
dwth_dt	scenario_ref (9.3.1.3.271)	time derivative of thermal plasma energy [W]. Time-dependent.
esup_icrhtot	scenario_ref (9.3.1.3.271)	total suprathermal energy of fast ions accelerated by ICRH [J]. Time-dependent.
esup_icrhper	scenario_ref (9.3.1.3.271)	perpendicular part of suprathermal energy of fast ions accelerated by ICRH [J]. Time-dependent.
esup_nbitot	scenario_ref (9.3.1.3.271)	total suprathermal energy of fast ions from NBI ionisation [J]. Time-dependent.
esup_nbiperp	scenario_ref (9.3.1.3.271)	perpendicular part of suprathermal energy of fast ions from NBI ionisation [J]. Time-dependent.
esup_lhcd	scenario_ref (9.3.1.3.271)	total suprathermal energy of fast electron from LHCD [J]. Time-dependent.
esup_alpha	scenario_ref (9.3.1.3.271)	total suprathermal energy of fast alpha particules [J]. Time-dependent.

Type of: scenario:energy (706)

### 9.3.1.3.261 scenario\_global

global scalar value

member	type	description
ip	scenario_ref (9.3.1.3.271)	Plasma current [A]. Time-dependent.
dip_dt	scenario_ref (9.3.1.3.271)	time derivative of plasma current [A/s]. Time-dependent.
beta_pol	scenario_ref (9.3.1.3.271)	poloidal beta []. Time-dependent.
beta_tor	scenario_ref (9.3.1.3.271)	toroidal beta []. Time-dependent.
beta_normal	scenario_ref (9.3.1.3.271)	normalised beta []. Time-dependent.
li	scenario_ref (9.3.1.3.271)	internal inductance (definition 3). Time-dependent.
volume	scenario_ref (9.3.1.3.271)	total plasma volume [ $m^3$ ]. Time-dependent.
area_pol	scenario_ref (9.3.1.3.271)	area poloidal cross section [ $m^2$ ]. Time-dependent.
area_ext	scenario_ref (9.3.1.3.271)	external plasma surface [ $m^2$ ]. Time-dependent.
len_sepa	scenario_ref (9.3.1.3.271)	length of the separatrix [m]. Time-dependent.

member	type	description
beta_pol.th	scenario_ref (9.3.1.3.271)	poloidal beta, thermal contribution []. Time-dependent.
beta_tor.th	scenario_ref (9.3.1.3.271)	toroidal beta, thermal contribution []. Time-dependent.
beta_n.th	scenario_ref (9.3.1.3.271)	normalised beta, thermal contribution []. Time-dependent.
disruption	scenario_ref (9.3.1.3.271)	flag for disruption (set to 1 for disruption, otherwise equal 0) []. Time-dependent.
mode_h	scenario_ref (9.3.1.3.271)	confinement mode versus time: 0 = L-mode et 1 = H-mode []. Time-dependent.
s.alpha	scenario_ref (9.3.1.3.271)	total number of alpha fusion particules from D-T ractions per second [s <sup>-1</sup> ]. Time-dependent.

Type of: scenario:global\_param (706)

### 9.3.1.3.262 scenario\_heat\_power

Power delivred to plasma (thermal an non thermal)

member	type	description
plh	scenario_ref (9.3.1.3.271)	Lower hybrid power [W]. Time-dependent.
pohmic	scenario_ref (9.3.1.3.271)	ohmic power (thermal species contribution only) [W]. Time-dependent.
picrh	scenario_ref (9.3.1.3.271)	Ion cyclotron resonance heating power [W]. Time-dependent.
pecrh	scenario_ref (9.3.1.3.271)	electron cyclotron resonance heating power [W]. Time-dependent.
pnbi	scenario_ref (9.3.1.3.271)	neutral beam injection power [W]. Time-dependent.
pnbi_co_cur	scenario_ref (9.3.1.3.271)	neutral beam injection power ineted in co-current direction [W]. Time-dependent.
pnbi_counter	scenario_ref (9.3.1.3.271)	neutral beam injection power ineted in counter-current direction [W]. Time-dependent.
plh.th	scenario_ref (9.3.1.3.271)	lower hybrid power deposited on thermal electrons [W]. Time-dependent.
picrh.th	scenario_ref (9.3.1.3.271)	ion cyclotron resonance heating power deposited on thermal species [W]. Time-dependent.
pecrh.th	scenario_ref (9.3.1.3.271)	electron cyclotron resonance heating power deposited on thermal electrons [W]. Time-dependent.
pnbi.th	scenario_ref (9.3.1.3.271)	neutral beam injection power deposited on thermal species [W]. Time-dependent.
ploss_icrh	scenario_ref (9.3.1.3.271)	Ion cyclotron resonance heating power losses [W]. Time-dependent.
ploss_nbi	scenario_ref (9.3.1.3.271)	neutral beam injection power losses (including shine-through) [W]. Time-dependent.
pbrem	scenario_ref (9.3.1.3.271)	Bremsstrahlung radition losses [W]. Time-dependent.
pcyclo	scenario_ref (9.3.1.3.271)	cyclotron radiation losses [W]. Time-dependent.
prad	scenario_ref (9.3.1.3.271)	impurity radition losses in core plamsa , without Bremsstrahlung [W]. Time-dependent.
pdd_fus	scenario_ref (9.3.1.3.271)	fusion power due to DD reactions [W]. Time-dependent.
pei	scenario_ref (9.3.1.3.271)	power exchange between eletron and ion (equipartition) [W]. Time-dependent.
pel_tot	scenario_ref (9.3.1.3.271)	total thermal electron power deposition without equipartition [W]. Time-dependent.
pel_fus	scenario_ref (9.3.1.3.271)	fusion electron power deposition [W]. Time-dependent.
pel_icrh	scenario_ref (9.3.1.3.271)	ICRH electron power deposition [W]. Time-dependent.
pel_nbi	scenario_ref (9.3.1.3.271)	NBI electron power deposition [W]. Time-dependent.
pfus_dt	scenario_ref (9.3.1.3.271)	total D-T fusion power of alpha [W]. Time-dependent.
ploss_fus	scenario_ref (9.3.1.3.271)	D-T fusion power of alpha losses [W]. Time-dependent.
pfus_nbi	scenario_ref (9.3.1.3.271)	NBI induce D-T fusion power of alpha [W]. Time-dependent.
pfus_th	scenario_ref (9.3.1.3.271)	alpha (from DT fusion reaction) power deposited on thermal species [W]. Time-dependent.
padd_tot	scenario_ref (9.3.1.3.271)	total additional power input including ohmic power [W]. Time-dependent.
pion_tot	scenario_ref (9.3.1.3.271)	total thermal ion power deposition without equipartition [W]. Time-dependent.
pion_fus	scenario_ref (9.3.1.3.271)	fusion ion power deposition [W]. Time-dependent.
pion_icrh	scenario_ref (9.3.1.3.271)	ICRH ion power deposition [W]. Time-dependent.
pion_nbi	scenario_ref (9.3.1.3.271)	NBI ion power deposition [W]. Time-dependent.
pioniz	scenario_ref (9.3.1.3.271)	power losses due to cold neutral ionization [W]. Time-dependent.
ploss	scenario_ref (9.3.1.3.271)	plasma losses power, as define in ITER basis [W]. Time-dependent.
p_wth	scenario_ref (9.3.1.3.271)	thermal power input, define as tau.E * P.th = Wth [W]. Time-dependent.
p_w	scenario_ref (9.3.1.3.271)	effective power define as tau.E * P.w = W_tot [W]. Time-dependent.
p_l2h_thr	scenario_ref (9.3.1.3.271)	additional power crossing the LCMS; must be compare to L-2H threshold power (Ryter PPCF 2002) [W]. Time-dependent.
p_l2h_sc	scenario_ref (9.3.1.3.271)	threshold power given by the choosen scaling law for transition from L-mode to H-mode [W]. Time-dependent.
p_nbi_icrh	scenario_ref (9.3.1.3.271)	beam power increase due to ICRH effects [W]. Time-dependent.

Type of: scenario:heat\_power (706)

### 9.3.1.3.263 scenario\_int

Structure for scenario integer flag; Time-dependent

member	type	description
value	integer (9.3.1.1.2)	Signal value; Time-dependent; Scalar Integer.
source	string (9.3.1.1.3)	Source of the signal (any comment describing the origin of the signal : code, path to diagnostic signals, massaging, ...); String

Type of: scenario\_configuration:config (929) I scenario\_configuration:ecrh\_harm (929) I scenario\_configuration:ecrh\_mode (929) I scenario\_configuration:grad\_b\_drift (929) I scenario\_itb:itb\_type (937)

### 9.3.1.3.264 scenario\_itb

Values characteristics of the Internal Transport Barrier

member	type	description
q_min	scenario_ref (9.3.1.3.271)	minimal value of safety factor []. Time-dependent.
te_itb	scenario_ref (9.3.1.3.271)	electron temperature @ q = q_min [eV]. Time-dependent.
ti_itb	scenario_ref (9.3.1.3.271)	ion temperature @ q = q_min [eV]. Time-dependent.
ne_itb	scenario_ref (9.3.1.3.271)	electron density @ q = q_min [m <sup>-3</sup> ]. Time-dependent.
ni_itb	scenario_ref (9.3.1.3.271)	ion density @ q = q_min [m <sup>-3</sup> ]. Time-dependent.
psi_itb	scenario_ref (9.3.1.3.271)	poloidal flux @ q = q_min [Wb]. Time-dependent.
phi_itb	scenario_ref (9.3.1.3.271)	toroidal flux @ q = q_min [Wb]. Time-dependent.
rho_itb	scenario_ref (9.3.1.3.271)	value of internal simulator coordinate @ q = q_min [m]. Time-dependent.
h_itb	scenario_ref (9.3.1.3.271)	energy enhancement ITB factor [m]. Time-dependent.
width_itb	scenario_ref (9.3.1.3.271)	width of the high pressure gradient region (on scale of rho_itb) [m]. Time-dependent.
vtor_itb	scenario_ref (9.3.1.3.271)	rotation velocity of selected impurity @ rho_itb [m/s]. Time-dependent.
itb_type	scenario_int (9.3.1.3.263)	itb type []. Time-dependent. Any combinaison of : 0 = none; 1 = on T <sub>i</sub> ; 2 = on T <sub>e</sub> ; 4 = on n <sub>e</sub> ; 8 = reverse shear triggered; 16 = toroidal rotation triggered; 32 = alpha stabilisation triggered; 64 = T <sub>i</sub> / T <sub>e</sub> triggered; 128 = radiation triggered; 256 = rationnal q triggered

Type of: scenario:itb (706)

### 9.3.1.3.265 scenario\_lim\_div\_wall

values on the plate of divertor or on the limiter or on the wall (@ LCMS)

member	type	description
te_lim_div	scenario_ref (9.3.1.3.271)	limiter/divertor electron temperature [eV]. Time-dependent.
ti_lim_div	scenario_ref (9.3.1.3.271)	limiter/divertor ion temperature [eV]. Time-dependent.
ne_lim_div	scenario_ref (9.3.1.3.271)	limiter/divertor electron density [m <sup>-3</sup> ]. Time-dependent.
ni_lim_div	scenario_ref (9.3.1.3.271)	limiter/divertor ion density [m <sup>-3</sup> ]. Time-dependent.
p_peak_div	scenario_ref (9.3.1.3.271)	peak power on divertor [W]. Time-dependent.
surf_temp	scenario_ref (9.3.1.3.271)	limiter surface or divertor plate temperature [K]. Time-dependent.
p_lim_div	scenario_ref (9.3.1.3.271)	Power flux on limiter or divertor plate [W]. Time-dependent.
p_rad_div	scenario_ref (9.3.1.3.271)	radiative power in the divertor zone [W]. Time-dependent.
wall_temp	scenario_ref (9.3.1.3.271)	wall temperature [K]. Time-dependent.
wall_state	scenario_ref (9.3.1.3.271)	saturation state of the wall (0 = completly pumping wall, 1 = completly saturate wall) []. Time-dependent.
detach_state	scenario_ref (9.3.1.3.271)	plasma detachment state (0= attach plasma, 1 = completely detach plasma) []. Time-dependent.
pump_flux	scenario_ref (9.3.1.3.271)	flux pump out for each ion species [s <sup>-1</sup> ]. Time-dependent.

Type of: scenario:lim\_div\_wall (706)

### 9.3.1.3.266 scenario\_line\_ave

line averaged value

member	type	description
ne_line	scenario_ref (9.3.1.3.271)	line averaged electron density [m <sup>-3</sup> ]. Time-dependent.
z_eff_line	scenario_ref (9.3.1.3.271)	line averaged effective charge. Time-dependent.
ne_z_eff_line	scenario_ref (9.3.1.3.271)	line averaged electron density * Z <sub>eff</sub> . Time-dependent.
dne_line_dt	scenario_ref (9.3.1.3.271)	time derivative of line averaged electron density [m <sup>-3</sup> /s]. Time-dependent.

Type of: scenario:line\_ave (706)

### 9.3.1.3.267 scenario\_neutron

neutron flux for DD and DT reactions

member	type	description
ndd_tot	scenario_ref (9.3.1.3.271)	total neutron flux coming from DD reactions [Hz]. Time-dependent.
ndd_th	scenario_ref (9.3.1.3.271)	neutron flux coming from thermal DD reactions [Hz]. Time-dependent.
ndd_nbi_th	scenario_ref (9.3.1.3.271)	neutron flux coming from beam/plasma DD reactions [Hz]. Time-dependent.
ndd_nbi_nbi	scenario_ref (9.3.1.3.271)	neutron flux coming from beam/beam DD reactions [Hz]. Time-dependent.
ndt_tot	scenario_ref (9.3.1.3.271)	total neutron flux coming from DT reactions [Hz]. Time-dependent.
ndt_th	scenario_ref (9.3.1.3.271)	neutron flux coming from thermal DT reactions [Hz]. Time-dependent.

Type of: scenario:neutron (706)

### 9.3.1.3.268 scenario\_ninety\_five

values at 95% of poloidal flux

member	type	description
q_95	scenario_ref (9.3.1.3.271)	safety factor value @ 95 % of poloidal flux span []. Time-dependent.
elong_95	scenario_ref (9.3.1.3.271)	plasma elongation @ 95 % of poloidal flux span []. Time-dependent.
tria_95	scenario_ref (9.3.1.3.271)	averaged plasma triangularity @ 95 % of poloidal flux span []. Time-dependent.
tria_up_95	scenario_ref (9.3.1.3.271)	upper plasma triangularity @ 95 % of poloidal flux span []. Time-dependent.
tria_lo_95	scenario_ref (9.3.1.3.271)	lower plasma triangularity @ 95 % of poloidal flux span []. Time-dependent.
te_95	scenario_ref (9.3.1.3.271)	electron temperature @ 95 % of poloidal flux [eV]. Time-dependent.
ti_95	scenario_ref (9.3.1.3.271)	ion temperature @ 95 % of poloidal flux [eV]. Time-dependent.
ne_95	scenario_ref (9.3.1.3.271)	electron density @ 95 % of poloidal flux [m <sup>-3</sup> ]. Time-dependent.
ni_95	scenario_ref (9.3.1.3.271)	ion density @ 95 % of poloidal flux [m <sup>-3</sup> ]. Time-dependent.
phi_95	scenario_ref (9.3.1.3.271)	toroidal flux @ 95 % of poloidal flux [Wb]. Time-dependent.
rho_95	scenario_ref (9.3.1.3.271)	value of internal simulator coordinate @ 95 % of poloidal flux [m]. Time-dependent.
vtor_95	scenario_ref (9.3.1.3.271)	rotation velocity of selected impurity @ 95 % of poloidal flux [m/s]. Time-dependent.

Type of: scenario:ninety\_five (706)

### 9.3.1.3.269 scenario\_pedestal

Values at the top of the H-mode pedestal

member	type	description
te_ped	scenario_ref (9.3.1.3.271)	pedestal electron temperature [eV]. Time-dependent.
ti_ped	scenario_ref (9.3.1.3.271)	pedestal ion temperature [eV]. Time-dependent.
ne_ped	scenario_ref (9.3.1.3.271)	pedestal electron density [m <sup>-3</sup> ]. Time-dependent.
ni_ped	scenario_ref (9.3.1.3.271)	pedestal ion density [m <sup>-3</sup> ]. Time-dependent.
psi_ped	scenario_ref (9.3.1.3.271)	pedestal poloidal flux [Wb]. Time-dependent.
phi_ped	scenario_ref (9.3.1.3.271)	pedestal toroidal flux [Wb]. Time-dependent.
rho_ped	scenario_ref (9.3.1.3.271)	top pedestal value of internal simulator coordinate [m]. Time-dependent.
q_ped	scenario_ref (9.3.1.3.271)	top pedestal safety factor value []. Time-dependent.
pressure_ped	scenario_ref (9.3.1.3.271)	top pedestal thermal pressure (n <sub>e</sub> * T <sub>e</sub> + n <sub>i</sub> * T <sub>i</sub> ) [Pa]. Time-dependent.
vtor_ped	scenario_ref (9.3.1.3.271)	top pedestal value of rotation velocity of selected impurity [m/s]. Time-dependent.

Type of: scenario:pedestal (706)

### 9.3.1.3.270 scenario\_reactor

reactor data (such as electricity cost ...)

member	type	description
pnetwork	float (9.3.1.1.1)	reactor electric power provide to the network [W].



Type of: scenario:reactor (706)

### 9.3.1.3.271 scenario\_ref

Structure for scenario reference; Time-dependent

member	type	description
value	float (9.3.1.1.1)	Signal value; Time-dependent; Scalar
source	string (9.3.1.1.3)	Source of the signal (any comment describing the origin of the signal : code, path to diagnostic signals, massaging, ...); String

Type of: scenario\_centre:Rmag (927) I scenario\_centre:Zmag (927) I scenario\_centre:ne0 (927) I scenario\_centre:ni0 (927) I scenario\_centre:phi0 (927) I scenario\_centre:psi0 (927) I scenario\_centre:q0 (927) I scenario\_centre:shift0 (927) I scenario\_centre:te0 (927) I scenario\_centre:ti0 (927) I scenario\_centre:vtor\_0 (927) I scenario\_configuration:LH\_freq (929) I scenario\_configuration:LH\_npar (929) I scenario\_configuration:ecrh\_freq (929) I scenario\_configuration:ecrh\_loc (929) I scenario\_configuration:ecrh\_pol\_ang (929) I scenario\_configuration:ecrh\_tor\_ang (929) I scenario\_configuration:enbi (929) I scenario\_configuration:icrh\_freq (929) I scenario\_configuration:icrh\_phase (929) I scenario\_configuration:pellet\_ang (929) I scenario\_configuration:pellet\_nba (929) I scenario\_configuration:pellet\_v (929) I scenario\_configuration:r\_nbi (929) I scenario\_confinement:tau\_cur\_diff (930) I scenario\_confinement:tau\_e (930) I scenario\_confinement:tau\_e\_ee (930) I scenario\_confinement:tau\_e\_ei (930) I scenario\_confinement:tau\_e\_ii (930) I scenario\_confinement:tau\_h\_sc (930) I scenario\_confinement:tau\_he (930) I scenario\_confinement:tau\_i\_rol (930) I scenario\_confinement:tau\_l\_sc (930) I scenario\_currents:RR (931) I scenario\_currents:i\_align (931) I scenario\_currents:i\_boot (931) I scenario\_currents:i\_cd\_tot (931) I scenario\_currents:i\_eccd (931) I scenario\_currents:i\_fast\_ion (931) I scenario\_currents:i\_fwcd (931) I scenario\_currents:i\_lhcd (931) I scenario\_currents:i\_nbicd (931) I scenario\_currents:i\_ni\_tot (931) I scenario\_currents:i\_ohm (931) I scenario\_currents:i\_par (931) I scenario\_currents:i\_runaway (931) I scenario\_currents:v\_loop (931) I scenario\_currents:v\_meas (931) I scenario\_edge:drho\_edge\_dt (932) I scenario\_edge:ne\_edge (932) I scenario\_edge:neutral\_flux (932) I scenario\_edge:ni\_edge (932) I scenario\_edge:phi\_edge (932) I scenario\_edge:phi\_plasma (932) I scenario\_edge:psi\_edge (932) I scenario\_edge:q\_edge (932) I scenario\_edge:rho\_edge (932) I scenario\_edge:te\_edge (932) I scenario\_edge:ti\_edge (932) I scenario\_edge:vtor\_edge (932) I scenario\_energy:dwbpol\_dt (933) I scenario\_energy:dwbtorpla\_dt (933) I scenario\_energy:dwdia\_dt (933) I scenario\_energy:dwth\_dt (933) I scenario\_energy:dwtot\_dt (933) I scenario\_energy:esup\_alp (933) I scenario\_energy:esup\_icrhper (933) I scenario\_energy:esup\_icrhtot (933) I scenario\_energy:esup\_lhcd (933) I scenario\_energy:esup\_nbiperp (933) I scenario\_energy:esup\_nbitot (933) I scenario\_energy:w\_b\_pol (933) I scenario\_energy:w\_b\_tor\_pla (933) I scenario\_energy:w\_dia (933) I scenario\_energy:w\_th (933) I scenario\_energy:w\_tot (933) I scenario\_global:area\_ext (934) I scenario\_global:area\_pol (934) I scenario\_global:beta\_n\_th (934) I scenario\_global:beta\_normal (934) I scenario\_global:beta\_pol (934) I scenario\_global:beta\_pol\_th (934) I scenario\_global:beta\_tor (934) I scenario\_global:beta\_tor\_th (934) I scenario\_global:dip\_dt (934) I scenario\_global:disruption (934) I scenario\_global:ip (934) I scenario\_global:len\_sepa (934) I scenario\_global:li (934) I scenario\_global:mode\_h (934) I scenario\_global:s\_alpha (934) I scenario\_global:volume (934) I scenario\_heat\_power:p\_l2h\_sc (935) I scenario\_heat\_power:p\_l2l (935) I scenario\_heat\_power:p\_nbi\_icrh (935) I scenario\_heat\_power:p\_w (935) I scenario\_heat\_power:p\_wth (935) I scenario\_heat\_power:padd\_tot (935) I scenario\_heat\_power:pbrem (935) I scenario\_heat\_power:pcyclo (935) I scenario\_heat\_power:pdd\_fus (935) I scenario\_heat\_power:pecrh (935) I scenario\_heat\_power:pecrh\_th (935) I scenario\_heat\_power:pei (935) I scenario\_heat\_power:pel\_fus (935) I scenario\_heat\_power:pel\_icrh (935) I scenario\_heat\_power:pel\_nbi (935) I scenario\_heat\_power:pel\_tot (935) I scenario\_heat\_power:pfus\_dt (935) I scenario\_heat\_power:pfus\_nbi (935) I scenario\_heat\_power:pfus\_th (935) I scenario\_heat\_power:picrh (935) I scenario\_heat\_power:picrh\_th (935) I scenario\_heat\_power:pion\_fus (935) I scenario\_heat\_power:pion\_icrh (935) I scenario\_heat\_power:pion\_nbi (935) I scenario\_heat\_power:pion\_tot (935) I scenario\_heat\_power:pioniz (935) I scenario\_heat\_power:plh (935) I scenario\_heat\_power:plh\_th (935) I scenario\_heat\_power:ploss (935) I scenario\_heat\_power:ploss\_fus (935) I scenario\_heat\_power:ploss\_icrh (935) I scenario\_heat\_power:ploss\_nbi (935) I scenario\_heat\_power:pnbi (935) I scenario\_heat\_power:pnbi\_co\_cur (935) I scenario\_heat\_power:pnbi\_counter (935) I scenario\_heat\_power:pnbi\_th (935) I scenario\_heat\_power:pohmic (935) I scenario\_heat\_power:prad (935) I scenario\_itb:h\_itb (937) I scenario\_itb:ne\_itb (937) I scenario\_itb:ni\_itb (937) I scenario\_itb:phi\_itb (937) I scenario\_itb:psi\_itb (937) I scenario\_itb:q\_min (937) I scenario\_itb:rho\_itb (937) I scenario\_itb:te\_itb (937) I scenario\_itb:ti\_itb (937) I scenario\_itb:vtor\_itb (937) I scenario\_itb:width\_itb (937) I scenario\_lim\_div\_wall:detach\_state (938) I scenario\_lim\_div\_wall:ne\_lim\_div (938) I scenario\_lim\_div\_wall:ni\_lim\_div (938) I scenario\_lim\_div\_wall:p\_lim\_div (938) I scenario\_lim\_div\_wall:p\_peak\_div (938) I scenario\_lim\_div\_wall:p\_rad\_div (938) I scenario\_lim\_div\_wall:pump\_flux (938) I scenario\_lim\_div\_wall:surf\_temp (938) I scenario\_lim\_div\_wall:te\_lim\_div (938) I scenario\_lim\_div\_wall:ti\_lim\_div (938) I scenario\_lim\_div\_wall:wall\_state (938) I scenario\_lim\_div\_wall:wall\_temp (938) I scenario\_line\_ave:dne\_line\_dt (939) I scenario\_line\_ave:ne\_line (939) I scenario\_line\_ave:ne\_zeff\_line (939) I scenario\_line\_ave:zeff\_line (939) I scenario\_neutron:ndd\_nbi\_nbi (940) I scenario\_neutron:ndd\_nbi\_th (940) I scenario\_neutron:ndd\_th (940) I scenario\_neutron:ndd\_tot (940) I scenario\_neutron:ndt\_th (940) I scenario\_neutron:ndt\_tot (940) I scenario\_ninety\_five:elong\_95 (941) I scenario\_ninety\_five:ne\_95 (941) I scenario\_ninety\_five:ni\_95 (941) I scenario\_ninety\_five:phi\_95 (941) I scenario\_ninety\_five:q\_95 (941) I scenario\_ninety\_five:rho\_95 (941) I scenario\_ninety\_five:te\_95 (941) I scenario\_ninety\_five:ti\_95 (941)



(941) I scenario\_ninety\_five:tria\_95 (941) I scenario\_ninety\_five:tria\_lo\_95 (941) I scenario\_ninety\_five:tria\_up\_95 (941) I scenario\_ninety\_five:vtor\_95 (941) I scenario\_pedestal:ne\_ped (942) I scenario\_pedestal:ni\_ped (942) I scenario\_pedestal:phi\_ped (942) I scenario\_pedestal:pressure\_ped (942) I scenario\_pedestal:psi\_ped (942) I scenario\_pedestal:q\_ped (942) I scenario\_pedestal:rho\_ped (942) I scenario\_pedestal:te\_ped (942) I scenario\_pedestal:ti\_ped (942) I scenario\_pedestal:vtor\_ped (942) I scenario\_references:bvac\_r (945) I scenario\_references:enhancement (945) I scenario\_references:gas\_puff (945) I scenario\_references:ip (945) I scenario\_references:isotopic (945) I scenario\_references:nbar (945) I scenario\_references:nbi\_td\_ratio (945) I scenario\_references:pecrh (945) I scenario\_references:picrh (945) I scenario\_references:plh (945) I scenario\_references:pnbi (945) I scenario\_references:pol\_flux (945) I scenario\_references:xecrh (945) I scenario\_references:zeffl (945) I scenario\_sol:gas\_puff (946) I scenario\_sol:l\_ne\_sol (946) I scenario\_sol:l\_ni\_sol (946) I scenario\_sol:l\_qe\_sol (946) I scenario\_sol:l\_qi\_sol (946) I scenario\_sol:l\_te\_sol (946) I scenario\_sol:l\_ti\_sol (946) I scenario\_sol:p\_rad\_sol (946) I scenario\_vol\_ave:dne\_ave\_dt (947) I scenario\_vol\_ave:meff\_ave (947) I scenario\_vol\_ave:ne\_ave (947) I scenario\_vol\_ave:ni\_ave (947) I scenario\_vol\_ave:omega\_ave (947) I scenario\_vol\_ave:pellet\_flux (947) I scenario\_vol\_ave:te\_ave (947) I scenario\_vol\_ave:ti\_ave (947) I scenario\_vol\_ave:ti\_o\_te\_ave (947) I scenario\_vol\_ave:zeff\_ave (947)

### 9.3.1.3.272 scenario\_references

References

member	type	description
plh	scenario_ref (9.3.1.3.271)	Lower hybrid power [W]. Time-dependent.
picrh	scenario_ref (9.3.1.3.271)	Ion cyclotron resonance heating power [W]. Time-dependent.
pecrh	scenario_ref (9.3.1.3.271)	electron cyclotron resonance heating power [W]. Time-dependent.
pnbi	scenario_ref (9.3.1.3.271)	neutral beam injection power [W]. Time-dependent.
ip	scenario_ref (9.3.1.3.271)	Plasma current [A]. Time-dependent.
bvac_r	scenario_ref (9.3.1.3.271)	Vacuum field times radius in the toroidal field magnet [T.m]. Time-dependent.
zeffl	scenario_ref (9.3.1.3.271)	line averaged effective charge []. Time-dependent.
nbar	scenario_ref (9.3.1.3.271)	line averaged electron density [m <sup>-3</sup> ]. Time-dependent.
xecrh	scenario_ref (9.3.1.3.271)	position of maximum (normalized rho coordinate) of electron cyclotron resonance heating power []. Time-dependent.
pol_flux	scenario_ref (9.3.1.3.271)	separatrix poloidal flux [Wb]. Time-dependent.
enhancement	scenario_ref (9.3.1.3.271)	energy enhancement factor []. Time-dependent.
isotopic	scenario_ref (9.3.1.3.271)	ratio between tritium and deuterium density (for burning plasma) []. Time-dependent.
nbi_td_ratio	scenario_ref (9.3.1.3.271)	ratio between tritium and deuterium power in neutral beam injection []. Time-dependent.
gas_puff	scenario_ref (9.3.1.3.271)	gas puff flux reference, in equivalent [electrons.s <sup>-1</sup> ]. Time-dependent.

Type of: scenario:references (706)

### 9.3.1.3.273 scenario\_sol

SOL characteristic (@ LCMS)

member	type	description
l_te_sol	scenario_ref (9.3.1.3.271)	electron temperature radial decay length [m]. Time-dependent.
l_ti_sol	scenario_ref (9.3.1.3.271)	ion temperature radial decay length [m]. Time-dependent.
l_ne_sol	scenario_ref (9.3.1.3.271)	electron density radial decay length [m]. Time-dependent.
l_ni_sol	scenario_ref (9.3.1.3.271)	ion density radial decay length [m]. Time-dependent.
l_qe_sol	scenario_ref (9.3.1.3.271)	electron heat flux radial decay length [m]. Time-dependent.
l_qi_sol	scenario_ref (9.3.1.3.271)	ion heat flux radial decay length [m]. Time-dependent.
p_rad_sol	scenario_ref (9.3.1.3.271)	radiative power of the SOL [W]. Time-dependent.
gas_puff	scenario_ref (9.3.1.3.271)	gas puff flux for each ion species [s <sup>-1</sup> ]. Time-dependent.

Type of: scenario:sol (706)

### 9.3.1.3.274 scenario\_vol\_ave

volume averaged values

member	type	description
te_ave	scenario_ref (9.3.1.3.271)	volume averaged electron temperature [eV]. Time-dependent.
ti_ave	scenario_ref (9.3.1.3.271)	volume averaged ion temperature [eV]. Time-dependent.
ne_ave	scenario_ref (9.3.1.3.271)	volume averaged electron density [m <sup>-3</sup> ]. Time-dependent.

member	type	description
dne_ave_dt	scenario_ref (9.3.1.3.271)	time derivative of volume averaged electron density [ $m^{-3}/s$ ]. Time-dependent.
ni_ave	scenario_ref (9.3.1.3.271)	volume averaged ion density ( $\langle \sum(n_k)_i, k \text{ in species} \rangle [m^{-3}]$ ). Time-dependent.
zeff_ave	scenario_ref (9.3.1.3.271)	volume averaged effective charge. Time-dependent.
ti_o_te_ave	scenario_ref (9.3.1.3.271)	volume averaged ion temperature over electron temperature ( $\langle T_i/T_e \rangle$ ) []. Time-dependent.
meff_ave	scenario_ref (9.3.1.3.271)	volume averaged effective mass ( $\langle \sum(n_k * m_k) / \langle \sum(n_k) \rangle$ ) []. Time-dependent.
pellet_flux	scenario_ref (9.3.1.3.271)	number of electrons fuelling the plasma every second coming from pellet injection [ $s^{-1}$ ]. Time-dependent.
nions_ave	vecflt_type (9.3.1.2.9)	volume averaged ions densities (vector, one element per ion species) [ $m^{-3}$ ]. Time-dependent.
omega_ave	scenario_ref (9.3.1.3.271)	bulk volume average toroidal rotation velocity (whole plasma) [ $rad/s$ ]. Time-dependent.

Type of: scenario:vol\_ave (706)

### 9.3.1.3.275 setup\_bprobe

diagnostic setup information

member	type	description
name	vecstring_type (9.3.1.2.11)	Name of the probe. Array of strings (nprobes).
id	vecstring_type (9.3.1.2.11)	ID of the probe. Array of strings (nprobes).
position	rz1D (9.3.1.3.242)	RZ of coil centre [m]; Vector (nprobes)
polangle	vecflt_type (9.3.1.2.9)	Poloidal angle of coil orientation (w.r.t. horizontal ?? to be checked) [rad]; Vector (nprobes)
torangle	vecflt_type (9.3.1.2.9)	Toroidal angle of coil orientation (0 if fully in the poloidal plane) [rad] ; Vector (nprobes)
area	vecflt_type (9.3.1.2.9)	Area of coil [ $m^2$ ]; Vector (nprobes)
length	vecflt_type (9.3.1.2.9)	Length of coil [m]; Vector (nprobes)
turns	vecint_type (9.3.1.2.10)	Turns in the coil; Vector (nprobes)

Type of: bpol\_probes:setup\_bprobe (729)

### 9.3.1.3.276 setup\_floops

diagnostic setup information

member	type	description
name	vecstring_type (9.3.1.2.11)	Name of loop. Array of strings (nloops).
id	vecstring_type (9.3.1.2.11)	ID of loop. Array of strings (nloops).
position	rzphi2D (9.3.1.3.249)	List of (R,Z,phi) points defining the position of the loop (see data structure documentation FLUXLOOPposition.pdf); Matrices (nloops, max_npoints)
npoints	vecint_type (9.3.1.2.10)	Number of points describing each loop in the "position" matrices. Vector (nloops)

Type of: flux\_loops:setup\_floops (820)

### 9.3.1.3.277 setup\_inject

Detailed information on an injection unit.

member	type	description
position	rzphi0D (9.3.1.3.246)	Position of centre of injection unit surface.
tang_rad	float (9.3.1.1.1)	Tagency radius (major radius where the central line of a NBI unit is tangent to a circle around the torus) [m]
angle	float (9.3.1.1.1)	Angle of inclination between a line at the centre of the injection unit surface and the horizontal plane [rad]
direction	integer (9.3.1.1.2)	Direction of the beam seen from above the torus: -1 = clockwise; 1 = counter clockwise
focal_len_hz	float (9.3.1.1.1)	Horizontal focal length along the beam line [m]
focal_len_vc	float (9.3.1.1.1)	Vertical focal length along the beam line [m]
divergence	divergence (9.3.1.3.124)	Detailed information on beamlet divergence. Divergens is described as a super position of Gaussian profiles with amplitude "frac_divcomp" and vertical/horizontal divergence "div_vert"/"div_horiz". Note that for positive ion NBI the divergence is well described by a single Gaussian.
beamlets	beamlets (9.3.1.3.49)	Detailed information on beamlets.

Type of: nbi\_unit:setup\_inject (856)

### 9.3.1.3.278 setup\_line

Geometric description of the lines of sight for line integral diagnostic

member	type	description
pivot_point	rzphi1D (9.3.1.3.247)	Pivot point of each line of sight; Vector (nchords)
horchordang1	vecflt_type (9.3.1.2.9)	Angle [rad] of horizontal projection of l.o.s. with poloidal cross section (0 for HFS to LFS chord - see Convention.angles.interfdiag.pdf) [rad]. Vector (nchords)
verchordang1	vecflt_type (9.3.1.2.9)	Angle of chord with vertical axis (0 for bottom-top chord, Pi for top-bottom chord - see Convention.angles.interfdiag.pdf) [rad]; Vector (nchords)
width	vecflt_type (9.3.1.2.9)	Width of the laser beam (1/e) [m]; Vector (nchords)
second_point	rzphi1D (9.3.1.3.247)	Second point defining the line of sight together with the pivot_point. In case the probing wave is reflected, this should be the position of the mirror. This data is redundant with horchordang1 and verchordang1. Vector (nchords).
horchordang2	vecflt_type (9.3.1.2.9)	For reflected l.o.s. only (undefined otherwise) : Angle [rad] of horizontal projection of reflected l.o.s. with poloidal cross section (0 for HFS to LFS chord - see Convention.angles.interfdiag.pdf) [rad]. Vector (nchords)
verchordang2	vecflt_type (9.3.1.2.9)	For reflected l.o.s. only (undefined otherwise) : Angle of reflected chord with vertical axis (0 for bottom-top chord, Pi for top-bottom chord - see Convention.angles.interfdiag.pdf) [rad]; Vector (nchords)
third_point	rzphi1D (9.3.1.3.247)	Third point defining the reflected line of sight together with the second_point (undefined if the probing wave is not reflected). This data is redundant with horchordang2 and verchordang2. Vector (nchords).
nchordpoints	integer (9.3.1.1.2)	Number of points along the viewing chords (used for synthetic diagnostic signal reconstruction)

Type of: counts:setup\_line (762) I lineintegraldiag:setup\_line (842)

### 9.3.1.3.279 setup\_mse

diagnostic setup information

member	type	description
rzgamma	rzphidrzdphi1D (9.3.1.3.251)	Position and width of the intersection between beam and line of sight. Vectors (nchords)
geom_coef	matflt_type (9.3.1.2.7)	Geometric coefficients (9) describing the angle between beam and line of sight; The first dimension contains successively : numerator, coefficients of BZ, BR, Bphi, ER; denominator, coefficients of BZ, BR, Bphi, ER, EZ; Matrix (9,nchords). In versions of the data structure before 4.08, there were only 6 coefficients namely : numerator, coefficients of BZ, BR, Bphi; denominator, coefficients of BZ, BR, Bphi.

Type of: msediag:setup\_mse (698)

### 9.3.1.3.280 source

Source. Time-dependent. Structure array. Replicate this source structure for each neutron or gamma with a particular energy.

member	type	description
fus_product	string (9.3.1.1.3)	Type of fusion product (neutron,gamma)
reaction	string (9.3.1.1.3)	Type of reaction involved (e.g. DD neutron, Be-alpha,n,gamma-C)
counts	counts (9.3.1.3.89)	Integrated emissivity [ $m^{-2}.s^{-1}$ ].
emissivity1d	emissivity1d (9.3.1.3.135)	Reconstructed 1D emissivity [ $counts.m^{-3}.s^{-1}$ ].
emissivity2d	emissivity2d (9.3.1.3.136)	Reconstructed 2D emissivity [ $counts.m^{-3}.s^{-1}$ ].
codeparam	codeparam (9.3.1.3.58)	Code parameters

Type of: fusiondiag:source (690)

### 9.3.1.3.281 source\_el

Subtree containing source terms for electrons

member	type	description
exp	vecflt_type (9.3.1.2.9)	Explicit source term [same unit as root quantity]. Time-dependent. Vector (nrho)
imp	vecflt_type (9.3.1.2.9)	Implicit source term [ $s^{-1}.m^{-3}$ ]. Time-dependent. Vector (nrho)

Type of: coresource:qe (682) I coresource:se (682)

### 9.3.1.3.282 source\_grid

Source density of particles in phase space (real space, velocity space, spin state).

member	type	description
grid.info	grid.info (9.3.1.3.156)	Specifying the grid; type of the grid (unstructured/structured/rectangular), the grid coordiante, in what variables the source is continuous/discrete, if the source is given at gyrocentre or real particle position.
dim1	array6dflt.type (9.3.1.2.5)	Grid in the first dimension in phase space (as specified in grid.coord). Time-dependent; Array6d (ndim1, ndim2, ndim3, ndim4, ndim5, ndim6)
dim2	array6dflt.type (9.3.1.2.5)	Grid in the second dimension in phase space (as specified in grid.coord). Time-dependent; Array6d (ndim1, ndim2, ndim3, ndim4, ndim5, ndim6)
dim3	array6dflt.type (9.3.1.2.5)	Grid in the third dimension in phase space (as specified in grid.coord). Time-dependent; Array6d (ndim1, ndim2, ndim3, ndim4, ndim5, ndim6)
dim4	array6dflt.type (9.3.1.2.5)	Grid in the fourth dimension in phase space (as specified in grid.coord). Time-dependent; Array6d (ndim1, ndim2, ndim3, ndim4, ndim5, ndim6)
dim5	array6dflt.type (9.3.1.2.5)	Grid in the fifth dimension in phase space (as specified in grid.coord). Time-dependent; Array6d (ndim1, ndim2, ndim3, ndim4, ndim5, ndim6)
dim6	array6dflt.type (9.3.1.2.5)	Grid in the sixth dimension in phase space (as specified in grid.coord). Time-dependent; Array6d (ndim1, ndim2, ndim3, ndim4, ndim5, ndim6)
jacobian	array6dflt.type (9.3.1.2.5)	Jacobian of the phase space grid coordinate system specified in grid.coord. Time-dependent; Array6d (ndim1, ndim2, ndim3, ndim4, ndim5, ndim6)
source	array6dflt.type (9.3.1.2.5)	Source rate of particles in phase space. The units depend on the grid.type: $[m^{-3} s^{-1}]$ if the grid is discrete in energy/velocity and $[(m/s)^{-3} m^{-3} s^{-1}]$ if continuous. Time-dependent; Array6d (ndim1, ndim2, ndim3, ndim4, ndim5, ndim6)

Type of: distsource\_source:source\_grid (796)

### 9.3.1.3.283 source\_imp

Subtree containing source terms for the impurity species

member	type	description
exp	array3dflt.type (9.3.1.2.1)	Explicit source term [same unit as root quantity]. Time-dependent. Array3d (nrho,nimp,max_nzimp)
imp	array3dflt.type (9.3.1.2.1)	Implicit source term $[s^{-1}.m^{-3}]$ . Time-dependent. Array3d (nrho,nimp,max_nzimp)

Type of: coresource:qz (682) I coresource:sz (682)

### 9.3.1.3.284 source\_ion

Subtree containing source terms for the various ion species

member	type	description
exp	matflt.type (9.3.1.2.7)	Explicit source term [same unit as root quantity]. Time-dependent. Matrix (nrho,nion)
imp	matflt.type (9.3.1.2.7)	Implicit source term $[s^{-1}.m^{-3}]$ . Time-dependent. Matrix (nrho,nion)

Type of: coresource:qi (682) I coresource:si (682) I coresource:ui (682)

### 9.3.1.3.285 source\_mark

Source given as a set of markers (test particles)

member	type	description
var.coord	vecint.type (9.3.1.2.10)	Identifies the coordinates specifies in var1, var2, var3, var4, var5, var6 and var7. var.coord(K) describe the coordinate represented in varK, for K=1,2,...7. The possible coordinates are: 1=R, Major radius [m]; 2=Z, Vertical position [m]; 3=X, first cartesian coordinate in the horizontal plane [m]; 4=Y, second cartesian coordinate in the horizontal plane ( $\text{grad}(X) \times \text{grad}(Y) = \text{grad}(Z)$ ) [m]; 5=phi, toroidal angle [rad]; 6=psi, poloidal magnetic flux $[T/m^2]$ ; 7=rhotor, the square root of the toroidal flux; 8=theta, geometrical poloidal angle [rad]; 9=theta_b, Boozer poloidal angle [rad]; 10=vx, velocity in the x-direction [m/s]; 11=vy, velocity in the y-direction [m/s]; 12=vz, velocity in the z-direction [m/s]; 13=vel, total velocity [m/s]; 14=vphi, velocity in the phi-direction [m/s]; 15=vpar, velocity in the parallel direction [m/s]; 16=vperp, velocity in the perpendicular direction [m/s]; 17=E, Hamiltonian energy [J]; 18=Pphi, canonical toroidal angular momentum $[kg \cdot m^2/s]$ ; 19=mu, magnetic moment $[J/T]$ ; 20=Lambda=mu/E $[1/T]$ ; 21=pitch=vpar/v [-]; 22=s, the position of the omnigenous plane (generalised equatorial plane) as described by the fields omnigen_surf% <i>s</i> and omnigen_surf% <i>r</i> ; 23=particle spin. Vector (7)

member	type	description
gyrosrc.type	integer (9.3.1.1.2)	Defines how to interpret the source: 1 = the source is calculated at the particle birth point; 2 = the source is calculated at the gyro centre of the birth point.
var1	vecflt.type (9.3.1.2.9)	Phase space variable number one characterising the markers. Time-dependent; Vector (n.particles)
var2	vecflt.type (9.3.1.2.9)	Phase space variable number two characterising the markers. Time-dependent; Vector (n.particles)
var3	vecflt.type (9.3.1.2.9)	Phase space variable number three characterising the markers. Time-dependent; Vector (n.particles)
var4	vecflt.type (9.3.1.2.9)	Phase space variable number four characterising the markers. Time-dependent; Vector (n.particles)
var5	vecflt.type (9.3.1.2.9)	Phase space variable number five characterising the markers. Time-dependent; Vector (n.particles)
var6	vecflt.type (9.3.1.2.9)	Phase space variable number six characterising the markers. Time-dependent; Vector (n.particles)
var7	vecflt.type (9.3.1.2.9)	Phase space variable number seven characterising the markers. Time-dependent; Vector (n.particles)
weight	vecflt.type (9.3.1.2.9)	Weight of the markers; Time-dependent; Vector (n.particles)

Type of: `distsource.source.mark` (796)

### 9.3.1.3.286 sourceel

Structure for the total source term for the transport equation (electrons). Time-dependent;

member	type	description
value	vecflt.type (9.3.1.2.9)	Value of the source term; Time-dependent; Vector (nrho)
integral	vecflt.type (9.3.1.2.9)	Integral from 0 to rho of the source term. Time-dependent; Vector (nrho)
source	string (9.3.1.1.3)	Source of the profile (any comment describing the origin of the profile : code, path to diagnostic signals, massaging, ...); String

Type of: `corefield.source.term` (751)

### 9.3.1.3.287 sourceimp

Structure for the total source term for the transport equation (impurities). Time-dependent;

member	type	description
value	array3dfit.type (9.3.1.2.1)	Value of the source term [ $m^{-3}.s^{-1}$ ]; Time-dependent; Array3D (nrho,nimp,max.nzimp)
integral	array3dfit.type (9.3.1.2.1)	Integral from 0 to rho of the source term. Time-dependent; Array3D(nsource,nimp,max.nzimp)
source	vecstring.type (9.3.1.2.11)	Source of the profile (any comment describing the origin of the impurity profiles : code, path to diagnostic signals, massaging, ...); Array of strings (nimp)

Type of: `coreimpur.source.term` (679)

### 9.3.1.3.288 sourceion

Structure for the total source term for the transport equation (ions). Time-dependent;

member	type	description
value	matflt.type (9.3.1.2.7)	Value of the source term; Time-dependent; Matrix (nrho,nion)
integral	matflt.type (9.3.1.2.7)	Integral from 0 to rho of the source term. Time-dependent; Matrix (nrho,nion)
source	vecstring.type (9.3.1.2.11)	Source of the profile (any comment describing the origin of the profile : code, path to diagnostic signals, massaging, ...); Array of strings (nion)

Type of: `corefieldion.source.term` (752)

### 9.3.1.3.289 special\_pos

Special positions along an orbit (like turning points).

member	type	description
midplane	midplane (9.3.1.3.181)	Intersections with the midplane
turning_pts	turning_pts (9.3.1.3.323)	Location of turning points

Type of: orb\_glob\_dat:special\_pos (864)

### 9.3.1.3.290 species\_desc

Description of a single ion species or bundled charge state.

member	type	description
label	string (9.3.1.1.3)	Name of species
amn	float (9.3.1.1.1)	Atomic mass number of the species
zn	float (9.3.1.1.1)	Nuclear charge of the impurity
zmin	float (9.3.1.1.1)	Minimum Z of species charge state bundle
zmax	float (9.3.1.1.1)	Maximum Z of species charge state bundle

Type of: edge:species (688)

### 9.3.1.3.291 spectrum

Spectral properties of the wave.

member	type	description
phi_theta	launchs_phi_theta (9.3.1.3.164)	Power spectrum as a function of the refractive index in the toroidal and poloidal directions.
parallel	launchs_parallel (9.3.1.3.163)	Power spectrum as a function of the parallel refractive index.

Type of: launchs:spectrum (694)

### 9.3.1.3.292 spot

Spot characteristics

member	type	description
waist	vecflt_type (9.3.1.2.9)	Waist for the spot ellipse [m], Vector (2). Time-dependent
angle	float (9.3.1.1.1)	Rotation angle for the spot ellipse [rd], Float. Time-dependent

Type of: rfbeam:spot (913)

### 9.3.1.3.293 sputtering\_neutrals

Sputtering coefficients

member	type	description
physical	matflt_type (9.3.1.2.7)	Effective coefficient of physical sputtering of the neutral type INEUT due to ion type IION. Matrix(nneut,nion). Time-dependent.
chemical	matflt_type (9.3.1.2.7)	Effective coefficient of chemical sputtering of the neutral type INEUT due to ion type IION. Matrix(nneut,nion). Time-dependent.

Type of: coefficients\_neutrals:sputtering (732)

### 9.3.1.3.294 src\_snk\_fav

member	type	description
particles	vecflt_type (9.3.1.2.9)	Source/sink particles [ $s^{-1} m^{-3}$ ]; Time-dependendent; Vector (npsi)
power	vecflt_type (9.3.1.2.9)	Power density associated with the source/sink of particles [ $W/m^3$ ]; Time-dependent; Vector (npsi)
torque	vecflt_type (9.3.1.2.9)	Torque density due to the source/sink of particles [ $Nm/m^3$ ]; Time-dependent; Vector (npsi)

### 9.3.1.3.295 src\_snk\_int

member	type	description
particles	vecflt_type (9.3.1.2.9)	Source/sink particles [ $s^{-1} m^{-3}$ ]; Time-dependendent; Vector (npsi)

member	type	description
power	vecflt.type (9.3.1.2.9)	Power associated with the source/sink of particles [MW/m <sup>3</sup> ]; Time-dependent; Vector(npsi)
torque	vecflt.type (9.3.1.2.9)	Torque due to the source/sink of particles [Nm/m <sup>3</sup> ]; Time-dependent; Vector (npsi)

### 9.3.1.3.296 src\_snk\_tot

member	type	description
particles	float (9.3.1.1.1)	Source/sink particles [1/s]; Time-dependendent
power	float (9.3.1.1.1)	Power associated with the source/sink of particles [W]; Time-dependent
torque	float (9.3.1.1.1)	Torque due to the source/sink of particles [Nm]; Time-dependent

### 9.3.1.3.297 straps

Properties of the IC antenna strap; Time-dependent; Vector(nstraps)

member	type	description
phase	exp0D (9.3.1.3.142)	Phase of strap current [rad]; Time-dependent; exp0D
phi_centre	float (9.3.1.1.1)	Toroidal angle at the centre of the strap [rad]; Float
width	float (9.3.1.1.1)	Width of strap in the toroidal direction [m]; Float
dist2wall	float (9.3.1.1.1)	Distance to conducting wall or other conductor behind the antenna straps [m]; Float
coord_strap	rz1D (9.3.1.3.242)	Coordinates (R,z) of polygon describing the antenna in the poloidal plane; rz1d vector (ncoord_strap)

Type of: antennaic\_setup:straps (718)

### 9.3.1.3.298 table

Stores the interpolation table (0d to 7d). Only one entry should be used.

member	type	description
table_0d	float (9.3.1.1.1)	NO DOCS
table_1d	vecflt.type (9.3.1.2.9)	NO DOCS
table_2d	matflt.type (9.3.1.2.7)	NO DOCS
table_3d	array3dfilt.type (9.3.1.2.1)	NO DOCS
table_4d	array4dfilt.type (9.3.1.2.3)	NO DOCS
table_5d	array5dfilt.type (9.3.1.2.4)	NO DOCS
table_6d	array6dfilt.type (9.3.1.2.5)	NO DOCS

Type of: tables:table (972)

### 9.3.1.3.299 tables

Definition of a process

member	type	description
ndim	integer (9.3.1.1.2)	Table dimensionality of the process. Indicates which of the tables is filled.
coord_index	integer (9.3.1.1.2)	Index in tables.coord, specifying what coordinate specification to use for this table.
result_label	string (9.3.1.1.3)	Description of the process result (rate, cross section, sputtering yield, ...)
result_unit	string (9.3.1.1.3)	Unit of the process result
result_trans	integer (9.3.1.1.2)	Transformation of the process result. Integer flag: 0=no transformation; 1=10°; 2=exp()
table	table (9.3.1.3.298)	Array of data tables, one entry per species. Vector(nchargestates)

Type of: amns:tables (676)

### 9.3.1.3.300 tables\_coord

Definition of coordinates for one specific coordinate system used in one or more tables.

member	type	description
coords	coords (9.3.1.3.77)	Vector(ndim) of coordinates. ndim is number of parameters for a process.

Type of: `amns:tables.coord` (676)

### 9.3.1.3.301 `tf_desc_tfcoils`

Description of the toroidal field coils

member	type	description
<code>type</code>	integer (9.3.1.1.2)	Type of coil, 0=circular coil, 1=plane coil with arbitrary shape.
<code>phi</code>	float (9.3.1.1.1)	Toroidal angle of centre of coil 1, assuming all coils are identical and evenly distributed around the torus [rad]. Scalar
<code>circularcoil</code>	<code>circularcoil</code> (9.3.1.3.57)	Circular coil description
<code>planecoil</code>	<code>planecoil</code> (9.3.1.3.205)	Plane coil description
<code>structure</code>	<code>tf.structure</code> (9.3.1.3.302)	Inner TF coil structure

Type of: `toroidfield:desc_tfcoils` (709)

### 9.3.1.3.302 `tf.structure`

Inner TF coil structure

member	type	description
<code>jcable</code>	float (9.3.1.1.1)	CICS cable in current density [A/m]; Scalar
<code>tisotf</code>	float (9.3.1.1.1)	Insulation thickness of TF conductor [m]; Scalar
<code>efcasing</code>	float (9.3.1.1.1)	Thickness front casing [m]; Scalar
<code>escasing</code>	float (9.3.1.1.1)	Thickness side casing [m]; Scalar
<code>sigjackettf</code>	float (9.3.1.1.1)	Jacket stress limit [Pa]; Scalar
<code>sigvaulttf</code>	float (9.3.1.1.1)	Vault stress limit [Pa]; Scalar
<code>ktf</code>	float (9.3.1.1.1)	Amplification factor for magnetic field
<code>ritf</code>	float (9.3.1.1.1)	Internal TF coil radius [m]; Scalar
<code>riitf</code>	float (9.3.1.1.1)	Internal vault TF coil radius [m]; Scalar
<code>retf</code>	float (9.3.1.1.1)	External TF coil radius [m]; Scalar

Type of: `tf_desc_tfcoils:structure` (974)

### 9.3.1.3.303 `theta_info`

Information on the poloidal angle theta.

member	type	description
<code>angl.type</code>	integer (9.3.1.1.2)	Type of poloidal angle: 1 : same as the poloidal angle in the equilibrium cpo; 2 : geometrical polar angle, $\tan(\theta) = Z / (R - R_0)$ ; 3 : other. If option 3, a transformation to the geometrical poloidal angle is provided in <code>th2th_pol</code> .
<code>th2th_pol</code>	<code>matflt.type</code> (9.3.1.2.7)	Geometrical poloidal angle at grid points in theta, i.e. the transformation from theta to the polar poloidal angle; used only if <code>angl.type</code> =3; Time-dependent; Matrix (ndim1, ndim2)

Type of: `waves_grid_2d:theta_info` (1001)

### 9.3.1.3.304 `topo_regions`

List with distribution function in each topological region; Time-dependent. Structure array(`nregion.topo`)

member	type	description
<code>ind_omnigen</code>	integer (9.3.1.1.2)	Index of the omnigenous magnetic surfaces (generalised equatorial plane) to which the s-coordinates refer. NOTE: only used for <code>gridcoord</code> =3.
<code>dim1</code>	<code>array6dflt.type</code> (9.3.1.2.5)	First dimension in phase space; Time-dependent; Array6d(ndim11, ndim21, ndim31, ndim41, ndim51, ndim61).
<code>dim2</code>	<code>array6dflt.type</code> (9.3.1.2.5)	Second dimension in phase space; Time-dependent; Array6d(ndim12, ndim22, ndim32, ndim42, ndim52, ndim62).
<code>dim3</code>	<code>array6dflt.type</code> (9.3.1.2.5)	Third dimension in phase space; Time-dependent; Array6d(ndim13, ndim23, ndim33, ndim43, ndim53, ndim63).
<code>dim4</code>	<code>array6dflt.type</code> (9.3.1.2.5)	Fourth dimension in phase space; Time-dependent; Array6d(ndim14, ndim24, ndim34, ndim44, ndim54, ndim64).
<code>dim5</code>	<code>array6dflt.type</code> (9.3.1.2.5)	Fifth dimension in phase space; Time-dependent; Array6d(ndim15, ndim25, ndim35, ndim45, ndim55, ndim65).



member	type	description
dim6	array6dflt.type (9.3.1.2.5)	Sixth dimension in phase space; Time-dependent; Array6d(ndim16, ndim26, ndim36, ndim46, ndim56, ndim66).
jacobian	array6dflt.type (9.3.1.2.5)	Jacobian of the transformation of the phase space grid variables; Time-dependent; Array6d(ndim11, ndim22, ndim33, ndim44, ndim55, ndim66).
distfunc	array6dflt.type (9.3.1.2.5)	Orbit (or bounce) averaged distribution function given on a grid [ $1/m^3 (m/s)^{-3}$ ]; Time-dependent; Array6d(ndim11, ndim22, ndim33, ndim44, ndim55, ndim66).

### 9.3.1.3.305 toroid\_field

Toroidal field information entering the definition of rho\_tor, for reference only. The physical value of the toroidal field should be taken from the toroidfield CPO. Time-dependent.

member	type	description
b0	float (9.3.1.1.1)	Vacuum field at r0 [T]; Time-dependent. Scalar.
b0prime	float (9.3.1.1.1)	Time derivative of the vacuum field at r0 [T/s]; Time-dependent. Scalar.
r0	float (9.3.1.1.1)	Characteristic major radius of the device (used in publications, usually middle of the vessel at the equatorial midplane) [m]. Scalar.
time	float (9.3.1.1.1)	Time [s] (exact time slice used from the time array of the source signal, here the toroidfield CPO. If the time slice does not exist in the time array of the source signal, it means linear interpolation has been used); Time-dependent; Scalar.

Type of: coreprof:toroid\_field (681)

### 9.3.1.3.306 transcoefel

Subtree containing transport coefficients from a transport model, for the electrons

member	type	description
diff_eff	vecflt.type (9.3.1.2.9)	Effective diffusivity [ $m^2.s^{-1}$ ]. Time-dependent. Vector (nrho)
vconv_eff	vecflt.type (9.3.1.2.9)	Effective convection [ $m.s^{-1}$ ]. Time-dependent. Vector (nrho)
flux	vecflt.type (9.3.1.2.9)	Flux. Not used in transport equations [ $field.m.s^{-1}, m^{-3}$ if field is not a density itself]. Time-dependent. Vector (nrho)
off_diagonal	offdiagel (9.3.1.3.188)	Details of the transport matrix, just for diagnostic (not used in transport equations). Time-dependent.
flag	integer (9.3.1.1.2)	Flag describing the form of transport produced by the original model : 0- not calculated, 1- D and V, 2- flux, 3- full transport matrix. Scalar.

Type of: coretransp:te\_transp (683) I neoclassic:mtor\_neo (700) I neoclassic:ne\_neo (700) I neoclassic:te\_neo (700)

### 9.3.1.3.307 transcoefimp

Subtree containing transport coefficients from a transport model, for the various impurity species (multiple charge states)

member	type	description
diff_eff	array3dflt.type (9.3.1.2.1)	Effective diffusivity [ $m^2.s^{-1}$ ]. Time-dependent. Array3d (nrho,nimp,max_nzimp)
vconv_eff	array3dflt.type (9.3.1.2.1)	Effective convection [ $m.s^{-1}$ ]. Time-dependent. Array3d (nrho,nimp,max_nzimp)
exchange	array3dflt.type (9.3.1.2.1)	Ion to electron energy exchange [ $W.m^{-3}$ ]. Time-dependent. Array3d (nrho,nimp,max_nzimp)
flux	array3dflt.type (9.3.1.2.1)	Flux. Not used in transport equations [ $field.m.s^{-1}, m^{-3}$ if field is not a density itself]. Time-dependent. Array3d (nrho,nimp,max_nzimp)
flag	integer (9.3.1.1.2)	Flag describing the form of transport produced by the original model : 0- not calculated, 1- D and V, 2- flux, 3- full transport matrix (off-diagonal subtree not available for impurities for the moment). Scalar.

Type of: coretransp:nz\_transp (683) I coretransp:tz\_transp (683) I neoclassic:nz\_neo (700) I neoclassic:tz\_neo (700)

### 9.3.1.3.308 transcoefion

Subtree containing transport coefficients from a transport model, for the various ion species, including the energy exchange term qgi.

member	type	description
diff_eff	matflt.type (9.3.1.2.7)	Effective diffusivity [ $m^2.s^{-1}$ ]. Time-dependent. Matrix (nrho,nion)

member	type	description
vconv_eff	matflt_type (9.3.1.2.7)	Effective convection [ $\text{m}\cdot\text{s}^{-1}$ ]. Time-dependent. Matrix (nrho,nion)
exchange	matflt_type (9.3.1.2.7)	Ion to electron energy exchange [ $\text{W}\cdot\text{m}^{-3}$ ]. Time-dependent. Matrix (nrho,nion).
qgi	matflt_type (9.3.1.2.7)	Energy exchange term due to transport. [ $\text{W}\cdot\text{m}^{-3}$ ]. Time-dependent. Matrix (nrho,nion)
flux	matflt_type (9.3.1.2.7)	Flux. Not used in transport equations [ $\text{field}\cdot\text{m}\cdot\text{s}^{-1}, \text{m}^{-3}$ if field is not a density itself]. Time-dependent. Matrix (nrho,nion)
off_diagonal	offdiagion (9.3.1.3.189)	Details of the transport matrix, just for diagnostic (not used in transport equations). Time-dependent.
flag	integer (9.3.1.1.2)	Flag describing the form of transport produced by the original model : 0- not calculated, 1- D and V, 2- flux, 3- full transport matrix. Scalar.

Type of: coretransp:ti\_transp (683) I neoclassic:ni\_neo (700) I neoclassic:ti\_neo (700)

### 9.3.1.3.309 transcoefvtr

Subtree containing transport coefficients from a transport model, for the various ion species

member	type	description
diff_eff	matflt_type (9.3.1.2.7)	Effective diffusivity [ $\text{m}^2\cdot\text{s}^{-1}$ ]. Time-dependent. Matrix (nrho,nion)
vconv_eff	matflt_type (9.3.1.2.7)	Effective convection [ $\text{m}\cdot\text{s}^{-1}$ ]. Time-dependent. Matrix (nrho,nion)
flux	matflt_type (9.3.1.2.7)	Flux. Not used in transport equations [ $\text{field}\cdot\text{m}\cdot\text{s}^{-1}, \text{m}^{-3}$ if field is not a density itself]. Time-dependent. Matrix (nrho,nion)
off_diagonal	offdiagion (9.3.1.3.189)	Details of the transport matrix, just for diagnostic (not used in transport equations). Time-dependent.
flag	integer (9.3.1.1.2)	Flag describing the form of transport produced by the original model : 0- not calculated, 1- D and V, 2- flux, 3- full transport matrix. Scalar.

Type of: coretransp:vtr\_transp (683)

### 9.3.1.3.310 tsmeasure

Measured values (Thomson scattering)

member	type	description
te	exp1D (9.3.1.3.143)	Electron temperature [eV]. Vector (nchords)
ne	exp1D (9.3.1.3.143)	Electron density [ $\text{m}^{-3}$ ]. Vector (nchords)

Type of: tsdiag:measure (710)

### 9.3.1.3.311 tssetup

diagnostic setup information

member	type	description
position	rzphi1D (9.3.1.3.247)	Position of intersection between laser and line of sight; Vector (nchords)

Type of: tsdiag:setup (710)

### 9.3.1.3.312 turbcomposition

Plasma composition (description of ion species).

member	type	description
amn	vecflt_type (9.3.1.2.9)	Atomic mass number (lumped ions are allowed); Vector (nion)
zn	vecflt_type (9.3.1.2.9)	Nuclear charge (lumped ions are allowed); Vector (nion)
zion	vecflt_type (9.3.1.2.9)	Ion charge (of the dominant ionisation state; lumped ions are allowed); Vector (nion)
ie_mass	vecflt_type (9.3.1.2.9)	Ion to electron mass ratio as used in the code for each species. To be used only by models which keep electron inertia. Vector (nion)

Type of: turbulence:composition (711)

### 9.3.1.3.313 turbcoordsys

Description of the coordinates and metric.

member	type	description
grid.type	string (9.3.1.1.3)	Type of coordinate system.
turbgrid	turbgrid (9.3.1.3.315)	Turbulence grid used by the codes; Time-dependent.
jacobian	matflt.type (9.3.1.2.7)	Jacobian of the coordinate system; Time-dependent; Matrix (ndim1, ndim2).
g_11	matflt.type (9.3.1.2.7)	metric coefficients g_11; Time-dependent; Matrix (ndim1, ndim2).
g_12	matflt.type (9.3.1.2.7)	metric coefficients g_12; Time-dependent; Matrix (ndim1, ndim2).
g_13	matflt.type (9.3.1.2.7)	metric coefficients g_13; Time-dependent; Matrix (ndim1, ndim2).
g_22	matflt.type (9.3.1.2.7)	metric coefficients g_22; Time-dependent; Matrix (ndim1, ndim2).
g_23	matflt.type (9.3.1.2.7)	metric coefficients g_23; Time-dependent; Matrix (ndim1, ndim2).
g_33	matflt.type (9.3.1.2.7)	metric coefficients g_33; Time-dependent; Matrix (ndim1, ndim2).
position	rzphi3D (9.3.1.3.250)	R Z phi positions of grid points; Time-dependent; Array3D (ndim1, ndim2, ndim3).

Type of: turbulence:coordsys (711)

### 9.3.1.3.314 turbenv1d

Parallel fluctuation envelope.

member	type	description
theta	vecflt.type (9.3.1.2.9)	Straight field line poloidal angle [rad]; Vector (ntheta.env).
phi	vecflt.type (9.3.1.2.9)	Electrostatic potential [V <sup>2</sup> ]; Time-dependent; Vector (ntheta.env).
vor	vecflt.type (9.3.1.2.9)	Vorticity [coulomb <sup>2</sup> /m <sup>6</sup> ]; Time-dependent; Vector (ntheta.env).
jpl	vecflt.type (9.3.1.2.9)	Parallel current [A <sup>2</sup> /m <sup>4</sup> ]; Time-dependent; Vector (ntheta.env).
ne	vecflt.type (9.3.1.2.9)	Electron density [m <sup>-6</sup> ]; Time-dependent; Vector (ntheta.env).
he	vecflt.type (9.3.1.2.9)	Nonadiabatic electron density [m <sup>-6</sup> ]; Time-dependent; Vector (ntheta.env).
te	vecflt.type (9.3.1.2.9)	Electron temperature [eV <sup>2</sup> ]; Time-dependent; Vector (ntheta.env).
ni	matflt.type (9.3.1.2.7)	Ion density [m <sup>-6</sup> ]; Time-dependent; Matrix(ntheta.env,nion).
ti	matflt.type (9.3.1.2.7)	Ion temperature [eV <sup>2</sup> ]; Time-dependent; Matrix(ntheta.env,nion).
ui	matflt.type (9.3.1.2.7)	Ion parallel velocity [m <sup>2</sup> /s <sup>2</sup> ]; Time-dependent; Matrix(ntheta.env,nion).
fe	vecflt.type (9.3.1.2.9)	Electron particle flux [m <sup>-2</sup> /s per mode]; Time-dependent; Vector (ntheta.env).
qe	vecflt.type (9.3.1.2.9)	Electron conductive heat flux [W.m <sup>-2</sup> per mode]; Time-dependent; Vector (ntheta.env).
qi	matflt.type (9.3.1.2.7)	Ion conductive heat flux [W. m <sup>-2</sup> per mode]; Time-dependent; Matrix(ntheta.env,nion).
me	vecflt.type (9.3.1.2.9)	Magnetic electron heat flux [W.m <sup>-2</sup> per mode]; Time-dependent; Vector (ntheta.env).
mi	matflt.type (9.3.1.2.7)	Magnetic ion heat flux [W. m <sup>-2</sup> per mode]; Time-dependent; Matrix(ntheta.env,nion).

Type of: turbulence:env1d (711)

### 9.3.1.3.315 turbgrid

Generic structure for a turbulence grid.

member	type	description
dim1	vecflt.type (9.3.1.2.9)	First dimension values; Vector (ndim1).
dim2	vecflt.type (9.3.1.2.9)	Second dimension values; Vector (ndim2).
dim3	vecflt.type (9.3.1.2.9)	Third dimension values; Vector (ndim3).
dim_v1	vecflt.type (9.3.1.2.9)	First v-space dimension values; Vector (ndim_v1).
dim_v2	vecflt.type (9.3.1.2.9)	Second v-space dimension values; Vector (ndim_v2).

Type of: turbcoordsys:turbgrid (986)

### 9.3.1.3.316 turbspec1d

Perpendicular wavenumber spectra.

member	type	description
kperp	vecflt.type (9.3.1.2.9)	Perpendicular wavenumber [m <sup>-1</sup> ]; Vector (ndim_spec).
phi	vecflt.type (9.3.1.2.9)	Electrostatic potential [V <sup>2</sup> per mode]; Time-dependent; Vector (ndim_spec).

member	type	description
vor	vecflt_type (9.3.1.2.9)	Vorticity [ $s^{-2}$ per mode]; Time-dependent; Vector (ndim_spec).
b	vecflt_type (9.3.1.2.9)	Magnetic energy [ $T^2$ per mode]; Time-dependent; Vector (ndim_spec).
jpl	vecflt_type (9.3.1.2.9)	Current [ $A^2/m^4$ per mode]; Time-dependent; Vector (ndim_spec).
ne	vecflt_type (9.3.1.2.9)	Electron density [ $m^{-6}$ per mode]; Time-dependent; Vector (ndim_spec).
te	vecflt_type (9.3.1.2.9)	Electron temperature [ $eV^2$ per mode]; Time-dependent; Vector (ndim_spec).
ti	matflt_type (9.3.1.2.7)	Ion temperature [ $eV^2$ per mode]; Time-dependent; Matrix (ndim_spec,nion).
fe	vecflt_type (9.3.1.2.9)	Electron particle flux [ $m^{-2}/s$ per mode]; Time-dependent; Vector (ndim_spec).
qe	vecflt_type (9.3.1.2.9)	Electron conductive heat flux [ $W.m^{-2}$ per mode]; Time-dependent; Vector (ndim_spec).
qi	matflt_type (9.3.1.2.7)	Ion conductive heat flux [ $W.m^{-2}$ per mode]; Time-dependent; Matrix(ndim_spec,nion).
me	vecflt_type (9.3.1.2.9)	Magnetic electron heat flux [ $W.m^{-2}$ per mode]; Time-dependent; Matrix (ndim_spec).
mi	matflt_type (9.3.1.2.7)	Magnetic ion heat flux [ $W.m^{-2}$ per mode]; Time-dependent; Matrix (ndim_spec,nion).

Type of: turbulence:spec1d (711)

### 9.3.1.3.317 turbvar0d

Time traces.

member	type	description
dtime_type	string (9.3.1.1.3)	Description of time trace e.g. last ndtime points.
dtime	vecflt_type (9.3.1.2.9)	Fast diagnostic time [s]; Time-dependent; Vector (ndtime).
en_exb	vecflt_type (9.3.1.2.9)	ExB energy [ $J/m^3$ ]; Time-dependent; Vector (ndtime).
en_mag	vecflt_type (9.3.1.2.9)	Magnetic energy [ $J/m^3$ ]; Time-dependent; Vector (ndtime).
en_el.th	vecflt_type (9.3.1.2.9)	electron thermal energy or free energy [ $J/m^3$ ]; Time-dependent.
en_ion.th	matflt_type (9.3.1.2.7)	Ion thermal energy or free energy [ $J/m^3$ ]; Time-dependent; Matrix (ndtime, nion).
en_el.par	vecflt_type (9.3.1.2.9)	Electron parallel energy [ $J/m^3$ ]; Time-dependent; Vector (ndtime).
en_ion.par	matflt_type (9.3.1.2.7)	Ion parallel energy [ $J/m^3$ ]; Time-dependent; Matrix (ndtime,nion).
en_tot	vecflt_type (9.3.1.2.9)	Total energy or free energy [ $J/m^3$ ]; Time-dependent; Vector (ndtime).
fl_el	vecflt_type (9.3.1.2.9)	Electron flux [ $m^{-2} s^{-1}$ ]; Time-dependent; Vector (ndtime).
fl_heatel	vecflt_type (9.3.1.2.9)	Conductive electron heat flux [ $W.m^{-2}$ ]; Time-dependent; Vector (ndtime).
fl_ion	matflt_type (9.3.1.2.7)	Ion flux [ $m^{-2} s^{-1}$ ]; Time-dependent; Matrix (ndtime, nion).
fl_heation	matflt_type (9.3.1.2.7)	Conductive ion heat flux [ $W.m^{-2}$ ]; Time-dependent; Matrix (ndtime, nion).
fl_magel	vecflt_type (9.3.1.2.9)	Electron flux [ $m^{-2} s^{-1}$ ]; Time-dependent; Vector (ndtime).
fl_magheatel	vecflt_type (9.3.1.2.9)	Conductive electron heat flux [ $W.m^{-2}$ ]; Time-dependent; Vector (ndtime).
fl_magion	matflt_type (9.3.1.2.7)	Ion flux [ $m^{-2} s^{-1}$ ]; Time-dependent; Matrix (ndtime, nion).
fmagheation	matflt_type (9.3.1.2.7)	Conductive ion heat flux [ $W.m^{-2}$ ]; Time-dependent; Matrix (ndtime, nion).

Type of: turbulence:var0d (711)

### 9.3.1.3.318 turbvar1d

Dependent variable zonal average radial profile.

member	type	description
rho_tor_norm	vecflt_type (9.3.1.2.9)	Normalised toroidal flux coordinate. Vector(nrho1d)
phi	vecflt_type (9.3.1.2.9)	Electrostatic potential [V]; Time-dependent; Vector (nrho1d).
er	vecflt_type (9.3.1.2.9)	Radial electric field [V/m]; Time-dependent; Vector (nrho1d).
vor	vecflt_type (9.3.1.2.9)	Vorticity [ $s^{-1}$ ]; Time-dependent; Vector (nrho1d).
apl	vecflt_type (9.3.1.2.9)	Parallel magnetic potential divided by B [m]; Time-dependent; Vector (nrho1d).
jpl	vecflt_type (9.3.1.2.9)	Parallel current divided by B [ $A/m^2$ per T]; Time-dependent; Vector (nrho1d).
ne	vecflt_type (9.3.1.2.9)	Electron density [ $m^{-3}$ ]; Time-dependent; Vector (nrho1d).
te	vecflt_type (9.3.1.2.9)	Electron temperature [eV]; Time-dependent; Vector (nrho1d).
ni	matflt_type (9.3.1.2.7)	Ion density [ $m^{-3}$ ]; Time-dependent; Matrix (nrho1d,nion).
ti	matflt_type (9.3.1.2.7)	Ion temperature [eV]; Time-dependent; Matrix (nrho1d,nion).
ui	matflt_type (9.3.1.2.7)	Ion parallel velocity divided by B [m/s per T]; Time-dependent; Matrix (nrho1d,nion).

Type of: turbulence:var1d (711)

### 9.3.1.3.319 turbvar2d

Dependent variable axisymmetric component.

member	type	description
rho_tor_norm	vecflt_type (9.3.1.2.9)	Normalised toroidal flux coordinate. Vector(nrho2d)
theta	vecflt_type (9.3.1.2.9)	Straight field line poloidal angle [rad]. Vector(ntheta2d)
phi	matflt_type (9.3.1.2.7)	Electrostatic potential [V]; Time-dependent; Matrix (nrho2d,ntheta2d).
apl	matflt_type (9.3.1.2.7)	Parallel magnetic potential divided by B [m]; Time-dependent; Matrix (nrho2d,ntheta2d).
jpl	matflt_type (9.3.1.2.7)	Parallel current divided by B [A/m <sup>2</sup> per T]; Time-dependent; Matrix (nrho2d,ntheta2d).
vor	matflt_type (9.3.1.2.7)	Vorticity [s <sup>-1</sup> ]; Time-dependent; Matrix(nrho2d,ntheta2d).
ne	matflt_type (9.3.1.2.7)	Electron density [m <sup>-3</sup> ]; Time-dependent; Matrix (nrho2d,ntheta2d).
te	matflt_type (9.3.1.2.7)	Electron temperature [eV]; Time-dependent; Matrix (nrho2d,ntheta2d).
ni	array3dfilt_type (9.3.1.2.1)	Ion density [m <sup>-3</sup> ]; Time-dependent; Array3D (nrho2d,ntheta2d,nion).
ti	array3dfilt_type (9.3.1.2.1)	Ion temperature [eV]; Time-dependent; Array3D (nrho2d,ntheta2d,nion).
ui	array3dfilt_type (9.3.1.2.1)	Ion parallel velocity divided by B [m/s per T]; Time-dependent; Array3D(nrho2d,ntheta2d,nion).

Type of: turbulence:var2d (711)

### 9.3.1.3.320 turbvar3d

Dependent variable morphology (on the internal grid code coord\_sys/turbgrid).

member	type	description
phi	array3dfilt_type (9.3.1.2.1)	Electrostatic potential [V]; Time-dependent; Array3D(ndim1,ndim2,ndim3).
vor	array3dfilt_type (9.3.1.2.1)	Vorticity [s <sup>-1</sup> ]; Time-dependent; Array3D(ndim1,ndim2,ndim3).
jpl	array3dfilt_type (9.3.1.2.1)	Parallel current [A/m <sup>2</sup> ]; Time-dependent; Array3D(ndim1,ndim2,ndim3).
ne	array3dfilt_type (9.3.1.2.1)	Electron density [m <sup>-3</sup> ]; Time-dependent; Array3D(ndim1,ndim2,ndim3).

Type of: turbulence:var3d (711)

### 9.3.1.3.321 turbvar4d

Gyrokinetic distribution function, axisymmetric component. Grid is defined in coord\_sys/turbgrid.

member	type	description
fe	array4dfilt_type (9.3.1.2.3)	Electron distribution function times V-space volume element, axisymmetric component [m <sup>-3</sup> ]; Time-dependent; Array4D(ndim1,ndim2,ndim3,ndim.v1).
fi	array5dfilt_type (9.3.1.2.4)	Ion distribution function times V-space volume element, axisymmetric component [m <sup>-3</sup> ]; Time-dependent; Array5D(ndim1,ndim2,ndim3,ndim.v1,nion).

Type of: turbulence:var4d (711)

### 9.3.1.3.322 turbvar5d

Gyrokinetic distribution function. Grid is defined in coord\_sys/turbgrid.

member	type	description
fe	array5dfilt_type (9.3.1.2.4)	Electron distribution function times V-space volume element [m <sup>-3</sup> ]; Time-dependent; Array5D(ndim1,ndim2,ndim3,ndim.v1,ndim.v2).
fi	array6dfilt_type (9.3.1.2.5)	Ion distribution function times V-space volume element [m <sup>-3</sup> ]; Time-dependent; Array6D(ndim1,ndim2,ndim3,ndim.v1,ndim.v2,nion).

Type of: turbulence:var5d (711)

### 9.3.1.3.323 turning\_pts

Location of turning points

member	type	description
upper	orbit_pos (9.3.1.3.193)	Position at upper turning point
lower	orbit_pos (9.3.1.3.193)	Position at lower turning point

Type of: special\_pos:turning\_pts (962)

### 9.3.1.3.324 typelist

Definition of types for each neutral species

member	type	description
ntype	vecint.type (9.3.1.2.10)	For each neutral species, number of possible types considered (in terms of energy : cold, thermal, fast, NBI, ...). Vector of integers (nneut)
type	matint.type (9.3.1.2.8)	Type of neutral, in terms of energy : 0=cold, 1=thermal, 2= fast, 3=NBI. Matrix of integers (nneut,max_ntype)

Type of: composition\_neutrals:typelist (748)

### 9.3.1.3.325 waveguides

Waveguides description

member	type	description
nwm_theta	integer (9.3.1.1.2)	Number of waveguides per module in the poloidal direction.
nwm_phi	integer (9.3.1.1.2)	Number of waveguides per module in the toroidal direction.
mask	vecint.type (9.3.1.2.10)	Mask of passive and active waveguides for an internal module; Vector of integers (nwm_phi)
npwbm_phi	integer (9.3.1.1.2)	Number of passive waveguide between modules in the toroidal direction
npwe_phi	integer (9.3.1.1.2)	Number of passive waveguides on each antenna edge in the toroidal direction
sw_theta	float (9.3.1.1.1)	Spacing between poloidally neighboring waveguides [m]
hw_theta	float (9.3.1.1.1)	Height of waveguides in the poloidal direction [m]
bwa	float (9.3.1.1.1)	Width of active waveguides [m]; Float
biwp	float (9.3.1.1.1)	Width of internal passive waveguides [m]; Float
bewp	float (9.3.1.1.1)	Width of edge passive waveguides [m]; Float
e_phi	vecflt.type (9.3.1.2.9)	Thickness between waveguides in the toroidal direction [m], Vector (nthick_phi). Reminder : nthick_phi = nmp_phi*nwm_phi + (nmp_phi - 1)*npwbm_phi + 2*npwe_phi
scl	vecflt.type (9.3.1.2.9)	Short circuit length for passive waveguides [m], Vector (nshort_phi). Reminder : nshort_phi = nmp_phi*npwm_phi + (nmp_phi - 1)*npwbm_phi + 2*npwe_phi

Type of: modules:waveguides (855)

### 9.3.1.3.326 waves\_global\_param

Global wave deposition parameters

member	type	description
frequency	float (9.3.1.1.1)	Wave frequency [Hz]; Time-dependent, floating
name	string (9.3.1.1.3)	Antenna name, String
type	string (9.3.1.1.3)	Wave type (LH, EC, IC, ...), String
ntor	vecint.type (9.3.1.2.10)	Toroidal mode numbers; Time-dependent; Vector (ntor)
f_assumption	vecint.type (9.3.1.2.10)	Assumption on the functions distribution used by the wave solver to calculate the power deposition : 0 = Maxwellian (linear absorption); 1 = quasi-linear (F given by a distribution function CPO). Integer vector (nion+1). The first value corresponds to the electrons, then to the other ion species. Time-dependent.
power_tot	float (9.3.1.1.1)	Total absorbed wave power [W]; Time-dependent
p_frac_ntor	vecflt.type (9.3.1.2.9)	Fraction of wave power per toroidal mode number; Time-dependent; Vector (ntor)
pow_i	vecflt.type (9.3.1.2.9)	Wave power absorbed by an ion species [W]; Time-dependent; Vector (nion)
pow_e	float (9.3.1.1.1)	Wave power absorbed by the electrons [W]; Time-dependent; Float
pow_ntor_i	matflt.type (9.3.1.2.7)	Wave power absorbed by an ion species per toroidal mode number [W]; Time-dependent; Matrix (ntor,nion)
pow_ntor_e	vecflt.type (9.3.1.2.9)	Wave power absorbed by the electrons per toroidal mode number [W]; Time-dependent; Vector (ntor)
cur_tor	float (9.3.1.1.1)	Wave driven toroidal current from a stand alone calculation (not consistent with other sources) [A]; Time-dependent, Float
cur_tor_ntor	vecflt.type (9.3.1.2.9)	Wave driven toroidal current for each toroidal mode number from a stand alone calculation (not consistent with other sources) [A]; Time-dependent; Vector (ntor)
code_type	integer (9.3.1.1.2)	Type of wave deposition code for a given frequency: 1=beam/ray tracing; 2=full wave; Integer
toroid_field	b0r0 (9.3.1.3.48)	Characteristics of the vacuum toroidal field, redundant with the toroidfield CPO, to document the normalisation of parallel current densities in this CPO; Float.

Type of: coherentwave:global\_param (733)

### 9.3.1.3.327 waves\_grid\_1d

Grid points for profiles

member	type	description
rho_tor_norm	vecflt_type (9.3.1.2.9)	Normalised toroidal flux coordinate at the grid points for 1D profiles; Time-dependent; Vector (npsi)
rho_tor	vecflt_type (9.3.1.2.9)	Toroidal flux coordinate at the grid points for 1D profiles [m]; Time-dependent; Vector (npsi)
psi	vecflt_type (9.3.1.2.9)	Grid points in poloidal flux function [Wb], without $1/2\pi$ and such that $B_p =  \text{grad } \psi  / R/2/\pi$ . Time-dependent; Vector (npsi)

Type of: coherentwave:grid\_1d (733)

### 9.3.1.3.328 waves\_grid\_2d

Grid points for 2D profiles

member	type	description
grid_type	integer (9.3.1.1.2)	Grid type. 1: rectangular grid in (R,Z). 2: rectangular grid in (psi, theta). 3: unstructured grid. Integer.
rho_tor_norm	matflt_type (9.3.1.2.7)	Normalised toroidal flux coordinate at the grid points for the 2D profiles; Time-dependent; Matrix (ndim1, ndim2)
rho_tor	matflt_type (9.3.1.2.7)	Toroidal flux coordinate at the grid points for the 2D profiles [m]; Time-dependent; Matrix (ndim1, ndim2)
psi	matflt_type (9.3.1.2.7)	Grid points in poloidal flux function [Wb], without $1/2\pi$ and such that $B_p =  \text{grad } \psi  / R/2/\pi$ . Time-dependent; Matrix (ndim1, ndim2)
theta	matflt_type (9.3.1.2.7)	Poloidal angle at the grid points (see theta_info for detailed definition); Time-dependent; Matrix (ndim1, ndim2)
r	matflt_type (9.3.1.2.7)	R (major radius) of grid points; Time-dependent; Matrix(ndim1, ndim2)
z	matflt_type (9.3.1.2.7)	Z (altitude) of grid points; Time-dependent; Matrix (ndim1, ndim2)
theta_info	theta_info (9.3.1.3.303)	Information on the poloidal angle theta.

Type of: coherentwave:grid\_2d (733)

### 9.3.1.3.329 waves\_profiles\_1d

waves 1D radial profiles

member	type	description
powd_tot	vecflt_type (9.3.1.2.9)	Total flux surface averaged wave power density [ $\text{W}/\text{m}^3$ ]; Time-dependent; Vector (npsi)
powd_e	vecflt_type (9.3.1.2.9)	Flux surface averaged absorbed wave power density on electrons [ $\text{W}/\text{m}^3$ ]; Time-dependent; Vector (npsi)
powd_i	matflt_type (9.3.1.2.7)	Flux surface averaged absorbed wave power density on ion species [ $\text{W}/\text{m}^3$ ]; Time-dependent; Matrix (npsi, nion)
powd_ntor	matflt_type (9.3.1.2.7)	Flux surface averaged power density for each toroidal mode number [ $\text{W}/\text{m}^3$ ]; Time-dependent; Matrix(npsi, ntor)
powd_ntor_e	matflt_type (9.3.1.2.7)	Flux surface averaged absorbed power density for each toroidal mode number on electrons [ $\text{W}/\text{m}^3$ ]; Time-dependent; Matrix (npsi, ntor)
powd_ntor_i	array3dflt_type (9.3.1.2.1)	Flux surface averaged power density for each toroidal mode number on each ions species [ $\text{W}/\text{m}^3$ ]; Time-dependent; Array3D (npsi, ntor, nion)
curd_tor	vecflt_type (9.3.1.2.9)	Flux surface averaged wave driven toroidal current density = $\text{average}(j_{\phi}/R) / \text{average}(1/R)$ [ $\text{A}/\text{m}^2$ ]; Time-dependent; Vector (npsi)
curd_torntor	matflt_type (9.3.1.2.7)	Flux surface averaged wave driven toroidal current density for each toroidal mode number = $\text{average}(j_{\phi}/R) / \text{average}(1/R)$ [ $\text{A}/\text{m}^2$ ]; Time-dependent; Matrix (npsi, ntor)
pow_tot	vecflt_type (9.3.1.2.9)	Volume integrated absorbed wave power density [W]; Time-dependent; Vector (npsi)
pow_e	vecflt_type (9.3.1.2.9)	Volume integrated absorbed wave power density on electrons [W]; Time-dependent; Vector (npsi)
pow_i	matflt_type (9.3.1.2.7)	Volume integrated absorbed wave power density on ion species [W]; Time-dependent; Matrix (npsi, nion)
pow_ntor	array3dflt_type (9.3.1.2.1)	Volume integrated power density for each toroidal mode number [W]; Time-dependent; Matrix (npsi, ntor)
pow_ntor_e	matflt_type (9.3.1.2.7)	Volume integrated power density for each toroidal mode number on the electrons [W]; Time-dependent; Matrix (npsi, ntor)
pow_ntor_i	array3dflt_type (9.3.1.2.1)	Volume integrated power density for each toroidal mode number on each ions species [W]; Time-dependent; Array3D (npsi, ntor, nion)

member	type	description
curd_par	vecflt.type (9.3.1.2.9)	Flux surface averaged wave driven parallel current density = average(j.B) / B0, where B0 is in global_param/toroid.field/b0, from stand alone calculation (not consistent with other sources) ; [A/m <sup>2</sup> ]; Time-dependent; Vector (npsi)
curd_pantor	matflt.type (9.3.1.2.7)	Flux surface averaged wave driven parallel current density for each toroidal mode number = average(j.B) / B0, where B0 is in global_param/toroid.field/b0, from stand alone calculation (not consistent with other sources) ; [A/m <sup>2</sup> ]; Time-dependent; Matrix (npsi, ntor)
cur_tor	vecflt.type (9.3.1.2.9)	Wave driven toroidal current inside a flux surface from stand alone calculation (not consistent with other sources) [A]; Time-dependent; Vector (npsi)
cur_tor_ntor	matflt.type (9.3.1.2.7)	Wave driven toroidal current inside a flux surface for each toroidal mode number from a stand alone calculation (not consistent with other sources) [A]; Time-dependent; Matrix (npsi, ntor)

Type of: coherentwave:profiles\_1d (733)

### 9.3.1.3.330 waves\_profiles\_2d

waves 2D profiles in poloidal cross-section

member	type	description
powd_tot	matflt.type (9.3.1.2.7)	Total wave power density; Time-dependent [W/m <sup>3</sup> ]; Matrix (ndim1, ndim2)
powd_e	matflt.type (9.3.1.2.7)	Absorbed wave power density on electrons [W/m <sup>3</sup> ]; Time-dependent; Matrix (ndim1, ndim2)
powd_i	array3dflt.type (9.3.1.2.1)	Absorbed wave power density on ion species [W/m <sup>3</sup> ]; Time-dependent; Array3D (ndim1, ndim2, nion)
powd_ntor	array3dflt.type (9.3.1.2.1)	Absorbed power density for each toroidal mode number [W/m <sup>3</sup> ]; Time-dependent; Array 3D (ndim1, ndim2, ntor)
powd_ntor_e	array3dflt.type (9.3.1.2.1)	Absorbed power density for each toroidal mode number on electrons [W/m <sup>3</sup> ]; Time-dependent; Array 3D (ndim1, ndim2, ntor)
powd_ntor_i	array4dflt.type (9.3.1.2.3)	Absorbed power density for each toroidal mode number on each ions species [W/m <sup>3</sup> ]; Time-dependent; Array4D (ndim1, ndim2, ntor, nion)
powd_iharm	array5dflt.type (9.3.1.2.4)	Power density absorbed by an ion species for each toroidal mode number at a given harmonic cyclotron resonance ; Time-dependent (W/m <sup>3</sup> ); Array5D (ndim1, ndim2, ntor, nion, nharm)

Type of: coherentwave:profiles\_2d (733)

### 9.3.1.3.331 waves\_rtposition

Ray/beam position

member	type	description
r	vecflt.type (9.3.1.2.9)	Major radius location [m]; Time-dependent; Vector (npoints)
z	vecflt.type (9.3.1.2.9)	Vertical location [m]; Time-dependent; Vector (npoints)
phi	vecflt.type (9.3.1.2.9)	Toroidal angle location [rad]; Time-dependent; Vector (npoints)
psi	vecflt.type (9.3.1.2.9)	Poloidal magnetic flux coordinate [Wb], without 1/2pi and such that Bp= grad psi  /R/2/pi; Time-dependent; Vector (npoints)
theta	vecflt.type (9.3.1.2.9)	Poloidal angle location [rad]; Time-dependent; Vector (npoints). PRECISE THE DEFINITION OF THE POLOIDAL ANGLE, SEE WAVES/COHERENTWAVE(:)/GRID_2D.

Type of: beamtracing:position (723)

### 9.3.1.3.332 waves\_rtwavevector

Ray/beam wave vector

member	type	description
kr	vecflt.type (9.3.1.2.9)	Wave vector in the major radius direction [m <sup>**</sup> -1], Vector (npoints). Time-dependent
kz	vecflt.type (9.3.1.2.9)	Wave vector in the vertical direction [m <sup>**</sup> -1], Vector (npoints). Time-dependent
kphi	vecflt.type (9.3.1.2.9)	Wave vector in the toroidal direction [m <sup>**</sup> -1], Vector (npoints). Time-dependent
npar	vecflt.type (9.3.1.2.9)	Parallel refractive index, Vector (npoints). Time-dependent
nperp	vecflt.type (9.3.1.2.9)	Perpendicular refractive index, Vector (npoints). Time-dependent
ntor	vecflt.type (9.3.1.2.9)	Toroidal wave number, Vector (npoints/1). If var_ntor=0, ntor is constant along the ray path and the last dimension is of size 1 in order to avoid useless repetition of ntor constant value. Time-dependent
var_ntor	integer (9.3.1.1.2)	Flag telling whether ntor is constant along the ray path (0) or varying (1). Integer

Type of: beamtracing:wavevector (723)



### 9.3.1.3.333 whatref

Structure defining a database entry and the CPO occurrence

member	type	description
user	string (9.3.1.1.3)	Name of the user if private data, public if public ITM database.
machine	string (9.3.1.1.3)	Name of the device
shot	integer (9.3.1.1.2)	Shot number
run	integer (9.3.1.1.2)	Run number
occurrence	integer (9.3.1.1.2)	Occurrence number of the CPO in the reference entry

Type of: datainfo:whatref (765)

### 9.3.1.3.334 xpts

Position of the X-point(s)

member	type	description
position	rzID (9.3.1.3.242)	Position of the X-point(s); Time-dependent; Vector (nmeas)
source	string (9.3.1.1.3)	Description or path to the source signal (diagnostic or genprof, from which to read all info on the signal), e.g. 'magdiag/bpol_probes/measure/value'. String
weight	vecflt_type (9.3.1.2.9)	weight given to the measurement ( $\zeta = 0$ ); -1 if exact data; Time-dependent; Vector (nmeas)
sigma	vecflt_type (9.3.1.2.9)	standard deviation of the measurement; Time-dependent; Vector (nmeas)
calculated	vecflt_type (9.3.1.2.9)	Signal as recalculated by the equilibrium code; Time-dependent; Vector (nmeas)
chi2	vecflt_type (9.3.1.2.9)	$\chi^2$ of (calculated-measured); Time-dependent; Vector (nmeas)

Type of: eqconstraint:xpts (811) itmtypes<sup>177</sup>

## 9.3.2 CPO Instances

Generated from the ITM data structure schemas.

### 9.3.2.1 Fortran

#### 9.3.2.1.1 amns

datainfo (676)	amns%datainfo (datainfo) (9.3.1.3.92)
dataprovider (765)	amns%datainfo%dataprovider (string) (9.3.1.1.3)
putdate (765)	amns%datainfo%putdate (string) (9.3.1.1.3)
source (765)	amns%datainfo%source (string) (9.3.1.1.3)
comment (765)	amns%datainfo%comment (string) (9.3.1.1.3)
isref (765)	amns%datainfo%isref (integer) (9.3.1.1.2)
whatref (765)	amns%datainfo%whatref (whatref) (9.3.1.3.333)
user (1006)	amns%datainfo%whatref%user (string) (9.3.1.1.3)
machine (1006)	amns%datainfo%whatref%machine (string) (9.3.1.1.3)
shot (1006)	amns%datainfo%whatref%shot (integer) (9.3.1.1.2)
run (1006)	amns%datainfo%whatref%run (integer) (9.3.1.1.2)
occurrence (1006)	amns%datainfo%whatref%occurrence (integer) (9.3.1.1.2)
putinfo (765)	amns%datainfo%putinfo (putinfo) (9.3.1.3.215)
putmethod (888)	amns%datainfo%putinfo%putmethod (string) (9.3.1.1.3)
putaccess (888)	amns%datainfo%putinfo%putaccess (string) (9.3.1.1.3)
putlocation (888)	amns%datainfo%putinfo%putlocation (string) (9.3.1.1.3)
rights (888)	amns%datainfo%putinfo%rights (string) (9.3.1.1.3)
version (676)	amns%version (string) (9.3.1.1.3)
source (676)	amns%source (string) (9.3.1.1.3)
zn (676)	amns%zn (integer) (9.3.1.1.2)
amn (676)	amns%amn (float) (9.3.1.1.1)
zion (676)	amns%zion (vecint_type) (9.3.1.2.10)
state_label (676)	amns%state_label (vecstring_type) (9.3.1.2.11)
bundled (676)	amns%bundled (integer) (9.3.1.1.2)

<sup>177</sup>[https://www.efda-itm.eu/ITM/html/itmtypes\\_\\_4.09a.html](https://www.efda-itm.eu/ITM/html/itmtypes__4.09a.html)

proc_label (676)	amns%proc_label (vecstring_type) (9.3.1.2.11)
tables (676)	amns%tables (tables) (9.3.1.3.299)
ndim (972)	amns%tables%ndim (integer) (9.3.1.1.2)
coord_index (972)	amns%tables%coord_index (integer) (9.3.1.1.2)
result_label (972)	amns%tables%result_label (string) (9.3.1.1.3)
result_unit (972)	amns%tables%result_unit (string) (9.3.1.1.3)
result_trans (972)	amns%tables%result_trans (integer) (9.3.1.1.2)
table (972)	amns%tables%table (table) (9.3.1.3.298)
table_0d (971)	amns%tables%table%table_0d (float) (9.3.1.1.1)
table_1d (971)	amns%tables%table%table_1d (vecflt_type) (9.3.1.2.9)
table_2d (971)	amns%tables%table%table_2d (matflt_type) (9.3.1.2.7)
table_3d (971)	amns%tables%table%table_3d (array3dfit_type) (9.3.1.2.1)
table_4d (971)	amns%tables%table%table_4d (array4dfit_type) (9.3.1.2.3)
table_5d (971)	amns%tables%table%table_5d (array5dfit_type) (9.3.1.2.4)
table_6d (971)	amns%tables%table%table_6d (array6dfit_type) (9.3.1.2.5)
tables_coord (676)	amns%tables_coord (tables_coord) (9.3.1.3.300)
coords (973)	amns%tables_coord%coords (coords) (9.3.1.3.77)
coord (750)	amns%tables_coord%coords%coord (vecflt_type) (9.3.1.2.9)
coord_label (750)	amns%tables_coord%coords%coord_label (vecstring_type) (9.3.1.2.11)
extrap_type (750)	amns%tables_coord%coords%extrap_type (vecint_type) (9.3.1.2.10)
interp_type (750)	amns%tables_coord%coords%interp_type (integer) (9.3.1.1.2)
label (750)	amns%tables_coord%coords%label (string) (9.3.1.1.3)
unit (750)	amns%tables_coord%coords%unit (string) (9.3.1.1.3)
transform (750)	amns%tables_coord%coords%transform (integer) (9.3.1.1.2)
spacing (750)	amns%tables_coord%coords%spacing (integer) (9.3.1.1.2)

### 9.3.2.1.2 antennas

datainfo (677)	antennas%datainfo (datainfo) (9.3.1.3.92)
dataprovider (765)	antennas%datainfo%dataprovider (string) (9.3.1.1.3)
putdate (765)	antennas%datainfo%putdate (string) (9.3.1.1.3)
source (765)	antennas%datainfo%source (string) (9.3.1.1.3)
comment (765)	antennas%datainfo%comment (string) (9.3.1.1.3)
isref (765)	antennas%datainfo%isref (integer) (9.3.1.1.2)
whatref (765)	antennas%datainfo%whatref (whatref) (9.3.1.3.333)
user (1006)	antennas%datainfo%whatref%user (string) (9.3.1.1.3)
machine (1006)	antennas%datainfo%whatref%machine (string) (9.3.1.1.3)
shot (1006)	antennas%datainfo%whatref%shot (integer) (9.3.1.1.2)
run (1006)	antennas%datainfo%whatref%run (integer) (9.3.1.1.2)
occurrence (1006)	antennas%datainfo%whatref%occurrence (integer) (9.3.1.1.2)
putinfo (765)	antennas%datainfo%putinfo (putinfo) (9.3.1.3.215)
putmethod (888)	antennas%datainfo%putinfo%putmethod (string) (9.3.1.1.3)
putaccess (888)	antennas%datainfo%putinfo%putaccess (string) (9.3.1.1.3)
putlocation (888)	antennas%datainfo%putinfo%putlocation (string) (9.3.1.1.3)
rights (888)	antennas%datainfo%putinfo%rights (string) (9.3.1.1.3)
antenna_unit (677)	antennas%antenna_unit (antenna_unit) (9.3.1.3.44)
antenna_ec (717)	antennas%antenna_unit%antenna_ec (antenna_ec) (9.3.1.3.41)
name (714)	antennas%antenna_unit%antenna_ec%name (string) (9.3.1.1.3)
frequency (714)	antennas%antenna_unit%antenna_ec%frequency (float) (9.3.1.1.1)
power (714)	antennas%antenna_unit%antenna_ec%power (exp0D) (9.3.1.3.142)
value (815)	antennas%antenna_unit%antenna_ec%power%value (float) (9.3.1.1.1)
abserror (815)	antennas%antenna_unit%antenna_ec%power%abserror (float) (9.3.1.1.1)
relerror (815)	antennas%antenna_unit%antenna_ec%power%relerror (float) (9.3.1.1.1)
mode (714)	antennas%antenna_unit%antenna_ec%mode (integer) (9.3.1.1.2)
position (714)	antennas%antenna_unit%antenna_ec%position (rzphi0D) (9.3.1.3.246)
r (919)	antennas%antenna_unit%antenna_ec%position%r (float) (9.3.1.1.1)
z (919)	antennas%antenna_unit%antenna_ec%position%z (float) (9.3.1.1.1)
phi (919)	antennas%antenna_unit%antenna_ec%position%phi (float) (9.3.1.1.1)
launchangles (714)	antennas%antenna_unit%antenna_ec%launchangles (launchangles) (9.3.1.3.162)
alpha (835)	antennas%antenna_unit%antenna_ec%launchangles%alpha (float) (9.3.1.1.1)
beta (835)	antennas%antenna_unit%antenna_ec%launchangles%beta (float) (9.3.1.1.1)

beam (714)	antennas%antenna_unit%antenna_ec%beam (rfbeam) (9.3.1.3.240)
spot (913)	antennas%antenna_unit%antenna_ec%beam%spot (spot) (9.3.1.3.292)
waist (965)	antennas%antenna_unit%antenna_ec%beam%spot%waist (vecflt.type) (9.3.1.2.9)
angle (965)	antennas%antenna_unit%antenna_ec%beam%spot%angle (float) (9.3.1.1.1)
phaseellipse (913)	antennas%antenna_unit%antenna_ec%beam%phaseellipse (phaseellipse) (9.3.1.3.204)
invcurvrad (877)	antennas%antenna_unit%antenna_ec%beam%phaseellipse%invcurvrad (vecflt.type) (9.3.1.2.9)
angle (877)	antennas%antenna_unit%antenna_ec%beam%phaseellipse%angle (float) (9.3.1.1.1)
antenna_ic (717)	antennas%antenna_unit%antenna_ic (antenna_ic) (9.3.1.3.42)
name (715)	antennas%antenna_unit%antenna_ic%name (string) (9.3.1.1.3)
frequency (715)	antennas%antenna_unit%antenna_ic%frequency (exp0D) (9.3.1.3.142)
value (815)	antennas%antenna_unit%antenna_ic%frequency%value (float) (9.3.1.1.1)
abserror (815)	antennas%antenna_unit%antenna_ic%frequency%abserror (float) (9.3.1.1.1)
relerror (815)	antennas%antenna_unit%antenna_ic%frequency%relerror (float) (9.3.1.1.1)
power (715)	antennas%antenna_unit%antenna_ic%power (exp0D) (9.3.1.3.142)
value (815)	antennas%antenna_unit%antenna_ic%power%value (float) (9.3.1.1.1)
abserror (815)	antennas%antenna_unit%antenna_ic%power%abserror (float) (9.3.1.1.1)
relerror (815)	antennas%antenna_unit%antenna_ic%power%relerror (float) (9.3.1.1.1)
setup (715)	antennas%antenna_unit%antenna_ic%setup (antennaic_setup) (9.3.1.3.45)
straps (718)	antennas%antenna_unit%antenna_ic%setup%straps (straps) (9.3.1.3.297)
phase (970)	antennas%antenna_unit%antenna_ic%setup%straps%phase (exp0D) (9.3.1.3.142)
value (815)	antennas%antenna_unit%antenna_ic%setup%straps%phase%value (float) (9.3.1.1.1)
abserror (815)	antennas%antenna_unit%antenna_ic%setup%straps%phase%abserror (float) (9.3.1.1.1)
relerror (815)	antennas%antenna_unit%antenna_ic%setup%straps%phase%relerror (float) (9.3.1.1.1)
phi_centre (970)	antennas%antenna_unit%antenna_ic%setup%straps%phi_centre (float) (9.3.1.1.1)
width (970)	antennas%antenna_unit%antenna_ic%setup%straps%width (float) (9.3.1.1.1)
dist2wall (970)	antennas%antenna_unit%antenna_ic%setup%straps%dist2wall (float) (9.3.1.1.1)
coord_strap (970)	antennas%antenna_unit%antenna_ic%setup%straps%coord_strap (rz1D) (9.3.1.3.242)
r (915)	antennas%antenna_unit%antenna_ic%setup%straps%coord_strap%r (vecflt.type) (9.3.1.2.9)
z (915)	antennas%antenna_unit%antenna_ic%setup%straps%coord_strap%z (vecflt.type) (9.3.1.2.9)
antenna_lh (717)	antennas%antenna_unit%antenna_lh (antenna_lh) (9.3.1.3.43)
name (716)	antennas%antenna_unit%antenna_lh%name (string) (9.3.1.1.3)
frequency (716)	antennas%antenna_unit%antenna_lh%frequency (float) (9.3.1.1.1)
power (716)	antennas%antenna_unit%antenna_lh%power (exp0D) (9.3.1.3.142)
value (815)	antennas%antenna_unit%antenna_lh%power%value (float) (9.3.1.1.1)
abserror (815)	antennas%antenna_unit%antenna_lh%power%abserror (float) (9.3.1.1.1)
relerror (815)	antennas%antenna_unit%antenna_lh%power%relerror (float) (9.3.1.1.1)
n_par (716)	antennas%antenna_unit%antenna_lh%n_par (float) (9.3.1.1.1)
position (716)	antennas%antenna_unit%antenna_lh%position (rzphi0D) (9.3.1.3.246)
r (919)	antennas%antenna_unit%antenna_lh%position%r (float) (9.3.1.1.1)
z (919)	antennas%antenna_unit%antenna_lh%position%z (float) (9.3.1.1.1)
phi (919)	antennas%antenna_unit%antenna_lh%position%phi (float) (9.3.1.1.1)
setup (716)	antennas%antenna_unit%antenna_lh%setup (antennalh_setup) (9.3.1.3.46)
modules (719)	antennas%antenna_unit%antenna_lh%setup%modules (modules) (9.3.1.3.182)
nma_theta (855)	antennas%antenna_unit%antenna_lh%setup%modules%nma_theta (integer) (9.3.1.1.2)
nma_phi (855)	antennas%antenna_unit%antenna_lh%setup%modules%nma_phi (integer) (9.3.1.1.2)
ima_theta (855)	antennas%antenna_unit%antenna_lh%setup%modules%ima_theta (vecint.type) (9.3.1.2.10)
ima_phi (855)	antennas%antenna_unit%antenna_lh%setup%modules%ima_phi (vecint.type) (9.3.1.2.10)
sm_theta (855)	antennas%antenna_unit%antenna_lh%setup%modules%sm_theta (float) (9.3.1.1.1)
amplitude (855)	antennas%antenna_unit%antenna_lh%setup%modules%amplitude (exp1D) (9.3.1.3.143)
value (816)	antennas%antenna_unit%antenna_lh%setup%modules%amplitude%value (vecflt.type) (9.3.1.2.9)
abserror (816)	antennas%antenna_unit%antenna_lh%setup%modules%amplitude%abserror (vecflt.type) (9.3.1.2.9)
relerror (816)	antennas%antenna_unit%antenna_lh%setup%modules%amplitude%relerror (vecflt.type) (9.3.1.2.9)
phase (855)	antennas%antenna_unit%antenna_lh%setup%modules%phase (exp1D) (9.3.1.3.143)
value (816)	antennas%antenna_unit%antenna_lh%setup%modules%phase%value (vecflt.type) (9.3.1.2.9)
abserror (816)	antennas%antenna_unit%antenna_lh%setup%modules%phase%abserror (vecflt.type) (9.3.1.2.9)
relerror (816)	antennas%antenna_unit%antenna_lh%setup%modules%phase%relerror (vecflt.type) (9.3.1.2.9)
waveguides (855)	antennas%antenna_unit%antenna_lh%setup%modules%waveguides (waveguides) (9.3.1.3.325)

nwm_theta (998)	antennas%antenna_unit%antenna_lh%setup%modules%waveguides%nwm_theta (integer) (9.3.1.1.2)
nwm_phi (998)	antennas%antenna_unit%antenna_lh%setup%modules%waveguides%nwm_phi (integer) (9.3.1.1.2)
mask (998)	antennas%antenna_unit%antenna_lh%setup%modules%waveguides%mask (vecint_type) (9.3.1.2.10)
npwbm_phi (998)	antennas%antenna_unit%antenna_lh%setup%modules%waveguides%npwbm_phi (integer) (9.3.1.1.2)
npwe_phi (998)	antennas%antenna_unit%antenna_lh%setup%modules%waveguides%npwe_phi (integer) (9.3.1.1.2)
sw_theta (998)	antennas%antenna_unit%antenna_lh%setup%modules%waveguides%sw_theta (float) (9.3.1.1.1)
hw_theta (998)	antennas%antenna_unit%antenna_lh%setup%modules%waveguides%hw_theta (float) (9.3.1.1.1)
bwa (998)	antennas%antenna_unit%antenna_lh%setup%modules%waveguides%bwa (float) (9.3.1.1.1)
biwp (998)	antennas%antenna_unit%antenna_lh%setup%modules%waveguides%biwp (float) (9.3.1.1.1)
bewp (998)	antennas%antenna_unit%antenna_lh%setup%modules%waveguides%bewp (float) (9.3.1.1.1)
e_phi (998)	antennas%antenna_unit%antenna_lh%setup%modules%waveguides%e_phi (vecflt_type) (9.3.1.2.9)
scl (998)	antennas%antenna_unit%antenna_lh%setup%modules%waveguides%scl (vecflt_type) (9.3.1.2.9)
plasmaedge (716)	antennas%antenna_unit%antenna_lh%plasmaedge (plasmaedge) (9.3.1.3.206)
npoints (879)	antennas%antenna_unit%antenna_lh%plasmaedge%npoints (integer) (9.3.1.1.2)
distance (879)	antennas%antenna_unit%antenna_lh%plasmaedge%distance (vecflt_type) (9.3.1.2.9)
density (879)	antennas%antenna_unit%antenna_lh%plasmaedge%density (vecflt_type) (9.3.1.2.9)
beam (716)	antennas%antenna_unit%antenna_lh%beam (rfbeam) (9.3.1.3.240)
spot (913)	antennas%antenna_unit%antenna_lh%beam%spot (spot) (9.3.1.3.292)
waist (965)	antennas%antenna_unit%antenna_lh%beam%spot%waist (vecflt_type) (9.3.1.2.9)
angle (965)	antennas%antenna_unit%antenna_lh%beam%spot%angle (float) (9.3.1.1.1)
phaseellipse (913)	antennas%antenna_unit%antenna_lh%beam%phaseellipse (phaseellipse) (9.3.1.3.204)
invcurvrad (877)	antennas%antenna_unit%antenna_lh%beam%phaseellipse%invcurvrad (vecflt_type) (9.3.1.2.9)
angle (877)	antennas%antenna_unit%antenna_lh%beam%phaseellipse%angle (float) (9.3.1.1.1)
codeparam (717)	antennas%antenna_unit%codeparam (codeparam) (9.3.1.3.58)
codename (731)	antennas%antenna_unit%codeparam%codename (string) (9.3.1.1.3)
codeversion (731)	antennas%antenna_unit%codeparam%codeversion (string) (9.3.1.1.3)
parameters (731)	antennas%antenna_unit%codeparam%parameters (string) (9.3.1.1.3)
output_diag (731)	antennas%antenna_unit%codeparam%output_diag (string) (9.3.1.1.3)
output_flag (731)	antennas%antenna_unit%codeparam%output_flag (integer) (9.3.1.1.2)
codeparam (677)	antennas%codeparam (codeparam) (9.3.1.3.58)
codename (731)	antennas%codeparam%codename (string) (9.3.1.1.3)
codeversion (731)	antennas%codeparam%codeversion (string) (9.3.1.1.3)
parameters (731)	antennas%codeparam%parameters (string) (9.3.1.1.3)
output_diag (731)	antennas%codeparam%output_diag (string) (9.3.1.1.3)
output_flag (731)	antennas%codeparam%output_flag (integer) (9.3.1.1.2)
time (677)	antennas%time (float) (9.3.1.1.1)

### 9.3.2.1.3 coredelta

datainfo (678)	coredelta%datainfo (datainfo) (9.3.1.3.92)
dataprovider (765)	coredelta%datainfo%dataprovider (string) (9.3.1.1.3)
putdate (765)	coredelta%datainfo%putdate (string) (9.3.1.1.3)
source (765)	coredelta%datainfo%source (string) (9.3.1.1.3)
comment (765)	coredelta%datainfo%comment (string) (9.3.1.1.3)
isref (765)	coredelta%datainfo%isref (integer) (9.3.1.1.2)
whatref (765)	coredelta%datainfo%whatref (whatref) (9.3.1.3.333)
user (1006)	coredelta%datainfo%whatref%user (string) (9.3.1.1.3)
machine (1006)	coredelta%datainfo%whatref%machine (string) (9.3.1.1.3)
shot (1006)	coredelta%datainfo%whatref%shot (integer) (9.3.1.1.2)
run (1006)	coredelta%datainfo%whatref%run (integer) (9.3.1.1.2)
occurrence (1006)	coredelta%datainfo%whatref%occurrence (integer) (9.3.1.1.2)
putinfo (765)	coredelta%datainfo%putinfo (putinfo) (9.3.1.3.215)
putmethod (888)	coredelta%datainfo%putinfo%putmethod (string) (9.3.1.1.3)
putaccess (888)	coredelta%datainfo%putinfo%putaccess (string) (9.3.1.1.3)

putlocation (888)	coredelta%datainfo%putinfo%putlocation (string) (9.3.1.1.3)
rights (888)	coredelta%datainfo%putinfo%rights (string) (9.3.1.1.3)
composition (678)	coredelta%composition (composition) (9.3.1.3.74)
amn (747)	coredelta%composition%amn (vecflt_type) (9.3.1.2.9)
zn (747)	coredelta%composition%zn (vecflt_type) (9.3.1.2.9)
zion (747)	coredelta%composition%zion (vecflt_type) (9.3.1.2.9)
imp_flag (747)	coredelta%composition%imp_flag (vecint_type) (9.3.1.2.10)
rho_tor (678)	coredelta%rho_tor (vecflt_type) (9.3.1.2.9)
rho_tor_norm (678)	coredelta%rho_tor_norm (vecflt_type) (9.3.1.2.9)
delta_psi (678)	coredelta%delta_psi (vecflt_type) (9.3.1.2.9)
delta_te (678)	coredelta%delta_te (vecflt_type) (9.3.1.2.9)
delta_ti (678)	coredelta%delta_ti (matflt_type) (9.3.1.2.7)
delta_tz (678)	coredelta%delta_tz (array3dflt_type) (9.3.1.2.1)
delta_ne (678)	coredelta%delta_ne (vecflt_type) (9.3.1.2.9)
delta_ni (678)	coredelta%delta_ni (matflt_type) (9.3.1.2.7)
delta_nz (678)	coredelta%delta_nz (array3dflt_type) (9.3.1.2.1)
delta_vtor (678)	coredelta%delta_vtor (matflt_type) (9.3.1.2.7)
codeparam (678)	coredelta%codeparam (codeparam) (9.3.1.3.58)
codename (731)	coredelta%codeparam%codename (string) (9.3.1.1.3)
codeversion (731)	coredelta%codeparam%codeversion (string) (9.3.1.1.3)
parameters (731)	coredelta%codeparam%parameters (string) (9.3.1.1.3)
output_diag (731)	coredelta%codeparam%output_diag (string) (9.3.1.1.3)
output_flag (731)	coredelta%codeparam%output_flag (integer) (9.3.1.1.2)
time (678)	coredelta%time (float) (9.3.1.1.1)

### 9.3.2.1.4 coreimpur

datainfo (679)	coreimpur%datainfo (datainfo) (9.3.1.3.92)
dataprovider (765)	coreimpur%datainfo%dataprovider (string) (9.3.1.1.3)
putdate (765)	coreimpur%datainfo%putdate (string) (9.3.1.1.3)
source (765)	coreimpur%datainfo%source (string) (9.3.1.1.3)
comment (765)	coreimpur%datainfo%comment (string) (9.3.1.1.3)
isref (765)	coreimpur%datainfo%isref (integer) (9.3.1.1.2)
whatref (765)	coreimpur%datainfo%whatref (whatref) (9.3.1.3.333)
user (1006)	coreimpur%datainfo%whatref%user (string) (9.3.1.1.3)
machine (1006)	coreimpur%datainfo%whatref%machine (string) (9.3.1.1.3)
shot (1006)	coreimpur%datainfo%whatref%shot (integer) (9.3.1.1.2)
run (1006)	coreimpur%datainfo%whatref%run (integer) (9.3.1.1.2)
occurrence (1006)	coreimpur%datainfo%whatref%occurrence (integer) (9.3.1.1.2)
putinfo (765)	coreimpur%datainfo%putinfo (putinfo) (9.3.1.3.215)
putmethod (888)	coreimpur%datainfo%putinfo%putmethod (string) (9.3.1.1.3)
putaccess (888)	coreimpur%datainfo%putinfo%putaccess (string) (9.3.1.1.3)
putlocation (888)	coreimpur%datainfo%putinfo%putlocation (string) (9.3.1.1.3)
rights (888)	coreimpur%datainfo%putinfo%rights (string) (9.3.1.1.3)
rho_tor_norm (679)	coreimpur%rho_tor_norm (vecflt_type) (9.3.1.2.9)
rho_tor (679)	coreimpur%rho_tor (vecflt_type) (9.3.1.2.9)
source (679)	coreimpur%source (vecstring_type) (9.3.1.2.11)
flag (679)	coreimpur%flag (vecint_type) (9.3.1.2.10)
desc_impur (679)	coreimpur%desc_impur (desc_impur) (9.3.1.3.93)
amn (766)	coreimpur%desc_impur%amn (vecflt_type) (9.3.1.2.9)
zn (766)	coreimpur%desc_impur%zn (vecint_type) (9.3.1.2.10)
i_ion (766)	coreimpur%desc_impur%i_ion (vecint_type) (9.3.1.2.10)
nzimp (766)	coreimpur%desc_impur%nzimp (vecint_type) (9.3.1.2.10)
zmin (766)	coreimpur%desc_impur%zmin (matint_type) (9.3.1.2.8)
zmax (766)	coreimpur%desc_impur%zmax (matint_type) (9.3.1.2.8)
z (679)	coreimpur%z (array3dflt_type) (9.3.1.2.1)
zsq (679)	coreimpur%zsq (array3dflt_type) (9.3.1.2.1)
nz (679)	coreimpur%nz (array3dflt_type) (9.3.1.2.1)
source_term (679)	coreimpur%source_term (sourceimp) (9.3.1.3.287)
value (960)	coreimpur%source_term%value (array3dflt_type) (9.3.1.2.1)
integral (960)	coreimpur%source_term%integral (array3dflt_type) (9.3.1.2.1)

source (960)	coreimpur%source_term%source (vecstring_type) (9.3.1.2.11)
boundary (679)	coreimpur%boundary (boundaryimp) (9.3.1.3.54)
value (727)	coreimpur%boundary%value (array3dflt_type) (9.3.1.2.1)
source (727)	coreimpur%boundary%source (vecstring_type) (9.3.1.2.11)
type (727)	coreimpur%boundary%type (matint_type) (9.3.1.2.8)
rho (727)	coreimpur%boundary%rho (matflt_type) (9.3.1.2.7)
codeparam (727)	coreimpur%boundary%codeparam (codeparam) (9.3.1.3.58)
codename (731)	coreimpur%boundary%codeparam%codename (string) (9.3.1.1.3)
codeversion (731)	coreimpur%boundary%codeparam%codeversion (string) (9.3.1.1.3)
parameters (731)	coreimpur%boundary%codeparam%parameters (string) (9.3.1.1.3)
output_diag (731)	coreimpur%boundary%codeparam%output_diag (string) (9.3.1.1.3)
output_flag (731)	coreimpur%boundary%codeparam%output_flag (integer) (9.3.1.1.2)
transp_coef (679)	coreimpur%transp_coef (coretransimp) (9.3.1.3.87)
diff (760)	coreimpur%transp_coef%diff (array3dflt_type) (9.3.1.2.1)
vconv (760)	coreimpur%transp_coef%vconv (array3dflt_type) (9.3.1.2.1)
source (760)	coreimpur%transp_coef%source (vecstring_type) (9.3.1.2.11)
flux (679)	coreimpur%flux (fluximp) (9.3.1.3.149)
flux_dv (822)	coreimpur%flux%flux_dv (array3dflt_type) (9.3.1.2.1)
flux_interp (822)	coreimpur%flux%flux_interp (array3dflt_type) (9.3.1.2.1)
time_deriv (679)	coreimpur%time_deriv (array3dflt_type) (9.3.1.2.1)
atomic_data (679)	coreimpur%atomic_data (vecstring_type) (9.3.1.2.11)
time (679)	coreimpur%time (float) (9.3.1.1.1)
codeparam (679)	coreimpur%codeparam (codeparam) (9.3.1.3.58)
codename (731)	coreimpur%codeparam%codename (string) (9.3.1.1.3)
codeversion (731)	coreimpur%codeparam%codeversion (string) (9.3.1.1.3)
parameters (731)	coreimpur%codeparam%parameters (string) (9.3.1.1.3)
output_diag (731)	coreimpur%codeparam%output_diag (string) (9.3.1.1.3)
output_flag (731)	coreimpur%codeparam%output_flag (integer) (9.3.1.1.2)

### 9.3.2.1.5 coreneutrals

datainfo (680)	coreneutrals%datainfo (datainfo) (9.3.1.3.92)
dataprovider (765)	coreneutrals%datainfo%dataprovider (string) (9.3.1.1.3)
putdate (765)	coreneutrals%datainfo%putdate (string) (9.3.1.1.3)
source (765)	coreneutrals%datainfo%source (string) (9.3.1.1.3)
comment (765)	coreneutrals%datainfo%comment (string) (9.3.1.1.3)
isref (765)	coreneutrals%datainfo%isref (integer) (9.3.1.1.2)
whatref (765)	coreneutrals%datainfo%whatref (whatref) (9.3.1.3.333)
user (1006)	coreneutrals%datainfo%whatref%user (string) (9.3.1.1.3)
machine (1006)	coreneutrals%datainfo%whatref%machine (string) (9.3.1.1.3)
shot (1006)	coreneutrals%datainfo%whatref%shot (integer) (9.3.1.1.2)
run (1006)	coreneutrals%datainfo%whatref%run (integer) (9.3.1.1.2)
occurrence (1006)	coreneutrals%datainfo%whatref%occurrence (integer) (9.3.1.1.2)
putinfo (765)	coreneutrals%datainfo%putinfo (putinfo) (9.3.1.3.215)
putmethod (888)	coreneutrals%datainfo%putinfo%putmethod (string) (9.3.1.1.3)
putaccess (888)	coreneutrals%datainfo%putinfo%putaccess (string) (9.3.1.1.3)
putlocation (888)	coreneutrals%datainfo%putinfo%putlocation (string) (9.3.1.1.3)
rights (888)	coreneutrals%datainfo%putinfo%rights (string) (9.3.1.1.3)
rho_tor (680)	coreneutrals%rho_tor (vecflt_type) (9.3.1.2.9)
rho_tor_norm (680)	coreneutrals%rho_tor_norm (vecflt_type) (9.3.1.2.9)
composition (680)	coreneutrals%composition (composition_neutrals) (9.3.1.3.75)
atomlist (748)	coreneutrals%composition%atomlist (atomlist) (9.3.1.3.47)
amn (720)	coreneutrals%composition%atomlist%amn (vecflt_type) (9.3.1.2.9)
zn (720)	coreneutrals%composition%atomlist%zn (vecflt_type) (9.3.1.2.9)
neutrallist (748)	coreneutrals%composition%neutrallist (neutrallist) (9.3.1.3.185)
ncomp (858)	coreneutrals%composition%neutrallist%ncomp (vecint_type) (9.3.1.2.10)
tatm (858)	coreneutrals%composition%neutrallist%tatm (matint_type) (9.3.1.2.8)
multatm (858)	coreneutrals%composition%neutrallist%multatm (matint_type) (9.3.1.2.8)
typelist (748)	coreneutrals%composition%typelist (typelist) (9.3.1.3.324)
ntype (997)	coreneutrals%composition%typelist%ntype (vecint_type) (9.3.1.2.10)
type (997)	coreneutrals%composition%typelist%type (matint_type) (9.3.1.2.8)

profiles (680)	coreneutrals%profiles (profiles_neutrals) (9.3.1.3.213)
n0 (886)	coreneutrals%profiles%n0 (corefieldneutral) (9.3.1.3.80)
value (753)	coreneutrals%profiles%n0%value (array3dflt.type) (9.3.1.2.1)
flux (753)	coreneutrals%profiles%n0%flux (array3dflt.type) (9.3.1.2.1)
boundary (753)	coreneutrals%profiles%n0%boundary (boundary_neutrals) (9.3.1.3.52)
value (725)	coreneutrals%profiles%n0%boundary%value (array3dflt.type) (9.3.1.2.1)
type (725)	coreneutrals%profiles%n0%boundary%type (matint.type) (9.3.1.2.8)
rho_tor (725)	coreneutrals%profiles%n0%boundary%rho_tor (matflt.type) (9.3.1.2.7)
t0 (886)	coreneutrals%profiles%t0 (corefieldneutrale) (9.3.1.3.81)
value (754)	coreneutrals%profiles%t0%value (array3dflt.type) (9.3.1.2.1)
flux (754)	coreneutrals%profiles%t0%flux (array3dflt.type) (9.3.1.2.1)
boundary (754)	coreneutrals%profiles%t0%boundary (boundary_neutrals) (9.3.1.3.52)
value (725)	coreneutrals%profiles%t0%boundary%value (array3dflt.type) (9.3.1.2.1)
type (725)	coreneutrals%profiles%t0%boundary%type (matint.type) (9.3.1.2.8)
rho_tor (725)	coreneutrals%profiles%t0%boundary%rho_tor (matflt.type) (9.3.1.2.7)
v0 (886)	coreneutrals%profiles%v0 (corefieldneutralv0) (9.3.1.3.83)
toroidal (756)	coreneutrals%profiles%v0%toroidal (corefieldneutralv) (9.3.1.3.82)
value (755)	coreneutrals%profiles%v0%toroidal%value (array3dflt.type) (9.3.1.2.1)
boundary (755)	coreneutrals%profiles%v0%toroidal%boundary (boundary_neutrals) (9.3.1.3.52)
value (725)	coreneutrals%profiles%v0%toroidal%boundary%value (array3dflt.type) (9.3.1.2.1)
type (725)	coreneutrals%profiles%v0%toroidal%boundary%type (matint.type) (9.3.1.2.8)
rho_tor (725)	coreneutrals%profiles%v0%toroidal%boundary%rho_tor (matflt.type) (9.3.1.2.7)
poloidal (756)	coreneutrals%profiles%v0%poloidal (corefieldneutralv) (9.3.1.3.82)
value (755)	coreneutrals%profiles%v0%poloidal%value (array3dflt.type) (9.3.1.2.1)
boundary (755)	coreneutrals%profiles%v0%poloidal%boundary (boundary_neutrals) (9.3.1.3.52)
value (725)	coreneutrals%profiles%v0%poloidal%boundary%value (array3dflt.type) (9.3.1.2.1)
type (725)	coreneutrals%profiles%v0%poloidal%boundary%type (matint.type) (9.3.1.2.8)
rho_tor (725)	coreneutrals%profiles%v0%poloidal%boundary%rho_tor (matflt.type) (9.3.1.2.7)
radial (756)	coreneutrals%profiles%v0%radial (corefieldneutralv) (9.3.1.3.82)
value (755)	coreneutrals%profiles%v0%radial%value (array3dflt.type) (9.3.1.2.1)
boundary (755)	coreneutrals%profiles%v0%radial%boundary (boundary_neutrals) (9.3.1.3.52)
value (725)	coreneutrals%profiles%v0%radial%boundary%value (array3dflt.type) (9.3.1.2.1)
type (725)	coreneutrals%profiles%v0%radial%boundary%type (matint.type) (9.3.1.2.8)
rho_tor (725)	coreneutrals%profiles%v0%radial%boundary%rho_tor (matflt.type) (9.3.1.2.7)
prad0 (886)	coreneutrals%profiles%prad0 (matflt.type) (9.3.1.2.7)
coefficients (680)	coreneutrals%coefficients (coefficients_neutrals) (9.3.1.3.59)
recycling (732)	coreneutrals%coefficients%recycling (recycling_neutrals) (9.3.1.3.217)
particles (890)	coreneutrals%coefficients%recycling%particles (matflt.type) (9.3.1.2.7)
energy (890)	coreneutrals%coefficients%recycling%energy (matflt.type) (9.3.1.2.7)
sputtering (732)	coreneutrals%coefficients%sputtering (sputtering_neutrals) (9.3.1.3.293)
physical (966)	coreneutrals%coefficients%sputtering%physical (matflt.type) (9.3.1.2.7)
chemical (966)	coreneutrals%coefficients%sputtering%chemical (matflt.type) (9.3.1.2.7)
codeparam (680)	coreneutrals%codeparam (codeparam) (9.3.1.3.58)
codename (731)	coreneutrals%codeparam%codename (string) (9.3.1.1.3)
codeversion (731)	coreneutrals%codeparam%codeversion (string) (9.3.1.1.3)
parameters (731)	coreneutrals%codeparam%parameters (string) (9.3.1.1.3)
output_diag (731)	coreneutrals%codeparam%output_diag (string) (9.3.1.1.3)
output_flag (731)	coreneutrals%codeparam%output_flag (integer) (9.3.1.1.2)
time (680)	coreneutrals%time (float) (9.3.1.1.1)

### 9.3.2.1.6 coreprof

datainfo (681)	coreprof%datainfo (datainfo) (9.3.1.3.92)
dataprovider (765)	coreprof%datainfo%dataprovider (string) (9.3.1.1.3)
putdate (765)	coreprof%datainfo%putdate (string) (9.3.1.1.3)
source (765)	coreprof%datainfo%source (string) (9.3.1.1.3)
comment (765)	coreprof%datainfo%comment (string) (9.3.1.1.3)
isref (765)	coreprof%datainfo%isref (integer) (9.3.1.1.2)
whatref (765)	coreprof%datainfo%whatref (whatref) (9.3.1.3.333)
user (1006)	coreprof%datainfo%whatref%user (string) (9.3.1.1.3)
machine (1006)	coreprof%datainfo%whatref%machine (string) (9.3.1.1.3)



shot (1006)	coreprof%datainfo%whatref%shot (integer) (9.3.1.1.2)
run (1006)	coreprof%datainfo%whatref%run (integer) (9.3.1.1.2)
occurrence (1006)	coreprof%datainfo%whatref%occurrence (integer) (9.3.1.1.2)
putinfo (765)	coreprof%datainfo%putinfo (putinfo) (9.3.1.3.215)
putmethod (888)	coreprof%datainfo%putinfo%putmethod (string) (9.3.1.1.3)
putaccess (888)	coreprof%datainfo%putinfo%putaccess (string) (9.3.1.1.3)
putlocation (888)	coreprof%datainfo%putinfo%putlocation (string) (9.3.1.1.3)
rights (888)	coreprof%datainfo%putinfo%rights (string) (9.3.1.1.3)
rho_tor_norm (681)	coreprof%rho_tor_norm (vecflt.type) (9.3.1.2.9)
rho_tor (681)	coreprof%rho_tor (vecflt.type) (9.3.1.2.9)
drho_dt (681)	coreprof%drho_dt (vecflt.type) (9.3.1.2.9)
toroid_field (681)	coreprof%toroid_field (toroid_field) (9.3.1.3.305)
b0 (978)	coreprof%toroid_field%b0 (float) (9.3.1.1.1)
b0prime (978)	coreprof%toroid_field%b0prime (float) (9.3.1.1.1)
r0 (978)	coreprof%toroid_field%r0 (float) (9.3.1.1.1)
time (978)	coreprof%toroid_field%time (float) (9.3.1.1.1)
composition (681)	coreprof%composition (composition) (9.3.1.3.74)
amn (747)	coreprof%composition%amn (vecflt.type) (9.3.1.2.9)
zn (747)	coreprof%composition%zn (vecflt.type) (9.3.1.2.9)
zion (747)	coreprof%composition%zion (vecflt.type) (9.3.1.2.9)
imp_flag (747)	coreprof%composition%imp_flag (vecint.type) (9.3.1.2.10)
psi (681)	coreprof%psi (psi) (9.3.1.3.214)
value (887)	coreprof%psi%value (vecflt.type) (9.3.1.2.9)
derivative (887)	coreprof%psi%derivative (vecflt.type) (9.3.1.2.9)
source (887)	coreprof%psi%source (string) (9.3.1.1.3)
flag (887)	coreprof%psi%flag (integer) (9.3.1.1.2)
boundary (887)	coreprof%psi%boundary (boundary) (9.3.1.3.51)
value (724)	coreprof%psi%boundary%value (vecflt.type) (9.3.1.2.9)
source (724)	coreprof%psi%boundary%source (string) (9.3.1.1.3)
type (724)	coreprof%psi%boundary%type (integer) (9.3.1.1.2)
rho (724)	coreprof%psi%boundary%rho (float) (9.3.1.1.1)
codeparam (724)	coreprof%psi%boundary%codeparam (codeparam) (9.3.1.3.58)
codename (731)	coreprof%psi%boundary%codeparam%codename (string) (9.3.1.1.3)
codeversion (731)	coreprof%psi%boundary%codeparam%codeversion (string) (9.3.1.1.3)
parameters (731)	coreprof%psi%boundary%codeparam%parameters (string) (9.3.1.1.3)
output_diag (731)	coreprof%psi%boundary%codeparam%output_diag (string) (9.3.1.1.3)
output_flag (731)	coreprof%psi%boundary%codeparam%output_flag (integer) (9.3.1.1.2)
jni (887)	coreprof%psi%jni (jni) (9.3.1.3.159)
value (832)	coreprof%psi%jni%value (vecflt.type) (9.3.1.2.9)
integral (832)	coreprof%psi%jni%integral (vecflt.type) (9.3.1.2.9)
source (832)	coreprof%psi%jni%source (string) (9.3.1.1.3)
sigma_par (887)	coreprof%psi%sigma_par (coreprofile) (9.3.1.3.84)
value (757)	coreprof%psi%sigma_par%value (vecflt.type) (9.3.1.2.9)
source (757)	coreprof%psi%sigma_par%source (string) (9.3.1.1.3)
codeparam (887)	coreprof%psi%codeparam (codeparam) (9.3.1.3.58)
codename (731)	coreprof%psi%codeparam%codename (string) (9.3.1.1.3)
codeversion (731)	coreprof%psi%codeparam%codeversion (string) (9.3.1.1.3)
parameters (731)	coreprof%psi%codeparam%parameters (string) (9.3.1.1.3)
output_diag (731)	coreprof%psi%codeparam%output_diag (string) (9.3.1.1.3)
output_flag (731)	coreprof%psi%codeparam%output_flag (integer) (9.3.1.1.2)
te (681)	coreprof%te (corefield) (9.3.1.3.78)
value (751)	coreprof%te%value (vecflt.type) (9.3.1.2.9)
derivative (751)	coreprof%te%derivative (vecflt.type) (9.3.1.2.9)
source (751)	coreprof%te%source (string) (9.3.1.1.3)
flag (751)	coreprof%te%flag (integer) (9.3.1.1.2)
boundary (751)	coreprof%te%boundary (boundaryel) (9.3.1.3.53)
value (726)	coreprof%te%boundary%value (vecflt.type) (9.3.1.2.9)
source (726)	coreprof%te%boundary%source (string) (9.3.1.1.3)
type (726)	coreprof%te%boundary%type (integer) (9.3.1.1.2)
rho_tor (726)	coreprof%te%boundary%rho_tor (float) (9.3.1.1.1)
source_term (751)	coreprof%te%source_term (sourceel) (9.3.1.3.286)



value (959)	coreprof%te%source_term%value (vecflt.type) (9.3.1.2.9)
integral (959)	coreprof%te%source_term%integral (vecflt.type) (9.3.1.2.9)
source (959)	coreprof%te%source_term%source (string) (9.3.1.1.3)
transp_coef (751)	coreprof%te%transp_coef (coretransel) (9.3.1.3.86)
diff (759)	coreprof%te%transp_coef%diff (vecflt.type) (9.3.1.2.9)
vconv (759)	coreprof%te%transp_coef%vconv (vecflt.type) (9.3.1.2.9)
source (759)	coreprof%te%transp_coef%source (string) (9.3.1.1.3)
flux (751)	coreprof%te%flux (fluxel) (9.3.1.3.148)
flux_dv (821)	coreprof%te%flux%flux_dv (vecflt.type) (9.3.1.2.9)
flux_interp (821)	coreprof%te%flux%flux_interp (vecflt.type) (9.3.1.2.9)
time_deriv (751)	coreprof%te%time_deriv (vecflt.type) (9.3.1.2.9)
codeparam (751)	coreprof%te%codeparam (codeparam) (9.3.1.3.58)
codename (731)	coreprof%te%codeparam%codename (string) (9.3.1.1.3)
codeversion (731)	coreprof%te%codeparam%codeversion (string) (9.3.1.1.3)
parameters (731)	coreprof%te%codeparam%parameters (string) (9.3.1.1.3)
output_diag (731)	coreprof%te%codeparam%output_diag (string) (9.3.1.1.3)
output_flag (731)	coreprof%te%codeparam%output_flag (integer) (9.3.1.1.2)
ti (681)	coreprof%ti (corefieldion) (9.3.1.3.79)
value (752)	coreprof%ti%value (matflt.type) (9.3.1.2.7)
derivative (752)	coreprof%ti%derivative (matflt.type) (9.3.1.2.7)
source (752)	coreprof%ti%source (vecstring.type) (9.3.1.2.11)
flag (752)	coreprof%ti%flag (vecint.type) (9.3.1.2.10)
boundary (752)	coreprof%ti%boundary (boundaryion) (9.3.1.3.55)
value (728)	coreprof%ti%boundary%value (matflt.type) (9.3.1.2.7)
source (728)	coreprof%ti%boundary%source (vecstring.type) (9.3.1.2.11)
type (728)	coreprof%ti%boundary%type (vecint.type) (9.3.1.2.10)
rho_tor (728)	coreprof%ti%boundary%rho_tor (vecflt.type) (9.3.1.2.9)
source_term (752)	coreprof%ti%source_term (sourceion) (9.3.1.3.288)
value (961)	coreprof%ti%source_term%value (matflt.type) (9.3.1.2.7)
integral (961)	coreprof%ti%source_term%integral (matflt.type) (9.3.1.2.7)
source (961)	coreprof%ti%source_term%source (vecstring.type) (9.3.1.2.11)
transp_coef (752)	coreprof%ti%transp_coef (coretransion) (9.3.1.3.88)
diff (761)	coreprof%ti%transp_coef%diff (matflt.type) (9.3.1.2.7)
vconv (761)	coreprof%ti%transp_coef%vconv (matflt.type) (9.3.1.2.7)
source (761)	coreprof%ti%transp_coef%source (vecstring.type) (9.3.1.2.11)
flux (752)	coreprof%ti%flux (fluxion) (9.3.1.3.150)
flux_dv (823)	coreprof%ti%flux%flux_dv (matflt.type) (9.3.1.2.7)
flux_interp (823)	coreprof%ti%flux%flux_interp (matflt.type) (9.3.1.2.7)
time_deriv (752)	coreprof%ti%time_deriv (matflt.type) (9.3.1.2.7)
codeparam (752)	coreprof%ti%codeparam (codeparam) (9.3.1.3.58)
codename (731)	coreprof%ti%codeparam%codename (string) (9.3.1.1.3)
codeversion (731)	coreprof%ti%codeparam%codeversion (string) (9.3.1.1.3)
parameters (731)	coreprof%ti%codeparam%parameters (string) (9.3.1.1.3)
output_diag (731)	coreprof%ti%codeparam%output_diag (string) (9.3.1.1.3)
output_flag (731)	coreprof%ti%codeparam%output_flag (integer) (9.3.1.1.2)
ne (681)	coreprof%ne (corefield) (9.3.1.3.78)
value (751)	coreprof%ne%value (vecflt.type) (9.3.1.2.9)
derivative (751)	coreprof%ne%derivative (vecflt.type) (9.3.1.2.9)
source (751)	coreprof%ne%source (string) (9.3.1.1.3)
flag (751)	coreprof%ne%flag (integer) (9.3.1.1.2)
boundary (751)	coreprof%ne%boundary (boundaryel) (9.3.1.3.53)
value (726)	coreprof%ne%boundary%value (vecflt.type) (9.3.1.2.9)
source (726)	coreprof%ne%boundary%source (string) (9.3.1.1.3)
type (726)	coreprof%ne%boundary%type (integer) (9.3.1.1.2)
rho_tor (726)	coreprof%ne%boundary%rho_tor (float) (9.3.1.1.1)
source_term (751)	coreprof%ne%source_term (sourceel) (9.3.1.3.286)
value (959)	coreprof%ne%source_term%value (vecflt.type) (9.3.1.2.9)
integral (959)	coreprof%ne%source_term%integral (vecflt.type) (9.3.1.2.9)
source (959)	coreprof%ne%source_term%source (string) (9.3.1.1.3)
transp_coef (751)	coreprof%ne%transp_coef (coretransel) (9.3.1.3.86)
diff (759)	coreprof%ne%transp_coef%diff (vecflt.type) (9.3.1.2.9)

vconv (759)  
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 flux (751)  
   flux\_dv (821)  
   flux\_interp (821)  
 time\_deriv (751)  
 codeparam (751)  
   codename (731)  
   codeversion (731)  
   parameters (731)  
   output\_diag (731)  
   output\_flag (731)  
 ni (681)  
   value (752)  
   derivative (752)  
   source (752)  
   flag (752)  
   boundary (752)  
     value (728)  
     source (728)  
     type (728)  
     rho\_tor (728)  
   source\_term (752)  
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     integral (961)  
     source (961)  
   transp\_coef (752)  
     diff (761)  
     vconv (761)  
     source (761)  
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     flux\_interp (823)  
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   codeparam (752)  
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     output\_flag (731)  
 vtor (681)  
   value (752)  
   derivative (752)  
   source (752)  
   flag (752)  
   boundary (752)  
     value (728)  
     source (728)  
     type (728)  
     rho\_tor (728)  
   source\_term (752)  
     value (961)  
     integral (961)  
     source (961)  
   transp\_coef (752)  
     diff (761)  
     vconv (761)  
     source (761)  
   flux (752)  
     flux\_dv (823)  
     flux\_interp (823)  
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   coreprof%ne%transp\_coef%source (string) (9.3.1.1.3)  
   coreprof%ne%flux (fluxel) (9.3.1.3.148)  
   coreprof%ne%flux%flux\_dv (vecflt.type) (9.3.1.2.9)  
   coreprof%ne%flux%flux\_interp (vecflt.type) (9.3.1.2.9)  
   coreprof%ne%time\_deriv (vecflt.type) (9.3.1.2.9)  
   coreprof%ne%codeparam (codeparam) (9.3.1.3.58)  
   coreprof%ne%codeparam%codename (string) (9.3.1.1.3)  
   coreprof%ne%codeparam%codeversion (string) (9.3.1.1.3)  
   coreprof%ne%codeparam%parameters (string) (9.3.1.1.3)  
   coreprof%ne%codeparam%output\_diag (string) (9.3.1.1.3)  
   coreprof%ne%codeparam%output\_flag (integer) (9.3.1.1.2)  
   coreprof%ni (corefieldion) (9.3.1.3.79)  
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   coreprof%ni%derivative (matflt.type) (9.3.1.2.7)  
   coreprof%ni%source (vecstring.type) (9.3.1.2.11)  
   coreprof%ni%flag (vecint.type) (9.3.1.2.10)  
   coreprof%ni%boundary (boundaryion) (9.3.1.3.55)  
   coreprof%ni%boundary%value (matflt.type) (9.3.1.2.7)  
   coreprof%ni%boundary%source (vecstring.type) (9.3.1.2.11)  
   coreprof%ni%boundary%type (vecint.type) (9.3.1.2.10)  
   coreprof%ni%boundary%rho\_tor (vecflt.type) (9.3.1.2.9)  
   coreprof%ni%source\_term (sourceion) (9.3.1.3.288)  
   coreprof%ni%source\_term%value (matflt.type) (9.3.1.2.7)  
   coreprof%ni%source\_term%integral (matflt.type) (9.3.1.2.7)  
   coreprof%ni%source\_term%source (vecstring.type) (9.3.1.2.11)  
   coreprof%ni%transp\_coef (coretransion) (9.3.1.3.88)  
   coreprof%ni%transp\_coef%diff (matflt.type) (9.3.1.2.7)  
   coreprof%ni%transp\_coef%vconv (matflt.type) (9.3.1.2.7)  
   coreprof%ni%transp\_coef%source (vecstring.type) (9.3.1.2.11)  
   coreprof%ni%flux (fluxion) (9.3.1.3.150)  
   coreprof%ni%flux%flux\_dv (matflt.type) (9.3.1.2.7)  
   coreprof%ni%flux%flux\_interp (matflt.type) (9.3.1.2.7)  
   coreprof%ni%time\_deriv (matflt.type) (9.3.1.2.7)  
   coreprof%ni%codeparam (codeparam) (9.3.1.3.58)  
   coreprof%ni%codeparam%codename (string) (9.3.1.1.3)  
   coreprof%ni%codeparam%codeversion (string) (9.3.1.1.3)  
   coreprof%ni%codeparam%parameters (string) (9.3.1.1.3)  
   coreprof%ni%codeparam%output\_diag (string) (9.3.1.1.3)  
   coreprof%ni%codeparam%output\_flag (integer) (9.3.1.1.2)  
   coreprof%vtor (corefieldion) (9.3.1.3.79)  
   coreprof%vtor%value (matflt.type) (9.3.1.2.7)  
   coreprof%vtor%derivative (matflt.type) (9.3.1.2.7)  
   coreprof%vtor%source (vecstring.type) (9.3.1.2.11)  
   coreprof%vtor%flag (vecint.type) (9.3.1.2.10)  
   coreprof%vtor%boundary (boundaryion) (9.3.1.3.55)  
   coreprof%vtor%boundary%value (matflt.type) (9.3.1.2.7)  
   coreprof%vtor%boundary%source (vecstring.type) (9.3.1.2.11)  
   coreprof%vtor%boundary%type (vecint.type) (9.3.1.2.10)  
   coreprof%vtor%boundary%rho\_tor (vecflt.type) (9.3.1.2.9)  
   coreprof%vtor%source\_term (sourceion) (9.3.1.3.288)  
   coreprof%vtor%source\_term%value (matflt.type) (9.3.1.2.7)  
   coreprof%vtor%source\_term%integral (matflt.type) (9.3.1.2.7)  
   coreprof%vtor%source\_term%source (vecstring.type) (9.3.1.2.11)  
   coreprof%vtor%transp\_coef (coretransion) (9.3.1.3.88)  
   coreprof%vtor%transp\_coef%diff (matflt.type) (9.3.1.2.7)  
   coreprof%vtor%transp\_coef%vconv (matflt.type) (9.3.1.2.7)  
   coreprof%vtor%transp\_coef%source (vecstring.type) (9.3.1.2.11)  
   coreprof%vtor%flux (fluxion) (9.3.1.3.150)  
   coreprof%vtor%flux%flux\_dv (matflt.type) (9.3.1.2.7)  
   coreprof%vtor%flux%flux\_interp (matflt.type) (9.3.1.2.7)

time_deriv (752)	coreprof%vtor%time_deriv (matflt.type) (9.3.1.2.7)
codeparam (752)	coreprof%vtor%codeparam (codeparam) (9.3.1.3.58)
codename (731)	coreprof%vtor%codeparam%codename (string) (9.3.1.1.3)
codeversion (731)	coreprof%vtor%codeparam%codeversion (string) (9.3.1.1.3)
parameters (731)	coreprof%vtor%codeparam%parameters (string) (9.3.1.1.3)
output_diag (731)	coreprof%vtor%codeparam%output_diag (string) (9.3.1.1.3)
output_flag (731)	coreprof%vtor%codeparam%output_flag (integer) (9.3.1.1.2)
profiles1d (681)	coreprof%profiles1d (profiles1d) (9.3.1.3.210)
pe (883)	coreprof%profiles1d%pe (coreprofile) (9.3.1.3.84)
value (757)	coreprof%profiles1d%pe%value (vecflt.type) (9.3.1.2.9)
source (757)	coreprof%profiles1d%pe%source (string) (9.3.1.1.3)
pi (883)	coreprof%profiles1d%pi (coreprofion) (9.3.1.3.85)
value (758)	coreprof%profiles1d%pi%value (matflt.type) (9.3.1.2.7)
source (758)	coreprof%profiles1d%pi%source (vecstring.type) (9.3.1.2.11)
pr.th (883)	coreprof%profiles1d%pr.th (coreprofile) (9.3.1.3.84)
value (757)	coreprof%profiles1d%pr.th%value (vecflt.type) (9.3.1.2.9)
source (757)	coreprof%profiles1d%pr.th%source (string) (9.3.1.1.3)
pr.perp (883)	coreprof%profiles1d%pr.perp (coreprofile) (9.3.1.3.84)
value (757)	coreprof%profiles1d%pr.perp%value (vecflt.type) (9.3.1.2.9)
source (757)	coreprof%profiles1d%pr.perp%source (string) (9.3.1.1.3)
pr.parallel (883)	coreprof%profiles1d%pr.parallel (coreprofile) (9.3.1.3.84)
value (757)	coreprof%profiles1d%pr.parallel%value (vecflt.type) (9.3.1.2.9)
source (757)	coreprof%profiles1d%pr.parallel%source (string) (9.3.1.1.3)
jtot (883)	coreprof%profiles1d%jtot (coreprofile) (9.3.1.3.84)
value (757)	coreprof%profiles1d%jtot%value (vecflt.type) (9.3.1.2.9)
source (757)	coreprof%profiles1d%jtot%source (string) (9.3.1.1.3)
jni (883)	coreprof%profiles1d%jni (coreprofile) (9.3.1.3.84)
value (757)	coreprof%profiles1d%jni%value (vecflt.type) (9.3.1.2.9)
source (757)	coreprof%profiles1d%jni%source (string) (9.3.1.1.3)
joh (883)	coreprof%profiles1d%joh (coreprofile) (9.3.1.3.84)
value (757)	coreprof%profiles1d%joh%value (vecflt.type) (9.3.1.2.9)
source (757)	coreprof%profiles1d%joh%source (string) (9.3.1.1.3)
vloop (883)	coreprof%profiles1d%vloop (coreprofile) (9.3.1.3.84)
value (757)	coreprof%profiles1d%vloop%value (vecflt.type) (9.3.1.2.9)
source (757)	coreprof%profiles1d%vloop%source (string) (9.3.1.1.3)
sigmapar (883)	coreprof%profiles1d%sigmapar (coreprofile) (9.3.1.3.84)
value (757)	coreprof%profiles1d%sigmapar%value (vecflt.type) (9.3.1.2.9)
source (757)	coreprof%profiles1d%sigmapar%source (string) (9.3.1.1.3)
qoh (883)	coreprof%profiles1d%qoh (coreprofile) (9.3.1.3.84)
value (757)	coreprof%profiles1d%qoh%value (vecflt.type) (9.3.1.2.9)
source (757)	coreprof%profiles1d%qoh%source (string) (9.3.1.1.3)
eparallel (883)	coreprof%profiles1d%eparallel (coreprofile) (9.3.1.3.84)
value (757)	coreprof%profiles1d%eparallel%value (vecflt.type) (9.3.1.2.9)
source (757)	coreprof%profiles1d%eparallel%source (string) (9.3.1.1.3)
e.b (883)	coreprof%profiles1d%e.b (coreprofile) (9.3.1.3.84)
value (757)	coreprof%profiles1d%e.b%value (vecflt.type) (9.3.1.2.9)
source (757)	coreprof%profiles1d%e.b%source (string) (9.3.1.1.3)
q (883)	coreprof%profiles1d%q (coreprofile) (9.3.1.3.84)
value (757)	coreprof%profiles1d%q%value (vecflt.type) (9.3.1.2.9)
source (757)	coreprof%profiles1d%q%source (string) (9.3.1.1.3)
shear (883)	coreprof%profiles1d%shear (coreprofile) (9.3.1.3.84)
value (757)	coreprof%profiles1d%shear%value (vecflt.type) (9.3.1.2.9)
source (757)	coreprof%profiles1d%shear%source (string) (9.3.1.1.3)
ns (883)	coreprof%profiles1d%ns (coreprofion) (9.3.1.3.85)
value (758)	coreprof%profiles1d%ns%value (matflt.type) (9.3.1.2.7)
source (758)	coreprof%profiles1d%ns%source (vecstring.type) (9.3.1.2.11)
mtor (883)	coreprof%profiles1d%mtor (coreprofion) (9.3.1.3.85)
value (758)	coreprof%profiles1d%mtor%value (matflt.type) (9.3.1.2.7)
source (758)	coreprof%profiles1d%mtor%source (vecstring.type) (9.3.1.2.11)
wtor (883)	coreprof%profiles1d%wtor (coreprofion) (9.3.1.3.85)
value (758)	coreprof%profiles1d%wtor%value (matflt.type) (9.3.1.2.7)

source (758)	coreprof%profiles1d%wtor%source (vecstring_type) (9.3.1.2.11)
zeff (883)	coreprof%profiles1d%zeff (coreprofile) (9.3.1.3.84)
value (757)	coreprof%profiles1d%zeff%value (vecflt_type) (9.3.1.2.9)
source (757)	coreprof%profiles1d%zeff%source (string) (9.3.1.1.3)
bpol (883)	coreprof%profiles1d%bpol (coreprofile) (9.3.1.3.84)
value (757)	coreprof%profiles1d%bpol%value (vecflt_type) (9.3.1.2.9)
source (757)	coreprof%profiles1d%bpol%source (string) (9.3.1.1.3)
dpsidt (883)	coreprof%profiles1d%dpsidt (coreprofile) (9.3.1.3.84)
value (757)	coreprof%profiles1d%dpsidt%value (vecflt_type) (9.3.1.2.9)
source (757)	coreprof%profiles1d%dpsidt%source (string) (9.3.1.1.3)
dpsidt_phi (883)	coreprof%profiles1d%dpsidt_phi (coreprofile) (9.3.1.3.84)
value (757)	coreprof%profiles1d%dpsidt_phi%value (vecflt_type) (9.3.1.2.9)
source (757)	coreprof%profiles1d%dpsidt_phi%source (string) (9.3.1.1.3)
dvprimedt (883)	coreprof%profiles1d%dvprimedt (coreprofile) (9.3.1.3.84)
value (757)	coreprof%profiles1d%dvprimedt%value (vecflt_type) (9.3.1.2.9)
source (757)	coreprof%profiles1d%dvprimedt%source (string) (9.3.1.1.3)
globalparam (681)	coreprof%globalparam (globalparam) (9.3.1.3.154)
current_tot (827)	coreprof%globalparam%current_tot (float) (9.3.1.1.1)
current_bnd (827)	coreprof%globalparam%current_bnd (float) (9.3.1.1.1)
current_ni (827)	coreprof%globalparam%current_ni (float) (9.3.1.1.1)
vloop (827)	coreprof%globalparam%vloop (float) (9.3.1.1.1)
li (827)	coreprof%globalparam%li (float) (9.3.1.1.1)
beta_tor (827)	coreprof%globalparam%beta_tor (float) (9.3.1.1.1)
beta_normal (827)	coreprof%globalparam%beta_normal (float) (9.3.1.1.1)
beta_pol (827)	coreprof%globalparam%beta_pol (float) (9.3.1.1.1)
w_dia (827)	coreprof%globalparam%w_dia (float) (9.3.1.1.1)
codeparam (681)	coreprof%codeparam (codeparam) (9.3.1.3.58)
codename (731)	coreprof%codeparam%codename (string) (9.3.1.1.3)
codeversion (731)	coreprof%codeparam%codeversion (string) (9.3.1.1.3)
parameters (731)	coreprof%codeparam%parameters (string) (9.3.1.1.3)
output_diag (731)	coreprof%codeparam%output_diag (string) (9.3.1.1.3)
output_flag (731)	coreprof%codeparam%output_flag (integer) (9.3.1.1.2)
time (681)	coreprof%time (float) (9.3.1.1.1)

### 9.3.2.1.7 coresource

datainfo (682)	coresource%datainfo (datainfo) (9.3.1.3.92)
dataprovider (765)	coresource%datainfo%dataprovider (string) (9.3.1.1.3)
putdate (765)	coresource%datainfo%putdate (string) (9.3.1.1.3)
source (765)	coresource%datainfo%source (string) (9.3.1.1.3)
comment (765)	coresource%datainfo%comment (string) (9.3.1.1.3)
isref (765)	coresource%datainfo%isref (integer) (9.3.1.1.2)
whatref (765)	coresource%datainfo%whatref (whatref) (9.3.1.3.333)
user (1006)	coresource%datainfo%whatref%user (string) (9.3.1.1.3)
machine (1006)	coresource%datainfo%whatref%machine (string) (9.3.1.1.3)
shot (1006)	coresource%datainfo%whatref%shot (integer) (9.3.1.1.2)
run (1006)	coresource%datainfo%whatref%run (integer) (9.3.1.1.2)
occurrence (1006)	coresource%datainfo%whatref%occurrence (integer) (9.3.1.1.2)
putinfo (765)	coresource%datainfo%putinfo (putinfo) (9.3.1.3.215)
putmethod (888)	coresource%datainfo%putinfo%putmethod (string) (9.3.1.1.3)
putaccess (888)	coresource%datainfo%putinfo%putaccess (string) (9.3.1.1.3)
putlocation (888)	coresource%datainfo%putinfo%putlocation (string) (9.3.1.1.3)
rights (888)	coresource%datainfo%putinfo%rights (string) (9.3.1.1.3)
rho_tor (682)	coresource%rho_tor (vecflt_type) (9.3.1.2.9)
rho_tor_norm (682)	coresource%rho_tor_norm (vecflt_type) (9.3.1.2.9)
composition (682)	coresource%composition (composition) (9.3.1.3.74)
amn (747)	coresource%composition%amn (vecflt_type) (9.3.1.2.9)
zn (747)	coresource%composition%zn (vecflt_type) (9.3.1.2.9)
zion (747)	coresource%composition%zion (vecflt_type) (9.3.1.2.9)
imp_flag (747)	coresource%composition%imp_flag (vecint_type) (9.3.1.2.10)
toroid_field (682)	coresource%toroid_field (b0r0) (9.3.1.3.48)

r0 (721)	coresource%toroid_field%r0 (float) (9.3.1.1.1)
b0 (721)	coresource%toroid_field%b0 (float) (9.3.1.1.1)
j (682)	coresource%j (vecflt.type) (9.3.1.2.9)
sigma (682)	coresource%sigma (vecflt.type) (9.3.1.2.9)
si (682)	coresource%si (source_ion) (9.3.1.3.284)
exp (957)	coresource%si%exp (matflt.type) (9.3.1.2.7)
imp (957)	coresource%si%imp (matflt.type) (9.3.1.2.7)
se (682)	coresource%se (source_el) (9.3.1.3.281)
exp (954)	coresource%se%exp (vecflt.type) (9.3.1.2.9)
imp (954)	coresource%se%imp (vecflt.type) (9.3.1.2.9)
sz (682)	coresource%sz (source_imp) (9.3.1.3.283)
exp (956)	coresource%sz%exp (array3dflt.type) (9.3.1.2.1)
imp (956)	coresource%sz%imp (array3dflt.type) (9.3.1.2.1)
qi (682)	coresource%qi (source_ion) (9.3.1.3.284)
exp (957)	coresource%qi%exp (matflt.type) (9.3.1.2.7)
imp (957)	coresource%qi%imp (matflt.type) (9.3.1.2.7)
qe (682)	coresource%qe (source_el) (9.3.1.3.281)
exp (954)	coresource%qe%exp (vecflt.type) (9.3.1.2.9)
imp (954)	coresource%qe%imp (vecflt.type) (9.3.1.2.9)
qz (682)	coresource%qz (source_imp) (9.3.1.3.283)
exp (956)	coresource%qz%exp (array3dflt.type) (9.3.1.2.1)
imp (956)	coresource%qz%imp (array3dflt.type) (9.3.1.2.1)
ui (682)	coresource%ui (source_ion) (9.3.1.3.284)
exp (957)	coresource%ui%exp (matflt.type) (9.3.1.2.7)
imp (957)	coresource%ui%imp (matflt.type) (9.3.1.2.7)
codeparam (682)	coresource%codeparam (codeparam) (9.3.1.3.58)
codename (731)	coresource%codeparam%codename (string) (9.3.1.1.3)
codeversion (731)	coresource%codeparam%codeversion (string) (9.3.1.1.3)
parameters (731)	coresource%codeparam%parameters (string) (9.3.1.1.3)
output_diag (731)	coresource%codeparam%output_diag (string) (9.3.1.1.3)
output_flag (731)	coresource%codeparam%output_flag (integer) (9.3.1.1.2)
time (682)	coresource%time (float) (9.3.1.1.1)

### 9.3.2.1.8 coretransp

datainfo (683)	coretransp%datainfo (datainfo) (9.3.1.3.92)
dataprovider (765)	coretransp%datainfo%dataprovider (string) (9.3.1.1.3)
putdate (765)	coretransp%datainfo%putdate (string) (9.3.1.1.3)
source (765)	coretransp%datainfo%source (string) (9.3.1.1.3)
comment (765)	coretransp%datainfo%comment (string) (9.3.1.1.3)
isref (765)	coretransp%datainfo%isref (integer) (9.3.1.1.2)
whatref (765)	coretransp%datainfo%whatref (whatref) (9.3.1.3.333)
user (1006)	coretransp%datainfo%whatref%user (string) (9.3.1.1.3)
machine (1006)	coretransp%datainfo%whatref%machine (string) (9.3.1.1.3)
shot (1006)	coretransp%datainfo%whatref%shot (integer) (9.3.1.1.2)
run (1006)	coretransp%datainfo%whatref%run (integer) (9.3.1.1.2)
occurrence (1006)	coretransp%datainfo%whatref%occurrence (integer) (9.3.1.1.2)
putinfo (765)	coretransp%datainfo%putinfo (putinfo) (9.3.1.3.215)
putmethod (888)	coretransp%datainfo%putinfo%putmethod (string) (9.3.1.1.3)
putaccess (888)	coretransp%datainfo%putinfo%putaccess (string) (9.3.1.1.3)
putlocation (888)	coretransp%datainfo%putinfo%putlocation (string) (9.3.1.1.3)
rights (888)	coretransp%datainfo%putinfo%rights (string) (9.3.1.1.3)
composition (683)	coretransp%composition (composition) (9.3.1.3.74)
amn (747)	coretransp%composition%amn (vecflt.type) (9.3.1.2.9)
zn (747)	coretransp%composition%zn (vecflt.type) (9.3.1.2.9)
zion (747)	coretransp%composition%zion (vecflt.type) (9.3.1.2.9)
imp_flag (747)	coretransp%composition%imp_flag (vecint.type) (9.3.1.2.10)
rho_tor_norm (683)	coretransp%rho_tor_norm (vecflt.type) (9.3.1.2.9)
rho_tor (683)	coretransp%rho_tor (vecflt.type) (9.3.1.2.9)
sigma (683)	coretransp%sigma (vecflt.type) (9.3.1.2.9)
ni_transp (683)	coretransp%ni_transp (ni_transp) (9.3.1.3.186)

diff_eff (859)	coretransp%ni.transp%diff_eff (array3dflt.type) (9.3.1.2.1)
vconv_eff (859)	coretransp%ni.transp%vconv_eff (array3dflt.type) (9.3.1.2.1)
flux (859)	coretransp%ni.transp%flux (matflt.type) (9.3.1.2.7)
off_diagonal (859)	coretransp%ni.transp%off_diagonal (offdiagion) (9.3.1.3.189)
d_ni (862)	coretransp%ni.transp%off_diagonal%d_ni (array3dflt.type) (9.3.1.2.1)
d_ti (862)	coretransp%ni.transp%off_diagonal%d_ti (array3dflt.type) (9.3.1.2.1)
d_ne (862)	coretransp%ni.transp%off_diagonal%d_ne (matflt.type) (9.3.1.2.7)
d_te (862)	coretransp%ni.transp%off_diagonal%d_te (matflt.type) (9.3.1.2.7)
d_epar (862)	coretransp%ni.transp%off_diagonal%d_epar (matflt.type) (9.3.1.2.7)
d_mtor (862)	coretransp%ni.transp%off_diagonal%d_mtor (matflt.type) (9.3.1.2.7)
flag (859)	coretransp%ni.transp%flag (integer) (9.3.1.1.2)
ne_transp (683)	coretransp%ne.transp (ne.transp) (9.3.1.3.184)
diff_eff (857)	coretransp%ne.transp%diff_eff (matflt.type) (9.3.1.2.7)
vconv_eff (857)	coretransp%ne.transp%vconv_eff (matflt.type) (9.3.1.2.7)
flux (857)	coretransp%ne.transp%flux (vecflt.type) (9.3.1.2.9)
off_diagonal (857)	coretransp%ne.transp%off_diagonal (offdiagel) (9.3.1.3.188)
d_ni (861)	coretransp%ne.transp%off_diagonal%d_ni (matflt.type) (9.3.1.2.7)
d_ti (861)	coretransp%ne.transp%off_diagonal%d_ti (matflt.type) (9.3.1.2.7)
d_ne (861)	coretransp%ne.transp%off_diagonal%d_ne (vecflt.type) (9.3.1.2.9)
d_te (861)	coretransp%ne.transp%off_diagonal%d_te (vecflt.type) (9.3.1.2.9)
d_epar (861)	coretransp%ne.transp%off_diagonal%d_epar (vecflt.type) (9.3.1.2.9)
d_mtor (861)	coretransp%ne.transp%off_diagonal%d_mtor (vecflt.type) (9.3.1.2.9)
flag (857)	coretransp%ne.transp%flag (integer) (9.3.1.1.2)
nz_transp (683)	coretransp%nz.transp (transcoefimp) (9.3.1.3.307)
diff_eff (980)	coretransp%nz.transp%diff_eff (array3dflt.type) (9.3.1.2.1)
vconv_eff (980)	coretransp%nz.transp%vconv_eff (array3dflt.type) (9.3.1.2.1)
exchange (980)	coretransp%nz.transp%exchange (array3dflt.type) (9.3.1.2.1)
flux (980)	coretransp%nz.transp%flux (array3dflt.type) (9.3.1.2.1)
flag (980)	coretransp%nz.transp%flag (integer) (9.3.1.1.2)
ti_transp (683)	coretransp%ti.transp (transcoefion) (9.3.1.3.308)
diff_eff (981)	coretransp%ti.transp%diff_eff (matflt.type) (9.3.1.2.7)
vconv_eff (981)	coretransp%ti.transp%vconv_eff (matflt.type) (9.3.1.2.7)
exchange (981)	coretransp%ti.transp%exchange (matflt.type) (9.3.1.2.7)
qgi (981)	coretransp%ti.transp%qgi (matflt.type) (9.3.1.2.7)
flux (981)	coretransp%ti.transp%flux (matflt.type) (9.3.1.2.7)
off_diagonal (981)	coretransp%ti.transp%off_diagonal (offdiagion) (9.3.1.3.189)
d_ni (862)	coretransp%ti.transp%off_diagonal%d_ni (array3dflt.type) (9.3.1.2.1)
d_ti (862)	coretransp%ti.transp%off_diagonal%d_ti (array3dflt.type) (9.3.1.2.1)
d_ne (862)	coretransp%ti.transp%off_diagonal%d_ne (matflt.type) (9.3.1.2.7)
d_te (862)	coretransp%ti.transp%off_diagonal%d_te (matflt.type) (9.3.1.2.7)
d_epar (862)	coretransp%ti.transp%off_diagonal%d_epar (matflt.type) (9.3.1.2.7)
d_mtor (862)	coretransp%ti.transp%off_diagonal%d_mtor (matflt.type) (9.3.1.2.7)
flag (981)	coretransp%ti.transp%flag (integer) (9.3.1.1.2)
te_transp (683)	coretransp%te.transp (transcoefel) (9.3.1.3.306)
diff_eff (979)	coretransp%te.transp%diff_eff (vecflt.type) (9.3.1.2.9)
vconv_eff (979)	coretransp%te.transp%vconv_eff (vecflt.type) (9.3.1.2.9)
flux (979)	coretransp%te.transp%flux (vecflt.type) (9.3.1.2.9)
off_diagonal (979)	coretransp%te.transp%off_diagonal (offdiagel) (9.3.1.3.188)
d_ni (861)	coretransp%te.transp%off_diagonal%d_ni (matflt.type) (9.3.1.2.7)
d_ti (861)	coretransp%te.transp%off_diagonal%d_ti (matflt.type) (9.3.1.2.7)
d_ne (861)	coretransp%te.transp%off_diagonal%d_ne (vecflt.type) (9.3.1.2.9)
d_te (861)	coretransp%te.transp%off_diagonal%d_te (vecflt.type) (9.3.1.2.9)
d_epar (861)	coretransp%te.transp%off_diagonal%d_epar (vecflt.type) (9.3.1.2.9)
d_mtor (861)	coretransp%te.transp%off_diagonal%d_mtor (vecflt.type) (9.3.1.2.9)
flag (979)	coretransp%te.transp%flag (integer) (9.3.1.1.2)
tz_transp (683)	coretransp%tz.transp (transcoefimp) (9.3.1.3.307)
diff_eff (980)	coretransp%tz.transp%diff_eff (array3dflt.type) (9.3.1.2.1)
vconv_eff (980)	coretransp%tz.transp%vconv_eff (array3dflt.type) (9.3.1.2.1)
exchange (980)	coretransp%tz.transp%exchange (array3dflt.type) (9.3.1.2.1)
flux (980)	coretransp%tz.transp%flux (array3dflt.type) (9.3.1.2.1)
flag (980)	coretransp%tz.transp%flag (integer) (9.3.1.1.2)



vtor_transp (683)	coretransp%vtor_transp (transcoefvtor) (9.3.1.3.309)
diff_eff (982)	coretransp%vtor_transp%diff_eff (matflt.type) (9.3.1.2.7)
vconv_eff (982)	coretransp%vtor_transp%vconv_eff (matflt.type) (9.3.1.2.7)
flux (982)	coretransp%vtor_transp%flux (matflt.type) (9.3.1.2.7)
off_diagonal (982)	coretransp%vtor_transp%off_diagonal (offdiagion) (9.3.1.3.189)
d_ni (862)	coretransp%vtor_transp%off_diagonal%d_ni (array3dflt.type) (9.3.1.2.1)
d_ti (862)	coretransp%vtor_transp%off_diagonal%d_ti (array3dflt.type) (9.3.1.2.1)
d_ne (862)	coretransp%vtor_transp%off_diagonal%d_ne (matflt.type) (9.3.1.2.7)
d_te (862)	coretransp%vtor_transp%off_diagonal%d_te (matflt.type) (9.3.1.2.7)
d_epar (862)	coretransp%vtor_transp%off_diagonal%d_epar (matflt.type) (9.3.1.2.7)
d_mtor (862)	coretransp%vtor_transp%off_diagonal%d_mtor (matflt.type) (9.3.1.2.7)
flag (982)	coretransp%vtor_transp%flag (integer) (9.3.1.1.2)
codeparam (683)	coretransp%codeparam (codeparam) (9.3.1.3.58)
codename (731)	coretransp%codeparam%codename (string) (9.3.1.1.3)
codeversion (731)	coretransp%codeparam%codeversion (string) (9.3.1.1.3)
parameters (731)	coretransp%codeparam%parameters (string) (9.3.1.1.3)
output_diag (731)	coretransp%codeparam%output_diag (string) (9.3.1.1.3)
output_flag (731)	coretransp%codeparam%output_flag (integer) (9.3.1.1.2)
time (683)	coretransp%time (float) (9.3.1.1.1)

### 9.3.2.1.9 cxdiag

datainfo (684)	cxdiag%datainfo (datainfo) (9.3.1.3.92)
dataprovider (765)	cxdiag%datainfo%dataprovider (string) (9.3.1.1.3)
putdate (765)	cxdiag%datainfo%putdate (string) (9.3.1.1.3)
source (765)	cxdiag%datainfo%source (string) (9.3.1.1.3)
comment (765)	cxdiag%datainfo%comment (string) (9.3.1.1.3)
isref (765)	cxdiag%datainfo%isref (integer) (9.3.1.1.2)
whatref (765)	cxdiag%datainfo%whatref (whatref) (9.3.1.3.333)
user (1006)	cxdiag%datainfo%whatref%user (string) (9.3.1.1.3)
machine (1006)	cxdiag%datainfo%whatref%machine (string) (9.3.1.1.3)
shot (1006)	cxdiag%datainfo%whatref%shot (integer) (9.3.1.1.2)
run (1006)	cxdiag%datainfo%whatref%run (integer) (9.3.1.1.2)
occurrence (1006)	cxdiag%datainfo%whatref%occurrence (integer) (9.3.1.1.2)
putinfo (765)	cxdiag%datainfo%putinfo (putinfo) (9.3.1.3.215)
putmethod (888)	cxdiag%datainfo%putinfo%putmethod (string) (9.3.1.1.3)
putaccess (888)	cxdiag%datainfo%putinfo%putaccess (string) (9.3.1.1.3)
putlocation (888)	cxdiag%datainfo%putinfo%putlocation (string) (9.3.1.1.3)
rights (888)	cxdiag%datainfo%putinfo%rights (string) (9.3.1.1.3)
setup (684)	cxdiag%setup (cxsetup) (9.3.1.3.91)
position (764)	cxdiag%setup%position (rzphi1Dexp) (9.3.1.3.248)
r (921)	cxdiag%setup%position%r (exp1D) (9.3.1.3.143)
value (816)	cxdiag%setup%position%r%value (vecflt.type) (9.3.1.2.9)
abserror (816)	cxdiag%setup%position%r%abserror (vecflt.type) (9.3.1.2.9)
releror (816)	cxdiag%setup%position%r%releror (vecflt.type) (9.3.1.2.9)
z (921)	cxdiag%setup%position%z (exp1D) (9.3.1.3.143)
value (816)	cxdiag%setup%position%z%value (vecflt.type) (9.3.1.2.9)
abserror (816)	cxdiag%setup%position%z%abserror (vecflt.type) (9.3.1.2.9)
releror (816)	cxdiag%setup%position%z%releror (vecflt.type) (9.3.1.2.9)
phi (921)	cxdiag%setup%position%phi (exp1D) (9.3.1.3.143)
value (816)	cxdiag%setup%position%phi%value (vecflt.type) (9.3.1.2.9)
abserror (816)	cxdiag%setup%position%phi%abserror (vecflt.type) (9.3.1.2.9)
releror (816)	cxdiag%setup%position%phi%releror (vecflt.type) (9.3.1.2.9)
measure (684)	cxdiag%measure (cxmeasure) (9.3.1.3.90)
ti (763)	cxdiag%measure%ti (exp1D) (9.3.1.3.143)
value (816)	cxdiag%measure%ti%value (vecflt.type) (9.3.1.2.9)
abserror (816)	cxdiag%measure%ti%abserror (vecflt.type) (9.3.1.2.9)
releror (816)	cxdiag%measure%ti%releror (vecflt.type) (9.3.1.2.9)
vtor (763)	cxdiag%measure%vtor (exp1D) (9.3.1.3.143)
value (816)	cxdiag%measure%vtor%value (vecflt.type) (9.3.1.2.9)
abserror (816)	cxdiag%measure%vtor%abserror (vecflt.type) (9.3.1.2.9)

releror (816)	cxdiag%measure%v%tor%releror (vecflt.type) (9.3.1.2.9)
vpol (763)	cxdiag%measure%v%pol (exp1D) (9.3.1.3.143)
value (816)	cxdiag%measure%v%pol%value (vecflt.type) (9.3.1.2.9)
abserror (816)	cxdiag%measure%v%pol%abserror (vecflt.type) (9.3.1.2.9)
releror (816)	cxdiag%measure%v%pol%releror (vecflt.type) (9.3.1.2.9)
time (684)	cxdiag%time (float) (9.3.1.1.1)

### 9.3.2.1.10 distribution

datainfo (685)	distribution%datainfo (datainfo) (9.3.1.3.92)
dataprovider (765)	distribution%datainfo%dataprovider (string) (9.3.1.1.3)
putdate (765)	distribution%datainfo%putdate (string) (9.3.1.1.3)
source (765)	distribution%datainfo%source (string) (9.3.1.1.3)
comment (765)	distribution%datainfo%comment (string) (9.3.1.1.3)
isref (765)	distribution%datainfo%isref (integer) (9.3.1.1.2)
whatref (765)	distribution%datainfo%whatref (whatref) (9.3.1.3.333)
user (1006)	distribution%datainfo%whatref%user (string) (9.3.1.1.3)
machine (1006)	distribution%datainfo%whatref%machine (string) (9.3.1.1.3)
shot (1006)	distribution%datainfo%whatref%shot (integer) (9.3.1.1.2)
run (1006)	distribution%datainfo%whatref%run (integer) (9.3.1.1.2)
occurrence (1006)	distribution%datainfo%whatref%occurrence (integer) (9.3.1.1.2)
putinfo (765)	distribution%datainfo%putinfo (putinfo) (9.3.1.3.215)
putmethod (888)	distribution%datainfo%putinfo%putmethod (string) (9.3.1.1.3)
putaccess (888)	distribution%datainfo%putinfo%putaccess (string) (9.3.1.1.3)
putlocation (888)	distribution%datainfo%putinfo%putlocation (string) (9.3.1.1.3)
rights (888)	distribution%datainfo%putinfo%rights (string) (9.3.1.1.3)
composition (685)	distribution%composition (composition) (9.3.1.3.74)
amn (747)	distribution%composition%amn (vecflt.type) (9.3.1.2.9)
zn (747)	distribution%composition%zn (vecflt.type) (9.3.1.2.9)
zion (747)	distribution%composition%zion (vecflt.type) (9.3.1.2.9)
imp_flag (747)	distribution%composition%imp_flag (vecint.type) (9.3.1.2.10)
distri_vec (685)	distribution%distri_vec (distri_vec) (9.3.1.3.119)
calc_spec (792)	distribution%distri_vec%calc_spec (integer) (9.3.1.1.2)
nucl_reac (792)	distribution%distri_vec%nucl_reac (dist_nucl_reac) (9.3.1.3.104)
point_reac (777)	distribution%distri_vec%nucl_reac%point_reac (vecint.type) (9.3.1.2.10)
id_reac (777)	distribution%distri_vec%nucl_reac%id_reac (vecint.type) (9.3.1.2.10)
global_param (792)	distribution%distri_vec%global_param (dist_glob) (9.3.1.3.99)
enrg (772)	distribution%distri_vec%global_param%enrg (float) (9.3.1.1.1)
enrg_para (772)	distribution%distri_vec%global_param%enrg_para (float) (9.3.1.1.1)
pow_coll_i (772)	distribution%distri_vec%global_param%pow_coll_i (vecflt.type) (9.3.1.2.9)
pow_coll_e (772)	distribution%distri_vec%global_param%pow_coll_e (float) (9.3.1.1.1)
therm_src (772)	distribution%distri_vec%global_param%therm_src (dist_src_snk_tot) (9.3.1.3.116)
particles (789)	distribution%distri_vec%global_param%therm_src%particles (float) (9.3.1.1.1)
power (789)	distribution%distri_vec%global_param%therm_src%power (float) (9.3.1.1.1)
torque (789)	distribution%distri_vec%global_param%therm_src%torque (float) (9.3.1.1.1)
losses (772)	distribution%distri_vec%global_param%losses (dist_glob_dist_losses) (9.3.1.3.100)
orb_loss (773)	distribution%distri_vec%global_param%losses%orb_loss (dist_src_snk_tot) (9.3.1.3.116)
particles (789)	distribution%distri_vec%global_param%losses%orb_loss%particles (float) (9.3.1.1.1)
power (789)	distribution%distri_vec%global_param%losses%orb_loss%power (float) (9.3.1.1.1)
torque (789)	distribution%distri_vec%global_param%losses%orb_loss%torque (float) (9.3.1.1.1)
neutr_loss (773)	distribution%distri_vec%global_param%losses%neutr_loss (dist_src_snk_tot) (9.3.1.3.116)
particles (789)	distribution%distri_vec%global_param%losses%neutr_loss%particles (float) (9.3.1.1.1)
power (789)	distribution%distri_vec%global_param%losses%neutr_loss%power (float) (9.3.1.1.1)
torque (789)	distribution%distri_vec%global_param%losses%neutr_loss%torque (float) (9.3.1.1.1)
cur_dr_tor (772)	distribution%distri_vec%global_param%cur_dr_tor (float) (9.3.1.1.1)
trq_i (772)	distribution%distri_vec%global_param%trq_i (vecflt.type) (9.3.1.2.9)
trq_e (772)	distribution%distri_vec%global_param%trq_e (float) (9.3.1.1.1)
trq_j_rxb (772)	distribution%distri_vec%global_param%trq_j_rxb (float) (9.3.1.1.1)
nucl_reac_th (772)	distribution%distri_vec%global_param%nucl_reac_th (dist_nucl_reac_th) (9.3.1.3.106)
rate (779)	distribution%distri_vec%global_param%nucl_reac_th%rate (vecflt.type) (9.3.1.2.9)
power (779)	distribution%distri_vec%global_param%nucl_reac_th%power (vecflt.type) (9.3.1.2.9)



nucl_reac_sf (772)	distribution%distri_vec%global_param%nucl_reac_sf (dist_nucl_reac_sf) (9.3.1.3.105)
rate (778)	distribution%distri_vec%global_param%nucl_reac_sf%rate (float) (9.3.1.1.1)
power (778)	distribution%distri_vec%global_param%nucl_reac_sf%power (float) (9.3.1.1.1)
profiles_1d (792)	distribution%distri_vec%profiles_1d (dist_profiles) (9.3.1.3.114)
npsi (787)	distribution%distri_vec%profiles_1d%npsi (integer) (9.3.1.1.2)
rho_tor_norm (787)	distribution%distri_vec%profiles_1d%rho_tor_norm (vecflt_type) (9.3.1.2.9)
rho_tor (787)	distribution%distri_vec%profiles_1d%rho_tor (vecflt_type) (9.3.1.2.9)
psi (787)	distribution%distri_vec%profiles_1d%psi (vecflt_type) (9.3.1.2.9)
enrgd_tot (787)	distribution%distri_vec%profiles_1d%enrgd_tot (vecflt_type) (9.3.1.2.9)
enrgd_para (787)	distribution%distri_vec%profiles_1d%enrgd_para (vecflt_type) (9.3.1.2.9)
powd_coll_i (787)	distribution%distri_vec%profiles_1d%powd_coll_i (matflt_type) (9.3.1.2.7)
powd_coll_e (787)	distribution%distri_vec%profiles_1d%powd_coll_e (vecflt_type) (9.3.1.2.9)
therm_srcd (787)	distribution%distri_vec%profiles_1d%therm_srcd (dist_src_snk_surf) (9.3.1.3.115)
particlesd (788)	distribution%distri_vec%profiles_1d%therm_srcd%particlesd (vecflt_type) (9.3.1.2.9)
powerd (788)	distribution%distri_vec%profiles_1d%therm_srcd%powerd (vecflt_type) (9.3.1.2.9)
torqued (788)	distribution%distri_vec%profiles_1d%therm_srcd%torqued (vecflt_type) (9.3.1.2.9)
lossesd (787)	distribution%distri_vec%profiles_1d%lossesd (dist_prof_surf_dist_losses) (9.3.1.3.108)
orb_loss (781)	distribution%distri_vec%profiles_1d%lossesd%orb_loss (dist_src_snk_surf) (9.3.1.3.115)
particlesd (788)	distribution%distri_vec%profiles_1d%lossesd%orb_loss%particlesd (vecflt_type) (9.3.1.2.9)
powerd (788)	distribution%distri_vec%profiles_1d%lossesd%orb_loss%powerd (vecflt_type) (9.3.1.2.9)
torqued (788)	distribution%distri_vec%profiles_1d%lossesd%orb_loss%torqued (vecflt_type) (9.3.1.2.9)
neutr_loss (781)	distribution%distri_vec%profiles_1d%lossesd%neutr_loss (dist_src_snk_surf) (9.3.1.3.115)
particlesd (788)	distribution%distri_vec%profiles_1d%lossesd%neutr_loss%particlesd (vecflt_type) (9.3.1.2.9)
powerd (788)	distribution%distri_vec%profiles_1d%lossesd%neutr_loss%powerd (vecflt_type) (9.3.1.2.9)
torqued (788)	distribution%distri_vec%profiles_1d%lossesd%neutr_loss%torqued (vecflt_type) (9.3.1.2.9)
curd_fp (787)	distribution%distri_vec%profiles_1d%curd_fp (vecflt_type) (9.3.1.2.9)
curd_dr (787)	distribution%distri_vec%profiles_1d%curd_dr (vecflt_type) (9.3.1.2.9)
trqd_i (787)	distribution%distri_vec%profiles_1d%trqd_i (matflt_type) (9.3.1.2.7)
trqd_e (787)	distribution%distri_vec%profiles_1d%trqd_e (vecflt_type) (9.3.1.2.9)
trqd_jrx (787)	distribution%distri_vec%profiles_1d%trqd_jrx (vecflt_type) (9.3.1.2.9)
nucl_rd_th (787)	distribution%distri_vec%profiles_1d%nucl_rd_th (dist_prof_surf_nucl_reac_th) (9.3.1.3.110)
rated (783)	distribution%distri_vec%profiles_1d%nucl_rd_th%rated (matflt_type) (9.3.1.2.7)
powerd (783)	distribution%distri_vec%profiles_1d%nucl_rd_th%powerd (matflt_type) (9.3.1.2.7)
nucl_rd_sf (787)	distribution%distri_vec%profiles_1d%nucl_rd_sf (dist_prof_surf_nucl_reac_sf) (9.3.1.3.109)
rate (782)	distribution%distri_vec%profiles_1d%nucl_rd_sf%rate (vecflt_type) (9.3.1.2.9)
power (782)	distribution%distri_vec%profiles_1d%nucl_rd_sf%power (vecflt_type) (9.3.1.2.9)
enrg_tot (787)	distribution%distri_vec%profiles_1d%enrg_tot (vecflt_type) (9.3.1.2.9)
enrg_para (787)	distribution%distri_vec%profiles_1d%enrg_para (vecflt_type) (9.3.1.2.9)
pow_coll_i (787)	distribution%distri_vec%profiles_1d%pow_coll_i (matflt_type) (9.3.1.2.7)
pow_coll_e (787)	distribution%distri_vec%profiles_1d%pow_coll_e (vecflt_type) (9.3.1.2.9)
therm_src (787)	distribution%distri_vec%profiles_1d%therm_src (dist_src_snk_vol) (9.3.1.3.117)
particles (790)	distribution%distri_vec%profiles_1d%therm_src%particles (vecflt_type) (9.3.1.2.9)
power (790)	distribution%distri_vec%profiles_1d%therm_src%power (vecflt_type) (9.3.1.2.9)
torque (790)	distribution%distri_vec%profiles_1d%therm_src%torque (vecflt_type) (9.3.1.2.9)
losses (787)	distribution%distri_vec%profiles_1d%losses (dist_prof_vol_dist_losses) (9.3.1.3.111)
orb_loss (784)	distribution%distri_vec%profiles_1d%losses%orb_loss (dist_src_snk_vol) (9.3.1.3.117)
particles (790)	distribution%distri_vec%profiles_1d%losses%orb_loss%particles (vecflt_type) (9.3.1.2.9)
power (790)	distribution%distri_vec%profiles_1d%losses%orb_loss%power (vecflt_type) (9.3.1.2.9)
torque (790)	distribution%distri_vec%profiles_1d%losses%orb_loss%torque (vecflt_type) (9.3.1.2.9)
neutr_loss (784)	distribution%distri_vec%profiles_1d%losses%neutr_loss (dist_src_snk_vol) (9.3.1.3.117)
particles (790)	distribution%distri_vec%profiles_1d%losses%neutr_loss%particles (vecflt_type) (9.3.1.2.9)
power (790)	distribution%distri_vec%profiles_1d%losses%neutr_loss%power (vecflt_type) (9.3.1.2.9)
torque (790)	distribution%distri_vec%profiles_1d%losses%neutr_loss%torque (vecflt_type) (9.3.1.2.9)
cur_fp (787)	distribution%distri_vec%profiles_1d%cur_fp (vecflt_type) (9.3.1.2.9)
cur_dr (787)	distribution%distri_vec%profiles_1d%cur_dr (vecflt_type) (9.3.1.2.9)
trq_i (787)	distribution%distri_vec%profiles_1d%trq_i (matflt_type) (9.3.1.2.7)
trq_e (787)	distribution%distri_vec%profiles_1d%trq_e (vecflt_type) (9.3.1.2.9)
trq_j_rxb (787)	distribution%distri_vec%profiles_1d%trq_j_rxb (vecflt_type) (9.3.1.2.9)
nucl_reac_th (787)	distribution%distri_vec%profiles_1d%nucl_reac_th (dist_prof_vol_nucl_reac_th) (9.3.1.3.113)
rate (786)	distribution%distri_vec%profiles_1d%nucl_reac_th%rate (matflt_type) (9.3.1.2.7)
power (786)	distribution%distri_vec%profiles_1d%nucl_reac_th%power (matflt_type) (9.3.1.2.7)

nucl_reac_sf (787)	distribution%distri_vec%profiles_1d%nucl_reac_sf (dist_prof_vol_nucl_reac_sf) (9.3.1.3.112)
rate (785)	distribution%distri_vec%profiles_1d%nucl_reac_sf%rate (vecflt_type) (9.3.1.2.9)
power (785)	distribution%distri_vec%profiles_1d%nucl_reac_sf%power (vecflt_type) (9.3.1.2.9)
dist_func (792)	distribution%distri_vec%dist_func (dist_func) (9.3.1.3.98)
markers (771)	distribution%distri_vec%dist_func%markers (dist_markers) (9.3.1.3.103)
nvar (776)	distribution%distri_vec%dist_func%markers%nvar (float) (9.3.1.1.1)
var_id (776)	distribution%distri_vec%dist_func%markers%var_id (vecint_type) (9.3.1.2.10)
var1 (776)	distribution%distri_vec%dist_func%markers%var1 (vecflt_type) (9.3.1.2.9)
var2 (776)	distribution%distri_vec%dist_func%markers%var2 (vecflt_type) (9.3.1.2.9)
var3 (776)	distribution%distri_vec%dist_func%markers%var3 (vecflt_type) (9.3.1.2.9)
var4 (776)	distribution%distri_vec%dist_func%markers%var4 (vecflt_type) (9.3.1.2.9)
var5 (776)	distribution%distri_vec%dist_func%markers%var5 (vecflt_type) (9.3.1.2.9)
var6 (776)	distribution%distri_vec%dist_func%markers%var6 (vecflt_type) (9.3.1.2.9)
var7 (776)	distribution%distri_vec%dist_func%markers%var7 (vecflt_type) (9.3.1.2.9)
weight (776)	distribution%distri_vec%dist_func%markers%weight (vecflt_type) (9.3.1.2.9)
f_expansion (771)	distribution%distri_vec%dist_func%f_expansion (dist_ff) (9.3.1.3.97)
grid_info (770)	distribution%distri_vec%dist_func%f_expansion%grid_info (dist_grid_info) (9.3.1.3.101)
grid_type (774)	distribution%distri_vec%dist_func%f_expansion%grid_info%grid_type (integer) (9.3.1.1.2)
ngriddim (774)	distribution%distri_vec%dist_func%f_expansion%grid_info%ngriddim (integer) (9.3.1.1.2)
grid_coord (774)	distribution%distri_vec%dist_func%f_expansion%grid_info%grid_coord (vecint_type) (9.3.1.2.10)
thin_orbits (774)	distribution%distri_vec%dist_func%f_expansion%grid_info%thin_orbits (integer) (9.3.1.1.2)
topology (774)	distribution%distri_vec%dist_func%f_expansion%grid_info%topology (string) (9.3.1.1.3)
omnigen_surf (774)	distribution%distri_vec%dist_func%f_expansion%grid_info%omnigen_surf (omnigen_surf) (9.3.1.3.190)
rz (863)	distribution%distri_vec%dist_func%f_expansion%grid_info%omnigen_surf%rz (rz1D) (9.3.1.3.242)
r (915)	distribution%distri_vec%dist_func%f_expansion%grid_info%omnigen_surf%rz%r (vecflt_type) (9.3.1.2.9)
z (915)	distribution%distri_vec%dist_func%f_expansion%grid_info%omnigen_surf%rz%z (vecflt_type) (9.3.1.2.9)
s (863)	distribution%distri_vec%dist_func%f_expansion%grid_info%omnigen_surf%s (vecflt_type) (9.3.1.2.9)
topo_regions (770)	distribution%distri_vec%dist_func%f_expansion%topo_regions (topo_regions) (9.3.1.3.304)
ind_omnigen (977)	distribution%distri_vec%dist_func%f_expansion%topo_regions%ind_omnigen (integer) (9.3.1.1.2)
dim1 (977)	distribution%distri_vec%dist_func%f_expansion%topo_regions%dim1 (array6dflt_type) (9.3.1.2.5)
dim2 (977)	distribution%distri_vec%dist_func%f_expansion%topo_regions%dim2 (array6dflt_type) (9.3.1.2.5)
dim3 (977)	distribution%distri_vec%dist_func%f_expansion%topo_regions%dim3 (array6dflt_type) (9.3.1.2.5)
dim4 (977)	distribution%distri_vec%dist_func%f_expansion%topo_regions%dim4 (array6dflt_type) (9.3.1.2.5)
dim5 (977)	distribution%distri_vec%dist_func%f_expansion%topo_regions%dim5 (array6dflt_type) (9.3.1.2.5)
dim6 (977)	distribution%distri_vec%dist_func%f_expansion%topo_regions%dim6 (array6dflt_type) (9.3.1.2.5)
jacobian (977)	distribution%distri_vec%dist_func%f_expansion%topo_regions%jacobian (array6dflt_type) (9.3.1.2.5)
distfunc (977)	distribution%distri_vec%dist_func%f_expansion%topo_regions%distfunc (array6dflt_type) (9.3.1.2.5)
input_src (792)	distribution%distri_vec%input_src (dist_input_src) (9.3.1.3.102)
particle_src (775)	distribution%distri_vec%input_src%particle_src (dist_particle_src) (9.3.1.3.107)
total (780)	distribution%distri_vec%input_src%particle_src%total (dist_src_snk_tot) (9.3.1.3.116)
particles (789)	distribution%distri_vec%input_src%particle_src%total%particles (float) (9.3.1.1.1)
power (789)	distribution%distri_vec%input_src%particle_src%total%power (float) (9.3.1.1.1)
torque (789)	distribution%distri_vec%input_src%particle_src%total%torque (float) (9.3.1.1.1)
volume_intgr (780)	distribution%distri_vec%input_src%particle_src%volume_intgr (dist_src_snk_vol) (9.3.1.3.117)
particles (790)	distribution%distri_vec%input_src%particle_src%volume_intgr%particles (vecflt_type) (9.3.1.2.9)
power (790)	distribution%distri_vec%input_src%particle_src%volume_intgr%power (vecflt_type) (9.3.1.2.9)
torque (790)	distribution%distri_vec%input_src%particle_src%volume_intgr%torque (vecflt_type) (9.3.1.2.9)
flux_surf_av (780)	distribution%distri_vec%input_src%particle_src%flux_surf_av (dist_src_snk_surf) (9.3.1.3.115)
particlesd (788)	distribution%distri_vec%input_src%particle_src%flux_surf_av%particlesd (vecflt_type) (9.3.1.2.9)

powerd (788)	distribution%distri_vec%input_src%particle_src%flux_surf.av%powerd (9.3.1.2.9)	(vecflt.type)
torqued (788)	distribution%distri_vec%input_src%particle_src%flux_surf.av%torqued (9.3.1.2.9)	(vecflt.type)
wave_src (775)	distribution%distri_vec%input_src%wave_src (dist_wave_src) (9.3.1.3.118)	
type (791)	distribution%distri_vec%input_src%wave_src%type (string) (9.3.1.1.3)	
wave.power (791)	distribution%distri_vec%input_src%wave_src%wave.power (float) (9.3.1.1.1)	
wave.powerd (791)	distribution%distri_vec%input_src%wave_src%wave.powerd (vecflt.type) (9.3.1.2.9)	
codeparam (792)	distribution%distri_vec%codeparam (codeparam) (9.3.1.3.58)	
codename (731)	distribution%distri_vec%codeparam%codename (string) (9.3.1.1.3)	
codeversion (731)	distribution%distri_vec%codeparam%codeversion (string) (9.3.1.1.3)	
parameters (731)	distribution%distri_vec%codeparam%parameters (string) (9.3.1.1.3)	
output.diag (731)	distribution%distri_vec%codeparam%output.diag (string) (9.3.1.1.3)	
output.flag (731)	distribution%distri_vec%codeparam%output.flag (integer) (9.3.1.1.2)	
codeparam (685)	distribution%codeparam (codeparam) (9.3.1.3.58)	
codename (731)	distribution%codeparam%codename (string) (9.3.1.1.3)	
codeversion (731)	distribution%codeparam%codeversion (string) (9.3.1.1.3)	
parameters (731)	distribution%codeparam%parameters (string) (9.3.1.1.3)	
output.diag (731)	distribution%codeparam%output.diag (string) (9.3.1.1.3)	
output.flag (731)	distribution%codeparam%output.flag (integer) (9.3.1.1.2)	
time (685)	distribution%time (float) (9.3.1.1.1)	

### 9.3.2.1.11 distsource

datainfo (686)	distsource%datainfo (datainfo) (9.3.1.3.92)	
dataproducer (765)	distsource%datainfo%dataproducer (string) (9.3.1.1.3)	
putdate (765)	distsource%datainfo%putdate (string) (9.3.1.1.3)	
source (765)	distsource%datainfo%source (string) (9.3.1.1.3)	
comment (765)	distsource%datainfo%comment (string) (9.3.1.1.3)	
isref (765)	distsource%datainfo%isref (integer) (9.3.1.1.2)	
whatref (765)	distsource%datainfo%whatref (whatref) (9.3.1.3.333)	
user (1006)	distsource%datainfo%whatref%user (string) (9.3.1.1.3)	
machine (1006)	distsource%datainfo%whatref%machine (string) (9.3.1.1.3)	
shot (1006)	distsource%datainfo%whatref%shot (integer) (9.3.1.1.2)	
run (1006)	distsource%datainfo%whatref%run (integer) (9.3.1.1.2)	
occurrence (1006)	distsource%datainfo%whatref%occurrence (integer) (9.3.1.1.2)	
putinfo (765)	distsource%datainfo%putinfo (putinfo) (9.3.1.3.215)	
putmethod (888)	distsource%datainfo%putinfo%putmethod (string) (9.3.1.1.3)	
putaccess (888)	distsource%datainfo%putinfo%putaccess (string) (9.3.1.1.3)	
putlocation (888)	distsource%datainfo%putinfo%putlocation (string) (9.3.1.1.3)	
rights (888)	distsource%datainfo%putinfo%rights (string) (9.3.1.1.3)	
composition (686)	distsource%composition (composition) (9.3.1.3.74)	
amn (747)	distsource%composition%amn (vecflt.type) (9.3.1.2.9)	
zn (747)	distsource%composition%zn (vecflt.type) (9.3.1.2.9)	
zion (747)	distsource%composition%zion (vecflt.type) (9.3.1.2.9)	
imp_flag (747)	distsource%composition%imp_flag (vecint.type) (9.3.1.2.10)	
source (686)	distsource%source (distsource.source) (9.3.1.3.123)	
src_spec (796)	distsource%source%src_spec (integer) (9.3.1.1.2)	
global_param (796)	distsource%source%global_param (distsource.global_param) (9.3.1.3.120)	
src_pow (793)	distsource%source%global_param%src_pow (exp0D) (9.3.1.3.142)	
value (815)	distsource%source%global_param%src_pow%value (float) (9.3.1.1.1)	
abserror (815)	distsource%source%global_param%src_pow%abserror (float) (9.3.1.1.1)	
relerror (815)	distsource%source%global_param%src_pow%relerror (float) (9.3.1.1.1)	
src_rate (793)	distsource%source%global_param%src_rate (exp0D) (9.3.1.3.142)	
value (815)	distsource%source%global_param%src_rate%value (float) (9.3.1.1.1)	
abserror (815)	distsource%source%global_param%src_rate%abserror (float) (9.3.1.1.1)	
relerror (815)	distsource%source%global_param%src_rate%relerror (float) (9.3.1.1.1)	
profiles.1d (796)	distsource%source%profiles.1d (distsource.profiles.1d) (9.3.1.3.121)	
rho_tor_norm (794)	distsource%source%profiles.1d%rho_tor_norm (vecflt.type) (9.3.1.2.9)	
rho_tor (794)	distsource%source%profiles.1d%rho_tor (vecflt.type) (9.3.1.2.9)	
psi (794)	distsource%source%profiles.1d%psi (vecflt.type) (9.3.1.2.9)	
pow_den (794)	distsource%source%profiles.1d%pow_den (exp1D) (9.3.1.3.143)	

value (816)	distsource%source%profiles_1d%pow_den%value (vecflt.type) (9.3.1.2.9)
abserror (816)	distsource%source%profiles_1d%pow_den%abserror (vecflt.type) (9.3.1.2.9)
relelror (816)	distsource%source%profiles_1d%pow_den%relelror (vecflt.type) (9.3.1.2.9)
src_rate (794)	distsource%source%profiles_1d%src_rate (exp1D) (9.3.1.3.143)
value (816)	distsource%source%profiles_1d%src_rate%value (vecflt.type) (9.3.1.2.9)
abserror (816)	distsource%source%profiles_1d%src_rate%abserror (vecflt.type) (9.3.1.2.9)
relelror (816)	distsource%source%profiles_1d%src_rate%relelror (vecflt.type) (9.3.1.2.9)
profiles_2d (796)	distsource%source%profiles_2d (distsource_profiles_2d) (9.3.1.3.122)
grid_coord (795)	distsource%source%profiles_2d%grid_coord (vecint.type) (9.3.1.2.10)
dim1 (795)	distsource%source%profiles_2d%dim1 (matflt.type) (9.3.1.2.7)
dim2 (795)	distsource%source%profiles_2d%dim2 (matflt.type) (9.3.1.2.7)
g11 (795)	distsource%source%profiles_2d%g11 (matflt.type) (9.3.1.2.7)
g12 (795)	distsource%source%profiles_2d%g12 (matflt.type) (9.3.1.2.7)
g21 (795)	distsource%source%profiles_2d%g21 (matflt.type) (9.3.1.2.7)
g22 (795)	distsource%source%profiles_2d%g22 (matflt.type) (9.3.1.2.7)
pow_den (795)	distsource%source%profiles_2d%pow_den (exp2D) (9.3.1.3.144)
value (817)	distsource%source%profiles_2d%pow_den%value (matflt.type) (9.3.1.2.7)
abserror (817)	distsource%source%profiles_2d%pow_den%abserror (matflt.type) (9.3.1.2.7)
relelror (817)	distsource%source%profiles_2d%pow_den%relelror (matflt.type) (9.3.1.2.7)
src_rate (795)	distsource%source%profiles_2d%src_rate (exp2D) (9.3.1.3.144)
value (817)	distsource%source%profiles_2d%src_rate%value (matflt.type) (9.3.1.2.7)
abserror (817)	distsource%source%profiles_2d%src_rate%abserror (matflt.type) (9.3.1.2.7)
relelror (817)	distsource%source%profiles_2d%src_rate%relelror (matflt.type) (9.3.1.2.7)
source_grid (796)	distsource%source%source_grid (source_grid) (9.3.1.3.282)
grid_info (955)	distsource%source%source_grid%grid_info (grid_info) (9.3.1.3.156)
grid_type (829)	distsource%source%source_grid%grid_info%grid_type (integer) (9.3.1.1.2)
ngriddim (829)	distsource%source%source_grid%grid_info%ngriddim (integer) (9.3.1.1.2)
grid_coord (829)	distsource%source%source_grid%grid_info%grid_coord (vecint.type) (9.3.1.2.10)
discrete_dims (829)	distsource%source%source_grid%grid_info%discrete_dims (vecint.type) (9.3.1.2.10)
gyrosrc_type (829)	distsource%source%source_grid%grid_info%gyrosrc_type (integer) (9.3.1.1.2)
dim1 (955)	distsource%source%source_grid%dim1 (array6dflt.type) (9.3.1.2.5)
dim2 (955)	distsource%source%source_grid%dim2 (array6dflt.type) (9.3.1.2.5)
dim3 (955)	distsource%source%source_grid%dim3 (array6dflt.type) (9.3.1.2.5)
dim4 (955)	distsource%source%source_grid%dim4 (array6dflt.type) (9.3.1.2.5)
dim5 (955)	distsource%source%source_grid%dim5 (array6dflt.type) (9.3.1.2.5)
dim6 (955)	distsource%source%source_grid%dim6 (array6dflt.type) (9.3.1.2.5)
jacobian (955)	distsource%source%source_grid%jacobian (array6dflt.type) (9.3.1.2.5)
source (955)	distsource%source%source_grid%source (array6dflt.type) (9.3.1.2.5)
source_mark (796)	distsource%source%source_mark (source_mark) (9.3.1.3.285)
var_coord (958)	distsource%source%source_mark%var_coord (vecint.type) (9.3.1.2.10)
gyrosrc_type (958)	distsource%source%source_mark%gyrosrc_type (integer) (9.3.1.1.2)
var1 (958)	distsource%source%source_mark%var1 (vecflt.type) (9.3.1.2.9)
var2 (958)	distsource%source%source_mark%var2 (vecflt.type) (9.3.1.2.9)
var3 (958)	distsource%source%source_mark%var3 (vecflt.type) (9.3.1.2.9)
var4 (958)	distsource%source%source_mark%var4 (vecflt.type) (9.3.1.2.9)
var5 (958)	distsource%source%source_mark%var5 (vecflt.type) (9.3.1.2.9)
var6 (958)	distsource%source%source_mark%var6 (vecflt.type) (9.3.1.2.9)
var7 (958)	distsource%source%source_mark%var7 (vecflt.type) (9.3.1.2.9)
weight (958)	distsource%source%source_mark%weight (vecflt.type) (9.3.1.2.9)
codeparam (796)	distsource%source%codeparam (codeparam) (9.3.1.3.58)
codename (731)	distsource%source%codeparam%codename (string) (9.3.1.1.3)
codeversion (731)	distsource%source%codeparam%codeversion (string) (9.3.1.1.3)
parameters (731)	distsource%source%codeparam%parameters (string) (9.3.1.1.3)
output_diag (731)	distsource%source%codeparam%output_diag (string) (9.3.1.1.3)
output_flag (731)	distsource%source%codeparam%output_flag (integer) (9.3.1.1.2)
codeparam (686)	distsource%codeparam (codeparam) (9.3.1.3.58)
codename (731)	distsource%codeparam%codename (string) (9.3.1.1.3)
codeversion (731)	distsource%codeparam%codeversion (string) (9.3.1.1.3)
parameters (731)	distsource%codeparam%parameters (string) (9.3.1.1.3)
output_diag (731)	distsource%codeparam%output_diag (string) (9.3.1.1.3)
output_flag (731)	distsource%codeparam%output_flag (integer) (9.3.1.1.2)

### 9.3.2.1.12 ecediag

datainfo (687)	ecediag%datainfo (datainfo) (9.3.1.3.92)
dataprovider (765)	ecediag%datainfo%dataprovider (string) (9.3.1.1.3)
putdate (765)	ecediag%datainfo%putdate (string) (9.3.1.1.3)
source (765)	ecediag%datainfo%source (string) (9.3.1.1.3)
comment (765)	ecediag%datainfo%comment (string) (9.3.1.1.3)
isref (765)	ecediag%datainfo%isref (integer) (9.3.1.1.2)
whatref (765)	ecediag%datainfo%whatref (whatref) (9.3.1.3.333)
user (1006)	ecediag%datainfo%whatref%user (string) (9.3.1.1.3)
machine (1006)	ecediag%datainfo%whatref%machine (string) (9.3.1.1.3)
shot (1006)	ecediag%datainfo%whatref%shot (integer) (9.3.1.1.2)
run (1006)	ecediag%datainfo%whatref%run (integer) (9.3.1.1.2)
occurrence (1006)	ecediag%datainfo%whatref%occurrence (integer) (9.3.1.1.2)
putinfo (765)	ecediag%datainfo%putinfo (putinfo) (9.3.1.3.215)
putmethod (888)	ecediag%datainfo%putinfo%putmethod (string) (9.3.1.1.3)
putaccess (888)	ecediag%datainfo%putinfo%putaccess (string) (9.3.1.1.3)
putlocation (888)	ecediag%datainfo%putinfo%putlocation (string) (9.3.1.1.3)
rights (888)	ecediag%datainfo%putinfo%rights (string) (9.3.1.1.3)
setup (687)	ecediag%setup (ecesetup) (9.3.1.3.126)
frequency (799)	ecediag%setup%frequency (vecflt_type) (9.3.1.2.9)
position (799)	ecediag%setup%position (rzphi1Dexp) (9.3.1.3.248)
r (921)	ecediag%setup%position%r (exp1D) (9.3.1.3.143)
value (816)	ecediag%setup%position%r%value (vecflt_type) (9.3.1.2.9)
abserror (816)	ecediag%setup%position%r%abserror (vecflt_type) (9.3.1.2.9)
releror (816)	ecediag%setup%position%r%releror (vecflt_type) (9.3.1.2.9)
z (921)	ecediag%setup%position%z (exp1D) (9.3.1.3.143)
value (816)	ecediag%setup%position%z%value (vecflt_type) (9.3.1.2.9)
abserror (816)	ecediag%setup%position%z%abserror (vecflt_type) (9.3.1.2.9)
releror (816)	ecediag%setup%position%z%releror (vecflt_type) (9.3.1.2.9)
phi (921)	ecediag%setup%position%phi (exp1D) (9.3.1.3.143)
value (816)	ecediag%setup%position%phi%value (vecflt_type) (9.3.1.2.9)
abserror (816)	ecediag%setup%position%phi%abserror (vecflt_type) (9.3.1.2.9)
releror (816)	ecediag%setup%position%phi%releror (vecflt_type) (9.3.1.2.9)
measure (687)	ecediag%measure (ecemeasure) (9.3.1.3.125)
te (798)	ecediag%measure%te (exp1D) (9.3.1.3.143)
value (816)	ecediag%measure%te%value (vecflt_type) (9.3.1.2.9)
abserror (816)	ecediag%measure%te%abserror (vecflt_type) (9.3.1.2.9)
releror (816)	ecediag%measure%te%releror (vecflt_type) (9.3.1.2.9)
time (687)	ecediag%time (float) (9.3.1.1.1)

### 9.3.2.1.13 edge

datainfo (688)	edge%datainfo (datainfo) (9.3.1.3.92)
dataprovider (765)	edge%datainfo%dataprovider (string) (9.3.1.1.3)
putdate (765)	edge%datainfo%putdate (string) (9.3.1.1.3)
source (765)	edge%datainfo%source (string) (9.3.1.1.3)
comment (765)	edge%datainfo%comment (string) (9.3.1.1.3)
isref (765)	edge%datainfo%isref (integer) (9.3.1.1.2)
whatref (765)	edge%datainfo%whatref (whatref) (9.3.1.3.333)
user (1006)	edge%datainfo%whatref%user (string) (9.3.1.1.3)
machine (1006)	edge%datainfo%whatref%machine (string) (9.3.1.1.3)
shot (1006)	edge%datainfo%whatref%shot (integer) (9.3.1.1.2)
run (1006)	edge%datainfo%whatref%run (integer) (9.3.1.1.2)
occurrence (1006)	edge%datainfo%whatref%occurrence (integer) (9.3.1.1.2)
putinfo (765)	edge%datainfo%putinfo (putinfo) (9.3.1.3.215)
putmethod (888)	edge%datainfo%putinfo%putmethod (string) (9.3.1.1.3)
putaccess (888)	edge%datainfo%putinfo%putaccess (string) (9.3.1.1.3)
putlocation (888)	edge%datainfo%putinfo%putlocation (string) (9.3.1.1.3)

rights (888)	edge%datainfo%putinfo%rights (string) (9.3.1.1.3)
grid (688)	edge%grid (complexgrid) (9.3.1.3.61)
spaces (734)	edge%grid%spaces (complexgrid_space) (9.3.1.3.69)
coordtype (742)	edge%grid%spaces%coordtype (vecint_type) (9.3.1.2.10)
properties (742)	edge%grid%spaces%properties (complexgrid_space_properties) (9.3.1.3.70)
geotype (743)	edge%grid%spaces%properties%geotype (integer) (9.3.1.1.2)
geotypeid (743)	edge%grid%spaces%properties%geotypeid (string) (9.3.1.1.3)
objects (742)	edge%grid%spaces%objects (objects) (9.3.1.3.187)
boundary (860)	edge%grid%spaces%objects%boundary (matint_type) (9.3.1.2.8)
neighbour (860)	edge%grid%spaces%objects%neighbour (array3dint_type) (9.3.1.2.2)
geo (860)	edge%grid%spaces%objects%geo (array3dflt_type) (9.3.1.2.1)
measure (860)	edge%grid%spaces%objects%measure (vecflt_type) (9.3.1.2.9)
nodes (742)	edge%grid%spaces%nodes (complexgrid_nodes) (9.3.1.3.65)
geo (738)	edge%grid%spaces%nodes%geo (array3dflt_type) (9.3.1.2.1)
xpoints (738)	edge%grid%spaces%nodes%xpoints (vecint_type) (9.3.1.2.10)
altgeo (738)	edge%grid%spaces%nodes%altgeo (complexgrid_altgeo) (9.3.1.3.62)
coordtype (735)	edge%grid%spaces%nodes%altgeo%coordtype (vecint_type) (9.3.1.2.10)
geo (735)	edge%grid%spaces%nodes%altgeo%geo (array3dflt_type) (9.3.1.2.1)
alias (738)	edge%grid%spaces%nodes%alias (vecint_type) (9.3.1.2.10)
subgrids (734)	edge%grid%subgrids (complexgrid_subgrid) (9.3.1.3.71)
id (744)	edge%grid%subgrids%id (string) (9.3.1.1.3)
list (744)	edge%grid%subgrids%list (complexgrid_objectlist) (9.3.1.3.66)
cls (739)	edge%grid%subgrids%list%cls (vecint_type) (9.3.1.2.10)
indset (739)	edge%grid%subgrids%list%indset (complexgrid_indexlist) (9.3.1.3.63)
range (736)	edge%grid%subgrids%list%indset%range (vecint_type) (9.3.1.2.10)
ind (736)	edge%grid%subgrids%list%indset%ind (vecint_type) (9.3.1.2.10)
ind (739)	edge%grid%subgrids%list%ind (matint_type) (9.3.1.2.8)
metric (734)	edge%grid%metric (complexgrid_metric) (9.3.1.3.64)
measure (737)	edge%grid%metric%measure (complexgrid_scalar_simplestruct) (9.3.1.3.68)
subgrid (741)	edge%grid%metric%measure%subgrid (integer) (9.3.1.1.2)
scalar (741)	edge%grid%metric%measure%scalar (vecflt_type) (9.3.1.2.9)
vector (741)	edge%grid%metric%measure%vector (matflt_type) (9.3.1.2.7)
matrix (741)	edge%grid%metric%measure%matrix (array3dflt_type) (9.3.1.2.1)
g11 (737)	edge%grid%metric%g11 (complexgrid_scalar_simplestruct) (9.3.1.3.68)
subgrid (741)	edge%grid%metric%g11%subgrid (integer) (9.3.1.1.2)
scalar (741)	edge%grid%metric%g11%scalar (vecflt_type) (9.3.1.2.9)
vector (741)	edge%grid%metric%g11%vector (matflt_type) (9.3.1.2.7)
matrix (741)	edge%grid%metric%g11%matrix (array3dflt_type) (9.3.1.2.1)
g12 (737)	edge%grid%metric%g12 (complexgrid_scalar_simplestruct) (9.3.1.3.68)
subgrid (741)	edge%grid%metric%g12%subgrid (integer) (9.3.1.1.2)
scalar (741)	edge%grid%metric%g12%scalar (vecflt_type) (9.3.1.2.9)
vector (741)	edge%grid%metric%g12%vector (matflt_type) (9.3.1.2.7)
matrix (741)	edge%grid%metric%g12%matrix (array3dflt_type) (9.3.1.2.1)
g13 (737)	edge%grid%metric%g13 (complexgrid_scalar_simplestruct) (9.3.1.3.68)
subgrid (741)	edge%grid%metric%g13%subgrid (integer) (9.3.1.1.2)
scalar (741)	edge%grid%metric%g13%scalar (vecflt_type) (9.3.1.2.9)
vector (741)	edge%grid%metric%g13%vector (matflt_type) (9.3.1.2.7)
matrix (741)	edge%grid%metric%g13%matrix (array3dflt_type) (9.3.1.2.1)
g22 (737)	edge%grid%metric%g22 (complexgrid_scalar_simplestruct) (9.3.1.3.68)
subgrid (741)	edge%grid%metric%g22%subgrid (integer) (9.3.1.1.2)
scalar (741)	edge%grid%metric%g22%scalar (vecflt_type) (9.3.1.2.9)
vector (741)	edge%grid%metric%g22%vector (matflt_type) (9.3.1.2.7)
matrix (741)	edge%grid%metric%g22%matrix (array3dflt_type) (9.3.1.2.1)
g23 (737)	edge%grid%metric%g23 (complexgrid_scalar_simplestruct) (9.3.1.3.68)
subgrid (741)	edge%grid%metric%g23%subgrid (integer) (9.3.1.1.2)
scalar (741)	edge%grid%metric%g23%scalar (vecflt_type) (9.3.1.2.9)
vector (741)	edge%grid%metric%g23%vector (matflt_type) (9.3.1.2.7)
matrix (741)	edge%grid%metric%g23%matrix (array3dflt_type) (9.3.1.2.1)
g33 (737)	edge%grid%metric%g33 (complexgrid_scalar_simplestruct) (9.3.1.3.68)
subgrid (741)	edge%grid%metric%g33%subgrid (integer) (9.3.1.1.2)
scalar (741)	edge%grid%metric%g33%scalar (vecflt_type) (9.3.1.2.9)



vector (741)	edge%grid%metric%g33%vector (matflt.type) (9.3.1.2.7)
matrix (741)	edge%grid%metric%g33%matrix (array3dflt.type) (9.3.1.2.1)
jacobian (737)	edge%grid%metric%jacobian (complexgrid_scalar_simplestruct) (9.3.1.3.68)
subgrid (741)	edge%grid%metric%jacobian%subgrid (integer) (9.3.1.1.2)
scalar (741)	edge%grid%metric%jacobian%scalar (vecflt.type) (9.3.1.2.9)
vector (741)	edge%grid%metric%jacobian%vector (matflt.type) (9.3.1.2.7)
matrix (741)	edge%grid%metric%jacobian%matrix (array3dflt.type) (9.3.1.2.1)
species (688)	edge%species (species_desc) (9.3.1.3.290)
label (963)	edge%species%label (string) (9.3.1.1.3)
amn (963)	edge%species%amn (float) (9.3.1.1.1)
zn (963)	edge%species%zn (float) (9.3.1.1.1)
zmin (963)	edge%species%zmin (float) (9.3.1.1.1)
zmax (963)	edge%species%zmax (float) (9.3.1.1.1)
fluid (688)	edge%fluid (edge_fluid) (9.3.1.3.127)
ne (800)	edge%fluid%ne (edge_fluid_scalar_simplestruct) (9.3.1.3.129)
value (802)	edge%fluid%ne%value (complexgrid_scalar) (9.3.1.3.67)
subgrid (740)	edge%fluid%ne%value%subgrid (integer) (9.3.1.1.2)
scalar (740)	edge%fluid%ne%value%scalar (vecflt.type) (9.3.1.2.9)
vector (740)	edge%fluid%ne%value%vector (matflt.type) (9.3.1.2.7)
matrix (740)	edge%fluid%ne%value%matrix (array3dflt.type) (9.3.1.2.1)
bndvalue (802)	edge%fluid%ne%bndvalue (complexgrid_scalar) (9.3.1.3.67)
subgrid (740)	edge%fluid%ne%bndvalue%subgrid (integer) (9.3.1.1.2)
scalar (740)	edge%fluid%ne%bndvalue%scalar (vecflt.type) (9.3.1.2.9)
vector (740)	edge%fluid%ne%bndvalue%vector (matflt.type) (9.3.1.2.7)
matrix (740)	edge%fluid%ne%bndvalue%matrix (array3dflt.type) (9.3.1.2.1)
flux (802)	edge%fluid%ne%flux (complexgrid_vector) (9.3.1.3.72)
label (745)	edge%fluid%ne%flux%label (string) (9.3.1.1.3)
comp (745)	edge%fluid%ne%flux%comp (complexgrid_scalar) (9.3.1.3.67)
subgrid (740)	edge%fluid%ne%flux%comp%subgrid (integer) (9.3.1.1.2)
scalar (740)	edge%fluid%ne%flux%comp%scalar (vecflt.type) (9.3.1.2.9)
vector (740)	edge%fluid%ne%flux%comp%vector (matflt.type) (9.3.1.2.7)
matrix (740)	edge%fluid%ne%flux%comp%matrix (array3dflt.type) (9.3.1.2.1)
align (745)	edge%fluid%ne%flux%align (vecint.type) (9.3.1.2.10)
alignid (745)	edge%fluid%ne%flux%alignid (vecstring.type) (9.3.1.2.11)
bndflux (802)	edge%fluid%ne%bndflux (complexgrid_vector) (9.3.1.3.72)
label (745)	edge%fluid%ne%bndflux%label (string) (9.3.1.1.3)
comp (745)	edge%fluid%ne%bndflux%comp (complexgrid_scalar) (9.3.1.3.67)
subgrid (740)	edge%fluid%ne%bndflux%comp%subgrid (integer) (9.3.1.1.2)
scalar (740)	edge%fluid%ne%bndflux%comp%scalar (vecflt.type) (9.3.1.2.9)
vector (740)	edge%fluid%ne%bndflux%comp%vector (matflt.type) (9.3.1.2.7)
matrix (740)	edge%fluid%ne%bndflux%comp%matrix (array3dflt.type) (9.3.1.2.1)
align (745)	edge%fluid%ne%bndflux%align (vecint.type) (9.3.1.2.10)
alignid (745)	edge%fluid%ne%bndflux%alignid (vecstring.type) (9.3.1.2.11)
transpcoeff (802)	edge%fluid%ne%transpcoeff (edge_fluid_scalar_transpcoeff) (9.3.1.3.130)
d (803)	edge%fluid%ne%transpcoeff%d (complexgrid_vector_simplestruct) (9.3.1.3.73)
label (746)	edge%fluid%ne%transpcoeff%d%label (string) (9.3.1.1.3)
comp (746)	edge%fluid%ne%transpcoeff%d%comp (complexgrid_scalar) (9.3.1.3.67)
subgrid (740)	edge%fluid%ne%transpcoeff%d%comp%subgrid (integer) (9.3.1.1.2)
scalar (740)	edge%fluid%ne%transpcoeff%d%comp%scalar (vecflt.type) (9.3.1.2.9)
vector (740)	edge%fluid%ne%transpcoeff%d%comp%vector (matflt.type) (9.3.1.2.7)
matrix (740)	edge%fluid%ne%transpcoeff%d%comp%matrix (array3dflt.type) (9.3.1.2.1)
align (746)	edge%fluid%ne%transpcoeff%d%align (vecint.type) (9.3.1.2.10)
alignid (746)	edge%fluid%ne%transpcoeff%d%alignid (vecstring.type) (9.3.1.2.11)
v (803)	edge%fluid%ne%transpcoeff%v (complexgrid_vector_simplestruct) (9.3.1.3.73)
label (746)	edge%fluid%ne%transpcoeff%v%label (string) (9.3.1.1.3)
comp (746)	edge%fluid%ne%transpcoeff%v%comp (complexgrid_scalar) (9.3.1.3.67)
subgrid (740)	edge%fluid%ne%transpcoeff%v%comp%subgrid (integer) (9.3.1.1.2)
scalar (740)	edge%fluid%ne%transpcoeff%v%comp%scalar (vecflt.type) (9.3.1.2.9)
vector (740)	edge%fluid%ne%transpcoeff%v%comp%vector (matflt.type) (9.3.1.2.7)
matrix (740)	edge%fluid%ne%transpcoeff%v%comp%matrix (array3dflt.type) (9.3.1.2.1)
align (746)	edge%fluid%ne%transpcoeff%v%align (vecint.type) (9.3.1.2.10)

alignid (746)	edge%fluid%ne%transpcoeff%v%alignid (vecstring_type) (9.3.1.2.11)
source (802)	edge%fluid%ne%source (complexgrid_scalar) (9.3.1.3.67)
subgrid (740)	edge%fluid%ne%source%subgrid (integer) (9.3.1.1.2)
scalar (740)	edge%fluid%ne%source%scalar (vecflt_type) (9.3.1.2.9)
vector (740)	edge%fluid%ne%source%vector (matflt_type) (9.3.1.2.7)
matrix (740)	edge%fluid%ne%source%matrix (array3dflt_type) (9.3.1.2.1)
ni (800)	edge%fluid%ni (edge_fluid_scalar) (9.3.1.3.128)
value (801)	edge%fluid%ni%value (complexgrid_scalar) (9.3.1.3.67)
subgrid (740)	edge%fluid%ni%value%subgrid (integer) (9.3.1.1.2)
scalar (740)	edge%fluid%ni%value%scalar (vecflt_type) (9.3.1.2.9)
vector (740)	edge%fluid%ni%value%vector (matflt_type) (9.3.1.2.7)
matrix (740)	edge%fluid%ni%value%matrix (array3dflt_type) (9.3.1.2.1)
bndvalue (801)	edge%fluid%ni%bndvalue (complexgrid_scalar) (9.3.1.3.67)
subgrid (740)	edge%fluid%ni%bndvalue%subgrid (integer) (9.3.1.1.2)
scalar (740)	edge%fluid%ni%bndvalue%scalar (vecflt_type) (9.3.1.2.9)
vector (740)	edge%fluid%ni%bndvalue%vector (matflt_type) (9.3.1.2.7)
matrix (740)	edge%fluid%ni%bndvalue%matrix (array3dflt_type) (9.3.1.2.1)
flux (801)	edge%fluid%ni%flux (complexgrid_vector) (9.3.1.3.72)
label (745)	edge%fluid%ni%flux%label (string) (9.3.1.1.3)
comp (745)	edge%fluid%ni%flux%comp (complexgrid_scalar) (9.3.1.3.67)
subgrid (740)	edge%fluid%ni%flux%comp%subgrid (integer) (9.3.1.1.2)
scalar (740)	edge%fluid%ni%flux%comp%scalar (vecflt_type) (9.3.1.2.9)
vector (740)	edge%fluid%ni%flux%comp%vector (matflt_type) (9.3.1.2.7)
matrix (740)	edge%fluid%ni%flux%comp%matrix (array3dflt_type) (9.3.1.2.1)
align (745)	edge%fluid%ni%flux%align (vecint_type) (9.3.1.2.10)
alignid (745)	edge%fluid%ni%flux%alignid (vecstring_type) (9.3.1.2.11)
bndflux (801)	edge%fluid%ni%bndflux (complexgrid_vector) (9.3.1.3.72)
label (745)	edge%fluid%ni%bndflux%label (string) (9.3.1.1.3)
comp (745)	edge%fluid%ni%bndflux%comp (complexgrid_scalar) (9.3.1.3.67)
subgrid (740)	edge%fluid%ni%bndflux%comp%subgrid (integer) (9.3.1.1.2)
scalar (740)	edge%fluid%ni%bndflux%comp%scalar (vecflt_type) (9.3.1.2.9)
vector (740)	edge%fluid%ni%bndflux%comp%vector (matflt_type) (9.3.1.2.7)
matrix (740)	edge%fluid%ni%bndflux%comp%matrix (array3dflt_type) (9.3.1.2.1)
align (745)	edge%fluid%ni%bndflux%align (vecint_type) (9.3.1.2.10)
alignid (745)	edge%fluid%ni%bndflux%alignid (vecstring_type) (9.3.1.2.11)
transpcoeff (801)	edge%fluid%ni%transpcoeff (edge_fluid_scalar_transpcoeff) (9.3.1.3.130)
d (803)	edge%fluid%ni%transpcoeff%d (complexgrid_vector_simplestruct) (9.3.1.3.73)
label (746)	edge%fluid%ni%transpcoeff%d%label (string) (9.3.1.1.3)
comp (746)	edge%fluid%ni%transpcoeff%d%comp (complexgrid_scalar) (9.3.1.3.67)
subgrid (740)	edge%fluid%ni%transpcoeff%d%comp%subgrid (integer) (9.3.1.1.2)
scalar (740)	edge%fluid%ni%transpcoeff%d%comp%scalar (vecflt_type) (9.3.1.2.9)
vector (740)	edge%fluid%ni%transpcoeff%d%comp%vector (matflt_type) (9.3.1.2.7)
matrix (740)	edge%fluid%ni%transpcoeff%d%comp%matrix (array3dflt_type) (9.3.1.2.1)
align (746)	edge%fluid%ni%transpcoeff%d%align (vecint_type) (9.3.1.2.10)
alignid (746)	edge%fluid%ni%transpcoeff%d%alignid (vecstring_type) (9.3.1.2.11)
v (803)	edge%fluid%ni%transpcoeff%v (complexgrid_vector_simplestruct) (9.3.1.3.73)
label (746)	edge%fluid%ni%transpcoeff%v%label (string) (9.3.1.1.3)
comp (746)	edge%fluid%ni%transpcoeff%v%comp (complexgrid_scalar) (9.3.1.3.67)
subgrid (740)	edge%fluid%ni%transpcoeff%v%comp%subgrid (integer) (9.3.1.1.2)
scalar (740)	edge%fluid%ni%transpcoeff%v%comp%scalar (vecflt_type) (9.3.1.2.9)
vector (740)	edge%fluid%ni%transpcoeff%v%comp%vector (matflt_type) (9.3.1.2.7)
matrix (740)	edge%fluid%ni%transpcoeff%v%comp%matrix (array3dflt_type) (9.3.1.2.1)
align (746)	edge%fluid%ni%transpcoeff%v%align (vecint_type) (9.3.1.2.10)
alignid (746)	edge%fluid%ni%transpcoeff%v%alignid (vecstring_type) (9.3.1.2.11)
source (801)	edge%fluid%ni%source (complexgrid_scalar) (9.3.1.3.67)
subgrid (740)	edge%fluid%ni%source%subgrid (integer) (9.3.1.1.2)
scalar (740)	edge%fluid%ni%source%scalar (vecflt_type) (9.3.1.2.9)
vector (740)	edge%fluid%ni%source%vector (matflt_type) (9.3.1.2.7)
matrix (740)	edge%fluid%ni%source%matrix (array3dflt_type) (9.3.1.2.1)
ve (800)	edge%fluid%ve (edge_fluid_vector_simplestruct) (9.3.1.3.132)
comps (805)	edge%fluid%ve%comps (edge_fluid_scalar) (9.3.1.3.128)



value (801)	edge%fluid%ve%comps%value (complexgrid_scalar) (9.3.1.3.67)
subgrid (740)	edge%fluid%ve%comps%value%subgrid (integer) (9.3.1.1.2)
scalar (740)	edge%fluid%ve%comps%value%scalar (vecflt_type) (9.3.1.2.9)
vector (740)	edge%fluid%ve%comps%value%vector (matflt_type) (9.3.1.2.7)
matrix (740)	edge%fluid%ve%comps%value%matrix (array3dflt_type) (9.3.1.2.1)
bndvalue (801)	edge%fluid%ve%comps%bndvalue (complexgrid_scalar) (9.3.1.3.67)
subgrid (740)	edge%fluid%ve%comps%bndvalue%subgrid (integer) (9.3.1.1.2)
scalar (740)	edge%fluid%ve%comps%bndvalue%scalar (vecflt_type) (9.3.1.2.9)
vector (740)	edge%fluid%ve%comps%bndvalue%vector (matflt_type) (9.3.1.2.7)
matrix (740)	edge%fluid%ve%comps%bndvalue%matrix (array3dflt_type) (9.3.1.2.1)
flux (801)	edge%fluid%ve%comps%flux (complexgrid_vector) (9.3.1.3.72)
label (745)	edge%fluid%ve%comps%flux%label (string) (9.3.1.1.3)
comp (745)	edge%fluid%ve%comps%flux%comp (complexgrid_scalar) (9.3.1.3.67)
subgrid (740)	edge%fluid%ve%comps%flux%comp%subgrid (integer) (9.3.1.1.2)
scalar (740)	edge%fluid%ve%comps%flux%comp%scalar (vecflt_type) (9.3.1.2.9)
vector (740)	edge%fluid%ve%comps%flux%comp%vector (matflt_type) (9.3.1.2.7)
matrix (740)	edge%fluid%ve%comps%flux%comp%matrix (array3dflt_type) (9.3.1.2.1)
align (745)	edge%fluid%ve%comps%flux%align (vecint_type) (9.3.1.2.10)
alignid (745)	edge%fluid%ve%comps%flux%alignid (vecstring_type) (9.3.1.2.11)
bndflux (801)	edge%fluid%ve%comps%bndflux (complexgrid_vector) (9.3.1.3.72)
label (745)	edge%fluid%ve%comps%bndflux%label (string) (9.3.1.1.3)
comp (745)	edge%fluid%ve%comps%bndflux%comp (complexgrid_scalar) (9.3.1.3.67)
subgrid (740)	edge%fluid%ve%comps%bndflux%comp%subgrid (integer) (9.3.1.1.2)
scalar (740)	edge%fluid%ve%comps%bndflux%comp%scalar (vecflt_type) (9.3.1.2.9)
vector (740)	edge%fluid%ve%comps%bndflux%comp%vector (matflt_type) (9.3.1.2.7)
matrix (740)	edge%fluid%ve%comps%bndflux%comp%matrix (array3dflt_type) (9.3.1.2.1)
align (745)	edge%fluid%ve%comps%bndflux%align (vecint_type) (9.3.1.2.10)
alignid (745)	edge%fluid%ve%comps%bndflux%alignid (vecstring_type) (9.3.1.2.11)
transpcoeff (801)	edge%fluid%ve%comps%transpcoeff (edge_fluid_scalar_transpcoeff) (9.3.1.3.130)
d (803)	edge%fluid%ve%comps%transpcoeff%d (complexgrid_vector_simplestruct) (9.3.1.3.73)
label (746)	edge%fluid%ve%comps%transpcoeff%d%label (string) (9.3.1.1.3)
comp (746)	edge%fluid%ve%comps%transpcoeff%d%comp (complexgrid_scalar) (9.3.1.3.67)
subgrid (740)	edge%fluid%ve%comps%transpcoeff%d%comp%subgrid (integer) (9.3.1.1.2)
scalar (740)	edge%fluid%ve%comps%transpcoeff%d%comp%scalar (vecflt_type) (9.3.1.2.9)
vector (740)	edge%fluid%ve%comps%transpcoeff%d%comp%vector (matflt_type) (9.3.1.2.7)
matrix (740)	edge%fluid%ve%comps%transpcoeff%d%comp%matrix (array3dflt_type) (9.3.1.2.1)
align (746)	edge%fluid%ve%comps%transpcoeff%d%align (vecint_type) (9.3.1.2.10)
alignid (746)	edge%fluid%ve%comps%transpcoeff%d%alignid (vecstring_type) (9.3.1.2.11)
v (803)	edge%fluid%ve%comps%transpcoeff%v (complexgrid_vector_simplestruct) (9.3.1.3.73)
label (746)	edge%fluid%ve%comps%transpcoeff%v%label (string) (9.3.1.1.3)
comp (746)	edge%fluid%ve%comps%transpcoeff%v%comp (complexgrid_scalar) (9.3.1.3.67)
subgrid (740)	edge%fluid%ve%comps%transpcoeff%v%comp%subgrid (integer) (9.3.1.1.2)
scalar (740)	edge%fluid%ve%comps%transpcoeff%v%comp%scalar (vecflt_type) (9.3.1.2.9)
vector (740)	edge%fluid%ve%comps%transpcoeff%v%comp%vector (matflt_type) (9.3.1.2.7)
matrix (740)	edge%fluid%ve%comps%transpcoeff%v%comp%matrix (array3dflt_type) (9.3.1.2.1)
align (746)	edge%fluid%ve%comps%transpcoeff%v%align (vecint_type) (9.3.1.2.10)
alignid (746)	edge%fluid%ve%comps%transpcoeff%v%alignid (vecstring_type) (9.3.1.2.11)
source (801)	edge%fluid%ve%comps%source (complexgrid_scalar) (9.3.1.3.67)
subgrid (740)	edge%fluid%ve%comps%source%subgrid (integer) (9.3.1.1.2)
scalar (740)	edge%fluid%ve%comps%source%scalar (vecflt_type) (9.3.1.2.9)
vector (740)	edge%fluid%ve%comps%source%vector (matflt_type) (9.3.1.2.7)
matrix (740)	edge%fluid%ve%comps%source%matrix (array3dflt_type) (9.3.1.2.1)
align (805)	edge%fluid%ve%align (vecint_type) (9.3.1.2.10)
alignid (805)	edge%fluid%ve%alignid (vecstring_type) (9.3.1.2.11)
vi (800)	edge%fluid%vi (edge_fluid_vector) (9.3.1.3.131)
comps (804)	edge%fluid%vi%comps (edge_fluid_scalar) (9.3.1.3.128)
value (801)	edge%fluid%vi%comps%value (complexgrid_scalar) (9.3.1.3.67)
subgrid (740)	edge%fluid%vi%comps%value%subgrid (integer) (9.3.1.1.2)
scalar (740)	edge%fluid%vi%comps%value%scalar (vecflt_type) (9.3.1.2.9)
vector (740)	edge%fluid%vi%comps%value%vector (matflt_type) (9.3.1.2.7)
matrix (740)	edge%fluid%vi%comps%value%matrix (array3dflt_type) (9.3.1.2.1)

bndvalue (801)	edge%fluid%vi%comps%bndvalue (complexgrid_scalar) (9.3.1.3.67)
subgrid (740)	edge%fluid%vi%comps%bndvalue%subgrid (integer) (9.3.1.1.2)
scalar (740)	edge%fluid%vi%comps%bndvalue%scalar (vecflt_type) (9.3.1.2.9)
vector (740)	edge%fluid%vi%comps%bndvalue%vector (matflt_type) (9.3.1.2.7)
matrix (740)	edge%fluid%vi%comps%bndvalue%matrix (array3dflt_type) (9.3.1.2.1)
flux (801)	edge%fluid%vi%comps%flux (complexgrid_vector) (9.3.1.3.72)
label (745)	edge%fluid%vi%comps%flux%label (string) (9.3.1.1.3)
comp (745)	edge%fluid%vi%comps%flux%comp (complexgrid_scalar) (9.3.1.3.67)
subgrid (740)	edge%fluid%vi%comps%flux%comp%subgrid (integer) (9.3.1.1.2)
scalar (740)	edge%fluid%vi%comps%flux%comp%scalar (vecflt_type) (9.3.1.2.9)
vector (740)	edge%fluid%vi%comps%flux%comp%vector (matflt_type) (9.3.1.2.7)
matrix (740)	edge%fluid%vi%comps%flux%comp%matrix (array3dflt_type) (9.3.1.2.1)
align (745)	edge%fluid%vi%comps%flux%align (vecint_type) (9.3.1.2.10)
alignid (745)	edge%fluid%vi%comps%flux%alignid (vecstring_type) (9.3.1.2.11)
bndflux (801)	edge%fluid%vi%comps%bndflux (complexgrid_vector) (9.3.1.3.72)
label (745)	edge%fluid%vi%comps%bndflux%label (string) (9.3.1.1.3)
comp (745)	edge%fluid%vi%comps%bndflux%comp (complexgrid_scalar) (9.3.1.3.67)
subgrid (740)	edge%fluid%vi%comps%bndflux%comp%subgrid (integer) (9.3.1.1.2)
scalar (740)	edge%fluid%vi%comps%bndflux%comp%scalar (vecflt_type) (9.3.1.2.9)
vector (740)	edge%fluid%vi%comps%bndflux%comp%vector (matflt_type) (9.3.1.2.7)
matrix (740)	edge%fluid%vi%comps%bndflux%comp%matrix (array3dflt_type) (9.3.1.2.1)
align (745)	edge%fluid%vi%comps%bndflux%align (vecint_type) (9.3.1.2.10)
alignid (745)	edge%fluid%vi%comps%bndflux%alignid (vecstring_type) (9.3.1.2.11)
transpcoeff (801)	edge%fluid%vi%comps%transpcoeff (edge_fluid_scalar_transpcoeff) (9.3.1.3.130)
d (803)	edge%fluid%vi%comps%transpcoeff%d (complexgrid_vector_simplestruct) (9.3.1.3.73)
label (746)	edge%fluid%vi%comps%transpcoeff%d%label (string) (9.3.1.1.3)
comp (746)	edge%fluid%vi%comps%transpcoeff%d%comp (complexgrid_scalar) (9.3.1.3.67)
subgrid (740)	edge%fluid%vi%comps%transpcoeff%d%comp%subgrid (integer) (9.3.1.1.2)
scalar (740)	edge%fluid%vi%comps%transpcoeff%d%comp%scalar (vecflt_type) (9.3.1.2.9)
vector (740)	edge%fluid%vi%comps%transpcoeff%d%comp%vector (matflt_type) (9.3.1.2.7)
matrix (740)	edge%fluid%vi%comps%transpcoeff%d%comp%matrix (array3dflt_type) (9.3.1.2.1)
align (746)	edge%fluid%vi%comps%transpcoeff%d%align (vecint_type) (9.3.1.2.10)
alignid (746)	edge%fluid%vi%comps%transpcoeff%d%alignid (vecstring_type) (9.3.1.2.11)
v (803)	edge%fluid%vi%comps%transpcoeff%v (complexgrid_vector_simplestruct) (9.3.1.3.73)
label (746)	edge%fluid%vi%comps%transpcoeff%v%label (string) (9.3.1.1.3)
comp (746)	edge%fluid%vi%comps%transpcoeff%v%comp (complexgrid_scalar) (9.3.1.3.67)
subgrid (740)	edge%fluid%vi%comps%transpcoeff%v%comp%subgrid (integer) (9.3.1.1.2)
scalar (740)	edge%fluid%vi%comps%transpcoeff%v%comp%scalar (vecflt_type) (9.3.1.2.9)
vector (740)	edge%fluid%vi%comps%transpcoeff%v%comp%vector (matflt_type) (9.3.1.2.7)
matrix (740)	edge%fluid%vi%comps%transpcoeff%v%comp%matrix (array3dflt_type) (9.3.1.2.1)
align (746)	edge%fluid%vi%comps%transpcoeff%v%align (vecint_type) (9.3.1.2.10)
alignid (746)	edge%fluid%vi%comps%transpcoeff%v%alignid (vecstring_type) (9.3.1.2.11)
source (801)	edge%fluid%vi%comps%source (complexgrid_scalar) (9.3.1.3.67)
subgrid (740)	edge%fluid%vi%comps%source%subgrid (integer) (9.3.1.1.2)
scalar (740)	edge%fluid%vi%comps%source%scalar (vecflt_type) (9.3.1.2.9)
vector (740)	edge%fluid%vi%comps%source%vector (matflt_type) (9.3.1.2.7)
matrix (740)	edge%fluid%vi%comps%source%matrix (array3dflt_type) (9.3.1.2.1)
align (804)	edge%fluid%vi%align (vecint_type) (9.3.1.2.10)
alignid (804)	edge%fluid%vi%alignid (vecstring_type) (9.3.1.2.11)
te (800)	edge%fluid%te (edge_fluid_scalar_simplestruct) (9.3.1.3.129)
value (802)	edge%fluid%te%value (complexgrid_scalar) (9.3.1.3.67)
subgrid (740)	edge%fluid%te%value%subgrid (integer) (9.3.1.1.2)
scalar (740)	edge%fluid%te%value%scalar (vecflt_type) (9.3.1.2.9)
vector (740)	edge%fluid%te%value%vector (matflt_type) (9.3.1.2.7)
matrix (740)	edge%fluid%te%value%matrix (array3dflt_type) (9.3.1.2.1)
bndvalue (802)	edge%fluid%te%bndvalue (complexgrid_scalar) (9.3.1.3.67)
subgrid (740)	edge%fluid%te%bndvalue%subgrid (integer) (9.3.1.1.2)
scalar (740)	edge%fluid%te%bndvalue%scalar (vecflt_type) (9.3.1.2.9)
vector (740)	edge%fluid%te%bndvalue%vector (matflt_type) (9.3.1.2.7)
matrix (740)	edge%fluid%te%bndvalue%matrix (array3dflt_type) (9.3.1.2.1)
flux (802)	edge%fluid%te%flux (complexgrid_vector) (9.3.1.3.72)

label (745)	edge%fluid%te%flux%label (string) (9.3.1.1.3)
comp (745)	edge%fluid%te%flux%comp (complexgrid_scalar) (9.3.1.3.67)
subgrid (740)	edge%fluid%te%flux%comp%subgrid (integer) (9.3.1.1.2)
scalar (740)	edge%fluid%te%flux%comp%scalar (vecflt_type) (9.3.1.2.9)
vector (740)	edge%fluid%te%flux%comp%vector (matflt_type) (9.3.1.2.7)
matrix (740)	edge%fluid%te%flux%comp%matrix (array3dflt_type) (9.3.1.2.1)
align (745)	edge%fluid%te%flux%align (vecint_type) (9.3.1.2.10)
alignid (745)	edge%fluid%te%flux%alignid (vecstring_type) (9.3.1.2.11)
bndflux (802)	edge%fluid%te%bndflux (complexgrid_vector) (9.3.1.3.72)
label (745)	edge%fluid%te%bndflux%label (string) (9.3.1.1.3)
comp (745)	edge%fluid%te%bndflux%comp (complexgrid_scalar) (9.3.1.3.67)
subgrid (740)	edge%fluid%te%bndflux%comp%subgrid (integer) (9.3.1.1.2)
scalar (740)	edge%fluid%te%bndflux%comp%scalar (vecflt_type) (9.3.1.2.9)
vector (740)	edge%fluid%te%bndflux%comp%vector (matflt_type) (9.3.1.2.7)
matrix (740)	edge%fluid%te%bndflux%comp%matrix (array3dflt_type) (9.3.1.2.1)
align (745)	edge%fluid%te%bndflux%align (vecint_type) (9.3.1.2.10)
alignid (745)	edge%fluid%te%bndflux%alignid (vecstring_type) (9.3.1.2.11)
transpcoeff (802)	edge%fluid%te%transpcoeff (edge_fluid_scalar_transpcoeff) (9.3.1.3.130)
d (803)	edge%fluid%te%transpcoeff%d (complexgrid_vector_simplestruct) (9.3.1.3.73)
label (746)	edge%fluid%te%transpcoeff%d%label (string) (9.3.1.1.3)
comp (746)	edge%fluid%te%transpcoeff%d%comp (complexgrid_scalar) (9.3.1.3.67)
subgrid (740)	edge%fluid%te%transpcoeff%d%comp%subgrid (integer) (9.3.1.1.2)
scalar (740)	edge%fluid%te%transpcoeff%d%comp%scalar (vecflt_type) (9.3.1.2.9)
vector (740)	edge%fluid%te%transpcoeff%d%comp%vector (matflt_type) (9.3.1.2.7)
matrix (740)	edge%fluid%te%transpcoeff%d%comp%matrix (array3dflt_type) (9.3.1.2.1)
align (746)	edge%fluid%te%transpcoeff%d%align (vecint_type) (9.3.1.2.10)
alignid (746)	edge%fluid%te%transpcoeff%d%alignid (vecstring_type) (9.3.1.2.11)
v (803)	edge%fluid%te%transpcoeff%v (complexgrid_vector_simplestruct) (9.3.1.3.73)
label (746)	edge%fluid%te%transpcoeff%v%label (string) (9.3.1.1.3)
comp (746)	edge%fluid%te%transpcoeff%v%comp (complexgrid_scalar) (9.3.1.3.67)
subgrid (740)	edge%fluid%te%transpcoeff%v%comp%subgrid (integer) (9.3.1.1.2)
scalar (740)	edge%fluid%te%transpcoeff%v%comp%scalar (vecflt_type) (9.3.1.2.9)
vector (740)	edge%fluid%te%transpcoeff%v%comp%vector (matflt_type) (9.3.1.2.7)
matrix (740)	edge%fluid%te%transpcoeff%v%comp%matrix (array3dflt_type) (9.3.1.2.1)
align (746)	edge%fluid%te%transpcoeff%v%align (vecint_type) (9.3.1.2.10)
alignid (746)	edge%fluid%te%transpcoeff%v%alignid (vecstring_type) (9.3.1.2.11)
source (802)	edge%fluid%te%source (complexgrid_scalar) (9.3.1.3.67)
subgrid (740)	edge%fluid%te%source%subgrid (integer) (9.3.1.1.2)
scalar (740)	edge%fluid%te%source%scalar (vecflt_type) (9.3.1.2.9)
vector (740)	edge%fluid%te%source%vector (matflt_type) (9.3.1.2.7)
matrix (740)	edge%fluid%te%source%matrix (array3dflt_type) (9.3.1.2.1)
ti (800)	edge%fluid%ti (edge_fluid_scalar) (9.3.1.3.128)
value (801)	edge%fluid%ti%value (complexgrid_scalar) (9.3.1.3.67)
subgrid (740)	edge%fluid%ti%value%subgrid (integer) (9.3.1.1.2)
scalar (740)	edge%fluid%ti%value%scalar (vecflt_type) (9.3.1.2.9)
vector (740)	edge%fluid%ti%value%vector (matflt_type) (9.3.1.2.7)
matrix (740)	edge%fluid%ti%value%matrix (array3dflt_type) (9.3.1.2.1)
bndvalue (801)	edge%fluid%ti%bndvalue (complexgrid_scalar) (9.3.1.3.67)
subgrid (740)	edge%fluid%ti%bndvalue%subgrid (integer) (9.3.1.1.2)
scalar (740)	edge%fluid%ti%bndvalue%scalar (vecflt_type) (9.3.1.2.9)
vector (740)	edge%fluid%ti%bndvalue%vector (matflt_type) (9.3.1.2.7)
matrix (740)	edge%fluid%ti%bndvalue%matrix (array3dflt_type) (9.3.1.2.1)
flux (801)	edge%fluid%ti%flux (complexgrid_vector) (9.3.1.3.72)
label (745)	edge%fluid%ti%flux%label (string) (9.3.1.1.3)
comp (745)	edge%fluid%ti%flux%comp (complexgrid_scalar) (9.3.1.3.67)
subgrid (740)	edge%fluid%ti%flux%comp%subgrid (integer) (9.3.1.1.2)
scalar (740)	edge%fluid%ti%flux%comp%scalar (vecflt_type) (9.3.1.2.9)
vector (740)	edge%fluid%ti%flux%comp%vector (matflt_type) (9.3.1.2.7)
matrix (740)	edge%fluid%ti%flux%comp%matrix (array3dflt_type) (9.3.1.2.1)
align (745)	edge%fluid%ti%flux%align (vecint_type) (9.3.1.2.10)
alignid (745)	edge%fluid%ti%flux%alignid (vecstring_type) (9.3.1.2.11)

bndflux (801)	edge%fluid%ti%bndflux (complexgrid_vector) (9.3.1.3.72)
label (745)	edge%fluid%ti%bndflux%label (string) (9.3.1.1.3)
comp (745)	edge%fluid%ti%bndflux%comp (complexgrid_scalar) (9.3.1.3.67)
subgrid (740)	edge%fluid%ti%bndflux%comp%subgrid (integer) (9.3.1.1.2)
scalar (740)	edge%fluid%ti%bndflux%comp%scalar (vecflt_type) (9.3.1.2.9)
vector (740)	edge%fluid%ti%bndflux%comp%vector (matflt_type) (9.3.1.2.7)
matrix (740)	edge%fluid%ti%bndflux%comp%matrix (array3dflt_type) (9.3.1.2.1)
align (745)	edge%fluid%ti%bndflux%align (vecint_type) (9.3.1.2.10)
alignid (745)	edge%fluid%ti%bndflux%alignid (vecstring_type) (9.3.1.2.11)
transpcoeff (801)	edge%fluid%ti%transpcoeff (edge_fluid_scalar_transpcoeff) (9.3.1.3.130)
d (803)	edge%fluid%ti%transpcoeff%d (complexgrid_vector_simplestruct) (9.3.1.3.73)
label (746)	edge%fluid%ti%transpcoeff%d%label (string) (9.3.1.1.3)
comp (746)	edge%fluid%ti%transpcoeff%d%comp (complexgrid_scalar) (9.3.1.3.67)
subgrid (740)	edge%fluid%ti%transpcoeff%d%comp%subgrid (integer) (9.3.1.1.2)
scalar (740)	edge%fluid%ti%transpcoeff%d%comp%scalar (vecflt_type) (9.3.1.2.9)
vector (740)	edge%fluid%ti%transpcoeff%d%comp%vector (matflt_type) (9.3.1.2.7)
matrix (740)	edge%fluid%ti%transpcoeff%d%comp%matrix (array3dflt_type) (9.3.1.2.1)
align (746)	edge%fluid%ti%transpcoeff%d%align (vecint_type) (9.3.1.2.10)
alignid (746)	edge%fluid%ti%transpcoeff%d%alignid (vecstring_type) (9.3.1.2.11)
v (803)	edge%fluid%ti%transpcoeff%v (complexgrid_vector_simplestruct) (9.3.1.3.73)
label (746)	edge%fluid%ti%transpcoeff%v%label (string) (9.3.1.1.3)
comp (746)	edge%fluid%ti%transpcoeff%v%comp (complexgrid_scalar) (9.3.1.3.67)
subgrid (740)	edge%fluid%ti%transpcoeff%v%comp%subgrid (integer) (9.3.1.1.2)
scalar (740)	edge%fluid%ti%transpcoeff%v%comp%scalar (vecflt_type) (9.3.1.2.9)
vector (740)	edge%fluid%ti%transpcoeff%v%comp%vector (matflt_type) (9.3.1.2.7)
matrix (740)	edge%fluid%ti%transpcoeff%v%comp%matrix (array3dflt_type) (9.3.1.2.1)
align (746)	edge%fluid%ti%transpcoeff%v%align (vecint_type) (9.3.1.2.10)
alignid (746)	edge%fluid%ti%transpcoeff%v%alignid (vecstring_type) (9.3.1.2.11)
source (801)	edge%fluid%ti%source (complexgrid_scalar) (9.3.1.3.67)
subgrid (740)	edge%fluid%ti%source%subgrid (integer) (9.3.1.1.2)
scalar (740)	edge%fluid%ti%source%scalar (vecflt_type) (9.3.1.2.9)
vector (740)	edge%fluid%ti%source%vector (matflt_type) (9.3.1.2.7)
matrix (740)	edge%fluid%ti%source%matrix (array3dflt_type) (9.3.1.2.1)
te_aniso (800)	edge%fluid%te_aniso (edge_fluid_vector_simplestruct) (9.3.1.3.132)
comps (805)	edge%fluid%te_aniso%comps (edge_fluid_scalar) (9.3.1.3.128)
value (801)	edge%fluid%te_aniso%comps%value (complexgrid_scalar) (9.3.1.3.67)
subgrid (740)	edge%fluid%te_aniso%comps%value%subgrid (integer) (9.3.1.1.2)
scalar (740)	edge%fluid%te_aniso%comps%value%scalar (vecflt_type) (9.3.1.2.9)
vector (740)	edge%fluid%te_aniso%comps%value%vector (matflt_type) (9.3.1.2.7)
matrix (740)	edge%fluid%te_aniso%comps%value%matrix (array3dflt_type) (9.3.1.2.1)
bndvalue (801)	edge%fluid%te_aniso%comps%bndvalue (complexgrid_scalar) (9.3.1.3.67)
subgrid (740)	edge%fluid%te_aniso%comps%bndvalue%subgrid (integer) (9.3.1.1.2)
scalar (740)	edge%fluid%te_aniso%comps%bndvalue%scalar (vecflt_type) (9.3.1.2.9)
vector (740)	edge%fluid%te_aniso%comps%bndvalue%vector (matflt_type) (9.3.1.2.7)
matrix (740)	edge%fluid%te_aniso%comps%bndvalue%matrix (array3dflt_type) (9.3.1.2.1)
flux (801)	edge%fluid%te_aniso%comps%flux (complexgrid_vector) (9.3.1.3.72)
label (745)	edge%fluid%te_aniso%comps%flux%label (string) (9.3.1.1.3)
comp (745)	edge%fluid%te_aniso%comps%flux%comp (complexgrid_scalar) (9.3.1.3.67)
subgrid (740)	edge%fluid%te_aniso%comps%flux%comp%subgrid (integer) (9.3.1.1.2)
scalar (740)	edge%fluid%te_aniso%comps%flux%comp%scalar (vecflt_type) (9.3.1.2.9)
vector (740)	edge%fluid%te_aniso%comps%flux%comp%vector (matflt_type) (9.3.1.2.7)
matrix (740)	edge%fluid%te_aniso%comps%flux%comp%matrix (array3dflt_type) (9.3.1.2.1)
align (745)	edge%fluid%te_aniso%comps%flux%align (vecint_type) (9.3.1.2.10)
alignid (745)	edge%fluid%te_aniso%comps%flux%alignid (vecstring_type) (9.3.1.2.11)
bndflux (801)	edge%fluid%te_aniso%comps%bndflux (complexgrid_vector) (9.3.1.3.72)
label (745)	edge%fluid%te_aniso%comps%bndflux%label (string) (9.3.1.1.3)
comp (745)	edge%fluid%te_aniso%comps%bndflux%comp (complexgrid_scalar) (9.3.1.3.67)
subgrid (740)	edge%fluid%te_aniso%comps%bndflux%comp%subgrid (integer) (9.3.1.1.2)
scalar (740)	edge%fluid%te_aniso%comps%bndflux%comp%scalar (vecflt_type) (9.3.1.2.9)
vector (740)	edge%fluid%te_aniso%comps%bndflux%comp%vector (matflt_type) (9.3.1.2.7)
matrix (740)	edge%fluid%te_aniso%comps%bndflux%comp%matrix (array3dflt_type) (9.3.1.2.1)

align (745)	edge%fluid%te.aniso%comps%bndflux%align (vecint_type) (9.3.1.2.10)
alignid (745)	edge%fluid%te.aniso%comps%bndflux%alignid (vecstring_type) (9.3.1.2.11)
transpcoeff (801)	edge%fluid%te.aniso%comps%transpcoeff (edge_fluid_scalar_transpcoeff) (9.3.1.3.130)
d (803)	edge%fluid%te.aniso%comps%transpcoeff%d (complexgrid_vector_simplestruct) (9.3.1.3.73)
label (746)	edge%fluid%te.aniso%comps%transpcoeff%d%label (string) (9.3.1.1.3)
comp (746)	edge%fluid%te.aniso%comps%transpcoeff%d%comp (complexgrid_scalar) (9.3.1.3.67)
subgrid (740)	edge%fluid%te.aniso%comps%transpcoeff%d%comp%subgrid (integer) (9.3.1.1.2)
scalar (740)	edge%fluid%te.aniso%comps%transpcoeff%d%comp%scalar (vecflt_type) (9.3.1.2.9)
vector (740)	edge%fluid%te.aniso%comps%transpcoeff%d%comp%vector (matflt_type) (9.3.1.2.7)
matrix (740)	edge%fluid%te.aniso%comps%transpcoeff%d%comp%matrix (array3dflt_type) (9.3.1.2.1)
align (746)	edge%fluid%te.aniso%comps%transpcoeff%d%align (vecint_type) (9.3.1.2.10)
alignid (746)	edge%fluid%te.aniso%comps%transpcoeff%d%alignid (vecstring_type) (9.3.1.2.11)
v (803)	edge%fluid%te.aniso%comps%transpcoeff%v (complexgrid_vector_simplestruct) (9.3.1.3.73)
label (746)	edge%fluid%te.aniso%comps%transpcoeff%v%label (string) (9.3.1.1.3)
comp (746)	edge%fluid%te.aniso%comps%transpcoeff%v%comp (complexgrid_scalar) (9.3.1.3.67)
subgrid (740)	edge%fluid%te.aniso%comps%transpcoeff%v%comp%subgrid (integer) (9.3.1.1.2)
scalar (740)	edge%fluid%te.aniso%comps%transpcoeff%v%comp%scalar (vecflt_type) (9.3.1.2.9)
vector (740)	edge%fluid%te.aniso%comps%transpcoeff%v%comp%vector (matflt_type) (9.3.1.2.7)
matrix (740)	edge%fluid%te.aniso%comps%transpcoeff%v%comp%matrix (array3dflt_type) (9.3.1.2.1)
align (746)	edge%fluid%te.aniso%comps%transpcoeff%v%align (vecint_type) (9.3.1.2.10)
alignid (746)	edge%fluid%te.aniso%comps%transpcoeff%v%alignid (vecstring_type) (9.3.1.2.11)
source (801)	edge%fluid%te.aniso%comps%source (complexgrid_scalar) (9.3.1.3.67)
subgrid (740)	edge%fluid%te.aniso%comps%source%subgrid (integer) (9.3.1.1.2)
scalar (740)	edge%fluid%te.aniso%comps%source%scalar (vecflt_type) (9.3.1.2.9)
vector (740)	edge%fluid%te.aniso%comps%source%vector (matflt_type) (9.3.1.2.7)
matrix (740)	edge%fluid%te.aniso%comps%source%matrix (array3dflt_type) (9.3.1.2.1)
align (805)	edge%fluid%te.aniso%align (vecint_type) (9.3.1.2.10)
alignid (805)	edge%fluid%te.aniso%alignid (vecstring_type) (9.3.1.2.11)
ti.aniso (800)	edge%fluid%ti.aniso (edge_fluid_vector) (9.3.1.3.131)
comps (804)	edge%fluid%ti.aniso%comps (edge_fluid_scalar) (9.3.1.3.128)
value (801)	edge%fluid%ti.aniso%comps%value (complexgrid_scalar) (9.3.1.3.67)
subgrid (740)	edge%fluid%ti.aniso%comps%value%subgrid (integer) (9.3.1.1.2)
scalar (740)	edge%fluid%ti.aniso%comps%value%scalar (vecflt_type) (9.3.1.2.9)
vector (740)	edge%fluid%ti.aniso%comps%value%vector (matflt_type) (9.3.1.2.7)
matrix (740)	edge%fluid%ti.aniso%comps%value%matrix (array3dflt_type) (9.3.1.2.1)
bndvalue (801)	edge%fluid%ti.aniso%comps%bndvalue (complexgrid_scalar) (9.3.1.3.67)
subgrid (740)	edge%fluid%ti.aniso%comps%bndvalue%subgrid (integer) (9.3.1.1.2)
scalar (740)	edge%fluid%ti.aniso%comps%bndvalue%scalar (vecflt_type) (9.3.1.2.9)
vector (740)	edge%fluid%ti.aniso%comps%bndvalue%vector (matflt_type) (9.3.1.2.7)
matrix (740)	edge%fluid%ti.aniso%comps%bndvalue%matrix (array3dflt_type) (9.3.1.2.1)
flux (801)	edge%fluid%ti.aniso%comps%flux (complexgrid_vector) (9.3.1.3.72)
label (745)	edge%fluid%ti.aniso%comps%flux%label (string) (9.3.1.1.3)
comp (745)	edge%fluid%ti.aniso%comps%flux%comp (complexgrid_scalar) (9.3.1.3.67)
subgrid (740)	edge%fluid%ti.aniso%comps%flux%comp%subgrid (integer) (9.3.1.1.2)
scalar (740)	edge%fluid%ti.aniso%comps%flux%comp%scalar (vecflt_type) (9.3.1.2.9)
vector (740)	edge%fluid%ti.aniso%comps%flux%comp%vector (matflt_type) (9.3.1.2.7)
matrix (740)	edge%fluid%ti.aniso%comps%flux%comp%matrix (array3dflt_type) (9.3.1.2.1)
align (745)	edge%fluid%ti.aniso%comps%flux%align (vecint_type) (9.3.1.2.10)
alignid (745)	edge%fluid%ti.aniso%comps%flux%alignid (vecstring_type) (9.3.1.2.11)
bndflux (801)	edge%fluid%ti.aniso%comps%bndflux (complexgrid_vector) (9.3.1.3.72)
label (745)	edge%fluid%ti.aniso%comps%bndflux%label (string) (9.3.1.1.3)
comp (745)	edge%fluid%ti.aniso%comps%bndflux%comp (complexgrid_scalar) (9.3.1.3.67)
subgrid (740)	edge%fluid%ti.aniso%comps%bndflux%comp%subgrid (integer) (9.3.1.1.2)
scalar (740)	edge%fluid%ti.aniso%comps%bndflux%comp%scalar (vecflt_type) (9.3.1.2.9)
vector (740)	edge%fluid%ti.aniso%comps%bndflux%comp%vector (matflt_type) (9.3.1.2.7)
matrix (740)	edge%fluid%ti.aniso%comps%bndflux%comp%matrix (array3dflt_type) (9.3.1.2.1)
align (745)	edge%fluid%ti.aniso%comps%bndflux%align (vecint_type) (9.3.1.2.10)
alignid (745)	edge%fluid%ti.aniso%comps%bndflux%alignid (vecstring_type) (9.3.1.2.11)
transpcoeff (801)	edge%fluid%ti.aniso%comps%transpcoeff (edge_fluid_scalar_transpcoeff) (9.3.1.3.130)
d (803)	edge%fluid%ti.aniso%comps%transpcoeff%d (complexgrid_vector_simplestruct) (9.3.1.3.73)
label (746)	edge%fluid%ti.aniso%comps%transpcoeff%d%label (string) (9.3.1.1.3)



comp (746)	edge%fluid%ti.aniso%comps%transpcoeff%d%comp (complexgrid_scalar) (9.3.1.3.67)
subgrid (740)	edge%fluid%ti.aniso%comps%transpcoeff%d%comp%subgrid (integer) (9.3.1.1.2)
scalar (740)	edge%fluid%ti.aniso%comps%transpcoeff%d%comp%scalar (vecflt_type) (9.3.1.2.9)
vector (740)	edge%fluid%ti.aniso%comps%transpcoeff%d%comp%vector (matflt_type) (9.3.1.2.7)
matrix (740)	edge%fluid%ti.aniso%comps%transpcoeff%d%comp%matrix (array3dflt_type) (9.3.1.2.1)
align (746)	edge%fluid%ti.aniso%comps%transpcoeff%d%align (vecint_type) (9.3.1.2.10)
alignid (746)	edge%fluid%ti.aniso%comps%transpcoeff%d%alignid (vecstring_type) (9.3.1.2.11)
v (803)	edge%fluid%ti.aniso%comps%transpcoeff%v (complexgrid_vector_simplestruct) (9.3.1.3.73)
label (746)	edge%fluid%ti.aniso%comps%transpcoeff%v%label (string) (9.3.1.1.3)
comp (746)	edge%fluid%ti.aniso%comps%transpcoeff%v%comp (complexgrid_scalar) (9.3.1.3.67)
subgrid (740)	edge%fluid%ti.aniso%comps%transpcoeff%v%comp%subgrid (integer) (9.3.1.1.2)
scalar (740)	edge%fluid%ti.aniso%comps%transpcoeff%v%comp%scalar (vecflt_type) (9.3.1.2.9)
vector (740)	edge%fluid%ti.aniso%comps%transpcoeff%v%comp%vector (matflt_type) (9.3.1.2.7)
matrix (740)	edge%fluid%ti.aniso%comps%transpcoeff%v%comp%matrix (array3dflt_type) (9.3.1.2.1)
align (746)	edge%fluid%ti.aniso%comps%transpcoeff%v%align (vecint_type) (9.3.1.2.10)
alignid (746)	edge%fluid%ti.aniso%comps%transpcoeff%v%alignid (vecstring_type) (9.3.1.2.11)
source (801)	edge%fluid%ti.aniso%comps%source (complexgrid_scalar) (9.3.1.3.67)
subgrid (740)	edge%fluid%ti.aniso%comps%source%subgrid (integer) (9.3.1.1.2)
scalar (740)	edge%fluid%ti.aniso%comps%source%scalar (vecflt_type) (9.3.1.2.9)
vector (740)	edge%fluid%ti.aniso%comps%source%vector (matflt_type) (9.3.1.2.7)
matrix (740)	edge%fluid%ti.aniso%comps%source%matrix (array3dflt_type) (9.3.1.2.1)
align (804)	edge%fluid%ti.aniso%align (vecint_type) (9.3.1.2.10)
alignid (804)	edge%fluid%ti.aniso%alignid (vecstring_type) (9.3.1.2.11)
po (800)	edge%fluid%po (edge_fluid_scalar_simplestruct) (9.3.1.3.129)
value (802)	edge%fluid%po%value (complexgrid_scalar) (9.3.1.3.67)
subgrid (740)	edge%fluid%po%value%subgrid (integer) (9.3.1.1.2)
scalar (740)	edge%fluid%po%value%scalar (vecflt_type) (9.3.1.2.9)
vector (740)	edge%fluid%po%value%vector (matflt_type) (9.3.1.2.7)
matrix (740)	edge%fluid%po%value%matrix (array3dflt_type) (9.3.1.2.1)
bndvalue (802)	edge%fluid%po%bndvalue (complexgrid_scalar) (9.3.1.3.67)
subgrid (740)	edge%fluid%po%bndvalue%subgrid (integer) (9.3.1.1.2)
scalar (740)	edge%fluid%po%bndvalue%scalar (vecflt_type) (9.3.1.2.9)
vector (740)	edge%fluid%po%bndvalue%vector (matflt_type) (9.3.1.2.7)
matrix (740)	edge%fluid%po%bndvalue%matrix (array3dflt_type) (9.3.1.2.1)
flux (802)	edge%fluid%po%flux (complexgrid_vector) (9.3.1.3.72)
label (745)	edge%fluid%po%flux%label (string) (9.3.1.1.3)
comp (745)	edge%fluid%po%flux%comp (complexgrid_scalar) (9.3.1.3.67)
subgrid (740)	edge%fluid%po%flux%comp%subgrid (integer) (9.3.1.1.2)
scalar (740)	edge%fluid%po%flux%comp%scalar (vecflt_type) (9.3.1.2.9)
vector (740)	edge%fluid%po%flux%comp%vector (matflt_type) (9.3.1.2.7)
matrix (740)	edge%fluid%po%flux%comp%matrix (array3dflt_type) (9.3.1.2.1)
align (745)	edge%fluid%po%flux%align (vecint_type) (9.3.1.2.10)
alignid (745)	edge%fluid%po%flux%alignid (vecstring_type) (9.3.1.2.11)
bndflux (802)	edge%fluid%po%bndflux (complexgrid_vector) (9.3.1.3.72)
label (745)	edge%fluid%po%bndflux%label (string) (9.3.1.1.3)
comp (745)	edge%fluid%po%bndflux%comp (complexgrid_scalar) (9.3.1.3.67)
subgrid (740)	edge%fluid%po%bndflux%comp%subgrid (integer) (9.3.1.1.2)
scalar (740)	edge%fluid%po%bndflux%comp%scalar (vecflt_type) (9.3.1.2.9)
vector (740)	edge%fluid%po%bndflux%comp%vector (matflt_type) (9.3.1.2.7)
matrix (740)	edge%fluid%po%bndflux%comp%matrix (array3dflt_type) (9.3.1.2.1)
align (745)	edge%fluid%po%bndflux%align (vecint_type) (9.3.1.2.10)
alignid (745)	edge%fluid%po%bndflux%alignid (vecstring_type) (9.3.1.2.11)
transpcoeff (802)	edge%fluid%po%transpcoeff (edge_fluid_scalar_transpcoeff) (9.3.1.3.130)
d (803)	edge%fluid%po%transpcoeff%d (complexgrid_vector_simplestruct) (9.3.1.3.73)
label (746)	edge%fluid%po%transpcoeff%d%label (string) (9.3.1.1.3)
comp (746)	edge%fluid%po%transpcoeff%d%comp (complexgrid_scalar) (9.3.1.3.67)
subgrid (740)	edge%fluid%po%transpcoeff%d%comp%subgrid (integer) (9.3.1.1.2)
scalar (740)	edge%fluid%po%transpcoeff%d%comp%scalar (vecflt_type) (9.3.1.2.9)
vector (740)	edge%fluid%po%transpcoeff%d%comp%vector (matflt_type) (9.3.1.2.7)
matrix (740)	edge%fluid%po%transpcoeff%d%comp%matrix (array3dflt_type) (9.3.1.2.1)
align (746)	edge%fluid%po%transpcoeff%d%align (vecint_type) (9.3.1.2.10)

alignid (746)	edge%fluid%po%transpcoeff%d%alignid (vecstring_type) (9.3.1.2.11)
v (803)	edge%fluid%po%transpcoeff%v (complexgrid_vector_simplestruct) (9.3.1.3.73)
label (746)	edge%fluid%po%transpcoeff%v%label (string) (9.3.1.1.3)
comp (746)	edge%fluid%po%transpcoeff%v%comp (complexgrid_scalar) (9.3.1.3.67)
subgrid (740)	edge%fluid%po%transpcoeff%v%comp%subgrid (integer) (9.3.1.1.2)
scalar (740)	edge%fluid%po%transpcoeff%v%comp%scalar (vecflt_type) (9.3.1.2.9)
vector (740)	edge%fluid%po%transpcoeff%v%comp%vector (matflt_type) (9.3.1.2.7)
matrix (740)	edge%fluid%po%transpcoeff%v%comp%matrix (array3dflt_type) (9.3.1.2.1)
align (746)	edge%fluid%po%transpcoeff%v%align (vecint_type) (9.3.1.2.10)
alignid (746)	edge%fluid%po%transpcoeff%v%alignid (vecstring_type) (9.3.1.2.11)
source (802)	edge%fluid%po%source (complexgrid_scalar) (9.3.1.3.67)
subgrid (740)	edge%fluid%po%source%subgrid (integer) (9.3.1.1.2)
scalar (740)	edge%fluid%po%source%scalar (vecflt_type) (9.3.1.2.9)
vector (740)	edge%fluid%po%source%vector (matflt_type) (9.3.1.2.7)
matrix (740)	edge%fluid%po%source%matrix (array3dflt_type) (9.3.1.2.1)
j (800)	edge%fluid%j (edge_fluid_vector_simplestruct) (9.3.1.3.132)
comps (805)	edge%fluid%j%comps (edge_fluid_scalar) (9.3.1.3.128)
value (801)	edge%fluid%j%comps%value (complexgrid_scalar) (9.3.1.3.67)
subgrid (740)	edge%fluid%j%comps%value%subgrid (integer) (9.3.1.1.2)
scalar (740)	edge%fluid%j%comps%value%scalar (vecflt_type) (9.3.1.2.9)
vector (740)	edge%fluid%j%comps%value%vector (matflt_type) (9.3.1.2.7)
matrix (740)	edge%fluid%j%comps%value%matrix (array3dflt_type) (9.3.1.2.1)
bndvalue (801)	edge%fluid%j%comps%bndvalue (complexgrid_scalar) (9.3.1.3.67)
subgrid (740)	edge%fluid%j%comps%bndvalue%subgrid (integer) (9.3.1.1.2)
scalar (740)	edge%fluid%j%comps%bndvalue%scalar (vecflt_type) (9.3.1.2.9)
vector (740)	edge%fluid%j%comps%bndvalue%vector (matflt_type) (9.3.1.2.7)
matrix (740)	edge%fluid%j%comps%bndvalue%matrix (array3dflt_type) (9.3.1.2.1)
flux (801)	edge%fluid%j%comps%flux (complexgrid_vector) (9.3.1.3.72)
label (745)	edge%fluid%j%comps%flux%label (string) (9.3.1.1.3)
comp (745)	edge%fluid%j%comps%flux%comp (complexgrid_scalar) (9.3.1.3.67)
subgrid (740)	edge%fluid%j%comps%flux%comp%subgrid (integer) (9.3.1.1.2)
scalar (740)	edge%fluid%j%comps%flux%comp%scalar (vecflt_type) (9.3.1.2.9)
vector (740)	edge%fluid%j%comps%flux%comp%vector (matflt_type) (9.3.1.2.7)
matrix (740)	edge%fluid%j%comps%flux%comp%matrix (array3dflt_type) (9.3.1.2.1)
align (745)	edge%fluid%j%comps%flux%align (vecint_type) (9.3.1.2.10)
alignid (745)	edge%fluid%j%comps%flux%alignid (vecstring_type) (9.3.1.2.11)
bndflux (801)	edge%fluid%j%comps%bndflux (complexgrid_vector) (9.3.1.3.72)
label (745)	edge%fluid%j%comps%bndflux%label (string) (9.3.1.1.3)
comp (745)	edge%fluid%j%comps%bndflux%comp (complexgrid_scalar) (9.3.1.3.67)
subgrid (740)	edge%fluid%j%comps%bndflux%comp%subgrid (integer) (9.3.1.1.2)
scalar (740)	edge%fluid%j%comps%bndflux%comp%scalar (vecflt_type) (9.3.1.2.9)
vector (740)	edge%fluid%j%comps%bndflux%comp%vector (matflt_type) (9.3.1.2.7)
matrix (740)	edge%fluid%j%comps%bndflux%comp%matrix (array3dflt_type) (9.3.1.2.1)
align (745)	edge%fluid%j%comps%bndflux%align (vecint_type) (9.3.1.2.10)
alignid (745)	edge%fluid%j%comps%bndflux%alignid (vecstring_type) (9.3.1.2.11)
transpcoeff (801)	edge%fluid%j%comps%transpcoeff (edge_fluid_scalar_transpcoeff) (9.3.1.3.130)
d (803)	edge%fluid%j%comps%transpcoeff%d (complexgrid_vector_simplestruct) (9.3.1.3.73)
label (746)	edge%fluid%j%comps%transpcoeff%d%label (string) (9.3.1.1.3)
comp (746)	edge%fluid%j%comps%transpcoeff%d%comp (complexgrid_scalar) (9.3.1.3.67)
subgrid (740)	edge%fluid%j%comps%transpcoeff%d%comp%subgrid (integer) (9.3.1.1.2)
scalar (740)	edge%fluid%j%comps%transpcoeff%d%comp%scalar (vecflt_type) (9.3.1.2.9)
vector (740)	edge%fluid%j%comps%transpcoeff%d%comp%vector (matflt_type) (9.3.1.2.7)
matrix (740)	edge%fluid%j%comps%transpcoeff%d%comp%matrix (array3dflt_type) (9.3.1.2.1)
align (746)	edge%fluid%j%comps%transpcoeff%d%align (vecint_type) (9.3.1.2.10)
alignid (746)	edge%fluid%j%comps%transpcoeff%d%alignid (vecstring_type) (9.3.1.2.11)
v (803)	edge%fluid%j%comps%transpcoeff%v (complexgrid_vector_simplestruct) (9.3.1.3.73)
label (746)	edge%fluid%j%comps%transpcoeff%v%label (string) (9.3.1.1.3)
comp (746)	edge%fluid%j%comps%transpcoeff%v%comp (complexgrid_scalar) (9.3.1.3.67)
subgrid (740)	edge%fluid%j%comps%transpcoeff%v%comp%subgrid (integer) (9.3.1.1.2)
scalar (740)	edge%fluid%j%comps%transpcoeff%v%comp%scalar (vecflt_type) (9.3.1.2.9)
vector (740)	edge%fluid%j%comps%transpcoeff%v%comp%vector (matflt_type) (9.3.1.2.7)

matrix (740)	edge%fluid%j%comps%transpcoeff%v%comp%matrix (array3dflt.type) (9.3.1.2.1)
align (746)	edge%fluid%j%comps%transpcoeff%v%align (vecint.type) (9.3.1.2.10)
alignid (746)	edge%fluid%j%comps%transpcoeff%v%alignid (vecstring.type) (9.3.1.2.11)
source (801)	edge%fluid%j%comps%source (complexgrid_scalar) (9.3.1.3.67)
subgrid (740)	edge%fluid%j%comps%source%subgrid (integer) (9.3.1.1.2)
scalar (740)	edge%fluid%j%comps%source%scalar (vecflt.type) (9.3.1.2.9)
vector (740)	edge%fluid%j%comps%source%vector (matflt.type) (9.3.1.2.7)
matrix (740)	edge%fluid%j%comps%source%matrix (array3dflt.type) (9.3.1.2.1)
align (805)	edge%fluid%j%align (vecint.type) (9.3.1.2.10)
alignid (805)	edge%fluid%j%alignid (vecstring.type) (9.3.1.2.11)
kinetic (688)	edge%kinetic (edge_kinetic) (9.3.1.3.133)
f (806)	edge%kinetic%f (edge_kinetic_distribution) (9.3.1.3.134)
value (807)	edge%kinetic%f%value (complexgrid_scalar) (9.3.1.3.67)
subgrid (740)	edge%kinetic%f%value%subgrid (integer) (9.3.1.1.2)
scalar (740)	edge%kinetic%f%value%scalar (vecflt.type) (9.3.1.2.9)
vector (740)	edge%kinetic%f%value%vector (matflt.type) (9.3.1.2.7)
matrix (740)	edge%kinetic%f%value%matrix (array3dflt.type) (9.3.1.2.1)
bndvalue (807)	edge%kinetic%f%bndvalue (complexgrid_scalar) (9.3.1.3.67)
subgrid (740)	edge%kinetic%f%bndvalue%subgrid (integer) (9.3.1.1.2)
scalar (740)	edge%kinetic%f%bndvalue%scalar (vecflt.type) (9.3.1.2.9)
vector (740)	edge%kinetic%f%bndvalue%vector (matflt.type) (9.3.1.2.7)
matrix (740)	edge%kinetic%f%bndvalue%matrix (array3dflt.type) (9.3.1.2.1)
fluxes (807)	edge%kinetic%f%fluxes (complexgrid_vector) (9.3.1.3.72)
label (745)	edge%kinetic%f%fluxes%label (string) (9.3.1.1.3)
comp (745)	edge%kinetic%f%fluxes%comp (complexgrid_scalar) (9.3.1.3.67)
subgrid (740)	edge%kinetic%f%fluxes%comp%subgrid (integer) (9.3.1.1.2)
scalar (740)	edge%kinetic%f%fluxes%comp%scalar (vecflt.type) (9.3.1.2.9)
vector (740)	edge%kinetic%f%fluxes%comp%vector (matflt.type) (9.3.1.2.7)
matrix (740)	edge%kinetic%f%fluxes%comp%matrix (array3dflt.type) (9.3.1.2.1)
align (745)	edge%kinetic%f%fluxes%align (vecint.type) (9.3.1.2.10)
alignid (745)	edge%kinetic%f%fluxes%alignid (vecstring.type) (9.3.1.2.11)
source (807)	edge%kinetic%f%source (complexgrid_scalar) (9.3.1.3.67)
subgrid (740)	edge%kinetic%f%source%subgrid (integer) (9.3.1.1.2)
scalar (740)	edge%kinetic%f%source%scalar (vecflt.type) (9.3.1.2.9)
vector (740)	edge%kinetic%f%source%vector (matflt.type) (9.3.1.2.7)
matrix (740)	edge%kinetic%f%source%matrix (array3dflt.type) (9.3.1.2.1)
codeparam (688)	edge%codeparam (codeparam) (9.3.1.3.58)
codename (731)	edge%codeparam%codename (string) (9.3.1.1.3)
codeversion (731)	edge%codeparam%codeversion (string) (9.3.1.1.3)
parameters (731)	edge%codeparam%parameters (string) (9.3.1.1.3)
output.diag (731)	edge%codeparam%output.diag (string) (9.3.1.1.3)
output.flag (731)	edge%codeparam%output.flag (integer) (9.3.1.1.2)
time (688)	edge%time (float) (9.3.1.1.1)

### 9.3.2.1.14 equilibrium

datainfo (689)	equilibrium%datainfo (datainfo) (9.3.1.3.92)
dataprovider (765)	equilibrium%datainfo%dataprovider (string) (9.3.1.1.3)
putdate (765)	equilibrium%datainfo%putdate (string) (9.3.1.1.3)
source (765)	equilibrium%datainfo%source (string) (9.3.1.1.3)
comment (765)	equilibrium%datainfo%comment (string) (9.3.1.1.3)
isref (765)	equilibrium%datainfo%isref (integer) (9.3.1.1.2)
whatref (765)	equilibrium%datainfo%whatref (whatref) (9.3.1.3.333)
user (1006)	equilibrium%datainfo%whatref%user (string) (9.3.1.1.3)
machine (1006)	equilibrium%datainfo%whatref%machine (string) (9.3.1.1.3)
shot (1006)	equilibrium%datainfo%whatref%shot (integer) (9.3.1.1.2)
run (1006)	equilibrium%datainfo%whatref%run (integer) (9.3.1.1.2)
occurrence (1006)	equilibrium%datainfo%whatref%occurrence (integer) (9.3.1.1.2)
putinfo (765)	equilibrium%datainfo%putinfo (putinfo) (9.3.1.3.215)
putmethod (888)	equilibrium%datainfo%putinfo%putmethod (string) (9.3.1.1.3)
putaccess (888)	equilibrium%datainfo%putinfo%putaccess (string) (9.3.1.1.3)



putlocation (888)	equilibrium%datainfo%putinfo%putlocation (string) (9.3.1.1.3)
rights (888)	equilibrium%datainfo%putinfo%rights (string) (9.3.1.1.3)
eqconstraint (689)	equilibrium%eqconstraint (eqconstraint) (9.3.1.3.138)
bpol (811)	equilibrium%eqconstraint%bpol (eqmes1D) (9.3.1.3.141)
measured (814)	equilibrium%eqconstraint%bpol%measured (vecflt_type) (9.3.1.2.9)
source (814)	equilibrium%eqconstraint%bpol%source (string) (9.3.1.1.3)
time (814)	equilibrium%eqconstraint%bpol%time (float) (9.3.1.1.1)
exact (814)	equilibrium%eqconstraint%bpol%exact (vecint_type) (9.3.1.2.10)
weight (814)	equilibrium%eqconstraint%bpol%weight (vecflt_type) (9.3.1.2.9)
sigma (814)	equilibrium%eqconstraint%bpol%sigma (vecflt_type) (9.3.1.2.9)
calculated (814)	equilibrium%eqconstraint%bpol%calculated (vecflt_type) (9.3.1.2.9)
chi2 (814)	equilibrium%eqconstraint%bpol%chi2 (vecflt_type) (9.3.1.2.9)
bvac_r (811)	equilibrium%eqconstraint%bvac_r (eqmes0D) (9.3.1.3.140)
measured (813)	equilibrium%eqconstraint%bvac_r%measured (float) (9.3.1.1.1)
source (813)	equilibrium%eqconstraint%bvac_r%source (string) (9.3.1.1.3)
time (813)	equilibrium%eqconstraint%bvac_r%time (float) (9.3.1.1.1)
exact (813)	equilibrium%eqconstraint%bvac_r%exact (integer) (9.3.1.1.2)
weight (813)	equilibrium%eqconstraint%bvac_r%weight (float) (9.3.1.1.1)
sigma (813)	equilibrium%eqconstraint%bvac_r%sigma (float) (9.3.1.1.1)
calculated (813)	equilibrium%eqconstraint%bvac_r%calculated (float) (9.3.1.1.1)
chi2 (813)	equilibrium%eqconstraint%bvac_r%chi2 (float) (9.3.1.1.1)
diamagflux (811)	equilibrium%eqconstraint%diamagflux (eqmes0D) (9.3.1.3.140)
measured (813)	equilibrium%eqconstraint%diamagflux%measured (float) (9.3.1.1.1)
source (813)	equilibrium%eqconstraint%diamagflux%source (string) (9.3.1.1.3)
time (813)	equilibrium%eqconstraint%diamagflux%time (float) (9.3.1.1.1)
exact (813)	equilibrium%eqconstraint%diamagflux%exact (integer) (9.3.1.1.2)
weight (813)	equilibrium%eqconstraint%diamagflux%weight (float) (9.3.1.1.1)
sigma (813)	equilibrium%eqconstraint%diamagflux%sigma (float) (9.3.1.1.1)
calculated (813)	equilibrium%eqconstraint%diamagflux%calculated (float) (9.3.1.1.1)
chi2 (813)	equilibrium%eqconstraint%diamagflux%chi2 (float) (9.3.1.1.1)
faraday (811)	equilibrium%eqconstraint%faraday (eqmes1D) (9.3.1.3.141)
measured (814)	equilibrium%eqconstraint%faraday%measured (vecflt_type) (9.3.1.2.9)
source (814)	equilibrium%eqconstraint%faraday%source (string) (9.3.1.1.3)
time (814)	equilibrium%eqconstraint%faraday%time (float) (9.3.1.1.1)
exact (814)	equilibrium%eqconstraint%faraday%exact (vecint_type) (9.3.1.2.10)
weight (814)	equilibrium%eqconstraint%faraday%weight (vecflt_type) (9.3.1.2.9)
sigma (814)	equilibrium%eqconstraint%faraday%sigma (vecflt_type) (9.3.1.2.9)
calculated (814)	equilibrium%eqconstraint%faraday%calculated (vecflt_type) (9.3.1.2.9)
chi2 (814)	equilibrium%eqconstraint%faraday%chi2 (vecflt_type) (9.3.1.2.9)
flux (811)	equilibrium%eqconstraint%flux (eqmes1D) (9.3.1.3.141)
measured (814)	equilibrium%eqconstraint%flux%measured (vecflt_type) (9.3.1.2.9)
source (814)	equilibrium%eqconstraint%flux%source (string) (9.3.1.1.3)
time (814)	equilibrium%eqconstraint%flux%time (float) (9.3.1.1.1)
exact (814)	equilibrium%eqconstraint%flux%exact (vecint_type) (9.3.1.2.10)
weight (814)	equilibrium%eqconstraint%flux%weight (vecflt_type) (9.3.1.2.9)
sigma (814)	equilibrium%eqconstraint%flux%sigma (vecflt_type) (9.3.1.2.9)
calculated (814)	equilibrium%eqconstraint%flux%calculated (vecflt_type) (9.3.1.2.9)
chi2 (814)	equilibrium%eqconstraint%flux%chi2 (vecflt_type) (9.3.1.2.9)
i_plasma (811)	equilibrium%eqconstraint%i_plasma (eqmes0D) (9.3.1.3.140)
measured (813)	equilibrium%eqconstraint%i_plasma%measured (float) (9.3.1.1.1)
source (813)	equilibrium%eqconstraint%i_plasma%source (string) (9.3.1.1.3)
time (813)	equilibrium%eqconstraint%i_plasma%time (float) (9.3.1.1.1)
exact (813)	equilibrium%eqconstraint%i_plasma%exact (integer) (9.3.1.1.2)
weight (813)	equilibrium%eqconstraint%i_plasma%weight (float) (9.3.1.1.1)
sigma (813)	equilibrium%eqconstraint%i_plasma%sigma (float) (9.3.1.1.1)
calculated (813)	equilibrium%eqconstraint%i_plasma%calculated (float) (9.3.1.1.1)
chi2 (813)	equilibrium%eqconstraint%i_plasma%chi2 (float) (9.3.1.1.1)
isoflux (811)	equilibrium%eqconstraint%isoflux (isoflux) (9.3.1.3.158)
position (831)	equilibrium%eqconstraint%isoflux%position (rz1D) (9.3.1.3.242)
r (915)	equilibrium%eqconstraint%isoflux%position%r (vecflt_type) (9.3.1.2.9)
z (915)	equilibrium%eqconstraint%isoflux%position%z (vecflt_type) (9.3.1.2.9)

source (831)	equilibrium%eqconstraint%isoflux%source (string) (9.3.1.1.3)
weight (831)	equilibrium%eqconstraint%isoflux%weight (vecflt.type) (9.3.1.2.9)
sigma (831)	equilibrium%eqconstraint%isoflux%sigma (vecflt.type) (9.3.1.2.9)
calculated (831)	equilibrium%eqconstraint%isoflux%calculated (vecflt.type) (9.3.1.2.9)
chi2 (831)	equilibrium%eqconstraint%isoflux%chi2 (vecflt.type) (9.3.1.2.9)
jsurf (811)	equilibrium%eqconstraint%jsurf (eqmes1D) (9.3.1.3.141)
measured (814)	equilibrium%eqconstraint%jsurf%measured (vecflt.type) (9.3.1.2.9)
source (814)	equilibrium%eqconstraint%jsurf%source (string) (9.3.1.1.3)
time (814)	equilibrium%eqconstraint%jsurf%time (float) (9.3.1.1.1)
exact (814)	equilibrium%eqconstraint%jsurf%exact (vecint.type) (9.3.1.2.10)
weight (814)	equilibrium%eqconstraint%jsurf%weight (vecflt.type) (9.3.1.2.9)
sigma (814)	equilibrium%eqconstraint%jsurf%sigma (vecflt.type) (9.3.1.2.9)
calculated (814)	equilibrium%eqconstraint%jsurf%calculated (vecflt.type) (9.3.1.2.9)
chi2 (814)	equilibrium%eqconstraint%jsurf%chi2 (vecflt.type) (9.3.1.2.9)
magnet.iron (811)	equilibrium%eqconstraint%magnet.iron (magnet.iron) (9.3.1.3.172)
mr (845)	equilibrium%eqconstraint%magnet.iron%mr (eqmes1D) (9.3.1.3.141)
measured (814)	equilibrium%eqconstraint%magnet.iron%mr%measured (vecflt.type) (9.3.1.2.9)
source (814)	equilibrium%eqconstraint%magnet.iron%mr%source (string) (9.3.1.1.3)
time (814)	equilibrium%eqconstraint%magnet.iron%mr%time (float) (9.3.1.1.1)
exact (814)	equilibrium%eqconstraint%magnet.iron%mr%exact (vecint.type) (9.3.1.2.10)
weight (814)	equilibrium%eqconstraint%magnet.iron%mr%weight (vecflt.type) (9.3.1.2.9)
sigma (814)	equilibrium%eqconstraint%magnet.iron%mr%sigma (vecflt.type) (9.3.1.2.9)
calculated (814)	equilibrium%eqconstraint%magnet.iron%mr%calculated (vecflt.type) (9.3.1.2.9)
chi2 (814)	equilibrium%eqconstraint%magnet.iron%mr%chi2 (vecflt.type) (9.3.1.2.9)
mz (845)	equilibrium%eqconstraint%magnet.iron%mz (eqmes1D) (9.3.1.3.141)
measured (814)	equilibrium%eqconstraint%magnet.iron%mz%measured (vecflt.type) (9.3.1.2.9)
source (814)	equilibrium%eqconstraint%magnet.iron%mz%source (string) (9.3.1.1.3)
time (814)	equilibrium%eqconstraint%magnet.iron%mz%time (float) (9.3.1.1.1)
exact (814)	equilibrium%eqconstraint%magnet.iron%mz%exact (vecint.type) (9.3.1.2.10)
weight (814)	equilibrium%eqconstraint%magnet.iron%mz%weight (vecflt.type) (9.3.1.2.9)
sigma (814)	equilibrium%eqconstraint%magnet.iron%mz%sigma (vecflt.type) (9.3.1.2.9)
calculated (814)	equilibrium%eqconstraint%magnet.iron%mz%calculated (vecflt.type) (9.3.1.2.9)
chi2 (814)	equilibrium%eqconstraint%magnet.iron%mz%chi2 (vecflt.type) (9.3.1.2.9)
mse (811)	equilibrium%eqconstraint%mse (eqmes1D) (9.3.1.3.141)
measured (814)	equilibrium%eqconstraint%mse%measured (vecflt.type) (9.3.1.2.9)
source (814)	equilibrium%eqconstraint%mse%source (string) (9.3.1.1.3)
time (814)	equilibrium%eqconstraint%mse%time (float) (9.3.1.1.1)
exact (814)	equilibrium%eqconstraint%mse%exact (vecint.type) (9.3.1.2.10)
weight (814)	equilibrium%eqconstraint%mse%weight (vecflt.type) (9.3.1.2.9)
sigma (814)	equilibrium%eqconstraint%mse%sigma (vecflt.type) (9.3.1.2.9)
calculated (814)	equilibrium%eqconstraint%mse%calculated (vecflt.type) (9.3.1.2.9)
chi2 (814)	equilibrium%eqconstraint%mse%chi2 (vecflt.type) (9.3.1.2.9)
ne (811)	equilibrium%eqconstraint%ne (eqmes1D) (9.3.1.3.141)
measured (814)	equilibrium%eqconstraint%ne%measured (vecflt.type) (9.3.1.2.9)
source (814)	equilibrium%eqconstraint%ne%source (string) (9.3.1.1.3)
time (814)	equilibrium%eqconstraint%ne%time (float) (9.3.1.1.1)
exact (814)	equilibrium%eqconstraint%ne%exact (vecint.type) (9.3.1.2.10)
weight (814)	equilibrium%eqconstraint%ne%weight (vecflt.type) (9.3.1.2.9)
sigma (814)	equilibrium%eqconstraint%ne%sigma (vecflt.type) (9.3.1.2.9)
calculated (814)	equilibrium%eqconstraint%ne%calculated (vecflt.type) (9.3.1.2.9)
chi2 (814)	equilibrium%eqconstraint%ne%chi2 (vecflt.type) (9.3.1.2.9)
pfcurrent (811)	equilibrium%eqconstraint%pfcurrent (eqmes1D) (9.3.1.3.141)
measured (814)	equilibrium%eqconstraint%pfcurrent%measured (vecflt.type) (9.3.1.2.9)
source (814)	equilibrium%eqconstraint%pfcurrent%source (string) (9.3.1.1.3)
time (814)	equilibrium%eqconstraint%pfcurrent%time (float) (9.3.1.1.1)
exact (814)	equilibrium%eqconstraint%pfcurrent%exact (vecint.type) (9.3.1.2.10)
weight (814)	equilibrium%eqconstraint%pfcurrent%weight (vecflt.type) (9.3.1.2.9)
sigma (814)	equilibrium%eqconstraint%pfcurrent%sigma (vecflt.type) (9.3.1.2.9)
calculated (814)	equilibrium%eqconstraint%pfcurrent%calculated (vecflt.type) (9.3.1.2.9)
chi2 (814)	equilibrium%eqconstraint%pfcurrent%chi2 (vecflt.type) (9.3.1.2.9)
pressure (811)	equilibrium%eqconstraint%pressure (eqmes1D) (9.3.1.3.141)

measured (814)	equilibrium%eqconstraint%pressure%measured (vecflt.type) (9.3.1.2.9)
source (814)	equilibrium%eqconstraint%pressure%source (string) (9.3.1.1.3)
time (814)	equilibrium%eqconstraint%pressure%time (float) (9.3.1.1.1)
exact (814)	equilibrium%eqconstraint%pressure%exact (vecint.type) (9.3.1.2.10)
weight (814)	equilibrium%eqconstraint%pressure%weight (vecflt.type) (9.3.1.2.9)
sigma (814)	equilibrium%eqconstraint%pressure%sigma (vecflt.type) (9.3.1.2.9)
calculated (814)	equilibrium%eqconstraint%pressure%calculated (vecflt.type) (9.3.1.2.9)
chi2 (814)	equilibrium%eqconstraint%pressure%chi2 (vecflt.type) (9.3.1.2.9)
q (811)	equilibrium%eqconstraint%q (q) (9.3.1.3.216)
qvalue (889)	equilibrium%eqconstraint%q%qvalue (vecflt.type) (9.3.1.2.9)
position (889)	equilibrium%eqconstraint%q%position (rz1D) (9.3.1.3.242)
r (915)	equilibrium%eqconstraint%q%position%r (vecflt.type) (9.3.1.2.9)
z (915)	equilibrium%eqconstraint%q%position%z (vecflt.type) (9.3.1.2.9)
source (889)	equilibrium%eqconstraint%q%source (string) (9.3.1.1.3)
exact (889)	equilibrium%eqconstraint%q%exact (integer) (9.3.1.1.2)
weight (889)	equilibrium%eqconstraint%q%weight (vecflt.type) (9.3.1.2.9)
sigma (889)	equilibrium%eqconstraint%q%sigma (vecflt.type) (9.3.1.2.9)
calculated (889)	equilibrium%eqconstraint%q%calculated (vecflt.type) (9.3.1.2.9)
chi2 (889)	equilibrium%eqconstraint%q%chi2 (vecflt.type) (9.3.1.2.9)
xpts (811)	equilibrium%eqconstraint%xpts (xpts) (9.3.1.3.334)
position (1007)	equilibrium%eqconstraint%xpts%position (rz1D) (9.3.1.3.242)
r (915)	equilibrium%eqconstraint%xpts%position%r (vecflt.type) (9.3.1.2.9)
z (915)	equilibrium%eqconstraint%xpts%position%z (vecflt.type) (9.3.1.2.9)
source (1007)	equilibrium%eqconstraint%xpts%source (string) (9.3.1.1.3)
weight (1007)	equilibrium%eqconstraint%xpts%weight (vecflt.type) (9.3.1.2.9)
sigma (1007)	equilibrium%eqconstraint%xpts%sigma (vecflt.type) (9.3.1.2.9)
calculated (1007)	equilibrium%eqconstraint%xpts%calculated (vecflt.type) (9.3.1.2.9)
chi2 (1007)	equilibrium%eqconstraint%xpts%chi2 (vecflt.type) (9.3.1.2.9)
eqgeometry (689)	equilibrium%eqgeometry (eqgeometry) (9.3.1.3.139)
source (812)	equilibrium%eqgeometry%source (string) (9.3.1.1.3)
boundarytype (812)	equilibrium%eqgeometry%boundarytype (integer) (9.3.1.1.2)
boundary (812)	equilibrium%eqgeometry%boundary (rz1D_npoin) (9.3.1.3.243)
r (916)	equilibrium%eqgeometry%boundary%r (vecflt.type) (9.3.1.2.9)
z (916)	equilibrium%eqgeometry%boundary%z (vecflt.type) (9.3.1.2.9)
npoin (916)	equilibrium%eqgeometry%boundary%npoin (integer) (9.3.1.1.2)
geom.axis (812)	equilibrium%eqgeometry%geom.axis (rz0D) (9.3.1.3.241)
r (914)	equilibrium%eqgeometry%geom.axis%r (float) (9.3.1.1.1)
z (914)	equilibrium%eqgeometry%geom.axis%z (float) (9.3.1.1.1)
a_minor (812)	equilibrium%eqgeometry%a_minor (float) (9.3.1.1.1)
elongation (812)	equilibrium%eqgeometry%elongation (float) (9.3.1.1.1)
tria_upper (812)	equilibrium%eqgeometry%tria_upper (float) (9.3.1.1.1)
tria_lower (812)	equilibrium%eqgeometry%tria_lower (float) (9.3.1.1.1)
xpts (812)	equilibrium%eqgeometry%xpts (rz1D) (9.3.1.3.242)
r (915)	equilibrium%eqgeometry%xpts%r (vecflt.type) (9.3.1.2.9)
z (915)	equilibrium%eqgeometry%xpts%z (vecflt.type) (9.3.1.2.9)
left_low_st (812)	equilibrium%eqgeometry%left_low_st (rz0D) (9.3.1.3.241)
r (914)	equilibrium%eqgeometry%left_low_st%r (float) (9.3.1.1.1)
z (914)	equilibrium%eqgeometry%left_low_st%z (float) (9.3.1.1.1)
right_low_st (812)	equilibrium%eqgeometry%right_low_st (rz0D) (9.3.1.3.241)
r (914)	equilibrium%eqgeometry%right_low_st%r (float) (9.3.1.1.1)
z (914)	equilibrium%eqgeometry%right_low_st%z (float) (9.3.1.1.1)
left_up_st (812)	equilibrium%eqgeometry%left_up_st (rz0D) (9.3.1.3.241)
r (914)	equilibrium%eqgeometry%left_up_st%r (float) (9.3.1.1.1)
z (914)	equilibrium%eqgeometry%left_up_st%z (float) (9.3.1.1.1)
right_up_st (812)	equilibrium%eqgeometry%right_up_st (rz0D) (9.3.1.3.241)
r (914)	equilibrium%eqgeometry%right_up_st%r (float) (9.3.1.1.1)
z (914)	equilibrium%eqgeometry%right_up_st%z (float) (9.3.1.1.1)
active_limit (812)	equilibrium%eqgeometry%active_limit (rz0D) (9.3.1.3.241)
r (914)	equilibrium%eqgeometry%active_limit%r (float) (9.3.1.1.1)
z (914)	equilibrium%eqgeometry%active_limit%z (float) (9.3.1.1.1)
flush (689)	equilibrium%flush (flush) (9.3.1.3.146)

datainfo (819)	equilibrium%flush%datainfo (datainfo) (9.3.1.3.92)
dataprovider (765)	equilibrium%flush%datainfo%dataprovider (string) (9.3.1.1.3)
putdate (765)	equilibrium%flush%datainfo%putdate (string) (9.3.1.1.3)
source (765)	equilibrium%flush%datainfo%source (string) (9.3.1.1.3)
comment (765)	equilibrium%flush%datainfo%comment (string) (9.3.1.1.3)
isref (765)	equilibrium%flush%datainfo%isref (integer) (9.3.1.1.2)
whatref (765)	equilibrium%flush%datainfo%whatref (whatref) (9.3.1.3.333)
user (1006)	equilibrium%flush%datainfo%whatref%user (string) (9.3.1.1.3)
machine (1006)	equilibrium%flush%datainfo%whatref%machine (string) (9.3.1.1.3)
shot (1006)	equilibrium%flush%datainfo%whatref%shot (integer) (9.3.1.1.2)
run (1006)	equilibrium%flush%datainfo%whatref%run (integer) (9.3.1.1.2)
occurrence (1006)	equilibrium%flush%datainfo%whatref%occurrence (integer) (9.3.1.1.2)
putinfo (765)	equilibrium%flush%datainfo%putinfo (putinfo) (9.3.1.3.215)
putmethod (888)	equilibrium%flush%datainfo%putinfo%putmethod (string) (9.3.1.1.3)
putaccess (888)	equilibrium%flush%datainfo%putinfo%putaccess (string) (9.3.1.1.3)
putlocation (888)	equilibrium%flush%datainfo%putinfo%putlocation (string) (9.3.1.1.3)
rights (888)	equilibrium%flush%datainfo%putinfo%rights (string) (9.3.1.1.3)
position (819)	equilibrium%flush%position (rz1D) (9.3.1.3.242)
r (915)	equilibrium%flush%position%r (vecflt.type) (9.3.1.2.9)
z (915)	equilibrium%flush%position%z (vecflt.type) (9.3.1.2.9)
coef (819)	equilibrium%flush%coef (matflt.type) (9.3.1.2.7)
codeparam (819)	equilibrium%flush%codeparam (codeparam) (9.3.1.3.58)
codename (731)	equilibrium%flush%codeparam%codename (string) (9.3.1.1.3)
codeversion (731)	equilibrium%flush%codeparam%codeversion (string) (9.3.1.1.3)
parameters (731)	equilibrium%flush%codeparam%parameters (string) (9.3.1.1.3)
output_diag (731)	equilibrium%flush%codeparam%output_diag (string) (9.3.1.1.3)
output_flag (731)	equilibrium%flush%codeparam%output_flag (integer) (9.3.1.1.2)
global_param (689)	equilibrium%global_param (global_param) (9.3.1.3.153)
beta_pol (826)	equilibrium%global_param%beta_pol (float) (9.3.1.1.1)
beta_tor (826)	equilibrium%global_param%beta_tor (float) (9.3.1.1.1)
beta_normal (826)	equilibrium%global_param%beta_normal (float) (9.3.1.1.1)
i_plasma (826)	equilibrium%global_param%i_plasma (float) (9.3.1.1.1)
li (826)	equilibrium%global_param%li (float) (9.3.1.1.1)
volume (826)	equilibrium%global_param%volume (float) (9.3.1.1.1)
area (826)	equilibrium%global_param%area (float) (9.3.1.1.1)
psi_ax (826)	equilibrium%global_param%psi_ax (float) (9.3.1.1.1)
psi_bound (826)	equilibrium%global_param%psi_bound (float) (9.3.1.1.1)
mag_axis (826)	equilibrium%global_param%mag_axis (mag_axis) (9.3.1.3.171)
position (844)	equilibrium%global_param%mag_axis%position (rz0D) (9.3.1.3.241)
r (914)	equilibrium%global_param%mag_axis%position%r (float) (9.3.1.1.1)
z (914)	equilibrium%global_param%mag_axis%position%z (float) (9.3.1.1.1)
bphi (844)	equilibrium%global_param%mag_axis%bphi (float) (9.3.1.1.1)
q (844)	equilibrium%global_param%mag_axis%q (float) (9.3.1.1.1)
q_95 (826)	equilibrium%global_param%q_95 (float) (9.3.1.1.1)
q_min (826)	equilibrium%global_param%q_min (float) (9.3.1.1.1)
toroid_field (826)	equilibrium%global_param%toroid_field (b0r0) (9.3.1.3.48)
r0 (721)	equilibrium%global_param%toroid_field%r0 (float) (9.3.1.1.1)
b0 (721)	equilibrium%global_param%toroid_field%b0 (float) (9.3.1.1.1)
w_mhd (826)	equilibrium%global_param%w_mhd (float) (9.3.1.1.1)
gamma (826)	equilibrium%global_param%gamma (float) (9.3.1.1.1)
profiles_1d (689)	equilibrium%profiles_1d (profiles_1d) (9.3.1.3.211)
psi (884)	equilibrium%profiles_1d%psi (vecflt.type) (9.3.1.2.9)
phi (884)	equilibrium%profiles_1d%phi (vecflt.type) (9.3.1.2.9)
pressure (884)	equilibrium%profiles_1d%pressure (vecflt.type) (9.3.1.2.9)
F_dia (884)	equilibrium%profiles_1d%F_dia (vecflt.type) (9.3.1.2.9)
pprime (884)	equilibrium%profiles_1d%pprime (vecflt.type) (9.3.1.2.9)
ffprime (884)	equilibrium%profiles_1d%ffprime (vecflt.type) (9.3.1.2.9)
jphi (884)	equilibrium%profiles_1d%jphi (vecflt.type) (9.3.1.2.9)
jparallel (884)	equilibrium%profiles_1d%jparallel (vecflt.type) (9.3.1.2.9)
q (884)	equilibrium%profiles_1d%q (vecflt.type) (9.3.1.2.9)
r_inboard (884)	equilibrium%profiles_1d%r_inboard (vecflt.type) (9.3.1.2.9)

r_outboard (884)	equilibrium%profiles_1d%r_outboard (vecflt.type) (9.3.1.2.9)
rho_tor (884)	equilibrium%profiles_1d%rho_tor (vecflt.type) (9.3.1.2.9)
dpsidrho_tor (884)	equilibrium%profiles_1d%dpsidrho_tor (vecflt.type) (9.3.1.2.9)
rho_vol (884)	equilibrium%profiles_1d%rho_vol (vecflt.type) (9.3.1.2.9)
beta_pol (884)	equilibrium%profiles_1d%beta_pol (vecflt.type) (9.3.1.2.9)
li (884)	equilibrium%profiles_1d%li (vecflt.type) (9.3.1.2.9)
elongation (884)	equilibrium%profiles_1d%elongation (vecflt.type) (9.3.1.2.9)
tria_upper (884)	equilibrium%profiles_1d%tria_upper (vecflt.type) (9.3.1.2.9)
tria_lower (884)	equilibrium%profiles_1d%tria_lower (vecflt.type) (9.3.1.2.9)
volume (884)	equilibrium%profiles_1d%volume (vecflt.type) (9.3.1.2.9)
vprime (884)	equilibrium%profiles_1d%vprime (vecflt.type) (9.3.1.2.9)
area (884)	equilibrium%profiles_1d%area (vecflt.type) (9.3.1.2.9)
aprime (884)	equilibrium%profiles_1d%aprime (vecflt.type) (9.3.1.2.9)
surface (884)	equilibrium%profiles_1d%surface (vecflt.type) (9.3.1.2.9)
ftrap (884)	equilibrium%profiles_1d%ftrap (vecflt.type) (9.3.1.2.9)
gm1 (884)	equilibrium%profiles_1d%gm1 (vecflt.type) (9.3.1.2.9)
gm2 (884)	equilibrium%profiles_1d%gm2 (vecflt.type) (9.3.1.2.9)
gm3 (884)	equilibrium%profiles_1d%gm3 (vecflt.type) (9.3.1.2.9)
gm4 (884)	equilibrium%profiles_1d%gm4 (vecflt.type) (9.3.1.2.9)
gm5 (884)	equilibrium%profiles_1d%gm5 (vecflt.type) (9.3.1.2.9)
gm6 (884)	equilibrium%profiles_1d%gm6 (vecflt.type) (9.3.1.2.9)
gm7 (884)	equilibrium%profiles_1d%gm7 (vecflt.type) (9.3.1.2.9)
gm8 (884)	equilibrium%profiles_1d%gm8 (vecflt.type) (9.3.1.2.9)
gm9 (884)	equilibrium%profiles_1d%gm9 (vecflt.type) (9.3.1.2.9)
b_av (884)	equilibrium%profiles_1d%b_av (vecflt.type) (9.3.1.2.9)
b_min (884)	equilibrium%profiles_1d%b_min (vecflt.type) (9.3.1.2.9)
b_max (884)	equilibrium%profiles_1d%b_max (vecflt.type) (9.3.1.2.9)
omega (884)	equilibrium%profiles_1d%omega (vecflt.type) (9.3.1.2.9)
omegaprime (884)	equilibrium%profiles_1d%omegaprime (vecflt.type) (9.3.1.2.9)
mach.a (884)	equilibrium%profiles_1d%mach.a (vecflt.type) (9.3.1.2.9)
phi_flow (884)	equilibrium%profiles_1d%phi_flow (vecflt.type) (9.3.1.2.9)
s_flow (884)	equilibrium%profiles_1d%s_flow (vecflt.type) (9.3.1.2.9)
h_flow (884)	equilibrium%profiles_1d%h_flow (vecflt.type) (9.3.1.2.9)
profiles_2d (689)	equilibrium%profiles_2d (profiles_2d) (9.3.1.3.212)
grid_type (885)	equilibrium%profiles_2d%grid_type (string) (9.3.1.1.3)
grid (885)	equilibrium%profiles_2d%grid (grid) (9.3.1.3.155)
dim1 (828)	equilibrium%profiles_2d%grid%dim1 (vecflt.type) (9.3.1.2.9)
dim2 (828)	equilibrium%profiles_2d%grid%dim2 (vecflt.type) (9.3.1.2.9)
connect (828)	equilibrium%profiles_2d%grid%connect (matint.type) (9.3.1.2.8)
r (885)	equilibrium%profiles_2d%r (matflt.type) (9.3.1.2.7)
z (885)	equilibrium%profiles_2d%z (matflt.type) (9.3.1.2.7)
psi (885)	equilibrium%profiles_2d%psi (matflt.type) (9.3.1.2.7)
theta (885)	equilibrium%profiles_2d%theta (matflt.type) (9.3.1.2.7)
jphi (885)	equilibrium%profiles_2d%jphi (matflt.type) (9.3.1.2.7)
jpar (885)	equilibrium%profiles_2d%jpar (matflt.type) (9.3.1.2.7)
br (885)	equilibrium%profiles_2d%br (matflt.type) (9.3.1.2.7)
bz (885)	equilibrium%profiles_2d%bz (matflt.type) (9.3.1.2.7)
bphi (885)	equilibrium%profiles_2d%bphi (matflt.type) (9.3.1.2.7)
vphi (885)	equilibrium%profiles_2d%vphi (matflt.type) (9.3.1.2.7)
vtheta (885)	equilibrium%profiles_2d%vtheta (matflt.type) (9.3.1.2.7)
rho_mass (885)	equilibrium%profiles_2d%rho_mass (matflt.type) (9.3.1.2.7)
pressure (885)	equilibrium%profiles_2d%pressure (matflt.type) (9.3.1.2.7)
temperature (885)	equilibrium%profiles_2d%temperature (matflt.type) (9.3.1.2.7)
coord_sys (689)	equilibrium%coord_sys (coord_sys) (9.3.1.3.76)
grid_type (749)	equilibrium%coord_sys%grid_type (string) (9.3.1.1.3)
grid (749)	equilibrium%coord_sys%grid (reggrid) (9.3.1.3.239)
dim1 (912)	equilibrium%coord_sys%grid%dim1 (vecflt.type) (9.3.1.2.9)
dim2 (912)	equilibrium%coord_sys%grid%dim2 (vecflt.type) (9.3.1.2.9)
jacobian (749)	equilibrium%coord_sys%jacobian (matflt.type) (9.3.1.2.7)
g_11 (749)	equilibrium%coord_sys%g_11 (matflt.type) (9.3.1.2.7)
g_12 (749)	equilibrium%coord_sys%g_12 (matflt.type) (9.3.1.2.7)

g_13 (749)	equilibrium%coord_sys%g_13 (matflt.type) (9.3.1.2.7)
g_22 (749)	equilibrium%coord_sys%g_22 (matflt.type) (9.3.1.2.7)
g_23 (749)	equilibrium%coord_sys%g_23 (matflt.type) (9.3.1.2.7)
g_33 (749)	equilibrium%coord_sys%g_33 (matflt.type) (9.3.1.2.7)
position (749)	equilibrium%coord_sys%position (rz2D) (9.3.1.3.244)
r (917)	equilibrium%coord_sys%position%r (matflt.type) (9.3.1.2.7)
z (917)	equilibrium%coord_sys%position%z (matflt.type) (9.3.1.2.7)
time (689)	equilibrium%time (float) (9.3.1.1.1)
codeparam (689)	equilibrium%codeparam (codeparam) (9.3.1.3.58)
codename (731)	equilibrium%codeparam%codename (string) (9.3.1.1.3)
codeversion (731)	equilibrium%codeparam%codeversion (string) (9.3.1.1.3)
parameters (731)	equilibrium%codeparam%parameters (string) (9.3.1.1.3)
output_diag (731)	equilibrium%codeparam%output_diag (string) (9.3.1.1.3)
output_flag (731)	equilibrium%codeparam%output_flag (integer) (9.3.1.1.2)

### 9.3.2.1.15 fusiondiag

datainfo (690)	fusiondiag%datainfo (datainfo) (9.3.1.3.92)
dataprovider (765)	fusiondiag%datainfo%dataprovider (string) (9.3.1.1.3)
putdate (765)	fusiondiag%datainfo%putdate (string) (9.3.1.1.3)
source (765)	fusiondiag%datainfo%source (string) (9.3.1.1.3)
comment (765)	fusiondiag%datainfo%comment (string) (9.3.1.1.3)
isref (765)	fusiondiag%datainfo%isref (integer) (9.3.1.1.2)
whatref (765)	fusiondiag%datainfo%whatref (whatref) (9.3.1.3.333)
user (1006)	fusiondiag%datainfo%whatref%user (string) (9.3.1.1.3)
machine (1006)	fusiondiag%datainfo%whatref%machine (string) (9.3.1.1.3)
shot (1006)	fusiondiag%datainfo%whatref%shot (integer) (9.3.1.1.2)
run (1006)	fusiondiag%datainfo%whatref%run (integer) (9.3.1.1.2)
occurrence (1006)	fusiondiag%datainfo%whatref%occurrence (integer) (9.3.1.1.2)
putinfo (765)	fusiondiag%datainfo%putinfo (putinfo) (9.3.1.3.215)
putmethod (888)	fusiondiag%datainfo%putinfo%putmethod (string) (9.3.1.1.3)
putaccess (888)	fusiondiag%datainfo%putinfo%putaccess (string) (9.3.1.1.3)
putlocation (888)	fusiondiag%datainfo%putinfo%putlocation (string) (9.3.1.1.3)
rights (888)	fusiondiag%datainfo%putinfo%rights (string) (9.3.1.1.3)
source (690)	fusiondiag%source (source) (9.3.1.3.280)
fus_product (953)	fusiondiag%source%fus_product (string) (9.3.1.1.3)
reaction (953)	fusiondiag%source%reaction (string) (9.3.1.1.3)
counts (953)	fusiondiag%source%counts (counts) (9.3.1.3.89)
expression (762)	fusiondiag%source%counts%expression (string) (9.3.1.1.3)
setup_line (762)	fusiondiag%source%counts%setup_line (setup_line) (9.3.1.3.278)
pivot_point (951)	fusiondiag%source%counts%setup_line%pivot_point (rzphiID) (9.3.1.3.247)
r (920)	fusiondiag%source%counts%setup_line%pivot_point%r (vecflt.type) (9.3.1.2.9)
z (920)	fusiondiag%source%counts%setup_line%pivot_point%z (vecflt.type) (9.3.1.2.9)
phi (920)	fusiondiag%source%counts%setup_line%pivot_point%phi (vecflt.type) (9.3.1.2.9)
horchordang1 (951)	fusiondiag%source%counts%setup_line%horchordang1 (vecflt.type) (9.3.1.2.9)
verchordang1 (951)	fusiondiag%source%counts%setup_line%verchordang1 (vecflt.type) (9.3.1.2.9)
width (951)	fusiondiag%source%counts%setup_line%width (vecflt.type) (9.3.1.2.9)
second_point (951)	fusiondiag%source%counts%setup_line%second_point (rzphiID) (9.3.1.3.247)
r (920)	fusiondiag%source%counts%setup_line%second_point%r (vecflt.type) (9.3.1.2.9)
z (920)	fusiondiag%source%counts%setup_line%second_point%z (vecflt.type) (9.3.1.2.9)
phi (920)	fusiondiag%source%counts%setup_line%second_point%phi (vecflt.type) (9.3.1.2.9)
horchordang2 (951)	fusiondiag%source%counts%setup_line%horchordang2 (vecflt.type) (9.3.1.2.9)
verchordang2 (951)	fusiondiag%source%counts%setup_line%verchordang2 (vecflt.type) (9.3.1.2.9)
third_point (951)	fusiondiag%source%counts%setup_line%third_point (rzphiID) (9.3.1.3.247)
r (920)	fusiondiag%source%counts%setup_line%third_point%r (vecflt.type) (9.3.1.2.9)
z (920)	fusiondiag%source%counts%setup_line%third_point%z (vecflt.type) (9.3.1.2.9)
phi (920)	fusiondiag%source%counts%setup_line%third_point%phi (vecflt.type) (9.3.1.2.9)
nchordpoints (951)	fusiondiag%source%counts%setup_line%nchordpoints (integer) (9.3.1.1.2)
measure (762)	fusiondiag%source%counts%measure (expID) (9.3.1.3.143)
value (816)	fusiondiag%source%counts%measure%value (vecflt.type) (9.3.1.2.9)
abserror (816)	fusiondiag%source%counts%measure%abserror (vecflt.type) (9.3.1.2.9)



releror (816)	fusiondiag%source%counts%measure%releror (vecflt.type) (9.3.1.2.9)
emissivity1d (953)	fusiondiag%source%emissivity1d (emissivity1d) (9.3.1.3.135)
r (808)	fusiondiag%source%emissivity1d%r (exp1D) (9.3.1.3.143)
value (816)	fusiondiag%source%emissivity1d%r%value (vecflt.type) (9.3.1.2.9)
abserror (816)	fusiondiag%source%emissivity1d%r%abserror (vecflt.type) (9.3.1.2.9)
releror (816)	fusiondiag%source%emissivity1d%r%releror (vecflt.type) (9.3.1.2.9)
z (808)	fusiondiag%source%emissivity1d%z (exp1D) (9.3.1.3.143)
value (816)	fusiondiag%source%emissivity1d%z%value (vecflt.type) (9.3.1.2.9)
abserror (816)	fusiondiag%source%emissivity1d%z%abserror (vecflt.type) (9.3.1.2.9)
releror (816)	fusiondiag%source%emissivity1d%z%releror (vecflt.type) (9.3.1.2.9)
measure (808)	fusiondiag%source%emissivity1d%measure (exp1D) (9.3.1.3.143)
value (816)	fusiondiag%source%emissivity1d%measure%value (vecflt.type) (9.3.1.2.9)
abserror (816)	fusiondiag%source%emissivity1d%measure%abserror (vecflt.type) (9.3.1.2.9)
releror (816)	fusiondiag%source%emissivity1d%measure%releror (vecflt.type) (9.3.1.2.9)
emissivity2d (953)	fusiondiag%source%emissivity2d (emissivity2d) (9.3.1.3.136)
r (809)	fusiondiag%source%emissivity2d%r (exp2D) (9.3.1.3.144)
value (817)	fusiondiag%source%emissivity2d%r%value (matflt.type) (9.3.1.2.7)
abserror (817)	fusiondiag%source%emissivity2d%r%abserror (matflt.type) (9.3.1.2.7)
releror (817)	fusiondiag%source%emissivity2d%r%releror (matflt.type) (9.3.1.2.7)
z (809)	fusiondiag%source%emissivity2d%z (exp2D) (9.3.1.3.144)
value (817)	fusiondiag%source%emissivity2d%z%value (matflt.type) (9.3.1.2.7)
abserror (817)	fusiondiag%source%emissivity2d%z%abserror (matflt.type) (9.3.1.2.7)
releror (817)	fusiondiag%source%emissivity2d%z%releror (matflt.type) (9.3.1.2.7)
measure (809)	fusiondiag%source%emissivity2d%measure (exp2D) (9.3.1.3.144)
value (817)	fusiondiag%source%emissivity2d%measure%value (matflt.type) (9.3.1.2.7)
abserror (817)	fusiondiag%source%emissivity2d%measure%abserror (matflt.type) (9.3.1.2.7)
releror (817)	fusiondiag%source%emissivity2d%measure%releror (matflt.type) (9.3.1.2.7)
codeparam (953)	fusiondiag%source%codeparam (codeparam) (9.3.1.3.58)
codename (731)	fusiondiag%source%codeparam%codename (string) (9.3.1.1.3)
codeversion (731)	fusiondiag%source%codeparam%codeversion (string) (9.3.1.1.3)
parameters (731)	fusiondiag%source%codeparam%parameters (string) (9.3.1.1.3)
output_diag (731)	fusiondiag%source%codeparam%output_diag (string) (9.3.1.1.3)
output_flag (731)	fusiondiag%source%codeparam%output_flag (integer) (9.3.1.1.2)
codeparam (690)	fusiondiag%codeparam (codeparam) (9.3.1.3.58)
codename (731)	fusiondiag%codeparam%codename (string) (9.3.1.1.3)
codeversion (731)	fusiondiag%codeparam%codeversion (string) (9.3.1.1.3)
parameters (731)	fusiondiag%codeparam%parameters (string) (9.3.1.1.3)
output_diag (731)	fusiondiag%codeparam%output_diag (string) (9.3.1.1.3)
output_flag (731)	fusiondiag%codeparam%output_flag (integer) (9.3.1.1.2)
time (690)	fusiondiag%time (float) (9.3.1.1.1)

### 9.3.2.1.16 interfdiag

datainfo (842)	lineintegraldiag%datainfo (datainfo) (9.3.1.3.92)
dataproducer (765)	lineintegraldiag%datainfo%dataproducer (string) (9.3.1.1.3)
putdate (765)	lineintegraldiag%datainfo%putdate (string) (9.3.1.1.3)
source (765)	lineintegraldiag%datainfo%source (string) (9.3.1.1.3)
comment (765)	lineintegraldiag%datainfo%comment (string) (9.3.1.1.3)
isref (765)	lineintegraldiag%datainfo%isref (integer) (9.3.1.1.2)
whatref (765)	lineintegraldiag%datainfo%whatref (whatref) (9.3.1.3.333)
user (1006)	lineintegraldiag%datainfo%whatref%user (string) (9.3.1.1.3)
machine (1006)	lineintegraldiag%datainfo%whatref%machine (string) (9.3.1.1.3)
shot (1006)	lineintegraldiag%datainfo%whatref%shot (integer) (9.3.1.1.2)
run (1006)	lineintegraldiag%datainfo%whatref%run (integer) (9.3.1.1.2)
occurrence (1006)	lineintegraldiag%datainfo%whatref%occurrence (integer) (9.3.1.1.2)
putinfo (765)	lineintegraldiag%datainfo%putinfo (putinfo) (9.3.1.3.215)
putmethod (888)	lineintegraldiag%datainfo%putinfo%putmethod (string) (9.3.1.1.3)
putaccess (888)	lineintegraldiag%datainfo%putinfo%putaccess (string) (9.3.1.1.3)
putlocation (888)	lineintegraldiag%datainfo%putinfo%putlocation (string) (9.3.1.1.3)
rights (888)	lineintegraldiag%datainfo%putinfo%rights (string) (9.3.1.1.3)
expression (842)	lineintegraldiag%expression (string) (9.3.1.1.3)

setup_line (842)	lineintegraldiag%setup_line (setup_line) (9.3.1.3.278)
pivot_point (951)	lineintegraldiag%setup_line%pivot_point (rzphi1D) (9.3.1.3.247)
r (920)	lineintegraldiag%setup_line%pivot_point%r (vecflt.type) (9.3.1.2.9)
z (920)	lineintegraldiag%setup_line%pivot_point%z (vecflt.type) (9.3.1.2.9)
phi (920)	lineintegraldiag%setup_line%pivot_point%phi (vecflt.type) (9.3.1.2.9)
horchordang1 (951)	lineintegraldiag%setup_line%horchordang1 (vecflt.type) (9.3.1.2.9)
verchordang1 (951)	lineintegraldiag%setup_line%verchordang1 (vecflt.type) (9.3.1.2.9)
width (951)	lineintegraldiag%setup_line%width (vecflt.type) (9.3.1.2.9)
second_point (951)	lineintegraldiag%setup_line%second_point (rzphi1D) (9.3.1.3.247)
r (920)	lineintegraldiag%setup_line%second_point%r (vecflt.type) (9.3.1.2.9)
z (920)	lineintegraldiag%setup_line%second_point%z (vecflt.type) (9.3.1.2.9)
phi (920)	lineintegraldiag%setup_line%second_point%phi (vecflt.type) (9.3.1.2.9)
horchordang2 (951)	lineintegraldiag%setup_line%horchordang2 (vecflt.type) (9.3.1.2.9)
verchordang2 (951)	lineintegraldiag%setup_line%verchordang2 (vecflt.type) (9.3.1.2.9)
third_point (951)	lineintegraldiag%setup_line%third_point (rzphi1D) (9.3.1.3.247)
r (920)	lineintegraldiag%setup_line%third_point%r (vecflt.type) (9.3.1.2.9)
z (920)	lineintegraldiag%setup_line%third_point%z (vecflt.type) (9.3.1.2.9)
phi (920)	lineintegraldiag%setup_line%third_point%phi (vecflt.type) (9.3.1.2.9)
nchordpoints (951)	lineintegraldiag%setup_line%nchordpoints (integer) (9.3.1.1.2)
measure (842)	lineintegraldiag%measure (exp1D) (9.3.1.3.143)
value (816)	lineintegraldiag%measure%value (vecflt.type) (9.3.1.2.9)
abserror (816)	lineintegraldiag%measure%abserror (vecflt.type) (9.3.1.2.9)
relerror (816)	lineintegraldiag%measure%relerror (vecflt.type) (9.3.1.2.9)
time (842)	lineintegraldiag%time (float) (9.3.1.1.1)

### 9.3.2.1.17 ironmodel

datainfo (692)	ironmodel%datainfo (datainfo) (9.3.1.3.92)
dataprovider (765)	ironmodel%datainfo%dataprovider (string) (9.3.1.1.3)
putdate (765)	ironmodel%datainfo%putdate (string) (9.3.1.1.3)
source (765)	ironmodel%datainfo%source (string) (9.3.1.1.3)
comment (765)	ironmodel%datainfo%comment (string) (9.3.1.1.3)
isref (765)	ironmodel%datainfo%isref (integer) (9.3.1.1.2)
whatref (765)	ironmodel%datainfo%whatref (whatref) (9.3.1.3.333)
user (1006)	ironmodel%datainfo%whatref%user (string) (9.3.1.1.3)
machine (1006)	ironmodel%datainfo%whatref%machine (string) (9.3.1.1.3)
shot (1006)	ironmodel%datainfo%whatref%shot (integer) (9.3.1.1.2)
run (1006)	ironmodel%datainfo%whatref%run (integer) (9.3.1.1.2)
occurrence (1006)	ironmodel%datainfo%whatref%occurrence (integer) (9.3.1.1.2)
putinfo (765)	ironmodel%datainfo%putinfo (putinfo) (9.3.1.3.215)
putmethod (888)	ironmodel%datainfo%putinfo%putmethod (string) (9.3.1.1.3)
putaccess (888)	ironmodel%datainfo%putinfo%putaccess (string) (9.3.1.1.3)
putlocation (888)	ironmodel%datainfo%putinfo%putlocation (string) (9.3.1.1.3)
rights (888)	ironmodel%datainfo%putinfo%rights (string) (9.3.1.1.3)
desc_iron (692)	ironmodel%desc_iron (desc_iron) (9.3.1.3.94)
name (767)	ironmodel%desc_iron%name (vecstring.type) (9.3.1.2.11)
id (767)	ironmodel%desc_iron%id (vecstring.type) (9.3.1.2.11)
permeability (767)	ironmodel%desc_iron%permeability (permeability) (9.3.1.3.196)
b (869)	ironmodel%desc_iron%permeability%b (matflt.type) (9.3.1.2.7)
mur (869)	ironmodel%desc_iron%permeability%mur (matflt.type) (9.3.1.2.7)
geom_iron (767)	ironmodel%desc_iron%geom_iron (geom_iron) (9.3.1.3.152)
npoints (825)	ironmodel%desc_iron%geom_iron%npoints (vecint.type) (9.3.1.2.10)
rzcoordinate (825)	ironmodel%desc_iron%geom_iron%rzcoordinate (rz2D) (9.3.1.3.244)
r (917)	ironmodel%desc_iron%geom_iron%rzcoordinate%r (matflt.type) (9.3.1.2.7)
z (917)	ironmodel%desc_iron%geom_iron%rzcoordinate%z (matflt.type) (9.3.1.2.7)
magnetise (692)	ironmodel%magnetise (magnetise) (9.3.1.3.173)
mr (846)	ironmodel%magnetise%mr (exp1D) (9.3.1.3.143)
value (816)	ironmodel%magnetise%mr%value (vecflt.type) (9.3.1.2.9)
abserror (816)	ironmodel%magnetise%mr%abserror (vecflt.type) (9.3.1.2.9)
relerror (816)	ironmodel%magnetise%mr%relerror (vecflt.type) (9.3.1.2.9)
mz (846)	ironmodel%magnetise%mz (exp1D) (9.3.1.3.143)



value (816)	ironmodel%magnetise% <i>mz</i> %value (vecflt.type) (9.3.1.2.9)
abserror (816)	ironmodel%magnetise% <i>mz</i> %abserror (vecflt.type) (9.3.1.2.9)
releror (816)	ironmodel%magnetise% <i>mz</i> %releror (vecflt.type) (9.3.1.2.9)
time (692)	ironmodel%time (float) (9.3.1.1.1)

### 9.3.2.1.18 langmuirdiag

datainfo (693)	langmuirdiag%datainfo (datainfo) (9.3.1.3.92)
dataprovider (765)	langmuirdiag%datainfo%dataprovider (string) (9.3.1.1.3)
putdate (765)	langmuirdiag%datainfo%putdate (string) (9.3.1.1.3)
source (765)	langmuirdiag%datainfo%source (string) (9.3.1.1.3)
comment (765)	langmuirdiag%datainfo%comment (string) (9.3.1.1.3)
isref (765)	langmuirdiag%datainfo%isref (integer) (9.3.1.1.2)
whatref (765)	langmuirdiag%datainfo%whatref (whatref) (9.3.1.3.333)
user (1006)	langmuirdiag%datainfo%whatref%user (string) (9.3.1.1.3)
machine (1006)	langmuirdiag%datainfo%whatref%machine (string) (9.3.1.1.3)
shot (1006)	langmuirdiag%datainfo%whatref%shot (integer) (9.3.1.1.2)
run (1006)	langmuirdiag%datainfo%whatref%run (integer) (9.3.1.1.2)
occurrence (1006)	langmuirdiag%datainfo%whatref%occurrence (integer) (9.3.1.1.2)
putinfo (765)	langmuirdiag%datainfo%putinfo (putinfo) (9.3.1.3.215)
putmethod (888)	langmuirdiag%datainfo%putinfo%putmethod (string) (9.3.1.1.3)
putaccess (888)	langmuirdiag%datainfo%putinfo%putaccess (string) (9.3.1.1.3)
putlocation (888)	langmuirdiag%datainfo%putinfo%putlocation (string) (9.3.1.1.3)
rights (888)	langmuirdiag%datainfo%putinfo%rights (string) (9.3.1.1.3)
potential (693)	langmuirdiag%potential (lang_measure) (9.3.1.3.161)
name (834)	langmuirdiag%potential%name (vecstring.type) (9.3.1.2.11)
direction (834)	langmuirdiag%potential%direction (vecstring.type) (9.3.1.2.11)
area (834)	langmuirdiag%potential%area (exp1D) (9.3.1.3.143)
value (816)	langmuirdiag%potential%area%value (vecflt.type) (9.3.1.2.9)
abserror (816)	langmuirdiag%potential%area%abserror (vecflt.type) (9.3.1.2.9)
releror (816)	langmuirdiag%potential%area%releror (vecflt.type) (9.3.1.2.9)
position (834)	langmuirdiag%potential%position (rzphi1Dexp) (9.3.1.3.248)
r (921)	langmuirdiag%potential%position%r (exp1D) (9.3.1.3.143)
value (816)	langmuirdiag%potential%position%r%value (vecflt.type) (9.3.1.2.9)
abserror (816)	langmuirdiag%potential%position%r%abserror (vecflt.type) (9.3.1.2.9)
releror (816)	langmuirdiag%potential%position%r%releror (vecflt.type) (9.3.1.2.9)
z (921)	langmuirdiag%potential%position%z (exp1D) (9.3.1.3.143)
value (816)	langmuirdiag%potential%position%z%value (vecflt.type) (9.3.1.2.9)
abserror (816)	langmuirdiag%potential%position%z%abserror (vecflt.type) (9.3.1.2.9)
releror (816)	langmuirdiag%potential%position%z%releror (vecflt.type) (9.3.1.2.9)
phi (921)	langmuirdiag%potential%position%phi (exp1D) (9.3.1.3.143)
value (816)	langmuirdiag%potential%position%phi%value (vecflt.type) (9.3.1.2.9)
abserror (816)	langmuirdiag%potential%position%phi%abserror (vecflt.type) (9.3.1.2.9)
releror (816)	langmuirdiag%potential%position%phi%releror (vecflt.type) (9.3.1.2.9)
measure (834)	langmuirdiag%potential%measure (exp1D) (9.3.1.3.143)
value (816)	langmuirdiag%potential%measure%value (vecflt.type) (9.3.1.2.9)
abserror (816)	langmuirdiag%potential%measure%abserror (vecflt.type) (9.3.1.2.9)
releror (816)	langmuirdiag%potential%measure%releror (vecflt.type) (9.3.1.2.9)
bias (693)	langmuirdiag%bias (lang_measure) (9.3.1.3.161)
name (834)	langmuirdiag%bias%name (vecstring.type) (9.3.1.2.11)
direction (834)	langmuirdiag%bias%direction (vecstring.type) (9.3.1.2.11)
area (834)	langmuirdiag%bias%area (exp1D) (9.3.1.3.143)
value (816)	langmuirdiag%bias%area%value (vecflt.type) (9.3.1.2.9)
abserror (816)	langmuirdiag%bias%area%abserror (vecflt.type) (9.3.1.2.9)
releror (816)	langmuirdiag%bias%area%releror (vecflt.type) (9.3.1.2.9)
position (834)	langmuirdiag%bias%position (rzphi1Dexp) (9.3.1.3.248)
r (921)	langmuirdiag%bias%position%r (exp1D) (9.3.1.3.143)
value (816)	langmuirdiag%bias%position%r%value (vecflt.type) (9.3.1.2.9)
abserror (816)	langmuirdiag%bias%position%r%abserror (vecflt.type) (9.3.1.2.9)
releror (816)	langmuirdiag%bias%position%r%releror (vecflt.type) (9.3.1.2.9)
z (921)	langmuirdiag%bias%position%z (exp1D) (9.3.1.3.143)

value (816)	langmuirdiag%bias%position%z%value (vecflt.type) (9.3.1.2.9)
abserror (816)	langmuirdiag%bias%position%z%abserror (vecflt.type) (9.3.1.2.9)
releror (816)	langmuirdiag%bias%position%z%releror (vecflt.type) (9.3.1.2.9)
phi (921)	langmuirdiag%bias%position%phi (exp1D) (9.3.1.3.143)
value (816)	langmuirdiag%bias%position%phi%value (vecflt.type) (9.3.1.2.9)
abserror (816)	langmuirdiag%bias%position%phi%abserror (vecflt.type) (9.3.1.2.9)
releror (816)	langmuirdiag%bias%position%phi%releror (vecflt.type) (9.3.1.2.9)
measure (834)	langmuirdiag%bias%measure (exp1D) (9.3.1.3.143)
value (816)	langmuirdiag%bias%measure%value (vecflt.type) (9.3.1.2.9)
abserror (816)	langmuirdiag%bias%measure%abserror (vecflt.type) (9.3.1.2.9)
releror (816)	langmuirdiag%bias%measure%releror (vecflt.type) (9.3.1.2.9)
jsat (693)	langmuirdiag%jsat (lang_measure) (9.3.1.3.161)
name (834)	langmuirdiag%jsat%name (vecstring.type) (9.3.1.2.11)
direction (834)	langmuirdiag%jsat%direction (vecstring.type) (9.3.1.2.11)
area (834)	langmuirdiag%jsat%area (exp1D) (9.3.1.3.143)
value (816)	langmuirdiag%jsat%area%value (vecflt.type) (9.3.1.2.9)
abserror (816)	langmuirdiag%jsat%area%abserror (vecflt.type) (9.3.1.2.9)
releror (816)	langmuirdiag%jsat%area%releror (vecflt.type) (9.3.1.2.9)
position (834)	langmuirdiag%jsat%position (rzphi1Dexp) (9.3.1.3.248)
r (921)	langmuirdiag%jsat%position%r (exp1D) (9.3.1.3.143)
value (816)	langmuirdiag%jsat%position%r%value (vecflt.type) (9.3.1.2.9)
abserror (816)	langmuirdiag%jsat%position%r%abserror (vecflt.type) (9.3.1.2.9)
releror (816)	langmuirdiag%jsat%position%r%releror (vecflt.type) (9.3.1.2.9)
z (921)	langmuirdiag%jsat%position%z (exp1D) (9.3.1.3.143)
value (816)	langmuirdiag%jsat%position%z%value (vecflt.type) (9.3.1.2.9)
abserror (816)	langmuirdiag%jsat%position%z%abserror (vecflt.type) (9.3.1.2.9)
releror (816)	langmuirdiag%jsat%position%z%releror (vecflt.type) (9.3.1.2.9)
phi (921)	langmuirdiag%jsat%position%phi (exp1D) (9.3.1.3.143)
value (816)	langmuirdiag%jsat%position%phi%value (vecflt.type) (9.3.1.2.9)
abserror (816)	langmuirdiag%jsat%position%phi%abserror (vecflt.type) (9.3.1.2.9)
releror (816)	langmuirdiag%jsat%position%phi%releror (vecflt.type) (9.3.1.2.9)
measure (834)	langmuirdiag%jsat%measure (exp1D) (9.3.1.3.143)
value (816)	langmuirdiag%jsat%measure%value (vecflt.type) (9.3.1.2.9)
abserror (816)	langmuirdiag%jsat%measure%abserror (vecflt.type) (9.3.1.2.9)
releror (816)	langmuirdiag%jsat%measure%releror (vecflt.type) (9.3.1.2.9)
ne (693)	langmuirdiag%ne (lang_derived) (9.3.1.3.160)
source (833)	langmuirdiag%ne%source (vecstring.type) (9.3.1.2.11)
position (833)	langmuirdiag%ne%position (rzphi1Dexp) (9.3.1.3.248)
r (921)	langmuirdiag%ne%position%r (exp1D) (9.3.1.3.143)
value (816)	langmuirdiag%ne%position%r%value (vecflt.type) (9.3.1.2.9)
abserror (816)	langmuirdiag%ne%position%r%abserror (vecflt.type) (9.3.1.2.9)
releror (816)	langmuirdiag%ne%position%r%releror (vecflt.type) (9.3.1.2.9)
z (921)	langmuirdiag%ne%position%z (exp1D) (9.3.1.3.143)
value (816)	langmuirdiag%ne%position%z%value (vecflt.type) (9.3.1.2.9)
abserror (816)	langmuirdiag%ne%position%z%abserror (vecflt.type) (9.3.1.2.9)
releror (816)	langmuirdiag%ne%position%z%releror (vecflt.type) (9.3.1.2.9)
phi (921)	langmuirdiag%ne%position%phi (exp1D) (9.3.1.3.143)
value (816)	langmuirdiag%ne%position%phi%value (vecflt.type) (9.3.1.2.9)
abserror (816)	langmuirdiag%ne%position%phi%abserror (vecflt.type) (9.3.1.2.9)
releror (816)	langmuirdiag%ne%position%phi%releror (vecflt.type) (9.3.1.2.9)
measure (833)	langmuirdiag%ne%measure (exp1D) (9.3.1.3.143)
value (816)	langmuirdiag%ne%measure%value (vecflt.type) (9.3.1.2.9)
abserror (816)	langmuirdiag%ne%measure%abserror (vecflt.type) (9.3.1.2.9)
releror (816)	langmuirdiag%ne%measure%releror (vecflt.type) (9.3.1.2.9)
te (693)	langmuirdiag%te (lang_derived) (9.3.1.3.160)
source (833)	langmuirdiag%te%source (vecstring.type) (9.3.1.2.11)
position (833)	langmuirdiag%te%position (rzphi1Dexp) (9.3.1.3.248)
r (921)	langmuirdiag%te%position%r (exp1D) (9.3.1.3.143)
value (816)	langmuirdiag%te%position%r%value (vecflt.type) (9.3.1.2.9)
abserror (816)	langmuirdiag%te%position%r%abserror (vecflt.type) (9.3.1.2.9)
releror (816)	langmuirdiag%te%position%r%releror (vecflt.type) (9.3.1.2.9)

z (921)	langmuirdiag%te%position%z (exp1D) (9.3.1.3.143)
value (816)	langmuirdiag%te%position%z%value (vecflt.type) (9.3.1.2.9)
abserror (816)	langmuirdiag%te%position%z%abserror (vecflt.type) (9.3.1.2.9)
releror (816)	langmuirdiag%te%position%z%releror (vecflt.type) (9.3.1.2.9)
phi (921)	langmuirdiag%te%position%phi (exp1D) (9.3.1.3.143)
value (816)	langmuirdiag%te%position%phi%value (vecflt.type) (9.3.1.2.9)
abserror (816)	langmuirdiag%te%position%phi%abserror (vecflt.type) (9.3.1.2.9)
releror (816)	langmuirdiag%te%position%phi%releror (vecflt.type) (9.3.1.2.9)
measure (833)	langmuirdiag%te%measure (exp1D) (9.3.1.3.143)
value (816)	langmuirdiag%te%measure%value (vecflt.type) (9.3.1.2.9)
abserror (816)	langmuirdiag%te%measure%abserror (vecflt.type) (9.3.1.2.9)
releror (816)	langmuirdiag%te%measure%releror (vecflt.type) (9.3.1.2.9)
machpar (693)	langmuirdiag%machpar (lang_derived) (9.3.1.3.160)
source (833)	langmuirdiag%machpar%source (vecstring.type) (9.3.1.2.11)
position (833)	langmuirdiag%machpar%position (rzphi1Dexp) (9.3.1.3.248)
r (921)	langmuirdiag%machpar%position%r (exp1D) (9.3.1.3.143)
value (816)	langmuirdiag%machpar%position%r%value (vecflt.type) (9.3.1.2.9)
abserror (816)	langmuirdiag%machpar%position%r%abserror (vecflt.type) (9.3.1.2.9)
releror (816)	langmuirdiag%machpar%position%r%releror (vecflt.type) (9.3.1.2.9)
z (921)	langmuirdiag%machpar%position%z (exp1D) (9.3.1.3.143)
value (816)	langmuirdiag%machpar%position%z%value (vecflt.type) (9.3.1.2.9)
abserror (816)	langmuirdiag%machpar%position%z%abserror (vecflt.type) (9.3.1.2.9)
releror (816)	langmuirdiag%machpar%position%z%releror (vecflt.type) (9.3.1.2.9)
phi (921)	langmuirdiag%machpar%position%phi (exp1D) (9.3.1.3.143)
value (816)	langmuirdiag%machpar%position%phi%value (vecflt.type) (9.3.1.2.9)
abserror (816)	langmuirdiag%machpar%position%phi%abserror (vecflt.type) (9.3.1.2.9)
releror (816)	langmuirdiag%machpar%position%phi%releror (vecflt.type) (9.3.1.2.9)
measure (833)	langmuirdiag%machpar%measure (exp1D) (9.3.1.3.143)
value (816)	langmuirdiag%machpar%measure%value (vecflt.type) (9.3.1.2.9)
abserror (816)	langmuirdiag%machpar%measure%abserror (vecflt.type) (9.3.1.2.9)
releror (816)	langmuirdiag%machpar%measure%releror (vecflt.type) (9.3.1.2.9)
codeparam (693)	langmuirdiag%codeparam (codeparam) (9.3.1.3.58)
codename (731)	langmuirdiag%codeparam%codename (string) (9.3.1.1.3)
codeversion (731)	langmuirdiag%codeparam%codeversion (string) (9.3.1.1.3)
parameters (731)	langmuirdiag%codeparam%parameters (string) (9.3.1.1.3)
output_diag (731)	langmuirdiag%codeparam%output_diag (string) (9.3.1.1.3)
output_flag (731)	langmuirdiag%codeparam%output_flag (integer) (9.3.1.1.2)
time (693)	langmuirdiag%time (float) (9.3.1.1.1)

### 9.3.2.1.19 launches

datainfo (694)	launchs%datainfo (datainfo) (9.3.1.3.92)
dataprovider (765)	launchs%datainfo%dataprovider (string) (9.3.1.1.3)
putdate (765)	launchs%datainfo%putdate (string) (9.3.1.1.3)
source (765)	launchs%datainfo%source (string) (9.3.1.1.3)
comment (765)	launchs%datainfo%comment (string) (9.3.1.1.3)
isref (765)	launchs%datainfo%isref (integer) (9.3.1.1.2)
whatref (765)	launchs%datainfo%whatref (whatref) (9.3.1.3.333)
user (1006)	launchs%datainfo%whatref%user (string) (9.3.1.1.3)
machine (1006)	launchs%datainfo%whatref%machine (string) (9.3.1.1.3)
shot (1006)	launchs%datainfo%whatref%shot (integer) (9.3.1.1.2)
run (1006)	launchs%datainfo%whatref%run (integer) (9.3.1.1.2)
occurrence (1006)	launchs%datainfo%whatref%occurrence (integer) (9.3.1.1.2)
putinfo (765)	launchs%datainfo%putinfo (putinfo) (9.3.1.3.215)
putmethod (888)	launchs%datainfo%putinfo%putmethod (string) (9.3.1.1.3)
putaccess (888)	launchs%datainfo%putinfo%putaccess (string) (9.3.1.1.3)
putlocation (888)	launchs%datainfo%putinfo%putlocation (string) (9.3.1.1.3)
rights (888)	launchs%datainfo%putinfo%rights (string) (9.3.1.1.3)
name (694)	launchs%name (vecstring.type) (9.3.1.2.11)
type (694)	launchs%type (vecstring.type) (9.3.1.2.11)
frequency (694)	launchs%frequency (vecflt.type) (9.3.1.2.9)

mode (694)	launchs%mode (vecint_type) (9.3.1.2.10)
position (694)	launchs%position (rzphi1D) (9.3.1.3.247)
r (920)	launchs%position%r (vecflt_type) (9.3.1.2.9)
z (920)	launchs%position%z (vecflt_type) (9.3.1.2.9)
phi (920)	launchs%position%phi (vecflt_type) (9.3.1.2.9)
spectrum (694)	launchs%spectrum (spectrum) (9.3.1.3.291)
phi_theta (964)	launchs%spectrum%phi_theta (launchs_phi_theta) (9.3.1.3.164)
nn_phi (837)	launchs%spectrum%phi_theta%nn_phi (vecint_type) (9.3.1.2.10)
nn_theta (837)	launchs%spectrum%phi_theta%nn_theta (vecint_type) (9.3.1.2.10)
n_phi (837)	launchs%spectrum%phi_theta%n_phi (matflt_type) (9.3.1.2.7)
n_theta (837)	launchs%spectrum%phi_theta%n_theta (matflt_type) (9.3.1.2.7)
power (837)	launchs%spectrum%phi_theta%power (array3dflt_type) (9.3.1.2.1)
parallel (964)	launchs%spectrum%parallel (launchs_parallel) (9.3.1.3.163)
nn_par (836)	launchs%spectrum%parallel%nn_par (vecint_type) (9.3.1.2.10)
n_par (836)	launchs%spectrum%parallel%n_par (matflt_type) (9.3.1.2.7)
power (836)	launchs%spectrum%parallel%power (vecflt_type) (9.3.1.2.9)
beam (694)	launchs%beam (launchs_rfbeam) (9.3.1.3.165)
spot (838)	launchs%beam%spot (launchs_rfbeam_spot) (9.3.1.3.167)
waist (840)	launchs%beam%spot%waist (matflt_type) (9.3.1.2.7)
angle (840)	launchs%beam%spot%angle (vecflt_type) (9.3.1.2.9)
phaseellipse (838)	launchs%beam%phaseellipse (launchs_rfbeam_phaseellipse) (9.3.1.3.166)
incurrad (839)	launchs%beam%phaseellipse%incurrad (matflt_type) (9.3.1.2.7)
angle (839)	launchs%beam%phaseellipse%angle (vecflt_type) (9.3.1.2.9)
codeparam (694)	launchs%codeparam (codeparam) (9.3.1.3.58)
codename (731)	launchs%codeparam%codename (string) (9.3.1.1.3)
codeversion (731)	launchs%codeparam%codeversion (string) (9.3.1.1.3)
parameters (731)	launchs%codeparam%parameters (string) (9.3.1.1.3)
output_diag (731)	launchs%codeparam%output_diag (string) (9.3.1.1.3)
output_flag (731)	launchs%codeparam%output_flag (integer) (9.3.1.1.2)
time (694)	launchs%time (float) (9.3.1.1.1)

### 9.3.2.1.20 limiter

datainfo (695)	limiter%datainfo (datainfo) (9.3.1.3.92)
dataprovider (765)	limiter%datainfo%dataprovider (string) (9.3.1.1.3)
putdate (765)	limiter%datainfo%putdate (string) (9.3.1.1.3)
source (765)	limiter%datainfo%source (string) (9.3.1.1.3)
comment (765)	limiter%datainfo%comment (string) (9.3.1.1.3)
isref (765)	limiter%datainfo%isref (integer) (9.3.1.1.2)
whatref (765)	limiter%datainfo%whatref (whatref) (9.3.1.3.333)
user (1006)	limiter%datainfo%whatref%user (string) (9.3.1.1.3)
machine (1006)	limiter%datainfo%whatref%machine (string) (9.3.1.1.3)
shot (1006)	limiter%datainfo%whatref%shot (integer) (9.3.1.1.2)
run (1006)	limiter%datainfo%whatref%run (integer) (9.3.1.1.2)
occurrence (1006)	limiter%datainfo%whatref%occurrence (integer) (9.3.1.1.2)
putinfo (765)	limiter%datainfo%putinfo (putinfo) (9.3.1.3.215)
putmethod (888)	limiter%datainfo%putinfo%putmethod (string) (9.3.1.1.3)
putaccess (888)	limiter%datainfo%putinfo%putaccess (string) (9.3.1.1.3)
putlocation (888)	limiter%datainfo%putinfo%putlocation (string) (9.3.1.1.3)
rights (888)	limiter%datainfo%putinfo%rights (string) (9.3.1.1.3)
limiter_unit (695)	limiter%limiter_unit (limiter_unit) (9.3.1.3.168)
name (841)	limiter%limiter_unit%name (string) (9.3.1.1.3)
closed (841)	limiter%limiter_unit%closed (string) (9.3.1.1.3)
position (841)	limiter%limiter_unit%position (rz1D) (9.3.1.3.242)
r (915)	limiter%limiter_unit%position%r (vecflt_type) (9.3.1.2.9)
z (915)	limiter%limiter_unit%position%z (vecflt_type) (9.3.1.2.9)

### 9.3.2.1.21 magdiag

datainfo (696)	magdiag%datainfo (datainfo) (9.3.1.3.92)
dataprovider (765)	magdiag%datainfo%dataprovider (string) (9.3.1.1.3)

putdate (765)	magdiag%datainfo%putdate (string) (9.3.1.1.3)
source (765)	magdiag%datainfo%source (string) (9.3.1.1.3)
comment (765)	magdiag%datainfo%comment (string) (9.3.1.1.3)
isref (765)	magdiag%datainfo%isref (integer) (9.3.1.1.2)
whatref (765)	magdiag%datainfo%whatref (whatref) (9.3.1.3.333)
user (1006)	magdiag%datainfo%whatref%user (string) (9.3.1.1.3)
machine (1006)	magdiag%datainfo%whatref%machine (string) (9.3.1.1.3)
shot (1006)	magdiag%datainfo%whatref%shot (integer) (9.3.1.1.2)
run (1006)	magdiag%datainfo%whatref%run (integer) (9.3.1.1.2)
occurrence (1006)	magdiag%datainfo%whatref%occurrence (integer) (9.3.1.1.2)
putinfo (765)	magdiag%datainfo%putinfo (putinfo) (9.3.1.3.215)
putmethod (888)	magdiag%datainfo%putinfo%putmethod (string) (9.3.1.1.3)
putaccess (888)	magdiag%datainfo%putinfo%putaccess (string) (9.3.1.1.3)
putlocation (888)	magdiag%datainfo%putinfo%putlocation (string) (9.3.1.1.3)
rights (888)	magdiag%datainfo%putinfo%rights (string) (9.3.1.1.3)
ip (696)	magdiag%ip (exp0D) (9.3.1.3.142)
value (815)	magdiag%ip%value (float) (9.3.1.1.1)
abserror (815)	magdiag%ip%abserror (float) (9.3.1.1.1)
releror (815)	magdiag%ip%releror (float) (9.3.1.1.1)
diamagflux (696)	magdiag%diamagflux (exp0D) (9.3.1.3.142)
value (815)	magdiag%diamagflux%value (float) (9.3.1.1.1)
abserror (815)	magdiag%diamagflux%abserror (float) (9.3.1.1.1)
releror (815)	magdiag%diamagflux%releror (float) (9.3.1.1.1)
flux_loops (696)	magdiag%flux_loops (flux_loops) (9.3.1.3.147)
setup_floops (820)	magdiag%flux_loops%setup_floops (setup_floops) (9.3.1.3.276)
name (949)	magdiag%flux_loops%setup_floops%name (vecstring_type) (9.3.1.2.11)
id (949)	magdiag%flux_loops%setup_floops%id (vecstring_type) (9.3.1.2.11)
position (949)	magdiag%flux_loops%setup_floops%position (rzphi2D) (9.3.1.3.249)
r (922)	magdiag%flux_loops%setup_floops%position%r (matflt_type) (9.3.1.2.7)
z (922)	magdiag%flux_loops%setup_floops%position%z (matflt_type) (9.3.1.2.7)
phi (922)	magdiag%flux_loops%setup_floops%position%phi (matflt_type) (9.3.1.2.7)
npoints (949)	magdiag%flux_loops%setup_floops%npoints (vecint_type) (9.3.1.2.10)
measure (820)	magdiag%flux_loops%measure (exp1D) (9.3.1.3.143)
value (816)	magdiag%flux_loops%measure%value (vecflt_type) (9.3.1.2.9)
abserror (816)	magdiag%flux_loops%measure%abserror (vecflt_type) (9.3.1.2.9)
releror (816)	magdiag%flux_loops%measure%releror (vecflt_type) (9.3.1.2.9)
bpol_probes (696)	magdiag%bpol_probes (bpol_probes) (9.3.1.3.56)
setup_bprobe (729)	magdiag%bpol_probes%setup_bprobe (setup_bprobe) (9.3.1.3.275)
name (948)	magdiag%bpol_probes%setup_bprobe%name (vecstring_type) (9.3.1.2.11)
id (948)	magdiag%bpol_probes%setup_bprobe%id (vecstring_type) (9.3.1.2.11)
position (948)	magdiag%bpol_probes%setup_bprobe%position (rz1D) (9.3.1.3.242)
r (915)	magdiag%bpol_probes%setup_bprobe%position%r (vecflt_type) (9.3.1.2.9)
z (915)	magdiag%bpol_probes%setup_bprobe%position%z (vecflt_type) (9.3.1.2.9)
polangle (948)	magdiag%bpol_probes%setup_bprobe%polangle (vecflt_type) (9.3.1.2.9)
torangle (948)	magdiag%bpol_probes%setup_bprobe%torangle (vecflt_type) (9.3.1.2.9)
area (948)	magdiag%bpol_probes%setup_bprobe%area (vecflt_type) (9.3.1.2.9)
length (948)	magdiag%bpol_probes%setup_bprobe%length (vecflt_type) (9.3.1.2.9)
turns (948)	magdiag%bpol_probes%setup_bprobe%turns (vecint_type) (9.3.1.2.10)
measure (729)	magdiag%bpol_probes%measure (exp1D) (9.3.1.3.143)
value (816)	magdiag%bpol_probes%measure%value (vecflt_type) (9.3.1.2.9)
abserror (816)	magdiag%bpol_probes%measure%abserror (vecflt_type) (9.3.1.2.9)
releror (816)	magdiag%bpol_probes%measure%releror (vecflt_type) (9.3.1.2.9)
time (696)	magdiag%time (float) (9.3.1.1.1)

### 9.3.2.1.22 mhd

datainfo (697)	mhd%datainfo (datainfo) (9.3.1.3.92)
dataprovider (765)	mhd%datainfo%dataprovider (string) (9.3.1.1.3)
putdate (765)	mhd%datainfo%putdate (string) (9.3.1.1.3)
source (765)	mhd%datainfo%source (string) (9.3.1.1.3)
comment (765)	mhd%datainfo%comment (string) (9.3.1.1.3)

isref (765)  
 whatref (765)  
   user (1006)  
   machine (1006)  
   shot (1006)  
   run (1006)  
   occurrence (1006)  
 putinfo (765)  
   putmethod (888)  
   putaccess (888)  
   putlocation (888)  
   rights (888)  
 n (697)  
 frequency (697)  
 growthrate (697)  
 plasma (697)  
   psi (849)  
   m (849)  
   disp\_perp (849)  
   disp\_par (849)  
   tau\_alfven (849)  
   tau\_resistive (849)  
   coord\_sys (849)  
     grid\_type (749)  
     grid (749)  
       dim1 (912)  
       dim2 (912)  
     jacobian (749)  
     g\_11 (749)  
     g\_12 (749)  
     g\_13 (749)  
     g\_22 (749)  
     g\_23 (749)  
     g\_33 (749)  
     position (749)  
       r (917)  
       z (917)  
   a\_pert (849)  
     coord1 (852)  
     coord2 (852)  
     coord3 (852)  
   b\_pert (849)  
     coord1 (852)  
     coord2 (852)  
     coord3 (852)  
   v\_pert (849)  
     coord1 (852)  
     coord2 (852)  
     coord3 (852)  
   p\_pert (849)  
   rho\_mass\_pert (849)  
   temp\_pert (849)  
 vacuum (697)  
   m (851)  
   coord\_sys (851)  
     grid\_type (749)  
     grid (749)  
       dim1 (912)  
       dim2 (912)  
     jacobian (749)  
     g\_11 (749)  
   mhd%datainfo%isref (integer) (9.3.1.1.2)  
   mhd%datainfo%whatref (whatref) (9.3.1.3.333)  
   mhd%datainfo%whatref%user (string) (9.3.1.1.3)  
   mhd%datainfo%whatref%machine (string) (9.3.1.1.3)  
   mhd%datainfo%whatref%shot (integer) (9.3.1.1.2)  
   mhd%datainfo%whatref%run (integer) (9.3.1.1.2)  
   mhd%datainfo%whatref%occurrence (integer) (9.3.1.1.2)  
   mhd%datainfo%putinfo (putinfo) (9.3.1.3.215)  
   mhd%datainfo%putinfo%putmethod (string) (9.3.1.1.3)  
   mhd%datainfo%putinfo%putaccess (string) (9.3.1.1.3)  
   mhd%datainfo%putinfo%putlocation (string) (9.3.1.1.3)  
   mhd%datainfo%putinfo%rights (string) (9.3.1.1.3)  
   mhd%n (vecint\_type) (9.3.1.2.10)  
   mhd%frequency (vecflt\_type) (9.3.1.2.9)  
   mhd%growthrate (vecflt\_type) (9.3.1.2.9)  
   mhd%plasma (mhd\_plasma) (9.3.1.3.176)  
   mhd%plasma%psi (vecflt\_type) (9.3.1.2.9)  
   mhd%plasma%m (array3dflt\_type) (9.3.1.2.1)  
   mhd%plasma%disp\_perp (array3dflt\_type) (9.3.1.2.1)  
   mhd%plasma%disp\_par (array3dflt\_type) (9.3.1.2.1)  
   mhd%plasma%tau\_alfven (vecflt\_type) (9.3.1.2.9)  
   mhd%plasma%tau\_resistive (vecflt\_type) (9.3.1.2.9)  
   mhd%plasma%coord\_sys (coord\_sys) (9.3.1.3.76)  
   mhd%plasma%coord\_sys%grid\_type (string) (9.3.1.1.3)  
   mhd%plasma%coord\_sys%grid (reggrid) (9.3.1.3.239)  
   mhd%plasma%coord\_sys%grid%dim1 (vecflt\_type) (9.3.1.2.9)  
   mhd%plasma%coord\_sys%grid%dim2 (vecflt\_type) (9.3.1.2.9)  
   mhd%plasma%coord\_sys%jacobian (matflt\_type) (9.3.1.2.7)  
   mhd%plasma%coord\_sys%g\_11 (matflt\_type) (9.3.1.2.7)  
   mhd%plasma%coord\_sys%g\_12 (matflt\_type) (9.3.1.2.7)  
   mhd%plasma%coord\_sys%g\_13 (matflt\_type) (9.3.1.2.7)  
   mhd%plasma%coord\_sys%g\_22 (matflt\_type) (9.3.1.2.7)  
   mhd%plasma%coord\_sys%g\_23 (matflt\_type) (9.3.1.2.7)  
   mhd%plasma%coord\_sys%g\_33 (matflt\_type) (9.3.1.2.7)  
   mhd%plasma%coord\_sys%position (rz2D) (9.3.1.3.244)  
   mhd%plasma%coord\_sys%position%r (matflt\_type) (9.3.1.2.7)  
   mhd%plasma%coord\_sys%position%z (matflt\_type) (9.3.1.2.7)  
   mhd%plasma%a\_pert (mhd\_vector) (9.3.1.3.179)  
   mhd%plasma%a\_pert%coord1 (array3dflt\_type) (9.3.1.2.1)  
   mhd%plasma%a\_pert%coord2 (array3dflt\_type) (9.3.1.2.1)  
   mhd%plasma%a\_pert%coord3 (array3dflt\_type) (9.3.1.2.1)  
   mhd%plasma%b\_pert (mhd\_vector) (9.3.1.3.179)  
   mhd%plasma%b\_pert%coord1 (array3dflt\_type) (9.3.1.2.1)  
   mhd%plasma%b\_pert%coord2 (array3dflt\_type) (9.3.1.2.1)  
   mhd%plasma%b\_pert%coord3 (array3dflt\_type) (9.3.1.2.1)  
   mhd%plasma%v\_pert (mhd\_vector) (9.3.1.3.179)  
   mhd%plasma%v\_pert%coord1 (array3dflt\_type) (9.3.1.2.1)  
   mhd%plasma%v\_pert%coord2 (array3dflt\_type) (9.3.1.2.1)  
   mhd%plasma%v\_pert%coord3 (array3dflt\_type) (9.3.1.2.1)  
   mhd%plasma%p\_pert (array3dflt\_type) (9.3.1.2.1)  
   mhd%plasma%rho\_mass\_pert (array3dflt\_type) (9.3.1.2.1)  
   mhd%plasma%temp\_pert (array3dflt\_type) (9.3.1.2.1)  
   mhd%vacuum (mhd\_vacuum) (9.3.1.3.178)  
   mhd%vacuum%m (array3dflt\_type) (9.3.1.2.1)  
   mhd%vacuum%coord\_sys (coord\_sys) (9.3.1.3.76)  
   mhd%vacuum%coord\_sys%grid\_type (string) (9.3.1.1.3)  
   mhd%vacuum%coord\_sys%grid (reggrid) (9.3.1.3.239)  
   mhd%vacuum%coord\_sys%grid%dim1 (vecflt\_type) (9.3.1.2.9)  
   mhd%vacuum%coord\_sys%grid%dim2 (vecflt\_type) (9.3.1.2.9)  
   mhd%vacuum%coord\_sys%jacobian (matflt\_type) (9.3.1.2.7)  
   mhd%vacuum%coord\_sys%g\_11 (matflt\_type) (9.3.1.2.7)



g_12 (749)	mhd%vacuum%coord_sys%g_12 (matflt.type) (9.3.1.2.7)
g_13 (749)	mhd%vacuum%coord_sys%g_13 (matflt.type) (9.3.1.2.7)
g_22 (749)	mhd%vacuum%coord_sys%g_22 (matflt.type) (9.3.1.2.7)
g_23 (749)	mhd%vacuum%coord_sys%g_23 (matflt.type) (9.3.1.2.7)
g_33 (749)	mhd%vacuum%coord_sys%g_33 (matflt.type) (9.3.1.2.7)
position (749)	mhd%vacuum%coord_sys%position (rz2D) (9.3.1.3.244)
r (917)	mhd%vacuum%coord_sys%position%r (matflt.type) (9.3.1.2.7)
z (917)	mhd%vacuum%coord_sys%position%z (matflt.type) (9.3.1.2.7)
a_pert (851)	mhd%vacuum%a_pert (mhd_vector) (9.3.1.3.179)
coord1 (852)	mhd%vacuum%a_pert%coord1 (array3dflt.type) (9.3.1.2.1)
coord2 (852)	mhd%vacuum%a_pert%coord2 (array3dflt.type) (9.3.1.2.1)
coord3 (852)	mhd%vacuum%a_pert%coord3 (array3dflt.type) (9.3.1.2.1)
b_pert (851)	mhd%vacuum%b_pert (mhd_vector) (9.3.1.3.179)
coord1 (852)	mhd%vacuum%b_pert%coord1 (array3dflt.type) (9.3.1.2.1)
coord2 (852)	mhd%vacuum%b_pert%coord2 (array3dflt.type) (9.3.1.2.1)
coord3 (852)	mhd%vacuum%b_pert%coord3 (array3dflt.type) (9.3.1.2.1)
walls (697)	mhd%walls (mhd_walls2d) (9.3.1.3.180)
ideal_wall (853)	mhd%walls%ideal_wall (mhd_ideal_wall2d) (9.3.1.3.175)
walltype (848)	mhd%walls%ideal_wall%walltype (integer) (9.3.1.1.2)
position (848)	mhd%walls%ideal_wall%position (rz1D) (9.3.1.3.242)
r (915)	mhd%walls%ideal_wall%position%r (vecflt.type) (9.3.1.2.9)
z (915)	mhd%walls%ideal_wall%position%z (vecflt.type) (9.3.1.2.9)
res_wall (853)	mhd%walls%res_wall (mhd_res_wall2d) (9.3.1.3.177)
walltype (850)	mhd%walls%res_wall%walltype (integer) (9.3.1.1.2)
delta (850)	mhd%walls%res_wall%delta (float) (9.3.1.1.1)
eta (850)	mhd%walls%res_wall%eta (float) (9.3.1.1.1)
position (850)	mhd%walls%res_wall%position (rz1D) (9.3.1.3.242)
r (915)	mhd%walls%res_wall%position%r (vecflt.type) (9.3.1.2.9)
z (915)	mhd%walls%res_wall%position%z (vecflt.type) (9.3.1.2.9)
time (697)	mhd%time (float) (9.3.1.1.1)
codeparam (697)	mhd%codeparam (codeparam) (9.3.1.3.58)
codename (731)	mhd%codeparam%codename (string) (9.3.1.1.3)
codeversion (731)	mhd%codeparam%codeversion (string) (9.3.1.1.3)
parameters (731)	mhd%codeparam%parameters (string) (9.3.1.1.3)
output_diag (731)	mhd%codeparam%output_diag (string) (9.3.1.1.3)
output_flag (731)	mhd%codeparam%output_flag (integer) (9.3.1.1.2)

### 9.3.2.1.23 msediag

datainfo (698)	msediag%datainfo (datainfo) (9.3.1.3.92)
dataprovider (765)	msediag%datainfo%dataprovider (string) (9.3.1.1.3)
putdate (765)	msediag%datainfo%putdate (string) (9.3.1.1.3)
source (765)	msediag%datainfo%source (string) (9.3.1.1.3)
comment (765)	msediag%datainfo%comment (string) (9.3.1.1.3)
isref (765)	msediag%datainfo%isref (integer) (9.3.1.1.2)
whatref (765)	msediag%datainfo%whatref (whatref) (9.3.1.3.333)
user (1006)	msediag%datainfo%whatref%user (string) (9.3.1.1.3)
machine (1006)	msediag%datainfo%whatref%machine (string) (9.3.1.1.3)
shot (1006)	msediag%datainfo%whatref%shot (integer) (9.3.1.1.2)
run (1006)	msediag%datainfo%whatref%run (integer) (9.3.1.1.2)
occurrence (1006)	msediag%datainfo%whatref%occurrence (integer) (9.3.1.1.2)
putinfo (765)	msediag%datainfo%putinfo (putinfo) (9.3.1.3.215)
putmethod (888)	msediag%datainfo%putinfo%putmethod (string) (9.3.1.1.3)
putaccess (888)	msediag%datainfo%putinfo%putaccess (string) (9.3.1.1.3)
putlocation (888)	msediag%datainfo%putinfo%putlocation (string) (9.3.1.1.3)
rights (888)	msediag%datainfo%putinfo%rights (string) (9.3.1.1.3)
setup_mse (698)	msediag%setup_mse (setup_mse) (9.3.1.3.279)
rzgamma (952)	msediag%setup_mse%rzgamma (rzphidrdzphi1D) (9.3.1.3.251)
r (924)	msediag%setup_mse%rzgamma%r (vecflt.type) (9.3.1.2.9)
z (924)	msediag%setup_mse%rzgamma%z (vecflt.type) (9.3.1.2.9)
phi (924)	msediag%setup_mse%rzgamma%phi (vecflt.type) (9.3.1.2.9)

dr (924)	msediag%setup_mse%orzgamma%dr (vecflt.type) (9.3.1.2.9)
dz (924)	msediag%setup_mse%orzgamma%dz (vecflt.type) (9.3.1.2.9)
dphi (924)	msediag%setup_mse%orzgamma%dphi (vecflt.type) (9.3.1.2.9)
geom_coef (952)	msediag%setup_mse%geom_coef (matflt.type) (9.3.1.2.7)
measure (698)	msediag%measure (exp1D) (9.3.1.3.143)
value (816)	msediag%measure%value (vecflt.type) (9.3.1.2.9)
abserror (816)	msediag%measure%abserror (vecflt.type) (9.3.1.2.9)
releror (816)	msediag%measure%releror (vecflt.type) (9.3.1.2.9)
time (698)	msediag%time (float) (9.3.1.1.1)

### 9.3.2.1.24 nbi

datainfo (699)	nbi%datainfo (datainfo) (9.3.1.3.92)
dataprovider (765)	nbi%datainfo%dataprovider (string) (9.3.1.1.3)
putdate (765)	nbi%datainfo%putdate (string) (9.3.1.1.3)
source (765)	nbi%datainfo%source (string) (9.3.1.1.3)
comment (765)	nbi%datainfo%comment (string) (9.3.1.1.3)
isref (765)	nbi%datainfo%isref (integer) (9.3.1.1.2)
whatref (765)	nbi%datainfo%whatref (whatref) (9.3.1.3.333)
user (1006)	nbi%datainfo%whatref%user (string) (9.3.1.1.3)
machine (1006)	nbi%datainfo%whatref%machine (string) (9.3.1.1.3)
shot (1006)	nbi%datainfo%whatref%shot (integer) (9.3.1.1.2)
run (1006)	nbi%datainfo%whatref%run (integer) (9.3.1.1.2)
occurrence (1006)	nbi%datainfo%whatref%occurrence (integer) (9.3.1.1.2)
putinfo (765)	nbi%datainfo%putinfo (putinfo) (9.3.1.3.215)
putmethod (888)	nbi%datainfo%putinfo%putmethod (string) (9.3.1.1.3)
putaccess (888)	nbi%datainfo%putinfo%putaccess (string) (9.3.1.1.3)
putlocation (888)	nbi%datainfo%putinfo%putlocation (string) (9.3.1.1.3)
rights (888)	nbi%datainfo%putinfo%rights (string) (9.3.1.1.3)
nbi_unit (699)	nbi%nbi_unit (nbi_unit) (9.3.1.3.183)
inj_spec (856)	nbi%nbi_unit%inj_spec (inj_spec) (9.3.1.3.157)
amn (830)	nbi%nbi_unit%inj_spec%amn (float) (9.3.1.1.1)
zn (830)	nbi%nbi_unit%inj_spec%zn (float) (9.3.1.1.1)
pow_unit (856)	nbi%nbi_unit%pow_unit (exp0D) (9.3.1.3.142)
value (815)	nbi%nbi_unit%pow_unit%value (float) (9.3.1.1.1)
abserror (815)	nbi%nbi_unit%pow_unit%abserror (float) (9.3.1.1.1)
releror (815)	nbi%nbi_unit%pow_unit%releror (float) (9.3.1.1.1)
inj_eng_unit (856)	nbi%nbi_unit%inj_eng_unit (exp0D) (9.3.1.3.142)
value (815)	nbi%nbi_unit%inj_eng_unit%value (float) (9.3.1.1.1)
abserror (815)	nbi%nbi_unit%inj_eng_unit%abserror (float) (9.3.1.1.1)
releror (815)	nbi%nbi_unit%inj_eng_unit%releror (float) (9.3.1.1.1)
beamcurfrac (856)	nbi%nbi_unit%beamcurfrac (exp1D) (9.3.1.3.143)
value (816)	nbi%nbi_unit%beamcurfrac%value (vecflt.type) (9.3.1.2.9)
abserror (816)	nbi%nbi_unit%beamcurfrac%abserror (vecflt.type) (9.3.1.2.9)
releror (816)	nbi%nbi_unit%beamcurfrac%releror (vecflt.type) (9.3.1.2.9)
beampowfrac (856)	nbi%nbi_unit%beampowfrac (exp1D) (9.3.1.3.143)
value (816)	nbi%nbi_unit%beampowfrac%value (vecflt.type) (9.3.1.2.9)
abserror (816)	nbi%nbi_unit%beampowfrac%abserror (vecflt.type) (9.3.1.2.9)
releror (816)	nbi%nbi_unit%beampowfrac%releror (vecflt.type) (9.3.1.2.9)
setup_inject (856)	nbi%nbi_unit%setup_inject (setup_inject) (9.3.1.3.277)
position (950)	nbi%nbi_unit%setup_inject%position (rzphi0D) (9.3.1.3.246)
r (919)	nbi%nbi_unit%setup_inject%position%r (float) (9.3.1.1.1)
z (919)	nbi%nbi_unit%setup_inject%position%z (float) (9.3.1.1.1)
phi (919)	nbi%nbi_unit%setup_inject%position%phi (float) (9.3.1.1.1)
tang_rad (950)	nbi%nbi_unit%setup_inject%tang_rad (float) (9.3.1.1.1)
angle (950)	nbi%nbi_unit%setup_inject%angle (float) (9.3.1.1.1)
direction (950)	nbi%nbi_unit%setup_inject%direction (integer) (9.3.1.1.2)
focal_len_hz (950)	nbi%nbi_unit%setup_inject%focal_len_hz (float) (9.3.1.1.1)
focal_len_vc (950)	nbi%nbi_unit%setup_inject%focal_len_vc (float) (9.3.1.1.1)
divergence (950)	nbi%nbi_unit%setup_inject%divergence (divergence) (9.3.1.3.124)
frac_divcomp (797)	nbi%nbi_unit%setup_inject%divergence%frac_divcomp (vecflt.type) (9.3.1.2.9)



div_vert (797)	nbi%nbi_unit%setup_inject%divergence%div_vert (vecflt_type) (9.3.1.2.9)
div_horiz (797)	nbi%nbi_unit%setup_inject%divergence%div_horiz (vecflt_type) (9.3.1.2.9)
beamlets (950)	nbi%nbi_unit%setup_inject%beamlets (beamlets) (9.3.1.3.49)
position (722)	nbi%nbi_unit%setup_inject%beamlets%position (rzphi1D) (9.3.1.3.247)
r (920)	nbi%nbi_unit%setup_inject%beamlets%position%r (vecflt_type) (9.3.1.2.9)
z (920)	nbi%nbi_unit%setup_inject%beamlets%position%z (vecflt_type) (9.3.1.2.9)
phi (920)	nbi%nbi_unit%setup_inject%beamlets%position%phi (vecflt_type) (9.3.1.2.9)
tang_rad_blt (722)	nbi%nbi_unit%setup_inject%beamlets%tang_rad_blt (vecflt_type) (9.3.1.2.9)
angle_blt (722)	nbi%nbi_unit%setup_inject%beamlets%angle_blt (vecflt_type) (9.3.1.2.9)
pow_frc_blt (722)	nbi%nbi_unit%setup_inject%beamlets%pow_frc_blt (vecflt_type) (9.3.1.2.9)
codeparam (856)	nbi%nbi_unit%codeparam (codeparam) (9.3.1.3.58)
codename (731)	nbi%nbi_unit%codeparam%codename (string) (9.3.1.1.3)
codeversion (731)	nbi%nbi_unit%codeparam%codeversion (string) (9.3.1.1.3)
parameters (731)	nbi%nbi_unit%codeparam%parameters (string) (9.3.1.1.3)
output_diag (731)	nbi%nbi_unit%codeparam%output_diag (string) (9.3.1.1.3)
output_flag (731)	nbi%nbi_unit%codeparam%output_flag (integer) (9.3.1.1.2)
codeparam (699)	nbi%codeparam (codeparam) (9.3.1.3.58)
codename (731)	nbi%codeparam%codename (string) (9.3.1.1.3)
codeversion (731)	nbi%codeparam%codeversion (string) (9.3.1.1.3)
parameters (731)	nbi%codeparam%parameters (string) (9.3.1.1.3)
output_diag (731)	nbi%codeparam%output_diag (string) (9.3.1.1.3)
output_flag (731)	nbi%codeparam%output_flag (integer) (9.3.1.1.2)
time (699)	nbi%time (float) (9.3.1.1.1)

### 9.3.2.1.25 neoclassic

datainfo (700)	neoclassic%datainfo (datainfo) (9.3.1.3.92)
dataprovider (765)	neoclassic%datainfo%dataprovider (string) (9.3.1.1.3)
putdate (765)	neoclassic%datainfo%putdate (string) (9.3.1.1.3)
source (765)	neoclassic%datainfo%source (string) (9.3.1.1.3)
comment (765)	neoclassic%datainfo%comment (string) (9.3.1.1.3)
isref (765)	neoclassic%datainfo%isref (integer) (9.3.1.1.2)
whatref (765)	neoclassic%datainfo%whatref (whatref) (9.3.1.3.333)
user (1006)	neoclassic%datainfo%whatref%user (string) (9.3.1.1.3)
machine (1006)	neoclassic%datainfo%whatref%machine (string) (9.3.1.1.3)
shot (1006)	neoclassic%datainfo%whatref%shot (integer) (9.3.1.1.2)
run (1006)	neoclassic%datainfo%whatref%run (integer) (9.3.1.1.2)
occurrence (1006)	neoclassic%datainfo%whatref%occurrence (integer) (9.3.1.1.2)
putinfo (765)	neoclassic%datainfo%putinfo (putinfo) (9.3.1.3.215)
putmethod (888)	neoclassic%datainfo%putinfo%putmethod (string) (9.3.1.1.3)
putaccess (888)	neoclassic%datainfo%putinfo%putaccess (string) (9.3.1.1.3)
putlocation (888)	neoclassic%datainfo%putinfo%putlocation (string) (9.3.1.1.3)
rights (888)	neoclassic%datainfo%putinfo%rights (string) (9.3.1.1.3)
rho_tor_norm (700)	neoclassic%rho_tor_norm (vecflt_type) (9.3.1.2.9)
rho_tor (700)	neoclassic%rho_tor (vecflt_type) (9.3.1.2.9)
composition (700)	neoclassic%composition (composition) (9.3.1.3.74)
amn (747)	neoclassic%composition%amn (vecflt_type) (9.3.1.2.9)
zn (747)	neoclassic%composition%zn (vecflt_type) (9.3.1.2.9)
zion (747)	neoclassic%composition%zion (vecflt_type) (9.3.1.2.9)
imp_flag (747)	neoclassic%composition%imp_flag (vecint_type) (9.3.1.2.10)
ni_neo (700)	neoclassic%ni_neo (transcoefion) (9.3.1.3.308)
diff_eff (981)	neoclassic%ni_neo%diff_eff (matflt_type) (9.3.1.2.7)
vconv_eff (981)	neoclassic%ni_neo%vconv_eff (matflt_type) (9.3.1.2.7)
exchange (981)	neoclassic%ni_neo%exchange (matflt_type) (9.3.1.2.7)
qgi (981)	neoclassic%ni_neo%qgi (matflt_type) (9.3.1.2.7)
flux (981)	neoclassic%ni_neo%flux (matflt_type) (9.3.1.2.7)
off_diagonal (981)	neoclassic%ni_neo%off_diagonal (offdiagon) (9.3.1.3.189)
d_ni (862)	neoclassic%ni_neo%off_diagonal%d_ni (array3dflt_type) (9.3.1.2.1)
d_ti (862)	neoclassic%ni_neo%off_diagonal%d_ti (array3dflt_type) (9.3.1.2.1)
d_ne (862)	neoclassic%ni_neo%off_diagonal%d_ne (matflt_type) (9.3.1.2.7)
d_te (862)	neoclassic%ni_neo%off_diagonal%d_te (matflt_type) (9.3.1.2.7)

d_epar (862)	neoclassic%ni_neo%off_diagonal%d_epar (matflt.type) (9.3.1.2.7)
d_mtor (862)	neoclassic%ni_neo%off_diagonal%d_mtor (matflt.type) (9.3.1.2.7)
flag (981)	neoclassic%ni_neo%flag (integer) (9.3.1.1.2)
ne_neo (700)	neoclassic%ne_neo (transcoefel) (9.3.1.3.306)
diff_eff (979)	neoclassic%ne_neo%diff_eff (vecflt.type) (9.3.1.2.9)
vconv_eff (979)	neoclassic%ne_neo%vconv_eff (vecflt.type) (9.3.1.2.9)
flux (979)	neoclassic%ne_neo%flux (vecflt.type) (9.3.1.2.9)
off_diagonal (979)	neoclassic%ne_neo%off_diagonal (offdiagel) (9.3.1.3.188)
d_ni (861)	neoclassic%ne_neo%off_diagonal%d_ni (matflt.type) (9.3.1.2.7)
d_ti (861)	neoclassic%ne_neo%off_diagonal%d_ti (matflt.type) (9.3.1.2.7)
d_ne (861)	neoclassic%ne_neo%off_diagonal%d_ne (vecflt.type) (9.3.1.2.9)
d_te (861)	neoclassic%ne_neo%off_diagonal%d_te (vecflt.type) (9.3.1.2.9)
d_epar (861)	neoclassic%ne_neo%off_diagonal%d_epar (vecflt.type) (9.3.1.2.9)
d_mtor (861)	neoclassic%ne_neo%off_diagonal%d_mtor (vecflt.type) (9.3.1.2.9)
flag (979)	neoclassic%ne_neo%flag (integer) (9.3.1.1.2)
nz_neo (700)	neoclassic%nz_neo (transcoefimp) (9.3.1.3.307)
diff_eff (980)	neoclassic%nz_neo%diff_eff (array3dflt.type) (9.3.1.2.1)
vconv_eff (980)	neoclassic%nz_neo%vconv_eff (array3dflt.type) (9.3.1.2.1)
exchange (980)	neoclassic%nz_neo%exchange (array3dflt.type) (9.3.1.2.1)
flux (980)	neoclassic%nz_neo%flux (array3dflt.type) (9.3.1.2.1)
flag (980)	neoclassic%nz_neo%flag (integer) (9.3.1.1.2)
ti_neo (700)	neoclassic%ti_neo (transcoefion) (9.3.1.3.308)
diff_eff (981)	neoclassic%ti_neo%diff_eff (matflt.type) (9.3.1.2.7)
vconv_eff (981)	neoclassic%ti_neo%vconv_eff (matflt.type) (9.3.1.2.7)
exchange (981)	neoclassic%ti_neo%exchange (matflt.type) (9.3.1.2.7)
qgi (981)	neoclassic%ti_neo%qgi (matflt.type) (9.3.1.2.7)
flux (981)	neoclassic%ti_neo%flux (matflt.type) (9.3.1.2.7)
off_diagonal (981)	neoclassic%ti_neo%off_diagonal (offdiagion) (9.3.1.3.189)
d_ni (862)	neoclassic%ti_neo%off_diagonal%d_ni (array3dflt.type) (9.3.1.2.1)
d_ti (862)	neoclassic%ti_neo%off_diagonal%d_ti (array3dflt.type) (9.3.1.2.1)
d_ne (862)	neoclassic%ti_neo%off_diagonal%d_ne (matflt.type) (9.3.1.2.7)
d_te (862)	neoclassic%ti_neo%off_diagonal%d_te (matflt.type) (9.3.1.2.7)
d_epar (862)	neoclassic%ti_neo%off_diagonal%d_epar (matflt.type) (9.3.1.2.7)
d_mtor (862)	neoclassic%ti_neo%off_diagonal%d_mtor (matflt.type) (9.3.1.2.7)
flag (981)	neoclassic%ti_neo%flag (integer) (9.3.1.1.2)
te_neo (700)	neoclassic%te_neo (transcoefel) (9.3.1.3.306)
diff_eff (979)	neoclassic%te_neo%diff_eff (vecflt.type) (9.3.1.2.9)
vconv_eff (979)	neoclassic%te_neo%vconv_eff (vecflt.type) (9.3.1.2.9)
flux (979)	neoclassic%te_neo%flux (vecflt.type) (9.3.1.2.9)
off_diagonal (979)	neoclassic%te_neo%off_diagonal (offdiagel) (9.3.1.3.188)
d_ni (861)	neoclassic%te_neo%off_diagonal%d_ni (matflt.type) (9.3.1.2.7)
d_ti (861)	neoclassic%te_neo%off_diagonal%d_ti (matflt.type) (9.3.1.2.7)
d_ne (861)	neoclassic%te_neo%off_diagonal%d_ne (vecflt.type) (9.3.1.2.9)
d_te (861)	neoclassic%te_neo%off_diagonal%d_te (vecflt.type) (9.3.1.2.9)
d_epar (861)	neoclassic%te_neo%off_diagonal%d_epar (vecflt.type) (9.3.1.2.9)
d_mtor (861)	neoclassic%te_neo%off_diagonal%d_mtor (vecflt.type) (9.3.1.2.9)
flag (979)	neoclassic%te_neo%flag (integer) (9.3.1.1.2)
tz_neo (700)	neoclassic%tz_neo (transcoefimp) (9.3.1.3.307)
diff_eff (980)	neoclassic%tz_neo%diff_eff (array3dflt.type) (9.3.1.2.1)
vconv_eff (980)	neoclassic%tz_neo%vconv_eff (array3dflt.type) (9.3.1.2.1)
exchange (980)	neoclassic%tz_neo%exchange (array3dflt.type) (9.3.1.2.1)
flux (980)	neoclassic%tz_neo%flux (array3dflt.type) (9.3.1.2.1)
flag (980)	neoclassic%tz_neo%flag (integer) (9.3.1.1.2)
mtor_neo (700)	neoclassic%mtor_neo (transcoefel) (9.3.1.3.306)
diff_eff (979)	neoclassic%mtor_neo%diff_eff (vecflt.type) (9.3.1.2.9)
vconv_eff (979)	neoclassic%mtor_neo%vconv_eff (vecflt.type) (9.3.1.2.9)
flux (979)	neoclassic%mtor_neo%flux (vecflt.type) (9.3.1.2.9)
off_diagonal (979)	neoclassic%mtor_neo%off_diagonal (offdiagel) (9.3.1.3.188)
d_ni (861)	neoclassic%mtor_neo%off_diagonal%d_ni (matflt.type) (9.3.1.2.7)
d_ti (861)	neoclassic%mtor_neo%off_diagonal%d_ti (matflt.type) (9.3.1.2.7)
d_ne (861)	neoclassic%mtor_neo%off_diagonal%d_ne (vecflt.type) (9.3.1.2.9)

d.te (861)	neoclassic%mtor_neo%off_diagonal%d.te (vecflt_type) (9.3.1.2.9)
d.epar (861)	neoclassic%mtor_neo%off_diagonal%d.epar (vecflt_type) (9.3.1.2.9)
d.mtor (861)	neoclassic%mtor_neo%off_diagonal%d.mtor (vecflt_type) (9.3.1.2.9)
flag (979)	neoclassic%mtor_neo%flag (integer) (9.3.1.1.2)
sigma (700)	neoclassic%sigma (vecflt_type) (9.3.1.2.9)
jboot (700)	neoclassic%jboot (vecflt_type) (9.3.1.2.9)
er (700)	neoclassic%er (vecflt_type) (9.3.1.2.9)
vpol (700)	neoclassic%vpol (matflt_type) (9.3.1.2.7)
fext (700)	neoclassic%fext (array3dflt_type) (9.3.1.2.1)
jext (700)	neoclassic%jext (vecflt_type) (9.3.1.2.9)
time (700)	neoclassic%time (float) (9.3.1.1.1)
codeparam (700)	neoclassic%codeparam (codeparam) (9.3.1.3.58)
codename (731)	neoclassic%codeparam%codename (string) (9.3.1.1.3)
codeversion (731)	neoclassic%codeparam%codeversion (string) (9.3.1.1.3)
parameters (731)	neoclassic%codeparam%parameters (string) (9.3.1.1.3)
output_diag (731)	neoclassic%codeparam%output_diag (string) (9.3.1.1.3)
output_flag (731)	neoclassic%codeparam%output_flag (integer) (9.3.1.1.2)

### 9.3.2.1.26 orbit

datainfo (701)	orbit%datainfo (datainfo) (9.3.1.3.92)
dataprovider (765)	orbit%datainfo%dataprovider (string) (9.3.1.1.3)
putdate (765)	orbit%datainfo%putdate (string) (9.3.1.1.3)
source (765)	orbit%datainfo%source (string) (9.3.1.1.3)
comment (765)	orbit%datainfo%comment (string) (9.3.1.1.3)
isref (765)	orbit%datainfo%isref (integer) (9.3.1.1.2)
whatref (765)	orbit%datainfo%whatref (whatref) (9.3.1.3.333)
user (1006)	orbit%datainfo%whatref <sup>f</sup> user (string) (9.3.1.1.3)
machine (1006)	orbit%datainfo%whatref <sup>f</sup> machine (string) (9.3.1.1.3)
shot (1006)	orbit%datainfo%whatref <sup>f</sup> shot (integer) (9.3.1.1.2)
run (1006)	orbit%datainfo%whatref <sup>f</sup> run (integer) (9.3.1.1.2)
occurrence (1006)	orbit%datainfo%whatref <sup>f</sup> occurrence (integer) (9.3.1.1.2)
putinfo (765)	orbit%datainfo%putinfo (putinfo) (9.3.1.3.215)
putmethod (888)	orbit%datainfo%putinfo%putmethod (string) (9.3.1.1.3)
putaccess (888)	orbit%datainfo%putinfo%putaccess (string) (9.3.1.1.3)
putlocation (888)	orbit%datainfo%putinfo%putlocation (string) (9.3.1.1.3)
rights (888)	orbit%datainfo%putinfo%rights (string) (9.3.1.1.3)
orbitt_id (701)	orbit%orbitt_id (orbitt_id) (9.3.1.3.194)
amn (867)	orbit%orbitt_id%amn (float) (9.3.1.1.1)
zion (867)	orbit%orbitt_id%zion (float) (9.3.1.1.1)
energy (867)	orbit%orbitt_id%energy (vecflt_type) (9.3.1.2.9)
magn_mom (867)	orbit%orbitt_id%magn_mom (vecflt_type) (9.3.1.2.9)
p_phi (867)	orbit%orbitt_id%p_phi (vecflt_type) (9.3.1.2.9)
sigma (867)	orbit%orbitt_id%sigma (vecint_type) (9.3.1.2.10)
orb_trace (701)	orbit%orb_trace (orb_trace) (9.3.1.3.192)
time_orb (865)	orbit%orb_trace%time_orb (matflt_type) (9.3.1.2.7)
ntorb (865)	orbit%orb_trace%ntorb (vecint_type) (9.3.1.2.10)
r (865)	orbit%orb_trace%r (matflt_type) (9.3.1.2.7)
z (865)	orbit%orb_trace%z (matflt_type) (9.3.1.2.7)
psi (865)	orbit%orb_trace%psi (matflt_type) (9.3.1.2.7)
theta_b (865)	orbit%orb_trace%theta_b (matflt_type) (9.3.1.2.7)
v_parallel (865)	orbit%orb_trace%v_parallel (matflt_type) (9.3.1.2.7)
v_perp (865)	orbit%orb_trace%v_perp (matflt_type) (9.3.1.2.7)
orb_glob_dat (701)	orbit%orb_glob_dat (orb_glob_dat) (9.3.1.3.191)
orbit_type (864)	orbit%orb_glob_dat%orbit_type (vecint_type) (9.3.1.2.10)
omega_b (864)	orbit%orb_glob_dat%omega_b (vecflt_type) (9.3.1.2.9)
omega_phi (864)	orbit%orb_glob_dat%omega_phi (vecflt_type) (9.3.1.2.9)
omega_c_av (864)	orbit%orb_glob_dat%omega_c_av (vecflt_type) (9.3.1.2.9)
special_pos (864)	orbit%orb_glob_dat%special_pos (special_pos) (9.3.1.3.289)
midplane (962)	orbit%orb_glob_dat%special_pos%midplane (midplane) (9.3.1.3.181)
outer (854)	orbit%orb_glob_dat%special_pos%midplane%outer (orbit_pos) (9.3.1.3.193)

r (866)	orbit%orb_glob_dat%special_pos%midplane%outer%r (vecflt.type) (9.3.1.2.9)
z (866)	orbit%orb_glob_dat%special_pos%midplane%outer%z (vecflt.type) (9.3.1.2.9)
psi (866)	orbit%orb_glob_dat%special_pos%midplane%outer%psi (vecflt.type) (9.3.1.2.9)
theta_b (866)	orbit%orb_glob_dat%special_pos%midplane%outer%theta_b (vecflt.type) (9.3.1.2.9)
inner (854)	orbit%orb_glob_dat%special_pos%midplane%inner (orbit_pos) (9.3.1.3.193)
r (866)	orbit%orb_glob_dat%special_pos%midplane%inner%r (vecflt.type) (9.3.1.2.9)
z (866)	orbit%orb_glob_dat%special_pos%midplane%inner%z (vecflt.type) (9.3.1.2.9)
psi (866)	orbit%orb_glob_dat%special_pos%midplane%inner%psi (vecflt.type) (9.3.1.2.9)
theta_b (866)	orbit%orb_glob_dat%special_pos%midplane%inner%theta_b (vecflt.type) (9.3.1.2.9)
turning_pts (962)	orbit%orb_glob_dat%special_pos%turning_pts (turning_pts) (9.3.1.3.323)
upper (996)	orbit%orb_glob_dat%special_pos%turning_pts%upper (orbit_pos) (9.3.1.3.193)
r (866)	orbit%orb_glob_dat%special_pos%turning_pts%upper%r (vecflt.type) (9.3.1.2.9)
z (866)	orbit%orb_glob_dat%special_pos%turning_pts%upper%z (vecflt.type) (9.3.1.2.9)
psi (866)	orbit%orb_glob_dat%special_pos%turning_pts%upper%psi (vecflt.type) (9.3.1.2.9)
theta_b (866)	orbit%orb_glob_dat%special_pos%turning_pts%upper%theta_b (vecflt.type) (9.3.1.2.9)
lower (996)	orbit%orb_glob_dat%special_pos%turning_pts%lower (orbit_pos) (9.3.1.3.193)
r (866)	orbit%orb_glob_dat%special_pos%turning_pts%lower%r (vecflt.type) (9.3.1.2.9)
z (866)	orbit%orb_glob_dat%special_pos%turning_pts%lower%z (vecflt.type) (9.3.1.2.9)
psi (866)	orbit%orb_glob_dat%special_pos%turning_pts%lower%psi (vecflt.type) (9.3.1.2.9)
theta_b (866)	orbit%orb_glob_dat%special_pos%turning_pts%lower%theta_b (vecflt.type) (9.3.1.2.9)
codeparam (701)	orbit%codeparam (codeparam) (9.3.1.3.58)
codename (731)	orbit%codeparam%codename (string) (9.3.1.1.3)
codeversion (731)	orbit%codeparam%codeversion (string) (9.3.1.1.3)
parameters (731)	orbit%codeparam%parameters (string) (9.3.1.1.3)
output_diag (731)	orbit%codeparam%output_diag (string) (9.3.1.1.3)
output_flag (731)	orbit%codeparam%output_flag (integer) (9.3.1.1.2)
time (701)	orbit%time (float) (9.3.1.1.1)

### 9.3.2.1.27 pfsystems

datainfo (702)	pfsystems%datainfo (datainfo) (9.3.1.3.92)
dataprovider (765)	pfsystems%datainfo%dataprovider (string) (9.3.1.1.3)
putdate (765)	pfsystems%datainfo%putdate (string) (9.3.1.1.3)
source (765)	pfsystems%datainfo%source (string) (9.3.1.1.3)
comment (765)	pfsystems%datainfo%comment (string) (9.3.1.1.3)
isref (765)	pfsystems%datainfo%isref (integer) (9.3.1.1.2)
whatref (765)	pfsystems%datainfo%whatref (whatref) (9.3.1.3.333)
user (1006)	pfsystems%datainfo%whatref%user (string) (9.3.1.1.3)
machine (1006)	pfsystems%datainfo%whatref%machine (string) (9.3.1.1.3)
shot (1006)	pfsystems%datainfo%whatref%shot (integer) (9.3.1.1.2)
run (1006)	pfsystems%datainfo%whatref%run (integer) (9.3.1.1.2)
occurrence (1006)	pfsystems%datainfo%whatref%occurrence (integer) (9.3.1.1.2)
putinfo (765)	pfsystems%datainfo%putinfo (putinfo) (9.3.1.3.215)
putmethod (888)	pfsystems%datainfo%putinfo%putmethod (string) (9.3.1.1.3)
putaccess (888)	pfsystems%datainfo%putinfo%putaccess (string) (9.3.1.1.3)
putlocation (888)	pfsystems%datainfo%putinfo%putlocation (string) (9.3.1.1.3)
rights (888)	pfsystems%datainfo%putinfo%rights (string) (9.3.1.1.3)
pfcoils (702)	pfsystems%pfcoils (pfcoils) (9.3.1.3.198)
desc_pfcoils (871)	pfsystems%pfcoils%desc_pfcoils (desc_pfcoils) (9.3.1.3.95)
name (768)	pfsystems%pfcoils%desc_pfcoils%name (vecstring.type) (9.3.1.2.11)
id (768)	pfsystems%pfcoils%desc_pfcoils%id (vecstring.type) (9.3.1.2.11)
res (768)	pfsystems%pfcoils%desc_pfcoils%res (vecflt.type) (9.3.1.2.9)
emax (768)	pfsystems%pfcoils%desc_pfcoils%emax (vecflt.type) (9.3.1.2.9)
nelement (768)	pfsystems%pfcoils%desc_pfcoils%nelement (vecint.type) (9.3.1.2.10)
pfelement (768)	pfsystems%pfcoils%desc_pfcoils%pfelement (pfelement) (9.3.1.3.199)
name (872)	pfsystems%pfcoils%desc_pfcoils%pfelement%name (vecstring.type) (9.3.1.2.11)
id (872)	pfsystems%pfcoils%desc_pfcoils%pfelement%id (vecstring.type) (9.3.1.2.11)
turnsign (872)	pfsystems%pfcoils%desc_pfcoils%pfelement%turnsign (matflt.type) (9.3.1.2.7)
area (872)	pfsystems%pfcoils%desc_pfcoils%pfelement%area (matflt.type) (9.3.1.2.7)
pfgeometry (872)	pfsystems%pfcoils%desc_pfcoils%pfelement%pfgeometry (pfgeometry) (9.3.1.3.200)
type (873)	pfsystems%pfcoils%desc_pfcoils%pfelement%pfgeometry%type (matint.type) (9.3.1.2.8)

npoints (873)	pfsystems%pfcoils%desc_pfcoils%pfelement%pfgeometry%npoints (matint.type) (9.3.1.2.8)
rzcoordinate (873)	pfsystems%pfcoils%desc_pfcoils%pfelement%pfgeometry%rzcoordinate (rz3D) (9.3.1.3.245)
r (918)	pfsystems%pfcoils%desc_pfcoils%pfelement%pfgeometry%rzcoordinate%r (array3dflt.type) (9.3.1.2.1)
z (918)	pfsystems%pfcoils%desc_pfcoils%pfelement%pfgeometry%rzcoordinate%z (array3dflt.type) (9.3.1.2.1)
rzdrdz (873)	pfsystems%pfcoils%desc_pfcoils%pfelement%pfgeometry%rzdrdz (array3dflt.type) (9.3.1.2.1)
coilcurrent (871)	pfsystems%pfcoils%coilcurrent (exp1D) (9.3.1.3.143)
value (816)	pfsystems%pfcoils%coilcurrent%value (vecflt.type) (9.3.1.2.9)
abserror (816)	pfsystems%pfcoils%coilcurrent%abserror (vecflt.type) (9.3.1.2.9)
releror (816)	pfsystems%pfcoils%coilcurrent%releror (vecflt.type) (9.3.1.2.9)
coilvoltage (871)	pfsystems%pfcoils%coilvoltage (exp1D) (9.3.1.3.143)
value (816)	pfsystems%pfcoils%coilvoltage%value (vecflt.type) (9.3.1.2.9)
abserror (816)	pfsystems%pfcoils%coilvoltage%abserror (vecflt.type) (9.3.1.2.9)
releror (816)	pfsystems%pfcoils%coilvoltage%releror (vecflt.type) (9.3.1.2.9)
pfpassive (702)	pfsystems%pfpassive (pfpassive) (9.3.1.3.202)
area (875)	pfsystems%pfpassive%area (vecflt.type) (9.3.1.2.9)
res (875)	pfsystems%pfpassive%res (vecflt.type) (9.3.1.2.9)
pfpagometry (875)	pfsystems%pfpassive%pfpagometry (pfpagometry) (9.3.1.3.201)
type (874)	pfsystems%pfpassive%pfpagometry%type (vecint.type) (9.3.1.2.10)
npoints (874)	pfsystems%pfpassive%pfpagometry%npoints (vecint.type) (9.3.1.2.10)
rzcoordinate (874)	pfsystems%pfpassive%pfpagometry%rzcoordinate (rz2D) (9.3.1.3.244)
r (917)	pfsystems%pfpassive%pfpagometry%rzcoordinate%r (matflt.type) (9.3.1.2.7)
z (917)	pfsystems%pfpassive%pfpagometry%rzcoordinate%z (matflt.type) (9.3.1.2.7)
rzdrdz (874)	pfsystems%pfpassive%pfpagometry%rzdrdz (matflt.type) (9.3.1.2.7)
pfcircuits (702)	pfsystems%pfcircuits (pfcircuits) (9.3.1.3.197)
name (870)	pfsystems%pfcircuits%name (vecstring.type) (9.3.1.2.11)
id (870)	pfsystems%pfcircuits%id (vecstring.type) (9.3.1.2.11)
type (870)	pfsystems%pfcircuits%type (vecstring.type) (9.3.1.2.11)
nnodes (870)	pfsystems%pfcircuits%nnodes (vecint.type) (9.3.1.2.10)
connections (870)	pfsystems%pfcircuits%connections (array3dint.type) (9.3.1.2.2)
pfsupplies (702)	pfsystems%pfsupplies (pfsupplies) (9.3.1.3.203)
desc_supply (876)	pfsystems%pfsupplies%desc_supply (desc_supply) (9.3.1.3.96)
name (769)	pfsystems%pfsupplies%desc_supply%name (vecstring.type) (9.3.1.2.11)
id (769)	pfsystems%pfsupplies%desc_supply%id (vecstring.type) (9.3.1.2.11)
type (769)	pfsystems%pfsupplies%desc_supply%type (vecstring.type) (9.3.1.2.11)
delay (769)	pfsystems%pfsupplies%desc_supply%delay (vecflt.type) (9.3.1.2.9)
filter (769)	pfsystems%pfsupplies%desc_supply%filter (filter) (9.3.1.3.145)
num (818)	pfsystems%pfsupplies%desc_supply%filter%num (matflt.type) (9.3.1.2.7)
den (818)	pfsystems%pfsupplies%desc_supply%filter%den (matflt.type) (9.3.1.2.7)
imin (769)	pfsystems%pfsupplies%desc_supply%imin (vecflt.type) (9.3.1.2.9)
imax (769)	pfsystems%pfsupplies%desc_supply%imax (vecflt.type) (9.3.1.2.9)
res (769)	pfsystems%pfsupplies%desc_supply%res (vecflt.type) (9.3.1.2.9)
umin (769)	pfsystems%pfsupplies%desc_supply%umin (vecflt.type) (9.3.1.2.9)
umax (769)	pfsystems%pfsupplies%desc_supply%umax (vecflt.type) (9.3.1.2.9)
emax (769)	pfsystems%pfsupplies%desc_supply%emax (vecflt.type) (9.3.1.2.9)
voltage (876)	pfsystems%pfsupplies%voltage (exp1D) (9.3.1.3.143)
value (816)	pfsystems%pfsupplies%voltage%value (vecflt.type) (9.3.1.2.9)
abserror (816)	pfsystems%pfsupplies%voltage%abserror (vecflt.type) (9.3.1.2.9)
releror (816)	pfsystems%pfsupplies%voltage%releror (vecflt.type) (9.3.1.2.9)
current (876)	pfsystems%pfsupplies%current (exp1D) (9.3.1.3.143)
value (816)	pfsystems%pfsupplies%current%value (vecflt.type) (9.3.1.2.9)
abserror (816)	pfsystems%pfsupplies%current%abserror (vecflt.type) (9.3.1.2.9)
releror (816)	pfsystems%pfsupplies%current%releror (vecflt.type) (9.3.1.2.9)
time (702)	pfsystems%time (float) (9.3.1.1.1)

### 9.3.2.1.28 polardiag

datainfo (842)	lineintegraldiag%datainfo (datainfo) (9.3.1.3.92)
dataprovider (765)	lineintegraldiag%datainfo%dataprovider (string) (9.3.1.1.3)
putdate (765)	lineintegraldiag%datainfo%putdate (string) (9.3.1.1.3)

source (765)	lineintegraldiag%datainfo%source (string) (9.3.1.1.3)
comment (765)	lineintegraldiag%datainfo%comment (string) (9.3.1.1.3)
isref (765)	lineintegraldiag%datainfo%isref (integer) (9.3.1.1.2)
whatref (765)	lineintegraldiag%datainfo%whatref (whatref) (9.3.1.3.333)
user (1006)	lineintegraldiag%datainfo%whatref%user (string) (9.3.1.1.3)
machine (1006)	lineintegraldiag%datainfo%whatref%machine (string) (9.3.1.1.3)
shot (1006)	lineintegraldiag%datainfo%whatref%shot (integer) (9.3.1.1.2)
run (1006)	lineintegraldiag%datainfo%whatref%run (integer) (9.3.1.1.2)
occurrence (1006)	lineintegraldiag%datainfo%whatref%occurrence (integer) (9.3.1.1.2)
putinfo (765)	lineintegraldiag%datainfo%putinfo (putinfo) (9.3.1.3.215)
putmethod (888)	lineintegraldiag%datainfo%putinfo%putmethod (string) (9.3.1.1.3)
putaccess (888)	lineintegraldiag%datainfo%putinfo%putaccess (string) (9.3.1.1.3)
putlocation (888)	lineintegraldiag%datainfo%putinfo%putlocation (string) (9.3.1.1.3)
rights (888)	lineintegraldiag%datainfo%putinfo%rights (string) (9.3.1.1.3)
expression (842)	lineintegraldiag%expression (string) (9.3.1.1.3)
setup_line (842)	lineintegraldiag%setup_line (setup_line) (9.3.1.3.278)
pivot_point (951)	lineintegraldiag%setup_line%pivot_point (rzphi1D) (9.3.1.3.247)
r (920)	lineintegraldiag%setup_line%pivot_point%r (vecflt.type) (9.3.1.2.9)
z (920)	lineintegraldiag%setup_line%pivot_point%z (vecflt.type) (9.3.1.2.9)
phi (920)	lineintegraldiag%setup_line%pivot_point%phi (vecflt.type) (9.3.1.2.9)
horchordang1 (951)	lineintegraldiag%setup_line%horchordang1 (vecflt.type) (9.3.1.2.9)
verchordang1 (951)	lineintegraldiag%setup_line%verchordang1 (vecflt.type) (9.3.1.2.9)
width (951)	lineintegraldiag%setup_line%width (vecflt.type) (9.3.1.2.9)
second_point (951)	lineintegraldiag%setup_line%second_point (rzphi1D) (9.3.1.3.247)
r (920)	lineintegraldiag%setup_line%second_point%r (vecflt.type) (9.3.1.2.9)
z (920)	lineintegraldiag%setup_line%second_point%z (vecflt.type) (9.3.1.2.9)
phi (920)	lineintegraldiag%setup_line%second_point%phi (vecflt.type) (9.3.1.2.9)
horchordang2 (951)	lineintegraldiag%setup_line%horchordang2 (vecflt.type) (9.3.1.2.9)
verchordang2 (951)	lineintegraldiag%setup_line%verchordang2 (vecflt.type) (9.3.1.2.9)
third_point (951)	lineintegraldiag%setup_line%third_point (rzphi1D) (9.3.1.3.247)
r (920)	lineintegraldiag%setup_line%third_point%r (vecflt.type) (9.3.1.2.9)
z (920)	lineintegraldiag%setup_line%third_point%z (vecflt.type) (9.3.1.2.9)
phi (920)	lineintegraldiag%setup_line%third_point%phi (vecflt.type) (9.3.1.2.9)
nchordpoints (951)	lineintegraldiag%setup_line%nchordpoints (integer) (9.3.1.1.2)
measure (842)	lineintegraldiag%measure (exp1D) (9.3.1.3.143)
value (816)	lineintegraldiag%measure%value (vecflt.type) (9.3.1.2.9)
abserror (816)	lineintegraldiag%measure%abserror (vecflt.type) (9.3.1.2.9)
relerror (816)	lineintegraldiag%measure%relerror (vecflt.type) (9.3.1.2.9)
time (842)	lineintegraldiag%time (float) (9.3.1.1.1)

### 9.3.2.1.29 reference

datainfo (704)	reference%datainfo (datainfo) (9.3.1.3.92)
dataprovider (765)	reference%datainfo%dataprovider (string) (9.3.1.1.3)
putdate (765)	reference%datainfo%putdate (string) (9.3.1.1.3)
source (765)	reference%datainfo%source (string) (9.3.1.1.3)
comment (765)	reference%datainfo%comment (string) (9.3.1.1.3)
isref (765)	reference%datainfo%isref (integer) (9.3.1.1.2)
whatref (765)	reference%datainfo%whatref (whatref) (9.3.1.3.333)
user (1006)	reference%datainfo%whatref%user (string) (9.3.1.1.3)
machine (1006)	reference%datainfo%whatref%machine (string) (9.3.1.1.3)
shot (1006)	reference%datainfo%whatref%shot (integer) (9.3.1.1.2)
run (1006)	reference%datainfo%whatref%run (integer) (9.3.1.1.2)
occurrence (1006)	reference%datainfo%whatref%occurrence (integer) (9.3.1.1.2)
putinfo (765)	reference%datainfo%putinfo (putinfo) (9.3.1.3.215)
putmethod (888)	reference%datainfo%putinfo%putmethod (string) (9.3.1.1.3)
putaccess (888)	reference%datainfo%putinfo%putaccess (string) (9.3.1.1.3)
putlocation (888)	reference%datainfo%putinfo%putlocation (string) (9.3.1.1.3)
rights (888)	reference%datainfo%putinfo%rights (string) (9.3.1.1.3)
non_timed (704)	reference%non_timed (ref_nt) (9.3.1.3.219)
zerod_real (892)	reference%non_timed%zerod_real (ref_nt.0dr) (9.3.1.3.222)



ref1 (895)	reference%non_timed%zerod_real%ref1 (ref_nt_0dr_ref) (9.3.1.3.223)
value (896)	reference%non_timed%zerod_real%ref1%value (float) (9.3.1.1.1)
description (896)	reference%non_timed%zerod_real%ref1%description (string) (9.3.1.1.3)
ref2 (895)	reference%non_timed%zerod_real%ref2 (ref_nt_0dr_ref) (9.3.1.3.223)
value (896)	reference%non_timed%zerod_real%ref2%value (float) (9.3.1.1.1)
description (896)	reference%non_timed%zerod_real%ref2%description (string) (9.3.1.1.3)
ref3 (895)	reference%non_timed%zerod_real%ref3 (ref_nt_0dr_ref) (9.3.1.3.223)
value (896)	reference%non_timed%zerod_real%ref3%value (float) (9.3.1.1.1)
description (896)	reference%non_timed%zerod_real%ref3%description (string) (9.3.1.1.3)
ref4 (895)	reference%non_timed%zerod_real%ref4 (ref_nt_0dr_ref) (9.3.1.3.223)
value (896)	reference%non_timed%zerod_real%ref4%value (float) (9.3.1.1.1)
description (896)	reference%non_timed%zerod_real%ref4%description (string) (9.3.1.1.3)
ref5 (895)	reference%non_timed%zerod_real%ref5 (ref_nt_0dr_ref) (9.3.1.3.223)
value (896)	reference%non_timed%zerod_real%ref5%value (float) (9.3.1.1.1)
description (896)	reference%non_timed%zerod_real%ref5%description (string) (9.3.1.1.3)
ref6 (895)	reference%non_timed%zerod_real%ref6 (ref_nt_0dr_ref) (9.3.1.3.223)
value (896)	reference%non_timed%zerod_real%ref6%value (float) (9.3.1.1.1)
description (896)	reference%non_timed%zerod_real%ref6%description (string) (9.3.1.1.3)
ref7 (895)	reference%non_timed%zerod_real%ref7 (ref_nt_0dr_ref) (9.3.1.3.223)
value (896)	reference%non_timed%zerod_real%ref7%value (float) (9.3.1.1.1)
description (896)	reference%non_timed%zerod_real%ref7%description (string) (9.3.1.1.3)
zerod_int (892)	reference%non_timed%zerod_int (ref_nt_0di) (9.3.1.3.220)
ref1 (893)	reference%non_timed%zerod_int%ref1 (ref_nt_0di_ref) (9.3.1.3.221)
value (894)	reference%non_timed%zerod_int%ref1%value (integer) (9.3.1.1.2)
description (894)	reference%non_timed%zerod_int%ref1%description (string) (9.3.1.1.3)
ref2 (893)	reference%non_timed%zerod_int%ref2 (ref_nt_0di_ref) (9.3.1.3.221)
value (894)	reference%non_timed%zerod_int%ref2%value (integer) (9.3.1.1.2)
description (894)	reference%non_timed%zerod_int%ref2%description (string) (9.3.1.1.3)
ref3 (893)	reference%non_timed%zerod_int%ref3 (ref_nt_0di_ref) (9.3.1.3.221)
value (894)	reference%non_timed%zerod_int%ref3%value (integer) (9.3.1.1.2)
description (894)	reference%non_timed%zerod_int%ref3%description (string) (9.3.1.1.3)
ref4 (893)	reference%non_timed%zerod_int%ref4 (ref_nt_0di_ref) (9.3.1.3.221)
value (894)	reference%non_timed%zerod_int%ref4%value (integer) (9.3.1.1.2)
description (894)	reference%non_timed%zerod_int%ref4%description (string) (9.3.1.1.3)
zerod_string (892)	reference%non_timed%zerod_string (ref_nt_0ds) (9.3.1.3.224)
ref1 (897)	reference%non_timed%zerod_string%ref1 (ref_nt_0ds_ref) (9.3.1.3.225)
value (898)	reference%non_timed%zerod_string%ref1%value (string) (9.3.1.1.3)
description (898)	reference%non_timed%zerod_string%ref1%description (string) (9.3.1.1.3)
ref2 (897)	reference%non_timed%zerod_string%ref2 (ref_nt_0ds_ref) (9.3.1.3.225)
value (898)	reference%non_timed%zerod_string%ref2%value (string) (9.3.1.1.3)
description (898)	reference%non_timed%zerod_string%ref2%description (string) (9.3.1.1.3)
oned_real (892)	reference%non_timed%oned_real (ref_nt_1dr) (9.3.1.3.228)
ref1 (901)	reference%non_timed%oned_real%ref1 (ref_nt_1dr_ref) (9.3.1.3.229)
value (902)	reference%non_timed%oned_real%ref1%value (vecflt_type) (9.3.1.2.9)
description (902)	reference%non_timed%oned_real%ref1%description (string) (9.3.1.1.3)
ref2 (901)	reference%non_timed%oned_real%ref2 (ref_nt_1dr_ref) (9.3.1.3.229)
value (902)	reference%non_timed%oned_real%ref2%value (vecflt_type) (9.3.1.2.9)
description (902)	reference%non_timed%oned_real%ref2%description (string) (9.3.1.1.3)
ref3 (901)	reference%non_timed%oned_real%ref3 (ref_nt_1dr_ref) (9.3.1.3.229)
value (902)	reference%non_timed%oned_real%ref3%value (vecflt_type) (9.3.1.2.9)
description (902)	reference%non_timed%oned_real%ref3%description (string) (9.3.1.1.3)
ref4 (901)	reference%non_timed%oned_real%ref4 (ref_nt_1dr_ref) (9.3.1.3.229)
value (902)	reference%non_timed%oned_real%ref4%value (vecflt_type) (9.3.1.2.9)
description (902)	reference%non_timed%oned_real%ref4%description (string) (9.3.1.1.3)
ref5 (901)	reference%non_timed%oned_real%ref5 (ref_nt_1dr_ref) (9.3.1.3.229)
value (902)	reference%non_timed%oned_real%ref5%value (vecflt_type) (9.3.1.2.9)
description (902)	reference%non_timed%oned_real%ref5%description (string) (9.3.1.1.3)
oned_int (892)	reference%non_timed%oned_int (ref_nt_1di) (9.3.1.3.226)
ref1 (899)	reference%non_timed%oned_int%ref1 (ref_nt_1di_ref) (9.3.1.3.227)
value (900)	reference%non_timed%oned_int%ref1%value (vecint_type) (9.3.1.2.10)
description (900)	reference%non_timed%oned_int%ref1%description (string) (9.3.1.1.3)

ref2 (899)	reference%non_timed%oned_int%ref2 (ref_nt_1di_ref) (9.3.1.3.227)
value (900)	reference%non_timed%oned_int%ref2%value (vecint_type) (9.3.1.2.10)
description (900)	reference%non_timed%oned_int%ref2%description (string) (9.3.1.1.3)
ref3 (899)	reference%non_timed%oned_int%ref3 (ref_nt_1di_ref) (9.3.1.3.227)
value (900)	reference%non_timed%oned_int%ref3%value (vecint_type) (9.3.1.2.10)
description (900)	reference%non_timed%oned_int%ref3%description (string) (9.3.1.1.3)
ref4 (899)	reference%non_timed%oned_int%ref4 (ref_nt_1di_ref) (9.3.1.3.227)
value (900)	reference%non_timed%oned_int%ref4%value (vecint_type) (9.3.1.2.10)
description (900)	reference%non_timed%oned_int%ref4%description (string) (9.3.1.1.3)
timed (704)	reference%timed (ref_t) (9.3.1.3.230)
zerod_real (903)	reference%timed%zerod_real (ref_t_0dr) (9.3.1.3.233)
ref1 (906)	reference%timed%zerod_real%ref1 (ref_t_0dr_ref) (9.3.1.3.234)
value (907)	reference%timed%zerod_real%ref1%value (float) (9.3.1.1.1)
description (907)	reference%timed%zerod_real%ref1%description (string) (9.3.1.1.3)
ref2 (906)	reference%timed%zerod_real%ref2 (ref_t_0dr_ref) (9.3.1.3.234)
value (907)	reference%timed%zerod_real%ref2%value (float) (9.3.1.1.1)
description (907)	reference%timed%zerod_real%ref2%description (string) (9.3.1.1.3)
ref3 (906)	reference%timed%zerod_real%ref3 (ref_t_0dr_ref) (9.3.1.3.234)
value (907)	reference%timed%zerod_real%ref3%value (float) (9.3.1.1.1)
description (907)	reference%timed%zerod_real%ref3%description (string) (9.3.1.1.3)
ref4 (906)	reference%timed%zerod_real%ref4 (ref_t_0dr_ref) (9.3.1.3.234)
value (907)	reference%timed%zerod_real%ref4%value (float) (9.3.1.1.1)
description (907)	reference%timed%zerod_real%ref4%description (string) (9.3.1.1.3)
ref5 (906)	reference%timed%zerod_real%ref5 (ref_t_0dr_ref) (9.3.1.3.234)
value (907)	reference%timed%zerod_real%ref5%value (float) (9.3.1.1.1)
description (907)	reference%timed%zerod_real%ref5%description (string) (9.3.1.1.3)
ref6 (906)	reference%timed%zerod_real%ref6 (ref_t_0dr_ref) (9.3.1.3.234)
value (907)	reference%timed%zerod_real%ref6%value (float) (9.3.1.1.1)
description (907)	reference%timed%zerod_real%ref6%description (string) (9.3.1.1.3)
ref7 (906)	reference%timed%zerod_real%ref7 (ref_t_0dr_ref) (9.3.1.3.234)
value (907)	reference%timed%zerod_real%ref7%value (float) (9.3.1.1.1)
description (907)	reference%timed%zerod_real%ref7%description (string) (9.3.1.1.3)
ref8 (906)	reference%timed%zerod_real%ref8 (ref_t_0dr_ref) (9.3.1.3.234)
value (907)	reference%timed%zerod_real%ref8%value (float) (9.3.1.1.1)
description (907)	reference%timed%zerod_real%ref8%description (string) (9.3.1.1.3)
ref9 (906)	reference%timed%zerod_real%ref9 (ref_t_0dr_ref) (9.3.1.3.234)
value (907)	reference%timed%zerod_real%ref9%value (float) (9.3.1.1.1)
description (907)	reference%timed%zerod_real%ref9%description (string) (9.3.1.1.3)
ref10 (906)	reference%timed%zerod_real%ref10 (ref_t_0dr_ref) (9.3.1.3.234)
value (907)	reference%timed%zerod_real%ref10%value (float) (9.3.1.1.1)
description (907)	reference%timed%zerod_real%ref10%description (string) (9.3.1.1.3)
zerod_int (903)	reference%timed%zerod_int (ref_t_0di) (9.3.1.3.231)
ref1 (904)	reference%timed%zerod_int%ref1 (ref_t_0di_ref) (9.3.1.3.232)
value (905)	reference%timed%zerod_int%ref1%value (integer) (9.3.1.1.2)
description (905)	reference%timed%zerod_int%ref1%description (string) (9.3.1.1.3)
ref2 (904)	reference%timed%zerod_int%ref2 (ref_t_0di_ref) (9.3.1.3.232)
value (905)	reference%timed%zerod_int%ref2%value (integer) (9.3.1.1.2)
description (905)	reference%timed%zerod_int%ref2%description (string) (9.3.1.1.3)
ref3 (904)	reference%timed%zerod_int%ref3 (ref_t_0di_ref) (9.3.1.3.232)
value (905)	reference%timed%zerod_int%ref3%value (integer) (9.3.1.1.2)
description (905)	reference%timed%zerod_int%ref3%description (string) (9.3.1.1.3)
ref4 (904)	reference%timed%zerod_int%ref4 (ref_t_0di_ref) (9.3.1.3.232)
value (905)	reference%timed%zerod_int%ref4%value (integer) (9.3.1.1.2)
description (905)	reference%timed%zerod_int%ref4%description (string) (9.3.1.1.3)
oned_real (903)	reference%timed%oned_real (ref_t_1dr) (9.3.1.3.237)
ref1 (910)	reference%timed%oned_real%ref1 (ref_t_1dr_ref) (9.3.1.3.238)
value (911)	reference%timed%oned_real%ref1%value (vecflt_type) (9.3.1.2.9)
description (911)	reference%timed%oned_real%ref1%description (string) (9.3.1.1.3)
ref2 (910)	reference%timed%oned_real%ref2 (ref_t_1dr_ref) (9.3.1.3.238)
value (911)	reference%timed%oned_real%ref2%value (vecflt_type) (9.3.1.2.9)
description (911)	reference%timed%oned_real%ref2%description (string) (9.3.1.1.3)



ref3 (910)	reference%timed%oned_real%ref3 (ref.t.1dr_ref) (9.3.1.3.238)
value (911)	reference%timed%oned_real%ref3%value (vecflt_type) (9.3.1.2.9)
description (911)	reference%timed%oned_real%ref3%description (string) (9.3.1.1.3)
ref4 (910)	reference%timed%oned_real%ref4 (ref.t.1dr_ref) (9.3.1.3.238)
value (911)	reference%timed%oned_real%ref4%value (vecflt_type) (9.3.1.2.9)
description (911)	reference%timed%oned_real%ref4%description (string) (9.3.1.1.3)
ref5 (910)	reference%timed%oned_real%ref5 (ref.t.1dr_ref) (9.3.1.3.238)
value (911)	reference%timed%oned_real%ref5%value (vecflt_type) (9.3.1.2.9)
description (911)	reference%timed%oned_real%ref5%description (string) (9.3.1.1.3)
oned_int (903)	reference%timed%oned_int (ref.t.1di) (9.3.1.3.235)
ref1 (908)	reference%timed%oned_int%ref1 (ref.t.1di_ref) (9.3.1.3.236)
value (909)	reference%timed%oned_int%ref1%value (vecint_type) (9.3.1.2.10)
description (909)	reference%timed%oned_int%ref1%description (string) (9.3.1.1.3)
ref2 (908)	reference%timed%oned_int%ref2 (ref.t.1di_ref) (9.3.1.3.236)
value (909)	reference%timed%oned_int%ref2%value (vecint_type) (9.3.1.2.10)
description (909)	reference%timed%oned_int%ref2%description (string) (9.3.1.1.3)
ref3 (908)	reference%timed%oned_int%ref3 (ref.t.1di_ref) (9.3.1.3.236)
value (909)	reference%timed%oned_int%ref3%value (vecint_type) (9.3.1.2.10)
description (909)	reference%timed%oned_int%ref3%description (string) (9.3.1.1.3)
ref4 (908)	reference%timed%oned_int%ref4 (ref.t.1di_ref) (9.3.1.3.236)
value (909)	reference%timed%oned_int%ref4%value (vecint_type) (9.3.1.2.10)
description (909)	reference%timed%oned_int%ref4%description (string) (9.3.1.1.3)
time (704)	reference%time (float) (9.3.1.1.1)

### 9.3.2.1.30 sawteeth

datainfo (705)	sawteeth%datainfo (datainfo) (9.3.1.3.92)
dataprovider (765)	sawteeth%datainfo%dataprovider (string) (9.3.1.1.3)
putdate (765)	sawteeth%datainfo%putdate (string) (9.3.1.1.3)
source (765)	sawteeth%datainfo%source (string) (9.3.1.1.3)
comment (765)	sawteeth%datainfo%comment (string) (9.3.1.1.3)
isref (765)	sawteeth%datainfo%isref (integer) (9.3.1.1.2)
whatref (765)	sawteeth%datainfo%whatref (whatref) (9.3.1.3.333)
user (1006)	sawteeth%datainfo%whatref%user (string) (9.3.1.1.3)
machine (1006)	sawteeth%datainfo%whatref%machine (string) (9.3.1.1.3)
shot (1006)	sawteeth%datainfo%whatref%shot (integer) (9.3.1.1.2)
run (1006)	sawteeth%datainfo%whatref%run (integer) (9.3.1.1.2)
occurrence (1006)	sawteeth%datainfo%whatref%occurrence (integer) (9.3.1.1.2)
putinfo (765)	sawteeth%datainfo%putinfo (putinfo) (9.3.1.3.215)
putmethod (888)	sawteeth%datainfo%putinfo%putmethod (string) (9.3.1.1.3)
putaccess (888)	sawteeth%datainfo%putinfo%putaccess (string) (9.3.1.1.3)
putlocation (888)	sawteeth%datainfo%putinfo%putlocation (string) (9.3.1.1.3)
rights (888)	sawteeth%datainfo%putinfo%rights (string) (9.3.1.1.3)
crash_trig (705)	sawteeth%crash_trig (integer) (9.3.1.1.2)
composition (705)	sawteeth%composition (composition) (9.3.1.3.74)
amn (747)	sawteeth%composition%amn (vecflt_type) (9.3.1.2.9)
zn (747)	sawteeth%composition%zn (vecflt_type) (9.3.1.2.9)
zion (747)	sawteeth%composition%zion (vecflt_type) (9.3.1.2.9)
imp_flag (747)	sawteeth%composition%imp_flag (vecint_type) (9.3.1.2.10)
rho_tor_norm (705)	sawteeth%rho_tor_norm (vecflt_type) (9.3.1.2.9)
rho_tor (705)	sawteeth%rho_tor (vecflt_type) (9.3.1.2.9)
profiles1d (705)	sawteeth%profiles1d (sawteeth_profiles1d) (9.3.1.3.253)
ne (926)	sawteeth%profiles1d%ne (vecflt_type) (9.3.1.2.9)
ni (926)	sawteeth%profiles1d%ni (matflt_type) (9.3.1.2.7)
te (926)	sawteeth%profiles1d%te (vecflt_type) (9.3.1.2.9)
ti (926)	sawteeth%profiles1d%ti (matflt_type) (9.3.1.2.7)
psi (926)	sawteeth%profiles1d%psi (vecflt_type) (9.3.1.2.9)
phi (926)	sawteeth%profiles1d%phi (vecflt_type) (9.3.1.2.9)
psistar (926)	sawteeth%profiles1d%psistar (vecflt_type) (9.3.1.2.9)
volume (926)	sawteeth%profiles1d%volume (vecflt_type) (9.3.1.2.9)
q (926)	sawteeth%profiles1d%q (vecflt_type) (9.3.1.2.9)

diags (705)	sawteeth%diags (sawteeth_diags) (9.3.1.3.252)
shear1 (925)	sawteeth%diags%shear1 (float) (9.3.1.1.1)
rhotorn_q1 (925)	sawteeth%diags%rhotorn_q1 (float) (9.3.1.1.1)
rhotorn_inv (925)	sawteeth%diags%rhotorn_inv (float) (9.3.1.1.1)
rhotorn_mix (925)	sawteeth%diags%rhotorn_mix (float) (9.3.1.1.1)
codeparam (705)	sawteeth%codeparam (codeparam) (9.3.1.3.58)
codename (731)	sawteeth%codeparam%codename (string) (9.3.1.1.3)
codeversion (731)	sawteeth%codeparam%codeversion (string) (9.3.1.1.3)
parameters (731)	sawteeth%codeparam%parameters (string) (9.3.1.1.3)
output_diag (731)	sawteeth%codeparam%output_diag (string) (9.3.1.1.3)
output_flag (731)	sawteeth%codeparam%output_flag (integer) (9.3.1.1.2)
time (705)	sawteeth%time (float) (9.3.1.1.1)

### 9.3.2.1.31 scenario

datainfo (706)	scenario%datainfo (datainfo) (9.3.1.3.92)
dataprovider (765)	scenario%datainfo%dataprovider (string) (9.3.1.1.3)
putdate (765)	scenario%datainfo%putdate (string) (9.3.1.1.3)
source (765)	scenario%datainfo%source (string) (9.3.1.1.3)
comment (765)	scenario%datainfo%comment (string) (9.3.1.1.3)
isref (765)	scenario%datainfo%isref (integer) (9.3.1.1.2)
whatref (765)	scenario%datainfo%whatref (whatref) (9.3.1.3.333)
user (1006)	scenario%datainfo%whatref%user (string) (9.3.1.1.3)
machine (1006)	scenario%datainfo%whatref%machine (string) (9.3.1.1.3)
shot (1006)	scenario%datainfo%whatref%shot (integer) (9.3.1.1.2)
run (1006)	scenario%datainfo%whatref%run (integer) (9.3.1.1.2)
occurrence (1006)	scenario%datainfo%whatref%occurrence (integer) (9.3.1.1.2)
putinfo (765)	scenario%datainfo%putinfo (putinfo) (9.3.1.3.215)
putmethod (888)	scenario%datainfo%putinfo%putmethod (string) (9.3.1.1.3)
putaccess (888)	scenario%datainfo%putinfo%putaccess (string) (9.3.1.1.3)
putlocation (888)	scenario%datainfo%putinfo%putlocation (string) (9.3.1.1.3)
rights (888)	scenario%datainfo%putinfo%rights (string) (9.3.1.1.3)
centre (706)	scenario%centre (scenario_centre) (9.3.1.3.254)
te0 (927)	scenario%centre%te0 (scenario_ref) (9.3.1.3.271)
value (944)	scenario%centre%te0%value (float) (9.3.1.1.1)
source (944)	scenario%centre%te0%source (string) (9.3.1.1.3)
ti0 (927)	scenario%centre%ti0 (scenario_ref) (9.3.1.3.271)
value (944)	scenario%centre%ti0%value (float) (9.3.1.1.1)
source (944)	scenario%centre%ti0%source (string) (9.3.1.1.3)
ne0 (927)	scenario%centre%ne0 (scenario_ref) (9.3.1.3.271)
value (944)	scenario%centre%ne0%value (float) (9.3.1.1.1)
source (944)	scenario%centre%ne0%source (string) (9.3.1.1.3)
ni0 (927)	scenario%centre%ni0 (scenario_ref) (9.3.1.3.271)
value (944)	scenario%centre%ni0%value (float) (9.3.1.1.1)
source (944)	scenario%centre%ni0%source (string) (9.3.1.1.3)
shift0 (927)	scenario%centre%shift0 (scenario_ref) (9.3.1.3.271)
value (944)	scenario%centre%shift0%value (float) (9.3.1.1.1)
source (944)	scenario%centre%shift0%source (string) (9.3.1.1.3)
psi0 (927)	scenario%centre%psi0 (scenario_ref) (9.3.1.3.271)
value (944)	scenario%centre%psi0%value (float) (9.3.1.1.1)
source (944)	scenario%centre%psi0%source (string) (9.3.1.1.3)
phi0 (927)	scenario%centre%phi0 (scenario_ref) (9.3.1.3.271)
value (944)	scenario%centre%phi0%value (float) (9.3.1.1.1)
source (944)	scenario%centre%phi0%source (string) (9.3.1.1.3)
q0 (927)	scenario%centre%q0 (scenario_ref) (9.3.1.3.271)
value (944)	scenario%centre%q0%value (float) (9.3.1.1.1)
source (944)	scenario%centre%q0%source (string) (9.3.1.1.3)
Rmag (927)	scenario%centre%Rmag (scenario_ref) (9.3.1.3.271)
value (944)	scenario%centre%Rmag%value (float) (9.3.1.1.1)
source (944)	scenario%centre%Rmag%source (string) (9.3.1.1.3)
Zmag (927)	scenario%centre%Zmag (scenario_ref) (9.3.1.3.271)

value (944)	scenario%centre%Zmag%value (float) (9.3.1.1.1)
source (944)	scenario%centre%Zmag%source (string) (9.3.1.1.3)
vtor.0 (927)	scenario%centre%vtor.0 (scenario_ref) (9.3.1.3.271)
value (944)	scenario%centre%vtor.0%value (float) (9.3.1.1.1)
source (944)	scenario%centre%vtor.0%source (string) (9.3.1.1.3)
composition (706)	scenario%composition (scenario_composition) (9.3.1.3.255)
amn (928)	scenario%composition%amn (vecflt_type) (9.3.1.2.9)
zn (928)	scenario%composition%zn (vecflt_type) (9.3.1.2.9)
zion (928)	scenario%composition%zion (vecflt_type) (9.3.1.2.9)
imp_flag (928)	scenario%composition%imp_flag (vecint_type) (9.3.1.2.10)
rot_imp_flag (928)	scenario%composition%rot_imp_flag (vecint_type) (9.3.1.2.10)
pellet_amn (928)	scenario%composition%pellet_amn (vecflt_type) (9.3.1.2.9)
pellet_zn (928)	scenario%composition%pellet_zn (vecflt_type) (9.3.1.2.9)
nbi_amn (928)	scenario%composition%nbi_amn (vecflt_type) (9.3.1.2.9)
nbi_zn (928)	scenario%composition%nbi_zn (vecflt_type) (9.3.1.2.9)
configs (706)	scenario%configs (scenario_configuration) (9.3.1.3.256)
config (929)	scenario%configs%config (scenario_int) (9.3.1.3.263)
value (936)	scenario%configs%config%value (integer) (9.3.1.1.2)
source (936)	scenario%configs%config%source (string) (9.3.1.1.3)
lmode_sc (929)	scenario%configs%lmode_sc (string) (9.3.1.1.3)
hmode_sc (929)	scenario%configs%hmode_sc (string) (9.3.1.1.3)
core_sc (929)	scenario%configs%core_sc (string) (9.3.1.1.3)
pedestal_sc (929)	scenario%configs%pedestal_sc (string) (9.3.1.1.3)
helium_sc (929)	scenario%configs%helium_sc (string) (9.3.1.1.3)
impurity_sc (929)	scenario%configs%impurity_sc (string) (9.3.1.1.3)
l2h_sc (929)	scenario%configs%l2h_sc (string) (9.3.1.1.3)
tor_rot_sc (929)	scenario%configs%tor_rot_sc (string) (9.3.1.1.3)
wall_mat (929)	scenario%configs%wall_mat (string) (9.3.1.1.3)
evap_mat (929)	scenario%configs%evap_mat (string) (9.3.1.1.3)
lim_mat (929)	scenario%configs%lim_mat (string) (9.3.1.1.3)
div_mat (929)	scenario%configs%div_mat (string) (9.3.1.1.3)
coordinate (929)	scenario%configs%coordinate (string) (9.3.1.1.3)
ecrh_freq (929)	scenario%configs%ecrh_freq (scenario_ref) (9.3.1.3.271)
value (944)	scenario%configs%ecrh_freq%value (float) (9.3.1.1.1)
source (944)	scenario%configs%ecrh_freq%source (string) (9.3.1.1.3)
ecrh_loc (929)	scenario%configs%ecrh_loc (scenario_ref) (9.3.1.3.271)
value (944)	scenario%configs%ecrh_loc%value (float) (9.3.1.1.1)
source (944)	scenario%configs%ecrh_loc%source (string) (9.3.1.1.3)
ecrh_mode (929)	scenario%configs%ecrh_mode (scenario_int) (9.3.1.3.263)
value (936)	scenario%configs%ecrh_mode%value (integer) (9.3.1.1.2)
source (936)	scenario%configs%ecrh_mode%source (string) (9.3.1.1.3)
ecrh_tor_ang (929)	scenario%configs%ecrh_tor_ang (scenario_ref) (9.3.1.3.271)
value (944)	scenario%configs%ecrh_tor_ang%value (float) (9.3.1.1.1)
source (944)	scenario%configs%ecrh_tor_ang%source (string) (9.3.1.1.3)
ecrh_pol_ang (929)	scenario%configs%ecrh_pol_ang (scenario_ref) (9.3.1.3.271)
value (944)	scenario%configs%ecrh_pol_ang%value (float) (9.3.1.1.1)
source (944)	scenario%configs%ecrh_pol_ang%source (string) (9.3.1.1.3)
ecrh_harm (929)	scenario%configs%ecrh_harm (scenario_int) (9.3.1.3.263)
value (936)	scenario%configs%ecrh_harm%value (integer) (9.3.1.1.2)
source (936)	scenario%configs%ecrh_harm%source (string) (9.3.1.1.3)
enbi (929)	scenario%configs%enbi (scenario_ref) (9.3.1.3.271)
value (944)	scenario%configs%enbi%value (float) (9.3.1.1.1)
source (944)	scenario%configs%enbi%source (string) (9.3.1.1.3)
r_nbi (929)	scenario%configs%r_nbi (scenario_ref) (9.3.1.3.271)
value (944)	scenario%configs%r_nbi%value (float) (9.3.1.1.1)
source (944)	scenario%configs%r_nbi%source (string) (9.3.1.1.3)
grad_b_drift (929)	scenario%configs%grad_b_drift (scenario_int) (9.3.1.3.263)
value (936)	scenario%configs%grad_b_drift%value (integer) (9.3.1.1.2)
source (936)	scenario%configs%grad_b_drift%source (string) (9.3.1.1.3)
icrh_freq (929)	scenario%configs%icrh_freq (scenario_ref) (9.3.1.3.271)
value (944)	scenario%configs%icrh_freq%value (float) (9.3.1.1.1)

source (944)	scenario%configs%icrh_freq%source (string) (9.3.1.1.3)
icrh_scheme (929)	scenario%configs%icrh_scheme (string) (9.3.1.1.3)
icrh_phase (929)	scenario%configs%icrh_phase (scenario_ref) (9.3.1.3.271)
value (944)	scenario%configs%icrh_phase%value (float) (9.3.1.1.1)
source (944)	scenario%configs%icrh_phase%source (string) (9.3.1.1.3)
LH_freq (929)	scenario%configs%LH_freq (scenario_ref) (9.3.1.3.271)
value (944)	scenario%configs%LH_freq%value (float) (9.3.1.1.1)
source (944)	scenario%configs%LH_freq%source (string) (9.3.1.1.3)
LH_npar (929)	scenario%configs%LH_npar (scenario_ref) (9.3.1.3.271)
value (944)	scenario%configs%LH_npar%value (float) (9.3.1.1.1)
source (944)	scenario%configs%LH_npar%source (string) (9.3.1.1.3)
pellet_ang (929)	scenario%configs%pellet_ang (scenario_ref) (9.3.1.3.271)
value (944)	scenario%configs%pellet_ang%value (float) (9.3.1.1.1)
source (944)	scenario%configs%pellet_ang%source (string) (9.3.1.1.3)
pellet_v (929)	scenario%configs%pellet_v (scenario_ref) (9.3.1.3.271)
value (944)	scenario%configs%pellet_v%value (float) (9.3.1.1.1)
source (944)	scenario%configs%pellet_v%source (string) (9.3.1.1.3)
pellet_nba (929)	scenario%configs%pellet_nba (scenario_ref) (9.3.1.3.271)
value (944)	scenario%configs%pellet_nba%value (float) (9.3.1.1.1)
source (944)	scenario%configs%pellet_nba%source (string) (9.3.1.1.3)
confinement (706)	scenario%confinement (scenario_confinement) (9.3.1.3.257)
tau_e (930)	scenario%confinement%tau_e (scenario_ref) (9.3.1.3.271)
value (944)	scenario%confinement%tau_e%value (float) (9.3.1.1.1)
source (944)	scenario%confinement%tau_e%source (string) (9.3.1.1.3)
tau_l_sc (930)	scenario%confinement%tau_l_sc (scenario_ref) (9.3.1.3.271)
value (944)	scenario%confinement%tau_l_sc%value (float) (9.3.1.1.1)
source (944)	scenario%confinement%tau_l_sc%source (string) (9.3.1.1.3)
tau_h_sc (930)	scenario%confinement%tau_h_sc (scenario_ref) (9.3.1.3.271)
value (944)	scenario%confinement%tau_h_sc%value (float) (9.3.1.1.1)
source (944)	scenario%confinement%tau_h_sc%source (string) (9.3.1.1.3)
tau_he (930)	scenario%confinement%tau_he (scenario_ref) (9.3.1.3.271)
value (944)	scenario%confinement%tau_he%value (float) (9.3.1.1.1)
source (944)	scenario%confinement%tau_he%source (string) (9.3.1.1.3)
tau_e_ee (930)	scenario%confinement%tau_e_ee (scenario_ref) (9.3.1.3.271)
value (944)	scenario%confinement%tau_e_ee%value (float) (9.3.1.1.1)
source (944)	scenario%confinement%tau_e_ee%source (string) (9.3.1.1.3)
tau_e_ii (930)	scenario%confinement%tau_e_ii (scenario_ref) (9.3.1.3.271)
value (944)	scenario%confinement%tau_e_ii%value (float) (9.3.1.1.1)
source (944)	scenario%confinement%tau_e_ii%source (string) (9.3.1.1.3)
tau_e_ei (930)	scenario%confinement%tau_e_ei (scenario_ref) (9.3.1.3.271)
value (944)	scenario%confinement%tau_e_ei%value (float) (9.3.1.1.1)
source (944)	scenario%confinement%tau_e_ei%source (string) (9.3.1.1.3)
tau_cur_diff (930)	scenario%confinement%tau_cur_diff (scenario_ref) (9.3.1.3.271)
value (944)	scenario%confinement%tau_cur_diff%value (float) (9.3.1.1.1)
source (944)	scenario%confinement%tau_cur_diff%source (string) (9.3.1.1.3)
tau_i_rol (930)	scenario%confinement%tau_i_rol (scenario_ref) (9.3.1.3.271)
value (944)	scenario%confinement%tau_i_rol%value (float) (9.3.1.1.1)
source (944)	scenario%confinement%tau_i_rol%source (string) (9.3.1.1.3)
currents (706)	scenario%currents (scenario_currents) (9.3.1.3.258)
RR (931)	scenario%currents%RR (scenario_ref) (9.3.1.3.271)
value (944)	scenario%currents%RR%value (float) (9.3.1.1.1)
source (944)	scenario%currents%RR%source (string) (9.3.1.1.3)
i_align (931)	scenario%currents%i_align (scenario_ref) (9.3.1.3.271)
value (944)	scenario%currents%i_align%value (float) (9.3.1.1.1)
source (944)	scenario%currents%i_align%source (string) (9.3.1.1.3)
i_boot (931)	scenario%currents%i_boot (scenario_ref) (9.3.1.3.271)
value (944)	scenario%currents%i_boot%value (float) (9.3.1.1.1)
source (944)	scenario%currents%i_boot%source (string) (9.3.1.1.3)
i_cd_tot (931)	scenario%currents%i_cd_tot (scenario_ref) (9.3.1.3.271)
value (944)	scenario%currents%i_cd_tot%value (float) (9.3.1.1.1)
source (944)	scenario%currents%i_cd_tot%source (string) (9.3.1.1.3)

i_eccd (931)	scenario%currents%i_eccd (scenario_ref) (9.3.1.3.271)
value (944)	scenario%currents%i_eccd%value (float) (9.3.1.1.1)
source (944)	scenario%currents%i_eccd%source (string) (9.3.1.1.3)
i_fast_ion (931)	scenario%currents%i_fast_ion (scenario_ref) (9.3.1.3.271)
value (944)	scenario%currents%i_fast_ion%value (float) (9.3.1.1.1)
source (944)	scenario%currents%i_fast_ion%source (string) (9.3.1.1.3)
i_fwcd (931)	scenario%currents%i_fwcd (scenario_ref) (9.3.1.3.271)
value (944)	scenario%currents%i_fwcd%value (float) (9.3.1.1.1)
source (944)	scenario%currents%i_fwcd%source (string) (9.3.1.1.3)
i_lhcd (931)	scenario%currents%i_lhcd (scenario_ref) (9.3.1.3.271)
value (944)	scenario%currents%i_lhcd%value (float) (9.3.1.1.1)
source (944)	scenario%currents%i_lhcd%source (string) (9.3.1.1.3)
i_nbicd (931)	scenario%currents%i_nbicd (scenario_ref) (9.3.1.3.271)
value (944)	scenario%currents%i_nbicd%value (float) (9.3.1.1.1)
source (944)	scenario%currents%i_nbicd%source (string) (9.3.1.1.3)
i_ni_tot (931)	scenario%currents%i_ni_tot (scenario_ref) (9.3.1.3.271)
value (944)	scenario%currents%i_ni_tot%value (float) (9.3.1.1.1)
source (944)	scenario%currents%i_ni_tot%source (string) (9.3.1.1.3)
i_ohm (931)	scenario%currents%i_ohm (scenario_ref) (9.3.1.3.271)
value (944)	scenario%currents%i_ohm%value (float) (9.3.1.1.1)
source (944)	scenario%currents%i_ohm%source (string) (9.3.1.1.3)
i_par (931)	scenario%currents%i_par (scenario_ref) (9.3.1.3.271)
value (944)	scenario%currents%i_par%value (float) (9.3.1.1.1)
source (944)	scenario%currents%i_par%source (string) (9.3.1.1.3)
i_runaway (931)	scenario%currents%i_runaway (scenario_ref) (9.3.1.3.271)
value (944)	scenario%currents%i_runaway%value (float) (9.3.1.1.1)
source (944)	scenario%currents%i_runaway%source (string) (9.3.1.1.3)
v_loop (931)	scenario%currents%v_loop (scenario_ref) (9.3.1.3.271)
value (944)	scenario%currents%v_loop%value (float) (9.3.1.1.1)
source (944)	scenario%currents%v_loop%source (string) (9.3.1.1.3)
v_meas (931)	scenario%currents%v_meas (scenario_ref) (9.3.1.3.271)
value (944)	scenario%currents%v_meas%value (float) (9.3.1.1.1)
source (944)	scenario%currents%v_meas%source (string) (9.3.1.1.3)
edge (706)	scenario%edge (scenario_edge) (9.3.1.3.259)
te_edge (932)	scenario%edge%te_edge (scenario_ref) (9.3.1.3.271)
value (944)	scenario%edge%te_edge%value (float) (9.3.1.1.1)
source (944)	scenario%edge%te_edge%source (string) (9.3.1.1.3)
ti_edge (932)	scenario%edge%ti_edge (scenario_ref) (9.3.1.3.271)
value (944)	scenario%edge%ti_edge%value (float) (9.3.1.1.1)
source (944)	scenario%edge%ti_edge%source (string) (9.3.1.1.3)
ne_edge (932)	scenario%edge%ne_edge (scenario_ref) (9.3.1.3.271)
value (944)	scenario%edge%ne_edge%value (float) (9.3.1.1.1)
source (944)	scenario%edge%ne_edge%source (string) (9.3.1.1.3)
ni_edge (932)	scenario%edge%ni_edge (scenario_ref) (9.3.1.3.271)
value (944)	scenario%edge%ni_edge%value (float) (9.3.1.1.1)
source (944)	scenario%edge%ni_edge%source (string) (9.3.1.1.3)
psi_edge (932)	scenario%edge%psi_edge (scenario_ref) (9.3.1.3.271)
value (944)	scenario%edge%psi_edge%value (float) (9.3.1.1.1)
source (944)	scenario%edge%psi_edge%source (string) (9.3.1.1.3)
phi_edge (932)	scenario%edge%phi_edge (scenario_ref) (9.3.1.3.271)
value (944)	scenario%edge%phi_edge%value (float) (9.3.1.1.1)
source (944)	scenario%edge%phi_edge%source (string) (9.3.1.1.3)
rho_edge (932)	scenario%edge%rho_edge (scenario_ref) (9.3.1.3.271)
value (944)	scenario%edge%rho_edge%value (float) (9.3.1.1.1)
source (944)	scenario%edge%rho_edge%source (string) (9.3.1.1.3)
drho_edge_dt (932)	scenario%edge%drho_edge_dt (scenario_ref) (9.3.1.3.271)
value (944)	scenario%edge%drho_edge_dt%value (float) (9.3.1.1.1)
source (944)	scenario%edge%drho_edge_dt%source (string) (9.3.1.1.3)
q_edge (932)	scenario%edge%q_edge (scenario_ref) (9.3.1.3.271)
value (944)	scenario%edge%q_edge%value (float) (9.3.1.1.1)
source (944)	scenario%edge%q_edge%source (string) (9.3.1.1.3)

neutral_flux (932)	scenario%edge%neutral_flux (scenario_ref) (9.3.1.3.271)
value (944)	scenario%edge%neutral_flux%value (float) (9.3.1.1.1)
source (944)	scenario%edge%neutral_flux%source (string) (9.3.1.1.3)
phi_plasma (932)	scenario%edge%phi_plasma (scenario_ref) (9.3.1.3.271)
value (944)	scenario%edge%phi_plasma%value (float) (9.3.1.1.1)
source (944)	scenario%edge%phi_plasma%source (string) (9.3.1.1.3)
vtor_edge (932)	scenario%edge%vtor_edge (scenario_ref) (9.3.1.3.271)
value (944)	scenario%edge%vtor_edge%value (float) (9.3.1.1.1)
source (944)	scenario%edge%vtor_edge%source (string) (9.3.1.1.3)
energy (706)	scenario%energy (scenario_energy) (9.3.1.3.260)
w_tot (933)	scenario%energy%w_tot (scenario_ref) (9.3.1.3.271)
value (944)	scenario%energy%w_tot%value (float) (9.3.1.1.1)
source (944)	scenario%energy%w_tot%source (string) (9.3.1.1.3)
w_b_pol (933)	scenario%energy%w_b_pol (scenario_ref) (9.3.1.3.271)
value (944)	scenario%energy%w_b_pol%value (float) (9.3.1.1.1)
source (944)	scenario%energy%w_b_pol%source (string) (9.3.1.1.3)
w_dia (933)	scenario%energy%w_dia (scenario_ref) (9.3.1.3.271)
value (944)	scenario%energy%w_dia%value (float) (9.3.1.1.1)
source (944)	scenario%energy%w_dia%source (string) (9.3.1.1.3)
dwdia_dt (933)	scenario%energy%dwdia_dt (scenario_ref) (9.3.1.3.271)
value (944)	scenario%energy%dwdia_dt%value (float) (9.3.1.1.1)
source (944)	scenario%energy%dwdia_dt%source (string) (9.3.1.1.3)
w_b_tor_pla (933)	scenario%energy%w_b_tor_pla (scenario_ref) (9.3.1.3.271)
value (944)	scenario%energy%w_b_tor_pla%value (float) (9.3.1.1.1)
source (944)	scenario%energy%w_b_tor_pla%source (string) (9.3.1.1.3)
w_th (933)	scenario%energy%w_th (scenario_ref) (9.3.1.3.271)
value (944)	scenario%energy%w_th%value (float) (9.3.1.1.1)
source (944)	scenario%energy%w_th%source (string) (9.3.1.1.3)
dwtot_dt (933)	scenario%energy%dwtot_dt (scenario_ref) (9.3.1.3.271)
value (944)	scenario%energy%dwtot_dt%value (float) (9.3.1.1.1)
source (944)	scenario%energy%dwtot_dt%source (string) (9.3.1.1.3)
dwbpol_dt (933)	scenario%energy%dwbpol_dt (scenario_ref) (9.3.1.3.271)
value (944)	scenario%energy%dwbpol_dt%value (float) (9.3.1.1.1)
source (944)	scenario%energy%dwbpol_dt%source (string) (9.3.1.1.3)
dwbtorpla_dt (933)	scenario%energy%dwbtorpla_dt (scenario_ref) (9.3.1.3.271)
value (944)	scenario%energy%dwbtorpla_dt%value (float) (9.3.1.1.1)
source (944)	scenario%energy%dwbtorpla_dt%source (string) (9.3.1.1.3)
dwth_dt (933)	scenario%energy%dwth_dt (scenario_ref) (9.3.1.3.271)
value (944)	scenario%energy%dwth_dt%value (float) (9.3.1.1.1)
source (944)	scenario%energy%dwth_dt%source (string) (9.3.1.1.3)
esup_icrhtot (933)	scenario%energy%esup_icrhtot (scenario_ref) (9.3.1.3.271)
value (944)	scenario%energy%esup_icrhtot%value (float) (9.3.1.1.1)
source (944)	scenario%energy%esup_icrhtot%source (string) (9.3.1.1.3)
esup_icrhper (933)	scenario%energy%esup_icrhper (scenario_ref) (9.3.1.3.271)
value (944)	scenario%energy%esup_icrhper%value (float) (9.3.1.1.1)
source (944)	scenario%energy%esup_icrhper%source (string) (9.3.1.1.3)
esup_nbitot (933)	scenario%energy%esup_nbitot (scenario_ref) (9.3.1.3.271)
value (944)	scenario%energy%esup_nbitot%value (float) (9.3.1.1.1)
source (944)	scenario%energy%esup_nbitot%source (string) (9.3.1.1.3)
esup_nbiperp (933)	scenario%energy%esup_nbiperp (scenario_ref) (9.3.1.3.271)
value (944)	scenario%energy%esup_nbiperp%value (float) (9.3.1.1.1)
source (944)	scenario%energy%esup_nbiperp%source (string) (9.3.1.1.3)
esup_lhcd (933)	scenario%energy%esup_lhcd (scenario_ref) (9.3.1.3.271)
value (944)	scenario%energy%esup_lhcd%value (float) (9.3.1.1.1)
source (944)	scenario%energy%esup_lhcd%source (string) (9.3.1.1.3)
esup_alpha (933)	scenario%energy%esup_alpha (scenario_ref) (9.3.1.3.271)
value (944)	scenario%energy%esup_alpha%value (float) (9.3.1.1.1)
source (944)	scenario%energy%esup_alpha%source (string) (9.3.1.1.3)
eqgeometry (706)	scenario%eqgeometry (eqgeometry) (9.3.1.3.139)
source (812)	scenario%eqgeometry%source (string) (9.3.1.1.3)
boundarytype (812)	scenario%eqgeometry%boundarytype (integer) (9.3.1.1.2)



boundary (812)	scenario%eqgeometry%boundary (rz1D_npoints) (9.3.1.3.243)
r (916)	scenario%eqgeometry%boundary%r (vecflt.type) (9.3.1.2.9)
z (916)	scenario%eqgeometry%boundary%z (vecflt.type) (9.3.1.2.9)
npoints (916)	scenario%eqgeometry%boundary%npoints (integer) (9.3.1.1.2)
geom_axis (812)	scenario%eqgeometry%geom_axis (rz0D) (9.3.1.3.241)
r (914)	scenario%eqgeometry%geom_axis%r (float) (9.3.1.1.1)
z (914)	scenario%eqgeometry%geom_axis%z (float) (9.3.1.1.1)
a_minor (812)	scenario%eqgeometry%a_minor (float) (9.3.1.1.1)
elongation (812)	scenario%eqgeometry%elongation (float) (9.3.1.1.1)
tria_upper (812)	scenario%eqgeometry%tria_upper (float) (9.3.1.1.1)
tria_lower (812)	scenario%eqgeometry%tria_lower (float) (9.3.1.1.1)
xpts (812)	scenario%eqgeometry%xpts (rz1D) (9.3.1.3.242)
r (915)	scenario%eqgeometry%xpts%r (vecflt.type) (9.3.1.2.9)
z (915)	scenario%eqgeometry%xpts%z (vecflt.type) (9.3.1.2.9)
left_low_st (812)	scenario%eqgeometry%left_low_st (rz0D) (9.3.1.3.241)
r (914)	scenario%eqgeometry%left_low_st%r (float) (9.3.1.1.1)
z (914)	scenario%eqgeometry%left_low_st%z (float) (9.3.1.1.1)
right_low_st (812)	scenario%eqgeometry%right_low_st (rz0D) (9.3.1.3.241)
r (914)	scenario%eqgeometry%right_low_st%r (float) (9.3.1.1.1)
z (914)	scenario%eqgeometry%right_low_st%z (float) (9.3.1.1.1)
left_up_st (812)	scenario%eqgeometry%left_up_st (rz0D) (9.3.1.3.241)
r (914)	scenario%eqgeometry%left_up_st%r (float) (9.3.1.1.1)
z (914)	scenario%eqgeometry%left_up_st%z (float) (9.3.1.1.1)
right_up_st (812)	scenario%eqgeometry%right_up_st (rz0D) (9.3.1.3.241)
r (914)	scenario%eqgeometry%right_up_st%r (float) (9.3.1.1.1)
z (914)	scenario%eqgeometry%right_up_st%z (float) (9.3.1.1.1)
active_limit (812)	scenario%eqgeometry%active_limit (rz0D) (9.3.1.3.241)
r (914)	scenario%eqgeometry%active_limit%r (float) (9.3.1.1.1)
z (914)	scenario%eqgeometry%active_limit%z (float) (9.3.1.1.1)
global_param (706)	scenario%global_param (scenario_global) (9.3.1.3.261)
ip (934)	scenario%global_param%ip (scenario_ref) (9.3.1.3.271)
value (944)	scenario%global_param%ip%value (float) (9.3.1.1.1)
source (944)	scenario%global_param%ip%source (string) (9.3.1.1.3)
dip_dt (934)	scenario%global_param%dip_dt (scenario_ref) (9.3.1.3.271)
value (944)	scenario%global_param%dip_dt%value (float) (9.3.1.1.1)
source (944)	scenario%global_param%dip_dt%source (string) (9.3.1.1.3)
beta_pol (934)	scenario%global_param%beta_pol (scenario_ref) (9.3.1.3.271)
value (944)	scenario%global_param%beta_pol%value (float) (9.3.1.1.1)
source (944)	scenario%global_param%beta_pol%source (string) (9.3.1.1.3)
beta_tor (934)	scenario%global_param%beta_tor (scenario_ref) (9.3.1.3.271)
value (944)	scenario%global_param%beta_tor%value (float) (9.3.1.1.1)
source (944)	scenario%global_param%beta_tor%source (string) (9.3.1.1.3)
beta_normal (934)	scenario%global_param%beta_normal (scenario_ref) (9.3.1.3.271)
value (944)	scenario%global_param%beta_normal%value (float) (9.3.1.1.1)
source (944)	scenario%global_param%beta_normal%source (string) (9.3.1.1.3)
li (934)	scenario%global_param%li (scenario_ref) (9.3.1.3.271)
value (944)	scenario%global_param%li%value (float) (9.3.1.1.1)
source (944)	scenario%global_param%li%source (string) (9.3.1.1.3)
volume (934)	scenario%global_param%volume (scenario_ref) (9.3.1.3.271)
value (944)	scenario%global_param%volume%value (float) (9.3.1.1.1)
source (944)	scenario%global_param%volume%source (string) (9.3.1.1.3)
area_pol (934)	scenario%global_param%area_pol (scenario_ref) (9.3.1.3.271)
value (944)	scenario%global_param%area_pol%value (float) (9.3.1.1.1)
source (944)	scenario%global_param%area_pol%source (string) (9.3.1.1.3)
area_ext (934)	scenario%global_param%area_ext (scenario_ref) (9.3.1.3.271)
value (944)	scenario%global_param%area_ext%value (float) (9.3.1.1.1)
source (944)	scenario%global_param%area_ext%source (string) (9.3.1.1.3)
len_sepa (934)	scenario%global_param%len_sepa (scenario_ref) (9.3.1.3.271)
value (944)	scenario%global_param%len_sepa%value (float) (9.3.1.1.1)
source (944)	scenario%global_param%len_sepa%source (string) (9.3.1.1.3)
beta_pol_th (934)	scenario%global_param%beta_pol_th (scenario_ref) (9.3.1.3.271)

value (944)	scenario%global_param%beta_pol.th%value (float) (9.3.1.1.1)
source (944)	scenario%global_param%beta_pol.th%source (string) (9.3.1.1.3)
beta_tor.th (934)	scenario%global_param%beta_tor.th (scenario_ref) (9.3.1.3.271)
value (944)	scenario%global_param%beta_tor.th%value (float) (9.3.1.1.1)
source (944)	scenario%global_param%beta_tor.th%source (string) (9.3.1.1.3)
beta_n.th (934)	scenario%global_param%beta_n.th (scenario_ref) (9.3.1.3.271)
value (944)	scenario%global_param%beta_n.th%value (float) (9.3.1.1.1)
source (944)	scenario%global_param%beta_n.th%source (string) (9.3.1.1.3)
disruption (934)	scenario%global_param%disruption (scenario_ref) (9.3.1.3.271)
value (944)	scenario%global_param%disruption%value (float) (9.3.1.1.1)
source (944)	scenario%global_param%disruption%source (string) (9.3.1.1.3)
mode.h (934)	scenario%global_param%mode.h (scenario_ref) (9.3.1.3.271)
value (944)	scenario%global_param%mode.h%value (float) (9.3.1.1.1)
source (944)	scenario%global_param%mode.h%source (string) (9.3.1.1.3)
s.alpha (934)	scenario%global_param%s.alpha (scenario_ref) (9.3.1.3.271)
value (944)	scenario%global_param%s.alpha%value (float) (9.3.1.1.1)
source (944)	scenario%global_param%s.alpha%source (string) (9.3.1.1.3)
heat.power (706)	scenario%heat.power (scenario_heat.power) (9.3.1.3.262)
plh (935)	scenario%heat.power%plh (scenario_ref) (9.3.1.3.271)
value (944)	scenario%heat.power%plh%value (float) (9.3.1.1.1)
source (944)	scenario%heat.power%plh%source (string) (9.3.1.1.3)
pohmic (935)	scenario%heat.power%pohmic (scenario_ref) (9.3.1.3.271)
value (944)	scenario%heat.power%pohmic%value (float) (9.3.1.1.1)
source (944)	scenario%heat.power%pohmic%source (string) (9.3.1.1.3)
picrh (935)	scenario%heat.power%picrh (scenario_ref) (9.3.1.3.271)
value (944)	scenario%heat.power%picrh%value (float) (9.3.1.1.1)
source (944)	scenario%heat.power%picrh%source (string) (9.3.1.1.3)
pecrh (935)	scenario%heat.power%pecrh (scenario_ref) (9.3.1.3.271)
value (944)	scenario%heat.power%pecrh%value (float) (9.3.1.1.1)
source (944)	scenario%heat.power%pecrh%source (string) (9.3.1.1.3)
pnbi (935)	scenario%heat.power%pnbi (scenario_ref) (9.3.1.3.271)
value (944)	scenario%heat.power%pnbi%value (float) (9.3.1.1.1)
source (944)	scenario%heat.power%pnbi%source (string) (9.3.1.1.3)
pnbi.co.cur (935)	scenario%heat.power%pnbi.co.cur (scenario_ref) (9.3.1.3.271)
value (944)	scenario%heat.power%pnbi.co.cur%value (float) (9.3.1.1.1)
source (944)	scenario%heat.power%pnbi.co.cur%source (string) (9.3.1.1.3)
pnbi.counter (935)	scenario%heat.power%pnbi.counter (scenario_ref) (9.3.1.3.271)
value (944)	scenario%heat.power%pnbi.counter%value (float) (9.3.1.1.1)
source (944)	scenario%heat.power%pnbi.counter%source (string) (9.3.1.1.3)
plh.th (935)	scenario%heat.power%plh.th (scenario_ref) (9.3.1.3.271)
value (944)	scenario%heat.power%plh.th%value (float) (9.3.1.1.1)
source (944)	scenario%heat.power%plh.th%source (string) (9.3.1.1.3)
picrh.th (935)	scenario%heat.power%picrh.th (scenario_ref) (9.3.1.3.271)
value (944)	scenario%heat.power%picrh.th%value (float) (9.3.1.1.1)
source (944)	scenario%heat.power%picrh.th%source (string) (9.3.1.1.3)
pecrh.th (935)	scenario%heat.power%pecrh.th (scenario_ref) (9.3.1.3.271)
value (944)	scenario%heat.power%pecrh.th%value (float) (9.3.1.1.1)
source (944)	scenario%heat.power%pecrh.th%source (string) (9.3.1.1.3)
pnbi.th (935)	scenario%heat.power%pnbi.th (scenario_ref) (9.3.1.3.271)
value (944)	scenario%heat.power%pnbi.th%value (float) (9.3.1.1.1)
source (944)	scenario%heat.power%pnbi.th%source (string) (9.3.1.1.3)
ploss.icrh (935)	scenario%heat.power%ploss.icrh (scenario_ref) (9.3.1.3.271)
value (944)	scenario%heat.power%ploss.icrh%value (float) (9.3.1.1.1)
source (944)	scenario%heat.power%ploss.icrh%source (string) (9.3.1.1.3)
ploss.nbi (935)	scenario%heat.power%ploss.nbi (scenario_ref) (9.3.1.3.271)
value (944)	scenario%heat.power%ploss.nbi%value (float) (9.3.1.1.1)
source (944)	scenario%heat.power%ploss.nbi%source (string) (9.3.1.1.3)
pbrem (935)	scenario%heat.power%pbrem (scenario_ref) (9.3.1.3.271)
value (944)	scenario%heat.power%pbrem%value (float) (9.3.1.1.1)
source (944)	scenario%heat.power%pbrem%source (string) (9.3.1.1.3)
pcyclo (935)	scenario%heat.power%pcyclo (scenario_ref) (9.3.1.3.271)



value (944)	scenario%heat_power%pcyclo%value (float) (9.3.1.1.1)
source (944)	scenario%heat_power%pcyclo%source (string) (9.3.1.1.3)
prad (935)	scenario%heat_power%prad (scenario_ref) (9.3.1.3.271)
value (944)	scenario%heat_power%prad%value (float) (9.3.1.1.1)
source (944)	scenario%heat_power%prad%source (string) (9.3.1.1.3)
pdd_fus (935)	scenario%heat_power%pdd_fus (scenario_ref) (9.3.1.3.271)
value (944)	scenario%heat_power%pdd_fus%value (float) (9.3.1.1.1)
source (944)	scenario%heat_power%pdd_fus%source (string) (9.3.1.1.3)
pei (935)	scenario%heat_power%pei (scenario_ref) (9.3.1.3.271)
value (944)	scenario%heat_power%pei%value (float) (9.3.1.1.1)
source (944)	scenario%heat_power%pei%source (string) (9.3.1.1.3)
pel_tot (935)	scenario%heat_power%pel_tot (scenario_ref) (9.3.1.3.271)
value (944)	scenario%heat_power%pel_tot%value (float) (9.3.1.1.1)
source (944)	scenario%heat_power%pel_tot%source (string) (9.3.1.1.3)
pel_fus (935)	scenario%heat_power%pel_fus (scenario_ref) (9.3.1.3.271)
value (944)	scenario%heat_power%pel_fus%value (float) (9.3.1.1.1)
source (944)	scenario%heat_power%pel_fus%source (string) (9.3.1.1.3)
pel_icrh (935)	scenario%heat_power%pel_icrh (scenario_ref) (9.3.1.3.271)
value (944)	scenario%heat_power%pel_icrh%value (float) (9.3.1.1.1)
source (944)	scenario%heat_power%pel_icrh%source (string) (9.3.1.1.3)
pel_nbi (935)	scenario%heat_power%pel_nbi (scenario_ref) (9.3.1.3.271)
value (944)	scenario%heat_power%pel_nbi%value (float) (9.3.1.1.1)
source (944)	scenario%heat_power%pel_nbi%source (string) (9.3.1.1.3)
pfus_dt (935)	scenario%heat_power%pfus_dt (scenario_ref) (9.3.1.3.271)
value (944)	scenario%heat_power%pfus_dt%value (float) (9.3.1.1.1)
source (944)	scenario%heat_power%pfus_dt%source (string) (9.3.1.1.3)
ploss_fus (935)	scenario%heat_power%ploss_fus (scenario_ref) (9.3.1.3.271)
value (944)	scenario%heat_power%ploss_fus%value (float) (9.3.1.1.1)
source (944)	scenario%heat_power%ploss_fus%source (string) (9.3.1.1.3)
pfus_nbi (935)	scenario%heat_power%pfus_nbi (scenario_ref) (9.3.1.3.271)
value (944)	scenario%heat_power%pfus_nbi%value (float) (9.3.1.1.1)
source (944)	scenario%heat_power%pfus_nbi%source (string) (9.3.1.1.3)
pfus_th (935)	scenario%heat_power%pfus_th (scenario_ref) (9.3.1.3.271)
value (944)	scenario%heat_power%pfus_th%value (float) (9.3.1.1.1)
source (944)	scenario%heat_power%pfus_th%source (string) (9.3.1.1.3)
padd_tot (935)	scenario%heat_power%padd_tot (scenario_ref) (9.3.1.3.271)
value (944)	scenario%heat_power%padd_tot%value (float) (9.3.1.1.1)
source (944)	scenario%heat_power%padd_tot%source (string) (9.3.1.1.3)
pion_tot (935)	scenario%heat_power%pion_tot (scenario_ref) (9.3.1.3.271)
value (944)	scenario%heat_power%pion_tot%value (float) (9.3.1.1.1)
source (944)	scenario%heat_power%pion_tot%source (string) (9.3.1.1.3)
pion_fus (935)	scenario%heat_power%pion_fus (scenario_ref) (9.3.1.3.271)
value (944)	scenario%heat_power%pion_fus%value (float) (9.3.1.1.1)
source (944)	scenario%heat_power%pion_fus%source (string) (9.3.1.1.3)
pion_icrh (935)	scenario%heat_power%pion_icrh (scenario_ref) (9.3.1.3.271)
value (944)	scenario%heat_power%pion_icrh%value (float) (9.3.1.1.1)
source (944)	scenario%heat_power%pion_icrh%source (string) (9.3.1.1.3)
pion_nbi (935)	scenario%heat_power%pion_nbi (scenario_ref) (9.3.1.3.271)
value (944)	scenario%heat_power%pion_nbi%value (float) (9.3.1.1.1)
source (944)	scenario%heat_power%pion_nbi%source (string) (9.3.1.1.3)
pioniz (935)	scenario%heat_power%pioniz (scenario_ref) (9.3.1.3.271)
value (944)	scenario%heat_power%pioniz%value (float) (9.3.1.1.1)
source (944)	scenario%heat_power%pioniz%source (string) (9.3.1.1.3)
ploss (935)	scenario%heat_power%ploss (scenario_ref) (9.3.1.3.271)
value (944)	scenario%heat_power%ploss%value (float) (9.3.1.1.1)
source (944)	scenario%heat_power%ploss%source (string) (9.3.1.1.3)
p_wth (935)	scenario%heat_power%p_wth (scenario_ref) (9.3.1.3.271)
value (944)	scenario%heat_power%p_wth%value (float) (9.3.1.1.1)
source (944)	scenario%heat_power%p_wth%source (string) (9.3.1.1.3)
p_w (935)	scenario%heat_power%p_w (scenario_ref) (9.3.1.3.271)
value (944)	scenario%heat_power%p_w%value (float) (9.3.1.1.1)

source (944)	scenario%heat_power%p_w%source (string) (9.3.1.1.3)
p_l2h_thr (935)	scenario%heat_power%p_l2h_thr (scenario_ref) (9.3.1.3.271)
value (944)	scenario%heat_power%p_l2h_thr%value (float) (9.3.1.1.1)
source (944)	scenario%heat_power%p_l2h_thr%source (string) (9.3.1.1.3)
p_l2h_sc (935)	scenario%heat_power%p_l2h_sc (scenario_ref) (9.3.1.3.271)
value (944)	scenario%heat_power%p_l2h_sc%value (float) (9.3.1.1.1)
source (944)	scenario%heat_power%p_l2h_sc%source (string) (9.3.1.1.3)
p_nbi_icrh (935)	scenario%heat_power%p_nbi_icrh (scenario_ref) (9.3.1.3.271)
value (944)	scenario%heat_power%p_nbi_icrh%value (float) (9.3.1.1.1)
source (944)	scenario%heat_power%p_nbi_icrh%source (string) (9.3.1.1.3)
itb (706)	scenario%itb (scenario_itb) (9.3.1.3.264)
q_min (937)	scenario%itb%q_min (scenario_ref) (9.3.1.3.271)
value (944)	scenario%itb%q_min%value (float) (9.3.1.1.1)
source (944)	scenario%itb%q_min%source (string) (9.3.1.1.3)
te_itb (937)	scenario%itb%te_itb (scenario_ref) (9.3.1.3.271)
value (944)	scenario%itb%te_itb%value (float) (9.3.1.1.1)
source (944)	scenario%itb%te_itb%source (string) (9.3.1.1.3)
ti_itb (937)	scenario%itb%ti_itb (scenario_ref) (9.3.1.3.271)
value (944)	scenario%itb%ti_itb%value (float) (9.3.1.1.1)
source (944)	scenario%itb%ti_itb%source (string) (9.3.1.1.3)
ne_itb (937)	scenario%itb%ne_itb (scenario_ref) (9.3.1.3.271)
value (944)	scenario%itb%ne_itb%value (float) (9.3.1.1.1)
source (944)	scenario%itb%ne_itb%source (string) (9.3.1.1.3)
ni_itb (937)	scenario%itb%ni_itb (scenario_ref) (9.3.1.3.271)
value (944)	scenario%itb%ni_itb%value (float) (9.3.1.1.1)
source (944)	scenario%itb%ni_itb%source (string) (9.3.1.1.3)
psi_itb (937)	scenario%itb%psi_itb (scenario_ref) (9.3.1.3.271)
value (944)	scenario%itb%psi_itb%value (float) (9.3.1.1.1)
source (944)	scenario%itb%psi_itb%source (string) (9.3.1.1.3)
phi_itb (937)	scenario%itb%phi_itb (scenario_ref) (9.3.1.3.271)
value (944)	scenario%itb%phi_itb%value (float) (9.3.1.1.1)
source (944)	scenario%itb%phi_itb%source (string) (9.3.1.1.3)
rho_itb (937)	scenario%itb%rho_itb (scenario_ref) (9.3.1.3.271)
value (944)	scenario%itb%rho_itb%value (float) (9.3.1.1.1)
source (944)	scenario%itb%rho_itb%source (string) (9.3.1.1.3)
h_itb (937)	scenario%itb%h_itb (scenario_ref) (9.3.1.3.271)
value (944)	scenario%itb%h_itb%value (float) (9.3.1.1.1)
source (944)	scenario%itb%h_itb%source (string) (9.3.1.1.3)
width_itb (937)	scenario%itb%width_itb (scenario_ref) (9.3.1.3.271)
value (944)	scenario%itb%width_itb%value (float) (9.3.1.1.1)
source (944)	scenario%itb%width_itb%source (string) (9.3.1.1.3)
vtr_itb (937)	scenario%itb%vtr_itb (scenario_ref) (9.3.1.3.271)
value (944)	scenario%itb%vtr_itb%value (float) (9.3.1.1.1)
source (944)	scenario%itb%vtr_itb%source (string) (9.3.1.1.3)
itb_type (937)	scenario%itb%itb_type (scenario_int) (9.3.1.3.263)
value (936)	scenario%itb%itb_type%value (integer) (9.3.1.1.2)
source (936)	scenario%itb%itb_type%source (string) (9.3.1.1.3)
lim_div_wall (706)	scenario%lim_div_wall (scenario_lim_div_wall) (9.3.1.3.265)
te_lim_div (938)	scenario%lim_div_wall%te_lim_div (scenario_ref) (9.3.1.3.271)
value (944)	scenario%lim_div_wall%te_lim_div%value (float) (9.3.1.1.1)
source (944)	scenario%lim_div_wall%te_lim_div%source (string) (9.3.1.1.3)
ti_lim_div (938)	scenario%lim_div_wall%ti_lim_div (scenario_ref) (9.3.1.3.271)
value (944)	scenario%lim_div_wall%ti_lim_div%value (float) (9.3.1.1.1)
source (944)	scenario%lim_div_wall%ti_lim_div%source (string) (9.3.1.1.3)
ne_lim_div (938)	scenario%lim_div_wall%ne_lim_div (scenario_ref) (9.3.1.3.271)
value (944)	scenario%lim_div_wall%ne_lim_div%value (float) (9.3.1.1.1)
source (944)	scenario%lim_div_wall%ne_lim_div%source (string) (9.3.1.1.3)
ni_lim_div (938)	scenario%lim_div_wall%ni_lim_div (scenario_ref) (9.3.1.3.271)
value (944)	scenario%lim_div_wall%ni_lim_div%value (float) (9.3.1.1.1)
source (944)	scenario%lim_div_wall%ni_lim_div%source (string) (9.3.1.1.3)
p_peak_div (938)	scenario%lim_div_wall%p_peak_div (scenario_ref) (9.3.1.3.271)

value (944)	scenario%lim_div_wall%p_peak_div%value (float) (9.3.1.1.1)
source (944)	scenario%lim_div_wall%p_peak_div%source (string) (9.3.1.1.3)
surf_temp (938)	scenario%lim_div_wall%surf_temp (scenario_ref) (9.3.1.3.271)
value (944)	scenario%lim_div_wall%surf_temp%value (float) (9.3.1.1.1)
source (944)	scenario%lim_div_wall%surf_temp%source (string) (9.3.1.1.3)
p_lim_div (938)	scenario%lim_div_wall%p_lim_div (scenario_ref) (9.3.1.3.271)
value (944)	scenario%lim_div_wall%p_lim_div%value (float) (9.3.1.1.1)
source (944)	scenario%lim_div_wall%p_lim_div%source (string) (9.3.1.1.3)
p_rad_div (938)	scenario%lim_div_wall%p_rad_div (scenario_ref) (9.3.1.3.271)
value (944)	scenario%lim_div_wall%p_rad_div%value (float) (9.3.1.1.1)
source (944)	scenario%lim_div_wall%p_rad_div%source (string) (9.3.1.1.3)
wall_temp (938)	scenario%lim_div_wall%wall_temp (scenario_ref) (9.3.1.3.271)
value (944)	scenario%lim_div_wall%wall_temp%value (float) (9.3.1.1.1)
source (944)	scenario%lim_div_wall%wall_temp%source (string) (9.3.1.1.3)
wall_state (938)	scenario%lim_div_wall%wall_state (scenario_ref) (9.3.1.3.271)
value (944)	scenario%lim_div_wall%wall_state%value (float) (9.3.1.1.1)
source (944)	scenario%lim_div_wall%wall_state%source (string) (9.3.1.1.3)
detach_state (938)	scenario%lim_div_wall%detach_state (scenario_ref) (9.3.1.3.271)
value (944)	scenario%lim_div_wall%detach_state%value (float) (9.3.1.1.1)
source (944)	scenario%lim_div_wall%detach_state%source (string) (9.3.1.1.3)
pump_flux (938)	scenario%lim_div_wall%pump_flux (scenario_ref) (9.3.1.3.271)
value (944)	scenario%lim_div_wall%pump_flux%value (float) (9.3.1.1.1)
source (944)	scenario%lim_div_wall%pump_flux%source (string) (9.3.1.1.3)
line_ave (706)	scenario%line_ave (scenario_line_ave) (9.3.1.3.266)
ne_line (939)	scenario%line_ave%ne_line (scenario_ref) (9.3.1.3.271)
value (944)	scenario%line_ave%ne_line%value (float) (9.3.1.1.1)
source (944)	scenario%line_ave%ne_line%source (string) (9.3.1.1.3)
zeff_line (939)	scenario%line_ave%zeff_line (scenario_ref) (9.3.1.3.271)
value (944)	scenario%line_ave%zeff_line%value (float) (9.3.1.1.1)
source (944)	scenario%line_ave%zeff_line%source (string) (9.3.1.1.3)
ne_zeff_line (939)	scenario%line_ave%ne_zeff_line (scenario_ref) (9.3.1.3.271)
value (944)	scenario%line_ave%ne_zeff_line%value (float) (9.3.1.1.1)
source (944)	scenario%line_ave%ne_zeff_line%source (string) (9.3.1.1.3)
dne_line_dt (939)	scenario%line_ave%dne_line_dt (scenario_ref) (9.3.1.3.271)
value (944)	scenario%line_ave%dne_line_dt%value (float) (9.3.1.1.1)
source (944)	scenario%line_ave%dne_line_dt%source (string) (9.3.1.1.3)
neutron (706)	scenario%neutron (scenario_neutron) (9.3.1.3.267)
ndd_tot (940)	scenario%neutron%ndd_tot (scenario_ref) (9.3.1.3.271)
value (944)	scenario%neutron%ndd_tot%value (float) (9.3.1.1.1)
source (944)	scenario%neutron%ndd_tot%source (string) (9.3.1.1.3)
ndd_th (940)	scenario%neutron%ndd_th (scenario_ref) (9.3.1.3.271)
value (944)	scenario%neutron%ndd_th%value (float) (9.3.1.1.1)
source (944)	scenario%neutron%ndd_th%source (string) (9.3.1.1.3)
ndd_nbi_th (940)	scenario%neutron%ndd_nbi_th (scenario_ref) (9.3.1.3.271)
value (944)	scenario%neutron%ndd_nbi_th%value (float) (9.3.1.1.1)
source (944)	scenario%neutron%ndd_nbi_th%source (string) (9.3.1.1.3)
ndd_nbi_nbi (940)	scenario%neutron%ndd_nbi_nbi (scenario_ref) (9.3.1.3.271)
value (944)	scenario%neutron%ndd_nbi_nbi%value (float) (9.3.1.1.1)
source (944)	scenario%neutron%ndd_nbi_nbi%source (string) (9.3.1.1.3)
ndt_tot (940)	scenario%neutron%ndt_tot (scenario_ref) (9.3.1.3.271)
value (944)	scenario%neutron%ndt_tot%value (float) (9.3.1.1.1)
source (944)	scenario%neutron%ndt_tot%source (string) (9.3.1.1.3)
ndt_th (940)	scenario%neutron%ndt_th (scenario_ref) (9.3.1.3.271)
value (944)	scenario%neutron%ndt_th%value (float) (9.3.1.1.1)
source (944)	scenario%neutron%ndt_th%source (string) (9.3.1.1.3)
ninety_five (706)	scenario%ninety_five (scenario_ninety_five) (9.3.1.3.268)
q_95 (941)	scenario%ninety_five%q_95 (scenario_ref) (9.3.1.3.271)
value (944)	scenario%ninety_five%q_95%value (float) (9.3.1.1.1)
source (944)	scenario%ninety_five%q_95%source (string) (9.3.1.1.3)
elong_95 (941)	scenario%ninety_five%elong_95 (scenario_ref) (9.3.1.3.271)
value (944)	scenario%ninety_five%elong_95%value (float) (9.3.1.1.1)

source (944)	scenario%ninety_five%elong_95%source (string) (9.3.1.1.3)
tria_95 (941)	scenario%ninety_five%tria_95 (scenario_ref) (9.3.1.3.271)
value (944)	scenario%ninety_five%tria_95%value (float) (9.3.1.1.1)
source (944)	scenario%ninety_five%tria_95%source (string) (9.3.1.1.3)
tria_up_95 (941)	scenario%ninety_five%tria_up_95 (scenario_ref) (9.3.1.3.271)
value (944)	scenario%ninety_five%tria_up_95%value (float) (9.3.1.1.1)
source (944)	scenario%ninety_five%tria_up_95%source (string) (9.3.1.1.3)
tria_lo_95 (941)	scenario%ninety_five%tria_lo_95 (scenario_ref) (9.3.1.3.271)
value (944)	scenario%ninety_five%tria_lo_95%value (float) (9.3.1.1.1)
source (944)	scenario%ninety_five%tria_lo_95%source (string) (9.3.1.1.3)
te_95 (941)	scenario%ninety_five%te_95 (scenario_ref) (9.3.1.3.271)
value (944)	scenario%ninety_five%te_95%value (float) (9.3.1.1.1)
source (944)	scenario%ninety_five%te_95%source (string) (9.3.1.1.3)
ti_95 (941)	scenario%ninety_five%ti_95 (scenario_ref) (9.3.1.3.271)
value (944)	scenario%ninety_five%ti_95%value (float) (9.3.1.1.1)
source (944)	scenario%ninety_five%ti_95%source (string) (9.3.1.1.3)
ne_95 (941)	scenario%ninety_five%ne_95 (scenario_ref) (9.3.1.3.271)
value (944)	scenario%ninety_five%ne_95%value (float) (9.3.1.1.1)
source (944)	scenario%ninety_five%ne_95%source (string) (9.3.1.1.3)
ni_95 (941)	scenario%ninety_five%ni_95 (scenario_ref) (9.3.1.3.271)
value (944)	scenario%ninety_five%ni_95%value (float) (9.3.1.1.1)
source (944)	scenario%ninety_five%ni_95%source (string) (9.3.1.1.3)
phi_95 (941)	scenario%ninety_five%phi_95 (scenario_ref) (9.3.1.3.271)
value (944)	scenario%ninety_five%phi_95%value (float) (9.3.1.1.1)
source (944)	scenario%ninety_five%phi_95%source (string) (9.3.1.1.3)
rho_95 (941)	scenario%ninety_five%rho_95 (scenario_ref) (9.3.1.3.271)
value (944)	scenario%ninety_five%rho_95%value (float) (9.3.1.1.1)
source (944)	scenario%ninety_five%rho_95%source (string) (9.3.1.1.3)
vtor_95 (941)	scenario%ninety_five%vtor_95 (scenario_ref) (9.3.1.3.271)
value (944)	scenario%ninety_five%vtor_95%value (float) (9.3.1.1.1)
source (944)	scenario%ninety_five%vtor_95%source (string) (9.3.1.1.3)
pedestal (706)	scenario%pedestal (scenario_pedestal) (9.3.1.3.269)
te_ped (942)	scenario%pedestal%te_ped (scenario_ref) (9.3.1.3.271)
value (944)	scenario%pedestal%te_ped%value (float) (9.3.1.1.1)
source (944)	scenario%pedestal%te_ped%source (string) (9.3.1.1.3)
ti_ped (942)	scenario%pedestal%ti_ped (scenario_ref) (9.3.1.3.271)
value (944)	scenario%pedestal%ti_ped%value (float) (9.3.1.1.1)
source (944)	scenario%pedestal%ti_ped%source (string) (9.3.1.1.3)
ne_ped (942)	scenario%pedestal%ne_ped (scenario_ref) (9.3.1.3.271)
value (944)	scenario%pedestal%ne_ped%value (float) (9.3.1.1.1)
source (944)	scenario%pedestal%ne_ped%source (string) (9.3.1.1.3)
ni_ped (942)	scenario%pedestal%ni_ped (scenario_ref) (9.3.1.3.271)
value (944)	scenario%pedestal%ni_ped%value (float) (9.3.1.1.1)
source (944)	scenario%pedestal%ni_ped%source (string) (9.3.1.1.3)
psi_ped (942)	scenario%pedestal%psi_ped (scenario_ref) (9.3.1.3.271)
value (944)	scenario%pedestal%psi_ped%value (float) (9.3.1.1.1)
source (944)	scenario%pedestal%psi_ped%source (string) (9.3.1.1.3)
phi_ped (942)	scenario%pedestal%phi_ped (scenario_ref) (9.3.1.3.271)
value (944)	scenario%pedestal%phi_ped%value (float) (9.3.1.1.1)
source (944)	scenario%pedestal%phi_ped%source (string) (9.3.1.1.3)
rho_ped (942)	scenario%pedestal%rho_ped (scenario_ref) (9.3.1.3.271)
value (944)	scenario%pedestal%rho_ped%value (float) (9.3.1.1.1)
source (944)	scenario%pedestal%rho_ped%source (string) (9.3.1.1.3)
q_ped (942)	scenario%pedestal%q_ped (scenario_ref) (9.3.1.3.271)
value (944)	scenario%pedestal%q_ped%value (float) (9.3.1.1.1)
source (944)	scenario%pedestal%q_ped%source (string) (9.3.1.1.3)
pressure_ped (942)	scenario%pedestal%pressure_ped (scenario_ref) (9.3.1.3.271)
value (944)	scenario%pedestal%pressure_ped%value (float) (9.3.1.1.1)
source (944)	scenario%pedestal%pressure_ped%source (string) (9.3.1.1.3)
vtor_ped (942)	scenario%pedestal%vtor_ped (scenario_ref) (9.3.1.3.271)
value (944)	scenario%pedestal%vtor_ped%value (float) (9.3.1.1.1)

source (944)	scenario%pedestal%vtop_ped%source (string) (9.3.1.1.3)
references (706)	scenario%references (scenario_references) (9.3.1.3.272)
plh (945)	scenario%references%plh (scenario_ref) (9.3.1.3.271)
value (944)	scenario%references%plh%value (float) (9.3.1.1.1)
source (944)	scenario%references%plh%source (string) (9.3.1.1.3)
picrh (945)	scenario%references%picrh (scenario_ref) (9.3.1.3.271)
value (944)	scenario%references%picrh%value (float) (9.3.1.1.1)
source (944)	scenario%references%picrh%source (string) (9.3.1.1.3)
pechr (945)	scenario%references%pechr (scenario_ref) (9.3.1.3.271)
value (944)	scenario%references%pechr%value (float) (9.3.1.1.1)
source (944)	scenario%references%pechr%source (string) (9.3.1.1.3)
pnbi (945)	scenario%references%pnbi (scenario_ref) (9.3.1.3.271)
value (944)	scenario%references%pnbi%value (float) (9.3.1.1.1)
source (944)	scenario%references%pnbi%source (string) (9.3.1.1.3)
ip (945)	scenario%references%ip (scenario_ref) (9.3.1.3.271)
value (944)	scenario%references%ip%value (float) (9.3.1.1.1)
source (944)	scenario%references%ip%source (string) (9.3.1.1.3)
bvac_r (945)	scenario%references%bvac_r (scenario_ref) (9.3.1.3.271)
value (944)	scenario%references%bvac_r%value (float) (9.3.1.1.1)
source (944)	scenario%references%bvac_r%source (string) (9.3.1.1.3)
zeffl (945)	scenario%references%zeffl (scenario_ref) (9.3.1.3.271)
value (944)	scenario%references%zeffl%value (float) (9.3.1.1.1)
source (944)	scenario%references%zeffl%source (string) (9.3.1.1.3)
nbar (945)	scenario%references%nbar (scenario_ref) (9.3.1.3.271)
value (944)	scenario%references%nbar%value (float) (9.3.1.1.1)
source (944)	scenario%references%nbar%source (string) (9.3.1.1.3)
xecrh (945)	scenario%references%xecrh (scenario_ref) (9.3.1.3.271)
value (944)	scenario%references%xecrh%value (float) (9.3.1.1.1)
source (944)	scenario%references%xecrh%source (string) (9.3.1.1.3)
pol_flux (945)	scenario%references%pol_flux (scenario_ref) (9.3.1.3.271)
value (944)	scenario%references%pol_flux%value (float) (9.3.1.1.1)
source (944)	scenario%references%pol_flux%source (string) (9.3.1.1.3)
enhancement (945)	scenario%references%enhancement (scenario_ref) (9.3.1.3.271)
value (944)	scenario%references%enhancement%value (float) (9.3.1.1.1)
source (944)	scenario%references%enhancement%source (string) (9.3.1.1.3)
isotopic (945)	scenario%references%isotopic (scenario_ref) (9.3.1.3.271)
value (944)	scenario%references%isotopic%value (float) (9.3.1.1.1)
source (944)	scenario%references%isotopic%source (string) (9.3.1.1.3)
nbi_td_ratio (945)	scenario%references%nbi_td_ratio (scenario_ref) (9.3.1.3.271)
value (944)	scenario%references%nbi_td_ratio%value (float) (9.3.1.1.1)
source (944)	scenario%references%nbi_td_ratio%source (string) (9.3.1.1.3)
gas_puff (945)	scenario%references%gas_puff (scenario_ref) (9.3.1.3.271)
value (944)	scenario%references%gas_puff%value (float) (9.3.1.1.1)
source (944)	scenario%references%gas_puff%source (string) (9.3.1.1.3)
reactor (706)	scenario%reactor (scenario_reactor) (9.3.1.3.270)
pnetwork (943)	scenario%reactor%pnetwork (float) (9.3.1.1.1)
sol (706)	scenario%sol (scenario_sol) (9.3.1.3.273)
lte_sol (946)	scenario%sol%lte_sol (scenario_ref) (9.3.1.3.271)
value (944)	scenario%sol%lte_sol%value (float) (9.3.1.1.1)
source (944)	scenario%sol%lte_sol%source (string) (9.3.1.1.3)
lti_sol (946)	scenario%sol%lti_sol (scenario_ref) (9.3.1.3.271)
value (944)	scenario%sol%lti_sol%value (float) (9.3.1.1.1)
source (944)	scenario%sol%lti_sol%source (string) (9.3.1.1.3)
lne_sol (946)	scenario%sol%lne_sol (scenario_ref) (9.3.1.3.271)
value (944)	scenario%sol%lne_sol%value (float) (9.3.1.1.1)
source (944)	scenario%sol%lne_sol%source (string) (9.3.1.1.3)
lni_sol (946)	scenario%sol%lni_sol (scenario_ref) (9.3.1.3.271)
value (944)	scenario%sol%lni_sol%value (float) (9.3.1.1.1)
source (944)	scenario%sol%lni_sol%source (string) (9.3.1.1.3)
lqe_sol (946)	scenario%sol%lqe_sol (scenario_ref) (9.3.1.3.271)
value (944)	scenario%sol%lqe_sol%value (float) (9.3.1.1.1)

source (944)	scenario%sol%l.qe_sol%source (string) (9.3.1.1.3)
l.qi_sol (946)	scenario%sol%l.qi_sol (scenario_ref) (9.3.1.3.271)
value (944)	scenario%sol%l.qi_sol%value (float) (9.3.1.1.1)
source (944)	scenario%sol%l.qi_sol%source (string) (9.3.1.1.3)
p_rad_sol (946)	scenario%sol%p_rad_sol (scenario_ref) (9.3.1.3.271)
value (944)	scenario%sol%p_rad_sol%value (float) (9.3.1.1.1)
source (944)	scenario%sol%p_rad_sol%source (string) (9.3.1.1.3)
gas_puff (946)	scenario%sol%gas_puff (scenario_ref) (9.3.1.3.271)
value (944)	scenario%sol%gas_puff%value (float) (9.3.1.1.1)
source (944)	scenario%sol%gas_puff%source (string) (9.3.1.1.3)
vol_ave (706)	scenario%vol_ave (scenario_vol_ave) (9.3.1.3.274)
te_ave (947)	scenario%vol_ave%te_ave (scenario_ref) (9.3.1.3.271)
value (944)	scenario%vol_ave%te_ave%value (float) (9.3.1.1.1)
source (944)	scenario%vol_ave%te_ave%source (string) (9.3.1.1.3)
ti_ave (947)	scenario%vol_ave%ti_ave (scenario_ref) (9.3.1.3.271)
value (944)	scenario%vol_ave%ti_ave%value (float) (9.3.1.1.1)
source (944)	scenario%vol_ave%ti_ave%source (string) (9.3.1.1.3)
ne_ave (947)	scenario%vol_ave%ne_ave (scenario_ref) (9.3.1.3.271)
value (944)	scenario%vol_ave%ne_ave%value (float) (9.3.1.1.1)
source (944)	scenario%vol_ave%ne_ave%source (string) (9.3.1.1.3)
dne_ave_dt (947)	scenario%vol_ave%dne_ave_dt (scenario_ref) (9.3.1.3.271)
value (944)	scenario%vol_ave%dne_ave_dt%value (float) (9.3.1.1.1)
source (944)	scenario%vol_ave%dne_ave_dt%source (string) (9.3.1.1.3)
ni_ave (947)	scenario%vol_ave%ni_ave (scenario_ref) (9.3.1.3.271)
value (944)	scenario%vol_ave%ni_ave%value (float) (9.3.1.1.1)
source (944)	scenario%vol_ave%ni_ave%source (string) (9.3.1.1.3)
zef_ave (947)	scenario%vol_ave%zef_ave (scenario_ref) (9.3.1.3.271)
value (944)	scenario%vol_ave%zef_ave%value (float) (9.3.1.1.1)
source (944)	scenario%vol_ave%zef_ave%source (string) (9.3.1.1.3)
ti_o_te_ave (947)	scenario%vol_ave%ti_o_te_ave (scenario_ref) (9.3.1.3.271)
value (944)	scenario%vol_ave%ti_o_te_ave%value (float) (9.3.1.1.1)
source (944)	scenario%vol_ave%ti_o_te_ave%source (string) (9.3.1.1.3)
mef_ave (947)	scenario%vol_ave%mef_ave (scenario_ref) (9.3.1.3.271)
value (944)	scenario%vol_ave%mef_ave%value (float) (9.3.1.1.1)
source (944)	scenario%vol_ave%mef_ave%source (string) (9.3.1.1.3)
pellet_flux (947)	scenario%vol_ave%pellet_flux (scenario_ref) (9.3.1.3.271)
value (944)	scenario%vol_ave%pellet_flux%value (float) (9.3.1.1.1)
source (944)	scenario%vol_ave%pellet_flux%source (string) (9.3.1.1.3)
nions_ave (947)	scenario%vol_ave%nions_ave (vecflt_type) (9.3.1.2.9)
omega_ave (947)	scenario%vol_ave%omega_ave (scenario_ref) (9.3.1.3.271)
value (944)	scenario%vol_ave%omega_ave%value (float) (9.3.1.1.1)
source (944)	scenario%vol_ave%omega_ave%source (string) (9.3.1.1.3)
codeparam (706)	scenario%codeparam (codeparam) (9.3.1.3.58)
codename (731)	scenario%codeparam%codename (string) (9.3.1.1.3)
codeversion (731)	scenario%codeparam%codeversion (string) (9.3.1.1.3)
parameters (731)	scenario%codeparam%parameters (string) (9.3.1.1.3)
output_diag (731)	scenario%codeparam%output_diag (string) (9.3.1.1.3)
output_flag (731)	scenario%codeparam%output_flag (integer) (9.3.1.1.2)
time (706)	scenario%time (float) (9.3.1.1.1)

### 9.3.2.1.32 summary

datainfo (707)	summary%datainfo (datainfo) (9.3.1.3.92)
dataprovider (765)	summary%datainfo%dataprovider (string) (9.3.1.1.3)
putdate (765)	summary%datainfo%putdate (string) (9.3.1.1.3)
source (765)	summary%datainfo%source (string) (9.3.1.1.3)
comment (765)	summary%datainfo%comment (string) (9.3.1.1.3)
isref (765)	summary%datainfo%isref (integer) (9.3.1.1.2)
whatref (765)	summary%datainfo%whatref (whatref) (9.3.1.3.333)
user (1006)	summary%datainfo%whatref%user (string) (9.3.1.1.3)
machine (1006)	summary%datainfo%whatref%machine (string) (9.3.1.1.3)



shot (1006)	summary%datainfo%whatref%shot (integer) (9.3.1.1.2)
run (1006)	summary%datainfo%whatref%run (integer) (9.3.1.1.2)
occurrence (1006)	summary%datainfo%whatref%occurrence (integer) (9.3.1.1.2)
putinfo (765)	summary%datainfo%putinfo (putinfo) (9.3.1.3.215)
putmethod (888)	summary%datainfo%putinfo%putmethod (string) (9.3.1.1.3)
putaccess (888)	summary%datainfo%putinfo%putaccess (string) (9.3.1.1.3)
putlocation (888)	summary%datainfo%putinfo%putlocation (string) (9.3.1.1.3)
rights (888)	summary%datainfo%putinfo%rights (string) (9.3.1.1.3)
ip (707)	summary%ip (reduced) (9.3.1.3.218)
value (891)	summary%ip%value (float) (9.3.1.1.1)
source (891)	summary%ip%source (string) (9.3.1.1.3)
time (891)	summary%ip%time (float) (9.3.1.1.1)
bvac_r (707)	summary%bvac_r (reduced) (9.3.1.3.218)
value (891)	summary%bvac_r%value (float) (9.3.1.1.1)
source (891)	summary%bvac_r%source (string) (9.3.1.1.3)
time (891)	summary%bvac_r%time (float) (9.3.1.1.1)
geom_axis_r (707)	summary%geom_axis_r (reduced) (9.3.1.3.218)
value (891)	summary%geom_axis_r%value (float) (9.3.1.1.1)
source (891)	summary%geom_axis_r%source (string) (9.3.1.1.3)
time (891)	summary%geom_axis_r%time (float) (9.3.1.1.1)
a_minor (707)	summary%a_minor (reduced) (9.3.1.3.218)
value (891)	summary%a_minor%value (float) (9.3.1.1.1)
source (891)	summary%a_minor%source (string) (9.3.1.1.3)
time (891)	summary%a_minor%time (float) (9.3.1.1.1)
elongation (707)	summary%elongation (reduced) (9.3.1.3.218)
value (891)	summary%elongation%value (float) (9.3.1.1.1)
source (891)	summary%elongation%source (string) (9.3.1.1.3)
time (891)	summary%elongation%time (float) (9.3.1.1.1)
tria_lower (707)	summary%tria_lower (reduced) (9.3.1.3.218)
value (891)	summary%tria_lower%value (float) (9.3.1.1.1)
source (891)	summary%tria_lower%source (string) (9.3.1.1.3)
time (891)	summary%tria_lower%time (float) (9.3.1.1.1)
tria_upper (707)	summary%tria_upper (reduced) (9.3.1.3.218)
value (891)	summary%tria_upper%value (float) (9.3.1.1.1)
source (891)	summary%tria_upper%source (string) (9.3.1.1.3)
time (891)	summary%tria_upper%time (float) (9.3.1.1.1)
tev (707)	summary%tev (reduced) (9.3.1.3.218)
value (891)	summary%tev%value (float) (9.3.1.1.1)
source (891)	summary%tev%source (string) (9.3.1.1.3)
time (891)	summary%tev%time (float) (9.3.1.1.1)
tiv (707)	summary%tiv (reduced) (9.3.1.3.218)
value (891)	summary%tiv%value (float) (9.3.1.1.1)
source (891)	summary%tiv%source (string) (9.3.1.1.3)
time (891)	summary%tiv%time (float) (9.3.1.1.1)
nev (707)	summary%nev (reduced) (9.3.1.3.218)
value (891)	summary%nev%value (float) (9.3.1.1.1)
source (891)	summary%nev%source (string) (9.3.1.1.3)
time (891)	summary%nev%time (float) (9.3.1.1.1)
zeffv (707)	summary%zeffv (reduced) (9.3.1.3.218)
value (891)	summary%zeffv%value (float) (9.3.1.1.1)
source (891)	summary%zeffv%source (string) (9.3.1.1.3)
time (891)	summary%zeffv%time (float) (9.3.1.1.1)
beta_pol (707)	summary%beta_pol (reduced) (9.3.1.3.218)
value (891)	summary%beta_pol%value (float) (9.3.1.1.1)
source (891)	summary%beta_pol%source (string) (9.3.1.1.3)
time (891)	summary%beta_pol%time (float) (9.3.1.1.1)
beta_tor (707)	summary%beta_tor (reduced) (9.3.1.3.218)
value (891)	summary%beta_tor%value (float) (9.3.1.1.1)
source (891)	summary%beta_tor%source (string) (9.3.1.1.3)
time (891)	summary%beta_tor%time (float) (9.3.1.1.1)
beta_normal (707)	summary%beta_normal (reduced) (9.3.1.3.218)

value (891)	summary%beta_normal%value (float) (9.3.1.1.1)
source (891)	summary%beta_normal%source (string) (9.3.1.1.3)
time (891)	summary%beta_normal%time (float) (9.3.1.1.1)
li (707)	summary%li (reduced) (9.3.1.3.218)
value (891)	summary%li%value (float) (9.3.1.1.1)
source (891)	summary%li%source (string) (9.3.1.1.3)
time (891)	summary%li%time (float) (9.3.1.1.1)
volume (707)	summary%volume (reduced) (9.3.1.3.218)
value (891)	summary%volume%value (float) (9.3.1.1.1)
source (891)	summary%volume%source (string) (9.3.1.1.3)
time (891)	summary%volume%time (float) (9.3.1.1.1)
area (707)	summary%area (reduced) (9.3.1.3.218)
value (891)	summary%area%value (float) (9.3.1.1.1)
source (891)	summary%area%source (string) (9.3.1.1.3)
time (891)	summary%area%time (float) (9.3.1.1.1)
main_ion1_z (707)	summary%main_ion1_z (reduced) (9.3.1.3.218)
value (891)	summary%main_ion1_z%value (float) (9.3.1.1.1)
source (891)	summary%main_ion1_z%source (string) (9.3.1.1.3)
time (891)	summary%main_ion1_z%time (float) (9.3.1.1.1)
main_ion1_a (707)	summary%main_ion1_a (reduced) (9.3.1.3.218)
value (891)	summary%main_ion1_a%value (float) (9.3.1.1.1)
source (891)	summary%main_ion1_a%source (string) (9.3.1.1.3)
time (891)	summary%main_ion1_a%time (float) (9.3.1.1.1)
main_ion2_z (707)	summary%main_ion2_z (reduced) (9.3.1.3.218)
value (891)	summary%main_ion2_z%value (float) (9.3.1.1.1)
source (891)	summary%main_ion2_z%source (string) (9.3.1.1.3)
time (891)	summary%main_ion2_z%time (float) (9.3.1.1.1)
main_ion2_a (707)	summary%main_ion2_a (reduced) (9.3.1.3.218)
value (891)	summary%main_ion2_a%value (float) (9.3.1.1.1)
source (891)	summary%main_ion2_a%source (string) (9.3.1.1.3)
time (891)	summary%main_ion2_a%time (float) (9.3.1.1.1)
impur1_z (707)	summary%impur1_z (reduced) (9.3.1.3.218)
value (891)	summary%impur1_z%value (float) (9.3.1.1.1)
source (891)	summary%impur1_z%source (string) (9.3.1.1.3)
time (891)	summary%impur1_z%time (float) (9.3.1.1.1)
impur1_a (707)	summary%impur1_a (reduced) (9.3.1.3.218)
value (891)	summary%impur1_a%value (float) (9.3.1.1.1)
source (891)	summary%impur1_a%source (string) (9.3.1.1.3)
time (891)	summary%impur1_a%time (float) (9.3.1.1.1)
time (707)	summary%time (float) (9.3.1.1.1)

### 9.3.2.1.33 topinfo

dataprovider (708)	topinfo%dataprovider (string) (9.3.1.1.3)
description (708)	topinfo%description (string) (9.3.1.1.3)
firstputdate (708)	topinfo%firstputdate (string) (9.3.1.1.3)
lastupdate (708)	topinfo%lastupdate (string) (9.3.1.1.3)
source (708)	topinfo%source (string) (9.3.1.1.3)
comment (708)	topinfo%comment (string) (9.3.1.1.3)
dataversion (708)	topinfo%dataversion (string) (9.3.1.1.3)
workflow (708)	topinfo%workflow (string) (9.3.1.1.3)
entry (708)	topinfo%entry (entry_def) (9.3.1.3.137)
user (810)	topinfo%entry%user (string) (9.3.1.1.3)
machine (810)	topinfo%entry%machine (string) (9.3.1.1.3)
shot (810)	topinfo%entry%shot (integer) (9.3.1.1.2)
run (810)	topinfo%entry%run (integer) (9.3.1.1.2)
parent_entry (708)	topinfo%parent_entry (entry_def) (9.3.1.3.137)
user (810)	topinfo%parent_entry%user (string) (9.3.1.1.3)
machine (810)	topinfo%parent_entry%machine (string) (9.3.1.1.3)
shot (810)	topinfo%parent_entry%shot (integer) (9.3.1.1.2)
run (810)	topinfo%parent_entry%run (integer) (9.3.1.1.2)



mdinfo (708)	topinfo%mdinfo (mdinfo) (9.3.1.3.174)
shot_min (847)	topinfo%mdinfo%shot_min (integer) (9.3.1.1.2)
shot_max (847)	topinfo%mdinfo%shot_max (integer) (9.3.1.1.2)
md_entry (847)	topinfo%mdinfo%md_entry (entry_def) (9.3.1.3.137)
user (810)	topinfo%mdinfo%md_entry%user (string) (9.3.1.1.3)
machine (810)	topinfo%mdinfo%md_entry%machine (string) (9.3.1.1.3)
shot (810)	topinfo%mdinfo%md_entry%shot (integer) (9.3.1.1.2)
run (810)	topinfo%mdinfo%md_entry%run (integer) (9.3.1.1.2)

### 9.3.2.1.34 toroidfield

datainfo (709)	toroidfield%datainfo (datainfo) (9.3.1.3.92)
dataprovider (765)	toroidfield%datainfo%dataprovider (string) (9.3.1.1.3)
putdate (765)	toroidfield%datainfo%putdate (string) (9.3.1.1.3)
source (765)	toroidfield%datainfo%source (string) (9.3.1.1.3)
comment (765)	toroidfield%datainfo%comment (string) (9.3.1.1.3)
isref (765)	toroidfield%datainfo%isref (integer) (9.3.1.1.2)
whatref (765)	toroidfield%datainfo%whatref (whatref) (9.3.1.3.333)
user (1006)	toroidfield%datainfo%whatref%user (string) (9.3.1.1.3)
machine (1006)	toroidfield%datainfo%whatref%machine (string) (9.3.1.1.3)
shot (1006)	toroidfield%datainfo%whatref%shot (integer) (9.3.1.1.2)
run (1006)	toroidfield%datainfo%whatref%run (integer) (9.3.1.1.2)
occurrence (1006)	toroidfield%datainfo%whatref%occurrence (integer) (9.3.1.1.2)
putinfo (765)	toroidfield%datainfo%putinfo (putinfo) (9.3.1.3.215)
putmethod (888)	toroidfield%datainfo%putinfo%putmethod (string) (9.3.1.1.3)
putaccess (888)	toroidfield%datainfo%putinfo%putaccess (string) (9.3.1.1.3)
putlocation (888)	toroidfield%datainfo%putinfo%putlocation (string) (9.3.1.1.3)
rights (888)	toroidfield%datainfo%putinfo%rights (string) (9.3.1.1.3)
desc.tfcoils (709)	toroidfield%desc.tfcoils (tf_desc.tfcoils) (9.3.1.3.301)
type (974)	toroidfield%desc.tfcoils%type (integer) (9.3.1.1.2)
phi (974)	toroidfield%desc.tfcoils%phi (float) (9.3.1.1.1)
circularcoil (974)	toroidfield%desc.tfcoils%circularcoil (circularcoil) (9.3.1.3.57)
centre (730)	toroidfield%desc.tfcoils%circularcoil%centre (rz0D) (9.3.1.3.241)
r (914)	toroidfield%desc.tfcoils%circularcoil%centre%r (float) (9.3.1.1.1)
z (914)	toroidfield%desc.tfcoils%circularcoil%centre%z (float) (9.3.1.1.1)
hlength (730)	toroidfield%desc.tfcoils%circularcoil%hlength (float) (9.3.1.1.1)
radialwidth (730)	toroidfield%desc.tfcoils%circularcoil%radialwidth (float) (9.3.1.1.1)
planecoil (974)	toroidfield%desc.tfcoils%planecoil (planecoil) (9.3.1.3.205)
coordinates (878)	toroidfield%desc.tfcoils%planecoil%coordinates (rz1D) (9.3.1.3.242)
r (915)	toroidfield%desc.tfcoils%planecoil%coordinates%r (vecflt_type) (9.3.1.2.9)
z (915)	toroidfield%desc.tfcoils%planecoil%coordinates%z (vecflt_type) (9.3.1.2.9)
hlength (878)	toroidfield%desc.tfcoils%planecoil%hlength (vecflt_type) (9.3.1.2.9)
radialwidth (878)	toroidfield%desc.tfcoils%planecoil%radialwidth (vecflt_type) (9.3.1.2.9)
structure (974)	toroidfield%desc.tfcoils%structure (tf_structure) (9.3.1.3.302)
jcable (975)	toroidfield%desc.tfcoils%structure%jcable (float) (9.3.1.1.1)
tisotf (975)	toroidfield%desc.tfcoils%structure%tisotf (float) (9.3.1.1.1)
efcasing (975)	toroidfield%desc.tfcoils%structure%efcasing (float) (9.3.1.1.1)
escasing (975)	toroidfield%desc.tfcoils%structure%escasing (float) (9.3.1.1.1)
sigjackettf (975)	toroidfield%desc.tfcoils%structure%sigjackettf (float) (9.3.1.1.1)
sigvaulttf (975)	toroidfield%desc.tfcoils%structure%sigvaulttf (float) (9.3.1.1.1)
ktf (975)	toroidfield%desc.tfcoils%structure%ktf (float) (9.3.1.1.1)
ritf (975)	toroidfield%desc.tfcoils%structure%ritf (float) (9.3.1.1.1)
riitf (975)	toroidfield%desc.tfcoils%structure%riitf (float) (9.3.1.1.1)
retf (975)	toroidfield%desc.tfcoils%structure%retf (float) (9.3.1.1.1)
nturns (709)	toroidfield%nturns (integer) (9.3.1.1.2)
ncoils (709)	toroidfield%ncoils (integer) (9.3.1.1.2)
current (709)	toroidfield%current (exp0D) (9.3.1.3.142)
value (815)	toroidfield%current%value (float) (9.3.1.1.1)
abserror (815)	toroidfield%current%abserror (float) (9.3.1.1.1)
relerror (815)	toroidfield%current%relerror (float) (9.3.1.1.1)
bvac_r (709)	toroidfield%bvac_r (exp0D) (9.3.1.3.142)

value (815)	toroidfield%bvac.r%value (float) (9.3.1.1.1)
abserror (815)	toroidfield%bvac.r%abserror (float) (9.3.1.1.1)
releror (815)	toroidfield%bvac.r%releror (float) (9.3.1.1.1)
r0 (709)	toroidfield%r0 (float) (9.3.1.1.1)
time (709)	toroidfield%time (float) (9.3.1.1.1)

### 9.3.2.1.35 tsdiag

datainfo (710)	tsdiag%datainfo (datainfo) (9.3.1.3.92)
dataprovider (765)	tsdiag%datainfo%dataprovider (string) (9.3.1.1.3)
putdate (765)	tsdiag%datainfo%putdate (string) (9.3.1.1.3)
source (765)	tsdiag%datainfo%source (string) (9.3.1.1.3)
comment (765)	tsdiag%datainfo%comment (string) (9.3.1.1.3)
isref (765)	tsdiag%datainfo%isref (integer) (9.3.1.1.2)
whatref (765)	tsdiag%datainfo%whatref (whatref) (9.3.1.3.333)
user (1006)	tsdiag%datainfo%whatref%user (string) (9.3.1.1.3)
machine (1006)	tsdiag%datainfo%whatref%machine (string) (9.3.1.1.3)
shot (1006)	tsdiag%datainfo%whatref%shot (integer) (9.3.1.1.2)
run (1006)	tsdiag%datainfo%whatref%run (integer) (9.3.1.1.2)
occurrence (1006)	tsdiag%datainfo%whatref%occurrence (integer) (9.3.1.1.2)
putinfo (765)	tsdiag%datainfo%putinfo (putinfo) (9.3.1.3.215)
putmethod (888)	tsdiag%datainfo%putinfo%putmethod (string) (9.3.1.1.3)
putaccess (888)	tsdiag%datainfo%putinfo%putaccess (string) (9.3.1.1.3)
putlocation (888)	tsdiag%datainfo%putinfo%putlocation (string) (9.3.1.1.3)
rights (888)	tsdiag%datainfo%putinfo%rights (string) (9.3.1.1.3)
setup (710)	tsdiag%setup (tssetup) (9.3.1.3.311)
position (984)	tsdiag%setup%position (rzphiID) (9.3.1.3.247)
r (920)	tsdiag%setup%position%r (vecflt.type) (9.3.1.2.9)
z (920)	tsdiag%setup%position%z (vecflt.type) (9.3.1.2.9)
phi (920)	tsdiag%setup%position%phi (vecflt.type) (9.3.1.2.9)
measure (710)	tsdiag%measure (tsmeasure) (9.3.1.3.310)
te (983)	tsdiag%measure%te (exp1D) (9.3.1.3.143)
value (816)	tsdiag%measure%te%value (vecflt.type) (9.3.1.2.9)
abserror (816)	tsdiag%measure%te%abserror (vecflt.type) (9.3.1.2.9)
releror (816)	tsdiag%measure%te%releror (vecflt.type) (9.3.1.2.9)
ne (983)	tsdiag%measure%ne (exp1D) (9.3.1.3.143)
value (816)	tsdiag%measure%ne%value (vecflt.type) (9.3.1.2.9)
abserror (816)	tsdiag%measure%ne%abserror (vecflt.type) (9.3.1.2.9)
releror (816)	tsdiag%measure%ne%releror (vecflt.type) (9.3.1.2.9)
time (710)	tsdiag%time (float) (9.3.1.1.1)

### 9.3.2.1.36 turbulence

datainfo (711)	turbulence%datainfo (datainfo) (9.3.1.3.92)
dataprovider (765)	turbulence%datainfo%dataprovider (string) (9.3.1.1.3)
putdate (765)	turbulence%datainfo%putdate (string) (9.3.1.1.3)
source (765)	turbulence%datainfo%source (string) (9.3.1.1.3)
comment (765)	turbulence%datainfo%comment (string) (9.3.1.1.3)
isref (765)	turbulence%datainfo%isref (integer) (9.3.1.1.2)
whatref (765)	turbulence%datainfo%whatref (whatref) (9.3.1.3.333)
user (1006)	turbulence%datainfo%whatref%user (string) (9.3.1.1.3)
machine (1006)	turbulence%datainfo%whatref%machine (string) (9.3.1.1.3)
shot (1006)	turbulence%datainfo%whatref%shot (integer) (9.3.1.1.2)
run (1006)	turbulence%datainfo%whatref%run (integer) (9.3.1.1.2)
occurrence (1006)	turbulence%datainfo%whatref%occurrence (integer) (9.3.1.1.2)
putinfo (765)	turbulence%datainfo%putinfo (putinfo) (9.3.1.3.215)
putmethod (888)	turbulence%datainfo%putinfo%putmethod (string) (9.3.1.1.3)
putaccess (888)	turbulence%datainfo%putinfo%putaccess (string) (9.3.1.1.3)
putlocation (888)	turbulence%datainfo%putinfo%putlocation (string) (9.3.1.1.3)
rights (888)	turbulence%datainfo%putinfo%rights (string) (9.3.1.1.3)
composition (711)	turbulence%composition (turbcomposition) (9.3.1.3.312)

amn (985)	turbulence%composition%amn (vecflt.type) (9.3.1.2.9)
zn (985)	turbulence%composition%zn (vecflt.type) (9.3.1.2.9)
zion (985)	turbulence%composition%zion (vecflt.type) (9.3.1.2.9)
ie_mass (985)	turbulence%composition%ie_mass (vecflt.type) (9.3.1.2.9)
coordsys (711)	turbulence%coordsys (turbcoordsys) (9.3.1.3.313)
grid_type (986)	turbulence%coordsys%grid_type (string) (9.3.1.1.3)
turbgrid (986)	turbulence%coordsys%turbgrid (turbgrid) (9.3.1.3.315)
dim1 (988)	turbulence%coordsys%turbgrid%dim1 (vecflt.type) (9.3.1.2.9)
dim2 (988)	turbulence%coordsys%turbgrid%dim2 (vecflt.type) (9.3.1.2.9)
dim3 (988)	turbulence%coordsys%turbgrid%dim3 (vecflt.type) (9.3.1.2.9)
dim.v1 (988)	turbulence%coordsys%turbgrid%dim.v1 (vecflt.type) (9.3.1.2.9)
dim.v2 (988)	turbulence%coordsys%turbgrid%dim.v2 (vecflt.type) (9.3.1.2.9)
jacobian (986)	turbulence%coordsys%jacobian (matflt.type) (9.3.1.2.7)
g_11 (986)	turbulence%coordsys%g_11 (matflt.type) (9.3.1.2.7)
g_12 (986)	turbulence%coordsys%g_12 (matflt.type) (9.3.1.2.7)
g_13 (986)	turbulence%coordsys%g_13 (matflt.type) (9.3.1.2.7)
g_22 (986)	turbulence%coordsys%g_22 (matflt.type) (9.3.1.2.7)
g_23 (986)	turbulence%coordsys%g_23 (matflt.type) (9.3.1.2.7)
g_33 (986)	turbulence%coordsys%g_33 (matflt.type) (9.3.1.2.7)
position (986)	turbulence%coordsys%position (rzphi3D) (9.3.1.3.250)
r (923)	turbulence%coordsys%position%r (array3dflt.type) (9.3.1.2.1)
z (923)	turbulence%coordsys%position%z (array3dflt.type) (9.3.1.2.1)
phi (923)	turbulence%coordsys%position%phi (array3dflt.type) (9.3.1.2.1)
var0d (711)	turbulence%var0d (turbvar0d) (9.3.1.3.317)
dtime.type (990)	turbulence%var0d%dtime.type (string) (9.3.1.1.3)
dtime (990)	turbulence%var0d%dtime (vecflt.type) (9.3.1.2.9)
en_exb (990)	turbulence%var0d%en_exb (vecflt.type) (9.3.1.2.9)
en_mag (990)	turbulence%var0d%en_mag (vecflt.type) (9.3.1.2.9)
en_el.th (990)	turbulence%var0d%en_el.th (vecflt.type) (9.3.1.2.9)
en_ion.th (990)	turbulence%var0d%en_ion.th (matflt.type) (9.3.1.2.7)
en_el.par (990)	turbulence%var0d%en_el.par (vecflt.type) (9.3.1.2.9)
en_ion.par (990)	turbulence%var0d%en_ion.par (matflt.type) (9.3.1.2.7)
en_tot (990)	turbulence%var0d%en_tot (vecflt.type) (9.3.1.2.9)
fl_el (990)	turbulence%var0d%fl_el (vecflt.type) (9.3.1.2.9)
fl_heatel (990)	turbulence%var0d%fl_heatel (vecflt.type) (9.3.1.2.9)
fl_ion (990)	turbulence%var0d%fl_ion (matflt.type) (9.3.1.2.7)
fl_heation (990)	turbulence%var0d%fl_heation (matflt.type) (9.3.1.2.7)
fl_magel (990)	turbulence%var0d%fl_magel (vecflt.type) (9.3.1.2.9)
fl_magheatel (990)	turbulence%var0d%fl_magheatel (vecflt.type) (9.3.1.2.9)
fl_magion (990)	turbulence%var0d%fl_magion (matflt.type) (9.3.1.2.7)
flmagheation (990)	turbulence%var0d%flmagheation (matflt.type) (9.3.1.2.7)
var1d (711)	turbulence%var1d (turbvar1d) (9.3.1.3.318)
rho_tor_norm (991)	turbulence%var1d%rho_tor_norm (vecflt.type) (9.3.1.2.9)
phi (991)	turbulence%var1d%phi (vecflt.type) (9.3.1.2.9)
er (991)	turbulence%var1d%er (vecflt.type) (9.3.1.2.9)
vor (991)	turbulence%var1d%vor (vecflt.type) (9.3.1.2.9)
apl (991)	turbulence%var1d%apl (vecflt.type) (9.3.1.2.9)
jpl (991)	turbulence%var1d%jpl (vecflt.type) (9.3.1.2.9)
ne (991)	turbulence%var1d%ne (vecflt.type) (9.3.1.2.9)
te (991)	turbulence%var1d%te (vecflt.type) (9.3.1.2.9)
ni (991)	turbulence%var1d%ni (matflt.type) (9.3.1.2.7)
ti (991)	turbulence%var1d%ti (matflt.type) (9.3.1.2.7)
ui (991)	turbulence%var1d%ui (matflt.type) (9.3.1.2.7)
var2d (711)	turbulence%var2d (turbvar2d) (9.3.1.3.319)
rho_tor_norm (992)	turbulence%var2d%rho_tor_norm (vecflt.type) (9.3.1.2.9)
theta (992)	turbulence%var2d%theta (vecflt.type) (9.3.1.2.9)
phi (992)	turbulence%var2d%phi (matflt.type) (9.3.1.2.7)
apl (992)	turbulence%var2d%apl (matflt.type) (9.3.1.2.7)
jpl (992)	turbulence%var2d%jpl (matflt.type) (9.3.1.2.7)
vor (992)	turbulence%var2d%vor (matflt.type) (9.3.1.2.7)
ne (992)	turbulence%var2d%ne (matflt.type) (9.3.1.2.7)

te (992)	turbulence%var2d%te (matflt.type) (9.3.1.2.7)
ni (992)	turbulence%var2d%ni (array3dflt.type) (9.3.1.2.1)
ti (992)	turbulence%var2d%ti (array3dflt.type) (9.3.1.2.1)
ui (992)	turbulence%var2d%ui (array3dflt.type) (9.3.1.2.1)
var3d (711)	turbulence%var3d (turbvar3d) (9.3.1.3.320)
phi (993)	turbulence%var3d%phi (array3dflt.type) (9.3.1.2.1)
vor (993)	turbulence%var3d%vor (array3dflt.type) (9.3.1.2.1)
jpl (993)	turbulence%var3d%jpl (array3dflt.type) (9.3.1.2.1)
ne (993)	turbulence%var3d%ne (array3dflt.type) (9.3.1.2.1)
var4d (711)	turbulence%var4d (turbvar4d) (9.3.1.3.321)
fe (994)	turbulence%var4d%fe (array4dflt.type) (9.3.1.2.3)
fi (994)	turbulence%var4d%fi (array5dflt.type) (9.3.1.2.4)
var5d (711)	turbulence%var5d (turbvar5d) (9.3.1.3.322)
fe (995)	turbulence%var5d%fe (array5dflt.type) (9.3.1.2.4)
fi (995)	turbulence%var5d%fi (array6dflt.type) (9.3.1.2.5)
spec1d (711)	turbulence%spec1d (turbspec1d) (9.3.1.3.316)
kperp (989)	turbulence%spec1d%kperp (vecflt.type) (9.3.1.2.9)
phi (989)	turbulence%spec1d%phi (vecflt.type) (9.3.1.2.9)
vor (989)	turbulence%spec1d%vor (vecflt.type) (9.3.1.2.9)
b (989)	turbulence%spec1d%b (vecflt.type) (9.3.1.2.9)
jpl (989)	turbulence%spec1d%jpl (vecflt.type) (9.3.1.2.9)
ne (989)	turbulence%spec1d%ne (vecflt.type) (9.3.1.2.9)
te (989)	turbulence%spec1d%te (vecflt.type) (9.3.1.2.9)
ti (989)	turbulence%spec1d%ti (matflt.type) (9.3.1.2.7)
fe (989)	turbulence%spec1d%fe (vecflt.type) (9.3.1.2.9)
qe (989)	turbulence%spec1d%qe (vecflt.type) (9.3.1.2.9)
qi (989)	turbulence%spec1d%qi (matflt.type) (9.3.1.2.7)
me (989)	turbulence%spec1d%me (vecflt.type) (9.3.1.2.9)
mi (989)	turbulence%spec1d%mi (matflt.type) (9.3.1.2.7)
env1d (711)	turbulence%env1d (turbenv1d) (9.3.1.3.314)
theta (987)	turbulence%env1d%theta (vecflt.type) (9.3.1.2.9)
phi (987)	turbulence%env1d%phi (vecflt.type) (9.3.1.2.9)
vor (987)	turbulence%env1d%vor (vecflt.type) (9.3.1.2.9)
jpl (987)	turbulence%env1d%jpl (vecflt.type) (9.3.1.2.9)
ne (987)	turbulence%env1d%ne (vecflt.type) (9.3.1.2.9)
he (987)	turbulence%env1d%he (vecflt.type) (9.3.1.2.9)
te (987)	turbulence%env1d%te (vecflt.type) (9.3.1.2.9)
ni (987)	turbulence%env1d%ni (matflt.type) (9.3.1.2.7)
ti (987)	turbulence%env1d%ti (matflt.type) (9.3.1.2.7)
ui (987)	turbulence%env1d%ui (matflt.type) (9.3.1.2.7)
fe (987)	turbulence%env1d%fe (vecflt.type) (9.3.1.2.9)
qe (987)	turbulence%env1d%qe (vecflt.type) (9.3.1.2.9)
qi (987)	turbulence%env1d%qi (matflt.type) (9.3.1.2.7)
me (987)	turbulence%env1d%me (vecflt.type) (9.3.1.2.9)
mi (987)	turbulence%env1d%mi (matflt.type) (9.3.1.2.7)
codeparam (711)	turbulence%codeparam (codeparam) (9.3.1.3.58)
codename (731)	turbulence%codeparam%codename (string) (9.3.1.1.3)
codeversion (731)	turbulence%codeparam%codeversion (string) (9.3.1.1.3)
parameters (731)	turbulence%codeparam%parameters (string) (9.3.1.1.3)
output_diag (731)	turbulence%codeparam%output_diag (string) (9.3.1.1.3)
output_flag (731)	turbulence%codeparam%output_flag (integer) (9.3.1.1.2)
time (711)	turbulence%time (float) (9.3.1.1.1)

### 9.3.2.1.37 vessel

datainfo (712)	vessel%datainfo (datainfo) (9.3.1.3.92)
dataprovider (765)	vessel%datainfo%dataprovider (string) (9.3.1.1.3)
putdate (765)	vessel%datainfo%putdate (string) (9.3.1.1.3)
source (765)	vessel%datainfo%source (string) (9.3.1.1.3)
comment (765)	vessel%datainfo%comment (string) (9.3.1.1.3)
isref (765)	vessel%datainfo%isref (integer) (9.3.1.1.2)

whatref (765)	vessel%datainfo%whatref (whatref) (9.3.1.3.333)
user (1006)	vessel%datainfo%whatref%user (string) (9.3.1.1.3)
machine (1006)	vessel%datainfo%whatref%machine (string) (9.3.1.1.3)
shot (1006)	vessel%datainfo%whatref%shot (integer) (9.3.1.1.2)
run (1006)	vessel%datainfo%whatref%run (integer) (9.3.1.1.2)
occurrence (1006)	vessel%datainfo%whatref%occurrence (integer) (9.3.1.1.2)
putinfo (765)	vessel%datainfo%putinfo (putinfo) (9.3.1.3.215)
putmethod (888)	vessel%datainfo%putinfo%putmethod (string) (9.3.1.1.3)
putaccess (888)	vessel%datainfo%putinfo%putaccess (string) (9.3.1.1.3)
putlocation (888)	vessel%datainfo%putinfo%putlocation (string) (9.3.1.1.3)
rights (888)	vessel%datainfo%putinfo%rights (string) (9.3.1.1.3)
position (712)	vessel%position (rz1D) (9.3.1.3.242)
r (915)	vessel%position%r (vecflt_type) (9.3.1.2.9)
z (915)	vessel%position%z (vecflt_type) (9.3.1.2.9)

### 9.3.2.1.38 waves

datainfo (713)	waves%datainfo (datainfo) (9.3.1.3.92)
dataprovider (765)	waves%datainfo%dataprovider (string) (9.3.1.1.3)
putdate (765)	waves%datainfo%putdate (string) (9.3.1.1.3)
source (765)	waves%datainfo%source (string) (9.3.1.1.3)
comment (765)	waves%datainfo%comment (string) (9.3.1.1.3)
isref (765)	waves%datainfo%isref (integer) (9.3.1.1.2)
whatref (765)	waves%datainfo%whatref (whatref) (9.3.1.3.333)
user (1006)	waves%datainfo%whatref%user (string) (9.3.1.1.3)
machine (1006)	waves%datainfo%whatref%machine (string) (9.3.1.1.3)
shot (1006)	waves%datainfo%whatref%shot (integer) (9.3.1.1.2)
run (1006)	waves%datainfo%whatref%run (integer) (9.3.1.1.2)
occurrence (1006)	waves%datainfo%whatref%occurrence (integer) (9.3.1.1.2)
putinfo (765)	waves%datainfo%putinfo (putinfo) (9.3.1.3.215)
putmethod (888)	waves%datainfo%putinfo%putmethod (string) (9.3.1.1.3)
putaccess (888)	waves%datainfo%putinfo%putaccess (string) (9.3.1.1.3)
putlocation (888)	waves%datainfo%putinfo%putlocation (string) (9.3.1.1.3)
rights (888)	waves%datainfo%putinfo%rights (string) (9.3.1.1.3)
coherentwave (713)	waves%coherentwave (coherentwave) (9.3.1.3.60)
composition (733)	waves%coherentwave%composition (composition) (9.3.1.3.74)
amn (747)	waves%coherentwave%composition%amn (vecflt_type) (9.3.1.2.9)
zn (747)	waves%coherentwave%composition%zn (vecflt_type) (9.3.1.2.9)
zion (747)	waves%coherentwave%composition%zion (vecflt_type) (9.3.1.2.9)
imp_flag (747)	waves%coherentwave%composition%imp_flag (vecint_type) (9.3.1.2.10)
global_param (733)	waves%coherentwave%global_param (waves_global_param) (9.3.1.3.326)
frequency (999)	waves%coherentwave%global_param%frequency (float) (9.3.1.1.1)
name (999)	waves%coherentwave%global_param%name (string) (9.3.1.1.3)
type (999)	waves%coherentwave%global_param%type (string) (9.3.1.1.3)
ntor (999)	waves%coherentwave%global_param%ntor (vecint_type) (9.3.1.2.10)
f_assumption (999)	waves%coherentwave%global_param%f_assumption (vecint_type) (9.3.1.2.10)
power_tot (999)	waves%coherentwave%global_param%power_tot (float) (9.3.1.1.1)
p_frac_ntor (999)	waves%coherentwave%global_param%p_frac_ntor (vecflt_type) (9.3.1.2.9)
pow_i (999)	waves%coherentwave%global_param%pow_i (vecflt_type) (9.3.1.2.9)
pow_e (999)	waves%coherentwave%global_param%pow_e (float) (9.3.1.1.1)
pow_ntor_i (999)	waves%coherentwave%global_param%pow_ntor_i (matflt_type) (9.3.1.2.7)
pow_ntor_e (999)	waves%coherentwave%global_param%pow_ntor_e (vecflt_type) (9.3.1.2.9)
cur_tor (999)	waves%coherentwave%global_param%cur_tor (float) (9.3.1.1.1)
cur_tor_ntor (999)	waves%coherentwave%global_param%cur_tor_ntor (vecflt_type) (9.3.1.2.9)
code_type (999)	waves%coherentwave%global_param%code_type (integer) (9.3.1.1.2)
toroid_field (999)	waves%coherentwave%global_param%toroid_field (b0r0) (9.3.1.3.48)
r0 (721)	waves%coherentwave%global_param%toroid_field%r0 (float) (9.3.1.1.1)
b0 (721)	waves%coherentwave%global_param%toroid_field%b0 (float) (9.3.1.1.1)
grid_1d (733)	waves%coherentwave%grid_1d (waves_grid_1d) (9.3.1.3.327)
rho_tor_norm (1000)	waves%coherentwave%grid_1d%rho_tor_norm (vecflt_type) (9.3.1.2.9)
rho_tor (1000)	waves%coherentwave%grid_1d%rho_tor (vecflt_type) (9.3.1.2.9)

psi (1000)	waves%coherentwave%grid.1d%psi (vecflt.type) (9.3.1.2.9)
grid.2d (733)	waves%coherentwave%grid.2d (waves_grid.2d) (9.3.1.3.328)
grid.type (1001)	waves%coherentwave%grid.2d%grid.type (integer) (9.3.1.1.2)
rho_tor_norm (1001)	waves%coherentwave%grid.2d%rho_tor_norm (matflt.type) (9.3.1.2.7)
rho_tor (1001)	waves%coherentwave%grid.2d%rho_tor (matflt.type) (9.3.1.2.7)
psi (1001)	waves%coherentwave%grid.2d%psi (matflt.type) (9.3.1.2.7)
theta (1001)	waves%coherentwave%grid.2d%theta (matflt.type) (9.3.1.2.7)
r (1001)	waves%coherentwave%grid.2d%r (matflt.type) (9.3.1.2.7)
z (1001)	waves%coherentwave%grid.2d%z (matflt.type) (9.3.1.2.7)
theta_info (1001)	waves%coherentwave%grid.2d%theta_info (theta_info) (9.3.1.3.303)
angl.type (976)	waves%coherentwave%grid.2d%theta_info%angl.type (integer) (9.3.1.1.2)
th2th_pol (976)	waves%coherentwave%grid.2d%theta_info%th2th_pol (matflt.type) (9.3.1.2.7)
profiles.1d (733)	waves%coherentwave%profiles.1d (waves_profiles.1d) (9.3.1.3.329)
powd_tot (1002)	waves%coherentwave%profiles.1d%powd_tot (vecflt.type) (9.3.1.2.9)
powd_e (1002)	waves%coherentwave%profiles.1d%powd_e (vecflt.type) (9.3.1.2.9)
powd_i (1002)	waves%coherentwave%profiles.1d%powd_i (matflt.type) (9.3.1.2.7)
powd_ntor (1002)	waves%coherentwave%profiles.1d%powd_ntor (matflt.type) (9.3.1.2.7)
powd_ntor_e (1002)	waves%coherentwave%profiles.1d%powd_ntor_e (matflt.type) (9.3.1.2.7)
powd_ntor_i (1002)	waves%coherentwave%profiles.1d%powd_ntor_i (array3dflt.type) (9.3.1.2.1)
curd_tor (1002)	waves%coherentwave%profiles.1d%curd_tor (vecflt.type) (9.3.1.2.9)
curd_torntor (1002)	waves%coherentwave%profiles.1d%curd_torntor (matflt.type) (9.3.1.2.7)
pow_tot (1002)	waves%coherentwave%profiles.1d%pow_tot (vecflt.type) (9.3.1.2.9)
pow_e (1002)	waves%coherentwave%profiles.1d%pow_e (vecflt.type) (9.3.1.2.9)
pow_i (1002)	waves%coherentwave%profiles.1d%pow_i (matflt.type) (9.3.1.2.7)
pow_ntor (1002)	waves%coherentwave%profiles.1d%pow_ntor (array3dflt.type) (9.3.1.2.1)
pow_ntor_e (1002)	waves%coherentwave%profiles.1d%pow_ntor_e (matflt.type) (9.3.1.2.7)
pow_ntor_i (1002)	waves%coherentwave%profiles.1d%pow_ntor_i (array3dflt.type) (9.3.1.2.1)
curd_par (1002)	waves%coherentwave%profiles.1d%curd_par (vecflt.type) (9.3.1.2.9)
curd_parntor (1002)	waves%coherentwave%profiles.1d%curd_parntor (matflt.type) (9.3.1.2.7)
cur_tor (1002)	waves%coherentwave%profiles.1d%cur_tor (vecflt.type) (9.3.1.2.9)
cur_tor_ntor (1002)	waves%coherentwave%profiles.1d%cur_tor_ntor (matflt.type) (9.3.1.2.7)
profiles.2d (733)	waves%coherentwave%profiles.2d (waves_profiles.2d) (9.3.1.3.330)
powd_tot (1003)	waves%coherentwave%profiles.2d%powd_tot (matflt.type) (9.3.1.2.7)
powd_e (1003)	waves%coherentwave%profiles.2d%powd_e (matflt.type) (9.3.1.2.7)
powd_i (1003)	waves%coherentwave%profiles.2d%powd_i (array3dflt.type) (9.3.1.2.1)
powd_ntor (1003)	waves%coherentwave%profiles.2d%powd_ntor (array3dflt.type) (9.3.1.2.1)
powd_ntor_e (1003)	waves%coherentwave%profiles.2d%powd_ntor_e (array3dflt.type) (9.3.1.2.1)
powd_ntor_i (1003)	waves%coherentwave%profiles.2d%powd_ntor_i (array4dflt.type) (9.3.1.2.3)
powd_iharm (1003)	waves%coherentwave%profiles.2d%powd_iharm (array5dflt.type) (9.3.1.2.4)
beamtracing (733)	waves%coherentwave%beamtracing (beamtracing) (9.3.1.3.50)
npoints (723)	waves%coherentwave%beamtracing%npoints (integer) (9.3.1.1.2)
power (723)	waves%coherentwave%beamtracing%power (float) (9.3.1.1.1)
dnpar (723)	waves%coherentwave%beamtracing%dnpar (vecflt.type) (9.3.1.2.9)
length (723)	waves%coherentwave%beamtracing%length (vecflt.type) (9.3.1.2.9)
position (723)	waves%coherentwave%beamtracing%position (waves_rtposition) (9.3.1.3.331)
r (1004)	waves%coherentwave%beamtracing%position%r (vecflt.type) (9.3.1.2.9)
z (1004)	waves%coherentwave%beamtracing%position%z (vecflt.type) (9.3.1.2.9)
phi (1004)	waves%coherentwave%beamtracing%position%phi (vecflt.type) (9.3.1.2.9)
psi (1004)	waves%coherentwave%beamtracing%position%psi (vecflt.type) (9.3.1.2.9)
theta (1004)	waves%coherentwave%beamtracing%position%theta (vecflt.type) (9.3.1.2.9)
wavevector (723)	waves%coherentwave%beamtracing%wavevector (waves_rtwavevector) (9.3.1.3.332)
kr (1005)	waves%coherentwave%beamtracing%wavevector%kr (vecflt.type) (9.3.1.2.9)
kz (1005)	waves%coherentwave%beamtracing%wavevector%kz (vecflt.type) (9.3.1.2.9)
kphi (1005)	waves%coherentwave%beamtracing%wavevector%kphi (vecflt.type) (9.3.1.2.9)
npar (1005)	waves%coherentwave%beamtracing%wavevector%npar (vecflt.type) (9.3.1.2.9)
nperp (1005)	waves%coherentwave%beamtracing%wavevector%nperp (vecflt.type) (9.3.1.2.9)
ntor (1005)	waves%coherentwave%beamtracing%wavevector%ntor (vecflt.type) (9.3.1.2.9)
var_ntor (1005)	waves%coherentwave%beamtracing%wavevector%var_ntor (integer) (9.3.1.1.2)
polarization (723)	waves%coherentwave%beamtracing%polarization (polarization) (9.3.1.3.208)
epol_p_re (881)	waves%coherentwave%beamtracing%polarization%epol_p_re (vecflt.type) (9.3.1.2.9)
epol_p_im (881)	waves%coherentwave%beamtracing%polarization%epol_p_im (vecflt.type) (9.3.1.2.9)



epol_m_re (881)	waves%coherentwave%beamtracing%polarization%epol_m_re (vecflt_type) (9.3.1.2.9)
epol_m_im (881)	waves%coherentwave%beamtracing%polarization%epol_m_im (vecflt_type) (9.3.1.2.9)
epol_par_re (881)	waves%coherentwave%beamtracing%polarization%epol_par_re (vecflt_type) (9.3.1.2.9)
epol_par_im (881)	waves%coherentwave%beamtracing%polarization%epol_par_im (vecflt_type) (9.3.1.2.9)
powerflow (723)	waves%coherentwave%beamtracing%powerflow (powerflow) (9.3.1.3.209)
phi_perp (882)	waves%coherentwave%beamtracing%powerflow%phi_perp (vecflt_type) (9.3.1.2.9)
phi_par (882)	waves%coherentwave%beamtracing%powerflow%phi_par (vecflt_type) (9.3.1.2.9)
power_e (882)	waves%coherentwave%beamtracing%powerflow%power_e (vecflt_type) (9.3.1.2.9)
power_i (882)	waves%coherentwave%beamtracing%powerflow%power_i (matflt_type) (9.3.1.2.7)
fullwave (733)	waves%coherentwave%fullwave (fullwave) (9.3.1.3.151)
pol_decomp (824)	waves%coherentwave%fullwave%pol_decomp (pol_decomp) (9.3.1.3.207)
mpol (880)	waves%coherentwave%fullwave%pol_decomp%mpol (vecint_type) (9.3.1.2.10)
e_plus (880)	waves%coherentwave%fullwave%pol_decomp%e_plus (array3dflt_type) (9.3.1.2.1)
e_plus_ph (880)	waves%coherentwave%fullwave%pol_decomp%e_plus_ph (array3dflt_type) (9.3.1.2.1)
e_minus (880)	waves%coherentwave%fullwave%pol_decomp%e_minus (array3dflt_type) (9.3.1.2.1)
e_minus_ph (880)	waves%coherentwave%fullwave%pol_decomp%e_minus_ph (array3dflt_type) (9.3.1.2.1)
e_norm (880)	waves%coherentwave%fullwave%pol_decomp%e_norm (array3dflt_type) (9.3.1.2.1)
e_norm_ph (880)	waves%coherentwave%fullwave%pol_decomp%e_norm_ph (array3dflt_type) (9.3.1.2.1)
e_binorm (880)	waves%coherentwave%fullwave%pol_decomp%e_binorm (array3dflt_type) (9.3.1.2.1)
e_binorm_ph (880)	waves%coherentwave%fullwave%pol_decomp%e_binorm_ph (array3dflt_type) (9.3.1.2.1)
e_para (880)	waves%coherentwave%fullwave%pol_decomp%e_para (array3dflt_type) (9.3.1.2.1)
e_para_ph (880)	waves%coherentwave%fullwave%pol_decomp%e_para_ph (array3dflt_type) (9.3.1.2.1)
b_norm (880)	waves%coherentwave%fullwave%pol_decomp%b_norm (array3dflt_type) (9.3.1.2.1)
b_norm_ph (880)	waves%coherentwave%fullwave%pol_decomp%b_norm_ph (array3dflt_type) (9.3.1.2.1)
b_binorm (880)	waves%coherentwave%fullwave%pol_decomp%b_binorm (array3dflt_type) (9.3.1.2.1)
b_binorm_ph (880)	waves%coherentwave%fullwave%pol_decomp%b_binorm_ph (array4dflt_type) (9.3.1.2.3)
b_para (880)	waves%coherentwave%fullwave%pol_decomp%b_para (array3dflt_type) (9.3.1.2.1)
b_para_ph (880)	waves%coherentwave%fullwave%pol_decomp%b_para_ph (array3dflt_type) (9.3.1.2.1)
local (824)	waves%coherentwave%fullwave%local (local) (9.3.1.3.170)
e_plus (843)	waves%coherentwave%fullwave%local%e_plus (array3dflt_type) (9.3.1.2.1)
e_plus_ph (843)	waves%coherentwave%fullwave%local%e_plus_ph (array3dflt_type) (9.3.1.2.1)
e_minus (843)	waves%coherentwave%fullwave%local%e_minus (array3dflt_type) (9.3.1.2.1)
e_minus_ph (843)	waves%coherentwave%fullwave%local%e_minus_ph (array3dflt_type) (9.3.1.2.1)
e_norm (843)	waves%coherentwave%fullwave%local%e_norm (array3dint_type) (9.3.1.2.2)
enorm_ph (843)	waves%coherentwave%fullwave%local%enorm_ph (array3dflt_type) (9.3.1.2.1)
e_binorm (843)	waves%coherentwave%fullwave%local%e_binorm (array3dflt_type) (9.3.1.2.1)
e_binorm_ph (843)	waves%coherentwave%fullwave%local%e_binorm_ph (array3dflt_type) (9.3.1.2.1)
e_para (843)	waves%coherentwave%fullwave%local%e_para (array3dflt_type) (9.3.1.2.1)
e_para_ph (843)	waves%coherentwave%fullwave%local%e_para_ph (array3dflt_type) (9.3.1.2.1)
b_norm (843)	waves%coherentwave%fullwave%local%b_norm (array3dflt_type) (9.3.1.2.1)
b_norm_ph (843)	waves%coherentwave%fullwave%local%b_norm_ph (array3dflt_type) (9.3.1.2.1)
b_binorm (843)	waves%coherentwave%fullwave%local%b_binorm (array3dflt_type) (9.3.1.2.1)
b_binorm_ph (843)	waves%coherentwave%fullwave%local%b_binorm_ph (array3dflt_type) (9.3.1.2.1)
b_para (843)	waves%coherentwave%fullwave%local%b_para (array3dflt_type) (9.3.1.2.1)
b_para_ph (843)	waves%coherentwave%fullwave%local%b_para_ph (array3dflt_type) (9.3.1.2.1)
codeparam (733)	waves%coherentwave%codeparam (codeparam) (9.3.1.3.58)
codename (731)	waves%coherentwave%codeparam%codename (string) (9.3.1.1.3)
codeversion (731)	waves%coherentwave%codeparam%codeversion (string) (9.3.1.1.3)
parameters (731)	waves%coherentwave%codeparam%parameters (string) (9.3.1.1.3)
output_diag (731)	waves%coherentwave%codeparam%output_diag (string) (9.3.1.1.3)
output_flag (731)	waves%coherentwave%codeparam%output_flag (integer) (9.3.1.1.2)
codeparam (713)	waves%codeparam (codeparam) (9.3.1.3.58)
codename (731)	waves%codeparam%codename (string) (9.3.1.1.3)
codeversion (731)	waves%codeparam%codeversion (string) (9.3.1.1.3)
parameters (731)	waves%codeparam%parameters (string) (9.3.1.1.3)
output_diag (731)	waves%codeparam%output_diag (string) (9.3.1.1.3)
output_flag (731)	waves%codeparam%output_flag (integer) (9.3.1.1.2)
time (713)	waves%time (float) (9.3.1.1.1)

## 9.4 4.10a

### 9.4.1 ITM Types

Generated from the ITM data structure schemas. Time-dependent values are shown in green. Anonymous structure (complex) types in the schemas are given parent element names; a prefix or suffix (eg type\_, \_type, \_t) can be added if required.

#### 9.4.1.1 Primitive Types

Clear definitions required.

##### 9.4.1.1.1 float

##### 9.4.1.1.2 integer

##### 9.4.1.1.3 string

#### 9.4.1.2 Array Types

Clear definitions required.

##### 9.4.1.2.1 array3dflt\_type

Example: [[[1.0,2.0,3.0],[5.0,6.0,7.0]],[[1.0,2.0,3.0],[5.0,6.0,7.0]]]

##### 9.4.1.2.2 array3dint\_type

Example: [[[1,2,3],[5,6,7]],[[1,2,3],[5,6,7]]]

##### 9.4.1.2.3 array4dflt\_type

Example: [[[[1.0,2.0,3.0],[5.0,6.0,7.0]],[[1.0,2.0,3.0],[5.0,6.0,7.0]]],[[[1.0,2.0,3.0],[5.0,6.0,7.0]],[[1.0,2.0,3.0],[5.0,6.0,7.0]]]]]

##### 9.4.1.2.4 array5dflt\_type

Example: [[[[[[1.0,2.0,3.0],[5.0,6.0,7.0]],[[1.0,2.0,3.0],[5.0,6.0,7.0]]],[[1.0,2.0,3.0],[5.0,6.0,7.0]],[[1.0,2.0,3.0],[5.0,6.0,7.0]]]]],[[[1.0,2.0,3.0],[5.0,6.0,7.0]],[[1.0,2.0,3.0],[5.0,6.0,7.0]]]]]

##### 9.4.1.2.5 array6dflt\_type

Example: [[[[[[[[1.0,2.0,3.0],[5.0,6.0,7.0]],[[1.0,2.0,3.0],[5.0,6.0,7.0]]],[[1.0,2.0,3.0],[5.0,6.0,7.0]],[[1.0,2.0,3.0],[5.0,6.0,7.0]]]]],[[1.0,2.0,3.0],[5.0,6.0,7.0]],[[1.0,2.0,3.0],[5.0,6.0,7.0]]]]]

##### 9.4.1.2.6 array7dflt\_type

Example: [[[[[[[[[[1.0,2.0,3.0],[5.0,6.0,7.0]],[[1.0,2.0,3.0],[5.0,6.0,7.0]]],[[1.0,2.0,3.0],[5.0,6.0,7.0]],[[1.0,2.0,3.0],[5.0,6.0,7.0]]]]],[[1.0,2.0,3.0],[5.0,6.0,7.0]],[[1.0,2.0,3.0],[5.0,6.0,7.0]]]]]]]

##### 9.4.1.2.7 matflt\_type

Example: [[1.0,2.0,3.0],[5.0,6.0,7.0]]

##### 9.4.1.2.8 matint\_type

Example: [[1,2,3],[4,5,6]]

##### 9.4.1.2.9 vecflt\_type

Example: [1.0,-3e5,-4.0e-3]

##### 9.4.1.2.10 vecint\_type

Example: [1,2,3]



#### 9.4.1.2.11 vecstring\_type

Example: ["aaa","bb","cccc"]

### 9.4.1.3 Structure Types

#### 9.4.1.3.1 CPO Structures

#### 9.4.1.3.2 amns

Description of AMNS processes for one species.

member	type	description
datainfo	datainfo (9.4.1.3.120)	Generic information on a data item
version	string (9.4.1.1.3)	Version of the data.
source	string (9.4.1.1.3)	Source of the data.
zn	integer (9.4.1.1.2)	Nuclear charge [units of elementary charge];
amn	float (9.4.1.1.1)	Mass of atom [amu]
zion	vecint_type (9.4.1.2.10)	Ion charge [units of elementary charge]. If negative value, means it is a bundle of charge state which cannot be described as single value. Vector of integers (nchargestates)
state_label	vecstring_type (9.4.1.2.11)	Label for charge state (e.g. D0, D1+, ...); Vector(nchargestates)
bundled	integer (9.4.1.1.2)	Flag indicating bundling status. Integer flag: 0=no bundling.
proc_label	vecstring_type (9.4.1.2.11)	Label for process (e.g. EI, RC; could also include error estimates); Vector(nprocs)
tables(:)	tables (9.4.1.3.381)	Rate tables for processes. Vector(nprocs)
tables_coord(:)	tables.coord (9.4.1.3.382)	Array of possible coordinate systems for tables. Vector(ncoordbases)
version_ind(:)	version_ind (9.4.1.3.407)	Array of releases/versions of the AMNS data; each element contains information about the AMNS data that is included in the release

#### 9.4.1.3.3 antennas

RF antenna list. Time-dependent CPO.

member	type	description
datainfo	datainfo (9.4.1.3.120)	Generic information on a data item
antenna_ec(:)	antenna_ec (9.4.1.3.49)	Vector of Electron Cyclotron antennas
antenna_ic(:)	antenna_ic (9.4.1.3.50)	Vector of Ion Cyclotron antennas
antenna_lh(:)	antenna_lh (9.4.1.3.51)	Vector of Lower Hybrid antennas
codeparam	codeparam (9.4.1.3.65)	Code parameters
time	float (9.4.1.1.1)	Time [s]; Time-dependent; Scalar

#### 9.4.1.3.4 compositionc

Species description (ions, impurities, neutrals).

member	type	description
datainfo	datainfo (9.4.1.3.120)	Generic information on a data item
compositions	compositions.type (9.4.1.3.87)	Contains all the composition information for the simulation (main ions, impurities, neutrals, edge species).

#### 9.4.1.3.5 coredelta

Generic instant change of the radial core profiles due to pellet, MHD, ... Time-dependent CPO.

member	type	description
datainfo	datainfo (9.4.1.3.120)	Generic information on a data item
composition	composition (9.4.1.3.83)	Plasma composition (description of ion species).
desc_impur	desc_impur (9.4.1.3.123)	Description of the impurities (list of ion species and possibly different charge states)
compositions	compositions.type (9.4.1.3.87)	Contains all the composition information for the simulation (main ions, impurities, neutrals, edge species).
values(:)	coredelta.values (9.4.1.3.92)	Description of the delta term for the various origins. Array of structure (ndelta). Time-dependent
codeparam	codeparam (9.4.1.3.65)	Code parameters
time	float (9.4.1.1.1)	Time [s]; Time-dependent; Scalar

### 9.4.1.3.6 coreimpur

Impurity species (i.e. ion species with multiple charge states), radial core profiles. For heavy impurities, some ionisation states can be grouped into "bundles". Can be the result of an impurity transport code or experimental measurements. Time-dependent CPO

member	type	description
datainfo	datainfo (9.4.1.3.120)	Generic information on a data item
rho_tor_norm	vecflt.type (9.4.1.2.9)	Normalised toroidal flux coordinate values (= rho_tor normalised to the value at the last grid point); Time-dependent; Vector (nrho)
rho_tor	vecflt.type (9.4.1.2.9)	Toroidal flux coordinate (not normalised, equivalent to rho_tor_norm) [m]; Vector (nrho). Time-dependent.
source	vecstring.type (9.4.1.2.11)	Source of the profile (any comment describing the origin of the impurity profiles : code, path to diagnostic signals, massaging, ...); Array of strings (nimp)
flag	vecint.type (9.4.1.2.10)	Flag describing how the profile has been processed : 0-not calculated; 1-interpretative; 2-calculated by the transport solver; 3-calculated by a separate code : in that case only, description of the code provided in codeparam at the same level; 4-used value from the previous time step; Time-dependent; Vector(nimp)
desc_impur	desc_impur (9.4.1.3.123)	Description of the impurities (list of ion species and possibly different charge states)
compositions	compositions.type (9.4.1.3.87)	Contains all the composition information for the simulation (main ions, impurities, neutrals, edge species).
atomic_data	vecstring.type (9.4.1.2.11)	Reference for the atomic data used for each impurity. Array of strings (nimp)
impurity(:)	impurity.type (9.4.1.3.216)	Array(nimp). Time-dependent
diagnostic	coreimpurediag.type (9.4.1.3.104)	NO DOCS
diagnosticsum	coreimpurediag_sum (9.4.1.3.102)	NO DOCS
codeparam	codeparam (9.4.1.3.65)	Code parameters
time	float (9.4.1.1.1)	Time [s]; Time-dependent; Scalar.

### 9.4.1.3.7 coreneutrals

Core plasma neutrals description. Time-dependent CPO.

member	type	description
datainfo	datainfo (9.4.1.3.120)	Generic information on a data item
rho_tor	vecflt.type (9.4.1.2.9)	Toroidal flux coordinate (not normalised, equivalent to rho_tor_norm) [m]; Vector (nrho). Time-dependent.
rho_tor_norm	vecflt.type (9.4.1.2.9)	Normalised toroidal flux coordinate values (= rho_tor normalised to the value at the last grid point); Time-dependent; Vector (nrho)
neutcompo	composition_neutrals (9.4.1.3.84)	Description of neutrals species
composition	composition (9.4.1.3.83)	Plasma composition (description of ion species).
desc_impur	desc_impur (9.4.1.3.123)	Description of the impurities (list of ion species and possibly different charge states)
compositions	compositions.type (9.4.1.3.87)	Contains all the composition information for the simulation (main ions, impurities, neutrals, edge species).
profiles(:)	neutral.complex.type (9.4.1.3.256)	Profiles derived from the fields solved in the transport equations, or from experiment. Array(nneut). Time-dependent
ioncoeff(:)	coefficients_neutrals (9.4.1.3.66)	Recycling and sputtering coefficients for each ion in composition. Array(nion). Time-dependent
impcoeff(:)	impcoeff (9.4.1.3.214)	Recycling and sputtering coefficients for each impurity ion in desc_impur. Array(nimp). Time-dependent.
codeparam	codeparam (9.4.1.3.65)	Code parameters
time	float (9.4.1.1.1)	Time [s]; Time-dependent; Scalar

### 9.4.1.3.8 coreprof

Core plasma 1D profiles as a function of the toroidal flux coordinate, obtained by solving the core transport equations (can be also fitted profiles from experimental data). The codeparam element here describes the parameters of the transport equation solver and/or those of the fitting program. Time-dependent CPO.

member	type	description
datainfo	datainfo (9.4.1.3.120)	Generic information on a data item
rho_tor_norm	vecflt.type (9.4.1.2.9)	Normalised toroidal flux coordinate values (= rho_tor normalised to the value at the last radial grid point, which is quasi at the Last Closed Flux Surface); Time-dependent; Vector (nrho)
rho_tor	vecflt.type (9.4.1.2.9)	Toroidal flux coordinate (not normalised, equivalent to rho_tor_norm) [m]; Vector (nrho). Time-dependent.
drho_dt	vecflt.type (9.4.1.2.9)	Time derivative of rho_tor [m/s]; Vector (nrho). Time-dependent.

member	type	description
toroid_field	toroid_field (9.4.1.3.387)	Toroidal field information entering the definition of rho_tor, for reference only. The physical value of the toroidal field should be taken from the toroidfield CPO. Time-dependent.
composition	composition (9.4.1.3.83)	Plasma composition (description of ion species).
desc_impur	desc_impur (9.4.1.3.123)	Description of the impurities (list of ion species and possibly different charge states)
compositions	compositions.type (9.4.1.3.87)	Contains all the composition information for the simulation (main ions, impurities, neutrals, edge species).
psi	psi (9.4.1.3.288)	Poloidal magnetic flux [Wb]; Time-dependent;
te	corefield (9.4.1.3.93)	Electron temperature [eV]; (source term in [W.m <sup>-3</sup> ]). Time-dependent;
ti	corefieldion (9.4.1.3.94)	Ion temperature [eV]; (source term in [W.m <sup>-3</sup> ]). Time-dependent;
ne	corefield (9.4.1.3.93)	Electron density [m <sup>-3</sup> ]; (source term in [m <sup>-3</sup> ]). Time-dependent;
ni	corefieldion (9.4.1.3.94)	Ion density [m <sup>-3</sup> ]; (source term in [m <sup>-3</sup> ]). Time-dependent;
vtor	corefieldion (9.4.1.3.94)	Toroidal velocity of the various ion species [m.s <sup>-1</sup> ]; Time-dependent;
profiles1d	profiles1d (9.4.1.3.286)	Profiles derived from the fields solved in the transport equations, or from experiment.
globalparam	globalparam (9.4.1.3.208)	Various global quantities calculated from the 1D profiles. Time-dependent
codeparam	codeparam (9.4.1.3.65)	Code parameters
time	float (9.4.1.1.1)	Time [s]; Time-dependent; Scalar

### 9.4.1.3.9 coresource

Generic source term for the core transport equations (radial profile). Time-dependent CPO.

member	type	description
datainfo	datainfo (9.4.1.3.120)	Generic information on a data item
composition	composition (9.4.1.3.83)	Plasma composition (description of ion species).
desc_impur	desc_impur (9.4.1.3.123)	Description of the impurities (list of ion species and possibly different charge states)
compositions	compositions.type (9.4.1.3.87)	Contains all the composition information for the simulation (main ions, impurities, neutrals, edge species).
toroid_field	b0r0 (9.4.1.3.55)	Characteristics of the vacuum toroidal field, redundant with the toroidfield CPO, to document the normalisation of rho and j in this CPO.
values(:)	coresource_values (9.4.1.3.111)	Description of the source terms of various origins. Array of structure (nsource). Time-dependent.
codeparam	codeparam (9.4.1.3.65)	Code parameters
time	float (9.4.1.1.1)	Time [s]; Time-dependent; Scalar

### 9.4.1.3.10 coretransp

Generic transport coefficients for the core transport equations (radial profile). Time-dependent CPO

member	type	description
datainfo	datainfo (9.4.1.3.120)	Generic information on a data item
composition	composition (9.4.1.3.83)	Plasma composition (description of ion species).
desc_impur	desc_impur (9.4.1.3.123)	Description of the impurities (list of ion species and possibly different charge states)
compositions	compositions.type (9.4.1.3.87)	Contains all the composition information for the simulation (main ions, impurities, neutrals, edge species).
values(:)	coretransp_values (9.4.1.3.115)	Description of transport term coming from various origins. Array of structure (ntransp). Time-dependent
codeparam	codeparam (9.4.1.3.65)	Code parameters
time	float (9.4.1.1.1)	Time [s]; Time-dependent; Scalar

### 9.4.1.3.11 cxdiag

Charge Exchange Diagnostic; Time-dependent CPO

member	type	description
datainfo	datainfo (9.4.1.3.120)	Generic information on a data item
setup	cxsetup (9.4.1.3.118)	diagnostic setup information
measure	cxmeasure (9.4.1.3.117)	Measured values
time	float (9.4.1.1.1)	Time [s]; Time-dependent; Scalar

### 9.4.1.3.12 distribution

Distribution function for electron and ion species. Normally output from a Fokker-Planck calculation; Time-dependent CPO

member	type	description
datainfo	datainfo (9.4.1.3.120)	Generic information on a data item
composition	composition (9.4.1.3.83)	Plasma composition (description of ion species).
compositions	compositions.type (9.4.1.3.87)	Contains all the composition information for the simulation (main ions, impurities, neutrals, edge species).
distri_vec(:)	distri_vec (9.4.1.3.150)	Vector over all distribution functions; Time-dependent. Structure array(ndistri_vec)
codeparam	codeparam (9.4.1.3.65)	Code parameters
time	float (9.4.1.1.1)	Time [s]; Time-dependent; Scalar

### 9.4.1.3.13 distsource

Sources of particles for input to kinetic equations, e.g. Fokker-Planck calculation. The sources could originate from e.g. NBI or fusion reactions. Time-dependent CPO

member	type	description
datainfo	datainfo (9.4.1.3.120)	Generic information on a data item
composition	composition (9.4.1.3.83)	Plasma composition (description of ion species).
compositions	compositions.type (9.4.1.3.87)	Contains detailed information on the plasma composition (main ions, impurities, neutrals, edge species).
source(:)	distsource_source (9.4.1.3.155)	Source. Time-dependent. Structure array(nsrc_spec)
codeparam	codeparam (9.4.1.3.65)	Code parameters
time	float (9.4.1.1.1)	Time [s]; Time-dependent; scalar

### 9.4.1.3.14 ecediag

Electron Cyclotron Emission Diagnostic; Time-dependent CPO

member	type	description
datainfo	datainfo (9.4.1.3.120)	Generic information on a data item
setup	ecsetup (9.4.1.3.159)	diagnostic setup information
measure	ecemeasure (9.4.1.3.158)	Measured values
time	float (9.4.1.1.1)	Time [s]; Time-dependent; Scalar

### 9.4.1.3.15 edge

CPO for edge/SOL plasma description. Time-dependent CPO

member	type	description
datainfo	datainfo (9.4.1.3.120)	Generic information on a data item
grid	complexgrid (9.4.1.3.70)	Grid description
species(:)	species_desc (9.4.1.3.370)	Description of ion species. Array of structures(nspecies)
compositions	compositions.type (9.4.1.3.87)	Contains all the composition information for the simulation (main ions, impurities, neutrals, edge species).
fluid	edge_fluid (9.4.1.3.160)	Fluid description of edge plasma. Time-dependent.
kinetic	edge_kinetic (9.4.1.3.166)	Kinetic description of edge plasma. Time-dependent.
codeparam	codeparam (9.4.1.3.65)	Code parameters
time	float (9.4.1.1.1)	Time [s]; Time-dependent; Scalar

### 9.4.1.3.16 efcc

Error field correction coils. Time-dependent CPO.

member	type	description
datainfo	datainfo (9.4.1.3.120)	Generic information on a data item
coil(:)	coil (9.4.1.3.68)	Individual coil. Time-dependent. Structure array. Replicate this coil structure for coil element in the efcc array.
time	float (9.4.1.1.1)	Time [s]; Time-dependent; Scalar
codeparam	codeparam (9.4.1.3.65)	Code parameters

### 9.4.1.3.17 equilibrium

Description of a 2D, axi-symmetric, tokamak equilibrium; result of an equilibrium code. Time-dependent CPO

member	type	description
datainfo	datainfo (9.4.1.3.120)	Generic information on a data item
eqconstraint	eqconstraint (9.4.1.3.173)	measurements to constrain the equilibrium, output values and accuracy of the fit
eqgeometry	eqgeometry (9.4.1.3.174)	Geometry of the plasma boundary
flush	flush (9.4.1.3.184)	FLUSH package coefficients for the mapping of the equilibrium. The time grid of this structure is the same as the equilibrium structure above.
global_param	global_param (9.4.1.3.207)	0d output parameters
profiles_1d	profiles_1d (9.4.1.3.287)	output profiles as a function of the poloidal flux
profiles_2d(:)	equilibrium_profiles_2d (9.4.1.3.178)	Output profiles in the poloidal plane. Time-dependent
coord_sys	coord_sys (9.4.1.3.89)	flux surface coordinate system on a square grid of flux and angle
time	float (9.4.1.1.1)	Time [s]; Time-dependent; Scalar
codeparam	codeparam (9.4.1.3.65)	Code parameters

### 9.4.1.3.18 fusiondiag

Fusion product diagnostics; Time-dependent CPO

member	type	description
datainfo	datainfo (9.4.1.3.120)	Generic information on a data item
fus_product(:)	fusiondiag_fus_product (9.4.1.3.202)	Source. Time-dependent. Structure array. Replicate this source structure to accommodate neutron and gammas.
codeparam	codeparam (9.4.1.3.65)	Code parameters
time	float (9.4.1.1.1)	Time [s]; Time-dependent; Scalar

### 9.4.1.3.19 halphadiag

H/D alpha line integrated diagnostic; Time-dependent CPO

member	type	description
datainfo	datainfo (9.4.1.3.120)	Generic information on a data item
setup	halpha_setup (9.4.1.3.211)	setup for the lines of sight of the line integrated measurement
intensity	exp1D (9.4.1.3.180)	Measured light intensity (a.u.). Time-dependent. Vector (nlos)
time	float (9.4.1.1.1)	Time [s]; Time-dependent; Scalar

### 9.4.1.3.20 interfdiag

General line integral diagnostic

member	type	description
datainfo	datainfo (9.4.1.3.120)	Generic information on a data item
expression	string (9.4.1.1.3)	Formal expression for the line integral to be evaluated as a function of ne, ni, Te, Ti, Zeff, Br, Bz
setup_line	setup_line (9.4.1.3.356)	Geometric description of the lines of sight
measure	exp1D (9.4.1.3.180)	Measured value. Time-dependent; Vector (nchords)
time	float (9.4.1.1.1)	Time [s]; Time-dependent; Scalar

### 9.4.1.3.21 ironmodel

Model of the iron circuit; Time-dependent CPO

member	type	description
datainfo	datainfo (9.4.1.3.120)	Generic information on a data item
desc_iron	desc_iron (9.4.1.3.124)	Description of the iron segments
magnetise	magnetise (9.4.1.3.237)	Magnetisation M of the iron segment, assumed to be constant inside a given iron segment. Reminder : $H = 1/\mu_0 * B - \text{mur} * M$ ; [A/m].
time	float (9.4.1.1.1)	Time [s]; Time-dependent; Scalar

### 9.4.1.3.22 langmuirdiag

Langmuir probes; Time-dependent CPO

member	type	description
datainfo	datainfo (9.4.1.3.120)	Generic information on a data item
potential	lang_measure (9.4.1.3.222)	Floating potential [V]. All children are vectors(npot)
bias	lang_measure (9.4.1.3.222)	Biasing potential [V]. All children are vectors(bias)
jsat	lang_measure (9.4.1.3.222)	Ion saturation current [A/m <sup>2</sup> ]. All children are vectors(njsat)
ne	lang_derived (9.4.1.3.221)	Electron density [m <sup>-3</sup> ]. All children are vectors(ndensity).
te	lang_derived (9.4.1.3.221)	Electron Temperature [eV]. All children are vectors(nte)
machpar	lang_derived (9.4.1.3.221)	Parallel Mach number. All children are vectors(nmach)
codeparam	codeparam (9.4.1.3.65)	Code parameters
time	float (9.4.1.1.1)	Time [s]; Time-dependent; Scalar

### 9.4.1.3.23 launches

RF wave launch conditions. Time-dependent CPO

member	type	description
datainfo	datainfo (9.4.1.3.120)	Generic information on a data item
name	vecstring_type (9.4.1.2.11)	Antenna name, Vector of strings (nantenna)
type	vecstring_type (9.4.1.2.11)	Wave type (LH, EC, IC, ...), Vector of strings (nantenna)
frequency	vecflt_type (9.4.1.2.9)	Wave frequency [Hz], Vector (nantenna).
mode	vecint_type (9.4.1.2.10)	Incoming wave mode (+ 1 : slow wave only; -1 both slow and fast wave modes). Vector of integers (nantenna). Time-dependent
position	rzphiID (9.4.1.3.325)	Reference global position of the antenna. Time-dependent
spectrum	spectrum (9.4.1.3.372)	Spectral properties of the wave.
beam	launchs_rfbeam (9.4.1.3.226)	Beam characteristics
codeparam	codeparam (9.4.1.3.65)	Code parameters
time	float (9.4.1.1.1)	Time [s]; Time-dependent; Scalar

### 9.4.1.3.24 limiter

Description of the immobile limiting surface(s) or plasma facing components for defining the Last Closed Flux Surface. CPO

member	type	description
datainfo	datainfo (9.4.1.3.120)	Generic information on a data item
limiter.unit(:)	limiter_unit (9.4.1.3.230)	Vector of limiting surfaces. Replicate this limiter_unit element ncomponents times. Each unit contains a plasma facing component that can have dedicated number of points. Array of structures (ncomponents)

### 9.4.1.3.25 lithiumdiag

Lithium Beam Diagnostic; Time-dependent CPO

member	type	description
datainfo	datainfo (9.4.1.3.120)	Generic information on a data item
setup	lithsetup (9.4.1.3.233)	diagnostic setup information
measure	lithmeasure (9.4.1.3.232)	Measured values
time	float (9.4.1.1.1)	Time [s]; Time-dependent; Scalar

### 9.4.1.3.26 magdiag

Magnetic diagnostics. Time-dependent CPO

member	type	description
datainfo	datainfo (9.4.1.3.120)	Generic information on a data item
ip	exp0D (9.4.1.3.179)	Plasma current [A]. Positive sign means anti-clockwise when viewed from above. Time-dependent. Scalar
diamagflux	exp0D (9.4.1.3.179)	Diamagnetic flux [Wb]; Time-dependent; Scalar
flux_loops	flux_loops (9.4.1.3.185)	Poloidal flux loops RZ coordinates have 1 component for the full loop and two if there is a negative reference loop

member	type	description
bpol.probes	bpol.probes (9.4.1.3.63)	Poloidal field probes
time	float (9.4.1.1.1)	Time [s]; Time-dependent; Scalar

#### 9.4.1.3.27 mhd

MHD linear stability. Time-dependent CPO

member	type	description
datainfo	datainfo (9.4.1.3.120)	Generic information on a data item
n	vecint.type (9.4.1.2.10)	Toroidal mode number; Time-dependent; Vector (nn)
frequency	vecflt.type (9.4.1.2.9)	Frequency of the mode [Hz]; Time-dependent; Vector (nn)
growthrate	vecflt.type (9.4.1.2.9)	Linear growthrate of the mode [Hz]; Time-dependent; Vector (nn)
plasma	mhd.plasma (9.4.1.3.241)	MHD modes in the confined plasma
vacuum	mhd.vacuum (9.4.1.3.243)	External modes
time	float (9.4.1.1.1)	Time [s]; Time-dependent; Scalar.
codeparam	codeparam (9.4.1.3.65)	Code parameters

#### 9.4.1.3.28 msediag

MSE Diagnostic; Time-dependent CPO

member	type	description
datainfo	datainfo (9.4.1.3.120)	Generic information on a data item
polarimetry	polarimetry (9.4.1.3.283)	This structure accomodates the polarimetry setup and measurements of a mse diagnostic, as widely used in fusion devices. The final measurement is the $\tan(\gamma)$ where $\gamma$ is the polarization angle of a particular spectral mse component.
spectral	spectral (9.4.1.3.371)	This structure accommodates the types needed on a spectral MSE diagnostic namely the emmissivity and the radiance spectra. It will be subsequently upgraded with optical + photon detection elements since the structure will also be used for a synthetic spectral mse code.
time	float (9.4.1.1.1)	Time [s]; Time-dependent; Scalar

#### 9.4.1.3.29 nbi

Neutral Beam Injection. Input to NBI source codes; describes the neutrals that are about to be launched into the torus; Time-dependent CPO

member	type	description
datainfo	datainfo (9.4.1.3.120)	Generic information on a data item
nbi.unit(:)	nbi.unit (9.4.1.3.254)	Vector of Neutral Beam Injector units. Structure array(nunits). Time-dependent
codeparam	codeparam (9.4.1.3.65)	Code parameters
time	float (9.4.1.1.1)	Time [s]; Time-dependent; Scalar

#### 9.4.1.3.30 neoclassic

Neoclassical quantities (including transport coefficients). Time-dependent CPO

member	type	description
datainfo	datainfo (9.4.1.3.120)	Generic information on a data item
rho.tor.norm	vecflt.type (9.4.1.2.9)	Normalised toroidal flux coordinate values (= rho.tor normalised to the value at the last grid point); Vector (nrho)
rho.tor	vecflt.type (9.4.1.2.9)	Toroidal flux coordinate (not normalised, equivalent to rho.tor.norm) [m]; Vector (nrho). Time-dependent.
composition	composition (9.4.1.3.83)	Plasma composition (description of ion species).
desc.impur	desc.impur (9.4.1.3.123)	Description of the impurities (list of ion species and possibly different charge states)
compositions	compositions.type (9.4.1.3.87)	Contains all the composition information for the simulation (main ions, impurities, neutrals, edge species).
ni.neo	transcoefion (9.4.1.3.391)	Neoclassical transport coefficients for ion density equation. Time-dependent.
ne.neo	transcoefel (9.4.1.3.389)	Neoclassical transport coefficients for electron density equation. Time-dependent.
nz.neo(:)	transcoefimp (9.4.1.3.390)	Neoclassical transport coefficients for impurity (multiple charge state) density equation. Time-dependent.
ti.neo	transcoefion (9.4.1.3.391)	Neoclassical transport coefficients for ion temperature equation. Time-dependent.
te.neo	transcoefel (9.4.1.3.389)	Neoclassical transport coefficients for electron temperature equation. Time-dependent.
tz.neo(:)	transcoefimp (9.4.1.3.390)	Neoclassical transport coefficients for impurity (multiple charge state) temperature equation. Time-dependent.

member	type	description
mtor_neo	transcoefel (9.4.1.3.389)	Neoclassical transport coefficients for total toroidal momentum equation. Time-dependent.
sigma	vecflt.type (9.4.1.2.9)	Neoclassical conductivity [ $\text{ohm}^{-1} \cdot \text{m}^{-1}$ ]. Time-dependent. Vector(nrho).
jboot	vecflt.type (9.4.1.2.9)	Bootstrap current density [ $\text{A} \cdot \text{m}^{-2}$ ]. Time-dependent. Vector(nrho).
er	vecflt.type (9.4.1.2.9)	Radial electric field [ $\text{V}/\text{m}$ ]. Time-dependent. Vector(nrho).
vpol	matflt.type (9.4.1.2.7)	Neoclassical poloidal rotation of for each ion species [ $\text{m}/\text{s}$ ]. Time-dependent. Matrix(nrho,nion).
fext	array3dfilt.type (9.4.1.2.1)	Moments of parallel external force on each ion species [ $\text{T} \cdot \text{J} \cdot \text{m}^{-3}$ ]. Time-dependent. Array3D(nrho,nion,nmoment).
jext	vecflt.type (9.4.1.2.9)	Current density response to fext [ $\text{A} \cdot \text{m}^{-2}$ ]. Time-dependent. Vector(nrho).
time	float (9.4.1.1.1)	Time [s]; Time-dependent; Scalar.
codeparam	codeparam (9.4.1.3.65)	Code parameters

### 9.4.1.3.31 orbit

Orbits for a set of particles. Time-dependent CPO

member	type	description
datainfo	datainfo (9.4.1.3.120)	Generic information on a data item
com	com (9.4.1.3.69)	COM (Constants Of Motion) parameters identifying an orbit
trace	trace (9.4.1.3.388)	Position of particle in 5D space (3D in real and 2D in velocity).
global_param	orbit_global_param (9.4.1.3.263)	Global quantities associated with an orbit.
codeparam	codeparam (9.4.1.3.65)	Code parameters
time	float (9.4.1.1.1)	Time [s]; Time-dependent; Scalar

### 9.4.1.3.32 pellets

Pellet injectors and diagnostic; Time-dependent CPO

member	type	description
datainfo	datainfo (9.4.1.3.120)	Generic information on a data item
toroid_field	b0r0 (9.4.1.3.55)	Characteristics of the vacuum toroidal field, redundant with the toroidfield CPO, to document the normalisation of rho in this CPO.
species	species (9.4.1.3.369)	Pellet composition
shape	shape (9.4.1.3.357)	Pellet shape
pelletpath	pelletpath (9.4.1.3.269)	Description of the flight path of the pellet (assumed a straight line)
velocity	float (9.4.1.1.1)	Pellet injection velocity (m/s). Time-dependent. Scalar
ablationrate	ablationrate (9.4.1.3.48)	Ablation rate data [particle/s]. Formally the ablation rate profile only makes sense after the pellet has fully penetrated inside the plasma. The assignment of a suitable time stamp to the profile should be made either to time of maximum penetration or to the mean of the time window of pellet lifetime. In the modelling however, the reference time is the time when the pellet crosses the separatrix. Time-dependent. Vector (npos)
deposprofile	deposprofile (9.4.1.3.121)	Deposition profile ( $\text{m}^{-3}$ ). This deposition profile only makes sense after the ablated pellet cloud interacts via some transport processes with the plasma. This is why we add a time delay stamp to the profile in reference to the ablation rate profile. Time-dependent. Vector (npos)
codeparam	codeparam (9.4.1.3.65)	Code parameters
time	float (9.4.1.1.1)	Time [s]; Time-dependent; Scalar

### 9.4.1.3.33 pfsystems

Description of the active poloidal coils, passive conductors, currents flowing in those and mutual electromagnetic effects of the device; Time-dependent CPO

member	type	description
datainfo	datainfo (9.4.1.3.120)	Generic information on a data item
pccoils	pccoils (9.4.1.3.272)	Active poloidal field coils
pfpassive	pfpassive (9.4.1.3.276)	Passive axisymmetric conductor description
pfcircuits	pfcircuits (9.4.1.3.271)	Circuits, connected to multiple coils and to multiple supplies, defining the current and voltage relationships in the system
pfsupplies	pfsupplies (9.4.1.3.277)	PF power supplies
time	float (9.4.1.1.1)	Time [s]; Time-dependent; Scalar



### 9.4.1.3.34 polardiag

General line integral diagnostic

member	type	description
datainfo	datainfo (9.4.1.3.120)	Generic information on a data item
expression	string (9.4.1.1.3)	Formal expression for the line integral to be evaluated as a function of ne, ni, Te, Ti, Zeff, Br, Bz
setup_line	setup_line (9.4.1.3.356)	Geometric description of the lines of sight
measure	exp1D (9.4.1.3.180)	Measured value. Time-dependent; Vector (nchords)
time	float (9.4.1.1.1)	Time [s]; Time-dependent; Scalar

### 9.4.1.3.35 reference

Set of generic reference signals (for input e.g. to a controller); Time-dependent CPO

member	type	description
datainfo	datainfo (9.4.1.3.120)	Generic information on a data item
non_timed	ref_nt (9.4.1.3.293)	Time-independent references (parameters)
timed	ref.t (9.4.1.3.304)	Time-dependent references
time	float (9.4.1.1.1)	Time [s]; Time-dependent; Scalar

### 9.4.1.3.36 rfadiag

Retarding field analyser Diagnostic; Time-dependent CPO

member	type	description
datainfo	datainfo (9.4.1.3.120)	Generic information on a data item
setup	rfasetup (9.4.1.3.316)	diagnostic setup information
measure	rfameasure (9.4.1.3.315)	Measured values
time	float (9.4.1.1.1)	Time [s]; Time-dependent; Scalar

### 9.4.1.3.37 sawteeth

Description of sawtooth events. Time-dependent CPO

member	type	description
datainfo	datainfo (9.4.1.3.120)	Generic information on a data item
crash_trig	integer (9.4.1.1.2)	Flag indicating whether a crash condition has been satisfied : 0 = no crash. N( $\zeta$ 0) = crash triggered due to condition ii=N. Integer. Time-dependent.
composition	composition (9.4.1.3.83)	Plasma composition (description of ion species).
rho_tor_norm	vecflt_type (9.4.1.2.9)	Normalised toroidal flux coordinate values (= rho_tor normalised to the value at the last grid point); Vector (nrho)
rho_tor	vecflt_type (9.4.1.2.9)	Toroidal flux coordinate [m] given by $\sqrt{\phi/B_0/\pi}$ , where $B_0 = \text{toroidfield}\%bvac.r\%value / \text{toroidfield}\%r0$ . Vector (nrho). Time-dependent.
profiles1d	sawteeth_profiles1d (9.4.1.3.331)	Core profiles after sawtooth crash
diags	sawteeth_diags (9.4.1.3.330)	NO DOCS
codeparam	codeparam (9.4.1.3.65)	Code parameters
time	float (9.4.1.1.1)	Time [s]; Time-dependent; Scalar

### 9.4.1.3.38 scenario

Scenario characteristics, to be used as input or output of a whole discharge simulator. Time-dependent CPO.

member	type	description
datainfo	datainfo (9.4.1.3.120)	Generic information on a data item
centre	scenario_centre (9.4.1.3.332)	central values of the profiles (at magnetic axis)
composition	scenario_composition (9.4.1.3.333)	Plasma composition (description of ion species).
configs	scenario_configuration (9.4.1.3.334)	Strings describing the tokamak configuration
confinement	scenario_confinement (9.4.1.3.335)	characteristic confinement times
currents	scenario_currents (9.4.1.3.336)	data related to current sources and current diffusion

member	type	description
edge	scenario_edge (9.4.1.3.337)	edge value (@ LCMS)
energy	scenario_energy (9.4.1.3.338)	plasma energy content
eqgeometry	eqgeometry (9.4.1.3.174)	Geometry of the plasma boundary
global_param	scenario_global (9.4.1.3.339)	Global scalar values
heat-power	scenario_heat-power (9.4.1.3.340)	Power delivered to plasma (thermal and non thermal)
itb	scenario_itb (9.4.1.3.342)	Values characteristics of the Internal Transport Barrier
lim.div.wall	scenario_lim.div.wall (9.4.1.3.343)	values on the plate of divertor or on the limiter or on the wall (@ LCMS)
line_ave	scenario_line_ave (9.4.1.3.344)	line averaged value
neutron	scenario_neutron (9.4.1.3.345)	neutron flux for DD and DT reactions
ninety_five	scenario_ninety_five (9.4.1.3.346)	values at 95% of poloidal flux
pedestal	scenario_pedestal (9.4.1.3.347)	Values at the top of the H-mode pedestal
references	scenario_references (9.4.1.3.350)	References
reactor	scenario_reactor (9.4.1.3.348)	reactor data (such as electricity cost ...)
sol	scenario_sol (9.4.1.3.351)	SOL characteristic (@ LCMS)
vol_ave	scenario_vol_ave (9.4.1.3.352)	volume averaged value
codeparam	codeparam (9.4.1.3.65)	Code parameters
time	float (9.4.1.1.1)	Time [s]; Time-dependent; Scalar

#### 9.4.1.3.39 summary

Set of reduced data summarising the main simulation parameters for the data base catalogue. CPO.

member	type	description
datainfo	datainfo (9.4.1.3.120)	Generic information on a data item
ip	reduced (9.4.1.3.292)	Plasma current [A]
bvac_r	reduced (9.4.1.3.292)	Vacuum field times radius in the toroidal field magnet [T.m];
geom_axis_r	reduced (9.4.1.3.292)	Major radius of the geometric axis [m]
a_minor	reduced (9.4.1.3.292)	Minor radius of the plasma boundary [m]
elongation	reduced (9.4.1.3.292)	Elongation of the plasma boundary [m]
tria_lower	reduced (9.4.1.3.292)	Lower triangularity of the plasma boundary [m]
tria_upper	reduced (9.4.1.3.292)	Upper triangularity of the plasma boundary [m]
tev	reduced (9.4.1.3.292)	volume averaged electron temperature [eV]
tiv	reduced (9.4.1.3.292)	volume averaged ion temperature [eV]
nev	reduced (9.4.1.3.292)	volume averaged electron density [m <sup>-3</sup> ]
zeffv	reduced (9.4.1.3.292)	volume averaged effective charge
beta_pol	reduced (9.4.1.3.292)	poloidal beta
beta_tor	reduced (9.4.1.3.292)	toroidal beta
beta_normal	reduced (9.4.1.3.292)	normalised beta
li	reduced (9.4.1.3.292)	internal inductance
volume	reduced (9.4.1.3.292)	total plasma volume [m <sup>3</sup> ]
area	reduced (9.4.1.3.292)	area poloidal cross section [m <sup>2</sup> ]
main_ion1_z	reduced (9.4.1.3.292)	Atomic number of the main ion #1 [a.m.u.]
main_ion1_a	reduced (9.4.1.3.292)	Atomic mass of the main ion #1 [a.m.u.]
main_ion2_z	reduced (9.4.1.3.292)	Atomic number of the main ion #2 [a.m.u.]
main_ion2_a	reduced (9.4.1.3.292)	Atomic mass of the main ion #2 [a.m.u.]
impur1_z	reduced (9.4.1.3.292)	Atomic number of the impurity #1 [a.m.u.]
impur1_a	reduced (9.4.1.3.292)	Atomic mass of the impurity #1 [a.m.u.]
time	float (9.4.1.1.1)	Time at which the 0D variables of the summary are taken [s]. Scalar

#### 9.4.1.3.40 topinfo

General info about the database entry. CPO.

member	type	description
dataprovider	string (9.4.1.1.3)	Name of the main data provider (the person who filled the original data)
description	string (9.4.1.1.3)	Pulse/Entry description
firstputdate	string (9.4.1.1.3)	Date of the original data submission
lastupdate	string (9.4.1.1.3)	Date of the last data addition in the tree
source	string (9.4.1.1.3)	Exact reference of the data source (e.g. original reference in the native machine data base)
comment	string (9.4.1.1.3)	Any additional comment
dataversion	string (9.4.1.1.3)	Version of the data structure
workflow	string (9.4.1.1.3)	Workflow which has been used to produce the present entry. Exact format to be defined with the platform group. User-specific input files (if allowed) must be stored there as well.
entry	entry_def (9.4.1.3.171)	Definition of this database entry
parent_entry	entry_def (9.4.1.3.171)	Definition of the entry of the direct parent (if any)
mdinfo	mdinfo (9.4.1.3.239)	Information related to machine description for this entry

#### 9.4.1.3.41 toroidfield

Toroidal field. Time-dependent CPO

member	type	description
datainfo	datainfo (9.4.1.3.120)	Generic information on a data item
desc_tfcoils	tf_desc_tfcoils (9.4.1.3.383)	Description of the toroidal field coils
nturns	integer (9.4.1.1.2)	Number of total turns in the toroidal field coil
ncoils	integer (9.4.1.1.2)	Number of packets of coils
current	exp0D (9.4.1.3.179)	Current in the toroidal field coils [A]; Time-dependent. Scalar.
bvac_r	exp0D (9.4.1.3.179)	Vacuum field times radius in the toroidal field magnet [T.m]. Positive sign means anti-clockwise when viewed from above. Time-dependent. Scalar.
r0	float (9.4.1.1.1)	Characteristic major radius of the device (used in publications, usually middle of the vessel at the equatorial midplane) [m]. Scalar.
time	float (9.4.1.1.1)	Time [s]; Time-dependent. Scalar.

#### 9.4.1.3.42 tsdiag

Thomson scattering Diagnostic; Time-dependent CPO

member	type	description
datainfo	datainfo (9.4.1.3.120)	Generic information on a data item
setup	tssetup (9.4.1.3.394)	diagnostic setup information
measure	tsmeasure (9.4.1.3.393)	Measured values
time	float (9.4.1.1.1)	Time [s]; Time-dependent; Scalar

#### 9.4.1.3.43 turbulence

Turbulence; Time-dependent CPO.

member	type	description
datainfo	datainfo (9.4.1.3.120)	Generic information on a data item
composition	turbcomposition (9.4.1.3.395)	Plasma composition (description of ion species).
coordsys	turbcoordsys (9.4.1.3.396)	Description of the coordinates and metric used by the codes.
var0d	turbvar0d (9.4.1.3.400)	Diagnostic fast time traces.
var1d	turbvar1d (9.4.1.3.401)	Dependent variable radial profile.
var2d	turbvar2d (9.4.1.3.402)	Dependent variable axisymmetric.
var3d	turbvar3d (9.4.1.3.403)	Dependent variable morphology. Grid is defined in coord_sys/turbgrid.
var4d	turbvar4d (9.4.1.3.404)	Gyrokinetic distribution function, axisymmetric component. Grid is defined in coord_sys/turbgrid.
var5d	turbvar5d (9.4.1.3.405)	Gyrokinetic distribution function. Grid is defined in coord_sys/turbgrid.
spec1d	turbspec1d (9.4.1.3.399)	Toroidal mode number spectra.
env1d	turbenv1d (9.4.1.3.397)	Parallel fluctuation envelope.
codeparam	codeparam (9.4.1.3.65)	Code parameters
time	float (9.4.1.1.1)	Time [s]; Time-dependent; Scalar.

#### 9.4.1.3.44 vessel

Mechanical structure of the vacuum vessel. CPO.

member	type	description
datainfo	datainfo (9.4.1.3.120)	Generic information on a data item
position	rz1D (9.4.1.3.319)	Vessel wall outline (list of R,Z co-ordinates) [m]; Vector (npoints)

#### 9.4.1.3.45 wall

General Wall representation. Time-dependent CPO.

member	type	description
datainfo	datainfo (9.4.1.3.120)	Generic information on a data item
wall2d_mhd	wall2d_mhd (9.4.1.3.409)	Simplified wall that encloses necessary information for RWM codes.
wall2d(:)	wall2d (9.4.1.3.408)	2D wall type. Structure array. Replicate this element for each type of possible physics configurations necessary (single contour limiter, disjoints gapped plasma facing components)
wall3d(:)	wall3d (9.4.1.3.410)	A 3D wall type; Structure array. Replicate this element for each type of possible physics configurations necessary (gas thight vs wall with ports and holes)
plasma	plasma (9.4.1.3.280)	Plasma flux from/to plasma facing wall surfaces
surface	surface (9.4.1.3.379)	State of plasma facing wall surfaces
time	float (9.4.1.1.1)	Time [s]; Time-dependent; Scalar

#### 9.4.1.3.46 waves

RF wave propagation and deposition. Time-dependent CPO

member	type	description
datainfo	datainfo (9.4.1.3.120)	Generic information on a data item
coherentwave(:)	coherentwave (9.4.1.3.67)	Wave description for each frequency. Time-dependent. Structure array(nfreq)
codeparam	codeparam (9.4.1.3.65)	Code parameters
time	float (9.4.1.1.1)	Time [s]; Time-dependent; Scalar

#### 9.4.1.3.47 Utility Structures

##### 9.4.1.3.48 ablationrate

Ablation rate data [particle/s]. Formally the ablation rate profile only makes sense after the pellet has fully penetrated inside the plasma. The assignment of a suitable time stamp to the profile should be made either to time of maximum penetration or to the mean of the time window of pellet lifetime. In the modelling however, the reference time is the time when the pellet crosses the separatrix. Time-dependent. Vector (npos)

member	type	description
rho_tor	vecflt_type (9.4.1.2.9)	Toroidal flux coordinate [m], to be used by the ETS and in many CPOs (coreprof, ...). Defined as $\sqrt{\phi/\pi/B_0}$ , where $B_0$ = equilibrium/global_param/toroid_field/b0. Time-dependent; Vector (npos)
rate	vecflt_type (9.4.1.2.9)	Calculated ablation rate; (particle/s)
position	rzphi1D (9.4.1.3.325)	Coordinates for ablation rate

Type of: pellets:ablationrate (1076)

##### 9.4.1.3.49 antenna\_ec

Vector of Electron Cyclotron antennas

member	type	description
name	string (9.4.1.1.3)	Antenna name
frequency	float (9.4.1.1.1)	Frequency [Hz]
power	exp0D (9.4.1.3.179)	Power [W]; Time-dependent
mode	integer (9.4.1.1.2)	Incoming wave mode (+ or -1 for O/X mode); Time-dependent
position	rzphi0D (9.4.1.3.324)	Launching position in the global reference system; Time-dependent
launchangles	launchangles (9.4.1.3.223)	Launching angles of the beam
beam	rfbeam (9.4.1.3.317)	Beam characteristics at the launching position
codeparam	codeparam (9.4.1.3.65)	Code parameters

Type of: antennas:antenna\_ec (1047)

#### 9.4.1.3.50 antenna\_ic

Vector of Ion Cyclotron antennas

member	type	description
name	string (9.4.1.1.3)	Antenna name; String
frequency	exp0D (9.4.1.3.179)	Frequency [Hz]; Time-dependent; Exp0d
power	exp0D (9.4.1.3.179)	Power [W]; Time-dependent; Exp0d
setup	antennaic.setup (9.4.1.3.52)	Detailed description of IC antennas
codeparam	codeparam (9.4.1.3.65)	Code parameters

Type of: antennas:antenna\_ic (1047)

#### 9.4.1.3.51 antenna\_lh

Vector of Lower Hybrid antennas

member	type	description
name	string (9.4.1.1.3)	Antenna name, String
frequency	float (9.4.1.1.1)	Frequency [Hz]
power	exp0D (9.4.1.3.179)	Power [W]; Exp0d. Time-dependent
n_par	float (9.4.1.1.1)	Main parallel refractive index of the launched spectrum, for multi-junction antennas. Time-dependent
position	rzphi0D (9.4.1.3.324)	Reference global antenna position. Time-dependent
setup	antennalh.setup (9.4.1.3.53)	Detailed description of LH antennas.
plasmaedge	plasmaedge (9.4.1.3.281)	Plasma edge characteristics in front of the antenna.
beam	rfbeam (9.4.1.3.317)	Beam characteristics
codeparam	codeparam (9.4.1.3.65)	Code parameters

Type of: antennas:antenna\_lh (1047)

#### 9.4.1.3.52 antennaic\_setup

Detailed description of ICRH antennas

member	type	description
straps(:)	straps (9.4.1.3.378)	Properties of the IC antenna strap; Time-dependent; Vector(nstraps)

Type of: antenna\_ic:setup (1093)

#### 9.4.1.3.53 antennalh\_setup

Detailed description of LH antennas

member	type	description
modules	modules (9.4.1.3.245)	Modules description. NB there are nmodules per antenna, distributed among nma_phi toroidal positions and nma_theta poloidal positions

Type of: antenna\_lh:setup (1094)

#### 9.4.1.3.54 array3dcpplx.type

Temporary structure for real and imaginary part of complex numbers (3D)

member	type	description
re	array3dflt.type (9.4.1.2.1)	Real part
im	array3dflt.type (9.4.1.2.1)	Imaginary part

Type of: complexgrid\_scalar\_cplx:matrix (1119) | mhd\_plasma:disp\_par (1284) | mhd\_plasma:disp\_perp (1284) |

mhd\_plasma:p\_pert (1284) I mhd\_plasma:rho\_mass\_pert (1284) I mhd\_plasma:temp\_pert (1284) I mhd\_vector:coord1 (1287) I mhd\_vector:coord2 (1287) I mhd\_vector:coord3 (1287)

#### 9.4.1.3.55 b0r0

Characteristics of the vacuum toroidal field, redundant with the toroidfield CPO, normalisation used by the ETS

member	type	description
r0	float (9.4.1.1.1)	Characteristic major radius of the device (used in publications, usually middle of the vessel at the equatorial midplane) [m]. Scalar.
b0	float (9.4.1.1.1)	Vacuum field at r0 [T]; Positive sign means anti-clockwise when viewed from above. Scalar. Time-dependent.

Type of: coresource:toroid\_field (1053) I global\_param:toroid\_field (1250) I pellets:toroid\_field (1076) I waves\_global\_param:toroid\_field (1461)

#### 9.4.1.3.56 beamlets

Detailed information on beamlets.

member	type	description
position	rzphi1D (9.4.1.3.325)	Position of beamlets. Vector rzphi1D (nbeamlets)
tang_rad.blk	vecflt.type (9.4.1.2.9)	Tangency radius (major radius where the central line of a beamlet is tangent to a circle around the torus) [m]; Vector(nbeamlets)
angle.blk	vecflt.type (9.4.1.2.9)	Angle of inclination between a line at the centre of a beamlet and the horizontal plane [rad]; Vector(nbeamlets)
pow_frc.blk	vecflt.type (9.4.1.2.9)	Fraction of power of a unit injected by a beamlet; Vector(nbeamlets)

Type of: setup\_inject:beamlets (1398)

#### 9.4.1.3.57 beamtracing

Beam-tracing or ray-tracing solver. Vector(nbeams). Time-dependent

member	type	description
npoints	integer (9.4.1.1.2)	Number of points along each ray/beam. Integer
power	float (9.4.1.1.1)	Initial power in each ray/beam [W]. Float. Time-dependent
dnpar	vecflt.type (9.4.1.2.9)	Spectral width in refractive index associated with each ray/beam, Vector (npoints). Time-dependent
length	vecflt.type (9.4.1.2.9)	Ray/beam curvilinear length [m], Vector (npoints). Time-dependent
position	waves_rtposition (9.4.1.3.423)	Ray/beam position
wavevector	waves_rtwavevector (9.4.1.3.424)	Ray/beam wave vector.
polarization	polarization (9.4.1.3.284)	Wave field polarization along the ray/beam.
powerflow	powerflow (9.4.1.3.285)	Power flow along the ray/beam.

Type of: coherentwave:beamtracing (1110)

#### 9.4.1.3.58 boundary

Boundary condition for the transport equation. Time-dependent.

member	type	description
value	vecflt.type (9.4.1.2.9)	Value of the boundary condition (in case flag = 2). Unit depends on type, respectively [1-Wb, 2-A, 3-V]. For type 1 to 3, only the first position in the vector is used. For type 5, all three positions are used, meaning respectively a1, a2, a3. Time-dependent. Vector(3).
source	string (9.4.1.1.3)	Source of the boundary condition (any comment describing its origin : code, path to diagnostic signals, massaging); String
type	integer (9.4.1.1.2)	Type of the boundary condition for the transport solver (in case flag = 2). 0- equation not solved; 1- edge value of poloidal flux; 2- total current inside boundary; 3- edge Vloop; 4- not defined; 5- generic boundary condition expressed as $a1*(dpsi\_drho\_tor)+a2*psi=a3$ . Time-dependent. Scalar
rho	float (9.4.1.1.1)	Position of the boundary condition (in terms of toroidal flux coordinate) for the transport solver [m]. Outside this boundary, the value of the data are considered to be prescribed. Scalar

member	type	description
codeparam	codeparam (9.4.1.3.65)	Code parameters

Type of: psi:boundary (1331)

#### 9.4.1.3.59 boundary\_neutrals

Structure for the boundary condition of core transport equations (neutrals). Time-dependent;

member	type	description
value	vecflt.type (9.4.1.2.9)	Value of the boundary condition. Unit depends on type, respectively [1-field, 2-field.m <sup>-1</sup> , 3-m, 4-field.s <sup>-1</sup> ]. For type 1 to 4, only the first position in the vector is used. For type 5, all three positions are used, meaning respectively a1, a2, a3. Time-dependent. Array1D(3)
type	integer (9.4.1.1.2)	Type of the boundary condition for the transport solver. 0- equation not solved; 1- value of the field y; 2-radial derivative of the field (-dy/drho.tor); 3-scale length of the field y/(-dy/drho.tor); 4- flux; 5- generic boundary condition y expressed as a1y'+a2y=a3. Time-dependent. Int
rho.tor	float (9.4.1.1.1)	Position of the boundary condition (in terms of toroidal flux coordinate) for the transport solver [m]. Outside this boundary, the value of the data are considered to be prescribed. Time-dependent. Float.

Type of: corefieldneutral:boundary (1138) | corefieldneutrals:boundary (1139) | corefieldneutralv:boundary (1140)

#### 9.4.1.3.60 boundaryel

Structure for the boundary condition of core transport equations (electrons) Time-dependent;

member	type	description
value	vecflt.type (9.4.1.2.9)	Value of the boundary condition (in case flag = 2). Unit depends on type, respectively [1-field, 2-field.m <sup>-1</sup> , 3-m, 4-field.s <sup>-1</sup> ]. For type 1 to 4, only the first position in the vector is used. For type 5, all three positions are used, meaning respectively a1, a2, a3. Time-dependent. Vector(3).
source	string (9.4.1.1.3)	Source of the boundary condition (any comment describing its origin : code, path to diagnostic signals, massaging); String
type	integer (9.4.1.1.2)	Type of the boundary condition for the transport solver (in case flag = 2). 0- equation not solved; 1- value of the field y; 2-radial derivative of the field (-dy/drho.tor); 3-scale length of the field y/(-dy/drho.tor); 4- flux; 5- generic boundary condition y expressed as a1y'+a2y=a3. Time-dependent. Scalar
rho.tor	float (9.4.1.1.1)	Position of the boundary condition (in terms of toroidal flux coordinate) for the transport solver [m]. Outside this boundary, the value of the data are considered to be prescribed. Time-dependent. Scalar

Type of: corefield:boundary (1136)

#### 9.4.1.3.61 boundaryimp

Structure for the boundary condition of core transport equations (impurities) Time-dependent

member	type	description
value	matflt.type (9.4.1.2.7)	Value of the boundary condition (in case flag = 2). Unit depends on type, respectively [1-field, 2-field.m <sup>-1</sup> , 3-m, 4-field.s <sup>-1</sup> ]. For type 1 to 4, only the first position in the first dimension is used. For type 5, all three positions are used, meaning respectively a1, a2, a3. Time-dependent. Array 2D (3,nzimp)
source	string (9.4.1.1.3)	Source of the boundary condition (any comment describing its origin : code, path to diagnostic signals, massaging); String
type	vecint.type (9.4.1.2.10)	Type of the boundary condition for the transport solver (in case flag = 2). 0- equation not solved; 1- value of the field y; 2-radial derivative of the field (-dy/drho.tor); 3-scale length of the field y/(-dy/drho.tor); 4- flux; 5- generic boundary condition y expressed as a1y'+a2y=a3. Time-dependent. Vector(nzimp)
rho	vecflt.type (9.4.1.2.9)	Position of the boundary condition (in terms of toroidal flux coordinate) for the transport solver [m]. Outside this boundary, the value of the data are considered to be prescribed. Time-dependent. Vector(nzimp)
codeparam	codeparam (9.4.1.3.65)	Code parameters

Type of: impurity\_type:boundary (1259)

### 9.4.1.3.62 boundaryion

Structure for the boundary condition of core transport equations (ions) Time-dependent

member	type	description
value	matflt.type (9.4.1.2.7)	Value of the boundary condition (in case flag = 2). Unit depends on type, respectively [1-field, 2-field.m <sup>-1</sup> , 3-m, 4-field.s <sup>-1</sup> ]. For type 1 to 4, only the first position in the first dimension is used. For type 5, all three positions are used, meaning respectively a1, a2, a3. Time-dependent. Matrix(3,nion)
source	vecstring.type (9.4.1.2.11)	Source of the boundary condition (any comment describing its origin : code, path to diagnostic signals, massaging); Array of strings (nion)
type	vecint.type (9.4.1.2.10)	Type of the boundary condition for the transport solver (in case flag = 2). 0- equation not solved; 1- value of the field y; 2-radial derivative of the field (-dy/drho_tor); 3-scale length of the field y/(-dy/drho_tor); 4- flux; 5- generic boundary condition y expressed as aly'+a2y=a3. Time-dependent. Vector(nion)
rho_tor	vecflt.type (9.4.1.2.9)	Position of the boundary condition (in terms of toroidal flux coordinate) for the transport solver [m]. Outside this boundary, the value of the data are considered to be prescribed. Time-dependent. Vector(nion)

Type of: corefieldion:boundary (1137)

### 9.4.1.3.63 bpol\_probes

Poloidal field probes

member	type	description
setup_bprobe	setup_bprobe (9.4.1.3.353)	diagnostic setup information
measure	exp1D (9.4.1.3.180)	Measured value [T]; Time-dependent; Vector (nprobes)

Type of: magdiag:bpol\_probes (1070)

### 9.4.1.3.64 circularcoil

Circular coil description

member	type	description
centre	rz0D (9.4.1.3.318)	Circular coil centre
hlength	float (9.4.1.1.1)	Half length along coil axis [m]
radialwidth	float (9.4.1.1.1)	Half width, (outer radius-inner radius)/2 [m]

Type of: tf\_desc.tfcoils:circularcoil (1426)

### 9.4.1.3.65 codeparam

Code parameters

member	type	description
codename	string (9.4.1.1.3)	Name of the code
codeversion	string (9.4.1.1.3)	Version of the code (as in the ITM repository)
parameters	string (9.4.1.1.3)	List of the code specific parameters, string expected to be in XML format.
output_diag	string (9.4.1.1.3)	List of the code specific diagnostic/output, string expected to be in XML format.
output_flag	integer (9.4.1.1.2)	Output flag : 0 means the run is successful, other values meaning some difficulty has been encountered, the exact meaning is then code specific. Negative values mean the result shall not be used. Exact rules could discussed and implemented in the module wrapper. Time-dependent.

Type of: antenna\_ec:codeparam (1092) I antenna\_ic:codeparam (1093) I antenna\_lh:codeparam (1094) I antennas:codeparam (1047) I boundary:codeparam (1101) I boundaryimp:codeparam (1104) I coherentwave:codeparam (1110) I coredelta:codeparam (1049) I coredelta\_values:codeparam (1135) I corefield:codeparam (1136) I corefieldion:codeparam (1137) I coreimpur:codeparam (1050) I coreneutrals:codeparam (1051) I coreprof:codeparam (1052) I coresource:codeparam (1053) I coresource\_values:codeparam (1154) I coretransp:codeparam (1054) I coretransp\_values:codeparam (1158) I distri\_vec:codeparam (1193) I distribution:codeparam (1056) I distsource:codeparam (1057) I distsource\_source:codeparam (1198) I edge:codeparam (1059) I efcc:codeparam (1060) I equilibrium:codeparam (1061) I flush:codeparam (1227) I fusiondiag:codeparam (1062) I fusiondiag\_fus\_product:codeparam (1245) I langmuirdiag:codeparam (1066) I launches:codeparam (1067) I mhd:codeparam (1071) I nbi:codeparam



(1073) I nbi\_unit:codeparam (1297) I neoclassic:codeparam (1074) I orbit:codeparam (1075) I pellets:codeparam (1076) I psi:codeparam (1331) I sawteeth:codeparam (1081) I scenario:codeparam (1082) I spectral:codeparam (1414) I turbulence:codeparam (1087) I waves:codeparam (1090)

#### 9.4.1.3.66 coefficients\_neutrals

Recycling and sputtering coefficients used by the neutral solver. The particular causing ion or impurity charge state is determined by the path.

member	type	description
recycling	recycling_neutrals (9.4.1.3.291)	Recycling coefficients
sputtering	sputtering_neutrals (9.4.1.3.374)	Sputtering coefficients

Type of: coreneutrals:ioncoeff (1051) I impcoeff:chargestate (1257)

#### 9.4.1.3.67 coherentwave

Wave description for each frequency. Time-dependent. Structure array(nfreq)

member	type	description
wave_id	enum_instance (9.4.1.3.172)	Identifier for the coherent-wave, in terms of the type and name of the antenna driving the wave and an index separating waves driven by the same antenna. Possible types: EC/LH/IC; the field name should include the name of the antenna as specified in either antennas(*)%ec.antenna%name, antennas(*)%ic.antenna%name, or antennas(*)%lh.antenna%name; the field index should separate different waves generated from a single antenna.
composition	composition (9.4.1.3.83)	Plasma composition (description of ion species).
compositions	compositions.type (9.4.1.3.87)	Contains detailed information on the plasma composition (main ions, impurities, neutrals, edge species).
global_param	waves_global_param (9.4.1.3.418)	Global wave deposition parameters
grid_1d	waves_grid_1d (9.4.1.3.419)	Grid points for 1D profiles.
grid_2d	waves_grid_2d (9.4.1.3.420)	Grid points for 2D profiles and for full wave solutions.
profiles_1d	waves_profiles_1d (9.4.1.3.421)	1D radial profiles
profiles_2d	waves_profiles_2d (9.4.1.3.422)	2D profiles in poloidal cross-section
beamtracing(:)	beamtracing (9.4.1.3.57)	Beam-tracing or ray-tracing solver. Vector(nbeams). Time-dependent
fullwave	fullwave (9.4.1.3.189)	Solution by full wave code
codeparam	codeparam (9.4.1.3.65)	Code parameters

Type of: waves:coherentwave (1090)

#### 9.4.1.3.68 coil

Individual coil. Time-dependent. Structure array. Replicate this coil structure for coil element in the efcc array.

member	type	description
desc_coils	desc_coils (9.4.1.3.122)	Description of the coils
coilcurrent	exp1D (9.4.1.3.180)	Circuit feed current in the coil, defined positive if it flows from point 1 to point 2 of the geometry description [A]; Time-dependent
coilvoltage	exp1D (9.4.1.3.180)	Voltage on the full coil [V]; Time-dependent

Type of: efcc:coil (1060)

#### 9.4.1.3.69 com

COM (Constants Of Motion) parameters identifying an orbit

member	type	description
amn	float (9.4.1.1.1)	Atomic mass of the particle; Scalar
zion	float (9.4.1.1.1)	Atomic charge of the particle; Scalar
energy	vecflt.type (9.4.1.2.9)	Energy of the particle [keV]; Time-dependent; Vector (norbits).
magn_mom	vecflt.type (9.4.1.2.9)	Magnetic momentum [kg m <sup>-2</sup> / s <sup>-2</sup> / T]; Time-dependent, Vector(norbits).

member	type	description
p_phi	vecflt.type (9.4.1.2.9)	toroidal angular momentum [kg m <sup>2</sup> / s]; Time-dependent; Vector(norbits);
sigma	vecint.type (9.4.1.2.10)	Sign of parallel velocity at psi=psi_max along the orbit; Time-dependent; Vector(norbits)

Type of: orbit:com (1075)

### 9.4.1.3.70 complexgrid

Generic definition of a complex grid

member	type	description
uid	integer (9.4.1.1.2)	Unique index of this grid. Used for handling multiple grids
id	string (9.4.1.1.3)	Name / identifier string for this grid
spaces(:)	complexgrid.space (9.4.1.3.79)	Definitions of grid spaces. Array of structures (number of spaces)
subgrids(:)	complexgrid.subgrid (9.4.1.3.80)	Definitions of subgrids. Array of structures (number of subgrids)
metric	complexgrid.metric (9.4.1.3.73)	Metric coefficients
geo(:)	complexgrid.geo_global (9.4.1.3.71)	Geometry data for implicit objects
bases(:)	complexgrid.vector (9.4.1.3.81)	Vector bases. Used for aligned vector representation. Array of structures (number of bases)

Type of: edge:grid (1059) I f\_expansion:grid (1225) I fullwave:grid (1232) I source\_rate:grid (1407) I wall3d:grid (1453)

### 9.4.1.3.71 complexgrid\_geo\_global

Geometry information for implicitly defined grid objects (which cannot be stored in the space definitions); Array of structures (number of alternate geometries).

member	type	description
geotype	integer (9.4.1.1.2)	Type of geometry (id flag). A flag defining how the geometry data associated with grid objects is to be interpreted. If the field is undefined (0=GRID.UNDEFINED), the standard interpretation for; the given coordinate types is assumed.
geotypeid	string (9.4.1.1.3)	Type of geometry (id string).
coordtype	vecint.type (9.4.1.2.10)	Type of coordinates describing the physical space. Vector (number of space dimensions); The size of coordtype defines the dimension of the space.; For predefined integer constants for standard coordinates see; the documentation of the grid service library.
geo_matrix(:)	complexgrid.scalar (9.4.1.3.75)	Geometry data matrix associated with implicit objects. Array of structures (number of subgrids this information is stored on); The exact definition of the stored values depends on the geometry type of the geometry complexgrid_geo_global.geotype;
measure(:)	complexgrid.scalar (9.4.1.3.75)	Measure of object, i.e. physical size (length for 1d, area for 2d, volume for 3d objects) in this geometry. [m <sup>dim</sup> ]; Use this field to store measures of implicitly defined grid objects.; Array of structures (number of subgrids this information is stored on)

Type of: complexgrid:geo (1113)

### 9.4.1.3.72 complexgrid\_indexlist

An index list describing a list of indices or a range of indices.; If the explicit index list ind is defined and has nonzero size, the list is assumed to be an explicit index list.; Otherwise it is assumed to be a range of indices.; A single index can either be defined by using an explicit list with a single entry or as a range with identical; start and end index.

member	type	description
range	vecint.type (9.4.1.2.10)	Defines an index range enumerating from range[1] to range[2] (with both range[1] and range[2] included). If additionally a third value range(3) is given, it is used as a stride. If it is omitted, a stride of 1 is assumed. Vector(3)
ind	vecint.type (9.4.1.2.10)	An explicit list of indices. If this member is defined and has nonzero size, the list is assumed to be explicit. Vector(length of explicit index list)

Type of: complexgrid\_objectlist:indset (1117)

### 9.4.1.3.73 complexgrid\_metric

Metric information for grid objects

member	type	description
measure(:)	complexgrid_scalar (9.4.1.3.75)	Measure of object, i.e. physical size (length for 1d, area for 2d, volume for 3d objects). [ $m^{\text{dim}}$ ].; Use this field to store measures of implicitly defined grid objects.; Array of structures (number of subgrids this information is stored on)
g11(:)	complexgrid_scalar (9.4.1.3.75)	Metric coefficients g11. Array of structures (number of subgrids this information is stored on)
g12(:)	complexgrid_scalar (9.4.1.3.75)	Metric coefficients g12. Array of structures (number of subgrids this information is stored on)
g13(:)	complexgrid_scalar (9.4.1.3.75)	Metric coefficients g13. Array of structures (number of subgrids this information is stored on)
g22(:)	complexgrid_scalar (9.4.1.3.75)	Metric coefficients g22. Array of structures (number of subgrids this information is stored on)
g23(:)	complexgrid_scalar (9.4.1.3.75)	Metric coefficients g23. Array of structures (number of subgrids this information is stored on)
g33(:)	complexgrid_scalar (9.4.1.3.75)	Metric coefficients g33. Array of structures (number of subgrids this information is stored on)
jacobian(:)	complexgrid_scalar (9.4.1.3.75)	Jacobian. Array of structures (number of subgrids this information is stored on)

Type of: complexgrid:metric (1113)

### 9.4.1.3.74 complexgrid\_objectlist

A list of grid objects with a common class, either in explicit or implicit form.; The list is explicit if the matrix ind is given and has nonzero size. In this case the index tuples are listed in ind.; Otherwise the list is implicit and the index tuples are defined by a list of index lists stored in indset.

member	type	description
cls	vecint.type (9.4.1.2.10)	Class tuple of the grid objects in this object list. Vector (number of grid spaces)
indset(:)	complexgrid_indexlist (9.4.1.3.72)	Implicit list of the object indices.; Array of structures (number of grid spaces = length of index tuple). Every index of the index tuple is described by an index set, which defines either a list of index values or a range of index values.
ind	matint.type (9.4.1.2.8)	Explicit list of index tuples. Matrix (number of objects, number of spaces in grid).; First dimension: object index, second dimension: index tuple/space index.; If this field is defined and has nonzero size, the object list is understood to be explicit.

Type of: complexgrid\_subgrid:list (1123)

### 9.4.1.3.75 complexgrid\_scalar

A quantity stored on a grid. The data is given either as a vector of scalars, vectors or matrices.; Note that the vector and matrix storage methods are not meant for multidimensional data, but; for complex data representations with multiple degrees of freedom.; To be used as arrays of structure; FIXME: add non-timedependent element "label" of type string

member	type	description
griduid	integer (9.4.1.1.2)	Unique identifier of the grid this scalar quantity is associated with.
subgrid	integer (9.4.1.1.2)	Index of the subgrid (as stored in grid.subgrids) the data is stored on.
scalar	vecflt.type (9.4.1.2.9)	Scalar representation of data. One scalar entry is stored per object in the subgrid.; The order is implicitly defined by the subgrid.; Float Vector(nobjects.subgrid). First dimension: object index.
vector	matflt.type (9.4.1.2.7)	Vector representation of data. One vector is stored per object in the subgrid. The order is implicitly defined by the subgrid.; Float matrix(nobjects.subgrid, ndata). First dimension: object index, second dimension: index of data vector.
matrix	array3dflt.type (9.4.1.2.1)	Matrix representation of data. One matrix is stored per object in the subgrid. The order is implicitly defined by the subgrid.; 3d float array(nobjects.subgrid, ndata1, ndata2). First dimension: object index, second dimension: matrix row, third dimension: matrix column.

Type of: complexgrid\_geo\_global:geo\_matrix (1114) I complexgrid\_geo\_global:measure (1114) I complexgrid\_metric:g11 (1116) I complexgrid\_metric:g12 (1116) I complexgrid\_metric:g13 (1116) I complexgrid\_metric:g22 (1116) I complexgrid\_metric:g23 (1116) I complexgrid\_metric:g33 (1116) I complexgrid\_metric:jacobian (1116) I complexgrid\_metric:measure (1116) I complexgrid\_vector:comp (1124) I complexgrid\_vector\_simplestruct:comp (1125) I edge\_fluid\_scalar:bndvalue (1204) I edge\_fluid\_scalar:source (1204) I edge\_fluid\_scalar:value (1204) I edge\_fluid\_scalar\_simplestruct:source (1205) I edge\_fluid\_scalar\_simplestruct:value (1205) I edge\_kinetic.distribution

(1210) I edge\_kinetic\_distribution:source (1210) I edge\_kinetic\_distribution:value (1210) I f\_expansion:values (1225) I plasma:energy (1323) I plasma:flux (1323) I source\_rate:value (1407)

#### 9.4.1.3.76 complexgrid\_scalar\_cplx

A quantity stored on a grid. The data is given either as a vector of scalars, vectors or matrices.; Note that the vector and matrix storage methods are not meant for multidimensional data, but; for complex data representations with multiple degrees of freedom.; To be used as arrays of structure; FIXME: add non-timedependent element "label" of type string

member	type	description
griduid	integer (9.4.1.1.2)	Unique identifier of the grid this scalar quantity is associated with.
subgrid	integer (9.4.1.1.2)	Index of the subgrid (as stored in grid.subgrids) the data is stored on.
scalar	vecplx_type (9.4.1.3.406)	Scalar representation of data. One scalar entry is stored per object in the subgrid.; The order is implicitly defined by the subgrid.; Complex Vector(nobjects_subgrid). First dimension: object index.
vector	matcplx_type (9.4.1.3.238)	Vector representation of data. One vector is stored per object in the subgrid. The order is implicitly defined by the subgrid.; Complex matrix(nobjects_subgrid, ndata).First dimension: object index, second dimension: index of data vector.
matrix	array3dcplx_type (9.4.1.3.54)	Matrix representation of data. One matrix is stored per object in the subgrid. The order is implicitly defined by the subgrid.; 3d complex array(nobjects_subgrid,ndata1,ndata2). First dimension: object index, second dimension: matrix row, third dimension: matrix column.

Type of: e\_components:b\_binorm (1200) I e\_components:b\_norm (1200) I e\_components:b\_para (1200) I e\_components:e\_binorm (1200) I e\_components:e\_minus (1200) I e\_components:e\_norm (1200) I e\_components:e\_para (1200) I e\_components:e\_plus (1200)

#### 9.4.1.3.77 complexgrid\_scalar\_int

A quantity stored on a grid. The data is given either as a vector of scalars, vectors or matrices.; Note that the vector and matrix storage methods are not meant for multidimensional data, but; for complex data representations with multiple degrees of freedom.; To be used as arrays of structure; FIXME: add non-timedependent element "label" of type string

member	type	description
griduid	integer (9.4.1.1.2)	Unique identifier of the grid this scalar quantity is associated with.
subgrid	integer (9.4.1.1.2)	Index of the subgrid (as stored in grid.subgrids) the data is stored on.
scalar	vecint_type (9.4.1.2.10)	Scalar representation of data. One scalar entry is stored per object in the subgrid.; The order is implicitly defined by the subgrid.; Float Vector(nobjects_subgrid). First dimension: object index.
vector	matint_type (9.4.1.2.8)	Vector representation of data. One vector is stored per object in the subgrid. The order is implicitly defined by the subgrid.; Float matrix(nobjects_subgrid, ndata).First dimension: object index, second dimension: index of data vector.
matrix	array3dint_type (9.4.1.2.2)	Matrix representation of data. One matrix is stored per object in the subgrid. The order is implicitly defined by the subgrid.; 3d float array(nobjects_subgrid,ndata1,ndata2). First dimension: object index, second dimension: matrix row, third dimension: matrix column.

Type of: surface:wall\_type (1422)

#### 9.4.1.3.78 complexgrid\_scalar\_simplestruct

A quantity stored on a grid. The data is given either as a vector of scalars, vectors or matrices.; Note that the vector and matrix storage methods are not meant for multidimensional data, but; for complex data representations with multiple degrees of freedom.; To be used as a simple structure; FIXME: add non-timedependent element "label" of type string

member	type	description
subgrid	integer (9.4.1.1.2)	Index of the subgrid (as stored in grid.subgrids) the data is stored on.
scalar	vecflt_type (9.4.1.2.9)	Scalar representation of data. One scalar entry is stored per object in the subgrid.; The order is implicitly defined by the subgrid.; Float Vector(nobjects_subgrid). First dimension: object index.
vector	matflt_type (9.4.1.2.7)	Vector representation of data. One vector is stored per object in the subgrid. The order is implicitly defined by the subgrid.; Float matrix(nobjects_subgrid, ndata).First dimension: object index, second dimension: index of data vector.
matrix	array3dfilt_type (9.4.1.2.1)	Matrix representation of data. One matrix is stored per object in the subgrid. The order is implicitly defined by the subgrid.; 3d float array(nobjects_subgrid,ndata1,ndata2). First dimension: object index, second dimension: matrix row, third dimension: matrix column.

### 9.4.1.3.79 complexgrid\_space

Description of a grid space

member	type	description
geotype	vecint.type (9.4.1.2.10)	Type of space geometry (id flags). Flags defining how the geometry (objects.geo) fields associated with; space objects are to be interpreted. Array (number of geometries defined for this space); first dimension: geometry index. A flag value of GRID.UNDEFINED=0 indicates the standard interpretation for; the given coordinates.
geotypeid	vecstring.type (9.4.1.2.11)	Type of space geometries (id string). See geotype.
coordtype	matint.type (9.4.1.2.8)	Type of coordinates describing the physical space. Vector (number of space dimensions); The size of coordtype defines the dimension of the space.; For predefined integer constants for standard coordinates see; the documentation of the grid service library.
objects(:)	objects (9.4.1.3.259)	Definition of the space objects.; Array of structures (dimension of highest-dimensional objects); First dimension: dimension of the objects (1=nodes, 2=edges, 3=faces, 4=cells/volumes, ...)
xpoints	vecint.type (9.4.1.2.10)	List of indices of all nodes which are x-points. Vector (number of x-points)

Type of: complexgrid:spaces (1113)

### 9.4.1.3.80 complexgrid\_subgrid

Subgrid definition. A subgrid is a list of grid objects, given as a list of explicit or implicit object lists.

member	type	description
id	string (9.4.1.1.3)	ID string (name) of the subgrid.
list(:)	complexgrid_objectlist (9.4.1.3.74)	List of object lists. Array of structures (number of object lists).

Type of: complexgrid:subgrids (1113)

### 9.4.1.3.81 complexgrid\_vector

A vector quantity stored on a grid, with components possibly explicitly aligned to a coordinate direction. To be used as array of structure.

member	type	description
griduid	integer (9.4.1.1.2)	Unique identifier of the grid this vector quantity is associated with.
label	string (9.4.1.1.3)	Label describing the data
comp(:)	complexgrid_scalar (9.4.1.3.75)	Components of the vector. Array of structures (number of vector components). Time-dependent; FIXME: inherit time-dependence for this element
align	vecint.type (9.4.1.2.10)	Alignment flag for vector components. Integer vector (number of vector components).
alignid	vecstring.type (9.4.1.2.11)	Alignment id for vector components. String vector (number of vector components).
basis	integer (9.4.1.1.2)	Index of basis (defined in associated grid) this vector is aligned to; If set to GRID.UNDEFINED=0, the canonical basis of the default coordinates of the grid assumed.

Type of: complexgrid:bases (1113) I edge\_fluid:b (1203) I edge\_fluid\_scalar:bndflux (1204) I edge\_fluid\_scalar:flux (1204) I edge\_fluid\_scalar\_simplestruct:bndflux (1205) I edge\_fluid\_scalar\_simplestruct:flux (1205) I edge\_kinetic\_distribution (1210)

### 9.4.1.3.82 complexgrid\_vector\_simplestruct

A vector quantity stored on a grid, with components possibly explicitly aligned to a coordinate direction. To be used as simple structure

member	type	description
label	string (9.4.1.1.3)	Label describing the data
comp(:)	complexgrid_scalar (9.4.1.3.75)	Components of the vector. Vector of griddata(ndim). Time-dependent; FIXME: inherit time-dependence for this element
align	vecint.type (9.4.1.2.10)	Alignment of vector components, numerical flag. Int vector(ndim)
alignid	vecstring.type (9.4.1.2.11)	Alignment of vector components, string description. String vector(ndim)

Type of: edge\_fluid\_scalar\_transpcoeff:d (1206) I edge\_fluid\_scalar\_transpcoeff:v (1206) I plasma:b (1323)

### 9.4.1.3.83 composition

Plasma composition (description of ion species).

member	type	description
amn	vecflt.type (9.4.1.2.9)	Atomic mass number (lumped ions are allowed); Vector (nion)
zn	vecflt.type (9.4.1.2.9)	Nuclear charge (lumped ions are allowed); Vector (nion)
zion	vecflt.type (9.4.1.2.9)	Ion charge (of the dominant ionisation state; lumped ions are allowed); Vector (nion)
imp_flag	vecint.type (9.4.1.2.10)	Multiple charge state calculation flag : 0-Only one charge state is considered; 1-Multiple charge state are considered and are described in impurity CPO; Vector (nion)
label	vecstring.type (9.4.1.2.11)	Label for the ions - note the charge state is not included; String Vector (nion)

Type of: coherentwave:composition (1110) I coredelta:composition (1049) I coreneutrals:composition (1051) I coreprof:composition (1052) I coresource:composition (1053) I coretransp:composition (1054) I distribution:composition (1056) I distsource:composition (1057) I neoclassic:composition (1074) I sawteeth:composition (1081)

### 9.4.1.3.84 composition\_neutrals

Description of neutrals species

member	type	description
atomlist(:)	coreneutrals_atomlist (9.4.1.3.107)	List of the atoms that enter the composition of the neutral species. Vector(natm)
neutral(:)	composition_neutralscomp (9.4.1.3.86)	List of neutrals. Vector(nneut)

Type of: coreneutrals:neutcompo (1051)

### 9.4.1.3.85 composition\_neutrals\_neutcomp

Array of components to the atom or molecule. Vector (ncomp)

member	type	description
nucindex	integer (9.4.1.1.2)	Index into list of nuclei; int
multiplicity	integer (9.4.1.1.2)	Multiplicity of the atom; int

Type of: composition\_neutralscomp:neutcomp (1129)

### 9.4.1.3.86 composition\_neutralscomp

Array of neutrals.

member	type	description
neutcomp(:)	composition_neutrals_neutcomp (9.4.1.3.85)	Array of components to the atom or molecule. Vector (ncomp)
type(:)	identifier (9.4.1.3.213)	Type of neutral, in terms of energy : 0=cold, 1=thermal, 2= fast, 3=NBI. Vector (ntype) of identifiers
label	string (9.4.1.1.3)	String identifying the atom or molecule (e.g. D2, DT, CD4, ...)

Type of: composition\_neutrals:neutral (1127) I compositions\_type:neutralscomp (1130)

### 9.4.1.3.87 compositions\_type

Attempt to a generic declaration of Plasma composition for a simulation

member	type	description
nuclei(:)	nuclei (9.4.1.3.258)	Array of nuclei considered.
ions(:)	ions (9.4.1.3.218)	Array of main plasma ions.
impurities(:)	impurities (9.4.1.3.215)	Array of impurities.
neutralscomp(:)	composition_neutralscomp (9.4.1.3.86)	Array of neutrals.
edgespecies(:)	edgespecies (9.4.1.3.169)	Array of edge species.

member	type	description
signature	identifier (9.4.1.3.213)	Identifier for species choices. The goal of this is to uniquely capture the species blocks so that if the signatures are the same then the species blocks will also be the same.

Type of: coherentwave:compositions (1110) I compositionc:compositions (1048) I coredelta:compositions (1049) I coreimpur:compositions (1050) I coreneutrals:compositions (1051) I coreprof:compositions (1052) I coresource:compositions (1053) I coretransp:compositions (1054) I distribution:compositions (1056) I distsource:compositions (1057) I edge:compositions (1059) I neoclassic:compositions (1074)

#### 9.4.1.3.88 compound\_desc

Description of chemical compounds used in wall element layer compositions

member	type	description
label	string (9.4.1.1.3)	Compound name/label
stoichiometry	vecflt.type (9.4.1.2.9)	Composition of the compound. Float vector, dimensions: 1. element number (numbering as in surface.elements array)
density	float (9.4.1.1.1)	Compound density (molecules/m <sup>3</sup> )

Type of: surface:compounds (1422)

#### 9.4.1.3.89 coord\_sys

flux surface coordinate system on a square grid of flux and angle

member	type	description
grid_type	string (9.4.1.1.3)	Type of coordinate system
grid	reggrid (9.4.1.3.314)	Regular grid definition; Time-dependent
jacobian	matflt.type (9.4.1.2.7)	Jacobian of the coordinate system; Time-dependent; Matrix (ndim1, ndim2)
g_11	matflt.type (9.4.1.2.7)	metric coefficients g_11; g_ij=g <sup>-ij</sup> are contravariant metric tensor for the grid described by grid_type. Time-dependent; Matrix (ndim1, ndim2)
g_12	matflt.type (9.4.1.2.7)	metric coefficients g_12; g_ij=g <sup>-ij</sup> are contravariant metric tensor for the grid described by grid_type. Time-dependent; Matrix (ndim1, ndim2)
g_13	matflt.type (9.4.1.2.7)	metric coefficients g_13; g_ij=g <sup>-ij</sup> are contravariant metric tensor for the grid described by grid_type. Time-dependent; Matrix (ndim1, ndim2)
g_22	matflt.type (9.4.1.2.7)	metric coefficients g_22; g_ij=g <sup>-ij</sup> are contravariant metric tensor for the grid described by grid_type. Time-dependent; Matrix (ndim1, ndim2)
g_23	matflt.type (9.4.1.2.7)	metric coefficients g_23; g_ij=g <sup>-ij</sup> are contravariant metric tensor for the grid described by grid_type. Time-dependent; Matrix (ndim1, ndim2)
g_33	matflt.type (9.4.1.2.7)	metric coefficients g_33; g_ij=g <sup>-ij</sup> are contravariant metric tensor for the grid described by grid_type. Time-dependent; Matrix (ndim1, ndim2)
position	rz2D (9.4.1.3.322)	R and Z position of grid points; Time-dependent; Matrix (ndim1, ndim2)

Type of: equilibrium:coord\_sys (1061) I mhd\_plasma:coord\_sys (1284) I mhd\_vacuum:coord\_sys (1286)

#### 9.4.1.3.90 coordinates

Poloidal and Toroidal coordinates of the center of each hole;

member	type	description
theta	vecflt.type (9.4.1.2.9)	Theta coordinate of holes center; Vector (n_holes)
phi	vecflt.type (9.4.1.2.9)	Toroidal coordinate of holes center; Vector (n_holes)

Type of: holes:coordinates (1255)

#### 9.4.1.3.91 coords

Specification of coordinates in one dimension. Can be either a range of real values or a set of discrete values (if interp\_type=0).

member	type	description
coord	vecflt.type (9.4.1.2.9)	Coordinate values. Vector(npoints).
coord_label	vecstring.type (9.4.1.2.11)	String description of discrete coordinate values (if interp_type=0). Vector(npoints). E.g., for spectroscopic lines, the spectroscopic description of the transition.



member	type	description
extrap_type	vecint_type (9.4.1.2.10)	Extrapolation strategy when leaving the domain. Vector(2). Entry 1: behaviour at lower bound, entry 2: behaviour at upper bound.; Possible values: 0=none, report error; 1=boundary value; 2=linear extrapolation;
interp_type	integer (9.4.1.1.2)	Interpolation strategy in this coordinate direction. Integer flag: 0=discrete (no interpolation); 1=linear; ...
label	string (9.4.1.1.3)	Description of coordinate (e.g. "Electron temperature")
unit	string (9.4.1.1.3)	Units of coordinate (e.g. [eV])
transform	integer (9.4.1.1.2)	Coordinate transformation applied to coordinate values stored in coord. Integer flag: 0=none; 1=log10; 2=ln
spacing	integer (9.4.1.1.2)	Flag for specific coordinate spacing (for optimization purposes). Integer flag: 0=undefined; 1=uniform; ...

Type of: tables\_coord:coords (1425)

### 9.4.1.3.92 coredelta\_values

Description of the delta term for a given origin

member	type	description
deltaid	identifier (9.4.1.3.213)	Identifier for the origin of the delta terms (see conventions in the ITM website)
rho_tor	vecflt_type (9.4.1.2.9)	Toroidal flux coordinate (not normalised, equivalent to rho_tor_norm) [m]; Vector (nrho). Time-dependent.
rho_tor_norm	vecflt_type (9.4.1.2.9)	Normalised toroidal flux coordinate values (= rho_tor normalised to the value at the last grid point); Time-dependent; Vector (nrho)
delta_psi	vecflt_type (9.4.1.2.9)	Instant change of the poloidal flux [Wb]. Time-dependent. Vector(nrho).
delta_te	vecflt_type (9.4.1.2.9)	Instant change of the electron temperature [eV]. Time-dependent. Vector(nrho).
delta_ti	matflt_type (9.4.1.2.7)	Instant change of the ion temperature [eV]. Time-dependent. Matrix (nrho,nion).
delta_tz	array3dflt_type (9.4.1.2.1)	Instant change of the impurity (multiple charge states) temperature [eV]. Time-dependent. Array3d (nrho,nimp,max_nzimp).
delta_ne	vecflt_type (9.4.1.2.9)	Instant change of the electron density [m <sup>-3</sup> ]. Time-dependent. Vector(nrho).
delta_ni	matflt_type (9.4.1.2.7)	Instant change of the ion density [m <sup>-3</sup> ]. Time-dependent. Matrix (nrho,nion).
delta_nz	array3dflt_type (9.4.1.2.1)	Instant change of the impurity (multiple charge states) density [m <sup>-3</sup> ]. Time-dependent. Array3d (nrho,nimp,max_nzimp).
delta_vtor	matflt_type (9.4.1.2.7)	Instant change of the toroidal toroidal velocity [m.s <sup>-1</sup> ]. Time-dependent. Matrix (nrho,nion).
codeparam	codeparam (9.4.1.3.65)	Code parameters

Type of: coredelta:values (1049)

### 9.4.1.3.93 corefield

Structure for a main field of core transport equations; Time-dependent;

member	type	description
value	vecflt_type (9.4.1.2.9)	Signal value; Time-dependent; Vector (nrho)
ddrho	vecflt_type (9.4.1.2.9)	Radial derivative (dvalue/drho_tor) [signal.value.unit.m <sup>-1</sup> ]; Time-dependent; Vector (nrho)
d2drho2	vecflt_type (9.4.1.2.9)	Second order radial derivative (d2value/drho_tor <sup>2</sup> ) [signal.value.unit.m <sup>-2</sup> ]; Time-dependent; Vector (nrho)
ddt	vecflt_type (9.4.1.2.9)	Time derivative (dvalue/dtime) [signal.value.unit.s <sup>-1</sup> ]; Time-dependent; Vector (nrho)
source	string (9.4.1.1.3)	Source of the profile (any comment describing the origin of the profile : code, path to diagnostic signals, massaging, ...); String
flag	integer (9.4.1.1.2)	Flag describing how the profile has been processed : 0-not calculated 1-interpretative; 2-calculated by the transport solver; 3-calculated by a separate code : in that case only, description of the code provided in codeparam at the same level; 4-used value from the previous time step; Time-dependent; Scalar
boundary	boundaryel (9.4.1.3.60)	Boundary condition for the transport equation. Time-dependent.
source_term	sourceel (9.4.1.3.366)	Total source term for the transport equation. Time-dependent.
transp_coef	coretransel (9.4.1.3.112)	Total transport coefficients. Time-dependent.
flux	fluxel (9.4.1.3.186)	Fluxes of the quantity, two definitions. Time-dependent.
flux_dv_surf	vecflt_type (9.4.1.2.9)	Net flux through the magnetic surface, i.e. integral over the magnetic surface area of flux_dv. Time-dependent; Vector (nrho)
time_deriv	vecflt_type (9.4.1.2.9)	Integral of the time derivative term of the transport equation. Time-dependent. Vector (nrho)
codeparam	codeparam (9.4.1.3.65)	Code parameters

Type of: coreprof:ne (1052) | coreprof:te (1052)



### 9.4.1.3.94 corefieldion

Structure for an ion field of core transport equations; Time-dependent;

member	type	description
value	matflt.type (9.4.1.2.7)	Signal value; Time-dependent; Matrix (nrho,nion)
ddrho	matflt.type (9.4.1.2.7)	Radial derivative (dvalue/drho.tor) [signal.value.unit.m <sup>-1</sup> ]; Time-dependent; Matrix (nrho,nion)
d2drho2	matflt.type (9.4.1.2.7)	Second order radial derivative (d2value/drho.tor <sup>2</sup> ) [signal.value.unit.m <sup>-2</sup> ]; Time-dependent; Matrix (nrho,nion)
ddt	matflt.type (9.4.1.2.7)	Time derivative (dvalue/dtime) [signal.value.unit.s <sup>-1</sup> ]; Time-dependent; Matrix (nrho,nion)
source	vecstring.type (9.4.1.2.11)	Source of the profile (any comment describing the origin of the profile : code, path to diagnostic signals, massaging, ...); Array of strings (nion)
flag	vecint.type (9.4.1.2.10)	Flag describing how the profile has been processed : 0-not calculated 1-interpretative; 2-calculated by the transport solver; 3-calculated by a separate code : in that case only, description of the code provided in codeparam at the same level; 4-used value from the previous time step; Time-dependent; Vector(nion)
boundary	boundaryion (9.4.1.3.62)	Boundary condition for the transport equation
source.term	sourceion (9.4.1.3.368)	Total source term for the transport equation. Time-dependent.
transp.coef	coretransion (9.4.1.3.114)	Total transport coefficients. Time-dependent.
flux	fluxion (9.4.1.3.188)	Fluxes of the quantity, two definitions. Time-dependent.
flux.dv.surf	matflt.type (9.4.1.2.7)	Net flux through the magnetic surface, i.e. integral over the magnetic surface area of flux.dv. Time-dependent; Matrix(nrho,nion)
time.deriv	matflt.type (9.4.1.2.7)	Integral of the time derivative term of the transport equation. Time-dependent. Matrix (nrho,nion)
codeparam	codeparam (9.4.1.3.65)	Code parameters

Type of: coreprof:ni (1052) I coreprof:ti (1052) I coreprof:vtor (1052)

### 9.4.1.3.95 corefieldneutral

Structure for a main field of core neutral transport equations; Time-dependent;

member	type	description
value	vecflt.type (9.4.1.2.9)	Signal value; Array1D(nrho). Time-dependent
flux	vecflt.type (9.4.1.2.9)	Net neutral flux through the magnetic surface, positive values correspond to the direction from the center to the edge [s <sup>-1</sup> ]. Array1D(nrho). Time-dependent;
boundary	boundary_neutrals (9.4.1.3.59)	Boundary condition for the transport equation. Time-dependent.

Type of: coreneutrals\_neutraltype:n0 (1151)

### 9.4.1.3.96 corefieldneutrale

Structure for a main field of core neutral transport equations, (Temperature, with flux as energy); Time-dependent;

member	type	description
value	vecflt.type (9.4.1.2.9)	Signal value; Array1D(nrho). Time-dependent
flux	vecflt.type (9.4.1.2.9)	Net flux of the kinetic energy through the magnetic surface (3/2*E*n*V), positive values correspond to the direction from the center to the edge [W]. Array1D(nrho). Time-dependent;
boundary	boundary_neutrals (9.4.1.3.59)	Boundary condition for the transport equation. Time-dependent.

Type of: coreneutrals\_neutraltype:t0 (1151)

### 9.4.1.3.97 corefieldneutralv

Structure for a main field of core neutral transport equations (without flux variable); Time-dependent;

member	type	description
value	vecflt.type (9.4.1.2.9)	Signal value; Vector(nrho). Time-dependent;
boundary	boundary_neutrals (9.4.1.3.59)	Boundary condition for the transport equation. Time-dependent.

Type of: corefieldneutralv0:poloidal (1141) I corefieldneutralv0:radial (1141) I corefieldneutralv0:toroidal (1141)

### 9.4.1.3.98 corefieldneutralv0

Neutral velocity

member	type	description
toroidal	corefieldneutralv (9.4.1.3.97)	Neutral velocity in the toroidal direction [m.s <sup>-1</sup> ]. Positive is anti-clockwise when viewed from above. Time-dependent;
poloidal	corefieldneutralv (9.4.1.3.97)	Velocity of neutrals in the poloidal direction. 0 is directed towards low field side, pi is towards high field side. Positive is anti-clockwise when viewed with low field side at the right. [m.s <sup>-1</sup> ]. Array3D(nrho,nneut,max_ntype). Time-dependent;
radial	corefieldneutralv (9.4.1.3.97)	Neutral velocity in the radial direction (perpendicular to the magnetic surface), positive is from the centre to the edge [m.s <sup>-1</sup> ]. Array3D(nrho,nneut,max_ntype). Time-dependent;

Type of: coreneutrals\_neutraltype:v0 (1151)

### 9.4.1.3.99 coreimpurdiag\_sum\_radiation

member	type	description
line_rad	coreimpurediagsum.type (9.4.1.3.106)	NO DOCS
brem_radrec	coreimpurediagsum.type (9.4.1.3.106)	NO DOCS
sum	coreimpurediagsum.type (9.4.1.3.106)	NO DOCS

Type of: coreimpurediag\_sum:radiation (1145)

### 9.4.1.3.100 coreimpurediag\_energy

member	type	description
ionization	coreimpurediagprof.type (9.4.1.3.105)	NO DOCS
recombin	coreimpurediagprof.type (9.4.1.3.105)	NO DOCS
sum	coreimpurediagprof.type (9.4.1.3.105)	NO DOCS

Type of: coreimpurediag\_type:energy (1147)

### 9.4.1.3.101 coreimpurediag\_radiation

member	type	description
line_rad	coreimpurediagprof.type (9.4.1.3.105)	NO DOCS
brem_radrec	coreimpurediagprof.type (9.4.1.3.105)	NO DOCS
sum	coreimpurediagprof.type (9.4.1.3.105)	NO DOCS

Type of: coreimpurediag\_type:radiation (1147)

### 9.4.1.3.102 coreimpurediag\_sum

member	type	description
radiation	coreimpurdiag_sum.radiation (9.4.1.3.99)	NO DOCS
energy	coreimpurediag_sum.energy (9.4.1.3.103)	NO DOCS

Type of: coreimpur:diagnosticsum (1050)

#### 9.4.1.3.103 coreimpurediag\_sum\_energy

member	type	description
ionization	coreimpurediagsum.type (9.4.1.3.106)	NO DOCS
recombin	coreimpurediagsum.type (9.4.1.3.106)	NO DOCS
sum	coreimpurediagsum.type (9.4.1.3.106)	NO DOCS

Type of: coreimpurediag\_sum:energy (1145)

#### 9.4.1.3.104 coreimpurediag\_type

member	type	description
radiation	coreimpurediag_radiation (9.4.1.3.101)	NO DOCS
energy	coreimpurediag_energy (9.4.1.3.100)	NO DOCS

Type of: coreimpur:diagnostic (1050) I impurity\_type:diagnostic (1259)

#### 9.4.1.3.105 coreimpurediagprof\_type

member	type	description
profile	matflt.type (9.4.1.2.7)	Profile of the radiation or energy sources. Time-dependent. Array2D (nrho,nzimp or nimp)
integral	matflt.type (9.4.1.2.7)	Running integral over nrho of the radiation or energy sources. Time-dependent. Array2D (nrho,nzimp or nimp)

Type of: coreimpurediag\_energy:ionization (1143) I coreimpurediag\_energy:recombin (1143) I coreimpurediag\_energy:sum (1143) I coreimpurediag\_radiation:brem\_radrec (1144) I coreimpurediag\_radiation:line\_rad (1144) I coreimpurediag\_radiation:sum (1144)

#### 9.4.1.3.106 coreimpurediagsum\_type

member	type	description
profile	vecflt.type (9.4.1.2.9)	Profile of the radiation or energy sources. Time-dependent. Array1D (nrho)
integral	vecflt.type (9.4.1.2.9)	Running integral over nrho of the radiation or energy sources. Time-dependent. Array1D (nrho)

Type of: coreimpurdiag\_sum\_radiation:brem\_radrec (1142) I coreimpurdiag\_sum\_radiation:line\_rad (1142) I coreimpurdiag\_sum\_radiation:sum (1142) I coreimpurediag\_sum\_energy:ionization (1146) I coreimpurediag\_sum\_energy:recombin (1146) I coreimpurediag\_sum\_energy:sum (1146)

#### 9.4.1.3.107 coreneutrals\_atomlist

List of the atoms that enter the composition of the neutral species. Vector(natm)

member	type	description
amn	float (9.4.1.1.1)	Atomic mass number; Float
zn	float (9.4.1.1.1)	Nuclear charge; Float
ionimptype	identifier (9.4.1.3.213)	Identifier whether ion in coreprof or impurity in coreimpur.
ionimpindex	integer (9.4.1.1.2)	Index in composition or desc.impur of the corresponding ion or impurity.

Type of: composition\_neutrals:atomlist (1127)

#### 9.4.1.3.108 coreneutrals\_neutraltype

Array (ntype) over neutral types.

member	type	description
n0	corefieldneutral (9.4.1.3.95)	Neutral density [m <sup>-3</sup> ]. Time-dependent;
t0	corefieldneutrale (9.4.1.3.96)	Neutral temperature [eV]. Time-dependent;
v0	corefieldneutralv0 (9.4.1.3.98)	Neutral velocity [m.s <sup>-1</sup> ]. Time-dependent;

Type of: neutral\_complex\_type:neutraltype (1299)

#### 9.4.1.3.109 coreprofile

Structure for core plasma profile; Time-dependent

member	type	description
value	vecflt_type (9.4.1.2.9)	Signal value; Time-dependent; Vector (nrho)
source	string (9.4.1.1.3)	Source of the profile (any comment describing the origin of the profile : code, path to diagnostic signals, massaging, ...); String

Type of: profiles1d:bpol (1329) I profiles1d:dpedt (1329) I profiles1d:dpi\_totdt (1329) I profiles1d:dvprimedt (1329) I profiles1d:e\_b (1329) I profiles1d:eparallel (1329) I profiles1d:jni (1329) I profiles1d:joh (1329) I profiles1d:jphi (1329) I profiles1d:jtot (1329) I profiles1d:pe (1329) I profiles1d:pi\_tot (1329) I profiles1d:pr\_parallel (1329) I profiles1d:pr\_perp (1329) I profiles1d:pr\_th (1329) I profiles1d:q (1329) I profiles1d:qei (1329) I profiles1d:shear (1329) I profiles1d:sigmapar (1329) I profiles1d:vloop (1329) I profiles1d:zeff (1329) I psi:sigma\_par (1331)

#### 9.4.1.3.110 coreprofion

Structure for core plasma ion profile; Time-dependent

member	type	description
value	matflt_type (9.4.1.2.7)	Signal value; Time-dependent; Vector (nrho,nion)
source	vecstring_type (9.4.1.2.11)	Source of the profile (any comment describing the origin of the profile : code, path to diagnostic signals, massaging, ...); Array of strings (nion)

Type of: profiles1d:mtor (1329) I profiles1d:ns (1329) I profiles1d:pi (1329) I profiles1d:wtor (1329)

#### 9.4.1.3.111 coresource.values

Description of the source terms for a given origin

member	type	description
sourceid	identifier (9.4.1.3.213)	Identifier for the origin of the source terms (see conventions in the ITM website)
rho.tor	vecflt_type (9.4.1.2.9)	Toroidal flux coordinate (not normalised, equivalent to rho.tor.norm) [m]; Vector (nrho). Time-dependent.
rho.tor.norm	vecflt_type (9.4.1.2.9)	Normalised toroidal flux coordinate values (= rho.tor normalised to the value at the last grid point); Time-dependent; Vector (nrho)
j	vecflt_type (9.4.1.2.9)	Parallel current source for psi transport equation, = average(j.B) / B0, where B0 = core-source/toroid_field/b0 [A.m <sup>-2</sup> ]. Vector(nrho). Time-dependent.
sigma	vecflt_type (9.4.1.2.9)	Induced parallel conductivity [ohm <sup>-1</sup> .m <sup>-1</sup> ]. EXACT DEFINITION PENDING. Vector(nrho). Time-dependent.
si	source_ion (9.4.1.3.361)	Particle source for ion density transport equation [m <sup>-3</sup> .s <sup>-1</sup> ]. Time-dependent.
se	source_vec (9.4.1.3.365)	Particle source for electron density transport equation [m <sup>-3</sup> .s <sup>-1</sup> ]. Time-dependent.
sz(:)	source_imp (9.4.1.3.360)	Particle source for impurity density transport equation [m <sup>-3</sup> .s <sup>-1</sup> ]. Time-dependent.
qi	source_ion (9.4.1.3.361)	Heat source for ion heat transport equations [W.m <sup>-3</sup> ]. Time-dependent.
qe	source_vec (9.4.1.3.365)	Heat source for electron heat transport equation [W.m <sup>-3</sup> ]. Time-dependent.
qz(:)	source_imp (9.4.1.3.360)	Heat source for impurity heat transport equations [W.m <sup>-3</sup> ]. Time-dependent.
ui	source_ion (9.4.1.3.361)	Toroidal torque on individual ion species; for toroidal momentum transport equation [kg.m <sup>-1</sup> .s <sup>-2</sup> ]. Time-dependent.
ujxb	source_vec (9.4.1.3.365)	Toroidal JxB torque on bulk plasma; for toroidal momentum transport equation [kg.m <sup>-1</sup> .s <sup>-2</sup> ]. Here J is the return current from fast ion radial currents Jfast=-J. Time-dependent.
codeparam	codeparam (9.4.1.3.65)	Code parameters

Type of: coresource:values (1053)

#### 9.4.1.3.112 coretransel

Structure for the transport coefficients for the transport equation (electrons). Time-dependent;

member	type	description
diff	vecflt_type (9.4.1.2.9)	Diffusion coefficient [ $m^2.s^{-1}$ ]. Time-dependent; Vector (nrho)
vconv	vecflt_type (9.4.1.2.9)	Convection coefficient [ $m.s^{-1}$ ]. Time-dependent; Vector (nrho)
source	string (9.4.1.1.3)	Source of the profile (any comment describing the origin of the profile : code, path to diagnostic signals, massaging, ...); String

Type of: corefield:transp\_coef (1136)

#### 9.4.1.3.113 coretransimp

Structure for the transport coefficients for the transport equation (impurities). Time-dependent;

member	type	description
diff	matflt_type (9.4.1.2.7)	Diffusion coefficient [ $m^2.s^{-1}$ ]. Time-dependent; Array2D(nrho,nzimp)
vconv	matflt_type (9.4.1.2.7)	Convection coefficient [ $m.s^{-1}$ ]. Time-dependent; Array2D(nrho,nzimp)
source	vecstring_type (9.4.1.2.11)	Source of the profile (any comment describing the origin of the impurity profiles : code, path to diagnostic signals, massaging, ...); Array of strings (nimp)

Type of: impurity\_type:transp\_coef (1259)

#### 9.4.1.3.114 coretransion

Structure for the transport coefficients for the transport equation (ions). Time-dependent;

member	type	description
diff	matflt_type (9.4.1.2.7)	Diffusion coefficient [ $m^2.s^{-1}$ ]. Time-dependent; Matrix (nrho,nion)
vconv	matflt_type (9.4.1.2.7)	Convection coefficient [ $m.s^{-1}$ ]. Time-dependent; Matrix (nrho,nion)
source	vecstring_type (9.4.1.2.11)	Source of the profile (any comment describing the origin of the profile : code, path to diagnostic signals, massaging, ...); Array of strings (nion)

Type of: corefieldion:transp\_coef (1137)

#### 9.4.1.3.115 coretransp\_values

Description of transport term coming from various origins. Array of structure (ntransp)

member	type	description
transportid	identifier (9.4.1.3.213)	Identifier for the origin of the transport terms (see conventions in the ITM website)
rho_tor_norm	vecflt_type (9.4.1.2.9)	Normalised toroidal flux coordinate values (= rho_tor normalised to the value at the last grid point); Time-dependent; Vector (nrho)
rho_tor	vecflt_type (9.4.1.2.9)	Toroidal flux coordinate (not normalised, equivalent to rho_tor_norm) [m]; Vector (nrho). Time-dependent.
sigma	vecflt_type (9.4.1.2.9)	Parallel conductivity [ $ohm^{-1}.m^{-1}$ ]. Time-dependent. Vector(nrho).
ni_transp	ni_transp (9.4.1.3.257)	Transport coefficients for ion density equation. Time-dependent.
ne_transp	ne_transp (9.4.1.3.255)	Transport coefficients for electron density equation. Time-dependent.
nz_transp(:)	transcoefimp (9.4.1.3.390)	Transport coefficients for impurity (multiple charge state) density equation. Time-dependent.
ti_transp	transcoefion (9.4.1.3.391)	Transport coefficients for ion temperature equation. Time-dependent.
te_transp	transcoefel (9.4.1.3.389)	Transport coefficients for electron temperature equation. Time-dependent.
tz_transp(:)	transcoefimp (9.4.1.3.390)	Transport coefficients for impurity (multiple charge state) temperature equation. Time-dependent.
vtor_transp	transcoefvtor (9.4.1.3.392)	Transport coefficients for toroidal velocity equation. Time-dependent.
codeparam	codeparam (9.4.1.3.65)	Code parameters

Type of: coretransp:values (1054)

#### 9.4.1.3.116 cplx\_type

Temporary structure for real and imaginary part of complex numbers (scalar)

member	type	description
re	float (9.4.1.1.1)	Real part
im	float (9.4.1.1.1)	Imaginary part

#### 9.4.1.3.117 cxmeasure

Measured values

member	type	description
ti	exp1D (9.4.1.3.180)	Ion temperature [eV]. Vector (nchannels)
vtor	exp1D (9.4.1.3.180)	Toroidal velocity [m/s]. Vector (nchannels)
vpol	exp1D (9.4.1.3.180)	Poloidal velocity [m/s]. Vector (nchannels)

Type of: cxdiag:measure (1055)

#### 9.4.1.3.118 cxsetup

diagnostic setup information

member	type	description
position	rzphi1Dexp (9.4.1.3.326)	Position of the measurement. Time-dependent. Vector (nchannels)

Type of: cxdiag:setup (1055)

#### 9.4.1.3.119 data\_release

Stores information about each entry available at this version.

member	type	description
shot	integer (9.4.1.1.2)	Shot number = Mass*100+Nuclear.charge.
run	integer (9.4.1.1.2)	Which run number is the active run number for this version.
description	vecstring.type (9.4.1.2.11)	Possible description of why this version of the data is the current version.

Type of: version\_ind:data\_release (1450)

#### 9.4.1.3.120 datainfo

Generic information on a data item

member	type	description
dataprovder	string (9.4.1.1.3)	Name of the actual data provider (the person who filled the data)
putdate	string (9.4.1.1.3)	Date at which the data has been put in the DB
source	string (9.4.1.1.3)	Exact reference of the data source (e.g. original reference in the native machine data base)
comment	string (9.4.1.1.3)	Any additional comment
cocos	integer (9.4.1.1.2)	COordinates CONventionS followed by this CPO
id	integer (9.4.1.1.2)	CPO id for checking its provenance in the workflow
isref	integer (9.4.1.1.2)	1 if the data can be found in the present data base entry; 2 if the data can be found in a parent data base entry; 0 if no data consistent with the present entry can be found.
whatref	whatref (9.4.1.3.426)	Structure defining a database entry and the CPO occurrence
putinfo	putinfo (9.4.1.3.289)	Level 2 information describing how to retrieve the actual data for the UAL. Not to be filled/used by the ITM user !

Type of: amns:datainfo (1046) I antennas:datainfo (1047) I compositionc:datainfo (1048) I coredelta:datainfo (1049) I coreimpur:datainfo (1050) I coreneutrals:datainfo (1051) I coreprof:datainfo (1052) I coresource:datainfo (1053) I coretransp:datainfo (1054) I cxdiag:datainfo (1055) I distribution:datainfo (1056) I distsource:datainfo (1057) I ecediag:datainfo (1058) I edge:datainfo (1059) I efcc:datainfo (1060) I equilibrium:datainfo (1061) I flush:datainfo (1227) I fusiondiag:datainfo (1062) I halphadiag:datainfo (1063) I ironmodel:datainfo (1065) I langmuirdiag:datainfo (1066) I launches:datainfo (1067) I limiter:datainfo (1068) I lineintegraldiag:datainfo (1274) I lithiumdiag:datainfo (1069) I magdiag:datainfo (1070) I mhd:datainfo (1071) I msediag:datainfo (1072) I nbi:datainfo (1073) I neoclassic:datainfo (1074) I orbit:datainfo (1075) I pellets:datainfo (1076) I pfsystems:datainfo (1077) I reference:datainfo (1079) I rfadiag:datainfo (1080) I sawteeth:datainfo (1081) I scenario:datainfo (1082)

I summary:datainfo (1083) I toroidfield:datainfo (1085) I tsdiag:datainfo (1086) I turbulence:datainfo (1087) I vessel:datainfo (1088) I wall:datainfo (1089) I waves:datainfo (1090)

#### 9.4.1.3.121 deposprofile

Deposition profile ( $m^{-3}$ ). This deposition profile only makes sense after the ablated pellet cloud interacts via some transport processes with the plasma. This is why we add a time delay stamp to the profile in reference to the ablation rate profile. Time-dependent. Vector (npos)

member	type	description
rho_tor	vecflt.type (9.4.1.2.9)	Toroidal flux coordinate [m], to be used by the ETS and in many CPOs (coreprof, ...). Defined as $\sqrt{\phi/\pi/B_0}$ , where $B_0 = \text{equilibrium/global\_param/toroid\_field}/b_0$ . Time-dependent; Vector (npsi)
density	vecflt.type (9.4.1.2.9)	Density increase (deposition profile); ( $m^{-3}$ )
position	rzphi1D (9.4.1.3.325)	Coordinates for ablation rate
delay	float (9.4.1.1.1)	Time delay between the deposition profile and the ablation profile; Scalar; Time-dependent (s)

Type of: pellets:deposprofile (1076)

#### 9.4.1.3.122 desc\_coils

Description of the coils

member	type	description
name	string (9.4.1.1.3)	Name of coil.
res	float (9.4.1.1.1)	Coil resistance [Ohm]
nturns	integer (9.4.1.1.2)	number of turns inside the coil
closed	string (9.4.1.1.3)	Identify whether the coil is closed (y) or open (n). For closed coils there is no need to replicate the first r,z,phi point as last point
edges(:)	edges (9.4.1.3.168)	Edges defining the coil volume faces. Structure array. Replicate this edge structure N-times for N-edge cross sections. Use just one for wire coil approximation.

Type of: coil:desc\_coils (1111)

#### 9.4.1.3.123 desc\_impur

Description of the impurities (list of ion species and possibly different charge states)

member	type	description
amn	vecflt.type (9.4.1.2.9)	Atomic mass number of the impurity; Vector (nimp)
zn	vecint.type (9.4.1.2.10)	Nuclear charge of the impurity; Vector (nimp)
i_ion	vecint.type (9.4.1.2.10)	Index of the impurity species in the coreprof ion species ordering. Vector (nimp)
nzimp	vecint.type (9.4.1.2.10)	Number of charge states (or bundles) considered for each impurity species. Vector (nimp)
zmin	matint.type (9.4.1.2.8)	Minimum Z of impurity ionisation state bundle. Matrix (nimp,max_nzimp)
zmax	matint.type (9.4.1.2.8)	Maximum Z of impurity ionisation state bundle. If no bundle, zmax=zmin. Matrix (nimp,max_nzimp)
label	vecstring.type (9.4.1.2.11)	Label for the impurities - note that the charge state is not included; String Vector (nimp)

Type of: coredelta:desc\_impur (1049) I coreimpur:desc\_impur (1050) I coreneutrals:desc\_impur (1051) I coreprof:desc\_impur (1052) I coresource:desc\_impur (1053) I coretransp:desc\_impur (1054) I neoclassic:desc\_impur (1074)

#### 9.4.1.3.124 desc\_iron

Description of the iron segments

member	type	description
name	vecstring.type (9.4.1.2.11)	Name of circuit. Array of strings (ncircuit).
id	vecstring.type (9.4.1.2.11)	ID of circuit. Array of strings (ncircuit).
permeability	permeability (9.4.1.3.270)	Permeability model (can be different for each iron segment)
geom_iron	geom_iron (9.4.1.3.206)	Geometry of the iron segments

Type of: ironmodel:desc\_iron (1065)

#### 9.4.1.3.125 desc\_pfcoils

Description of the coils

member	type	description
name	vecstring.type (9.4.1.2.11)	Name of coil. Array of strings (ncoils)
id	vecstring.type (9.4.1.2.11)	ID of coil. Array of strings (ncoils)
res	vecflt.type (9.4.1.2.9)	Coil resistance [Ohm]; Vector (ncoils)
emax	vecflt.type (9.4.1.2.9)	Maximum Energy to be dissipated in coils [J]; Vector (ncoils)
nelement	vecint.type (9.4.1.2.10)	Number of elements used to describe a coil; Vector (ncoils)
pfelement	pfelement (9.4.1.3.273)	Axisymmetric conductor description

Type of: pfcoils:desc\_pfcoils (1315)

#### 9.4.1.3.126 desc\_supply

Description of the power supplies

member	type	description
name	vecstring.type (9.4.1.2.11)	Name of the supply; Array of strings (nsupplies)
id	vecstring.type (9.4.1.2.11)	ID of the supply; Array of strings (nsupplies)
type	vecstring.type (9.4.1.2.11)	Type of supply; Array of strings (nsupplies)
delay	vecflt.type (9.4.1.2.9)	Pure delay in the supply [s]; Vector (nsupplies)
filter	filter (9.4.1.3.183)	Laplace proper filter
imin	vecflt.type (9.4.1.2.9)	Minimum current [A]; Vector (nsupplies)
imax	vecflt.type (9.4.1.2.9)	Maximum current [A]; Vector (nsupplies)
res	vecflt.type (9.4.1.2.9)	Supply internal resistance [Ohm]; Vector (nsupplies)
umin	vecflt.type (9.4.1.2.9)	Minimum voltage [V]; Vector (nsupplies)
umax	vecflt.type (9.4.1.2.9)	Maximum voltage [V]; Vector (nsupplies)
emax	vecflt.type (9.4.1.2.9)	Maximum Energy to be dissipated in supply [J]; Vector (nsupplies)

Type of: pfsupplies:desc\_supply (1320)

#### 9.4.1.3.127 diag\_func

Structure to provide the description on the detector used and store the transfer matrix of the detector for that l.o.s.

member	type	description
description	string (9.4.1.1.3)	Short description of the detector with reference to the number of cells (ncells).
transf_mat	matflt.type (9.4.1.2.7)	Transfer matrix of the detector. Each l.o.s. might have a dedicated detector response function and energy resolution (and number of cells). Time-independent. Matrix (ncells, nenergy)

Type of: fusiondiag\_detect.ct.energy:diag\_func (1242)

#### 9.4.1.3.128 dist\_ff

Distribution function of e.g. ions, or electrons; the density of particles in the velocity space, the real space and spin state. The grid is split into topological regions, which could overlap in coordinate space (i.e. one coordinate can correspond to more than one orbit). The number of topological region is given by nregion\_topo. For nregion\_topo=2 the topology should be that of a high aspect ratio tokamak with two topological regions, where the passing orbits moving counter to the plasma current are stored in region\_topo=2 and all other orbits are stored in region\_topo=1. For nregion\_topo > 2 (e.g. for spherical tokamaks) the topology should be described in the field topology.

member	type	description
grid_info	dist_grid_info (9.4.1.3.132)	Specification of grids used in topo_regions. Grid coordinates could either be invariants of motion, or information at single point along orbit, e.g. xi and s for grid.coord=3. This point should always be on a so-called omnigenous surface (a generalised equatorial plane); grad(psi) x grad(B) = 0. All closed orbits cross omnigenous surfaces at least two times. The omnigenous surfaces are described in omnigen_surf.



member	type	description
topo_regions(:)	topo_regions (9.4.1.3.386)	List with distribution function in each topological region; Time-dependent. Structure array(nregion.topo)

Type of: dist\_func:f\_expan\_topo (1172)

#### 9.4.1.3.129 dist\_func

Distribution functions. The total distribution total distribution can either be given by the a set of markers/test particles (in markers), or by a gridded function (dist\_expand). Note that the gridded distribution can be written as sum of successive approximations, where each term is given by an element in the vector dist\_expand. Finally, the distribution can be written as a sum of a marker distribution and a gridded distribution, e.g. for delta-f Monte Carlo solution.

member	type	description
is_delta_f	integer (9.4.1.1.2)	If is_full_f=1, then the distribution represents the deviation from a Maxwellian; is_full_f=0, then the distribution represents all particles, i.e. the full-f solution.
markers	weighted_markers (9.4.1.3.425)	Distribution represented by a set of markers (test particles).
f_expan_topo(:)	dist_ff (9.4.1.3.128)	TO BE REMOVED. KEPT TEMPORARILY AS AN ALTERNATIVE TO f_expansion. [Distribution function, f, expanded into a vector of successive approximations (topology-based formulation, without the grid-cpo). The first element in the vector (f_expansion(1)) is the zeroth order distribution function, while the K:th element in the vector (f_expansion(K)) is the K:th correction, such that the total distribution function is a sum over all elements in the f_expansion vector. Time-dependent. Structure array(Nf_expansion)]
f_expansion(:)	f_expansion (9.4.1.3.182)	Distribution function, f, expanded into a vector of successive approximations. The first element in the vector (f_expansion(1)) is the zeroth order distribution function, while the K:th element in the vector (f_expansion(K)) is the K:th correction, such that the total distribution function is a sum over all elements in the f_expansion vector. Time-dependent. Structure array(Nf_expansion)

Type of: distri\_vec:dist\_func (1193)

#### 9.4.1.3.130 dist\_glob

Global parameters (in most cases volume integrated and surface averaged quantities).

member	type	description
n_particles	float (9.4.1.1.1)	Number of particles in the distribution (note: this is the number of real particles and not markers); Time-dependent
enrg	float (9.4.1.1.1)	Energy content of the distribution [J]; Time-dependent
enrg_para	float (9.4.1.1.1)	Parallel energy content of the distribution [J]; Time-dependent
pow_coll_i	vecflt_type (9.4.1.2.9)	Collisional power to ions [W]; Time-dependent; Matrix(nion)
pow_coll_e	float (9.4.1.1.1)	Collisional power to the electrons [W]; Time-dependent
therm_src	dist_src_snk_tot (9.4.1.3.147)	Source particles and power due to particles of the distribution species being thermalised (merging into the thermal plasma).
losses	dist_glob_dist_losses (9.4.1.3.131)	Losses of the distribution species (orbit losses and neutralisation losses).
cur_dr_tor	float (9.4.1.1.1)	Toroidal current of non-thermal particles (excluding electron back current for fast ions) [A]; Time-dependent.
trq_i	vecflt_type (9.4.1.2.9)	Collisional torque to background ions [N.m]; Time-dependent; Vector (nion)
trq_e	float (9.4.1.1.1)	Collisional torque to electrons [N.m]; Time-dependent
trq_j_rxb	float (9.4.1.1.1)	Torque due to radial currents of non-thermal particles [N.m]; Time-dependent.
nucl_reac_th	dist_nucl_reac_th (9.4.1.3.137)	Nuclear reactions between the calculated species and other species assumed to have thermal distributions.
nucl_reac_sf	dist_nucl_reac_sf (9.4.1.3.136)	Nuclear reactions of the calculated species with itself (thermal + non-thermal).

Type of: distri\_vec:global\_param (1193)

#### 9.4.1.3.131 dist\_glob\_dist\_losses

Losses of the distribution species (orbit losses and neutralisation losses).

member	type	description
orb_loss	dist_src_snk_tot (9.4.1.3.147)	Losses due to orbits intersecting a material surface.
neutr_loss	dist_src_snk_tot (9.4.1.3.147)	Losses due to neutralisation of distribution ions (charge exchange etc.)

Type of: `dist_glob:losses` (1173)

### 9.4.1.3.132 `dist_grid_info`

Specification of grids used in `topo_regions`. Grid coordinates could either be invariants of motion, or information at single point along orbit, e.g.  $\xi$  and  $s$  for `grid_coord=3`. This point should always be on a so-called omnigenous surface (a generalised equatorial plane);  $\text{grad}(\psi) \times \text{grad}(B) = 0$ . All closed orbits cross omnigenous surfaces at least two times. The omnigenous surfaces are described in `omnigen_surf`.

member	type	description
<code>grid_type</code>	integer (9.4.1.1.2)	Type of grid: 1=unstructured grid; 2=structured non-rectangular grid, here <code>ndim1=ndim2=ndim3</code> , <code>ndim21=ndim22=ndim23</code> , <code>ndim31=ndim32=ndim33</code> ; 3=rectangular grid, where grid coordinates are stored in the vectors <code>dim1(1:ndim1,1)</code> , <code>dim2(1,1:ndim2,1)</code> , <code>dim3(1,1,1:ndim3)</code>
<code>ngriddim</code>	integer (9.4.1.1.2)	Number of grid dimension. For <code>ngriddim=2</code> the grid is specified by <code>dim1</code> and <code>dim2</code> only, while <code>dim3</code> , <code>dim4</code> , <code>dim5</code> , <code>dim6</code> can be ignored (should not be allocated). For <code>ngriddim=3</code> also <code>dim3</code> is used to describe the grid etc. E.g. if your distribution is given by the three variables the poloidal flux, perpendicular and parallel velocities, then <code>ngriddim=3</code> and <code>grid_coord(1)=15</code> , <code>grid_coord(1)=16</code> , <code>grid_coord(3)=6</code> .
<code>grid_coord</code>	vecint_type (9.4.1.2.10)	Identifies the coordinates specifies in <code>dim1</code> , <code>dim2</code> , <code>dim3</code> , <code>dim4</code> , <code>dim5</code> , and <code>dim6</code> . <code>grid_coord(K)</code> describes the coordinate represented in <code>dimK</code> , for $K=1,2,\dots,6$ . The possible coordinates are: 1= $R$ , Major radius [m]; 2= $Z$ , Vertical position [m]; 3= $X$ , first cartesian coordinate in the horizontal plane [m]; 4= $Y$ , second cartesian coordinate in the horizontal plane ( $\text{grad}(X) \times \text{grad}(Y) = \text{grad}(Z)$ ) [m]; 5= $\phi$ , toroidal angle [rad]; 6= $\psi$ , poloidal magnetic flux [ $T \cdot m^2$ ]; 7= $\rho$ , the square root of the toroidal flux; 8= $\theta$ , geometrical poloidal angle [rad]; 9= $\theta_b$ , Boozer poloidal angle [rad]; 10= $v_x$ , velocity in the x-direction [m/s]; 11= $v_y$ , velocity in the y-direction [m/s]; 12= $v_z$ , velocity in the z-direction [m/s]; 13= $v$ , total velocity [m/s]; 14= $v_\phi$ , velocity in the phi-direction [m/s]; 15= $v_{\parallel}$ , velocity in the parallel direction [m/s]; 16= $v_{\perp}$ , velocity in the perpendicular direction [m/s]; 17= $E$ , Hamiltonian energy [J]; 18= $P_\phi$ , canonical toroidal angular momentum [ $kg \cdot m^2/s$ ]; 19= $\mu$ , magnetic moment [J/T]; 20= $\Lambda = \mu/E$ [1/T]; 21= $\text{pitch} = v_{\parallel}/v$ [-]; 22= $s$ , the position of the omnigenous plane (generalised equatorial plane) as described by the fields <code>omnigen_surf%<math>s</math></code> and <code>omnigen_surf%<math>r_z</math></code> ; 23= $\text{spin}$ ; 24= $n_{\text{Legendre}}$ , the index of the Legendre polynomial of the pitch, e.g. if the $k$ :th component of <code>dim3(1,1,k,1,1,1)=5</code> then this refer to the 5-th Legendre polynomial $P_5(\xi)$ . Vector (6)
<code>thin_orbits</code>	integer (9.4.1.1.2)	Specifies if guiding centre orbits are thin. Note: only used for orbit averaged distribution functions. For <code>thin_orbits=1</code> the orbit are considered thin, i.e. each orbit is bound to follow a single flux surface; for <code>thin_orbits=0</code> the orbits are assumed to follow guiding centre trajectories. E.g. <code>thin_orbits=0</code> using constants of motion as given in a generalised equatorial plane, then the orbit outside the equatorial plane are described by the guiding centre equations of motion.
<code>topology</code>	string (9.4.1.1.3)	Description of the topology of the grid. NOTE: only used for <code>nregion_topo&gt;2</code> .
<code>omnigen_surf(?)</code>	<code>omnigen_surf</code> (9.4.1.3.262)	List of omnigenous magnetic surfaces to which the $s$ -coordinates in <code>grid_coord</code> refer. NOTE: only used for <code>grid_coord=3</code> . NOTE: all guiding centre orbits intersect at least one omnigenous (or stagnation) surfaces, i.e. the omnigenous generalised the equatorial plane (the midplane). <code>nsurfs</code> =Number of omnigenous surfaces. Structure array( <code>nregion_topo</code> )

Type of: `dist_ff:grid_info` (1171)

### 9.4.1.3.133 `dist_input_src`

Input sources of particles and power for the distribution species (to aid diagnosing the code output).

member	type	description
<code>particle_src</code>	<code>dist_particle_src</code> (9.4.1.3.138)	Particle source
<code>wave_src</code>	<code>dist_wave_src</code> (9.4.1.3.149)	Auxiliary wave absorbed by the distribution species

Type of: `distri_vec:input_src` (1193)

### 9.4.1.3.134 `dist_markers`

Distribution given as a set of markers (test particles).

member	type	description
<code>nvar</code>	float (9.4.1.1.1)	Number of variables associated with a marker (test particle)

member	type	description
var.id	vecint.type (9.4.1.2.10)	Identification of phase space variables. var_id(K) describe the variable represented in varK, for K=1,2...7. The possible variables are: 1=R, Major radius [m]; 2=Z, Vertical position [m]; 3=X, first cartesian coordinate in the horizontal plane [m]; 4=Y, second cartesian coordinate in the horizontal plane ( $\text{grad}(X) \times \text{grad}(Y) = \text{grad}(Z)$ ) [m]; 5=phi, toroidal angle [rad]; 6=psi, poloidal magnetic flux [ $\text{T} \cdot \text{m}^2$ ]; 7=rhotor, the square root of the toroidal flux; 8=theta, geometrical poloidal angle [rad]; 9=theta.b, Boozer poloidal angle [rad]; 10=vx, velocity in the x-direction [m/s]; 11=vy, velocity in the y-direction [m/s]; 12=vz, velocity in the z-direction [m/s]; 13=vel, total velocity [m/s]; 14=vphi, velocity in the phi-direction [m/s]; 15=vpar, velocity in the parallel direction [m/s]; 16=vperp, velocity in the perpendicular direction [m/s]; 17=E, Hamiltonian energy [J]; 18=Pphi, canonical toroidal angular momentum [ $\text{kg m}^2/\text{s}$ ]; 19=mu, magnetic moment [J/T]; 20=Lambda=mu/E [1/T]; 21=pitch=vpar/v [-]; 22=s, the position of the omnigenous plane (generalised equatorial plane) as described by the fields omnigen_surf% <i>s</i> and omnigen_surf% <i>z</i> ; 23=particle spin. Vector (7)
var1	vecflt.type (9.4.1.2.9)	Phase space variables one characterising the markers; Time-dependent; Vector (ntpart)
var2	vecflt.type (9.4.1.2.9)	Phase space variables two characterising the markers; Time-dependent; Vector (ntpart)
var3	vecflt.type (9.4.1.2.9)	Phase space variables three characterising the markers; Time-dependent; Vector (ntpart)
var4	vecflt.type (9.4.1.2.9)	Phase space variables four characterising the markers; Time-dependent; Vector (ntpart)
var5	vecflt.type (9.4.1.2.9)	Phase space variables five characterising the markers; Time-dependent; Vector (ntpart)
var6	vecflt.type (9.4.1.2.9)	Phase space variables six characterising the markers; Time-dependent; Vector (ntpart)
var7	vecflt.type (9.4.1.2.9)	Phase space variables seven characterising the markers; Time-dependent; Vector (ntpart)
weight	vecflt.type (9.4.1.2.9)	Weight of the markers; Time-dependent; Vector (ntpart)

#### 9.4.1.3.135 dist\_nucl\_reac

Information on nuclear reactions involving the calculated species.

member	type	description
point_reac	vecint.type (9.4.1.2.10)	Pointer to a species in composition who can undergo a nuclear reaction with the calculated species; Vector (nreac)
id_reac	vecint.type (9.4.1.2.10)	Identification of the reaction between the calculated species and a background species (including which branch if applicable); Time-dependent; Vector (nreac). Table defining the index of reactions to be provided.

Type of: distri\_vec:nucl\_reac (1193)

#### 9.4.1.3.136 dist\_nucl\_reac\_sf

Nuclear reactions of the calculated species with itself (thermal + non-thermal).

member	type	description
rate	float (9.4.1.1.1)	Reaction rate [1/s]; Time-dependent
power	float (9.4.1.1.1)	Fusion reaction power[W]; Time-dependent

Type of: dist\_glob:nucl\_reac.sf (1173)

#### 9.4.1.3.137 dist\_nucl\_reac\_th

Nuclear reactions between the calculated species and other species assumed to have thermal distributions.

member	type	description
rate	vecflt.type (9.4.1.2.9)	Reaction rate [1/s]; Time-dependent; Vector (nreac)
power	vecflt.type (9.4.1.2.9)	Fusion reaction power[W]; Time-dependent; Vector (nreac)

Type of: dist\_glob:nucl\_reac.th (1173)

#### 9.4.1.3.138 dist\_particle\_src

Particle source

member	type	description
total	dist_src.snk_tot (9.4.1.3.147)	Total source of particles and power (NBI, fusion products, pellets etc.)
volume_intgr	dist_src.snk_vol (9.4.1.3.148)	Volume integrated source of particles and power (NBI, fusion products, pellets etc.)
flux_surf_av	dist_src.snk_surf (9.4.1.3.146)	Flux surface averaged source of particles and power (NBI, fusion products, pellets etc.)

Type of: `dist_input_src:particle_src` (1176)

#### 9.4.1.3.139 `dist_prof_surf_dist.losses`

Losses of the distribution species.

member	type	description
orb.loss	<code>dist_src.snk_surf</code> (9.4.1.3.146)	Losses due to orbits intersecting a material surface.
neutr.loss	<code>dist_src.snk_surf</code> (9.4.1.3.146)	Losses due to neutralised ions, e.g. due to charge exchange events.

Type of: `dist_profiles:lossesd` (1188)

#### 9.4.1.3.140 `dist_prof_surf_nucl_reac.sf`

Nuclear reactions of the calculated species with itself (thermal + non-thermal).

member	type	description
rate	<code>vecflt.type</code> (9.4.1.2.9)	Reaction rate [ $s^{-1}.m^{-3}$ ]; Time-dependent; Matrix (npsi)
power	<code>vecflt.type</code> (9.4.1.2.9)	Fusion reaction power [ $W.m^{-3}$ ]; Time-dependent; Matrix (npsi)

Type of: `dist_profiles:nucl_rd.sf` (1188)

#### 9.4.1.3.141 `dist_prof_surf_nucl_reac.th`

Nuclear reactions between the calculated species and other species assumed to have thermal distributions.

member	type	description
rated	<code>matflt.type</code> (9.4.1.2.7)	Reaction rate [ $s^{-1}.m^{-3}$ ]; Time-dependent; Matrix (nreac, max_npsi)
powerd	<code>matflt.type</code> (9.4.1.2.7)	Nuclear reaction power density [ $W.m^{-3}$ ]; Time-dependent; Matrix (nreac, max_npsi)

Type of: `dist_profiles:nucl_rd.th` (1188)

#### 9.4.1.3.142 `dist_prof_vol_dist.losses`

Losses of the distribution species.

member	type	description
orb.loss	<code>dist_src.snk_vol</code> (9.4.1.3.148)	Losses due to orbits intersecting a material surface.
neutr.loss	<code>dist_src.snk_vol</code> (9.4.1.3.148)	Losses due to neutralised ions, e.g. due to charge exchange events.

Type of: `dist_profiles:losses` (1188)

#### 9.4.1.3.143 `dist_prof_vol_nucl_reac.sf`

Nuclear reactions of the calculated species with itself (thermal + non-thermal).

member	type	description
rate	<code>vecflt.type</code> (9.4.1.2.9)	Reaction rate [1/s]; Time-dependent; Vector (npsi)
power	<code>vecflt.type</code> (9.4.1.2.9)	Fusion reaction power[W]; Time-dependent; Vector (npsi)

Type of: `dist_profiles:nucl_reac.sf` (1188)

#### 9.4.1.3.144 `dist_prof_vol_nucl_reac.th`

Nuclear reactions between the calculated species and other species assumed to have thermal distributions.

member	type	description
rate	<code>matflt.type</code> (9.4.1.2.7)	Reaction rate [1/s]; Time-dependent; Matrix (nreac, npsi)

member	type	description
power	matflt.type (9.4.1.2.7)	Fusion reaction power[W]; Time-dependent; Matrix (nreac, npsi)

Type of: dist\_profiles:nucl\_reac\_th (1188)

### 9.4.1.3.145 dist\_profiles

Profiles (volume integrated and flux surface averaged)

member	type	description
rho_tor_norm	vecflt.type (9.4.1.2.9)	Normalised toroidal flux coordinate at the grid points for 1D profiles; Time-dependent; Vector (npsi)
rho_tor	vecflt.type (9.4.1.2.9)	Toroidal flux coordinate at the grid points for 1D profiles [m]. Defined as $\sqrt{\phi/\pi/B_0}$ , where $B_0 = \text{equilibrium/global\_param/toroid\_field}/b_0$ . Time-dependent; Vector (npsi)
psi	vecflt.type (9.4.1.2.9)	Poloidal flux at the grid points for 1D profiles [Wb], without $1/2\pi$ and such that $B_p =  \text{grad psi} /R/2/\pi$ . Time-dependent; Vector (npsi)
dens	vecflt.type (9.4.1.2.9)	Flux surface averaged particle density of the distribution [ $J/m^3$ ]; Time-dependent; Vector (npsi)
enrgd_tot	vecflt.type (9.4.1.2.9)	Flux surface averaged energy density of the distribution [ $J/m^3$ ]; Time-dependent; Vector (npsi)
enrgd_para	vecflt.type (9.4.1.2.9)	Flux surface averaged parallel energy density of the distribution [ $J/m^3$ ]; Time-dependent; Vector (npsi).
powd_coll_i	matflt.type (9.4.1.2.7)	Flux surface averaged collisional power to ions [ $W.m^{-3}$ ]; Time-dependent; Matrix (nion, npsi)
powd_coll_e	vecflt.type (9.4.1.2.9)	Flux surface averaged collisional power to the electrons [ $W.m^{-3}$ ]; Time-dependent; Vector(npsi)
therm_srcd	dist_src_snk_surf (9.4.1.3.146)	Flux surface averaged source of particles and power due to particles of the distribution species being thermalised (merging into the thermal plasma).
lossesd	dist_prof_surf_dist.losses (9.4.1.3.139)	Particle loss densities due to charge exchange events with neutrals or orbits intersecting material surfaces.
curd_fp	vecflt.type (9.4.1.2.9)	Flux surface averaged toroidal current density of non-thermal (fast) particles of the distribution species (excluding electron back current for fast ions) [ $A.m^{-2}$ ]; Time-dependent; Vector (npsi).
curd_dr	vecflt.type (9.4.1.2.9)	Total toroidal driven current density (including electron back current in the presence of fast ions) [A]; Time-dependent; Vector (npsi)
trqd_i	matflt.type (9.4.1.2.7)	Flux surface averaged collisional toroidal torque to background ions [ $N.m^{-2}$ ]; Time-dependent; Matrix (nion, npsi)
trqd_e	vecflt.type (9.4.1.2.9)	Flux surface averaged collisional toroidal torque density to electrons [ $N.m^{-2}$ ]; Time-dependent; Vector (npsi)
trqd_jrxb	vecflt.type (9.4.1.2.9)	Toroidal torque density due to radial currents of non-thermal particles of the distribution species [ $N.m^{-2}$ ]; Time-dependent; Vector (npsi)
nucl_rd_th	dist_prof_surf_nucl_reac_th (9.4.1.3.141)	Nuclear reaction rate densities for reactions between the cacluated species and other species assumed to have thermal distributions.
nucl_rd_sf	dist_prof_surf_nucl_reac_sf (9.4.1.3.140)	Nuclear reaction rate densities for reactions of the calculated species with itself (thermal + non-thermal).
enrg_tot	vecflt.type (9.4.1.2.9)	Energy content of of a distribution species [J] inside a flux surface; Time-dependent; Vector (npsi)
enrg_para	vecflt.type (9.4.1.2.9)	Parallel energy content of a distribution species [J] inside a flux surface; Time-dependent; Vector (npsi)
pow_coll_i	matflt.type (9.4.1.2.7)	Collisional power to ions inside a flux surface [W]; Time-dependent; Matrix(nion, npsi)
pow_coll_e	vecflt.type (9.4.1.2.9)	Collisional power to the electrons inside a flux surface [W]; Time-dependent; Vector(npsi)
therm_src	dist_src_snk_vol (9.4.1.3.148)	Source particles and power inside a flux surface due to particles of the distribution species being thermalised (merging into the thermal plasma).
losses	dist_prof_vol_dist.losses (9.4.1.3.142)	Particle loss inside flux surface due to charge exchange events.
cur_fp	vecflt.type (9.4.1.2.9)	Toroidal current of non-thermal (fast) particles driven inside a flux surface (does not include electron back current for fast ions) [A]; Time-dependent; Vector (npsi)
cur_dr	vecflt.type (9.4.1.2.9)	Total toroidal current driven inside a flux surface (including electron back current in the presence of fast ions) [A]; Time-dependent; Vector (npsi).
trq_i	matflt.type (9.4.1.2.7)	Collisional toroidal torque to background ions inside a flux surface [N.m]; Time-dependent; Matrix (nion, npsi)
trq_e	vecflt.type (9.4.1.2.9)	Collisional toroidal torque to electrons inside a flux surface [N.m]; Time-dependent; Vector (npsi)
trq_jrxb	vecflt.type (9.4.1.2.9)	Toroidal torque due to radial currents of non-thermal particles of the distribution species [N.m]; Time-dependent; Vector (npsi)
nucl_reac_th	dist_prof_vol_nucl_reac_th (9.4.1.3.144)	Nuclear reactions inside a flux surface involving the distribution species and other species assumed to be thermal.
nucl_reac_sf	dist_prof_vol_nucl_reac_sf (9.4.1.3.143)	Nuclear reactions inside a flux surface of the calculated species with itself (thermal + non-thermal).

Type of: distri\_vec:profiles\_1d (1193)

#### 9.4.1.3.146 `dist_src_snk_surf`

Losses due to orbits intersecting a material surface.

member	type	description
particlesd	vecflt_type (9.4.1.2.9)	Source/sink particles [ $s^{-1} m^{-3}$ ]; Time-dependendent; Vector (npsi)
powerd	vecflt_type (9.4.1.2.9)	Power density associated with the source/sink of particles [ $W.m^{-3}$ ]; Time-dependent; Vector (npsi)
torqued	vecflt_type (9.4.1.2.9)	Torque density due to the source/sink of particles [ $N.m^{-2}$ ]; Time-dependent; Vector (npsi)

Type of: `dist_particle_src:flux_surf_av` (1181) I `dist_prof_surf_dist_losses:neutr_loss` (1182) I `dist_prof_surf_dist_losses:orb_loss` (1182) I `dist_profiles:therm_srcd` (1188)

#### 9.4.1.3.147 `dist_src_snk_tot`

Source particles and power due to particles of the distribution species being thermalised (merging into the thermal plasma).

member	type	description
particles	float (9.4.1.1.1)	Source/sink particles [1/s]; Time-dependendent
power	float (9.4.1.1.1)	Power associated with the source/sink of particles [W]; Time-dependent
torque	float (9.4.1.1.1)	Torque due to the source/sink of particles [N.m]; Time-dependent

Type of: `dist_glob:therm_src` (1173) I `dist_glob_dist_losses:neutr_loss` (1174) I `dist_glob_dist_losses:orb_loss` (1174) I `dist_particle_src:total` (1181)

#### 9.4.1.3.148 `dist_src_snk_vol`

Losses due to orbits intersecting a material surface.

member	type	description
particles	vecflt_type (9.4.1.2.9)	Source/sink particles [1/s]; Time-dependendent; Vector (npsi)
power	vecflt_type (9.4.1.2.9)	Power associated with the source/sink of particles [W]; Time-dependent; Vector (npsi)
torque	vecflt_type (9.4.1.2.9)	Torque due to the source/sink of particles [N.m]; Time-dependent; Vector (npsi)

Type of: `dist_particle_src:volume_intgr` (1181) I `dist_prof_vol_dist_losses:neutr_loss` (1185) I `dist_prof_vol_dist_losses:orb_loss` (1185) I `dist_profiles:therm_src` (1188)

#### 9.4.1.3.149 `dist_wave_src`

Auxiliary wave absorbed by the distribution species

member	type	description
type	string (9.4.1.1.3)	Wave type (LH, EC, IC, ...), can be a combination of these if several wave types are absorbed by this species.
wave_power	float (9.4.1.1.1)	Auxiliary wave power absorbed by the distribution species [W]; Time-dependent.
wave_powerd	vecflt_type (9.4.1.2.9)	Auxiliary flux surface averaged wave power density absorbed by the distribution species [ $W/m^3$ ]; Time-dependent; Vector (npsi)

Type of: `dist_input_src:wave_src` (1176)

#### 9.4.1.3.150 `distri_vec`

Vector over all distribution functions; Time-dependent. Structure array(`ndistri_vec`)

member	type	description
wave_id(:)	enum_instance (9.4.1.3.172)	List all waves affecting the distribution, as specified in <code>waves(*)%coherentwave(*)%wave.id</code> . Vector( <code>n_antennas</code> )
source_id(:)	enum_instance (9.4.1.3.172)	List all neutral beam injectors and reactions contributing to the source, as specified in <code>dist-source(*)%source(*)%source.id</code> . Vector( <code>n_injectors_and_reactions</code> )
calc_spec	integer (9.4.1.1.2)	Pointer to the species for which the distribution function(s) is/are calculated and whose characteristics are given in composition (for ions). Value 0 means electrons.
gyro_type	integer (9.4.1.1.2)	Defines how to interpret the spatial coordinates: 1 = given at the actual particle position; 2 = given at the gyro centre of the particle position.

member	type	description
global_param	dist_glob (9.4.1.3.130)	Global parameters (in most cases volume integrated and surface averaged quantities).
profiles_1d	dist_profiles (9.4.1.3.145)	Profiles (volume integrated and flux surface averaged)
dist_func	dist_func (9.4.1.3.129)	Distribution functions. The total distribution total distribution can either be given by the a set of markers/test particles (in markers), or by a gridded function (dist.expand). Note that the gridded distribution can be written as sum of successive approximations, where each term is given by an element in the vector dist.expand. Finally, the distribution can be written as a sum of a marker distribution and a gridded distribution, e.g. for delta-f Monte Carlo solution.
input_src	dist_input_src (9.4.1.3.133)	Input sources of particles and power for the distribution species (to aid diagnosing the code output).
nucl_reac	dist_nucl_reac (9.4.1.3.135)	Information on nuclear reactions involving the calculated species.
codeparam	codeparam (9.4.1.3.65)	Code parameters

Type of: distribution:distri\_vec (1056)

#### 9.4.1.3.151 distsource\_global\_param

Global parameters (volume integrated).

member	type	description
src_pow	exp0D (9.4.1.3.179)	Total power source [W]; Time-dependent.
src_rate	exp0D (9.4.1.3.179)	Particle source rate [1/s]; Time-dependent.

Type of: distsource\_source:global\_param (1198)

#### 9.4.1.3.152 distsource\_line\_src\_prof

1D profiles representation of a line source

member	type	description
rho_tor	vecflt_type (9.4.1.2.9)	Toroidal flux coordinate at the grid points for 1D profiles [m]. Defined as $\sqrt{\phi/\pi/B_0}$ , where $B_0 = \text{equilibrium}/\text{global\_param}/\text{toroid\_field}/b_0$ . Time-dependent; Vector (npsi)
rho_tor_norm	vecflt_type (9.4.1.2.9)	Normalised toroidal flux coordinate at the grid points for 1D profiles; Time-dependent; Vector (npsi)
psi	vecflt_type (9.4.1.2.9)	Poloidal flux at the grid points for 1D profiles [Wb], without $1/2\pi$ and such that $B_p =  \text{grad } \psi  / (R^2 \pi)$ . Time-dependent; Vector (npsi)
R	vecflt_type (9.4.1.2.9)	Major radius at the line source. Time-dependent; Vector (npsi)
Z	vecflt_type (9.4.1.2.9)	Vertical position of the line source. Time-dependent; Vector (npsi)
theta	vecflt_type (9.4.1.2.9)	Poloidal angle [rad]. Time-dependent; Vector (npsi)
theta_id	vecflt_type (9.4.1.2.9)	Type of poloidal angle: 1 : same as the poloidal angle in the equilibrium cpo; 2 : geometrical polar angle, $\tan(\theta) = Z/(R-R_0)$ ; 3 : other. If option 3, a transformation to the geometrical poloidal angle is provided in th2th.pol.
th2th.pol	matflt_type (9.4.1.2.7)	Geometrical poloidal angle at grid points in theta, i.e. the transformation from theta to the polar poloidal angle; used only if <code>angl_type=3</code> ; Time-dependent; Matrix (ndim1, ndim2)
pitch	vecflt_type (9.4.1.2.9)	Pitch (i.e. $v_{\text{parallel}}/v$ ) of source particles. Time-dependent; Vector (npsi)
energy	vecflt_type (9.4.1.2.9)	Kinetic energy of source particles [eV]. Time-dependent; Vector (npsi)
ang_momentum	vecflt_type (9.4.1.2.9)	Kinetic angular momentum of a single source particles, $R m v_{\phi}$ [Nms]. Time-dependent; Vector (npsi)
src_rate	vecflt_type (9.4.1.2.9)	Source density of particles [ $1/m^3/s$ ]. Time-dependent; Vector (npsi)

Type of: distsource\_source:line\_srcprof (1198)

#### 9.4.1.3.153 distsource\_profiles\_1d

1D radial profiles

member	type	description
rho_tor_norm	vecflt_type (9.4.1.2.9)	Normalised toroidal flux coordinate at the grid points for 1D profiles; Time-dependent; Vector (npsi)
rho_tor	vecflt_type (9.4.1.2.9)	Toroidal flux coordinate at the grid points for 1D profiles [m]. Defined as $\sqrt{\phi/\pi/B_0}$ , where $B_0 = \text{equilibrium}/\text{global\_param}/\text{toroid\_field}/b_0$ . Time-dependent; Vector (npsi)
psi	vecflt_type (9.4.1.2.9)	Poloidal flux at the grid points for 1D profiles [Wb], without $1/2\pi$ and such that $B_p =  \text{grad } \psi  / (R^2 \pi)$ . Time-dependent; Vector (npsi)
pow_den	exp1D (9.4.1.3.180)	Flux surface averaged power density [ $W/m^3$ ]; Time-dependent; Vector (npsi)



member	type	description
src_rate	exp1D (9.4.1.3.180)	Flux surface averaged total source density of particles [ $m^{-3} s^{-1}$ ]; Time-dependent; Vector (npsi)

Type of: `distsource_source:profiles_1d` (1198)

#### 9.4.1.3.154 `distsource_profiles_2d`

2D source profiles in terms of two phase space coordinates

member	type	description
grid_coord	vecint.type (9.4.1.2.10)	Identifies the coordinates specified in dim1 and dim2. <code>grid_coord(1)</code> and <code>grid_coord(2)</code> describe the coordinate represented in dim1 and dim2. The possible coordinates are: 1=R, Major radius [m]; 2=Z, Vertical position [m]; 3=X, first cartesian coordinate in the horizontal plane [m]; 4=Y, second cartesian coordinate in the horizontal plane ( $\text{grad}(X) \times \text{grad}(Y) = \text{grad}(Z)$ ) [m]; 5=phi, toroidal angle [rad]; 6=psi, poloidal magnetic flux [ $T^*m^2$ ]; 7=rhotor, the square root of the toroidal flux; 8=theta, geometrical poloidal angle [rad]; 9=theta.b, Boozer poloidal angle [rad]; 10=vx, velocity in the x-direction [m/s]; 11=vy, velocity in the y-direction [m/s]; 12=vz, velocity in the z-direction [m/s]; 13=vel, total velocity [m/s]; 14=vphi, velocity in the phi-direction [m/s]; 15=vpar, velocity in the parallel direction [m/s]; 16=vperp, velocity in the perpendicular direction [m/s]; 17=E, Hamiltonian energy [J]; 18=Pphi, canonical toroidal angular momentum [ $kg m^2/s$ ]; 19=mu, magnetic moment [J/T]; 20=Lambda=mu/E [1/T]. Vector (2)
dim1	matflt.type (9.4.1.2.7)	First coordinate of 2D grid. Time-dependent; Vector (ndim1,ndim2)
dim2	matflt.type (9.4.1.2.7)	Second coordinate of 2D grid. Time-dependent; Vector (ndim1,ndim2)
g11	matflt.type (9.4.1.2.7)	11 component of the covariant metric tensor in the (dim1, dim2) coordinate system. Time-dependent; Vector (ndim1,ndim2)
g12	matflt.type (9.4.1.2.7)	12 component of the covariant metric tensor in the (dim1, dim2) coordinate system. Time-dependent; Vector (ndim1,ndim2)
g21	matflt.type (9.4.1.2.7)	21 component of the covariant metric tensor in the (dim1, dim2) coordinate system. Time-dependent; Vector (ndim1,ndim2)
g22	matflt.type (9.4.1.2.7)	22 component of the covariant metric tensor in the (dim1, dim2) coordinate system. Time-dependent; Vector (ndim1,ndim2)
pow_den	exp2D (9.4.1.3.181)	Source power density. Here $\text{sum}(M,N=1,2; \text{pow\_den} * g_{NM} * \text{dimN} * \text{dimM})$ have unit [W]. Time-dependent; Vector (ndim1,ndim2)
src_rate	exp2D (9.4.1.3.181)	Source density of particles. Here $\text{sum}(M,N=1,2; \text{src\_rate} * g_{NM} * \text{dimN} * \text{dimM})$ have unit [1/s]. Time-dependent; Vector (ndim1,ndim2)

Type of: `distsource_source:profiles_2d` (1198)

#### 9.4.1.3.155 `distsource_source`

Source

member	type	description
source_id(:)	enum_instance (9.4.1.3.172)	List of identifiers for the source, in term the type and name of the injectors and reactions that provide the source, along with an index separating sources with the same name and type. Possible content for type: NBI or reaction names (see specifications on the ITM webpages); the field name should either be taken from <code>nbi(*)%nbi_unit(*)%name</code> , or describe the populations involved in the reaction, e.g. fast-thermal; the field index should separate different sources generated from a single injector or reaction. Vector(n.injectors.and.reactions)
src_spec	integer (9.4.1.1.2)	Pointer to the source species whose characteristics are given in composition.
gyro_type	integer (9.4.1.1.2)	Defines how to interpret the spatial coordinates: 1 = given at the actual particle birth point; 2 = given at the gyro centre of the birth point.
global_param	<code>distsource_global_param</code> (9.4.1.3.151)	Global parameters.
profiles_1d	<code>distsource_profiles_1d</code> (9.4.1.3.153)	1D radial profiles
profiles_2d	<code>distsource_profiles_2d</code> (9.4.1.3.154)	2D source profiles in terms of two phase space coordinates
line_srcprof(:)	<code>distsource_line_src_prof</code> (9.4.1.3.152)	1D profiles representation of a line source
source_rate	<code>source_rate</code> (9.4.1.3.364)	Source density of particles in phase space (real space, velocity space, spin state).
source_grid	<code>source_on_grid</code> (9.4.1.3.363)	TO BE REMOVED, being replaced by <code>source_rate</code> . Kept only to make smooth transition between data-type versions. [Source density of particles in phase space (real space, velocity space, spin state); simplified formulation, without the <code>grid_cpo</code> .]
markers	<code>weighted_markers</code> (9.4.1.3.425)	Source given as a set of markers (test particles) born per second.
codeparam	<code>codeparam</code> (9.4.1.3.65)	Code parameters

Type of: `distsource:source` (1057)



### 9.4.1.3.156 divergence

Detailed information on beamlet divergence. Divergens is described as a super position of Gaussian profiles with amplitude "frac\_divcomp" and vertical/horizontal divergence "div\_vert"/"div\_horiz". Note that for positive ion NBI the divergence is well described by a single Gaussian.

member	type	description
frac_divcomp	vecflt_type (9.4.1.2.9)	Fraction of injected particles. Vector(ndiv_comp)
div_vert	vecflt_type (9.4.1.2.9)	Beam divergence for a unit in the vertical direction[rad]. Vector(ndiv_comp)
div_horiz	vecflt_type (9.4.1.2.9)	Beam divergence for a unit in the horizontal direction[rad]. Vector(ndiv_comp)

Type of: setup\_inject:divergence (1398)

### 9.4.1.3.157 e.components

E-field representation in terms of the parallel and circularly polarised components

member	type	description
e_plus	complexgrid_scalar_cplx (9.4.1.3.76)	Left hand circularly polarised component of the perpendicular (to the static magnetic field) electric field [V/m]. Time-dependent; Complexgrid_scalar
e_minus	complexgrid_scalar_cplx (9.4.1.3.76)	Right hand circularly polarised component of the perpendicular (to the static magnetic field) electric field [V/m]. Time-dependent; Complexgrid_scalar
e_para	complexgrid_scalar_cplx (9.4.1.3.76)	Parallel (to the static magnetic field) component of electric field [V/m]. Time-dependent; Complexgrid_scalar
e_norm	complexgrid_scalar_cplx (9.4.1.3.76)	Magnitude of wave electric field normal to a flux surface [V/m]; Time-dependent; Complexgrid_scalar
e_binorm	complexgrid_scalar_cplx (9.4.1.3.76)	Magnitude of perpendicular (to the static magnetic field) wave electric field tangent to a flux surface [V/m]; Time-dependent; Complexgrid_scalar
b_norm	complexgrid_scalar_cplx (9.4.1.3.76)	Magnitude of perpendicular (to the static magnetic field) wave magnetic field normal to a flux surface [T]; Time-dependent; Complexgrid_scalar
b_binorm	complexgrid_scalar_cplx (9.4.1.3.76)	Magnitude of wave magnetic field tangent to a flux surface [T]; Time-dependent; Complexgrid_scalar
b_para	complexgrid_scalar_cplx (9.4.1.3.76)	Magnitude of wave magnetic field parallel to the equilibrium magnetic field [T]; Time-dependent; Complexgrid_scalar

Type of: fullwave:e.components (1232)

### 9.4.1.3.158 ecemeasure

Measured values

member	type	description
te	exp1D (9.4.1.3.180)	Electron temperature [eV]. Vector (nchannels)

Type of: ecediag:measure (1058)

### 9.4.1.3.159 ecsetup

diagnostic setup information

member	type	description
frequency	vecflt_type (9.4.1.2.9)	Frequency of the ECE channels. Vector (nchannels)
harmonic	vecstring_type (9.4.1.2.11)	Harmonic detected by the ECE channels. Vector of strings (nchannels)
position	rzphi1Dexp (9.4.1.3.326)	Position of the measurement. Time-dependent. Vector (nchannels)

Type of: ecediag:setup (1058)

### 9.4.1.3.160 edge\_fluid

Fluid quantities

member	type	description
ne	edge_fluid_scalar_simplestruct (9.4.1.3.162)	Electron density [ $1/m^3$ ]; Time-dependent;

member	type	description
ni(:)	edge_fluid_scalar (9.4.1.3.161)	Ion density [1/m <sup>3</sup> ] (per species). Array of structures(nspecies); Time-dependent;
ve	edge_fluid_vector_simplestruct (9.4.1.3.165)	Electron velocity [m/s]; Time-dependent;
vi(:)	edge_fluid_vector (9.4.1.3.164)	Ion velocity [m/s] (per species).Array of structures(nspecies); Time-dependent;
te	edge_fluid_scalar_simplestruct (9.4.1.3.162)	Electron temperature [eV]; Time-dependent;
ti(:)	edge_fluid_scalar (9.4.1.3.161)	Ion temperature [eV] (per species). Array of structures(nspecies); Time-dependent;
te_aniso	edge_fluid_vector_simplestruct (9.4.1.3.165)	Anisotropic electron temperature [eV]; Time-dependent;
ti_aniso(:)	edge_fluid_vector (9.4.1.3.164)	Anisotropic ion temperature [eV] (per species). Array of structures(nspecies); Time-dependent;
po	edge_fluid_scalar_simplestruct (9.4.1.3.162)	Electric potential [V]; Time-dependent;
j	edge_fluid_vector_simplestruct (9.4.1.3.165)	Electric current [A]; Time-dependent;
b(:)	complexgrid_vector (9.4.1.3.81)	Magnetic field vector [T]; Time-dependent;

Type of: edge:fluid (1059)

#### 9.4.1.3.161 edge\_fluid\_scalar

A scalar fluid quantity. To be used as array of structure

member	type	description
value(:)	complexgrid_scalar (9.4.1.3.75)	Value of the quantity. Possibly stored on multiple subgrids.; Time-dependent; Array of structures (nsubgrid_quantity)
bndvalue(:)	complexgrid_scalar (9.4.1.3.75)	Boundary values of the quantity. Possibly stored on multiple (boundary) subgrids.; Time-dependent; Array of structures (nsubgrid_quantity)
flux(:)	complexgrid_vector (9.4.1.3.81)	Flux of the quantity. Possibly stored on multiple subgrids.; Time-dependent; Array of structures (nsubgrid_quantity)
bndflux(:)	complexgrid_vector (9.4.1.3.81)	Flux of the quantity. Possibly stored on multiple (boundary) subgrids.; Time-dependent; Array of structures (nsubgrid_quantity)
transpcoeff(:)	edge_fluid_scalar_transpcoeff (9.4.1.3.163)	Transport coefficients; Time-dependent; Array of structures (nsubgrid_quantity)
source(:)	complexgrid_scalar (9.4.1.3.75)	Source; Time-dependent; Array of structures (nsubgrid_quantity)

Type of: edge\_fluid:ni (1203) I edge\_fluid:ti (1203) I edge\_fluid\_vector:comps (1207) I edge\_fluid\_vector\_simplestruct:comps (1208)

#### 9.4.1.3.162 edge\_fluid\_scalar\_simplestruct

A scalar fluid quantity. To be used as simple structure.

member	type	description
value(:)	complexgrid_scalar (9.4.1.3.75)	Value of the quantity. Possibly stored on multiple subgrids.; Time-dependent; Array of structures (nsubgrid_quantity)
bndvalue(:)	complexgrid_scalar (9.4.1.3.75)	Boundary values of the quantity. Possibly stored on multiple (boundary) subgrids.; Time-dependent; Array of structures (nsubgrid_quantity)
flux(:)	complexgrid_vector (9.4.1.3.81)	Flux of the quantity. Possibly stored on multiple subgrids.; Time-dependent; Array of structures (nsubgrid_quantity)
bndflux(:)	complexgrid_vector (9.4.1.3.81)	Flux of the quantity. Possibly stored on multiple (boundary) subgrids.; Time-dependent; Array of structures (nsubgrid_quantity)
transpcoeff(:)	edge_fluid_scalar_transpcoeff (9.4.1.3.163)	Transport coefficients; Time-dependent; Array of structures (nsubgrid_quantity)
source(:)	complexgrid_scalar (9.4.1.3.75)	Source; Time-dependent; Array of structures (nsubgrid_quantity)

Type of: edge\_fluid:ne (1203) I edge\_fluid:po (1203) I edge\_fluid:te (1203)

### 9.4.1.3.163 edge\_fluid\_scalar\_transpcoeff

Transport coefficients; Time-dependent; Array of structures (nsubgrid\_quantity)

member	type	description
d	complexgrid_vector_simplestruct (9.4.1.3.82)	Diffusivity [m <sup>2</sup> /s]; Time-dependent;
v	complexgrid_vector_simplestruct (9.4.1.3.82)	Velocity [m/s]; Time-dependent;

Type of: edge\_fluid\_scalar:transpcoeff (1204) I edge\_fluid\_scalar\_simplestruct:transpcoeff (1205)

### 9.4.1.3.164 edge\_fluid\_vector

A fluid vector quantity, with components possibly explicitly aligned to a coordinate direction. To be used as array of structure

member	type	description
griduid	integer (9.4.1.1.2)	Unique identifier of the grid this vector quantity is associated with.
basis	integer (9.4.1.1.2)	Index of basis (defined in associated grid) this vector is aligned to; If set to GRID.UNDEFINED=0, the canonical basis of the default coordinates of the grid assumed.
align	vecint_type (9.4.1.2.10)	Alignment of vector components, numerical flag. Int vector (number of vector components);
alignid	vecstring_type (9.4.1.2.11)	Alignment of vector components, string description. String vector (number of vector components);
comps(:)	edge_fluid_scalar (9.4.1.3.161)	Components of the vector. Array of structures (number of vector components); Time-dependent;

Type of: edge\_fluid:ti\_aniso (1203) I edge\_fluid:vi (1203)

### 9.4.1.3.165 edge\_fluid\_vector\_simplestruct

A fluid vector quantity, with components possibly explicitly aligned to a coordinate direction. To be used as simple structure.

member	type	description
griduid	integer (9.4.1.1.2)	Unique identifier of the grid this vector quantity is associated with.
basis	integer (9.4.1.1.2)	Index of basis (defined in associated grid) this vector is aligned to; If set to GRID.UNDEFINED=0, the canonical basis of the default coordinates of the grid assumed.
comps(:)	edge_fluid_scalar (9.4.1.3.161)	Components of the vector. Array of structures(ndim); Time-dependent;
align	vecint_type (9.4.1.2.10)	Alignment of vector components, numerical flag. Int vector(ndim);
alignid	vecstring_type (9.4.1.2.11)	Alignment of vector components, string description. String vector(ndim);

Type of: edge\_fluid:j (1203) I edge\_fluid:te\_aniso (1203) I edge\_fluid:ve (1203)

### 9.4.1.3.166 edge\_kinetic

Kinetic quantities

member	type	description
f(:)	edge_kinetic_distribution (9.4.1.3.167)	Distribution function [1/m <sup>3</sup> (m/s) <sup>-3</sup> ]. Array of structuresr(nspecies); Time-dependent;

Type of: edge:kinetic (1059)

### 9.4.1.3.167 edge\_kinetic\_distribution

Distribution function [1/m<sup>3</sup> (m/s)<sup>-3</sup>]. Array of structuresr(nspecies); Time-dependent;

member	type	description
value(:)	complexgrid_scalar (9.4.1.3.75)	Value of distribution function. Possibly stored on multiple subgrids.; Vector (nsubgrid_quantity). Time-dependent;

member	type	description
bndvalue(:)	complexgrid_scalar (9.4.1.3.75)	Boundary value of distribution function. Possibly stored on multiple subgrids.; Vector (nsubgrid_quantity). Time-dependent;
fluxes(:)	complexgrid_vector (9.4.1.3.81)	Fluxes in phase space. Possibly stored on multiple subgrids.; Vector (nsubgrid_quantity). Time-dependent;
source(:)	complexgrid_scalar (9.4.1.3.75)	Sources in phase space. Possibly stored on multiple subgrids.; Vector (nsubgrid_quantity). Time-dependent;

Type of: edge\_kinetic:f (1209)

#### 9.4.1.3.168 edges

Edges defining the coil volume faces. Structure array. Replicate this edge structure N-times for N-edge cross sections. Use just one for wire coil approximation.

member	type	description
edge_rzphi	rzphiID (9.4.1.3.325)	Sequence of points describing a coil edge. Vector (npoints)

Type of: desc\_coils:edges (1165)

#### 9.4.1.3.169 edgespecies

Array of edge species.

member	type	description
nucindex	integer (9.4.1.1.2)	Index into list of nuclei; int
zmin	float (9.4.1.1.1)	Minimum Z of species charge state bundle
zmax	float (9.4.1.1.1)	Maximum Z of species charge state bundle
label	string (9.4.1.1.3)	String identifying the species (e.g. D0, D+, C0, C+, C+2, ...)

Type of: compositions.type:edgespecies (1130)

#### 9.4.1.3.170 element\_desc

Description of atomic elements used in wall element layer compositions

member	type	description
label	string (9.4.1.1.3)	Element name/label
zn	integer (9.4.1.1.2)	Nuclear charge
amn	float (9.4.1.1.1)	Nuclear mass
density	float (9.4.1.1.1)	Material density (atoms/m <sup>3</sup> )

Type of: surface:elements (1422)

#### 9.4.1.3.171 entry\_def

Structure defining a database entry

member	type	description
user	string (9.4.1.1.3)	Name of the user if private data. Value should be ITM if stored in the official common ITM tree
machine	string (9.4.1.1.3)	Name of the device
shot	integer (9.4.1.1.2)	Shot number
run	integer (9.4.1.1.2)	Run number

Type of: mdinfo:md\_entry (1282)

#### 9.4.1.3.172 enum\_instance

Specifies a specific enumerated instance of an object or process in term of its type, name and an index. E.g. the input could be the wave with index=2, selected from all waves launched by the antenna with name=A2, where the antenna is of type=IC.

member	type	description
type	identifier (9.4.1.3.213)	Identify the type of the object or process.
name	string (9.4.1.1.3)	The name of the object or process. Here the object should be an instans of the type specified in the field type.
index	integer (9.4.1.1.2)	Index the separating objects or processes with the same name.

Type of: coherentwave:wave\_id (1110) I distri\_vec:source\_id (1193) I distri\_vec:wave\_id (1193) I distsource\_source:source\_id (1198)

### 9.4.1.3.173 eqconstraint

measurements to constrain the equilibrium, output values and accuracy of the fit

member	type	description
bpol	eqmes1D (9.4.1.3.176)	poloidal pickup coils [T]
bvac_r	eqmes0D (9.4.1.3.175)	Vacuum field times radius in the toroidal field magnet [T.m];
diamagflux	eqmes0D (9.4.1.3.175)	Diamagnetic flux [Wb], defined as integral (Btor - Btor,vac) dS where the integral is over the poloidal cross section of the plasma. It is measured by a single wire loop around the cross section of the torus (e.g. Wesson, Tokamaks, 1997, p.473). It gives information about the separation of the two source profiles p' and FF' of the Grad-Shafranov equation.
faraday	eqmes1D (9.4.1.3.176)	Faraday rotation angles [rad]
flux	eqmes1D (9.4.1.3.176)	Poloidal flux loops [Wb]
i_plasma	eqmes0D (9.4.1.3.175)	Plasma current [A];
isoflux	isoflux (9.4.1.3.219)	Point series at which the flux is considered the same
jsurf	eqmes1D (9.4.1.3.176)	Average of current density on the flux surface [A/m <sup>2</sup> ]
magnet_iron	magnet_iron (9.4.1.3.236)	Magnetisation in iron segments [T]
mse	eqmes1D (9.4.1.3.176)	MSE angles [rad]
ne	eqmes1D (9.4.1.3.176)	Electron density [m <sup>-3</sup> for local measurement, m <sup>-2</sup> if line integrated]
pfcurrent	eqmes1D (9.4.1.3.176)	Current in poloidal field coils [A]
pressure	eqmes1D (9.4.1.3.176)	Total pressure [Pa]
q	q (9.4.1.3.290)	Safety factor
xpts	xpts (9.4.1.3.428)	Position of the X-point(s)

Type of: equilibrium:eqconstraint (1061)

### 9.4.1.3.174 eqgeometry

Geometry of the plasma boundary

member	type	description
source	string (9.4.1.1.3)	Comment describing the origin of the eqgeometry data; String
boundarytype	integer (9.4.1.1.2)	0 (limiter) or 1 (separatrix); Integer; Time-dependent
boundary(:)	rz1Dexp (9.4.1.3.321)	RZ description of the plasma boundary; This is formally declared as an array of structure to allow for time-dependent size of the R and Z vectors in the sub-structure below. However, boundary must be allocated to size 1. Time-dependent;
geom_axis	rz0D (9.4.1.3.318)	position of the geometric axis [m]; Time-dependent; Scalar
a_minor	float (9.4.1.1.1)	Minor radius of the plasma boundary [m]; Time-dependent; Scalar
elongation	float (9.4.1.1.1)	Elongation of the plasma boundary; Time-dependent; Scalar
elong_upper	float (9.4.1.1.1)	Elongation upper of the plasma boundary; Time-dependent; Scalar
elong_lower	float (9.4.1.1.1)	Elongation lower of the plasma boundary; Time-dependent; Scalar
tria_upper	float (9.4.1.1.1)	Upper triangularity of the plasma boundary; Time-dependent; Scalar
tria_lower	float (9.4.1.1.1)	Lower triangularity of the plasma boundary; Time-dependent; Scalar
xpts(:)	rz1Dexp (9.4.1.3.321)	Position of the Xpoints, first is the active xpoint if diverted [m]; This is formally declared as an array of structure to allow for time-dependent size of the R and Z vectors in the sub-structure below. However, xpts must be allocated to size 1. Time-dependent;
left_low_st	rz0D (9.4.1.3.318)	Position of the lower left strike point [m]; Time-dependent; Scalar
right_low_st	rz0D (9.4.1.3.318)	Position of the lower right strike point [m]; Time-dependent; Scalar
left_up_st	rz0D (9.4.1.3.318)	Position of the upper left strike point [m]; Time-dependent; Scalar
right_up_st	rz0D (9.4.1.3.318)	Position of the upper right strike point [m]; Time-dependent; Scalar
active_limit	rz0D (9.4.1.3.318)	Position of the active limiter point (point of the plasma boundary in contact with the limiter) [m]; Set R = 0 for X-point plasma; Time-dependent; Scalar
ang_lcms.upo	float (9.4.1.1.1)	Angle at the LMCS X point upper outer; Time-dependent; Scalar
ang_lcms.upi	float (9.4.1.1.1)	Angle at the LMCS X point upper inner; Time-dependent; Scalar

member	type	description
ang_lcms_lwo	float (9.4.1.1.1)	Angle at the LMCS X point lower outer; Time-dependent; Scalar
ang_lcms_lwi	float (9.4.1.1.1)	Angle at the LMCS X point lower inner; Time-dependent; Scalar

Type of: equilibrium:eqgeometry (1061) I scenario:eqgeometry (1082)

#### 9.4.1.3.175 eqmes0D

Structure for equilibrium measurement 0D signal

member	type	description
measured	float (9.4.1.1.1)	Measured value of the signal; Time-dependent; Scalar.
source	string (9.4.1.1.3)	Path to the source signal (diagnostic or genprof, from which to read all info on the signal); String
time	float (9.4.1.1.1)	Time (exact time slice used from the time array of the source signal. If the time slice does not exist in the time array of the source signal, it means linear interpolation has been used); Time-dependent; Scalar.
exact	integer (9.4.1.1.2)	1 means exact data, is not fitted; 0 means the equilibrium code does a least square fit; scalar integer
weight	float (9.4.1.1.1)	weight given to the measurement ( $\zeta=0$ ); Time-dependent; Scalar.
sigma	float (9.4.1.1.1)	standard deviation of the measurement; Time-dependent; Scalar.
calculated	float (9.4.1.1.1)	Signal as recalculated by the equilibrium code; Time-dependent; Scalar.
chi2	float (9.4.1.1.1)	chi <sup>2</sup> of (calculated-measured); Time-dependent; Scalar.

Type of: eqconstraint:bvac\_r (1216) I eqconstraint:diamagflux (1216) I eqconstraint:i\_plasma (1216)

#### 9.4.1.3.176 eqmes1D

Structure for equilibrium measurement 1D signal

member	type	description
measured	vecflt_type (9.4.1.2.9)	Measured value of the signal; Time-dependent; Array(nmeas)
source	string (9.4.1.1.3)	Path to the source signal (diagnostic or genprof, from which to read all info on the signal), e.g. 'magdiag/bpol_probes/measure/value'. String
time	float (9.4.1.1.1)	Exact time slice used from the time array of the source signal. If the time slice does not exist in the time array of the source signal, it means linear interpolation has been used); Time-dependent; Scalar
exact	vecint_type (9.4.1.2.10)	1 means exact data, is not fitted; 0 means the equilibrium code does a least square fit; Time-dependent; Array(nmeas)
weight	vecflt_type (9.4.1.2.9)	weight given to the measurement ( $\zeta=0$ ); Time-dependent; Array(nmeas)
sigma	vecflt_type (9.4.1.2.9)	standard deviation of the measurement; Time-dependent; Array(nmeas)
calculated	vecflt_type (9.4.1.2.9)	Signal as recalculated by the equilibrium code; Time-dependent; Array(nmeas)
chi2	vecflt_type (9.4.1.2.9)	chi <sup>2</sup> of (calculated-measured); Time-dependent; Array(nmeas)

Type of: eqconstraint:bpol (1216) I eqconstraint:faraday (1216) I eqconstraint:flux (1216) I eqconstraint:jsurf (1216) I eqconstraint:mse (1216) I eqconstraint:ne (1216) I eqconstraint:pfcurent (1216) I eqconstraint:pressure (1216) I magnet\_iron:mr (1279) I magnet\_iron:mz (1279)

#### 9.4.1.3.177 equilibrium\_profiles2d\_grid

definition of the 2D grid

member	type	description
dim1	vecflt_type (9.4.1.2.9)	First dimension values; Time-dependent; Vector (ndim1)
dim2	vecflt_type (9.4.1.2.9)	Second dimension values; Time-dependent; Vector (ndim2)
connect	matint_type (9.4.1.2.8)	In case of a finite elemnt representation, lists the points (3 for triangles, 4 for quadrangles) which define a finite element. In this case, ndim1=ndim2 and the value of grid_connect represents the index of the points in the list 1:ndim. E.g. : grid_connect(i,1:4) is a list of four integers [k1 k2 k3 k4] meaning that finite element #i is defined by the points (dim1(k1),dim2(k1)),(dim1(k2),dim2(k2)),(dim1(k3),dim2(k3)) and (dim1(k4),dim2(k4)); Time-dependent; Matrix of integers (nelement,4)

Type of: equilibrium\_profiles.2d:grid (1221)

### 9.4.1.3.178 equilibrium\_profiles\_2d

output profiles in the poloidal plane

member	type	description
grid.type	vecstring.type (9.4.1.2.11)	Selection of one of a set of grid types. 1-rectangular (R,Z) grid, in this case the position arrays should not be filled since they are redundant with grid/dim1 and dim2.
grid	equilibrium_profiles2d.grid (9.4.1.3.177)	definition of the 2D grid
r	matflt.type (9.4.1.2.7)	values of the major radius on the grid [m]; Time-dependent; Matrix (ndim1, ndim2)
z	matflt.type (9.4.1.2.7)	values of the altitude on the grid [m]; Time-dependent; Matrix (ndim1, ndim2)
psi	matflt.type (9.4.1.2.7)	values of the poloidal flux at the grid in the poloidal plane [Wb]; Time-dependent; Matrix (ndim1, ndim2)
theta	matflt.type (9.4.1.2.7)	values of the poloidal angle on the grid [rad]; Time-dependent; Matrix (ndim1, ndim2)
phi	matflt.type (9.4.1.2.7)	Toroidal flux [Wb]. Time-dependent; Matrix (ndim1, ndim2)
jphi	matflt.type (9.4.1.2.7)	toroidal plasma current density [A m <sup>-2</sup> ]; Time-dependent; Matrix (ndim1, ndim2)
jpar	matflt.type (9.4.1.2.7)	parallel (to magnetic field) plasma current density [A m <sup>-2</sup> ]; Time-dependent; Matrix (ndim1, ndim2)
br	matflt.type (9.4.1.2.7)	R component of the poloidal magnetic field at the specified grid [T]; Time-dependent; Matrix (ndim1, ndim2)
bz	matflt.type (9.4.1.2.7)	Z component of the poloidal magnetic field at the specified grid [T]; Time-dependent; Matrix (ndim1, ndim2)
bphi	matflt.type (9.4.1.2.7)	toroidal component of the magnetic field at the specified grid [T]; Time-dependent; Matrix (ndim1, ndim2)
vphi	matflt.type (9.4.1.2.7)	toroidal flow velocity [m/s]; Time-dependent; Matrix (ndim1, ndim2)
vtheta	matflt.type (9.4.1.2.7)	Poloidal flow velocity [m/s]; Time-dependent; Matrix (ndim1, ndim2)
rho.mass	matflt.type (9.4.1.2.7)	Mass density [kg/m <sup>3</sup> ]; Time-dependent; Matrix (ndim1, ndim2)
pressure	matflt.type (9.4.1.2.7)	Pressure [Pa]; Time-dependent; Matrix (ndim1, ndim2)
temperature	matflt.type (9.4.1.2.7)	Temperature [eV]; Time-dependent; Matrix (ndim1, ndim2)

Type of: equilibrium:profiles\_2d (1061)

### 9.4.1.3.179 exp0D

Structure for experimental time-dependent scalar signal

member	type	description
value	float (9.4.1.1.1)	Signal value; Time-dependent; Scalar
abserror	float (9.4.1.1.1)	Absolute error on signal; Time-dependent; Scalar
relerror	float (9.4.1.1.1)	Relative error on signal (normalised to signal value); Time-dependent; Scalar

Type of: antenna\_ec:power (1092) I antenna\_ic:frequency (1093) I antenna\_ic:power (1093) I antenna\_lh:power (1094) I distsource\_global\_param:src\_pow (1194) I distsource\_global\_param:src\_rate (1194) I fusiondiag\_ct\_chords:energy (1240) I fusiondiag\_spec1d:energy (1246) I fusiondiag\_spec2d:energy (1247) I magdiag:diamagflux (1070) I magdiag:ip (1070) I nbi\_unit:inj\_eng\_unit (1297) I nbi\_unit:pow\_unit (1297) I straps:phase (1421) I toroidfield:bvac\_r (1085) I toroidfield:current (1085)

### 9.4.1.3.180 exp1D

Structure for experimental 1D signal

member	type	description
value	vecflt.type (9.4.1.2.9)	Signal value; Time-dependent; Vector
abserror	vecflt.type (9.4.1.2.9)	Absolute error on signal; Time-dependent; Vector
relerror	vecflt.type (9.4.1.2.9)	Relative error on signal (normalised to signal value); Time-dependent; Vector

Type of: bpole\_probes:measure (1106) I coil:coilcurrent (1111) I coil:coilvoltage (1111) I cxmeasure:ti (1160) I cxmeasure:vpole (1160) I cxmeasure:vtor (1160) I distsource\_profiles\_1d:pow\_den (1196) I distsource\_profiles\_1d:src\_rate (1196) I ecmeasure:te (1201) I flux\_loops:measure (1228) I fusiondiag\_ct\_chords:measure (1240) I fusiondiag\_ct.energy:energy (1241) I fusiondiag\_ct.energy:measure (1241) I fusiondiag\_detect\_ct.energy:energy (1242) I fusiondiag\_detect\_ct.energy:measure (1242) I fusiondiag\_emissivity1d:r (1243) I fusiondiag\_emissivity1d:z (1243) I fusiondiag\_spec1d:measure (1246) I halphasetup:solidangle (1254) I halphadiag:intensity (1063) I lang\_derived:measure (1264) I lang\_measure:area (1265) I lang\_measure:measure (1265) I lineintegraldiag:measure (1274) I lithmeasure:ne (1275) I magnetise:mr

(1280) I magnetise:mz (1280) I modules:amplitude (1288) I modules:phase (1288) I msediag\_radia\_chord:totradiance (1292) I msediag\_radiance:wavelength (1293) I nbi\_unit:beamcurrfrac (1297) I nbi\_unit:beampowfrac (1297) I pfcoils:coilcurrent (1315) I pfcoils:coilvoltage (1315) I pfsupplies:current (1320) I pfsupplies:voltage (1320) I polarimetry:measure (1326) I rfmeasure:ti (1358) I rzphi1Dexp:phi (1369) I rzphi1Dexp:r (1369) I rzphi1Dexp:z (1369) I tsmeasure:ne (1436) I tsmeasure:te (1436)

#### 9.4.1.3.181 exp2D

Structure for experimental 2D signal

member	type	description
value	matflt.type (9.4.1.2.7)	Signal value; Time-dependent; Matrix
abserror	matflt.type (9.4.1.2.7)	Absolute error on signal; Time-dependent; Matrix
relerror	matflt.type (9.4.1.2.7)	Relative error on signal (normalised to signal value); Time-dependent; Matrix

Type of: distsource\_profiles\_2d:pow\_den (1197) I distsource\_profiles\_2d:src\_rate (1197) I fusiondiag\_emissivity2d:r (1244) I fusiondiag\_emissivity2d:z (1244) I fusiondiag\_spec2d:measure (1247)

#### 9.4.1.3.182 f\_expansion

Distribution function,  $f$ , expanded into a vector of successive approximations. The first element in the vector ( $f\_expansion(1)$ ) is the zeroth order distribution function, while the  $K$ :th element in the vector ( $f\_expansion(K)$ ) is the  $K$ :th correction, such that the total distribution function is a sum over all elements in the  $f\_expansion$  vector. Time-dependent. Structure array ( $Nf\_expansion$ )

member	type	description
grid	complexgrid (9.4.1.3.70)	Grid for storing the distribution function. Time-dependent; Complexgrid
values	complexgrid.scalar (9.4.1.3.75)	Values of the distribution function [ $m^{-3} (m/s)^{-3}$ ]. Time-dependent; Complexgrid.scalar.

Type of: dist\_func:f\_expansion (1172)

#### 9.4.1.3.183 filter

Laplace proper filter

member	type	description
num	matflt.type (9.4.1.2.7)	Coefficients of the numerator, in increasing order : $a_0 + a_1*s + \dots + a_n*s^n$ ; Matrix (nsupplies,n)
den	matflt.type (9.4.1.2.7)	Coefficients of the denominator, in increasing order : $b_0 + b_1*s + \dots + b_m*s^m$ ; Matrix (nsupplies,m)

Type of: desc\_supply:filter (1169)

#### 9.4.1.3.184 flush

FLUSH package coefficients for the mapping of the equilibrium. The time grid of this structure is the same as the equilibrium structure above.

member	type	description
datainfo	datainfo (9.4.1.3.120)	Generic information on a data item
position	rz1D (9.4.1.3.319)	Major radius and altitude of the FLUSH grid [m]; Time-dependent; Vectors resp. (nR) and (nZ)
coef	matflt.type (9.4.1.2.7)	Coefficients of the fit; Time-dependent; Matrix 2D (nR,nZ)
codeparam	codeparam (9.4.1.3.65)	Code parameters

Type of: equilibrium:flush (1061)

#### 9.4.1.3.185 flux\_loops

Poloidal flux loops RZ coordinates have 1 component for the full loop and two if there is a negative reference loop



member	type	description
setup_floops	setup_floops (9.4.1.3.354)	diagnostic setup information
measure	exp1D (9.4.1.3.180)	Measured flux [Wb]; Time-dependent; Vector (nloops)

Type of: magdiag:flux\_loops (1070)

#### 9.4.1.3.186 fluxel

Structure for the fluxes of a field of the core transport equations (electrons); Time-dependent;

member	type	description
flux_dv	vecflt.type (9.4.1.2.9)	Flux of the field calculated from the transport coefficients. Time-dependent; Vector (nrho)
flux_interp	vecflt.type (9.4.1.2.9)	Interpretative flux deduced from measured data, the integral of the source term, and the time derivative of the field. Time-dependent; Vector (nrho)

Type of: corefield:flux (1136)

#### 9.4.1.3.187 fluximp

Structure for the fluxes of a field of the core transport equations (impurities); Time-dependent;

member	type	description
flux_dv	matflt.type (9.4.1.2.7)	Flux of the field calculated from the transport coefficients. Time-dependent; Array2D (nrho,nzimp)
flux_interp	matflt.type (9.4.1.2.7)	Interpretative flux deduced from measured data, the integral of the source term, and the time derivative of the field. Time-dependent; Array2D (nrho,nzimp)

Type of: impurity\_type:flux (1259)

#### 9.4.1.3.188 fluxion

Structure for the fluxes of a field of the core transport equations (ions); Time-dependent;

member	type	description
flux_dv	matflt.type (9.4.1.2.7)	Flux of the field calculated from the transport coefficients. Time-dependent; Matrix (nrho,nion)
flux_interp	matflt.type (9.4.1.2.7)	Interpretative flux deduced from measured data, the integral of the source term, and the time derivative of the field. Time-dependent; Matrix (nrho,nion)

Type of: corefieldion:flux (1137)

#### 9.4.1.3.189 fullwave

Solution by full wave code

member	type	description
grid	complexgrid (9.4.1.3.70)	Grid for storing the components of the wave field; Time-dependent
e.components	e.components (9.4.1.3.157)	E-field representation in terms of the parallel and circularly polarised components
pol.decomp	pol.decomp (9.4.1.3.282)	TO BE REMOVED, being replaced by e.components and grid. Kept only to make smooth transition between data-type versions. [Poloidal decomposition of the wave fields. Uses the flux surface grid in grid_1d.]
local	local (9.4.1.3.234)	TO BE REMOVED, being replaced by e.components and grid. Kept only to make smooth transition between data-type versions. [Local description of the wave fields. Uses the grid in grid_2d].

Type of: coherentwave:fullwave (1110)

#### 9.4.1.3.190 fusiondiag\_colli\_3d

Geometry of each channel of detector for arbitrary cross section. Replicate this structure for each channel.

member	type	description
name	string (9.4.1.1.3)	Name tag for the chord. String.

member	type	description
voxels(:)	fusiondiag_voxels (9.4.1.3.205)	Array of voxel structures defining the plasma region viewed from each collimator and scaling factor for effective solid angle for sources.

Type of: fusiondiag\_collimator:colli\_3d (1236)

#### 9.4.1.3.191 fusiondiag\_colli\_circ

Geometry of each channel of detector for circular cross section. Replicate this structure for each channel.

member	type	description
name	string (9.4.1.1.3)	Name tag for the chord.
setup_line	setup_line (9.4.1.3.356)	Geometric description of the line of sight. First pivot close to detector position and second pivot at first wall hit.
colliunit(:)	fusiondiag_colliunit_circ (9.4.1.3.194)	Detail of each collimator unit of each chord. Replicate this structure for each collimator.

Type of: fusiondiag\_collimator:colli\_circ (1236)

#### 9.4.1.3.192 fusiondiag\_colli\_poly

Geometry of each channel of detector for polygon cross section. Replicate this structure for each channel.

member	type	description
name	string (9.4.1.1.3)	Name tag for the chord.
setup_line	setup_line (9.4.1.3.356)	Geometric description of the line of sight. First pivot close to detector position and second pivot at first wall hit.
colliunit(:)	fusiondiag_colliunit_poly (9.4.1.3.195)	Detail of each collimator unit of each chord. Replicate this structure for each collimator.

Type of: fusiondiag\_collimator:colli\_poly (1236)

#### 9.4.1.3.193 fusiondiag\_collimator

Collimator array.

member	type	description
colli_circ(:)	fusiondiag_colli_circ (9.4.1.3.191)	Geometry of each channel of detector for circular cross section. Replicate this structure for each channel.
colli_poly(:)	fusiondiag_colli_poly (9.4.1.3.192)	Geometry of each channel of detector for polygon cross section. Replicate this structure for each channel.
colli_3d(:)	fusiondiag_colli_3d (9.4.1.3.190)	Geometry of each channel of detector for arbitrary cross section. Replicate this structure for each channel.

Type of: fusiondiag\_fus\_product:collimator (1245)

#### 9.4.1.3.194 fusiondiag\_colliunit\_circ

Detail of each collimator unit of each chord. Replicate this structure for each collimator.

member	type	description
radius	vecflt.type (9.4.1.2.9)	Radius of cross section; Typically dim=2 for just entry and exit of collimator; Vector (dim)
centre	rzphiID (9.4.1.3.325)	Position of cross section centre; Typically dim=2 for just entry and exit of collimator; Vector (dim)

Type of: fusiondiag\_colli\_circ:colliunit (1234)

#### 9.4.1.3.195 fusiondiag\_colliunit\_poly

Detail of each collimator unit of each chord. Replicate this structure for each collimator.

member	type	description
member	type	description
dimension	float (9.4.1.1.1)	Number of edges of cross section.
nodes	rzphi2D (9.4.1.3.327)	Coordinates of nodes defining each cross section; Typically dim=2 for just entry and exit of collimator; Vector (dim,nnodes)

Type of: fusiondiag\_colli\_poly:colliunit (1235)

#### 9.4.1.3.196 fusiondiag\_counts

Integrated emissivity [ $s^{-1}$ ].

member	type	description
units	string (9.4.1.1.3)	Energy units (ev, tof - time of flight)
ct_chords(:)	fusiondiag_ct_chords (9.4.1.3.197)	Integrated emissivity for all spatial chords. Replicate the structure for each energy bin [ $s^{-1}$ ].
ct_energy(:)	fusiondiag_ct_energy (9.4.1.3.198)	Integrated emissivity for each chord as function of energy like variable. Replicate this structure for each chord [ $s^{-1}$ ].
detect_ct(:)	fusiondiag_detect_ct_energy (9.4.1.3.199)	Detected integrated emissivity for each chord as function of energy like variable. Replicate this structure for each chord. This structure contains the actual experimental data as obtained from the detector. To get from species emissivity to the detector counts a detector transfer matrix is used (should be shot independent) since a monoenergetic beam will ultimately show up with a given spread in the detector channels. Each detector type or l.o.s. might have a dedicated detector transfer matrix since the energy discrimination can vary. [ $s^{-1}$ ].

Type of: fusiondiag\_fus\_product:counts (1245)

#### 9.4.1.3.197 fusiondiag\_ct\_chords

Integrated emissivity for all spatial chords. Replicate the structure for each energy bin [ $s^{-1}$ ].

member	type	description
name	vecstring_type (9.4.1.2.11)	Name tag for each chord. Vector (nchords)
energy	exp0D (9.4.1.3.179)	Energy like variable span. Use minimum energy when no energy spectra is resolved.
measure	exp1D (9.4.1.3.180)	Measured counts. Vector (nchords)

Type of: fusiondiag\_counts:ct\_chords (1239)

#### 9.4.1.3.198 fusiondiag\_ct\_energy

Integrated emissivity for each chord as function of energy like variable. Replicate this structure for each chord [ $s^{-1}$ ].

member	type	description
energy	exp1D (9.4.1.3.180)	Energy array of detected counts spectra. Vector (nenergy)
measure	exp1D (9.4.1.3.180)	Measured counts spectra. Vector (nenergy)

Type of: fusiondiag\_counts:ct\_energy (1239)

#### 9.4.1.3.199 fusiondiag\_detect\_ct\_energy

Detected integrated emissivity for each chord as function of energy like variable. Replicate this structure for each chord. This structure contains the actual experimental data as obtained from the detector. To get from species emissivity to the detector counts a detector transfer matrix is used (should be shot independent) since a monoenergetic beam will ultimately show up with a given spread in the detector channels. Each detector type or l.o.s. might have a dedicated detector transfer matrix since the energy discrimination can vary. [ $s^{-1}$ ].

member	type	description
energy	exp1D (9.4.1.3.180)	Energy array of detected counts spectra. Vector (nenergy)
measure	exp1D (9.4.1.3.180)	Measured counts spectra. Vector (nenergy)
diag_func	diag_func (9.4.1.3.127)	Structure to provide the description on the detector used and store the transfer matrix of the detector for that l.o.s.

Type of: fusiondiag\_counts:detect\_ct (1239)

#### 9.4.1.3.200 fusiondiag\_emissivity1d

Reconstructed 1D emissivity [counts.m<sup>-3</sup>.s<sup>-1</sup>].

member	type	description
units	string (9.4.1.1.3)	Energy units (ev, tof - time of flight)
r	exp1D (9.4.1.3.180)	horizontal grid. Vector (dim)
z	exp1D (9.4.1.3.180)	vertical grid. Vector (dim)
spec1d(:)	fusiondiag_spec1d (9.4.1.3.203)	Emissivity in given energy like variable range [counts.m <sup>-3</sup> .s <sup>-1</sup> ].

Type of: fusiondiag\_fus\_product:emissivity1d (1245)

#### 9.4.1.3.201 fusiondiag\_emissivity2d

Reconstructed 2D emissivity [counts.m<sup>-3</sup>.s<sup>-1</sup>].

member	type	description
units	string (9.4.1.1.3)	Energy units (ev, tof - time of flight)
r	exp2D (9.4.1.3.181)	radial grid. Vector (dim1,dim2)
z	exp2D (9.4.1.3.181)	vertical grid. Vector (dim1,dim2)
spec2d(:)	fusiondiag_spec2d (9.4.1.3.204)	Emissivity in given energy like variable range [counts.m <sup>-3</sup> .s <sup>-1</sup> ].

Type of: fusiondiag\_fus\_product:emissivity2d (1245)

#### 9.4.1.3.202 fusiondiag\_fus\_product

Source. Time-dependent. Structure array. Replicate this source structure to accommodate neutron and gammas.

member	type	description
product	string (9.4.1.1.3)	Type of fusion product (neutron,gamma)
reaction	string (9.4.1.1.3)	Type of reaction involved (e.g. DD neutron, Be-alpha,n,gamma-C)
collimator	fusiondiag_collimator (9.4.1.3.193)	Collimator array.
counts	fusiondiag_counts (9.4.1.3.196)	Integrated emissivity [s <sup>-1</sup> ].
emissivity1d	fusiondiag_emissivity1d (9.4.1.3.200)	Reconstructed 1D emissivity [counts.m <sup>-3</sup> .s <sup>-1</sup> ].
emissivity2d	fusiondiag_emissivity2d (9.4.1.3.201)	Reconstructed 2D emissivity [counts.m <sup>-3</sup> .s <sup>-1</sup> ].
codeparam	codeparam (9.4.1.3.65)	Code parameters

Type of: fusiondiag\_fus\_product (1062)

#### 9.4.1.3.203 fusiondiag\_spec1d

Emissivity in given energy like variable range [counts.m<sup>-3</sup>.s<sup>-1</sup>].

member	type	description
energy	exp0D (9.4.1.3.179)	Energy like variable span. Use minimum energy when no energy spectra is resolved. Scalar
measure	exp1D (9.4.1.3.180)	reconstruction. Vector (dim)

Type of: fusiondiag\_emissivity1d:spec1d (1243)

#### 9.4.1.3.204 fusiondiag\_spec2d

Emissivity in given energy like variable range [counts.m<sup>-3</sup>.s<sup>-1</sup>].

member	type	description
energy	exp0D (9.4.1.3.179)	Energy like variable span. Use minimum energy when no energy spectra is resolved. Scalar
measure	exp2D (9.4.1.3.181)	reconstruction. Vector (dim1,dim2)

Type of: fusiondiag\_emissivity2d:spec2d (1244)

#### 9.4.1.3.205 fusiondiag\_voxels

Array of voxel structures defining the plasma region viewed from each collimator and scaling factor for effective solid angle for sources.

member	type	description
centre	rzphi0D (9.4.1.3.324)	Centre of voxel; used also as origin of direction to detector
direction	rzphi0D (9.4.1.3.324)	Second point defining the direction to detector.
volume	float (9.4.1.1.1)	Voxel Volume
solid_angle	float (9.4.1.1.1)	effective solid angle (divided by 4pi) of the voxel towards detector.

Type of: fusiondiag\_colli\_3d:voxels (1233)

#### 9.4.1.3.206 geom\_iron

Geometry of the iron segments

member	type	description
npoints	vecint.type (9.4.1.2.10)	Number of points describing an element (irregular outline rzcoordinate); Vector (nsegment)
rzcoordinate	rz2D (9.4.1.3.322)	Irregular outline [m]; 2D arrays (nsegment,max_npoints)

Type of: desc\_iron:geom\_iron (1167)

#### 9.4.1.3.207 global\_param

0d output parameters

member	type	description
beta_pol	float (9.4.1.1.1)	poloidal beta; Time-dependent; Scalar
beta_tor	float (9.4.1.1.1)	toroidal beta; Time-dependent; Scalar
beta_normal	float (9.4.1.1.1)	normalised beta; Time-dependent; Scalar
i_plasma	float (9.4.1.1.1)	total toroidal plasma current [A]; Positive sign means anti-clockwise when viewed from above. Time-dependent; Scalar
li	float (9.4.1.1.1)	internal inductance; Time-dependent; Scalar
volume	float (9.4.1.1.1)	total plasma volume [m <sup>3</sup> ]; Time-dependent; Scalar
area	float (9.4.1.1.1)	area poloidal cross section [m <sup>2</sup> ]; Time-dependent; Scalar
psi_ax	float (9.4.1.1.1)	poloidal flux at the magnetic axis [Wb]; Time-dependent; Scalar
psi_bound	float (9.4.1.1.1)	poloidal flux at the selected plasma boundary (separatrix for a free boundary code; fixed boundary for fixed boundary code) [Wb]; Time-dependent; Scalar
mag_axis	mag_axis (9.4.1.3.235)	Magnetic axis values
q_95	float (9.4.1.1.1)	q at the 95% poloidal flux surface; Time-dependent; Scalar
q_min	float (9.4.1.1.1)	minimum q value in the plasma; Time-dependent; Scalar
toroid_field	b0r0 (9.4.1.3.55)	Characteristics of the vacuum toroidal field, redundant with the toroidfield CPO, to be used by the ETS
w_mhd	float (9.4.1.1.1)	Plasma energy content = 3/2 * int(p,dV) with p being the total pressure (thermal + fast particles) [J]. Time-dependent; Scalar
gamma	float (9.4.1.1.1)	Adiabatic index. Time-dependent; Scalar

Type of: equilibrium:global\_param (1061)

#### 9.4.1.3.208 globalparam

Various global quantities calculated from the 1D profiles. Time-dependent

member	type	description
current_tot	float (9.4.1.1.1)	Total plasma current [A]; Time-dependent; Scalar
current_bnd	float (9.4.1.1.1)	Plasma current inside transport solver boundary rho_tor_bnd [A]; Time-dependent; Scalar
current_ni	float (9.4.1.1.1)	Total non-inductive parallel current [A]; Time-dependent; Scalar
vloop	float (9.4.1.1.1)	Toroidal loop voltage [V]; Time-dependent; Scalar
li	float (9.4.1.1.1)	Internal inductance; Time-dependent; Scalar
beta_tor	float (9.4.1.1.1)	toroidal beta; Time-dependent; Scalar
beta_normal	float (9.4.1.1.1)	normalised beta; Time-dependent; Scalar
beta_pol	float (9.4.1.1.1)	poloidal beta; Time-dependent; Scalar
w_dia	float (9.4.1.1.1)	Plasma energy content = $3/2 \int p, dV$ with p being the total pressure (pr.th + pr.perp). Time-dependent; Scalar

Type of: coreprof:globalparam (1052)

### 9.4.1.3.209 grid info

Specifying the grid; type of the grid (unstructured/structured/rectangular), the grid coordiante, in what variables the source is continuous/discrete, if the source is given at gyrocentre or real particle position.

member	type	description
grid_type	integer (9.4.1.1.2)	Type of grid in continuous dimensions: 1=unstructured grid, 2=structured non-rectangular grid, 3=rectangular. For rectangular grids, and/or dimensions with discrete source, the grid coordinates dim1,dim2,... is stored in vectors dim1(1:ndim1,1,1,1), dim1(1,1:ndim2,1,1),...
ngriddim	integer (9.4.1.1.2)	Number of grid dimension. For ngriddim=2 the grid is specified by dim1 and dim2 only, while dim3, dim4, dim5, and dim6 can be ignored (should not be allocated). For ngriddim=3 also dim3 is used to describe the grid etc. E.g. if your distribution is given by the three variables the poloidal flux, perpendicular and parallel velocities, then ngriddim=3 and grid.coord(1)=15, grid.coord(1)=16, grid.coord(3)=6.
grid_coord	vecint.type (9.4.1.2.10)	Identifies the coordinates specifies in dim1, dim2, dim3, dim4, dim5, and dim6. grid.coord(K) describe the coordinate represented in dimK, for K=1,2...6. The possible coordinates are: 1=R, Major radius [m]; 2=Z, Vertical position [m]; 3=X, first cartesian coordinate in the horizontal plane [m]; 4=Y, second cartesian coordinate in the horizontal plane (grad(X) x grad(Y) = grad(Z)) [m]; 5=phi, toroidal angle [rad]; 6=psi, poloidal magnetic flux [ $T^*m^2$ ]; 7=rhotor, the square root of the toroidal flux; 8=theta, geometrical poloidal angle [rad]; 9=theta_b, Boozer poloidal angle [rad]; 10=vx, velocity in the x-direction [m/s]; 11=vy, velocity in the y-direction [m/s]; 12=vz, velocity in the z-direction [m/s]; 13=vel, total velocity [m/s]; 14=vphi, velocity in the phi-direction [m/s]; 15=vpar, velocity in the parallel direction [m/s]; 16=vperp, velocity in the perpendicular direction [m/s]; 17=E, Hamiltonian energy [J]; 18=Pphi, canonical toroidal angular momentum [ $kg \ m^2/s$ ]; 19=mu, magnetic moment [J/T]; 20=Lambda=mu/E [1/T]; 21=pitch=vpar/v [-]; 22=s, the position of the omnigenous plane (generalised equatorial plane) as described by the fields omnigen_surf% <i>s</i> and omnigen_surf% <i>rz</i> ; 23=particle spin; 24=n.Legendre, the index of the Legendre polynomial of the pitch, e.g. if the k:th component of dim3(1,1,k,1,1,1)=5 then this refer to the 5:th Legendre polynomial P_5(xi). Vector (6)
discrete_dims	vecint.type (9.4.1.2.10)	Specifies discrete or continuous grid in each dimension separately. For discrete_dims(K)=1, K=1,2...6: the source is discretely distributed at the grid points of the dimK-grid (e.g. to treat the discrete energies injected with NBI); for discrete_dims(K)=0: continuous source, i.e. the source is distributed over the continuous variable dimK (e.g. the source density is a continuous function of the major radius). Vector (6)

Type of: source\_on\_grid:grid\_info (1406)

### 9.4.1.3.210 h.inventory

Data on wall element hydrogen inventories

member	type	description
surf_trap_de	array5dflt.type (9.4.1.2.4)	Density of hydrogen traps on internal surfaces [ $1/m^2$ ]; Time-dependent; 5d float array; Dimensions: 1. compound type (indexing as in chemical.comp), 2. trap type, 3. cell index of 1d layer height discretization; 4. layer index; 5. wall element index
bulk_trap_de	array5dflt.type (9.4.1.2.4)	Density of hydrogen traps in bulk material [ $1/m^3$ ]; Time-dependent; 5d float array; Dimensions: see surface_trap_density
bulk_D	array5dflt.type (9.4.1.2.4)	Diffusivity of hydrogen species in bulks of different compounds; Time-dependent; 5d float array. Dimensions: 1. index of compound (indexing as in chemical.comp), 2. index of hydrogen isotope, 3. cell index of 1d layer height discretization, 4. layer index, 5. wall element index
surface_D	array5dflt.type (9.4.1.2.4)	Diffusivity of hydrogen species of surface of different compounds; Time-dependent; Dimensions: see bulk_D
bulk_C_s	array5dflt.type (9.4.1.2.4)	Bulk mobile (solute) concentration [atoms/ $m^3$ ]; Time-dependent; Dimensions: see bulk_D
surface_C_s	array5dflt.type (9.4.1.2.4)	Surface mobile (solute) concentration [atoms/ $m^2$ ]; Time-dependent; Dimensions: see bulk_D
bulk_C_t	array5dflt.type (9.4.1.2.4)	Bulk trapped concentration [atoms/ $m^3$ ]; Time-dependent; Dimensions: see bulk_D
surface_C_t	array5dflt.type (9.4.1.2.4)	Surface trapped concentration [atoms/ $m^2$ ]; Time-dependent; Dimensions: see bulk_D

member	type	description
surf_recreate	array5dflt.type (9.4.1.2.4)	Recombination rate on surface (only for pure elements, not compounds) [molecules*m <sup>2</sup> /s]; Time-dependent; Dimensions: see bulk.D

Type of: surface:h\_inventory (1422)

#### 9.4.1.3.211 halpha\_setup

setup for the lines of sight of the line integrated measurement

member	type	description
name	vecstring.type (9.4.1.2.11)	Name of the channel. Array of strings (nlos).
pivot_point	rzphi1D (9.4.1.3.325)	Pivot point of l.o.s. it can be either the collimator position or entry point on the vessel. Vector (nlos)
horchordang	vecflt.type (9.4.1.2.9)	Angle [rad] of horizontal projection of l.o.s. with poloidal cross section (0 for HFS to LFS trajectory - see Convention_angles_interfdiag.pdf) [rad]. Vector (nlos)
verchordang	vecflt.type (9.4.1.2.9)	Angle of l.o.s. with vertical axis (0 for bottom-top trajectory, Pi for top-bottom trajectory - see Convention_angles_interfdiag.pdf) [rad]; Vector (npos)
second_point	rzphi1D (9.4.1.3.325)	Second point defining the l.o.s. together with the pivot_point. Vector (nlos)
solidangle	exp1D (9.4.1.3.180)	Solid angle of the detector; [sr] Vector (nlos)

Type of: halphadiag:setup (1063)

#### 9.4.1.3.212 holes

Structure to describe the placing and properties of the holes

member	type	description
n_holes	integer (9.4.1.1.2)	Number of holes on each wall;
coordinates	coordinates (9.4.1.3.90)	Poloidal and Toroidal coordinates of the center of each hole;
width	width (9.4.1.3.427)	Angular width of each in the poloidal and toroidal direction;
eta	vecflt.type (9.4.1.2.9)	Resistivity of each hole [ohm.m]; Vector (n_holes)

Type of: mhd\_res\_wall2d:holes (1285)

#### 9.4.1.3.213 identifier

Standard type for identifiers. The three fields: id, flag and description are all representations of the same information. Associated with each application of this identifier-type, there should be a translation table defining the three fields for all objects to be identified.

member	type	description
id	string (9.4.1.1.3)	Short string identifier
flag	integer (9.4.1.1.2)	Integer identifier
description	string (9.4.1.1.3)	Verbose description of identifier

Type of: composition\_neutralscomp:type (1129) I compositions\_type:signature (1130) I coredelta\_values:deltaid (1135) I coreneutrals\_atomlist:ionimptype (1150) I coresource\_values:sourceid (1154) I coretransp\_values:transportid (1158) I enum\_instance:type (1215) I mhd\_ideal\_wall2d:walltype (1283) I mhd\_res\_wall2d:walltype (1285) I mse-diag\_polarization:type (1291) I msediag\_stokes:type (1296) I wall2d:wall\_id (1451) I wall2d\_mhd:wall\_id (1452) I wall3d:wall\_id (1453) I weighted\_markers:variable\_ids (1468)

#### 9.4.1.3.214 impcoeff

Array over charge states for this particular impurity.

member	type	description
chargestate(·)	coefficients_neutrals (9.4.1.3.66)	NO DOCS

Type of: coreneutrals:impcoeff (1051)

### 9.4.1.3.215 impurities

Array of impurities.

member	type	description
nucindex	integer (9.4.1.1.2)	Index into list of nuclei; int
i_ion	integer (9.4.1.1.2)	Index of the impurity species in the coreprof ion species ordering. Vector (nimp)
nzimp	integer (9.4.1.1.2)	Number of charge states (or bundles) considered for this impurity species.
zmin	vecflt.type (9.4.1.2.9)	Minimum Z of impurity ionisation state bundle. Vector (nzimp)
zmax	vecflt.type (9.4.1.2.9)	Maximum Z of impurity ionisation state bundle. If no bundle, zmax=zmin. Vector (nzimp)
label	vecstring.type (9.4.1.2.11)	String array (nzimp) identifying impurities (e.g. C+, C+2, C+3, C+4, C+5, C+6, ...)

Type of: compositions.type:impurities (1130)

### 9.4.1.3.216 impurity\_type

Array(nimp). Time-dependent

member	type	description
z	matflt.type (9.4.1.2.7)	Impurity ionisation state (averaged for bundle); Time-dependent; Array2D (nrho,nzimp)
zsq	matflt.type (9.4.1.2.7)	Z <sup>2</sup> , Square of impurity ionisation state (averaged for bundle); Time-dependent; Array2D (nrho,nzimp)
nz	matflt.type (9.4.1.2.7)	Density of impurity in a given charge state [m <sup>-3</sup> ]. Time-dependent; Array2D (nrho,nzimp)
source_term	sourceimp (9.4.1.3.367)	Source term for each charge state. Time-dependent.
boundary	boundaryimp (9.4.1.3.61)	Boundary condition for each charge state. Time-dependent
transp_coef	coretransimp (9.4.1.3.113)	Transport coefficients for each charge state
flux	fluximp (9.4.1.3.187)	Fluxes of impurity particles, two definitions [m <sup>-2</sup> .s <sup>-1</sup> ]. Time-dependent.
time_deriv	matflt.type (9.4.1.2.7)	Integral of the time derivative term of the transport equation. Time-dependent. Array2D (nrho,nzimp)
diagnostic	coreimpurediag.type (9.4.1.3.104)	NO DOCS

Type of: coreimpur:impurity (1050)

### 9.4.1.3.217 inj\_spec

Injected species

member	type	description
amn	float (9.4.1.1.1)	Atomic mass number
zn	float (9.4.1.1.1)	Nuclear charge

Type of: nbi\_unit:inj\_spec (1297)

### 9.4.1.3.218 ions

Array of main plasma ions.

member	type	description
nucindex	integer (9.4.1.1.2)	Index into list of nuclei; int
zion	float (9.4.1.1.1)	Ion charge (of the dominant ionisation state; lumped ions are allowed); Vector (nion)
imp_flag	integer (9.4.1.1.2)	Multiple charge state calculation flag : 0-Only one charge state is considered; 1-Multiple charge state are considered and are described in impurity CPO; Vector (nion)
label	string (9.4.1.1.3)	String identifying ion (e.g. H+, D+, T+, He+2, C+, ...)

Type of: compositions.type:ions (1130)

### 9.4.1.3.219 isoflux

Point series at which the flux is considered the same

member	type	description
position	rz1D (9.4.1.3.319)	Position of the points at which the flux is considered the same; Time-dependent; Vector (nmeas)



member	type	description
source	string (9.4.1.1.3)	Description or path to the source signal (diagnostic or genprof, from which to read all info on the signal), e.g. 'magdiag/bpol_probes/measure/value'. String
weight	vecflt.type (9.4.1.2.9)	weight given to the measurement ( $\zeta=0$ ); -1 if exact data; Time-dependent; Vector (nmeas)
sigma	vecflt.type (9.4.1.2.9)	standard deviation of the measurement; Time-dependent; Vector (nmeas)
calculated	vecflt.type (9.4.1.2.9)	Signal as recalculated by the equilibrium code; Time-dependent; Vector (nmeas)
chi2	vecflt.type (9.4.1.2.9)	chi <sup>2</sup> of (calculated-measured); Time-dependent; Vector (nmeas)

Type of: eqconstraint:isoflux (1216)

#### 9.4.1.3.220 jni

Non-inductive parallel current density [A/m<sup>2</sup>]; Time-dependent;

member	type	description
value	vecflt.type (9.4.1.2.9)	Value of jni; Time-dependent; Vector (nrho)
integral	vecflt.type (9.4.1.2.9)	Integral from 0 to rho of jni. Time-dependent; Vector (nrho)
source	string (9.4.1.1.3)	Source of the profile (any comment describing the origin of the profile : code, path to diagnostic signals, massaging, ...); String

Type of: psi:jni (1331)

#### 9.4.1.3.221 lang\_derived

Structure for physics quantities derived from Langmuir probe measurements

member	type	description
source	vecstring.type (9.4.1.2.11)	Probes in probe holder used to derive measure. String vector
position	rzphi1Dexp (9.4.1.3.326)	Position of the measurement. Time-dependent.
measure	exp1D (9.4.1.3.180)	Measured quantity. Time-dependent.

Type of: langmuirdiag:machpar (1066) | langmuirdiag:ne (1066) | langmuirdiag:te (1066)

#### 9.4.1.3.222 lang\_measure

Structure for elementary Langmuir probe measurement

member	type	description
name	vecstring.type (9.4.1.2.11)	Name of the probe e.g. Jsatur1,Vfloat1). String vector
direction	vecstring.type (9.4.1.2.11)	Direction of the probe w.r.t. magnetic field. For Mach arrangement use 'co' (co-field) and 'ct' (counter field) for the pair, otherwise use 'both'. String vector
area	exp1D (9.4.1.3.180)	Effective area of probe [m <sup>2</sup> ]. Time-dependent.
position	rzphi1Dexp (9.4.1.3.326)	Position of the measurement. Time-dependent.
measure	exp1D (9.4.1.3.180)	Measured quantity. Time-dependent.

Type of: langmuirdiag:bias (1066) | langmuirdiag:jsat (1066) | langmuirdiag:potential (1066)

#### 9.4.1.3.223 launchangles

Launching angles of the beam

member	type	description
alpha	float (9.4.1.1.1)	Poloidal launching angle between the horizontal plane and the poloidal component of the nominal beam centerline [rad], Tan(alpha)=-k.z/k.R; Time-dependent
beta	float (9.4.1.1.1)	Toroidal launching angle between the poloidal plane and the nominal beam centerline [rad], Sin(beta)=k.phi; Time-dependent

Type of: antenna.ec:launchangles (1092)

#### 9.4.1.3.224 **launchs\_parallel**

Power spectrum as a function of the parallel refractive index.

member	type	description
nn_par	vecint_type (9.4.1.2.10)	Number of points for the discretization of the spectrum in the poloidal direction, Vector of integers (nantenna).
n_par	matflt_type (9.4.1.2.7)	Refraction index in the parallel direction, Matrix (nantenna,max_nn_par).
power	vecflt_type (9.4.1.2.9)	W/dN_par [W], Matrix(nantenna, max_nn_par). Time-dependent

Type of: spectrum:parallel (1415)

#### 9.4.1.3.225 **launchs\_phi\_theta**

Power spectrum as a function of the refractive index in the toroidal and poloidal directions.

member	type	description
nn_phi	vecint_type (9.4.1.2.10)	Number of points for the discretization of the spectrum in the toroidal direction, Vector of integers (nantenna).
nn_theta	vecint_type (9.4.1.2.10)	Number of points for the discretization of the spectrum in the poloidal direction, Vector of integers (nantenna).
n_phi	matflt_type (9.4.1.2.7)	Refraction index in the toroidal direction, Matrix (nantenna,max_nn_phi).
n_theta	matflt_type (9.4.1.2.7)	Refraction index in poloidal direction, Matrix (nantenna,max_nn_theta).
power	array3dfilt_type (9.4.1.2.1)	W/dNphi/dNtheta [W], Array (nantenna, max_nn_phi, max_nn_theta). Time-dependent

Type of: spectrum:phi\_theta (1415)

#### 9.4.1.3.226 **launchs\_rfbeam**

Beam characteristics (RF wave description)

member	type	description
spot	launchs_rfbeam_spot (9.4.1.3.228)	Spot characteristics
phaseellipse	launchs_rfbeam_phaseellipse (9.4.1.3.227)	Phase ellipse characteristics of the spot

Type of: launches:beam (1067)

#### 9.4.1.3.227 **launchs\_rfbeam\_phaseellipse**

Phase ellipse characteristics of the spot

member	type	description
invcurvrad	matflt_type (9.4.1.2.7)	Inverse curvature radii for the phase ellipse [m-1], Matrix (nantenna,2). Time-dependent
angle	vecflt_type (9.4.1.2.9)	Rotation angle for the phase ellipse [rd], Vector(nantenna). Time-dependent

Type of: launches\_rfbeam:phaseellipse (1269)

#### 9.4.1.3.228 **launchs\_rfbeam\_spot**

Spot characteristics

member	type	description
waist	matflt_type (9.4.1.2.7)	Waist for the spot ellipse [m], Matrix (nantenna,2). Time-dependent
angle	vecflt_type (9.4.1.2.9)	Rotation angle for the spot ellipse [rd], Vector(nantenna). Time-dependent

Type of: launches\_rfbeam:spot (1269)

#### 9.4.1.3.229 **layers**

Data on wall element layers

member	type	description
density	matflt.type (9.4.1.2.7)	Density of the surface layers [kg/m <sup>3</sup> ]; Time-dependent; Float matrix (max. number of layers, number of elements); First dimension: index of surface layer, second element: index of wall element
thickness	matflt.type (9.4.1.2.7)	Thickness of surface layer [m]; Time-dependent; Float matrix (max. number of layers, number of elements); First dimension: index of surface layer, second element: index of wall element
roughness	matflt.type (9.4.1.2.7)	Surface roughness [m] (surface between this layer and the one above it towards the plasma); Time-dependent; Float matrix (max. number of layers, number of elements); First dimension: index of surface layer, second element: index of wall element
t	array3dflt.type (9.4.1.2.1)	Temperature in layer [K]; Time-dependent; 3d float array, dimensions: 1. cell index of 1d layer height discretization, 2. layer index, 3. wall element index
element_frac	array3dflt.type (9.4.1.2.1)	Elemental composition; Time-dependent; Float 3d array (max. number of tracked elements, max. number of layers, number of wall elements); Dimensions: 1. index of tracked element (c.f. surface.elements list), 2. layer index, 3. wall element index
chem_comp	array3dflt.type (9.4.1.2.1)	Chemical composition, referring to the list surface.compounds; Time-dependent; 3d float array, dimensions: 1. index of tracked compound, 2. index of layer, 3. index of wall element

Type of: surface:layers (1422)

#### 9.4.1.3.230 limiter\_unit

Vector of limiting surfaces. Replicate this limiter\_unit element ncomponents times. Each unit contains a plasma facing component that can have dedicated number of points. Array of structures (ncomponents)

member	type	description
name	string (9.4.1.1.3)	Name or description of the limiter_unit
closed	string (9.4.1.1.3)	Identify whether the contour is closed (y) or open (n)
position	rz1D (9.4.1.3.319)	Position (R,Z coordinates) of a limiting surface. No need to repeat first point for closed contours [m]; Vector(npoints)
eta	float (9.4.1.1.1)	Wall resistivity [ohm.m]; Scalar
delta	float (9.4.1.1.1)	Wall thickness [m] (Optional if a closed facing component is given but useful for simpler closed contour limiter); Time-dependent; Scalar
permeability	float (9.4.1.1.1)	Vessel relative permeability; Scalar

Type of: limiter:limiter\_unit (1068) I wall\_limiter:limiter\_unit (1456)

#### 9.4.1.3.231 lineintegraldiag

General line integral diagnostic

member	type	description
datainfo	datainfo (9.4.1.3.120)	Generic information on a data item
expression	string (9.4.1.1.3)	Formal expression for the line integral to be evaluated as a function of ne, ni, Te, Ti, Zeff, Br, Bz
setup_line	setup_line (9.4.1.3.356)	Geometric description of the lines of sight
measure	expID (9.4.1.3.180)	Measured value. Time-dependent; Vector (nchords)
time	float (9.4.1.1.1)	Time [s]; Time-dependent; Scalar

#### 9.4.1.3.232 lithmeasure

Measured values

member	type	description
ne	expID (9.4.1.3.180)	Electron density [m <sup>-3</sup> ]. Vector (nchannels)

Type of: lithiumdiag:measure (1069)

#### 9.4.1.3.233 lithsetup

diagnostic setup information

member	type	description
position	rzphiID (9.4.1.3.325)	Position of the measurement. Vector (nchannels)

Type of: lithiumdiag:setup (1069)

### 9.4.1.3.234 local

TO BE REMOVED, being replaced by e\_components and grid. Kept only to make smooth transition between data-type versions. [Local description of the wave fields. Uses the grid in grid\_2d].

member	type	description
e.plus	array3dflt.type (9.4.1.2.1)	Magnitude of left hand polarised component of the wave electric field [V/m]; Time-dependent; Array 3D (ntor, ndim1, ndim2)
e.plus.ph	array3dflt.type (9.4.1.2.1)	Phase of left hand polarised component of the wave electric field [rad]; Time-dependent; Array 3D (ntor, ndim1, ndim2)
e.minus	array3dflt.type (9.4.1.2.1)	Magnitude of right hand polarised component of the wave electric field [v/m]; Time-dependent; Array 3D (ntor, ndim1, ndim2)
e.minus.ph	array3dflt.type (9.4.1.2.1)	Phase of right hand polarised component of the wave electric field [rad]; Time-dependent; Array 3D (ntor, ndim1, ndim2)
e.norm	array3dint.type (9.4.1.2.2)	Magnitude of wave electric field normal to a flux surface [V/m]; Time-dependent; 3D (ntor, ndim1, ndim2)
enorm.ph	array3dflt.type (9.4.1.2.1)	Phase of wave electric field normal to a flux surface [rad]; Time-dependent; 3D (ntor, ndim1, ndim2)
e.binorm	array3dflt.type (9.4.1.2.1)	Magnitude of wave electric field tangent to a flux surface [V/m]; Time-dependent; 3D (ntor, ndim1, ndim2)
e.binorm.ph	array3dflt.type (9.4.1.2.1)	Phase of wave electric field tangent to a flux surface [rad]; Time-dependent; 3D (ntor, ndim1, ndim2)
e.para	array3dflt.type (9.4.1.2.1)	Magnitude of parallel wave electric field [V/m]; Time-dependent; Array 3D (ntor, ndim1, ndim2)
e.para.ph	array3dflt.type (9.4.1.2.1)	Phase of parallel wave electric field [rad]; Time-dependent; Array 3D (ntor, ndim1, ndim2)
b.norm	array3dflt.type (9.4.1.2.1)	Magnitude of wave magnetic field normal to a flux surface [T]; Time-dependent; Array 3D (ntor, ndim1, ndim2)
b.norm.ph	array3dflt.type (9.4.1.2.1)	Phase of wave magnetic field normal to a flux surface [rad]; Time-dependent; Array 3D (ntor, ndim1, ndim2)
b.binorm	array3dflt.type (9.4.1.2.1)	Magnitude of wave magnetic field tangent to a flux surface [T]; Time-dependent; Array 3D (ntor, ndim1, ndim2)
b.binorm.ph	array3dflt.type (9.4.1.2.1)	Phase of wave magnetic field tangent to a flux surface [rad]; Time-dependent; Array 3D (ntor, ndim1, ndim2)
b.para	array3dflt.type (9.4.1.2.1)	Magnitude of wave magnetic field parallel to the equilibrium magnetic field [T]; Time-dependent; Array 3D (ntor, ndim1, ndim2)
b.para.ph	array3dflt.type (9.4.1.2.1)	Phase of wave magnetic field parallel to the equilibrium magnetic field [rad]; Time-dependent; Array 3D (ntor, ndim1, ndim2)

Type of: fullwave:local (1232)

### 9.4.1.3.235 mag\_axis

Magnetic axis values

member	type	description
position	rz0D (9.4.1.3.318)	Position of the magnetic axis [m]; Time-dependent; Scalar;
bphi	float (9.4.1.1.1)	Total toroidal magnetic field at the magnetic axis [T]; Time-dependent; Scalar
q	float (9.4.1.1.1)	q at the magnetic axis; Time-dependent; Scalar

Type of: global\_param:mag\_axis (1250)

### 9.4.1.3.236 magnet\_iron

Magnetisation in iron segments [T]

member	type	description
mr	eqmes1D (9.4.1.3.176)	Magnetisation along the R axis [T];
mz	eqmes1D (9.4.1.3.176)	Magnetisation along the Z axis [T];

Type of: eqconstraint:magnet\_iron (1216)

### 9.4.1.3.237 magnetise

Magnetisation M of the iron segment, assumed to be constant inside a given iron segment. Reminder :  $H = 1/\mu_0 * B - \mu_r * M$ ; [A/m].

member	type	description
mr	exp1D (9.4.1.3.180)	Magnetisation along the R axis [T]; Time-dependent; Vector (nsegment)
mz	exp1D (9.4.1.3.180)	Magnetisation along the Z axis [T]; Time-dependent; Vector (nsegment)

Type of: ironmodel:magnetise (1065)

#### 9.4.1.3.238 matcplx.type

Temporary structure for real and imaginary part of complex numbers (matrix)

member	type	description
re	matflt.type (9.4.1.2.7)	Real part
im	matflt.type (9.4.1.2.7)	Imaginary part

Type of: complexgrid\_scalar\_cplx:vector (1119)

#### 9.4.1.3.239 mdinfo

Information related to machine description for this entry

member	type	description
shot_min	integer (9.4.1.1.2)	Minimum shot number to which the machine description applies
shot_max	integer (9.4.1.1.2)	Maximum shot number to which the machine description applies
md_entry	entry_def (9.4.1.3.171)	Entry of the machine description used. NB : just for information : for the moment, no guarantee that machine description data have not been modified with respect to the data in md_entry. Machine description data are written explicitly in each CPO.

Type of

#### 9.4.1.3.240 mhd\_ideal\_wall2d

Ideal wall

member	type	description
walltype	identifier (9.4.1.3.213)	Tag the type of wall to be used, 0 (conformal) or 1 (free)
position	rz1D (9.4.1.3.319)	RZ description of the wall;

Type of: wall2d\_mhd:ideal\_wall (1452)

#### 9.4.1.3.241 mhd\_plasma

MHD modes in the confined plasma

member	type	description
psi	vecflt.type (9.4.1.2.9)	Position in poloidal flux [Wb] (without $1/2\pi$ and such that $B_p =  \text{grad } \psi  / R/2/\pi$ ). Time-dependent; Vector (npsi)
m	array3dfilt.type (9.4.1.2.1)	Poloidal mode number; Time-dependent; Array3D (npsi,nn,nm)
disp_perp	array3dcplx.type (9.4.1.3.54)	Perpendicular displacement of the mode (in Fourier space) [m]; Time-dependent; Array 3D (npsi,nn,nm)
disp_par	array3dcplx.type (9.4.1.3.54)	Parallel displacement of the mode (in Fourier space) [m]; Time-dependent; Array 3D (npsi,nn,nm)
tau_alfven	vecflt.type (9.4.1.2.9)	Alven time= $R/v_A=R0 \sqrt{\mu_0 \rho_0} / B_0$ [s]; Definitions of $R_0$ , $B_0$ , $\mu_0$ , $\rho_0$ to be clarified. rho grid should be included in the MHD CPO ? Time-dependent; Vector (npsi)
tau_resistive	vecflt.type (9.4.1.2.9)	Resistive time = $\mu_0 \rho_0 / \eta_{\text{neo}}$ [s]; Source of $\eta_{\text{neo}}$ to be clarified. Time-dependent; Vector (npsi)
coord_sys	coord.sys (9.4.1.3.89)	flux surface coordinate system on a square grid of flux and angle
a_pert	mhd_vector (9.4.1.3.244)	Perturbed vector potential (in Fourier space) [T.m]
b_pert	mhd_vector (9.4.1.3.244)	Perturbed magnetic field (in Fourier space) [T]
v_pert	mhd_vector (9.4.1.3.244)	Perturbed velocity (in Fourier space) [m/s]
p_pert	array3dcplx.type (9.4.1.3.54)	Perturbed pressure (in Fourier space) [Pa]; Time-dependent; Array 3D (npsi,nn,nm)
rho_mass_pert	array3dcplx.type (9.4.1.3.54)	Perturbed mass density (in Fourier space) [ $\text{kg}/\text{m}^3$ ]; Time-dependent; Array 3D (npsi,nn,nm)

member	type	description
temp_pert	array3dcplx_type (9.4.1.3.54)	Perturbed temperature (in Fourier space) [eV]; Time-dependent; Array 3D (npsi,nn,nm)

Type of: mhd:plasma (1071)

#### 9.4.1.3.242 mhd\_res\_wall2d

Resistive wall

member	type	description
walltype	identifier (9.4.1.3.213)	Tag the type of wall to be used, 0 (conformal) or 1 (free)
delta	float (9.4.1.1.1)	Wall thickness [m]; Scalar
eta	float (9.4.1.1.1)	Wall resistivity [ohm.m]; Scalar
npoloidal	integer (9.4.1.1.2)	Number of poloidal coordinates for each wall (dimension of R and Z);
position	rz1D (9.4.1.3.319)	RZ description of the wall; wall coordinates are defined at a middle line (line passing through the middle of the real wall as defined by thickness parameter delta)
holes	holes (9.4.1.3.212)	Structure to describe the placing and properties of the holes

Type of: wall2d\_mhd:res\_wall (1452)

#### 9.4.1.3.243 mhd\_vacuum

External modes

member	type	description
m	array3dfilt_type (9.4.1.2.1)	Poloidal mode number; Time-dependent; Array3D (npsi,nn,nm)
coord_sys	coord_sys (9.4.1.3.89)	flux surface coordinate system on a square grid of flux and angle
a_pert	mhd_vector (9.4.1.3.244)	Pertubed vector potential (in Fourier space) [T.m]
b_pert	mhd_vector (9.4.1.3.244)	Perturbed magnetic field (in Fourier space) [T]

Type of: mhd:vacuum (1071)

#### 9.4.1.3.244 mhd\_vector

Vector structure for MHD CPO

member	type	description
coord1	array3dcplx_type (9.4.1.3.54)	Fourier components of first coordinate; Time-dependent; Array 3D (npsi,nn,nm)
coord2	array3dcplx_type (9.4.1.3.54)	Fourier components of second coordinate; Time-dependent; Array 3D (npsi,nn,nm)
coord3	array3dcplx_type (9.4.1.3.54)	Fourier components of third coordinate; Time-dependent; Array 3D (npsi,nn,nm)

Type of: mhd\_plasma:a\_pert (1284) | mhd\_plasma:b\_pert (1284) | mhd\_plasma:v\_pert (1284) | mhd\_vacuum:a\_pert (1286) | mhd\_vacuum:b\_pert (1286)

#### 9.4.1.3.245 modules

Modules description. NB there are nmodules per antenna, distributed among nma\_phi toroidal positions and nma\_theta poloidal positions

member	type	description
nma_theta	integer (9.4.1.1.2)	Number of modules per antenna in the poloidal direction.
nma_phi	integer (9.4.1.1.2)	Number of modules per antenna in the toroidal direction.
ima_theta	vecint_type (9.4.1.2.10)	Position index of the module in the poloidal direction (from low theta to high theta, i.e. from bottom to top if the antenna is on LFS). Vector of integers (nmodules).
ima_phi	vecint_type (9.4.1.2.10)	Position index of the module in the toroidal direction (from low phi to high phi, counter-clockwise when seen from above). Vector of integers (nmodules).
sm_theta	float (9.4.1.1.1)	Spacing between poloidally neighboring modules [m]
amplitude	exp1D (9.4.1.3.180)	Amplitude of the TE10 mode injected in the module [W], Vector exp1d (nmodules). Time-dependent
phase	exp1D (9.4.1.3.180)	Phase of the TE10 mode injected in the module [radians], Vector exp1d (nmodules). Time-dependent

member	type	description
waveguides	waveguides (9.4.1.3.417)	Waveguides description

Type of: antennalh\_setup:modules (1096)

#### 9.4.1.3.246 msediag\_emiss\_chord

MSE Emissivity characterization. This structure is used for each line of sight of the MSE setup and contains the geometry of the line of sight, the emissivity(wavelength,pos) for each polarization state along the line of sight, the quantization axis and the emission volume. Replicate the structure for each line of sight.

member	type	description
volume	float (9.4.1.1.1)	Emitting volume ( $m^{-3}$ ). Scalar
setup	rzphiID (9.4.1.3.325)	Description of the line of sight (for the moment a line - not a cone of sight). Vector (npos).
polarization(:)	msediag_polarization (9.4.1.3.248)	Polarized and unpolarized emissivity of the relevant MSE spectral lines. Structure Array (ncomp). Time-dependent.
quantiaxis	vecflt_type (9.4.1.2.9)	Quantization axis for the line of sight (eR,ePhi,eZ). It is a unitary vector associated to the line of sight and to the emissivity, e.g. the Lorentzian electric field direction); Vector (3). Time-dependent

Type of: msediag\_emissivity:emiss\_chord (1290)

#### 9.4.1.3.247 msediag\_emissivity

Emissivity characteristics.

member	type	description
wavelength	vecflt_type (9.4.1.2.9)	Wavelength [m]. Vector (nwavelength)
emiss_chord(:)	msediag_emiss_chord (9.4.1.3.246)	MSE Emissivity characterization. This structure is used for each line of sight of the MSE setup and contains the geometry of the line of sight, the emissivity(wavelength,pos) for each polarization state along the line of sight, the quantization axis and the emission volume. Replicate the structure for each line of sight.

Type of: spectral:emissivity (1414)

#### 9.4.1.3.248 msediag\_polarization

Polarized and unpolarized emissivity of the relevant MSE spectral lines. Structure Array (ncomp). Time-dependent.

member	type	description
type	identifier (9.4.1.3.213)	Type of the polarization. 0 for unpolarised, 1 for Pi, 2 for sigma <sup>+</sup> and 3 for sigma <sup>-</sup>
spec_emiss	matflt_type (9.4.1.2.7)	Spectral emissivity of a particular polarization ( $Wm^{-3}sr^{-1}$ ). Matrix (npos,nwavelength). Time-dependent

Type of: msediag\_emiss\_chord:polarization (1289)

#### 9.4.1.3.249 msediag\_radia\_chord

MSE radiance characterization. This structure is used for each line of sight of the MSE setup and contains the geometry of the line of sight, the radiance(wavelength) for each polarization state, the quantization axis. Replicate the structure for each line of sight.

member	type	description
setup	msediag_setup (9.4.1.3.251)	Geometry for the observation line of sight
stokes(:)	msediag_stokes (9.4.1.3.253)	Stokes vector (I,U,S,V) as a function of the wavelength for the polarized and unpolarized relevant MSE spectral lines. Replicate for each spectral component. Structure array (ncomp). Time-dependent.
totradiance	expID (9.4.1.3.180)	Total Radiance integrated along the lines of sight ( $Wm^{-2}sr^{-1}$ ). Vector (nwavelength)

Type of: msediag\_radiance:radia\_chord (1293)

### 9.4.1.3.250 msediag\_radiance

Emissivity characteristics.

member	type	description
wavelength	exp1D (9.4.1.3.180)	Wavelength [m]. Vector (nwavelength)
radia_chord(:)	msediag_radia_chord (9.4.1.3.249)	MSE radiance characterization. This structure is used for each line of sight of the MSE setup and contains the geometry of the line of sight, the radiance(wavelength) for each polarization state, the quantization axis. Replicate the structure for each line of sight.

Type of: spectral:radiance (1414)

### 9.4.1.3.251 msediag\_setup

Geometry for the observation line of sight

member	type	description
pivot_point	rzphi0D (9.4.1.3.324)	Pivot point of mse line of sight. Scalar
horchordang	float (9.4.1.1.1)	Angle [rad] of horizontal projection of mse line of sight with poloidal cross section (0 for HFS to LFS trajectory - see Convention_angles_interfdiag.pdf) [rad]. Scalar
verchordang	float (9.4.1.1.1)	Angle of mse line of sight with vertical axis (0 for bottom-top trajectory, Pi for top-bottom trajectory - see Convention_angles_interfdiag.pdf) [rad]; Scalar
second_point	rzphi0D (9.4.1.3.324)	Second point defining the mse line of sight together with the pivot_point. Scalar

Type of: msediag\_radia\_chord:setup (1292)

### 9.4.1.3.252 msediag\_setup\_polarimetry

diagnostic setup information

member	type	description
rzgamma	rzphidrdzphi1D (9.4.1.3.329)	Position and width of the intersection between beam and line of sight. Vectors (nchords)
geom_coef	matflt.type (9.4.1.2.7)	Geometric coefficients (9) describing the angle between beam and line of sight; The first dimension contains successively : numerator, coefficients of BZ, BR, Bphi, ER; denominator, coefficients of BZ, BR, Bphi, ER, EZ; Matrix (9,nchords). In versions of the data structure before 4.08, there were only 6 coefficients namely : numerator, coefficients of BZ, BR, Bphi; denominator, coefficients of BZ, BR, Bphi.

Type of: polarimetry:setup (1326)

### 9.4.1.3.253 msediag\_stokes

Stokes vector (I,U,S,V) as a function of the wavelength for the polarized and unpolarized relevant MSE spectral lines. Replicate for each spectral component. Structure array (ncomp). Time-dependent.

member	type	description
type	identifier (9.4.1.3.213)	Type of the polarization. 0 for unpolarised, 1 for Pi, 2 for sigma <sup>+</sup> and 3 for sigma <sup>-</sup>
vector	matflt.type (9.4.1.2.7)	Stokes vector (I,U,S,V) as a function of the wavelength. Vector (4,nwavelength).

Type of: msediag\_radia\_chord:stokes (1292)

### 9.4.1.3.254 nbi\_unit

Vector of Neutral Beam Injector units. Structure array(nunits). Time-dependent

member	type	description
name	string (9.4.1.1.3)	Name of the neutral beam injector
inj_spec	inj_spec (9.4.1.3.217)	Injected species
pow_unit	exp0D (9.4.1.3.179)	Power delivered by an NBI unit [W]; Time-dependent
inj_eng_unit	exp0D (9.4.1.3.179)	Full injection energy of a unit [ev]; Time-dependent
beamcurfrac	exp1D (9.4.1.3.180)	Beam current fractions; beamcurfrac(j) is the fraction of the beam current from beam neutrals with the j:th harmonic energy, inj_eng_unit. Vector(3); Time-dependent
beampowfrac	exp1D (9.4.1.3.180)	Beam power fractions; beampowfrac(j) is the fraction of the beam power from beam neutrals with the j:th harmonic energy, inj_eng_unit. Vector(3); Time-dependent



member	type	description
setup_inject	setup_inject (9.4.1.3.355)	Detailed information on an injection unit.
codeparam	codeparam (9.4.1.3.65)	Code parameters

Type of: nbi:nbi\_unit (1073)

#### 9.4.1.3.255 ne\_transp

Transport coefficients for electron density equation. Time-dependent.

member	type	description
diff_eff	matflt.type (9.4.1.2.7)	Effective diffusivity [ $m^2.s^{-1}$ ]. The last index of the array describes which multiplier should be applied to the particule flux when adding its contribution in the expression of the heat flux : position 1 is multiplied by 0, 2 is multiplied by 3/2, 3 is multiplied by 5/2. The total particle flux (for the particle transport equation) is obtained as the sum over the three positions. Time-dependent. Matrix (nrho,3)
vconv_eff	matflt.type (9.4.1.2.7)	Effective convection [ $m.s^{-1}$ ]. The last index of the array describes which multiplier should be applied to the particule flux when adding its contribution in the expression of the heat flux : position 1 is multiplied by 0, 2 is multiplied by 3/2, 3 is multiplied by 5/2. The total particle flux (for the particle transport equation) is obtained as the sum over the three positions. Time-dependent. Matrix (nrho,3)
flux	vecflt.type (9.4.1.2.9)	Flux. Not used in transport equations [ $field.m.s^{-1}, m^{-3}$ if field is not a density itself]. Time-dependent. Vector (nrho)
off.diagonal	offdiagel (9.4.1.3.260)	Details of the transport matrix, just for diagnostic (not used in transport equations). Time-dependent.
flag	integer (9.4.1.1.2)	Flag describing the form of transport produced by the original model : 0- not calculated, 1- D and V, 2- flux, 3- full transport matrix. Scalar.

Type of: coretransp\_values:ne\_transp (1158)

#### 9.4.1.3.256 neutral\_complex\_type

Profiles derived from the fields solved in the transport equations, or from experiment. Array(nneut). Time-dependent

member	type	description
neutraltypes(:)	coreneutrals_neutraltype (9.4.1.3.108)	Array (ntype) over neutral types. Time-dependent.
prad0	vecflt.type (9.4.1.2.9)	Power radiated by neutrals [ $W.m^{-3}$ ]. Vector (nrho). Time-dependent.

Type of: coreneutrals:profiles (1051)

#### 9.4.1.3.257 ni\_transp

Transport coefficients for ion density equation. Time-dependent.

member	type	description
diff_eff	array3dflt.type (9.4.1.2.1)	Effective diffusivity [ $m^2.s^{-1}$ ]. The last index of the array describes which multiplier should be applied to the particule flux when adding its contribution in the expression of the heat flux : position 1 is multiplied by 0, 2 is multiplied by 3/2, 3 is multiplied by 5/2. The total particle flux (for the particle transport equation) is obtained as the sum over the three positions. Time-dependent. Array3d (nrho,nion,3)
vconv_eff	array3dflt.type (9.4.1.2.1)	Effective convection [ $m.s^{-1}$ ]. The last index of the array describes which multiplier should be applied to the particule flux when adding its contribution in the expression of the heat flux : position 1 is multiplied by 0, 2 is multiplied by 3/2, 3 is multiplied by 5/2. The total particle flux (for the particle transport equation) is obtained as the sum over the three positions. Time-dependent. Array3d (nrho,nion,3)
flux	matflt.type (9.4.1.2.7)	Flux. Not used in transport equations [ $field.m.s^{-1}, m^{-3}$ if field is not a density itself]. Time-dependent. Matrix (nrho,nion)
off.diagonal	offdiagion (9.4.1.3.261)	Details of the transport matrix, just for diagnostic (not used in transport equations). Time-dependent.
flag	integer (9.4.1.1.2)	Flag describing the form of transport produced by the original model : 0- not calculated, 1- D and V, 2- flux, 3- full transport matrix. Scalar.

Type of: coretransp\_values:ni\_transp (1158)

### 9.4.1.3.258 nuclei

Array of nuclei considered.

member	type	description
zn	float (9.4.1.1.1)	Nuclear charge [units of elementary charge];
amn	float (9.4.1.1.1)	Mass of atom [amu]
label	string (9.4.1.1.3)	String identifying element (e.g. H, D, T, He, C, ...)

Type of: compositions.type:nuclei (1130)

### 9.4.1.3.259 objects

Definition of space objects (nodes, edges, faces, cells, ...); A space object of dimension n is defined; by enumerating the (n-1)-dimensional space objects defining its boundaries

member	type	description
boundary	matint.type (9.4.1.2.8)	Lists of (n-1)-dimensional space objects defining the boundary of an n-dimensional space object; Matrix(number of objects of dimension n, maximum number of boundary objects); First dimension: object index, second dimension: boundary object index
neighbour	array3dint.type (9.4.1.2.2)	Connectivity information. Array (number of objects, maximum number of boundaries per object, maximum number of neighbours per boundary); Stores the indices of the n-dimensional objects adjacent to the given n-dimensional object; An object can possibly have multiple neighbours on every boundary; First dimension: object index, second dimension: boundary index, third dimension: neighbour index on the boundary.
geo	array4dflt.type (9.4.1.2.3)	Geometry data matrix associated with every object. Float array (number of objects, number of geometry coeff. 1, number of geometry coeff. 2, number of geometries); The exact definition depends on the geometry type of the space (complexgrid.space.geotype); First dimension: object index, second+third dimension: geometry coefficient matrix row+column, third dimension: geometry index (for definition of multiple geometries).
measure	matflt.type (9.4.1.2.7)	Measure of space objects, i.e. physical size (length for 1d, area for 2d, volume for 3d objects,...). [m <sup>dim</sup> ]; First dimension: object index, second dimension: geometry index

Type of: complexgrid.space:objects (1122)

### 9.4.1.3.260 offdiagel

Subtree containing the full transport matrix from a transport model, for the electrons. Time-dependent.

member	type	description
d.ni	matflt.type (9.4.1.2.7)	Off-Diagonal term coupling ion density gradient to the transport equation [m. <sup>2</sup> .s <sup>-1</sup> ]. Time-dependent. Matrix (nrho,nion)
d.ti	matflt.type (9.4.1.2.7)	Off-Diagonal term coupling ion density gradient to the transport equation [m. <sup>2</sup> .s <sup>-1</sup> ]. Time-dependent. Matrix (nrho,nion)
d.ne	vecflt.type (9.4.1.2.9)	Off-Diagonal term coupling electron density gradient to the transport equation [m. <sup>2</sup> .s <sup>-1</sup> ]. Time-dependent. Vector (nrho)
d.te	vecflt.type (9.4.1.2.9)	Off-Diagonal term coupling electron temperature gradient to the transport equation [m. <sup>2</sup> .s <sup>-1</sup> ]. Time-dependent. Vector (nrho)
d.epar	vecflt.type (9.4.1.2.9)	Off-Diagonal term coupling parallel electric field to the transport equation [m. <sup>2</sup> .s <sup>-1</sup> ]. Time-dependent. Vector (nrho)
d.mtor	vecflt.type (9.4.1.2.9)	Off-Diagonal term coupling total toroidal momentum to the transport equation [m. <sup>2</sup> .s <sup>-1</sup> ]. Time-dependent. Vector (nrho)

Type of: ne.transp:off\_diagonal (1298) I transcoefel:off\_diagonal (1432)

### 9.4.1.3.261 offdiagion

Subtree containing the full transport matrix from a transport model, for the various ion species

member	type	description
d.ni	array3dflt.type (9.4.1.2.1)	Off-Diagonal term coupling ion density gradient to the transport equation [m. <sup>2</sup> .s <sup>-1</sup> ]. Time-dependent. Array3d (nrho,nion,nion)
d.ti	array3dflt.type (9.4.1.2.1)	Off-Diagonal term coupling ion density gradient to the transport equation [m. <sup>2</sup> .s <sup>-1</sup> ]. Time-dependent. Array3d (nrho,nion,nion)
d.ne	matflt.type (9.4.1.2.7)	Off-Diagonal term coupling electron density gradient to the transport equation [m. <sup>2</sup> .s <sup>-1</sup> ]. Time-dependent. Matrix (nrho,nion)
d.te	matflt.type (9.4.1.2.7)	Off-Diagonal term coupling electron temperature gradient to the transport equation [m. <sup>2</sup> .s <sup>-1</sup> ]. Time-dependent. Matrix (nrho,nion)

member	type	description
d.epar	matflt.type (9.4.1.2.7)	Off-Diagonal term coupling parallel electric field to the transport equation [m. <sup>2</sup> .s <sup>-1</sup> ]. Time-dependent. Matrix (nrho,nion)
d.mtor	matflt.type (9.4.1.2.7)	Off-Diagonal term coupling total toroidal momentum to the transport equation [m. <sup>2</sup> .s <sup>-1</sup> ]. Time-dependent. Matrix (nrho,nion)

Type of: ni\_transp:off\_diagonal (1300) I\_transcoefion:off\_diagonal (1434) I\_transcoefvtor:off\_diagonal (1435)

#### 9.4.1.3.262 omnigen\_surf

List of omnigenous magnetic surfaces to which the s-coordinates in grid.coord refer. NOTE: only used for gridcoord=3. NOTE: all guiding centre orbits intersect at least one omnigenous (or stagnation) surfaces, i.e. the omnigenous generalised the equatorial plane (the midplane). nsurfs=Number of omnigenous surfaces. Structure array(nregion\_topo)

member	type	description
rz	rz1D (9.4.1.3.319)	(R,z) coordinates of the omnigenous magnetic surfaces (generalised equatorial plane). NOTE: only used for gridcoord=3. Vector rz1d (nsurfs)
s	vecflt.type (9.4.1.2.9)	Coordinates which uniquely maps the omnigenous magnetic surfaces (generalised equatorial plane). NOTE: only used for gridcoord=3. Vector (nsurfs)

Type of: dist\_grid\_info:omnigen\_surf (1175)

#### 9.4.1.3.263 orbit\_global\_param

Global quantities associated with an orbit.

member	type	description
orbit.type	vecint.type (9.4.1.2.10)	Identifier of orbit type: 0 trapped, -1 co-passing, + 1 counter-passing ; Time-dependent; Vector (norbits)
omega.b	vecflt.type (9.4.1.2.9)	Bounce angular frequency rad/s; Time-dependent; Vector (norbits)
omega.phi	vecflt.type (9.4.1.2.9)	Toroidal angular precession frequency [rad/s]; Time-dependent; Vector (norbits).
omega.c.av	vecflt.type (9.4.1.2.9)	Orbit averaged cyclotron frequency [rad/a]; Time-dependent; Vector(norbits).
special_pos	orbit_special_pos (9.4.1.3.266)	Special positions along an orbit (like turning points).

Type of: orbit:global\_param (1075)

#### 9.4.1.3.264 orbit\_midplane

Intersections with the midplane

member	type	description
outer	orbit_pos (9.4.1.3.265)	Position at outer mid-plane
inner	orbit_pos (9.4.1.3.265)	Position at inner mid-plane

Type of: orbit\_special\_pos:midplane (1309)

#### 9.4.1.3.265 orbit\_pos

Complex type for orbit position (Vector)

member	type	description
r	vecflt.type (9.4.1.2.9)	Major radius [m]; Time-dependent; Vector (norbits).
z	vecflt.type (9.4.1.2.9)	Altitude [m]; Time-dependent; Vector (norbits).
phi	vecflt.type (9.4.1.2.9)	Toroidal angle [rad]; Time-dependent; Vector (norbits).
psi	vecflt.type (9.4.1.2.9)	Position in psi [normalised poloidal flux]; Time-dependent; Vector (norbits).
theta.b	vecflt.type (9.4.1.2.9)	Poloidal Boozer angle [rad]; Time-dependent; Vector (norbits).

Type of: orbit\_midplane:inner (1307) I\_orbit\_midplane:outer (1307) I\_orbit\_turning\_pts:lower (1310) I\_orbit\_turning\_pts:upper (1310)

### 9.4.1.3.266 orbit\_special\_pos

Special positions along an orbit (like turning points).

member	type	description
midplane	orbit_midplane (9.4.1.3.264)	Intersections with the midplane
turning_pts	orbit_turning_pts (9.4.1.3.267)	Location of turning points

Type of: orbit\_global\_param:special\_pos (1306)

### 9.4.1.3.267 orbit\_turning\_pts

Location of turning points

member	type	description
upper	orbit_pos (9.4.1.3.265)	Position at upper turning point
lower	orbit_pos (9.4.1.3.265)	Position at lower turning point

Type of: orbit\_special\_pos:turning\_pts (1309)

### 9.4.1.3.268 param

Code parameters block passed from the wrapper to the subroutine. Does not appear as such in the data structure (in fact each string is an instance of codeparam/parameters). This is inserted in utilities.xsd for automatic declaration in the Fortran type definitions.

member	type	description
parameters	string (9.4.1.1.3)	Actual value of the code parameters (instance of coparam/parameters in XML format).
default_param	string (9.4.1.1.3)	Default value of the code parameters (instance of coparam/parameters in XML format).
schema	string (9.4.1.1.3)	Code parameters schema.

Type of

### 9.4.1.3.269 pelletpath

Description of the flight path of the pellet (assumed a straight line)

member	type	description
pivot_point	rzphi0D (9.4.1.3.324)	Pivot point of pellet path line. Scalar
horchordang	float (9.4.1.1.1)	Angle [rad] of horizontal projection of pellet path line with poloidal cross section (0 for HFS to LFS trajectory - see Convention_angles_interfdiag.pdf) [rad]. Scalar
verchordang	float (9.4.1.1.1)	Angle of pellet path with vertical axis (0 for bottom-top trajectory, Pi for top-bottom trajectory - see Convention_angles_interfdiag.pdf) [rad]; Scalar
second_point	rzphi0D (9.4.1.3.324)	Second point defining the pellet path line together with the pivot_point. Scalar

Type of: pellets:pelletpath (1076)

### 9.4.1.3.270 permeability

Permeability model (can be different for each iron segment)

member	type	description
b	matflt_type (9.4.1.2.7)	List of B values for description of the mur(B) dependence [T]; Matrix (nsegment,nB)
mur	matflt_type (9.4.1.2.7)	Relative permeability mur(B) [dimensionless]; Matrix (nsegment,nB)

Type of: desc\_iron:permeability (1167)

### 9.4.1.3.271 pfcircuits

Circuits, connected to multiple coils and to multiple supplies, defining the current and voltage relationships in the system

member	type	description
name	vecstring.type (9.4.1.2.11)	Name of circuit, array of strings (ncircuits)
id	vecstring.type (9.4.1.2.11)	ID of circuit, array of strings (ncircuits)
type	vecstring.type (9.4.1.2.11)	Type of circuit, array of strings (ncircuits)
nnodes	vecint.type (9.4.1.2.10)	Number of nodes used to describe a circuit. Vector (ncircuits)
connections	array3dint.type (9.4.1.2.2)	Description of the supplies and coils connections (nodes) across each circuit. Array 3D (ncircuits,max_nnodes,2*ncomponents), describing for each node which component are connected to it (1 if connected, 0 otherwise). There are 2 sides at each component, thus 2*ncomponents as the size of the third dimension, listing first all supplies, then all coils (in the same order as listed in PFSUPPLIES and PFCOILS). An example can be found in the data structure documentation PFconnections.pdf

Type of: pfsystems:pfcircuits (1077)

### 9.4.1.3.272 pccoils

Active poloidal field coils

member	type	description
desc_pccoils	desc_pccoils (9.4.1.3.125)	Description of the coils
coilcurrent	exp1D (9.4.1.3.180)	Circuit feed current in the coil , defined positive if it flows from point 1 to point 2 of the component in the pfcircuit description [A]; Time-dependent; Vector (ncoils)
coilvoltage	exp1D (9.4.1.3.180)	Voltage on the full coil [V]; Time-dependent; Vector (ncoils)

Type of: pfsystems:pccoils (1077)

### 9.4.1.3.273 pfelement

Axisymmetric conductor description

member	type	description
name	vecstring.type (9.4.1.2.11)	Name of this element. Should be a matrix of strings (ncoils,max_nelements), but not supported by the UAL yet.
id	vecstring.type (9.4.1.2.11)	ID of this element. Should be a matrix of strings (ncoils,max_nelements), but not supported by the UAL yet.
turnsign	matflt.type (9.4.1.2.7)	Sign of turn and fraction of a turn for calculating magnetic field of the Element; Matrix (ncoils,max_nelements)
area	matflt.type (9.4.1.2.7)	Surface area of this element [m <sup>2</sup> ]; Matrix (ncoils,max_nelements)
pfgeometry	pfgeometry (9.4.1.3.274)	Shape of a PF Coil Element

Type of: desc\_pccoils:pfelement (1168)

### 9.4.1.3.274 pfgeometry

Shape of a PF Coil Element

member	type	description
type	matint.type (9.4.1.2.8)	Type used to describe a coil shape (0 for 'rzcoordinates' or 1 for 'rzdrdz'); Matrix of integers (ncoils,max_nelements)
npoints	matint.type (9.4.1.2.8)	Number of points describing an element (irregular outline rzcoordinates); Matrix (ncoils,max_nelements)
rzcoordinate	rz3D (9.4.1.3.323)	Irregular outline [m]; 3D arrays (ncoils,max_nelements,max_npoints)
rzdrdz	array3dflt.type (9.4.1.2.1)	4-vector defining Centre R,Z and full extents dR, dZ [m]; 3D Array (ncoils,max_nelements,4)

Type of: pfelement:pfgeometry (1316)

### 9.4.1.3.275 pfpgeometry

Geometry of the passive elements

member	type	description
type	vecint.type (9.4.1.2.10)	Type used to describe the shape (0 for 'rzcoordinates' or 1 for 'rzdrdz'); Vector of integers (nelements)
npoints	vecint.type (9.4.1.2.10)	Number of points describing an element (irregular outline rzcoordinates); Vector of integers (nelements)
rzcoordinate	rz2D (9.4.1.3.322)	Irregular outline [m]; Matrix (nelements,max_npoints)
rzdrdz	matflt.type (9.4.1.2.7)	4-vector defining Centre R,Z and full extents dR, dZ [m]; Matrix (nelements,4)

Type of: pfpasive:pfpgeometry (1319)

#### 9.4.1.3.276 pfpasive

Passive axisymmetric conductor description

member	type	description
name	vecstring.type (9.4.1.2.11)	Name of coil. Array of strings (nelements)
area	vecflt.type (9.4.1.2.9)	Surface area of this passive element [m <sup>2</sup> ]; Vector (nelements)
res	vecflt.type (9.4.1.2.9)	Passive element resistance [Ohm]; Vector (nelements)
eta	vecflt.type (9.4.1.2.9)	Passive element resistivity [Ohm.m]; Vector (nelements)
pfpgeometry	pfpgeometry (9.4.1.3.275)	Geometry of the passive elements

Type of: pfsystems:pfpasive (1077)

#### 9.4.1.3.277 pfsupplies

PF power supplies

member	type	description
desc.supply	desc.supply (9.4.1.3.126)	Description of the power supplies
voltage	exp1D (9.4.1.3.180)	Voltage at the supply output [V]; Time-dependent; Vector (nsupplies)
current	exp1D (9.4.1.3.180)	Current at the supply output, defined positive if it flows from point 1 to point 2 of the component in the pfcircuit description [A]; Time-dependent; Vector (nsupplies)

Type of: pfsystems:pfsupplies (1077)

#### 9.4.1.3.278 phaseellipse

Phase ellipse characteristics

member	type	description
invcurvrad	vecflt.type (9.4.1.2.9)	Inverse curvature radii for the phase ellipse [m <sup>-1</sup> ], positive/negative for divergent/convergent beams, Vector (2). Time-dependent
angle	float (9.4.1.1.1)	Rotation angle for the phase ellipse [rd], Float. Time-dependent

Type of: rfbeam:phaseellipse (1360)

#### 9.4.1.3.279 planecoil

Plane coil description

member	type	description
coordinates	rz1D (9.4.1.3.319)	Coordinate points of centre of conductor; vectors(nelements)
hlength	vecflt.type (9.4.1.2.9)	Half length perpendicular to plane where coil is defined; vector(nelements) [m].
radialwidth	vecflt.type (9.4.1.2.9)	Half width, (outer contour-inner contour)/2; vector(nelements) [m].

Type of: tf\_desc.tfcoils:planecoil (1426)

#### 9.4.1.3.280 plasma

Plasma flux from/to plasma facing wall surfaces

member	type	description
flux(:)	complexgrid_scalar (9.4.1.3.75)	Flux density of incoming particle flux [particles/(m <sup>2</sup> s)]; Time-dependent; Array of structures (number of plasma species); First dimension: index of plasma species (as given in species array)
b	complexgrid_vector_simplestructure (9.4.1.3.82)	Magnetic field vector at the surface [T]; Time-dependent;
energy(:)	complexgrid_scalar (9.4.1.3.75)	Average energy of incoming particles [eV]; Time-dependent; Array of structures (number of plasma species)
species(:)	species_desc (9.4.1.3.370)	Definition of plasma species (ions+neutrals); Array of structures (number of species)

Type of: wall:plasma (1089)

#### 9.4.1.3.281 plasmaedge

Plasma edge characteristics in front of the antenna.

member	type	description
npoints	integer (9.4.1.1.2)	Number of points in the distance grid. Integer
distance	vecflt_type (9.4.1.2.9)	Grid for electron density, defined as the perpendicular distance to the antenna waveguide plane (the origin being described in the position sub-structure) [m]. Vector (npoints). Time-dependent.
density	vecflt_type (9.4.1.2.9)	Electron density in front of the antenna [m <sup>-3</sup> ]. Vector (npoints). Time-dependent.

Type of: antenna.lh:plasmaedge (1094)

#### 9.4.1.3.282 pol\_decomp

TO BE REMOVED, being replaced by e\_components and grid. Kept only to make smooth transition between data-type versions. [Poloidal decomposition of the wave fields. Uses the flux surface grid in grid.1d.]

member	type	description
mpol	vecint_type (9.4.1.2.10)	Poloidal mode numbers; Vector (nmpol)
e_plus	array3dfilt_type (9.4.1.2.1)	Magnitude of poloidal Fourier decomposition of left hand polarised component of the wave electric field [V/m]; Time-dependent; Array 3D (ntor, npsi, nmpol)
e_plus_ph	array3dfilt_type (9.4.1.2.1)	Phase of poloidal Fourier decomposition of left hand polarised component of the wave electric field [rad]; Time-dependent; Array 3D (ntor, npsi, nmpol)
e_minus	array3dfilt_type (9.4.1.2.1)	Magnitude of poloidal Fourier decomposition of right hand polarised component of the wave electric field; Time-dependent (V/m); Array 3D (ntor, npsi, nmpol)
e_minus_ph	array3dfilt_type (9.4.1.2.1)	Phase of poloidal Fourier decomposition of right hand polarised component of the wave electric field [rad]; Time-dependent; Array 3D (ntor, npsi, nmpol)
e_norm	array3dfilt_type (9.4.1.2.1)	Magnitude of poloidal Fourier decomposition of wave electric field normal to a flux surface [V/m]; Time-dependent; Array 3D (ntor, npsi, nmpol)
e_norm_ph	array3dfilt_type (9.4.1.2.1)	Phase of poloidal Fourier decomposition of wave electric field normal to a flux surface [rad]; Time-dependent; Array 3D (ntor, npsi, nmpol)
e_binorm	array3dfilt_type (9.4.1.2.1)	Magnitude of poloidal Fourier decomposition of wave electric field tangent to a flux surface [V/m]; Time-dependent; Array 3D (ntor, npsi, nmpol)
e_binorm_ph	array3dfilt_type (9.4.1.2.1)	Phase of poloidal Fourier decomposition of wave electric field tangent to a flux surface [rad]; Time-dependent; Array 3D (ntor, npsi, nmpol)
e_para	array3dfilt_type (9.4.1.2.1)	Magnitude of poloidal Fourier decomposition of parallel wave electric field [V/m]; Time-dependent; Array 3D (ntor, npsi, nmpol)
e_para_ph	array3dfilt_type (9.4.1.2.1)	Phase of poloidal Fourier decomposition of parallel wave electric field [rad]; Time-dependent; Array 3D (ntor, npsi, nmpol)
b_norm	array3dfilt_type (9.4.1.2.1)	Magnitude of poloidal Fourier decomposition of wave magnetic field normal to a flux surface [T]; Time-dependent; Array 3D (ntor, npsi, nmpol)
b_norm_ph	array3dfilt_type (9.4.1.2.1)	Phase of poloidal Fourier decomposition of parallel wave electric field [rad]; Time-dependent; Array 3D (ntor, npsi, nmpol)
b_binorm	array3dfilt_type (9.4.1.2.1)	Magnitude of poloidal Fourier decomposition of wave magnetic field tangent to a flux surface [T]; Time-dependent; Array 3D (ntor, npsi, nmpol)
b_binorm_ph	array3dfilt_type (9.4.1.2.1)	Phase of poloidal Fourier decomposition of wave magnetic field tangent to a flux surface [rad]; Time-dependent; Array 3D (ntor, npsi, nmpol)
b_para	array3dfilt_type (9.4.1.2.1)	Magnitude of Fourier decomposition of wave magnetic field parallel to the equilibrium magnetic field [T]; Time-dependent; Array 3D (ntor, npsi, nmpol)
b_para_ph	array3dfilt_type (9.4.1.2.1)	Phase of Fourier decomposition of wave magnetic field parallel to the equilibrium magnetic field [T]; Time-dependent; Array 3D (ntor, npsi, nmpol)

Type of: fullwave:pol\_decomp (1232)

### 9.4.1.3.283 polarimetry

This structure accomodates the polarimetry setup and measurements of a mse diagnostic, as widely used in fusion devices. The final measurement is the  $\tan(\gamma)$  where  $\gamma$  is the polarization angle of a particular spectral mse component.

member	type	description
setup	msediag_setup-polarimetry (9.4.1.3.252)	diagnostic setup information
measure	expID (9.4.1.3.180)	Measured value (MSE angle $\gamma$ [rad]). Time-dependent; Vector (nchords)

Type of: msediag:polarimetry (1072)

### 9.4.1.3.284 polarization

Wave field polarization along the ray/beam.

member	type	description
epol_p_re	vecflt_type (9.4.1.2.9)	Real part of the left hand polarized electric field (rotating with the ions), Vector (npoints). Time-dependent
epol_p_im	vecflt_type (9.4.1.2.9)	Imaginary part of the left hand polarized electric field (rotating with the ions), Vector (npoints). Time-dependent
epol_m_re	vecflt_type (9.4.1.2.9)	Real part of the right hand polarized electric field (rotating with the electrons), Vector (npoints). Time-dependent
epol_m_im	vecflt_type (9.4.1.2.9)	Real part of the right hand polarized electric field (rotating with the electrons), Vector (npoints). Time-dependent
epol_par_re	vecflt_type (9.4.1.2.9)	Real part of the electric field polarization vector in the magnetic field direction, Vector (npoints). Time-dependent
epol_par_im	vecflt_type (9.4.1.2.9)	Imaginary part of the electric field polarization vector in the magnetic field direction, Vector (npoints). Time-dependent

Type of: beamtracing:polarization (1100)

### 9.4.1.3.285 powerflow

Power flow along the ray/beam.

member	type	description
phi_perp	vecflt_type (9.4.1.2.9)	Normalized power flow in the direction perpendicular to the magnetic field; Vector (npoints). Time-dependent
phi_par	vecflt_type (9.4.1.2.9)	Normalized power flow in the direction parallel to the magnetic field; Vector (npoints). Time-dependent
power_e	vecflt_type (9.4.1.2.9)	Power absorbed along the beam by electrons [W]; Vector (npoints). Time-dependent
power_i	matflt_type (9.4.1.2.7)	Power absorbed along the beam by an ion species [W]; Matrix (npoints, nion). Time-dependent

Type of: beamtracing:powerflow (1100)

### 9.4.1.3.286 profiles1d

Profiles derived from the fields solved in the transport equations, or from experiment.

member	type	description
pe	coreprofile (9.4.1.3.109)	Electron pressure [Pa]; Time-dependent;
dpedt	coreprofile (9.4.1.3.109)	Time derivative of the electron pressure [Pa/s]; Time-dependent;
pi	coreprofion (9.4.1.3.110)	Ion pressure [Pa]; Time-dependent;
pi_tot	coreprofile (9.4.1.3.109)	Total ion pressure (sum of the species) [Pa]; Time-dependent;
dpi_totdt	coreprofile (9.4.1.3.109)	Time derivative of the total ion pressure [Pa/s]; Time-dependent;
pr_th	coreprofile (9.4.1.3.109)	Thermal pressure (electrons+ions) [Pa]; Time-dependent;
pr_perp	coreprofile (9.4.1.3.109)	Total perpendicular pressure (electrons+ions, thermal+non-thermal) [Pa]; Time-dependent;
pr_parallel	coreprofile (9.4.1.3.109)	Total parallel pressure (electrons+ions, thermal+non-thermal) [Pa]; Time-dependent;
jtot	coreprofile (9.4.1.3.109)	total parallel current density = $\text{average}(j_{tot}.B) / B_0$ , where $B_0 = \text{coreprof}/\text{toroid\_field}/b_0$ [A/m <sup>2</sup> ]; Time-dependent;
jni	coreprofile (9.4.1.3.109)	non-inductive parallel current density = $\text{average}(j_{ni}.B) / B_0$ , where $B_0 = \text{coreprof}/\text{toroid\_field}/b_0$ [A/m <sup>2</sup> ]; Time-dependent;
jphi	coreprofile (9.4.1.3.109)	total toroidal current density = $\text{average}(j_{phi}/R) / \text{average}(1/R)$ [A/m <sup>2</sup> ]; Time-dependent;



member	type	description
joh	coreprofile (9.4.1.3.109)	ohmic parallel current density = average(joh.B) / B0, where B0 = coreprof/toroid.field/b0 [A/m <sup>2</sup> ]; Time-dependent;
vloop	coreprofile (9.4.1.3.109)	Toroidal loop voltage [V]. Time-dependent.
sigmapar	coreprofile (9.4.1.3.109)	Parallel conductivity [ohm <sup>-1</sup> .m <sup>-1</sup> ]. Time-dependent.
qoh	sourcecel (9.4.1.3.366)	ohmic heating [W/m <sup>3</sup> ]; Time-dependent;
qei	coreprofile (9.4.1.3.109)	Collisional heat transfer from electrons to ions (equipartition term) [W/m <sup>3</sup> ]; Time-dependent;
eparallel	coreprofile (9.4.1.3.109)	Parallel electric field = average(E.B) / B0, where B0 = coreprof/toroid.field/b0 [V.m <sup>-1</sup> ]. Time-dependent.
e.b	coreprofile (9.4.1.3.109)	Average(E.B) [V.T.m <sup>-1</sup> ]. Time-dependent.
q	coreprofile (9.4.1.3.109)	Safety factor profile; Time-dependent;
shear	coreprofile (9.4.1.3.109)	Magnetic shear profile; Time-dependent;
ns	corepfion (9.4.1.3.110)	Density of fast ions, for the various ion species [m <sup>-3</sup> ]; Time-dependent;
mtor	corepfion (9.4.1.3.110)	Toroidal momentum of the various ion species [UNITS?]; Time-dependent;
wtor	corepfion (9.4.1.3.110)	Angular toroidal rotation frequency of the various ion species [s <sup>-1</sup> ]; Time-dependent;
zeff	coreprofile (9.4.1.3.109)	Effective charge profile; Time-dependent;
bpol	coreprofile (9.4.1.3.109)	Average poloidal magnetic field, defined as sqrt(ave(grad rho <sup>2</sup> /R <sup>2</sup> )).dpsi/drho [T]. Time-dependent.
dvprimedt	coreprofile (9.4.1.3.109)	Time derivative of the radial derivative of the volume enclosed in the flux surface, i.e. d/dt(dV/drho.tor) [m <sup>2</sup> .s <sup>-1</sup> ]; Time-dependent.

Type of: coreprof:profiles1d (1052)

### 9.4.1.3.287 profiles.1d

output profiles as a function of the poloidal flux

member	type	description
psi	vecflt.type (9.4.1.2.9)	Poloidal flux [Wb], without 1/2pi and such that Bp= grad psi  /R/2/pi. Time-dependent; Vector (npsi)
phi	vecflt.type (9.4.1.2.9)	toroidal flux [Wb]; Time-dependent; Vector (npsi)
pressure	vecflt.type (9.4.1.2.9)	pressure profile as a function of the poloidal flux [Pa]; Time-dependent; Vector (npsi)
F.dia	vecflt.type (9.4.1.2.9)	diamagnetic profile (R B_phi) [T m]; Time-dependent; Vector (npsi)
pprime	vecflt.type (9.4.1.2.9)	psi derivative of the pressure profile [Pa/Wb]; Time-dependent; Vector (npsi)
ffprime	vecflt.type (9.4.1.2.9)	psi derivative of F.dia multiplied with F.dia [T <sup>2</sup> m <sup>2</sup> /Wb]; Time-dependent; Vector (npsi)
jphi	vecflt.type (9.4.1.2.9)	flux surface averaged toroidal current density = average(jphi/R) / average(1/R) [A/m <sup>2</sup> ]; Time-dependent; Vector (npsi)
jparallel	vecflt.type (9.4.1.2.9)	flux surface averaged parallel current density = average(j.B) / B0, where B0 = equilibrium/global.param/toroid.field/b0 ; [A/m <sup>2</sup> ]; Time-dependent; Vector (npsi)
q	vecflt.type (9.4.1.2.9)	Safety factor = dphi/dpsi [-]; Time-dependent; Vector (npsi)
r_inboard	vecflt.type (9.4.1.2.9)	radial coordinate (major radius) at the height and on the left of the magnetic axis [m]; Time-dependent; Vector (npsi)
r_outboard	vecflt.type (9.4.1.2.9)	radial coordinate (major radius) at the height and on the right of the magnetic axis [m]; Time-dependent; Vector (npsi)
rho.tor	vecflt.type (9.4.1.2.9)	Toroidal flux coordinate [m], to be used by the ETS and in many CPOs (coreprof, ...). Defined as sqrt(phi/pi/B0), where B0 = equilibrium/global.param/toroid.field/b0. Time-dependent; Vector (npsi)
dpsidrho.tor	vecflt.type (9.4.1.2.9)	dpsi/drho.tor [Wb/m]; Time-dependent; Vector (npsi)
rho.vol	vecflt.type (9.4.1.2.9)	Normalised radial coordinate related to the plasma volume. Defined as sqrt(volume / volume[LCFS]). Time-dependent; Vector (npsi)
beta.pol	vecflt.type (9.4.1.2.9)	poloidal beta (inside the magnetic surface); Time-dependent; Vector (npsi)
li	vecflt.type (9.4.1.2.9)	internal inductance (inside the magnetic surface); Time-dependent; Vector (npsi)
elongation	vecflt.type (9.4.1.2.9)	Elongation; Time-dependent; Vector (npsi)
tria_upper	vecflt.type (9.4.1.2.9)	Upper triangularity profile; Time-dependent; Vector (npsi)
tria_lower	vecflt.type (9.4.1.2.9)	Lower triangularity profile; Time-dependent; Vector (npsi)
volume	vecflt.type (9.4.1.2.9)	Volume enclosed in the flux surface [m <sup>3</sup> ]; Time-dependent; Vector (npsi)
vprime	vecflt.type (9.4.1.2.9)	Radial derivative of the volume enclosed in the flux surface with respect to psi, i.e. dV/dpsi [m <sup>3</sup> /Wb]; Time-dependent; Vector (npsi)
dvdrho	vecflt.type (9.4.1.2.9)	Radial derivative of the volume enclosed in the flux surface with respect to rho, i.e. dV/drho [m <sup>2</sup> ]; Time-dependent; Vector (npsi)
area	vecflt.type (9.4.1.2.9)	Cross-sectional area of the flux surface [m <sup>2</sup> ]; Time-dependent; Vector (npsi)
aprime	vecflt.type (9.4.1.2.9)	Radial derivative of the cross-sectional area of the flux surface with respect to psi, i.e. darea/dpsi [m <sup>2</sup> /Wb]; Time-dependent; Vector (npsi)
surface	vecflt.type (9.4.1.2.9)	Surface area of the flux surface [m <sup>2</sup> ]; Time-dependent; Vector (npsi)
fttrap	vecflt.type (9.4.1.2.9)	Trapped particle fraction; Time-dependent; Vector (npsi)
gm1	vecflt.type (9.4.1.2.9)	average(1/R <sup>2</sup> ); Time-dependent; Vector (npsi)

member	type	description
gm2	vecflt_type (9.4.1.2.9)	average(grad_rho^2/R^2); Time-dependent; Vector (npsi)
gm3	vecflt_type (9.4.1.2.9)	average(grad_rho^2); Time-dependent; Vector (npsi)
gm4	vecflt_type (9.4.1.2.9)	average(1/B^2) [T^-2]; Time-dependent; Vector (npsi)
gm5	vecflt_type (9.4.1.2.9)	average(B^2) [T^2]; Time-dependent; Vector (npsi)
gm6	vecflt_type (9.4.1.2.9)	average(grad_rho^2/B^2) [T^-2]; Time-dependent; Vector (npsi)
gm7	vecflt_type (9.4.1.2.9)	average(grad_rho); Time-dependent; Vector (npsi)
gm8	vecflt_type (9.4.1.2.9)	average(R); Time-dependent; Vector (npsi)
gm9	vecflt_type (9.4.1.2.9)	average(1/R); Time-dependent; Vector (npsi)
b_av	vecflt_type (9.4.1.2.9)	average(B); Time-dependent; Vector (npsi)
b_min	vecflt_type (9.4.1.2.9)	minimum(B) on the flux surface; Time-dependent; Vector (npsi)
b_max	vecflt_type (9.4.1.2.9)	maximum(B) on the flux surface; Time-dependent; Vector (npsi)
omega	vecflt_type (9.4.1.2.9)	Toroidal rotation angular frequency (assumed constant on the flux surface) [rad/s]; Time-dependent; Vector (npsi)
omegaprime	vecflt_type (9.4.1.2.9)	Psi derivative of the toroidal rotation angular frequency (assumed constant on the flux surface) [rad/(s.Wb)]; Time-dependent; Vector (npsi)
mach_a	vecflt_type (9.4.1.2.9)	Alfvenic Mach number; Time-dependent; Vector (npsi)
phi_flow	vecflt_type (9.4.1.2.9)	Poloidal flow function phi_flow = rho*v_pol*B_pol[kg/(V.s^2)]; Time-dependent; Vector (npsi)
s_flow	vecflt_type (9.4.1.2.9)	Definition to be provided; Time-dependent; Vector (npsi)
h_flow	vecflt_type (9.4.1.2.9)	flow function h_flow = gamma/(gamma-1)*s_flow*rho^(gamma-1) + 0.5*(phi_flow*B/rho)^2 - 0.5*(R*omega)^2 [m^2/s^2]; Time-dependent; Vector (npsi)

Type of: equilibrium:profiles\_1d (1061)

#### 9.4.1.3.288 psi

Poloidal magnetic flux [Wb]; Time-dependent;

member	type	description
value	vecflt_type (9.4.1.2.9)	Signal value [Wb]; Time-dependent; Vector (nrho)
ddrho	vecflt_type (9.4.1.2.9)	Radial derivative (dvalue/drho_tor) [Wb.m^-1]; Time-dependent; Vector (nrho)
d2drho2	vecflt_type (9.4.1.2.9)	Second order radial derivative (d2value/drho_tor2) [Wb.m^-2]; Time-dependent; Vector (nrho)
ddt_rhotor	vecflt_type (9.4.1.2.9)	Time derivative of the poloidal flux at constant rho_tor_norm [V]. Time-dependent.
ddt_phi	vecflt_type (9.4.1.2.9)	Time derivative of the poloidal flux at constant toroidal flux [V]. Time-dependent.
source	string (9.4.1.1.3)	Source of the profile (any comment describing the origin of the profile : code, path to diagnostic signals, massaging, ...); String
flag	integer (9.4.1.1.2)	Flag describing how the profile has been processed : 0-not calculated; 1-interpretative; 2-calculated by the transport solver; 3-calculated by a separate code : in that case only, description of the code provided in codeparam at the same level; 4-used value from the previous time step; Time-dependent; Scalar
boundary	boundary (9.4.1.3.58)	Boundary condition for the transport equation. Time-dependent.
jni	jni (9.4.1.3.220)	Non-inductive parallel current density [A/m^2]; Time-dependent;
sigma_par	coreprofile (9.4.1.3.109)	Parallel conductivity [ohm^-1.m^-1]. Time-dependent
codeparam	codeparam (9.4.1.3.65)	Code parameters

Type of: coreprof:psi (1052)

#### 9.4.1.3.289 putinfo

Structure which is type independent, describing the data item

member	type	description
putmethod	string (9.4.1.1.3)	Storage method for this data
putaccess	string (9.4.1.1.3)	Instructions to access the data using this method
putlocation	string (9.4.1.1.3)	Name of this data under this method
rights	string (9.4.1.1.3)	Access rights to this data

Type of: datainfo:putinfo (1163)

#### 9.4.1.3.290 q

Safety factor

member	type	description
qvalue	vecflt.type (9.4.1.2.9)	Safety factor values; Time-dependent; Vector (nmeas)
position	rz1D (9.4.1.3.319)	Major radius of the given safety factor values [m]; Time-dependent; Vector (nmeas)
source	string (9.4.1.1.3)	Description or path to the source signal (diagnostic or genprof, from which to read all info on the signal), e.g. 'magdiag/bpol_probes/measure/value'. String
exact	integer (9.4.1.1.2)	1 means exact data, is not fitted; 0 means the equilibrium code does a least square fit; scalar integer
weight	vecflt.type (9.4.1.2.9)	weight given to the measurement ( $\chi=0$ ); Time-dependent; Vector (nmeas)
sigma	vecflt.type (9.4.1.2.9)	standard deviation of the measurement; Time-dependent; Vector (nmeas)
calculated	vecflt.type (9.4.1.2.9)	Signal as recalculated by the equilibrium code; Time-dependent; Vector (nmeas)
chi2	vecflt.type (9.4.1.2.9)	chi <sup>2</sup> of (calculated-measured); Time-dependent; Vector (nmeas)

Type of: eqconstraint:q (1216)

#### 9.4.1.3.291 recycling\_neutrals

Recycling coefficients

member	type	description
particles	vecflt.type (9.4.1.2.9)	Particle recycling coefficient corresponding to the conversion to the neutral type INEUT. Vector(nneut). Time-dependent.
energy	vecflt.type (9.4.1.2.9)	Energy recycling coefficient corresponding to the conversion to the neutral type INEUT. Vector(nneut). Time-dependent.

Type of: coefficients\_neutrals:recycling (1109)

#### 9.4.1.3.292 reduced

Structure for a reduced data signal (0D data)

member	type	description
value	float (9.4.1.1.1)	Data value; Real
source	string (9.4.1.1.3)	Path to the source signal (diagnostic or genprof, from which to read all info on the signal); String
time	float (9.4.1.1.1)	Time (exact time slice used from the time array of the source signal); Real

Type of: summary:a\_minor (1083) I summary:area (1083) I summary:beta\_normal (1083) I summary:beta\_pol (1083) I summary:beta\_tor (1083) I summary:bvac\_r (1083) I summary:elongation (1083) I summary:geom\_axis\_r (1083) I summary:impur1\_a (1083) I summary:impur1\_z (1083) I summary:ip (1083) I summary:li (1083) I summary:main\_ion1\_a (1083) I summary:main\_ion1\_z (1083) I summary:main\_ion2\_a (1083) I summary:main\_ion2\_z (1083) I summary:nev (1083) I summary:tev (1083) I summary:tiv (1083) I summary:tria\_lower (1083) I summary:tria\_upper (1083) I summary:volume (1083) I summary:zeffv (1083)

#### 9.4.1.3.293 ref\_nt

set of non-timed references

member	type	description
zerod_real	ref_nt_0dr (9.4.1.3.296)	0d reference of real type
zerod_int	ref_nt_0di (9.4.1.3.294)	0d reference of integer type
zerod_string	ref_nt_0ds (9.4.1.3.298)	0d reference of string type
oned_real	ref_nt_1dr (9.4.1.3.302)	1d reference of real type
oned_int	ref_nt_1di (9.4.1.3.300)	1d reference of integer type

Type of: reference:non\_timed (1079)

#### 9.4.1.3.294 ref\_nt\_0di

set of non-timed references of integer type

member	type	description
ref1	ref_nt_0di_ref (9.4.1.3.295)	Reference signal #1

member	type	description
ref2	ref_nt_0di_ref (9.4.1.3.295)	Reference signal #2
ref3	ref_nt_0di_ref (9.4.1.3.295)	Reference signal #3
ref4	ref_nt_0di_ref (9.4.1.3.295)	Reference signal #4

Type of: ref\_nt:zerod\_int (1336)

#### 9.4.1.3.295 ref\_nt\_0di\_ref

a non-timed reference of integer type

member	type	description
value	integer (9.4.1.1.2)	Value of the reference. Integer scalar.
description	string (9.4.1.1.3)	Description of the reference. String.

Type of: ref\_nt\_0di:ref1 (1337) I ref\_nt\_0di:ref2 (1337) I ref\_nt\_0di:ref3 (1337) I ref\_nt\_0di:ref4 (1337)

#### 9.4.1.3.296 ref\_nt\_0dr

set of non-timed references of real type

member	type	description
ref1	ref_nt_0dr_ref (9.4.1.3.297)	Reference signal #1
ref2	ref_nt_0dr_ref (9.4.1.3.297)	Reference signal #2
ref3	ref_nt_0dr_ref (9.4.1.3.297)	Reference signal #3
ref4	ref_nt_0dr_ref (9.4.1.3.297)	Reference signal #4
ref5	ref_nt_0dr_ref (9.4.1.3.297)	Reference signal #5
ref6	ref_nt_0dr_ref (9.4.1.3.297)	Reference signal #6
ref7	ref_nt_0dr_ref (9.4.1.3.297)	Reference signal #7

Type of: ref\_nt:zerod\_real (1336)

#### 9.4.1.3.297 ref\_nt\_0dr\_ref

a non-timed reference of real type

member	type	description
value	float (9.4.1.1.1)	Value of the reference. Real scalar.
description	string (9.4.1.1.3)	Description of the reference. String.

Type of: ref\_nt\_0dr:ref1 (1339) I ref\_nt\_0dr:ref2 (1339) I ref\_nt\_0dr:ref3 (1339) I ref\_nt\_0dr:ref4 (1339) I ref\_nt\_0dr:ref5 (1339) I ref\_nt\_0dr:ref6 (1339) I ref\_nt\_0dr:ref7 (1339)

#### 9.4.1.3.298 ref\_nt\_0ds

set of non-timed references of string type

member	type	description
ref1	ref_nt_0ds_ref (9.4.1.3.299)	Reference signal #1
ref2	ref_nt_0ds_ref (9.4.1.3.299)	Reference signal #2

Type of: ref\_nt:zerod\_string (1336)

#### 9.4.1.3.299 ref\_nt\_0ds\_ref

a non-timed reference of string type

member	type	description
value	string (9.4.1.1.3)	Value of the reference. String
description	string (9.4.1.1.3)	Description of the reference. String.

Type of: ref\_nt\_0ds:ref1 (1341) I ref\_nt\_0ds:ref2 (1341)

#### 9.4.1.3.300 ref\_nt\_1di

set of non-timed references of vecint type

member	type	description
ref1	ref_nt_1di_ref (9.4.1.3.301)	Reference signal #1
ref2	ref_nt_1di_ref (9.4.1.3.301)	Reference signal #2
ref3	ref_nt_1di_ref (9.4.1.3.301)	Reference signal #3
ref4	ref_nt_1di_ref (9.4.1.3.301)	Reference signal #4

Type of: ref\_nt:oned\_int (1336)

#### 9.4.1.3.301 ref\_nt\_1di\_ref

a non-timed reference of vecint type

member	type	description
value	vecint_type (9.4.1.2.10)	Value of the reference. Vector of integers.
description	string (9.4.1.1.3)	Description of the reference. String.

Type of: ref\_nt\_1di:ref1 (1343) I ref\_nt\_1di:ref2 (1343) I ref\_nt\_1di:ref3 (1343) I ref\_nt\_1di:ref4 (1343)

#### 9.4.1.3.302 ref\_nt\_1dr

set of non-timed references of vecflt type

member	type	description
ref1	ref_nt_1dr_ref (9.4.1.3.303)	Reference signal #1
ref2	ref_nt_1dr_ref (9.4.1.3.303)	Reference signal #2
ref3	ref_nt_1dr_ref (9.4.1.3.303)	Reference signal #3
ref4	ref_nt_1dr_ref (9.4.1.3.303)	Reference signal #4
ref5	ref_nt_1dr_ref (9.4.1.3.303)	Reference signal #5

Type of: ref\_nt:oned\_real (1336)

#### 9.4.1.3.303 ref\_nt\_1dr\_ref

a non-timed reference of vecflt type

member	type	description
value	vecflt_type (9.4.1.2.9)	Value of the reference. Vector.
description	string (9.4.1.1.3)	Description of the reference. String.

Type of: ref\_nt\_1dr:ref1 (1345) I ref\_nt\_1dr:ref2 (1345) I ref\_nt\_1dr:ref3 (1345) I ref\_nt\_1dr:ref4 (1345) I ref\_nt\_1dr:ref5 (1345)

#### 9.4.1.3.304 ref\_t

set of timed references

member	type	description
zerod_real	ref_t_0dr (9.4.1.3.307)	0d reference of real type
zerod_int	ref_t_0di (9.4.1.3.305)	0d reference of integer type
oned_real	ref_t_1dr (9.4.1.3.311)	1d reference of real type
oned_int	ref_t_1di (9.4.1.3.309)	1d reference of integer type

Type of: reference:timed (1079)

### 9.4.1.3.305 ref\_t\_0di

set of timed references of integer type

member	type	description
ref1	ref_t_0di_ref (9.4.1.3.306)	Reference signal #1
ref2	ref_t_0di_ref (9.4.1.3.306)	Reference signal #2
ref3	ref_t_0di_ref (9.4.1.3.306)	Reference signal #3
ref4	ref_t_0di_ref (9.4.1.3.306)	Reference signal #4

Type of: ref\_t:zerod\_int (1347)

### 9.4.1.3.306 ref\_t\_0di\_ref

a timed reference of integer type

member	type	description
value	integer (9.4.1.1.2)	Value of the reference. Integer scalar. Time-dependent.
description	string (9.4.1.1.3)	Description of the reference. String.

Type of: ref\_t\_0di:ref1 (1348) I ref\_t\_0di:ref2 (1348) I ref\_t\_0di:ref3 (1348) I ref\_t\_0di:ref4 (1348)

### 9.4.1.3.307 ref\_t\_0dr

set of timed references of real type

member	type	description
ref1	ref_t_0dr_ref (9.4.1.3.308)	Reference signal #1
ref2	ref_t_0dr_ref (9.4.1.3.308)	Reference signal #2
ref3	ref_t_0dr_ref (9.4.1.3.308)	Reference signal #3
ref4	ref_t_0dr_ref (9.4.1.3.308)	Reference signal #4
ref5	ref_t_0dr_ref (9.4.1.3.308)	Reference signal #5
ref6	ref_t_0dr_ref (9.4.1.3.308)	Reference signal #6
ref7	ref_t_0dr_ref (9.4.1.3.308)	Reference signal #7
ref8	ref_t_0dr_ref (9.4.1.3.308)	Reference signal #8
ref9	ref_t_0dr_ref (9.4.1.3.308)	Reference signal #9
ref10	ref_t_0dr_ref (9.4.1.3.308)	Reference signal #10

Type of: ref\_t:zerod\_real (1347)

### 9.4.1.3.308 ref\_t\_0dr\_ref

a timed reference of real type

member	type	description
value	float (9.4.1.1.1)	Value of the reference. Real scalar. Time-dependent.
description	string (9.4.1.1.3)	Description of the reference. String.

Type of: ref\_t\_0dr:ref1 (1350) I ref\_t\_0dr:ref10 (1350) I ref\_t\_0dr:ref2 (1350) I ref\_t\_0dr:ref3 (1350) I ref\_t\_0dr:ref4 (1350) I ref\_t\_0dr:ref5 (1350) I ref\_t\_0dr:ref6 (1350) I ref\_t\_0dr:ref7 (1350) I ref\_t\_0dr:ref8 (1350) I ref\_t\_0dr:ref9 (1350)

### 9.4.1.3.309 ref\_t\_1di

set of timed references of vecint type

member	type	description
ref1	ref_t_1di_ref (9.4.1.3.310)	Reference signal #1
ref2	ref_t_1di_ref (9.4.1.3.310)	Reference signal #2
ref3	ref_t_1di_ref (9.4.1.3.310)	Reference signal #3
ref4	ref_t_1di_ref (9.4.1.3.310)	Reference signal #4

Type of: `ref_t:oned_int` (1347)

#### 9.4.1.3.310 `ref_t_1di_ref`

a timed reference of `vecint` type

member	type	description
value	<code>vecint.type</code> (9.4.1.2.10)	Value of the reference. Vector of integers. Time-dependent.
description	string (9.4.1.1.3)	Description of the reference. String.

Type of: `ref_t_1di:ref1` (1352) | `ref_t_1di:ref2` (1352) | `ref_t_1di:ref3` (1352) | `ref_t_1di:ref4` (1352)

#### 9.4.1.3.311 `ref_t_1dr`

set of timed references of `vecflt` type

member	type	description
ref1	<code>ref_t_1dr_ref</code> (9.4.1.3.312)	Reference signal #1
ref2	<code>ref_t_1dr_ref</code> (9.4.1.3.312)	Reference signal #2
ref3	<code>ref_t_1dr_ref</code> (9.4.1.3.312)	Reference signal #3
ref4	<code>ref_t_1dr_ref</code> (9.4.1.3.312)	Reference signal #4
ref5	<code>ref_t_1dr_ref</code> (9.4.1.3.312)	Reference signal #5

Type of: `ref_t:oned_real` (1347)

#### 9.4.1.3.312 `ref_t_1dr_ref`

a timed reference of `vecflt` type

member	type	description
value	<code>vecflt.type</code> (9.4.1.2.9)	Value of the reference. Vector. Time-dependent.
description	string (9.4.1.1.3)	Description of the reference. String.

Type of: `ref_t_1dr:ref1` (1354) | `ref_t_1dr:ref2` (1354) | `ref_t_1dr:ref3` (1354) | `ref_t_1dr:ref4` (1354) | `ref_t_1dr:ref5` (1354)

#### 9.4.1.3.313 `ref_wall_typ`

List of reference wall compositions; Array of structures (number of reference compositions)

member	type	description
label	string (9.4.1.1.3)	Label for this reference wall type
thickness	<code>vecflt.type</code> (9.4.1.2.9)	Thickness(m). Float vector, dimensions: 1. layer index
stoichiometry	<code>matflt.type</code> (9.4.1.2.7)	Material composition of layer. Float matrix, dimensions: 1. layer index, 2. element number (numbering as in <code>surface.elements/surface.compound</code> array)
dx	<code>matflt.type</code> (9.4.1.2.7)	Cell spacings for 1d layer height discretization; Float matrix (max. number of cells for layer, layer index), dimensions: 1. cell index, 2. layer index

Type of: `surface:ref_wall_typ` (1422)

#### 9.4.1.3.314 `reggrid`

Generic structure for a regular grid

member	type	description
dim1	<code>vecflt.type</code> (9.4.1.2.9)	First dimension values; Vector (ndim1)
dim2	<code>vecflt.type</code> (9.4.1.2.9)	Second dimension values; Vector (ndim2)

Type of: `coord_sys:grid` (1132)

### 9.4.1.3.315 rfameasure

Measured values

member	type	description
ti	exp1D ( <a href="#">9.4.1.3.180</a> )	Ion temperature [eV]. Vector (nchannels)

Type of: rfdiag:measure ([1080](#))

### 9.4.1.3.316 rfsetup

diagnostic setup information

member	type	description
position	rzphi1Dexp ( <a href="#">9.4.1.3.326</a> )	Position of the measurement. Time-dependent. Vector (nchannels)

Type of: rfdiag:setup ([1080](#))

### 9.4.1.3.317 rfbeam

Beam characteristics

member	type	description
spot	spot ( <a href="#">9.4.1.3.373</a> )	Spot characteristics
phaseellipse	phaseellipse ( <a href="#">9.4.1.3.278</a> )	Phase ellipse characteristics

Type of: antenna\_ec:beam ([1092](#)) I antenna\_lh:beam ([1094](#))

### 9.4.1.3.318 rz0D

Structure for one (R,Z) position (0D)

member	type	description
r	float ( <a href="#">9.4.1.1.1</a> )	Major radius [m]
z	float ( <a href="#">9.4.1.1.1</a> )	Altitude [m]

Type of: circularcoil:centre ([1107](#)) I eqgeometry:active\_limit ([1217](#)) I eqgeometry:geom\_axis ([1217](#)) I eqgeometry:left\_low\_st ([1217](#)) I eqgeometry:left\_up\_st ([1217](#)) I eqgeometry:right\_low\_st ([1217](#)) I eqgeometry:right\_up\_st ([1217](#)) I mag\_axis:position ([1278](#))

### 9.4.1.3.319 rz1D

Structure for list of R,Z positions (1D)

member	type	description
r	vecflt.type ( <a href="#">9.4.1.2.9</a> )	Major radius [m]
z	vecflt.type ( <a href="#">9.4.1.2.9</a> )	Altitude [m]

Type of: flush:position ([1227](#)) I isoflux:position ([1262](#)) I limiter\_unit:position ([1273](#)) I mhd\_ideal\_wall2d:position ([1283](#)) I mhd\_res\_wall2d:position ([1285](#)) I omnigen\_surf:rz ([1305](#)) I planecoil:coordinates ([1322](#)) I q:position ([1333](#)) I setup\_bprobe:position ([1396](#)) I straps:coord\_strap ([1421](#)) I vessel:position ([1088](#)) I wall\_blocks\_unit:position ([1455](#)) I wall\_vessel\_annular:inside ([1458](#)) I wall\_vessel\_annular:outside ([1458](#)) I xpts:position ([1471](#))

### 9.4.1.3.320 rz1D\_npoints

Structure for list of R,Z positions (1D), with mention of the number of points relevant for a given time slice

member	type	description
r	vecflt.type ( <a href="#">9.4.1.2.9</a> )	Major radius [m]. Vector(max_npoints). Time-dependent
z	vecflt.type ( <a href="#">9.4.1.2.9</a> )	Altitude [m]. Vector(max_npoints). Time-dependent
npoints	integer ( <a href="#">9.4.1.1.2</a> )	Number of meaningful points in the above vectors at a given time slice. Time-dependent



#### 9.4.1.3.321 rz1Dexp

Structure for list of R,Z positions (1D), with R and Z time-depent and experimental.

member	type	description
r	vecflt.type (9.4.1.2.9)	Major radius [m]. Vector(npoints). Time-dependent
z	vecflt.type (9.4.1.2.9)	Altitude [m]. Vector(npoints). Time-dependent

Type of: eqgeometry:boundary (1217) I eqgeometry:xpts (1217)

#### 9.4.1.3.322 rz2D

Structure for list of R,Z positions (2D)

member	type	description
r	matflt.type (9.4.1.2.7)	Major radius [m]
z	matflt.type (9.4.1.2.7)	Altitude [m]

Type of: coord\_sys:position (1132) I geom\_iron:rzcoordinate (1249) I pfpgeometry:rzcoordinate (1318)

#### 9.4.1.3.323 rz3D

Structure for list of R,Z positions (3D)

member	type	description
r	array3dflt.type (9.4.1.2.1)	Major radius [m]
z	array3dflt.type (9.4.1.2.1)	Altitude [m]

Type of: pfgeometry:rzcoordinate (1317)

#### 9.4.1.3.324 rzphi0D

Structure for a single R,Z,phi position (0D)

member	type	description
r	float (9.4.1.1.1)	Major radius [m]
z	float (9.4.1.1.1)	Altitude [m]
phi	float (9.4.1.1.1)	Toroidal angle [rad]

Type of: antenna\_ec:position (1092) I antenna\_lh:position (1094) I fusiondiag\_voxels:centre (1248) I fusiondiag\_voxels:direction (1248) I msediag\_setup:pivot\_point (1294) I msediag\_setup:second\_point (1294) I pelletpath:pivot\_point (1312) I pelletpath:second\_point (1312) I setup\_inject:position (1398)

#### 9.4.1.3.325 rzphi1D

Structure for list of R,Z,phi positions (1D)

member	type	description
r	vecflt.type (9.4.1.2.9)	Major radius [m]
z	vecflt.type (9.4.1.2.9)	Altitude [m]
phi	vecflt.type (9.4.1.2.9)	Toroidal angle [rad]

Type of: ablationrate:position (1091) I beamlets:position (1099) I deposprofile:position (1164) I edges:edge\_rzphi (1211) I fusiondiag\_colliunit\_circ:centre (1237) I halpha\_setup:pivot\_point (1254) I halpha\_setup:second\_point (1254) I launches:position (1067) I lithsetup:position (1276) I msediag\_emiss\_chord:setup (1289) I setup\_line:pivot\_point (1399) I setup\_line:second\_point (1399) I setup\_line:third\_point (1399) I tssetup:position (1437)

#### 9.4.1.3.326 rzphi1Dexp

Structure for list of R,Z,phi positions (1D)

member	type	description
r	exp1D (9.4.1.3.180)	Major radius [m]
z	exp1D (9.4.1.3.180)	Altitude [m]
phi	exp1D (9.4.1.3.180)	Toroidal angle [rad]

Type of: cxsetup:position (1161) I ecsetup:position (1202) I lang\_derived:position (1264) I lang\_measure:position (1265) I rfasetup:position (1359)

#### 9.4.1.3.327 rzphi2D

Structure for list of R,Z,phi positions (2D)

member	type	description
r	matflt.type (9.4.1.2.7)	Major radius [m]
z	matflt.type (9.4.1.2.7)	Altitude [m]
phi	matflt.type (9.4.1.2.7)	Toroidal angle [rad]

Type of: fusiondiag\_colliunit\_poly:nodes (1238) I setup\_floops:position (1397)

#### 9.4.1.3.328 rzphi3D

Structure for list of R,Z,phi positions (3D)

member	type	description
r	array3dfilt.type (9.4.1.2.1)	Major radius [m]
z	array3dfilt.type (9.4.1.2.1)	Altitude [m]
phi	array3dfilt.type (9.4.1.2.1)	Toroidal angle [rad]

Type of: turbcoordsys:position (1439)

#### 9.4.1.3.329 rzphidrdzdphi1D

Structure for list of R,Z,phi positions and width dR dZ dphi (1D)

member	type	description
r	vecflt.type (9.4.1.2.9)	Position : major radius [m]
z	vecflt.type (9.4.1.2.9)	Position : altitude [m]
phi	vecflt.type (9.4.1.2.9)	Position : toroidal angle [rad]
dr	vecflt.type (9.4.1.2.9)	Width : major radius [m]
dz	vecflt.type (9.4.1.2.9)	Width : altitude [m]
dphi	vecflt.type (9.4.1.2.9)	Width : toroidal angle [rad]

Type of: msediag\_setup\_polarimetry:rzgamma (1295)

#### 9.4.1.3.330 sawteeth\_diags

Inversion and mixing radii

member	type	description
shear1	float (9.4.1.1.1)	Magnetic shear at $q = 1$ [-]. Time-dependent. Real scalar.
rhotorm_q1	float (9.4.1.1.1)	Rho_tor_norm at $q=1$ radius [-]. Time-dependent. Real scalar.
rhotorm_inv	float (9.4.1.1.1)	Rho_tor_norm at inversion radius [-]. Time-dependent. Real scalar.
rhotorm_mix	float (9.4.1.1.1)	Rho_tor_norm at mixing radius [-]. Time-dependent. Real scalar.

Type of: sawteeth:diags (1081)

#### 9.4.1.3.331 sawteeth\_profiles1d

Core profiles after sawtooth crash

member	type	description
ne	vecflt_type (9.4.1.2.9)	Electron density [ $m^{-3}$ ]. Time-dependent. Vector (nrho).
ni	matflt_type (9.4.1.2.7)	Ion density [ $m^{-3}$ ]. Time-dependent. Matrix (nrho,nion).
te	vecflt_type (9.4.1.2.9)	Electron temperature [eV]. Time-dependent. Vector (nrho).
ti	matflt_type (9.4.1.2.7)	Ion temperature [eV]. Time-dependent. Matrix (nrho,nion).
psi	vecflt_type (9.4.1.2.9)	Poloidal flux [Wb], without $1/2\pi$ and such that $B_p =  grad\ psi  / R/2/\pi$ . Time-dependent. Vector (nrho).
phi	vecflt_type (9.4.1.2.9)	Toroidal flux [Wb]. Time-dependent. Vector (nrho).
psistar	vecflt_type (9.4.1.2.9)	$\Psi^* = \psi - \phi$ [Wb]. Time-dependent. Vector (nrho).
volume	vecflt_type (9.4.1.2.9)	Volume enclosed in the flux surface [ $m^3$ ]. Required to ensure particle and energy conservation during reconnection process ( $ndV$ and $(nT)dV$ are conserved). Time-dependent. Vector (nrho).
q	vecflt_type (9.4.1.2.9)	Safety factor = $d\phi/d\psi$ [-]. Time-dependent. Vector (nrho).

Type of: sawteeth:profiles1d (1081)

#### 9.4.1.3.332 scenario\_centre

central values of the profiles (at magnetic axis)

member	type	description
te0	scenario_ref (9.4.1.3.349)	central electron temperature [eV]. Time-dependent.
ti0	scenario_ref (9.4.1.3.349)	central ion temperature [eV]. Time-dependent.
ne0	scenario_ref (9.4.1.3.349)	central electron density [ $m^{-3}$ ]. Time-dependent.
ni0	scenario_ref (9.4.1.3.349)	central ion density [ $m^{-3}$ ]. Time-dependent.
shift0	scenario_ref (9.4.1.3.349)	central value of Shafranov shift [m]. Time-dependent.
psi0	scenario_ref (9.4.1.3.349)	pedestal poloidal flux [Wb]. Time-dependent.
phi0	scenario_ref (9.4.1.3.349)	central toroidal flux [Wb]. Time-dependent.
q0	scenario_ref (9.4.1.3.349)	central safety factor value []. Time-dependent.
Rmag	scenario_ref (9.4.1.3.349)	radius of magnetic axis [R]. Time-dependent.
Zmag	scenario_ref (9.4.1.3.349)	Z coordinate of magnetic axis [R]. Time-dependent.
vtor_0	scenario_ref (9.4.1.3.349)	central rotation velocity of selected impurity [m/s]. Time-dependent.

Type of: scenario:centre (1082)

#### 9.4.1.3.333 scenario\_composition

Plasma composition (description of ion species).

member	type	description
amn	vecflt_type (9.4.1.2.9)	Atomic mass number (lumped ions are allowed); Vector (nion)
zn	vecflt_type (9.4.1.2.9)	Nuclear charge (lumped ions are allowed); Vector (nion)
zion	vecflt_type (9.4.1.2.9)	Ion charge (of the dominant ionisation state; lumped ions are allowed); Vector (nion)
imp_flag	vecint_type (9.4.1.2.10)	Multiple charge state calculation flag : 0-Only one charge state is considered; 1-Multiple charge state are considered and are described in impurity CPO; Vector (nion)
rot_imp_flag	vecint_type (9.4.1.2.10)	set to 1 for the impurity corresponding at the given toroidal rotation, otherwise = 0
pellet_amn	vecflt_type (9.4.1.2.9)	Atomic mass number (for pellet injector); Vector (nion)
pellet_zn	vecflt_type (9.4.1.2.9)	Nuclear charge (pellet injector); Vector (nion)
nbi_amn	vecflt_type (9.4.1.2.9)	Atomic mass number (for neutral beam injection); Vector (nion)
nbi_zn	vecflt_type (9.4.1.2.9)	Nuclear charge (for neutral beam injection); Vector (nion)

Type of: scenario:composition (1082)

#### 9.4.1.3.334 scenario\_configuration

Strings describing the tokamak configuration

member	type	description
config	scenario_int (9.4.1.3.341)	plasma configuration (limiter/divertor ...) []. Time-dependent. Possible values : 0 = undetermined; 1 = poloidal limiter (ring); 2 = poloidal limiter (LFS); 3 = poloidal limiter (HFS); 4 = toroidal limiter (ring); 5 = toroidal limiter (segment); 6 = poloidal divertor; 7 = toroidal divertor (single null, ion drift in direction of divertor); 8 = toroidal divertor (single null, ion drift in opposite direction of divertor); 9 = toroidal divertor (double null).
lmode_sc	string (9.4.1.1.3)	name of the L-mode scaling law. String.

member	type	description
hmode_sc	string (9.4.1.1.3)	name of the H-mode scaling law. String.
core_sc	string (9.4.1.1.3)	name of the core plasma energy scaling law. String.
pedestal_sc	string (9.4.1.1.3)	name of the pedestal energy scaling law. String.
helium_sc	string (9.4.1.1.3)	name of the helium confinement time scaling law. String.
impurity_sc	string (9.4.1.1.3)	name of the impurities confinement time scaling law
l2h_sc	string (9.4.1.1.3)	name of the L-mode to H-mode power threshold scaling law. String.
tor_rot_sc	string (9.4.1.1.3)	name of the toroidal spontaneous rotation scaling law. String.
wall_mat	string (9.4.1.1.3)	chemical composition of the wall. String.
evap_mat	string (9.4.1.1.3)	chemical composition evaporated wall conditioning material. String.
lim_mat	string (9.4.1.1.3)	chemical composition of the limiter. String.
div_mat	string (9.4.1.1.3)	chemical composition of the divertor
coordinate	string (9.4.1.1.3)	name/definition of the internal coordinate of the simulator that are given by the data named rho
ecrh_freq	scenario_ref (9.4.1.3.349)	ECRH frequency [Hz]. Time-dependent.
ecrh_loc	scenario_ref (9.4.1.3.349)	position of maximum ECRH deposition on scale of rho [rho]. Time-dependent.
ecrh_mode	scenario_int (9.4.1.3.341)	polarisation of ecrh wave (0 = O mode, 1 = X mode) []. Time-dependent.
ecrh_tor_ang	scenario_ref (9.4.1.3.349)	toroidal angle of ECRH at resonance [rad] Time-dependent.
ecrh_pol_ang	scenario_ref (9.4.1.3.349)	poloidal angle of ECRH resonance position (0= LFS, pi/2 = top, -pi/2 = down, pi = HFS) [rad]. Time-dependent.
ecrh_harm	scenario_int (9.4.1.3.341)	harmonic number of the absorbed ecrh wave []. Time-dependent.
enbi	scenario_ref (9.4.1.3.349)	energy of the neutral beam [eV]. Time-dependent.
r_nbi	scenario_ref (9.4.1.3.349)	Major radius of tangence of NBI [m]. Time-dependent.
grad_b_drift	scenario_int (9.4.1.3.341)	direction of ion grad-B drift (1= to lower divertor, -1 = from lower divertor) []. Time-dependent.
icrh_freq	scenario_ref (9.4.1.3.349)	ICRH frequency [Hz]. Time-dependent.
icrh_scheme	string (9.4.1.1.3)	icrh scheme either : H_min_1; He3_min; T_harm_2; FW; FW_CD; FW_CCD
icrh_phase	scenario_ref (9.4.1.3.349)	ICRH antenna phasing [rad]. Time-dependent.
LH_freq	scenario_ref (9.4.1.3.349)	LHCD frequency [Hz]. Time-dependent.
LH_npar	scenario_ref (9.4.1.3.349)	LHCD parallel indice []. Time-dependent.
pellet_ang	scenario_ref (9.4.1.3.349)	pellet injection position (0= LFS, pi/2 = top, -pi/2 = down, pi = HFS) [rad]. Time-dependent.
pellet_v	scenario_ref (9.4.1.3.349)	pellet injection velocity [m/s]. Time-dependent.
pellet_nba	scenario_ref (9.4.1.3.349)	initial number of atoms in pellet []. Time-dependent.

Type of: scenario:configs (1082)

#### 9.4.1.3.335 scenario\_confinement

characteristic confinement times

member	type	description
tau_e	scenario_ref (9.4.1.3.349)	thermal energy confinement time [s]. Time-dependent.
tau_l_sc	scenario_ref (9.4.1.3.349)	confinement time given by the selected L-mode scaling law [s]. Time-dependent.
tau_h_sc	scenario_ref (9.4.1.3.349)	confinement time given by the selected H-mode scaling law [s]. Time-dependent.
tau_he	scenario_ref (9.4.1.3.349)	Helium ashes confinement time [s]. Time-dependent.
tau_e_ee	scenario_ref (9.4.1.3.349)	electron energy confinement time [s]. Time-dependent.
tau_e_ii	scenario_ref (9.4.1.3.349)	ion energy confinement time [s]. Time-dependent.
tau_e_ei	scenario_ref (9.4.1.3.349)	energy equipartition characteristic time [s]. Time-dependent.
tau_cur_diff	scenario_ref (9.4.1.3.349)	characteristic time for current diffusion [s]. Time-dependent.
tau_i_rol	scenario_ref (9.4.1.3.349)	characteristic time for current decrease in tokamak equivalent R/L circuit [s]. Time-dependent.

Type of: scenario:confinement (1082)

#### 9.4.1.3.336 scenario\_currents

data related to current sources and current diffusion

member	type	description
RR	scenario_ref (9.4.1.3.349)	plasma resistivity [ohm]. Time-dependent.
i_align	scenario_ref (9.4.1.3.349)	current drive alignment quality parameter (1 = good , 0 = bad). Time-dependent.
i_boot	scenario_ref (9.4.1.3.349)	bootstrap current [A]. Time-dependent.
i_cd_tot	scenario_ref (9.4.1.3.349)	total current drive [A]. Time-dependent.
i_eccd	scenario_ref (9.4.1.3.349)	Electron Cyclotron current drive [A]. Time-dependent.

member	type	description
i_fast_ion	scenario_ref (9.4.1.3.349)	fast ions bootstrap like current drive (i.e. fast alpha) [A]. Time-dependent.
i_fwcd	scenario_ref (9.4.1.3.349)	Fast Wave current drive [A]. Time-dependent.
i_lhcd	scenario_ref (9.4.1.3.349)	Lower Hybrid current drive [A]. Time-dependent.
i_nbicd	scenario_ref (9.4.1.3.349)	Neutral Beam Injection current drive [A]. Time-dependent.
i_ni_tot	scenario_ref (9.4.1.3.349)	total non inductive current [A]. Time-dependent.
i_ohm	scenario_ref (9.4.1.3.349)	ohmic current [A]. Time-dependent.
i_par	scenario_ref (9.4.1.3.349)	total plasma current (projected on B : $\langle J_z/B_0 \rangle$ ) [A]. Time-dependent.
i_runaway	scenario_ref (9.4.1.3.349)	runaway current [A]. Time-dependent.
v_loop	scenario_ref (9.4.1.3.349)	loop voltage @ LCMS / LFS , equatorial point [V]. Time-dependent.
v_meas	scenario_ref (9.4.1.3.349)	loop voltage measured on a coil [V]. Time-dependent.

Type of: scenario:currents (1082)

#### 9.4.1.3.337 scenario\_edge

edge value (@ LCMS)

member	type	description
te_edge	scenario_ref (9.4.1.3.349)	edge electron temperature [eV]. Time-dependent.
ti_edge	scenario_ref (9.4.1.3.349)	edge ion temperature [eV]. Time-dependent.
ne_edge	scenario_ref (9.4.1.3.349)	edge electron density [ $m^{-3}$ ]. Time-dependent.
ni_edge	scenario_ref (9.4.1.3.349)	edge ion density [ $m^{-3}$ ]. Time-dependent.
psi_edge	scenario_ref (9.4.1.3.349)	edge poloidal flux [Wb]. Time-dependent.
phi_edge	scenario_ref (9.4.1.3.349)	edge toroidal flux [Wb]. Time-dependent.
rho_edge	scenario_ref (9.4.1.3.349)	edge value of internal simulator coordinate [m]. Time-dependent.
drho_edge.dt	scenario_ref (9.4.1.3.349)	time derivative of edge value of internal simulator coordinate [m/s]. Time-dependent.
q_edge	scenario_ref (9.4.1.3.349)	edge or effective safety factor value []. Time-dependent.
neutral_flux	scenario_ref (9.4.1.3.349)	number of cold neutral (in equivalent electron for Z $\geq 1$ ) that input in plasma at the edge every second coming from recycling and gaz puff [ $s^{-1}$ ]. Time-dependent.
phi_plasma	scenario_ref (9.4.1.3.349)	contribution of the plasma to the toroidal flux (used for toroidal coils heat load computation) [Wb]. Time-dependent.
vtor_edge	scenario_ref (9.4.1.3.349)	rotation velocity of selected impurity on the separatrix [m/s]. Time-dependent.

Type of: scenario:edge (1082)

#### 9.4.1.3.338 scenario\_energy

plasma energy content

member	type	description
w_tot	scenario_ref (9.4.1.3.349)	total plasma energy [J]. Time-dependent.
w_b_pol	scenario_ref (9.4.1.3.349)	poloidal field energy of the plasma [J]. Time-dependent.
w_dia	scenario_ref (9.4.1.3.349)	3/2 perpendicular plasma energy [J]. Time-dependent.
dwdia.dt	scenario_ref (9.4.1.3.349)	time derivative of Wdia [W]. Time-dependent.
w_b_tor_pla	scenario_ref (9.4.1.3.349)	toroidal magnetic plasma energy [J]. Time-dependent.
w_th	scenario_ref (9.4.1.3.349)	thermal plasma energy [J]. Time-dependent.
dwtot.dt	scenario_ref (9.4.1.3.349)	time derivative of total plasma energy [W]. Time-dependent.
dwbpol.dt	scenario_ref (9.4.1.3.349)	time derivative of plasma poloidal field energy [W]. Time-dependent.
dwbtorpla.dt	scenario_ref (9.4.1.3.349)	time derivative of toroidal magnetic plasma energy [W]. Time-dependent.
dwth.dt	scenario_ref (9.4.1.3.349)	time derivative of thermal plasma energy [W]. Time-dependent.
esup_icrhtot	scenario_ref (9.4.1.3.349)	total suprathermal energy of fast ions accelerated by ICRH [J]. Time-dependent.
esup_icrhper	scenario_ref (9.4.1.3.349)	perpendicular part of suprathermal energy of fast ions accelerated by ICRH [J]. Time-dependent.
esup_nbitot	scenario_ref (9.4.1.3.349)	total suprathermal energy of fast ions from NBI ionisation [J]. Time-dependent.
esup_nbiperp	scenario_ref (9.4.1.3.349)	perpendicular part of suprathermal energy of fast ions from NBI ionisation [J]. Time-dependent.
esup_lhcd	scenario_ref (9.4.1.3.349)	total suprathermal energy of fast electron from LHCD [J]. Time-dependent.
esup_alpha	scenario_ref (9.4.1.3.349)	total suprathermal energy of fast alpha particles [J]. Time-dependent.

Type of: scenario:energy (1082)

### 9.4.1.3.339 scenario\_global

global scalar value

member	type	description
ip	scenario_ref (9.4.1.3.349)	Plasma current [A]. Time-dependent.
dip_dt	scenario_ref (9.4.1.3.349)	time derivative of plasma current [A/s]. Time-dependent.
beta_pol	scenario_ref (9.4.1.3.349)	poloidal beta []. Time-dependent.
beta_tor	scenario_ref (9.4.1.3.349)	toroidal beta []. Time-dependent.
beta_normal	scenario_ref (9.4.1.3.349)	normalised beta []. Time-dependent.
li	scenario_ref (9.4.1.3.349)	internal inductance (definition 3). Time-dependent.
volume	scenario_ref (9.4.1.3.349)	total plasma volume [m <sup>3</sup> ]. Time-dependent.
area_pol	scenario_ref (9.4.1.3.349)	area poloidal cross section [m <sup>2</sup> ]. Time-dependent.
area_ext	scenario_ref (9.4.1.3.349)	external plasma surface [m <sup>2</sup> ]. Time-dependent.
len_sepa	scenario_ref (9.4.1.3.349)	length of the separatrix [m]. Time-dependent.
beta_pol.th	scenario_ref (9.4.1.3.349)	poloidal beta, thermal contribution []. Time-dependent.
beta_tor.th	scenario_ref (9.4.1.3.349)	toroidal beta, thermal contribution []. Time-dependent.
beta_n.th	scenario_ref (9.4.1.3.349)	normalised beta, thermal contribution []. Time-dependent.
disruption	scenario_ref (9.4.1.3.349)	flag for disruption (set to 1 for disruption, otherwise equal 0) []. Time-dependent.
mode_h	scenario_ref (9.4.1.3.349)	confinement mode versus time: 0 = L-mode et 1 = H-mode []. Time-dependent.
s.alpha	scenario_ref (9.4.1.3.349)	total number of alpha fusion particules from D-T ractions per second [s <sup>-1</sup> ]. Time-dependent.

Type of: scenario:global\_param (1082)

### 9.4.1.3.340 scenario\_heat\_power

Power delivred to plasma (thermal an non thermal)

member	type	description
plh	scenario_ref (9.4.1.3.349)	Lower hybrid power [W]. Time-dependent.
pohmic	scenario_ref (9.4.1.3.349)	ohmic power (thermal species contribution only) [W]. Time-dependent.
picrh	scenario_ref (9.4.1.3.349)	Ion cyclotron resonance heating power [W]. Time-dependent.
pecrh	scenario_ref (9.4.1.3.349)	electron cyclotron resonance heating power [W]. Time-dependent.
pnbi	scenario_ref (9.4.1.3.349)	neutral beam injection power [W]. Time-dependent.
pnbi_co_cur	scenario_ref (9.4.1.3.349)	neutral beam injection power injeted in co-current direction [W]. Time-dependent.
pnbi_counter	scenario_ref (9.4.1.3.349)	neutral beam injection power injeted in counter-current direction [W]. Time-dependent.
plh.th	scenario_ref (9.4.1.3.349)	lower hybrid power deposited on thermal electrons [W]. Time-dependent.
picrh.th	scenario_ref (9.4.1.3.349)	ion cyclotron resonance heating power deposited on thermal species [W]. Time-dependent.
pecrh.th	scenario_ref (9.4.1.3.349)	electron cyclotron resonance heating power deposited on thermal electrons [W]. Time-dependent.
pnbi.th	scenario_ref (9.4.1.3.349)	neutral beam injection power deposited on thermal species [W]. Time-dependent.
ploss_icrh	scenario_ref (9.4.1.3.349)	Ion cyclotron resonance heating power losses [W]. Time-dependent.
ploss_nbi	scenario_ref (9.4.1.3.349)	neutral beam injection power losses (including shine-through) [W]. Time-dependent.
pbrem	scenario_ref (9.4.1.3.349)	Bremsstrahlung radition losses [W]. Time-dependent.
pcyclo	scenario_ref (9.4.1.3.349)	cyclotron radiation losses [W]. Time-dependent.
prad	scenario_ref (9.4.1.3.349)	impurity radition losses in core plamsa , without Bremsstrahlung [W]. Time-dependent.
pdd_fus	scenario_ref (9.4.1.3.349)	fusion power due to DD reactions [W]. Time-dependent.
pei	scenario_ref (9.4.1.3.349)	power exchange between eletron and ion (equipartition) [W]. Time-dependent.
pel_tot	scenario_ref (9.4.1.3.349)	total thermal electron power deposition without equipartition [W]. Time-dependent.
pel_fus	scenario_ref (9.4.1.3.349)	fusion electron power deposition [W]. Time-dependent.
pel_icrh	scenario_ref (9.4.1.3.349)	ICRH electron power deposition [W]. Time-dependent.
pel_nbi	scenario_ref (9.4.1.3.349)	NBI electron power deposition [W]. Time-dependent.
pfus_dt	scenario_ref (9.4.1.3.349)	total D-T fusion power of alpha [W]. Time-dependent.
ploss_fus	scenario_ref (9.4.1.3.349)	D-T fusion power of alpha losses [W]. Time-dependent.
pfus_nbi	scenario_ref (9.4.1.3.349)	NBI induce D-T fusion power of alpha [W]. Time-dependent.
pfus.th	scenario_ref (9.4.1.3.349)	alpha (from DT fusion reaction) power deposited on thermal species [W]. Time-dependent.
padd_tot	scenario_ref (9.4.1.3.349)	total additional power input including ohmic power [W]. Time-dependent.
pion_tot	scenario_ref (9.4.1.3.349)	total thermal ion power deposition without equipartition [W]. Time-dependent.
pion_fus	scenario_ref (9.4.1.3.349)	fusion ion power deposition [W]. Time-dependent.
pion_icrh	scenario_ref (9.4.1.3.349)	ICRH ion power deposition [W]. Time-dependent.
pion_nbi	scenario_ref (9.4.1.3.349)	NBI ion power deposition [W]. Time-dependent.
pioniz	scenario_ref (9.4.1.3.349)	power losses due to cold neutral ionization [W]. Time-dependent.

member	type	description
ploss	scenario_ref (9.4.1.3.349)	plasma losses power, as define in ITER basis [W]. Time-dependent.
p_wth	scenario_ref (9.4.1.3.349)	thermal power input, define as $\tau_E \cdot P_{th} = W_{th}$ [W]. Time-dependent.
p_w	scenario_ref (9.4.1.3.349)	effective power define as $\tau_E \cdot P_w = W_{tot}$ [W]. Time-dependent.
p_l2h_thr	scenario_ref (9.4.1.3.349)	additionnal power crossing the LCMS; must be compare to L- $\zeta$ H threshold power (Ryter PPCF 2002) [W]. Time-dependent.
p_l2h_sc	scenario_ref (9.4.1.3.349)	threshold power given by the choosen scaling law for transition from L-mode to H-mode [W]. Time-dependent.
p_nbi_icrh	scenario_ref (9.4.1.3.349)	beam power increase due to ICRH effects [W]. Time-dependent.

Type of: scenario:heat\_power (1082)

#### 9.4.1.3.341 scenario\_int

Structure for scenario integer flag; Time-dependent

member	type	description
value	integer (9.4.1.1.2)	Signal value; Time-dependent; Scalar Integer.
source	string (9.4.1.1.3)	Source of the signal (any comment describing the origin of the signal : code, path to diagnostic signals, massaging, ...); String

Type of: scenario\_configuration:config (1377) I scenario\_configuration:ecrh\_harm (1377) I scenario\_configuration:ecrh\_mode (1377) I scenario\_configuration:grad\_b\_drift (1377) I scenario\_itb:itb\_type (1385)

#### 9.4.1.3.342 scenario\_itb

Values characteristics of the Internal Transport Barrier

member	type	description
q_min	scenario_ref (9.4.1.3.349)	minimal value of safety factor []. Time-dependent.
te_itb	scenario_ref (9.4.1.3.349)	electron temperature @ $q = q_{min}$ [eV]. Time-dependent.
ti_itb	scenario_ref (9.4.1.3.349)	ion temperature @ $q = q_{min}$ [eV]. Time-dependent.
ne_itb	scenario_ref (9.4.1.3.349)	electron density @ $q = q_{min}$ [ $m^{-3}$ ]. Time-dependent.
ni_itb	scenario_ref (9.4.1.3.349)	ion density @ $q = q_{min}$ [ $m^{-3}$ ]. Time-dependent.
psi_itb	scenario_ref (9.4.1.3.349)	poloidal flux @ $q = q_{min}$ [Wb]. Time-dependent.
phi_itb	scenario_ref (9.4.1.3.349)	toroidal flux @ $q = q_{min}$ [Wb]. Time-dependent.
rho_itb	scenario_ref (9.4.1.3.349)	value of internal simulator coordinate @ $q = q_{min}$ [m]. Time-dependent.
h_itb	scenario_ref (9.4.1.3.349)	energy enhancement ITB factor [m]. Time-dependent.
width_itb	scenario_ref (9.4.1.3.349)	width of the high pressure gradient region (on scale of rho_itb) [m]. Time-dependent.
vtor_itb	scenario_ref (9.4.1.3.349)	rotation velocity of selected impurity @ rho_itb [m/s]. Time-dependent.
itb_type	scenario_int (9.4.1.3.341)	itb type []. Time-dependent. Any combinaison of :0 = none; 1 = on T <sub>i</sub> ; 2 = on T <sub>e</sub> ; 4 = on n <sub>e</sub> ; 8 = reverse shear triggered; 16 = toroidal rotation triggered; 32 = alpha stabilisation triggered; 64 = T <sub>i</sub> / T <sub>e</sub> triggered; 128 = radiation triggered; 256 = rationnal q triggered

Type of: scenario:itb (1082)

#### 9.4.1.3.343 scenario\_lim\_div\_wall

values on the plate of divertor or on the limiter or on the wall (@ LCMS)

member	type	description
te_lim_div	scenario_ref (9.4.1.3.349)	limiter/divertor electron temperature [eV]. Time-dependent.
ti_lim_div	scenario_ref (9.4.1.3.349)	limiter/divertor ion temperature [eV]. Time-dependent.
ne_lim_div	scenario_ref (9.4.1.3.349)	limiter/divertor electron density [ $m^{-3}$ ]. Time-dependent.
ni_lim_div	scenario_ref (9.4.1.3.349)	limiter/divertor ion density [ $m^{-3}$ ]. Time-dependent.
p_peak_div	scenario_ref (9.4.1.3.349)	peak power on divertor [W]. Time-dependent.
surf_temp	scenario_ref (9.4.1.3.349)	limiter surface or divertor plate temperature [K]. Time-dependent.
p_lim_div	scenario_ref (9.4.1.3.349)	Power flux on limiter or divertor plate [W]. Time-dependent.
p_rad_div	scenario_ref (9.4.1.3.349)	radiative power in the divertor zone [W]. Time-dependent.
wall_temp	scenario_ref (9.4.1.3.349)	wall temperature [K]. Time-dependent.
wall_state	scenario_ref (9.4.1.3.349)	saturation state of the wall (0 = completly pumping wall, 1 = completly saturate wall) []. Time-dependent.

member	type	description
detach_state	scenario_ref (9.4.1.3.349)	plasma detachment state (0= attach plasma, 1 = completely detach plasma) []. Time-dependent.
pump_flux	scenario_ref (9.4.1.3.349)	flux pump out for each ion species [s <sup>-1</sup> ]. Time-dependent.

Type of: scenario:lim\_div\_wall (1082)

#### 9.4.1.3.344 scenario\_line\_ave

line averaged value

member	type	description
ne_line	scenario_ref (9.4.1.3.349)	line averaged electron density [m <sup>-3</sup> ]. Time-dependent.
zeff_line	scenario_ref (9.4.1.3.349)	line averaged effective charge. Time-dependent.
ne_zeff_line	scenario_ref (9.4.1.3.349)	line averaged electron density * Zeff . Time-dependent.
dne_line_dt	scenario_ref (9.4.1.3.349)	time derivative of line averaged electron density [m <sup>-3</sup> /s]. Time-dependent.

Type of: scenario:line\_ave (1082)

#### 9.4.1.3.345 scenario\_neutron

neutron flux for DD and DT reactions

member	type	description
ndd_tot	scenario_ref (9.4.1.3.349)	total neutron flux coming from DD reactions [Hz]. Time-dependent.
ndd_th	scenario_ref (9.4.1.3.349)	neutron flux coming from thermal DD reactions [Hz]. Time-dependent.
ndd_nbi_th	scenario_ref (9.4.1.3.349)	neutron flux coming from beam/plasma DD reactions [Hz]. Time-dependent.
ndd_nbi_nbi	scenario_ref (9.4.1.3.349)	neutron flux coming from beam/beam DD reactions [Hz]. Time-dependent.
ndt_tot	scenario_ref (9.4.1.3.349)	total neutron flux coming from DT reactions [Hz]. Time-dependent.
ndt_th	scenario_ref (9.4.1.3.349)	neutron flux coming from thermal DT reactions [Hz]. Time-dependent.

Type of: scenario:neutron (1082)

#### 9.4.1.3.346 scenario\_ninety\_five

values at 95% of poloidal flux

member	type	description
q_95	scenario_ref (9.4.1.3.349)	safety factor value @ 95 % of poloidal flux span []. Time-dependent.
elong_95	scenario_ref (9.4.1.3.349)	plasma elongation @ 95 % of poloidal flux span []. Time-dependent.
tria_95	scenario_ref (9.4.1.3.349)	averaged plasma triangularity @ 95 % of poloidal flux span []. Time-dependent.
tria_up_95	scenario_ref (9.4.1.3.349)	upper plasma triangularity @ 95 % of poloidal flux span []. Time-dependent.
tria_lo_95	scenario_ref (9.4.1.3.349)	lower plasma triangularity @ 95 % of poloidal flux span []. Time-dependent.
te_95	scenario_ref (9.4.1.3.349)	electron temperature @ 95 % of poloidal flux [eV]. Time-dependent.
ti_95	scenario_ref (9.4.1.3.349)	ion temperature @ 95 % of poloidal flux [eV]. Time-dependent.
ne_95	scenario_ref (9.4.1.3.349)	electron density @ 95 % of poloidal flux [m <sup>-3</sup> ]. Time-dependent.
ni_95	scenario_ref (9.4.1.3.349)	ion density @ 95 % of poloidal flux [m <sup>-3</sup> ]. Time-dependent.
phi_95	scenario_ref (9.4.1.3.349)	toroidal flux @ 95 % of poloidal flux [Wb]. Time-dependent.
rho_95	scenario_ref (9.4.1.3.349)	value of internal simulator coordinate @ 95 % of poloidal flux [m]. Time-dependent.
vtor_95	scenario_ref (9.4.1.3.349)	rotation velocity of selected impurity @ 95 % of poloidal flux [m/s]. Time-dependent.

Type of: scenario:ninety\_five (1082)

#### 9.4.1.3.347 scenario\_pedestal

Values at the top of the H-mode pedestal

member	type	description
te_ped	scenario_ref (9.4.1.3.349)	pedestal electron temperature [eV]. Time-dependent.
ti_ped	scenario_ref (9.4.1.3.349)	pedestal ion temperature [eV]. Time-dependent.
ne_ped	scenario_ref (9.4.1.3.349)	pedestal electron density [m <sup>-3</sup> ]. Time-dependent.



member	type	description
ni_ped	scenario_ref (9.4.1.3.349)	pedestal ion density [m <sup>-3</sup> ]. Time-dependent.
psi_ped	scenario_ref (9.4.1.3.349)	pedestal poloidal flux [Wb]. Time-dependent.
phi_ped	scenario_ref (9.4.1.3.349)	pedestal toroidal flux [Wb]. Time-dependent.
rho_ped	scenario_ref (9.4.1.3.349)	top pedestal value of internal simulator coordinate [m]. Time-dependent.
q_ped	scenario_ref (9.4.1.3.349)	top pedestal safety factor value []. Time-dependent.
pressure_ped	scenario_ref (9.4.1.3.349)	top pedestal thermal pressure ( $n_e * T_e + n_i * T_i$ ) [Pa]. Time-dependent.
vtor_ped	scenario_ref (9.4.1.3.349)	top pedestal value of rotation velocity of selected impurity [m/s]. Time-dependent.

Type of: scenario:pedestal (1082)

#### 9.4.1.3.348 scenario\_reactor

reactor data (such as electricity cost ...)

member	type	description
pnetwork	float (9.4.1.1.1)	reactor electric power provide to the network [W].

Type of: scenario:reactor (1082)

#### 9.4.1.3.349 scenario\_ref

Structure for scenario reference; Time-dependent

member	type	description
value	float (9.4.1.1.1)	Signal value; Time-dependent; Scalar
source	string (9.4.1.1.3)	Source of the signal (any comment describing the origin of the signal : code, path to diagnostic signals, massaging, ...); String

Type of: scenario\_centre:Rmag (1375) I scenario\_centre:Zmag (1375) I scenario\_centre:ne0 (1375) I scenario\_centre:ni0 (1375) I scenario\_centre:phi0 (1375) I scenario\_centre:psi0 (1375) I scenario\_centre:q0 (1375) I scenario\_centre:shift0 (1375) I scenario\_centre:te0 (1375) I scenario\_centre:ti0 (1375) I scenario\_centre:vtor\_0 (1375) I scenario\_configuration:LH\_freq (1377) I scenario\_configuration:LH\_npar (1377) I scenario\_configuration:ecrh\_freq (1377) I scenario\_configuration:ecrh\_loc (1377) I scenario\_configuration:ecrh\_pol\_ang (1377) I scenario\_configuration:ecrh\_tor\_ang (1377) I scenario\_configuration:enb (1377) I scenario\_configuration:icrh\_freq (1377) I scenario\_configuration:icrh\_phase (1377) I scenario\_configuration:pellet\_ang (1377) I scenario\_configuration:pellet\_nba (1377) I scenario\_configuration:pellet\_v (1377) I scenario\_configuration:r\_nbi (1377) I scenario\_confinement:tau\_cur\_diff (1378) I scenario\_confinement:tau\_e (1378) I scenario\_confinement:tau\_e\_ee (1378) I scenario\_confinement:tau\_e\_ei (1378) I scenario\_confinement:tau\_e\_ii (1378) I scenario\_confinement:tau\_h\_sc (1378) I scenario\_confinement:tau\_he (1378) I scenario\_confinement:tau\_i\_rol (1378) I scenario\_confinement:tau\_l\_sc (1378) I scenario\_currents:RR (1379) I scenario\_currents:i\_align (1379) I scenario\_currents:i\_boot (1379) I scenario\_currents:i\_cd\_tot (1379) I scenario\_currents:i\_eccd (1379) I scenario\_currents:i\_fast\_ion (1379) I scenario\_currents:i\_fwcd (1379) I scenario\_currents:i\_lhcd (1379) I scenario\_currents:i\_nbicd (1379) I scenario\_currents:i\_ni\_tot (1379) I scenario\_currents:i\_ohm (1379) I scenario\_currents:i\_par (1379) I scenario\_currents:i\_runaway (1379) I scenario\_currents:v\_loop (1379) I scenario\_currents:v\_meas (1379) I scenario\_edge:drho\_edge\_dt (1380) I scenario\_edge:ne\_edge (1380) I scenario\_edge:neutral\_flux (1380) I scenario\_edge:ni\_edge (1380) I scenario\_edge:phi\_edge (1380) I scenario\_edge:phi\_plasma (1380) I scenario\_edge:psi\_edge (1380) I scenario\_edge:q\_edge (1380) I scenario\_edge:rho\_edge (1380) I scenario\_edge:te\_edge (1380) I scenario\_edge:ti\_edge (1380) I scenario\_edge:vtor\_edge (1380) I scenario\_energy:dwbpol\_dt (1381) I scenario\_energy:dwbtorpla\_dt (1381) I scenario\_energy:dwdia\_dt (1381) I scenario\_energy:dwth\_dt (1381) I scenario\_energy:dwtot\_dt (1381) I scenario\_energy:esup\_alpha (1381) I scenario\_energy:esup\_icrhper (1381) I scenario\_energy:esup\_icrhtot (1381) I scenario\_energy:esup\_lhcd (1381) I scenario\_energy:esup\_nbiperp (1381) I scenario\_energy:esup\_nbitot (1381) I scenario\_energy:w\_b\_pol (1381) I scenario\_energy:w\_b\_tor\_pla (1381) I scenario\_energy:w\_dia (1381) I scenario\_energy:w\_th (1381) I scenario\_energy:w\_tot (1381) I scenario\_global:area\_ext (1382) I scenario\_global:area\_pol (1382) I scenario\_global:beta\_n\_th (1382) I scenario\_global:beta\_normal (1382) I scenario\_global:beta\_pol (1382) I scenario\_global:beta\_pol\_th (1382) I scenario\_global:beta\_tor (1382) I scenario\_global:beta\_tor\_th (1382) I scenario\_global:dip\_dt (1382) I scenario\_global:disruption (1382) I scenario\_global:ip (1382) I scenario\_global:len\_sepa (1382) I scenario\_global:li (1382) I scenario\_global:mode\_h (1382) I scenario\_global:s\_alpha (1382) I scenario\_global:volume (1382) I scenario\_heat\_power:p\_l2h\_sc (1383) I scenario\_heat\_power:p\_l2h\_thr (1383) I scenario\_heat\_power:p\_nbi\_icrh (1383) I scenario\_heat\_power:p\_w (1383) I scenario\_heat\_power:p\_wth (1383) I scenario\_heat\_power:padd\_tot (1383) I scenario\_heat\_power:pbrem (1383) I scenario\_heat\_power:pcyclo (1383) I scenario\_heat\_power:pdd\_fus (1383) I scenario\_heat\_power:pecrh (1383) I scenario\_heat\_power:pecrh\_th (1383) I scenario\_heat\_power:pei (1383) I scenario\_heat\_power:pel\_fus (1383) I scenario\_heat\_power:pel\_icrh

(1383) I scenario\_heat\_power:pel\_nbi (1383) I scenario\_heat\_power:pel\_tot (1383) I scenario\_heat\_power:pfus\_dt (1383) I scenario\_heat\_power:pfus\_nbi (1383) I scenario\_heat\_power:pfus\_th (1383) I scenario\_heat\_power:picrh (1383) I scenario\_heat\_power:picrh.th (1383) I scenario\_heat\_power:pion\_fus (1383) I scenario\_heat\_power:pion\_icrh (1383) I scenario\_heat\_power:pion\_nbi (1383) I scenario\_heat\_power:pion\_tot (1383) I scenario\_heat\_power:pioniz (1383) I scenario\_heat\_power:plh (1383) I scenario\_heat\_power:plh.th (1383) I scenario\_heat\_power:ploss (1383) I scenario\_heat\_power:ploss\_fus (1383) I scenario\_heat\_power:ploss\_icrh (1383) I scenario\_heat\_power:ploss\_nbi (1383) I scenario\_heat\_power:pnbi (1383) I scenario\_heat\_power:pnbi\_co\_cur (1383) I scenario\_heat\_power:pnbi\_counter (1383) I scenario\_heat\_power:pnbi.th (1383) I scenario\_heat\_power:pohmic (1383) I scenario\_heat\_power:prad (1383) I scenario\_itb:h\_itb (1385) I scenario\_itb:ne\_itb (1385) I scenario\_itb:ni\_itb (1385) I scenario\_itb:phi\_itb (1385) I scenario\_itb:psi\_itb (1385) I scenario\_itb:q\_min (1385) I scenario\_itb:rho\_itb (1385) I scenario\_itb:te\_itb (1385) I scenario\_itb:ti\_itb (1385) I scenario\_itb:vtor\_itb (1385) I scenario\_itb:width\_itb (1385) I scenario\_lim\_div\_wall:detach\_st (1386) I scenario\_lim\_div\_wall:ne\_lim\_div (1386) I scenario\_lim\_div\_wall:ni\_lim\_div (1386) I scenario\_lim\_div\_wall:p\_lim\_div (1386) I scenario\_lim\_div\_wall:p\_peak\_div (1386) I scenario\_lim\_div\_wall:p\_rad\_div (1386) I scenario\_lim\_div\_wall:pump\_flux (1386) I scenario\_lim\_div\_wall:surf\_temp (1386) I scenario\_lim\_div\_wall:te\_lim\_div (1386) I scenario\_lim\_div\_wall:ti\_lim\_div (1386) I scenario\_lim\_div\_wall:wall\_state (1386) I scenario\_lim\_div\_wall:wall\_temp (1386) I scenario\_line\_ave:dne\_line\_dt (1387) I scenario\_line\_ave:ne\_line (1387) I scenario\_line\_ave:ne\_zeff\_line (1387) I scenario\_line\_ave:zeff\_line (1387) I scenario\_neutron:ndd\_nbi\_nbi (1388) I scenario\_neutron:ndd\_nbi.th (1388) I scenario\_neutron:ndd.th (1388) I scenario\_neutron:ndd\_tot (1388) I scenario\_neutron:ndt.th (1388) I scenario\_neutron:ndt\_tot (1388) I scenario\_ninety\_five:elom (1389) I scenario\_ninety\_five:ne\_95 (1389) I scenario\_ninety\_five:ni\_95 (1389) I scenario\_ninety\_five:phi\_95 (1389) I scenario\_ninety\_five:q\_95 (1389) I scenario\_ninety\_five:rho\_95 (1389) I scenario\_ninety\_five:te\_95 (1389) I scenario\_ninety\_five:ti\_95 (1389) I scenario\_ninety\_five:tria\_95 (1389) I scenario\_ninety\_five:tria\_lo\_95 (1389) I scenario\_ninety\_five:tria\_up\_95 (1389) I scenario\_ninety\_five:vtor\_95 (1389) I scenario\_pedestal:ne\_ped (1390) I scenario\_pedestal:ni\_ped (1390) I scenario\_pedestal:phi\_ped (1390) I scenario\_pedestal:pressure\_ped (1390) I scenario\_pedestal:psi\_ped (1390) I scenario\_pedestal:q\_ped (1390) I scenario\_pedestal:rho\_ped (1390) I scenario\_pedestal:te\_ped (1390) I scenario\_pedestal:ti\_ped (1390) I scenario\_pedestal:vtor\_ped (1390) I scenario\_references:bvac\_r (1393) I scenario\_references:enhancement (1393) I scenario\_references:gas\_puff (1393) I scenario\_references:ip (1393) I scenario\_references:isotopic (1393) I scenario\_references:nbar (1393) I scenario\_references:nbi\_td\_ratio (1393) I scenario\_references:pecrh (1393) I scenario\_references:picrh (1393) I scenario\_references:plh (1393) I scenario\_references:pnbi (1393) I scenario\_references:pol\_flux (1393) I scenario\_references:xecrh (1393) I scenario\_references:zeffl (1393) I scenario\_sol:gas\_puff (1394) I scenario\_sol:l\_ne\_sol (1394) I scenario\_sol:l\_ni\_sol (1394) I scenario\_sol:l\_qe\_sol (1394) I scenario\_sol:l\_qi\_sol (1394) I scenario\_sol:l\_te\_sol (1394) I scenario\_sol:l\_ti\_sol (1394) I scenario\_sol:p\_rad\_sol (1394) I scenario\_vol\_ave:dne\_ave\_dt (1395) I scenario\_vol\_ave:meff\_ave (1395) I scenario\_vol\_ave:ne\_ave (1395) I scenario\_vol\_ave:ni\_ave (1395) I scenario\_vol\_ave:omega\_ave (1395) I scenario\_vol\_ave:pellet\_flux (1395) I scenario\_vol\_ave:te\_ave (1395) I scenario\_vol\_ave:ti\_ave (1395) I scenario\_vol\_ave:ti\_o\_te\_ave (1395) I scenario\_vol\_ave:zeff\_ave (1395)

#### 9.4.1.3.350 scenario\_references

##### References

member	type	description
plh	scenario_ref (9.4.1.3.349)	Lower hybrid power [W]. Time-dependent.
picrh	scenario_ref (9.4.1.3.349)	Ion cyclotron resonance heating power [W]. Time-dependent.
pecrh	scenario_ref (9.4.1.3.349)	electron cyclotron resonance heating power [W]. Time-dependent.
pnbi	scenario_ref (9.4.1.3.349)	neutral beam injection power [W]. Time-dependent.
ip	scenario_ref (9.4.1.3.349)	Plasma current [A]. Time-dependent.
bvac_r	scenario_ref (9.4.1.3.349)	Vacuum field times radius in the toroidal field magnet [T.m]. Time-dependent.
zeffl	scenario_ref (9.4.1.3.349)	line averaged effective charge []. Time-dependent.
nbar	scenario_ref (9.4.1.3.349)	line averaged electron density [ $m^{-3}$ ]. Time-dependent.
xecrh	scenario_ref (9.4.1.3.349)	position of maximum (normalized rho coordinate) of electron cyclotron resonance heating power []. Time-dependent.
pol_flux	scenario_ref (9.4.1.3.349)	separatrix poloidal flux [Wb]. Time-dependent.
enhancement	scenario_ref (9.4.1.3.349)	energy enhancement factor []. Time-dependent.
isotopic	scenario_ref (9.4.1.3.349)	ratio between tritium and deuterium density (for burning plasma) []. Time-dependent.
nbi_td_ratio	scenario_ref (9.4.1.3.349)	ratio between tritium and deuterium power in neutral beam injection []. Time-dependent.
gas_puff	scenario_ref (9.4.1.3.349)	gas puff flux reference, in equivalent [electrons.s <sup>-1</sup> ]. Time-dependent.

Type of: scenario:references (1082)

#### 9.4.1.3.351 scenario\_sol

SOL characteristic (@ LCMS)

member	type	description
l.te_sol	scenario_ref (9.4.1.3.349)	electron temperature radial decay length [m]. Time-dependent.
l.ti_sol	scenario_ref (9.4.1.3.349)	ion temperature radial decay length [m]. Time-dependent.
l.ne_sol	scenario_ref (9.4.1.3.349)	electron density radial decay length [m]. Time-dependent.
l.ni_sol	scenario_ref (9.4.1.3.349)	ion density radial decay length [m]. Time-dependent.
l.qe_sol	scenario_ref (9.4.1.3.349)	electron heat flux radial decay length [m]. Time-dependent.
l.qi_sol	scenario_ref (9.4.1.3.349)	ion heat flux radial decay length [m]. Time-dependent.
p_rad_sol	scenario_ref (9.4.1.3.349)	radiative power of the SOL [W]. Time-dependent.
gas_puff	scenario_ref (9.4.1.3.349)	gas puff flux for each ion species [s <sup>-1</sup> ]. Time-dependent.

Type of: scenario:sol (1082)

#### 9.4.1.3.352 scenario\_vol\_ave

volume averaged values

member	type	description
te_ave	scenario_ref (9.4.1.3.349)	volume averaged electron temperature [eV]. Time-dependent.
ti_ave	scenario_ref (9.4.1.3.349)	volume averaged ion temperature [eV]. Time-dependent.
ne_ave	scenario_ref (9.4.1.3.349)	volume averaged electron density [m <sup>-3</sup> ]. Time-dependent.
dne_ave_dt	scenario_ref (9.4.1.3.349)	time derivative of volume averaged electron density [m <sup>-3</sup> /s]. Time-dependent.
ni_ave	scenario_ref (9.4.1.3.349)	volume averaged ion density ( $\langle \sum(n.k)_z, k \text{ in species} \rangle$ ) [m <sup>-3</sup> ]. Time-dependent.
zeff_ave	scenario_ref (9.4.1.3.349)	volume averaged effective charge. Time-dependent.
ti_o_te_ave	scenario_ref (9.4.1.3.349)	volume averaged ion temperature over electron temperature ( $\langle T_i/T_e \rangle$ ) []. Time-dependent.
meff_ave	scenario_ref (9.4.1.3.349)	volume averaged effective mass ( $\langle \sum(n.k * m.k) / \langle \sum(n.k) \rangle$ ) []. Time-dependent.
pellet_flux	scenario_ref (9.4.1.3.349)	number of electrons fuelling the plasma every second coming from pellet injection [s <sup>-1</sup> ]. Time-dependent.
nions_ave	vecflt.type (9.4.1.2.9)	volume averaged ions densities (vector, one element per ion species) [m <sup>-3</sup> ]. Time-dependent.
omega_ave	scenario_ref (9.4.1.3.349)	bulk volume average toroidal rotation velocity (whole plasma) [rad/s]. Time-dependent.

Type of: scenario:vol\_ave (1082)

#### 9.4.1.3.353 setup\_bprobe

diagnostic setup information

member	type	description
name	vecstring.type (9.4.1.2.11)	Name of the probe. Array of strings (nprobes).
id	vecstring.type (9.4.1.2.11)	ID of the probe. Array of strings (nprobes).
position	rz1D (9.4.1.3.319)	RZ of coil centre [m]; Vector (nprobes)
polangle	vecflt.type (9.4.1.2.9)	Poloidal angle of coil orientation (w.r.t. horizontal ?? to be checked) [rad]; Vector (nprobes)
torangle	vecflt.type (9.4.1.2.9)	Toroidal angle of coil orientation (0 if fully in the poloidal plane) [rad] ; Vector (nprobes)
area	vecflt.type (9.4.1.2.9)	Area of coil [m <sup>2</sup> ]; Vector (nprobes)
length	vecflt.type (9.4.1.2.9)	Length of coil [m]; Vector (nprobes)
turns	vecint.type (9.4.1.2.10)	Turns in the coil; Vector (nprobes)

Type of: bpol\_probes:setup\_bprobe (1106)

#### 9.4.1.3.354 setup\_floops

diagnostic setup information

member	type	description
name	vecstring.type (9.4.1.2.11)	Name of loop. Array of strings (nloops).
id	vecstring.type (9.4.1.2.11)	ID of loop. Array of strings (nloops).
position	rzphi2D (9.4.1.3.327)	List of (R,Z,phi) points defining the position of the loop (see data structure documentation FLUXLOOPposition.pdf); Matrices (nloops, max_npoints)
npoints	vecint.type (9.4.1.2.10)	Number of points describing each loop in the "position" matrices. Vector (nloops)

Type of: flux\_loops:setup\_floops (1228)

### 9.4.1.3.355 setup\_inject

Detailed information on an injection unit.

member	type	description
position	rzphi0D (9.4.1.3.324)	Position of centre of injection unit surface.
tang_rad	float (9.4.1.1.1)	Tagency radius (major radius where the central line of a NBI unit is tangent to a circle around the torus) [m]
angle	float (9.4.1.1.1)	Angle of inclination between a line at the centre of the injection unit surface and the horizontal plane [rad]
direction	integer (9.4.1.1.2)	Direction of the beam seen from above the torus: -1 = clockwise; 1 = counter clockwise
focal_len_hz	float (9.4.1.1.1)	Horizontal focal length along the beam line [m]
focal_len_vc	float (9.4.1.1.1)	Vertical focal length along the beam line [m]
divergence	divergence (9.4.1.3.156)	Detailed information on beamlet divergence. Divergens is described as a super position of Gaussian profiles with amplitude "frac_divcomp" and vertical/horizontal divergence "div_vert"/"div_horiz". Note that for positive ion NBI the divergence is well described by a single Gaussian.
beamlets	beamlets (9.4.1.3.56)	Detailed information on beamlets.

Type of: nbi\_unit:setup\_inject (1297)

### 9.4.1.3.356 setup\_line

Geometric description of the lines of sight for line integral diagnostic

member	type	description
pivot_point	rzphi1D (9.4.1.3.325)	Pivot point of each line of sight; Vector (nchords)
horchordang1	vecflt_type (9.4.1.2.9)	Angle [rad] of horizontal projection of l.o.s. with poloidal cross section (0 for HFS to LFS chord - see Convention_angles_interfdiag.pdf) [rad]. Vector (nchords)
verchordang1	vecflt_type (9.4.1.2.9)	Angle of chord with vertical axis (0 for bottom-top chord, Pi for top-bottom chord - see Convention_angles_interfdiag.pdf) [rad]; Vector (nchords)
width	vecflt_type (9.4.1.2.9)	Width of the laser beam (1/e) [m]; Vector (nchords)
second_point	rzphi1D (9.4.1.3.325)	Second point defining the line of sight together with the pivot_point. In case the probing wave is reflected, this should be the position of the mirror. This data is redundant with horchordang1 and verchordang1. Vector (nchords).
horchordang2	vecflt_type (9.4.1.2.9)	For reflected l.o.s. only (undefined otherwise) : Angle [rad] of horizontal projection of reflected l.o.s. with poloidal cross section (0 for HFS to LFS chord - see Convention_angles_interfdiag.pdf) [rad]. Vector (nchords)
verchordang2	vecflt_type (9.4.1.2.9)	For reflected l.o.s. only (undefined otherwise) : Angle of reflected chord with vertical axis (0 for bottom-top chord, Pi for top-bottom chord - see Convention_angles_interfdiag.pdf) [rad]; Vector (nchords)
third_point	rzphi1D (9.4.1.3.325)	Third point defining the reflected line of sight together with the second_point (undefined if the probing wave is not reflected). This data is redundant with horchordang2 and verchordang2. Vector (nchords).
nchordpoints	integer (9.4.1.1.2)	Number of points along the viewing chords (used for synthetic diagnostic signal reconstruction)

Type of: fusiondiag\_colli\_circ:setup\_line (1234) | fusiondiag\_colli\_poly:setup\_line (1235) | lineintegraldiag:setup\_line (1274)

### 9.4.1.3.357 shape

Pellet shape

member	type	description
shape_sph	shape_sph (9.4.1.3.359)	Pellet shape
shape_cyl	shape_cyl (9.4.1.3.358)	Pellet shape

Type of: pellets:shape (1076)

### 9.4.1.3.358 shape\_cyl

Pellet shape

member	type	description
radius	float (9.4.1.1.1)	Pellet radius (m)

member	type	description
height	float (9.4.1.1.1)	Pellet height (m)

Type of: shape:shape\_cyl (1400)

#### 9.4.1.3.359 shape\_sph

Pellet shape

member	type	description
radius	float (9.4.1.1.1)	Pellet radius (m)

Type of: shape:shape\_sph (1400)

#### 9.4.1.3.360 source\_imp

Subtree containing source terms for the impurity species

member	type	description
exp	matflt.type (9.4.1.2.7)	Explicit source term [same unit as root quantity]. Time-dependent. Array2d (nrho,nzimp)
imp	matflt.type (9.4.1.2.7)	Implicit source term [ $s^{-1}.m^{-3}$ ]. Time-dependent. Array2d (nrho,nzimp)

Type of: coresource\_values:qz (1154) I coresource\_values:sz (1154)

#### 9.4.1.3.361 source\_ion

Subtree containing source terms for the various ion species

member	type	description
exp	matflt.type (9.4.1.2.7)	Explicit source term [same unit as root quantity]. Time-dependent. Matrix (nrho,nion)
imp	matflt.type (9.4.1.2.7)	Implicit source term [ $s^{-1}.m^{-3}$ ]. Time-dependent. Matrix (nrho,nion)

Type of: coresource\_values:qi (1154) I coresource\_values:si (1154) I coresource\_values:ui (1154)

#### 9.4.1.3.362 source\_mark

Source given as a set of markers (test particles)

member	type	description
var_coord	vecint.type (9.4.1.2.10)	Identifies the coordinates specified in var1, var2, var3, var4, var5, var6 and var7. var_coord(K) describe the coordinate represented in varK, for K=1,2...7. The possible coordinates are: 1=R, Major radius [m]; 2=Z, Vertical position [m]; 3=X, first cartesian coordinate in the horizontal plane [m]; 4=Y, second cartesian coordinate in the horizontal plane ( $\text{grad}(X) \times \text{grad}(Y) = \text{grad}(Z)$ ) [m]; 5=phi, toroidal angle [rad]; 6=psi, poloidal magnetic flux [ $T^2.m^2$ ]; 7=rhotor, the square root of the toroidal flux; 8=theta, geometrical poloidal angle [rad]; 9=theta.b, Boozer poloidal angle [rad]; 10=vx, velocity in the x-direction [m/s]; 11=vy, velocity in the y-direction [m/s]; 12=vz, velocity in the z-direction [m/s]; 13=vel, total velocity [m/s]; 14=vphi, velocity in the phi-direction [m/s]; 15=vpar, velocity in the parallel direction [m/s]; 16=vperp, velocity in the perpendicular direction [m/s]; 17=E, Hamiltonian energy [J]; 18=Pphi, canonical toroidal angular momentum [ $kg.m^2/s$ ]; 19=mu, magnetic moment [J/T]; 20=Lambda=mu/E [1/T]; 21=pitch=vpar/v [-]; 22=s, the position of the omnigenous plane (generalised equatorial plane) as described by the fields omnigen.surf% <i>s</i> and omnigen.surf% <i>rz</i> ; 23=particle spin. Vector (7)
var1	vecflt.type (9.4.1.2.9)	Phase space variable number one characterising the markers. Time-dependent; Vector (n_particles)
var2	vecflt.type (9.4.1.2.9)	Phase space variable number two characterising the markers. Time-dependent; Vector (n_particles)
var3	vecflt.type (9.4.1.2.9)	Phase space variable number three characterising the markers. Time-dependent; Vector (n_particles)
var4	vecflt.type (9.4.1.2.9)	Phase space variable number four characterising the markers. Time-dependent; Vector (n_particles)
var5	vecflt.type (9.4.1.2.9)	Phase space variable number five characterising the markers. Time-dependent; Vector (n_particles)
var6	vecflt.type (9.4.1.2.9)	Phase space variable number six characterising the markers. Time-dependent; Vector (n_particles)
var7	vecflt.type (9.4.1.2.9)	Phase space variable number seven characterising the markers. Time-dependent; Vector (n_particles)

member	type	description
weight	vecflt.type (9.4.1.2.9)	Weight of the markers; Time-dependent; Vector (n_particles)

#### 9.4.1.3.363 source\_on\_grid

Source density of particles in phase space (real space, velocity space, spin state).

member	type	description
grid_info	grid_info (9.4.1.3.209)	Specifying the grid; type of the grid (unstructured/structured/rectangular), the grid coordiante, in what variables the source is continuous/discrete, if the source is given at gyrocentre or real particle position.
dim1	array6dflt.type (9.4.1.2.5)	Grid in the first dimension in phase space (as specified in grid.coord). Time-dependent; Array6d (ndim1, ndim2, ndim3, ndim4, ndim5, ndim6)
dim2	array6dflt.type (9.4.1.2.5)	Grid in the second dimension in phase space (as specified in grid.coord). Time-dependent; Array6d (ndim1, ndim2, ndim3, ndim4, ndim5, ndim6)
dim3	array6dflt.type (9.4.1.2.5)	Grid in the third dimension in phase space (as specified in grid.coord). Time-dependent; Array6d (ndim1, ndim2, ndim3, ndim4, ndim5, ndim6)
dim4	array6dflt.type (9.4.1.2.5)	Grid in the fourth dimension in phase space (as specified in grid.coord). Time-dependent; Array6d (ndim1, ndim2, ndim3, ndim4, ndim5, ndim6)
dim5	array6dflt.type (9.4.1.2.5)	Grid in the fifth dimension in phase space (as specified in grid.coord). Time-dependent; Array6d (ndim1, ndim2, ndim3, ndim4, ndim5, ndim6)
dim6	array6dflt.type (9.4.1.2.5)	Grid in the sixth dimension in phase space (as specified in grid.coord). Time-dependent; Array6d (ndim1, ndim2, ndim3, ndim4, ndim5, ndim6)
jacobian	array6dflt.type (9.4.1.2.5)	Jacobian of the phase space grid coordinate system specified in grid.coord. Time-dependent; Array6d (ndim1, ndim2, ndim3, ndim4, ndim5, ndim6)
source	array6dflt.type (9.4.1.2.5)	Source rate of particles in phase space. The units depend on the grid.type: [ $m^{-3} s^{-1}$ ] if the grid is discrete in energy/velocity and [ $(m/s)^{-3} m^{-3} s^{-1}$ ] if continuous. Time-dependent; Array6d (ndim1, ndim2, ndim3, ndim4, ndim5, ndim6)

Type of: distsource\_source:source\_grid (1198)

#### 9.4.1.3.364 source\_rate

Source density of particles in phase space (real space, velocity space, spin state).

member	type	description
grid	complexgrid (9.4.1.3.70)	Grid for storing the source-rate. Time-dependent; Complexgrid
value	complexgrid_scalar (9.4.1.3.75)	The source-rate of particles in phase space, given on GRID. The units depend on the grid.type: [ $m^{-3} s^{-1}$ ] if the grid is discrete in energy/velocity and [ $(m/s)^{-3} m^{-3} s^{-1}$ ] if the grid is continuous. Time-dependent; Complexgrid_scalar

Type of: distsource\_source:source\_rate (1198)

#### 9.4.1.3.365 source\_vec

Subtree containing vector source term (radial dimension only)

member	type	description
exp	vecflt.type (9.4.1.2.9)	Explicit source term [same unit as root quantity]. Time-dependent. Vector (nrho)
imp	vecflt.type (9.4.1.2.9)	Implicit source term [ $s^{-1} m^{-3}$ ]. Time-dependent. Vector (nrho)

Type of: coresource\_values:qe (1154) I coresource\_values:se (1154) I coresource\_values:ujxb (1154)

#### 9.4.1.3.366 sourcecel

Structure for the total source term for the transport equation (electrons). Time-dependent;

member	type	description
value	vecflt.type (9.4.1.2.9)	Value of the source term; Time-dependent; Vector (nrho)
integral	vecflt.type (9.4.1.2.9)	Integral from 0 to rho of the source term. Time-dependent; Vector (nrho)
source	string (9.4.1.1.3)	Source of the profile (any comment describing the origin of the profile : code, path to diagnostic signals, massaging, ...); String

Type of: corefield:source\_term (1136) I profiles1d:qoh (1329)

### 9.4.1.3.367 sourceimp

Structure for the total source term for the transport equation (impurities). Time-dependent;

member	type	description
value	matflt.type (9.4.1.2.7)	Value of the source term [ $m^{-3}.s^{-1}$ ]; Time-dependent; Array2D(nrho,nzimp)
integral	matflt.type (9.4.1.2.7)	Integral from 0 to rho of the source term. Time-dependent; Array2D(nrho,nzimp)
source	vecstring.type (9.4.1.2.11)	Source of the profile (any comment describing the origin of the impurity profiles : code, path to diagnostic signals, massaging, ...); Array of strings (nimp)

Type of: impurity\_type:source\_term (1259)

### 9.4.1.3.368 sourceion

Structure for the total source term for the transport equation (ions). Time-dependent;

member	type	description
value	matflt.type (9.4.1.2.7)	Value of the source term; Time-dependent; Matrix(nrho,nion)
integral	matflt.type (9.4.1.2.7)	Integral from 0 to rho of the source term. Time-dependent; Matrix(nrho,nion)
source	vecstring.type (9.4.1.2.11)	Source of the profile (any comment describing the origin of the profile : code, path to diagnostic signals, massaging, ...); Array of strings (nion)

Type of: corefieldion:source\_term (1137)

### 9.4.1.3.369 species

Pellet composition

member	type	description
amn	vecflt.type (9.4.1.2.9)	Atomic mass number (lumped species are allowed); Vector (nspecies)
zn	vecflt.type (9.4.1.2.9)	Nuclear charge (lumped species are allowed); Vector (nspecies)
concentr	vecflt.type (9.4.1.2.9)	Concentration of species on pellet ranging from 0 to 1; Vector (nspecies)
subl_energy	vecflt.type (9.4.1.2.9)	Sublimation energy per atom of species on pellet in eV; Vector (nspecies)

Type of: pellets:species (1076)

### 9.4.1.3.370 species\_desc

Description of a single ion species or bundled charge state.

member	type	description
label	string (9.4.1.1.3)	Name of species
amn	float (9.4.1.1.1)	Atomic mass number of the species
zn	float (9.4.1.1.1)	Nuclear charge of the impurity
zmin	float (9.4.1.1.1)	Minimum Z of species charge state bundle
zmax	float (9.4.1.1.1)	Maximum Z of species charge state bundle

Type of: edge:species (1059) I plasma:species (1323)

### 9.4.1.3.371 spectral

This structure accommodates the types needed on a spectral MSE diagnostic namely the emissivity and the radiance spectra. It will be subsequently upgraded with optical + photon detection elements since the structure will also be used for a synthetic spectral mse code.

member	type	description
emissivity	msediag_emissivity (9.4.1.3.247)	Emissivity characteristics.
radiance	msediag_radiance (9.4.1.3.250)	Emissivity characteristics.
codeparam	codeparam (9.4.1.3.65)	Code parameters



Type of: msediag:spectral (1072)

#### 9.4.1.3.372 spectrum

Spectral properties of the wave.

member	type	description
phi.theta	launchs_phi_theta (9.4.1.3.225)	Power spectrum as a function of the refractive index in the toroidal and poloidal directions.
parallel	launchs_parallel (9.4.1.3.224)	Power spectrum as a function of the parallel refractive index.

Type of: launchs:spectrum (1067)

#### 9.4.1.3.373 spot

Spot characteristics

member	type	description
size	vecflt_type (9.4.1.2.9)	Size of the spot ellipse [m], Vector (2). Time-dependent
angle	float (9.4.1.1.1)	Rotation angle for the spot ellipse [rd], Float. Time-dependent

Type of: rfbeam:spot (1360)

#### 9.4.1.3.374 sputtering neutrals

Sputtering coefficients

member	type	description
physical	vecflt_type (9.4.1.2.9)	Effective coefficient of physical sputtering of the neutral type INEUT. Vector(nneut). Time-dependent.
chemical	vecflt_type (9.4.1.2.9)	Effective coefficient of chemical sputtering of the neutral type INEUT. Vector(nneut). Time-dependent.

Type of: coefficients\_neutrals:sputtering (1109)

#### 9.4.1.3.375 src\_snk\_fav

member	type	description
particles	vecflt_type (9.4.1.2.9)	Source/sink particles [ $s^{-1} m^{-3}$ ]; Time-dependendent; Vector (npsi)
power	vecflt_type (9.4.1.2.9)	Power density associated with the source/sink of particles [ $W/m^3$ ]; Time-dependent; Vector (npsi)
torque	vecflt_type (9.4.1.2.9)	Torque density due to the source/sink of particles [ $Nm/m^3$ ]; Time-dependent; Vector (npsi)

#### 9.4.1.3.376 src\_snk\_int

member	type	description
particles	vecflt_type (9.4.1.2.9)	Source/sink particles [ $s^{-1} m^{-3}$ ]; Time-dependendent; Vector (npsi)
power	vecflt_type (9.4.1.2.9)	Power associated with the source/sink of particles [ $MW/m^3$ ]; Time-dependent; Vector(npsi)
torque	vecflt_type (9.4.1.2.9)	Torque due to the source/sink of particles [ $Nm/m^3$ ]; Time-dependent; Vector (npsi)

#### 9.4.1.3.377 src\_snk\_tot

member	type	description
particles	float (9.4.1.1.1)	Source/sink particles [1/s]; Time-dependendent
power	float (9.4.1.1.1)	Power associated with the source/sink of particles [W]; Time-dependent
torque	float (9.4.1.1.1)	Torque due to the source/sink of particles [Nm]; Time-dependent

#### 9.4.1.3.378 straps

Properties of the IC antenna strap; Time-dependent; Vector(nstraps)



member	type	description
phase	exp0D (9.4.1.3.179)	Phase of strap current [rad]; Time-dependent; exp0D
phi_centre	float (9.4.1.1.1)	Toroidal angle at the centre of the strap [rad]; Float
width	float (9.4.1.1.1)	Width of strap in the toroidal direction [m]; Float
dist2wall	float (9.4.1.1.1)	Distance to conducting wall or other conductor behind the antenna straps [m]; Float
coord_strap	rz1D (9.4.1.3.319)	Coordinates (R,z) of polygon describing the antenna in the poloidal plane; rz1d vector (ncoord_strap)

Type of: antennaic\_setup:straps (1095)

#### 9.4.1.3.379 surface

State of plasma facing wall surfaces

member	type	description
ref_wall.typ(:)	ref_wall.typ (9.4.1.3.313)	List of reference wall compositions; Array of structures (number of reference compositions)
wall_type	complexgrid_scalar_int (9.4.1.3.77)	Definition of reference wall composition for every wall element; All other fields in this surface data structure refer to the geometric objects identified by the grid/subgrid in this field, in exactly the order given by the subgrid.
layers	layers (9.4.1.3.229)	Data on wall element layers
h_inventory	h_inventory (9.4.1.3.210)	Data on wall element hydrogen inventories
elements(:)	element.desc (9.4.1.3.170)	Description of atomic elements used in wall element layer compositions
compounds(:)	compound.desc (9.4.1.3.88)	Description of chemical compounds used in wall element layer compositions

Type of: wall:surface (1089)

#### 9.4.1.3.380 table

Stores the interpolation table (0d to 7d). Only one entry should be used.

member	type	description
table_0d	float (9.4.1.1.1)	NO DOCS
table_1d	vecflt_type (9.4.1.2.9)	NO DOCS
table_2d	matflt_type (9.4.1.2.7)	NO DOCS
table_3d	array3dfit_type (9.4.1.2.1)	NO DOCS
table_4d	array4dfit_type (9.4.1.2.3)	NO DOCS
table_5d	array5dfit_type (9.4.1.2.4)	NO DOCS
table_6d	array6dfit_type (9.4.1.2.5)	NO DOCS

Type of: tables:table (1424)

#### 9.4.1.3.381 tables

Definition of a process

member	type	description
ndim	integer (9.4.1.1.2)	Table dimensionality of the process. Indicates which of the tables is filled.
coord_index	integer (9.4.1.1.2)	Index in tables.coord, specifying what coordinate specification to use for this table.
result_label	string (9.4.1.1.3)	Description of the process result (rate, cross section, sputtering yield, ...)
result_unit	string (9.4.1.1.3)	Unit of the process result
result_trans	integer (9.4.1.1.2)	Transformation of the process result. Integer flag: 0=no transformation; 1=10 <sup>-</sup> ; 2=exp()
table(:)	table (9.4.1.3.380)	Array of data tables, one entry per species. Vector(nchargestates)
data_source	string (9.4.1.1.3)	Filename or subroutine name used to provide this data.
data_provide	string (9.4.1.1.3)	ITM responsible person for this data.
data_citation	string (9.4.1.1.3)	Reference to publication(s).

Type of: amns:tables (1046)

#### 9.4.1.3.382 tables\_coord

Definition of coordinates for one specific coordinate system used in one or more tables.

member	type	description
coords(:)	coords (9.4.1.3.91)	Vector(ndim) of coordinates. ndim is number of parameters for a process.

Type of: amns:tables.coord (1046)

#### 9.4.1.3.383 tf\_desc\_tfcoils

Description of the toroidal field coils

member	type	description
type	integer (9.4.1.1.2)	Type of coil, 0=circular coil, 1=plane coil with arbitrary shape.
phi	float (9.4.1.1.1)	Toroidal angle of centre of coil 1, assuming all coils are identical and evenly distributed around the torus [rad]. Scalar
circularcoil	circularcoil (9.4.1.3.64)	Circular coil description
planecoil	planecoil (9.4.1.3.279)	Plane coil description
structure	tf_structure (9.4.1.3.384)	Inner TF coil structure

Type of: toroidfield:desc\_tfcoils (1085)

#### 9.4.1.3.384 tf\_structure

Inner TF coil structure

member	type	description
jcable	float (9.4.1.1.1)	CICS cable in current density [A/m]; Scalar
tisoff	float (9.4.1.1.1)	Insulation thickness of TF conductor [m]; Scalar
efcasing	float (9.4.1.1.1)	Thickness front casing [m]; Scalar
escasing	float (9.4.1.1.1)	Thickness side casing [m]; Scalar
sigjackettf	float (9.4.1.1.1)	Jacket stress limit [Pa]; Scalar
sigvaulttf	float (9.4.1.1.1)	Vault stress limit [Pa]; Scalar
ktf	float (9.4.1.1.1)	Amplification factor for magnetic field
ritf	float (9.4.1.1.1)	Internal TF coil radius [m]; Scalar
riitf	float (9.4.1.1.1)	Internal vault TF coil radius [m]; Scalar
retf	float (9.4.1.1.1)	External TF coil radius [m]; Scalar

Type of: tf\_desc\_tfcoils:structure (1426)

#### 9.4.1.3.385 theta\_info

Information on the poloidal angle theta.

member	type	description
angl.type	integer (9.4.1.1.2)	Type of poloidal angle: 1 : same as the poloidal angle in the equilibrium cpo; 2 : geometrical polar angle, $\tan(\theta) = Z/(R-R.0)$ ; 3 : other. If option 3, a transformation to the geometrical poloidal angle is provided in th2th.pol.
th2th.pol	matflt.type (9.4.1.2.7)	Geometrical poloidal angle at grid points in theta, i.e. the transformation from theta to the polar poloidal angle; used only if angl.type=3; Time-dependent; Matrix (ndim1, ndim2)

Type of: waves\_grid\_2d:theta\_info (1463)

#### 9.4.1.3.386 topo\_regions

List with distribution function in each topological region; Time-dependent. Structure array(nregion.topo)

member	type	description
ind.omnigen	integer (9.4.1.1.2)	Index of the omnigenous magnetic surfaces (generalised equatorial plane) to which the s-coordinates refer. NOTE: only used for gridcoord=3.
dim1	array6dflt.type (9.4.1.2.5)	First dimension in phase space; Time-dependent; Array6d(ndim11, ndim21, ndim31, ndim41, ndim51, ndim61).
dim2	array6dflt.type (9.4.1.2.5)	Second dimension in phase space; Time-dependent; Array6d(ndim12, ndim22, ndim32, ndim42, ndim52, ndim62).
dim3	array6dflt.type (9.4.1.2.5)	Third dimension in phase space; Time-dependent; Array6d(ndim13, ndim23, ndim33, ndim43, ndim53, ndim63).

member	type	description
dim4	array6dflt.type (9.4.1.2.5)	Fourth dimension in phase space; Time-dependent; Array6d(ndim14, ndim24, ndim34, ndim44, ndim54, ndim64).
dim5	array6dflt.type (9.4.1.2.5)	Fifth dimension in phase space; Time-dependent; Array6d(ndim15, ndim25, ndim35, ndim45, ndim55, ndim65).
dim6	array6dflt.type (9.4.1.2.5)	Sixth dimension in phase space; Time-dependent; Array6d(ndim16, ndim26, ndim36, ndim46, ndim56, ndim66).
jacobian	array6dflt.type (9.4.1.2.5)	Jacobian of the transformation of the phase space grid variables; Time-dependent; Array6d(ndim11, ndim22, ndim33, ndim44, ndim55, ndim66).
distfunc	array6dflt.type (9.4.1.2.5)	Orbit (or bounce) averaged distribution function given on a grid [1/m <sup>3</sup> (m/s) <sup>-3</sup> ]; Time-dependent; Array6d(ndim11, ndim22, ndim33, ndim44, ndim55, ndim66).

#### 9.4.1.3.387 toroid\_field

Toroidal field information entering the definition of rho\_tor, for reference only. The physical value of the toroidal field should be taken from the toroidfield CPO. Time-dependent.

member	type	description
b0	float (9.4.1.1.1)	Vacuum field at r0 [T]; Time-dependent. Scalar.
b0prime	float (9.4.1.1.1)	Time derivative of the vacuum field at r0 [T/s]; Time-dependent. Scalar.
r0	float (9.4.1.1.1)	Characteristic major radius of the device (used in publications, usually middle of the vessel at the equatorial midplane) [m]. Scalar.
time	float (9.4.1.1.1)	Time [s] (exact time slice used from the time array of the source signal, here the toroidfield CPO. If the time slice does not exist in the time array of the source signal, it means linear interpolation has been used); Time-dependent; Scalar.

Type of: coreprof:toroid\_field (1052)

#### 9.4.1.3.388 trace

Position of particle in 5D space (3D in real and 2D in velocity).

member	type	description
time_orb	matflt.type (9.4.1.2.7)	Time along the orbit [s]; Time-dependent; Matrix (norbits, max_ntorb)
ntorb	vecint.type (9.4.1.2.10)	Number of time slices along the orbit, for each orbit. Time-dependent; Vector (norbits)
r	matflt.type (9.4.1.2.7)	Major radius of the guiding centre [m], Major radius; Time-dependent; Matrix (norbits, max_ntorb).
z	matflt.type (9.4.1.2.7)	Altitude of the guiding centre [m]; Time-dependent; Matrix (norbits, max_ntorb).
phi	matflt.type (9.4.1.2.7)	Toroidal angle of the guiding centre [rad]; Time-dependent; Matrix (norbits, max_ntorb).
psi	matflt.type (9.4.1.2.7)	Guiding centre position in psi [normalised poloidal flux]; Time-dependent; Matrix (norbits, max_ntorb).
theta_b	matflt.type (9.4.1.2.7)	Position of the guiding centre in poloidal Boozer angle [rad]; Time-dependent; Matrix (norbits, max_ntorb).
v_parallel	matflt.type (9.4.1.2.7)	Parallel velocity along the orbit [m/s]; Time-dependent; Matrix (norbits, max_ntorb).
v_perp	matflt.type (9.4.1.2.7)	Perpendicular velocity along the orbit [m/s]; Time-dependent; Matrix (norbits, max_ntorb).

Type of: orbit:trace (1075)

#### 9.4.1.3.389 transcoefel

Subtree containing transport coefficients from a transport model, for the electrons

member	type	description
diff_eff	vecflt.type (9.4.1.2.9)	Effective diffusivity [m <sup>2</sup> .s <sup>-1</sup> ]. Time-dependent. Vector (nrho)
vconv_eff	vecflt.type (9.4.1.2.9)	Effective convection [m.s <sup>-1</sup> ]. Time-dependent. Vector (nrho)
flux	vecflt.type (9.4.1.2.9)	Flux. Not used in transport equations [field.m.s <sup>-1</sup> ,m <sup>-3</sup> if field is not a density itself]. Time-dependent. Vector (nrho)
off_diagonal	offdiagel (9.4.1.3.260)	Details of the transport matrix, just for diagnostic (not used in transport equations). Time-dependent.
flag	integer (9.4.1.1.2)	Flag describing the form of transport produced by the original model : 0- not calculated, 1- D and V, 2- flux, 3- full transport matrix. Scalar.

Type of: coretransp.values:te\_transp (1158) I neoclassic:mtor\_neo (1074) I neoclassic:ne\_neo (1074) I neoclassic:te\_neo (1074)

### 9.4.1.3.390 transcoefimp

Subtree containing transport coefficients from a transport model, for the various impurity species (multiple charge states)

member	type	description
diff_eff	matflt.type (9.4.1.2.7)	Effective diffusivity [ $m^2.s^{-1}$ ]. Time-dependent. Array2d (nrho,nzimp)
vconv_eff	matflt.type (9.4.1.2.7)	Effective convection [ $m.s^{-1}$ ]. Time-dependent. Array2d (nrho,nzimp)
exchange	matflt.type (9.4.1.2.7)	Ion to electron energy exchange [ $W.m^{-3}$ ]. Time-dependent. Array2d (nrho,nzimp)
flux	matflt.type (9.4.1.2.7)	Flux. Not used in transport equations [ $field.m.s^{-1},m^{-3}$ if field is not a density itself]. Time-dependent. Array2d (nrho,nzimp)
flag	integer (9.4.1.1.2)	Flag describing the form of transport produced by the original model : 0- not calculated, 1- D and V, 2- flux, 3- full transport matrix (off-diagonal subtree not available for impurities for the moment). Scalar.

Type of: coretransp\_values:nz\_transp (1158) I coretransp\_values:tz\_transp (1158) I neoclassic:nz\_neo (1074) I neoclassic:tz\_neo (1074)

### 9.4.1.3.391 transcoefion

Subtree containing transport coefficients from a transport model, for the various ion species, including the energy exchange term qgi.

member	type	description
diff_eff	matflt.type (9.4.1.2.7)	Effective diffusivity [ $m^2.s^{-1}$ ]. Time-dependent. Matrix (nrho,nion)
vconv_eff	matflt.type (9.4.1.2.7)	Effective convection [ $m.s^{-1}$ ]. Time-dependent. Matrix (nrho,nion)
exchange	matflt.type (9.4.1.2.7)	Ion to electron energy exchange [ $W.m^{-3}$ ]. Time-dependent. Matrix(nrho,nion).
qgi	matflt.type (9.4.1.2.7)	Energy exchange term due to transport. [ $W.m^{-3}$ ]. Time-dependent. Matrix (nrho,nion)
flux	matflt.type (9.4.1.2.7)	Flux. Not used in transport equations [ $field.m.s^{-1},m^{-3}$ if field is not a density itself]. Time-dependent. Matrix (nrho,nion)
off.diagonal	offdiagion (9.4.1.3.261)	Details of the transport matrix, just for diagnostic (not used in transport equations). Time-dependent.
flag	integer (9.4.1.1.2)	Flag describing the form of transport produced by the original model : 0- not calculated, 1- D and V, 2- flux, 3- full transport matrix. Scalar.

Type of: coretransp\_values:ti\_transp (1158) I neoclassic:ni\_neo (1074) I neoclassic:ti\_neo (1074)

### 9.4.1.3.392 transcoefvtr

Subtree containing transport coefficients from a transport model, for the various ion species

member	type	description
diff_eff	matflt.type (9.4.1.2.7)	Effective diffusivity [ $m^2.s^{-1}$ ]. Time-dependent. Matrix (nrho,nion)
vconv_eff	matflt.type (9.4.1.2.7)	Effective convection [ $m.s^{-1}$ ]. Time-dependent. Matrix (nrho,nion)
flux	matflt.type (9.4.1.2.7)	Flux. Not used in transport equations [ $field.m.s^{-1},m^{-3}$ if field is not a density itself]. Time-dependent. Matrix (nrho,nion)
off.diagonal	offdiagion (9.4.1.3.261)	Details of the transport matrix, just for diagnostic (not used in transport equations). Time-dependent.
flag	integer (9.4.1.1.2)	Flag describing the form of transport produced by the original model : 0- not calculated, 1- D and V, 2- flux, 3- full transport matrix. Scalar.

Type of: coretransp\_values:vtr\_transp (1158)

### 9.4.1.3.393 tsmeasure

Measured values (Thomson scattering)

member	type	description
te	exp1D (9.4.1.3.180)	Electron temperature [eV]. Vector (nchords)
ne	exp1D (9.4.1.3.180)	Electron density [ $m^{-3}$ ]. Vector (nchords)

Type of: tsdiag:measure (1086)

### 9.4.1.3.394 tssetup

diagnostic setup information

member	type	description
position	rzphi1D (9.4.1.3.325)	Position of intersection between laser and line of sight; Vector (nchords)

Type of: tsdiag:setup (1086)

### 9.4.1.3.395 turbcomposition

Plasma composition (description of ion species).

member	type	description
amn	vecflt_type (9.4.1.2.9)	Atomic mass number (lumped ions are allowed); Vector (nion)
zn	vecflt_type (9.4.1.2.9)	Nuclear charge (lumped ions are allowed); Vector (nion)
zion	vecflt_type (9.4.1.2.9)	Ion charge (of the dominant ionisation state; lumped ions are allowed); Vector (nion)
ie_mass	vecflt_type (9.4.1.2.9)	Ion to electron mass ratio as used in the code for each species. To be used only by models which keep electron inertia. Vector (nion)

Type of: turbulence:composition (1087)

### 9.4.1.3.396 turbcoordsys

Description of the coordinates and metric.

member	type	description
grid_type	string (9.4.1.1.3)	Type of coordinate system.
turbgrid	turbgrid (9.4.1.3.398)	Turbulence grid used by the codes; Time-dependent.
jacobian	matflt_type (9.4.1.2.7)	Jacobian of the coordinate system; Time-dependent; Matrix (ndim1, ndim2).
g_11	matflt_type (9.4.1.2.7)	metric coefficients g_11; Time-dependent; Matrix (ndim1, ndim2).
g_12	matflt_type (9.4.1.2.7)	metric coefficients g_12; Time-dependent; Matrix (ndim1, ndim2).
g_13	matflt_type (9.4.1.2.7)	metric coefficients g_13; Time-dependent; Matrix (ndim1, ndim2).
g_22	matflt_type (9.4.1.2.7)	metric coefficients g_22; Time-dependent; Matrix (ndim1, ndim2).
g_23	matflt_type (9.4.1.2.7)	metric coefficients g_23; Time-dependent; Matrix (ndim1, ndim2).
g_33	matflt_type (9.4.1.2.7)	metric coefficients g_33; Time-dependent; Matrix (ndim1, ndim2).
position	rzphi3D (9.4.1.3.328)	R Z phi positions of grid points; Time-dependent; Array3D (ndim1, ndim2, ndim3).

Type of: turbulence:coordsys (1087)

### 9.4.1.3.397 turbenv1d

Parallel fluctuation envelope.

member	type	description
theta	vecflt_type (9.4.1.2.9)	Straight field line poloidal angle [rad]; Vector (ntheta_env).
phi	vecflt_type (9.4.1.2.9)	Electrostatic potential [V <sup>2</sup> ]; Time-dependent; Vector (ntheta_env).
vor	vecflt_type (9.4.1.2.9)	Vorticity [coulomb <sup>2</sup> /m <sup>6</sup> ]; Time-dependent; Vector (ntheta_env).
jpl	vecflt_type (9.4.1.2.9)	Parallel current [A <sup>2</sup> /m <sup>4</sup> ]; Time-dependent; Vector (ntheta_env).
ne	vecflt_type (9.4.1.2.9)	Electron density [m <sup>-6</sup> ]; Time-dependent; Vector (ntheta_env).
he	vecflt_type (9.4.1.2.9)	Nonadiabatic electron density [m <sup>-6</sup> ]; Time-dependent; Vector (ntheta_env).
te	vecflt_type (9.4.1.2.9)	Electron temperature [eV <sup>2</sup> ]; Time-dependent; Vector (ntheta_env).
ni	matflt_type (9.4.1.2.7)	Ion density [m <sup>-6</sup> ]; Time-dependent; Matrix(ntheta_env,nion).
ti	matflt_type (9.4.1.2.7)	Ion temperature [eV <sup>2</sup> ]; Time-dependent; Matrix(ntheta_env,nion).
ui	matflt_type (9.4.1.2.7)	Ion parallel velocity [m <sup>2</sup> /s <sup>2</sup> ]; Time-dependent; Matrix (ntheta_env,nion).
fe	vecflt_type (9.4.1.2.9)	Electron particle flux [m <sup>-2</sup> /s per mode]; Time-dependent; Vector (ntheta_env).
qe	vecflt_type (9.4.1.2.9)	Electron conductive heat flux [W.m <sup>-2</sup> per mode]; Time-dependent; Vector (ntheta_env).
qi	matflt_type (9.4.1.2.7)	Ion conductive heat flux [W. m <sup>-2</sup> per mode]; Time-dependent; Matrix(ntheta_env,nion).
me	vecflt_type (9.4.1.2.9)	Magnetic electron heat flux [W.m <sup>-2</sup> per mode]; Time-dependent; Vector (ntheta_env).
mi	matflt_type (9.4.1.2.7)	Magnetic ion heat flux [W. m <sup>-2</sup> per mode]; Time-dependent; Matrix(ntheta_env,nion).

Type of: turbulence:env1d (1087)

### 9.4.1.3.398 turbgrid

Generic structure for a turbulence grid.

member	type	description
dim1	vecflt_type (9.4.1.2.9)	First dimension values; Vector (ndim1).
dim2	vecflt_type (9.4.1.2.9)	Second dimension values; Vector (ndim2).
dim3	vecflt_type (9.4.1.2.9)	Third dimension values; Vector (ndim3).
dim.v1	vecflt_type (9.4.1.2.9)	First v-space dimension values; Vector (ndim.v1).
dim.v2	vecflt_type (9.4.1.2.9)	Second v-space dimension values; Vector (ndim.v2).

Type of: turbcoordsys:turbgrid (1439)

### 9.4.1.3.399 turbspec1d

Perpendicular wavenumber spectra.

member	type	description
kperp	vecflt_type (9.4.1.2.9)	Perpendicular wavenumber [ $\text{m}^{-1}$ ]; Vector (ndim_spec).
phi	vecflt_type (9.4.1.2.9)	Electrostatic potential [ $\text{V}^2$ per mode]; Time-dependent; Vector (ndim_spec).
vor	vecflt_type (9.4.1.2.9)	Vorticity [ $\text{s}^{-2}$ per mode]; Time-dependent; Vector (ndim_spec).
b	vecflt_type (9.4.1.2.9)	Magnetic energy [ $\text{T}^2$ per mode]; Time-dependent; Vector (ndim_spec).
jpl	vecflt_type (9.4.1.2.9)	Current [ $\text{A}^2/\text{m}^4$ per mode]; Time-dependent; Vector (ndim_spec).
ne	vecflt_type (9.4.1.2.9)	Electron density [ $\text{m}^{-6}$ per mode]; Time-dependent; Vector (ndim_spec).
te	vecflt_type (9.4.1.2.9)	Electron temperature [ $\text{eV}^2$ per mode]; Time-dependent; Vector (ndim_spec).
ti	matflt_type (9.4.1.2.7)	Ion temperature [ $\text{eV}^2$ per mode]; Time-dependent; Matrix (ndim_spec,nion).
fe	vecflt_type (9.4.1.2.9)	Electron particle flux [ $\text{m}^{-2}/\text{s}$ per mode]; Time-dependent; Vector (ndim_spec).
qe	vecflt_type (9.4.1.2.9)	Electron conductive heat flux [ $\text{W.m}^{-2}$ per mode]; Time-dependent; Vector (ndim_spec).
qi	matflt_type (9.4.1.2.7)	Ion conductive heat flux [ $\text{W.m}^{-2}$ per mode]; Time-dependent; Matrix(ndim_spec,nion).
me	vecflt_type (9.4.1.2.9)	Magnetic electron heat flux [ $\text{W.m}^{-2}$ per mode]; Time-dependent; Matrix (ndim_spec).
mi	matflt_type (9.4.1.2.7)	Magnetic ion heat flux [ $\text{W.m}^{-2}$ per mode]; Time-dependent; Matrix (ndim_spec,nion).

Type of: turbulence:spec1d (1087)

### 9.4.1.3.400 turbvar0d

Time traces.

member	type	description
dtime_type	string (9.4.1.1.3)	Description of time trace e.g. last ndtime points.
dtime	vecflt_type (9.4.1.2.9)	Fast diagnostic time [s]; Time-dependent; Vector (ndtime).
en_exb	vecflt_type (9.4.1.2.9)	ExB energy [ $\text{J}/\text{m}^3$ ]; Time-dependent; Vector (ndtime).
en_mag	vecflt_type (9.4.1.2.9)	Magnetic energy [ $\text{J}/\text{m}^3$ ]; Time-dependent; Vector (ndtime).
en_el.th	vecflt_type (9.4.1.2.9)	electron thermal energy or free energy [ $\text{J}/\text{m}^3$ ]; Time-dependent.
en_ion.th	matflt_type (9.4.1.2.7)	Ion thermal energy or free energy [ $\text{J}/\text{m}^3$ ]; Time-dependent; Matrix (ndtime, nion).
en_el.par	vecflt_type (9.4.1.2.9)	Electron parallel energy [ $\text{J}/\text{m}^3$ ]; Time-dependent; Vector (ndtime).
en_ion.par	matflt_type (9.4.1.2.7)	Ion parallel energy [ $\text{J}/\text{m}^3$ ]; Time-dependent; Matrix (ndtime,nion).
en_tot	vecflt_type (9.4.1.2.9)	Total energy or free energy [ $\text{J}/\text{m}^3$ ]; Time-dependent; Vector (ndtime).
fl_el	vecflt_type (9.4.1.2.9)	Electron flux [ $\text{m}^{-2} \text{s}^{-1}$ ]; Time-dependent; Vector (ndtime).
fl_heatel	vecflt_type (9.4.1.2.9)	Conductive electron heat flux [ $\text{W.m}^{-2}$ ]; Time-dependent; Vector (ndtime).
fl_ion	matflt_type (9.4.1.2.7)	Ion flux [ $\text{m}^{-2} \text{s}^{-1}$ ]; Time-dependent; Matrix (ndtime, nion).
fl_heation	matflt_type (9.4.1.2.7)	Conductive ion heat flux [ $\text{W.m}^{-2}$ ]; Time-dependent; Matrix (ndtime, nion).
fl_magel	vecflt_type (9.4.1.2.9)	Electron flux [ $\text{m}^{-2} \text{s}^{-1}$ ]; Time-dependent; Vector (ndtime).
fl_magheatel	vecflt_type (9.4.1.2.9)	Conductive electron heat flux [ $\text{W.m}^{-2}$ ]; Time-dependent; Vector (ndtime).
fl_magion	matflt_type (9.4.1.2.7)	Ion flux [ $\text{m}^{-2} \text{s}^{-1}$ ]; Time-dependent; Matrix (ndtime, nion).
flmagheation	matflt_type (9.4.1.2.7)	Conductive ion heat flux [ $\text{W.m}^{-2}$ ]; Time-dependent; Matrix (ndtime, nion).

Type of: turbulence:var0d (1087)

#### 9.4.1.3.401 turbvar1d

Dependent variable zonal average radial profile.

member	type	description
rho_tor_norm	vecflt_type (9.4.1.2.9)	Normalised toroidal flux coordinate. Vector(nrho1d)
phi	vecflt_type (9.4.1.2.9)	Electrostatic potential [V]; Time-dependent; Vector (nrho1d).
er	vecflt_type (9.4.1.2.9)	Radial electric field [V/m]; Time-dependent; Vector (nrho1d).
vor	vecflt_type (9.4.1.2.9)	Vorticity [s <sup>-1</sup> ]; Time-dependent; Vector (nrho1d).
apl	vecflt_type (9.4.1.2.9)	Parallel magnetic potential divided by B [m]; Time-dependent; Vector (nrho1d).
jpl	vecflt_type (9.4.1.2.9)	Parallel current divided by B [A/m <sup>2</sup> per T]; Time-dependent; Vector (nrho1d).
ne	vecflt_type (9.4.1.2.9)	Electron density [m <sup>-3</sup> ]; Time-dependent; Vector (nrho1d).
te	vecflt_type (9.4.1.2.9)	Electron temperature [eV]; Time-dependent; Vector (nrho1d).
ni	matflt_type (9.4.1.2.7)	Ion density [m <sup>-3</sup> ]; Time-dependent; Matrix (nrho1d,nion).
ti	matflt_type (9.4.1.2.7)	Ion temperature [eV]; Time-dependent; Matrix (nrho1d,nion).
ui	matflt_type (9.4.1.2.7)	Ion parallel velocity divided by B [m/s per T]; Time-dependent; Matrix (nrho1d,nion).

Type of: turbulence:var1d (1087)

#### 9.4.1.3.402 turbvar2d

Dependent variable axisymmetric component.

member	type	description
rho_tor_norm	vecflt_type (9.4.1.2.9)	Normalised toroidal flux coordinate. Vector(nrho2d)
theta	vecflt_type (9.4.1.2.9)	Straight field line poloidal angle [rad]. Vector(ntheta2d)
phi	matflt_type (9.4.1.2.7)	Electrostatic potential [V]; Time-dependent; Matrix (nrho2d,ntheta2d).
apl	matflt_type (9.4.1.2.7)	Parallel magnetic potential divided by B [m]; Time-dependent; Matrix(nrho2d,ntheta2d).
jpl	matflt_type (9.4.1.2.7)	Parallel current divided by B [A/m <sup>2</sup> per T]; Time-dependent; Matrix (nrho2d,ntheta2d).
vor	matflt_type (9.4.1.2.7)	Vorticity [s <sup>-1</sup> ]; Time-dependent; Matrix(nrho2d,ntheta2d).
ne	matflt_type (9.4.1.2.7)	Electron density [m <sup>-3</sup> ]; Time-dependent; Matrix (nrho2d,ntheta2d).
te	matflt_type (9.4.1.2.7)	Electron temperature [eV]; Time-dependent; Matrix (nrho2d,ntheta2d).
ni	array3dfilt_type (9.4.1.2.1)	Ion density [m <sup>-3</sup> ]; Time-dependent; Array3D (nrho2d,ntheta2d,nion).
ti	array3dfilt_type (9.4.1.2.1)	Ion temperature [eV]; Time-dependent; Array3D (nrho2d,ntheta2d,nion).
ui	array3dfilt_type (9.4.1.2.1)	Ion parallel velocity divided by B [m/s per T]; Time-dependent; Array3D(nrho2d,ntheta2d,nion).

Type of: turbulence:var2d (1087)

#### 9.4.1.3.403 turbvar3d

Dependent variable morphology (on the internal grid code coord\_sys/turbgrid).

member	type	description
phi	array3dfilt_type (9.4.1.2.1)	Electrostatic potential [V]; Time-dependent; Array3D(ndim1,ndim2,ndim3).
vor	array3dfilt_type (9.4.1.2.1)	Vorticity [s <sup>-1</sup> ]; Time-dependent; Array3D(ndim1,ndim2,ndim3).
jpl	array3dfilt_type (9.4.1.2.1)	Parallel current [A/m <sup>2</sup> ]; Time-dependent; Array3D(ndim1,ndim2,ndim3).
ne	array3dfilt_type (9.4.1.2.1)	Electron density [m <sup>-3</sup> ]; Time-dependent; Array3D(ndim1,ndim2,ndim3).

Type of: turbulence:var3d (1087)

#### 9.4.1.3.404 turbvar4d

Gyrokinetic distribution function, axisymmetric component. Grid is defined in coord\_sys/turbgrid.

member	type	description
fe	array4dfilt_type (9.4.1.2.3)	Electron distribution function times V-space volume element, axisymmetric component [m <sup>-3</sup> ]; Time-dependent; Array4D(ndim1,ndim2,ndim3,ndim.v1).
fi	array5dfilt_type (9.4.1.2.4)	Ion distribution function times V-space volume element, axisymmetric component [m <sup>-3</sup> ]; Time-dependent; Array5D(ndim1,ndim2,ndim3,ndim.v1,nion).

Type of: turbulence:var4d (1087)

#### 9.4.1.3.405 turbvar5d

gyrokinetic distribution function. Grid is defined in coord\_sys/turbgrid.

member	type	description
fe	array5dflt.type (9.4.1.2.4)	Electron distribution function times V-space volume element [ $m^{-3}$ ]; Time-dependent; Array5D(ndim1,ndim2,ndim3,ndim.v1,ndim.v2).
fi	array6dflt.type (9.4.1.2.5)	Ion distribution function times V-space volume element [ $m^{-3}$ ]; Time-dependent; Array6D(ndim1,ndim2,ndim3,ndim.v1,ndim.v2,nion).

Type of: turbulence:var5d (1087)

#### 9.4.1.3.406 vecclx\_type

Temporary structure for real and imaginary part of complex numbers (vector)

member	type	description
re	vecflt.type (9.4.1.2.9)	Real part
im	vecflt.type (9.4.1.2.9)	Imaginary part

Type of: complexgrid\_scalar\_cplx:scalar (1119)

#### 9.4.1.3.407 version\_ind

Used by shot/run=0/0 to store information about available versions.

member	type	description
description	vecstring.type (9.4.1.2.11)	Description of each version.
releasedate	string (9.4.1.1.3)	Release date
data_release(:)	data_release (9.4.1.3.119)	For this release, an array over each data item (i.e. shot/run pair containing the actual data) included in this release

Type of: amns:version.ind (1046)

#### 9.4.1.3.408 wall2d

2D wall type. Structure array. Replicate this element for each type of possible physics configurations necessary (single contour limiter, disjoints gapped plasma facing components)

member	type	description
wall_id	identifier (9.4.1.3.213)	Use this identifier to tag the type of 2d wall you are using. Use 0 for single contour limiter and 1 for disjoint PFC structure like first wall.
limiter	wall.limiter (9.4.1.3.413)	Description of the immobile limiting surface(s) or plasma facing components for defining the Last Closed Flux Surface.
vessel	wall.vessel (9.4.1.3.414)	Mechanical structure of the vacuum vessel. Vessel assumed as set of nested layers with given physics properties; Each vessel layer can be either a simple annular structure of given radial thickness or be made from a set of individual blocks with a given resistivity.

Type of: wall:wall2d (1089)

#### 9.4.1.3.409 wall2d\_mhd

Simplified wall that encloses necessary information for RWM codes.

member	type	description
wall_id	identifier (9.4.1.3.213)	NO DOCS
res_wall(:)	mhd.res_wall2d (9.4.1.3.242)	Resistive Wall(s).
ideal_wall	mhd.ideal_wall2d (9.4.1.3.240)	Ideal wall

Type of: wall:wall2d\_mhd (1089)



#### 9.4.1.3.410 wall3d

A 3D wall type; Structure array. Replicate this element for each type of possible physics configurations necessary (gas tight vs wall with ports and holes)

member	type	description
wall_id	identifier (9.4.1.3.213)	NO DOCS
grid	complexgrid (9.4.1.3.70)	Grid description

Type of: wall:wall3d (1089)

#### 9.4.1.3.411 wall\_blocks

Vector of vacuum vessel units. Replicate this vessel\_unit element ncomponents times. Each unit contains a mechanical structure of the vessel with distinct physics properties. Array of structures (ncomponents)

member	type	description
blocks_unit(:)	wall_blocks_unit (9.4.1.3.412)	Vector of blocks that build of the vessel layer. Replicate this element nblocks times. Each unit contains a building block of the vessel and can have dedicated number of points. Array of structures (nblocks)

Type of: wall\_vessel\_unit:blocks (1459)

#### 9.4.1.3.412 wall\_blocks\_unit

Vector of blocks that build of the vessel layer. Replicate this element nblocks times. Each unit contains a building block of the vessel and can have dedicated number of points. Array of structures (nblocks)

member	type	description
name	string (9.4.1.1.3)	Name or description of the blocks_unit
position	rz1D (9.4.1.3.319)	Position (R,Z coordinates) of a vessel segment. No need to repeat first point for closed contours [m]; Vector(npoints)
eta	float (9.4.1.1.1)	Resistivity of the vessel segment [ohm.m]; Scalar
permeability	float (9.4.1.1.1)	Vessel relative permeability; Scalar

Type of: wall\_blocks:blocks\_unit (1454)

#### 9.4.1.3.413 wall\_limiter

Description of the immobile limiting surface(s) or plasma facing components for defining the Last Closed Flux Surface.

member	type	description
limiter_unit(:)	limiter_unit (9.4.1.3.230)	Vector of limiting surfaces. Replicate this limiter_unit element ncomponents times. Each unit contains a plasma facing component that can have dedicated number of points. Array of structures (ncomponents)

Type of: wall2d:limiter (1451)

#### 9.4.1.3.414 wall\_vessel

Mechanical structure of the vacuum vessel. Vessel assumed as set of nested layers with given physics properties; Each vessel layer can be either a simple annular structure of given radial thickness or be made from a set of individual blocks with a given resistivity.

member	type	description
vessel_unit(:)	wall_vessel_unit (9.4.1.3.416)	Vector of vacuum vessel units. Replicate this vessel_unit element ncomponents times. Each unit contains a mechanical structure of the vessel with distinct physics properties. Array of structures (ncomponents)

Type of: wall2d:vessel (1451)

### 9.4.1.3.415 wall\_vessel\_annular

Vector of vacuum vessel units. Replicate this vessel\_unit element ncomponents times. Each unit contains a mechanical structure of the vessel with distinct physics properties. Array of structures (ncomponents)

member	type	description
name	string (9.4.1.1.3)	Name or description of the vessel_unit
inside	rz1D (9.4.1.3.319)	Inner Vessel wall outline (list of R,Z co-ordinates) [m]; Vector (npoints_inner)
outside	rz1D (9.4.1.3.319)	Outer Vessel wall outline (list of R,Z co-ordinates) [m]; Vector (npoints_inner)
eta	float (9.4.1.1.1)	Vessel resistivity [ohm.m]; Scalar
permeability	float (9.4.1.1.1)	Vessel relative permeability; Scalar

Type of: wall\_vessel\_unit:annular (1459)

### 9.4.1.3.416 wall\_vessel\_unit

Vector of vacuum vessel units. Replicate this vessel\_unit element ncomponents times. Each unit contains a mechanical structure of the vessel with distinct physics properties. Array of structures (ncomponents)

member	type	description
annular	wall_vessel_annular (9.4.1.3.415)	Vector of vacuum vessel units. Replicate this vessel_unit element ncomponents times. Each unit contains a mechanical structure of the vessel with distinct physics properties. Array of structures (ncomponents)
blocks	wall.blocks (9.4.1.3.411)	Vector of vacuum vessel units. Replicate this vessel_unit element ncomponents times. Each unit contains a mechanical structure of the vessel with distinct physics properties. Array of structures (ncomponents)

Type of: wall\_vessel:vessel\_unit (1457)

### 9.4.1.3.417 waveguides

Waveguides description

member	type	description
nwm_theta	integer (9.4.1.1.2)	Number of waveguides per module in the poloidal direction.
nwm_phi	integer (9.4.1.1.2)	Number of waveguides per module in the toroidal direction.
mask	vecint.type (9.4.1.2.10)	Mask of passive and active waveguides for an internal module; Vector of integers (nwm_phi)
npwbm_phi	integer (9.4.1.1.2)	Number of passive waveguide between modules in the toroidal direction
npwe_phi	integer (9.4.1.1.2)	Number of passive waveguides on each antenna edge in the toroidal direction
sw_theta	float (9.4.1.1.1)	Spacing between poloidally neighboring waveguides [m]
hw_theta	float (9.4.1.1.1)	Height of waveguides in the poloidal direction [m]
bwa	float (9.4.1.1.1)	Width of active waveguides [m]; Float
biwp	float (9.4.1.1.1)	Width of internal passive waveguides [m]; Float
bewp	float (9.4.1.1.1)	Width of edge passive waveguides [m]; Float
e_phi	vecflt.type (9.4.1.2.9)	Thickness between waveguides in the toroidal direction [m], Vector (nthick_phi). Reminder : nthick_phi = nmp_phi*nwm_phi + (nmp_phi - 1)*npwbm_phi + 2*npwe_phi
scl	vecflt.type (9.4.1.2.9)	Short circuit length for passive waveguides [m], Vector (nshort_phi). Reminder : nshort_phi = nmp_phi*npwm_phi + (nmp_phi - 1)*npwbm_phi + 2*npwe_phi

Type of: modules:waveguides (1288)

### 9.4.1.3.418 waves\_global\_param

Global wave deposition parameters

member	type	description
frequency	float (9.4.1.1.1)	Wave frequency [Hz]; Time-dependent, floating
name	string (9.4.1.1.3)	Antenna name, String
type	string (9.4.1.1.3)	Wave type (LH, EC, IC, ...), String
ntor	vecint.type (9.4.1.2.10)	Toroidal mode numbers; Time-dependent; Vector (ntor)
f_assumption	vecint.type (9.4.1.2.10)	Assumption on the functions distribution used by the wave solver to calculate the power deposition : 0 = Maxwellian (linear absorption); 1 = quasi-linear (F given by a distribution function CPO). Integer vector (nion+1). The first value corresponds to the electrons, then to the other ion species. Time-dependent.
power_tot	float (9.4.1.1.1)	Total absorbed wave power [W]; Time-dependent

member	type	description
p_frac_ntor	vecflt.type (9.4.1.2.9)	Fraction of wave power per toroidal mode number; Time-dependent; Vector (ntor)
pow_i	vecflt.type (9.4.1.2.9)	Wave power absorbed by an ion species [W]; Time-dependent; Vector (nion)
pow_e	float (9.4.1.1.1)	Wave power absorbed by the electrons [W]; Time-dependent; Float
pow_ntor_i	matflt.type (9.4.1.2.7)	Wave power absorbed by an ion species per toroidal mode number [W]; Time-dependent; Matrix (ntor,nion)
pow_ntor_e	vecflt.type (9.4.1.2.9)	Wave power absorbed by the electrons per toroidal mode number [W]; Time-dependent; Vector (ntor)
cur_tor	float (9.4.1.1.1)	Wave driven toroidal current from a stand alone calculation (not consistent with other sources) [A]; Time-dependent, Float
cur_tor_ntor	vecflt.type (9.4.1.2.9)	Wave driven toroidal current for each toroidal mode number from a stand alone calculation (not consistent with other sources) [A]; Time-dependent; Vector (ntor)
code.type	integer (9.4.1.1.2)	Type of wave deposition code for a given frequency: 1=beam/ray tracing; 2=full wave; Integer
toroid_field	b0r0 (9.4.1.3.55)	Characteristics of the vacuum toroidal field, redundant with the toroidfield CPO, to document the normalisation of parallel current densities in this CPO; Float.

Type of: coherentwave:global\_param (1110)

#### 9.4.1.3.419 waves\_grid\_1d

Grid points for profiles

member	type	description
rho_tor_norm	vecflt.type (9.4.1.2.9)	Normalised toroidal flux coordinate at the grid points for 1D profiles; Time-dependent; Vector (npsi)
rho_tor	vecflt.type (9.4.1.2.9)	Toroidal flux coordinate at the grid points for 1D profiles [m]; Time-dependent; Vector (npsi)
psi	vecflt.type (9.4.1.2.9)	Grid points in poloidal flux function [Wb], without $1/2\pi$ and such that $B_p =  \text{grad } \psi  / R / 2 / \pi$ . Time-dependent; Vector (npsi)

Type of: coherentwave:grid\_1d (1110)

#### 9.4.1.3.420 waves\_grid\_2d

Grid points for 2D profiles

member	type	description
grid.type	integer (9.4.1.1.2)	Grid type. 1: rectangular grid in (R,Z). 2: rectangular grid in (psi, theta). 3: unstructured grid. Integer.
rho_tor_norm	matflt.type (9.4.1.2.7)	Normalised toroidal flux coordinate at the grid points for the 2D profiles; Time-dependent; Matrix (ndim1, ndim2)
rho_tor	matflt.type (9.4.1.2.7)	Toroidal flux coordinate at the grid points for the 2D profiles [m]; Time-dependent; Matrix (ndim1, ndim2)
psi	matflt.type (9.4.1.2.7)	Grid points in poloidal flux function [Wb], without $1/2\pi$ and such that $B_p =  \text{grad } \psi  / R / 2 / \pi$ . Time-dependent; Matrix (ndim1, ndim2)
theta	matflt.type (9.4.1.2.7)	Poloidal angle at the grid points (see theta.info for detailed definition); Time-dependent; Matrix (ndim1, ndim2)
r	matflt.type (9.4.1.2.7)	R (major radius) of grid points; Time-dependent; Matrix(ndim1, ndim2)
z	matflt.type (9.4.1.2.7)	Z (altitude) of grid points; Time-dependent; Matrix (ndim1, ndim2)
theta.info	theta.info (9.4.1.3.385)	Information on the poloidal angle theta.

Type of: coherentwave:grid\_2d (1110)

#### 9.4.1.3.421 waves\_profiles\_1d

waves 1D radial profiles

member	type	description
powd_tot	vecflt.type (9.4.1.2.9)	Total flux surface averaged wave power density [ $\text{W}/\text{m}^3$ ]; Time-dependent; Vector (npsi)
powd_e	vecflt.type (9.4.1.2.9)	Flux surface averaged absorbed wave power density on electrons [ $\text{W}/\text{m}^3$ ]; Time-dependent; Vector (npsi)
powd_i	matflt.type (9.4.1.2.7)	Flux surface averaged absorbed wave power density on ion species [ $\text{W}/\text{m}^3$ ]; Time-dependent; Matrix (npsi, nion)
powd_ntor	matflt.type (9.4.1.2.7)	Flux surface averaged power density for each toroidal mode number [ $\text{W}/\text{m}^3$ ]; Time-dependent; Matrix(npsi, ntor)
powd_ntor_e	matflt.type (9.4.1.2.7)	Flux surface averaged absorbed power density for each toroidal mode number on electrons [ $\text{W}/\text{m}^3$ ]; Time-dependent; Matrix (npsi, ntor)

member	type	description
powd_ntor.i	array3dflt.type (9.4.1.2.1)	Flux surface averaged power density for each toroidal mode number on each ions species [W/m <sup>3</sup> ]; Time-dependent; Array3D (npsi, ntor, nion)
curd_tor	vecflt.type (9.4.1.2.9)	Flux surface averaged wave driven toroidal current density = average(jphi/R) / average(1/R) [A/m <sup>2</sup> ]; Time-dependent; Vector (npsi)
curd_torntor	matflt.type (9.4.1.2.7)	Flux surface averaged wave driven toroidal current density for each toroidal mode number = average(jphi/R) / average(1/R) [A/m <sup>2</sup> ]; Time-dependent; Matrix (npsi, ntor)
pow_tot	vecflt.type (9.4.1.2.9)	Volume integrated absorbed wave power density [W]; Time-dependent; Vector (npsi)
pow_e	vecflt.type (9.4.1.2.9)	Volume integrated absorbed wave power density on electrons [W]; Time-dependent; Vector (npsi)
pow_i	matflt.type (9.4.1.2.7)	Volume integrated absorbed wave power density on ion species [W]; Time-dependent; Matrix (npsi, nion)
pow_ntor	array3dflt.type (9.4.1.2.1)	Volume integrated power density for each toroidal mode number [W]; Time-dependent; Matrix (npsi, ntor)
pow_ntor_e	matflt.type (9.4.1.2.7)	Volume integrated power density for each toroidal mode number on the electrons [W]; Time-dependent; Matrix (npsi, ntor)
pow_ntor.i	array3dflt.type (9.4.1.2.1)	Volume integrated power density for each toroidal mode number on each ions species [W]; Time-dependent; Array3D (npsi, ntor, nion)
curd_par	vecflt.type (9.4.1.2.9)	Flux surface averaged wave driven parallel current density = average(j.B) / B0, where B0 is in global_param/toroid.field/b0, from stand alone calculation (not consistent with other sources) ; [A/m <sup>2</sup> ]; Time-dependent; Vector (npsi)
curd_parntor	matflt.type (9.4.1.2.7)	Flux surface averaged wave driven parallel current density for each toroidal mode number = average(j.B) / B0, where B0 is in global_param/toroid.field/b0, from stand alone calculation (not consistent with other sources) ; [A/m <sup>2</sup> ]; Time-dependent; Matrix (npsi, ntor)
cur_tor	vecflt.type (9.4.1.2.9)	Wave driven toroidal current inside a flux surface from stand alone calculation (not consistent with other sources) [A]; Time-dependent; Vector (npsi)
cur_tor_ntor	matflt.type (9.4.1.2.7)	Wave driven toroidal current inside a flux surface for each toroidal mode number from a stand alone calculation (not consistent with other sources) [A]; Time-dependent; Matrix (npsi, ntor)

Type of: coherentwave:profiles\_1d (1110)

#### 9.4.1.3.422 waves\_profiles\_2d

waves 2D profiles in poloidal cross-section

member	type	description
powd_tot	matflt.type (9.4.1.2.7)	Total wave power density; Time-dependent [W/m <sup>3</sup> ]; Matrix (ndim1, ndim2)
powd_e	matflt.type (9.4.1.2.7)	Absorbed wave power density on electrons [W/m <sup>3</sup> ]; Time-dependent; Matrix (ndim1, ndim2)
powd_i	array3dflt.type (9.4.1.2.1)	Absorbed wave power density on ion species [W/m <sup>3</sup> ]; Time-dependent; Array3D (ndim1, ndim2, nion)
powd_ntor	array3dflt.type (9.4.1.2.1)	Absorbed power density for each toroidal mode number [W/m <sup>3</sup> ]; Time-dependent; Array 3D (ndim1, ndim2, ntor)
powd_ntor.e	array3dflt.type (9.4.1.2.1)	Absorbed power density for each toroidal mode number on electrons [W/m <sup>3</sup> ]; Time-dependent; Array 3D (ndim1, ndim2, ntor)
powd_ntor.i	array4dflt.type (9.4.1.2.3)	Absorbed power density for each toroidal mode number on each ions species [W/m <sup>3</sup> ]; Time-dependent; Array4D (ndim1, ndim2, ntor, nion)
powd_iharm	array5dflt.type (9.4.1.2.4)	Power density absorbed by an ion species for each toroidal mode number at a given harmonic cyclotron resonance ; Time-dependent (W/m <sup>3</sup> ); Array5D (ndim1, ndim2, ntor, nion, nharm)

Type of: coherentwave:profiles\_2d (1110)

#### 9.4.1.3.423 waves\_rtposition

Ray/beam position

member	type	description
r	vecflt.type (9.4.1.2.9)	Major radius location [m]; Time-dependent; Vector (npoints)
z	vecflt.type (9.4.1.2.9)	Vertical location [m]; Time-dependent; Vector (npoints)
phi	vecflt.type (9.4.1.2.9)	Toroidal angle location [rad]; Time-dependent; Vector (npoints)
psi	vecflt.type (9.4.1.2.9)	Poloidal magnetic flux coordinate [Wb], without 1/2pi and such that Bp= grad psi  /R/2/pi; Time-dependent; Vector (npoints)
theta	vecflt.type (9.4.1.2.9)	Poloidal angle location [rad]; Time-dependent; Vector (npoints). PRECISE THE DEFINITION OF THE POLOIDAL ANGLE, SEE WAVES/COHERENTWAVE(:)/GRID_2D.

Type of: beamtracing:position (1100)

### 9.4.1.3.424 waves\_rtwavevector

Ray/beam wave vector

member	type	description
kr	vecflt_type (9.4.1.2.9)	Wave vector in the major radius direction [m**-1], Vector (npoints). Time-dependent
kz	vecflt_type (9.4.1.2.9)	Wave vector in the vertical direction [m**-1], Vector (npoints). Time-dependent
kphi	vecflt_type (9.4.1.2.9)	Wave vector in the toroidal direction [m**-1], Vector (npoints). Time-dependent
npar	vecflt_type (9.4.1.2.9)	Parallel refractive index, Vector (npoints). Time-dependent
nperp	vecflt_type (9.4.1.2.9)	Perpendicular refractive index, Vector (npoints). Time-dependent
ntor	vecflt_type (9.4.1.2.9)	Toroidal wave number, Vector (npoints/1). If var_ntor=0, ntor is constant along the ray path and the last dimension is of size 1 in order to avoid useless repetition of ntor constant value. Time-dependent
var_ntor	integer (9.4.1.1.2)	Flag telling whether ntor is constant along the ray path (0) or varying (1). Integer

Type of: beamtracing:wavevector (1100)

### 9.4.1.3.425 weighted\_markers

Array of NMARK weighted markers in NDIM dimensions

member	type	description
variable_ids(:)	identifier (9.4.1.3.213)	Integer identification of the variables stored in the coord matrix. Vector(NDIM)
coord	matflt_type (9.4.1.2.7)	Coordinates of the markers. The coordinates used is specified in variable_ids. Time-dependent; Float(NMARK,NDIM)
weight	vecflt_type (9.4.1.2.9)	Weight of the marker; number of real particles represented by the marker. Time-dependent; Float(NMARK)

Type of: dist\_func:markers (1172) | distsource.source:markers (1198)

### 9.4.1.3.426 whatref

Structure defining a database entry and the CPO occurrence

member	type	description
user	string (9.4.1.1.3)	Name of the user if private data, public if public ITM database.
machine	string (9.4.1.1.3)	Name of the device
shot	integer (9.4.1.1.2)	Shot number
run	integer (9.4.1.1.2)	Run number
occurrence	integer (9.4.1.1.2)	Occurrence number of the CPO in the reference entry

Type of: datainfo:whatref (1163)

### 9.4.1.3.427 width

Angular width of each in the poloidal and toroidal direction;

member	type	description
dtheta	vecflt_type (9.4.1.2.9)	Angular poloidal width of holes; Vector (n_holes)
phi	vecflt_type (9.4.1.2.9)	Angular toroidal width of holes; Vector (n_holes)

Type of: holes:width (1255)

### 9.4.1.3.428 xpts

Position of the X-point(s)

member	type	description
position	rz1D (9.4.1.3.319)	Position of the X-point(s); Time-dependent; Vector (nmeas)
source	string (9.4.1.1.3)	Description or path to the source signal (diagnostic or genprof, from which to read all info on the signal), e.g. 'magdiag/bpol.probes/measure/value'. String
weight	vecflt_type (9.4.1.2.9)	weight given to the measurement ( $\zeta=0$ ); -1 if exact data; Time-dependent; Vector (nmeas)
sigma	vecflt_type (9.4.1.2.9)	standard deviation of the measurement; Time-dependent; Vector (nmeas)

member	type	description
calculated	vecflt_type (9.4.1.2.9)	Signal as recalculated by the equilibrium code; Time-dependent; Vector (nmeas)
chi2	vecflt_type (9.4.1.2.9)	chi <sup>2</sup> of (calculated-measured); Time-dependent; Vector (nmeas)

Type of: eqconstraint:xpts (1216) [itmtypes](#) <sup>179</sup>

## 9.4.2 CPO Instances

Generated from the ITM data structure schemas.

### 9.4.2.1 Fortran

#### 9.4.2.1.1 amns

datainfo (1046)	amns%datainfo (datainfo) (9.4.1.3.120)
dataprovder (1163)	amns%datainfo%dataprovder (string) (9.4.1.1.3)
putdate (1163)	amns%datainfo%putdate (string) (9.4.1.1.3)
source (1163)	amns%datainfo%source (string) (9.4.1.1.3)
comment (1163)	amns%datainfo%comment (string) (9.4.1.1.3)
cocos (1163)	amns%datainfo%cocos (integer) (9.4.1.1.2)
id (1163)	amns%datainfo%id (integer) (9.4.1.1.2)
isref (1163)	amns%datainfo%isref (integer) (9.4.1.1.2)
whatref (1163)	amns%datainfo%whatref (whatref) (9.4.1.3.426)
user (1469)	amns%datainfo%whatref%user (string) (9.4.1.1.3)
machine (1469)	amns%datainfo%whatref%machine (string) (9.4.1.1.3)
shot (1469)	amns%datainfo%whatref%shot (integer) (9.4.1.1.2)
run (1469)	amns%datainfo%whatref%run (integer) (9.4.1.1.2)
occurrence (1469)	amns%datainfo%whatref%occurrence (integer) (9.4.1.1.2)
putinfo (1163)	amns%datainfo%putinfo (putinfo) (9.4.1.3.289)
putmethod (1332)	amns%datainfo%putinfo%putmethod (string) (9.4.1.1.3)
putaccess (1332)	amns%datainfo%putinfo%putaccess (string) (9.4.1.1.3)
putlocation (1332)	amns%datainfo%putinfo%putlocation (string) (9.4.1.1.3)
rights (1332)	amns%datainfo%putinfo%rights (string) (9.4.1.1.3)
version (1046)	amns%version (string) (9.4.1.1.3)
source (1046)	amns%source (string) (9.4.1.1.3)
zn (1046)	amns%zn (integer) (9.4.1.1.2)
amn (1046)	amns%amn (float) (9.4.1.1.1)
zion (1046)	amns%zion (vecint_type) (9.4.1.2.10)
state_label (1046)	amns%state_label (vecstring_type) (9.4.1.2.11)
bundled (1046)	amns%bundled (integer) (9.4.1.1.2)
proc_label (1046)	amns%proc_label (vecstring_type) (9.4.1.2.11)
tables (1046)	amns%tables(:) (tables) (9.4.1.3.381)
ndim (1424)	amns%tables(:)%ndim (integer) (9.4.1.1.2)
coord_index (1424)	amns%tables(:)%coord_index (integer) (9.4.1.1.2)
result_label (1424)	amns%tables(:)%result_label (string) (9.4.1.1.3)
result_unit (1424)	amns%tables(:)%result_unit (string) (9.4.1.1.3)
result_trans (1424)	amns%tables(:)%result_trans (integer) (9.4.1.1.2)
table (1424)	amns%tables(:)%table(:) (table) (9.4.1.3.380)
table_0d (1423)	amns%tables(:)%table(:)%table_0d (float) (9.4.1.1.1)
table_1d (1423)	amns%tables(:)%table(:)%table_1d (vecflt_type) (9.4.1.2.9)
table_2d (1423)	amns%tables(:)%table(:)%table_2d (matflt_type) (9.4.1.2.7)
table_3d (1423)	amns%tables(:)%table(:)%table_3d (array3dflt_type) (9.4.1.2.1)
table_4d (1423)	amns%tables(:)%table(:)%table_4d (array4dflt_type) (9.4.1.2.3)
table_5d (1423)	amns%tables(:)%table(:)%table_5d (array5dflt_type) (9.4.1.2.4)
table_6d (1423)	amns%tables(:)%table(:)%table_6d (array6dflt_type) (9.4.1.2.5)
data_source (1424)	amns%tables(:)%data_source (string) (9.4.1.1.3)
data_provide (1424)	amns%tables(:)%data_provide (string) (9.4.1.1.3)
data_citation (1424)	amns%tables(:)%data_citation (string) (9.4.1.1.3)
tables_coord (1046)	amns%tables_coord(:) (tables_coord) (9.4.1.3.382)

<sup>179</sup>[https://www.efda-itm.eu/ITM/html/itmtypes\\_\\_4.10a.html](https://www.efda-itm.eu/ITM/html/itmtypes__4.10a.html)

coords (1425)	amns%tables_coord(:)%coords(:) (coords) (9.4.1.3.91)
coord (1134)	amns%tables_coord(:)%coords(:)%coord (vecflt_type) (9.4.1.2.9)
coord_label (1134)	amns%tables_coord(:)%coords(:)%coord_label (vecstring_type) (9.4.1.2.11)
extrap_type (1134)	amns%tables_coord(:)%coords(:)%extrap_type (vecint_type) (9.4.1.2.10)
interp_type (1134)	amns%tables_coord(:)%coords(:)%interp_type (integer) (9.4.1.1.2)
label (1134)	amns%tables_coord(:)%coords(:)%label (string) (9.4.1.1.3)
unit (1134)	amns%tables_coord(:)%coords(:)%unit (string) (9.4.1.1.3)
transform (1134)	amns%tables_coord(:)%coords(:)%transform (integer) (9.4.1.1.2)
spacing (1134)	amns%tables_coord(:)%coords(:)%spacing (integer) (9.4.1.1.2)
version_ind (1046)	amns%version_ind(:) (version_ind) (9.4.1.3.407)
description (1450)	amns%version_ind(:)%description (vecstring_type) (9.4.1.2.11)
releasedate (1450)	amns%version_ind(:)%releasedate (string) (9.4.1.1.3)
data_release (1450)	amns%version_ind(:)%data_release(:) (data_release) (9.4.1.3.119)
shot (1162)	amns%version_ind(:)%data_release(:)%shot (integer) (9.4.1.1.2)
run (1162)	amns%version_ind(:)%data_release(:)%run (integer) (9.4.1.1.2)
description (1162)	amns%version_ind(:)%data_release(:)%description (vecstring_type) (9.4.1.2.11)

### 9.4.2.1.2 antennas

datainfo (1047)	antennas%datainfo (datainfo) (9.4.1.3.120)
dataprovider (1163)	antennas%datainfo%dataprovider (string) (9.4.1.1.3)
putdate (1163)	antennas%datainfo%putdate (string) (9.4.1.1.3)
source (1163)	antennas%datainfo%source (string) (9.4.1.1.3)
comment (1163)	antennas%datainfo%comment (string) (9.4.1.1.3)
cocos (1163)	antennas%datainfo%cocos (integer) (9.4.1.1.2)
id (1163)	antennas%datainfo%id (integer) (9.4.1.1.2)
isref (1163)	antennas%datainfo%isref (integer) (9.4.1.1.2)
whatref (1163)	antennas%datainfo%whatref (whatref) (9.4.1.3.426)
user (1469)	antennas%datainfo%whatref%user (string) (9.4.1.1.3)
machine (1469)	antennas%datainfo%whatref%machine (string) (9.4.1.1.3)
shot (1469)	antennas%datainfo%whatref%shot (integer) (9.4.1.1.2)
run (1469)	antennas%datainfo%whatref%run (integer) (9.4.1.1.2)
occurrence (1469)	antennas%datainfo%whatref%occurrence (integer) (9.4.1.1.2)
putinfo (1163)	antennas%datainfo%putinfo (putinfo) (9.4.1.3.289)
putmethod (1332)	antennas%datainfo%putinfo%putmethod (string) (9.4.1.1.3)
putaccess (1332)	antennas%datainfo%putinfo%putaccess (string) (9.4.1.1.3)
putlocation (1332)	antennas%datainfo%putinfo%putlocation (string) (9.4.1.1.3)
rights (1332)	antennas%datainfo%putinfo%rights (string) (9.4.1.1.3)
antenna_ec (1047)	antennas%antenna_ec(:) (antenna_ec) (9.4.1.3.49)
name (1092)	antennas%antenna_ec(:)%name (string) (9.4.1.1.3)
frequency (1092)	antennas%antenna_ec(:)%frequency (float) (9.4.1.1.1)
power (1092)	antennas%antenna_ec(:)%power (exp0D) (9.4.1.3.179)
value (1222)	antennas%antenna_ec(:)%power%value (float) (9.4.1.1.1)
abserror (1222)	antennas%antenna_ec(:)%power%abserror (float) (9.4.1.1.1)
releror (1222)	antennas%antenna_ec(:)%power%releror (float) (9.4.1.1.1)
mode (1092)	antennas%antenna_ec(:)%mode (integer) (9.4.1.1.2)
position (1092)	antennas%antenna_ec(:)%position (rzphi0D) (9.4.1.3.324)
r (1367)	antennas%antenna_ec(:)%position%r (float) (9.4.1.1.1)
z (1367)	antennas%antenna_ec(:)%position%z (float) (9.4.1.1.1)
phi (1367)	antennas%antenna_ec(:)%position%phi (float) (9.4.1.1.1)
launchangles (1092)	antennas%antenna_ec(:)%launchangles (launchangles) (9.4.1.3.223)
alpha (1266)	antennas%antenna_ec(:)%launchangles%alpha (float) (9.4.1.1.1)
beta (1266)	antennas%antenna_ec(:)%launchangles%beta (float) (9.4.1.1.1)
beam (1092)	antennas%antenna_ec(:)%beam (rfbeam) (9.4.1.3.317)
spot (1360)	antennas%antenna_ec(:)%beam%spot (spot) (9.4.1.3.373)
size (1416)	antennas%antenna_ec(:)%beam%spot%size (vecflt_type) (9.4.1.2.9)
angle (1416)	antennas%antenna_ec(:)%beam%spot%angle (float) (9.4.1.1.1)
phaseellipse (1360)	antennas%antenna_ec(:)%beam%phaseellipse (phaseellipse) (9.4.1.3.278)
invcurvrad (1321)	antennas%antenna_ec(:)%beam%phaseellipse%invcurvrad (vecflt_type) (9.4.1.2.9)
angle (1321)	antennas%antenna_ec(:)%beam%phaseellipse%angle (float) (9.4.1.1.1)
codeparam (1092)	antennas%antenna_ec(:)%codeparam (codeparam) (9.4.1.3.65)



codename (1108)	antennas%antenna_ec(:)%codeparam%codename (string) (9.4.1.1.3)
codeversion (1108)	antennas%antenna_ec(:)%codeparam%codeversion (string) (9.4.1.1.3)
parameters (1108)	antennas%antenna_ec(:)%codeparam%parameters (string) (9.4.1.1.3)
output_diag (1108)	antennas%antenna_ec(:)%codeparam%output_diag (string) (9.4.1.1.3)
output_flag (1108)	antennas%antenna_ec(:)%codeparam%output_flag (integer) (9.4.1.1.2)
antenna_ic (1047)	antennas%antenna_ic(:) (antenna_ic) (9.4.1.3.50)
name (1093)	antennas%antenna_ic(:)%name (string) (9.4.1.1.3)
frequency (1093)	antennas%antenna_ic(:)%frequency (exp0D) (9.4.1.3.179)
value (1222)	antennas%antenna_ic(:)%frequency%value (float) (9.4.1.1.1)
abserror (1222)	antennas%antenna_ic(:)%frequency%abserror (float) (9.4.1.1.1)
releror (1222)	antennas%antenna_ic(:)%frequency%releror (float) (9.4.1.1.1)
power (1093)	antennas%antenna_ic(:)%power (exp0D) (9.4.1.3.179)
value (1222)	antennas%antenna_ic(:)%power%value (float) (9.4.1.1.1)
abserror (1222)	antennas%antenna_ic(:)%power%abserror (float) (9.4.1.1.1)
releror (1222)	antennas%antenna_ic(:)%power%releror (float) (9.4.1.1.1)
setup (1093)	antennas%antenna_ic(:)%setup (antennaic_setup) (9.4.1.3.52)
straps (1095)	antennas%antenna_ic(:)%setup%straps(:) (straps) (9.4.1.3.378)
phase (1421)	antennas%antenna_ic(:)%setup%straps(:)%phase (exp0D) (9.4.1.3.179)
value (1222)	antennas%antenna_ic(:)%setup%straps(:)%phase%value (float) (9.4.1.1.1)
abserror (1222)	antennas%antenna_ic(:)%setup%straps(:)%phase%abserror (float) (9.4.1.1.1)
releror (1222)	antennas%antenna_ic(:)%setup%straps(:)%phase%releror (float) (9.4.1.1.1)
phi_centre (1421)	antennas%antenna_ic(:)%setup%straps(:)%phi_centre (float) (9.4.1.1.1)
width (1421)	antennas%antenna_ic(:)%setup%straps(:)%width (float) (9.4.1.1.1)
dist2wall (1421)	antennas%antenna_ic(:)%setup%straps(:)%dist2wall (float) (9.4.1.1.1)
coord_strap (1421)	antennas%antenna_ic(:)%setup%straps(:)%coord_strap (rz1D) (9.4.1.3.319)
r (1362)	antennas%antenna_ic(:)%setup%straps(:)%coord_strap%r (vecflt.type) (9.4.1.2.9)
z (1362)	antennas%antenna_ic(:)%setup%straps(:)%coord_strap%z (vecflt.type) (9.4.1.2.9)
codeparam (1093)	antennas%antenna_ic(:)%codeparam (codeparam) (9.4.1.3.65)
codename (1108)	antennas%antenna_ic(:)%codeparam%codename (string) (9.4.1.1.3)
codeversion (1108)	antennas%antenna_ic(:)%codeparam%codeversion (string) (9.4.1.1.3)
parameters (1108)	antennas%antenna_ic(:)%codeparam%parameters (string) (9.4.1.1.3)
output_diag (1108)	antennas%antenna_ic(:)%codeparam%output_diag (string) (9.4.1.1.3)
output_flag (1108)	antennas%antenna_ic(:)%codeparam%output_flag (integer) (9.4.1.1.2)
antenna_lh (1047)	antennas%antenna_lh(:) (antenna_lh) (9.4.1.3.51)
name (1094)	antennas%antenna_lh(:)%name (string) (9.4.1.1.3)
frequency (1094)	antennas%antenna_lh(:)%frequency (float) (9.4.1.1.1)
power (1094)	antennas%antenna_lh(:)%power (exp0D) (9.4.1.3.179)
value (1222)	antennas%antenna_lh(:)%power%value (float) (9.4.1.1.1)
abserror (1222)	antennas%antenna_lh(:)%power%abserror (float) (9.4.1.1.1)
releror (1222)	antennas%antenna_lh(:)%power%releror (float) (9.4.1.1.1)
n_par (1094)	antennas%antenna_lh(:)%n_par (float) (9.4.1.1.1)
position (1094)	antennas%antenna_lh(:)%position (rzphi0D) (9.4.1.3.324)
r (1367)	antennas%antenna_lh(:)%position%r (float) (9.4.1.1.1)
z (1367)	antennas%antenna_lh(:)%position%z (float) (9.4.1.1.1)
phi (1367)	antennas%antenna_lh(:)%position%phi (float) (9.4.1.1.1)
setup (1094)	antennas%antenna_lh(:)%setup (antennalh_setup) (9.4.1.3.53)
modules (1096)	antennas%antenna_lh(:)%setup%modules (modules) (9.4.1.3.245)
nma_theta (1288)	antennas%antenna_lh(:)%setup%modules%nma_theta (integer) (9.4.1.1.2)
nma_phi (1288)	antennas%antenna_lh(:)%setup%modules%nma_phi (integer) (9.4.1.1.2)
ima_theta (1288)	antennas%antenna_lh(:)%setup%modules%ima_theta (vecint.type) (9.4.1.2.10)
ima_phi (1288)	antennas%antenna_lh(:)%setup%modules%ima_phi (vecint.type) (9.4.1.2.10)
sm_theta (1288)	antennas%antenna_lh(:)%setup%modules%sm_theta (float) (9.4.1.1.1)
amplitude (1288)	antennas%antenna_lh(:)%setup%modules%amplitude (exp1D) (9.4.1.3.180)
value (1223)	antennas%antenna_lh(:)%setup%modules%amplitude%value (vecflt.type) (9.4.1.2.9)
abserror (1223)	antennas%antenna_lh(:)%setup%modules%amplitude%abserror (vecflt.type) (9.4.1.2.9)
releror (1223)	antennas%antenna_lh(:)%setup%modules%amplitude%releror (vecflt.type) (9.4.1.2.9)
phase (1288)	antennas%antenna_lh(:)%setup%modules%phase (exp1D) (9.4.1.3.180)
value (1223)	antennas%antenna_lh(:)%setup%modules%phase%value (vecflt.type) (9.4.1.2.9)
abserror (1223)	antennas%antenna_lh(:)%setup%modules%phase%abserror (vecflt.type) (9.4.1.2.9)
releror (1223)	antennas%antenna_lh(:)%setup%modules%phase%releror (vecflt.type) (9.4.1.2.9)
waveguides (1288)	antennas%antenna_lh(:)%setup%modules%waveguides (waveguides) (9.4.1.3.417)



nwm_theta (1460)	antennas%antenna.lh(:)%setup%modules%waveguides%nwm_theta (integer) (9.4.1.1.2)
nwm_phi (1460)	antennas%antenna.lh(:)%setup%modules%waveguides%nwm_phi (integer) (9.4.1.1.2)
mask (1460)	antennas%antenna.lh(:)%setup%modules%waveguides%mask (vecint_type) (9.4.1.2.10)
npwbm_phi (1460)	antennas%antenna.lh(:)%setup%modules%waveguides%npwbm_phi (integer) (9.4.1.1.2)
npwe_phi (1460)	antennas%antenna.lh(:)%setup%modules%waveguides%npwe_phi (integer) (9.4.1.1.2)
sw_theta (1460)	antennas%antenna.lh(:)%setup%modules%waveguides%sw_theta (float) (9.4.1.1.1)
hw_theta (1460)	antennas%antenna.lh(:)%setup%modules%waveguides%hw_theta (float) (9.4.1.1.1)
bwa (1460)	antennas%antenna.lh(:)%setup%modules%waveguides%bwa (float) (9.4.1.1.1)
biwp (1460)	antennas%antenna.lh(:)%setup%modules%waveguides%biwp (float) (9.4.1.1.1)
bewp (1460)	antennas%antenna.lh(:)%setup%modules%waveguides%bewp (float) (9.4.1.1.1)
e_phi (1460)	antennas%antenna.lh(:)%setup%modules%waveguides%e_phi (vecflt_type) (9.4.1.2.9)
scl (1460)	antennas%antenna.lh(:)%setup%modules%waveguides%scl (vecflt_type) (9.4.1.2.9)
plasmaedge (1094)	antennas%antenna.lh(:)%plasmaedge (plasmaedge) (9.4.1.3.281)
npoints (1324)	antennas%antenna.lh(:)%plasmaedge%npoints (integer) (9.4.1.1.2)
distance (1324)	antennas%antenna.lh(:)%plasmaedge%distance (vecflt_type) (9.4.1.2.9)
density (1324)	antennas%antenna.lh(:)%plasmaedge%density (vecflt_type) (9.4.1.2.9)
beam (1094)	antennas%antenna.lh(:)%beam (rfbeam) (9.4.1.3.317)
spot (1360)	antennas%antenna.lh(:)%beam%spot (spot) (9.4.1.3.373)
size (1416)	antennas%antenna.lh(:)%beam%spot%size (vecflt_type) (9.4.1.2.9)
angle (1416)	antennas%antenna.lh(:)%beam%spot%angle (float) (9.4.1.1.1)
phaseellipse (1360)	antennas%antenna.lh(:)%beam%phaseellipse (phaseellipse) (9.4.1.3.278)
invcurvrad (1321)	antennas%antenna.lh(:)%beam%phaseellipse%invcurvrad (vecflt_type) (9.4.1.2.9)
angle (1321)	antennas%antenna.lh(:)%beam%phaseellipse%angle (float) (9.4.1.1.1)
codeparam (1094)	antennas%antenna.lh(:)%codeparam (codeparam) (9.4.1.3.65)
codename (1108)	antennas%antenna.lh(:)%codeparam%codename (string) (9.4.1.1.3)
codeversion (1108)	antennas%antenna.lh(:)%codeparam%codeversion (string) (9.4.1.1.3)
parameters (1108)	antennas%antenna.lh(:)%codeparam%parameters (string) (9.4.1.1.3)
output_diag (1108)	antennas%antenna.lh(:)%codeparam%output_diag (string) (9.4.1.1.3)
output_flag (1108)	antennas%antenna.lh(:)%codeparam%output_flag (integer) (9.4.1.1.2)
codeparam (1047)	antennas%codeparam (codeparam) (9.4.1.3.65)
codename (1108)	antennas%codeparam%codename (string) (9.4.1.1.3)
codeversion (1108)	antennas%codeparam%codeversion (string) (9.4.1.1.3)
parameters (1108)	antennas%codeparam%parameters (string) (9.4.1.1.3)
output_diag (1108)	antennas%codeparam%output_diag (string) (9.4.1.1.3)
output_flag (1108)	antennas%codeparam%output_flag (integer) (9.4.1.1.2)
time (1047)	antennas%time (float) (9.4.1.1.1)

### 9.4.2.1.3 compositionc

datainfo (1048)	compositionc%datainfo (datainfo) (9.4.1.3.120)
dataprovider (1163)	compositionc%datainfo%dataprovider (string) (9.4.1.1.3)
putdate (1163)	compositionc%datainfo%putdate (string) (9.4.1.1.3)
source (1163)	compositionc%datainfo%source (string) (9.4.1.1.3)
comment (1163)	compositionc%datainfo%comment (string) (9.4.1.1.3)
cocos (1163)	compositionc%datainfo%cocos (integer) (9.4.1.1.2)
id (1163)	compositionc%datainfo%id (integer) (9.4.1.1.2)
isref (1163)	compositionc%datainfo%isref (integer) (9.4.1.1.2)
whatref (1163)	compositionc%datainfo%whatref (whatref) (9.4.1.3.426)
user (1469)	compositionc%datainfo%whatref%user (string) (9.4.1.1.3)
machine (1469)	compositionc%datainfo%whatref%machine (string) (9.4.1.1.3)
shot (1469)	compositionc%datainfo%whatref%shot (integer) (9.4.1.1.2)
run (1469)	compositionc%datainfo%whatref%run (integer) (9.4.1.1.2)
occurrence (1469)	compositionc%datainfo%whatref%occurrence (integer) (9.4.1.1.2)
putinfo (1163)	compositionc%datainfo%putinfo (putinfo) (9.4.1.3.289)
putmethod (1332)	compositionc%datainfo%putinfo%putmethod (string) (9.4.1.1.3)
putaccess (1332)	compositionc%datainfo%putinfo%putaccess (string) (9.4.1.1.3)
putlocation (1332)	compositionc%datainfo%putinfo%putlocation (string) (9.4.1.1.3)
rights (1332)	compositionc%datainfo%putinfo%rights (string) (9.4.1.1.3)
compositions (1048)	compositionc%compositions (compositions_type) (9.4.1.3.87)
nuclei (1130)	compositionc%compositions%nuclei(:) (nuclei) (9.4.1.3.258)
zn (1301)	compositionc%compositions%nuclei(:)%zn (float) (9.4.1.1.1)

amn (1301)	composition%compositions%nuclei(:)%amn (float) (9.4.1.1.1)
label (1301)	composition%compositions%nuclei(:)%label (string) (9.4.1.1.3)
ions (1130)	composition%compositions%ions(:) (ions) (9.4.1.3.218)
nucindex (1261)	composition%compositions%ions(:)%nucindex (integer) (9.4.1.1.2)
zion (1261)	composition%compositions%ions(:)%zion (float) (9.4.1.1.1)
imp_flag (1261)	composition%compositions%ions(:)%imp_flag (integer) (9.4.1.1.2)
label (1261)	composition%compositions%ions(:)%label (string) (9.4.1.1.3)
impurities (1130)	composition%compositions%impurities(:) (impurities) (9.4.1.3.215)
nucindex (1258)	composition%compositions%impurities(:)%nucindex (integer) (9.4.1.1.2)
i_ion (1258)	composition%compositions%impurities(:)%i_ion (integer) (9.4.1.1.2)
nzimp (1258)	composition%compositions%impurities(:)%nzimp (integer) (9.4.1.1.2)
zmin (1258)	composition%compositions%impurities(:)%zmin (vecflt_type) (9.4.1.2.9)
zmax (1258)	composition%compositions%impurities(:)%zmax (vecflt_type) (9.4.1.2.9)
label (1258)	composition%compositions%impurities(:)%label (vecstring_type) (9.4.1.2.11)
neutralscomp (1130)	composition%compositions%neutralscomp(:) (composition_neutralscomp) (9.4.1.3.86)
neutcomp (1129)	composition%compositions%neutralscomp(:)%neutcomp(:) (composition_neutrals_neutcomp) (9.4.1.3.85)
nucindex (1128)	composition%compositions%neutralscomp(:)%neutcomp(:)%nucindex (integer) (9.4.1.1.2)
multiplicity (1128)	composition%compositions%neutralscomp(:)%neutcomp(:)%multiplicity (integer) (9.4.1.1.2)
type (1129)	composition%compositions%neutralscomp(:)%type(:) (identifier) (9.4.1.3.213)
id (1256)	composition%compositions%neutralscomp(:)%type(:)%id (string) (9.4.1.1.3)
flag (1256)	composition%compositions%neutralscomp(:)%type(:)%flag (integer) (9.4.1.1.2)
description (1256)	composition%compositions%neutralscomp(:)%type(:)%description (string) (9.4.1.1.3)
label (1129)	composition%compositions%neutralscomp(:)%label (string) (9.4.1.1.3)
edgespecies (1130)	composition%compositions%edgespecies(:) (edgespecies) (9.4.1.3.169)
nucindex (1212)	composition%compositions%edgespecies(:)%nucindex (integer) (9.4.1.1.2)
zmin (1212)	composition%compositions%edgespecies(:)%zmin (float) (9.4.1.1.1)
zmax (1212)	composition%compositions%edgespecies(:)%zmax (float) (9.4.1.1.1)
label (1212)	composition%compositions%edgespecies(:)%label (string) (9.4.1.1.3)
signature (1130)	composition%compositions%signature (identifier) (9.4.1.3.213)
id (1256)	composition%compositions%signature%id (string) (9.4.1.1.3)
flag (1256)	composition%compositions%signature%flag (integer) (9.4.1.1.2)
description (1256)	composition%compositions%signature%description (string) (9.4.1.1.3)

#### 9.4.2.1.4 coredelta

datainfo (1049)	coredelta%datainfo (datainfo) (9.4.1.3.120)
dataprovder (1163)	coredelta%datainfo%dataprovder (string) (9.4.1.1.3)
putdate (1163)	coredelta%datainfo%putdate (string) (9.4.1.1.3)
source (1163)	coredelta%datainfo%source (string) (9.4.1.1.3)
comment (1163)	coredelta%datainfo%comment (string) (9.4.1.1.3)
cocos (1163)	coredelta%datainfo%cocos (integer) (9.4.1.1.2)
id (1163)	coredelta%datainfo%id (integer) (9.4.1.1.2)
isref (1163)	coredelta%datainfo%isref (integer) (9.4.1.1.2)
whatref (1163)	coredelta%datainfo%whatref (whatref) (9.4.1.3.426)
user (1469)	coredelta%datainfo%whatref%user (string) (9.4.1.1.3)
machine (1469)	coredelta%datainfo%whatref%machine (string) (9.4.1.1.3)
shot (1469)	coredelta%datainfo%whatref%shot (integer) (9.4.1.1.2)
run (1469)	coredelta%datainfo%whatref%run (integer) (9.4.1.1.2)
occurrence (1469)	coredelta%datainfo%whatref%occurrence (integer) (9.4.1.1.2)
putinfo (1163)	coredelta%datainfo%putinfo (putinfo) (9.4.1.3.289)
putmethod (1332)	coredelta%datainfo%putinfo%putmethod (string) (9.4.1.1.3)
putaccess (1332)	coredelta%datainfo%putinfo%putaccess (string) (9.4.1.1.3)
putlocation (1332)	coredelta%datainfo%putinfo%putlocation (string) (9.4.1.1.3)
rights (1332)	coredelta%datainfo%putinfo%rights (string) (9.4.1.1.3)
composition (1049)	coredelta%composition (composition) (9.4.1.3.83)
amn (1126)	coredelta%composition%amn (vecflt_type) (9.4.1.2.9)
zn (1126)	coredelta%composition%zn (vecflt_type) (9.4.1.2.9)
zion (1126)	coredelta%composition%zion (vecflt_type) (9.4.1.2.9)
imp_flag (1126)	coredelta%composition%imp_flag (vecint_type) (9.4.1.2.10)
label (1126)	coredelta%composition%label (vecstring_type) (9.4.1.2.11)
desc_impur (1049)	coredelta%desc_impur (desc_impur) (9.4.1.3.123)

amn (1166)	coredelta%desc_impur%amn (vecflt_type) (9.4.1.2.9)
zn (1166)	coredelta%desc_impur%zn (vecint_type) (9.4.1.2.10)
i.ion (1166)	coredelta%desc_impur%i.ion (vecint_type) (9.4.1.2.10)
nzimp (1166)	coredelta%desc_impur%nzimp (vecint_type) (9.4.1.2.10)
zmin (1166)	coredelta%desc_impur%zmin (matint_type) (9.4.1.2.8)
zmax (1166)	coredelta%desc_impur%zmax (matint_type) (9.4.1.2.8)
label (1166)	coredelta%desc_impur%label (vecstring_type) (9.4.1.2.11)
compositions (1049)	coredelta%compositions (compositions_type) (9.4.1.3.87)
nuclei (1130)	coredelta%compositions%nuclei(:) (nuclei) (9.4.1.3.258)
zn (1301)	coredelta%compositions%nuclei(:)%zn (float) (9.4.1.1.1)
amn (1301)	coredelta%compositions%nuclei(:)%amn (float) (9.4.1.1.1)
label (1301)	coredelta%compositions%nuclei(:)%label (string) (9.4.1.1.3)
ions (1130)	coredelta%compositions%ions(:) (ions) (9.4.1.3.218)
nucindex (1261)	coredelta%compositions%ions(:)%nucindex (integer) (9.4.1.1.2)
zion (1261)	coredelta%compositions%ions(:)%zion (float) (9.4.1.1.1)
imp_flag (1261)	coredelta%compositions%ions(:)%imp_flag (integer) (9.4.1.1.2)
label (1261)	coredelta%compositions%ions(:)%label (string) (9.4.1.1.3)
impurities (1130)	coredelta%compositions%impurities(:) (impurities) (9.4.1.3.215)
nucindex (1258)	coredelta%compositions%impurities(:)%nucindex (integer) (9.4.1.1.2)
i.ion (1258)	coredelta%compositions%impurities(:)%i.ion (integer) (9.4.1.1.2)
nzimp (1258)	coredelta%compositions%impurities(:)%nzimp (integer) (9.4.1.1.2)
zmin (1258)	coredelta%compositions%impurities(:)%zmin (vecflt_type) (9.4.1.2.9)
zmax (1258)	coredelta%compositions%impurities(:)%zmax (vecflt_type) (9.4.1.2.9)
label (1258)	coredelta%compositions%impurities(:)%label (vecstring_type) (9.4.1.2.11)
neutralscomp (1130)	coredelta%compositions%neutralscomp(:) (composition_neutralscomp) (9.4.1.3.86)
neutcomp (1129)	coredelta%compositions%neutralscomp(:)%neutcomp(:) (composition_neutrals_neutcomp) (9.4.1.3.85)
nucindex (1128)	coredelta%compositions%neutralscomp(:)%neutcomp(:)%nucindex (integer) (9.4.1.1.2)
multiplicity (1128)	coredelta%compositions%neutralscomp(:)%neutcomp(:)%multiplicity (integer) (9.4.1.1.2)
type (1129)	coredelta%compositions%neutralscomp(:)%type(:) (identifier) (9.4.1.3.213)
id (1256)	coredelta%compositions%neutralscomp(:)%type(:)%id (string) (9.4.1.1.3)
flag (1256)	coredelta%compositions%neutralscomp(:)%type(:)%flag (integer) (9.4.1.1.2)
description (1256)	coredelta%compositions%neutralscomp(:)%type(:)%description (string) (9.4.1.1.3)
label (1129)	coredelta%compositions%neutralscomp(:)%label (string) (9.4.1.1.3)
edgespecies (1130)	coredelta%compositions%edgespecies(:) (edgespecies) (9.4.1.3.169)
nucindex (1212)	coredelta%compositions%edgespecies(:)%nucindex (integer) (9.4.1.1.2)
zmin (1212)	coredelta%compositions%edgespecies(:)%zmin (float) (9.4.1.1.1)
zmax (1212)	coredelta%compositions%edgespecies(:)%zmax (float) (9.4.1.1.1)
label (1212)	coredelta%compositions%edgespecies(:)%label (string) (9.4.1.1.3)
signature (1130)	coredelta%compositions%signature (identifier) (9.4.1.3.213)
id (1256)	coredelta%compositions%signature%id (string) (9.4.1.1.3)
flag (1256)	coredelta%compositions%signature%flag (integer) (9.4.1.1.2)
description (1256)	coredelta%compositions%signature%description (string) (9.4.1.1.3)
values (1049)	coredelta%values(:) (coredelta_values) (9.4.1.3.92)
deltaid (1135)	coredelta%values(:)%deltaid (identifier) (9.4.1.3.213)
id (1256)	coredelta%values(:)%deltaid%id (string) (9.4.1.1.3)
flag (1256)	coredelta%values(:)%deltaid%flag (integer) (9.4.1.1.2)
description (1256)	coredelta%values(:)%deltaid%description (string) (9.4.1.1.3)
rho_tor (1135)	coredelta%values(:)%rho_tor (vecflt_type) (9.4.1.2.9)
rho_tor_norm (1135)	coredelta%values(:)%rho_tor_norm (vecflt_type) (9.4.1.2.9)
delta_psi (1135)	coredelta%values(:)%delta_psi (vecflt_type) (9.4.1.2.9)
delta_te (1135)	coredelta%values(:)%delta_te (vecflt_type) (9.4.1.2.9)
delta_ti (1135)	coredelta%values(:)%delta_ti (matflt_type) (9.4.1.2.7)
delta_tz (1135)	coredelta%values(:)%delta_tz (array3dflt_type) (9.4.1.2.1)
delta_ne (1135)	coredelta%values(:)%delta_ne (vecflt_type) (9.4.1.2.9)
delta_ni (1135)	coredelta%values(:)%delta_ni (matflt_type) (9.4.1.2.7)
delta_nz (1135)	coredelta%values(:)%delta_nz (array3dflt_type) (9.4.1.2.1)
delta_vtor (1135)	coredelta%values(:)%delta_vtor (matflt_type) (9.4.1.2.7)
codeparam (1135)	coredelta%values(:)%codeparam (codeparam) (9.4.1.3.65)
codename (1108)	coredelta%values(:)%codeparam%codename (string) (9.4.1.1.3)
codeversion (1108)	coredelta%values(:)%codeparam%codeversion (string) (9.4.1.1.3)
parameters (1108)	coredelta%values(:)%codeparam%parameters (string) (9.4.1.1.3)

output_diag (1108)	coredelta%values(:)%codeparam%output_diag (string) (9.4.1.1.3)
output_flag (1108)	coredelta%values(:)%codeparam%output_flag (integer) (9.4.1.1.2)
codeparam (1049)	coredelta%codeparam (codeparam) (9.4.1.3.65)
codename (1108)	coredelta%codeparam%codename (string) (9.4.1.1.3)
codeversion (1108)	coredelta%codeparam%codeversion (string) (9.4.1.1.3)
parameters (1108)	coredelta%codeparam%parameters (string) (9.4.1.1.3)
output_diag (1108)	coredelta%codeparam%output_diag (string) (9.4.1.1.3)
output_flag (1108)	coredelta%codeparam%output_flag (integer) (9.4.1.1.2)
time (1049)	coredelta%time (float) (9.4.1.1.1)

### 9.4.2.1.5 coreimpur

datainfo (1050)	coreimpur%datainfo (datainfo) (9.4.1.3.120)
dataproducer (1163)	coreimpur%datainfo%dataproducer (string) (9.4.1.1.3)
putdate (1163)	coreimpur%datainfo%putdate (string) (9.4.1.1.3)
source (1163)	coreimpur%datainfo%source (string) (9.4.1.1.3)
comment (1163)	coreimpur%datainfo%comment (string) (9.4.1.1.3)
cocos (1163)	coreimpur%datainfo%cocos (integer) (9.4.1.1.2)
id (1163)	coreimpur%datainfo%id (integer) (9.4.1.1.2)
isref (1163)	coreimpur%datainfo%isref (integer) (9.4.1.1.2)
whatref (1163)	coreimpur%datainfo%whatref (whatref) (9.4.1.3.426)
user (1469)	coreimpur%datainfo%whatref%user (string) (9.4.1.1.3)
machine (1469)	coreimpur%datainfo%whatref%machine (string) (9.4.1.1.3)
shot (1469)	coreimpur%datainfo%whatref%shot (integer) (9.4.1.1.2)
run (1469)	coreimpur%datainfo%whatref%run (integer) (9.4.1.1.2)
occurrence (1469)	coreimpur%datainfo%whatref%occurrence (integer) (9.4.1.1.2)
putinfo (1163)	coreimpur%datainfo%putinfo (putinfo) (9.4.1.3.289)
putmethod (1332)	coreimpur%datainfo%putinfo%putmethod (string) (9.4.1.1.3)
putaccess (1332)	coreimpur%datainfo%putinfo%putaccess (string) (9.4.1.1.3)
putlocation (1332)	coreimpur%datainfo%putinfo%putlocation (string) (9.4.1.1.3)
rights (1332)	coreimpur%datainfo%putinfo%rights (string) (9.4.1.1.3)
rho_tor_norm (1050)	coreimpur%rho_tor_norm (vecflt_type) (9.4.1.2.9)
rho_tor (1050)	coreimpur%rho_tor (vecflt_type) (9.4.1.2.9)
source (1050)	coreimpur%source (vecstring_type) (9.4.1.2.11)
flag (1050)	coreimpur%flag (vecint_type) (9.4.1.2.10)
desc_impur (1050)	coreimpur%desc_impur (desc_impur) (9.4.1.3.123)
amn (1166)	coreimpur%desc_impur%amn (vecflt_type) (9.4.1.2.9)
zn (1166)	coreimpur%desc_impur%zn (vecint_type) (9.4.1.2.10)
i_ion (1166)	coreimpur%desc_impur%i_ion (vecint_type) (9.4.1.2.10)
nzimp (1166)	coreimpur%desc_impur%nzimp (vecint_type) (9.4.1.2.10)
zmin (1166)	coreimpur%desc_impur%zmin (matint_type) (9.4.1.2.8)
zmax (1166)	coreimpur%desc_impur%zmax (matint_type) (9.4.1.2.8)
label (1166)	coreimpur%desc_impur%label (vecstring_type) (9.4.1.2.11)
compositions (1050)	coreimpur%compositions (compositions_type) (9.4.1.3.87)
nuclei (1130)	coreimpur%compositions%nuclei(:) (nuclei) (9.4.1.3.258)
zn (1301)	coreimpur%compositions%nuclei(:)%zn (float) (9.4.1.1.1)
amn (1301)	coreimpur%compositions%nuclei(:)%amn (float) (9.4.1.1.1)
label (1301)	coreimpur%compositions%nuclei(:)%label (string) (9.4.1.1.3)
ions (1130)	coreimpur%compositions%ions(:) (ions) (9.4.1.3.218)
nucindex (1261)	coreimpur%compositions%ions(:)%nucindex (integer) (9.4.1.1.2)
zion (1261)	coreimpur%compositions%ions(:)%zion (float) (9.4.1.1.1)
imp_flag (1261)	coreimpur%compositions%ions(:)%imp_flag (integer) (9.4.1.1.2)
label (1261)	coreimpur%compositions%ions(:)%label (string) (9.4.1.1.3)
impurities (1130)	coreimpur%compositions%impurities(:) (impurities) (9.4.1.3.215)
nucindex (1258)	coreimpur%compositions%impurities(:)%nucindex (integer) (9.4.1.1.2)
i_ion (1258)	coreimpur%compositions%impurities(:)%i_ion (integer) (9.4.1.1.2)
nzimp (1258)	coreimpur%compositions%impurities(:)%nzimp (integer) (9.4.1.1.2)
zmin (1258)	coreimpur%compositions%impurities(:)%zmin (vecflt_type) (9.4.1.2.9)
zmax (1258)	coreimpur%compositions%impurities(:)%zmax (vecflt_type) (9.4.1.2.9)
label (1258)	coreimpur%compositions%impurities(:)%label (vecstring_type) (9.4.1.2.11)
neutralscomp (1130)	coreimpur%compositions%neutralscomp(:) (composition_neutralscomp) (9.4.1.3.86)

neutcomp (1129)	coreimpur%compositions%neutralscomp(:)%neutcomp(:) (composition_neutrals_neutcomp) (9.4.1.3.85)
nucindex (1128)	coreimpur%compositions%neutralscomp(:)%neutcomp(:)%nucindex (integer) (9.4.1.1.2)
multiplicity (1128)	coreimpur%compositions%neutralscomp(:)%neutcomp(:)%multiplicity (integer) (9.4.1.1.2)
type (1129)	coreimpur%compositions%neutralscomp(:)%type(:) (identifier) (9.4.1.3.213)
id (1256)	coreimpur%compositions%neutralscomp(:)%type(:)%id (string) (9.4.1.1.3)
flag (1256)	coreimpur%compositions%neutralscomp(:)%type(:)%flag (integer) (9.4.1.1.2)
description (1256)	coreimpur%compositions%neutralscomp(:)%type(:)%description (string) (9.4.1.1.3)
label (1129)	coreimpur%compositions%neutralscomp(:)%label (string) (9.4.1.1.3)
edgespecies (1130)	coreimpur%compositions%edgespecies(:) (edgespecies) (9.4.1.3.169)
nucindex (1212)	coreimpur%compositions%edgespecies(:)%nucindex (integer) (9.4.1.1.2)
zmin (1212)	coreimpur%compositions%edgespecies(:)%zmin (float) (9.4.1.1.1)
zmax (1212)	coreimpur%compositions%edgespecies(:)%zmax (float) (9.4.1.1.1)
label (1212)	coreimpur%compositions%edgespecies(:)%label (string) (9.4.1.1.3)
signature (1130)	coreimpur%compositions%signature (identifier) (9.4.1.3.213)
id (1256)	coreimpur%compositions%signature%id (string) (9.4.1.1.3)
flag (1256)	coreimpur%compositions%signature%flag (integer) (9.4.1.1.2)
description (1256)	coreimpur%compositions%signature%description (string) (9.4.1.1.3)
atomic_data (1050)	coreimpur%atomic_data (vecstring_type) (9.4.1.2.11)
impurity (1050)	coreimpur%impurity(:) (impurity_type) (9.4.1.3.216)
z (1259)	coreimpur%impurity(:)%z (matflt_type) (9.4.1.2.7)
zsq (1259)	coreimpur%impurity(:)%zsq (matflt_type) (9.4.1.2.7)
nz (1259)	coreimpur%impurity(:)%nz (matflt_type) (9.4.1.2.7)
source_term (1259)	coreimpur%impurity(:)%source_term (sourceimp) (9.4.1.3.367)
value (1410)	coreimpur%impurity(:)%source_term%value (matflt_type) (9.4.1.2.7)
integral (1410)	coreimpur%impurity(:)%source_term%integral (matflt_type) (9.4.1.2.7)
source (1410)	coreimpur%impurity(:)%source_term%source (vecstring_type) (9.4.1.2.11)
boundary (1259)	coreimpur%impurity(:)%boundary (boundaryimp) (9.4.1.3.61)
value (1104)	coreimpur%impurity(:)%boundary%value (matflt_type) (9.4.1.2.7)
source (1104)	coreimpur%impurity(:)%boundary%source (string) (9.4.1.1.3)
type (1104)	coreimpur%impurity(:)%boundary%type (vecint_type) (9.4.1.2.10)
rho (1104)	coreimpur%impurity(:)%boundary%rho (vecflt_type) (9.4.1.2.9)
codeparam (1104)	coreimpur%impurity(:)%boundary%codeparam (codeparam) (9.4.1.3.65)
codename (1108)	coreimpur%impurity(:)%boundary%codeparam%codename (string) (9.4.1.1.3)
codeversion (1108)	coreimpur%impurity(:)%boundary%codeparam%codeversion (string) (9.4.1.1.3)
parameters (1108)	coreimpur%impurity(:)%boundary%codeparam%parameters (string) (9.4.1.1.3)
output_diag (1108)	coreimpur%impurity(:)%boundary%codeparam%output_diag (string) (9.4.1.1.3)
output_flag (1108)	coreimpur%impurity(:)%boundary%codeparam%output_flag (integer) (9.4.1.1.2)
transp_coef (1259)	coreimpur%impurity(:)%transp_coef (coretransimp) (9.4.1.3.113)
diff (1156)	coreimpur%impurity(:)%transp_coef%diff (matflt_type) (9.4.1.2.7)
vconv (1156)	coreimpur%impurity(:)%transp_coef%vconv (matflt_type) (9.4.1.2.7)
source (1156)	coreimpur%impurity(:)%transp_coef%source (vecstring_type) (9.4.1.2.11)
flux (1259)	coreimpur%impurity(:)%flux (fluximp) (9.4.1.3.187)
flux_dv (1230)	coreimpur%impurity(:)%flux%flux_dv (matflt_type) (9.4.1.2.7)
flux_interp (1230)	coreimpur%impurity(:)%flux%flux_interp (matflt_type) (9.4.1.2.7)
time_deriv (1259)	coreimpur%impurity(:)%time_deriv (matflt_type) (9.4.1.2.7)
diagnostic (1259)	coreimpur%impurity(:)%diagnostic (coreimpurediag_type) (9.4.1.3.104)
radiation (1147)	coreimpur%impurity(:)%diagnostic%radiation (coreimpurediag_radiation) (9.4.1.3.101)
line_rad (1144)	coreimpur%impurity(:)%diagnostic%radiation%line_rad (coreimpurediagprof_type) (9.4.1.3.105)
profile (1148)	coreimpur%impurity(:)%diagnostic%radiation%line_rad%profile (matflt_type) (9.4.1.2.7)
integral (1148)	coreimpur%impurity(:)%diagnostic%radiation%line_rad%integral (matflt_type) (9.4.1.2.7)
brem_radrec (1144)	coreimpur%impurity(:)%diagnostic%radiation%brem_radrec (coreimpurediagprof_type) (9.4.1.3.105)
profile (1148)	coreimpur%impurity(:)%diagnostic%radiation%brem_radrec%profile (matflt_type) (9.4.1.2.7)
integral (1148)	coreimpur%impurity(:)%diagnostic%radiation%brem_radrec%integral (matflt_type) (9.4.1.2.7)
sum (1144)	coreimpur%impurity(:)%diagnostic%radiation%sum (coreimpurediagprof_type) (9.4.1.3.105)
profile (1148)	coreimpur%impurity(:)%diagnostic%radiation%sum%profile (matflt_type) (9.4.1.2.7)
integral (1148)	coreimpur%impurity(:)%diagnostic%radiation%sum%integral (matflt_type) (9.4.1.2.7)
energy (1147)	coreimpur%impurity(:)%diagnostic%energy (coreimpurediag_energy) (9.4.1.3.100)
ionization (1143)	coreimpur%impurity(:)%diagnostic%energy%ionization (coreimpurediagprof_type) (9.4.1.3.105)

profile (1148)	coreimpur%impurity(:)%diagnostic%energy%ionization%profile (matflt.type) (9.4.1.2.7)
integral (1148)	coreimpur%impurity(:)%diagnostic%energy%ionization%integral (matflt.type) (9.4.1.2.7)
recombin (1143)	coreimpur%impurity(:)%diagnostic%energy%recombin (coreimpurediagprof.type) (9.4.1.3.105)
profile (1148)	coreimpur%impurity(:)%diagnostic%energy%recombin%profile (matflt.type) (9.4.1.2.7)
integral (1148)	coreimpur%impurity(:)%diagnostic%energy%recombin%integral (matflt.type) (9.4.1.2.7)
sum (1143)	coreimpur%impurity(:)%diagnostic%energy%sum (coreimpurediagprof.type) (9.4.1.3.105)
profile (1148)	coreimpur%impurity(:)%diagnostic%energy%sum%profile (matflt.type) (9.4.1.2.7)
integral (1148)	coreimpur%impurity(:)%diagnostic%energy%sum%integral (matflt.type) (9.4.1.2.7)
diagnostic (1050)	coreimpur%diagnostic (coreimpurediag.type) (9.4.1.3.104)
radiation (1147)	coreimpur%diagnostic%radiation (coreimpurediag_radiation) (9.4.1.3.101)
line_rad (1144)	coreimpur%diagnostic%radiation%line_rad (coreimpurediagprof.type) (9.4.1.3.105)
profile (1148)	coreimpur%diagnostic%radiation%line_rad%profile (matflt.type) (9.4.1.2.7)
integral (1148)	coreimpur%diagnostic%radiation%line_rad%integral (matflt.type) (9.4.1.2.7)
brem_radrec (1144)	coreimpur%diagnostic%radiation%brem_radrec (coreimpurediagprof.type) (9.4.1.3.105)
profile (1148)	coreimpur%diagnostic%radiation%brem_radrec%profile (matflt.type) (9.4.1.2.7)
integral (1148)	coreimpur%diagnostic%radiation%brem_radrec%integral (matflt.type) (9.4.1.2.7)
sum (1144)	coreimpur%diagnostic%radiation%sum (coreimpurediagprof.type) (9.4.1.3.105)
profile (1148)	coreimpur%diagnostic%radiation%sum%profile (matflt.type) (9.4.1.2.7)
integral (1148)	coreimpur%diagnostic%radiation%sum%integral (matflt.type) (9.4.1.2.7)
energy (1147)	coreimpur%diagnostic%energy (coreimpurediag_energy) (9.4.1.3.100)
ionization (1143)	coreimpur%diagnostic%energy%ionization (coreimpurediagprof.type) (9.4.1.3.105)
profile (1148)	coreimpur%diagnostic%energy%ionization%profile (matflt.type) (9.4.1.2.7)
integral (1148)	coreimpur%diagnostic%energy%ionization%integral (matflt.type) (9.4.1.2.7)
recombin (1143)	coreimpur%diagnostic%energy%recombin (coreimpurediagprof.type) (9.4.1.3.105)
profile (1148)	coreimpur%diagnostic%energy%recombin%profile (matflt.type) (9.4.1.2.7)
integral (1148)	coreimpur%diagnostic%energy%recombin%integral (matflt.type) (9.4.1.2.7)
sum (1143)	coreimpur%diagnostic%energy%sum (coreimpurediagprof.type) (9.4.1.3.105)
profile (1148)	coreimpur%diagnostic%energy%sum%profile (matflt.type) (9.4.1.2.7)
integral (1148)	coreimpur%diagnostic%energy%sum%integral (matflt.type) (9.4.1.2.7)
diagnosticsum (1050)	coreimpur%diagnosticsum (coreimpurediag_sum) (9.4.1.3.102)
radiation (1145)	coreimpur%diagnosticsum%radiation (coreimpurdiag_sum_radiation) (9.4.1.3.99)
line_rad (1142)	coreimpur%diagnosticsum%radiation%line_rad (coreimpurediagsum.type) (9.4.1.3.106)
profile (1149)	coreimpur%diagnosticsum%radiation%line_rad%profile (vecflt.type) (9.4.1.2.9)
integral (1149)	coreimpur%diagnosticsum%radiation%line_rad%integral (vecflt.type) (9.4.1.2.9)
brem_radrec (1142)	coreimpur%diagnosticsum%radiation%brem_radrec (coreimpurediagsum.type) (9.4.1.3.106)
profile (1149)	coreimpur%diagnosticsum%radiation%brem_radrec%profile (vecflt.type) (9.4.1.2.9)
integral (1149)	coreimpur%diagnosticsum%radiation%brem_radrec%integral (vecflt.type) (9.4.1.2.9)
sum (1142)	coreimpur%diagnosticsum%radiation%sum (coreimpurediagsum.type) (9.4.1.3.106)
profile (1149)	coreimpur%diagnosticsum%radiation%sum%profile (vecflt.type) (9.4.1.2.9)
integral (1149)	coreimpur%diagnosticsum%radiation%sum%integral (vecflt.type) (9.4.1.2.9)
energy (1145)	coreimpur%diagnosticsum%energy (coreimpurediag_sum_energy) (9.4.1.3.103)
ionization (1146)	coreimpur%diagnosticsum%energy%ionization (coreimpurediagsum.type) (9.4.1.3.106)
profile (1149)	coreimpur%diagnosticsum%energy%ionization%profile (vecflt.type) (9.4.1.2.9)
integral (1149)	coreimpur%diagnosticsum%energy%ionization%integral (vecflt.type) (9.4.1.2.9)
recombin (1146)	coreimpur%diagnosticsum%energy%recombin (coreimpurediagsum.type) (9.4.1.3.106)
profile (1149)	coreimpur%diagnosticsum%energy%recombin%profile (vecflt.type) (9.4.1.2.9)
integral (1149)	coreimpur%diagnosticsum%energy%recombin%integral (vecflt.type) (9.4.1.2.9)
sum (1146)	coreimpur%diagnosticsum%energy%sum (coreimpurediagsum.type) (9.4.1.3.106)
profile (1149)	coreimpur%diagnosticsum%energy%sum%profile (vecflt.type) (9.4.1.2.9)
integral (1149)	coreimpur%diagnosticsum%energy%sum%integral (vecflt.type) (9.4.1.2.9)
codeparam (1050)	coreimpur%codeparam (codeparam) (9.4.1.3.65)
codename (1108)	coreimpur%codeparam%codename (string) (9.4.1.1.3)
codeversion (1108)	coreimpur%codeparam%codeversion (string) (9.4.1.1.3)
parameters (1108)	coreimpur%codeparam%parameters (string) (9.4.1.1.3)
output_diag (1108)	coreimpur%codeparam%output_diag (string) (9.4.1.1.3)
output_flag (1108)	coreimpur%codeparam%output_flag (integer) (9.4.1.1.2)
time (1050)	coreimpur%time (float) (9.4.1.1.1)

### 9.4.2.1.6 coreneutrals

datainfo (1051)	coreneutrals%datainfo (datainfo) (9.4.1.3.120)
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dataprovider (1163)	coreneutrals%datainfo%dataprovider (string) (9.4.1.1.3)
putdate (1163)	coreneutrals%datainfo%putdate (string) (9.4.1.1.3)
source (1163)	coreneutrals%datainfo%source (string) (9.4.1.1.3)
comment (1163)	coreneutrals%datainfo%comment (string) (9.4.1.1.3)
cocos (1163)	coreneutrals%datainfo%cocos (integer) (9.4.1.1.2)
id (1163)	coreneutrals%datainfo%id (integer) (9.4.1.1.2)
isref (1163)	coreneutrals%datainfo%isref (integer) (9.4.1.1.2)
whatref (1163)	coreneutrals%datainfo%whatref (whatref) (9.4.1.3.426)
user (1469)	coreneutrals%datainfo%whatref%user (string) (9.4.1.1.3)
machine (1469)	coreneutrals%datainfo%whatref%machine (string) (9.4.1.1.3)
shot (1469)	coreneutrals%datainfo%whatref%shot (integer) (9.4.1.1.2)
run (1469)	coreneutrals%datainfo%whatref%run (integer) (9.4.1.1.2)
occurrence (1469)	coreneutrals%datainfo%whatref%occurrence (integer) (9.4.1.1.2)
putinfo (1163)	coreneutrals%datainfo%putinfo (putinfo) (9.4.1.3.289)
putmethod (1332)	coreneutrals%datainfo%putinfo%putmethod (string) (9.4.1.1.3)
putaccess (1332)	coreneutrals%datainfo%putinfo%putaccess (string) (9.4.1.1.3)
putlocation (1332)	coreneutrals%datainfo%putinfo%putlocation (string) (9.4.1.1.3)
rights (1332)	coreneutrals%datainfo%putinfo%rights (string) (9.4.1.1.3)
rho_tor (1051)	coreneutrals%rho_tor (vecflt_type) (9.4.1.2.9)
rho_tor_norm (1051)	coreneutrals%rho_tor_norm (vecflt_type) (9.4.1.2.9)
neutcompo (1051)	coreneutrals%neutcompo (composition_neutrals) (9.4.1.3.84)
atomlist (1127)	coreneutrals%neutcompo%atomlist(:) (coreneutrals_atomlist) (9.4.1.3.107)
amn (1150)	coreneutrals%neutcompo%atomlist(:)%amn (float) (9.4.1.1.1)
zn (1150)	coreneutrals%neutcompo%atomlist(:)%zn (float) (9.4.1.1.1)
ionimptype (1150)	coreneutrals%neutcompo%atomlist(:)%ionimptype (identifier) (9.4.1.3.213)
id (1256)	coreneutrals%neutcompo%atomlist(:)%ionimptype%id (string) (9.4.1.1.3)
flag (1256)	coreneutrals%neutcompo%atomlist(:)%ionimptype%flag (integer) (9.4.1.1.2)
description (1256)	coreneutrals%neutcompo%atomlist(:)%ionimptype%description (string) (9.4.1.1.3)
ionimpindex (1150)	coreneutrals%neutcompo%atomlist(:)%ionimpindex (integer) (9.4.1.1.2)
neutral (1127)	coreneutrals%neutcompo%neutral(:) (composition_neutralscomp) (9.4.1.3.86)
neutcomp (1129)	coreneutrals%neutcompo%neutral(:)%neutcomp(:) (composition_neutrals_neutcomp) (9.4.1.3.85)
nucindex (1128)	coreneutrals%neutcompo%neutral(:)%neutcomp(:)%nucindex (integer) (9.4.1.1.2)
multiplicity (1128)	coreneutrals%neutcompo%neutral(:)%neutcomp(:)%multiplicity (integer) (9.4.1.1.2)
type (1129)	coreneutrals%neutcompo%neutral(:)%type(:) (identifier) (9.4.1.3.213)
id (1256)	coreneutrals%neutcompo%neutral(:)%type(:)%id (string) (9.4.1.1.3)
flag (1256)	coreneutrals%neutcompo%neutral(:)%type(:)%flag (integer) (9.4.1.1.2)
description (1256)	coreneutrals%neutcompo%neutral(:)%type(:)%description (string) (9.4.1.1.3)
label (1129)	coreneutrals%neutcompo%neutral(:)%label (string) (9.4.1.1.3)
composition (1051)	coreneutrals%composition (composition) (9.4.1.3.83)
amn (1126)	coreneutrals%composition%amn (vecflt_type) (9.4.1.2.9)
zn (1126)	coreneutrals%composition%zn (vecflt_type) (9.4.1.2.9)
zion (1126)	coreneutrals%composition%zion (vecflt_type) (9.4.1.2.9)
imp_flag (1126)	coreneutrals%composition%imp_flag (vecint_type) (9.4.1.2.10)
label (1126)	coreneutrals%composition%label (vecstring_type) (9.4.1.2.11)
desc_impur (1051)	coreneutrals%desc_impur (desc_impur) (9.4.1.3.123)
amn (1166)	coreneutrals%desc_impur%amn (vecflt_type) (9.4.1.2.9)
zn (1166)	coreneutrals%desc_impur%zn (vecint_type) (9.4.1.2.10)
i_ion (1166)	coreneutrals%desc_impur%i_ion (vecint_type) (9.4.1.2.10)
nzimp (1166)	coreneutrals%desc_impur%nzimp (vecint_type) (9.4.1.2.10)
zmin (1166)	coreneutrals%desc_impur%zmin (matint_type) (9.4.1.2.8)
zmax (1166)	coreneutrals%desc_impur%zmax (matint_type) (9.4.1.2.8)
label (1166)	coreneutrals%desc_impur%label (vecstring_type) (9.4.1.2.11)
compositions (1051)	coreneutrals%compositions (compositions_type) (9.4.1.3.87)
nuclei (1130)	coreneutrals%compositions%nuclei(:) (nuclei) (9.4.1.3.258)
zn (1301)	coreneutrals%compositions%nuclei(:)%zn (float) (9.4.1.1.1)
amn (1301)	coreneutrals%compositions%nuclei(:)%amn (float) (9.4.1.1.1)
label (1301)	coreneutrals%compositions%nuclei(:)%label (string) (9.4.1.1.3)
ions (1130)	coreneutrals%compositions%ions(:) (ions) (9.4.1.3.218)
nucindex (1261)	coreneutrals%compositions%ions(:)%nucindex (integer) (9.4.1.1.2)
zion (1261)	coreneutrals%compositions%ions(:)%zion (float) (9.4.1.1.1)
imp_flag (1261)	coreneutrals%compositions%ions(:)%imp_flag (integer) (9.4.1.1.2)

label (1261)	coreneutrals%compositions%ions(:)%label (string) (9.4.1.1.3)
impurities (1130)	coreneutrals%compositions%impurities(:) (impurities) (9.4.1.3.215)
nucindex (1258)	coreneutrals%compositions%impurities(:)%nucindex (integer) (9.4.1.1.2)
i_ion (1258)	coreneutrals%compositions%impurities(:)%i_ion (integer) (9.4.1.1.2)
nzimp (1258)	coreneutrals%compositions%impurities(:)%nzimp (integer) (9.4.1.1.2)
zmin (1258)	coreneutrals%compositions%impurities(:)%zmin (vecflt_type) (9.4.1.2.9)
zmax (1258)	coreneutrals%compositions%impurities(:)%zmax (vecflt_type) (9.4.1.2.9)
label (1258)	coreneutrals%compositions%impurities(:)%label (vecstring_type) (9.4.1.2.11)
neutralscomp (1130)	coreneutrals%compositions%neutralscomp(:) (composition_neutralscomp) (9.4.1.3.86)
neutcomp (1129)	coreneutrals%compositions%neutralscomp(:)%neutcomp(:) (composition_neutrals_neutcomp) (9.4.1.3.85)
nucindex (1128)	coreneutrals%compositions%neutralscomp(:)%neutcomp(:)%nucindex (integer) (9.4.1.1.2)
multiplicity (1128)	coreneutrals%compositions%neutralscomp(:)%neutcomp(:)%multiplicity (integer) (9.4.1.1.2)
type (1129)	coreneutrals%compositions%neutralscomp(:)%type(:) (identifier) (9.4.1.3.213)
id (1256)	coreneutrals%compositions%neutralscomp(:)%type(:)%id (string) (9.4.1.1.3)
flag (1256)	coreneutrals%compositions%neutralscomp(:)%type(:)%flag (integer) (9.4.1.1.2)
description (1256)	coreneutrals%compositions%neutralscomp(:)%type(:)%description (string) (9.4.1.1.3)
label (1129)	coreneutrals%compositions%neutralscomp(:)%label (string) (9.4.1.1.3)
edgespecies (1130)	coreneutrals%compositions%edgespecies(:) (edgespecies) (9.4.1.3.169)
nucindex (1212)	coreneutrals%compositions%edgespecies(:)%nucindex (integer) (9.4.1.1.2)
zmin (1212)	coreneutrals%compositions%edgespecies(:)%zmin (float) (9.4.1.1.1)
zmax (1212)	coreneutrals%compositions%edgespecies(:)%zmax (float) (9.4.1.1.1)
label (1212)	coreneutrals%compositions%edgespecies(:)%label (string) (9.4.1.1.3)
signature (1130)	coreneutrals%compositions%signature (identifier) (9.4.1.3.213)
id (1256)	coreneutrals%compositions%signature%id (string) (9.4.1.1.3)
flag (1256)	coreneutrals%compositions%signature%flag (integer) (9.4.1.1.2)
description (1256)	coreneutrals%compositions%signature%description (string) (9.4.1.1.3)
profiles (1051)	coreneutrals%profiles(:) (neutral_complex_type) (9.4.1.3.256)
neutraltype (1299)	coreneutrals%profiles(:)%neutraltype(:) (coreneutrals_neutraltype) (9.4.1.3.108)
n0 (1151)	coreneutrals%profiles(:)%neutraltype(:)%n0 (corefieldneutral) (9.4.1.3.95)
value (1138)	coreneutrals%profiles(:)%neutraltype(:)%n0%value (vecflt_type) (9.4.1.2.9)
flux (1138)	coreneutrals%profiles(:)%neutraltype(:)%n0%flux (vecflt_type) (9.4.1.2.9)
boundary (1138)	coreneutrals%profiles(:)%neutraltype(:)%n0%boundary (boundary_neutrals) (9.4.1.3.59)
value (1102)	coreneutrals%profiles(:)%neutraltype(:)%n0%boundary%value (vecflt_type) (9.4.1.2.9)
type (1102)	coreneutrals%profiles(:)%neutraltype(:)%n0%boundary%type (integer) (9.4.1.1.2)
rho_tor (1102)	coreneutrals%profiles(:)%neutraltype(:)%n0%boundary%rho_tor (float) (9.4.1.1.1)
t0 (1151)	coreneutrals%profiles(:)%neutraltype(:)%t0 (corefieldneutrale) (9.4.1.3.96)
value (1139)	coreneutrals%profiles(:)%neutraltype(:)%t0%value (vecflt_type) (9.4.1.2.9)
flux (1139)	coreneutrals%profiles(:)%neutraltype(:)%t0%flux (vecflt_type) (9.4.1.2.9)
boundary (1139)	coreneutrals%profiles(:)%neutraltype(:)%t0%boundary (boundary_neutrals) (9.4.1.3.59)
value (1102)	coreneutrals%profiles(:)%neutraltype(:)%t0%boundary%value (vecflt_type) (9.4.1.2.9)
type (1102)	coreneutrals%profiles(:)%neutraltype(:)%t0%boundary%type (integer) (9.4.1.1.2)
rho_tor (1102)	coreneutrals%profiles(:)%neutraltype(:)%t0%boundary%rho_tor (float) (9.4.1.1.1)
v0 (1151)	coreneutrals%profiles(:)%neutraltype(:)%v0 (corefieldneutralv0) (9.4.1.3.98)
toroidal (1141)	coreneutrals%profiles(:)%neutraltype(:)%v0%toroidal (corefieldneutralrv) (9.4.1.3.97)
value (1140)	coreneutrals%profiles(:)%neutraltype(:)%v0%toroidal%value (vecflt_type) (9.4.1.2.9)
boundary (1140)	coreneutrals%profiles(:)%neutraltype(:)%v0%toroidal%boundary (boundary_neutrals) (9.4.1.3.59)
value (1102)	coreneutrals%profiles(:)%neutraltype(:)%v0%toroidal%boundary%value (vecflt_type) (9.4.1.2.9)
type (1102)	coreneutrals%profiles(:)%neutraltype(:)%v0%toroidal%boundary%type (integer) (9.4.1.1.2)
rho_tor (1102)	coreneutrals%profiles(:)%neutraltype(:)%v0%toroidal%boundary%rho_tor (float) (9.4.1.1.1)
poloidal (1141)	coreneutrals%profiles(:)%neutraltype(:)%v0%poloidal (corefieldneutralrv) (9.4.1.3.97)
value (1140)	coreneutrals%profiles(:)%neutraltype(:)%v0%poloidal%value (vecflt_type) (9.4.1.2.9)
boundary (1140)	coreneutrals%profiles(:)%neutraltype(:)%v0%poloidal%boundary (boundary_neutrals) (9.4.1.3.59)
value (1102)	coreneutrals%profiles(:)%neutraltype(:)%v0%poloidal%boundary%value (vecflt_type) (9.4.1.2.9)
type (1102)	coreneutrals%profiles(:)%neutraltype(:)%v0%poloidal%boundary%type (integer) (9.4.1.1.2)
rho_tor (1102)	coreneutrals%profiles(:)%neutraltype(:)%v0%poloidal%boundary%rho_tor (float) (9.4.1.1.1)
radial (1141)	coreneutrals%profiles(:)%neutraltype(:)%v0%radial (corefieldneutralrv) (9.4.1.3.97)
value (1140)	coreneutrals%profiles(:)%neutraltype(:)%v0%radial%value (vecflt_type) (9.4.1.2.9)
boundary (1140)	coreneutrals%profiles(:)%neutraltype(:)%v0%radial%boundary (boundary_neutrals) (9.4.1.3.59)



value (1102)	coreneutrals%profiles(:)%neutraltype(:)%v0%radial%boundary%value (vecflt.type) (9.4.1.2.9)
type (1102)	coreneutrals%profiles(:)%neutraltype(:)%v0%radial%boundary%type (integer) (9.4.1.1.2)
rho_tor (1102)	coreneutrals%profiles(:)%neutraltype(:)%v0%radial%boundary%rho_tor (float) (9.4.1.1.1)
prad0 (1299)	coreneutrals%profiles(:)%prad0 (vecflt.type) (9.4.1.2.9)
ioncoeff (1051)	coreneutrals%ioncoeff(:) (coefficients_neutrals) (9.4.1.3.66)
recycling (1109)	coreneutrals%ioncoeff(:)%recycling (recycling_neutrals) (9.4.1.3.291)
particles (1334)	coreneutrals%ioncoeff(:)%recycling%particles (vecflt.type) (9.4.1.2.9)
energy (1334)	coreneutrals%ioncoeff(:)%recycling%energy (vecflt.type) (9.4.1.2.9)
sputtering (1109)	coreneutrals%ioncoeff(:)%sputtering (sputtering_neutrals) (9.4.1.3.374)
physical (1417)	coreneutrals%ioncoeff(:)%sputtering%physical (vecflt.type) (9.4.1.2.9)
chemical (1417)	coreneutrals%ioncoeff(:)%sputtering%chemical (vecflt.type) (9.4.1.2.9)
impcoeff (1051)	coreneutrals%impcoeff(:) (impcoeff) (9.4.1.3.214)
chargestate (1257)	coreneutrals%impcoeff(:)%chargestate(:) (coefficients_neutrals) (9.4.1.3.66)
recycling (1109)	coreneutrals%impcoeff(:)%chargestate(:)%recycling (recycling_neutrals) (9.4.1.3.291)
particles (1334)	coreneutrals%impcoeff(:)%chargestate(:)%recycling%particles (vecflt.type) (9.4.1.2.9)
energy (1334)	coreneutrals%impcoeff(:)%chargestate(:)%recycling%energy (vecflt.type) (9.4.1.2.9)
sputtering (1109)	coreneutrals%impcoeff(:)%chargestate(:)%sputtering (sputtering_neutrals) (9.4.1.3.374)
physical (1417)	coreneutrals%impcoeff(:)%chargestate(:)%sputtering%physical (vecflt.type) (9.4.1.2.9)
chemical (1417)	coreneutrals%impcoeff(:)%chargestate(:)%sputtering%chemical (vecflt.type) (9.4.1.2.9)
codeparam (1051)	coreneutrals%codeparam (codeparam) (9.4.1.3.65)
codename (1108)	coreneutrals%codeparam%codename (string) (9.4.1.1.3)
codeversion (1108)	coreneutrals%codeparam%codeversion (string) (9.4.1.1.3)
parameters (1108)	coreneutrals%codeparam%parameters (string) (9.4.1.1.3)
output_diag (1108)	coreneutrals%codeparam%output_diag (string) (9.4.1.1.3)
output_flag (1108)	coreneutrals%codeparam%output_flag (integer) (9.4.1.1.2)
time (1051)	coreneutrals%time (float) (9.4.1.1.1)

### 9.4.2.1.7 coreprof

datainfo (1052)	coreprof%datainfo (datainfo) (9.4.1.3.120)
dataprovider (1163)	coreprof%datainfo%dataprovider (string) (9.4.1.1.3)
putdate (1163)	coreprof%datainfo%putdate (string) (9.4.1.1.3)
source (1163)	coreprof%datainfo%source (string) (9.4.1.1.3)
comment (1163)	coreprof%datainfo%comment (string) (9.4.1.1.3)
cocos (1163)	coreprof%datainfo%cocos (integer) (9.4.1.1.2)
id (1163)	coreprof%datainfo%id (integer) (9.4.1.1.2)
isref (1163)	coreprof%datainfo%isref (integer) (9.4.1.1.2)
whatref (1163)	coreprof%datainfo%whatref (whatref) (9.4.1.3.426)
user (1469)	coreprof%datainfo%whatref%user (string) (9.4.1.1.3)
machine (1469)	coreprof%datainfo%whatref%machine (string) (9.4.1.1.3)
shot (1469)	coreprof%datainfo%whatref%shot (integer) (9.4.1.1.2)
run (1469)	coreprof%datainfo%whatref%run (integer) (9.4.1.1.2)
occurrence (1469)	coreprof%datainfo%whatref%occurrence (integer) (9.4.1.1.2)
putinfo (1163)	coreprof%datainfo%putinfo (putinfo) (9.4.1.3.289)
putmethod (1332)	coreprof%datainfo%putinfo%putmethod (string) (9.4.1.1.3)
putaccess (1332)	coreprof%datainfo%putinfo%putaccess (string) (9.4.1.1.3)
putlocation (1332)	coreprof%datainfo%putinfo%putlocation (string) (9.4.1.1.3)
rights (1332)	coreprof%datainfo%putinfo%rights (string) (9.4.1.1.3)
rho_tor_norm (1052)	coreprof%rho_tor_norm (vecflt.type) (9.4.1.2.9)
rho_tor (1052)	coreprof%rho_tor (vecflt.type) (9.4.1.2.9)
drho_dt (1052)	coreprof%drho_dt (vecflt.type) (9.4.1.2.9)
toroid_field (1052)	coreprof%toroid_field (toroid_field) (9.4.1.3.387)
b0 (1430)	coreprof%toroid_field%b0 (float) (9.4.1.1.1)
b0prime (1430)	coreprof%toroid_field%b0prime (float) (9.4.1.1.1)
r0 (1430)	coreprof%toroid_field%r0 (float) (9.4.1.1.1)
time (1430)	coreprof%toroid_field%time (float) (9.4.1.1.1)
composition (1052)	coreprof%composition (composition) (9.4.1.3.83)
amn (1126)	coreprof%composition%amn (vecflt.type) (9.4.1.2.9)
zn (1126)	coreprof%composition%zn (vecflt.type) (9.4.1.2.9)
zion (1126)	coreprof%composition%zion (vecflt.type) (9.4.1.2.9)

imp_flag (1126)	coreprof%composition%imp_flag (vecint_type) (9.4.1.2.10)
label (1126)	coreprof%composition%label (vecstring_type) (9.4.1.2.11)
desc_impur (1052)	coreprof%desc_impur (desc_impur) (9.4.1.3.123)
amn (1166)	coreprof%desc_impur%amn (vecflt_type) (9.4.1.2.9)
zn (1166)	coreprof%desc_impur%zn (vecint_type) (9.4.1.2.10)
i_ion (1166)	coreprof%desc_impur%i_ion (vecint_type) (9.4.1.2.10)
nzimp (1166)	coreprof%desc_impur%nzimp (vecint_type) (9.4.1.2.10)
zmin (1166)	coreprof%desc_impur%zmin (matint_type) (9.4.1.2.8)
zmax (1166)	coreprof%desc_impur%zmax (matint_type) (9.4.1.2.8)
label (1166)	coreprof%desc_impur%label (vecstring_type) (9.4.1.2.11)
compositions (1052)	coreprof%compositions (compositions_type) (9.4.1.3.87)
nuclei (1130)	coreprof%compositions%nuclei(:) (nuclei) (9.4.1.3.258)
zn (1301)	coreprof%compositions%nuclei(:)%zn (float) (9.4.1.1.1)
amn (1301)	coreprof%compositions%nuclei(:)%amn (float) (9.4.1.1.1)
label (1301)	coreprof%compositions%nuclei(:)%label (string) (9.4.1.1.3)
ions (1130)	coreprof%compositions%ions(:) (ions) (9.4.1.3.218)
nucindex (1261)	coreprof%compositions%ions(:)%nucindex (integer) (9.4.1.1.2)
zion (1261)	coreprof%compositions%ions(:)%zion (float) (9.4.1.1.1)
imp_flag (1261)	coreprof%compositions%ions(:)%imp_flag (integer) (9.4.1.1.2)
label (1261)	coreprof%compositions%ions(:)%label (string) (9.4.1.1.3)
impurities (1130)	coreprof%compositions%impurities(:) (impurities) (9.4.1.3.215)
nucindex (1258)	coreprof%compositions%impurities(:)%nucindex (integer) (9.4.1.1.2)
i_ion (1258)	coreprof%compositions%impurities(:)%i_ion (integer) (9.4.1.1.2)
nzimp (1258)	coreprof%compositions%impurities(:)%nzimp (integer) (9.4.1.1.2)
zmin (1258)	coreprof%compositions%impurities(:)%zmin (vecflt_type) (9.4.1.2.9)
zmax (1258)	coreprof%compositions%impurities(:)%zmax (vecflt_type) (9.4.1.2.9)
label (1258)	coreprof%compositions%impurities(:)%label (vecstring_type) (9.4.1.2.11)
neutralscomp (1130)	coreprof%compositions%neutralscomp(:) (composition_neutralscomp) (9.4.1.3.86)
neutcomp (1129)	coreprof%compositions%neutralscomp(:)%neutcomp(:) (composition_neutrals_neutcomp) (9.4.1.3.85)
nucindex (1128)	coreprof%compositions%neutralscomp(:)%neutcomp(:)%nucindex (integer) (9.4.1.1.2)
multiplicity (1128)	coreprof%compositions%neutralscomp(:)%neutcomp(:)%multiplicity (integer) (9.4.1.1.2)
type (1129)	coreprof%compositions%neutralscomp(:)%type(:) (identifier) (9.4.1.3.213)
id (1256)	coreprof%compositions%neutralscomp(:)%type(:)%id (string) (9.4.1.1.3)
flag (1256)	coreprof%compositions%neutralscomp(:)%type(:)%flag (integer) (9.4.1.1.2)
description (1256)	coreprof%compositions%neutralscomp(:)%type(:)%description (string) (9.4.1.1.3)
label (1129)	coreprof%compositions%neutralscomp(:)%label (string) (9.4.1.1.3)
edgespecies (1130)	coreprof%compositions%edgespecies(:) (edgespecies) (9.4.1.3.169)
nucindex (1212)	coreprof%compositions%edgespecies(:)%nucindex (integer) (9.4.1.1.2)
zmin (1212)	coreprof%compositions%edgespecies(:)%zmin (float) (9.4.1.1.1)
zmax (1212)	coreprof%compositions%edgespecies(:)%zmax (float) (9.4.1.1.1)
label (1212)	coreprof%compositions%edgespecies(:)%label (string) (9.4.1.1.3)
signature (1130)	coreprof%compositions%signature (identifier) (9.4.1.3.213)
id (1256)	coreprof%compositions%signature%id (string) (9.4.1.1.3)
flag (1256)	coreprof%compositions%signature%flag (integer) (9.4.1.1.2)
description (1256)	coreprof%compositions%signature%description (string) (9.4.1.1.3)
psi (1052)	coreprof%psi (psi) (9.4.1.3.288)
value (1331)	coreprof%psi%value (vecflt_type) (9.4.1.2.9)
ddrho (1331)	coreprof%psi%ddrho (vecflt_type) (9.4.1.2.9)
d2drho2 (1331)	coreprof%psi%d2drho2 (vecflt_type) (9.4.1.2.9)
ddt_rhotorn (1331)	coreprof%psi%ddt_rhotorn (vecflt_type) (9.4.1.2.9)
ddt_phi (1331)	coreprof%psi%ddt_phi (vecflt_type) (9.4.1.2.9)
source (1331)	coreprof%psi%source (string) (9.4.1.1.3)
flag (1331)	coreprof%psi%flag (integer) (9.4.1.1.2)
boundary (1331)	coreprof%psi%boundary (boundary) (9.4.1.3.58)
value (1101)	coreprof%psi%boundary%value (vecflt_type) (9.4.1.2.9)
source (1101)	coreprof%psi%boundary%source (string) (9.4.1.1.3)
type (1101)	coreprof%psi%boundary%type (integer) (9.4.1.1.2)
rho (1101)	coreprof%psi%boundary%rho (float) (9.4.1.1.1)
codeparam (1101)	coreprof%psi%boundary%codeparam (codeparam) (9.4.1.3.65)
codename (1108)	coreprof%psi%boundary%codeparam%codename (string) (9.4.1.1.3)
codeversion (1108)	coreprof%psi%boundary%codeparam%codeversion (string) (9.4.1.1.3)

parameters (1108)	coreprof%psi%boundary%codeparam%parameters (string) (9.4.1.1.3)
output_diag (1108)	coreprof%psi%boundary%codeparam%output_diag (string) (9.4.1.1.3)
output_flag (1108)	coreprof%psi%boundary%codeparam%output_flag (integer) (9.4.1.1.2)
jni (1331)	coreprof%psi%jni (jni) (9.4.1.3.220)
value (1263)	coreprof%psi%jni%value (vecflt_type) (9.4.1.2.9)
integral (1263)	coreprof%psi%jni%integral (vecflt_type) (9.4.1.2.9)
source (1263)	coreprof%psi%jni%source (string) (9.4.1.1.3)
sigma_par (1331)	coreprof%psi%sigma_par (coreprofile) (9.4.1.3.109)
value (1152)	coreprof%psi%sigma_par%value (vecflt_type) (9.4.1.2.9)
source (1152)	coreprof%psi%sigma_par%source (string) (9.4.1.1.3)
codeparam (1331)	coreprof%psi%codeparam (codeparam) (9.4.1.3.65)
codename (1108)	coreprof%psi%codeparam%codename (string) (9.4.1.1.3)
codeversion (1108)	coreprof%psi%codeparam%codeversion (string) (9.4.1.1.3)
parameters (1108)	coreprof%psi%codeparam%parameters (string) (9.4.1.1.3)
output_diag (1108)	coreprof%psi%codeparam%output_diag (string) (9.4.1.1.3)
output_flag (1108)	coreprof%psi%codeparam%output_flag (integer) (9.4.1.1.2)
te (1052)	coreprof%te (corefield) (9.4.1.3.93)
value (1136)	coreprof%te%value (vecflt_type) (9.4.1.2.9)
ddrho (1136)	coreprof%te%ddrho (vecflt_type) (9.4.1.2.9)
d2drho2 (1136)	coreprof%te%d2drho2 (vecflt_type) (9.4.1.2.9)
ddt (1136)	coreprof%te%ddt (vecflt_type) (9.4.1.2.9)
source (1136)	coreprof%te%source (string) (9.4.1.1.3)
flag (1136)	coreprof%te%flag (integer) (9.4.1.1.2)
boundary (1136)	coreprof%te%boundary (boundaryel) (9.4.1.3.60)
value (1103)	coreprof%te%boundary%value (vecflt_type) (9.4.1.2.9)
source (1103)	coreprof%te%boundary%source (string) (9.4.1.1.3)
type (1103)	coreprof%te%boundary%type (integer) (9.4.1.1.2)
rho_tor (1103)	coreprof%te%boundary%rho_tor (float) (9.4.1.1.1)
source_term (1136)	coreprof%te%source_term (sourceel) (9.4.1.3.366)
value (1409)	coreprof%te%source_term%value (vecflt_type) (9.4.1.2.9)
integral (1409)	coreprof%te%source_term%integral (vecflt_type) (9.4.1.2.9)
source (1409)	coreprof%te%source_term%source (string) (9.4.1.1.3)
transp_coef (1136)	coreprof%te%transp_coef (coretransel) (9.4.1.3.112)
diff (1155)	coreprof%te%transp_coef%diff (vecflt_type) (9.4.1.2.9)
vconv (1155)	coreprof%te%transp_coef%vconv (vecflt_type) (9.4.1.2.9)
source (1155)	coreprof%te%transp_coef%source (string) (9.4.1.1.3)
flux (1136)	coreprof%te%flux (fluxel) (9.4.1.3.186)
flux_dv (1229)	coreprof%te%flux%flux_dv (vecflt_type) (9.4.1.2.9)
flux_interp (1229)	coreprof%te%flux%flux_interp (vecflt_type) (9.4.1.2.9)
flux_dv_surf (1136)	coreprof%te%flux_dv_surf (vecflt_type) (9.4.1.2.9)
time_deriv (1136)	coreprof%te%time_deriv (vecflt_type) (9.4.1.2.9)
codeparam (1136)	coreprof%te%codeparam (codeparam) (9.4.1.3.65)
codename (1108)	coreprof%te%codeparam%codename (string) (9.4.1.1.3)
codeversion (1108)	coreprof%te%codeparam%codeversion (string) (9.4.1.1.3)
parameters (1108)	coreprof%te%codeparam%parameters (string) (9.4.1.1.3)
output_diag (1108)	coreprof%te%codeparam%output_diag (string) (9.4.1.1.3)
output_flag (1108)	coreprof%te%codeparam%output_flag (integer) (9.4.1.1.2)
ti (1052)	coreprof%ti (corefieldion) (9.4.1.3.94)
value (1137)	coreprof%ti%value (matflt_type) (9.4.1.2.7)
ddrho (1137)	coreprof%ti%ddrho (matflt_type) (9.4.1.2.7)
d2drho2 (1137)	coreprof%ti%d2drho2 (matflt_type) (9.4.1.2.7)
ddt (1137)	coreprof%ti%ddt (matflt_type) (9.4.1.2.7)
source (1137)	coreprof%ti%source (vecstring_type) (9.4.1.2.11)
flag (1137)	coreprof%ti%flag (vecint_type) (9.4.1.2.10)
boundary (1137)	coreprof%ti%boundary (boundaryion) (9.4.1.3.62)
value (1105)	coreprof%ti%boundary%value (matflt_type) (9.4.1.2.7)
source (1105)	coreprof%ti%boundary%source (vecstring_type) (9.4.1.2.11)
type (1105)	coreprof%ti%boundary%type (vecint_type) (9.4.1.2.10)
rho_tor (1105)	coreprof%ti%boundary%rho_tor (vecflt_type) (9.4.1.2.9)
source_term (1137)	coreprof%ti%source_term (sourceion) (9.4.1.3.368)
value (1411)	coreprof%ti%source_term%value (matflt_type) (9.4.1.2.7)

integral (1411)  
 source (1411)  
 transp\_coef (1137)  
   diff (1157)  
   vconv (1157)  
   source (1157)  
 flux (1137)  
   flux\_dv (1231)  
   flux\_interp (1231)  
 flux\_dv\_surf (1137)  
 time\_deriv (1137)  
 codeparam (1137)  
   codename (1108)  
   codeversion (1108)  
   parameters (1108)  
   output\_diag (1108)  
   output\_flag (1108)  
 ne (1052)  
   value (1136)  
   ddrho (1136)  
   d2drho2 (1136)  
   ddt (1136)  
   source (1136)  
   flag (1136)  
   boundary (1136)  
     value (1103)  
     source (1103)  
     type (1103)  
     rho\_tor (1103)  
   source\_term (1136)  
     value (1409)  
     integral (1409)  
     source (1409)  
   transp\_coef (1136)  
     diff (1155)  
     vconv (1155)  
     source (1155)  
   flux (1136)  
     flux\_dv (1229)  
     flux\_interp (1229)  
   flux\_dv\_surf (1136)  
   time\_deriv (1136)  
   codeparam (1136)  
     codename (1108)  
     codeversion (1108)  
     parameters (1108)  
     output\_diag (1108)  
     output\_flag (1108)  
 ni (1052)  
   value (1137)  
   ddrho (1137)  
   d2drho2 (1137)  
   ddt (1137)  
   source (1137)  
   flag (1137)  
   boundary (1137)  
     value (1105)  
     source (1105)  
     type (1105)  
     rho\_tor (1105)  
   source\_term (1137)  
   coreprof%ti%source\_term%integral (matflt.type) (9.4.1.2.7)  
   coreprof%ti%source\_term%source (vecstring.type) (9.4.1.2.11)  
   coreprof%ti%transp\_coef (coretransion) (9.4.1.3.114)  
   coreprof%ti%transp\_coef%diff (matflt.type) (9.4.1.2.7)  
   coreprof%ti%transp\_coef%vconv (matflt.type) (9.4.1.2.7)  
   coreprof%ti%transp\_coef%source (vecstring.type) (9.4.1.2.11)  
   coreprof%ti%flux (fluxion) (9.4.1.3.188)  
   coreprof%ti%flux%flux\_dv (matflt.type) (9.4.1.2.7)  
   coreprof%ti%flux%flux\_interp (matflt.type) (9.4.1.2.7)  
   coreprof%ti%flux\_dv\_surf (matflt.type) (9.4.1.2.7)  
   coreprof%ti%time\_deriv (matflt.type) (9.4.1.2.7)  
   coreprof%ti%codeparam (codeparam) (9.4.1.3.65)  
   coreprof%ti%codeparam%codename (string) (9.4.1.1.3)  
   coreprof%ti%codeparam%codeversion (string) (9.4.1.1.3)  
   coreprof%ti%codeparam%parameters (string) (9.4.1.1.3)  
   coreprof%ti%codeparam%output\_diag (string) (9.4.1.1.3)  
   coreprof%ti%codeparam%output\_flag (integer) (9.4.1.1.2)  
   coreprof%ne (corefield) (9.4.1.3.93)  
   coreprof%ne%value (vecflt.type) (9.4.1.2.9)  
   coreprof%ne%ddrho (vecflt.type) (9.4.1.2.9)  
   coreprof%ne%d2drho2 (vecflt.type) (9.4.1.2.9)  
   coreprof%ne%ddt (vecflt.type) (9.4.1.2.9)  
   coreprof%ne%source (string) (9.4.1.1.3)  
   coreprof%ne%flag (integer) (9.4.1.1.2)  
   coreprof%ne%boundary (boundaryel) (9.4.1.3.60)  
   coreprof%ne%boundary%value (vecflt.type) (9.4.1.2.9)  
   coreprof%ne%boundary%source (string) (9.4.1.1.3)  
   coreprof%ne%boundary%type (integer) (9.4.1.1.2)  
   coreprof%ne%boundary%rho\_tor (float) (9.4.1.1.1)  
   coreprof%ne%source\_term (sourceel) (9.4.1.3.366)  
   coreprof%ne%source\_term%value (vecflt.type) (9.4.1.2.9)  
   coreprof%ne%source\_term%integral (vecflt.type) (9.4.1.2.9)  
   coreprof%ne%source\_term%source (string) (9.4.1.1.3)  
   coreprof%ne%transp\_coef (coretransel) (9.4.1.3.112)  
   coreprof%ne%transp\_coef%diff (vecflt.type) (9.4.1.2.9)  
   coreprof%ne%transp\_coef%vconv (vecflt.type) (9.4.1.2.9)  
   coreprof%ne%transp\_coef%source (string) (9.4.1.1.3)  
   coreprof%ne%flux (fluxel) (9.4.1.3.186)  
   coreprof%ne%flux%flux\_dv (vecflt.type) (9.4.1.2.9)  
   coreprof%ne%flux%flux\_interp (vecflt.type) (9.4.1.2.9)  
   coreprof%ne%flux\_dv\_surf (vecflt.type) (9.4.1.2.9)  
   coreprof%ne%time\_deriv (vecflt.type) (9.4.1.2.9)  
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   coreprof%ne%codeparam%codeversion (string) (9.4.1.1.3)  
   coreprof%ne%codeparam%parameters (string) (9.4.1.1.3)  
   coreprof%ne%codeparam%output\_diag (string) (9.4.1.1.3)  
   coreprof%ne%codeparam%output\_flag (integer) (9.4.1.1.2)  
   coreprof%ni (corefieldion) (9.4.1.3.94)  
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   coreprof%ni%ddrho (matflt.type) (9.4.1.2.7)  
   coreprof%ni%d2drho2 (matflt.type) (9.4.1.2.7)  
   coreprof%ni%ddt (matflt.type) (9.4.1.2.7)  
   coreprof%ni%source (vecstring.type) (9.4.1.2.11)  
   coreprof%ni%flag (vecint.type) (9.4.1.2.10)  
   coreprof%ni%boundary (boundaryion) (9.4.1.3.62)  
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   coreprof%ni%boundary%source (vecstring.type) (9.4.1.2.11)  
   coreprof%ni%boundary%type (vecint.type) (9.4.1.2.10)  
   coreprof%ni%boundary%rho\_tor (vecflt.type) (9.4.1.2.9)  
   coreprof%ni%source\_term (sourceion) (9.4.1.3.368)

value (1411)  
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 source (1411)  
 transp\_coef (1137)  
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   vconv (1157)  
   source (1157)  
 flux (1137)  
   flux\_dv (1231)  
   flux\_interp (1231)  
 flux\_dv\_surf (1137)  
 time\_deriv (1137)  
 codeparam (1137)  
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   codeversion (1108)  
   parameters (1108)  
   output\_diag (1108)  
   output\_flag (1108)  
 vtor (1052)  
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   ddrho (1137)  
   d2drho2 (1137)  
   ddt (1137)  
   source (1137)  
   flag (1137)  
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     rho\_tor (1105)  
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   flux\_dv\_surf (1137)  
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     value (1152)  
     source (1152)  
   pi (1329)  
     value (1153)  
     source (1153)  
   pi\_tot (1329)  
     value (1152)

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 coreprof%ni%source\_term%source (vecstring.type) (9.4.1.2.11)  
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 coreprof%ni%transp\_coef%vconv (matflt.type) (9.4.1.2.7)  
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 coreprof%ni%flux%flux\_interp (matflt.type) (9.4.1.2.7)  
 coreprof%ni%flux\_dv\_surf (matflt.type) (9.4.1.2.7)  
 coreprof%ni%time\_deriv (matflt.type) (9.4.1.2.7)  
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 coreprof%ni%codeparam%parameters (string) (9.4.1.1.3)  
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 coreprof%vtor%d2drho2 (matflt.type) (9.4.1.2.7)  
 coreprof%vtor%ddt (matflt.type) (9.4.1.2.7)  
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 coreprof%vtor%flag (vecint.type) (9.4.1.2.10)  
 coreprof%vtor%boundary (boundaryion) (9.4.1.3.62)  
 coreprof%vtor%boundary%value (matflt.type) (9.4.1.2.7)  
 coreprof%vtor%boundary%source (vecstring.type) (9.4.1.2.11)  
 coreprof%vtor%boundary%type (vecint.type) (9.4.1.2.10)  
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 coreprof%vtor%source\_term%source (vecstring.type) (9.4.1.2.11)  
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 coreprof%vtor%flux%flux\_interp (matflt.type) (9.4.1.2.7)  
 coreprof%vtor%flux\_dv\_surf (matflt.type) (9.4.1.2.7)  
 coreprof%vtor%time\_deriv (matflt.type) (9.4.1.2.7)  
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 coreprof%vtor%codeparam%codeversion (string) (9.4.1.1.3)  
 coreprof%vtor%codeparam%parameters (string) (9.4.1.1.3)  
 coreprof%vtor%codeparam%output\_diag (string) (9.4.1.1.3)  
 coreprof%vtor%codeparam%output\_flag (integer) (9.4.1.1.2)  
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 coreprof%profiles1d%pe (coreprofile) (9.4.1.3.109)  
 coreprof%profiles1d%pe%value (vecflt.type) (9.4.1.2.9)  
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 coreprof%profiles1d%dpedt (coreprofile) (9.4.1.3.109)  
 coreprof%profiles1d%dpedt%value (vecflt.type) (9.4.1.2.9)  
 coreprof%profiles1d%dpedt%source (string) (9.4.1.1.3)  
 coreprof%profiles1d%pi (corepfion) (9.4.1.3.110)  
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 coreprof%profiles1d%pi\_tot (coreprofile) (9.4.1.3.109)  
 coreprof%profiles1d%pi\_tot%value (vecflt.type) (9.4.1.2.9)

source (1152)	coreprof%profiles1d%pi.tot%source (string) (9.4.1.1.3)
dpi.totdt (1329)	coreprof%profiles1d%dpi.totdt (coreprofile) (9.4.1.3.109)
value (1152)	coreprof%profiles1d%dpi.totdt%value (vecflt.type) (9.4.1.2.9)
source (1152)	coreprof%profiles1d%dpi.totdt%source (string) (9.4.1.1.3)
pr.th (1329)	coreprof%profiles1d%pr.th (coreprofile) (9.4.1.3.109)
value (1152)	coreprof%profiles1d%pr.th%value (vecflt.type) (9.4.1.2.9)
source (1152)	coreprof%profiles1d%pr.th%source (string) (9.4.1.1.3)
pr.perp (1329)	coreprof%profiles1d%pr.perp (coreprofile) (9.4.1.3.109)
value (1152)	coreprof%profiles1d%pr.perp%value (vecflt.type) (9.4.1.2.9)
source (1152)	coreprof%profiles1d%pr.perp%source (string) (9.4.1.1.3)
pr.parallel (1329)	coreprof%profiles1d%pr.parallel (coreprofile) (9.4.1.3.109)
value (1152)	coreprof%profiles1d%pr.parallel%value (vecflt.type) (9.4.1.2.9)
source (1152)	coreprof%profiles1d%pr.parallel%source (string) (9.4.1.1.3)
jtot (1329)	coreprof%profiles1d%jtot (coreprofile) (9.4.1.3.109)
value (1152)	coreprof%profiles1d%jtot%value (vecflt.type) (9.4.1.2.9)
source (1152)	coreprof%profiles1d%jtot%source (string) (9.4.1.1.3)
jni (1329)	coreprof%profiles1d%jni (coreprofile) (9.4.1.3.109)
value (1152)	coreprof%profiles1d%jni%value (vecflt.type) (9.4.1.2.9)
source (1152)	coreprof%profiles1d%jni%source (string) (9.4.1.1.3)
jphi (1329)	coreprof%profiles1d%jphi (coreprofile) (9.4.1.3.109)
value (1152)	coreprof%profiles1d%jphi%value (vecflt.type) (9.4.1.2.9)
source (1152)	coreprof%profiles1d%jphi%source (string) (9.4.1.1.3)
joh (1329)	coreprof%profiles1d%joh (coreprofile) (9.4.1.3.109)
value (1152)	coreprof%profiles1d%joh%value (vecflt.type) (9.4.1.2.9)
source (1152)	coreprof%profiles1d%joh%source (string) (9.4.1.1.3)
vloop (1329)	coreprof%profiles1d%vloop (coreprofile) (9.4.1.3.109)
value (1152)	coreprof%profiles1d%vloop%value (vecflt.type) (9.4.1.2.9)
source (1152)	coreprof%profiles1d%vloop%source (string) (9.4.1.1.3)
sigmapar (1329)	coreprof%profiles1d%sigmapar (coreprofile) (9.4.1.3.109)
value (1152)	coreprof%profiles1d%sigmapar%value (vecflt.type) (9.4.1.2.9)
source (1152)	coreprof%profiles1d%sigmapar%source (string) (9.4.1.1.3)
qoh (1329)	coreprof%profiles1d%qoh (sourcecel) (9.4.1.3.366)
value (1409)	coreprof%profiles1d%qoh%value (vecflt.type) (9.4.1.2.9)
integral (1409)	coreprof%profiles1d%qoh%integral (vecflt.type) (9.4.1.2.9)
source (1409)	coreprof%profiles1d%qoh%source (string) (9.4.1.1.3)
qei (1329)	coreprof%profiles1d%qei (coreprofile) (9.4.1.3.109)
value (1152)	coreprof%profiles1d%qei%value (vecflt.type) (9.4.1.2.9)
source (1152)	coreprof%profiles1d%qei%source (string) (9.4.1.1.3)
eparallel (1329)	coreprof%profiles1d%eparallel (coreprofile) (9.4.1.3.109)
value (1152)	coreprof%profiles1d%eparallel%value (vecflt.type) (9.4.1.2.9)
source (1152)	coreprof%profiles1d%eparallel%source (string) (9.4.1.1.3)
e.b (1329)	coreprof%profiles1d%e.b (coreprofile) (9.4.1.3.109)
value (1152)	coreprof%profiles1d%e.b%value (vecflt.type) (9.4.1.2.9)
source (1152)	coreprof%profiles1d%e.b%source (string) (9.4.1.1.3)
q (1329)	coreprof%profiles1d%q (coreprofile) (9.4.1.3.109)
value (1152)	coreprof%profiles1d%q%value (vecflt.type) (9.4.1.2.9)
source (1152)	coreprof%profiles1d%q%source (string) (9.4.1.1.3)
shear (1329)	coreprof%profiles1d%shear (coreprofile) (9.4.1.3.109)
value (1152)	coreprof%profiles1d%shear%value (vecflt.type) (9.4.1.2.9)
source (1152)	coreprof%profiles1d%shear%source (string) (9.4.1.1.3)
ns (1329)	coreprof%profiles1d%ns (coreprofion) (9.4.1.3.110)
value (1153)	coreprof%profiles1d%ns%value (matflt.type) (9.4.1.2.7)
source (1153)	coreprof%profiles1d%ns%source (vecstring.type) (9.4.1.2.11)
mtor (1329)	coreprof%profiles1d%mtor (coreprofion) (9.4.1.3.110)
value (1153)	coreprof%profiles1d%mtor%value (matflt.type) (9.4.1.2.7)
source (1153)	coreprof%profiles1d%mtor%source (vecstring.type) (9.4.1.2.11)
wtor (1329)	coreprof%profiles1d%wtor (coreprofion) (9.4.1.3.110)
value (1153)	coreprof%profiles1d%wtor%value (matflt.type) (9.4.1.2.7)
source (1153)	coreprof%profiles1d%wtor%source (vecstring.type) (9.4.1.2.11)
zeff (1329)	coreprof%profiles1d%zeff (coreprofile) (9.4.1.3.109)
value (1152)	coreprof%profiles1d%zeff%value (vecflt.type) (9.4.1.2.9)



source (1152)	coreprof%profiles1d%zeff%source (string) (9.4.1.1.3)
bpol (1329)	coreprof%profiles1d%bpol (coreprofile) (9.4.1.3.109)
value (1152)	coreprof%profiles1d%bpol%value (vecflt.type) (9.4.1.2.9)
source (1152)	coreprof%profiles1d%bpol%source (string) (9.4.1.1.3)
dvprimedt (1329)	coreprof%profiles1d%dvprimedt (coreprofile) (9.4.1.3.109)
value (1152)	coreprof%profiles1d%dvprimedt%value (vecflt.type) (9.4.1.2.9)
source (1152)	coreprof%profiles1d%dvprimedt%source (string) (9.4.1.1.3)
globalparam (1052)	coreprof%globalparam (globalparam) (9.4.1.3.208)
current_tot (1251)	coreprof%globalparam%current_tot (float) (9.4.1.1.1)
current_bnd (1251)	coreprof%globalparam%current_bnd (float) (9.4.1.1.1)
current_ni (1251)	coreprof%globalparam%current_ni (float) (9.4.1.1.1)
vloop (1251)	coreprof%globalparam%vloop (float) (9.4.1.1.1)
li (1251)	coreprof%globalparam%li (float) (9.4.1.1.1)
beta_tor (1251)	coreprof%globalparam%beta_tor (float) (9.4.1.1.1)
beta_normal (1251)	coreprof%globalparam%beta_normal (float) (9.4.1.1.1)
beta_pol (1251)	coreprof%globalparam%beta_pol (float) (9.4.1.1.1)
w_dia (1251)	coreprof%globalparam%w_dia (float) (9.4.1.1.1)
codeparam (1052)	coreprof%codeparam (codeparam) (9.4.1.3.65)
codename (1108)	coreprof%codeparam%codename (string) (9.4.1.1.3)
codeversion (1108)	coreprof%codeparam%codeversion (string) (9.4.1.1.3)
parameters (1108)	coreprof%codeparam%parameters (string) (9.4.1.1.3)
output_diag (1108)	coreprof%codeparam%output_diag (string) (9.4.1.1.3)
output_flag (1108)	coreprof%codeparam%output_flag (integer) (9.4.1.1.2)
time (1052)	coreprof%time (float) (9.4.1.1.1)

#### 9.4.2.1.8 coresource

datainfo (1053)	coresource%datainfo (datainfo) (9.4.1.3.120)
dataprovider (1163)	coresource%datainfo%dataprovider (string) (9.4.1.1.3)
putdate (1163)	coresource%datainfo%putdate (string) (9.4.1.1.3)
source (1163)	coresource%datainfo%source (string) (9.4.1.1.3)
comment (1163)	coresource%datainfo%comment (string) (9.4.1.1.3)
cocos (1163)	coresource%datainfo%cocos (integer) (9.4.1.1.2)
id (1163)	coresource%datainfo%id (integer) (9.4.1.1.2)
isref (1163)	coresource%datainfo%isref (integer) (9.4.1.1.2)
whatref (1163)	coresource%datainfo%whatref (whatref) (9.4.1.3.426)
user (1469)	coresource%datainfo%whatref%user (string) (9.4.1.1.3)
machine (1469)	coresource%datainfo%whatref%machine (string) (9.4.1.1.3)
shot (1469)	coresource%datainfo%whatref%shot (integer) (9.4.1.1.2)
run (1469)	coresource%datainfo%whatref%run (integer) (9.4.1.1.2)
occurrence (1469)	coresource%datainfo%whatref%occurrence (integer) (9.4.1.1.2)
putinfo (1163)	coresource%datainfo%putinfo (putinfo) (9.4.1.3.289)
putmethod (1332)	coresource%datainfo%putinfo%putmethod (string) (9.4.1.1.3)
putaccess (1332)	coresource%datainfo%putinfo%putaccess (string) (9.4.1.1.3)
putlocation (1332)	coresource%datainfo%putinfo%putlocation (string) (9.4.1.1.3)
rights (1332)	coresource%datainfo%putinfo%rights (string) (9.4.1.1.3)
composition (1053)	coresource%composition (composition) (9.4.1.3.83)
amn (1126)	coresource%composition%amn (vecflt.type) (9.4.1.2.9)
zn (1126)	coresource%composition%zn (vecflt.type) (9.4.1.2.9)
zion (1126)	coresource%composition%zion (vecflt.type) (9.4.1.2.9)
imp_flag (1126)	coresource%composition%imp_flag (vecint.type) (9.4.1.2.10)
label (1126)	coresource%composition%label (vecstring.type) (9.4.1.2.11)
desc_impur (1053)	coresource%desc_impur (desc_impur) (9.4.1.3.123)
amn (1166)	coresource%desc_impur%amn (vecflt.type) (9.4.1.2.9)
zn (1166)	coresource%desc_impur%zn (vecint.type) (9.4.1.2.10)
i_ion (1166)	coresource%desc_impur%i_ion (vecint.type) (9.4.1.2.10)
nzimp (1166)	coresource%desc_impur%nzimp (vecint.type) (9.4.1.2.10)
zmin (1166)	coresource%desc_impur%zmin (matint.type) (9.4.1.2.8)
zmax (1166)	coresource%desc_impur%zmax (matint.type) (9.4.1.2.8)
label (1166)	coresource%desc_impur%label (vecstring.type) (9.4.1.2.11)
compositions (1053)	coresource%compositions (compositions.type) (9.4.1.3.87)

nuclei (1130)	coresource%compositions%nuclei(:) (nuclei) (9.4.1.3.258)
zn (1301)	coresource%compositions%nuclei(:)%zn (float) (9.4.1.1.1)
amn (1301)	coresource%compositions%nuclei(:)%amn (float) (9.4.1.1.1)
label (1301)	coresource%compositions%nuclei(:)%label (string) (9.4.1.1.3)
ions (1130)	coresource%compositions%ions(:) (ions) (9.4.1.3.218)
nucindex (1261)	coresource%compositions%ions(:)%nucindex (integer) (9.4.1.1.2)
zion (1261)	coresource%compositions%ions(:)%zion (float) (9.4.1.1.1)
imp_flag (1261)	coresource%compositions%ions(:)%imp_flag (integer) (9.4.1.1.2)
label (1261)	coresource%compositions%ions(:)%label (string) (9.4.1.1.3)
impurities (1130)	coresource%compositions%impurities(:) (impurities) (9.4.1.3.215)
nucindex (1258)	coresource%compositions%impurities(:)%nucindex (integer) (9.4.1.1.2)
i_ion (1258)	coresource%compositions%impurities(:)%i_ion (integer) (9.4.1.1.2)
nzimp (1258)	coresource%compositions%impurities(:)%nzimp (integer) (9.4.1.1.2)
zmin (1258)	coresource%compositions%impurities(:)%zmin (vecflt_type) (9.4.1.2.9)
zmax (1258)	coresource%compositions%impurities(:)%zmax (vecflt_type) (9.4.1.2.9)
label (1258)	coresource%compositions%impurities(:)%label (vecstring_type) (9.4.1.2.11)
neutralscomp (1130)	coresource%compositions%neutralscomp(:) (composition_neutralscomp) (9.4.1.3.86)
neutcomp (1129)	coresource%compositions%neutralscomp(:)%neutcomp(:) (composition_neutrals_neutcomp) (9.4.1.3.85)
nucindex (1128)	coresource%compositions%neutralscomp(:)%neutcomp(:)%nucindex (integer) (9.4.1.1.2)
multiplicity (1128)	coresource%compositions%neutralscomp(:)%neutcomp(:)%multiplicity (integer) (9.4.1.1.2)
type (1129)	coresource%compositions%neutralscomp(:)%type(:) (identifier) (9.4.1.3.213)
id (1256)	coresource%compositions%neutralscomp(:)%type(:)%id (string) (9.4.1.1.3)
flag (1256)	coresource%compositions%neutralscomp(:)%type(:)%flag (integer) (9.4.1.1.2)
description (1256)	coresource%compositions%neutralscomp(:)%type(:)%description (string) (9.4.1.1.3)
label (1129)	coresource%compositions%neutralscomp(:)%label (string) (9.4.1.1.3)
edgespecies (1130)	coresource%compositions%edgespecies(:) (edgespecies) (9.4.1.3.169)
nucindex (1212)	coresource%compositions%edgespecies(:)%nucindex (integer) (9.4.1.1.2)
zmin (1212)	coresource%compositions%edgespecies(:)%zmin (float) (9.4.1.1.1)
zmax (1212)	coresource%compositions%edgespecies(:)%zmax (float) (9.4.1.1.1)
label (1212)	coresource%compositions%edgespecies(:)%label (string) (9.4.1.1.3)
signature (1130)	coresource%compositions%signature (identifier) (9.4.1.3.213)
id (1256)	coresource%compositions%signature%id (string) (9.4.1.1.3)
flag (1256)	coresource%compositions%signature%flag (integer) (9.4.1.1.2)
description (1256)	coresource%compositions%signature%description (string) (9.4.1.1.3)
toroid_field (1053)	coresource%toroid_field (b0r0) (9.4.1.3.55)
r0 (1098)	coresource%toroid_field%r0 (float) (9.4.1.1.1)
b0 (1098)	coresource%toroid_field%b0 (float) (9.4.1.1.1)
values (1053)	coresource%values(:) (coresource_values) (9.4.1.3.111)
sourceid (1154)	coresource%values(:)%sourceid (identifier) (9.4.1.3.213)
id (1256)	coresource%values(:)%sourceid%id (string) (9.4.1.1.3)
flag (1256)	coresource%values(:)%sourceid%flag (integer) (9.4.1.1.2)
description (1256)	coresource%values(:)%sourceid%description (string) (9.4.1.1.3)
rho_tor (1154)	coresource%values(:)%rho_tor (vecflt_type) (9.4.1.2.9)
rho_tor_norm (1154)	coresource%values(:)%rho_tor_norm (vecflt_type) (9.4.1.2.9)
j (1154)	coresource%values(:)%j (vecflt_type) (9.4.1.2.9)
sigma (1154)	coresource%values(:)%sigma (vecflt_type) (9.4.1.2.9)
si (1154)	coresource%values(:)%si (source_ion) (9.4.1.3.361)
exp (1404)	coresource%values(:)%si%exp (matflt_type) (9.4.1.2.7)
imp (1404)	coresource%values(:)%si%imp (matflt_type) (9.4.1.2.7)
se (1154)	coresource%values(:)%se (source_vec) (9.4.1.3.365)
exp (1408)	coresource%values(:)%se%exp (vecflt_type) (9.4.1.2.9)
imp (1408)	coresource%values(:)%se%imp (vecflt_type) (9.4.1.2.9)
sz (1154)	coresource%values(:)%sz(:) (source_imp) (9.4.1.3.360)
exp (1403)	coresource%values(:)%sz(:)%exp (matflt_type) (9.4.1.2.7)
imp (1403)	coresource%values(:)%sz(:)%imp (matflt_type) (9.4.1.2.7)
qi (1154)	coresource%values(:)%qi (source_ion) (9.4.1.3.361)
exp (1404)	coresource%values(:)%qi%exp (matflt_type) (9.4.1.2.7)
imp (1404)	coresource%values(:)%qi%imp (matflt_type) (9.4.1.2.7)
qe (1154)	coresource%values(:)%qe (source_vec) (9.4.1.3.365)
exp (1408)	coresource%values(:)%qe%exp (vecflt_type) (9.4.1.2.9)
imp (1408)	coresource%values(:)%qe%imp (vecflt_type) (9.4.1.2.9)



qz (1154)	coresource%values(:)%qz(:) (source_imp) (9.4.1.3.360)
exp (1403)	coresource%values(:)%qz(:)%exp (matflt_type) (9.4.1.2.7)
imp (1403)	coresource%values(:)%qz(:)%imp (matflt_type) (9.4.1.2.7)
ui (1154)	coresource%values(:)%ui (source_ion) (9.4.1.3.361)
exp (1404)	coresource%values(:)%ui%exp (matflt_type) (9.4.1.2.7)
imp (1404)	coresource%values(:)%ui%imp (matflt_type) (9.4.1.2.7)
ujxb (1154)	coresource%values(:)%ujxb (source_vec) (9.4.1.3.365)
exp (1408)	coresource%values(:)%ujxb%exp (vecflt_type) (9.4.1.2.9)
imp (1408)	coresource%values(:)%ujxb%imp (vecflt_type) (9.4.1.2.9)
codeparam (1154)	coresource%values(:)%codeparam (codeparam) (9.4.1.3.65)
codename (1108)	coresource%values(:)%codeparam%codename (string) (9.4.1.1.3)
codeversion (1108)	coresource%values(:)%codeparam%codeversion (string) (9.4.1.1.3)
parameters (1108)	coresource%values(:)%codeparam%parameters (string) (9.4.1.1.3)
output_diag (1108)	coresource%values(:)%codeparam%output_diag (string) (9.4.1.1.3)
output_flag (1108)	coresource%values(:)%codeparam%output_flag (integer) (9.4.1.1.2)
codeparam (1053)	coresource%codeparam (codeparam) (9.4.1.3.65)
codename (1108)	coresource%codeparam%codename (string) (9.4.1.1.3)
codeversion (1108)	coresource%codeparam%codeversion (string) (9.4.1.1.3)
parameters (1108)	coresource%codeparam%parameters (string) (9.4.1.1.3)
output_diag (1108)	coresource%codeparam%output_diag (string) (9.4.1.1.3)
output_flag (1108)	coresource%codeparam%output_flag (integer) (9.4.1.1.2)
time (1053)	coresource%time (float) (9.4.1.1.1)

### 9.4.2.1.9 coretransp

datainfo (1054)	coretransp%datainfo (datainfo) (9.4.1.3.120)
dataprovider (1163)	coretransp%datainfo%dataprovider (string) (9.4.1.1.3)
putdate (1163)	coretransp%datainfo%putdate (string) (9.4.1.1.3)
source (1163)	coretransp%datainfo%source (string) (9.4.1.1.3)
comment (1163)	coretransp%datainfo%comment (string) (9.4.1.1.3)
cocos (1163)	coretransp%datainfo%cocos (integer) (9.4.1.1.2)
id (1163)	coretransp%datainfo%id (integer) (9.4.1.1.2)
isref (1163)	coretransp%datainfo%isref (integer) (9.4.1.1.2)
whatref (1163)	coretransp%datainfo%whatref (whatref) (9.4.1.3.426)
user (1469)	coretransp%datainfo%whatref%user (string) (9.4.1.1.3)
machine (1469)	coretransp%datainfo%whatref%machine (string) (9.4.1.1.3)
shot (1469)	coretransp%datainfo%whatref%shot (integer) (9.4.1.1.2)
run (1469)	coretransp%datainfo%whatref%run (integer) (9.4.1.1.2)
occurrence (1469)	coretransp%datainfo%whatref%occurrence (integer) (9.4.1.1.2)
putinfo (1163)	coretransp%datainfo%putinfo (putinfo) (9.4.1.3.289)
putmethod (1332)	coretransp%datainfo%putinfo%putmethod (string) (9.4.1.1.3)
putaccess (1332)	coretransp%datainfo%putinfo%putaccess (string) (9.4.1.1.3)
putlocation (1332)	coretransp%datainfo%putinfo%putlocation (string) (9.4.1.1.3)
rights (1332)	coretransp%datainfo%putinfo%rights (string) (9.4.1.1.3)
composition (1054)	coretransp%composition (composition) (9.4.1.3.83)
amn (1126)	coretransp%composition%amn (vecflt_type) (9.4.1.2.9)
zn (1126)	coretransp%composition%zn (vecflt_type) (9.4.1.2.9)
zion (1126)	coretransp%composition%zion (vecflt_type) (9.4.1.2.9)
imp_flag (1126)	coretransp%composition%imp_flag (vecint_type) (9.4.1.2.10)
label (1126)	coretransp%composition%label (vecstring_type) (9.4.1.2.11)
desc_impur (1054)	coretransp%desc_impur (desc_impur) (9.4.1.3.123)
amn (1166)	coretransp%desc_impur%amn (vecflt_type) (9.4.1.2.9)
zn (1166)	coretransp%desc_impur%zn (vecint_type) (9.4.1.2.10)
i_ion (1166)	coretransp%desc_impur%i_ion (vecint_type) (9.4.1.2.10)
nzimp (1166)	coretransp%desc_impur%nzimp (vecint_type) (9.4.1.2.10)
zmin (1166)	coretransp%desc_impur%zmin (matint_type) (9.4.1.2.8)
zmax (1166)	coretransp%desc_impur%zmax (matint_type) (9.4.1.2.8)
label (1166)	coretransp%desc_impur%label (vecstring_type) (9.4.1.2.11)
compositions (1054)	coretransp%compositions (compositions_type) (9.4.1.3.87)
nuclei (1130)	coretransp%compositions%nuclei(:) (nuclei) (9.4.1.3.258)
zn (1301)	coretransp%compositions%nuclei(:)%zn (float) (9.4.1.1.1)

amn (1301)	coretransp%compositions%nuclei(:)%amn (float) (9.4.1.1.1)
label (1301)	coretransp%compositions%nuclei(:)%label (string) (9.4.1.1.3)
ions (1130)	coretransp%compositions%ions(:) (ions) (9.4.1.3.218)
nucindex (1261)	coretransp%compositions%ions(:)%nucindex (integer) (9.4.1.1.2)
zion (1261)	coretransp%compositions%ions(:)%zion (float) (9.4.1.1.1)
imp_flag (1261)	coretransp%compositions%ions(:)%imp_flag (integer) (9.4.1.1.2)
label (1261)	coretransp%compositions%ions(:)%label (string) (9.4.1.1.3)
impurities (1130)	coretransp%compositions%impurities(:) (impurities) (9.4.1.3.215)
nucindex (1258)	coretransp%compositions%impurities(:)%nucindex (integer) (9.4.1.1.2)
i_ion (1258)	coretransp%compositions%impurities(:)%i_ion (integer) (9.4.1.1.2)
nzimp (1258)	coretransp%compositions%impurities(:)%nzimp (integer) (9.4.1.1.2)
zmin (1258)	coretransp%compositions%impurities(:)%zmin (vecflt_type) (9.4.1.2.9)
zmax (1258)	coretransp%compositions%impurities(:)%zmax (vecflt_type) (9.4.1.2.9)
label (1258)	coretransp%compositions%impurities(:)%label (vecstring_type) (9.4.1.2.11)
neutralscomp (1130)	coretransp%compositions%neutralscomp(:) (composition_neutralscomp) (9.4.1.3.86)
neutcomp (1129)	coretransp%compositions%neutralscomp(:)%neutcomp(:) (composition_neutrals_neutcomp) (9.4.1.3.85)
nucindex (1128)	coretransp%compositions%neutralscomp(:)%neutcomp(:)%nucindex (integer) (9.4.1.1.2)
multiplicity (1128)	coretransp%compositions%neutralscomp(:)%neutcomp(:)%multiplicity (integer) (9.4.1.1.2)
type (1129)	coretransp%compositions%neutralscomp(:)%type(:) (identifier) (9.4.1.3.213)
id (1256)	coretransp%compositions%neutralscomp(:)%type(:)%id (string) (9.4.1.1.3)
flag (1256)	coretransp%compositions%neutralscomp(:)%type(:)%flag (integer) (9.4.1.1.2)
description (1256)	coretransp%compositions%neutralscomp(:)%type(:)%description (string) (9.4.1.1.3)
label (1129)	coretransp%compositions%neutralscomp(:)%label (string) (9.4.1.1.3)
edgespecies (1130)	coretransp%compositions%edgespecies(:) (edgespecies) (9.4.1.3.169)
nucindex (1212)	coretransp%compositions%edgespecies(:)%nucindex (integer) (9.4.1.1.2)
zmin (1212)	coretransp%compositions%edgespecies(:)%zmin (float) (9.4.1.1.1)
zmax (1212)	coretransp%compositions%edgespecies(:)%zmax (float) (9.4.1.1.1)
label (1212)	coretransp%compositions%edgespecies(:)%label (string) (9.4.1.1.3)
signature (1130)	coretransp%compositions%signature (identifier) (9.4.1.3.213)
id (1256)	coretransp%compositions%signature%id (string) (9.4.1.1.3)
flag (1256)	coretransp%compositions%signature%flag (integer) (9.4.1.1.2)
description (1256)	coretransp%compositions%signature%description (string) (9.4.1.1.3)
values (1054)	coretransp%values(:) (coretransp_values) (9.4.1.3.115)
transportid (1158)	coretransp%values(:)%transportid (identifier) (9.4.1.3.213)
id (1256)	coretransp%values(:)%transportid%id (string) (9.4.1.1.3)
flag (1256)	coretransp%values(:)%transportid%flag (integer) (9.4.1.1.2)
description (1256)	coretransp%values(:)%transportid%description (string) (9.4.1.1.3)
rho_tor_norm (1158)	coretransp%values(:)%rho_tor_norm (vecflt_type) (9.4.1.2.9)
rho_tor (1158)	coretransp%values(:)%rho_tor (vecflt_type) (9.4.1.2.9)
sigma (1158)	coretransp%values(:)%sigma (vecflt_type) (9.4.1.2.9)
ni_transp (1158)	coretransp%values(:)%ni_transp (ni_transp) (9.4.1.3.257)
diff_eff (1300)	coretransp%values(:)%ni_transp%diff_eff (array3dflt_type) (9.4.1.2.1)
vconv_eff (1300)	coretransp%values(:)%ni_transp%vconv_eff (array3dflt_type) (9.4.1.2.1)
flux (1300)	coretransp%values(:)%ni_transp%flux (matflt_type) (9.4.1.2.7)
off_diagonal (1300)	coretransp%values(:)%ni_transp%off_diagonal (offdiagion) (9.4.1.3.261)
d_ni (1304)	coretransp%values(:)%ni_transp%off_diagonal%d_ni (array3dflt_type) (9.4.1.2.1)
d_ti (1304)	coretransp%values(:)%ni_transp%off_diagonal%d_ti (array3dflt_type) (9.4.1.2.1)
d_ne (1304)	coretransp%values(:)%ni_transp%off_diagonal%d_ne (matflt_type) (9.4.1.2.7)
d_te (1304)	coretransp%values(:)%ni_transp%off_diagonal%d_te (matflt_type) (9.4.1.2.7)
d_epar (1304)	coretransp%values(:)%ni_transp%off_diagonal%d_epar (matflt_type) (9.4.1.2.7)
d_mtor (1304)	coretransp%values(:)%ni_transp%off_diagonal%d_mtor (matflt_type) (9.4.1.2.7)
flag (1300)	coretransp%values(:)%ni_transp%flag (integer) (9.4.1.1.2)
ne_transp (1158)	coretransp%values(:)%ne_transp (ne_transp) (9.4.1.3.255)
diff_eff (1298)	coretransp%values(:)%ne_transp%diff_eff (matflt_type) (9.4.1.2.7)
vconv_eff (1298)	coretransp%values(:)%ne_transp%vconv_eff (matflt_type) (9.4.1.2.7)
flux (1298)	coretransp%values(:)%ne_transp%flux (vecflt_type) (9.4.1.2.9)
off_diagonal (1298)	coretransp%values(:)%ne_transp%off_diagonal (offdiagel) (9.4.1.3.260)
d_ni (1303)	coretransp%values(:)%ne_transp%off_diagonal%d_ni (matflt_type) (9.4.1.2.7)
d_ti (1303)	coretransp%values(:)%ne_transp%off_diagonal%d_ti (matflt_type) (9.4.1.2.7)
d_ne (1303)	coretransp%values(:)%ne_transp%off_diagonal%d_ne (vecflt_type) (9.4.1.2.9)
d_te (1303)	coretransp%values(:)%ne_transp%off_diagonal%d_te (vecflt_type) (9.4.1.2.9)

d_epar (1303)	coretransp%values(:)%ne_transp%off_diagonal%d_epar (vecflt_type) (9.4.1.2.9)
d_mtor (1303)	coretransp%values(:)%ne_transp%off_diagonal%d_mtor (vecflt_type) (9.4.1.2.9)
flag (1298)	coretransp%values(:)%ne_transp%flag (integer) (9.4.1.1.2)
nz_transp (1158)	coretransp%values(:)%nz_transp(:) (transcoefimp) (9.4.1.3.390)
diff_eff (1433)	coretransp%values(:)%nz_transp(:)%diff_eff (matflt_type) (9.4.1.2.7)
vconv_eff (1433)	coretransp%values(:)%nz_transp(:)%vconv_eff (matflt_type) (9.4.1.2.7)
exchange (1433)	coretransp%values(:)%nz_transp(:)%exchange (matflt_type) (9.4.1.2.7)
flux (1433)	coretransp%values(:)%nz_transp(:)%flux (matflt_type) (9.4.1.2.7)
flag (1433)	coretransp%values(:)%nz_transp(:)%flag (integer) (9.4.1.1.2)
ti_transp (1158)	coretransp%values(:)%ti_transp (transcoefion) (9.4.1.3.391)
diff_eff (1434)	coretransp%values(:)%ti_transp%diff_eff (matflt_type) (9.4.1.2.7)
vconv_eff (1434)	coretransp%values(:)%ti_transp%vconv_eff (matflt_type) (9.4.1.2.7)
exchange (1434)	coretransp%values(:)%ti_transp%exchange (matflt_type) (9.4.1.2.7)
qgi (1434)	coretransp%values(:)%ti_transp%qgi (matflt_type) (9.4.1.2.7)
flux (1434)	coretransp%values(:)%ti_transp%flux (matflt_type) (9.4.1.2.7)
off_diagonal (1434)	coretransp%values(:)%ti_transp%off_diagonal (offdiagion) (9.4.1.3.261)
d_ni (1304)	coretransp%values(:)%ti_transp%off_diagonal%d_ni (array3dflt_type) (9.4.1.2.1)
d_ti (1304)	coretransp%values(:)%ti_transp%off_diagonal%d_ti (array3dflt_type) (9.4.1.2.1)
d_ne (1304)	coretransp%values(:)%ti_transp%off_diagonal%d_ne (matflt_type) (9.4.1.2.7)
d_te (1304)	coretransp%values(:)%ti_transp%off_diagonal%d_te (matflt_type) (9.4.1.2.7)
d_epar (1304)	coretransp%values(:)%ti_transp%off_diagonal%d_epar (matflt_type) (9.4.1.2.7)
d_mtor (1304)	coretransp%values(:)%ti_transp%off_diagonal%d_mtor (matflt_type) (9.4.1.2.7)
flag (1434)	coretransp%values(:)%ti_transp%flag (integer) (9.4.1.1.2)
te_transp (1158)	coretransp%values(:)%te_transp (transcoefel) (9.4.1.3.389)
diff_eff (1432)	coretransp%values(:)%te_transp%diff_eff (vecflt_type) (9.4.1.2.9)
vconv_eff (1432)	coretransp%values(:)%te_transp%vconv_eff (vecflt_type) (9.4.1.2.9)
flux (1432)	coretransp%values(:)%te_transp%flux (vecflt_type) (9.4.1.2.9)
off_diagonal (1432)	coretransp%values(:)%te_transp%off_diagonal (offdiagel) (9.4.1.3.260)
d_ni (1303)	coretransp%values(:)%te_transp%off_diagonal%d_ni (matflt_type) (9.4.1.2.7)
d_ti (1303)	coretransp%values(:)%te_transp%off_diagonal%d_ti (matflt_type) (9.4.1.2.7)
d_ne (1303)	coretransp%values(:)%te_transp%off_diagonal%d_ne (vecflt_type) (9.4.1.2.9)
d_te (1303)	coretransp%values(:)%te_transp%off_diagonal%d_te (vecflt_type) (9.4.1.2.9)
d_epar (1303)	coretransp%values(:)%te_transp%off_diagonal%d_epar (vecflt_type) (9.4.1.2.9)
d_mtor (1303)	coretransp%values(:)%te_transp%off_diagonal%d_mtor (vecflt_type) (9.4.1.2.9)
flag (1432)	coretransp%values(:)%te_transp%flag (integer) (9.4.1.1.2)
tz_transp (1158)	coretransp%values(:)%tz_transp(:) (transcoefimp) (9.4.1.3.390)
diff_eff (1433)	coretransp%values(:)%tz_transp(:)%diff_eff (matflt_type) (9.4.1.2.7)
vconv_eff (1433)	coretransp%values(:)%tz_transp(:)%vconv_eff (matflt_type) (9.4.1.2.7)
exchange (1433)	coretransp%values(:)%tz_transp(:)%exchange (matflt_type) (9.4.1.2.7)
flux (1433)	coretransp%values(:)%tz_transp(:)%flux (matflt_type) (9.4.1.2.7)
flag (1433)	coretransp%values(:)%tz_transp(:)%flag (integer) (9.4.1.1.2)
vtor_transp (1158)	coretransp%values(:)%vtor_transp (transcoefvtor) (9.4.1.3.392)
diff_eff (1435)	coretransp%values(:)%vtor_transp%diff_eff (matflt_type) (9.4.1.2.7)
vconv_eff (1435)	coretransp%values(:)%vtor_transp%vconv_eff (matflt_type) (9.4.1.2.7)
flux (1435)	coretransp%values(:)%vtor_transp%flux (matflt_type) (9.4.1.2.7)
off_diagonal (1435)	coretransp%values(:)%vtor_transp%off_diagonal (offdiagion) (9.4.1.3.261)
d_ni (1304)	coretransp%values(:)%vtor_transp%off_diagonal%d_ni (array3dflt_type) (9.4.1.2.1)
d_ti (1304)	coretransp%values(:)%vtor_transp%off_diagonal%d_ti (array3dflt_type) (9.4.1.2.1)
d_ne (1304)	coretransp%values(:)%vtor_transp%off_diagonal%d_ne (matflt_type) (9.4.1.2.7)
d_te (1304)	coretransp%values(:)%vtor_transp%off_diagonal%d_te (matflt_type) (9.4.1.2.7)
d_epar (1304)	coretransp%values(:)%vtor_transp%off_diagonal%d_epar (matflt_type) (9.4.1.2.7)
d_mtor (1304)	coretransp%values(:)%vtor_transp%off_diagonal%d_mtor (matflt_type) (9.4.1.2.7)
flag (1435)	coretransp%values(:)%vtor_transp%flag (integer) (9.4.1.1.2)
codeparam (1158)	coretransp%values(:)%codeparam (codeparam) (9.4.1.3.65)
codename (1108)	coretransp%values(:)%codeparam%codename (string) (9.4.1.1.3)
codeversion (1108)	coretransp%values(:)%codeparam%codeversion (string) (9.4.1.1.3)
parameters (1108)	coretransp%values(:)%codeparam%parameters (string) (9.4.1.1.3)
output_diag (1108)	coretransp%values(:)%codeparam%output_diag (string) (9.4.1.1.3)
output_flag (1108)	coretransp%values(:)%codeparam%output_flag (integer) (9.4.1.1.2)
codeparam (1054)	coretransp%codeparam (codeparam) (9.4.1.3.65)
codename (1108)	coretransp%codeparam%codename (string) (9.4.1.1.3)

codeversion (1108)	coretransp%codeparam%codeversion (string) (9.4.1.1.3)
parameters (1108)	coretransp%codeparam%parameters (string) (9.4.1.1.3)
output_diag (1108)	coretransp%codeparam%output_diag (string) (9.4.1.1.3)
output_flag (1108)	coretransp%codeparam%output_flag (integer) (9.4.1.1.2)
time (1054)	coretransp%time (float) (9.4.1.1.1)

### 9.4.2.1.10 cxdia

datainfo (1055)	cxdiag%datainfo (datainfo) (9.4.1.3.120)
dataprovder (1163)	cxdiag%datainfo%dataprovder (string) (9.4.1.1.3)
putdate (1163)	cxdiag%datainfo%putdate (string) (9.4.1.1.3)
source (1163)	cxdiag%datainfo%source (string) (9.4.1.1.3)
comment (1163)	cxdiag%datainfo%comment (string) (9.4.1.1.3)
cocos (1163)	cxdiag%datainfo%cocos (integer) (9.4.1.1.2)
id (1163)	cxdiag%datainfo%id (integer) (9.4.1.1.2)
isref (1163)	cxdiag%datainfo%isref (integer) (9.4.1.1.2)
whatref (1163)	cxdiag%datainfo%whatref (whatref) (9.4.1.3.426)
user (1469)	cxdiag%datainfo%whatref%user (string) (9.4.1.1.3)
machine (1469)	cxdiag%datainfo%whatref%machine (string) (9.4.1.1.3)
shot (1469)	cxdiag%datainfo%whatref%shot (integer) (9.4.1.1.2)
run (1469)	cxdiag%datainfo%whatref%run (integer) (9.4.1.1.2)
occurrence (1469)	cxdiag%datainfo%whatref%occurrence (integer) (9.4.1.1.2)
putinfo (1163)	cxdiag%datainfo%putinfo (putinfo) (9.4.1.3.289)
putmethod (1332)	cxdiag%datainfo%putinfo%putmethod (string) (9.4.1.1.3)
putaccess (1332)	cxdiag%datainfo%putinfo%putaccess (string) (9.4.1.1.3)
putlocation (1332)	cxdiag%datainfo%putinfo%putlocation (string) (9.4.1.1.3)
rights (1332)	cxdiag%datainfo%putinfo%rights (string) (9.4.1.1.3)
setup (1055)	cxdiag%setup (cxsetup) (9.4.1.3.118)
position (1161)	cxdiag%setup%position (rzphi1Dexp) (9.4.1.3.326)
r (1369)	cxdiag%setup%position%r (exp1D) (9.4.1.3.180)
value (1223)	cxdiag%setup%position%r%value (vecflt.type) (9.4.1.2.9)
abserror (1223)	cxdiag%setup%position%r%abserror (vecflt.type) (9.4.1.2.9)
releror (1223)	cxdiag%setup%position%r%releror (vecflt.type) (9.4.1.2.9)
z (1369)	cxdiag%setup%position%z (exp1D) (9.4.1.3.180)
value (1223)	cxdiag%setup%position%z%value (vecflt.type) (9.4.1.2.9)
abserror (1223)	cxdiag%setup%position%z%abserror (vecflt.type) (9.4.1.2.9)
releror (1223)	cxdiag%setup%position%z%releror (vecflt.type) (9.4.1.2.9)
phi (1369)	cxdiag%setup%position%phi (exp1D) (9.4.1.3.180)
value (1223)	cxdiag%setup%position%phi%value (vecflt.type) (9.4.1.2.9)
abserror (1223)	cxdiag%setup%position%phi%abserror (vecflt.type) (9.4.1.2.9)
releror (1223)	cxdiag%setup%position%phi%releror (vecflt.type) (9.4.1.2.9)
measure (1055)	cxdiag%measure (cxmeasure) (9.4.1.3.117)
ti (1160)	cxdiag%measure%ti (exp1D) (9.4.1.3.180)
value (1223)	cxdiag%measure%ti%value (vecflt.type) (9.4.1.2.9)
abserror (1223)	cxdiag%measure%ti%abserror (vecflt.type) (9.4.1.2.9)
releror (1223)	cxdiag%measure%ti%releror (vecflt.type) (9.4.1.2.9)
vtr (1160)	cxdiag%measure%vtr (exp1D) (9.4.1.3.180)
value (1223)	cxdiag%measure%vtr%value (vecflt.type) (9.4.1.2.9)
abserror (1223)	cxdiag%measure%vtr%abserror (vecflt.type) (9.4.1.2.9)
releror (1223)	cxdiag%measure%vtr%releror (vecflt.type) (9.4.1.2.9)
vpol (1160)	cxdiag%measure%vpol (exp1D) (9.4.1.3.180)
value (1223)	cxdiag%measure%vpol%value (vecflt.type) (9.4.1.2.9)
abserror (1223)	cxdiag%measure%vpol%abserror (vecflt.type) (9.4.1.2.9)
releror (1223)	cxdiag%measure%vpol%releror (vecflt.type) (9.4.1.2.9)
time (1055)	cxdiag%time (float) (9.4.1.1.1)

### 9.4.2.1.11 distribution

datainfo (1056)	distribution%datainfo (datainfo) (9.4.1.3.120)
dataprovder (1163)	distribution%datainfo%dataprovder (string) (9.4.1.1.3)
putdate (1163)	distribution%datainfo%putdate (string) (9.4.1.1.3)

source (1163)	distribution%datainfo%source (string) (9.4.1.1.3)
comment (1163)	distribution%datainfo%comment (string) (9.4.1.1.3)
cocos (1163)	distribution%datainfo%cocos (integer) (9.4.1.1.2)
id (1163)	distribution%datainfo%id (integer) (9.4.1.1.2)
isref (1163)	distribution%datainfo%isref (integer) (9.4.1.1.2)
whatref (1163)	distribution%datainfo%whatref (whatref) (9.4.1.3.426)
user (1469)	distribution%datainfo%whatref%user (string) (9.4.1.1.3)
machine (1469)	distribution%datainfo%whatref%machine (string) (9.4.1.1.3)
shot (1469)	distribution%datainfo%whatref%shot (integer) (9.4.1.1.2)
run (1469)	distribution%datainfo%whatref%run (integer) (9.4.1.1.2)
occurrence (1469)	distribution%datainfo%whatref%occurrence (integer) (9.4.1.1.2)
putinfo (1163)	distribution%datainfo%putinfo (putinfo) (9.4.1.3.289)
putmethod (1332)	distribution%datainfo%putinfo%putmethod (string) (9.4.1.1.3)
putaccess (1332)	distribution%datainfo%putinfo%putaccess (string) (9.4.1.1.3)
putlocation (1332)	distribution%datainfo%putinfo%putlocation (string) (9.4.1.1.3)
rights (1332)	distribution%datainfo%putinfo%rights (string) (9.4.1.1.3)
composition (1056)	distribution%composition (composition) (9.4.1.3.83)
amn (1126)	distribution%composition%amn (vecflt.type) (9.4.1.2.9)
zn (1126)	distribution%composition%zn (vecflt.type) (9.4.1.2.9)
zion (1126)	distribution%composition%zion (vecflt.type) (9.4.1.2.9)
imp_flag (1126)	distribution%composition%imp_flag (vecint.type) (9.4.1.2.10)
label (1126)	distribution%composition%label (vecstring.type) (9.4.1.2.11)
compositions (1056)	distribution%compositions (compositions.type) (9.4.1.3.87)
nuclei (1130)	distribution%compositions%nuclei(:) (nuclei) (9.4.1.3.258)
zn (1301)	distribution%compositions%nuclei(:)%zn (float) (9.4.1.1.1)
amn (1301)	distribution%compositions%nuclei(:)%amn (float) (9.4.1.1.1)
label (1301)	distribution%compositions%nuclei(:)%label (string) (9.4.1.1.3)
ions (1130)	distribution%compositions%ions(:) (ions) (9.4.1.3.218)
nucindex (1261)	distribution%compositions%ions(:)%nucindex (integer) (9.4.1.1.2)
zion (1261)	distribution%compositions%ions(:)%zion (float) (9.4.1.1.1)
imp_flag (1261)	distribution%compositions%ions(:)%imp_flag (integer) (9.4.1.1.2)
label (1261)	distribution%compositions%ions(:)%label (string) (9.4.1.1.3)
impurities (1130)	distribution%compositions%impurities(:) (impurities) (9.4.1.3.215)
nucindex (1258)	distribution%compositions%impurities(:)%nucindex (integer) (9.4.1.1.2)
i_ion (1258)	distribution%compositions%impurities(:)%i_ion (integer) (9.4.1.1.2)
nzimp (1258)	distribution%compositions%impurities(:)%nzimp (integer) (9.4.1.1.2)
zmin (1258)	distribution%compositions%impurities(:)%zmin (vecflt.type) (9.4.1.2.9)
zmax (1258)	distribution%compositions%impurities(:)%zmax (vecflt.type) (9.4.1.2.9)
label (1258)	distribution%compositions%impurities(:)%label (vecstring.type) (9.4.1.2.11)
neutralscomp (1130)	distribution%compositions%neutralscomp(:) (composition_neutralscomp) (9.4.1.3.86)
neutcomp (1129)	distribution%compositions%neutralscomp(:)%neutcomp(:) (composition_neutrals_neutcomp) (9.4.1.3.85)
nucindex (1128)	distribution%compositions%neutralscomp(:)%neutcomp(:)%nucindex (integer) (9.4.1.1.2)
multiplicity (1128)	distribution%compositions%neutralscomp(:)%neutcomp(:)%multiplicity (integer) (9.4.1.1.2)
type (1129)	distribution%compositions%neutralscomp(:)%type(:) (identifier) (9.4.1.3.213)
id (1256)	distribution%compositions%neutralscomp(:)%type(:)%id (string) (9.4.1.1.3)
flag (1256)	distribution%compositions%neutralscomp(:)%type(:)%flag (integer) (9.4.1.1.2)
description (1256)	distribution%compositions%neutralscomp(:)%type(:)%description (string) (9.4.1.1.3)
label (1129)	distribution%compositions%neutralscomp(:)%label (string) (9.4.1.1.3)
edgespecies (1130)	distribution%compositions%edgespecies(:) (edgespecies) (9.4.1.3.169)
nucindex (1212)	distribution%compositions%edgespecies(:)%nucindex (integer) (9.4.1.1.2)
zmin (1212)	distribution%compositions%edgespecies(:)%zmin (float) (9.4.1.1.1)
zmax (1212)	distribution%compositions%edgespecies(:)%zmax (float) (9.4.1.1.1)
label (1212)	distribution%compositions%edgespecies(:)%label (string) (9.4.1.1.3)
signature (1130)	distribution%compositions%signature (identifier) (9.4.1.3.213)
id (1256)	distribution%compositions%signature%id (string) (9.4.1.1.3)
flag (1256)	distribution%compositions%signature%flag (integer) (9.4.1.1.2)
description (1256)	distribution%compositions%signature%description (string) (9.4.1.1.3)
distri_vec (1056)	distribution%distri_vec(:) (distri_vec) (9.4.1.3.150)
wave_id (1193)	distribution%distri_vec(:)%wave_id(:) (enum_instance) (9.4.1.3.172)
type (1215)	distribution%distri_vec(:)%wave_id(:)%type (identifier) (9.4.1.3.213)
id (1256)	distribution%distri_vec(:)%wave_id(:)%type%id (string) (9.4.1.1.3)

flag (1256)	distribution%distri_vec(:)%wave_id(:)%type%flag (integer) (9.4.1.1.2)
description (1256)	distribution%distri_vec(:)%wave_id(:)%type%description (string) (9.4.1.1.3)
name (1215)	distribution%distri_vec(:)%wave_id(:)%name (string) (9.4.1.1.3)
index (1215)	distribution%distri_vec(:)%wave_id(:)%index (integer) (9.4.1.1.2)
source_id (1193)	distribution%distri_vec(:)%source_id(:) (enum_instance) (9.4.1.3.172)
type (1215)	distribution%distri_vec(:)%source_id(:)%type (identifier) (9.4.1.3.213)
id (1256)	distribution%distri_vec(:)%source_id(:)%type%id (string) (9.4.1.1.3)
flag (1256)	distribution%distri_vec(:)%source_id(:)%type%flag (integer) (9.4.1.1.2)
description (1256)	distribution%distri_vec(:)%source_id(:)%type%description (string) (9.4.1.1.3)
name (1215)	distribution%distri_vec(:)%source_id(:)%name (string) (9.4.1.1.3)
index (1215)	distribution%distri_vec(:)%source_id(:)%index (integer) (9.4.1.1.2)
calc_spec (1193)	distribution%distri_vec(:)%calc_spec (integer) (9.4.1.1.2)
gyro_type (1193)	distribution%distri_vec(:)%gyro_type (integer) (9.4.1.1.2)
global_param (1193)	distribution%distri_vec(:)%global_param (dist_glob) (9.4.1.3.130)
n_particles (1173)	distribution%distri_vec(:)%global_param%n_particles (float) (9.4.1.1.1)
eng (1173)	distribution%distri_vec(:)%global_param%eng (float) (9.4.1.1.1)
eng_para (1173)	distribution%distri_vec(:)%global_param%eng_para (float) (9.4.1.1.1)
pow_coll_i (1173)	distribution%distri_vec(:)%global_param%pow_coll_i (vecflt_type) (9.4.1.2.9)
pow_coll_e (1173)	distribution%distri_vec(:)%global_param%pow_coll_e (float) (9.4.1.1.1)
therm_src (1173)	distribution%distri_vec(:)%global_param%therm_src (dist_src_snk_tot) (9.4.1.3.147)
particles (1190)	distribution%distri_vec(:)%global_param%therm_src%particles (float) (9.4.1.1.1)
power (1190)	distribution%distri_vec(:)%global_param%therm_src%power (float) (9.4.1.1.1)
torque (1190)	distribution%distri_vec(:)%global_param%therm_src%torque (float) (9.4.1.1.1)
losses (1173)	distribution%distri_vec(:)%global_param%losses (dist_glob_dist_losses) (9.4.1.3.131)
orb_loss (1174)	distribution%distri_vec(:)%global_param%losses%orb_loss (dist_src_snk_tot) (9.4.1.3.147)
particles (1190)	distribution%distri_vec(:)%global_param%losses%orb_loss%particles (float) (9.4.1.1.1)
power (1190)	distribution%distri_vec(:)%global_param%losses%orb_loss%power (float) (9.4.1.1.1)
torque (1190)	distribution%distri_vec(:)%global_param%losses%orb_loss%torque (float) (9.4.1.1.1)
neutr_loss (1174)	distribution%distri_vec(:)%global_param%losses%neutr_loss (dist_src_snk_tot) (9.4.1.3.147)
particles (1190)	distribution%distri_vec(:)%global_param%losses%neutr_loss%particles (float) (9.4.1.1.1)
power (1190)	distribution%distri_vec(:)%global_param%losses%neutr_loss%power (float) (9.4.1.1.1)
torque (1190)	distribution%distri_vec(:)%global_param%losses%neutr_loss%torque (float) (9.4.1.1.1)
cur_dr_tor (1173)	distribution%distri_vec(:)%global_param%cur_dr_tor (float) (9.4.1.1.1)
trq_i (1173)	distribution%distri_vec(:)%global_param%trq_i (vecflt_type) (9.4.1.2.9)
trq_e (1173)	distribution%distri_vec(:)%global_param%trq_e (float) (9.4.1.1.1)
trq_j_rxb (1173)	distribution%distri_vec(:)%global_param%trq_j_rxb (float) (9.4.1.1.1)
nucl_reac_th (1173)	distribution%distri_vec(:)%global_param%nucl_reac_th (dist_nucl_reac_th) (9.4.1.3.137)
rate (1180)	distribution%distri_vec(:)%global_param%nucl_reac_th%rate (vecflt_type) (9.4.1.2.9)
power (1180)	distribution%distri_vec(:)%global_param%nucl_reac_th%power (vecflt_type) (9.4.1.2.9)
nucl_reac_sf (1173)	distribution%distri_vec(:)%global_param%nucl_reac_sf (dist_nucl_reac_sf) (9.4.1.3.136)
rate (1179)	distribution%distri_vec(:)%global_param%nucl_reac_sf%rate (float) (9.4.1.1.1)
power (1179)	distribution%distri_vec(:)%global_param%nucl_reac_sf%power (float) (9.4.1.1.1)
profiles_1d (1193)	distribution%distri_vec(:)%profiles_1d (dist_profiles) (9.4.1.3.145)
rho_tor_norm (1188)	distribution%distri_vec(:)%profiles_1d%rho_tor_norm (vecflt_type) (9.4.1.2.9)
rho_tor (1188)	distribution%distri_vec(:)%profiles_1d%rho_tor (vecflt_type) (9.4.1.2.9)
psi (1188)	distribution%distri_vec(:)%profiles_1d%psi (vecflt_type) (9.4.1.2.9)
dens (1188)	distribution%distri_vec(:)%profiles_1d%dens (vecflt_type) (9.4.1.2.9)
engrd_tot (1188)	distribution%distri_vec(:)%profiles_1d%engrd_tot (vecflt_type) (9.4.1.2.9)
engrd_para (1188)	distribution%distri_vec(:)%profiles_1d%engrd_para (vecflt_type) (9.4.1.2.9)
powd_coll_i (1188)	distribution%distri_vec(:)%profiles_1d%powd_coll_i (matflt_type) (9.4.1.2.7)
powd_coll_e (1188)	distribution%distri_vec(:)%profiles_1d%powd_coll_e (vecflt_type) (9.4.1.2.9)
therm_srcd (1188)	distribution%distri_vec(:)%profiles_1d%therm_srcd (dist_src_snk_surf) (9.4.1.3.146)
particled (1189)	distribution%distri_vec(:)%profiles_1d%therm_srcd%particled (vecflt_type) (9.4.1.2.9)
powerd (1189)	distribution%distri_vec(:)%profiles_1d%therm_srcd%powerd (vecflt_type) (9.4.1.2.9)
torqued (1189)	distribution%distri_vec(:)%profiles_1d%therm_srcd%torqued (vecflt_type) (9.4.1.2.9)
lossesd (1188)	distribution%distri_vec(:)%profiles_1d%lossesd (dist_prof_surf_dist_losses) (9.4.1.3.139)
orb_loss (1182)	distribution%distri_vec(:)%profiles_1d%lossesd%orb_loss (dist_src_snk_surf) (9.4.1.3.146)
particled (1189)	distribution%distri_vec(:)%profiles_1d%lossesd%orb_loss%particled (vecflt_type) (9.4.1.2.9)
powerd (1189)	distribution%distri_vec(:)%profiles_1d%lossesd%orb_loss%powerd (vecflt_type) (9.4.1.2.9)
torqued (1189)	distribution%distri_vec(:)%profiles_1d%lossesd%orb_loss%torqued (vecflt_type) (9.4.1.2.9)
neutr_loss (1182)	distribution%distri_vec(:)%profiles_1d%lossesd%neutr_loss (dist_src_snk_surf) (9.4.1.3.146)



particlesd (1189)	distribution%distri_vec(:)%profiles_1d%losses%neutr_loss%particlesd (vecflt.type) (9.4.1.2.9)
powerd (1189)	distribution%distri_vec(:)%profiles_1d%losses%neutr_loss%powerd (vecflt.type) (9.4.1.2.9)
torqued (1189)	distribution%distri_vec(:)%profiles_1d%losses%neutr_loss%torqued (vecflt.type) (9.4.1.2.9)
curd_fp (1188)	distribution%distri_vec(:)%profiles_1d%curd_fp (vecflt.type) (9.4.1.2.9)
curd_dr (1188)	distribution%distri_vec(:)%profiles_1d%curd_dr (vecflt.type) (9.4.1.2.9)
trqd_i (1188)	distribution%distri_vec(:)%profiles_1d%trqd_i (matflt.type) (9.4.1.2.7)
trqd_e (1188)	distribution%distri_vec(:)%profiles_1d%trqd_e (vecflt.type) (9.4.1.2.9)
trqd_jrxb (1188)	distribution%distri_vec(:)%profiles_1d%trqd_jrxb (vecflt.type) (9.4.1.2.9)
nucl_rd_th (1188)	distribution%distri_vec(:)%profiles_1d%nucl_rd_th (dist_prof_surf_nucl_reac_th) (9.4.1.3.141)
rated (1184)	distribution%distri_vec(:)%profiles_1d%nucl_rd_th%rated (matflt.type) (9.4.1.2.7)
powerd (1184)	distribution%distri_vec(:)%profiles_1d%nucl_rd_th%powerd (matflt.type) (9.4.1.2.7)
nucl_rd_sf (1188)	distribution%distri_vec(:)%profiles_1d%nucl_rd_sf (dist_prof_surf_nucl_reac_sf) (9.4.1.3.140)
rate (1183)	distribution%distri_vec(:)%profiles_1d%nucl_rd_sf%rate (vecflt.type) (9.4.1.2.9)
power (1183)	distribution%distri_vec(:)%profiles_1d%nucl_rd_sf%power (vecflt.type) (9.4.1.2.9)
enrg_tot (1188)	distribution%distri_vec(:)%profiles_1d%enrg_tot (vecflt.type) (9.4.1.2.9)
enrg_para (1188)	distribution%distri_vec(:)%profiles_1d%enrg_para (vecflt.type) (9.4.1.2.9)
pow_coll_i (1188)	distribution%distri_vec(:)%profiles_1d%pow_coll_i (matflt.type) (9.4.1.2.7)
pow_coll_e (1188)	distribution%distri_vec(:)%profiles_1d%pow_coll_e (vecflt.type) (9.4.1.2.9)
therm_src (1188)	distribution%distri_vec(:)%profiles_1d%therm_src (dist_src_snk_vol) (9.4.1.3.148)
particles (1191)	distribution%distri_vec(:)%profiles_1d%therm_src%particles (vecflt.type) (9.4.1.2.9)
power (1191)	distribution%distri_vec(:)%profiles_1d%therm_src%power (vecflt.type) (9.4.1.2.9)
torque (1191)	distribution%distri_vec(:)%profiles_1d%therm_src%torque (vecflt.type) (9.4.1.2.9)
losses (1188)	distribution%distri_vec(:)%profiles_1d%losses (dist_prof_vol_dist_losses) (9.4.1.3.142)
orb_loss (1185)	distribution%distri_vec(:)%profiles_1d%losses%orb_loss (dist_src_snk_vol) (9.4.1.3.148)
particles (1191)	distribution%distri_vec(:)%profiles_1d%losses%orb_loss%particles (vecflt.type) (9.4.1.2.9)
power (1191)	distribution%distri_vec(:)%profiles_1d%losses%orb_loss%power (vecflt.type) (9.4.1.2.9)
torque (1191)	distribution%distri_vec(:)%profiles_1d%losses%orb_loss%torque (vecflt.type) (9.4.1.2.9)
neutr_loss (1185)	distribution%distri_vec(:)%profiles_1d%losses%neutr_loss (dist_src_snk_vol) (9.4.1.3.148)
particles (1191)	distribution%distri_vec(:)%profiles_1d%losses%neutr_loss%particles (vecflt.type) (9.4.1.2.9)
power (1191)	distribution%distri_vec(:)%profiles_1d%losses%neutr_loss%power (vecflt.type) (9.4.1.2.9)
torque (1191)	distribution%distri_vec(:)%profiles_1d%losses%neutr_loss%torque (vecflt.type) (9.4.1.2.9)
cur_fp (1188)	distribution%distri_vec(:)%profiles_1d%cur_fp (vecflt.type) (9.4.1.2.9)
cur_dr (1188)	distribution%distri_vec(:)%profiles_1d%cur_dr (vecflt.type) (9.4.1.2.9)
trq_i (1188)	distribution%distri_vec(:)%profiles_1d%trq_i (matflt.type) (9.4.1.2.7)
trq_e (1188)	distribution%distri_vec(:)%profiles_1d%trq_e (vecflt.type) (9.4.1.2.9)
trq_j_rxb (1188)	distribution%distri_vec(:)%profiles_1d%trq_j_rxb (vecflt.type) (9.4.1.2.9)
nucl_reac_th (1188)	distribution%distri_vec(:)%profiles_1d%nucl_reac_th (dist_prof_vol_nucl_reac_th) (9.4.1.3.144)
rate (1187)	distribution%distri_vec(:)%profiles_1d%nucl_reac_th%rate (matflt.type) (9.4.1.2.7)
power (1187)	distribution%distri_vec(:)%profiles_1d%nucl_reac_th%power (matflt.type) (9.4.1.2.7)
nucl_reac_sf (1188)	distribution%distri_vec(:)%profiles_1d%nucl_reac_sf (dist_prof_vol_nucl_reac_sf) (9.4.1.3.143)
rate (1186)	distribution%distri_vec(:)%profiles_1d%nucl_reac_sf%rate (vecflt.type) (9.4.1.2.9)
power (1186)	distribution%distri_vec(:)%profiles_1d%nucl_reac_sf%power (vecflt.type) (9.4.1.2.9)
dist_func (1193)	distribution%distri_vec(:)%dist_func (dist_func) (9.4.1.3.129)
is_delta_f (1172)	distribution%distri_vec(:)%dist_func%is_delta_f (integer) (9.4.1.1.2)
markers (1172)	distribution%distri_vec(:)%dist_func%markers (weighted_markers) (9.4.1.3.425)
variable_ids (1468)	distribution%distri_vec(:)%dist_func%markers%variable_ids(:) (identifier) (9.4.1.3.213)
id (1256)	distribution%distri_vec(:)%dist_func%markers%variable_ids(:)%id (string) (9.4.1.1.3)
flag (1256)	distribution%distri_vec(:)%dist_func%markers%variable_ids(:)%flag (integer) (9.4.1.1.2)
description (1256)	distribution%distri_vec(:)%dist_func%markers%variable_ids(:)%description (string) (9.4.1.1.3)
coord (1468)	distribution%distri_vec(:)%dist_func%markers%coord (matflt.type) (9.4.1.2.7)
weight (1468)	distribution%distri_vec(:)%dist_func%markers%weight (vecflt.type) (9.4.1.2.9)
f_expan_topo (1172)	distribution%distri_vec(:)%dist_func%f_expan_topo(:) (dist_ff) (9.4.1.3.128)
grid_info (1171)	distribution%distri_vec(:)%dist_func%f_expan_topo(:)%grid_info (dist_grid_info) (9.4.1.3.132)
grid_type (1175)	distribution%distri_vec(:)%dist_func%f_expan_topo(:)%grid_info%grid_type (integer) (9.4.1.1.2)
ngriddim (1175)	distribution%distri_vec(:)%dist_func%f_expan_topo(:)%grid_info%ngriddim (integer) (9.4.1.1.2)
grid_coord (1175)	distribution%distri_vec(:)%dist_func%f_expan_topo(:)%grid_info%grid_coord (vecint.type) (9.4.1.2.10)
thin_orbits (1175)	distribution%distri_vec(:)%dist_func%f_expan_topo(:)%grid_info%thin_orbits (integer) (9.4.1.1.2)
topology (1175)	distribution%distri_vec(:)%dist_func%f_expan_topo(:)%grid_info%topology (string) (9.4.1.1.3)

omnigen_surf (1175)	distribution%distri_vec(:)%dist_func%of_expan_topo(:)%grid_info%omnigen_surf(:) (omnigen_surf) (9.4.1.3.262)
rz (1305)	distribution%distri_vec(:)%dist_func%of_expan_topo(:)%grid_info%omnigen_surf(:)%rz (rz1D) (9.4.1.3.319)
r (1362)	distribution%distri_vec(:)%dist_func%of_expan_topo(:)%grid_info%omnigen_surf(:)%rz%r (vecflt_type) (9.4.1.2.9)
z (1362)	distribution%distri_vec(:)%dist_func%of_expan_topo(:)%grid_info%omnigen_surf(:)%rz%z (vecflt_type) (9.4.1.2.9)
s (1305)	distribution%distri_vec(:)%dist_func%of_expan_topo(:)%grid_info%omnigen_surf(:)%s (vecflt_type) (9.4.1.2.9)
topo_regions (1171)	distribution%distri_vec(:)%dist_func%of_expan_topo(:)%topo_regions(:) (topo_regions) (9.4.1.3.386)
ind_omnigen (1429)	distribution%distri_vec(:)%dist_func%of_expan_topo(:)%topo_regions(:)%ind_omnigen (integer) (9.4.1.1.2)
dim1 (1429)	distribution%distri_vec(:)%dist_func%of_expan_topo(:)%topo_regions(:)%dim1 (array6dflt_type) (9.4.1.2.5)
dim2 (1429)	distribution%distri_vec(:)%dist_func%of_expan_topo(:)%topo_regions(:)%dim2 (array6dflt_type) (9.4.1.2.5)
dim3 (1429)	distribution%distri_vec(:)%dist_func%of_expan_topo(:)%topo_regions(:)%dim3 (array6dflt_type) (9.4.1.2.5)
dim4 (1429)	distribution%distri_vec(:)%dist_func%of_expan_topo(:)%topo_regions(:)%dim4 (array6dflt_type) (9.4.1.2.5)
dim5 (1429)	distribution%distri_vec(:)%dist_func%of_expan_topo(:)%topo_regions(:)%dim5 (array6dflt_type) (9.4.1.2.5)
dim6 (1429)	distribution%distri_vec(:)%dist_func%of_expan_topo(:)%topo_regions(:)%dim6 (array6dflt_type) (9.4.1.2.5)
jacobian (1429)	distribution%distri_vec(:)%dist_func%of_expan_topo(:)%topo_regions(:)%jacobian (array6dflt_type) (9.4.1.2.5)
distfunc (1429)	distribution%distri_vec(:)%dist_func%of_expan_topo(:)%topo_regions(:)%distfunc (array6dflt_type) (9.4.1.2.5)
f_expansion (1172)	distribution%distri_vec(:)%dist_func%of_expansion(:) (f_expansion) (9.4.1.3.182)
grid (1225)	distribution%distri_vec(:)%dist_func%of_expansion(:)%grid (complexgrid) (9.4.1.3.70)
uid (1113)	distribution%distri_vec(:)%dist_func%of_expansion(:)%grid%uid (integer) (9.4.1.1.2)
id (1113)	distribution%distri_vec(:)%dist_func%of_expansion(:)%grid%id (string) (9.4.1.1.3)
spaces (1113)	distribution%distri_vec(:)%dist_func%of_expansion(:)%grid%spaces(:) (complexgrid_space) (9.4.1.3.79)
geotype (1122)	distribution%distri_vec(:)%dist_func%of_expansion(:)%grid%spaces(:)%geotype (vecint_type) (9.4.1.2.10)
geotypeid (1122)	distribution%distri_vec(:)%dist_func%of_expansion(:)%grid%spaces(:)%geotypeid (vecstring_type) (9.4.1.2.11)
coordtype (1122)	distribution%distri_vec(:)%dist_func%of_expansion(:)%grid%spaces(:)%coordtype (matint_type) (9.4.1.2.8)
objects (1122)	distribution%distri_vec(:)%dist_func%of_expansion(:)%grid%spaces(:)%objects(:) (objects) (9.4.1.3.259)
boundary (1302)	distribution%distri_vec(:)%dist_func%of_expansion(:)%grid%spaces(:)%objects(:)%boundary (matint_type) (9.4.1.2.8)
neighbour (1302)	distribution%distri_vec(:)%dist_func%of_expansion(:)%grid%spaces(:)%objects(:)%neighbour (array3dint_type) (9.4.1.2.2)
geo (1302)	distribution%distri_vec(:)%dist_func%of_expansion(:)%grid%spaces(:)%objects(:)%geo (array4dflt_type) (9.4.1.2.3)
measure (1302)	distribution%distri_vec(:)%dist_func%of_expansion(:)%grid%spaces(:)%objects(:)%measure (matflt_type) (9.4.1.2.7)
xpoints (1122)	distribution%distri_vec(:)%dist_func%of_expansion(:)%grid%spaces(:)%xpoints (vecint_type) (9.4.1.2.10)
subgrids (1113)	distribution%distri_vec(:)%dist_func%of_expansion(:)%grid%subgrids(:) (complexgrid_subgrid) (9.4.1.3.80)
id (1123)	distribution%distri_vec(:)%dist_func%of_expansion(:)%grid%subgrids(:)%id (string) (9.4.1.1.3)
list (1123)	distribution%distri_vec(:)%dist_func%of_expansion(:)%grid%subgrids(:)%list(:) (complexgrid_objectlist) (9.4.1.3.74)
cls (1117)	distribution%distri_vec(:)%dist_func%of_expansion(:)%grid%subgrids(:)%list(:)%cls (vecint_type) (9.4.1.2.10)
indset (1117)	distribution%distri_vec(:)%dist_func%of_expansion(:)%grid%subgrids(:)%list(:)%indset(:) (complexgrid_indexlist) (9.4.1.3.72)
range (1115)	distribution%distri_vec(:)%dist_func%of_expansion(:)%grid%subgrids(:)%list(:)%indset(:)%range (vecint_type) (9.4.1.2.10)
ind (1115)	distribution%distri_vec(:)%dist_func%of_expansion(:)%grid%subgrids(:)%list(:)%indset(:)%ind (vecint_type) (9.4.1.2.10)
ind (1117)	distribution%distri_vec(:)%dist_func%of_expansion(:)%grid%subgrids(:)%list(:)%ind (matint_type) (9.4.1.2.8)
metric (1113)	distribution%distri_vec(:)%dist_func%of_expansion(:)%grid%metric (complexgrid_metric) (9.4.1.3.73)
measure (1116)	distribution%distri_vec(:)%dist_func%of_expansion(:)%grid%metric%measure(:) (complexgrid_scalar) (9.4.1.3.75)





subgrid (1118)	distribution%distri_vec(:)%dist_func%of_expansion(:)%grid%metric%g33(:)%subgrid (integer) (9.4.1.1.2)
scalar (1118)	distribution%distri_vec(:)%dist_func%of_expansion(:)%grid%metric%g33(:)%scalar (vecflt_type) (9.4.1.2.9)
vector (1118)	distribution%distri_vec(:)%dist_func%of_expansion(:)%grid%metric%g33(:)%vector (matflt_type) (9.4.1.2.7)
matrix (1118)	distribution%distri_vec(:)%dist_func%of_expansion(:)%grid%metric%g33(:)%matrix (array3dflt_type) (9.4.1.2.1)
jacobian (1116)	distribution%distri_vec(:)%dist_func%of_expansion(:)%grid%metric%jacobian(:) (complex_grid_scalar) (9.4.1.3.75)
griduid (1118)	distribution%distri_vec(:)%dist_func%of_expansion(:)%grid%metric%jacobian(:)%griduid (integer) (9.4.1.1.2)
subgrid (1118)	distribution%distri_vec(:)%dist_func%of_expansion(:)%grid%metric%jacobian(:)%subgrid (integer) (9.4.1.1.2)
scalar (1118)	distribution%distri_vec(:)%dist_func%of_expansion(:)%grid%metric%jacobian(:)%scalar (vecflt_type) (9.4.1.2.9)
vector (1118)	distribution%distri_vec(:)%dist_func%of_expansion(:)%grid%metric%jacobian(:)%vector (matflt_type) (9.4.1.2.7)
matrix (1118)	distribution%distri_vec(:)%dist_func%of_expansion(:)%grid%metric%jacobian(:)%matrix (array3dflt_type) (9.4.1.2.1)
geo (1113)	distribution%distri_vec(:)%dist_func%of_expansion(:)%grid%geo(:) (complexgrid_geo_global) (9.4.1.3.71)
geotype (1114)	distribution%distri_vec(:)%dist_func%of_expansion(:)%grid%geo(:)%geotype (integer) (9.4.1.1.2)
geotypeid (1114)	distribution%distri_vec(:)%dist_func%of_expansion(:)%grid%geo(:)%geotypeid (string) (9.4.1.1.3)
coordtype (1114)	distribution%distri_vec(:)%dist_func%of_expansion(:)%grid%geo(:)%coordtype (vecint_type) (9.4.1.2.10)
geo_matrix (1114)	distribution%distri_vec(:)%dist_func%of_expansion(:)%grid%geo(:)%geo_matrix(:) (complex_grid_scalar) (9.4.1.3.75)
griduid (1118)	distribution%distri_vec(:)%dist_func%of_expansion(:)%grid%geo(:)%geo_matrix(:)%griduid (integer) (9.4.1.1.2)
subgrid (1118)	distribution%distri_vec(:)%dist_func%of_expansion(:)%grid%geo(:)%geo_matrix(:)%subgrid (integer) (9.4.1.1.2)
scalar (1118)	distribution%distri_vec(:)%dist_func%of_expansion(:)%grid%geo(:)%geo_matrix(:)%scalar (vecflt_type) (9.4.1.2.9)
vector (1118)	distribution%distri_vec(:)%dist_func%of_expansion(:)%grid%geo(:)%geo_matrix(:)%vector (matflt_type) (9.4.1.2.7)
matrix (1118)	distribution%distri_vec(:)%dist_func%of_expansion(:)%grid%geo(:)%geo_matrix(:)%matrix (array3dflt_type) (9.4.1.2.1)
measure (1114)	distribution%distri_vec(:)%dist_func%of_expansion(:)%grid%geo(:)%measure(:) (complex_grid_scalar) (9.4.1.3.75)
griduid (1118)	distribution%distri_vec(:)%dist_func%of_expansion(:)%grid%geo(:)%measure(:)%griduid (integer) (9.4.1.1.2)
subgrid (1118)	distribution%distri_vec(:)%dist_func%of_expansion(:)%grid%geo(:)%measure(:)%subgrid (integer) (9.4.1.1.2)
scalar (1118)	distribution%distri_vec(:)%dist_func%of_expansion(:)%grid%geo(:)%measure(:)%scalar (vecflt_type) (9.4.1.2.9)
vector (1118)	distribution%distri_vec(:)%dist_func%of_expansion(:)%grid%geo(:)%measure(:)%vector (matflt_type) (9.4.1.2.7)
matrix (1118)	distribution%distri_vec(:)%dist_func%of_expansion(:)%grid%geo(:)%measure(:)%matrix (array3dflt_type) (9.4.1.2.1)
bases (1113)	distribution%distri_vec(:)%dist_func%of_expansion(:)%grid%bases(:) (complexgrid_vector) (9.4.1.3.81)
griduid (1124)	distribution%distri_vec(:)%dist_func%of_expansion(:)%grid%bases(:)%griduid (integer) (9.4.1.1.2)
label (1124)	distribution%distri_vec(:)%dist_func%of_expansion(:)%grid%bases(:)%label (string) (9.4.1.1.3)
comp (1124)	distribution%distri_vec(:)%dist_func%of_expansion(:)%grid%bases(:)%comp(:) (complex_grid_scalar) (9.4.1.3.75)
griduid (1118)	distribution%distri_vec(:)%dist_func%of_expansion(:)%grid%bases(:)%comp(:)%griduid (integer) (9.4.1.1.2)
subgrid (1118)	distribution%distri_vec(:)%dist_func%of_expansion(:)%grid%bases(:)%comp(:)%subgrid (integer) (9.4.1.1.2)
scalar (1118)	distribution%distri_vec(:)%dist_func%of_expansion(:)%grid%bases(:)%comp(:)%scalar (vecflt_type) (9.4.1.2.9)
vector (1118)	distribution%distri_vec(:)%dist_func%of_expansion(:)%grid%bases(:)%comp(:)%vector (matflt_type) (9.4.1.2.7)
matrix (1118)	distribution%distri_vec(:)%dist_func%of_expansion(:)%grid%bases(:)%comp(:)%matrix (array3dflt_type) (9.4.1.2.1)
align (1124)	distribution%distri_vec(:)%dist_func%of_expansion(:)%grid%bases(:)%align (vecint_type) (9.4.1.2.10)
alignid (1124)	distribution%distri_vec(:)%dist_func%of_expansion(:)%grid%bases(:)%alignid (vecstring_type) (9.4.1.2.11)

basis (1124)	distribution%distri_vec(:)%dist_func%of_expansion(:)%grid%bases(:)%basis (integer) (9.4.1.1.2)
values (1225)	distribution%distri_vec(:)%dist_func%of_expansion(:)%values (complexgrid_scalar) (9.4.1.3.75)
griduid (1118)	distribution%distri_vec(:)%dist_func%of_expansion(:)%values%griduid (integer) (9.4.1.1.2)
subgrid (1118)	distribution%distri_vec(:)%dist_func%of_expansion(:)%values%subgrid (integer) (9.4.1.1.2)
scalar (1118)	distribution%distri_vec(:)%dist_func%of_expansion(:)%values%scalar (vecflt_type) (9.4.1.2.9)
vector (1118)	distribution%distri_vec(:)%dist_func%of_expansion(:)%values%vector (matflt_type) (9.4.1.2.7)
matrix (1118)	distribution%distri_vec(:)%dist_func%of_expansion(:)%values%matrix (array3dflt_type) (9.4.1.2.1)
input_src (1193)	distribution%distri_vec(:)%input_src (dist_input_src) (9.4.1.3.133)
particle_src (1176)	distribution%distri_vec(:)%input_src%particle_src (dist_particle_src) (9.4.1.3.138)
total (1181)	distribution%distri_vec(:)%input_src%particle_src%total (dist_src_snk_tot) (9.4.1.3.147)
particles (1190)	distribution%distri_vec(:)%input_src%particle_src%total%particles (float) (9.4.1.1.1)
power (1190)	distribution%distri_vec(:)%input_src%particle_src%total%power (float) (9.4.1.1.1)
torque (1190)	distribution%distri_vec(:)%input_src%particle_src%total%torque (float) (9.4.1.1.1)
volume_intgr (1181)	distribution%distri_vec(:)%input_src%particle_src%volume_intgr (dist_src_snk_vol) (9.4.1.3.148)
particles (1191)	distribution%distri_vec(:)%input_src%particle_src%volume_intgr%particles (vecflt_type) (9.4.1.2.9)
power (1191)	distribution%distri_vec(:)%input_src%particle_src%volume_intgr%power (vecflt_type) (9.4.1.2.9)
torque (1191)	distribution%distri_vec(:)%input_src%particle_src%volume_intgr%torque (vecflt_type) (9.4.1.2.9)
flux_surf_av (1181)	distribution%distri_vec(:)%input_src%particle_src%flux_surf_av (dist_src_snk_surf) (9.4.1.3.146)
particlesd (1189)	distribution%distri_vec(:)%input_src%particle_src%flux_surf_av%particlesd (vecflt_type) (9.4.1.2.9)
powerd (1189)	distribution%distri_vec(:)%input_src%particle_src%flux_surf_av%powerd (vecflt_type) (9.4.1.2.9)
torqued (1189)	distribution%distri_vec(:)%input_src%particle_src%flux_surf_av%torqued (vecflt_type) (9.4.1.2.9)
wave_src (1176)	distribution%distri_vec(:)%input_src%wave_src (dist_wave_src) (9.4.1.3.149)
type (1192)	distribution%distri_vec(:)%input_src%wave_src%type (string) (9.4.1.1.3)
wave_power (1192)	distribution%distri_vec(:)%input_src%wave_src%wave_power (float) (9.4.1.1.1)
wave_powerd (1192)	distribution%distri_vec(:)%input_src%wave_src%wave_powerd (vecflt_type) (9.4.1.2.9)
nucl_reac (1193)	distribution%distri_vec(:)%nucl_reac (dist_nucl_reac) (9.4.1.3.135)
point_reac (1178)	distribution%distri_vec(:)%nucl_reac%point_reac (vecint_type) (9.4.1.2.10)
id_reac (1178)	distribution%distri_vec(:)%nucl_reac%id_reac (vecint_type) (9.4.1.2.10)
codeparam (1193)	distribution%distri_vec(:)%codeparam (codeparam) (9.4.1.3.65)
codename (1108)	distribution%distri_vec(:)%codeparam%codename (string) (9.4.1.1.3)
codeversion (1108)	distribution%distri_vec(:)%codeparam%codeversion (string) (9.4.1.1.3)
parameters (1108)	distribution%distri_vec(:)%codeparam%parameters (string) (9.4.1.1.3)
output_diag (1108)	distribution%distri_vec(:)%codeparam%output_diag (string) (9.4.1.1.3)
output_flag (1108)	distribution%distri_vec(:)%codeparam%output_flag (integer) (9.4.1.1.2)
codeparam (1056)	distribution%codeparam (codeparam) (9.4.1.3.65)
codename (1108)	distribution%codeparam%codename (string) (9.4.1.1.3)
codeversion (1108)	distribution%codeparam%codeversion (string) (9.4.1.1.3)
parameters (1108)	distribution%codeparam%parameters (string) (9.4.1.1.3)
output_diag (1108)	distribution%codeparam%output_diag (string) (9.4.1.1.3)
output_flag (1108)	distribution%codeparam%output_flag (integer) (9.4.1.1.2)
time (1056)	distribution%time (float) (9.4.1.1.1)

### 9.4.2.1.12 distsource

datainfo (1057)	distsource%datainfo (datainfo) (9.4.1.3.120)
dataprovder (1163)	distsource%datainfo%dataprovder (string) (9.4.1.1.3)
putdate (1163)	distsource%datainfo%putdate (string) (9.4.1.1.3)
source (1163)	distsource%datainfo%source (string) (9.4.1.1.3)
comment (1163)	distsource%datainfo%comment (string) (9.4.1.1.3)
cocos (1163)	distsource%datainfo%cocos (integer) (9.4.1.1.2)
id (1163)	distsource%datainfo%id (integer) (9.4.1.1.2)
isref (1163)	distsource%datainfo%isref (integer) (9.4.1.1.2)
whatref (1163)	distsource%datainfo%whatref (whatref) (9.4.1.3.426)
user (1469)	distsource%datainfo%whatref%user (string) (9.4.1.1.3)

machine (1469)	distsource%datainfo%whatref%machine (string) (9.4.1.1.3)
shot (1469)	distsource%datainfo%whatref%shot (integer) (9.4.1.1.2)
run (1469)	distsource%datainfo%whatref%run (integer) (9.4.1.1.2)
occurrence (1469)	distsource%datainfo%whatref%occurrence (integer) (9.4.1.1.2)
putinfo (1163)	distsource%datainfo%putinfo (putinfo) (9.4.1.3.289)
putmethod (1332)	distsource%datainfo%putinfo%putmethod (string) (9.4.1.1.3)
putaccess (1332)	distsource%datainfo%putinfo%putaccess (string) (9.4.1.1.3)
putlocation (1332)	distsource%datainfo%putinfo%putlocation (string) (9.4.1.1.3)
rights (1332)	distsource%datainfo%putinfo%rights (string) (9.4.1.1.3)
composition (1057)	distsource%composition (composition) (9.4.1.3.83)
amn (1126)	distsource%composition%amn (vecflt_type) (9.4.1.2.9)
zn (1126)	distsource%composition%zn (vecflt_type) (9.4.1.2.9)
zion (1126)	distsource%composition%zion (vecflt_type) (9.4.1.2.9)
imp_flag (1126)	distsource%composition%imp_flag (vecint_type) (9.4.1.2.10)
label (1126)	distsource%composition%label (vecstring_type) (9.4.1.2.11)
compositions (1057)	distsource%compositions (compositions_type) (9.4.1.3.87)
nuclei (1130)	distsource%compositions%nuclei(:) (nuclei) (9.4.1.3.258)
zn (1301)	distsource%compositions%nuclei(:)%zn (float) (9.4.1.1.1)
amn (1301)	distsource%compositions%nuclei(:)%amn (float) (9.4.1.1.1)
label (1301)	distsource%compositions%nuclei(:)%label (string) (9.4.1.1.3)
ions (1130)	distsource%compositions%ions(:) (ions) (9.4.1.3.218)
nucindex (1261)	distsource%compositions%ions(:)%nucindex (integer) (9.4.1.1.2)
zion (1261)	distsource%compositions%ions(:)%zion (float) (9.4.1.1.1)
imp_flag (1261)	distsource%compositions%ions(:)%imp_flag (integer) (9.4.1.1.2)
label (1261)	distsource%compositions%ions(:)%label (string) (9.4.1.1.3)
impurities (1130)	distsource%compositions%impurities(:) (impurities) (9.4.1.3.215)
nucindex (1258)	distsource%compositions%impurities(:)%nucindex (integer) (9.4.1.1.2)
i_ion (1258)	distsource%compositions%impurities(:)%i_ion (integer) (9.4.1.1.2)
nzimp (1258)	distsource%compositions%impurities(:)%nzimp (integer) (9.4.1.1.2)
zmin (1258)	distsource%compositions%impurities(:)%zmin (vecflt_type) (9.4.1.2.9)
zmax (1258)	distsource%compositions%impurities(:)%zmax (vecflt_type) (9.4.1.2.9)
label (1258)	distsource%compositions%impurities(:)%label (vecstring_type) (9.4.1.2.11)
neutralscomp (1130)	distsource%compositions%neutralscomp(:) (composition_neutralscomp) (9.4.1.3.86)
neutcomp (1129)	distsource%compositions%neutralscomp(:)%neutcomp(:) (composition_neutrals_neutcomp) (9.4.1.3.85)
nucindex (1128)	distsource%compositions%neutralscomp(:)%neutcomp(:)%nucindex (integer) (9.4.1.1.2)
multiplicity (1128)	distsource%compositions%neutralscomp(:)%neutcomp(:)%multiplicity (integer) (9.4.1.1.2)
type (1129)	distsource%compositions%neutralscomp(:)%type(:) (identifier) (9.4.1.3.213)
id (1256)	distsource%compositions%neutralscomp(:)%type(:)%id (string) (9.4.1.1.3)
flag (1256)	distsource%compositions%neutralscomp(:)%type(:)%flag (integer) (9.4.1.1.2)
description (1256)	distsource%compositions%neutralscomp(:)%type(:)%description (string) (9.4.1.1.3)
label (1129)	distsource%compositions%neutralscomp(:)%label (string) (9.4.1.1.3)
edgespecies (1130)	distsource%compositions%edgespecies(:) (edgespecies) (9.4.1.3.169)
nucindex (1212)	distsource%compositions%edgespecies(:)%nucindex (integer) (9.4.1.1.2)
zmin (1212)	distsource%compositions%edgespecies(:)%zmin (float) (9.4.1.1.1)
zmax (1212)	distsource%compositions%edgespecies(:)%zmax (float) (9.4.1.1.1)
label (1212)	distsource%compositions%edgespecies(:)%label (string) (9.4.1.1.3)
signature (1130)	distsource%compositions%signature (identifier) (9.4.1.3.213)
id (1256)	distsource%compositions%signature%id (string) (9.4.1.1.3)
flag (1256)	distsource%compositions%signature%flag (integer) (9.4.1.1.2)
description (1256)	distsource%compositions%signature%description (string) (9.4.1.1.3)
source (1057)	distsource%source(:) (distsource_source) (9.4.1.3.155)
source_id (1198)	distsource%source(:)%source_id(:) (enum_instance) (9.4.1.3.172)
type (1215)	distsource%source(:)%source_id(:)%type (identifier) (9.4.1.3.213)
id (1256)	distsource%source(:)%source_id(:)%type%id (string) (9.4.1.1.3)
flag (1256)	distsource%source(:)%source_id(:)%type%flag (integer) (9.4.1.1.2)
description (1256)	distsource%source(:)%source_id(:)%type%description (string) (9.4.1.1.3)
name (1215)	distsource%source(:)%source_id(:)%name (string) (9.4.1.1.3)
index (1215)	distsource%source(:)%source_id(:)%index (integer) (9.4.1.1.2)
src_spec (1198)	distsource%source(:)%src_spec (integer) (9.4.1.1.2)
gyro_type (1198)	distsource%source(:)%gyro_type (integer) (9.4.1.1.2)
global_param (1198)	distsource%source(:)%global_param (distsource_global_param) (9.4.1.3.151)

src_pow (1194)	distsource%source(:)%global_param%src_pow (exp0D) (9.4.1.3.179)
value (1222)	distsource%source(:)%global_param%src_pow%value (float) (9.4.1.1.1)
abserror (1222)	distsource%source(:)%global_param%src_pow%abserror (float) (9.4.1.1.1)
releror (1222)	distsource%source(:)%global_param%src_pow%releror (float) (9.4.1.1.1)
src_rate (1194)	distsource%source(:)%global_param%src_rate (exp0D) (9.4.1.3.179)
value (1222)	distsource%source(:)%global_param%src_rate%value (float) (9.4.1.1.1)
abserror (1222)	distsource%source(:)%global_param%src_rate%abserror (float) (9.4.1.1.1)
releror (1222)	distsource%source(:)%global_param%src_rate%releror (float) (9.4.1.1.1)
profiles_1d (1198)	distsource%source(:)%profiles_1d (distsource_profiles_1d) (9.4.1.3.153)
rho_tor_norm (1196)	distsource%source(:)%profiles_1d%rho_tor_norm (vecflt.type) (9.4.1.2.9)
rho_tor (1196)	distsource%source(:)%profiles_1d%rho_tor (vecflt.type) (9.4.1.2.9)
psi (1196)	distsource%source(:)%profiles_1d%psi (vecflt.type) (9.4.1.2.9)
pow_den (1196)	distsource%source(:)%profiles_1d%pow_den (exp1D) (9.4.1.3.180)
value (1223)	distsource%source(:)%profiles_1d%pow_den%value (vecflt.type) (9.4.1.2.9)
abserror (1223)	distsource%source(:)%profiles_1d%pow_den%abserror (vecflt.type) (9.4.1.2.9)
releror (1223)	distsource%source(:)%profiles_1d%pow_den%releror (vecflt.type) (9.4.1.2.9)
src_rate (1196)	distsource%source(:)%profiles_1d%src_rate (exp1D) (9.4.1.3.180)
value (1223)	distsource%source(:)%profiles_1d%src_rate%value (vecflt.type) (9.4.1.2.9)
abserror (1223)	distsource%source(:)%profiles_1d%src_rate%abserror (vecflt.type) (9.4.1.2.9)
releror (1223)	distsource%source(:)%profiles_1d%src_rate%releror (vecflt.type) (9.4.1.2.9)
profiles_2d (1198)	distsource%source(:)%profiles_2d (distsource_profiles_2d) (9.4.1.3.154)
grid_coord (1197)	distsource%source(:)%profiles_2d%grid_coord (vecint.type) (9.4.1.2.10)
dim1 (1197)	distsource%source(:)%profiles_2d%dim1 (matflt.type) (9.4.1.2.7)
dim2 (1197)	distsource%source(:)%profiles_2d%dim2 (matflt.type) (9.4.1.2.7)
g11 (1197)	distsource%source(:)%profiles_2d%g11 (matflt.type) (9.4.1.2.7)
g12 (1197)	distsource%source(:)%profiles_2d%g12 (matflt.type) (9.4.1.2.7)
g21 (1197)	distsource%source(:)%profiles_2d%g21 (matflt.type) (9.4.1.2.7)
g22 (1197)	distsource%source(:)%profiles_2d%g22 (matflt.type) (9.4.1.2.7)
pow_den (1197)	distsource%source(:)%profiles_2d%pow_den (exp2D) (9.4.1.3.181)
value (1224)	distsource%source(:)%profiles_2d%pow_den%value (matflt.type) (9.4.1.2.7)
abserror (1224)	distsource%source(:)%profiles_2d%pow_den%abserror (matflt.type) (9.4.1.2.7)
releror (1224)	distsource%source(:)%profiles_2d%pow_den%releror (matflt.type) (9.4.1.2.7)
src_rate (1197)	distsource%source(:)%profiles_2d%src_rate (exp2D) (9.4.1.3.181)
value (1224)	distsource%source(:)%profiles_2d%src_rate%value (matflt.type) (9.4.1.2.7)
abserror (1224)	distsource%source(:)%profiles_2d%src_rate%abserror (matflt.type) (9.4.1.2.7)
releror (1224)	distsource%source(:)%profiles_2d%src_rate%releror (matflt.type) (9.4.1.2.7)
line_srcprof (1198)	distsource%source(:)%line_srcprof(:) (distsource_line_src_prof) (9.4.1.3.152)
rho_tor (1195)	distsource%source(:)%line_srcprof(:)%rho_tor (vecflt.type) (9.4.1.2.9)
rho_tor_norm (1195)	distsource%source(:)%line_srcprof(:)%rho_tor_norm (vecflt.type) (9.4.1.2.9)
psi (1195)	distsource%source(:)%line_srcprof(:)%psi (vecflt.type) (9.4.1.2.9)
R (1195)	distsource%source(:)%line_srcprof(:)%R (vecflt.type) (9.4.1.2.9)
Z (1195)	distsource%source(:)%line_srcprof(:)%Z (vecflt.type) (9.4.1.2.9)
theta (1195)	distsource%source(:)%line_srcprof(:)%theta (vecflt.type) (9.4.1.2.9)
theta_id (1195)	distsource%source(:)%line_srcprof(:)%theta_id (vecflt.type) (9.4.1.2.9)
th2th_pol (1195)	distsource%source(:)%line_srcprof(:)%th2th_pol (matflt.type) (9.4.1.2.7)
pitch (1195)	distsource%source(:)%line_srcprof(:)%pitch (vecflt.type) (9.4.1.2.9)
energy (1195)	distsource%source(:)%line_srcprof(:)%energy (vecflt.type) (9.4.1.2.9)
ang_momentum (1195)	distsource%source(:)%line_srcprof(:)%ang_momentum (vecflt.type) (9.4.1.2.9)
src_rate (1195)	distsource%source(:)%line_srcprof(:)%src_rate (vecflt.type) (9.4.1.2.9)
source_rate (1198)	distsource%source(:)%source_rate (source_rate) (9.4.1.3.364)
grid (1407)	distsource%source(:)%source_rate%grid (complexgrid) (9.4.1.3.70)
uid (1113)	distsource%source(:)%source_rate%grid%uid (integer) (9.4.1.1.2)
id (1113)	distsource%source(:)%source_rate%grid%id (string) (9.4.1.1.3)
spaces (1113)	distsource%source(:)%source_rate%grid%spaces(:) (complexgrid_spaces) (9.4.1.3.79)
geotype (1122)	distsource%source(:)%source_rate%grid%spaces(:)%geotype (vecint.type) (9.4.1.2.10)
geotypeid (1122)	distsource%source(:)%source_rate%grid%spaces(:)%geotypeid (vecstring.type) (9.4.1.2.11)
coordtype (1122)	distsource%source(:)%source_rate%grid%spaces(:)%coordtype (matint.type) (9.4.1.2.8)
objects (1122)	distsource%source(:)%source_rate%grid%spaces(:)%objects(:) (objects) (9.4.1.3.259)
boundary (1302)	distsource%source(:)%source_rate%grid%spaces(:)%objects(:)%boundary (matint.type) (9.4.1.2.8)
neighbour (1302)	distsource%source(:)%source_rate%grid%spaces(:)%objects(:)%neighbour (array3dint.type) (9.4.1.2.2)





scalar (1118)	<code>distsource%source(:)%source_rate%grid%metric%jacobian(:)%scalar (vecflt_type)</code> (9.4.1.2.9)
vector (1118)	<code>distsource%source(:)%source_rate%grid%metric%jacobian(:)%vector (matflt_type)</code> (9.4.1.2.7)
matrix (1118)	<code>distsource%source(:)%source_rate%grid%metric%jacobian(:)%matrix (array3dflt_type)</code> (9.4.1.2.1)
geo (1113)	<code>distsource%source(:)%source_rate%grid%geo(:)</code> (complexgrid_geo_global) (9.4.1.3.71)
geotype (1114)	<code>distsource%source(:)%source_rate%grid%geo(:)%geotype (integer)</code> (9.4.1.1.2)
geotypeid (1114)	<code>distsource%source(:)%source_rate%grid%geo(:)%geotypeid (string)</code> (9.4.1.1.3)
coordtype (1114)	<code>distsource%source(:)%source_rate%grid%geo(:)%coordtype (vecint_type)</code> (9.4.1.2.10)
geo_matrix (1114)	<code>distsource%source(:)%source_rate%grid%geo(:)%geo_matrix(:)</code> (complexgrid_scalar) (9.4.1.3.75)
griduid (1118)	<code>distsource%source(:)%source_rate%grid%geo(:)%geo_matrix(:)%griduid (integer)</code> (9.4.1.1.2)
subgrid (1118)	<code>distsource%source(:)%source_rate%grid%geo(:)%geo_matrix(:)%subgrid (integer)</code> (9.4.1.1.2)
scalar (1118)	<code>distsource%source(:)%source_rate%grid%geo(:)%geo_matrix(:)%scalar (vecflt_type)</code> (9.4.1.2.9)
vector (1118)	<code>distsource%source(:)%source_rate%grid%geo(:)%geo_matrix(:)%vector (matflt_type)</code> (9.4.1.2.7)
matrix (1118)	<code>distsource%source(:)%source_rate%grid%geo(:)%geo_matrix(:)%matrix (array3dflt_type)</code> (9.4.1.2.1)
measure (1114)	<code>distsource%source(:)%source_rate%grid%geo(:)%measure(:)</code> (complexgrid_scalar) (9.4.1.3.75)
griduid (1118)	<code>distsource%source(:)%source_rate%grid%geo(:)%measure(:)%griduid (integer)</code> (9.4.1.1.2)
subgrid (1118)	<code>distsource%source(:)%source_rate%grid%geo(:)%measure(:)%subgrid (integer)</code> (9.4.1.1.2)
scalar (1118)	<code>distsource%source(:)%source_rate%grid%geo(:)%measure(:)%scalar (vecflt_type)</code> (9.4.1.2.9)
vector (1118)	<code>distsource%source(:)%source_rate%grid%geo(:)%measure(:)%vector (matflt_type)</code> (9.4.1.2.7)
matrix (1118)	<code>distsource%source(:)%source_rate%grid%geo(:)%measure(:)%matrix (array3dflt_type)</code> (9.4.1.2.1)
bases (1113)	<code>distsource%source(:)%source_rate%grid%bases(:)</code> (complexgrid_vector) (9.4.1.3.81)
griduid (1124)	<code>distsource%source(:)%source_rate%grid%bases(:)%griduid (integer)</code> (9.4.1.1.2)
label (1124)	<code>distsource%source(:)%source_rate%grid%bases(:)%label (string)</code> (9.4.1.1.3)
comp (1124)	<code>distsource%source(:)%source_rate%grid%bases(:)%comp(:)</code> (complexgrid_scalar) (9.4.1.3.75)
griduid (1118)	<code>distsource%source(:)%source_rate%grid%bases(:)%comp(:)%griduid (integer)</code> (9.4.1.1.2)
subgrid (1118)	<code>distsource%source(:)%source_rate%grid%bases(:)%comp(:)%subgrid (integer)</code> (9.4.1.1.2)
scalar (1118)	<code>distsource%source(:)%source_rate%grid%bases(:)%comp(:)%scalar (vecflt_type)</code> (9.4.1.2.9)
vector (1118)	<code>distsource%source(:)%source_rate%grid%bases(:)%comp(:)%vector (matflt_type)</code> (9.4.1.2.7)
matrix (1118)	<code>distsource%source(:)%source_rate%grid%bases(:)%comp(:)%matrix (array3dflt_type)</code> (9.4.1.2.1)
align (1124)	<code>distsource%source(:)%source_rate%grid%bases(:)%align (vecint_type)</code> (9.4.1.2.10)
alignid (1124)	<code>distsource%source(:)%source_rate%grid%bases(:)%alignid (vecstring_type)</code> (9.4.1.2.11)
basis (1124)	<code>distsource%source(:)%source_rate%grid%bases(:)%basis (integer)</code> (9.4.1.1.2)
value (1407)	<code>distsource%source(:)%source_rate%value</code> (complexgrid_scalar) (9.4.1.3.75)
griduid (1118)	<code>distsource%source(:)%source_rate%value%griduid (integer)</code> (9.4.1.1.2)
subgrid (1118)	<code>distsource%source(:)%source_rate%value%subgrid (integer)</code> (9.4.1.1.2)
scalar (1118)	<code>distsource%source(:)%source_rate%value%scalar (vecflt_type)</code> (9.4.1.2.9)
vector (1118)	<code>distsource%source(:)%source_rate%value%vector (matflt_type)</code> (9.4.1.2.7)
matrix (1118)	<code>distsource%source(:)%source_rate%value%matrix (array3dflt_type)</code> (9.4.1.2.1)
source_grid (1198)	<code>distsource%source(:)%source_grid (source_on_grid)</code> (9.4.1.3.363)
grid_info (1406)	<code>distsource%source(:)%source_grid%grid_info (grid_info)</code> (9.4.1.3.209)
grid_type (1252)	<code>distsource%source(:)%source_grid%grid_info%grid_type (integer)</code> (9.4.1.1.2)
ngriddim (1252)	<code>distsource%source(:)%source_grid%grid_info%ngriddim (integer)</code> (9.4.1.1.2)
grid_coord (1252)	<code>distsource%source(:)%source_grid%grid_info%grid_coord (vecint_type)</code> (9.4.1.2.10)
discrete_dims (1252)	<code>distsource%source(:)%source_grid%grid_info%discrete_dims (vecint_type)</code> (9.4.1.2.10)
dim1 (1406)	<code>distsource%source(:)%source_grid%dim1 (array6dflt_type)</code> (9.4.1.2.5)
dim2 (1406)	<code>distsource%source(:)%source_grid%dim2 (array6dflt_type)</code> (9.4.1.2.5)
dim3 (1406)	<code>distsource%source(:)%source_grid%dim3 (array6dflt_type)</code> (9.4.1.2.5)
dim4 (1406)	<code>distsource%source(:)%source_grid%dim4 (array6dflt_type)</code> (9.4.1.2.5)
dim5 (1406)	<code>distsource%source(:)%source_grid%dim5 (array6dflt_type)</code> (9.4.1.2.5)
dim6 (1406)	<code>distsource%source(:)%source_grid%dim6 (array6dflt_type)</code> (9.4.1.2.5)
jacobian (1406)	<code>distsource%source(:)%source_grid%jacobian (array6dflt_type)</code> (9.4.1.2.5)
source (1406)	<code>distsource%source(:)%source_grid%source (array6dflt_type)</code> (9.4.1.2.5)
markers (1198)	<code>distsource%source(:)%markers (weighted_markers)</code> (9.4.1.3.425)
variable_ids (1468)	<code>distsource%source(:)%markers%variable_ids(:)</code> (identifier) (9.4.1.3.213)
id (1256)	<code>distsource%source(:)%markers%variable_ids(:)%id (string)</code> (9.4.1.1.3)
flag (1256)	<code>distsource%source(:)%markers%variable_ids(:)%flag (integer)</code> (9.4.1.1.2)
description (1256)	<code>distsource%source(:)%markers%variable_ids(:)%description (string)</code> (9.4.1.1.3)
coord (1468)	<code>distsource%source(:)%markers%coord (matflt_type)</code> (9.4.1.2.7)

weight (1468)	distsource%source(:)%markers%weight (vecflt.type) (9.4.1.2.9)
codeparam (1198)	distsource%source(:)%codeparam (codeparam) (9.4.1.3.65)
codename (1108)	distsource%source(:)%codeparam%codename (string) (9.4.1.1.3)
codeversion (1108)	distsource%source(:)%codeparam%codeversion (string) (9.4.1.1.3)
parameters (1108)	distsource%source(:)%codeparam%parameters (string) (9.4.1.1.3)
output_diag (1108)	distsource%source(:)%codeparam%output_diag (string) (9.4.1.1.3)
output_flag (1108)	distsource%source(:)%codeparam%output_flag (integer) (9.4.1.1.2)
codeparam (1057)	distsource%codeparam (codeparam) (9.4.1.3.65)
codename (1108)	distsource%codeparam%codename (string) (9.4.1.1.3)
codeversion (1108)	distsource%codeparam%codeversion (string) (9.4.1.1.3)
parameters (1108)	distsource%codeparam%parameters (string) (9.4.1.1.3)
output_diag (1108)	distsource%codeparam%output_diag (string) (9.4.1.1.3)
output_flag (1108)	distsource%codeparam%output_flag (integer) (9.4.1.1.2)
time (1057)	distsource%time (float) (9.4.1.1.1)

### 9.4.2.1.13 ecediag

datainfo (1058)	ecediag%datainfo (datainfo) (9.4.1.3.120)
dataprovider (1163)	ecediag%datainfo%dataprovider (string) (9.4.1.1.3)
putdate (1163)	ecediag%datainfo%putdate (string) (9.4.1.1.3)
source (1163)	ecediag%datainfo%source (string) (9.4.1.1.3)
comment (1163)	ecediag%datainfo%comment (string) (9.4.1.1.3)
cocos (1163)	ecediag%datainfo%cocos (integer) (9.4.1.1.2)
id (1163)	ecediag%datainfo%id (integer) (9.4.1.1.2)
isref (1163)	ecediag%datainfo%isref (integer) (9.4.1.1.2)
whatref (1163)	ecediag%datainfo%whatref (whatref) (9.4.1.3.426)
user (1469)	ecediag%datainfo%whatref%user (string) (9.4.1.1.3)
machine (1469)	ecediag%datainfo%whatref%machine (string) (9.4.1.1.3)
shot (1469)	ecediag%datainfo%whatref%shot (integer) (9.4.1.1.2)
run (1469)	ecediag%datainfo%whatref%run (integer) (9.4.1.1.2)
occurrence (1469)	ecediag%datainfo%whatref%occurrence (integer) (9.4.1.1.2)
putinfo (1163)	ecediag%datainfo%putinfo (putinfo) (9.4.1.3.289)
putmethod (1332)	ecediag%datainfo%putinfo%putmethod (string) (9.4.1.1.3)
putaccess (1332)	ecediag%datainfo%putinfo%putaccess (string) (9.4.1.1.3)
putlocation (1332)	ecediag%datainfo%putinfo%putlocation (string) (9.4.1.1.3)
rights (1332)	ecediag%datainfo%putinfo%rights (string) (9.4.1.1.3)
setup (1058)	ecediag%setup (ecesetup) (9.4.1.3.159)
frequency (1202)	ecediag%setup%frequency (vecflt.type) (9.4.1.2.9)
harmonic (1202)	ecediag%setup%harmonic (vecstring.type) (9.4.1.2.11)
position (1202)	ecediag%setup%position (rzphi1Dexp) (9.4.1.3.326)
r (1369)	ecediag%setup%position%r (exp1D) (9.4.1.3.180)
value (1223)	ecediag%setup%position%r%value (vecflt.type) (9.4.1.2.9)
abserror (1223)	ecediag%setup%position%r%abserror (vecflt.type) (9.4.1.2.9)
releror (1223)	ecediag%setup%position%r%releror (vecflt.type) (9.4.1.2.9)
z (1369)	ecediag%setup%position%z (exp1D) (9.4.1.3.180)
value (1223)	ecediag%setup%position%z%value (vecflt.type) (9.4.1.2.9)
abserror (1223)	ecediag%setup%position%z%abserror (vecflt.type) (9.4.1.2.9)
releror (1223)	ecediag%setup%position%z%releror (vecflt.type) (9.4.1.2.9)
phi (1369)	ecediag%setup%position%phi (exp1D) (9.4.1.3.180)
value (1223)	ecediag%setup%position%phi%value (vecflt.type) (9.4.1.2.9)
abserror (1223)	ecediag%setup%position%phi%abserror (vecflt.type) (9.4.1.2.9)
releror (1223)	ecediag%setup%position%phi%releror (vecflt.type) (9.4.1.2.9)
measure (1058)	ecediag%measure (ecemeasure) (9.4.1.3.158)
te (1201)	ecediag%measure%te (exp1D) (9.4.1.3.180)
value (1223)	ecediag%measure%te%value (vecflt.type) (9.4.1.2.9)
abserror (1223)	ecediag%measure%te%abserror (vecflt.type) (9.4.1.2.9)
releror (1223)	ecediag%measure%te%releror (vecflt.type) (9.4.1.2.9)
time (1058)	ecediag%time (float) (9.4.1.1.1)

### 9.4.2.1.14 edge



<code>datainfo</code> (1059)	<code>edge%datainfo</code> ( <code>datainfo</code> ) (9.4.1.3.120)
<code>dataprovider</code> (1163)	<code>edge%datainfo%dataprovider</code> (string) (9.4.1.1.3)
<code>putdate</code> (1163)	<code>edge%datainfo%putdate</code> (string) (9.4.1.1.3)
<code>source</code> (1163)	<code>edge%datainfo%source</code> (string) (9.4.1.1.3)
<code>comment</code> (1163)	<code>edge%datainfo%comment</code> (string) (9.4.1.1.3)
<code>cocos</code> (1163)	<code>edge%datainfo%cocos</code> (integer) (9.4.1.1.2)
<code>id</code> (1163)	<code>edge%datainfo%id</code> (integer) (9.4.1.1.2)
<code>isref</code> (1163)	<code>edge%datainfo%isref</code> (integer) (9.4.1.1.2)
<code>whatref</code> (1163)	<code>edge%datainfo%whatref</code> ( <code>whatref</code> ) (9.4.1.3.426)
<code>  user</code> (1469)	<code>edge%datainfo%whatref%user</code> (string) (9.4.1.1.3)
<code>  machine</code> (1469)	<code>edge%datainfo%whatref%machine</code> (string) (9.4.1.1.3)
<code>  shot</code> (1469)	<code>edge%datainfo%whatref%shot</code> (integer) (9.4.1.1.2)
<code>  run</code> (1469)	<code>edge%datainfo%whatref%run</code> (integer) (9.4.1.1.2)
<code>  occurrence</code> (1469)	<code>edge%datainfo%whatref%occurrence</code> (integer) (9.4.1.1.2)
<code>putinfo</code> (1163)	<code>edge%datainfo%putinfo</code> ( <code>putinfo</code> ) (9.4.1.3.289)
<code>  putmethod</code> (1332)	<code>edge%datainfo%putinfo%putmethod</code> (string) (9.4.1.1.3)
<code>  putaccess</code> (1332)	<code>edge%datainfo%putinfo%putaccess</code> (string) (9.4.1.1.3)
<code>  putlocation</code> (1332)	<code>edge%datainfo%putinfo%putlocation</code> (string) (9.4.1.1.3)
<code>  rights</code> (1332)	<code>edge%datainfo%putinfo%rights</code> (string) (9.4.1.1.3)
<code>grid</code> (1059)	<code>edge%grid</code> ( <code>complexgrid</code> ) (9.4.1.3.70)
<code>  uid</code> (1113)	<code>edge%grid%uid</code> (integer) (9.4.1.1.2)
<code>  id</code> (1113)	<code>edge%grid%id</code> (string) (9.4.1.1.3)
<code>  spaces</code> (1113)	<code>edge%grid%spaces(:)</code> ( <code>complexgrid_space</code> ) (9.4.1.3.79)
<code>    geotype</code> (1122)	<code>edge%grid%spaces(:)%geotype</code> ( <code>vecint_type</code> ) (9.4.1.2.10)
<code>    geotypeid</code> (1122)	<code>edge%grid%spaces(:)%geotypeid</code> ( <code>vecstring_type</code> ) (9.4.1.2.11)
<code>    coordtype</code> (1122)	<code>edge%grid%spaces(:)%coordtype</code> ( <code>matint_type</code> ) (9.4.1.2.8)
<code>    objects</code> (1122)	<code>edge%grid%spaces(:)%objects(:)</code> ( <code>objects</code> ) (9.4.1.3.259)
<code>      boundary</code> (1302)	<code>edge%grid%spaces(:)%objects(:)%boundary</code> ( <code>matint_type</code> ) (9.4.1.2.8)
<code>      neighbour</code> (1302)	<code>edge%grid%spaces(:)%objects(:)%neighbour</code> ( <code>array3dint_type</code> ) (9.4.1.2.2)
<code>      geo</code> (1302)	<code>edge%grid%spaces(:)%objects(:)%geo</code> ( <code>array4dflt_type</code> ) (9.4.1.2.3)
<code>      measure</code> (1302)	<code>edge%grid%spaces(:)%objects(:)%measure</code> ( <code>matflt_type</code> ) (9.4.1.2.7)
<code>    xpoints</code> (1122)	<code>edge%grid%spaces(:)%xpoints</code> ( <code>vecint_type</code> ) (9.4.1.2.10)
<code>subgrids</code> (1113)	<code>edge%grid%subgrids(:)</code> ( <code>complexgrid_subgrid</code> ) (9.4.1.3.80)
<code>  id</code> (1123)	<code>edge%grid%subgrids(:)%id</code> (string) (9.4.1.1.3)
<code>  list</code> (1123)	<code>edge%grid%subgrids(:)%list(:)</code> ( <code>complexgrid_objectlist</code> ) (9.4.1.3.74)
<code>    cls</code> (1117)	<code>edge%grid%subgrids(:)%list(:)%cls</code> ( <code>vecint_type</code> ) (9.4.1.2.10)
<code>    indset</code> (1117)	<code>edge%grid%subgrids(:)%list(:)%indset(:)</code> ( <code>complexgrid_indexlist</code> ) (9.4.1.3.72)
<code>      range</code> (1115)	<code>edge%grid%subgrids(:)%list(:)%indset(:)%range</code> ( <code>vecint_type</code> ) (9.4.1.2.10)
<code>      ind</code> (1115)	<code>edge%grid%subgrids(:)%list(:)%indset(:)%ind</code> ( <code>vecint_type</code> ) (9.4.1.2.10)
<code>    ind</code> (1117)	<code>edge%grid%subgrids(:)%list(:)%ind</code> ( <code>matint_type</code> ) (9.4.1.2.8)
<code>metric</code> (1113)	<code>edge%grid%metric</code> ( <code>complexgrid_metric</code> ) (9.4.1.3.73)
<code>  measure</code> (1116)	<code>edge%grid%metric%measure(:)</code> ( <code>complexgrid_scalar</code> ) (9.4.1.3.75)
<code>    griduid</code> (1118)	<code>edge%grid%metric%measure(:)%griduid</code> (integer) (9.4.1.1.2)
<code>    subgrid</code> (1118)	<code>edge%grid%metric%measure(:)%subgrid</code> (integer) (9.4.1.1.2)
<code>    scalar</code> (1118)	<code>edge%grid%metric%measure(:)%scalar</code> ( <code>vecflt_type</code> ) (9.4.1.2.9)
<code>    vector</code> (1118)	<code>edge%grid%metric%measure(:)%vector</code> ( <code>matflt_type</code> ) (9.4.1.2.7)
<code>    matrix</code> (1118)	<code>edge%grid%metric%measure(:)%matrix</code> ( <code>array3dflt_type</code> ) (9.4.1.2.1)
<code>  g11</code> (1116)	<code>edge%grid%metric%g11(:)</code> ( <code>complexgrid_scalar</code> ) (9.4.1.3.75)
<code>    griduid</code> (1118)	<code>edge%grid%metric%g11(:)%griduid</code> (integer) (9.4.1.1.2)
<code>    subgrid</code> (1118)	<code>edge%grid%metric%g11(:)%subgrid</code> (integer) (9.4.1.1.2)
<code>    scalar</code> (1118)	<code>edge%grid%metric%g11(:)%scalar</code> ( <code>vecflt_type</code> ) (9.4.1.2.9)
<code>    vector</code> (1118)	<code>edge%grid%metric%g11(:)%vector</code> ( <code>matflt_type</code> ) (9.4.1.2.7)
<code>    matrix</code> (1118)	<code>edge%grid%metric%g11(:)%matrix</code> ( <code>array3dflt_type</code> ) (9.4.1.2.1)
<code>  g12</code> (1116)	<code>edge%grid%metric%g12(:)</code> ( <code>complexgrid_scalar</code> ) (9.4.1.3.75)
<code>    griduid</code> (1118)	<code>edge%grid%metric%g12(:)%griduid</code> (integer) (9.4.1.1.2)
<code>    subgrid</code> (1118)	<code>edge%grid%metric%g12(:)%subgrid</code> (integer) (9.4.1.1.2)
<code>    scalar</code> (1118)	<code>edge%grid%metric%g12(:)%scalar</code> ( <code>vecflt_type</code> ) (9.4.1.2.9)
<code>    vector</code> (1118)	<code>edge%grid%metric%g12(:)%vector</code> ( <code>matflt_type</code> ) (9.4.1.2.7)
<code>    matrix</code> (1118)	<code>edge%grid%metric%g12(:)%matrix</code> ( <code>array3dflt_type</code> ) (9.4.1.2.1)
<code>  g13</code> (1116)	<code>edge%grid%metric%g13(:)</code> ( <code>complexgrid_scalar</code> ) (9.4.1.3.75)
<code>    griduid</code> (1118)	<code>edge%grid%metric%g13(:)%griduid</code> (integer) (9.4.1.1.2)

subgrid (1118)	edge%grid%metric%g13(:)%subgrid (integer) (9.4.1.1.2)
scalar (1118)	edge%grid%metric%g13(:)%scalar (vecflt_type) (9.4.1.2.9)
vector (1118)	edge%grid%metric%g13(:)%vector (matflt_type) (9.4.1.2.7)
matrix (1118)	edge%grid%metric%g13(:)%matrix (array3dflt_type) (9.4.1.2.1)
g22 (1116)	edge%grid%metric%g22(:) (complexgrid_scalar) (9.4.1.3.75)
griduid (1118)	edge%grid%metric%g22(:)%griduid (integer) (9.4.1.1.2)
subgrid (1118)	edge%grid%metric%g22(:)%subgrid (integer) (9.4.1.1.2)
scalar (1118)	edge%grid%metric%g22(:)%scalar (vecflt_type) (9.4.1.2.9)
vector (1118)	edge%grid%metric%g22(:)%vector (matflt_type) (9.4.1.2.7)
matrix (1118)	edge%grid%metric%g22(:)%matrix (array3dflt_type) (9.4.1.2.1)
g23 (1116)	edge%grid%metric%g23(:) (complexgrid_scalar) (9.4.1.3.75)
griduid (1118)	edge%grid%metric%g23(:)%griduid (integer) (9.4.1.1.2)
subgrid (1118)	edge%grid%metric%g23(:)%subgrid (integer) (9.4.1.1.2)
scalar (1118)	edge%grid%metric%g23(:)%scalar (vecflt_type) (9.4.1.2.9)
vector (1118)	edge%grid%metric%g23(:)%vector (matflt_type) (9.4.1.2.7)
matrix (1118)	edge%grid%metric%g23(:)%matrix (array3dflt_type) (9.4.1.2.1)
g33 (1116)	edge%grid%metric%g33(:) (complexgrid_scalar) (9.4.1.3.75)
griduid (1118)	edge%grid%metric%g33(:)%griduid (integer) (9.4.1.1.2)
subgrid (1118)	edge%grid%metric%g33(:)%subgrid (integer) (9.4.1.1.2)
scalar (1118)	edge%grid%metric%g33(:)%scalar (vecflt_type) (9.4.1.2.9)
vector (1118)	edge%grid%metric%g33(:)%vector (matflt_type) (9.4.1.2.7)
matrix (1118)	edge%grid%metric%g33(:)%matrix (array3dflt_type) (9.4.1.2.1)
jacobian (1116)	edge%grid%metric%jacobian(:) (complexgrid_scalar) (9.4.1.3.75)
griduid (1118)	edge%grid%metric%jacobian(:)%griduid (integer) (9.4.1.1.2)
subgrid (1118)	edge%grid%metric%jacobian(:)%subgrid (integer) (9.4.1.1.2)
scalar (1118)	edge%grid%metric%jacobian(:)%scalar (vecflt_type) (9.4.1.2.9)
vector (1118)	edge%grid%metric%jacobian(:)%vector (matflt_type) (9.4.1.2.7)
matrix (1118)	edge%grid%metric%jacobian(:)%matrix (array3dflt_type) (9.4.1.2.1)
geo (1113)	edge%grid%geo(:) (complexgrid_geo_global) (9.4.1.3.71)
geotype (1114)	edge%grid%geo(:)%geotype (integer) (9.4.1.1.2)
geotypeid (1114)	edge%grid%geo(:)%geotypeid (string) (9.4.1.1.3)
coordtype (1114)	edge%grid%geo(:)%coordtype (vecint_type) (9.4.1.2.10)
geo_matrix (1114)	edge%grid%geo(:)%geo_matrix(:) (complexgrid_scalar) (9.4.1.3.75)
griduid (1118)	edge%grid%geo(:)%geo_matrix(:)%griduid (integer) (9.4.1.1.2)
subgrid (1118)	edge%grid%geo(:)%geo_matrix(:)%subgrid (integer) (9.4.1.1.2)
scalar (1118)	edge%grid%geo(:)%geo_matrix(:)%scalar (vecflt_type) (9.4.1.2.9)
vector (1118)	edge%grid%geo(:)%geo_matrix(:)%vector (matflt_type) (9.4.1.2.7)
matrix (1118)	edge%grid%geo(:)%geo_matrix(:)%matrix (array3dflt_type) (9.4.1.2.1)
measure (1114)	edge%grid%geo(:)%measure(:) (complexgrid_scalar) (9.4.1.3.75)
griduid (1118)	edge%grid%geo(:)%measure(:)%griduid (integer) (9.4.1.1.2)
subgrid (1118)	edge%grid%geo(:)%measure(:)%subgrid (integer) (9.4.1.1.2)
scalar (1118)	edge%grid%geo(:)%measure(:)%scalar (vecflt_type) (9.4.1.2.9)
vector (1118)	edge%grid%geo(:)%measure(:)%vector (matflt_type) (9.4.1.2.7)
matrix (1118)	edge%grid%geo(:)%measure(:)%matrix (array3dflt_type) (9.4.1.2.1)
bases (1113)	edge%grid%bases(:) (complexgrid_vector) (9.4.1.3.81)
griduid (1124)	edge%grid%bases(:)%griduid (integer) (9.4.1.1.2)
label (1124)	edge%grid%bases(:)%label (string) (9.4.1.1.3)
comp (1124)	edge%grid%bases(:)%comp(:) (complexgrid_scalar) (9.4.1.3.75)
griduid (1118)	edge%grid%bases(:)%comp(:)%griduid (integer) (9.4.1.1.2)
subgrid (1118)	edge%grid%bases(:)%comp(:)%subgrid (integer) (9.4.1.1.2)
scalar (1118)	edge%grid%bases(:)%comp(:)%scalar (vecflt_type) (9.4.1.2.9)
vector (1118)	edge%grid%bases(:)%comp(:)%vector (matflt_type) (9.4.1.2.7)
matrix (1118)	edge%grid%bases(:)%comp(:)%matrix (array3dflt_type) (9.4.1.2.1)
align (1124)	edge%grid%bases(:)%align (vecint_type) (9.4.1.2.10)
alignid (1124)	edge%grid%bases(:)%alignid (vecstring_type) (9.4.1.2.11)
basis (1124)	edge%grid%bases(:)%basis (integer) (9.4.1.1.2)
species (1059)	edge%species(:) (species_desc) (9.4.1.3.370)
label (1413)	edge%species(:)%label (string) (9.4.1.1.3)
amn (1413)	edge%species(:)%amn (float) (9.4.1.1.1)
zn (1413)	edge%species(:)%zn (float) (9.4.1.1.1)
zmin (1413)	edge%species(:)%zmin (float) (9.4.1.1.1)

zmax (1413)	edge%species(:)%zmax (float) (9.4.1.1.1)
compositions (1059)	edge%compositions (compositions_type) (9.4.1.3.87)
nuclei (1130)	edge%compositions%nuclei(:) (nuclei) (9.4.1.3.258)
zn (1301)	edge%compositions%nuclei(:)%zn (float) (9.4.1.1.1)
amn (1301)	edge%compositions%nuclei(:)%amn (float) (9.4.1.1.1)
label (1301)	edge%compositions%nuclei(:)%label (string) (9.4.1.1.3)
ions (1130)	edge%compositions%ions(:) (ions) (9.4.1.3.218)
nucindex (1261)	edge%compositions%ions(:)%nucindex (integer) (9.4.1.1.2)
zion (1261)	edge%compositions%ions(:)%zion (float) (9.4.1.1.1)
imp_flag (1261)	edge%compositions%ions(:)%imp_flag (integer) (9.4.1.1.2)
label (1261)	edge%compositions%ions(:)%label (string) (9.4.1.1.3)
impurities (1130)	edge%compositions%impurities(:) (impurities) (9.4.1.3.215)
nucindex (1258)	edge%compositions%impurities(:)%nucindex (integer) (9.4.1.1.2)
i_ion (1258)	edge%compositions%impurities(:)%i_ion (integer) (9.4.1.1.2)
nzimp (1258)	edge%compositions%impurities(:)%nzimp (integer) (9.4.1.1.2)
zmin (1258)	edge%compositions%impurities(:)%zmin (vecflt_type) (9.4.1.2.9)
zmax (1258)	edge%compositions%impurities(:)%zmax (vecflt_type) (9.4.1.2.9)
label (1258)	edge%compositions%impurities(:)%label (vecstring_type) (9.4.1.2.11)
neutralscomp (1130)	edge%compositions%neutralscomp(:) (composition_neutralscomp) (9.4.1.3.86)
neutcomp (1129)	edge%compositions%neutralscomp(:)%neutcomp(:) (composition_neutrals_neutcomp) (9.4.1.3.85)
nucindex (1128)	edge%compositions%neutralscomp(:)%neutcomp(:)%nucindex (integer) (9.4.1.1.2)
multiplicity (1128)	edge%compositions%neutralscomp(:)%neutcomp(:)%multiplicity (integer) (9.4.1.1.2)
type (1129)	edge%compositions%neutralscomp(:)%type(:) (identifier) (9.4.1.3.213)
id (1256)	edge%compositions%neutralscomp(:)%type(:)%id (string) (9.4.1.1.3)
flag (1256)	edge%compositions%neutralscomp(:)%type(:)%flag (integer) (9.4.1.1.2)
description (1256)	edge%compositions%neutralscomp(:)%type(:)%description (string) (9.4.1.1.3)
label (1129)	edge%compositions%neutralscomp(:)%label (string) (9.4.1.1.3)
edgespecies (1130)	edge%compositions%edgespecies(:) (edgespecies) (9.4.1.3.169)
nucindex (1212)	edge%compositions%edgespecies(:)%nucindex (integer) (9.4.1.1.2)
zmin (1212)	edge%compositions%edgespecies(:)%zmin (float) (9.4.1.1.1)
zmax (1212)	edge%compositions%edgespecies(:)%zmax (float) (9.4.1.1.1)
label (1212)	edge%compositions%edgespecies(:)%label (string) (9.4.1.1.3)
signature (1130)	edge%compositions%signature (identifier) (9.4.1.3.213)
id (1256)	edge%compositions%signature%id (string) (9.4.1.1.3)
flag (1256)	edge%compositions%signature%flag (integer) (9.4.1.1.2)
description (1256)	edge%compositions%signature%description (string) (9.4.1.1.3)
fluid (1059)	edge%fluid (edge_fluid) (9.4.1.3.160)
ne (1203)	edge%fluid%ne (edge_fluid_scalar_simplestruct) (9.4.1.3.162)
value (1205)	edge%fluid%ne%value(:) (complexgrid_scalar) (9.4.1.3.75)
griduid (1118)	edge%fluid%ne%value(:)%griduid (integer) (9.4.1.1.2)
subgrid (1118)	edge%fluid%ne%value(:)%subgrid (integer) (9.4.1.1.2)
scalar (1118)	edge%fluid%ne%value(:)%scalar (vecflt_type) (9.4.1.2.9)
vector (1118)	edge%fluid%ne%value(:)%vector (matflt_type) (9.4.1.2.7)
matrix (1118)	edge%fluid%ne%value(:)%matrix (array3dflt_type) (9.4.1.2.1)
bndvalue (1205)	edge%fluid%ne%bndvalue(:) (complexgrid_scalar) (9.4.1.3.75)
griduid (1118)	edge%fluid%ne%bndvalue(:)%griduid (integer) (9.4.1.1.2)
subgrid (1118)	edge%fluid%ne%bndvalue(:)%subgrid (integer) (9.4.1.1.2)
scalar (1118)	edge%fluid%ne%bndvalue(:)%scalar (vecflt_type) (9.4.1.2.9)
vector (1118)	edge%fluid%ne%bndvalue(:)%vector (matflt_type) (9.4.1.2.7)
matrix (1118)	edge%fluid%ne%bndvalue(:)%matrix (array3dflt_type) (9.4.1.2.1)
flux (1205)	edge%fluid%ne%flux(:) (complexgrid_vector) (9.4.1.3.81)
griduid (1124)	edge%fluid%ne%flux(:)%griduid (integer) (9.4.1.1.2)
label (1124)	edge%fluid%ne%flux(:)%label (string) (9.4.1.1.3)
comp (1124)	edge%fluid%ne%flux(:)%comp(:) (complexgrid_scalar) (9.4.1.3.75)
griduid (1118)	edge%fluid%ne%flux(:)%comp(:)%griduid (integer) (9.4.1.1.2)
subgrid (1118)	edge%fluid%ne%flux(:)%comp(:)%subgrid (integer) (9.4.1.1.2)
scalar (1118)	edge%fluid%ne%flux(:)%comp(:)%scalar (vecflt_type) (9.4.1.2.9)
vector (1118)	edge%fluid%ne%flux(:)%comp(:)%vector (matflt_type) (9.4.1.2.7)
matrix (1118)	edge%fluid%ne%flux(:)%comp(:)%matrix (array3dflt_type) (9.4.1.2.1)
align (1124)	edge%fluid%ne%flux(:)%align (vecint_type) (9.4.1.2.10)
alignid (1124)	edge%fluid%ne%flux(:)%alignid (vecstring_type) (9.4.1.2.11)

basis (1124)	edge%fluid%ne%flux(:)%basis (integer) (9.4.1.1.2)
bndflux (1205)	edge%fluid%ne%bndflux(:) (complexgrid_vector) (9.4.1.3.81)
griduid (1124)	edge%fluid%ne%bndflux(:)%griduid (integer) (9.4.1.1.2)
label (1124)	edge%fluid%ne%bndflux(:)%label (string) (9.4.1.1.3)
comp (1124)	edge%fluid%ne%bndflux(:)%comp(:) (complexgrid_scalar) (9.4.1.3.75)
griduid (1118)	edge%fluid%ne%bndflux(:)%comp(:)%griduid (integer) (9.4.1.1.2)
subgrid (1118)	edge%fluid%ne%bndflux(:)%comp(:)%subgrid (integer) (9.4.1.1.2)
scalar (1118)	edge%fluid%ne%bndflux(:)%comp(:)%scalar (vecflt_type) (9.4.1.2.9)
vector (1118)	edge%fluid%ne%bndflux(:)%comp(:)%vector (matflt_type) (9.4.1.2.7)
matrix (1118)	edge%fluid%ne%bndflux(:)%comp(:)%matrix (array3dflt_type) (9.4.1.2.1)
align (1124)	edge%fluid%ne%bndflux(:)%align (vecint_type) (9.4.1.2.10)
alignid (1124)	edge%fluid%ne%bndflux(:)%alignid (vecstring_type) (9.4.1.2.11)
basis (1124)	edge%fluid%ne%bndflux(:)%basis (integer) (9.4.1.1.2)
transpcoeff (1205)	edge%fluid%ne%transpcoeff(:) (edge_fluid_scalar_transpcoeff) (9.4.1.3.163)
d (1206)	edge%fluid%ne%transpcoeff(:)%d (complexgrid_vector_simplestruct) (9.4.1.3.82)
label (1125)	edge%fluid%ne%transpcoeff(:)%d%label (string) (9.4.1.1.3)
comp (1125)	edge%fluid%ne%transpcoeff(:)%d%comp(:) (complexgrid_scalar) (9.4.1.3.75)
griduid (1118)	edge%fluid%ne%transpcoeff(:)%d%comp(:)%griduid (integer) (9.4.1.1.2)
subgrid (1118)	edge%fluid%ne%transpcoeff(:)%d%comp(:)%subgrid (integer) (9.4.1.1.2)
scalar (1118)	edge%fluid%ne%transpcoeff(:)%d%comp(:)%scalar (vecflt_type) (9.4.1.2.9)
vector (1118)	edge%fluid%ne%transpcoeff(:)%d%comp(:)%vector (matflt_type) (9.4.1.2.7)
matrix (1118)	edge%fluid%ne%transpcoeff(:)%d%comp(:)%matrix (array3dflt_type) (9.4.1.2.1)
align (1125)	edge%fluid%ne%transpcoeff(:)%d%align (vecint_type) (9.4.1.2.10)
alignid (1125)	edge%fluid%ne%transpcoeff(:)%d%alignid (vecstring_type) (9.4.1.2.11)
v (1206)	edge%fluid%ne%transpcoeff(:)%v (complexgrid_vector_simplestruct) (9.4.1.3.82)
label (1125)	edge%fluid%ne%transpcoeff(:)%v%label (string) (9.4.1.1.3)
comp (1125)	edge%fluid%ne%transpcoeff(:)%v%comp(:) (complexgrid_scalar) (9.4.1.3.75)
griduid (1118)	edge%fluid%ne%transpcoeff(:)%v%comp(:)%griduid (integer) (9.4.1.1.2)
subgrid (1118)	edge%fluid%ne%transpcoeff(:)%v%comp(:)%subgrid (integer) (9.4.1.1.2)
scalar (1118)	edge%fluid%ne%transpcoeff(:)%v%comp(:)%scalar (vecflt_type) (9.4.1.2.9)
vector (1118)	edge%fluid%ne%transpcoeff(:)%v%comp(:)%vector (matflt_type) (9.4.1.2.7)
matrix (1118)	edge%fluid%ne%transpcoeff(:)%v%comp(:)%matrix (array3dflt_type) (9.4.1.2.1)
align (1125)	edge%fluid%ne%transpcoeff(:)%v%align (vecint_type) (9.4.1.2.10)
alignid (1125)	edge%fluid%ne%transpcoeff(:)%v%alignid (vecstring_type) (9.4.1.2.11)
source (1205)	edge%fluid%ne%source(:) (complexgrid_scalar) (9.4.1.3.75)
griduid (1118)	edge%fluid%ne%source(:)%griduid (integer) (9.4.1.1.2)
subgrid (1118)	edge%fluid%ne%source(:)%subgrid (integer) (9.4.1.1.2)
scalar (1118)	edge%fluid%ne%source(:)%scalar (vecflt_type) (9.4.1.2.9)
vector (1118)	edge%fluid%ne%source(:)%vector (matflt_type) (9.4.1.2.7)
matrix (1118)	edge%fluid%ne%source(:)%matrix (array3dflt_type) (9.4.1.2.1)
ni (1203)	edge%fluid%ni(:) (edge_fluid_scalar) (9.4.1.3.161)
value (1204)	edge%fluid%ni(:)%value(:) (complexgrid_scalar) (9.4.1.3.75)
griduid (1118)	edge%fluid%ni(:)%value(:)%griduid (integer) (9.4.1.1.2)
subgrid (1118)	edge%fluid%ni(:)%value(:)%subgrid (integer) (9.4.1.1.2)
scalar (1118)	edge%fluid%ni(:)%value(:)%scalar (vecflt_type) (9.4.1.2.9)
vector (1118)	edge%fluid%ni(:)%value(:)%vector (matflt_type) (9.4.1.2.7)
matrix (1118)	edge%fluid%ni(:)%value(:)%matrix (array3dflt_type) (9.4.1.2.1)
bndvalue (1204)	edge%fluid%ni(:)%bndvalue(:) (complexgrid_scalar) (9.4.1.3.75)
griduid (1118)	edge%fluid%ni(:)%bndvalue(:)%griduid (integer) (9.4.1.1.2)
subgrid (1118)	edge%fluid%ni(:)%bndvalue(:)%subgrid (integer) (9.4.1.1.2)
scalar (1118)	edge%fluid%ni(:)%bndvalue(:)%scalar (vecflt_type) (9.4.1.2.9)
vector (1118)	edge%fluid%ni(:)%bndvalue(:)%vector (matflt_type) (9.4.1.2.7)
matrix (1118)	edge%fluid%ni(:)%bndvalue(:)%matrix (array3dflt_type) (9.4.1.2.1)
flux (1204)	edge%fluid%ni(:)%flux(:) (complexgrid_vector) (9.4.1.3.81)
griduid (1124)	edge%fluid%ni(:)%flux(:)%griduid (integer) (9.4.1.1.2)
label (1124)	edge%fluid%ni(:)%flux(:)%label (string) (9.4.1.1.3)
comp (1124)	edge%fluid%ni(:)%flux(:)%comp(:) (complexgrid_scalar) (9.4.1.3.75)
griduid (1118)	edge%fluid%ni(:)%flux(:)%comp(:)%griduid (integer) (9.4.1.1.2)
subgrid (1118)	edge%fluid%ni(:)%flux(:)%comp(:)%subgrid (integer) (9.4.1.1.2)
scalar (1118)	edge%fluid%ni(:)%flux(:)%comp(:)%scalar (vecflt_type) (9.4.1.2.9)
vector (1118)	edge%fluid%ni(:)%flux(:)%comp(:)%vector (matflt_type) (9.4.1.2.7)

matrix (1118)	edge%fluid%ni(:)%flux(:)%comp(:)%matrix (array3dflt.type) (9.4.1.2.1)
align (1124)	edge%fluid%ni(:)%flux(:)%align (vecint.type) (9.4.1.2.10)
alignid (1124)	edge%fluid%ni(:)%flux(:)%alignid (vecstring.type) (9.4.1.2.11)
basis (1124)	edge%fluid%ni(:)%flux(:)%basis (integer) (9.4.1.1.2)
bndflux (1204)	edge%fluid%ni(:)%bndflux(:) (complexgrid_vector) (9.4.1.3.81)
griduid (1124)	edge%fluid%ni(:)%bndflux(:)%griduid (integer) (9.4.1.1.2)
label (1124)	edge%fluid%ni(:)%bndflux(:)%label (string) (9.4.1.1.3)
comp (1124)	edge%fluid%ni(:)%bndflux(:)%comp(:) (complexgrid_scalar) (9.4.1.3.75)
griduid (1118)	edge%fluid%ni(:)%bndflux(:)%comp(:)%griduid (integer) (9.4.1.1.2)
subgrid (1118)	edge%fluid%ni(:)%bndflux(:)%comp(:)%subgrid (integer) (9.4.1.1.2)
scalar (1118)	edge%fluid%ni(:)%bndflux(:)%comp(:)%scalar (vecflt.type) (9.4.1.2.9)
vector (1118)	edge%fluid%ni(:)%bndflux(:)%comp(:)%vector (matflt.type) (9.4.1.2.7)
matrix (1118)	edge%fluid%ni(:)%bndflux(:)%comp(:)%matrix (array3dflt.type) (9.4.1.2.1)
align (1124)	edge%fluid%ni(:)%bndflux(:)%align (vecint.type) (9.4.1.2.10)
alignid (1124)	edge%fluid%ni(:)%bndflux(:)%alignid (vecstring.type) (9.4.1.2.11)
basis (1124)	edge%fluid%ni(:)%bndflux(:)%basis (integer) (9.4.1.1.2)
transpcoeff (1204)	edge%fluid%ni(:)%transpcoeff(:) (edge_fluid_scalar_transpcoeff) (9.4.1.3.163)
d (1206)	edge%fluid%ni(:)%transpcoeff(:)%d (complexgrid_vector_simplestruct) (9.4.1.3.82)
label (1125)	edge%fluid%ni(:)%transpcoeff(:)%d%label (string) (9.4.1.1.3)
comp (1125)	edge%fluid%ni(:)%transpcoeff(:)%d%comp(:) (complexgrid_scalar) (9.4.1.3.75)
griduid (1118)	edge%fluid%ni(:)%transpcoeff(:)%d%comp(:)%griduid (integer) (9.4.1.1.2)
subgrid (1118)	edge%fluid%ni(:)%transpcoeff(:)%d%comp(:)%subgrid (integer) (9.4.1.1.2)
scalar (1118)	edge%fluid%ni(:)%transpcoeff(:)%d%comp(:)%scalar (vecflt.type) (9.4.1.2.9)
vector (1118)	edge%fluid%ni(:)%transpcoeff(:)%d%comp(:)%vector (matflt.type) (9.4.1.2.7)
matrix (1118)	edge%fluid%ni(:)%transpcoeff(:)%d%comp(:)%matrix (array3dflt.type) (9.4.1.2.1)
align (1125)	edge%fluid%ni(:)%transpcoeff(:)%d%align (vecint.type) (9.4.1.2.10)
alignid (1125)	edge%fluid%ni(:)%transpcoeff(:)%d%alignid (vecstring.type) (9.4.1.2.11)
v (1206)	edge%fluid%ni(:)%transpcoeff(:)%v (complexgrid_vector_simplestruct) (9.4.1.3.82)
label (1125)	edge%fluid%ni(:)%transpcoeff(:)%v%label (string) (9.4.1.1.3)
comp (1125)	edge%fluid%ni(:)%transpcoeff(:)%v%comp(:) (complexgrid_scalar) (9.4.1.3.75)
griduid (1118)	edge%fluid%ni(:)%transpcoeff(:)%v%comp(:)%griduid (integer) (9.4.1.1.2)
subgrid (1118)	edge%fluid%ni(:)%transpcoeff(:)%v%comp(:)%subgrid (integer) (9.4.1.1.2)
scalar (1118)	edge%fluid%ni(:)%transpcoeff(:)%v%comp(:)%scalar (vecflt.type) (9.4.1.2.9)
vector (1118)	edge%fluid%ni(:)%transpcoeff(:)%v%comp(:)%vector (matflt.type) (9.4.1.2.7)
matrix (1118)	edge%fluid%ni(:)%transpcoeff(:)%v%comp(:)%matrix (array3dflt.type) (9.4.1.2.1)
align (1125)	edge%fluid%ni(:)%transpcoeff(:)%v%align (vecint.type) (9.4.1.2.10)
alignid (1125)	edge%fluid%ni(:)%transpcoeff(:)%v%alignid (vecstring.type) (9.4.1.2.11)
source (1204)	edge%fluid%ni(:)%source(:) (complexgrid_scalar) (9.4.1.3.75)
griduid (1118)	edge%fluid%ni(:)%source(:)%griduid (integer) (9.4.1.1.2)
subgrid (1118)	edge%fluid%ni(:)%source(:)%subgrid (integer) (9.4.1.1.2)
scalar (1118)	edge%fluid%ni(:)%source(:)%scalar (vecflt.type) (9.4.1.2.9)
vector (1118)	edge%fluid%ni(:)%source(:)%vector (matflt.type) (9.4.1.2.7)
matrix (1118)	edge%fluid%ni(:)%source(:)%matrix (array3dflt.type) (9.4.1.2.1)
ve (1203)	edge%fluid%ve (edge_fluid_vector_simplestruct) (9.4.1.3.165)
griduid (1208)	edge%fluid%ve%griduid (integer) (9.4.1.1.2)
basis (1208)	edge%fluid%ve%basis (integer) (9.4.1.1.2)
comps (1208)	edge%fluid%ve%comps(:) (edge_fluid_scalar) (9.4.1.3.161)
value (1204)	edge%fluid%ve%comps(:)%value(:) (complexgrid_scalar) (9.4.1.3.75)
griduid (1118)	edge%fluid%ve%comps(:)%value(:)%griduid (integer) (9.4.1.1.2)
subgrid (1118)	edge%fluid%ve%comps(:)%value(:)%subgrid (integer) (9.4.1.1.2)
scalar (1118)	edge%fluid%ve%comps(:)%value(:)%scalar (vecflt.type) (9.4.1.2.9)
vector (1118)	edge%fluid%ve%comps(:)%value(:)%vector (matflt.type) (9.4.1.2.7)
matrix (1118)	edge%fluid%ve%comps(:)%value(:)%matrix (array3dflt.type) (9.4.1.2.1)
bndvalue (1204)	edge%fluid%ve%comps(:)%bndvalue(:) (complexgrid_scalar) (9.4.1.3.75)
griduid (1118)	edge%fluid%ve%comps(:)%bndvalue(:)%griduid (integer) (9.4.1.1.2)
subgrid (1118)	edge%fluid%ve%comps(:)%bndvalue(:)%subgrid (integer) (9.4.1.1.2)
scalar (1118)	edge%fluid%ve%comps(:)%bndvalue(:)%scalar (vecflt.type) (9.4.1.2.9)
vector (1118)	edge%fluid%ve%comps(:)%bndvalue(:)%vector (matflt.type) (9.4.1.2.7)
matrix (1118)	edge%fluid%ve%comps(:)%bndvalue(:)%matrix (array3dflt.type) (9.4.1.2.1)
flux (1204)	edge%fluid%ve%comps(:)%flux(:) (complexgrid_vector) (9.4.1.3.81)
griduid (1124)	edge%fluid%ve%comps(:)%flux(:)%griduid (integer) (9.4.1.1.2)

label (1124)	edge%fluid%ve%comps(:)%flux(:)%label (string) (9.4.1.1.3)
comp (1124)	edge%fluid%ve%comps(:)%flux(:)%comp(:) (complexgrid_scalar) (9.4.1.3.75)
griduid (1118)	edge%fluid%ve%comps(:)%flux(:)%comp(:)%griduid (integer) (9.4.1.1.2)
subgrid (1118)	edge%fluid%ve%comps(:)%flux(:)%comp(:)%subgrid (integer) (9.4.1.1.2)
scalar (1118)	edge%fluid%ve%comps(:)%flux(:)%comp(:)%scalar (vecflt_type) (9.4.1.2.9)
vector (1118)	edge%fluid%ve%comps(:)%flux(:)%comp(:)%vector (matflt_type) (9.4.1.2.7)
matrix (1118)	edge%fluid%ve%comps(:)%flux(:)%comp(:)%matrix (array3dflt_type) (9.4.1.2.1)
align (1124)	edge%fluid%ve%comps(:)%flux(:)%align (vecint_type) (9.4.1.2.10)
alignid (1124)	edge%fluid%ve%comps(:)%flux(:)%alignid (vecstring_type) (9.4.1.2.11)
basis (1124)	edge%fluid%ve%comps(:)%flux(:)%basis (integer) (9.4.1.1.2)
bndflux (1204)	edge%fluid%ve%comps(:)%bndflux(:) (complexgrid_vector) (9.4.1.3.81)
griduid (1124)	edge%fluid%ve%comps(:)%bndflux(:)%griduid (integer) (9.4.1.1.2)
label (1124)	edge%fluid%ve%comps(:)%bndflux(:)%label (string) (9.4.1.1.3)
comp (1124)	edge%fluid%ve%comps(:)%bndflux(:)%comp(:) (complexgrid_scalar) (9.4.1.3.75)
griduid (1118)	edge%fluid%ve%comps(:)%bndflux(:)%comp(:)%griduid (integer) (9.4.1.1.2)
subgrid (1118)	edge%fluid%ve%comps(:)%bndflux(:)%comp(:)%subgrid (integer) (9.4.1.1.2)
scalar (1118)	edge%fluid%ve%comps(:)%bndflux(:)%comp(:)%scalar (vecflt_type) (9.4.1.2.9)
vector (1118)	edge%fluid%ve%comps(:)%bndflux(:)%comp(:)%vector (matflt_type) (9.4.1.2.7)
matrix (1118)	edge%fluid%ve%comps(:)%bndflux(:)%comp(:)%matrix (array3dflt_type) (9.4.1.2.1)
align (1124)	edge%fluid%ve%comps(:)%bndflux(:)%align (vecint_type) (9.4.1.2.10)
alignid (1124)	edge%fluid%ve%comps(:)%bndflux(:)%alignid (vecstring_type) (9.4.1.2.11)
basis (1124)	edge%fluid%ve%comps(:)%bndflux(:)%basis (integer) (9.4.1.1.2)
transpcoeff (1204)	edge%fluid%ve%comps(:)%transpcoeff(:) (edge_fluid_scalar_transpcoeff) (9.4.1.3.163)
d (1206)	edge%fluid%ve%comps(:)%transpcoeff(:)%d (complexgrid_vector_simplestruct) (9.4.1.3.82)
label (1125)	edge%fluid%ve%comps(:)%transpcoeff(:)%d%label (string) (9.4.1.1.3)
comp (1125)	edge%fluid%ve%comps(:)%transpcoeff(:)%d%comp(:) (complexgrid_scalar) (9.4.1.3.75)
griduid (1118)	edge%fluid%ve%comps(:)%transpcoeff(:)%d%comp(:)%griduid (integer) (9.4.1.1.2)
subgrid (1118)	edge%fluid%ve%comps(:)%transpcoeff(:)%d%comp(:)%subgrid (integer) (9.4.1.1.2)
scalar (1118)	edge%fluid%ve%comps(:)%transpcoeff(:)%d%comp(:)%scalar (vecflt_type) (9.4.1.2.9)
vector (1118)	edge%fluid%ve%comps(:)%transpcoeff(:)%d%comp(:)%vector (matflt_type) (9.4.1.2.7)
matrix (1118)	edge%fluid%ve%comps(:)%transpcoeff(:)%d%comp(:)%matrix (array3dflt_type) (9.4.1.2.1)
align (1125)	edge%fluid%ve%comps(:)%transpcoeff(:)%d%align (vecint_type) (9.4.1.2.10)
alignid (1125)	edge%fluid%ve%comps(:)%transpcoeff(:)%d%alignid (vecstring_type) (9.4.1.2.11)
v (1206)	edge%fluid%ve%comps(:)%transpcoeff(:)%v (complexgrid_vector_simplestruct) (9.4.1.3.82)
label (1125)	edge%fluid%ve%comps(:)%transpcoeff(:)%v%label (string) (9.4.1.1.3)
comp (1125)	edge%fluid%ve%comps(:)%transpcoeff(:)%v%comp(:) (complexgrid_scalar) (9.4.1.3.75)
griduid (1118)	edge%fluid%ve%comps(:)%transpcoeff(:)%v%comp(:)%griduid (integer) (9.4.1.1.2)
subgrid (1118)	edge%fluid%ve%comps(:)%transpcoeff(:)%v%comp(:)%subgrid (integer) (9.4.1.1.2)
scalar (1118)	edge%fluid%ve%comps(:)%transpcoeff(:)%v%comp(:)%scalar (vecflt_type) (9.4.1.2.9)
vector (1118)	edge%fluid%ve%comps(:)%transpcoeff(:)%v%comp(:)%vector (matflt_type) (9.4.1.2.7)
matrix (1118)	edge%fluid%ve%comps(:)%transpcoeff(:)%v%comp(:)%matrix (array3dflt_type) (9.4.1.2.1)
align (1125)	edge%fluid%ve%comps(:)%transpcoeff(:)%v%align (vecint_type) (9.4.1.2.10)
alignid (1125)	edge%fluid%ve%comps(:)%transpcoeff(:)%v%alignid (vecstring_type) (9.4.1.2.11)
source (1204)	edge%fluid%ve%comps(:)%source(:) (complexgrid_scalar) (9.4.1.3.75)
griduid (1118)	edge%fluid%ve%comps(:)%source(:)%griduid (integer) (9.4.1.1.2)
subgrid (1118)	edge%fluid%ve%comps(:)%source(:)%subgrid (integer) (9.4.1.1.2)
scalar (1118)	edge%fluid%ve%comps(:)%source(:)%scalar (vecflt_type) (9.4.1.2.9)
vector (1118)	edge%fluid%ve%comps(:)%source(:)%vector (matflt_type) (9.4.1.2.7)
matrix (1118)	edge%fluid%ve%comps(:)%source(:)%matrix (array3dflt_type) (9.4.1.2.1)
align (1208)	edge%fluid%ve%align (vecint_type) (9.4.1.2.10)
alignid (1208)	edge%fluid%ve%alignid (vecstring_type) (9.4.1.2.11)
vi (1203)	edge%fluid%vi(:) (edge_fluid_vector) (9.4.1.3.164)
griduid (1207)	edge%fluid%vi(:)%griduid (integer) (9.4.1.1.2)
basis (1207)	edge%fluid%vi(:)%basis (integer) (9.4.1.1.2)
align (1207)	edge%fluid%vi(:)%align (vecint_type) (9.4.1.2.10)
alignid (1207)	edge%fluid%vi(:)%alignid (vecstring_type) (9.4.1.2.11)
comps (1207)	edge%fluid%vi(:)%comps(:) (edge_fluid_scalar) (9.4.1.3.161)
value (1204)	edge%fluid%vi(:)%comps(:)%value(:) (complexgrid_scalar) (9.4.1.3.75)
griduid (1118)	edge%fluid%vi(:)%comps(:)%value(:)%griduid (integer) (9.4.1.1.2)
subgrid (1118)	edge%fluid%vi(:)%comps(:)%value(:)%subgrid (integer) (9.4.1.1.2)
scalar (1118)	edge%fluid%vi(:)%comps(:)%value(:)%scalar (vecflt_type) (9.4.1.2.9)



vector (1118)	edge%fluid%vi()%comps():%value():%vector (matflt.type) (9.4.1.2.7)
matrix (1118)	edge%fluid%vi()%comps():%value():%matrix (array3dflt.type) (9.4.1.2.1)
bndvalue (1204)	edge%fluid%vi()%comps():%bndvalue(): (complexgrid_scalar) (9.4.1.3.75)
griduid (1118)	edge%fluid%vi()%comps():%bndvalue():%griduid (integer) (9.4.1.1.2)
subgrid (1118)	edge%fluid%vi()%comps():%bndvalue():%subgrid (integer) (9.4.1.1.2)
scalar (1118)	edge%fluid%vi()%comps():%bndvalue():%scalar (vecflt.type) (9.4.1.2.9)
vector (1118)	edge%fluid%vi()%comps():%bndvalue():%vector (matflt.type) (9.4.1.2.7)
matrix (1118)	edge%fluid%vi()%comps():%bndvalue():%matrix (array3dflt.type) (9.4.1.2.1)
flux (1204)	edge%fluid%vi()%comps():%flux(): (complexgrid_vector) (9.4.1.3.81)
griduid (1124)	edge%fluid%vi()%comps():%flux():%griduid (integer) (9.4.1.1.2)
label (1124)	edge%fluid%vi()%comps():%flux():%label (string) (9.4.1.1.3)
comp (1124)	edge%fluid%vi()%comps():%flux():%comp(): (complexgrid_scalar) (9.4.1.3.75)
griduid (1118)	edge%fluid%vi()%comps():%flux():%comp():%griduid (integer) (9.4.1.1.2)
subgrid (1118)	edge%fluid%vi()%comps():%flux():%comp():%subgrid (integer) (9.4.1.1.2)
scalar (1118)	edge%fluid%vi()%comps():%flux():%comp():%scalar (vecflt.type) (9.4.1.2.9)
vector (1118)	edge%fluid%vi()%comps():%flux():%comp():%vector (matflt.type) (9.4.1.2.7)
matrix (1118)	edge%fluid%vi()%comps():%flux():%comp():%matrix (array3dflt.type) (9.4.1.2.1)
align (1124)	edge%fluid%vi()%comps():%flux():%align (vecint.type) (9.4.1.2.10)
alignid (1124)	edge%fluid%vi()%comps():%flux():%alignid (vecstring.type) (9.4.1.2.11)
basis (1124)	edge%fluid%vi()%comps():%flux():%basis (integer) (9.4.1.1.2)
bndflux (1204)	edge%fluid%vi()%comps():%bndflux(): (complexgrid_vector) (9.4.1.3.81)
griduid (1124)	edge%fluid%vi()%comps():%bndflux():%griduid (integer) (9.4.1.1.2)
label (1124)	edge%fluid%vi()%comps():%bndflux():%label (string) (9.4.1.1.3)
comp (1124)	edge%fluid%vi()%comps():%bndflux():%comp(): (complexgrid_scalar) (9.4.1.3.75)
griduid (1118)	edge%fluid%vi()%comps():%bndflux():%comp():%griduid (integer) (9.4.1.1.2)
subgrid (1118)	edge%fluid%vi()%comps():%bndflux():%comp():%subgrid (integer) (9.4.1.1.2)
scalar (1118)	edge%fluid%vi()%comps():%bndflux():%comp():%scalar (vecflt.type) (9.4.1.2.9)
vector (1118)	edge%fluid%vi()%comps():%bndflux():%comp():%vector (matflt.type) (9.4.1.2.7)
matrix (1118)	edge%fluid%vi()%comps():%bndflux():%comp():%matrix (array3dflt.type) (9.4.1.2.1)
align (1124)	edge%fluid%vi()%comps():%bndflux():%align (vecint.type) (9.4.1.2.10)
alignid (1124)	edge%fluid%vi()%comps():%bndflux():%alignid (vecstring.type) (9.4.1.2.11)
basis (1124)	edge%fluid%vi()%comps():%bndflux():%basis (integer) (9.4.1.1.2)
transpcoeff (1204)	edge%fluid%vi()%comps():%transpcoeff(): (edge_fluid_scalar_transpcoeff) (9.4.1.3.163)
d (1206)	edge%fluid%vi()%comps():%transpcoeff():%d (complexgrid_vector_simplestruct) (9.4.1.3.82)
label (1125)	edge%fluid%vi()%comps():%transpcoeff():%d%label (string) (9.4.1.1.3)
comp (1125)	edge%fluid%vi()%comps():%transpcoeff():%d%comp(): (complexgrid_scalar) (9.4.1.3.75)
griduid (1118)	edge%fluid%vi()%comps():%transpcoeff():%d%comp():%griduid (integer) (9.4.1.1.2)
subgrid (1118)	edge%fluid%vi()%comps():%transpcoeff():%d%comp():%subgrid (integer) (9.4.1.1.2)
scalar (1118)	edge%fluid%vi()%comps():%transpcoeff():%d%comp():%scalar (vecflt.type) (9.4.1.2.9)
vector (1118)	edge%fluid%vi()%comps():%transpcoeff():%d%comp():%vector (matflt.type) (9.4.1.2.7)
matrix (1118)	edge%fluid%vi()%comps():%transpcoeff():%d%comp():%matrix (array3dflt.type) (9.4.1.2.1)
align (1125)	edge%fluid%vi()%comps():%transpcoeff():%d%align (vecint.type) (9.4.1.2.10)
alignid (1125)	edge%fluid%vi()%comps():%transpcoeff():%d%alignid (vecstring.type) (9.4.1.2.11)
v (1206)	edge%fluid%vi()%comps():%transpcoeff():%v (complexgrid_vector_simplestruct) (9.4.1.3.82)
label (1125)	edge%fluid%vi()%comps():%transpcoeff():%v%label (string) (9.4.1.1.3)
comp (1125)	edge%fluid%vi()%comps():%transpcoeff():%v%comp(): (complexgrid_scalar) (9.4.1.3.75)
griduid (1118)	edge%fluid%vi()%comps():%transpcoeff():%v%comp():%griduid (integer) (9.4.1.1.2)
subgrid (1118)	edge%fluid%vi()%comps():%transpcoeff():%v%comp():%subgrid (integer) (9.4.1.1.2)
scalar (1118)	edge%fluid%vi()%comps():%transpcoeff():%v%comp():%scalar (vecflt.type) (9.4.1.2.9)
vector (1118)	edge%fluid%vi()%comps():%transpcoeff():%v%comp():%vector (matflt.type) (9.4.1.2.7)
matrix (1118)	edge%fluid%vi()%comps():%transpcoeff():%v%comp():%matrix (array3dflt.type) (9.4.1.2.1)
align (1125)	edge%fluid%vi()%comps():%transpcoeff():%v%align (vecint.type) (9.4.1.2.10)
alignid (1125)	edge%fluid%vi()%comps():%transpcoeff():%v%alignid (vecstring.type) (9.4.1.2.11)
source (1204)	edge%fluid%vi()%comps():%source(): (complexgrid_scalar) (9.4.1.3.75)
griduid (1118)	edge%fluid%vi()%comps():%source():%griduid (integer) (9.4.1.1.2)
subgrid (1118)	edge%fluid%vi()%comps():%source():%subgrid (integer) (9.4.1.1.2)
scalar (1118)	edge%fluid%vi()%comps():%source():%scalar (vecflt.type) (9.4.1.2.9)
vector (1118)	edge%fluid%vi()%comps():%source():%vector (matflt.type) (9.4.1.2.7)
matrix (1118)	edge%fluid%vi()%comps():%source():%matrix (array3dflt.type) (9.4.1.2.1)
te (1203)	edge%fluid%te (edge_fluid_scalar_simplestruct) (9.4.1.3.162)
value (1205)	edge%fluid%te%value(): (complexgrid_scalar) (9.4.1.3.75)

griduid (1118)	edge%fluid%te%value(:)%griduid (integer) (9.4.1.1.2)
subgrid (1118)	edge%fluid%te%value(:)%subgrid (integer) (9.4.1.1.2)
scalar (1118)	edge%fluid%te%value(:)%scalar (vecflt_type) (9.4.1.2.9)
vector (1118)	edge%fluid%te%value(:)%vector (matflt_type) (9.4.1.2.7)
matrix (1118)	edge%fluid%te%value(:)%matrix (array3dflt_type) (9.4.1.2.1)
bndvalue (1205)	edge%fluid%te%bndvalue(:) (complexgrid_scalar) (9.4.1.3.75)
griduid (1118)	edge%fluid%te%bndvalue(:)%griduid (integer) (9.4.1.1.2)
subgrid (1118)	edge%fluid%te%bndvalue(:)%subgrid (integer) (9.4.1.1.2)
scalar (1118)	edge%fluid%te%bndvalue(:)%scalar (vecflt_type) (9.4.1.2.9)
vector (1118)	edge%fluid%te%bndvalue(:)%vector (matflt_type) (9.4.1.2.7)
matrix (1118)	edge%fluid%te%bndvalue(:)%matrix (array3dflt_type) (9.4.1.2.1)
flux (1205)	edge%fluid%te%flux(:) (complexgrid_vector) (9.4.1.3.81)
griduid (1124)	edge%fluid%te%flux(:)%griduid (integer) (9.4.1.1.2)
label (1124)	edge%fluid%te%flux(:)%label (string) (9.4.1.1.3)
comp (1124)	edge%fluid%te%flux(:)%comp(:) (complexgrid_scalar) (9.4.1.3.75)
griduid (1118)	edge%fluid%te%flux(:)%comp(:)%griduid (integer) (9.4.1.1.2)
subgrid (1118)	edge%fluid%te%flux(:)%comp(:)%subgrid (integer) (9.4.1.1.2)
scalar (1118)	edge%fluid%te%flux(:)%comp(:)%scalar (vecflt_type) (9.4.1.2.9)
vector (1118)	edge%fluid%te%flux(:)%comp(:)%vector (matflt_type) (9.4.1.2.7)
matrix (1118)	edge%fluid%te%flux(:)%comp(:)%matrix (array3dflt_type) (9.4.1.2.1)
align (1124)	edge%fluid%te%flux(:)%align (vecint_type) (9.4.1.2.10)
alignid (1124)	edge%fluid%te%flux(:)%alignid (vecstring_type) (9.4.1.2.11)
basis (1124)	edge%fluid%te%flux(:)%basis (integer) (9.4.1.1.2)
bndflux (1205)	edge%fluid%te%bndflux(:) (complexgrid_vector) (9.4.1.3.81)
griduid (1124)	edge%fluid%te%bndflux(:)%griduid (integer) (9.4.1.1.2)
label (1124)	edge%fluid%te%bndflux(:)%label (string) (9.4.1.1.3)
comp (1124)	edge%fluid%te%bndflux(:)%comp(:) (complexgrid_scalar) (9.4.1.3.75)
griduid (1118)	edge%fluid%te%bndflux(:)%comp(:)%griduid (integer) (9.4.1.1.2)
subgrid (1118)	edge%fluid%te%bndflux(:)%comp(:)%subgrid (integer) (9.4.1.1.2)
scalar (1118)	edge%fluid%te%bndflux(:)%comp(:)%scalar (vecflt_type) (9.4.1.2.9)
vector (1118)	edge%fluid%te%bndflux(:)%comp(:)%vector (matflt_type) (9.4.1.2.7)
matrix (1118)	edge%fluid%te%bndflux(:)%comp(:)%matrix (array3dflt_type) (9.4.1.2.1)
align (1124)	edge%fluid%te%bndflux(:)%align (vecint_type) (9.4.1.2.10)
alignid (1124)	edge%fluid%te%bndflux(:)%alignid (vecstring_type) (9.4.1.2.11)
basis (1124)	edge%fluid%te%bndflux(:)%basis (integer) (9.4.1.1.2)
transpcoeff (1205)	edge%fluid%te%transpcoeff(:) (edge_fluid_scalar_transpcoeff) (9.4.1.3.163)
d (1206)	edge%fluid%te%transpcoeff(:)%d (complexgrid_vector_simplestruct) (9.4.1.3.82)
label (1125)	edge%fluid%te%transpcoeff(:)%d%label (string) (9.4.1.1.3)
comp (1125)	edge%fluid%te%transpcoeff(:)%d%comp(:) (complexgrid_scalar) (9.4.1.3.75)
griduid (1118)	edge%fluid%te%transpcoeff(:)%d%comp(:)%griduid (integer) (9.4.1.1.2)
subgrid (1118)	edge%fluid%te%transpcoeff(:)%d%comp(:)%subgrid (integer) (9.4.1.1.2)
scalar (1118)	edge%fluid%te%transpcoeff(:)%d%comp(:)%scalar (vecflt_type) (9.4.1.2.9)
vector (1118)	edge%fluid%te%transpcoeff(:)%d%comp(:)%vector (matflt_type) (9.4.1.2.7)
matrix (1118)	edge%fluid%te%transpcoeff(:)%d%comp(:)%matrix (array3dflt_type) (9.4.1.2.1)
align (1125)	edge%fluid%te%transpcoeff(:)%d%align (vecint_type) (9.4.1.2.10)
alignid (1125)	edge%fluid%te%transpcoeff(:)%d%alignid (vecstring_type) (9.4.1.2.11)
v (1206)	edge%fluid%te%transpcoeff(:)%v (complexgrid_vector_simplestruct) (9.4.1.3.82)
label (1125)	edge%fluid%te%transpcoeff(:)%v%label (string) (9.4.1.1.3)
comp (1125)	edge%fluid%te%transpcoeff(:)%v%comp(:) (complexgrid_scalar) (9.4.1.3.75)
griduid (1118)	edge%fluid%te%transpcoeff(:)%v%comp(:)%griduid (integer) (9.4.1.1.2)
subgrid (1118)	edge%fluid%te%transpcoeff(:)%v%comp(:)%subgrid (integer) (9.4.1.1.2)
scalar (1118)	edge%fluid%te%transpcoeff(:)%v%comp(:)%scalar (vecflt_type) (9.4.1.2.9)
vector (1118)	edge%fluid%te%transpcoeff(:)%v%comp(:)%vector (matflt_type) (9.4.1.2.7)
matrix (1118)	edge%fluid%te%transpcoeff(:)%v%comp(:)%matrix (array3dflt_type) (9.4.1.2.1)
align (1125)	edge%fluid%te%transpcoeff(:)%v%align (vecint_type) (9.4.1.2.10)
alignid (1125)	edge%fluid%te%transpcoeff(:)%v%alignid (vecstring_type) (9.4.1.2.11)
source (1205)	edge%fluid%te%source(:) (complexgrid_scalar) (9.4.1.3.75)
griduid (1118)	edge%fluid%te%source(:)%griduid (integer) (9.4.1.1.2)
subgrid (1118)	edge%fluid%te%source(:)%subgrid (integer) (9.4.1.1.2)
scalar (1118)	edge%fluid%te%source(:)%scalar (vecflt_type) (9.4.1.2.9)
vector (1118)	edge%fluid%te%source(:)%vector (matflt_type) (9.4.1.2.7)



matrix (1118)	edge%fluid%te%source(:)%matrix (array3dflt_type) (9.4.1.2.1)
ti (1203)	edge%fluid%ti(:) (edge_fluid_scalar) (9.4.1.3.161)
value (1204)	edge%fluid%ti(:)%value(:) (complexgrid_scalar) (9.4.1.3.75)
griduid (1118)	edge%fluid%ti(:)%value(:)%griduid (integer) (9.4.1.1.2)
subgrid (1118)	edge%fluid%ti(:)%value(:)%subgrid (integer) (9.4.1.1.2)
scalar (1118)	edge%fluid%ti(:)%value(:)%scalar (vecflt_type) (9.4.1.2.9)
vector (1118)	edge%fluid%ti(:)%value(:)%vector (matflt_type) (9.4.1.2.7)
matrix (1118)	edge%fluid%ti(:)%value(:)%matrix (array3dflt_type) (9.4.1.2.1)
bndvalue (1204)	edge%fluid%ti(:)%bndvalue(:) (complexgrid_scalar) (9.4.1.3.75)
griduid (1118)	edge%fluid%ti(:)%bndvalue(:)%griduid (integer) (9.4.1.1.2)
subgrid (1118)	edge%fluid%ti(:)%bndvalue(:)%subgrid (integer) (9.4.1.1.2)
scalar (1118)	edge%fluid%ti(:)%bndvalue(:)%scalar (vecflt_type) (9.4.1.2.9)
vector (1118)	edge%fluid%ti(:)%bndvalue(:)%vector (matflt_type) (9.4.1.2.7)
matrix (1118)	edge%fluid%ti(:)%bndvalue(:)%matrix (array3dflt_type) (9.4.1.2.1)
flux (1204)	edge%fluid%ti(:)%flux(:) (complexgrid_vector) (9.4.1.3.81)
griduid (1124)	edge%fluid%ti(:)%flux(:)%griduid (integer) (9.4.1.1.2)
label (1124)	edge%fluid%ti(:)%flux(:)%label (string) (9.4.1.1.3)
comp (1124)	edge%fluid%ti(:)%flux(:)%comp(:) (complexgrid_scalar) (9.4.1.3.75)
griduid (1118)	edge%fluid%ti(:)%flux(:)%comp(:)%griduid (integer) (9.4.1.1.2)
subgrid (1118)	edge%fluid%ti(:)%flux(:)%comp(:)%subgrid (integer) (9.4.1.1.2)
scalar (1118)	edge%fluid%ti(:)%flux(:)%comp(:)%scalar (vecflt_type) (9.4.1.2.9)
vector (1118)	edge%fluid%ti(:)%flux(:)%comp(:)%vector (matflt_type) (9.4.1.2.7)
matrix (1118)	edge%fluid%ti(:)%flux(:)%comp(:)%matrix (array3dflt_type) (9.4.1.2.1)
align (1124)	edge%fluid%ti(:)%flux(:)%align (vecint_type) (9.4.1.2.10)
alignid (1124)	edge%fluid%ti(:)%flux(:)%alignid (vecstring_type) (9.4.1.2.11)
basis (1124)	edge%fluid%ti(:)%flux(:)%basis (integer) (9.4.1.1.2)
bndflux (1204)	edge%fluid%ti(:)%bndflux(:) (complexgrid_vector) (9.4.1.3.81)
griduid (1124)	edge%fluid%ti(:)%bndflux(:)%griduid (integer) (9.4.1.1.2)
label (1124)	edge%fluid%ti(:)%bndflux(:)%label (string) (9.4.1.1.3)
comp (1124)	edge%fluid%ti(:)%bndflux(:)%comp(:) (complexgrid_scalar) (9.4.1.3.75)
griduid (1118)	edge%fluid%ti(:)%bndflux(:)%comp(:)%griduid (integer) (9.4.1.1.2)
subgrid (1118)	edge%fluid%ti(:)%bndflux(:)%comp(:)%subgrid (integer) (9.4.1.1.2)
scalar (1118)	edge%fluid%ti(:)%bndflux(:)%comp(:)%scalar (vecflt_type) (9.4.1.2.9)
vector (1118)	edge%fluid%ti(:)%bndflux(:)%comp(:)%vector (matflt_type) (9.4.1.2.7)
matrix (1118)	edge%fluid%ti(:)%bndflux(:)%comp(:)%matrix (array3dflt_type) (9.4.1.2.1)
align (1124)	edge%fluid%ti(:)%bndflux(:)%align (vecint_type) (9.4.1.2.10)
alignid (1124)	edge%fluid%ti(:)%bndflux(:)%alignid (vecstring_type) (9.4.1.2.11)
basis (1124)	edge%fluid%ti(:)%bndflux(:)%basis (integer) (9.4.1.1.2)
transpcoeff (1204)	edge%fluid%ti(:)%transpcoeff(:) (edge_fluid_scalar_transpcoeff) (9.4.1.3.163)
d (1206)	edge%fluid%ti(:)%transpcoeff(:)%d (complexgrid_vector_simplestruct) (9.4.1.3.82)
label (1125)	edge%fluid%ti(:)%transpcoeff(:)%d%label (string) (9.4.1.1.3)
comp (1125)	edge%fluid%ti(:)%transpcoeff(:)%d%comp(:) (complexgrid_scalar) (9.4.1.3.75)
griduid (1118)	edge%fluid%ti(:)%transpcoeff(:)%d%comp(:)%griduid (integer) (9.4.1.1.2)
subgrid (1118)	edge%fluid%ti(:)%transpcoeff(:)%d%comp(:)%subgrid (integer) (9.4.1.1.2)
scalar (1118)	edge%fluid%ti(:)%transpcoeff(:)%d%comp(:)%scalar (vecflt_type) (9.4.1.2.9)
vector (1118)	edge%fluid%ti(:)%transpcoeff(:)%d%comp(:)%vector (matflt_type) (9.4.1.2.7)
matrix (1118)	edge%fluid%ti(:)%transpcoeff(:)%d%comp(:)%matrix (array3dflt_type) (9.4.1.2.1)
align (1125)	edge%fluid%ti(:)%transpcoeff(:)%d%align (vecint_type) (9.4.1.2.10)
alignid (1125)	edge%fluid%ti(:)%transpcoeff(:)%d%alignid (vecstring_type) (9.4.1.2.11)
v (1206)	edge%fluid%ti(:)%transpcoeff(:)%v (complexgrid_vector_simplestruct) (9.4.1.3.82)
label (1125)	edge%fluid%ti(:)%transpcoeff(:)%v%label (string) (9.4.1.1.3)
comp (1125)	edge%fluid%ti(:)%transpcoeff(:)%v%comp(:) (complexgrid_scalar) (9.4.1.3.75)
griduid (1118)	edge%fluid%ti(:)%transpcoeff(:)%v%comp(:)%griduid (integer) (9.4.1.1.2)
subgrid (1118)	edge%fluid%ti(:)%transpcoeff(:)%v%comp(:)%subgrid (integer) (9.4.1.1.2)
scalar (1118)	edge%fluid%ti(:)%transpcoeff(:)%v%comp(:)%scalar (vecflt_type) (9.4.1.2.9)
vector (1118)	edge%fluid%ti(:)%transpcoeff(:)%v%comp(:)%vector (matflt_type) (9.4.1.2.7)
matrix (1118)	edge%fluid%ti(:)%transpcoeff(:)%v%comp(:)%matrix (array3dflt_type) (9.4.1.2.1)
align (1125)	edge%fluid%ti(:)%transpcoeff(:)%v%align (vecint_type) (9.4.1.2.10)
alignid (1125)	edge%fluid%ti(:)%transpcoeff(:)%v%alignid (vecstring_type) (9.4.1.2.11)
source (1204)	edge%fluid%ti(:)%source(:) (complexgrid_scalar) (9.4.1.3.75)
griduid (1118)	edge%fluid%ti(:)%source(:)%griduid (integer) (9.4.1.1.2)

subgrid (1118)	edge%fluid%ti(:)%source(:)%subgrid (integer) (9.4.1.1.2)
scalar (1118)	edge%fluid%ti(:)%source(:)%scalar (vecflt_type) (9.4.1.2.9)
vector (1118)	edge%fluid%ti(:)%source(:)%vector (matflt_type) (9.4.1.2.7)
matrix (1118)	edge%fluid%ti(:)%source(:)%matrix (array3dflt_type) (9.4.1.2.1)
te_aniso (1203)	edge%fluid%te_aniso (edge_fluid_vector_simplestruct) (9.4.1.3.165)
griduid (1208)	edge%fluid%te_aniso%griduid (integer) (9.4.1.1.2)
basis (1208)	edge%fluid%te_aniso%basis (integer) (9.4.1.1.2)
comps (1208)	edge%fluid%te_aniso%comps(:) (edge_fluid_scalar) (9.4.1.3.161)
value (1204)	edge%fluid%te_aniso%comps(:)%value(:) (complexgrid_scalar) (9.4.1.3.75)
griduid (1118)	edge%fluid%te_aniso%comps(:)%value(:)%griduid (integer) (9.4.1.1.2)
subgrid (1118)	edge%fluid%te_aniso%comps(:)%value(:)%subgrid (integer) (9.4.1.1.2)
scalar (1118)	edge%fluid%te_aniso%comps(:)%value(:)%scalar (vecflt_type) (9.4.1.2.9)
vector (1118)	edge%fluid%te_aniso%comps(:)%value(:)%vector (matflt_type) (9.4.1.2.7)
matrix (1118)	edge%fluid%te_aniso%comps(:)%value(:)%matrix (array3dflt_type) (9.4.1.2.1)
bndvalue (1204)	edge%fluid%te_aniso%comps(:)%bndvalue(:) (complexgrid_scalar) (9.4.1.3.75)
griduid (1118)	edge%fluid%te_aniso%comps(:)%bndvalue(:)%griduid (integer) (9.4.1.1.2)
subgrid (1118)	edge%fluid%te_aniso%comps(:)%bndvalue(:)%subgrid (integer) (9.4.1.1.2)
scalar (1118)	edge%fluid%te_aniso%comps(:)%bndvalue(:)%scalar (vecflt_type) (9.4.1.2.9)
vector (1118)	edge%fluid%te_aniso%comps(:)%bndvalue(:)%vector (matflt_type) (9.4.1.2.7)
matrix (1118)	edge%fluid%te_aniso%comps(:)%bndvalue(:)%matrix (array3dflt_type) (9.4.1.2.1)
flux (1204)	edge%fluid%te_aniso%comps(:)%flux(:) (complexgrid_vector) (9.4.1.3.81)
griduid (1124)	edge%fluid%te_aniso%comps(:)%flux(:)%griduid (integer) (9.4.1.1.2)
label (1124)	edge%fluid%te_aniso%comps(:)%flux(:)%label (string) (9.4.1.1.3)
comp (1124)	edge%fluid%te_aniso%comps(:)%flux(:)%comp(:) (complexgrid_scalar) (9.4.1.3.75)
griduid (1118)	edge%fluid%te_aniso%comps(:)%flux(:)%comp(:)%griduid (integer) (9.4.1.1.2)
subgrid (1118)	edge%fluid%te_aniso%comps(:)%flux(:)%comp(:)%subgrid (integer) (9.4.1.1.2)
scalar (1118)	edge%fluid%te_aniso%comps(:)%flux(:)%comp(:)%scalar (vecflt_type) (9.4.1.2.9)
vector (1118)	edge%fluid%te_aniso%comps(:)%flux(:)%comp(:)%vector (matflt_type) (9.4.1.2.7)
matrix (1118)	edge%fluid%te_aniso%comps(:)%flux(:)%comp(:)%matrix (array3dflt_type) (9.4.1.2.1)
align (1124)	edge%fluid%te_aniso%comps(:)%flux(:)%align (vecint_type) (9.4.1.2.10)
alignid (1124)	edge%fluid%te_aniso%comps(:)%flux(:)%alignid (vecstring_type) (9.4.1.2.11)
basis (1124)	edge%fluid%te_aniso%comps(:)%flux(:)%basis (integer) (9.4.1.1.2)
bndflux (1204)	edge%fluid%te_aniso%comps(:)%bndflux(:) (complexgrid_vector) (9.4.1.3.81)
griduid (1124)	edge%fluid%te_aniso%comps(:)%bndflux(:)%griduid (integer) (9.4.1.1.2)
label (1124)	edge%fluid%te_aniso%comps(:)%bndflux(:)%label (string) (9.4.1.1.3)
comp (1124)	edge%fluid%te_aniso%comps(:)%bndflux(:)%comp(:) (complexgrid_scalar) (9.4.1.3.75)
griduid (1118)	edge%fluid%te_aniso%comps(:)%bndflux(:)%comp(:)%griduid (integer) (9.4.1.1.2)
subgrid (1118)	edge%fluid%te_aniso%comps(:)%bndflux(:)%comp(:)%subgrid (integer) (9.4.1.1.2)
scalar (1118)	edge%fluid%te_aniso%comps(:)%bndflux(:)%comp(:)%scalar (vecflt_type) (9.4.1.2.9)
vector (1118)	edge%fluid%te_aniso%comps(:)%bndflux(:)%comp(:)%vector (matflt_type) (9.4.1.2.7)
matrix (1118)	edge%fluid%te_aniso%comps(:)%bndflux(:)%comp(:)%matrix (array3dflt_type) (9.4.1.2.1)
align (1124)	edge%fluid%te_aniso%comps(:)%bndflux(:)%align (vecint_type) (9.4.1.2.10)
alignid (1124)	edge%fluid%te_aniso%comps(:)%bndflux(:)%alignid (vecstring_type) (9.4.1.2.11)
basis (1124)	edge%fluid%te_aniso%comps(:)%bndflux(:)%basis (integer) (9.4.1.1.2)
transpcoeff (1204)	edge%fluid%te_aniso%comps(:)%transpcoeff(:) (edge_fluid_scalar_transpcoeff) (9.4.1.3.163)
d (1206)	edge%fluid%te_aniso%comps(:)%transpcoeff(:)%d (complexgrid_vector_simplestruct) (9.4.1.3.82)
label (1125)	edge%fluid%te_aniso%comps(:)%transpcoeff(:)%d%label (string) (9.4.1.1.3)
comp (1125)	edge%fluid%te_aniso%comps(:)%transpcoeff(:)%d%comp(:) (complexgrid_scalar) (9.4.1.3.75)
griduid (1118)	edge%fluid%te_aniso%comps(:)%transpcoeff(:)%d%comp(:)%griduid (integer) (9.4.1.1.2)
subgrid (1118)	edge%fluid%te_aniso%comps(:)%transpcoeff(:)%d%comp(:)%subgrid (integer) (9.4.1.1.2)
scalar (1118)	edge%fluid%te_aniso%comps(:)%transpcoeff(:)%d%comp(:)%scalar (vecflt_type) (9.4.1.2.9)
vector (1118)	edge%fluid%te_aniso%comps(:)%transpcoeff(:)%d%comp(:)%vector (matflt_type) (9.4.1.2.7)
matrix (1118)	edge%fluid%te_aniso%comps(:)%transpcoeff(:)%d%comp(:)%matrix (array3dflt_type) (9.4.1.2.1)
align (1125)	edge%fluid%te_aniso%comps(:)%transpcoeff(:)%d%align (vecint_type) (9.4.1.2.10)
alignid (1125)	edge%fluid%te_aniso%comps(:)%transpcoeff(:)%d%alignid (vecstring_type) (9.4.1.2.11)
v (1206)	edge%fluid%te_aniso%comps(:)%transpcoeff(:)%v (complexgrid_vector_simplestruct) (9.4.1.3.82)
label (1125)	edge%fluid%te_aniso%comps(:)%transpcoeff(:)%v%label (string) (9.4.1.1.3)
comp (1125)	edge%fluid%te_aniso%comps(:)%transpcoeff(:)%v%comp(:) (complexgrid_scalar) (9.4.1.3.75)
griduid (1118)	edge%fluid%te_aniso%comps(:)%transpcoeff(:)%v%comp(:)%griduid (integer) (9.4.1.1.2)

subgrid (1118)	edge%fluid%te_aniso%comps(:)%transpcoeff(:)%v%comp(:)%subgrid (integer) (9.4.1.1.2)
scalar (1118)	edge%fluid%te_aniso%comps(:)%transpcoeff(:)%v%comp(:)%scalar (vecflt_type) (9.4.1.2.9)
vector (1118)	edge%fluid%te_aniso%comps(:)%transpcoeff(:)%v%comp(:)%vector (matflt_type) (9.4.1.2.7)
matrix (1118)	edge%fluid%te_aniso%comps(:)%transpcoeff(:)%v%comp(:)%matrix (array3dflt_type) (9.4.1.2.1)
align (1125)	edge%fluid%te_aniso%comps(:)%transpcoeff(:)%v%align (vecint_type) (9.4.1.2.10)
alignid (1125)	edge%fluid%te_aniso%comps(:)%transpcoeff(:)%v%alignid (vecstring_type) (9.4.1.2.11)
source (1204)	edge%fluid%te_aniso%comps(:)%source(:) (complexgrid_scalar) (9.4.1.3.75)
griduid (1118)	edge%fluid%te_aniso%comps(:)%source(:)%griduid (integer) (9.4.1.1.2)
subgrid (1118)	edge%fluid%te_aniso%comps(:)%source(:)%subgrid (integer) (9.4.1.1.2)
scalar (1118)	edge%fluid%te_aniso%comps(:)%source(:)%scalar (vecflt_type) (9.4.1.2.9)
vector (1118)	edge%fluid%te_aniso%comps(:)%source(:)%vector (matflt_type) (9.4.1.2.7)
matrix (1118)	edge%fluid%te_aniso%comps(:)%source(:)%matrix (array3dflt_type) (9.4.1.2.1)
align (1208)	edge%fluid%te_aniso%align (vecint_type) (9.4.1.2.10)
alignid (1208)	edge%fluid%te_aniso%alignid (vecstring_type) (9.4.1.2.11)
ti_aniso (1203)	edge%fluid%ti_aniso(:) (edge_fluid_vector) (9.4.1.3.164)
griduid (1207)	edge%fluid%ti_aniso(:)%griduid (integer) (9.4.1.1.2)
basis (1207)	edge%fluid%ti_aniso(:)%basis (integer) (9.4.1.1.2)
align (1207)	edge%fluid%ti_aniso(:)%align (vecint_type) (9.4.1.2.10)
alignid (1207)	edge%fluid%ti_aniso(:)%alignid (vecstring_type) (9.4.1.2.11)
comps (1207)	edge%fluid%ti_aniso(:)%comps(:) (edge_fluid_scalar) (9.4.1.3.161)
value (1204)	edge%fluid%ti_aniso(:)%comps(:)%value(:) (complexgrid_scalar) (9.4.1.3.75)
griduid (1118)	edge%fluid%ti_aniso(:)%comps(:)%value(:)%griduid (integer) (9.4.1.1.2)
subgrid (1118)	edge%fluid%ti_aniso(:)%comps(:)%value(:)%subgrid (integer) (9.4.1.1.2)
scalar (1118)	edge%fluid%ti_aniso(:)%comps(:)%value(:)%scalar (vecflt_type) (9.4.1.2.9)
vector (1118)	edge%fluid%ti_aniso(:)%comps(:)%value(:)%vector (matflt_type) (9.4.1.2.7)
matrix (1118)	edge%fluid%ti_aniso(:)%comps(:)%value(:)%matrix (array3dflt_type) (9.4.1.2.1)
bndvalue (1204)	edge%fluid%ti_aniso(:)%comps(:)%bndvalue(:) (complexgrid_scalar) (9.4.1.3.75)
griduid (1118)	edge%fluid%ti_aniso(:)%comps(:)%bndvalue(:)%griduid (integer) (9.4.1.1.2)
subgrid (1118)	edge%fluid%ti_aniso(:)%comps(:)%bndvalue(:)%subgrid (integer) (9.4.1.1.2)
scalar (1118)	edge%fluid%ti_aniso(:)%comps(:)%bndvalue(:)%scalar (vecflt_type) (9.4.1.2.9)
vector (1118)	edge%fluid%ti_aniso(:)%comps(:)%bndvalue(:)%vector (matflt_type) (9.4.1.2.7)
matrix (1118)	edge%fluid%ti_aniso(:)%comps(:)%bndvalue(:)%matrix (array3dflt_type) (9.4.1.2.1)
flux (1204)	edge%fluid%ti_aniso(:)%comps(:)%flux(:) (complexgrid_vector) (9.4.1.3.81)
griduid (1124)	edge%fluid%ti_aniso(:)%comps(:)%flux(:)%griduid (integer) (9.4.1.1.2)
label (1124)	edge%fluid%ti_aniso(:)%comps(:)%flux(:)%label (string) (9.4.1.1.3)
comp (1124)	edge%fluid%ti_aniso(:)%comps(:)%flux(:)%comp(:) (complexgrid_scalar) (9.4.1.3.75)
griduid (1118)	edge%fluid%ti_aniso(:)%comps(:)%flux(:)%comp(:)%griduid (integer) (9.4.1.1.2)
subgrid (1118)	edge%fluid%ti_aniso(:)%comps(:)%flux(:)%comp(:)%subgrid (integer) (9.4.1.1.2)
scalar (1118)	edge%fluid%ti_aniso(:)%comps(:)%flux(:)%comp(:)%scalar (vecflt_type) (9.4.1.2.9)
vector (1118)	edge%fluid%ti_aniso(:)%comps(:)%flux(:)%comp(:)%vector (matflt_type) (9.4.1.2.7)
matrix (1118)	edge%fluid%ti_aniso(:)%comps(:)%flux(:)%comp(:)%matrix (array3dflt_type) (9.4.1.2.1)
align (1124)	edge%fluid%ti_aniso(:)%comps(:)%flux(:)%align (vecint_type) (9.4.1.2.10)
alignid (1124)	edge%fluid%ti_aniso(:)%comps(:)%flux(:)%alignid (vecstring_type) (9.4.1.2.11)
basis (1124)	edge%fluid%ti_aniso(:)%comps(:)%flux(:)%basis (integer) (9.4.1.1.2)
bndflux (1204)	edge%fluid%ti_aniso(:)%comps(:)%bndflux(:) (complexgrid_vector) (9.4.1.3.81)
griduid (1124)	edge%fluid%ti_aniso(:)%comps(:)%bndflux(:)%griduid (integer) (9.4.1.1.2)
label (1124)	edge%fluid%ti_aniso(:)%comps(:)%bndflux(:)%label (string) (9.4.1.1.3)
comp (1124)	edge%fluid%ti_aniso(:)%comps(:)%bndflux(:)%comp(:) (complexgrid_scalar) (9.4.1.3.75)
griduid (1118)	edge%fluid%ti_aniso(:)%comps(:)%bndflux(:)%comp(:)%griduid (integer) (9.4.1.1.2)
subgrid (1118)	edge%fluid%ti_aniso(:)%comps(:)%bndflux(:)%comp(:)%subgrid (integer) (9.4.1.1.2)
scalar (1118)	edge%fluid%ti_aniso(:)%comps(:)%bndflux(:)%comp(:)%scalar (vecflt_type) (9.4.1.2.9)
vector (1118)	edge%fluid%ti_aniso(:)%comps(:)%bndflux(:)%comp(:)%vector (matflt_type) (9.4.1.2.7)
matrix (1118)	edge%fluid%ti_aniso(:)%comps(:)%bndflux(:)%comp(:)%matrix (array3dflt_type) (9.4.1.2.1)
align (1124)	edge%fluid%ti_aniso(:)%comps(:)%bndflux(:)%align (vecint_type) (9.4.1.2.10)
alignid (1124)	edge%fluid%ti_aniso(:)%comps(:)%bndflux(:)%alignid (vecstring_type) (9.4.1.2.11)
basis (1124)	edge%fluid%ti_aniso(:)%comps(:)%bndflux(:)%basis (integer) (9.4.1.1.2)
transpcoeff (1204)	edge%fluid%ti_aniso(:)%comps(:)%transpcoeff(:) (edge_fluid_scalar_transpcoeff) (9.4.1.3.163)
d (1206)	edge%fluid%ti_aniso(:)%comps(:)%transpcoeff(:)%d (complexgrid_vector_simplestruct) (9.4.1.3.82)
label (1125)	edge%fluid%ti_aniso(:)%comps(:)%transpcoeff(:)%d%label (string) (9.4.1.1.3)
comp (1125)	edge%fluid%ti_aniso(:)%comps(:)%transpcoeff(:)%d%comp(:) (complexgrid_scalar) (9.4.1.3.75)

griduid (1118)	edge%fluid%ti_aniso(:)%comps(:)%transpcoeff(:)%d%comp(:)%griduid (integer) (9.4.1.1.2)
subgrid (1118)	edge%fluid%ti_aniso(:)%comps(:)%transpcoeff(:)%d%comp(:)%subgrid (integer) (9.4.1.1.2)
scalar (1118)	edge%fluid%ti_aniso(:)%comps(:)%transpcoeff(:)%d%comp(:)%scalar (vecflt_type) (9.4.1.2.9)
vector (1118)	edge%fluid%ti_aniso(:)%comps(:)%transpcoeff(:)%d%comp(:)%vector (matflt_type) (9.4.1.2.7)
matrix (1118)	edge%fluid%ti_aniso(:)%comps(:)%transpcoeff(:)%d%comp(:)%matrix (array3dflt_type) (9.4.1.2.1)
align (1125)	edge%fluid%ti_aniso(:)%comps(:)%transpcoeff(:)%d%align (vecint_type) (9.4.1.2.10)
alignid (1125)	edge%fluid%ti_aniso(:)%comps(:)%transpcoeff(:)%d%alignid (vecstring_type) (9.4.1.2.11)
v (1206)	edge%fluid%ti_aniso(:)%comps(:)%transpcoeff(:)%v (complexgrid_vector_simplestruct) (9.4.1.3.82)
label (1125)	edge%fluid%ti_aniso(:)%comps(:)%transpcoeff(:)%v%label (string) (9.4.1.1.3)
comp (1125)	edge%fluid%ti_aniso(:)%comps(:)%transpcoeff(:)%v%comp(:) (complexgrid_scalar) (9.4.1.3.75)
griduid (1118)	edge%fluid%ti_aniso(:)%comps(:)%transpcoeff(:)%v%comp(:)%griduid (integer) (9.4.1.1.2)
subgrid (1118)	edge%fluid%ti_aniso(:)%comps(:)%transpcoeff(:)%v%comp(:)%subgrid (integer) (9.4.1.1.2)
scalar (1118)	edge%fluid%ti_aniso(:)%comps(:)%transpcoeff(:)%v%comp(:)%scalar (vecflt_type) (9.4.1.2.9)
vector (1118)	edge%fluid%ti_aniso(:)%comps(:)%transpcoeff(:)%v%comp(:)%vector (matflt_type) (9.4.1.2.7)
matrix (1118)	edge%fluid%ti_aniso(:)%comps(:)%transpcoeff(:)%v%comp(:)%matrix (array3dflt_type) (9.4.1.2.1)
align (1125)	edge%fluid%ti_aniso(:)%comps(:)%transpcoeff(:)%v%align (vecint_type) (9.4.1.2.10)
alignid (1125)	edge%fluid%ti_aniso(:)%comps(:)%transpcoeff(:)%v%alignid (vecstring_type) (9.4.1.2.11)
source (1204)	edge%fluid%ti_aniso(:)%comps(:)%source(:) (complexgrid_scalar) (9.4.1.3.75)
griduid (1118)	edge%fluid%ti_aniso(:)%comps(:)%source(:)%griduid (integer) (9.4.1.1.2)
subgrid (1118)	edge%fluid%ti_aniso(:)%comps(:)%source(:)%subgrid (integer) (9.4.1.1.2)
scalar (1118)	edge%fluid%ti_aniso(:)%comps(:)%source(:)%scalar (vecflt_type) (9.4.1.2.9)
vector (1118)	edge%fluid%ti_aniso(:)%comps(:)%source(:)%vector (matflt_type) (9.4.1.2.7)
matrix (1118)	edge%fluid%ti_aniso(:)%comps(:)%source(:)%matrix (array3dflt_type) (9.4.1.2.1)
po (1203)	edge%fluid%po (edge_fluid_scalar_simplestruct) (9.4.1.3.162)
value (1205)	edge%fluid%po%value(:) (complexgrid_scalar) (9.4.1.3.75)
griduid (1118)	edge%fluid%po%value(:)%griduid (integer) (9.4.1.1.2)
subgrid (1118)	edge%fluid%po%value(:)%subgrid (integer) (9.4.1.1.2)
scalar (1118)	edge%fluid%po%value(:)%scalar (vecflt_type) (9.4.1.2.9)
vector (1118)	edge%fluid%po%value(:)%vector (matflt_type) (9.4.1.2.7)
matrix (1118)	edge%fluid%po%value(:)%matrix (array3dflt_type) (9.4.1.2.1)
bndvalue (1205)	edge%fluid%po%bndvalue(:) (complexgrid_scalar) (9.4.1.3.75)
griduid (1118)	edge%fluid%po%bndvalue(:)%griduid (integer) (9.4.1.1.2)
subgrid (1118)	edge%fluid%po%bndvalue(:)%subgrid (integer) (9.4.1.1.2)
scalar (1118)	edge%fluid%po%bndvalue(:)%scalar (vecflt_type) (9.4.1.2.9)
vector (1118)	edge%fluid%po%bndvalue(:)%vector (matflt_type) (9.4.1.2.7)
matrix (1118)	edge%fluid%po%bndvalue(:)%matrix (array3dflt_type) (9.4.1.2.1)
flux (1205)	edge%fluid%po%flux(:) (complexgrid_vector) (9.4.1.3.81)
griduid (1124)	edge%fluid%po%flux(:)%griduid (integer) (9.4.1.1.2)
label (1124)	edge%fluid%po%flux(:)%label (string) (9.4.1.1.3)
comp (1124)	edge%fluid%po%flux(:)%comp(:) (complexgrid_scalar) (9.4.1.3.75)
griduid (1118)	edge%fluid%po%flux(:)%comp(:)%griduid (integer) (9.4.1.1.2)
subgrid (1118)	edge%fluid%po%flux(:)%comp(:)%subgrid (integer) (9.4.1.1.2)
scalar (1118)	edge%fluid%po%flux(:)%comp(:)%scalar (vecflt_type) (9.4.1.2.9)
vector (1118)	edge%fluid%po%flux(:)%comp(:)%vector (matflt_type) (9.4.1.2.7)
matrix (1118)	edge%fluid%po%flux(:)%comp(:)%matrix (array3dflt_type) (9.4.1.2.1)
align (1124)	edge%fluid%po%flux(:)%align (vecint_type) (9.4.1.2.10)
alignid (1124)	edge%fluid%po%flux(:)%alignid (vecstring_type) (9.4.1.2.11)
basis (1124)	edge%fluid%po%flux(:)%basis (integer) (9.4.1.1.2)
bndflux (1205)	edge%fluid%po%bndflux(:) (complexgrid_vector) (9.4.1.3.81)
griduid (1124)	edge%fluid%po%bndflux(:)%griduid (integer) (9.4.1.1.2)
label (1124)	edge%fluid%po%bndflux(:)%label (string) (9.4.1.1.3)
comp (1124)	edge%fluid%po%bndflux(:)%comp(:) (complexgrid_scalar) (9.4.1.3.75)
griduid (1118)	edge%fluid%po%bndflux(:)%comp(:)%griduid (integer) (9.4.1.1.2)
subgrid (1118)	edge%fluid%po%bndflux(:)%comp(:)%subgrid (integer) (9.4.1.1.2)
scalar (1118)	edge%fluid%po%bndflux(:)%comp(:)%scalar (vecflt_type) (9.4.1.2.9)
vector (1118)	edge%fluid%po%bndflux(:)%comp(:)%vector (matflt_type) (9.4.1.2.7)
matrix (1118)	edge%fluid%po%bndflux(:)%comp(:)%matrix (array3dflt_type) (9.4.1.2.1)
align (1124)	edge%fluid%po%bndflux(:)%align (vecint_type) (9.4.1.2.10)
alignid (1124)	edge%fluid%po%bndflux(:)%alignid (vecstring_type) (9.4.1.2.11)

basis (1124)	edge%fluid%po%bndflux(:)%basis (integer) (9.4.1.1.2)
transpcoeff (1205)	edge%fluid%po%transpcoeff(:) (edge_fluid_scalar.transpcoeff) (9.4.1.3.163)
d (1206)	edge%fluid%po%transpcoeff(:)%d (complexgrid_vector.simplestruct) (9.4.1.3.82)
label (1125)	edge%fluid%po%transpcoeff(:)%d%label (string) (9.4.1.1.3)
comp (1125)	edge%fluid%po%transpcoeff(:)%d%comp(:) (complexgrid_scalar) (9.4.1.3.75)
griduid (1118)	edge%fluid%po%transpcoeff(:)%d%comp(:)%griduid (integer) (9.4.1.1.2)
subgrid (1118)	edge%fluid%po%transpcoeff(:)%d%comp(:)%subgrid (integer) (9.4.1.1.2)
scalar (1118)	edge%fluid%po%transpcoeff(:)%d%comp(:)%scalar (vecflt_type) (9.4.1.2.9)
vector (1118)	edge%fluid%po%transpcoeff(:)%d%comp(:)%vector (matflt_type) (9.4.1.2.7)
matrix (1118)	edge%fluid%po%transpcoeff(:)%d%comp(:)%matrix (array3dflt_type) (9.4.1.2.1)
align (1125)	edge%fluid%po%transpcoeff(:)%d%align (vecint_type) (9.4.1.2.10)
alignid (1125)	edge%fluid%po%transpcoeff(:)%d%alignid (vecstring_type) (9.4.1.2.11)
v (1206)	edge%fluid%po%transpcoeff(:)%v (complexgrid_vector.simplestruct) (9.4.1.3.82)
label (1125)	edge%fluid%po%transpcoeff(:)%v%label (string) (9.4.1.1.3)
comp (1125)	edge%fluid%po%transpcoeff(:)%v%comp(:) (complexgrid_scalar) (9.4.1.3.75)
griduid (1118)	edge%fluid%po%transpcoeff(:)%v%comp(:)%griduid (integer) (9.4.1.1.2)
subgrid (1118)	edge%fluid%po%transpcoeff(:)%v%comp(:)%subgrid (integer) (9.4.1.1.2)
scalar (1118)	edge%fluid%po%transpcoeff(:)%v%comp(:)%scalar (vecflt_type) (9.4.1.2.9)
vector (1118)	edge%fluid%po%transpcoeff(:)%v%comp(:)%vector (matflt_type) (9.4.1.2.7)
matrix (1118)	edge%fluid%po%transpcoeff(:)%v%comp(:)%matrix (array3dflt_type) (9.4.1.2.1)
align (1125)	edge%fluid%po%transpcoeff(:)%v%align (vecint_type) (9.4.1.2.10)
alignid (1125)	edge%fluid%po%transpcoeff(:)%v%alignid (vecstring_type) (9.4.1.2.11)
source (1205)	edge%fluid%po%source(:) (complexgrid_scalar) (9.4.1.3.75)
griduid (1118)	edge%fluid%po%source(:)%griduid (integer) (9.4.1.1.2)
subgrid (1118)	edge%fluid%po%source(:)%subgrid (integer) (9.4.1.1.2)
scalar (1118)	edge%fluid%po%source(:)%scalar (vecflt_type) (9.4.1.2.9)
vector (1118)	edge%fluid%po%source(:)%vector (matflt_type) (9.4.1.2.7)
matrix (1118)	edge%fluid%po%source(:)%matrix (array3dflt_type) (9.4.1.2.1)
j (1203)	edge%fluid%j (edge_fluid_vector.simplestruct) (9.4.1.3.165)
griduid (1208)	edge%fluid%j%griduid (integer) (9.4.1.1.2)
basis (1208)	edge%fluid%j%basis (integer) (9.4.1.1.2)
comps (1208)	edge%fluid%j%comps(:) (edge_fluid_scalar) (9.4.1.3.161)
value (1204)	edge%fluid%j%comps(:)%value(:) (complexgrid_scalar) (9.4.1.3.75)
griduid (1118)	edge%fluid%j%comps(:)%value(:)%griduid (integer) (9.4.1.1.2)
subgrid (1118)	edge%fluid%j%comps(:)%value(:)%subgrid (integer) (9.4.1.1.2)
scalar (1118)	edge%fluid%j%comps(:)%value(:)%scalar (vecflt_type) (9.4.1.2.9)
vector (1118)	edge%fluid%j%comps(:)%value(:)%vector (matflt_type) (9.4.1.2.7)
matrix (1118)	edge%fluid%j%comps(:)%value(:)%matrix (array3dflt_type) (9.4.1.2.1)
bndvalue (1204)	edge%fluid%j%comps(:)%bndvalue(:) (complexgrid_scalar) (9.4.1.3.75)
griduid (1118)	edge%fluid%j%comps(:)%bndvalue(:)%griduid (integer) (9.4.1.1.2)
subgrid (1118)	edge%fluid%j%comps(:)%bndvalue(:)%subgrid (integer) (9.4.1.1.2)
scalar (1118)	edge%fluid%j%comps(:)%bndvalue(:)%scalar (vecflt_type) (9.4.1.2.9)
vector (1118)	edge%fluid%j%comps(:)%bndvalue(:)%vector (matflt_type) (9.4.1.2.7)
matrix (1118)	edge%fluid%j%comps(:)%bndvalue(:)%matrix (array3dflt_type) (9.4.1.2.1)
flux (1204)	edge%fluid%j%comps(:)%flux(:) (complexgrid_vector) (9.4.1.3.81)
griduid (1124)	edge%fluid%j%comps(:)%flux(:)%griduid (integer) (9.4.1.1.2)
label (1124)	edge%fluid%j%comps(:)%flux(:)%label (string) (9.4.1.1.3)
comp (1124)	edge%fluid%j%comps(:)%flux(:)%comp(:) (complexgrid_scalar) (9.4.1.3.75)
griduid (1118)	edge%fluid%j%comps(:)%flux(:)%comp(:)%griduid (integer) (9.4.1.1.2)
subgrid (1118)	edge%fluid%j%comps(:)%flux(:)%comp(:)%subgrid (integer) (9.4.1.1.2)
scalar (1118)	edge%fluid%j%comps(:)%flux(:)%comp(:)%scalar (vecflt_type) (9.4.1.2.9)
vector (1118)	edge%fluid%j%comps(:)%flux(:)%comp(:)%vector (matflt_type) (9.4.1.2.7)
matrix (1118)	edge%fluid%j%comps(:)%flux(:)%comp(:)%matrix (array3dflt_type) (9.4.1.2.1)
align (1124)	edge%fluid%j%comps(:)%flux(:)%align (vecint_type) (9.4.1.2.10)
alignid (1124)	edge%fluid%j%comps(:)%flux(:)%alignid (vecstring_type) (9.4.1.2.11)
basis (1124)	edge%fluid%j%comps(:)%flux(:)%basis (integer) (9.4.1.1.2)
bndflux (1204)	edge%fluid%j%comps(:)%bndflux(:) (complexgrid_vector) (9.4.1.3.81)
griduid (1124)	edge%fluid%j%comps(:)%bndflux(:)%griduid (integer) (9.4.1.1.2)
label (1124)	edge%fluid%j%comps(:)%bndflux(:)%label (string) (9.4.1.1.3)
comp (1124)	edge%fluid%j%comps(:)%bndflux(:)%comp(:) (complexgrid_scalar) (9.4.1.3.75)
griduid (1118)	edge%fluid%j%comps(:)%bndflux(:)%comp(:)%griduid (integer) (9.4.1.1.2)



subgrid (1118)	edge%fluid%j%comps(:)%bndflux(:)%comp(:)%subgrid (integer) (9.4.1.1.2)
scalar (1118)	edge%fluid%j%comps(:)%bndflux(:)%comp(:)%scalar (vecflt_type) (9.4.1.2.9)
vector (1118)	edge%fluid%j%comps(:)%bndflux(:)%comp(:)%vector (matflt_type) (9.4.1.2.7)
matrix (1118)	edge%fluid%j%comps(:)%bndflux(:)%comp(:)%matrix (array3dflt_type) (9.4.1.2.1)
align (1124)	edge%fluid%j%comps(:)%bndflux(:)%align (vecint_type) (9.4.1.2.10)
alignid (1124)	edge%fluid%j%comps(:)%bndflux(:)%alignid (vecstring_type) (9.4.1.2.11)
basis (1124)	edge%fluid%j%comps(:)%bndflux(:)%basis (integer) (9.4.1.1.2)
transpcoeff (1204)	edge%fluid%j%comps(:)%transpcoeff(:) (edge_fluid_scalar_transpcoeff) (9.4.1.3.163)
d (1206)	edge%fluid%j%comps(:)%transpcoeff(:)%d (complexgrid_vector_simplestruct) (9.4.1.3.82)
label (1125)	edge%fluid%j%comps(:)%transpcoeff(:)%d%label (string) (9.4.1.1.3)
comp (1125)	edge%fluid%j%comps(:)%transpcoeff(:)%d%comp(:) (complexgrid_scalar) (9.4.1.3.75)
griduid (1118)	edge%fluid%j%comps(:)%transpcoeff(:)%d%comp(:)%griduid (integer) (9.4.1.1.2)
subgrid (1118)	edge%fluid%j%comps(:)%transpcoeff(:)%d%comp(:)%subgrid (integer) (9.4.1.1.2)
scalar (1118)	edge%fluid%j%comps(:)%transpcoeff(:)%d%comp(:)%scalar (vecflt_type) (9.4.1.2.9)
vector (1118)	edge%fluid%j%comps(:)%transpcoeff(:)%d%comp(:)%vector (matflt_type) (9.4.1.2.7)
matrix (1118)	edge%fluid%j%comps(:)%transpcoeff(:)%d%comp(:)%matrix (array3dflt_type) (9.4.1.2.1)
align (1125)	edge%fluid%j%comps(:)%transpcoeff(:)%d%align (vecint_type) (9.4.1.2.10)
alignid (1125)	edge%fluid%j%comps(:)%transpcoeff(:)%d%alignid (vecstring_type) (9.4.1.2.11)
v (1206)	edge%fluid%j%comps(:)%transpcoeff(:)%v (complexgrid_vector_simplestruct) (9.4.1.3.82)
label (1125)	edge%fluid%j%comps(:)%transpcoeff(:)%v%label (string) (9.4.1.1.3)
comp (1125)	edge%fluid%j%comps(:)%transpcoeff(:)%v%comp(:) (complexgrid_scalar) (9.4.1.3.75)
griduid (1118)	edge%fluid%j%comps(:)%transpcoeff(:)%v%comp(:)%griduid (integer) (9.4.1.1.2)
subgrid (1118)	edge%fluid%j%comps(:)%transpcoeff(:)%v%comp(:)%subgrid (integer) (9.4.1.1.2)
scalar (1118)	edge%fluid%j%comps(:)%transpcoeff(:)%v%comp(:)%scalar (vecflt_type) (9.4.1.2.9)
vector (1118)	edge%fluid%j%comps(:)%transpcoeff(:)%v%comp(:)%vector (matflt_type) (9.4.1.2.7)
matrix (1118)	edge%fluid%j%comps(:)%transpcoeff(:)%v%comp(:)%matrix (array3dflt_type) (9.4.1.2.1)
align (1125)	edge%fluid%j%comps(:)%transpcoeff(:)%v%align (vecint_type) (9.4.1.2.10)
alignid (1125)	edge%fluid%j%comps(:)%transpcoeff(:)%v%alignid (vecstring_type) (9.4.1.2.11)
source (1204)	edge%fluid%j%comps(:)%source(:) (complexgrid_scalar) (9.4.1.3.75)
griduid (1118)	edge%fluid%j%comps(:)%source(:)%griduid (integer) (9.4.1.1.2)
subgrid (1118)	edge%fluid%j%comps(:)%source(:)%subgrid (integer) (9.4.1.1.2)
scalar (1118)	edge%fluid%j%comps(:)%source(:)%scalar (vecflt_type) (9.4.1.2.9)
vector (1118)	edge%fluid%j%comps(:)%source(:)%vector (matflt_type) (9.4.1.2.7)
matrix (1118)	edge%fluid%j%comps(:)%source(:)%matrix (array3dflt_type) (9.4.1.2.1)
align (1208)	edge%fluid%j%align (vecint_type) (9.4.1.2.10)
alignid (1208)	edge%fluid%j%alignid (vecstring_type) (9.4.1.2.11)
b (1203)	edge%fluid%b(:) (complexgrid_vector) (9.4.1.3.81)
griduid (1124)	edge%fluid%b(:)%griduid (integer) (9.4.1.1.2)
label (1124)	edge%fluid%b(:)%label (string) (9.4.1.1.3)
comp (1124)	edge%fluid%b(:)%comp(:) (complexgrid_scalar) (9.4.1.3.75)
griduid (1118)	edge%fluid%b(:)%comp(:)%griduid (integer) (9.4.1.1.2)
subgrid (1118)	edge%fluid%b(:)%comp(:)%subgrid (integer) (9.4.1.1.2)
scalar (1118)	edge%fluid%b(:)%comp(:)%scalar (vecflt_type) (9.4.1.2.9)
vector (1118)	edge%fluid%b(:)%comp(:)%vector (matflt_type) (9.4.1.2.7)
matrix (1118)	edge%fluid%b(:)%comp(:)%matrix (array3dflt_type) (9.4.1.2.1)
align (1124)	edge%fluid%b(:)%align (vecint_type) (9.4.1.2.10)
alignid (1124)	edge%fluid%b(:)%alignid (vecstring_type) (9.4.1.2.11)
basis (1124)	edge%fluid%b(:)%basis (integer) (9.4.1.1.2)
kinetic (1059)	edge%kinetic (edge_kinetic) (9.4.1.3.166)
f (1209)	edge%kinetic%f(:) (edge_kinetic_distribution) (9.4.1.3.167)
value (1210)	edge%kinetic%f(:)%value(:) (complexgrid_scalar) (9.4.1.3.75)
griduid (1118)	edge%kinetic%f(:)%value(:)%griduid (integer) (9.4.1.1.2)
subgrid (1118)	edge%kinetic%f(:)%value(:)%subgrid (integer) (9.4.1.1.2)
scalar (1118)	edge%kinetic%f(:)%value(:)%scalar (vecflt_type) (9.4.1.2.9)
vector (1118)	edge%kinetic%f(:)%value(:)%vector (matflt_type) (9.4.1.2.7)
matrix (1118)	edge%kinetic%f(:)%value(:)%matrix (array3dflt_type) (9.4.1.2.1)
bndvalue (1210)	edge%kinetic%f(:)%bndvalue(:) (complexgrid_scalar) (9.4.1.3.75)
griduid (1118)	edge%kinetic%f(:)%bndvalue(:)%griduid (integer) (9.4.1.1.2)
subgrid (1118)	edge%kinetic%f(:)%bndvalue(:)%subgrid (integer) (9.4.1.1.2)
scalar (1118)	edge%kinetic%f(:)%bndvalue(:)%scalar (vecflt_type) (9.4.1.2.9)
vector (1118)	edge%kinetic%f(:)%bndvalue(:)%vector (matflt_type) (9.4.1.2.7)

matrix (1118)	edge%kinetic%f(:)%bndvalue(:)%matrix (array3dflt.type) (9.4.1.2.1)
fluxes (1210)	edge%kinetic%f(:)%fluxes(:) (complexgrid_vector) (9.4.1.3.81)
griduid (1124)	edge%kinetic%f(:)%fluxes(:)%griduid (integer) (9.4.1.1.2)
label (1124)	edge%kinetic%f(:)%fluxes(:)%label (string) (9.4.1.1.3)
comp (1124)	edge%kinetic%f(:)%fluxes(:)%comp(:) (complexgrid_scalar) (9.4.1.3.75)
griduid (1118)	edge%kinetic%f(:)%fluxes(:)%comp(:)%griduid (integer) (9.4.1.1.2)
subgrid (1118)	edge%kinetic%f(:)%fluxes(:)%comp(:)%subgrid (integer) (9.4.1.1.2)
scalar (1118)	edge%kinetic%f(:)%fluxes(:)%comp(:)%scalar (vecflt.type) (9.4.1.2.9)
vector (1118)	edge%kinetic%f(:)%fluxes(:)%comp(:)%vector (matflt.type) (9.4.1.2.7)
matrix (1118)	edge%kinetic%f(:)%fluxes(:)%comp(:)%matrix (array3dflt.type) (9.4.1.2.1)
align (1124)	edge%kinetic%f(:)%fluxes(:)%align (vecint.type) (9.4.1.2.10)
alignid (1124)	edge%kinetic%f(:)%fluxes(:)%alignid (vecstring.type) (9.4.1.2.11)
basis (1124)	edge%kinetic%f(:)%fluxes(:)%basis (integer) (9.4.1.1.2)
source (1210)	edge%kinetic%f(:)%source(:) (complexgrid_scalar) (9.4.1.3.75)
griduid (1118)	edge%kinetic%f(:)%source(:)%griduid (integer) (9.4.1.1.2)
subgrid (1118)	edge%kinetic%f(:)%source(:)%subgrid (integer) (9.4.1.1.2)
scalar (1118)	edge%kinetic%f(:)%source(:)%scalar (vecflt.type) (9.4.1.2.9)
vector (1118)	edge%kinetic%f(:)%source(:)%vector (matflt.type) (9.4.1.2.7)
matrix (1118)	edge%kinetic%f(:)%source(:)%matrix (array3dflt.type) (9.4.1.2.1)
codeparam (1059)	edge%codeparam (codeparam) (9.4.1.3.65)
codename (1108)	edge%codeparam%codename (string) (9.4.1.1.3)
codeversion (1108)	edge%codeparam%codeversion (string) (9.4.1.1.3)
parameters (1108)	edge%codeparam%parameters (string) (9.4.1.1.3)
output_diag (1108)	edge%codeparam%output_diag (string) (9.4.1.1.3)
output_flag (1108)	edge%codeparam%output_flag (integer) (9.4.1.1.2)
time (1059)	edge%time (float) (9.4.1.1.1)

#### 9.4.2.1.15 efcc

datainfo (1060)	efcc%datainfo (datainfo) (9.4.1.3.120)
dataprovider (1163)	efcc%datainfo%dataprovider (string) (9.4.1.1.3)
putdate (1163)	efcc%datainfo%putdate (string) (9.4.1.1.3)
source (1163)	efcc%datainfo%source (string) (9.4.1.1.3)
comment (1163)	efcc%datainfo%comment (string) (9.4.1.1.3)
cocos (1163)	efcc%datainfo%cocos (integer) (9.4.1.1.2)
id (1163)	efcc%datainfo%id (integer) (9.4.1.1.2)
isref (1163)	efcc%datainfo%isref (integer) (9.4.1.1.2)
whatref (1163)	efcc%datainfo%whatref (whatref) (9.4.1.3.426)
user (1469)	efcc%datainfo%whatref%user (string) (9.4.1.1.3)
machine (1469)	efcc%datainfo%whatref%machine (string) (9.4.1.1.3)
shot (1469)	efcc%datainfo%whatref%shot (integer) (9.4.1.1.2)
run (1469)	efcc%datainfo%whatref%run (integer) (9.4.1.1.2)
occurrence (1469)	efcc%datainfo%whatref%occurrence (integer) (9.4.1.1.2)
putinfo (1163)	efcc%datainfo%putinfo (putinfo) (9.4.1.3.289)
putmethod (1332)	efcc%datainfo%putinfo%putmethod (string) (9.4.1.1.3)
putaccess (1332)	efcc%datainfo%putinfo%putaccess (string) (9.4.1.1.3)
putlocation (1332)	efcc%datainfo%putinfo%putlocation (string) (9.4.1.1.3)
rights (1332)	efcc%datainfo%putinfo%rights (string) (9.4.1.1.3)
coil (1060)	efcc%coil(:) (coil) (9.4.1.3.68)
desc_coils (1111)	efcc%coil(:)%desc_coils (desc_coils) (9.4.1.3.122)
name (1165)	efcc%coil(:)%desc_coils%name (string) (9.4.1.1.3)
res (1165)	efcc%coil(:)%desc_coils%res (float) (9.4.1.1.1)
nturns (1165)	efcc%coil(:)%desc_coils%nturns (integer) (9.4.1.1.2)
closed (1165)	efcc%coil(:)%desc_coils%closed (string) (9.4.1.1.3)
edges (1165)	efcc%coil(:)%desc_coils%edges(:) (edges) (9.4.1.3.168)
edge_rzphi (1211)	efcc%coil(:)%desc_coils%edges(:)%edge_rzphi (rzphi1D) (9.4.1.3.325)
r (1368)	efcc%coil(:)%desc_coils%edges(:)%edge_rzphi%r (vecflt.type) (9.4.1.2.9)
z (1368)	efcc%coil(:)%desc_coils%edges(:)%edge_rzphi%z (vecflt.type) (9.4.1.2.9)
phi (1368)	efcc%coil(:)%desc_coils%edges(:)%edge_rzphi%phi (vecflt.type) (9.4.1.2.9)
coilcurrent (1111)	efcc%coil(:)%coilcurrent (exp1D) (9.4.1.3.180)
value (1223)	efcc%coil(:)%coilcurrent%value (vecflt.type) (9.4.1.2.9)

abserror (1223)	efcc%coil(:)%coilcurrent%abserror (vecflt_type) (9.4.1.2.9)
relerror (1223)	efcc%coil(:)%coilcurrent%relerror (vecflt_type) (9.4.1.2.9)
coilvoltage (1111)	efcc%coil(:)%coilvoltage (exp1D) (9.4.1.3.180)
value (1223)	efcc%coil(:)%coilvoltage%value (vecflt_type) (9.4.1.2.9)
abserror (1223)	efcc%coil(:)%coilvoltage%abserror (vecflt_type) (9.4.1.2.9)
relerror (1223)	efcc%coil(:)%coilvoltage%relerror (vecflt_type) (9.4.1.2.9)
time (1060)	efcc%time (float) (9.4.1.1.1)
codeparam (1060)	efcc%codeparam (codeparam) (9.4.1.3.65)
codename (1108)	efcc%codeparam%codename (string) (9.4.1.1.3)
codeversion (1108)	efcc%codeparam%codeversion (string) (9.4.1.1.3)
parameters (1108)	efcc%codeparam%parameters (string) (9.4.1.1.3)
output_diag (1108)	efcc%codeparam%output_diag (string) (9.4.1.1.3)
output_flag (1108)	efcc%codeparam%output_flag (integer) (9.4.1.1.2)

### 9.4.2.1.16 equilibrium

datainfo (1061)	equilibrium%datainfo (datainfo) (9.4.1.3.120)
dataproducer (1163)	equilibrium%datainfo%dataproducer (string) (9.4.1.1.3)
putdate (1163)	equilibrium%datainfo%putdate (string) (9.4.1.1.3)
source (1163)	equilibrium%datainfo%source (string) (9.4.1.1.3)
comment (1163)	equilibrium%datainfo%comment (string) (9.4.1.1.3)
cocos (1163)	equilibrium%datainfo%cocos (integer) (9.4.1.1.2)
id (1163)	equilibrium%datainfo%id (integer) (9.4.1.1.2)
isref (1163)	equilibrium%datainfo%isref (integer) (9.4.1.1.2)
whatref (1163)	equilibrium%datainfo%whatref (whatref) (9.4.1.3.426)
user (1469)	equilibrium%datainfo%whatref%user (string) (9.4.1.1.3)
machine (1469)	equilibrium%datainfo%whatref%machine (string) (9.4.1.1.3)
shot (1469)	equilibrium%datainfo%whatref%shot (integer) (9.4.1.1.2)
run (1469)	equilibrium%datainfo%whatref%run (integer) (9.4.1.1.2)
occurrence (1469)	equilibrium%datainfo%whatref%occurrence (integer) (9.4.1.1.2)
putinfo (1163)	equilibrium%datainfo%putinfo (putinfo) (9.4.1.3.289)
putmethod (1332)	equilibrium%datainfo%putinfo%putmethod (string) (9.4.1.1.3)
putaccess (1332)	equilibrium%datainfo%putinfo%putaccess (string) (9.4.1.1.3)
putlocation (1332)	equilibrium%datainfo%putinfo%putlocation (string) (9.4.1.1.3)
rights (1332)	equilibrium%datainfo%putinfo%rights (string) (9.4.1.1.3)
eqconstraint (1061)	equilibrium%eqconstraint (eqconstraint) (9.4.1.3.173)
bpol (1216)	equilibrium%eqconstraint%bpol (eqmes1D) (9.4.1.3.176)
measured (1219)	equilibrium%eqconstraint%bpol%measured (vecflt_type) (9.4.1.2.9)
source (1219)	equilibrium%eqconstraint%bpol%source (string) (9.4.1.1.3)
time (1219)	equilibrium%eqconstraint%bpol%time (float) (9.4.1.1.1)
exact (1219)	equilibrium%eqconstraint%bpol%exact (vecint_type) (9.4.1.2.10)
weight (1219)	equilibrium%eqconstraint%bpol%weight (vecflt_type) (9.4.1.2.9)
sigma (1219)	equilibrium%eqconstraint%bpol%sigma (vecflt_type) (9.4.1.2.9)
calculated (1219)	equilibrium%eqconstraint%bpol%calculated (vecflt_type) (9.4.1.2.9)
chi2 (1219)	equilibrium%eqconstraint%bpol%chi2 (vecflt_type) (9.4.1.2.9)
bvac_r (1216)	equilibrium%eqconstraint%bvac_r (eqmes0D) (9.4.1.3.175)
measured (1218)	equilibrium%eqconstraint%bvac_r%measured (float) (9.4.1.1.1)
source (1218)	equilibrium%eqconstraint%bvac_r%source (string) (9.4.1.1.3)
time (1218)	equilibrium%eqconstraint%bvac_r%time (float) (9.4.1.1.1)
exact (1218)	equilibrium%eqconstraint%bvac_r%exact (integer) (9.4.1.1.2)
weight (1218)	equilibrium%eqconstraint%bvac_r%weight (float) (9.4.1.1.1)
sigma (1218)	equilibrium%eqconstraint%bvac_r%sigma (float) (9.4.1.1.1)
calculated (1218)	equilibrium%eqconstraint%bvac_r%calculated (float) (9.4.1.1.1)
chi2 (1218)	equilibrium%eqconstraint%bvac_r%chi2 (float) (9.4.1.1.1)
diamagflux (1216)	equilibrium%eqconstraint%diamagflux (eqmes0D) (9.4.1.3.175)
measured (1218)	equilibrium%eqconstraint%diamagflux%measured (float) (9.4.1.1.1)
source (1218)	equilibrium%eqconstraint%diamagflux%source (string) (9.4.1.1.3)
time (1218)	equilibrium%eqconstraint%diamagflux%time (float) (9.4.1.1.1)
exact (1218)	equilibrium%eqconstraint%diamagflux%exact (integer) (9.4.1.1.2)
weight (1218)	equilibrium%eqconstraint%diamagflux%weight (float) (9.4.1.1.1)
sigma (1218)	equilibrium%eqconstraint%diamagflux%sigma (float) (9.4.1.1.1)



calculated (1218)	equilibrium%eqconstraint%diamagflux%calculated (float) (9.4.1.1.1)
chi2 (1218)	equilibrium%eqconstraint%diamagflux%chi2 (float) (9.4.1.1.1)
faraday (1216)	equilibrium%eqconstraint%faraday (eqmes1D) (9.4.1.3.176)
measured (1219)	equilibrium%eqconstraint%faraday%measured (vecflt_type) (9.4.1.2.9)
source (1219)	equilibrium%eqconstraint%faraday%source (string) (9.4.1.1.3)
time (1219)	equilibrium%eqconstraint%faraday%time (float) (9.4.1.1.1)
exact (1219)	equilibrium%eqconstraint%faraday%exact (vecint_type) (9.4.1.2.10)
weight (1219)	equilibrium%eqconstraint%faraday%weight (vecflt_type) (9.4.1.2.9)
sigma (1219)	equilibrium%eqconstraint%faraday%sigma (vecflt_type) (9.4.1.2.9)
calculated (1219)	equilibrium%eqconstraint%faraday%calculated (vecflt_type) (9.4.1.2.9)
chi2 (1219)	equilibrium%eqconstraint%faraday%chi2 (vecflt_type) (9.4.1.2.9)
flux (1216)	equilibrium%eqconstraint%flux (eqmes1D) (9.4.1.3.176)
measured (1219)	equilibrium%eqconstraint%flux%measured (vecflt_type) (9.4.1.2.9)
source (1219)	equilibrium%eqconstraint%flux%source (string) (9.4.1.1.3)
time (1219)	equilibrium%eqconstraint%flux%time (float) (9.4.1.1.1)
exact (1219)	equilibrium%eqconstraint%flux%exact (vecint_type) (9.4.1.2.10)
weight (1219)	equilibrium%eqconstraint%flux%weight (vecflt_type) (9.4.1.2.9)
sigma (1219)	equilibrium%eqconstraint%flux%sigma (vecflt_type) (9.4.1.2.9)
calculated (1219)	equilibrium%eqconstraint%flux%calculated (vecflt_type) (9.4.1.2.9)
chi2 (1219)	equilibrium%eqconstraint%flux%chi2 (vecflt_type) (9.4.1.2.9)
i.plasma (1216)	equilibrium%eqconstraint%i.plasma (eqmes0D) (9.4.1.3.175)
measured (1218)	equilibrium%eqconstraint%i.plasma%measured (float) (9.4.1.1.1)
source (1218)	equilibrium%eqconstraint%i.plasma%source (string) (9.4.1.1.3)
time (1218)	equilibrium%eqconstraint%i.plasma%time (float) (9.4.1.1.1)
exact (1218)	equilibrium%eqconstraint%i.plasma%exact (integer) (9.4.1.1.2)
weight (1218)	equilibrium%eqconstraint%i.plasma%weight (float) (9.4.1.1.1)
sigma (1218)	equilibrium%eqconstraint%i.plasma%sigma (float) (9.4.1.1.1)
calculated (1218)	equilibrium%eqconstraint%i.plasma%calculated (float) (9.4.1.1.1)
chi2 (1218)	equilibrium%eqconstraint%i.plasma%chi2 (float) (9.4.1.1.1)
isoflux (1216)	equilibrium%eqconstraint%isoflux (isoflux) (9.4.1.3.219)
position (1262)	equilibrium%eqconstraint%isoflux%position (rz1D) (9.4.1.3.319)
r (1362)	equilibrium%eqconstraint%isoflux%position%r (vecflt_type) (9.4.1.2.9)
z (1362)	equilibrium%eqconstraint%isoflux%position%z (vecflt_type) (9.4.1.2.9)
source (1262)	equilibrium%eqconstraint%isoflux%source (string) (9.4.1.1.3)
weight (1262)	equilibrium%eqconstraint%isoflux%weight (vecflt_type) (9.4.1.2.9)
sigma (1262)	equilibrium%eqconstraint%isoflux%sigma (vecflt_type) (9.4.1.2.9)
calculated (1262)	equilibrium%eqconstraint%isoflux%calculated (vecflt_type) (9.4.1.2.9)
chi2 (1262)	equilibrium%eqconstraint%isoflux%chi2 (vecflt_type) (9.4.1.2.9)
jsurf (1216)	equilibrium%eqconstraint%jsurf (eqmes1D) (9.4.1.3.176)
measured (1219)	equilibrium%eqconstraint%jsurf%measured (vecflt_type) (9.4.1.2.9)
source (1219)	equilibrium%eqconstraint%jsurf%source (string) (9.4.1.1.3)
time (1219)	equilibrium%eqconstraint%jsurf%time (float) (9.4.1.1.1)
exact (1219)	equilibrium%eqconstraint%jsurf%exact (vecint_type) (9.4.1.2.10)
weight (1219)	equilibrium%eqconstraint%jsurf%weight (vecflt_type) (9.4.1.2.9)
sigma (1219)	equilibrium%eqconstraint%jsurf%sigma (vecflt_type) (9.4.1.2.9)
calculated (1219)	equilibrium%eqconstraint%jsurf%calculated (vecflt_type) (9.4.1.2.9)
chi2 (1219)	equilibrium%eqconstraint%jsurf%chi2 (vecflt_type) (9.4.1.2.9)
magnet.iron (1216)	equilibrium%eqconstraint%magnet.iron (magnet.iron) (9.4.1.3.236)
mr (1279)	equilibrium%eqconstraint%magnet.iron%mr (eqmes1D) (9.4.1.3.176)
measured (1219)	equilibrium%eqconstraint%magnet.iron%mr%measured (vecflt_type) (9.4.1.2.9)
source (1219)	equilibrium%eqconstraint%magnet.iron%mr%source (string) (9.4.1.1.3)
time (1219)	equilibrium%eqconstraint%magnet.iron%mr%time (float) (9.4.1.1.1)
exact (1219)	equilibrium%eqconstraint%magnet.iron%mr%exact (vecint_type) (9.4.1.2.10)
weight (1219)	equilibrium%eqconstraint%magnet.iron%mr%weight (vecflt_type) (9.4.1.2.9)
sigma (1219)	equilibrium%eqconstraint%magnet.iron%mr%sigma (vecflt_type) (9.4.1.2.9)
calculated (1219)	equilibrium%eqconstraint%magnet.iron%mr%calculated (vecflt_type) (9.4.1.2.9)
chi2 (1219)	equilibrium%eqconstraint%magnet.iron%mr%chi2 (vecflt_type) (9.4.1.2.9)
mz (1279)	equilibrium%eqconstraint%magnet.iron%mz (eqmes1D) (9.4.1.3.176)
measured (1219)	equilibrium%eqconstraint%magnet.iron%mz%measured (vecflt_type) (9.4.1.2.9)
source (1219)	equilibrium%eqconstraint%magnet.iron%mz%source (string) (9.4.1.1.3)
time (1219)	equilibrium%eqconstraint%magnet.iron%mz%time (float) (9.4.1.1.1)

exact (1219)	equilibrium%eqconstraint%magnet_iron% <i>mz</i> %exact (vecint_type) (9.4.1.2.10)
weight (1219)	equilibrium%eqconstraint%magnet_iron% <i>mz</i> %weight (vecflt_type) (9.4.1.2.9)
sigma (1219)	equilibrium%eqconstraint%magnet_iron% <i>mz</i> %sigma (vecflt_type) (9.4.1.2.9)
calculated (1219)	equilibrium%eqconstraint%magnet_iron% <i>mz</i> %calculated (vecflt_type) (9.4.1.2.9)
chi2 (1219)	equilibrium%eqconstraint%magnet_iron% <i>mz</i> %chi2 (vecflt_type) (9.4.1.2.9)
mse (1216)	equilibrium%eqconstraint%mse (eqmes1D) (9.4.1.3.176)
measured (1219)	equilibrium%eqconstraint%mse%measured (vecflt_type) (9.4.1.2.9)
source (1219)	equilibrium%eqconstraint%mse%source (string) (9.4.1.1.3)
time (1219)	equilibrium%eqconstraint%mse%time (float) (9.4.1.1.1)
exact (1219)	equilibrium%eqconstraint%mse%exact (vecint_type) (9.4.1.2.10)
weight (1219)	equilibrium%eqconstraint%mse%weight (vecflt_type) (9.4.1.2.9)
sigma (1219)	equilibrium%eqconstraint%mse%sigma (vecflt_type) (9.4.1.2.9)
calculated (1219)	equilibrium%eqconstraint%mse%calculated (vecflt_type) (9.4.1.2.9)
chi2 (1219)	equilibrium%eqconstraint%mse%chi2 (vecflt_type) (9.4.1.2.9)
ne (1216)	equilibrium%eqconstraint%ne (eqmes1D) (9.4.1.3.176)
measured (1219)	equilibrium%eqconstraint%ne%measured (vecflt_type) (9.4.1.2.9)
source (1219)	equilibrium%eqconstraint%ne%source (string) (9.4.1.1.3)
time (1219)	equilibrium%eqconstraint%ne%time (float) (9.4.1.1.1)
exact (1219)	equilibrium%eqconstraint%ne%exact (vecint_type) (9.4.1.2.10)
weight (1219)	equilibrium%eqconstraint%ne%weight (vecflt_type) (9.4.1.2.9)
sigma (1219)	equilibrium%eqconstraint%ne%sigma (vecflt_type) (9.4.1.2.9)
calculated (1219)	equilibrium%eqconstraint%ne%calculated (vecflt_type) (9.4.1.2.9)
chi2 (1219)	equilibrium%eqconstraint%ne%chi2 (vecflt_type) (9.4.1.2.9)
pfcurrent (1216)	equilibrium%eqconstraint%pfcurrent (eqmes1D) (9.4.1.3.176)
measured (1219)	equilibrium%eqconstraint%pfcurrent%measured (vecflt_type) (9.4.1.2.9)
source (1219)	equilibrium%eqconstraint%pfcurrent%source (string) (9.4.1.1.3)
time (1219)	equilibrium%eqconstraint%pfcurrent%time (float) (9.4.1.1.1)
exact (1219)	equilibrium%eqconstraint%pfcurrent%exact (vecint_type) (9.4.1.2.10)
weight (1219)	equilibrium%eqconstraint%pfcurrent%weight (vecflt_type) (9.4.1.2.9)
sigma (1219)	equilibrium%eqconstraint%pfcurrent%sigma (vecflt_type) (9.4.1.2.9)
calculated (1219)	equilibrium%eqconstraint%pfcurrent%calculated (vecflt_type) (9.4.1.2.9)
chi2 (1219)	equilibrium%eqconstraint%pfcurrent%chi2 (vecflt_type) (9.4.1.2.9)
pressure (1216)	equilibrium%eqconstraint%pressure (eqmes1D) (9.4.1.3.176)
measured (1219)	equilibrium%eqconstraint%pressure%measured (vecflt_type) (9.4.1.2.9)
source (1219)	equilibrium%eqconstraint%pressure%source (string) (9.4.1.1.3)
time (1219)	equilibrium%eqconstraint%pressure%time (float) (9.4.1.1.1)
exact (1219)	equilibrium%eqconstraint%pressure%exact (vecint_type) (9.4.1.2.10)
weight (1219)	equilibrium%eqconstraint%pressure%weight (vecflt_type) (9.4.1.2.9)
sigma (1219)	equilibrium%eqconstraint%pressure%sigma (vecflt_type) (9.4.1.2.9)
calculated (1219)	equilibrium%eqconstraint%pressure%calculated (vecflt_type) (9.4.1.2.9)
chi2 (1219)	equilibrium%eqconstraint%pressure%chi2 (vecflt_type) (9.4.1.2.9)
q (1216)	equilibrium%eqconstraint%q (q) (9.4.1.3.290)
qvalue (1333)	equilibrium%eqconstraint%q%qvalue (vecflt_type) (9.4.1.2.9)
position (1333)	equilibrium%eqconstraint%q%position (rz1D) (9.4.1.3.319)
r (1362)	equilibrium%eqconstraint%q%position%r (vecflt_type) (9.4.1.2.9)
z (1362)	equilibrium%eqconstraint%q%position%z (vecflt_type) (9.4.1.2.9)
source (1333)	equilibrium%eqconstraint%q%source (string) (9.4.1.1.3)
exact (1333)	equilibrium%eqconstraint%q%exact (integer) (9.4.1.1.2)
weight (1333)	equilibrium%eqconstraint%q%weight (vecflt_type) (9.4.1.2.9)
sigma (1333)	equilibrium%eqconstraint%q%sigma (vecflt_type) (9.4.1.2.9)
calculated (1333)	equilibrium%eqconstraint%q%calculated (vecflt_type) (9.4.1.2.9)
chi2 (1333)	equilibrium%eqconstraint%q%chi2 (vecflt_type) (9.4.1.2.9)
xpts (1216)	equilibrium%eqconstraint%xpts (xpts) (9.4.1.3.428)
position (1471)	equilibrium%eqconstraint%xpts%position (rz1D) (9.4.1.3.319)
r (1362)	equilibrium%eqconstraint%xpts%position%r (vecflt_type) (9.4.1.2.9)
z (1362)	equilibrium%eqconstraint%xpts%position%z (vecflt_type) (9.4.1.2.9)
source (1471)	equilibrium%eqconstraint%xpts%source (string) (9.4.1.1.3)
weight (1471)	equilibrium%eqconstraint%xpts%weight (vecflt_type) (9.4.1.2.9)
sigma (1471)	equilibrium%eqconstraint%xpts%sigma (vecflt_type) (9.4.1.2.9)
calculated (1471)	equilibrium%eqconstraint%xpts%calculated (vecflt_type) (9.4.1.2.9)
chi2 (1471)	equilibrium%eqconstraint%xpts%chi2 (vecflt_type) (9.4.1.2.9)

eqgeometry (1061)  
   source (1217)  
   boundarytype (1217)  
   boundary (1217)  
     r (1364)  
     z (1364)  
   geom\_axis (1217)  
     r (1361)  
     z (1361)  
   a\_minor (1217)  
   elongation (1217)  
   elong\_upper (1217)  
   elong\_lower (1217)  
   tria\_upper (1217)  
   tria\_lower (1217)  
   xpts (1217)  
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     comment (1163)  
     cocos (1163)  
     id (1163)  
     isref (1163)  
     whatref (1163)  
       user (1469)  
       machine (1469)  
       shot (1469)  
       run (1469)  
       occurrence (1469)  
     putinfo (1163)  
       putmethod (1332)  
       putaccess (1332)  
       putlocation (1332)  
       rights (1332)  
   position (1227)  
     r (1362)  
     z (1362)  
   coef (1227)  
   equilibrium%eqgeometry (eqgeometry) (9.4.1.3.174)  
   equilibrium%eqgeometry%source (string) (9.4.1.1.3)  
   equilibrium%eqgeometry%boundarytype (integer) (9.4.1.1.2)  
   equilibrium%eqgeometry%boundary(:) (rz1Dexp) (9.4.1.3.321)  
   equilibrium%eqgeometry%boundary(:)%r (vecflt.type) (9.4.1.2.9)  
   equilibrium%eqgeometry%boundary(:)%z (vecflt.type) (9.4.1.2.9)  
   equilibrium%eqgeometry%geom\_axis (rz0D) (9.4.1.3.318)  
   equilibrium%eqgeometry%geom\_axis%r (float) (9.4.1.1.1)  
   equilibrium%eqgeometry%geom\_axis%z (float) (9.4.1.1.1)  
   equilibrium%eqgeometry%a\_minor (float) (9.4.1.1.1)  
   equilibrium%eqgeometry%elongation (float) (9.4.1.1.1)  
   equilibrium%eqgeometry%elong\_upper (float) (9.4.1.1.1)  
   equilibrium%eqgeometry%elong\_lower (float) (9.4.1.1.1)  
   equilibrium%eqgeometry%tria\_upper (float) (9.4.1.1.1)  
   equilibrium%eqgeometry%tria\_lower (float) (9.4.1.1.1)  
   equilibrium%eqgeometry%xpts(:) (rz1Dexp) (9.4.1.3.321)  
   equilibrium%eqgeometry%xpts(:)%r (vecflt.type) (9.4.1.2.9)  
   equilibrium%eqgeometry%xpts(:)%z (vecflt.type) (9.4.1.2.9)  
   equilibrium%eqgeometry%left\_low\_st (rz0D) (9.4.1.3.318)  
   equilibrium%eqgeometry%left\_low\_st%r (float) (9.4.1.1.1)  
   equilibrium%eqgeometry%left\_low\_st%z (float) (9.4.1.1.1)  
   equilibrium%eqgeometry%right\_low\_st (rz0D) (9.4.1.3.318)  
   equilibrium%eqgeometry%right\_low\_st%r (float) (9.4.1.1.1)  
   equilibrium%eqgeometry%right\_low\_st%z (float) (9.4.1.1.1)  
   equilibrium%eqgeometry%left\_up\_st (rz0D) (9.4.1.3.318)  
   equilibrium%eqgeometry%left\_up\_st%r (float) (9.4.1.1.1)  
   equilibrium%eqgeometry%left\_up\_st%z (float) (9.4.1.1.1)  
   equilibrium%eqgeometry%right\_up\_st (rz0D) (9.4.1.3.318)  
   equilibrium%eqgeometry%right\_up\_st%r (float) (9.4.1.1.1)  
   equilibrium%eqgeometry%right\_up\_st%z (float) (9.4.1.1.1)  
   equilibrium%eqgeometry%active\_limit (rz0D) (9.4.1.3.318)  
   equilibrium%eqgeometry%active\_limit%r (float) (9.4.1.1.1)  
   equilibrium%eqgeometry%active\_limit%z (float) (9.4.1.1.1)  
   equilibrium%eqgeometry%ang\_lcms\_upo (float) (9.4.1.1.1)  
   equilibrium%eqgeometry%ang\_lcms\_upi (float) (9.4.1.1.1)  
   equilibrium%eqgeometry%ang\_lcms\_lwo (float) (9.4.1.1.1)  
   equilibrium%eqgeometry%ang\_lcms\_lwi (float) (9.4.1.1.1)  
   equilibrium%flush (flush) (9.4.1.3.184)  
   equilibrium%flush%datainfo (datainfo) (9.4.1.3.120)  
   equilibrium%flush%datainfo%dataprovider (string) (9.4.1.1.3)  
   equilibrium%flush%datainfo%putdate (string) (9.4.1.1.3)  
   equilibrium%flush%datainfo%source (string) (9.4.1.1.3)  
   equilibrium%flush%datainfo%comment (string) (9.4.1.1.3)  
   equilibrium%flush%datainfo%cocos (integer) (9.4.1.1.2)  
   equilibrium%flush%datainfo%id (integer) (9.4.1.1.2)  
   equilibrium%flush%datainfo%isref (integer) (9.4.1.1.2)  
   equilibrium%flush%datainfo%whatref (whatref) (9.4.1.3.426)  
   equilibrium%flush%datainfo%whatref%user (string) (9.4.1.1.3)  
   equilibrium%flush%datainfo%whatref%machine (string) (9.4.1.1.3)  
   equilibrium%flush%datainfo%whatref%shot (integer) (9.4.1.1.2)  
   equilibrium%flush%datainfo%whatref%run (integer) (9.4.1.1.2)  
   equilibrium%flush%datainfo%whatref%occurrence (integer) (9.4.1.1.2)  
   equilibrium%flush%datainfo%putinfo (putinfo) (9.4.1.3.289)  
   equilibrium%flush%datainfo%putinfo%putmethod (string) (9.4.1.1.3)  
   equilibrium%flush%datainfo%putinfo%putaccess (string) (9.4.1.1.3)  
   equilibrium%flush%datainfo%putinfo%putlocation (string) (9.4.1.1.3)  
   equilibrium%flush%datainfo%putinfo%rights (string) (9.4.1.1.3)  
   equilibrium%flush%position (rz1D) (9.4.1.3.319)  
   equilibrium%flush%position%r (vecflt.type) (9.4.1.2.9)  
   equilibrium%flush%position%z (vecflt.type) (9.4.1.2.9)  
   equilibrium%flush%coef (matflt.type) (9.4.1.2.7)

codeparam (1227)	equilibrium%flush%codeparam (codeparam) (9.4.1.3.65)
codename (1108)	equilibrium%flush%codeparam%codename (string) (9.4.1.1.3)
codeversion (1108)	equilibrium%flush%codeparam%codeversion (string) (9.4.1.1.3)
parameters (1108)	equilibrium%flush%codeparam%parameters (string) (9.4.1.1.3)
output_diag (1108)	equilibrium%flush%codeparam%output_diag (string) (9.4.1.1.3)
output_flag (1108)	equilibrium%flush%codeparam%output_flag (integer) (9.4.1.1.2)
global_param (1061)	equilibrium%global_param (global_param) (9.4.1.3.207)
beta_pol (1250)	equilibrium%global_param%beta_pol (float) (9.4.1.1.1)
beta_tor (1250)	equilibrium%global_param%beta_tor (float) (9.4.1.1.1)
beta_normal (1250)	equilibrium%global_param%beta_normal (float) (9.4.1.1.1)
i_plasma (1250)	equilibrium%global_param%i_plasma (float) (9.4.1.1.1)
li (1250)	equilibrium%global_param%li (float) (9.4.1.1.1)
volume (1250)	equilibrium%global_param%volume (float) (9.4.1.1.1)
area (1250)	equilibrium%global_param%area (float) (9.4.1.1.1)
psi_ax (1250)	equilibrium%global_param%psi_ax (float) (9.4.1.1.1)
psi_bound (1250)	equilibrium%global_param%psi_bound (float) (9.4.1.1.1)
mag_axis (1250)	equilibrium%global_param%mag_axis (mag_axis) (9.4.1.3.235)
position (1278)	equilibrium%global_param%mag_axis%position (rz0D) (9.4.1.3.318)
r (1361)	equilibrium%global_param%mag_axis%position%r (float) (9.4.1.1.1)
z (1361)	equilibrium%global_param%mag_axis%position%z (float) (9.4.1.1.1)
bphi (1278)	equilibrium%global_param%mag_axis%bphi (float) (9.4.1.1.1)
q (1278)	equilibrium%global_param%mag_axis%q (float) (9.4.1.1.1)
q_95 (1250)	equilibrium%global_param%q_95 (float) (9.4.1.1.1)
q_min (1250)	equilibrium%global_param%q_min (float) (9.4.1.1.1)
toroid_field (1250)	equilibrium%global_param%toroid_field (b0r0) (9.4.1.3.55)
r0 (1098)	equilibrium%global_param%toroid_field%r0 (float) (9.4.1.1.1)
b0 (1098)	equilibrium%global_param%toroid_field%b0 (float) (9.4.1.1.1)
w_mhd (1250)	equilibrium%global_param%w_mhd (float) (9.4.1.1.1)
gamma (1250)	equilibrium%global_param%gamma (float) (9.4.1.1.1)
profiles_1d (1061)	equilibrium%profiles_1d (profiles_1d) (9.4.1.3.287)
psi (1330)	equilibrium%profiles_1d%psi (vecflt_type) (9.4.1.2.9)
phi (1330)	equilibrium%profiles_1d%phi (vecflt_type) (9.4.1.2.9)
pressure (1330)	equilibrium%profiles_1d%pressure (vecflt_type) (9.4.1.2.9)
F_dia (1330)	equilibrium%profiles_1d%F_dia (vecflt_type) (9.4.1.2.9)
pprime (1330)	equilibrium%profiles_1d%pprime (vecflt_type) (9.4.1.2.9)
ffprime (1330)	equilibrium%profiles_1d%ffprime (vecflt_type) (9.4.1.2.9)
jphi (1330)	equilibrium%profiles_1d%jphi (vecflt_type) (9.4.1.2.9)
jparallel (1330)	equilibrium%profiles_1d%jparallel (vecflt_type) (9.4.1.2.9)
q (1330)	equilibrium%profiles_1d%q (vecflt_type) (9.4.1.2.9)
r_inboard (1330)	equilibrium%profiles_1d%r_inboard (vecflt_type) (9.4.1.2.9)
r_outboard (1330)	equilibrium%profiles_1d%r_outboard (vecflt_type) (9.4.1.2.9)
rho_tor (1330)	equilibrium%profiles_1d%rho_tor (vecflt_type) (9.4.1.2.9)
dpsidrho_tor (1330)	equilibrium%profiles_1d%dpsidrho_tor (vecflt_type) (9.4.1.2.9)
rho_vol (1330)	equilibrium%profiles_1d%rho_vol (vecflt_type) (9.4.1.2.9)
beta_pol (1330)	equilibrium%profiles_1d%beta_pol (vecflt_type) (9.4.1.2.9)
li (1330)	equilibrium%profiles_1d%li (vecflt_type) (9.4.1.2.9)
elongation (1330)	equilibrium%profiles_1d%elongation (vecflt_type) (9.4.1.2.9)
tria_upper (1330)	equilibrium%profiles_1d%tria_upper (vecflt_type) (9.4.1.2.9)
tria_lower (1330)	equilibrium%profiles_1d%tria_lower (vecflt_type) (9.4.1.2.9)
volume (1330)	equilibrium%profiles_1d%volume (vecflt_type) (9.4.1.2.9)
vprime (1330)	equilibrium%profiles_1d%vprime (vecflt_type) (9.4.1.2.9)
dvdrho (1330)	equilibrium%profiles_1d%dvdrho (vecflt_type) (9.4.1.2.9)
area (1330)	equilibrium%profiles_1d%area (vecflt_type) (9.4.1.2.9)
aprime (1330)	equilibrium%profiles_1d%aprime (vecflt_type) (9.4.1.2.9)
surface (1330)	equilibrium%profiles_1d%surface (vecflt_type) (9.4.1.2.9)
ftrap (1330)	equilibrium%profiles_1d%ftrap (vecflt_type) (9.4.1.2.9)
gm1 (1330)	equilibrium%profiles_1d%gm1 (vecflt_type) (9.4.1.2.9)
gm2 (1330)	equilibrium%profiles_1d%gm2 (vecflt_type) (9.4.1.2.9)
gm3 (1330)	equilibrium%profiles_1d%gm3 (vecflt_type) (9.4.1.2.9)
gm4 (1330)	equilibrium%profiles_1d%gm4 (vecflt_type) (9.4.1.2.9)
gm5 (1330)	equilibrium%profiles_1d%gm5 (vecflt_type) (9.4.1.2.9)

gm6 (1330)	equilibrium%profiles_1d%gm6 (vecflt.type) (9.4.1.2.9)
gm7 (1330)	equilibrium%profiles_1d%gm7 (vecflt.type) (9.4.1.2.9)
gm8 (1330)	equilibrium%profiles_1d%gm8 (vecflt.type) (9.4.1.2.9)
gm9 (1330)	equilibrium%profiles_1d%gm9 (vecflt.type) (9.4.1.2.9)
b_av (1330)	equilibrium%profiles_1d%b_av (vecflt.type) (9.4.1.2.9)
b_min (1330)	equilibrium%profiles_1d%b_min (vecflt.type) (9.4.1.2.9)
b_max (1330)	equilibrium%profiles_1d%b_max (vecflt.type) (9.4.1.2.9)
omega (1330)	equilibrium%profiles_1d%omega (vecflt.type) (9.4.1.2.9)
omegaprime (1330)	equilibrium%profiles_1d%omegaprime (vecflt.type) (9.4.1.2.9)
mach_a (1330)	equilibrium%profiles_1d%mach_a (vecflt.type) (9.4.1.2.9)
phi_flow (1330)	equilibrium%profiles_1d%phi_flow (vecflt.type) (9.4.1.2.9)
s_flow (1330)	equilibrium%profiles_1d%s_flow (vecflt.type) (9.4.1.2.9)
h_flow (1330)	equilibrium%profiles_1d%h_flow (vecflt.type) (9.4.1.2.9)
profiles_2d (1061)	equilibrium%profiles_2d(:) (equilibrium_profiles_2d) (9.4.1.3.178)
grid_type (1221)	equilibrium%profiles_2d(:)%grid_type (vecstring.type) (9.4.1.2.11)
grid (1221)	equilibrium%profiles_2d(:)%grid (equilibrium_profiles2d_grid) (9.4.1.3.177)
dim1 (1220)	equilibrium%profiles_2d(:)%grid%dim1 (vecflt.type) (9.4.1.2.9)
dim2 (1220)	equilibrium%profiles_2d(:)%grid%dim2 (vecflt.type) (9.4.1.2.9)
connect (1220)	equilibrium%profiles_2d(:)%grid%connect (matint.type) (9.4.1.2.8)
r (1221)	equilibrium%profiles_2d(:)%r (matflt.type) (9.4.1.2.7)
z (1221)	equilibrium%profiles_2d(:)%z (matflt.type) (9.4.1.2.7)
psi (1221)	equilibrium%profiles_2d(:)%psi (matflt.type) (9.4.1.2.7)
theta (1221)	equilibrium%profiles_2d(:)%theta (matflt.type) (9.4.1.2.7)
phi (1221)	equilibrium%profiles_2d(:)%phi (matflt.type) (9.4.1.2.7)
jphi (1221)	equilibrium%profiles_2d(:)%jphi (matflt.type) (9.4.1.2.7)
jpar (1221)	equilibrium%profiles_2d(:)%jpar (matflt.type) (9.4.1.2.7)
br (1221)	equilibrium%profiles_2d(:)%br (matflt.type) (9.4.1.2.7)
bz (1221)	equilibrium%profiles_2d(:)%bz (matflt.type) (9.4.1.2.7)
bphi (1221)	equilibrium%profiles_2d(:)%bphi (matflt.type) (9.4.1.2.7)
vphi (1221)	equilibrium%profiles_2d(:)%vphi (matflt.type) (9.4.1.2.7)
vtheta (1221)	equilibrium%profiles_2d(:)%vtheta (matflt.type) (9.4.1.2.7)
rho_mass (1221)	equilibrium%profiles_2d(:)%rho_mass (matflt.type) (9.4.1.2.7)
pressure (1221)	equilibrium%profiles_2d(:)%pressure (matflt.type) (9.4.1.2.7)
temperature (1221)	equilibrium%profiles_2d(:)%temperature (matflt.type) (9.4.1.2.7)
coord_sys (1061)	equilibrium%coord_sys (coord_sys) (9.4.1.3.89)
grid_type (1132)	equilibrium%coord_sys%grid_type (string) (9.4.1.1.3)
grid (1132)	equilibrium%coord_sys%grid (reggrid) (9.4.1.3.314)
dim1 (1357)	equilibrium%coord_sys%grid%dim1 (vecflt.type) (9.4.1.2.9)
dim2 (1357)	equilibrium%coord_sys%grid%dim2 (vecflt.type) (9.4.1.2.9)
jacobian (1132)	equilibrium%coord_sys%jacobian (matflt.type) (9.4.1.2.7)
g_11 (1132)	equilibrium%coord_sys%g_11 (matflt.type) (9.4.1.2.7)
g_12 (1132)	equilibrium%coord_sys%g_12 (matflt.type) (9.4.1.2.7)
g_13 (1132)	equilibrium%coord_sys%g_13 (matflt.type) (9.4.1.2.7)
g_22 (1132)	equilibrium%coord_sys%g_22 (matflt.type) (9.4.1.2.7)
g_23 (1132)	equilibrium%coord_sys%g_23 (matflt.type) (9.4.1.2.7)
g_33 (1132)	equilibrium%coord_sys%g_33 (matflt.type) (9.4.1.2.7)
position (1132)	equilibrium%coord_sys%position (rz2D) (9.4.1.3.322)
r (1365)	equilibrium%coord_sys%position%r (matflt.type) (9.4.1.2.7)
z (1365)	equilibrium%coord_sys%position%z (matflt.type) (9.4.1.2.7)
time (1061)	equilibrium%time (float) (9.4.1.1.1)
codeparam (1061)	equilibrium%codeparam (codeparam) (9.4.1.3.65)
codename (1108)	equilibrium%codeparam%codename (string) (9.4.1.1.3)
codeversion (1108)	equilibrium%codeparam%codeversion (string) (9.4.1.1.3)
parameters (1108)	equilibrium%codeparam%parameters (string) (9.4.1.1.3)
output_diag (1108)	equilibrium%codeparam%output_diag (string) (9.4.1.1.3)
output_flag (1108)	equilibrium%codeparam%output_flag (integer) (9.4.1.1.2)

### 9.4.2.1.17 fusiondiag

datainfo (1062)	fusiondiag%datainfo (datainfo) (9.4.1.3.120)
dataprovder (1163)	fusiondiag%datainfo%dataprovder (string) (9.4.1.1.3)

putdate (1163)	fusiondiag%datainfo%putdate (string) (9.4.1.1.3)
source (1163)	fusiondiag%datainfo%source (string) (9.4.1.1.3)
comment (1163)	fusiondiag%datainfo%comment (string) (9.4.1.1.3)
cocos (1163)	fusiondiag%datainfo%cocos (integer) (9.4.1.1.2)
id (1163)	fusiondiag%datainfo%id (integer) (9.4.1.1.2)
isref (1163)	fusiondiag%datainfo%isref (integer) (9.4.1.1.2)
whatref (1163)	fusiondiag%datainfo%whatref (whatref) (9.4.1.3.426)
user (1469)	fusiondiag%datainfo%whatref%user (string) (9.4.1.1.3)
machine (1469)	fusiondiag%datainfo%whatref%machine (string) (9.4.1.1.3)
shot (1469)	fusiondiag%datainfo%whatref%shot (integer) (9.4.1.1.2)
run (1469)	fusiondiag%datainfo%whatref%run (integer) (9.4.1.1.2)
occurrence (1469)	fusiondiag%datainfo%whatref%occurrence (integer) (9.4.1.1.2)
putinfo (1163)	fusiondiag%datainfo%putinfo (putinfo) (9.4.1.3.289)
putmethod (1332)	fusiondiag%datainfo%putinfo%putmethod (string) (9.4.1.1.3)
putaccess (1332)	fusiondiag%datainfo%putinfo%putaccess (string) (9.4.1.1.3)
putlocation (1332)	fusiondiag%datainfo%putinfo%putlocation (string) (9.4.1.1.3)
rights (1332)	fusiondiag%datainfo%putinfo%rights (string) (9.4.1.1.3)
fus_product (1062)	fusiondiag%fus_product(:) (fusiondiag_fus_product) (9.4.1.3.202)
product (1245)	fusiondiag%fus_product(:)%product (string) (9.4.1.1.3)
reaction (1245)	fusiondiag%fus_product(:)%reaction (string) (9.4.1.1.3)
collimator (1245)	fusiondiag%fus_product(:)%collimator (fusiondiag_collimator) (9.4.1.3.193)
colli_circ (1236)	fusiondiag%fus_product(:)%collimator%colli_circ(:) (fusiondiag_colli_circ) (9.4.1.3.191)
name (1234)	fusiondiag%fus_product(:)%collimator%colli_circ(:)%name (string) (9.4.1.1.3)
setup_line (1234)	fusiondiag%fus_product(:)%collimator%colli_circ(:)%setup_line (setup_line) (9.4.1.3.356)
pivot_point (1399)	fusiondiag%fus_product(:)%collimator%colli_circ(:)%setup_line%pivot_point (rzphi1D) (9.4.1.3.325)
r (1368)	fusiondiag%fus_product(:)%collimator%colli_circ(:)%setup_line%pivot_point%r (vecflt_type) (9.4.1.2.9)
z (1368)	fusiondiag%fus_product(:)%collimator%colli_circ(:)%setup_line%pivot_point%z (vecflt_type) (9.4.1.2.9)
phi (1368)	fusiondiag%fus_product(:)%collimator%colli_circ(:)%setup_line%pivot_point%phi (vecflt_type) (9.4.1.2.9)
horchordang1 (1399)	fusiondiag%fus_product(:)%collimator%colli_circ(:)%setup_line%horchordang1 (vecflt_type) (9.4.1.2.9)
verchordang1 (1399)	fusiondiag%fus_product(:)%collimator%colli_circ(:)%setup_line%verchordang1 (vecflt_type) (9.4.1.2.9)
width (1399)	fusiondiag%fus_product(:)%collimator%colli_circ(:)%setup_line%width (vecflt_type) (9.4.1.2.9)
second_point (1399)	fusiondiag%fus_product(:)%collimator%colli_circ(:)%setup_line%second_point (rzphi1D) (9.4.1.3.325)
r (1368)	fusiondiag%fus_product(:)%collimator%colli_circ(:)%setup_line%second_point%r (vecflt_type) (9.4.1.2.9)
z (1368)	fusiondiag%fus_product(:)%collimator%colli_circ(:)%setup_line%second_point%z (vecflt_type) (9.4.1.2.9)
phi (1368)	fusiondiag%fus_product(:)%collimator%colli_circ(:)%setup_line%second_point%phi (vecflt_type) (9.4.1.2.9)
horchordang2 (1399)	fusiondiag%fus_product(:)%collimator%colli_circ(:)%setup_line%horchordang2 (vecflt_type) (9.4.1.2.9)
verchordang2 (1399)	fusiondiag%fus_product(:)%collimator%colli_circ(:)%setup_line%verchordang2 (vecflt_type) (9.4.1.2.9)
third_point (1399)	fusiondiag%fus_product(:)%collimator%colli_circ(:)%setup_line%third_point (rzphi1D) (9.4.1.3.325)
r (1368)	fusiondiag%fus_product(:)%collimator%colli_circ(:)%setup_line%third_point%r (vecflt_type) (9.4.1.2.9)
z (1368)	fusiondiag%fus_product(:)%collimator%colli_circ(:)%setup_line%third_point%z (vecflt_type) (9.4.1.2.9)
phi (1368)	fusiondiag%fus_product(:)%collimator%colli_circ(:)%setup_line%third_point%phi (vecflt_type) (9.4.1.2.9)
nchordpoints (1399)	fusiondiag%fus_product(:)%collimator%colli_circ(:)%setup_line%nchordpoints (integer) (9.4.1.1.2)
colliunit (1234)	fusiondiag%fus_product(:)%collimator%colli_circ(:)%colliunit(:) (fusiondiag_colliunit_circ) (9.4.1.3.194)
radius (1237)	fusiondiag%fus_product(:)%collimator%colli_circ(:)%colliunit(:)%radius (vecflt_type) (9.4.1.2.9)
centre (1237)	fusiondiag%fus_product(:)%collimator%colli_circ(:)%colliunit(:)%centre (rzphi1D) (9.4.1.3.325)
r (1368)	fusiondiag%fus_product(:)%collimator%colli_circ(:)%colliunit(:)%centre%r (vecflt_type) (9.4.1.2.9)



z (1368)	fusiondiag%fus.product():%collimator%colli_circ():%colliunit():%centre%z (vecflt.type) (9.4.1.2.9)
phi (1368)	fusiondiag%fus.product():%collimator%colli_circ():%colliunit():%centre%phi (vecflt.type) (9.4.1.2.9)
colli_poly (1236)	fusiondiag%fus.product():%collimator%colli_poly(:) (fusiondiag_colli_poly) (9.4.1.3.192)
name (1235)	fusiondiag%fus.product():%collimator%colli_poly(:)%name (string) (9.4.1.1.3)
setup_line (1235)	fusiondiag%fus.product():%collimator%colli_poly(:)%setup_line (setup_line) (9.4.1.3.356)
pivot_point (1399)	fusiondiag%fus.product():%collimator%colli_poly(:)%setup_line%pivot_point (rzphi1D) (9.4.1.3.325)
r (1368)	fusiondiag%fus.product():%collimator%colli_poly(:)%setup_line%pivot_point%r (vecflt.type) (9.4.1.2.9)
z (1368)	fusiondiag%fus.product():%collimator%colli_poly(:)%setup_line%pivot_point%z (vecflt.type) (9.4.1.2.9)
phi (1368)	fusiondiag%fus.product():%collimator%colli_poly(:)%setup_line%pivot_point%phi (vecflt.type) (9.4.1.2.9)
horchordang1 (1399)	fusiondiag%fus.product():%collimator%colli_poly(:)%setup_line%horchordang1 (vecflt.type) (9.4.1.2.9)
verchordang1 (1399)	fusiondiag%fus.product():%collimator%colli_poly(:)%setup_line%verchordang1 (vecflt.type) (9.4.1.2.9)
width (1399)	fusiondiag%fus.product():%collimator%colli_poly(:)%setup_line%width (vecflt.type) (9.4.1.2.9)
second_point (1399)	fusiondiag%fus.product():%collimator%colli_poly(:)%setup_line%second_point (rzphi1D) (9.4.1.3.325)
r (1368)	fusiondiag%fus.product():%collimator%colli_poly(:)%setup_line%second_point%r (vecflt.type) (9.4.1.2.9)
z (1368)	fusiondiag%fus.product():%collimator%colli_poly(:)%setup_line%second_point%z (vecflt.type) (9.4.1.2.9)
phi (1368)	fusiondiag%fus.product():%collimator%colli_poly(:)%setup_line%second_point%phi (vecflt.type) (9.4.1.2.9)
horchordang2 (1399)	fusiondiag%fus.product():%collimator%colli_poly(:)%setup_line%horchordang2 (vecflt.type) (9.4.1.2.9)
verchordang2 (1399)	fusiondiag%fus.product():%collimator%colli_poly(:)%setup_line%verchordang2 (vecflt.type) (9.4.1.2.9)
third_point (1399)	fusiondiag%fus.product():%collimator%colli_poly(:)%setup_line%third_point (rzphi1D) (9.4.1.3.325)
r (1368)	fusiondiag%fus.product():%collimator%colli_poly(:)%setup_line%third_point%r (vecflt.type) (9.4.1.2.9)
z (1368)	fusiondiag%fus.product():%collimator%colli_poly(:)%setup_line%third_point%z (vecflt.type) (9.4.1.2.9)
phi (1368)	fusiondiag%fus.product():%collimator%colli_poly(:)%setup_line%third_point%phi (vecflt.type) (9.4.1.2.9)
nchordpoints (1399)	fusiondiag%fus.product():%collimator%colli_poly(:)%setup_line%nchordpoints (integer) (9.4.1.1.2)
colliunit (1235)	fusiondiag%fus.product():%collimator%colli_poly(:)%colliunit(:) (fusiondiag_colliunit_poly) (9.4.1.3.195)
dimension (1238)	fusiondiag%fus.product():%collimator%colli_poly(:)%colliunit(:)%dimension (float) (9.4.1.1.1)
nodes (1238)	fusiondiag%fus.product():%collimator%colli_poly(:)%colliunit(:)%nodes (rzphi2D) (9.4.1.3.327)
r (1370)	fusiondiag%fus.product():%collimator%colli_poly(:)%colliunit(:)%nodes%r (matflt.type) (9.4.1.2.7)
z (1370)	fusiondiag%fus.product():%collimator%colli_poly(:)%colliunit(:)%nodes%z (matflt.type) (9.4.1.2.7)
phi (1370)	fusiondiag%fus.product():%collimator%colli_poly(:)%colliunit(:)%nodes%phi (matflt.type) (9.4.1.2.7)
colli_3d (1236)	fusiondiag%fus.product():%collimator%colli_3d(:) (fusiondiag_colli_3d) (9.4.1.3.190)
name (1233)	fusiondiag%fus.product():%collimator%colli_3d(:)%name (string) (9.4.1.1.3)
voxels (1233)	fusiondiag%fus.product():%collimator%colli_3d(:)%voxels(:) (fusiondiag_voxels) (9.4.1.3.205)
centre (1248)	fusiondiag%fus.product():%collimator%colli_3d(:)%voxels(:)%centre (rzphi0D) (9.4.1.3.324)
r (1367)	fusiondiag%fus.product():%collimator%colli_3d(:)%voxels(:)%centre%r (float) (9.4.1.1.1)
z (1367)	fusiondiag%fus.product():%collimator%colli_3d(:)%voxels(:)%centre%z (float) (9.4.1.1.1)
phi (1367)	fusiondiag%fus.product():%collimator%colli_3d(:)%voxels(:)%centre%phi (float) (9.4.1.1.1)
direction (1248)	fusiondiag%fus.product():%collimator%colli_3d(:)%voxels(:)%direction (rzphi0D) (9.4.1.3.324)
r (1367)	fusiondiag%fus.product():%collimator%colli_3d(:)%voxels(:)%direction%r (float) (9.4.1.1.1)
z (1367)	fusiondiag%fus.product():%collimator%colli_3d(:)%voxels(:)%direction%z (float) (9.4.1.1.1)
phi (1367)	fusiondiag%fus.product():%collimator%colli_3d(:)%voxels(:)%direction%phi (float) (9.4.1.1.1)
volume (1248)	fusiondiag%fus.product():%collimator%colli_3d(:)%voxels(:)%volume (float) (9.4.1.1.1)
solid_angle (1248)	fusiondiag%fus.product():%collimator%colli_3d(:)%voxels(:)%solid_angle (float) (9.4.1.1.1)
counts (1245)	fusiondiag%fus.product():%counts (fusiondiag_counts) (9.4.1.3.196)

units (1239)	fusiondiag%fus.product(:)%counts%units (string) (9.4.1.1.3)
ct.chords (1239)	fusiondiag%fus.product(:)%counts%ct.chords(:) (fusiondiag_ct.chords) (9.4.1.3.197)
name (1240)	fusiondiag%fus.product(:)%counts%ct.chords(:)%name (vecstring_type) (9.4.1.2.11)
energy (1240)	fusiondiag%fus.product(:)%counts%ct.chords(:)%energy (exp0D) (9.4.1.3.179)
value (1222)	fusiondiag%fus.product(:)%counts%ct.chords(:)%energy%value (float) (9.4.1.1.1)
abserror (1222)	fusiondiag%fus.product(:)%counts%ct.chords(:)%energy%abserror (float) (9.4.1.1.1)
relerror (1222)	fusiondiag%fus.product(:)%counts%ct.chords(:)%energy%relerror (float) (9.4.1.1.1)
measure (1240)	fusiondiag%fus.product(:)%counts%ct.chords(:)%measure (exp1D) (9.4.1.3.180)
value (1223)	fusiondiag%fus.product(:)%counts%ct.chords(:)%measure%value (vecflt_type) (9.4.1.2.9)
abserror (1223)	fusiondiag%fus.product(:)%counts%ct.chords(:)%measure%abserror (vecflt_type) (9.4.1.2.9)
relerror (1223)	fusiondiag%fus.product(:)%counts%ct.chords(:)%measure%relerror (vecflt_type) (9.4.1.2.9)
ct.energy (1239)	fusiondiag%fus.product(:)%counts%ct.energy(:) (fusiondiag_ct.energy) (9.4.1.3.198)
energy (1241)	fusiondiag%fus.product(:)%counts%ct.energy(:)%energy (exp1D) (9.4.1.3.180)
value (1223)	fusiondiag%fus.product(:)%counts%ct.energy(:)%energy%value (vecflt_type) (9.4.1.2.9)
abserror (1223)	fusiondiag%fus.product(:)%counts%ct.energy(:)%energy%abserror (vecflt_type) (9.4.1.2.9)
relerror (1223)	fusiondiag%fus.product(:)%counts%ct.energy(:)%energy%relerror (vecflt_type) (9.4.1.2.9)
measure (1241)	fusiondiag%fus.product(:)%counts%ct.energy(:)%measure (exp1D) (9.4.1.3.180)
value (1223)	fusiondiag%fus.product(:)%counts%ct.energy(:)%measure%value (vecflt_type) (9.4.1.2.9)
abserror (1223)	fusiondiag%fus.product(:)%counts%ct.energy(:)%measure%abserror (vecflt_type) (9.4.1.2.9)
relerror (1223)	fusiondiag%fus.product(:)%counts%ct.energy(:)%measure%relerror (vecflt_type) (9.4.1.2.9)
detect.ct (1239)	fusiondiag%fus.product(:)%counts%detect.ct(:) (fusiondiag_detect.ct.energy) (9.4.1.3.199)
energy (1242)	fusiondiag%fus.product(:)%counts%detect.ct(:)%energy (exp1D) (9.4.1.3.180)
value (1223)	fusiondiag%fus.product(:)%counts%detect.ct(:)%energy%value (vecflt_type) (9.4.1.2.9)
abserror (1223)	fusiondiag%fus.product(:)%counts%detect.ct(:)%energy%abserror (vecflt_type) (9.4.1.2.9)
relerror (1223)	fusiondiag%fus.product(:)%counts%detect.ct(:)%energy%relerror (vecflt_type) (9.4.1.2.9)
measure (1242)	fusiondiag%fus.product(:)%counts%detect.ct(:)%measure (exp1D) (9.4.1.3.180)
value (1223)	fusiondiag%fus.product(:)%counts%detect.ct(:)%measure%value (vecflt_type) (9.4.1.2.9)
abserror (1223)	fusiondiag%fus.product(:)%counts%detect.ct(:)%measure%abserror (vecflt_type) (9.4.1.2.9)
relerror (1223)	fusiondiag%fus.product(:)%counts%detect.ct(:)%measure%relerror (vecflt_type) (9.4.1.2.9)
diag_func (1242)	fusiondiag%fus.product(:)%counts%detect.ct(:)%diag_func (diag_func) (9.4.1.3.127)
description (1170)	fusiondiag%fus.product(:)%counts%detect.ct(:)%diag_func%description (string) (9.4.1.1.3)
transf_mat (1170)	fusiondiag%fus.product(:)%counts%detect.ct(:)%diag_func%transf_mat (matflt_type) (9.4.1.2.7)
emissivity1d (1245)	fusiondiag%fus.product(:)%emissivity1d (fusiondiag_emissivity1d) (9.4.1.3.200)
units (1243)	fusiondiag%fus.product(:)%emissivity1d%units (string) (9.4.1.1.3)
r (1243)	fusiondiag%fus.product(:)%emissivity1d%r (exp1D) (9.4.1.3.180)
value (1223)	fusiondiag%fus.product(:)%emissivity1d%r%value (vecflt_type) (9.4.1.2.9)
abserror (1223)	fusiondiag%fus.product(:)%emissivity1d%r%abserror (vecflt_type) (9.4.1.2.9)
relerror (1223)	fusiondiag%fus.product(:)%emissivity1d%r%relerror (vecflt_type) (9.4.1.2.9)
z (1243)	fusiondiag%fus.product(:)%emissivity1d%z (exp1D) (9.4.1.3.180)
value (1223)	fusiondiag%fus.product(:)%emissivity1d%z%value (vecflt_type) (9.4.1.2.9)
abserror (1223)	fusiondiag%fus.product(:)%emissivity1d%z%abserror (vecflt_type) (9.4.1.2.9)
relerror (1223)	fusiondiag%fus.product(:)%emissivity1d%z%relerror (vecflt_type) (9.4.1.2.9)
spec1d (1243)	fusiondiag%fus.product(:)%emissivity1d%spec1d(:) (fusiondiag_spec1d) (9.4.1.3.203)
energy (1246)	fusiondiag%fus.product(:)%emissivity1d%spec1d(:)%energy (exp0D) (9.4.1.3.179)
value (1222)	fusiondiag%fus.product(:)%emissivity1d%spec1d(:)%energy%value (float) (9.4.1.1.1)
abserror (1222)	fusiondiag%fus.product(:)%emissivity1d%spec1d(:)%energy%abserror (float) (9.4.1.1.1)
relerror (1222)	fusiondiag%fus.product(:)%emissivity1d%spec1d(:)%energy%relerror (float) (9.4.1.1.1)
measure (1246)	fusiondiag%fus.product(:)%emissivity1d%spec1d(:)%measure (exp1D) (9.4.1.3.180)
value (1223)	fusiondiag%fus.product(:)%emissivity1d%spec1d(:)%measure%value (vecflt_type) (9.4.1.2.9)
abserror (1223)	fusiondiag%fus.product(:)%emissivity1d%spec1d(:)%measure%abserror (vecflt_type) (9.4.1.2.9)
relerror (1223)	fusiondiag%fus.product(:)%emissivity1d%spec1d(:)%measure%relerror (vecflt_type) (9.4.1.2.9)
emissivity2d (1245)	fusiondiag%fus.product(:)%emissivity2d (fusiondiag_emissivity2d) (9.4.1.3.201)
units (1244)	fusiondiag%fus.product(:)%emissivity2d%units (string) (9.4.1.1.3)
r (1244)	fusiondiag%fus.product(:)%emissivity2d%r (exp2D) (9.4.1.3.181)
value (1224)	fusiondiag%fus.product(:)%emissivity2d%r%value (matflt_type) (9.4.1.2.7)
abserror (1224)	fusiondiag%fus.product(:)%emissivity2d%r%abserror (matflt_type) (9.4.1.2.7)
relerror (1224)	fusiondiag%fus.product(:)%emissivity2d%r%relerror (matflt_type) (9.4.1.2.7)
z (1244)	fusiondiag%fus.product(:)%emissivity2d%z (exp2D) (9.4.1.3.181)
value (1224)	fusiondiag%fus.product(:)%emissivity2d%z%value (matflt_type) (9.4.1.2.7)



abserror (1224)	fusiondiag%fus_product(:)%emissivity2d%z%abserror (matflt_type) (9.4.1.2.7)
releror (1224)	fusiondiag%fus_product(:)%emissivity2d%z%releror (matflt_type) (9.4.1.2.7)
spec2d (1244)	fusiondiag%fus_product(:)%emissivity2d%spec2d(:) (fusiondiag_spec2d) (9.4.1.3.204)
energy (1247)	fusiondiag%fus_product(:)%emissivity2d%spec2d(:)%energy (exp0D) (9.4.1.3.179)
value (1222)	fusiondiag%fus_product(:)%emissivity2d%spec2d(:)%energy%value (float) (9.4.1.1.1)
abserror (1222)	fusiondiag%fus_product(:)%emissivity2d%spec2d(:)%energy%abserror (float) (9.4.1.1.1)
releror (1222)	fusiondiag%fus_product(:)%emissivity2d%spec2d(:)%energy%releror (float) (9.4.1.1.1)
measure (1247)	fusiondiag%fus_product(:)%emissivity2d%spec2d(:)%measure (exp2D) (9.4.1.3.181)
value (1224)	fusiondiag%fus_product(:)%emissivity2d%spec2d(:)%measure%value (matflt_type) (9.4.1.2.7)
abserror (1224)	fusiondiag%fus_product(:)%emissivity2d%spec2d(:)%measure%abserror (matflt_type) (9.4.1.2.7)
releror (1224)	fusiondiag%fus_product(:)%emissivity2d%spec2d(:)%measure%releror (matflt_type) (9.4.1.2.7)
codeparam (1245)	fusiondiag%fus_product(:)%codeparam (codeparam) (9.4.1.3.65)
codename (1108)	fusiondiag%fus_product(:)%codeparam%codename (string) (9.4.1.1.3)
codeversion (1108)	fusiondiag%fus_product(:)%codeparam%codeversion (string) (9.4.1.1.3)
parameters (1108)	fusiondiag%fus_product(:)%codeparam%parameters (string) (9.4.1.1.3)
output_diag (1108)	fusiondiag%fus_product(:)%codeparam%output_diag (string) (9.4.1.1.3)
output_flag (1108)	fusiondiag%fus_product(:)%codeparam%output_flag (integer) (9.4.1.1.2)
codeparam (1062)	fusiondiag%codeparam (codeparam) (9.4.1.3.65)
codename (1108)	fusiondiag%codeparam%codename (string) (9.4.1.1.3)
codeversion (1108)	fusiondiag%codeparam%codeversion (string) (9.4.1.1.3)
parameters (1108)	fusiondiag%codeparam%parameters (string) (9.4.1.1.3)
output_diag (1108)	fusiondiag%codeparam%output_diag (string) (9.4.1.1.3)
output_flag (1108)	fusiondiag%codeparam%output_flag (integer) (9.4.1.1.2)
time (1062)	fusiondiag%time (float) (9.4.1.1.1)

### 9.4.2.1.18 halphadiag

datainfo (1063)	halphadiag%datainfo (datainfo) (9.4.1.3.120)
dataproducer (1163)	halphadiag%datainfo%dataproducer (string) (9.4.1.1.3)
putdate (1163)	halphadiag%datainfo%putdate (string) (9.4.1.1.3)
source (1163)	halphadiag%datainfo%source (string) (9.4.1.1.3)
comment (1163)	halphadiag%datainfo%comment (string) (9.4.1.1.3)
cocos (1163)	halphadiag%datainfo%cocos (integer) (9.4.1.1.2)
id (1163)	halphadiag%datainfo%id (integer) (9.4.1.1.2)
isref (1163)	halphadiag%datainfo%isref (integer) (9.4.1.1.2)
whatref (1163)	halphadiag%datainfo%whatref (whatref) (9.4.1.3.426)
user (1469)	halphadiag%datainfo%whatref%user (string) (9.4.1.1.3)
machine (1469)	halphadiag%datainfo%whatref%machine (string) (9.4.1.1.3)
shot (1469)	halphadiag%datainfo%whatref%shot (integer) (9.4.1.1.2)
run (1469)	halphadiag%datainfo%whatref%run (integer) (9.4.1.1.2)
occurrence (1469)	halphadiag%datainfo%whatref%occurrence (integer) (9.4.1.1.2)
putinfo (1163)	halphadiag%datainfo%putinfo (putinfo) (9.4.1.3.289)
putmethod (1332)	halphadiag%datainfo%putinfo%putmethod (string) (9.4.1.1.3)
putaccess (1332)	halphadiag%datainfo%putinfo%putaccess (string) (9.4.1.1.3)
putlocation (1332)	halphadiag%datainfo%putinfo%putlocation (string) (9.4.1.1.3)
rights (1332)	halphadiag%datainfo%putinfo%rights (string) (9.4.1.1.3)
setup (1063)	halphadiag%setup (halphadiag_setup) (9.4.1.3.211)
name (1254)	halphadiag%setup%name (vecstring_type) (9.4.1.2.11)
pivot_point (1254)	halphadiag%setup%pivot_point (rzphi1D) (9.4.1.3.325)
r (1368)	halphadiag%setup%pivot_point%r (vecflt_type) (9.4.1.2.9)
z (1368)	halphadiag%setup%pivot_point%z (vecflt_type) (9.4.1.2.9)
phi (1368)	halphadiag%setup%pivot_point%phi (vecflt_type) (9.4.1.2.9)
horchordang (1254)	halphadiag%setup%horchordang (vecflt_type) (9.4.1.2.9)
verchordang (1254)	halphadiag%setup%verchordang (vecflt_type) (9.4.1.2.9)
second_point (1254)	halphadiag%setup%second_point (rzphi1D) (9.4.1.3.325)
r (1368)	halphadiag%setup%second_point%r (vecflt_type) (9.4.1.2.9)
z (1368)	halphadiag%setup%second_point%z (vecflt_type) (9.4.1.2.9)
phi (1368)	halphadiag%setup%second_point%phi (vecflt_type) (9.4.1.2.9)
solidangle (1254)	halphadiag%setup%solidangle (exp1D) (9.4.1.3.180)
value (1223)	halphadiag%setup%solidangle%value (vecflt_type) (9.4.1.2.9)

abserror (1223)	halphadiag%setup%solidangle%abserror (vecflt_type) (9.4.1.2.9)
relerror (1223)	halphadiag%setup%solidangle%relerror (vecflt_type) (9.4.1.2.9)
intensity (1063)	halphadiag%intensity (exp1D) (9.4.1.3.180)
value (1223)	halphadiag%intensity%value (vecflt_type) (9.4.1.2.9)
abserror (1223)	halphadiag%intensity%abserror (vecflt_type) (9.4.1.2.9)
relerror (1223)	halphadiag%intensity%relerror (vecflt_type) (9.4.1.2.9)
time (1063)	halphadiag%time (float) (9.4.1.1.1)

### 9.4.2.1.19 interfdiag

datainfo (1274)	lineintegralsdiag%datainfo (datainfo) (9.4.1.3.120)
dataproducer (1163)	lineintegralsdiag%datainfo%dataproducer (string) (9.4.1.1.3)
putdate (1163)	lineintegralsdiag%datainfo%putdate (string) (9.4.1.1.3)
source (1163)	lineintegralsdiag%datainfo%source (string) (9.4.1.1.3)
comment (1163)	lineintegralsdiag%datainfo%comment (string) (9.4.1.1.3)
cocos (1163)	lineintegralsdiag%datainfo%cocos (integer) (9.4.1.1.2)
id (1163)	lineintegralsdiag%datainfo%id (integer) (9.4.1.1.2)
isref (1163)	lineintegralsdiag%datainfo%isref (integer) (9.4.1.1.2)
whatref (1163)	lineintegralsdiag%datainfo%whatref (whatref) (9.4.1.3.426)
user (1469)	lineintegralsdiag%datainfo%whatref%user (string) (9.4.1.1.3)
machine (1469)	lineintegralsdiag%datainfo%whatref%machine (string) (9.4.1.1.3)
shot (1469)	lineintegralsdiag%datainfo%whatref%shot (integer) (9.4.1.1.2)
run (1469)	lineintegralsdiag%datainfo%whatref%run (integer) (9.4.1.1.2)
occurrence (1469)	lineintegralsdiag%datainfo%whatref%occurrence (integer) (9.4.1.1.2)
putinfo (1163)	lineintegralsdiag%datainfo%putinfo (putinfo) (9.4.1.3.289)
putmethod (1332)	lineintegralsdiag%datainfo%putinfo%putmethod (string) (9.4.1.1.3)
putaccess (1332)	lineintegralsdiag%datainfo%putinfo%putaccess (string) (9.4.1.1.3)
putlocation (1332)	lineintegralsdiag%datainfo%putinfo%putlocation (string) (9.4.1.1.3)
rights (1332)	lineintegralsdiag%datainfo%putinfo%rights (string) (9.4.1.1.3)
expression (1274)	lineintegralsdiag%expression (string) (9.4.1.1.3)
setup_line (1274)	lineintegralsdiag%setup_line (setup_line) (9.4.1.3.356)
pivot_point (1399)	lineintegralsdiag%setup_line%pivot_point (rzphiID) (9.4.1.3.325)
r (1368)	lineintegralsdiag%setup_line%pivot_point%r (vecflt_type) (9.4.1.2.9)
z (1368)	lineintegralsdiag%setup_line%pivot_point%z (vecflt_type) (9.4.1.2.9)
phi (1368)	lineintegralsdiag%setup_line%pivot_point%phi (vecflt_type) (9.4.1.2.9)
horchordang1 (1399)	lineintegralsdiag%setup_line%horchordang1 (vecflt_type) (9.4.1.2.9)
verchordang1 (1399)	lineintegralsdiag%setup_line%verchordang1 (vecflt_type) (9.4.1.2.9)
width (1399)	lineintegralsdiag%setup_line%width (vecflt_type) (9.4.1.2.9)
second_point (1399)	lineintegralsdiag%setup_line%second_point (rzphiID) (9.4.1.3.325)
r (1368)	lineintegralsdiag%setup_line%second_point%r (vecflt_type) (9.4.1.2.9)
z (1368)	lineintegralsdiag%setup_line%second_point%z (vecflt_type) (9.4.1.2.9)
phi (1368)	lineintegralsdiag%setup_line%second_point%phi (vecflt_type) (9.4.1.2.9)
horchordang2 (1399)	lineintegralsdiag%setup_line%horchordang2 (vecflt_type) (9.4.1.2.9)
verchordang2 (1399)	lineintegralsdiag%setup_line%verchordang2 (vecflt_type) (9.4.1.2.9)
third_point (1399)	lineintegralsdiag%setup_line%third_point (rzphiID) (9.4.1.3.325)
r (1368)	lineintegralsdiag%setup_line%third_point%r (vecflt_type) (9.4.1.2.9)
z (1368)	lineintegralsdiag%setup_line%third_point%z (vecflt_type) (9.4.1.2.9)
phi (1368)	lineintegralsdiag%setup_line%third_point%phi (vecflt_type) (9.4.1.2.9)
nchordpoints (1399)	lineintegralsdiag%setup_line%nchordpoints (integer) (9.4.1.1.2)
measure (1274)	lineintegralsdiag%measure (exp1D) (9.4.1.3.180)
value (1223)	lineintegralsdiag%measure%value (vecflt_type) (9.4.1.2.9)
abserror (1223)	lineintegralsdiag%measure%abserror (vecflt_type) (9.4.1.2.9)
relerror (1223)	lineintegralsdiag%measure%relerror (vecflt_type) (9.4.1.2.9)
time (1274)	lineintegralsdiag%time (float) (9.4.1.1.1)

### 9.4.2.1.20 ironmodel

datainfo (1065)	ironmodel%datainfo (datainfo) (9.4.1.3.120)
dataproducer (1163)	ironmodel%datainfo%dataproducer (string) (9.4.1.1.3)
putdate (1163)	ironmodel%datainfo%putdate (string) (9.4.1.1.3)
source (1163)	ironmodel%datainfo%source (string) (9.4.1.1.3)

comment (1163)	ironmodel%datainfo%comment (string) (9.4.1.1.3)
cocos (1163)	ironmodel%datainfo%cocos (integer) (9.4.1.1.2)
id (1163)	ironmodel%datainfo%id (integer) (9.4.1.1.2)
isref (1163)	ironmodel%datainfo%isref (integer) (9.4.1.1.2)
whatref (1163)	ironmodel%datainfo%whatref (whatref) (9.4.1.3.426)
user (1469)	ironmodel%datainfo%whatref%user (string) (9.4.1.1.3)
machine (1469)	ironmodel%datainfo%whatref%machine (string) (9.4.1.1.3)
shot (1469)	ironmodel%datainfo%whatref%shot (integer) (9.4.1.1.2)
run (1469)	ironmodel%datainfo%whatref%run (integer) (9.4.1.1.2)
occurrence (1469)	ironmodel%datainfo%whatref%occurrence (integer) (9.4.1.1.2)
putinfo (1163)	ironmodel%datainfo%putinfo (putinfo) (9.4.1.3.289)
putmethod (1332)	ironmodel%datainfo%putinfo%putmethod (string) (9.4.1.1.3)
putaccess (1332)	ironmodel%datainfo%putinfo%putaccess (string) (9.4.1.1.3)
putlocation (1332)	ironmodel%datainfo%putinfo%putlocation (string) (9.4.1.1.3)
rights (1332)	ironmodel%datainfo%putinfo%rights (string) (9.4.1.1.3)
desc_iron (1065)	ironmodel%desc_iron (desc_iron) (9.4.1.3.124)
name (1167)	ironmodel%desc_iron%name (vecstring_type) (9.4.1.2.11)
id (1167)	ironmodel%desc_iron%id (vecstring_type) (9.4.1.2.11)
permeability (1167)	ironmodel%desc_iron%permeability (permeability) (9.4.1.3.270)
b (1313)	ironmodel%desc_iron%permeability%b (matflt_type) (9.4.1.2.7)
mur (1313)	ironmodel%desc_iron%permeability%mur (matflt_type) (9.4.1.2.7)
geom_iron (1167)	ironmodel%desc_iron%geom_iron (geom_iron) (9.4.1.3.206)
npoints (1249)	ironmodel%desc_iron%geom_iron%npoints (vecint_type) (9.4.1.2.10)
rzcoordinate (1249)	ironmodel%desc_iron%geom_iron%rzcoordinate (rz2D) (9.4.1.3.322)
r (1365)	ironmodel%desc_iron%geom_iron%rzcoordinate%r (matflt_type) (9.4.1.2.7)
z (1365)	ironmodel%desc_iron%geom_iron%rzcoordinate%z (matflt_type) (9.4.1.2.7)
magnetise (1065)	ironmodel%magnetise (magnetise) (9.4.1.3.237)
mr (1280)	ironmodel%magnetise%mr (exp1D) (9.4.1.3.180)
value (1223)	ironmodel%magnetise%mr%value (vecflt_type) (9.4.1.2.9)
abserror (1223)	ironmodel%magnetise%mr%abserror (vecflt_type) (9.4.1.2.9)
reerror (1223)	ironmodel%magnetise%mr%reerror (vecflt_type) (9.4.1.2.9)
mz (1280)	ironmodel%magnetise%mz (exp1D) (9.4.1.3.180)
value (1223)	ironmodel%magnetise%mz%value (vecflt_type) (9.4.1.2.9)
abserror (1223)	ironmodel%magnetise%mz%abserror (vecflt_type) (9.4.1.2.9)
reerror (1223)	ironmodel%magnetise%mz%reerror (vecflt_type) (9.4.1.2.9)
time (1065)	ironmodel%time (float) (9.4.1.1.1)

### 9.4.2.1.21 langmuirdiag

datainfo (1066)	langmuirdiag%datainfo (datainfo) (9.4.1.3.120)
dataprovider (1163)	langmuirdiag%datainfo%dataprovider (string) (9.4.1.1.3)
putdate (1163)	langmuirdiag%datainfo%putdate (string) (9.4.1.1.3)
source (1163)	langmuirdiag%datainfo%source (string) (9.4.1.1.3)
comment (1163)	langmuirdiag%datainfo%comment (string) (9.4.1.1.3)
cocos (1163)	langmuirdiag%datainfo%cocos (integer) (9.4.1.1.2)
id (1163)	langmuirdiag%datainfo%id (integer) (9.4.1.1.2)
isref (1163)	langmuirdiag%datainfo%isref (integer) (9.4.1.1.2)
whatref (1163)	langmuirdiag%datainfo%whatref (whatref) (9.4.1.3.426)
user (1469)	langmuirdiag%datainfo%whatref%user (string) (9.4.1.1.3)
machine (1469)	langmuirdiag%datainfo%whatref%machine (string) (9.4.1.1.3)
shot (1469)	langmuirdiag%datainfo%whatref%shot (integer) (9.4.1.1.2)
run (1469)	langmuirdiag%datainfo%whatref%run (integer) (9.4.1.1.2)
occurrence (1469)	langmuirdiag%datainfo%whatref%occurrence (integer) (9.4.1.1.2)
putinfo (1163)	langmuirdiag%datainfo%putinfo (putinfo) (9.4.1.3.289)
putmethod (1332)	langmuirdiag%datainfo%putinfo%putmethod (string) (9.4.1.1.3)
putaccess (1332)	langmuirdiag%datainfo%putinfo%putaccess (string) (9.4.1.1.3)
putlocation (1332)	langmuirdiag%datainfo%putinfo%putlocation (string) (9.4.1.1.3)
rights (1332)	langmuirdiag%datainfo%putinfo%rights (string) (9.4.1.1.3)
potential (1066)	langmuirdiag%potential (lang_measure) (9.4.1.3.222)
name (1265)	langmuirdiag%potential%name (vecstring_type) (9.4.1.2.11)
direction (1265)	langmuirdiag%potential%direction (vecstring_type) (9.4.1.2.11)

area (1265)	langmuirdiag%potential%area (exp1D) (9.4.1.3.180)
value (1223)	langmuirdiag%potential%area%value (vecflt_type) (9.4.1.2.9)
abserror (1223)	langmuirdiag%potential%area%abserror (vecflt_type) (9.4.1.2.9)
releror (1223)	langmuirdiag%potential%area%releror (vecflt_type) (9.4.1.2.9)
position (1265)	langmuirdiag%potential%position (rzphi1Dexp) (9.4.1.3.326)
r (1369)	langmuirdiag%potential%position%r (exp1D) (9.4.1.3.180)
value (1223)	langmuirdiag%potential%position%r%value (vecflt_type) (9.4.1.2.9)
abserror (1223)	langmuirdiag%potential%position%r%abserror (vecflt_type) (9.4.1.2.9)
releror (1223)	langmuirdiag%potential%position%r%releror (vecflt_type) (9.4.1.2.9)
z (1369)	langmuirdiag%potential%position%z (exp1D) (9.4.1.3.180)
value (1223)	langmuirdiag%potential%position%z%value (vecflt_type) (9.4.1.2.9)
abserror (1223)	langmuirdiag%potential%position%z%abserror (vecflt_type) (9.4.1.2.9)
releror (1223)	langmuirdiag%potential%position%z%releror (vecflt_type) (9.4.1.2.9)
phi (1369)	langmuirdiag%potential%position%phi (exp1D) (9.4.1.3.180)
value (1223)	langmuirdiag%potential%position%phi%value (vecflt_type) (9.4.1.2.9)
abserror (1223)	langmuirdiag%potential%position%phi%abserror (vecflt_type) (9.4.1.2.9)
releror (1223)	langmuirdiag%potential%position%phi%releror (vecflt_type) (9.4.1.2.9)
measure (1265)	langmuirdiag%potential%measure (exp1D) (9.4.1.3.180)
value (1223)	langmuirdiag%potential%measure%value (vecflt_type) (9.4.1.2.9)
abserror (1223)	langmuirdiag%potential%measure%abserror (vecflt_type) (9.4.1.2.9)
releror (1223)	langmuirdiag%potential%measure%releror (vecflt_type) (9.4.1.2.9)
bias (1066)	langmuirdiag%bias (lang_measure) (9.4.1.3.222)
name (1265)	langmuirdiag%bias%name (vecstring_type) (9.4.1.2.11)
direction (1265)	langmuirdiag%bias%direction (vecstring_type) (9.4.1.2.11)
area (1265)	langmuirdiag%bias%area (exp1D) (9.4.1.3.180)
value (1223)	langmuirdiag%bias%area%value (vecflt_type) (9.4.1.2.9)
abserror (1223)	langmuirdiag%bias%area%abserror (vecflt_type) (9.4.1.2.9)
releror (1223)	langmuirdiag%bias%area%releror (vecflt_type) (9.4.1.2.9)
position (1265)	langmuirdiag%bias%position (rzphi1Dexp) (9.4.1.3.326)
r (1369)	langmuirdiag%bias%position%r (exp1D) (9.4.1.3.180)
value (1223)	langmuirdiag%bias%position%r%value (vecflt_type) (9.4.1.2.9)
abserror (1223)	langmuirdiag%bias%position%r%abserror (vecflt_type) (9.4.1.2.9)
releror (1223)	langmuirdiag%bias%position%r%releror (vecflt_type) (9.4.1.2.9)
z (1369)	langmuirdiag%bias%position%z (exp1D) (9.4.1.3.180)
value (1223)	langmuirdiag%bias%position%z%value (vecflt_type) (9.4.1.2.9)
abserror (1223)	langmuirdiag%bias%position%z%abserror (vecflt_type) (9.4.1.2.9)
releror (1223)	langmuirdiag%bias%position%z%releror (vecflt_type) (9.4.1.2.9)
phi (1369)	langmuirdiag%bias%position%phi (exp1D) (9.4.1.3.180)
value (1223)	langmuirdiag%bias%position%phi%value (vecflt_type) (9.4.1.2.9)
abserror (1223)	langmuirdiag%bias%position%phi%abserror (vecflt_type) (9.4.1.2.9)
releror (1223)	langmuirdiag%bias%position%phi%releror (vecflt_type) (9.4.1.2.9)
measure (1265)	langmuirdiag%bias%measure (exp1D) (9.4.1.3.180)
value (1223)	langmuirdiag%bias%measure%value (vecflt_type) (9.4.1.2.9)
abserror (1223)	langmuirdiag%bias%measure%abserror (vecflt_type) (9.4.1.2.9)
releror (1223)	langmuirdiag%bias%measure%releror (vecflt_type) (9.4.1.2.9)
jsat (1066)	langmuirdiag%jsat (lang_measure) (9.4.1.3.222)
name (1265)	langmuirdiag%jsat%name (vecstring_type) (9.4.1.2.11)
direction (1265)	langmuirdiag%jsat%direction (vecstring_type) (9.4.1.2.11)
area (1265)	langmuirdiag%jsat%area (exp1D) (9.4.1.3.180)
value (1223)	langmuirdiag%jsat%area%value (vecflt_type) (9.4.1.2.9)
abserror (1223)	langmuirdiag%jsat%area%abserror (vecflt_type) (9.4.1.2.9)
releror (1223)	langmuirdiag%jsat%area%releror (vecflt_type) (9.4.1.2.9)
position (1265)	langmuirdiag%jsat%position (rzphi1Dexp) (9.4.1.3.326)
r (1369)	langmuirdiag%jsat%position%r (exp1D) (9.4.1.3.180)
value (1223)	langmuirdiag%jsat%position%r%value (vecflt_type) (9.4.1.2.9)
abserror (1223)	langmuirdiag%jsat%position%r%abserror (vecflt_type) (9.4.1.2.9)
releror (1223)	langmuirdiag%jsat%position%r%releror (vecflt_type) (9.4.1.2.9)
z (1369)	langmuirdiag%jsat%position%z (exp1D) (9.4.1.3.180)
value (1223)	langmuirdiag%jsat%position%z%value (vecflt_type) (9.4.1.2.9)
abserror (1223)	langmuirdiag%jsat%position%z%abserror (vecflt_type) (9.4.1.2.9)
releror (1223)	langmuirdiag%jsat%position%z%releror (vecflt_type) (9.4.1.2.9)

phi (1369)	langmuirdiag%jsat%position%phi (exp1D) (9.4.1.3.180)
value (1223)	langmuirdiag%jsat%position%phi%value (vecflt_type) (9.4.1.2.9)
abserror (1223)	langmuirdiag%jsat%position%phi%abserror (vecflt_type) (9.4.1.2.9)
releror (1223)	langmuirdiag%jsat%position%phi%releror (vecflt_type) (9.4.1.2.9)
measure (1265)	langmuirdiag%jsat%measure (exp1D) (9.4.1.3.180)
value (1223)	langmuirdiag%jsat%measure%value (vecflt_type) (9.4.1.2.9)
abserror (1223)	langmuirdiag%jsat%measure%abserror (vecflt_type) (9.4.1.2.9)
releror (1223)	langmuirdiag%jsat%measure%releror (vecflt_type) (9.4.1.2.9)
ne (1066)	langmuirdiag%ne (lang_derived) (9.4.1.3.221)
source (1264)	langmuirdiag%ne%source (vecstring_type) (9.4.1.2.11)
position (1264)	langmuirdiag%ne%position (rzphi1Dexp) (9.4.1.3.326)
r (1369)	langmuirdiag%ne%position%r (exp1D) (9.4.1.3.180)
value (1223)	langmuirdiag%ne%position%r%value (vecflt_type) (9.4.1.2.9)
abserror (1223)	langmuirdiag%ne%position%r%abserror (vecflt_type) (9.4.1.2.9)
releror (1223)	langmuirdiag%ne%position%r%releror (vecflt_type) (9.4.1.2.9)
z (1369)	langmuirdiag%ne%position%z (exp1D) (9.4.1.3.180)
value (1223)	langmuirdiag%ne%position%z%value (vecflt_type) (9.4.1.2.9)
abserror (1223)	langmuirdiag%ne%position%z%abserror (vecflt_type) (9.4.1.2.9)
releror (1223)	langmuirdiag%ne%position%z%releror (vecflt_type) (9.4.1.2.9)
phi (1369)	langmuirdiag%ne%position%phi (exp1D) (9.4.1.3.180)
value (1223)	langmuirdiag%ne%position%phi%value (vecflt_type) (9.4.1.2.9)
abserror (1223)	langmuirdiag%ne%position%phi%abserror (vecflt_type) (9.4.1.2.9)
releror (1223)	langmuirdiag%ne%position%phi%releror (vecflt_type) (9.4.1.2.9)
measure (1264)	langmuirdiag%ne%measure (exp1D) (9.4.1.3.180)
value (1223)	langmuirdiag%ne%measure%value (vecflt_type) (9.4.1.2.9)
abserror (1223)	langmuirdiag%ne%measure%abserror (vecflt_type) (9.4.1.2.9)
releror (1223)	langmuirdiag%ne%measure%releror (vecflt_type) (9.4.1.2.9)
te (1066)	langmuirdiag%te (lang_derived) (9.4.1.3.221)
source (1264)	langmuirdiag%te%source (vecstring_type) (9.4.1.2.11)
position (1264)	langmuirdiag%te%position (rzphi1Dexp) (9.4.1.3.326)
r (1369)	langmuirdiag%te%position%r (exp1D) (9.4.1.3.180)
value (1223)	langmuirdiag%te%position%r%value (vecflt_type) (9.4.1.2.9)
abserror (1223)	langmuirdiag%te%position%r%abserror (vecflt_type) (9.4.1.2.9)
releror (1223)	langmuirdiag%te%position%r%releror (vecflt_type) (9.4.1.2.9)
z (1369)	langmuirdiag%te%position%z (exp1D) (9.4.1.3.180)
value (1223)	langmuirdiag%te%position%z%value (vecflt_type) (9.4.1.2.9)
abserror (1223)	langmuirdiag%te%position%z%abserror (vecflt_type) (9.4.1.2.9)
releror (1223)	langmuirdiag%te%position%z%releror (vecflt_type) (9.4.1.2.9)
phi (1369)	langmuirdiag%te%position%phi (exp1D) (9.4.1.3.180)
value (1223)	langmuirdiag%te%position%phi%value (vecflt_type) (9.4.1.2.9)
abserror (1223)	langmuirdiag%te%position%phi%abserror (vecflt_type) (9.4.1.2.9)
releror (1223)	langmuirdiag%te%position%phi%releror (vecflt_type) (9.4.1.2.9)
measure (1264)	langmuirdiag%te%measure (exp1D) (9.4.1.3.180)
value (1223)	langmuirdiag%te%measure%value (vecflt_type) (9.4.1.2.9)
abserror (1223)	langmuirdiag%te%measure%abserror (vecflt_type) (9.4.1.2.9)
releror (1223)	langmuirdiag%te%measure%releror (vecflt_type) (9.4.1.2.9)
machpar (1066)	langmuirdiag%machpar (lang_derived) (9.4.1.3.221)
source (1264)	langmuirdiag%machpar%source (vecstring_type) (9.4.1.2.11)
position (1264)	langmuirdiag%machpar%position (rzphi1Dexp) (9.4.1.3.326)
r (1369)	langmuirdiag%machpar%position%r (exp1D) (9.4.1.3.180)
value (1223)	langmuirdiag%machpar%position%r%value (vecflt_type) (9.4.1.2.9)
abserror (1223)	langmuirdiag%machpar%position%r%abserror (vecflt_type) (9.4.1.2.9)
releror (1223)	langmuirdiag%machpar%position%r%releror (vecflt_type) (9.4.1.2.9)
z (1369)	langmuirdiag%machpar%position%z (exp1D) (9.4.1.3.180)
value (1223)	langmuirdiag%machpar%position%z%value (vecflt_type) (9.4.1.2.9)
abserror (1223)	langmuirdiag%machpar%position%z%abserror (vecflt_type) (9.4.1.2.9)
releror (1223)	langmuirdiag%machpar%position%z%releror (vecflt_type) (9.4.1.2.9)
phi (1369)	langmuirdiag%machpar%position%phi (exp1D) (9.4.1.3.180)
value (1223)	langmuirdiag%machpar%position%phi%value (vecflt_type) (9.4.1.2.9)
abserror (1223)	langmuirdiag%machpar%position%phi%abserror (vecflt_type) (9.4.1.2.9)
releror (1223)	langmuirdiag%machpar%position%phi%releror (vecflt_type) (9.4.1.2.9)

measure (1264)	langmuirdiag%machpar%measure (exp1D) (9.4.1.3.180)
value (1223)	langmuirdiag%machpar%measure%value (vecflt.type) (9.4.1.2.9)
abserror (1223)	langmuirdiag%machpar%measure%abserror (vecflt.type) (9.4.1.2.9)
releror (1223)	langmuirdiag%machpar%measure%releror (vecflt.type) (9.4.1.2.9)
codeparam (1066)	langmuirdiag%codeparam (codeparam) (9.4.1.3.65)
codename (1108)	langmuirdiag%codeparam%codename (string) (9.4.1.1.3)
codeversion (1108)	langmuirdiag%codeparam%codeversion (string) (9.4.1.1.3)
parameters (1108)	langmuirdiag%codeparam%parameters (string) (9.4.1.1.3)
output_diag (1108)	langmuirdiag%codeparam%output_diag (string) (9.4.1.1.3)
output_flag (1108)	langmuirdiag%codeparam%output_flag (integer) (9.4.1.1.2)
time (1066)	langmuirdiag%time (float) (9.4.1.1.1)

### 9.4.2.1.22 launches

datainfo (1067)	launchs%datainfo (datainfo) (9.4.1.3.120)
dataprovider (1163)	launchs%datainfo%dataprovider (string) (9.4.1.1.3)
putdate (1163)	launchs%datainfo%putdate (string) (9.4.1.1.3)
source (1163)	launchs%datainfo%source (string) (9.4.1.1.3)
comment (1163)	launchs%datainfo%comment (string) (9.4.1.1.3)
cocos (1163)	launchs%datainfo%cocos (integer) (9.4.1.1.2)
id (1163)	launchs%datainfo%id (integer) (9.4.1.1.2)
isref (1163)	launchs%datainfo%isref (integer) (9.4.1.1.2)
whatref (1163)	launchs%datainfo%whatref (whatref) (9.4.1.3.426)
user (1469)	launchs%datainfo%whatref%user (string) (9.4.1.1.3)
machine (1469)	launchs%datainfo%whatref%machine (string) (9.4.1.1.3)
shot (1469)	launchs%datainfo%whatref%shot (integer) (9.4.1.1.2)
run (1469)	launchs%datainfo%whatref%run (integer) (9.4.1.1.2)
occurrence (1469)	launchs%datainfo%whatref%occurrence (integer) (9.4.1.1.2)
putinfo (1163)	launchs%datainfo%putinfo (putinfo) (9.4.1.3.289)
putmethod (1332)	launchs%datainfo%putinfo%putmethod (string) (9.4.1.1.3)
putaccess (1332)	launchs%datainfo%putinfo%putaccess (string) (9.4.1.1.3)
putlocation (1332)	launchs%datainfo%putinfo%putlocation (string) (9.4.1.1.3)
rights (1332)	launchs%datainfo%putinfo%rights (string) (9.4.1.1.3)
name (1067)	launchs%name (vecstring.type) (9.4.1.2.11)
type (1067)	launchs%type (vecstring.type) (9.4.1.2.11)
frequency (1067)	launchs%frequency (vecflt.type) (9.4.1.2.9)
mode (1067)	launchs%mode (vecint.type) (9.4.1.2.10)
position (1067)	launchs%position (rzphi1D) (9.4.1.3.325)
r (1368)	launchs%position%r (vecflt.type) (9.4.1.2.9)
z (1368)	launchs%position%z (vecflt.type) (9.4.1.2.9)
phi (1368)	launchs%position%phi (vecflt.type) (9.4.1.2.9)
spectrum (1067)	launchs%spectrum (spectrum) (9.4.1.3.372)
phi_theta (1415)	launchs%spectrum%phi_theta (launchs.phi_theta) (9.4.1.3.225)
nn_phi (1268)	launchs%spectrum%phi_theta%nn_phi (vecint.type) (9.4.1.2.10)
nn_theta (1268)	launchs%spectrum%phi_theta%nn_theta (vecint.type) (9.4.1.2.10)
n_phi (1268)	launchs%spectrum%phi_theta%n_phi (matflt.type) (9.4.1.2.7)
n_theta (1268)	launchs%spectrum%phi_theta%n_theta (matflt.type) (9.4.1.2.7)
power (1268)	launchs%spectrum%phi_theta%power (array3dflt.type) (9.4.1.2.1)
parallel (1415)	launchs%spectrum%parallel (launchs.parallel) (9.4.1.3.224)
nn_par (1267)	launchs%spectrum%parallel%nn_par (vecint.type) (9.4.1.2.10)
n_par (1267)	launchs%spectrum%parallel%n_par (matflt.type) (9.4.1.2.7)
power (1267)	launchs%spectrum%parallel%power (vecflt.type) (9.4.1.2.9)
beam (1067)	launchs%beam (launchs.rfbeam) (9.4.1.3.226)
spot (1269)	launchs%beam%spot (launchs.rfbeam_spot) (9.4.1.3.228)
waist (1271)	launchs%beam%spot%waist (matflt.type) (9.4.1.2.7)
angle (1271)	launchs%beam%spot%angle (vecflt.type) (9.4.1.2.9)
phaseellipse (1269)	launchs%beam%phaseellipse (launchs.rfbeam_phaseellipse) (9.4.1.3.227)
invcurvrad (1270)	launchs%beam%phaseellipse%invcurvrad (matflt.type) (9.4.1.2.7)
angle (1270)	launchs%beam%phaseellipse%angle (vecflt.type) (9.4.1.2.9)
codeparam (1067)	launchs%codeparam (codeparam) (9.4.1.3.65)
codename (1108)	launchs%codeparam%codename (string) (9.4.1.1.3)



codeversion (1108)	launchs%codeparam%codeversion (string) (9.4.1.1.3)
parameters (1108)	launchs%codeparam%parameters (string) (9.4.1.1.3)
output_diag (1108)	launchs%codeparam%output_diag (string) (9.4.1.1.3)
output_flag (1108)	launchs%codeparam%output_flag (integer) (9.4.1.1.2)
time (1067)	launchs%time (float) (9.4.1.1.1)

### 9.4.2.1.23 limiter

datainfo (1068)	limiter%datainfo (datainfo) (9.4.1.3.120)
dataprovder (1163)	limiter%datainfo%dataprovder (string) (9.4.1.1.3)
putdate (1163)	limiter%datainfo%putdate (string) (9.4.1.1.3)
source (1163)	limiter%datainfo%source (string) (9.4.1.1.3)
comment (1163)	limiter%datainfo%comment (string) (9.4.1.1.3)
cocos (1163)	limiter%datainfo%cocos (integer) (9.4.1.1.2)
id (1163)	limiter%datainfo%id (integer) (9.4.1.1.2)
isref (1163)	limiter%datainfo%isref (integer) (9.4.1.1.2)
whatref (1163)	limiter%datainfo%whatref (whatref) (9.4.1.3.426)
user (1469)	limiter%datainfo%whatref%user (string) (9.4.1.1.3)
machine (1469)	limiter%datainfo%whatref%machine (string) (9.4.1.1.3)
shot (1469)	limiter%datainfo%whatref%shot (integer) (9.4.1.1.2)
run (1469)	limiter%datainfo%whatref%run (integer) (9.4.1.1.2)
occurrence (1469)	limiter%datainfo%whatref%occurrence (integer) (9.4.1.1.2)
putinfo (1163)	limiter%datainfo%putinfo (putinfo) (9.4.1.3.289)
putmethod (1332)	limiter%datainfo%putinfo%putmethod (string) (9.4.1.1.3)
putaccess (1332)	limiter%datainfo%putinfo%putaccess (string) (9.4.1.1.3)
putlocation (1332)	limiter%datainfo%putinfo%putlocation (string) (9.4.1.1.3)
rights (1332)	limiter%datainfo%putinfo%rights (string) (9.4.1.1.3)
limiter_unit (1068)	limiter%limiter_unit(:) (limiter_unit) (9.4.1.3.230)
name (1273)	limiter%limiter_unit(:)%name (string) (9.4.1.1.3)
closed (1273)	limiter%limiter_unit(:)%closed (string) (9.4.1.1.3)
position (1273)	limiter%limiter_unit(:)%position (rz1D) (9.4.1.3.319)
r (1362)	limiter%limiter_unit(:)%position%r (vecflt.type) (9.4.1.2.9)
z (1362)	limiter%limiter_unit(:)%position%z (vecflt.type) (9.4.1.2.9)
eta (1273)	limiter%limiter_unit(:)%eta (float) (9.4.1.1.1)
delta (1273)	limiter%limiter_unit(:)%delta (float) (9.4.1.1.1)
permeability (1273)	limiter%limiter_unit(:)%permeability (float) (9.4.1.1.1)

### 9.4.2.1.24 lithiumdiag

datainfo (1069)	lithiumdiag%datainfo (datainfo) (9.4.1.3.120)
dataprovder (1163)	lithiumdiag%datainfo%dataprovder (string) (9.4.1.1.3)
putdate (1163)	lithiumdiag%datainfo%putdate (string) (9.4.1.1.3)
source (1163)	lithiumdiag%datainfo%source (string) (9.4.1.1.3)
comment (1163)	lithiumdiag%datainfo%comment (string) (9.4.1.1.3)
cocos (1163)	lithiumdiag%datainfo%cocos (integer) (9.4.1.1.2)
id (1163)	lithiumdiag%datainfo%id (integer) (9.4.1.1.2)
isref (1163)	lithiumdiag%datainfo%isref (integer) (9.4.1.1.2)
whatref (1163)	lithiumdiag%datainfo%whatref (whatref) (9.4.1.3.426)
user (1469)	lithiumdiag%datainfo%whatref%user (string) (9.4.1.1.3)
machine (1469)	lithiumdiag%datainfo%whatref%machine (string) (9.4.1.1.3)
shot (1469)	lithiumdiag%datainfo%whatref%shot (integer) (9.4.1.1.2)
run (1469)	lithiumdiag%datainfo%whatref%run (integer) (9.4.1.1.2)
occurrence (1469)	lithiumdiag%datainfo%whatref%occurrence (integer) (9.4.1.1.2)
putinfo (1163)	lithiumdiag%datainfo%putinfo (putinfo) (9.4.1.3.289)
putmethod (1332)	lithiumdiag%datainfo%putinfo%putmethod (string) (9.4.1.1.3)
putaccess (1332)	lithiumdiag%datainfo%putinfo%putaccess (string) (9.4.1.1.3)
putlocation (1332)	lithiumdiag%datainfo%putinfo%putlocation (string) (9.4.1.1.3)
rights (1332)	lithiumdiag%datainfo%putinfo%rights (string) (9.4.1.1.3)
setup (1069)	lithiumdiag%setup (lithsetup) (9.4.1.3.233)
position (1276)	lithiumdiag%setup%position (rzphi1D) (9.4.1.3.325)
r (1368)	lithiumdiag%setup%position%r (vecflt.type) (9.4.1.2.9)

z (1368)	lithiumdiag%setup%position%z (vecflt.type) (9.4.1.2.9)
phi (1368)	lithiumdiag%setup%position%phi (vecflt.type) (9.4.1.2.9)
measure (1069)	lithiumdiag%measure (lithmeasure) (9.4.1.3.232)
ne (1275)	lithiumdiag%measure%ne (exp1D) (9.4.1.3.180)
value (1223)	lithiumdiag%measure%ne%value (vecflt.type) (9.4.1.2.9)
abserror (1223)	lithiumdiag%measure%ne%abserror (vecflt.type) (9.4.1.2.9)
releror (1223)	lithiumdiag%measure%ne%releror (vecflt.type) (9.4.1.2.9)
time (1069)	lithiumdiag%time (float) (9.4.1.1.1)

### 9.4.2.1.25 magdiag

datainfo (1070)	magdiag%datainfo (datainfo) (9.4.1.3.120)
dataprovider (1163)	magdiag%datainfo%dataprovider (string) (9.4.1.1.3)
putdate (1163)	magdiag%datainfo%putdate (string) (9.4.1.1.3)
source (1163)	magdiag%datainfo%source (string) (9.4.1.1.3)
comment (1163)	magdiag%datainfo%comment (string) (9.4.1.1.3)
cocos (1163)	magdiag%datainfo%cocos (integer) (9.4.1.1.2)
id (1163)	magdiag%datainfo%id (integer) (9.4.1.1.2)
isref (1163)	magdiag%datainfo%isref (integer) (9.4.1.1.2)
whatref (1163)	magdiag%datainfo%whatref (whatref) (9.4.1.3.426)
user (1469)	magdiag%datainfo%whatref%user (string) (9.4.1.1.3)
machine (1469)	magdiag%datainfo%whatref%machine (string) (9.4.1.1.3)
shot (1469)	magdiag%datainfo%whatref%shot (integer) (9.4.1.1.2)
run (1469)	magdiag%datainfo%whatref%run (integer) (9.4.1.1.2)
occurrence (1469)	magdiag%datainfo%whatref%occurrence (integer) (9.4.1.1.2)
putinfo (1163)	magdiag%datainfo%putinfo (putinfo) (9.4.1.3.289)
putmethod (1332)	magdiag%datainfo%putinfo%putmethod (string) (9.4.1.1.3)
putaccess (1332)	magdiag%datainfo%putinfo%putaccess (string) (9.4.1.1.3)
putlocation (1332)	magdiag%datainfo%putinfo%putlocation (string) (9.4.1.1.3)
rights (1332)	magdiag%datainfo%putinfo%rights (string) (9.4.1.1.3)
ip (1070)	magdiag%ip (exp0D) (9.4.1.3.179)
value (1222)	magdiag%ip%value (float) (9.4.1.1.1)
abserror (1222)	magdiag%ip%abserror (float) (9.4.1.1.1)
releror (1222)	magdiag%ip%releror (float) (9.4.1.1.1)
diamagflux (1070)	magdiag%diamagflux (exp0D) (9.4.1.3.179)
value (1222)	magdiag%diamagflux%value (float) (9.4.1.1.1)
abserror (1222)	magdiag%diamagflux%abserror (float) (9.4.1.1.1)
releror (1222)	magdiag%diamagflux%releror (float) (9.4.1.1.1)
flux_loops (1070)	magdiag%flux_loops (flux_loops) (9.4.1.3.185)
setup_floops (1228)	magdiag%flux_loops%setup_floops (setup_floops) (9.4.1.3.354)
name (1397)	magdiag%flux_loops%setup_floops%name (vecstring.type) (9.4.1.2.11)
id (1397)	magdiag%flux_loops%setup_floops%id (vecstring.type) (9.4.1.2.11)
position (1397)	magdiag%flux_loops%setup_floops%position (rzphi2D) (9.4.1.3.327)
r (1370)	magdiag%flux_loops%setup_floops%position%r (matflt.type) (9.4.1.2.7)
z (1370)	magdiag%flux_loops%setup_floops%position%z (matflt.type) (9.4.1.2.7)
phi (1370)	magdiag%flux_loops%setup_floops%position%phi (matflt.type) (9.4.1.2.7)
npoints (1397)	magdiag%flux_loops%setup_floops%npoints (vecint.type) (9.4.1.2.10)
measure (1228)	magdiag%flux_loops%measure (exp1D) (9.4.1.3.180)
value (1223)	magdiag%flux_loops%measure%value (vecflt.type) (9.4.1.2.9)
abserror (1223)	magdiag%flux_loops%measure%abserror (vecflt.type) (9.4.1.2.9)
releror (1223)	magdiag%flux_loops%measure%releror (vecflt.type) (9.4.1.2.9)
bpol_probes (1070)	magdiag%bpol_probes (bpol_probes) (9.4.1.3.63)
setup_bprobe (1106)	magdiag%bpol_probes%setup_bprobe (setup_bprobe) (9.4.1.3.353)
name (1396)	magdiag%bpol_probes%setup_bprobe%name (vecstring.type) (9.4.1.2.11)
id (1396)	magdiag%bpol_probes%setup_bprobe%id (vecstring.type) (9.4.1.2.11)
position (1396)	magdiag%bpol_probes%setup_bprobe%position (rz1D) (9.4.1.3.319)
r (1362)	magdiag%bpol_probes%setup_bprobe%position%r (vecflt.type) (9.4.1.2.9)
z (1362)	magdiag%bpol_probes%setup_bprobe%position%z (vecflt.type) (9.4.1.2.9)
polangle (1396)	magdiag%bpol_probes%setup_bprobe%polangle (vecflt.type) (9.4.1.2.9)
torangle (1396)	magdiag%bpol_probes%setup_bprobe%torangle (vecflt.type) (9.4.1.2.9)
area (1396)	magdiag%bpol_probes%setup_bprobe%area (vecflt.type) (9.4.1.2.9)



length (1396)	magdiag%bpol_probes%setup_bprobe%length (vecflt_type) (9.4.1.2.9)
turns (1396)	magdiag%bpol_probes%setup_bprobe%turns (vecint_type) (9.4.1.2.10)
measure (1106)	magdiag%bpol_probes%measure (exp1D) (9.4.1.3.180)
value (1223)	magdiag%bpol_probes%measure%value (vecflt_type) (9.4.1.2.9)
abserror (1223)	magdiag%bpol_probes%measure%abserror (vecflt_type) (9.4.1.2.9)
releror (1223)	magdiag%bpol_probes%measure%releror (vecflt_type) (9.4.1.2.9)
time (1070)	magdiag%time (float) (9.4.1.1.1)

### 9.4.2.1.26 mhd

datainfo (1071)	mhd%datainfo (datainfo) (9.4.1.3.120)
dataprovider (1163)	mhd%datainfo%dataprovider (string) (9.4.1.1.3)
putdate (1163)	mhd%datainfo%putdate (string) (9.4.1.1.3)
source (1163)	mhd%datainfo%source (string) (9.4.1.1.3)
comment (1163)	mhd%datainfo%comment (string) (9.4.1.1.3)
cocos (1163)	mhd%datainfo%cocos (integer) (9.4.1.1.2)
id (1163)	mhd%datainfo%id (integer) (9.4.1.1.2)
isref (1163)	mhd%datainfo%isref (integer) (9.4.1.1.2)
whatref (1163)	mhd%datainfo%whatref (whatref) (9.4.1.3.426)
user (1469)	mhd%datainfo%whatref%user (string) (9.4.1.1.3)
machine (1469)	mhd%datainfo%whatref%machine (string) (9.4.1.1.3)
shot (1469)	mhd%datainfo%whatref%shot (integer) (9.4.1.1.2)
run (1469)	mhd%datainfo%whatref%run (integer) (9.4.1.1.2)
occurrence (1469)	mhd%datainfo%whatref%occurrence (integer) (9.4.1.1.2)
putinfo (1163)	mhd%datainfo%putinfo (putinfo) (9.4.1.3.289)
putmethod (1332)	mhd%datainfo%putinfo%putmethod (string) (9.4.1.1.3)
putaccess (1332)	mhd%datainfo%putinfo%putaccess (string) (9.4.1.1.3)
putlocation (1332)	mhd%datainfo%putinfo%putlocation (string) (9.4.1.1.3)
rights (1332)	mhd%datainfo%putinfo%rights (string) (9.4.1.1.3)
n (1071)	mhd%n (vecint_type) (9.4.1.2.10)
frequency (1071)	mhd%frequency (vecflt_type) (9.4.1.2.9)
growthrate (1071)	mhd%growthrate (vecflt_type) (9.4.1.2.9)
plasma (1071)	mhd%plasma (mhd_plasma) (9.4.1.3.241)
psi (1284)	mhd%plasma%psi (vecflt_type) (9.4.1.2.9)
m (1284)	mhd%plasma%m (array3dflt_type) (9.4.1.2.1)
disp_perp (1284)	mhd%plasma%disp_perp (array3dcplx_type) (9.4.1.3.54)
re (1097)	mhd%plasma%disp_perp%re (array3dflt_type) (9.4.1.2.1)
im (1097)	mhd%plasma%disp_perp%im (array3dflt_type) (9.4.1.2.1)
disp_par (1284)	mhd%plasma%disp_par (array3dcplx_type) (9.4.1.3.54)
re (1097)	mhd%plasma%disp_par%re (array3dflt_type) (9.4.1.2.1)
im (1097)	mhd%plasma%disp_par%im (array3dflt_type) (9.4.1.2.1)
tau_alfven (1284)	mhd%plasma%tau_alfven (vecflt_type) (9.4.1.2.9)
tau_resistive (1284)	mhd%plasma%tau_resistive (vecflt_type) (9.4.1.2.9)
coord_sys (1284)	mhd%plasma%coord_sys (coord_sys) (9.4.1.3.89)
grid_type (1132)	mhd%plasma%coord_sys%grid_type (string) (9.4.1.1.3)
grid (1132)	mhd%plasma%coord_sys%grid (reggrid) (9.4.1.3.314)
dim1 (1357)	mhd%plasma%coord_sys%grid%dim1 (vecflt_type) (9.4.1.2.9)
dim2 (1357)	mhd%plasma%coord_sys%grid%dim2 (vecflt_type) (9.4.1.2.9)
jacobian (1132)	mhd%plasma%coord_sys%jacobian (matflt_type) (9.4.1.2.7)
g_11 (1132)	mhd%plasma%coord_sys%g_11 (matflt_type) (9.4.1.2.7)
g_12 (1132)	mhd%plasma%coord_sys%g_12 (matflt_type) (9.4.1.2.7)
g_13 (1132)	mhd%plasma%coord_sys%g_13 (matflt_type) (9.4.1.2.7)
g_22 (1132)	mhd%plasma%coord_sys%g_22 (matflt_type) (9.4.1.2.7)
g_23 (1132)	mhd%plasma%coord_sys%g_23 (matflt_type) (9.4.1.2.7)
g_33 (1132)	mhd%plasma%coord_sys%g_33 (matflt_type) (9.4.1.2.7)
position (1132)	mhd%plasma%coord_sys%position (rz2D) (9.4.1.3.322)
r (1365)	mhd%plasma%coord_sys%position%r (matflt_type) (9.4.1.2.7)
z (1365)	mhd%plasma%coord_sys%position%z (matflt_type) (9.4.1.2.7)
a_pert (1284)	mhd%plasma%a_pert (mhd_vector) (9.4.1.3.244)
coord1 (1287)	mhd%plasma%a_pert%coord1 (array3dcplx_type) (9.4.1.3.54)
re (1097)	mhd%plasma%a_pert%coord1%re (array3dflt_type) (9.4.1.2.1)

im (1097)	mhd%plasma%a_pert%coord1%im (array3dflt.type) (9.4.1.2.1)
coord2 (1287)	mhd%plasma%a_pert%coord2 (array3dcplx.type) (9.4.1.3.54)
re (1097)	mhd%plasma%a_pert%coord2%re (array3dflt.type) (9.4.1.2.1)
im (1097)	mhd%plasma%a_pert%coord2%im (array3dflt.type) (9.4.1.2.1)
coord3 (1287)	mhd%plasma%a_pert%coord3 (array3dcplx.type) (9.4.1.3.54)
re (1097)	mhd%plasma%a_pert%coord3%re (array3dflt.type) (9.4.1.2.1)
im (1097)	mhd%plasma%a_pert%coord3%im (array3dflt.type) (9.4.1.2.1)
b_pert (1284)	mhd%plasma%b_pert (mhd_vector) (9.4.1.3.244)
coord1 (1287)	mhd%plasma%b_pert%coord1 (array3dcplx.type) (9.4.1.3.54)
re (1097)	mhd%plasma%b_pert%coord1%re (array3dflt.type) (9.4.1.2.1)
im (1097)	mhd%plasma%b_pert%coord1%im (array3dflt.type) (9.4.1.2.1)
coord2 (1287)	mhd%plasma%b_pert%coord2 (array3dcplx.type) (9.4.1.3.54)
re (1097)	mhd%plasma%b_pert%coord2%re (array3dflt.type) (9.4.1.2.1)
im (1097)	mhd%plasma%b_pert%coord2%im (array3dflt.type) (9.4.1.2.1)
coord3 (1287)	mhd%plasma%b_pert%coord3 (array3dcplx.type) (9.4.1.3.54)
re (1097)	mhd%plasma%b_pert%coord3%re (array3dflt.type) (9.4.1.2.1)
im (1097)	mhd%plasma%b_pert%coord3%im (array3dflt.type) (9.4.1.2.1)
v_pert (1284)	mhd%plasma%v_pert (mhd_vector) (9.4.1.3.244)
coord1 (1287)	mhd%plasma%v_pert%coord1 (array3dcplx.type) (9.4.1.3.54)
re (1097)	mhd%plasma%v_pert%coord1%re (array3dflt.type) (9.4.1.2.1)
im (1097)	mhd%plasma%v_pert%coord1%im (array3dflt.type) (9.4.1.2.1)
coord2 (1287)	mhd%plasma%v_pert%coord2 (array3dcplx.type) (9.4.1.3.54)
re (1097)	mhd%plasma%v_pert%coord2%re (array3dflt.type) (9.4.1.2.1)
im (1097)	mhd%plasma%v_pert%coord2%im (array3dflt.type) (9.4.1.2.1)
coord3 (1287)	mhd%plasma%v_pert%coord3 (array3dcplx.type) (9.4.1.3.54)
re (1097)	mhd%plasma%v_pert%coord3%re (array3dflt.type) (9.4.1.2.1)
im (1097)	mhd%plasma%v_pert%coord3%im (array3dflt.type) (9.4.1.2.1)
p_pert (1284)	mhd%plasma%p_pert (array3dcplx.type) (9.4.1.3.54)
re (1097)	mhd%plasma%p_pert%re (array3dflt.type) (9.4.1.2.1)
im (1097)	mhd%plasma%p_pert%im (array3dflt.type) (9.4.1.2.1)
rho.mass.pert (1284)	mhd%plasma%rho.mass.pert (array3dcplx.type) (9.4.1.3.54)
re (1097)	mhd%plasma%rho.mass.pert%re (array3dflt.type) (9.4.1.2.1)
im (1097)	mhd%plasma%rho.mass.pert%im (array3dflt.type) (9.4.1.2.1)
temp.pert (1284)	mhd%plasma%temp.pert (array3dcplx.type) (9.4.1.3.54)
re (1097)	mhd%plasma%temp.pert%re (array3dflt.type) (9.4.1.2.1)
im (1097)	mhd%plasma%temp.pert%im (array3dflt.type) (9.4.1.2.1)
vacuum (1071)	mhd%vacuum (mhd_vacuum) (9.4.1.3.243)
m (1286)	mhd%vacuum%m (array3dflt.type) (9.4.1.2.1)
coord_sys (1286)	mhd%vacuum%coord_sys (coord_sys) (9.4.1.3.89)
grid.type (1132)	mhd%vacuum%coord_sys%grid.type (string) (9.4.1.1.3)
grid (1132)	mhd%vacuum%coord_sys%grid (reggrid) (9.4.1.3.314)
dim1 (1357)	mhd%vacuum%coord_sys%grid%dim1 (vecflt.type) (9.4.1.2.9)
dim2 (1357)	mhd%vacuum%coord_sys%grid%dim2 (vecflt.type) (9.4.1.2.9)
jacobian (1132)	mhd%vacuum%coord_sys%jacobian (matflt.type) (9.4.1.2.7)
g_11 (1132)	mhd%vacuum%coord_sys%g_11 (matflt.type) (9.4.1.2.7)
g_12 (1132)	mhd%vacuum%coord_sys%g_12 (matflt.type) (9.4.1.2.7)
g_13 (1132)	mhd%vacuum%coord_sys%g_13 (matflt.type) (9.4.1.2.7)
g_22 (1132)	mhd%vacuum%coord_sys%g_22 (matflt.type) (9.4.1.2.7)
g_23 (1132)	mhd%vacuum%coord_sys%g_23 (matflt.type) (9.4.1.2.7)
g_33 (1132)	mhd%vacuum%coord_sys%g_33 (matflt.type) (9.4.1.2.7)
position (1132)	mhd%vacuum%coord_sys%position (rz2D) (9.4.1.3.322)
r (1365)	mhd%vacuum%coord_sys%position%r (matflt.type) (9.4.1.2.7)
z (1365)	mhd%vacuum%coord_sys%position%z (matflt.type) (9.4.1.2.7)
a_pert (1286)	mhd%vacuum%a_pert (mhd_vector) (9.4.1.3.244)
coord1 (1287)	mhd%vacuum%a_pert%coord1 (array3dcplx.type) (9.4.1.3.54)
re (1097)	mhd%vacuum%a_pert%coord1%re (array3dflt.type) (9.4.1.2.1)
im (1097)	mhd%vacuum%a_pert%coord1%im (array3dflt.type) (9.4.1.2.1)
coord2 (1287)	mhd%vacuum%a_pert%coord2 (array3dcplx.type) (9.4.1.3.54)
re (1097)	mhd%vacuum%a_pert%coord2%re (array3dflt.type) (9.4.1.2.1)
im (1097)	mhd%vacuum%a_pert%coord2%im (array3dflt.type) (9.4.1.2.1)
coord3 (1287)	mhd%vacuum%a_pert%coord3 (array3dcplx.type) (9.4.1.3.54)

re (1097)	mhd%vacuum%a_pert%coord3%re (array3dflt.type) (9.4.1.2.1)
im (1097)	mhd%vacuum%a_pert%coord3%im (array3dflt.type) (9.4.1.2.1)
b_pert (1286)	mhd%vacuum%b_pert (mhd_vector) (9.4.1.3.244)
coord1 (1287)	mhd%vacuum%b_pert%coord1 (array3dcplx.type) (9.4.1.3.54)
re (1097)	mhd%vacuum%b_pert%coord1%re (array3dflt.type) (9.4.1.2.1)
im (1097)	mhd%vacuum%b_pert%coord1%im (array3dflt.type) (9.4.1.2.1)
coord2 (1287)	mhd%vacuum%b_pert%coord2 (array3dcplx.type) (9.4.1.3.54)
re (1097)	mhd%vacuum%b_pert%coord2%re (array3dflt.type) (9.4.1.2.1)
im (1097)	mhd%vacuum%b_pert%coord2%im (array3dflt.type) (9.4.1.2.1)
coord3 (1287)	mhd%vacuum%b_pert%coord3 (array3dcplx.type) (9.4.1.3.54)
re (1097)	mhd%vacuum%b_pert%coord3%re (array3dflt.type) (9.4.1.2.1)
im (1097)	mhd%vacuum%b_pert%coord3%im (array3dflt.type) (9.4.1.2.1)
time (1071)	mhd%time (float) (9.4.1.1.1)
codeparam (1071)	mhd%codeparam (codeparam) (9.4.1.3.65)
codename (1108)	mhd%codeparam%codename (string) (9.4.1.1.3)
codeversion (1108)	mhd%codeparam%codeversion (string) (9.4.1.1.3)
parameters (1108)	mhd%codeparam%parameters (string) (9.4.1.1.3)
output_diag (1108)	mhd%codeparam%output_diag (string) (9.4.1.1.3)
output_flag (1108)	mhd%codeparam%output_flag (integer) (9.4.1.1.2)

### 9.4.2.1.27 msediag

datainfo (1072)	msediag%datainfo (datainfo) (9.4.1.3.120)
dataprovider (1163)	msediag%datainfo%dataprovider (string) (9.4.1.1.3)
putdate (1163)	msediag%datainfo%putdate (string) (9.4.1.1.3)
source (1163)	msediag%datainfo%source (string) (9.4.1.1.3)
comment (1163)	msediag%datainfo%comment (string) (9.4.1.1.3)
cocos (1163)	msediag%datainfo%cocos (integer) (9.4.1.1.2)
id (1163)	msediag%datainfo%id (integer) (9.4.1.1.2)
isref (1163)	msediag%datainfo%isref (integer) (9.4.1.1.2)
whatref (1163)	msediag%datainfo%whatref (whatref) (9.4.1.3.426)
user (1469)	msediag%datainfo%whatref%user (string) (9.4.1.1.3)
machine (1469)	msediag%datainfo%whatref%machine (string) (9.4.1.1.3)
shot (1469)	msediag%datainfo%whatref%shot (integer) (9.4.1.1.2)
run (1469)	msediag%datainfo%whatref%run (integer) (9.4.1.1.2)
occurrence (1469)	msediag%datainfo%whatref%occurrence (integer) (9.4.1.1.2)
putinfo (1163)	msediag%datainfo%putinfo (putinfo) (9.4.1.3.289)
putmethod (1332)	msediag%datainfo%putinfo%putmethod (string) (9.4.1.1.3)
putaccess (1332)	msediag%datainfo%putinfo%putaccess (string) (9.4.1.1.3)
putlocation (1332)	msediag%datainfo%putinfo%putlocation (string) (9.4.1.1.3)
rights (1332)	msediag%datainfo%putinfo%rights (string) (9.4.1.1.3)
polarimetry (1072)	msediag%polarimetry (polarimetry) (9.4.1.3.283)
setup (1326)	msediag%polarimetry%setup (msediag_setup_polarimetry) (9.4.1.3.252)
rzgamma (1295)	msediag%polarimetry%setup%rzgamma (rzphidrdzdpH1D) (9.4.1.3.329)
r (1372)	msediag%polarimetry%setup%rzgamma%r (vecflt.type) (9.4.1.2.9)
z (1372)	msediag%polarimetry%setup%rzgamma%z (vecflt.type) (9.4.1.2.9)
phi (1372)	msediag%polarimetry%setup%rzgamma%phi (vecflt.type) (9.4.1.2.9)
dr (1372)	msediag%polarimetry%setup%rzgamma%dr (vecflt.type) (9.4.1.2.9)
dz (1372)	msediag%polarimetry%setup%rzgamma%dz (vecflt.type) (9.4.1.2.9)
dphi (1372)	msediag%polarimetry%setup%rzgamma%dphi (vecflt.type) (9.4.1.2.9)
geom_coef (1295)	msediag%polarimetry%setup%geom_coef (matflt.type) (9.4.1.2.7)
measure (1326)	msediag%polarimetry%measure (exp1D) (9.4.1.3.180)
value (1223)	msediag%polarimetry%measure%value (vecflt.type) (9.4.1.2.9)
abserror (1223)	msediag%polarimetry%measure%abserror (vecflt.type) (9.4.1.2.9)
relerror (1223)	msediag%polarimetry%measure%relerror (vecflt.type) (9.4.1.2.9)
spectral (1072)	msediag%spectral (spectral) (9.4.1.3.371)
emissivity (1414)	msediag%spectral%emissivity (msediag_emissivity) (9.4.1.3.247)
wavelength (1290)	msediag%spectral%emissivity <sup>o</sup> %wavelength (vecflt.type) (9.4.1.2.9)
emiss_chord (1290)	msediag%spectral%emissivity <sup>o</sup> %emiss_chord(:) (msediag_emiss_chord) (9.4.1.3.246)
volume (1289)	msediag%spectral%emissivity <sup>o</sup> %emiss_chord(:)%volume (float) (9.4.1.1.1)
setup (1289)	msediag%spectral%emissivity <sup>o</sup> %emiss_chord(:)%setup (rzphi1D) (9.4.1.3.325)

r (1368)	msediag%spectral%emissivity%emiss_chord(:)%setup%r (vecflt_type) (9.4.1.2.9)
z (1368)	msediag%spectral%emissivity%emiss_chord(:)%setup%z (vecflt_type) (9.4.1.2.9)
phi (1368)	msediag%spectral%emissivity%emiss_chord(:)%setup%phi (vecflt_type) (9.4.1.2.9)
polarization (1289)	msediag%spectral%emissivity%emiss_chord(:)%polarization(:) (msediag_polarization) (9.4.1.3.248)
type (1291)	msediag%spectral%emissivity%emiss_chord(:)%polarization(:)%type (identifier) (9.4.1.3.213)
id (1256)	msediag%spectral%emissivity%emiss_chord(:)%polarization(:)%type%id (string) (9.4.1.1.3)
flag (1256)	msediag%spectral%emissivity%emiss_chord(:)%polarization(:)%type%flag (integer) (9.4.1.1.2)
description (1256)	msediag%spectral%emissivity%emiss_chord(:)%polarization(:)%type%description (string) (9.4.1.1.3)
spec_emiss (1291)	msediag%spectral%emissivity%emiss_chord(:)%polarization(:)%spec_emiss (matflt_type) (9.4.1.2.7)
quantiaxis (1289)	msediag%spectral%emissivity%emiss_chord(:)%quantiaxis (vecflt_type) (9.4.1.2.9)
radiance (1414)	msediag%spectral%radiance (msediag_radiance) (9.4.1.3.250)
wavelength (1293)	msediag%spectral%radiance%wavelength (exp1D) (9.4.1.3.180)
value (1223)	msediag%spectral%radiance%wavelength%value (vecflt_type) (9.4.1.2.9)
abserror (1223)	msediag%spectral%radiance%wavelength%abserror (vecflt_type) (9.4.1.2.9)
releror (1223)	msediag%spectral%radiance%wavelength%releror (vecflt_type) (9.4.1.2.9)
radia_chord (1293)	msediag%spectral%radiance%radia_chord(:) (msediag_radia_chord) (9.4.1.3.249)
setup (1292)	msediag%spectral%radiance%radia_chord(:)%setup (msediag_setup) (9.4.1.3.251)
pivot_point (1294)	msediag%spectral%radiance%radia_chord(:)%setup%pivot_point (rzphi0D) (9.4.1.3.324)
r (1367)	msediag%spectral%radiance%radia_chord(:)%setup%pivot_point%r (float) (9.4.1.1.1)
z (1367)	msediag%spectral%radiance%radia_chord(:)%setup%pivot_point%z (float) (9.4.1.1.1)
phi (1367)	msediag%spectral%radiance%radia_chord(:)%setup%pivot_point%phi (float) (9.4.1.1.1)
horchordang (1294)	msediag%spectral%radiance%radia_chord(:)%setup%horchordang (float) (9.4.1.1.1)
verchordang (1294)	msediag%spectral%radiance%radia_chord(:)%setup%verchordang (float) (9.4.1.1.1)
second_point (1294)	msediag%spectral%radiance%radia_chord(:)%setup%second_point (rzphi0D) (9.4.1.3.324)
r (1367)	msediag%spectral%radiance%radia_chord(:)%setup%second_point%r (float) (9.4.1.1.1)
z (1367)	msediag%spectral%radiance%radia_chord(:)%setup%second_point%z (float) (9.4.1.1.1)
phi (1367)	msediag%spectral%radiance%radia_chord(:)%setup%second_point%phi (float) (9.4.1.1.1)
stokes (1292)	msediag%spectral%radiance%radia_chord(:)%stokes(:) (msediag_stokes) (9.4.1.3.253)
type (1296)	msediag%spectral%radiance%radia_chord(:)%stokes(:)%type (identifier) (9.4.1.3.213)
id (1256)	msediag%spectral%radiance%radia_chord(:)%stokes(:)%type%id (string) (9.4.1.1.3)
flag (1256)	msediag%spectral%radiance%radia_chord(:)%stokes(:)%type%flag (integer) (9.4.1.1.2)
description (1256)	msediag%spectral%radiance%radia_chord(:)%stokes(:)%type%description (string) (9.4.1.1.3)
vector (1296)	msediag%spectral%radiance%radia_chord(:)%stokes(:)%vector (matflt_type) (9.4.1.2.7)
totradiance (1292)	msediag%spectral%radiance%radia_chord(:)%totradiance (exp1D) (9.4.1.3.180)
value (1223)	msediag%spectral%radiance%radia_chord(:)%totradiance%value (vecflt_type) (9.4.1.2.9)
abserror (1223)	msediag%spectral%radiance%radia_chord(:)%totradiance%abserror (vecflt_type) (9.4.1.2.9)
releror (1223)	msediag%spectral%radiance%radia_chord(:)%totradiance%releror (vecflt_type) (9.4.1.2.9)
codeparam (1414)	msediag%spectral%codeparam (codeparam) (9.4.1.3.65)
codename (1108)	msediag%spectral%codeparam%codename (string) (9.4.1.1.3)
codeversion (1108)	msediag%spectral%codeparam%codeversion (string) (9.4.1.1.3)
parameters (1108)	msediag%spectral%codeparam%parameters (string) (9.4.1.1.3)
output_diag (1108)	msediag%spectral%codeparam%output_diag (string) (9.4.1.1.3)
output_flag (1108)	msediag%spectral%codeparam%output_flag (integer) (9.4.1.1.2)
time (1072)	msediag%time (float) (9.4.1.1.1)

### 9.4.2.1.28 nbi

datainfo (1073)	nbi%datainfo (datainfo) (9.4.1.3.120)
dataprovder (1163)	nbi%datainfo%dataprovder (string) (9.4.1.1.3)
putdate (1163)	nbi%datainfo%putdate (string) (9.4.1.1.3)
source (1163)	nbi%datainfo%source (string) (9.4.1.1.3)
comment (1163)	nbi%datainfo%comment (string) (9.4.1.1.3)
cocos (1163)	nbi%datainfo%cocos (integer) (9.4.1.1.2)
id (1163)	nbi%datainfo%id (integer) (9.4.1.1.2)
isref (1163)	nbi%datainfo%isref (integer) (9.4.1.1.2)
whatref (1163)	nbi%datainfo%whatref (whatref) (9.4.1.3.426)
user (1469)	nbi%datainfo%whatref%user (string) (9.4.1.1.3)
machine (1469)	nbi%datainfo%whatref%machine (string) (9.4.1.1.3)
shot (1469)	nbi%datainfo%whatref%shot (integer) (9.4.1.1.2)

run (1469)	nbi%datainfo%whatref%run (integer) (9.4.1.1.2)
occurrence (1469)	nbi%datainfo%whatref%occurrence (integer) (9.4.1.1.2)
putinfo (1163)	nbi%datainfo%putinfo (putinfo) (9.4.1.3.289)
putmethod (1332)	nbi%datainfo%putinfo%putmethod (string) (9.4.1.1.3)
putaccess (1332)	nbi%datainfo%putinfo%putaccess (string) (9.4.1.1.3)
putlocation (1332)	nbi%datainfo%putinfo%putlocation (string) (9.4.1.1.3)
rights (1332)	nbi%datainfo%putinfo%rights (string) (9.4.1.1.3)
nbi_unit (1073)	nbi%nbi_unit(:) (nbi_unit) (9.4.1.3.254)
name (1297)	nbi%nbi_unit(:)%name (string) (9.4.1.1.3)
inj_spec (1297)	nbi%nbi_unit(:)%inj_spec (inj_spec) (9.4.1.3.217)
amn (1260)	nbi%nbi_unit(:)%inj_spec%amn (float) (9.4.1.1.1)
zn (1260)	nbi%nbi_unit(:)%inj_spec%zn (float) (9.4.1.1.1)
pow_unit (1297)	nbi%nbi_unit(:)%pow_unit (exp0D) (9.4.1.3.179)
value (1222)	nbi%nbi_unit(:)%pow_unit%value (float) (9.4.1.1.1)
abserror (1222)	nbi%nbi_unit(:)%pow_unit%abserror (float) (9.4.1.1.1)
releror (1222)	nbi%nbi_unit(:)%pow_unit%releror (float) (9.4.1.1.1)
inj_eng_unit (1297)	nbi%nbi_unit(:)%inj_eng_unit (exp0D) (9.4.1.3.179)
value (1222)	nbi%nbi_unit(:)%inj_eng_unit%value (float) (9.4.1.1.1)
abserror (1222)	nbi%nbi_unit(:)%inj_eng_unit%abserror (float) (9.4.1.1.1)
releror (1222)	nbi%nbi_unit(:)%inj_eng_unit%releror (float) (9.4.1.1.1)
beamcurfrac (1297)	nbi%nbi_unit(:)%beamcurfrac (exp1D) (9.4.1.3.180)
value (1223)	nbi%nbi_unit(:)%beamcurfrac%value (vecflt.type) (9.4.1.2.9)
abserror (1223)	nbi%nbi_unit(:)%beamcurfrac%abserror (vecflt.type) (9.4.1.2.9)
releror (1223)	nbi%nbi_unit(:)%beamcurfrac%releror (vecflt.type) (9.4.1.2.9)
beampowfrac (1297)	nbi%nbi_unit(:)%beampowfrac (exp1D) (9.4.1.3.180)
value (1223)	nbi%nbi_unit(:)%beampowfrac%value (vecflt.type) (9.4.1.2.9)
abserror (1223)	nbi%nbi_unit(:)%beampowfrac%abserror (vecflt.type) (9.4.1.2.9)
releror (1223)	nbi%nbi_unit(:)%beampowfrac%releror (vecflt.type) (9.4.1.2.9)
setup_inject (1297)	nbi%nbi_unit(:)%setup_inject (setup_inject) (9.4.1.3.355)
position (1398)	nbi%nbi_unit(:)%setup_inject%position (rzphi0D) (9.4.1.3.324)
r (1367)	nbi%nbi_unit(:)%setup_inject%position%r (float) (9.4.1.1.1)
z (1367)	nbi%nbi_unit(:)%setup_inject%position%z (float) (9.4.1.1.1)
phi (1367)	nbi%nbi_unit(:)%setup_inject%position%phi (float) (9.4.1.1.1)
tang_rad (1398)	nbi%nbi_unit(:)%setup_inject%tang_rad (float) (9.4.1.1.1)
angle (1398)	nbi%nbi_unit(:)%setup_inject%angle (float) (9.4.1.1.1)
direction (1398)	nbi%nbi_unit(:)%setup_inject%direction (integer) (9.4.1.1.2)
focal.len.hz (1398)	nbi%nbi_unit(:)%setup_inject%focal.len.hz (float) (9.4.1.1.1)
focal.len.vc (1398)	nbi%nbi_unit(:)%setup_inject%focal.len.vc (float) (9.4.1.1.1)
divergence (1398)	nbi%nbi_unit(:)%setup_inject%divergence (divergence) (9.4.1.3.156)
frac.divcomp (1199)	nbi%nbi_unit(:)%setup_inject%divergence%frac.divcomp (vecflt.type) (9.4.1.2.9)
div.vert (1199)	nbi%nbi_unit(:)%setup_inject%divergence%div.vert (vecflt.type) (9.4.1.2.9)
div.horiz (1199)	nbi%nbi_unit(:)%setup_inject%divergence%div.horiz (vecflt.type) (9.4.1.2.9)
beamlets (1398)	nbi%nbi_unit(:)%setup_inject%beamlets (beamlets) (9.4.1.3.56)
position (1099)	nbi%nbi_unit(:)%setup_inject%beamlets%position (rzphi1D) (9.4.1.3.325)
r (1368)	nbi%nbi_unit(:)%setup_inject%beamlets%position%r (vecflt.type) (9.4.1.2.9)
z (1368)	nbi%nbi_unit(:)%setup_inject%beamlets%position%z (vecflt.type) (9.4.1.2.9)
phi (1368)	nbi%nbi_unit(:)%setup_inject%beamlets%position%phi (vecflt.type) (9.4.1.2.9)
tang_rad.bl_t (1099)	nbi%nbi_unit(:)%setup_inject%beamlets%tang_rad.bl_t (vecflt.type) (9.4.1.2.9)
angle.bl_t (1099)	nbi%nbi_unit(:)%setup_inject%beamlets%angle.bl_t (vecflt.type) (9.4.1.2.9)
pow_frc.bl_t (1099)	nbi%nbi_unit(:)%setup_inject%beamlets%pow_frc.bl_t (vecflt.type) (9.4.1.2.9)
codeparam (1297)	nbi%nbi_unit(:)%codeparam (codeparam) (9.4.1.3.65)
codename (1108)	nbi%nbi_unit(:)%codeparam%codename (string) (9.4.1.1.3)
codeversion (1108)	nbi%nbi_unit(:)%codeparam%codeversion (string) (9.4.1.1.3)
parameters (1108)	nbi%nbi_unit(:)%codeparam%parameters (string) (9.4.1.1.3)
output.diag (1108)	nbi%nbi_unit(:)%codeparam%output.diag (string) (9.4.1.1.3)
output.flag (1108)	nbi%nbi_unit(:)%codeparam%output.flag (integer) (9.4.1.1.2)
codeparam (1073)	nbi%codeparam (codeparam) (9.4.1.3.65)
codename (1108)	nbi%codeparam%codename (string) (9.4.1.1.3)
codeversion (1108)	nbi%codeparam%codeversion (string) (9.4.1.1.3)
parameters (1108)	nbi%codeparam%parameters (string) (9.4.1.1.3)
output.diag (1108)	nbi%codeparam%output.diag (string) (9.4.1.1.3)

output_flag (1108)	nbi%codeparam%output_flag (integer) (9.4.1.1.2)
time (1073)	nbi%time (float) (9.4.1.1.1)

### 9.4.2.1.29 neoclassic

datainfo (1074)	neoclassic%datainfo (datainfo) (9.4.1.3.120)
dataprovider (1163)	neoclassic%datainfo%dataprovider (string) (9.4.1.1.3)
putdate (1163)	neoclassic%datainfo%putdate (string) (9.4.1.1.3)
source (1163)	neoclassic%datainfo%source (string) (9.4.1.1.3)
comment (1163)	neoclassic%datainfo%comment (string) (9.4.1.1.3)
cocos (1163)	neoclassic%datainfo%cocos (integer) (9.4.1.1.2)
id (1163)	neoclassic%datainfo%id (integer) (9.4.1.1.2)
isref (1163)	neoclassic%datainfo%isref (integer) (9.4.1.1.2)
whatref (1163)	neoclassic%datainfo%whatref (whatref) (9.4.1.3.426)
user (1469)	neoclassic%datainfo%whatref%user (string) (9.4.1.1.3)
machine (1469)	neoclassic%datainfo%whatref%machine (string) (9.4.1.1.3)
shot (1469)	neoclassic%datainfo%whatref%shot (integer) (9.4.1.1.2)
run (1469)	neoclassic%datainfo%whatref%run (integer) (9.4.1.1.2)
occurrence (1469)	neoclassic%datainfo%whatref%occurrence (integer) (9.4.1.1.2)
putinfo (1163)	neoclassic%datainfo%putinfo (putinfo) (9.4.1.3.289)
putmethod (1332)	neoclassic%datainfo%putinfo%putmethod (string) (9.4.1.1.3)
putaccess (1332)	neoclassic%datainfo%putinfo%putaccess (string) (9.4.1.1.3)
putlocation (1332)	neoclassic%datainfo%putinfo%putlocation (string) (9.4.1.1.3)
rights (1332)	neoclassic%datainfo%putinfo%rights (string) (9.4.1.1.3)
rho_tor_norm (1074)	neoclassic%rho_tor_norm (vecflt_type) (9.4.1.2.9)
rho_tor (1074)	neoclassic%rho_tor (vecflt_type) (9.4.1.2.9)
composition (1074)	neoclassic%composition (composition) (9.4.1.3.83)
amn (1126)	neoclassic%composition%amn (vecflt_type) (9.4.1.2.9)
zn (1126)	neoclassic%composition%zn (vecflt_type) (9.4.1.2.9)
zion (1126)	neoclassic%composition%zion (vecflt_type) (9.4.1.2.9)
imp_flag (1126)	neoclassic%composition%imp_flag (vecint_type) (9.4.1.2.10)
label (1126)	neoclassic%composition%label (vecstring_type) (9.4.1.2.11)
desc_impur (1074)	neoclassic%desc_impur (desc_impur) (9.4.1.3.123)
amn (1166)	neoclassic%desc_impur%amn (vecflt_type) (9.4.1.2.9)
zn (1166)	neoclassic%desc_impur%zn (vecint_type) (9.4.1.2.10)
i_ion (1166)	neoclassic%desc_impur%i_ion (vecint_type) (9.4.1.2.10)
nzimp (1166)	neoclassic%desc_impur%nzimp (vecint_type) (9.4.1.2.10)
zmin (1166)	neoclassic%desc_impur%zmin (matint_type) (9.4.1.2.8)
zmax (1166)	neoclassic%desc_impur%zmax (matint_type) (9.4.1.2.8)
label (1166)	neoclassic%desc_impur%label (vecstring_type) (9.4.1.2.11)
compositions (1074)	neoclassic%compositions (compositions_type) (9.4.1.3.87)
nuclei (1130)	neoclassic%compositions%nuclei(:) (nuclei) (9.4.1.3.258)
zn (1301)	neoclassic%compositions%nuclei(:)%zn (float) (9.4.1.1.1)
amn (1301)	neoclassic%compositions%nuclei(:)%amn (float) (9.4.1.1.1)
label (1301)	neoclassic%compositions%nuclei(:)%label (string) (9.4.1.1.3)
ions (1130)	neoclassic%compositions%ions(:) (ions) (9.4.1.3.218)
nucindex (1261)	neoclassic%compositions%ions(:)%nucindex (integer) (9.4.1.1.2)
zion (1261)	neoclassic%compositions%ions(:)%zion (float) (9.4.1.1.1)
imp_flag (1261)	neoclassic%compositions%ions(:)%imp_flag (integer) (9.4.1.1.2)
label (1261)	neoclassic%compositions%ions(:)%label (string) (9.4.1.1.3)
impurities (1130)	neoclassic%compositions%impurities(:) (impurities) (9.4.1.3.215)
nucindex (1258)	neoclassic%compositions%impurities(:)%nucindex (integer) (9.4.1.1.2)
i_ion (1258)	neoclassic%compositions%impurities(:)%i_ion (integer) (9.4.1.1.2)
nzimp (1258)	neoclassic%compositions%impurities(:)%nzimp (integer) (9.4.1.1.2)
zmin (1258)	neoclassic%compositions%impurities(:)%zmin (vecflt_type) (9.4.1.2.9)
zmax (1258)	neoclassic%compositions%impurities(:)%zmax (vecflt_type) (9.4.1.2.9)
label (1258)	neoclassic%compositions%impurities(:)%label (vecstring_type) (9.4.1.2.11)
neutralscomp (1130)	neoclassic%compositions%neutralscomp(:) (composition_neutralscomp) (9.4.1.3.86)
neutcomp (1129)	neoclassic%compositions%neutralscomp(:)%neutcomp(:) (composition_neutrals_neutcomp) (9.4.1.3.85)
nucindex (1128)	neoclassic%compositions%neutralscomp(:)%neutcomp(:)%nucindex (integer) (9.4.1.1.2)



multiplicity (1128)	neoclassic%compositions%neutralscomp(:)%neutcomp(:)%multiplicity (integer) (9.4.1.1.2)
type (1129)	neoclassic%compositions%neutralscomp(:)%type(:) (identifier) (9.4.1.3.213)
id (1256)	neoclassic%compositions%neutralscomp(:)%type(:)%id (string) (9.4.1.1.3)
flag (1256)	neoclassic%compositions%neutralscomp(:)%type(:)%flag (integer) (9.4.1.1.2)
description (1256)	neoclassic%compositions%neutralscomp(:)%type(:)%description (string) (9.4.1.1.3)
label (1129)	neoclassic%compositions%neutralscomp(:)%label (string) (9.4.1.1.3)
edgespecies (1130)	neoclassic%compositions%edgespecies(:) (edgespecies) (9.4.1.3.169)
nucindex (1212)	neoclassic%compositions%edgespecies(:)%nucindex (integer) (9.4.1.1.2)
zmin (1212)	neoclassic%compositions%edgespecies(:)%zmin (float) (9.4.1.1.1)
zmax (1212)	neoclassic%compositions%edgespecies(:)%zmax (float) (9.4.1.1.1)
label (1212)	neoclassic%compositions%edgespecies(:)%label (string) (9.4.1.1.3)
signature (1130)	neoclassic%compositions%signature (identifier) (9.4.1.3.213)
id (1256)	neoclassic%compositions%signature%id (string) (9.4.1.1.3)
flag (1256)	neoclassic%compositions%signature%flag (integer) (9.4.1.1.2)
description (1256)	neoclassic%compositions%signature%description (string) (9.4.1.1.3)
ni_neo (1074)	neoclassic%ni_neo (transcoefion) (9.4.1.3.391)
diff_eff (1434)	neoclassic%ni_neo%diff_eff (matflt.type) (9.4.1.2.7)
vconv_eff (1434)	neoclassic%ni_neo%vconv_eff (matflt.type) (9.4.1.2.7)
exchange (1434)	neoclassic%ni_neo%exchange (matflt.type) (9.4.1.2.7)
qgi (1434)	neoclassic%ni_neo%qgi (matflt.type) (9.4.1.2.7)
flux (1434)	neoclassic%ni_neo%flux (matflt.type) (9.4.1.2.7)
off_diagonal (1434)	neoclassic%ni_neo%off_diagonal (offdiagion) (9.4.1.3.261)
d_ni (1304)	neoclassic%ni_neo%off_diagonal%d_ni (array3dflt.type) (9.4.1.2.1)
d_ti (1304)	neoclassic%ni_neo%off_diagonal%d_ti (array3dflt.type) (9.4.1.2.1)
d_ne (1304)	neoclassic%ni_neo%off_diagonal%d_ne (matflt.type) (9.4.1.2.7)
d_te (1304)	neoclassic%ni_neo%off_diagonal%d_te (matflt.type) (9.4.1.2.7)
d_epar (1304)	neoclassic%ni_neo%off_diagonal%d_epar (matflt.type) (9.4.1.2.7)
d_mtor (1304)	neoclassic%ni_neo%off_diagonal%d_mtor (matflt.type) (9.4.1.2.7)
flag (1434)	neoclassic%ni_neo%flag (integer) (9.4.1.1.2)
ne_neo (1074)	neoclassic%ne_neo (transcoefel) (9.4.1.3.389)
diff_eff (1432)	neoclassic%ne_neo%diff_eff (vecflt.type) (9.4.1.2.9)
vconv_eff (1432)	neoclassic%ne_neo%vconv_eff (vecflt.type) (9.4.1.2.9)
flux (1432)	neoclassic%ne_neo%flux (vecflt.type) (9.4.1.2.9)
off_diagonal (1432)	neoclassic%ne_neo%off_diagonal (offdiagel) (9.4.1.3.260)
d_ni (1303)	neoclassic%ne_neo%off_diagonal%d_ni (matflt.type) (9.4.1.2.7)
d_ti (1303)	neoclassic%ne_neo%off_diagonal%d_ti (matflt.type) (9.4.1.2.7)
d_ne (1303)	neoclassic%ne_neo%off_diagonal%d_ne (vecflt.type) (9.4.1.2.9)
d_te (1303)	neoclassic%ne_neo%off_diagonal%d_te (vecflt.type) (9.4.1.2.9)
d_epar (1303)	neoclassic%ne_neo%off_diagonal%d_epar (vecflt.type) (9.4.1.2.9)
d_mtor (1303)	neoclassic%ne_neo%off_diagonal%d_mtor (vecflt.type) (9.4.1.2.9)
flag (1432)	neoclassic%ne_neo%flag (integer) (9.4.1.1.2)
nz_neo (1074)	neoclassic%nz_neo(:) (transcoefimp) (9.4.1.3.390)
diff_eff (1433)	neoclassic%nz_neo(:)%diff_eff (matflt.type) (9.4.1.2.7)
vconv_eff (1433)	neoclassic%nz_neo(:)%vconv_eff (matflt.type) (9.4.1.2.7)
exchange (1433)	neoclassic%nz_neo(:)%exchange (matflt.type) (9.4.1.2.7)
flux (1433)	neoclassic%nz_neo(:)%flux (matflt.type) (9.4.1.2.7)
flag (1433)	neoclassic%nz_neo(:)%flag (integer) (9.4.1.1.2)
ti_neo (1074)	neoclassic%ti_neo (transcoefion) (9.4.1.3.391)
diff_eff (1434)	neoclassic%ti_neo%diff_eff (matflt.type) (9.4.1.2.7)
vconv_eff (1434)	neoclassic%ti_neo%vconv_eff (matflt.type) (9.4.1.2.7)
exchange (1434)	neoclassic%ti_neo%exchange (matflt.type) (9.4.1.2.7)
qgi (1434)	neoclassic%ti_neo%qgi (matflt.type) (9.4.1.2.7)
flux (1434)	neoclassic%ti_neo%flux (matflt.type) (9.4.1.2.7)
off_diagonal (1434)	neoclassic%ti_neo%off_diagonal (offdiagion) (9.4.1.3.261)
d_ni (1304)	neoclassic%ti_neo%off_diagonal%d_ni (array3dflt.type) (9.4.1.2.1)
d_ti (1304)	neoclassic%ti_neo%off_diagonal%d_ti (array3dflt.type) (9.4.1.2.1)
d_ne (1304)	neoclassic%ti_neo%off_diagonal%d_ne (matflt.type) (9.4.1.2.7)
d_te (1304)	neoclassic%ti_neo%off_diagonal%d_te (matflt.type) (9.4.1.2.7)
d_epar (1304)	neoclassic%ti_neo%off_diagonal%d_epar (matflt.type) (9.4.1.2.7)
d_mtor (1304)	neoclassic%ti_neo%off_diagonal%d_mtor (matflt.type) (9.4.1.2.7)
flag (1434)	neoclassic%ti_neo%flag (integer) (9.4.1.1.2)

te_neo (1074)	neoclassic%te_neo (transcoefel) (9.4.1.3.389)
diff_eff (1432)	neoclassic%te_neo%diff_eff (vecflt_type) (9.4.1.2.9)
vconv_eff (1432)	neoclassic%te_neo%vconv_eff (vecflt_type) (9.4.1.2.9)
flux (1432)	neoclassic%te_neo%flux (vecflt_type) (9.4.1.2.9)
off_diagonal (1432)	neoclassic%te_neo%off_diagonal (offdiagel) (9.4.1.3.260)
d_ni (1303)	neoclassic%te_neo%off_diagonal%d_ni (matflt_type) (9.4.1.2.7)
d_ti (1303)	neoclassic%te_neo%off_diagonal%d_ti (matflt_type) (9.4.1.2.7)
d_ne (1303)	neoclassic%te_neo%off_diagonal%d_ne (vecflt_type) (9.4.1.2.9)
d_te (1303)	neoclassic%te_neo%off_diagonal%d_te (vecflt_type) (9.4.1.2.9)
d_epar (1303)	neoclassic%te_neo%off_diagonal%d_epar (vecflt_type) (9.4.1.2.9)
d_mtor (1303)	neoclassic%te_neo%off_diagonal%d_mtor (vecflt_type) (9.4.1.2.9)
flag (1432)	neoclassic%te_neo%flag (integer) (9.4.1.1.2)
tz_neo (1074)	neoclassic%tz_neo(:) (transcoefimp) (9.4.1.3.390)
diff_eff (1433)	neoclassic%tz_neo(:)%diff_eff (matflt_type) (9.4.1.2.7)
vconv_eff (1433)	neoclassic%tz_neo(:)%vconv_eff (matflt_type) (9.4.1.2.7)
exchange (1433)	neoclassic%tz_neo(:)%exchange (matflt_type) (9.4.1.2.7)
flux (1433)	neoclassic%tz_neo(:)%flux (matflt_type) (9.4.1.2.7)
flag (1433)	neoclassic%tz_neo(:)%flag (integer) (9.4.1.1.2)
mtor_neo (1074)	neoclassic%mtor_neo (transcoefel) (9.4.1.3.389)
diff_eff (1432)	neoclassic%mtor_neo%diff_eff (vecflt_type) (9.4.1.2.9)
vconv_eff (1432)	neoclassic%mtor_neo%vconv_eff (vecflt_type) (9.4.1.2.9)
flux (1432)	neoclassic%mtor_neo%flux (vecflt_type) (9.4.1.2.9)
off_diagonal (1432)	neoclassic%mtor_neo%off_diagonal (offdiagel) (9.4.1.3.260)
d_ni (1303)	neoclassic%mtor_neo%off_diagonal%d_ni (matflt_type) (9.4.1.2.7)
d_ti (1303)	neoclassic%mtor_neo%off_diagonal%d_ti (matflt_type) (9.4.1.2.7)
d_ne (1303)	neoclassic%mtor_neo%off_diagonal%d_ne (vecflt_type) (9.4.1.2.9)
d_te (1303)	neoclassic%mtor_neo%off_diagonal%d_te (vecflt_type) (9.4.1.2.9)
d_epar (1303)	neoclassic%mtor_neo%off_diagonal%d_epar (vecflt_type) (9.4.1.2.9)
d_mtor (1303)	neoclassic%mtor_neo%off_diagonal%d_mtor (vecflt_type) (9.4.1.2.9)
flag (1432)	neoclassic%mtor_neo%flag (integer) (9.4.1.1.2)
sigma (1074)	neoclassic%sigma (vecflt_type) (9.4.1.2.9)
jboot (1074)	neoclassic%jboot (vecflt_type) (9.4.1.2.9)
er (1074)	neoclassic%er (vecflt_type) (9.4.1.2.9)
vpol (1074)	neoclassic%vpol (matflt_type) (9.4.1.2.7)
fext (1074)	neoclassic%fext (array3dflt_type) (9.4.1.2.1)
jext (1074)	neoclassic%jext (vecflt_type) (9.4.1.2.9)
time (1074)	neoclassic%time (float) (9.4.1.1.1)
codeparam (1074)	neoclassic%codeparam (codeparam) (9.4.1.3.65)
codename (1108)	neoclassic%codeparam%codename (string) (9.4.1.1.3)
codeversion (1108)	neoclassic%codeparam%codeversion (string) (9.4.1.1.3)
parameters (1108)	neoclassic%codeparam%parameters (string) (9.4.1.1.3)
output_diag (1108)	neoclassic%codeparam%output_diag (string) (9.4.1.1.3)
output_flag (1108)	neoclassic%codeparam%output_flag (integer) (9.4.1.1.2)

### 9.4.2.1.30 orbit

datainfo (1075)	orbit%datainfo (datainfo) (9.4.1.3.120)
dataprovider (1163)	orbit%datainfo%dataprovider (string) (9.4.1.1.3)
putdate (1163)	orbit%datainfo%putdate (string) (9.4.1.1.3)
source (1163)	orbit%datainfo%source (string) (9.4.1.1.3)
comment (1163)	orbit%datainfo%comment (string) (9.4.1.1.3)
cocos (1163)	orbit%datainfo%cocos (integer) (9.4.1.1.2)
id (1163)	orbit%datainfo%id (integer) (9.4.1.1.2)
isref (1163)	orbit%datainfo%isref (integer) (9.4.1.1.2)
whatref (1163)	orbit%datainfo%whatref (whatref) (9.4.1.3.426)
user (1469)	orbit%datainfo%whatref%user (string) (9.4.1.1.3)
machine (1469)	orbit%datainfo%whatref%machine (string) (9.4.1.1.3)
shot (1469)	orbit%datainfo%whatref%shot (integer) (9.4.1.1.2)
run (1469)	orbit%datainfo%whatref%run (integer) (9.4.1.1.2)
occurrence (1469)	orbit%datainfo%whatref%occurrence (integer) (9.4.1.1.2)
putinfo (1163)	orbit%datainfo%putinfo (putinfo) (9.4.1.3.289)



putmethod (1332)	orbit%datainfo%putinfo%putmethod (string) (9.4.1.1.3)
putaccess (1332)	orbit%datainfo%putinfo%putaccess (string) (9.4.1.1.3)
putlocation (1332)	orbit%datainfo%putinfo%putlocation (string) (9.4.1.1.3)
rights (1332)	orbit%datainfo%putinfo%rights (string) (9.4.1.1.3)
com (1075)	orbit%com (com) (9.4.1.3.69)
amn (1112)	orbit%com%amn (float) (9.4.1.1.1)
zion (1112)	orbit%com%zion (float) (9.4.1.1.1)
energy (1112)	orbit%com%energy (vecflt.type) (9.4.1.2.9)
magn_mom (1112)	orbit%com%magn_mom (vecflt.type) (9.4.1.2.9)
p_phi (1112)	orbit%com%p_phi (vecflt.type) (9.4.1.2.9)
sigma (1112)	orbit%com%sigma (vecint.type) (9.4.1.2.10)
trace (1075)	orbit%trace (trace) (9.4.1.3.388)
time_orb (1431)	orbit%trace%time_orb (matflt.type) (9.4.1.2.7)
ntorb (1431)	orbit%trace%ntorb (vecint.type) (9.4.1.2.10)
r (1431)	orbit%trace%r (matflt.type) (9.4.1.2.7)
z (1431)	orbit%trace%z (matflt.type) (9.4.1.2.7)
phi (1431)	orbit%trace%phi (matflt.type) (9.4.1.2.7)
psi (1431)	orbit%trace%psi (matflt.type) (9.4.1.2.7)
theta_b (1431)	orbit%trace%theta_b (matflt.type) (9.4.1.2.7)
v_parallel (1431)	orbit%trace%v_parallel (matflt.type) (9.4.1.2.7)
v_perp (1431)	orbit%trace%v_perp (matflt.type) (9.4.1.2.7)
global_param (1075)	orbit%global_param (orbit_global_param) (9.4.1.3.263)
orbit_type (1306)	orbit%global_param%orbit_type (vecint.type) (9.4.1.2.10)
omega_b (1306)	orbit%global_param%omega_b (vecflt.type) (9.4.1.2.9)
omega_phi (1306)	orbit%global_param%omega_phi (vecflt.type) (9.4.1.2.9)
omega_c_av (1306)	orbit%global_param%omega_c_av (vecflt.type) (9.4.1.2.9)
special_pos (1306)	orbit%global_param%special_pos (orbit_special_pos) (9.4.1.3.266)
midplane (1309)	orbit%global_param%special_pos%midplane (orbit_midplane) (9.4.1.3.264)
outer (1307)	orbit%global_param%special_pos%midplane%outer (orbit_pos) (9.4.1.3.265)
r (1308)	orbit%global_param%special_pos%midplane%outer%r (vecflt.type) (9.4.1.2.9)
z (1308)	orbit%global_param%special_pos%midplane%outer%z (vecflt.type) (9.4.1.2.9)
phi (1308)	orbit%global_param%special_pos%midplane%outer%phi (vecflt.type) (9.4.1.2.9)
psi (1308)	orbit%global_param%special_pos%midplane%outer%psi (vecflt.type) (9.4.1.2.9)
theta_b (1308)	orbit%global_param%special_pos%midplane%outer%theta_b (vecflt.type) (9.4.1.2.9)
inner (1307)	orbit%global_param%special_pos%midplane%inner (orbit_pos) (9.4.1.3.265)
r (1308)	orbit%global_param%special_pos%midplane%inner%r (vecflt.type) (9.4.1.2.9)
z (1308)	orbit%global_param%special_pos%midplane%inner%z (vecflt.type) (9.4.1.2.9)
phi (1308)	orbit%global_param%special_pos%midplane%inner%phi (vecflt.type) (9.4.1.2.9)
psi (1308)	orbit%global_param%special_pos%midplane%inner%psi (vecflt.type) (9.4.1.2.9)
theta_b (1308)	orbit%global_param%special_pos%midplane%inner%theta_b (vecflt.type) (9.4.1.2.9)
turning_pts (1309)	orbit%global_param%special_pos%turning_pts (orbit_turning_pts) (9.4.1.3.267)
upper (1310)	orbit%global_param%special_pos%turning_pts%upper (orbit_pos) (9.4.1.3.265)
r (1308)	orbit%global_param%special_pos%turning_pts%upper%r (vecflt.type) (9.4.1.2.9)
z (1308)	orbit%global_param%special_pos%turning_pts%upper%z (vecflt.type) (9.4.1.2.9)
phi (1308)	orbit%global_param%special_pos%turning_pts%upper%phi (vecflt.type) (9.4.1.2.9)
psi (1308)	orbit%global_param%special_pos%turning_pts%upper%psi (vecflt.type) (9.4.1.2.9)
theta_b (1308)	orbit%global_param%special_pos%turning_pts%upper%theta_b (vecflt.type) (9.4.1.2.9)
lower (1310)	orbit%global_param%special_pos%turning_pts%lower (orbit_pos) (9.4.1.3.265)
r (1308)	orbit%global_param%special_pos%turning_pts%lower%r (vecflt.type) (9.4.1.2.9)
z (1308)	orbit%global_param%special_pos%turning_pts%lower%z (vecflt.type) (9.4.1.2.9)
phi (1308)	orbit%global_param%special_pos%turning_pts%lower%phi (vecflt.type) (9.4.1.2.9)
psi (1308)	orbit%global_param%special_pos%turning_pts%lower%psi (vecflt.type) (9.4.1.2.9)
theta_b (1308)	orbit%global_param%special_pos%turning_pts%lower%theta_b (vecflt.type) (9.4.1.2.9)
codeparam (1075)	orbit%codeparam (codeparam) (9.4.1.3.65)
codename (1108)	orbit%codeparam%codename (string) (9.4.1.1.3)
codeversion (1108)	orbit%codeparam%codeversion (string) (9.4.1.1.3)
parameters (1108)	orbit%codeparam%parameters (string) (9.4.1.1.3)
output_diag (1108)	orbit%codeparam%output_diag (string) (9.4.1.1.3)
output_flag (1108)	orbit%codeparam%output_flag (integer) (9.4.1.1.2)
time (1075)	orbit%time (float) (9.4.1.1.1)

### 9.4.2.1.31 pellets

datainfo (1076)	pellets%datainfo (datainfo) (9.4.1.3.120)
dataproducer (1163)	pellets%datainfo%dataproducer (string) (9.4.1.1.3)
putdate (1163)	pellets%datainfo%putdate (string) (9.4.1.1.3)
source (1163)	pellets%datainfo%source (string) (9.4.1.1.3)
comment (1163)	pellets%datainfo%comment (string) (9.4.1.1.3)
cocos (1163)	pellets%datainfo%cocos (integer) (9.4.1.1.2)
id (1163)	pellets%datainfo%id (integer) (9.4.1.1.2)
isref (1163)	pellets%datainfo%isref (integer) (9.4.1.1.2)
whatref (1163)	pellets%datainfo%whatref (whatref) (9.4.1.3.426)
user (1469)	pellets%datainfo%whatref%user (string) (9.4.1.1.3)
machine (1469)	pellets%datainfo%whatref%machine (string) (9.4.1.1.3)
shot (1469)	pellets%datainfo%whatref%shot (integer) (9.4.1.1.2)
run (1469)	pellets%datainfo%whatref%run (integer) (9.4.1.1.2)
occurrence (1469)	pellets%datainfo%whatref%occurrence (integer) (9.4.1.1.2)
putinfo (1163)	pellets%datainfo%putinfo (putinfo) (9.4.1.3.289)
putmethod (1332)	pellets%datainfo%putinfo%putmethod (string) (9.4.1.1.3)
putaccess (1332)	pellets%datainfo%putinfo%putaccess (string) (9.4.1.1.3)
putlocation (1332)	pellets%datainfo%putinfo%putlocation (string) (9.4.1.1.3)
rights (1332)	pellets%datainfo%putinfo%rights (string) (9.4.1.1.3)
toroid_field (1076)	pellets%toroid_field (b0r0) (9.4.1.3.55)
r0 (1098)	pellets%toroid_field%r0 (float) (9.4.1.1.1)
b0 (1098)	pellets%toroid_field%b0 (float) (9.4.1.1.1)
species (1076)	pellets%species (species) (9.4.1.3.369)
amn (1412)	pellets%species%amn (vecflt_type) (9.4.1.2.9)
zn (1412)	pellets%species%zn (vecflt_type) (9.4.1.2.9)
concentr (1412)	pellets%species%concentr (vecflt_type) (9.4.1.2.9)
subl.energy (1412)	pellets%species%subl.energy (vecflt_type) (9.4.1.2.9)
shape (1076)	pellets%shape (shape) (9.4.1.3.357)
shape_sph (1400)	pellets%shape%shape_sph (shape_sph) (9.4.1.3.359)
radius (1402)	pellets%shape%shape_sph%radius (float) (9.4.1.1.1)
shape_cyl (1400)	pellets%shape%shape_cyl (shape_cyl) (9.4.1.3.358)
radius (1401)	pellets%shape%shape_cyl%radius (float) (9.4.1.1.1)
height (1401)	pellets%shape%shape_cyl%height (float) (9.4.1.1.1)
pelletpath (1076)	pellets%pelletpath (pelletpath) (9.4.1.3.269)
pivot_point (1312)	pellets%pelletpath%pivot_point (rzphi0D) (9.4.1.3.324)
r (1367)	pellets%pelletpath%pivot_point%r (float) (9.4.1.1.1)
z (1367)	pellets%pelletpath%pivot_point%z (float) (9.4.1.1.1)
phi (1367)	pellets%pelletpath%pivot_point%phi (float) (9.4.1.1.1)
horchordang (1312)	pellets%pelletpath%horchordang (float) (9.4.1.1.1)
verchordang (1312)	pellets%pelletpath%verchordang (float) (9.4.1.1.1)
second_point (1312)	pellets%pelletpath%second_point (rzphi0D) (9.4.1.3.324)
r (1367)	pellets%pelletpath%second_point%r (float) (9.4.1.1.1)
z (1367)	pellets%pelletpath%second_point%z (float) (9.4.1.1.1)
phi (1367)	pellets%pelletpath%second_point%phi (float) (9.4.1.1.1)
velocity (1076)	pellets%velocity (float) (9.4.1.1.1)
ablationrate (1076)	pellets%ablationrate (ablationrate) (9.4.1.3.48)
rho_tor (1091)	pellets%ablationrate%rho_tor (vecflt_type) (9.4.1.2.9)
rate (1091)	pellets%ablationrate%rate (vecflt_type) (9.4.1.2.9)
position (1091)	pellets%ablationrate%position (rzphi1D) (9.4.1.3.325)
r (1368)	pellets%ablationrate%position%r (vecflt_type) (9.4.1.2.9)
z (1368)	pellets%ablationrate%position%z (vecflt_type) (9.4.1.2.9)
phi (1368)	pellets%ablationrate%position%phi (vecflt_type) (9.4.1.2.9)
deposprofile (1076)	pellets%deposprofile (deposprofile) (9.4.1.3.121)
rho_tor (1164)	pellets%deposprofile%rho_tor (vecflt_type) (9.4.1.2.9)
density (1164)	pellets%deposprofile%density (vecflt_type) (9.4.1.2.9)
position (1164)	pellets%deposprofile%position (rzphi1D) (9.4.1.3.325)
r (1368)	pellets%deposprofile%position%r (vecflt_type) (9.4.1.2.9)
z (1368)	pellets%deposprofile%position%z (vecflt_type) (9.4.1.2.9)
phi (1368)	pellets%deposprofile%position%phi (vecflt_type) (9.4.1.2.9)
delay (1164)	pellets%deposprofile%delay (float) (9.4.1.1.1)

codeparam (1076)	pellets%codeparam (codeparam) (9.4.1.3.65)
codename (1108)	pellets%codeparam%codename (string) (9.4.1.1.3)
codeversion (1108)	pellets%codeparam%codeversion (string) (9.4.1.1.3)
parameters (1108)	pellets%codeparam%parameters (string) (9.4.1.1.3)
output_diag (1108)	pellets%codeparam%output_diag (string) (9.4.1.1.3)
output_flag (1108)	pellets%codeparam%output_flag (integer) (9.4.1.1.2)
time (1076)	pellets%time (float) (9.4.1.1.1)

### 9.4.2.1.32 pfsystems

datainfo (1077)	pfsystems%datainfo (datainfo) (9.4.1.3.120)
dataprovider (1163)	pfsystems%datainfo%dataprovider (string) (9.4.1.1.3)
putdate (1163)	pfsystems%datainfo%putdate (string) (9.4.1.1.3)
source (1163)	pfsystems%datainfo%source (string) (9.4.1.1.3)
comment (1163)	pfsystems%datainfo%comment (string) (9.4.1.1.3)
cocos (1163)	pfsystems%datainfo%cocos (integer) (9.4.1.1.2)
id (1163)	pfsystems%datainfo%id (integer) (9.4.1.1.2)
isref (1163)	pfsystems%datainfo%isref (integer) (9.4.1.1.2)
whatref (1163)	pfsystems%datainfo%whatref (whatref) (9.4.1.3.426)
user (1469)	pfsystems%datainfo%whatref%user (string) (9.4.1.1.3)
machine (1469)	pfsystems%datainfo%whatref%machine (string) (9.4.1.1.3)
shot (1469)	pfsystems%datainfo%whatref%shot (integer) (9.4.1.1.2)
run (1469)	pfsystems%datainfo%whatref%run (integer) (9.4.1.1.2)
occurrence (1469)	pfsystems%datainfo%whatref%occurrence (integer) (9.4.1.1.2)
putinfo (1163)	pfsystems%datainfo%putinfo (putinfo) (9.4.1.3.289)
putmethod (1332)	pfsystems%datainfo%putinfo%putmethod (string) (9.4.1.1.3)
putaccess (1332)	pfsystems%datainfo%putinfo%putaccess (string) (9.4.1.1.3)
putlocation (1332)	pfsystems%datainfo%putinfo%putlocation (string) (9.4.1.1.3)
rights (1332)	pfsystems%datainfo%putinfo%rights (string) (9.4.1.1.3)
pfcoils (1077)	pfsystems%pfcoils (pfcoils) (9.4.1.3.272)
desc_pfcoils (1315)	pfsystems%pfcoils%desc_pfcoils (desc_pfcoils) (9.4.1.3.125)
name (1168)	pfsystems%pfcoils%desc_pfcoils%name (vecstring_type) (9.4.1.2.11)
id (1168)	pfsystems%pfcoils%desc_pfcoils%id (vecstring_type) (9.4.1.2.11)
res (1168)	pfsystems%pfcoils%desc_pfcoils%res (vecflt_type) (9.4.1.2.9)
emax (1168)	pfsystems%pfcoils%desc_pfcoils%emax (vecflt_type) (9.4.1.2.9)
nelement (1168)	pfsystems%pfcoils%desc_pfcoils%nelement (vecint_type) (9.4.1.2.10)
pfelement (1168)	pfsystems%pfcoils%desc_pfcoils%pfelement (pfelement) (9.4.1.3.273)
name (1316)	pfsystems%pfcoils%desc_pfcoils%pfelement%name (vecstring_type) (9.4.1.2.11)
id (1316)	pfsystems%pfcoils%desc_pfcoils%pfelement%id (vecstring_type) (9.4.1.2.11)
turnsign (1316)	pfsystems%pfcoils%desc_pfcoils%pfelement%turnsign (matflt_type) (9.4.1.2.7)
area (1316)	pfsystems%pfcoils%desc_pfcoils%pfelement%area (matflt_type) (9.4.1.2.7)
pfgeometry (1316)	pfsystems%pfcoils%desc_pfcoils%pfelement%pfgeometry (pfgeometry) (9.4.1.3.274)
type (1317)	pfsystems%pfcoils%desc_pfcoils%pfelement%pfgeometry%type (matint_type) (9.4.1.2.8)
npoints (1317)	pfsystems%pfcoils%desc_pfcoils%pfelement%pfgeometry%npoints (matint_type) (9.4.1.2.8)
rzcoordinate (1317)	pfsystems%pfcoils%desc_pfcoils%pfelement%pfgeometry%rzcoordinate (rz3D) (9.4.1.3.323)
r (1366)	pfsystems%pfcoils%desc_pfcoils%pfelement%pfgeometry%rzcoordinate%r (array3dflt_type) (9.4.1.2.1)
z (1366)	pfsystems%pfcoils%desc_pfcoils%pfelement%pfgeometry%rzcoordinate%z (array3dflt_type) (9.4.1.2.1)
rzdrdz (1317)	pfsystems%pfcoils%desc_pfcoils%pfelement%pfgeometry%rzdrdz (array3dflt_type) (9.4.1.2.1)
coilcurrent (1315)	pfsystems%pfcoils%coilcurrent (exp1D) (9.4.1.3.180)
value (1223)	pfsystems%pfcoils%coilcurrent%value (vecflt_type) (9.4.1.2.9)
abserror (1223)	pfsystems%pfcoils%coilcurrent%abserror (vecflt_type) (9.4.1.2.9)
relerror (1223)	pfsystems%pfcoils%coilcurrent%relerror (vecflt_type) (9.4.1.2.9)
coilvoltage (1315)	pfsystems%pfcoils%coilvoltage (exp1D) (9.4.1.3.180)
value (1223)	pfsystems%pfcoils%coilvoltage%value (vecflt_type) (9.4.1.2.9)
abserror (1223)	pfsystems%pfcoils%coilvoltage%abserror (vecflt_type) (9.4.1.2.9)
relerror (1223)	pfsystems%pfcoils%coilvoltage%relerror (vecflt_type) (9.4.1.2.9)
pfpassive (1077)	pfsystems%pfpassive (pfpassive) (9.4.1.3.276)
name (1319)	pfsystems%pfpassive%name (vecstring_type) (9.4.1.2.11)
area (1319)	pfsystems%pfpassive%area (vecflt_type) (9.4.1.2.9)

res (1319)	pfsystems%pfpassive%res (vecflt_type) (9.4.1.2.9)
eta (1319)	pfsystems%pfpassive%eta (vecflt_type) (9.4.1.2.9)
pfpageometry (1319)	pfsystems%pfpassive%pfpageometry (pfpageometry) (9.4.1.3.275)
type (1318)	pfsystems%pfpassive%pfpageometry%type (vecint_type) (9.4.1.2.10)
npoints (1318)	pfsystems%pfpassive%pfpageometry%npoints (vecint_type) (9.4.1.2.10)
rzcoordinate (1318)	pfsystems%pfpassive%pfpageometry%rzcoordinate (rz2D) (9.4.1.3.322)
r (1365)	pfsystems%pfpassive%pfpageometry%rzcoordinate%r (matflt_type) (9.4.1.2.7)
z (1365)	pfsystems%pfpassive%pfpageometry%rzcoordinate%z (matflt_type) (9.4.1.2.7)
rzdrdz (1318)	pfsystems%pfpassive%pfpageometry%rzdrdz (matflt_type) (9.4.1.2.7)
pfcircuits (1077)	pfsystems%pfcircuits (pfcircuits) (9.4.1.3.271)
name (1314)	pfsystems%pfcircuits%name (vecstring_type) (9.4.1.2.11)
id (1314)	pfsystems%pfcircuits%id (vecstring_type) (9.4.1.2.11)
type (1314)	pfsystems%pfcircuits%type (vecstring_type) (9.4.1.2.11)
nnodes (1314)	pfsystems%pfcircuits%nnodes (vecint_type) (9.4.1.2.10)
connections (1314)	pfsystems%pfcircuits%connections (array3dint_type) (9.4.1.2.2)
pfsupplies (1077)	pfsystems%pfsupplies (pfsupplies) (9.4.1.3.277)
desc_supply (1320)	pfsystems%pfsupplies%desc_supply (desc_supply) (9.4.1.3.126)
name (1169)	pfsystems%pfsupplies%desc_supply%name (vecstring_type) (9.4.1.2.11)
id (1169)	pfsystems%pfsupplies%desc_supply%id (vecstring_type) (9.4.1.2.11)
type (1169)	pfsystems%pfsupplies%desc_supply%type (vecstring_type) (9.4.1.2.11)
delay (1169)	pfsystems%pfsupplies%desc_supply%delay (vecflt_type) (9.4.1.2.9)
filter (1169)	pfsystems%pfsupplies%desc_supply%filter (filter) (9.4.1.3.183)
num (1226)	pfsystems%pfsupplies%desc_supply%filter%num (matflt_type) (9.4.1.2.7)
den (1226)	pfsystems%pfsupplies%desc_supply%filter%den (matflt_type) (9.4.1.2.7)
imin (1169)	pfsystems%pfsupplies%desc_supply%imin (vecflt_type) (9.4.1.2.9)
imax (1169)	pfsystems%pfsupplies%desc_supply%imax (vecflt_type) (9.4.1.2.9)
res (1169)	pfsystems%pfsupplies%desc_supply%res (vecflt_type) (9.4.1.2.9)
umin (1169)	pfsystems%pfsupplies%desc_supply%umin (vecflt_type) (9.4.1.2.9)
umax (1169)	pfsystems%pfsupplies%desc_supply%umax (vecflt_type) (9.4.1.2.9)
emax (1169)	pfsystems%pfsupplies%desc_supply%emax (vecflt_type) (9.4.1.2.9)
voltage (1320)	pfsystems%pfsupplies%voltage (exp1D) (9.4.1.3.180)
value (1223)	pfsystems%pfsupplies%voltage%value (vecflt_type) (9.4.1.2.9)
abserror (1223)	pfsystems%pfsupplies%voltage%abserror (vecflt_type) (9.4.1.2.9)
relelror (1223)	pfsystems%pfsupplies%voltage%relelror (vecflt_type) (9.4.1.2.9)
current (1320)	pfsystems%pfsupplies%current (exp1D) (9.4.1.3.180)
value (1223)	pfsystems%pfsupplies%current%value (vecflt_type) (9.4.1.2.9)
abserror (1223)	pfsystems%pfsupplies%current%abserror (vecflt_type) (9.4.1.2.9)
relelror (1223)	pfsystems%pfsupplies%current%relelror (vecflt_type) (9.4.1.2.9)
time (1077)	pfsystems%time (float) (9.4.1.1.1)

### 9.4.2.1.33 polarddiag

datainfo (1274)	lineintegraldiag%datainfo (datainfo) (9.4.1.3.120)
dataprovider (1163)	lineintegraldiag%datainfo%dataprovider (string) (9.4.1.1.3)
putdate (1163)	lineintegraldiag%datainfo%putdate (string) (9.4.1.1.3)
source (1163)	lineintegraldiag%datainfo%source (string) (9.4.1.1.3)
comment (1163)	lineintegraldiag%datainfo%comment (string) (9.4.1.1.3)
cocos (1163)	lineintegraldiag%datainfo%cocos (integer) (9.4.1.1.2)
id (1163)	lineintegraldiag%datainfo%id (integer) (9.4.1.1.2)
isref (1163)	lineintegraldiag%datainfo%isref (integer) (9.4.1.1.2)
whatref (1163)	lineintegraldiag%datainfo%whatref (whatref) (9.4.1.3.426)
user (1469)	lineintegraldiag%datainfo%whatref%user (string) (9.4.1.1.3)
machine (1469)	lineintegraldiag%datainfo%whatref%machine (string) (9.4.1.1.3)
shot (1469)	lineintegraldiag%datainfo%whatref%shot (integer) (9.4.1.1.2)
run (1469)	lineintegraldiag%datainfo%whatref%run (integer) (9.4.1.1.2)
occurrence (1469)	lineintegraldiag%datainfo%whatref%occurrence (integer) (9.4.1.1.2)
putinfo (1163)	lineintegraldiag%datainfo%putinfo (putinfo) (9.4.1.3.289)
putmethod (1332)	lineintegraldiag%datainfo%putinfo%putmethod (string) (9.4.1.1.3)
putaccess (1332)	lineintegraldiag%datainfo%putinfo%putaccess (string) (9.4.1.1.3)
putlocation (1332)	lineintegraldiag%datainfo%putinfo%putlocation (string) (9.4.1.1.3)
rights (1332)	lineintegraldiag%datainfo%putinfo%rights (string) (9.4.1.1.3)

expression (1274)	lineintegraldiag%expression (string) (9.4.1.1.3)
setup_line (1274)	lineintegraldiag%setup_line (setup_line) (9.4.1.3.356)
pivot_point (1399)	lineintegraldiag%setup_line%pivot_point (rzphi1D) (9.4.1.3.325)
r (1368)	lineintegraldiag%setup_line%pivot_point%r (vecflt_type) (9.4.1.2.9)
z (1368)	lineintegraldiag%setup_line%pivot_point%z (vecflt_type) (9.4.1.2.9)
phi (1368)	lineintegraldiag%setup_line%pivot_point%phi (vecflt_type) (9.4.1.2.9)
horchordang1 (1399)	lineintegraldiag%setup_line%horchordang1 (vecflt_type) (9.4.1.2.9)
verchordang1 (1399)	lineintegraldiag%setup_line%verchordang1 (vecflt_type) (9.4.1.2.9)
width (1399)	lineintegraldiag%setup_line%width (vecflt_type) (9.4.1.2.9)
second_point (1399)	lineintegraldiag%setup_line%second_point (rzphi1D) (9.4.1.3.325)
r (1368)	lineintegraldiag%setup_line%second_point%r (vecflt_type) (9.4.1.2.9)
z (1368)	lineintegraldiag%setup_line%second_point%z (vecflt_type) (9.4.1.2.9)
phi (1368)	lineintegraldiag%setup_line%second_point%phi (vecflt_type) (9.4.1.2.9)
horchordang2 (1399)	lineintegraldiag%setup_line%horchordang2 (vecflt_type) (9.4.1.2.9)
verchordang2 (1399)	lineintegraldiag%setup_line%verchordang2 (vecflt_type) (9.4.1.2.9)
third_point (1399)	lineintegraldiag%setup_line%third_point (rzphi1D) (9.4.1.3.325)
r (1368)	lineintegraldiag%setup_line%third_point%r (vecflt_type) (9.4.1.2.9)
z (1368)	lineintegraldiag%setup_line%third_point%z (vecflt_type) (9.4.1.2.9)
phi (1368)	lineintegraldiag%setup_line%third_point%phi (vecflt_type) (9.4.1.2.9)
nchordpoints (1399)	lineintegraldiag%setup_line%nchordpoints (integer) (9.4.1.1.2)
measure (1274)	lineintegraldiag%measure (exp1D) (9.4.1.3.180)
value (1223)	lineintegraldiag%measure%value (vecflt_type) (9.4.1.2.9)
abserror (1223)	lineintegraldiag%measure%abserror (vecflt_type) (9.4.1.2.9)
relerror (1223)	lineintegraldiag%measure%relerror (vecflt_type) (9.4.1.2.9)
time (1274)	lineintegraldiag%time (float) (9.4.1.1.1)

#### 9.4.2.1.34 reference

datainfo (1079)	reference%datainfo (datainfo) (9.4.1.3.120)
dataprovider (1163)	reference%datainfo%dataprovider (string) (9.4.1.1.3)
putdate (1163)	reference%datainfo%putdate (string) (9.4.1.1.3)
source (1163)	reference%datainfo%source (string) (9.4.1.1.3)
comment (1163)	reference%datainfo%comment (string) (9.4.1.1.3)
cocos (1163)	reference%datainfo%cocos (integer) (9.4.1.1.2)
id (1163)	reference%datainfo%id (integer) (9.4.1.1.2)
isref (1163)	reference%datainfo%isref (integer) (9.4.1.1.2)
whatref (1163)	reference%datainfo%whatref (whatref) (9.4.1.3.426)
user (1469)	reference%datainfo%whatref%user (string) (9.4.1.1.3)
machine (1469)	reference%datainfo%whatref%machine (string) (9.4.1.1.3)
shot (1469)	reference%datainfo%whatref%shot (integer) (9.4.1.1.2)
run (1469)	reference%datainfo%whatref%run (integer) (9.4.1.1.2)
occurrence (1469)	reference%datainfo%whatref%occurrence (integer) (9.4.1.1.2)
putinfo (1163)	reference%datainfo%putinfo (putinfo) (9.4.1.3.289)
putmethod (1332)	reference%datainfo%putinfo%putmethod (string) (9.4.1.1.3)
putaccess (1332)	reference%datainfo%putinfo%putaccess (string) (9.4.1.1.3)
putlocation (1332)	reference%datainfo%putinfo%putlocation (string) (9.4.1.1.3)
rights (1332)	reference%datainfo%putinfo%rights (string) (9.4.1.1.3)
non_timed (1079)	reference%non_timed (ref_nt) (9.4.1.3.293)
zerod_real (1336)	reference%non_timed%zerod_real (ref_nt_0dr) (9.4.1.3.296)
ref1 (1339)	reference%non_timed%zerod_real%ref1 (ref_nt_0dr_ref) (9.4.1.3.297)
value (1340)	reference%non_timed%zerod_real%ref1%value (float) (9.4.1.1.1)
description (1340)	reference%non_timed%zerod_real%ref1%description (string) (9.4.1.1.3)
ref2 (1339)	reference%non_timed%zerod_real%ref2 (ref_nt_0dr_ref) (9.4.1.3.297)
value (1340)	reference%non_timed%zerod_real%ref2%value (float) (9.4.1.1.1)
description (1340)	reference%non_timed%zerod_real%ref2%description (string) (9.4.1.1.3)
ref3 (1339)	reference%non_timed%zerod_real%ref3 (ref_nt_0dr_ref) (9.4.1.3.297)
value (1340)	reference%non_timed%zerod_real%ref3%value (float) (9.4.1.1.1)
description (1340)	reference%non_timed%zerod_real%ref3%description (string) (9.4.1.1.3)
ref4 (1339)	reference%non_timed%zerod_real%ref4 (ref_nt_0dr_ref) (9.4.1.3.297)
value (1340)	reference%non_timed%zerod_real%ref4%value (float) (9.4.1.1.1)
description (1340)	reference%non_timed%zerod_real%ref4%description (string) (9.4.1.1.3)

ref5 (1339)	reference%non_timed%zerod_real%ref5 (ref_nt_0dr_ref) (9.4.1.3.297)
value (1340)	reference%non_timed%zerod_real%ref5%value (float) (9.4.1.1.1)
description (1340)	reference%non_timed%zerod_real%ref5%description (string) (9.4.1.1.3)
ref6 (1339)	reference%non_timed%zerod_real%ref6 (ref_nt_0dr_ref) (9.4.1.3.297)
value (1340)	reference%non_timed%zerod_real%ref6%value (float) (9.4.1.1.1)
description (1340)	reference%non_timed%zerod_real%ref6%description (string) (9.4.1.1.3)
ref7 (1339)	reference%non_timed%zerod_real%ref7 (ref_nt_0dr_ref) (9.4.1.3.297)
value (1340)	reference%non_timed%zerod_real%ref7%value (float) (9.4.1.1.1)
description (1340)	reference%non_timed%zerod_real%ref7%description (string) (9.4.1.1.3)
zerod_int (1336)	reference%non_timed%zerod_int (ref_nt_0di) (9.4.1.3.294)
ref1 (1337)	reference%non_timed%zerod_int%ref1 (ref_nt_0di_ref) (9.4.1.3.295)
value (1338)	reference%non_timed%zerod_int%ref1%value (integer) (9.4.1.1.2)
description (1338)	reference%non_timed%zerod_int%ref1%description (string) (9.4.1.1.3)
ref2 (1337)	reference%non_timed%zerod_int%ref2 (ref_nt_0di_ref) (9.4.1.3.295)
value (1338)	reference%non_timed%zerod_int%ref2%value (integer) (9.4.1.1.2)
description (1338)	reference%non_timed%zerod_int%ref2%description (string) (9.4.1.1.3)
ref3 (1337)	reference%non_timed%zerod_int%ref3 (ref_nt_0di_ref) (9.4.1.3.295)
value (1338)	reference%non_timed%zerod_int%ref3%value (integer) (9.4.1.1.2)
description (1338)	reference%non_timed%zerod_int%ref3%description (string) (9.4.1.1.3)
ref4 (1337)	reference%non_timed%zerod_int%ref4 (ref_nt_0di_ref) (9.4.1.3.295)
value (1338)	reference%non_timed%zerod_int%ref4%value (integer) (9.4.1.1.2)
description (1338)	reference%non_timed%zerod_int%ref4%description (string) (9.4.1.1.3)
zerod_string (1336)	reference%non_timed%zerod_string (ref_nt_0ds) (9.4.1.3.298)
ref1 (1341)	reference%non_timed%zerod_string%ref1 (ref_nt_0ds_ref) (9.4.1.3.299)
value (1342)	reference%non_timed%zerod_string%ref1%value (string) (9.4.1.1.3)
description (1342)	reference%non_timed%zerod_string%ref1%description (string) (9.4.1.1.3)
ref2 (1341)	reference%non_timed%zerod_string%ref2 (ref_nt_0ds_ref) (9.4.1.3.299)
value (1342)	reference%non_timed%zerod_string%ref2%value (string) (9.4.1.1.3)
description (1342)	reference%non_timed%zerod_string%ref2%description (string) (9.4.1.1.3)
oned_real (1336)	reference%non_timed%oned_real (ref_nt_1dr) (9.4.1.3.302)
ref1 (1345)	reference%non_timed%oned_real%ref1 (ref_nt_1dr_ref) (9.4.1.3.303)
value (1346)	reference%non_timed%oned_real%ref1%value (vecflt_type) (9.4.1.2.9)
description (1346)	reference%non_timed%oned_real%ref1%description (string) (9.4.1.1.3)
ref2 (1345)	reference%non_timed%oned_real%ref2 (ref_nt_1dr_ref) (9.4.1.3.303)
value (1346)	reference%non_timed%oned_real%ref2%value (vecflt_type) (9.4.1.2.9)
description (1346)	reference%non_timed%oned_real%ref2%description (string) (9.4.1.1.3)
ref3 (1345)	reference%non_timed%oned_real%ref3 (ref_nt_1dr_ref) (9.4.1.3.303)
value (1346)	reference%non_timed%oned_real%ref3%value (vecflt_type) (9.4.1.2.9)
description (1346)	reference%non_timed%oned_real%ref3%description (string) (9.4.1.1.3)
ref4 (1345)	reference%non_timed%oned_real%ref4 (ref_nt_1dr_ref) (9.4.1.3.303)
value (1346)	reference%non_timed%oned_real%ref4%value (vecflt_type) (9.4.1.2.9)
description (1346)	reference%non_timed%oned_real%ref4%description (string) (9.4.1.1.3)
ref5 (1345)	reference%non_timed%oned_real%ref5 (ref_nt_1dr_ref) (9.4.1.3.303)
value (1346)	reference%non_timed%oned_real%ref5%value (vecflt_type) (9.4.1.2.9)
description (1346)	reference%non_timed%oned_real%ref5%description (string) (9.4.1.1.3)
oned_int (1336)	reference%non_timed%oned_int (ref_nt_1di) (9.4.1.3.300)
ref1 (1343)	reference%non_timed%oned_int%ref1 (ref_nt_1di_ref) (9.4.1.3.301)
value (1344)	reference%non_timed%oned_int%ref1%value (vecint_type) (9.4.1.2.10)
description (1344)	reference%non_timed%oned_int%ref1%description (string) (9.4.1.1.3)
ref2 (1343)	reference%non_timed%oned_int%ref2 (ref_nt_1di_ref) (9.4.1.3.301)
value (1344)	reference%non_timed%oned_int%ref2%value (vecint_type) (9.4.1.2.10)
description (1344)	reference%non_timed%oned_int%ref2%description (string) (9.4.1.1.3)
ref3 (1343)	reference%non_timed%oned_int%ref3 (ref_nt_1di_ref) (9.4.1.3.301)
value (1344)	reference%non_timed%oned_int%ref3%value (vecint_type) (9.4.1.2.10)
description (1344)	reference%non_timed%oned_int%ref3%description (string) (9.4.1.1.3)
ref4 (1343)	reference%non_timed%oned_int%ref4 (ref_nt_1di_ref) (9.4.1.3.301)
value (1344)	reference%non_timed%oned_int%ref4%value (vecint_type) (9.4.1.2.10)
description (1344)	reference%non_timed%oned_int%ref4%description (string) (9.4.1.1.3)
timed (1079)	reference%timed (ref_t) (9.4.1.3.304)
zerod_real (1347)	reference%timed%zerod_real (ref_t_0dr) (9.4.1.3.307)
ref1 (1350)	reference%timed%zerod_real%ref1 (ref_t_0dr_ref) (9.4.1.3.308)





description (1353)	reference%timed%oned.int%ref1%description (string) (9.4.1.1.3)
ref2 (1352)	reference%timed%oned.int%ref2 (ref.t.1di.ref) (9.4.1.3.310)
value (1353)	reference%timed%oned.int%ref2%value (vecint.type) (9.4.1.2.10)
description (1353)	reference%timed%oned.int%ref2%description (string) (9.4.1.1.3)
ref3 (1352)	reference%timed%oned.int%ref3 (ref.t.1di.ref) (9.4.1.3.310)
value (1353)	reference%timed%oned.int%ref3%value (vecint.type) (9.4.1.2.10)
description (1353)	reference%timed%oned.int%ref3%description (string) (9.4.1.1.3)
ref4 (1352)	reference%timed%oned.int%ref4 (ref.t.1di.ref) (9.4.1.3.310)
value (1353)	reference%timed%oned.int%ref4%value (vecint.type) (9.4.1.2.10)
description (1353)	reference%timed%oned.int%ref4%description (string) (9.4.1.1.3)
time (1079)	reference%time (float) (9.4.1.1.1)

### 9.4.2.1.35 rfadiag

datainfo (1080)	rfadiag%datainfo (datainfo) (9.4.1.3.120)
dataprovder (1163)	rfadiag%datainfo%dataprovder (string) (9.4.1.1.3)
putdate (1163)	rfadiag%datainfo%putdate (string) (9.4.1.1.3)
source (1163)	rfadiag%datainfo%source (string) (9.4.1.1.3)
comment (1163)	rfadiag%datainfo%comment (string) (9.4.1.1.3)
cocos (1163)	rfadiag%datainfo%cocos (integer) (9.4.1.1.2)
id (1163)	rfadiag%datainfo%id (integer) (9.4.1.1.2)
isref (1163)	rfadiag%datainfo%isref (integer) (9.4.1.1.2)
whatref (1163)	rfadiag%datainfo%whatref (whatref) (9.4.1.3.426)
user (1469)	rfadiag%datainfo%whatref%user (string) (9.4.1.1.3)
machine (1469)	rfadiag%datainfo%whatref%machine (string) (9.4.1.1.3)
shot (1469)	rfadiag%datainfo%whatref%shot (integer) (9.4.1.1.2)
run (1469)	rfadiag%datainfo%whatref%run (integer) (9.4.1.1.2)
occurrence (1469)	rfadiag%datainfo%whatref%occurrence (integer) (9.4.1.1.2)
putinfo (1163)	rfadiag%datainfo%putinfo (putinfo) (9.4.1.3.289)
putmethod (1332)	rfadiag%datainfo%putinfo%putmethod (string) (9.4.1.1.3)
putaccess (1332)	rfadiag%datainfo%putinfo%putaccess (string) (9.4.1.1.3)
putlocation (1332)	rfadiag%datainfo%putinfo%putlocation (string) (9.4.1.1.3)
rights (1332)	rfadiag%datainfo%putinfo%rights (string) (9.4.1.1.3)
setup (1080)	rfadiag%setup (rfasetup) (9.4.1.3.316)
position (1359)	rfadiag%setup%position (rzphi1Dexp) (9.4.1.3.326)
r (1369)	rfadiag%setup%position%r (exp1D) (9.4.1.3.180)
value (1223)	rfadiag%setup%position%r%value (vecflt.type) (9.4.1.2.9)
abserror (1223)	rfadiag%setup%position%r%abserror (vecflt.type) (9.4.1.2.9)
relerror (1223)	rfadiag%setup%position%r%relerror (vecflt.type) (9.4.1.2.9)
z (1369)	rfadiag%setup%position%z (exp1D) (9.4.1.3.180)
value (1223)	rfadiag%setup%position%z%value (vecflt.type) (9.4.1.2.9)
abserror (1223)	rfadiag%setup%position%z%abserror (vecflt.type) (9.4.1.2.9)
relerror (1223)	rfadiag%setup%position%z%relerror (vecflt.type) (9.4.1.2.9)
phi (1369)	rfadiag%setup%position%phi (exp1D) (9.4.1.3.180)
value (1223)	rfadiag%setup%position%phi%value (vecflt.type) (9.4.1.2.9)
abserror (1223)	rfadiag%setup%position%phi%abserror (vecflt.type) (9.4.1.2.9)
relerror (1223)	rfadiag%setup%position%phi%relerror (vecflt.type) (9.4.1.2.9)
measure (1080)	rfadiag%measure (rfameasure) (9.4.1.3.315)
ti (1358)	rfadiag%measure%ti (exp1D) (9.4.1.3.180)
value (1223)	rfadiag%measure%ti%value (vecflt.type) (9.4.1.2.9)
abserror (1223)	rfadiag%measure%ti%abserror (vecflt.type) (9.4.1.2.9)
relerror (1223)	rfadiag%measure%ti%relerror (vecflt.type) (9.4.1.2.9)
time (1080)	rfadiag%time (float) (9.4.1.1.1)

### 9.4.2.1.36 sawteeth

datainfo (1081)	sawteeth%datainfo (datainfo) (9.4.1.3.120)
dataprovder (1163)	sawteeth%datainfo%dataprovder (string) (9.4.1.1.3)
putdate (1163)	sawteeth%datainfo%putdate (string) (9.4.1.1.3)
source (1163)	sawteeth%datainfo%source (string) (9.4.1.1.3)
comment (1163)	sawteeth%datainfo%comment (string) (9.4.1.1.3)



cocos (1163)	sawteeth%datainfo%cocos (integer) (9.4.1.1.2)
id (1163)	sawteeth%datainfo%id (integer) (9.4.1.1.2)
isref (1163)	sawteeth%datainfo%isref (integer) (9.4.1.1.2)
whatref (1163)	sawteeth%datainfo%whatref (whatref) (9.4.1.3.426)
user (1469)	sawteeth%datainfo%whatref%user (string) (9.4.1.1.3)
machine (1469)	sawteeth%datainfo%whatref%machine (string) (9.4.1.1.3)
shot (1469)	sawteeth%datainfo%whatref%shot (integer) (9.4.1.1.2)
run (1469)	sawteeth%datainfo%whatref%run (integer) (9.4.1.1.2)
occurrence (1469)	sawteeth%datainfo%whatref%occurrence (integer) (9.4.1.1.2)
putinfo (1163)	sawteeth%datainfo%putinfo (putinfo) (9.4.1.3.289)
putmethod (1332)	sawteeth%datainfo%putinfo%putmethod (string) (9.4.1.1.3)
putaccess (1332)	sawteeth%datainfo%putinfo%putaccess (string) (9.4.1.1.3)
putlocation (1332)	sawteeth%datainfo%putinfo%putlocation (string) (9.4.1.1.3)
rights (1332)	sawteeth%datainfo%putinfo%rights (string) (9.4.1.1.3)
crash_trig (1081)	sawteeth%crash_trig (integer) (9.4.1.1.2)
composition (1081)	sawteeth%composition (composition) (9.4.1.3.83)
amn (1126)	sawteeth%composition%amn (vecflt_type) (9.4.1.2.9)
zn (1126)	sawteeth%composition%zn (vecflt_type) (9.4.1.2.9)
zion (1126)	sawteeth%composition%zion (vecflt_type) (9.4.1.2.9)
imp_flag (1126)	sawteeth%composition%imp_flag (vecint_type) (9.4.1.2.10)
label (1126)	sawteeth%composition%label (vecstring_type) (9.4.1.2.11)
rho_tor_norm (1081)	sawteeth%rho_tor_norm (vecflt_type) (9.4.1.2.9)
rho_tor (1081)	sawteeth%rho_tor (vecflt_type) (9.4.1.2.9)
profiles1d (1081)	sawteeth%profiles1d (sawteeth_profiles1d) (9.4.1.3.331)
ne (1374)	sawteeth%profiles1d%ne (vecflt_type) (9.4.1.2.9)
ni (1374)	sawteeth%profiles1d%ni (matflt_type) (9.4.1.2.7)
te (1374)	sawteeth%profiles1d%te (vecflt_type) (9.4.1.2.9)
ti (1374)	sawteeth%profiles1d%ti (matflt_type) (9.4.1.2.7)
psi (1374)	sawteeth%profiles1d%psi (vecflt_type) (9.4.1.2.9)
phi (1374)	sawteeth%profiles1d%phi (vecflt_type) (9.4.1.2.9)
psistar (1374)	sawteeth%profiles1d%psistar (vecflt_type) (9.4.1.2.9)
volume (1374)	sawteeth%profiles1d%volume (vecflt_type) (9.4.1.2.9)
q (1374)	sawteeth%profiles1d%q (vecflt_type) (9.4.1.2.9)
diags (1081)	sawteeth%diags (sawteeth_diags) (9.4.1.3.330)
shear1 (1373)	sawteeth%diags%shear1 (float) (9.4.1.1.1)
rhotorn.q1 (1373)	sawteeth%diags%rhotorn.q1 (float) (9.4.1.1.1)
rhotorn.inv (1373)	sawteeth%diags%rhotorn.inv (float) (9.4.1.1.1)
rhotorn.mix (1373)	sawteeth%diags%rhotorn.mix (float) (9.4.1.1.1)
codeparam (1081)	sawteeth%codeparam (codeparam) (9.4.1.3.65)
codename (1108)	sawteeth%codeparam%codename (string) (9.4.1.1.3)
codeversion (1108)	sawteeth%codeparam%codeversion (string) (9.4.1.1.3)
parameters (1108)	sawteeth%codeparam%parameters (string) (9.4.1.1.3)
output_diag (1108)	sawteeth%codeparam%output_diag (string) (9.4.1.1.3)
output_flag (1108)	sawteeth%codeparam%output_flag (integer) (9.4.1.1.2)
time (1081)	sawteeth%time (float) (9.4.1.1.1)

### 9.4.2.1.37 scenario

datainfo (1082)	scenario%datainfo (datainfo) (9.4.1.3.120)
dataprovider (1163)	scenario%datainfo%dataprovider (string) (9.4.1.1.3)
putdate (1163)	scenario%datainfo%putdate (string) (9.4.1.1.3)
source (1163)	scenario%datainfo%source (string) (9.4.1.1.3)
comment (1163)	scenario%datainfo%comment (string) (9.4.1.1.3)
cocos (1163)	scenario%datainfo%cocos (integer) (9.4.1.1.2)
id (1163)	scenario%datainfo%id (integer) (9.4.1.1.2)
isref (1163)	scenario%datainfo%isref (integer) (9.4.1.1.2)
whatref (1163)	scenario%datainfo%whatref (whatref) (9.4.1.3.426)
user (1469)	scenario%datainfo%whatref%user (string) (9.4.1.1.3)
machine (1469)	scenario%datainfo%whatref%machine (string) (9.4.1.1.3)
shot (1469)	scenario%datainfo%whatref%shot (integer) (9.4.1.1.2)
run (1469)	scenario%datainfo%whatref%run (integer) (9.4.1.1.2)

occurrence (1469)	scenario%datainfo%whatref%occurrence (integer) (9.4.1.1.2)
putinfo (1163)	scenario%datainfo%putinfo (putinfo) (9.4.1.3.289)
putmethod (1332)	scenario%datainfo%putinfo%putmethod (string) (9.4.1.1.3)
putaccess (1332)	scenario%datainfo%putinfo%putaccess (string) (9.4.1.1.3)
putlocation (1332)	scenario%datainfo%putinfo%putlocation (string) (9.4.1.1.3)
rights (1332)	scenario%datainfo%putinfo%rights (string) (9.4.1.1.3)
centre (1082)	scenario%centre (scenario_centre) (9.4.1.3.332)
te0 (1375)	scenario%centre%te0 (scenario_ref) (9.4.1.3.349)
value (1392)	scenario%centre%te0%value (float) (9.4.1.1.1)
source (1392)	scenario%centre%te0%source (string) (9.4.1.1.3)
ti0 (1375)	scenario%centre%ti0 (scenario_ref) (9.4.1.3.349)
value (1392)	scenario%centre%ti0%value (float) (9.4.1.1.1)
source (1392)	scenario%centre%ti0%source (string) (9.4.1.1.3)
ne0 (1375)	scenario%centre%ne0 (scenario_ref) (9.4.1.3.349)
value (1392)	scenario%centre%ne0%value (float) (9.4.1.1.1)
source (1392)	scenario%centre%ne0%source (string) (9.4.1.1.3)
ni0 (1375)	scenario%centre%ni0 (scenario_ref) (9.4.1.3.349)
value (1392)	scenario%centre%ni0%value (float) (9.4.1.1.1)
source (1392)	scenario%centre%ni0%source (string) (9.4.1.1.3)
shift0 (1375)	scenario%centre%shift0 (scenario_ref) (9.4.1.3.349)
value (1392)	scenario%centre%shift0%value (float) (9.4.1.1.1)
source (1392)	scenario%centre%shift0%source (string) (9.4.1.1.3)
psi0 (1375)	scenario%centre%psi0 (scenario_ref) (9.4.1.3.349)
value (1392)	scenario%centre%psi0%value (float) (9.4.1.1.1)
source (1392)	scenario%centre%psi0%source (string) (9.4.1.1.3)
phi0 (1375)	scenario%centre%phi0 (scenario_ref) (9.4.1.3.349)
value (1392)	scenario%centre%phi0%value (float) (9.4.1.1.1)
source (1392)	scenario%centre%phi0%source (string) (9.4.1.1.3)
q0 (1375)	scenario%centre%q0 (scenario_ref) (9.4.1.3.349)
value (1392)	scenario%centre%q0%value (float) (9.4.1.1.1)
source (1392)	scenario%centre%q0%source (string) (9.4.1.1.3)
Rmag (1375)	scenario%centre%Rmag (scenario_ref) (9.4.1.3.349)
value (1392)	scenario%centre%Rmag%value (float) (9.4.1.1.1)
source (1392)	scenario%centre%Rmag%source (string) (9.4.1.1.3)
Zmag (1375)	scenario%centre%Zmag (scenario_ref) (9.4.1.3.349)
value (1392)	scenario%centre%Zmag%value (float) (9.4.1.1.1)
source (1392)	scenario%centre%Zmag%source (string) (9.4.1.1.3)
vtor.0 (1375)	scenario%centre%vtor.0 (scenario_ref) (9.4.1.3.349)
value (1392)	scenario%centre%vtor.0%value (float) (9.4.1.1.1)
source (1392)	scenario%centre%vtor.0%source (string) (9.4.1.1.3)
composition (1082)	scenario%composition (scenario_composition) (9.4.1.3.333)
amn (1376)	scenario%composition%amn (vecflt_type) (9.4.1.2.9)
zn (1376)	scenario%composition%zn (vecflt_type) (9.4.1.2.9)
zion (1376)	scenario%composition%zion (vecflt_type) (9.4.1.2.9)
imp_flag (1376)	scenario%composition%imp_flag (vecint_type) (9.4.1.2.10)
rot_imp_flag (1376)	scenario%composition%rot_imp_flag (vecint_type) (9.4.1.2.10)
pellet.amn (1376)	scenario%composition%pellet.amn (vecflt_type) (9.4.1.2.9)
pellet.zn (1376)	scenario%composition%pellet.zn (vecflt_type) (9.4.1.2.9)
nbi.amn (1376)	scenario%composition%nbi.amn (vecflt_type) (9.4.1.2.9)
nbi.zn (1376)	scenario%composition%nbi.zn (vecflt_type) (9.4.1.2.9)
configs (1082)	scenario%configs (scenario_configuration) (9.4.1.3.334)
config (1377)	scenario%configs%config (scenario_int) (9.4.1.3.341)
value (1384)	scenario%configs%config%value (integer) (9.4.1.1.2)
source (1384)	scenario%configs%config%source (string) (9.4.1.1.3)
lmode.sc (1377)	scenario%configs%lmode.sc (string) (9.4.1.1.3)
hmode.sc (1377)	scenario%configs%hmode.sc (string) (9.4.1.1.3)
core.sc (1377)	scenario%configs%core.sc (string) (9.4.1.1.3)
pedestal.sc (1377)	scenario%configs%pedestal.sc (string) (9.4.1.1.3)
helium.sc (1377)	scenario%configs%helium.sc (string) (9.4.1.1.3)
impurity.sc (1377)	scenario%configs%impurity.sc (string) (9.4.1.1.3)
l2h.sc (1377)	scenario%configs%l2h.sc (string) (9.4.1.1.3)

tor_rot_sc (1377)	scenario%configs%tor_rot_sc (string) (9.4.1.1.3)
wall_mat (1377)	scenario%configs%wall_mat (string) (9.4.1.1.3)
evap_mat (1377)	scenario%configs%evap_mat (string) (9.4.1.1.3)
lim_mat (1377)	scenario%configs%lim_mat (string) (9.4.1.1.3)
div_mat (1377)	scenario%configs%div_mat (string) (9.4.1.1.3)
coordinate (1377)	scenario%configs%coordinate (string) (9.4.1.1.3)
ecrh_freq (1377)	scenario%configs%ecrh_freq (scenario_ref) (9.4.1.3.349)
value (1392)	scenario%configs%ecrh_freq%value (float) (9.4.1.1.1)
source (1392)	scenario%configs%ecrh_freq%source (string) (9.4.1.1.3)
ecrh_loc (1377)	scenario%configs%ecrh_loc (scenario_ref) (9.4.1.3.349)
value (1392)	scenario%configs%ecrh_loc%value (float) (9.4.1.1.1)
source (1392)	scenario%configs%ecrh_loc%source (string) (9.4.1.1.3)
ecrh_mode (1377)	scenario%configs%ecrh_mode (scenario_int) (9.4.1.3.341)
value (1384)	scenario%configs%ecrh_mode%value (integer) (9.4.1.1.2)
source (1384)	scenario%configs%ecrh_mode%source (string) (9.4.1.1.3)
ecrh_tor_ang (1377)	scenario%configs%ecrh_tor_ang (scenario_ref) (9.4.1.3.349)
value (1392)	scenario%configs%ecrh_tor_ang%value (float) (9.4.1.1.1)
source (1392)	scenario%configs%ecrh_tor_ang%source (string) (9.4.1.1.3)
ecrh_pol_ang (1377)	scenario%configs%ecrh_pol_ang (scenario_ref) (9.4.1.3.349)
value (1392)	scenario%configs%ecrh_pol_ang%value (float) (9.4.1.1.1)
source (1392)	scenario%configs%ecrh_pol_ang%source (string) (9.4.1.1.3)
ecrh_harm (1377)	scenario%configs%ecrh_harm (scenario_int) (9.4.1.3.341)
value (1384)	scenario%configs%ecrh_harm%value (integer) (9.4.1.1.2)
source (1384)	scenario%configs%ecrh_harm%source (string) (9.4.1.1.3)
enbi (1377)	scenario%configs%enbi (scenario_ref) (9.4.1.3.349)
value (1392)	scenario%configs%enbi%value (float) (9.4.1.1.1)
source (1392)	scenario%configs%enbi%source (string) (9.4.1.1.3)
r_nbi (1377)	scenario%configs%r_nbi (scenario_ref) (9.4.1.3.349)
value (1392)	scenario%configs%r_nbi%value (float) (9.4.1.1.1)
source (1392)	scenario%configs%r_nbi%source (string) (9.4.1.1.3)
grad_b_drift (1377)	scenario%configs%grad_b_drift (scenario_int) (9.4.1.3.341)
value (1384)	scenario%configs%grad_b_drift%value (integer) (9.4.1.1.2)
source (1384)	scenario%configs%grad_b_drift%source (string) (9.4.1.1.3)
icrh_freq (1377)	scenario%configs%icrh_freq (scenario_ref) (9.4.1.3.349)
value (1392)	scenario%configs%icrh_freq%value (float) (9.4.1.1.1)
source (1392)	scenario%configs%icrh_freq%source (string) (9.4.1.1.3)
icrh_scheme (1377)	scenario%configs%icrh_scheme (string) (9.4.1.1.3)
icrh_phase (1377)	scenario%configs%icrh_phase (scenario_ref) (9.4.1.3.349)
value (1392)	scenario%configs%icrh_phase%value (float) (9.4.1.1.1)
source (1392)	scenario%configs%icrh_phase%source (string) (9.4.1.1.3)
LH_freq (1377)	scenario%configs%LH_freq (scenario_ref) (9.4.1.3.349)
value (1392)	scenario%configs%LH_freq%value (float) (9.4.1.1.1)
source (1392)	scenario%configs%LH_freq%source (string) (9.4.1.1.3)
LH_npar (1377)	scenario%configs%LH_npar (scenario_ref) (9.4.1.3.349)
value (1392)	scenario%configs%LH_npar%value (float) (9.4.1.1.1)
source (1392)	scenario%configs%LH_npar%source (string) (9.4.1.1.3)
pellet_ang (1377)	scenario%configs%pellet_ang (scenario_ref) (9.4.1.3.349)
value (1392)	scenario%configs%pellet_ang%value (float) (9.4.1.1.1)
source (1392)	scenario%configs%pellet_ang%source (string) (9.4.1.1.3)
pellet_v (1377)	scenario%configs%pellet_v (scenario_ref) (9.4.1.3.349)
value (1392)	scenario%configs%pellet_v%value (float) (9.4.1.1.1)
source (1392)	scenario%configs%pellet_v%source (string) (9.4.1.1.3)
pellet_nba (1377)	scenario%configs%pellet_nba (scenario_ref) (9.4.1.3.349)
value (1392)	scenario%configs%pellet_nba%value (float) (9.4.1.1.1)
source (1392)	scenario%configs%pellet_nba%source (string) (9.4.1.1.3)
confinement (1082)	scenario%confinement (scenario_confinement) (9.4.1.3.335)
tau_e (1378)	scenario%confinement%tau_e (scenario_ref) (9.4.1.3.349)
value (1392)	scenario%confinement%tau_e%value (float) (9.4.1.1.1)
source (1392)	scenario%confinement%tau_e%source (string) (9.4.1.1.3)
tau_l_sc (1378)	scenario%confinement%tau_l_sc (scenario_ref) (9.4.1.3.349)
value (1392)	scenario%confinement%tau_l_sc%value (float) (9.4.1.1.1)

source (1392)	scenario%confinement%tau_l.sc%source (string) (9.4.1.1.3)
tau_h.sc (1378)	scenario%confinement%tau_h.sc (scenario_ref) (9.4.1.3.349)
value (1392)	scenario%confinement%tau_h.sc%value (float) (9.4.1.1.1)
source (1392)	scenario%confinement%tau_h.sc%source (string) (9.4.1.1.3)
tau_he (1378)	scenario%confinement%tau_he (scenario_ref) (9.4.1.3.349)
value (1392)	scenario%confinement%tau_he%value (float) (9.4.1.1.1)
source (1392)	scenario%confinement%tau_he%source (string) (9.4.1.1.3)
tau_e.ee (1378)	scenario%confinement%tau_e.ee (scenario_ref) (9.4.1.3.349)
value (1392)	scenario%confinement%tau_e.ee%value (float) (9.4.1.1.1)
source (1392)	scenario%confinement%tau_e.ee%source (string) (9.4.1.1.3)
tau_e.ii (1378)	scenario%confinement%tau_e.ii (scenario_ref) (9.4.1.3.349)
value (1392)	scenario%confinement%tau_e.ii%value (float) (9.4.1.1.1)
source (1392)	scenario%confinement%tau_e.ii%source (string) (9.4.1.1.3)
tau_e.ei (1378)	scenario%confinement%tau_e.ei (scenario_ref) (9.4.1.3.349)
value (1392)	scenario%confinement%tau_e.ei%value (float) (9.4.1.1.1)
source (1392)	scenario%confinement%tau_e.ei%source (string) (9.4.1.1.3)
tau_cur.diff (1378)	scenario%confinement%tau_cur.diff (scenario_ref) (9.4.1.3.349)
value (1392)	scenario%confinement%tau_cur.diff%value (float) (9.4.1.1.1)
source (1392)	scenario%confinement%tau_cur.diff%source (string) (9.4.1.1.3)
tau_i.rol (1378)	scenario%confinement%tau_i.rol (scenario_ref) (9.4.1.3.349)
value (1392)	scenario%confinement%tau_i.rol%value (float) (9.4.1.1.1)
source (1392)	scenario%confinement%tau_i.rol%source (string) (9.4.1.1.3)
currents (1082)	scenario%currents (scenario_currents) (9.4.1.3.336)
RR (1379)	scenario%currents%RR (scenario_ref) (9.4.1.3.349)
value (1392)	scenario%currents%RR%value (float) (9.4.1.1.1)
source (1392)	scenario%currents%RR%source (string) (9.4.1.1.3)
i.align (1379)	scenario%currents%i.align (scenario_ref) (9.4.1.3.349)
value (1392)	scenario%currents%i.align%value (float) (9.4.1.1.1)
source (1392)	scenario%currents%i.align%source (string) (9.4.1.1.3)
i.boot (1379)	scenario%currents%i.boot (scenario_ref) (9.4.1.3.349)
value (1392)	scenario%currents%i.boot%value (float) (9.4.1.1.1)
source (1392)	scenario%currents%i.boot%source (string) (9.4.1.1.3)
i.cd.tot (1379)	scenario%currents%i.cd.tot (scenario_ref) (9.4.1.3.349)
value (1392)	scenario%currents%i.cd.tot%value (float) (9.4.1.1.1)
source (1392)	scenario%currents%i.cd.tot%source (string) (9.4.1.1.3)
i.eccd (1379)	scenario%currents%i.eccd (scenario_ref) (9.4.1.3.349)
value (1392)	scenario%currents%i.eccd%value (float) (9.4.1.1.1)
source (1392)	scenario%currents%i.eccd%source (string) (9.4.1.1.3)
i.fast.ion (1379)	scenario%currents%i.fast.ion (scenario_ref) (9.4.1.3.349)
value (1392)	scenario%currents%i.fast.ion%value (float) (9.4.1.1.1)
source (1392)	scenario%currents%i.fast.ion%source (string) (9.4.1.1.3)
i.fwcd (1379)	scenario%currents%i.fwcd (scenario_ref) (9.4.1.3.349)
value (1392)	scenario%currents%i.fwcd%value (float) (9.4.1.1.1)
source (1392)	scenario%currents%i.fwcd%source (string) (9.4.1.1.3)
i.lhcd (1379)	scenario%currents%i.lhcd (scenario_ref) (9.4.1.3.349)
value (1392)	scenario%currents%i.lhcd%value (float) (9.4.1.1.1)
source (1392)	scenario%currents%i.lhcd%source (string) (9.4.1.1.3)
i.nbicd (1379)	scenario%currents%i.nbicd (scenario_ref) (9.4.1.3.349)
value (1392)	scenario%currents%i.nbicd%value (float) (9.4.1.1.1)
source (1392)	scenario%currents%i.nbicd%source (string) (9.4.1.1.3)
i.ni.tot (1379)	scenario%currents%i.ni.tot (scenario_ref) (9.4.1.3.349)
value (1392)	scenario%currents%i.ni.tot%value (float) (9.4.1.1.1)
source (1392)	scenario%currents%i.ni.tot%source (string) (9.4.1.1.3)
i.ohm (1379)	scenario%currents%i.ohm (scenario_ref) (9.4.1.3.349)
value (1392)	scenario%currents%i.ohm%value (float) (9.4.1.1.1)
source (1392)	scenario%currents%i.ohm%source (string) (9.4.1.1.3)
i.par (1379)	scenario%currents%i.par (scenario_ref) (9.4.1.3.349)
value (1392)	scenario%currents%i.par%value (float) (9.4.1.1.1)
source (1392)	scenario%currents%i.par%source (string) (9.4.1.1.3)
i.runaway (1379)	scenario%currents%i.runaway (scenario_ref) (9.4.1.3.349)
value (1392)	scenario%currents%i.runaway%value (float) (9.4.1.1.1)

source (1392)	scenario%currents%i_runaway%source (string) (9.4.1.1.3)
v_loop (1379)	scenario%currents%v_loop (scenario_ref) (9.4.1.3.349)
value (1392)	scenario%currents%v_loop%value (float) (9.4.1.1.1)
source (1392)	scenario%currents%v_loop%source (string) (9.4.1.1.3)
v_meas (1379)	scenario%currents%v_meas (scenario_ref) (9.4.1.3.349)
value (1392)	scenario%currents%v_meas%value (float) (9.4.1.1.1)
source (1392)	scenario%currents%v_meas%source (string) (9.4.1.1.3)
edge (1082)	scenario%edge (scenario_edge) (9.4.1.3.337)
te_edge (1380)	scenario%edge%te_edge (scenario_ref) (9.4.1.3.349)
value (1392)	scenario%edge%te_edge%value (float) (9.4.1.1.1)
source (1392)	scenario%edge%te_edge%source (string) (9.4.1.1.3)
ti_edge (1380)	scenario%edge%ti_edge (scenario_ref) (9.4.1.3.349)
value (1392)	scenario%edge%ti_edge%value (float) (9.4.1.1.1)
source (1392)	scenario%edge%ti_edge%source (string) (9.4.1.1.3)
ne_edge (1380)	scenario%edge%ne_edge (scenario_ref) (9.4.1.3.349)
value (1392)	scenario%edge%ne_edge%value (float) (9.4.1.1.1)
source (1392)	scenario%edge%ne_edge%source (string) (9.4.1.1.3)
ni_edge (1380)	scenario%edge%ni_edge (scenario_ref) (9.4.1.3.349)
value (1392)	scenario%edge%ni_edge%value (float) (9.4.1.1.1)
source (1392)	scenario%edge%ni_edge%source (string) (9.4.1.1.3)
psi_edge (1380)	scenario%edge%psi_edge (scenario_ref) (9.4.1.3.349)
value (1392)	scenario%edge%psi_edge%value (float) (9.4.1.1.1)
source (1392)	scenario%edge%psi_edge%source (string) (9.4.1.1.3)
phi_edge (1380)	scenario%edge%phi_edge (scenario_ref) (9.4.1.3.349)
value (1392)	scenario%edge%phi_edge%value (float) (9.4.1.1.1)
source (1392)	scenario%edge%phi_edge%source (string) (9.4.1.1.3)
rho_edge (1380)	scenario%edge%rho_edge (scenario_ref) (9.4.1.3.349)
value (1392)	scenario%edge%rho_edge%value (float) (9.4.1.1.1)
source (1392)	scenario%edge%rho_edge%source (string) (9.4.1.1.3)
drho_edge_dt (1380)	scenario%edge%drho_edge_dt (scenario_ref) (9.4.1.3.349)
value (1392)	scenario%edge%drho_edge_dt%value (float) (9.4.1.1.1)
source (1392)	scenario%edge%drho_edge_dt%source (string) (9.4.1.1.3)
q_edge (1380)	scenario%edge%q_edge (scenario_ref) (9.4.1.3.349)
value (1392)	scenario%edge%q_edge%value (float) (9.4.1.1.1)
source (1392)	scenario%edge%q_edge%source (string) (9.4.1.1.3)
neutral_flux (1380)	scenario%edge%neutral_flux (scenario_ref) (9.4.1.3.349)
value (1392)	scenario%edge%neutral_flux%value (float) (9.4.1.1.1)
source (1392)	scenario%edge%neutral_flux%source (string) (9.4.1.1.3)
phi_plasma (1380)	scenario%edge%phi_plasma (scenario_ref) (9.4.1.3.349)
value (1392)	scenario%edge%phi_plasma%value (float) (9.4.1.1.1)
source (1392)	scenario%edge%phi_plasma%source (string) (9.4.1.1.3)
vtor_edge (1380)	scenario%edge%vtor_edge (scenario_ref) (9.4.1.3.349)
value (1392)	scenario%edge%vtor_edge%value (float) (9.4.1.1.1)
source (1392)	scenario%edge%vtor_edge%source (string) (9.4.1.1.3)
energy (1082)	scenario%energy (scenario_energy) (9.4.1.3.338)
w_tot (1381)	scenario%energy%w_tot (scenario_ref) (9.4.1.3.349)
value (1392)	scenario%energy%w_tot%value (float) (9.4.1.1.1)
source (1392)	scenario%energy%w_tot%source (string) (9.4.1.1.3)
w_b_pol (1381)	scenario%energy%w_b_pol (scenario_ref) (9.4.1.3.349)
value (1392)	scenario%energy%w_b_pol%value (float) (9.4.1.1.1)
source (1392)	scenario%energy%w_b_pol%source (string) (9.4.1.1.3)
w_dia (1381)	scenario%energy%w_dia (scenario_ref) (9.4.1.3.349)
value (1392)	scenario%energy%w_dia%value (float) (9.4.1.1.1)
source (1392)	scenario%energy%w_dia%source (string) (9.4.1.1.3)
dwdia_dt (1381)	scenario%energy%dwdia_dt (scenario_ref) (9.4.1.3.349)
value (1392)	scenario%energy%dwdia_dt%value (float) (9.4.1.1.1)
source (1392)	scenario%energy%dwdia_dt%source (string) (9.4.1.1.3)
w_b_tor_pla (1381)	scenario%energy%w_b_tor_pla (scenario_ref) (9.4.1.3.349)
value (1392)	scenario%energy%w_b_tor_pla%value (float) (9.4.1.1.1)
source (1392)	scenario%energy%w_b_tor_pla%source (string) (9.4.1.1.3)
w_th (1381)	scenario%energy%w_th (scenario_ref) (9.4.1.3.349)

value (1392)	scenario%energy%w_th%value (float) (9.4.1.1.1)
source (1392)	scenario%energy%w_th%source (string) (9.4.1.1.3)
dwtot.dt (1381)	scenario%energy%dwtot.dt (scenario_ref) (9.4.1.3.349)
value (1392)	scenario%energy%dwtot.dt%value (float) (9.4.1.1.1)
source (1392)	scenario%energy%dwtot.dt%source (string) (9.4.1.1.3)
dwbpol.dt (1381)	scenario%energy%dwbpol.dt (scenario_ref) (9.4.1.3.349)
value (1392)	scenario%energy%dwbpol.dt%value (float) (9.4.1.1.1)
source (1392)	scenario%energy%dwbpol.dt%source (string) (9.4.1.1.3)
dwbtorpla.dt (1381)	scenario%energy%dwbtorpla.dt (scenario_ref) (9.4.1.3.349)
value (1392)	scenario%energy%dwbtorpla.dt%value (float) (9.4.1.1.1)
source (1392)	scenario%energy%dwbtorpla.dt%source (string) (9.4.1.1.3)
dwth.dt (1381)	scenario%energy%dwth.dt (scenario_ref) (9.4.1.3.349)
value (1392)	scenario%energy%dwth.dt%value (float) (9.4.1.1.1)
source (1392)	scenario%energy%dwth.dt%source (string) (9.4.1.1.3)
esup_icrhtot (1381)	scenario%energy%esup_icrhtot (scenario_ref) (9.4.1.3.349)
value (1392)	scenario%energy%esup_icrhtot%value (float) (9.4.1.1.1)
source (1392)	scenario%energy%esup_icrhtot%source (string) (9.4.1.1.3)
esup_icrhper (1381)	scenario%energy%esup_icrhper (scenario_ref) (9.4.1.3.349)
value (1392)	scenario%energy%esup_icrhper%value (float) (9.4.1.1.1)
source (1392)	scenario%energy%esup_icrhper%source (string) (9.4.1.1.3)
esup_nbitot (1381)	scenario%energy%esup_nbitot (scenario_ref) (9.4.1.3.349)
value (1392)	scenario%energy%esup_nbitot%value (float) (9.4.1.1.1)
source (1392)	scenario%energy%esup_nbitot%source (string) (9.4.1.1.3)
esup_nbiperp (1381)	scenario%energy%esup_nbiperp (scenario_ref) (9.4.1.3.349)
value (1392)	scenario%energy%esup_nbiperp%value (float) (9.4.1.1.1)
source (1392)	scenario%energy%esup_nbiperp%source (string) (9.4.1.1.3)
esup_lhcd (1381)	scenario%energy%esup_lhcd (scenario_ref) (9.4.1.3.349)
value (1392)	scenario%energy%esup_lhcd%value (float) (9.4.1.1.1)
source (1392)	scenario%energy%esup_lhcd%source (string) (9.4.1.1.3)
esup_alpha (1381)	scenario%energy%esup_alpha (scenario_ref) (9.4.1.3.349)
value (1392)	scenario%energy%esup_alpha%value (float) (9.4.1.1.1)
source (1392)	scenario%energy%esup_alpha%source (string) (9.4.1.1.3)
eqgeometry (1082)	scenario%eqgeometry (eqgeometry) (9.4.1.3.174)
source (1217)	scenario%eqgeometry%source (string) (9.4.1.1.3)
boundarytype (1217)	scenario%eqgeometry%boundarytype (integer) (9.4.1.1.2)
boundary (1217)	scenario%eqgeometry%boundary(:) (rz1Dexp) (9.4.1.3.321)
r (1364)	scenario%eqgeometry%boundary(:)%r (vecflt.type) (9.4.1.2.9)
z (1364)	scenario%eqgeometry%boundary(:)%z (vecflt.type) (9.4.1.2.9)
geom.axis (1217)	scenario%eqgeometry%geom.axis (rz0D) (9.4.1.3.318)
r (1361)	scenario%eqgeometry%geom.axis%r (float) (9.4.1.1.1)
z (1361)	scenario%eqgeometry%geom.axis%z (float) (9.4.1.1.1)
a_minor (1217)	scenario%eqgeometry%a_minor (float) (9.4.1.1.1)
elongation (1217)	scenario%eqgeometry%elongation (float) (9.4.1.1.1)
elong_upper (1217)	scenario%eqgeometry%elong_upper (float) (9.4.1.1.1)
elong_lower (1217)	scenario%eqgeometry%elong_lower (float) (9.4.1.1.1)
tria_upper (1217)	scenario%eqgeometry%tria_upper (float) (9.4.1.1.1)
tria_lower (1217)	scenario%eqgeometry%tria_lower (float) (9.4.1.1.1)
xpts (1217)	scenario%eqgeometry%xpts(:) (rz1Dexp) (9.4.1.3.321)
r (1364)	scenario%eqgeometry%xpts(:)%r (vecflt.type) (9.4.1.2.9)
z (1364)	scenario%eqgeometry%xpts(:)%z (vecflt.type) (9.4.1.2.9)
left_low_st (1217)	scenario%eqgeometry%left_low_st (rz0D) (9.4.1.3.318)
r (1361)	scenario%eqgeometry%left_low_st%r (float) (9.4.1.1.1)
z (1361)	scenario%eqgeometry%left_low_st%z (float) (9.4.1.1.1)
right_low_st (1217)	scenario%eqgeometry%right_low_st (rz0D) (9.4.1.3.318)
r (1361)	scenario%eqgeometry%right_low_st%r (float) (9.4.1.1.1)
z (1361)	scenario%eqgeometry%right_low_st%z (float) (9.4.1.1.1)
left_up_st (1217)	scenario%eqgeometry%left_up_st (rz0D) (9.4.1.3.318)
r (1361)	scenario%eqgeometry%left_up_st%r (float) (9.4.1.1.1)
z (1361)	scenario%eqgeometry%left_up_st%z (float) (9.4.1.1.1)
right_up_st (1217)	scenario%eqgeometry%right_up_st (rz0D) (9.4.1.3.318)
r (1361)	scenario%eqgeometry%right_up_st%r (float) (9.4.1.1.1)



z (1361)	scenario%eqgeometry%right_up_st%z (float) (9.4.1.1.1)
active_limit (1217)	scenario%eqgeometry%active_limit (rz0D) (9.4.1.3.318)
r (1361)	scenario%eqgeometry%active_limit%r (float) (9.4.1.1.1)
z (1361)	scenario%eqgeometry%active_limit%z (float) (9.4.1.1.1)
ang_lcms.upo (1217)	scenario%eqgeometry%ang_lcms.upo (float) (9.4.1.1.1)
ang_lcms.upi (1217)	scenario%eqgeometry%ang_lcms.upi (float) (9.4.1.1.1)
ang_lcms.lwo (1217)	scenario%eqgeometry%ang_lcms.lwo (float) (9.4.1.1.1)
ang_lcms.lwi (1217)	scenario%eqgeometry%ang_lcms.lwi (float) (9.4.1.1.1)
global_param (1082)	scenario%global_param (scenario_global) (9.4.1.3.339)
ip (1382)	scenario%global_param%ip (scenario_ref) (9.4.1.3.349)
value (1392)	scenario%global_param%ip%value (float) (9.4.1.1.1)
source (1392)	scenario%global_param%ip%source (string) (9.4.1.1.3)
dip_dt (1382)	scenario%global_param%dip_dt (scenario_ref) (9.4.1.3.349)
value (1392)	scenario%global_param%dip_dt%value (float) (9.4.1.1.1)
source (1392)	scenario%global_param%dip_dt%source (string) (9.4.1.1.3)
beta_pol (1382)	scenario%global_param%beta_pol (scenario_ref) (9.4.1.3.349)
value (1392)	scenario%global_param%beta_pol%value (float) (9.4.1.1.1)
source (1392)	scenario%global_param%beta_pol%source (string) (9.4.1.1.3)
beta_tor (1382)	scenario%global_param%beta_tor (scenario_ref) (9.4.1.3.349)
value (1392)	scenario%global_param%beta_tor%value (float) (9.4.1.1.1)
source (1392)	scenario%global_param%beta_tor%source (string) (9.4.1.1.3)
beta_normal (1382)	scenario%global_param%beta_normal (scenario_ref) (9.4.1.3.349)
value (1392)	scenario%global_param%beta_normal%value (float) (9.4.1.1.1)
source (1392)	scenario%global_param%beta_normal%source (string) (9.4.1.1.3)
li (1382)	scenario%global_param%li (scenario_ref) (9.4.1.3.349)
value (1392)	scenario%global_param%li%value (float) (9.4.1.1.1)
source (1392)	scenario%global_param%li%source (string) (9.4.1.1.3)
volume (1382)	scenario%global_param%volume (scenario_ref) (9.4.1.3.349)
value (1392)	scenario%global_param%volume%value (float) (9.4.1.1.1)
source (1392)	scenario%global_param%volume%source (string) (9.4.1.1.3)
area_pol (1382)	scenario%global_param%area_pol (scenario_ref) (9.4.1.3.349)
value (1392)	scenario%global_param%area_pol%value (float) (9.4.1.1.1)
source (1392)	scenario%global_param%area_pol%source (string) (9.4.1.1.3)
area_ext (1382)	scenario%global_param%area_ext (scenario_ref) (9.4.1.3.349)
value (1392)	scenario%global_param%area_ext%value (float) (9.4.1.1.1)
source (1392)	scenario%global_param%area_ext%source (string) (9.4.1.1.3)
len_sepa (1382)	scenario%global_param%len_sepa (scenario_ref) (9.4.1.3.349)
value (1392)	scenario%global_param%len_sepa%value (float) (9.4.1.1.1)
source (1392)	scenario%global_param%len_sepa%source (string) (9.4.1.1.3)
beta_pol.th (1382)	scenario%global_param%beta_pol.th (scenario_ref) (9.4.1.3.349)
value (1392)	scenario%global_param%beta_pol.th%value (float) (9.4.1.1.1)
source (1392)	scenario%global_param%beta_pol.th%source (string) (9.4.1.1.3)
beta_tor.th (1382)	scenario%global_param%beta_tor.th (scenario_ref) (9.4.1.3.349)
value (1392)	scenario%global_param%beta_tor.th%value (float) (9.4.1.1.1)
source (1392)	scenario%global_param%beta_tor.th%source (string) (9.4.1.1.3)
beta_n.th (1382)	scenario%global_param%beta_n.th (scenario_ref) (9.4.1.3.349)
value (1392)	scenario%global_param%beta_n.th%value (float) (9.4.1.1.1)
source (1392)	scenario%global_param%beta_n.th%source (string) (9.4.1.1.3)
disruption (1382)	scenario%global_param%disruption (scenario_ref) (9.4.1.3.349)
value (1392)	scenario%global_param%disruption%value (float) (9.4.1.1.1)
source (1392)	scenario%global_param%disruption%source (string) (9.4.1.1.3)
mode_h (1382)	scenario%global_param%mode_h (scenario_ref) (9.4.1.3.349)
value (1392)	scenario%global_param%mode_h%value (float) (9.4.1.1.1)
source (1392)	scenario%global_param%mode_h%source (string) (9.4.1.1.3)
s.alpha (1382)	scenario%global_param%s.alpha (scenario_ref) (9.4.1.3.349)
value (1392)	scenario%global_param%s.alpha%value (float) (9.4.1.1.1)
source (1392)	scenario%global_param%s.alpha%source (string) (9.4.1.1.3)
heat_power (1082)	scenario%heat_power (scenario_heat_power) (9.4.1.3.340)
plh (1383)	scenario%heat_power%plh (scenario_ref) (9.4.1.3.349)
value (1392)	scenario%heat_power%plh%value (float) (9.4.1.1.1)
source (1392)	scenario%heat_power%plh%source (string) (9.4.1.1.3)

pohmic (1383)	scenario%heat_power%pohmic (scenario_ref) (9.4.1.3.349)
value (1392)	scenario%heat_power%pohmic%value (float) (9.4.1.1.1)
source (1392)	scenario%heat_power%pohmic%source (string) (9.4.1.1.3)
picrh (1383)	scenario%heat_power%picrh (scenario_ref) (9.4.1.3.349)
value (1392)	scenario%heat_power%picrh%value (float) (9.4.1.1.1)
source (1392)	scenario%heat_power%picrh%source (string) (9.4.1.1.3)
pecrh (1383)	scenario%heat_power%pecrh (scenario_ref) (9.4.1.3.349)
value (1392)	scenario%heat_power%pecrh%value (float) (9.4.1.1.1)
source (1392)	scenario%heat_power%pecrh%source (string) (9.4.1.1.3)
pnbi (1383)	scenario%heat_power%pnbi (scenario_ref) (9.4.1.3.349)
value (1392)	scenario%heat_power%pnbi%value (float) (9.4.1.1.1)
source (1392)	scenario%heat_power%pnbi%source (string) (9.4.1.1.3)
pnbi_co_cur (1383)	scenario%heat_power%pnbi_co_cur (scenario_ref) (9.4.1.3.349)
value (1392)	scenario%heat_power%pnbi_co_cur%value (float) (9.4.1.1.1)
source (1392)	scenario%heat_power%pnbi_co_cur%source (string) (9.4.1.1.3)
pnbi_counter (1383)	scenario%heat_power%pnbi_counter (scenario_ref) (9.4.1.3.349)
value (1392)	scenario%heat_power%pnbi_counter%value (float) (9.4.1.1.1)
source (1392)	scenario%heat_power%pnbi_counter%source (string) (9.4.1.1.3)
plh_th (1383)	scenario%heat_power%plh_th (scenario_ref) (9.4.1.3.349)
value (1392)	scenario%heat_power%plh_th%value (float) (9.4.1.1.1)
source (1392)	scenario%heat_power%plh_th%source (string) (9.4.1.1.3)
picrh_th (1383)	scenario%heat_power%picrh_th (scenario_ref) (9.4.1.3.349)
value (1392)	scenario%heat_power%picrh_th%value (float) (9.4.1.1.1)
source (1392)	scenario%heat_power%picrh_th%source (string) (9.4.1.1.3)
pecrh_th (1383)	scenario%heat_power%pecrh_th (scenario_ref) (9.4.1.3.349)
value (1392)	scenario%heat_power%pecrh_th%value (float) (9.4.1.1.1)
source (1392)	scenario%heat_power%pecrh_th%source (string) (9.4.1.1.3)
pnbi_th (1383)	scenario%heat_power%pnbi_th (scenario_ref) (9.4.1.3.349)
value (1392)	scenario%heat_power%pnbi_th%value (float) (9.4.1.1.1)
source (1392)	scenario%heat_power%pnbi_th%source (string) (9.4.1.1.3)
ploss_icrh (1383)	scenario%heat_power%ploss_icrh (scenario_ref) (9.4.1.3.349)
value (1392)	scenario%heat_power%ploss_icrh%value (float) (9.4.1.1.1)
source (1392)	scenario%heat_power%ploss_icrh%source (string) (9.4.1.1.3)
ploss_nbi (1383)	scenario%heat_power%ploss_nbi (scenario_ref) (9.4.1.3.349)
value (1392)	scenario%heat_power%ploss_nbi%value (float) (9.4.1.1.1)
source (1392)	scenario%heat_power%ploss_nbi%source (string) (9.4.1.1.3)
pbrem (1383)	scenario%heat_power%pbrem (scenario_ref) (9.4.1.3.349)
value (1392)	scenario%heat_power%pbrem%value (float) (9.4.1.1.1)
source (1392)	scenario%heat_power%pbrem%source (string) (9.4.1.1.3)
pcyclo (1383)	scenario%heat_power%pcyclo (scenario_ref) (9.4.1.3.349)
value (1392)	scenario%heat_power%pcyclo%value (float) (9.4.1.1.1)
source (1392)	scenario%heat_power%pcyclo%source (string) (9.4.1.1.3)
prad (1383)	scenario%heat_power%prad (scenario_ref) (9.4.1.3.349)
value (1392)	scenario%heat_power%prad%value (float) (9.4.1.1.1)
source (1392)	scenario%heat_power%prad%source (string) (9.4.1.1.3)
pdd_fus (1383)	scenario%heat_power%pdd_fus (scenario_ref) (9.4.1.3.349)
value (1392)	scenario%heat_power%pdd_fus%value (float) (9.4.1.1.1)
source (1392)	scenario%heat_power%pdd_fus%source (string) (9.4.1.1.3)
pei (1383)	scenario%heat_power%pei (scenario_ref) (9.4.1.3.349)
value (1392)	scenario%heat_power%pei%value (float) (9.4.1.1.1)
source (1392)	scenario%heat_power%pei%source (string) (9.4.1.1.3)
pel_tot (1383)	scenario%heat_power%pel_tot (scenario_ref) (9.4.1.3.349)
value (1392)	scenario%heat_power%pel_tot%value (float) (9.4.1.1.1)
source (1392)	scenario%heat_power%pel_tot%source (string) (9.4.1.1.3)
pel_fus (1383)	scenario%heat_power%pel_fus (scenario_ref) (9.4.1.3.349)
value (1392)	scenario%heat_power%pel_fus%value (float) (9.4.1.1.1)
source (1392)	scenario%heat_power%pel_fus%source (string) (9.4.1.1.3)
pel_icrh (1383)	scenario%heat_power%pel_icrh (scenario_ref) (9.4.1.3.349)
value (1392)	scenario%heat_power%pel_icrh%value (float) (9.4.1.1.1)
source (1392)	scenario%heat_power%pel_icrh%source (string) (9.4.1.1.3)
pel_nbi (1383)	scenario%heat_power%pel_nbi (scenario_ref) (9.4.1.3.349)



value (1392)	scenario%heat_power%pel_nbi%value (float) (9.4.1.1.1)
source (1392)	scenario%heat_power%pel_nbi%source (string) (9.4.1.1.3)
pfus_dt (1383)	scenario%heat_power%pfus_dt (scenario_ref) (9.4.1.3.349)
value (1392)	scenario%heat_power%pfus_dt%value (float) (9.4.1.1.1)
source (1392)	scenario%heat_power%pfus_dt%source (string) (9.4.1.1.3)
ploss_fus (1383)	scenario%heat_power%ploss_fus (scenario_ref) (9.4.1.3.349)
value (1392)	scenario%heat_power%ploss_fus%value (float) (9.4.1.1.1)
source (1392)	scenario%heat_power%ploss_fus%source (string) (9.4.1.1.3)
pfus_nbi (1383)	scenario%heat_power%pfus_nbi (scenario_ref) (9.4.1.3.349)
value (1392)	scenario%heat_power%pfus_nbi%value (float) (9.4.1.1.1)
source (1392)	scenario%heat_power%pfus_nbi%source (string) (9.4.1.1.3)
pfus_th (1383)	scenario%heat_power%pfus_th (scenario_ref) (9.4.1.3.349)
value (1392)	scenario%heat_power%pfus_th%value (float) (9.4.1.1.1)
source (1392)	scenario%heat_power%pfus_th%source (string) (9.4.1.1.3)
padd_tot (1383)	scenario%heat_power%padd_tot (scenario_ref) (9.4.1.3.349)
value (1392)	scenario%heat_power%padd_tot%value (float) (9.4.1.1.1)
source (1392)	scenario%heat_power%padd_tot%source (string) (9.4.1.1.3)
pion_tot (1383)	scenario%heat_power%pion_tot (scenario_ref) (9.4.1.3.349)
value (1392)	scenario%heat_power%pion_tot%value (float) (9.4.1.1.1)
source (1392)	scenario%heat_power%pion_tot%source (string) (9.4.1.1.3)
pion_fus (1383)	scenario%heat_power%pion_fus (scenario_ref) (9.4.1.3.349)
value (1392)	scenario%heat_power%pion_fus%value (float) (9.4.1.1.1)
source (1392)	scenario%heat_power%pion_fus%source (string) (9.4.1.1.3)
pion_icrh (1383)	scenario%heat_power%pion_icrh (scenario_ref) (9.4.1.3.349)
value (1392)	scenario%heat_power%pion_icrh%value (float) (9.4.1.1.1)
source (1392)	scenario%heat_power%pion_icrh%source (string) (9.4.1.1.3)
pion_nbi (1383)	scenario%heat_power%pion_nbi (scenario_ref) (9.4.1.3.349)
value (1392)	scenario%heat_power%pion_nbi%value (float) (9.4.1.1.1)
source (1392)	scenario%heat_power%pion_nbi%source (string) (9.4.1.1.3)
pioniz (1383)	scenario%heat_power%pioniz (scenario_ref) (9.4.1.3.349)
value (1392)	scenario%heat_power%pioniz%value (float) (9.4.1.1.1)
source (1392)	scenario%heat_power%pioniz%source (string) (9.4.1.1.3)
ploss (1383)	scenario%heat_power%ploss (scenario_ref) (9.4.1.3.349)
value (1392)	scenario%heat_power%ploss%value (float) (9.4.1.1.1)
source (1392)	scenario%heat_power%ploss%source (string) (9.4.1.1.3)
p_wth (1383)	scenario%heat_power%p_wth (scenario_ref) (9.4.1.3.349)
value (1392)	scenario%heat_power%p_wth%value (float) (9.4.1.1.1)
source (1392)	scenario%heat_power%p_wth%source (string) (9.4.1.1.3)
p_w (1383)	scenario%heat_power%p_w (scenario_ref) (9.4.1.3.349)
value (1392)	scenario%heat_power%p_w%value (float) (9.4.1.1.1)
source (1392)	scenario%heat_power%p_w%source (string) (9.4.1.1.3)
p_l2h_thr (1383)	scenario%heat_power%p_l2h_thr (scenario_ref) (9.4.1.3.349)
value (1392)	scenario%heat_power%p_l2h_thr%value (float) (9.4.1.1.1)
source (1392)	scenario%heat_power%p_l2h_thr%source (string) (9.4.1.1.3)
p_l2h_sc (1383)	scenario%heat_power%p_l2h_sc (scenario_ref) (9.4.1.3.349)
value (1392)	scenario%heat_power%p_l2h_sc%value (float) (9.4.1.1.1)
source (1392)	scenario%heat_power%p_l2h_sc%source (string) (9.4.1.1.3)
p_nbi_icrh (1383)	scenario%heat_power%p_nbi_icrh (scenario_ref) (9.4.1.3.349)
value (1392)	scenario%heat_power%p_nbi_icrh%value (float) (9.4.1.1.1)
source (1392)	scenario%heat_power%p_nbi_icrh%source (string) (9.4.1.1.3)
itb (1082)	scenario%itb (scenario_itb) (9.4.1.3.342)
q_min (1385)	scenario%itb%q_min (scenario_ref) (9.4.1.3.349)
value (1392)	scenario%itb%q_min%value (float) (9.4.1.1.1)
source (1392)	scenario%itb%q_min%source (string) (9.4.1.1.3)
te_itb (1385)	scenario%itb%te_itb (scenario_ref) (9.4.1.3.349)
value (1392)	scenario%itb%te_itb%value (float) (9.4.1.1.1)
source (1392)	scenario%itb%te_itb%source (string) (9.4.1.1.3)
ti_itb (1385)	scenario%itb%ti_itb (scenario_ref) (9.4.1.3.349)
value (1392)	scenario%itb%ti_itb%value (float) (9.4.1.1.1)
source (1392)	scenario%itb%ti_itb%source (string) (9.4.1.1.3)
ne_itb (1385)	scenario%itb%ne_itb (scenario_ref) (9.4.1.3.349)

value (1392)	scenario%itb%ne_itb%value (float) (9.4.1.1.1)
source (1392)	scenario%itb%ne_itb%source (string) (9.4.1.1.3)
ni_itb (1385)	scenario%itb%ni_itb (scenario_ref) (9.4.1.3.349)
value (1392)	scenario%itb%ni_itb%value (float) (9.4.1.1.1)
source (1392)	scenario%itb%ni_itb%source (string) (9.4.1.1.3)
psi_itb (1385)	scenario%itb%psi_itb (scenario_ref) (9.4.1.3.349)
value (1392)	scenario%itb%psi_itb%value (float) (9.4.1.1.1)
source (1392)	scenario%itb%psi_itb%source (string) (9.4.1.1.3)
phi_itb (1385)	scenario%itb%phi_itb (scenario_ref) (9.4.1.3.349)
value (1392)	scenario%itb%phi_itb%value (float) (9.4.1.1.1)
source (1392)	scenario%itb%phi_itb%source (string) (9.4.1.1.3)
rho_itb (1385)	scenario%itb%rho_itb (scenario_ref) (9.4.1.3.349)
value (1392)	scenario%itb%rho_itb%value (float) (9.4.1.1.1)
source (1392)	scenario%itb%rho_itb%source (string) (9.4.1.1.3)
h_itb (1385)	scenario%itb%h_itb (scenario_ref) (9.4.1.3.349)
value (1392)	scenario%itb%h_itb%value (float) (9.4.1.1.1)
source (1392)	scenario%itb%h_itb%source (string) (9.4.1.1.3)
width_itb (1385)	scenario%itb%width_itb (scenario_ref) (9.4.1.3.349)
value (1392)	scenario%itb%width_itb%value (float) (9.4.1.1.1)
source (1392)	scenario%itb%width_itb%source (string) (9.4.1.1.3)
vtor_itb (1385)	scenario%itb%vtor_itb (scenario_ref) (9.4.1.3.349)
value (1392)	scenario%itb%vtor_itb%value (float) (9.4.1.1.1)
source (1392)	scenario%itb%vtor_itb%source (string) (9.4.1.1.3)
itb_type (1385)	scenario%itb%itb_type (scenario_int) (9.4.1.3.341)
value (1384)	scenario%itb%itb_type%value (integer) (9.4.1.1.2)
source (1384)	scenario%itb%itb_type%source (string) (9.4.1.1.3)
lim_div_wall (1082)	scenario%lim_div_wall (scenario_lim_div_wall) (9.4.1.3.343)
te_lim_div (1386)	scenario%lim_div_wall%te_lim_div (scenario_ref) (9.4.1.3.349)
value (1392)	scenario%lim_div_wall%te_lim_div%value (float) (9.4.1.1.1)
source (1392)	scenario%lim_div_wall%te_lim_div%source (string) (9.4.1.1.3)
ti_lim_div (1386)	scenario%lim_div_wall%ti_lim_div (scenario_ref) (9.4.1.3.349)
value (1392)	scenario%lim_div_wall%ti_lim_div%value (float) (9.4.1.1.1)
source (1392)	scenario%lim_div_wall%ti_lim_div%source (string) (9.4.1.1.3)
ne_lim_div (1386)	scenario%lim_div_wall%ne_lim_div (scenario_ref) (9.4.1.3.349)
value (1392)	scenario%lim_div_wall%ne_lim_div%value (float) (9.4.1.1.1)
source (1392)	scenario%lim_div_wall%ne_lim_div%source (string) (9.4.1.1.3)
ni_lim_div (1386)	scenario%lim_div_wall%ni_lim_div (scenario_ref) (9.4.1.3.349)
value (1392)	scenario%lim_div_wall%ni_lim_div%value (float) (9.4.1.1.1)
source (1392)	scenario%lim_div_wall%ni_lim_div%source (string) (9.4.1.1.3)
p_peak_div (1386)	scenario%lim_div_wall%p_peak_div (scenario_ref) (9.4.1.3.349)
value (1392)	scenario%lim_div_wall%p_peak_div%value (float) (9.4.1.1.1)
source (1392)	scenario%lim_div_wall%p_peak_div%source (string) (9.4.1.1.3)
surf_temp (1386)	scenario%lim_div_wall%surf_temp (scenario_ref) (9.4.1.3.349)
value (1392)	scenario%lim_div_wall%surf_temp%value (float) (9.4.1.1.1)
source (1392)	scenario%lim_div_wall%surf_temp%source (string) (9.4.1.1.3)
p_lim_div (1386)	scenario%lim_div_wall%p_lim_div (scenario_ref) (9.4.1.3.349)
value (1392)	scenario%lim_div_wall%p_lim_div%value (float) (9.4.1.1.1)
source (1392)	scenario%lim_div_wall%p_lim_div%source (string) (9.4.1.1.3)
p_rad_div (1386)	scenario%lim_div_wall%p_rad_div (scenario_ref) (9.4.1.3.349)
value (1392)	scenario%lim_div_wall%p_rad_div%value (float) (9.4.1.1.1)
source (1392)	scenario%lim_div_wall%p_rad_div%source (string) (9.4.1.1.3)
wall_temp (1386)	scenario%lim_div_wall%wall_temp (scenario_ref) (9.4.1.3.349)
value (1392)	scenario%lim_div_wall%wall_temp%value (float) (9.4.1.1.1)
source (1392)	scenario%lim_div_wall%wall_temp%source (string) (9.4.1.1.3)
wall_state (1386)	scenario%lim_div_wall%wall_state (scenario_ref) (9.4.1.3.349)
value (1392)	scenario%lim_div_wall%wall_state%value (float) (9.4.1.1.1)
source (1392)	scenario%lim_div_wall%wall_state%source (string) (9.4.1.1.3)
detach_state (1386)	scenario%lim_div_wall%detach_state (scenario_ref) (9.4.1.3.349)
value (1392)	scenario%lim_div_wall%detach_state%value (float) (9.4.1.1.1)
source (1392)	scenario%lim_div_wall%detach_state%source (string) (9.4.1.1.3)
pump_flux (1386)	scenario%lim_div_wall%pump_flux (scenario_ref) (9.4.1.3.349)

value (1392)	scenario%lim_div_wall%pump_flux%value (float) (9.4.1.1.1)
source (1392)	scenario%lim_div_wall%pump_flux%source (string) (9.4.1.1.3)
line_ave (1082)	scenario%line_ave (scenario_line_ave) (9.4.1.3.344)
ne_line (1387)	scenario%line_ave%ne_line (scenario_ref) (9.4.1.3.349)
value (1392)	scenario%line_ave%ne_line%value (float) (9.4.1.1.1)
source (1392)	scenario%line_ave%ne_line%source (string) (9.4.1.1.3)
zeff_line (1387)	scenario%line_ave%zeff_line (scenario_ref) (9.4.1.3.349)
value (1392)	scenario%line_ave%zeff_line%value (float) (9.4.1.1.1)
source (1392)	scenario%line_ave%zeff_line%source (string) (9.4.1.1.3)
ne_zeff_line (1387)	scenario%line_ave%ne_zeff_line (scenario_ref) (9.4.1.3.349)
value (1392)	scenario%line_ave%ne_zeff_line%value (float) (9.4.1.1.1)
source (1392)	scenario%line_ave%ne_zeff_line%source (string) (9.4.1.1.3)
dne_line_dt (1387)	scenario%line_ave%dne_line_dt (scenario_ref) (9.4.1.3.349)
value (1392)	scenario%line_ave%dne_line_dt%value (float) (9.4.1.1.1)
source (1392)	scenario%line_ave%dne_line_dt%source (string) (9.4.1.1.3)
neutron (1082)	scenario%neutron (scenario_neutron) (9.4.1.3.345)
ndd_tot (1388)	scenario%neutron%ndd_tot (scenario_ref) (9.4.1.3.349)
value (1392)	scenario%neutron%ndd_tot%value (float) (9.4.1.1.1)
source (1392)	scenario%neutron%ndd_tot%source (string) (9.4.1.1.3)
ndd_th (1388)	scenario%neutron%ndd_th (scenario_ref) (9.4.1.3.349)
value (1392)	scenario%neutron%ndd_th%value (float) (9.4.1.1.1)
source (1392)	scenario%neutron%ndd_th%source (string) (9.4.1.1.3)
ndd_nbi_th (1388)	scenario%neutron%ndd_nbi_th (scenario_ref) (9.4.1.3.349)
value (1392)	scenario%neutron%ndd_nbi_th%value (float) (9.4.1.1.1)
source (1392)	scenario%neutron%ndd_nbi_th%source (string) (9.4.1.1.3)
ndd_nbi_nbi (1388)	scenario%neutron%ndd_nbi_nbi (scenario_ref) (9.4.1.3.349)
value (1392)	scenario%neutron%ndd_nbi_nbi%value (float) (9.4.1.1.1)
source (1392)	scenario%neutron%ndd_nbi_nbi%source (string) (9.4.1.1.3)
ndt_tot (1388)	scenario%neutron%ndt_tot (scenario_ref) (9.4.1.3.349)
value (1392)	scenario%neutron%ndt_tot%value (float) (9.4.1.1.1)
source (1392)	scenario%neutron%ndt_tot%source (string) (9.4.1.1.3)
ndt_th (1388)	scenario%neutron%ndt_th (scenario_ref) (9.4.1.3.349)
value (1392)	scenario%neutron%ndt_th%value (float) (9.4.1.1.1)
source (1392)	scenario%neutron%ndt_th%source (string) (9.4.1.1.3)
ninety_five (1082)	scenario%ninety_five (scenario_ninety_five) (9.4.1.3.346)
q_95 (1389)	scenario%ninety_five%q_95 (scenario_ref) (9.4.1.3.349)
value (1392)	scenario%ninety_five%q_95%value (float) (9.4.1.1.1)
source (1392)	scenario%ninety_five%q_95%source (string) (9.4.1.1.3)
elong_95 (1389)	scenario%ninety_five%elong_95 (scenario_ref) (9.4.1.3.349)
value (1392)	scenario%ninety_five%elong_95%value (float) (9.4.1.1.1)
source (1392)	scenario%ninety_five%elong_95%source (string) (9.4.1.1.3)
tria_95 (1389)	scenario%ninety_five%tria_95 (scenario_ref) (9.4.1.3.349)
value (1392)	scenario%ninety_five%tria_95%value (float) (9.4.1.1.1)
source (1392)	scenario%ninety_five%tria_95%source (string) (9.4.1.1.3)
tria_up_95 (1389)	scenario%ninety_five%tria_up_95 (scenario_ref) (9.4.1.3.349)
value (1392)	scenario%ninety_five%tria_up_95%value (float) (9.4.1.1.1)
source (1392)	scenario%ninety_five%tria_up_95%source (string) (9.4.1.1.3)
tria_lo_95 (1389)	scenario%ninety_five%tria_lo_95 (scenario_ref) (9.4.1.3.349)
value (1392)	scenario%ninety_five%tria_lo_95%value (float) (9.4.1.1.1)
source (1392)	scenario%ninety_five%tria_lo_95%source (string) (9.4.1.1.3)
te_95 (1389)	scenario%ninety_five%te_95 (scenario_ref) (9.4.1.3.349)
value (1392)	scenario%ninety_five%te_95%value (float) (9.4.1.1.1)
source (1392)	scenario%ninety_five%te_95%source (string) (9.4.1.1.3)
ti_95 (1389)	scenario%ninety_five%ti_95 (scenario_ref) (9.4.1.3.349)
value (1392)	scenario%ninety_five%ti_95%value (float) (9.4.1.1.1)
source (1392)	scenario%ninety_five%ti_95%source (string) (9.4.1.1.3)
ne_95 (1389)	scenario%ninety_five%ne_95 (scenario_ref) (9.4.1.3.349)
value (1392)	scenario%ninety_five%ne_95%value (float) (9.4.1.1.1)
source (1392)	scenario%ninety_five%ne_95%source (string) (9.4.1.1.3)
ni_95 (1389)	scenario%ninety_five%ni_95 (scenario_ref) (9.4.1.3.349)
value (1392)	scenario%ninety_five%ni_95%value (float) (9.4.1.1.1)

source (1392)	scenario%ninety_five%ni_95%source (string) (9.4.1.1.3)
phi_95 (1389)	scenario%ninety_five%phi_95 (scenario_ref) (9.4.1.3.349)
value (1392)	scenario%ninety_five%phi_95%value (float) (9.4.1.1.1)
source (1392)	scenario%ninety_five%phi_95%source (string) (9.4.1.1.3)
rho_95 (1389)	scenario%ninety_five%rho_95 (scenario_ref) (9.4.1.3.349)
value (1392)	scenario%ninety_five%rho_95%value (float) (9.4.1.1.1)
source (1392)	scenario%ninety_five%rho_95%source (string) (9.4.1.1.3)
vtr_95 (1389)	scenario%ninety_five%vtr_95 (scenario_ref) (9.4.1.3.349)
value (1392)	scenario%ninety_five%vtr_95%value (float) (9.4.1.1.1)
source (1392)	scenario%ninety_five%vtr_95%source (string) (9.4.1.1.3)
pedestal (1082)	scenario%pedestal (scenario_pedestal) (9.4.1.3.347)
te_ped (1390)	scenario%pedestal%te_ped (scenario_ref) (9.4.1.3.349)
value (1392)	scenario%pedestal%te_ped%value (float) (9.4.1.1.1)
source (1392)	scenario%pedestal%te_ped%source (string) (9.4.1.1.3)
ti_ped (1390)	scenario%pedestal%ti_ped (scenario_ref) (9.4.1.3.349)
value (1392)	scenario%pedestal%ti_ped%value (float) (9.4.1.1.1)
source (1392)	scenario%pedestal%ti_ped%source (string) (9.4.1.1.3)
ne_ped (1390)	scenario%pedestal%ne_ped (scenario_ref) (9.4.1.3.349)
value (1392)	scenario%pedestal%ne_ped%value (float) (9.4.1.1.1)
source (1392)	scenario%pedestal%ne_ped%source (string) (9.4.1.1.3)
ni_ped (1390)	scenario%pedestal%ni_ped (scenario_ref) (9.4.1.3.349)
value (1392)	scenario%pedestal%ni_ped%value (float) (9.4.1.1.1)
source (1392)	scenario%pedestal%ni_ped%source (string) (9.4.1.1.3)
psi_ped (1390)	scenario%pedestal%psi_ped (scenario_ref) (9.4.1.3.349)
value (1392)	scenario%pedestal%psi_ped%value (float) (9.4.1.1.1)
source (1392)	scenario%pedestal%psi_ped%source (string) (9.4.1.1.3)
phi_ped (1390)	scenario%pedestal%phi_ped (scenario_ref) (9.4.1.3.349)
value (1392)	scenario%pedestal%phi_ped%value (float) (9.4.1.1.1)
source (1392)	scenario%pedestal%phi_ped%source (string) (9.4.1.1.3)
rho_ped (1390)	scenario%pedestal%rho_ped (scenario_ref) (9.4.1.3.349)
value (1392)	scenario%pedestal%rho_ped%value (float) (9.4.1.1.1)
source (1392)	scenario%pedestal%rho_ped%source (string) (9.4.1.1.3)
q_ped (1390)	scenario%pedestal%q_ped (scenario_ref) (9.4.1.3.349)
value (1392)	scenario%pedestal%q_ped%value (float) (9.4.1.1.1)
source (1392)	scenario%pedestal%q_ped%source (string) (9.4.1.1.3)
pressure_ped (1390)	scenario%pedestal%pressure_ped (scenario_ref) (9.4.1.3.349)
value (1392)	scenario%pedestal%pressure_ped%value (float) (9.4.1.1.1)
source (1392)	scenario%pedestal%pressure_ped%source (string) (9.4.1.1.3)
vtr_ped (1390)	scenario%pedestal%vtr_ped (scenario_ref) (9.4.1.3.349)
value (1392)	scenario%pedestal%vtr_ped%value (float) (9.4.1.1.1)
source (1392)	scenario%pedestal%vtr_ped%source (string) (9.4.1.1.3)
references (1082)	scenario%references (scenario_references) (9.4.1.3.350)
plh (1393)	scenario%references%plh (scenario_ref) (9.4.1.3.349)
value (1392)	scenario%references%plh%value (float) (9.4.1.1.1)
source (1392)	scenario%references%plh%source (string) (9.4.1.1.3)
picrh (1393)	scenario%references%picrh (scenario_ref) (9.4.1.3.349)
value (1392)	scenario%references%picrh%value (float) (9.4.1.1.1)
source (1392)	scenario%references%picrh%source (string) (9.4.1.1.3)
pecrh (1393)	scenario%references%pecrh (scenario_ref) (9.4.1.3.349)
value (1392)	scenario%references%pecrh%value (float) (9.4.1.1.1)
source (1392)	scenario%references%pecrh%source (string) (9.4.1.1.3)
pnbi (1393)	scenario%references%pnbi (scenario_ref) (9.4.1.3.349)
value (1392)	scenario%references%pnbi%value (float) (9.4.1.1.1)
source (1392)	scenario%references%pnbi%source (string) (9.4.1.1.3)
ip (1393)	scenario%references%ip (scenario_ref) (9.4.1.3.349)
value (1392)	scenario%references%ip%value (float) (9.4.1.1.1)
source (1392)	scenario%references%ip%source (string) (9.4.1.1.3)
bvac_r (1393)	scenario%references%bvac_r (scenario_ref) (9.4.1.3.349)
value (1392)	scenario%references%bvac_r%value (float) (9.4.1.1.1)
source (1392)	scenario%references%bvac_r%source (string) (9.4.1.1.3)
zefl (1393)	scenario%references%zefl (scenario_ref) (9.4.1.3.349)

value (1392)	scenario%references%zeff%value (float) (9.4.1.1.1)
source (1392)	scenario%references%zeff%source (string) (9.4.1.1.3)
nbar (1393)	scenario%references%nbar (scenario_ref) (9.4.1.3.349)
value (1392)	scenario%references%nbar%value (float) (9.4.1.1.1)
source (1392)	scenario%references%nbar%source (string) (9.4.1.1.3)
xecrh (1393)	scenario%references%xecrh (scenario_ref) (9.4.1.3.349)
value (1392)	scenario%references%xecrh%value (float) (9.4.1.1.1)
source (1392)	scenario%references%xecrh%source (string) (9.4.1.1.3)
pol_flux (1393)	scenario%references%pol_flux (scenario_ref) (9.4.1.3.349)
value (1392)	scenario%references%pol_flux%value (float) (9.4.1.1.1)
source (1392)	scenario%references%pol_flux%source (string) (9.4.1.1.3)
enhancement (1393)	scenario%references%enhancement (scenario_ref) (9.4.1.3.349)
value (1392)	scenario%references%enhancement%value (float) (9.4.1.1.1)
source (1392)	scenario%references%enhancement%source (string) (9.4.1.1.3)
isotopic (1393)	scenario%references%isotopic (scenario_ref) (9.4.1.3.349)
value (1392)	scenario%references%isotopic%value (float) (9.4.1.1.1)
source (1392)	scenario%references%isotopic%source (string) (9.4.1.1.3)
nbi_td_ratio (1393)	scenario%references%nbi_td_ratio (scenario_ref) (9.4.1.3.349)
value (1392)	scenario%references%nbi_td_ratio%value (float) (9.4.1.1.1)
source (1392)	scenario%references%nbi_td_ratio%source (string) (9.4.1.1.3)
gas_puff (1393)	scenario%references%gas_puff (scenario_ref) (9.4.1.3.349)
value (1392)	scenario%references%gas_puff%value (float) (9.4.1.1.1)
source (1392)	scenario%references%gas_puff%source (string) (9.4.1.1.3)
reactor (1082)	scenario%reactor (scenario_reactor) (9.4.1.3.348)
pnetwork (1391)	scenario%reactor%pnetwork (float) (9.4.1.1.1)
sol (1082)	scenario%sol (scenario_sol) (9.4.1.3.351)
l_te_sol (1394)	scenario%sol%l_te_sol (scenario_ref) (9.4.1.3.349)
value (1392)	scenario%sol%l_te_sol%value (float) (9.4.1.1.1)
source (1392)	scenario%sol%l_te_sol%source (string) (9.4.1.1.3)
l_ti_sol (1394)	scenario%sol%l_ti_sol (scenario_ref) (9.4.1.3.349)
value (1392)	scenario%sol%l_ti_sol%value (float) (9.4.1.1.1)
source (1392)	scenario%sol%l_ti_sol%source (string) (9.4.1.1.3)
l_ne_sol (1394)	scenario%sol%l_ne_sol (scenario_ref) (9.4.1.3.349)
value (1392)	scenario%sol%l_ne_sol%value (float) (9.4.1.1.1)
source (1392)	scenario%sol%l_ne_sol%source (string) (9.4.1.1.3)
l_ni_sol (1394)	scenario%sol%l_ni_sol (scenario_ref) (9.4.1.3.349)
value (1392)	scenario%sol%l_ni_sol%value (float) (9.4.1.1.1)
source (1392)	scenario%sol%l_ni_sol%source (string) (9.4.1.1.3)
l_qe_sol (1394)	scenario%sol%l_qe_sol (scenario_ref) (9.4.1.3.349)
value (1392)	scenario%sol%l_qe_sol%value (float) (9.4.1.1.1)
source (1392)	scenario%sol%l_qe_sol%source (string) (9.4.1.1.3)
l_qi_sol (1394)	scenario%sol%l_qi_sol (scenario_ref) (9.4.1.3.349)
value (1392)	scenario%sol%l_qi_sol%value (float) (9.4.1.1.1)
source (1392)	scenario%sol%l_qi_sol%source (string) (9.4.1.1.3)
p_rad_sol (1394)	scenario%sol%p_rad_sol (scenario_ref) (9.4.1.3.349)
value (1392)	scenario%sol%p_rad_sol%value (float) (9.4.1.1.1)
source (1392)	scenario%sol%p_rad_sol%source (string) (9.4.1.1.3)
gas_puff (1394)	scenario%sol%gas_puff (scenario_ref) (9.4.1.3.349)
value (1392)	scenario%sol%gas_puff%value (float) (9.4.1.1.1)
source (1392)	scenario%sol%gas_puff%source (string) (9.4.1.1.3)
vol_ave (1082)	scenario%vol_ave (scenario_vol_ave) (9.4.1.3.352)
te_ave (1395)	scenario%vol_ave%te_ave (scenario_ref) (9.4.1.3.349)
value (1392)	scenario%vol_ave%te_ave%value (float) (9.4.1.1.1)
source (1392)	scenario%vol_ave%te_ave%source (string) (9.4.1.1.3)
ti_ave (1395)	scenario%vol_ave%ti_ave (scenario_ref) (9.4.1.3.349)
value (1392)	scenario%vol_ave%ti_ave%value (float) (9.4.1.1.1)
source (1392)	scenario%vol_ave%ti_ave%source (string) (9.4.1.1.3)
ne_ave (1395)	scenario%vol_ave%ne_ave (scenario_ref) (9.4.1.3.349)
value (1392)	scenario%vol_ave%ne_ave%value (float) (9.4.1.1.1)
source (1392)	scenario%vol_ave%ne_ave%source (string) (9.4.1.1.3)
dne_ave_dt (1395)	scenario%vol_ave%dne_ave_dt (scenario_ref) (9.4.1.3.349)

value (1392)	scenario%vol_ave%dne_ave.dt%value (float) (9.4.1.1.1)
source (1392)	scenario%vol_ave%dne_ave.dt%source (string) (9.4.1.1.3)
ni_ave (1395)	scenario%vol_ave%ni_ave (scenario_ref) (9.4.1.3.349)
value (1392)	scenario%vol_ave%ni_ave%value (float) (9.4.1.1.1)
source (1392)	scenario%vol_ave%ni_ave%source (string) (9.4.1.1.3)
zeff_ave (1395)	scenario%vol_ave%zeff_ave (scenario_ref) (9.4.1.3.349)
value (1392)	scenario%vol_ave%zeff_ave%value (float) (9.4.1.1.1)
source (1392)	scenario%vol_ave%zeff_ave%source (string) (9.4.1.1.3)
ti_o_te_ave (1395)	scenario%vol_ave%ti_o_te_ave (scenario_ref) (9.4.1.3.349)
value (1392)	scenario%vol_ave%ti_o_te_ave%value (float) (9.4.1.1.1)
source (1392)	scenario%vol_ave%ti_o_te_ave%source (string) (9.4.1.1.3)
meff_ave (1395)	scenario%vol_ave%meff_ave (scenario_ref) (9.4.1.3.349)
value (1392)	scenario%vol_ave%meff_ave%value (float) (9.4.1.1.1)
source (1392)	scenario%vol_ave%meff_ave%source (string) (9.4.1.1.3)
pellet_flux (1395)	scenario%vol_ave%pellet_flux (scenario_ref) (9.4.1.3.349)
value (1392)	scenario%vol_ave%pellet_flux%value (float) (9.4.1.1.1)
source (1392)	scenario%vol_ave%pellet_flux%source (string) (9.4.1.1.3)
nions_ave (1395)	scenario%vol_ave%nions_ave (vecflt_type) (9.4.1.2.9)
omega_ave (1395)	scenario%vol_ave%omega_ave (scenario_ref) (9.4.1.3.349)
value (1392)	scenario%vol_ave%omega_ave%value (float) (9.4.1.1.1)
source (1392)	scenario%vol_ave%omega_ave%source (string) (9.4.1.1.3)
codeparam (1082)	scenario%codeparam (codeparam) (9.4.1.3.65)
codename (1108)	scenario%codeparam%codename (string) (9.4.1.1.3)
codeversion (1108)	scenario%codeparam%codeversion (string) (9.4.1.1.3)
parameters (1108)	scenario%codeparam%parameters (string) (9.4.1.1.3)
output_diag (1108)	scenario%codeparam%output_diag (string) (9.4.1.1.3)
output_flag (1108)	scenario%codeparam%output_flag (integer) (9.4.1.1.2)
time (1082)	scenario%time (float) (9.4.1.1.1)

### 9.4.2.1.38 summary

datainfo (1083)	summary%datainfo (datainfo) (9.4.1.3.120)
dataprovider (1163)	summary%datainfo%dataprovider (string) (9.4.1.1.3)
putdate (1163)	summary%datainfo%putdate (string) (9.4.1.1.3)
source (1163)	summary%datainfo%source (string) (9.4.1.1.3)
comment (1163)	summary%datainfo%comment (string) (9.4.1.1.3)
cocos (1163)	summary%datainfo%cocos (integer) (9.4.1.1.2)
id (1163)	summary%datainfo%id (integer) (9.4.1.1.2)
isref (1163)	summary%datainfo%isref (integer) (9.4.1.1.2)
whatref (1163)	summary%datainfo%whatref (whatref) (9.4.1.3.426)
user (1469)	summary%datainfo%whatref%user (string) (9.4.1.1.3)
machine (1469)	summary%datainfo%whatref%machine (string) (9.4.1.1.3)
shot (1469)	summary%datainfo%whatref%shot (integer) (9.4.1.1.2)
run (1469)	summary%datainfo%whatref%run (integer) (9.4.1.1.2)
occurrence (1469)	summary%datainfo%whatref%occurrence (integer) (9.4.1.1.2)
putinfo (1163)	summary%datainfo%putinfo (putinfo) (9.4.1.3.289)
putmethod (1332)	summary%datainfo%putinfo%putmethod (string) (9.4.1.1.3)
putaccess (1332)	summary%datainfo%putinfo%putaccess (string) (9.4.1.1.3)
putlocation (1332)	summary%datainfo%putinfo%putlocation (string) (9.4.1.1.3)
rights (1332)	summary%datainfo%putinfo%rights (string) (9.4.1.1.3)
ip (1083)	summary%ip (reduced) (9.4.1.3.292)
value (1335)	summary%ip%value (float) (9.4.1.1.1)
source (1335)	summary%ip%source (string) (9.4.1.1.3)
time (1335)	summary%ip%time (float) (9.4.1.1.1)
bvac_r (1083)	summary%bvac_r (reduced) (9.4.1.3.292)
value (1335)	summary%bvac_r%value (float) (9.4.1.1.1)
source (1335)	summary%bvac_r%source (string) (9.4.1.1.3)
time (1335)	summary%bvac_r%time (float) (9.4.1.1.1)
geom_axis_r (1083)	summary%geom_axis_r (reduced) (9.4.1.3.292)
value (1335)	summary%geom_axis_r%value (float) (9.4.1.1.1)
source (1335)	summary%geom_axis_r%source (string) (9.4.1.1.3)



time (1335)	summary%geom_axis_r%time (float) (9.4.1.1.1)
a_minor (1083)	summary%a_minor (reduced) (9.4.1.3.292)
value (1335)	summary%a_minor%value (float) (9.4.1.1.1)
source (1335)	summary%a_minor%source (string) (9.4.1.1.3)
time (1335)	summary%a_minor%time (float) (9.4.1.1.1)
elongation (1083)	summary%elongation (reduced) (9.4.1.3.292)
value (1335)	summary%elongation%value (float) (9.4.1.1.1)
source (1335)	summary%elongation%source (string) (9.4.1.1.3)
time (1335)	summary%elongation%time (float) (9.4.1.1.1)
tria_lower (1083)	summary%tria_lower (reduced) (9.4.1.3.292)
value (1335)	summary%tria_lower%value (float) (9.4.1.1.1)
source (1335)	summary%tria_lower%source (string) (9.4.1.1.3)
time (1335)	summary%tria_lower%time (float) (9.4.1.1.1)
tria_upper (1083)	summary%tria_upper (reduced) (9.4.1.3.292)
value (1335)	summary%tria_upper%value (float) (9.4.1.1.1)
source (1335)	summary%tria_upper%source (string) (9.4.1.1.3)
time (1335)	summary%tria_upper%time (float) (9.4.1.1.1)
tev (1083)	summary%tev (reduced) (9.4.1.3.292)
value (1335)	summary%tev%value (float) (9.4.1.1.1)
source (1335)	summary%tev%source (string) (9.4.1.1.3)
time (1335)	summary%tev%time (float) (9.4.1.1.1)
tiv (1083)	summary%tiv (reduced) (9.4.1.3.292)
value (1335)	summary%tiv%value (float) (9.4.1.1.1)
source (1335)	summary%tiv%source (string) (9.4.1.1.3)
time (1335)	summary%tiv%time (float) (9.4.1.1.1)
nev (1083)	summary%nev (reduced) (9.4.1.3.292)
value (1335)	summary%nev%value (float) (9.4.1.1.1)
source (1335)	summary%nev%source (string) (9.4.1.1.3)
time (1335)	summary%nev%time (float) (9.4.1.1.1)
zeffv (1083)	summary%zeffv (reduced) (9.4.1.3.292)
value (1335)	summary%zeffv%value (float) (9.4.1.1.1)
source (1335)	summary%zeffv%source (string) (9.4.1.1.3)
time (1335)	summary%zeffv%time (float) (9.4.1.1.1)
beta_pol (1083)	summary%beta_pol (reduced) (9.4.1.3.292)
value (1335)	summary%beta_pol%value (float) (9.4.1.1.1)
source (1335)	summary%beta_pol%source (string) (9.4.1.1.3)
time (1335)	summary%beta_pol%time (float) (9.4.1.1.1)
beta_tor (1083)	summary%beta_tor (reduced) (9.4.1.3.292)
value (1335)	summary%beta_tor%value (float) (9.4.1.1.1)
source (1335)	summary%beta_tor%source (string) (9.4.1.1.3)
time (1335)	summary%beta_tor%time (float) (9.4.1.1.1)
beta_normal (1083)	summary%beta_normal (reduced) (9.4.1.3.292)
value (1335)	summary%beta_normal%value (float) (9.4.1.1.1)
source (1335)	summary%beta_normal%source (string) (9.4.1.1.3)
time (1335)	summary%beta_normal%time (float) (9.4.1.1.1)
li (1083)	summary%li (reduced) (9.4.1.3.292)
value (1335)	summary%li%value (float) (9.4.1.1.1)
source (1335)	summary%li%source (string) (9.4.1.1.3)
time (1335)	summary%li%time (float) (9.4.1.1.1)
volume (1083)	summary%volume (reduced) (9.4.1.3.292)
value (1335)	summary%volume%value (float) (9.4.1.1.1)
source (1335)	summary%volume%source (string) (9.4.1.1.3)
time (1335)	summary%volume%time (float) (9.4.1.1.1)
area (1083)	summary%area (reduced) (9.4.1.3.292)
value (1335)	summary%area%value (float) (9.4.1.1.1)
source (1335)	summary%area%source (string) (9.4.1.1.3)
time (1335)	summary%area%time (float) (9.4.1.1.1)
main_ion1_z (1083)	summary%main_ion1_z (reduced) (9.4.1.3.292)
value (1335)	summary%main_ion1_z%value (float) (9.4.1.1.1)
source (1335)	summary%main_ion1_z%source (string) (9.4.1.1.3)
time (1335)	summary%main_ion1_z%time (float) (9.4.1.1.1)

main_ion1.a (1083)	summary%main_ion1.a (reduced) (9.4.1.3.292)
value (1335)	summary%main_ion1.a%value (float) (9.4.1.1.1)
source (1335)	summary%main_ion1.a%source (string) (9.4.1.1.3)
time (1335)	summary%main_ion1.a%time (float) (9.4.1.1.1)
main_ion2.z (1083)	summary%main_ion2.z (reduced) (9.4.1.3.292)
value (1335)	summary%main_ion2.z%value (float) (9.4.1.1.1)
source (1335)	summary%main_ion2.z%source (string) (9.4.1.1.3)
time (1335)	summary%main_ion2.z%time (float) (9.4.1.1.1)
main_ion2.a (1083)	summary%main_ion2.a (reduced) (9.4.1.3.292)
value (1335)	summary%main_ion2.a%value (float) (9.4.1.1.1)
source (1335)	summary%main_ion2.a%source (string) (9.4.1.1.3)
time (1335)	summary%main_ion2.a%time (float) (9.4.1.1.1)
impur1.z (1083)	summary%impur1.z (reduced) (9.4.1.3.292)
value (1335)	summary%impur1.z%value (float) (9.4.1.1.1)
source (1335)	summary%impur1.z%source (string) (9.4.1.1.3)
time (1335)	summary%impur1.z%time (float) (9.4.1.1.1)
impur1.a (1083)	summary%impur1.a (reduced) (9.4.1.3.292)
value (1335)	summary%impur1.a%value (float) (9.4.1.1.1)
source (1335)	summary%impur1.a%source (string) (9.4.1.1.3)
time (1335)	summary%impur1.a%time (float) (9.4.1.1.1)
time (1083)	summary%time (float) (9.4.1.1.1)

### 9.4.2.1.39 topinfo

dataprovder (1084)	topinfo%dataprovder (string) (9.4.1.1.3)
description (1084)	topinfo%description (string) (9.4.1.1.3)
firstputdate (1084)	topinfo%firstputdate (string) (9.4.1.1.3)
lastupdate (1084)	topinfo%lastupdate (string) (9.4.1.1.3)
source (1084)	topinfo%source (string) (9.4.1.1.3)
comment (1084)	topinfo%comment (string) (9.4.1.1.3)
dataversion (1084)	topinfo%dataversion (string) (9.4.1.1.3)
workflow (1084)	topinfo%workflow (string) (9.4.1.1.3)
entry (1084)	topinfo%entry (entry_def) (9.4.1.3.171)
user (1214)	topinfo%entry%user (string) (9.4.1.1.3)
machine (1214)	topinfo%entry%machine (string) (9.4.1.1.3)
shot (1214)	topinfo%entry%shot (integer) (9.4.1.1.2)
run (1214)	topinfo%entry%run (integer) (9.4.1.1.2)
parent_entry (1084)	topinfo%parent_entry (entry_def) (9.4.1.3.171)
user (1214)	topinfo%parent_entry%user (string) (9.4.1.1.3)
machine (1214)	topinfo%parent_entry%machine (string) (9.4.1.1.3)
shot (1214)	topinfo%parent_entry%shot (integer) (9.4.1.1.2)
run (1214)	topinfo%parent_entry%run (integer) (9.4.1.1.2)
mdinfo (1084)	topinfo%mdinfo (mdinfo) (9.4.1.3.239)
shot_min (1282)	topinfo%mdinfo%shot_min (integer) (9.4.1.1.2)
shot_max (1282)	topinfo%mdinfo%shot_max (integer) (9.4.1.1.2)
md_entry (1282)	topinfo%mdinfo%md_entry (entry_def) (9.4.1.3.171)
user (1214)	topinfo%mdinfo%md_entry%user (string) (9.4.1.1.3)
machine (1214)	topinfo%mdinfo%md_entry%machine (string) (9.4.1.1.3)
shot (1214)	topinfo%mdinfo%md_entry%shot (integer) (9.4.1.1.2)
run (1214)	topinfo%mdinfo%md_entry%run (integer) (9.4.1.1.2)

### 9.4.2.1.40 toroidfield

datainfo (1085)	toroidfield%datainfo (datainfo) (9.4.1.3.120)
dataprovder (1163)	toroidfield%datainfo%dataprovder (string) (9.4.1.1.3)
putdate (1163)	toroidfield%datainfo%putdate (string) (9.4.1.1.3)
source (1163)	toroidfield%datainfo%source (string) (9.4.1.1.3)
comment (1163)	toroidfield%datainfo%comment (string) (9.4.1.1.3)
cocos (1163)	toroidfield%datainfo%cocos (integer) (9.4.1.1.2)
id (1163)	toroidfield%datainfo%id (integer) (9.4.1.1.2)
isref (1163)	toroidfield%datainfo%isref (integer) (9.4.1.1.2)



whatref (1163)	toroidfield%datainfo%whatref (whatref) (9.4.1.3.426)
user (1469)	toroidfield%datainfo%whatref%user (string) (9.4.1.1.3)
machine (1469)	toroidfield%datainfo%whatref%machine (string) (9.4.1.1.3)
shot (1469)	toroidfield%datainfo%whatref%shot (integer) (9.4.1.1.2)
run (1469)	toroidfield%datainfo%whatref%run (integer) (9.4.1.1.2)
occurrence (1469)	toroidfield%datainfo%whatref%occurrence (integer) (9.4.1.1.2)
putinfo (1163)	toroidfield%datainfo%putinfo (putinfo) (9.4.1.3.289)
putmethod (1332)	toroidfield%datainfo%putinfo%putmethod (string) (9.4.1.1.3)
putaccess (1332)	toroidfield%datainfo%putinfo%putaccess (string) (9.4.1.1.3)
putlocation (1332)	toroidfield%datainfo%putinfo%putlocation (string) (9.4.1.1.3)
rights (1332)	toroidfield%datainfo%putinfo%rights (string) (9.4.1.1.3)
desc.tfcoils (1085)	toroidfield%desc.tfcoils (tf_desc.tfcoils) (9.4.1.3.383)
type (1426)	toroidfield%desc.tfcoils%type (integer) (9.4.1.1.2)
phi (1426)	toroidfield%desc.tfcoils%phi (float) (9.4.1.1.1)
circularcoil (1426)	toroidfield%desc.tfcoils%circularcoil (circularcoil) (9.4.1.3.64)
centre (1107)	toroidfield%desc.tfcoils%circularcoil%centre (rz0D) (9.4.1.3.318)
r (1361)	toroidfield%desc.tfcoils%circularcoil%centre%r (float) (9.4.1.1.1)
z (1361)	toroidfield%desc.tfcoils%circularcoil%centre%z (float) (9.4.1.1.1)
hlength (1107)	toroidfield%desc.tfcoils%circularcoil%hlength (float) (9.4.1.1.1)
radialwidth (1107)	toroidfield%desc.tfcoils%circularcoil%radialwidth (float) (9.4.1.1.1)
planecoil (1426)	toroidfield%desc.tfcoils%planecoil (planecoil) (9.4.1.3.279)
coordinates (1322)	toroidfield%desc.tfcoils%planecoil%coordinates (rz1D) (9.4.1.3.319)
r (1362)	toroidfield%desc.tfcoils%planecoil%coordinates%r (vecflt_type) (9.4.1.2.9)
z (1362)	toroidfield%desc.tfcoils%planecoil%coordinates%z (vecflt_type) (9.4.1.2.9)
hlength (1322)	toroidfield%desc.tfcoils%planecoil%hlength (vecflt_type) (9.4.1.2.9)
radialwidth (1322)	toroidfield%desc.tfcoils%planecoil%radialwidth (vecflt_type) (9.4.1.2.9)
structure (1426)	toroidfield%desc.tfcoils%structure (tf_structure) (9.4.1.3.384)
jcable (1427)	toroidfield%desc.tfcoils%structure%jcable (float) (9.4.1.1.1)
tisoft (1427)	toroidfield%desc.tfcoils%structure%tisoft (float) (9.4.1.1.1)
efcasing (1427)	toroidfield%desc.tfcoils%structure%efcasing (float) (9.4.1.1.1)
escasing (1427)	toroidfield%desc.tfcoils%structure%escasing (float) (9.4.1.1.1)
sigjackettf (1427)	toroidfield%desc.tfcoils%structure%sigjackettf (float) (9.4.1.1.1)
sigvaulttf (1427)	toroidfield%desc.tfcoils%structure%sigvaulttf (float) (9.4.1.1.1)
ktf (1427)	toroidfield%desc.tfcoils%structure%ktf (float) (9.4.1.1.1)
ritf (1427)	toroidfield%desc.tfcoils%structure%ritf (float) (9.4.1.1.1)
riitf (1427)	toroidfield%desc.tfcoils%structure%riitf (float) (9.4.1.1.1)
retf (1427)	toroidfield%desc.tfcoils%structure%retf (float) (9.4.1.1.1)
nturns (1085)	toroidfield%nturns (integer) (9.4.1.1.2)
ncoils (1085)	toroidfield%ncoils (integer) (9.4.1.1.2)
current (1085)	toroidfield%current (exp0D) (9.4.1.3.179)
value (1222)	toroidfield%current%value (float) (9.4.1.1.1)
abserror (1222)	toroidfield%current%abserror (float) (9.4.1.1.1)
releror (1222)	toroidfield%current%releror (float) (9.4.1.1.1)
bvac_r (1085)	toroidfield%bvac_r (exp0D) (9.4.1.3.179)
value (1222)	toroidfield%bvac_r%value (float) (9.4.1.1.1)
abserror (1222)	toroidfield%bvac_r%abserror (float) (9.4.1.1.1)
releror (1222)	toroidfield%bvac_r%releror (float) (9.4.1.1.1)
r0 (1085)	toroidfield%r0 (float) (9.4.1.1.1)
time (1085)	toroidfield%time (float) (9.4.1.1.1)

#### 9.4.2.1.41 tsdiag

datainfo (1086)	tsdiag%datainfo (datainfo) (9.4.1.3.120)
dataprovider (1163)	tsdiag%datainfo%dataprovider (string) (9.4.1.1.3)
putdate (1163)	tsdiag%datainfo%putdate (string) (9.4.1.1.3)
source (1163)	tsdiag%datainfo%source (string) (9.4.1.1.3)
comment (1163)	tsdiag%datainfo%comment (string) (9.4.1.1.3)
cocos (1163)	tsdiag%datainfo%cocos (integer) (9.4.1.1.2)
id (1163)	tsdiag%datainfo%id (integer) (9.4.1.1.2)
isref (1163)	tsdiag%datainfo%isref (integer) (9.4.1.1.2)
whatref (1163)	tsdiag%datainfo%whatref (whatref) (9.4.1.3.426)

user (1469)	tsdiag%datainfo%whatref%user (string) (9.4.1.1.3)
machine (1469)	tsdiag%datainfo%whatref%machine (string) (9.4.1.1.3)
shot (1469)	tsdiag%datainfo%whatref%shot (integer) (9.4.1.1.2)
run (1469)	tsdiag%datainfo%whatref%run (integer) (9.4.1.1.2)
occurrence (1469)	tsdiag%datainfo%whatref%occurrence (integer) (9.4.1.1.2)
putinfo (1163)	tsdiag%datainfo%putinfo (putinfo) (9.4.1.3.289)
putmethod (1332)	tsdiag%datainfo%putinfo%putmethod (string) (9.4.1.1.3)
putaccess (1332)	tsdiag%datainfo%putinfo%putaccess (string) (9.4.1.1.3)
putlocation (1332)	tsdiag%datainfo%putinfo%putlocation (string) (9.4.1.1.3)
rights (1332)	tsdiag%datainfo%putinfo%rights (string) (9.4.1.1.3)
setup (1086)	tsdiag%setup (tssetup) (9.4.1.3.394)
position (1437)	tsdiag%setup%position (rzphiID) (9.4.1.3.325)
r (1368)	tsdiag%setup%position%r (vecflt_type) (9.4.1.2.9)
z (1368)	tsdiag%setup%position%z (vecflt_type) (9.4.1.2.9)
phi (1368)	tsdiag%setup%position%phi (vecflt_type) (9.4.1.2.9)
measure (1086)	tsdiag%measure (tsmeasure) (9.4.1.3.393)
te (1436)	tsdiag%measure%te (expID) (9.4.1.3.180)
value (1223)	tsdiag%measure%te%value (vecflt_type) (9.4.1.2.9)
abserror (1223)	tsdiag%measure%te%abserror (vecflt_type) (9.4.1.2.9)
releror (1223)	tsdiag%measure%te%releror (vecflt_type) (9.4.1.2.9)
ne (1436)	tsdiag%measure%ne (expID) (9.4.1.3.180)
value (1223)	tsdiag%measure%ne%value (vecflt_type) (9.4.1.2.9)
abserror (1223)	tsdiag%measure%ne%abserror (vecflt_type) (9.4.1.2.9)
releror (1223)	tsdiag%measure%ne%releror (vecflt_type) (9.4.1.2.9)
time (1086)	tsdiag%time (float) (9.4.1.1.1)

#### 9.4.2.1.42 turbulence

datainfo (1087)	turbulence%datainfo (datainfo) (9.4.1.3.120)
dataprovder (1163)	turbulence%datainfo%dataprovder (string) (9.4.1.1.3)
putdate (1163)	turbulence%datainfo%putdate (string) (9.4.1.1.3)
source (1163)	turbulence%datainfo%source (string) (9.4.1.1.3)
comment (1163)	turbulence%datainfo%comment (string) (9.4.1.1.3)
cocos (1163)	turbulence%datainfo%cocos (integer) (9.4.1.1.2)
id (1163)	turbulence%datainfo%id (integer) (9.4.1.1.2)
isref (1163)	turbulence%datainfo%isref (integer) (9.4.1.1.2)
whatref (1163)	turbulence%datainfo%whatref (whatref) (9.4.1.3.426)
user (1469)	turbulence%datainfo%whatref%user (string) (9.4.1.1.3)
machine (1469)	turbulence%datainfo%whatref%machine (string) (9.4.1.1.3)
shot (1469)	turbulence%datainfo%whatref%shot (integer) (9.4.1.1.2)
run (1469)	turbulence%datainfo%whatref%run (integer) (9.4.1.1.2)
occurrence (1469)	turbulence%datainfo%whatref%occurrence (integer) (9.4.1.1.2)
putinfo (1163)	turbulence%datainfo%putinfo (putinfo) (9.4.1.3.289)
putmethod (1332)	turbulence%datainfo%putinfo%putmethod (string) (9.4.1.1.3)
putaccess (1332)	turbulence%datainfo%putinfo%putaccess (string) (9.4.1.1.3)
putlocation (1332)	turbulence%datainfo%putinfo%putlocation (string) (9.4.1.1.3)
rights (1332)	turbulence%datainfo%putinfo%rights (string) (9.4.1.1.3)
composition (1087)	turbulence%composition (turbcomposition) (9.4.1.3.395)
amn (1438)	turbulence%composition%amn (vecflt_type) (9.4.1.2.9)
zn (1438)	turbulence%composition%zn (vecflt_type) (9.4.1.2.9)
zion (1438)	turbulence%composition%zion (vecflt_type) (9.4.1.2.9)
ie.mass (1438)	turbulence%composition%ie.mass (vecflt_type) (9.4.1.2.9)
coordsys (1087)	turbulence%coordsys (turbcoordsys) (9.4.1.3.396)
grid.type (1439)	turbulence%coordsys%grid.type (string) (9.4.1.1.3)
turbgrid (1439)	turbulence%coordsys%turbgrid (turbgrid) (9.4.1.3.398)
dim1 (1441)	turbulence%coordsys%turbgrid%dim1 (vecflt_type) (9.4.1.2.9)
dim2 (1441)	turbulence%coordsys%turbgrid%dim2 (vecflt_type) (9.4.1.2.9)
dim3 (1441)	turbulence%coordsys%turbgrid%dim3 (vecflt_type) (9.4.1.2.9)
dim.v1 (1441)	turbulence%coordsys%turbgrid%dim.v1 (vecflt_type) (9.4.1.2.9)
dim.v2 (1441)	turbulence%coordsys%turbgrid%dim.v2 (vecflt_type) (9.4.1.2.9)
jacobian (1439)	turbulence%coordsys%jacobian (matflt_type) (9.4.1.2.7)

g_11 (1439)	turbulence%coordsys%g_11 (matflt.type) (9.4.1.2.7)
g_12 (1439)	turbulence%coordsys%g_12 (matflt.type) (9.4.1.2.7)
g_13 (1439)	turbulence%coordsys%g_13 (matflt.type) (9.4.1.2.7)
g_22 (1439)	turbulence%coordsys%g_22 (matflt.type) (9.4.1.2.7)
g_23 (1439)	turbulence%coordsys%g_23 (matflt.type) (9.4.1.2.7)
g_33 (1439)	turbulence%coordsys%g_33 (matflt.type) (9.4.1.2.7)
position (1439)	turbulence%coordsys%position (rzphi3D) (9.4.1.3.328)
r (1371)	turbulence%coordsys%position%r (array3dflt.type) (9.4.1.2.1)
z (1371)	turbulence%coordsys%position%z (array3dflt.type) (9.4.1.2.1)
phi (1371)	turbulence%coordsys%position%phi (array3dflt.type) (9.4.1.2.1)
var0d (1087)	turbulence%var0d (turbvar0d) (9.4.1.3.400)
dtime.type (1443)	turbulence%var0d%dtime.type (string) (9.4.1.1.3)
dtime (1443)	turbulence%var0d%dtime (vecflt.type) (9.4.1.2.9)
en_exb (1443)	turbulence%var0d%en_exb (vecflt.type) (9.4.1.2.9)
en_mag (1443)	turbulence%var0d%en_mag (vecflt.type) (9.4.1.2.9)
en_el.th (1443)	turbulence%var0d%en_el.th (vecflt.type) (9.4.1.2.9)
en_ion.th (1443)	turbulence%var0d%en_ion.th (matflt.type) (9.4.1.2.7)
en_el.par (1443)	turbulence%var0d%en_el.par (vecflt.type) (9.4.1.2.9)
en_ion.par (1443)	turbulence%var0d%en_ion.par (matflt.type) (9.4.1.2.7)
en_tot (1443)	turbulence%var0d%en_tot (vecflt.type) (9.4.1.2.9)
fl.el (1443)	turbulence%var0d%fl.el (vecflt.type) (9.4.1.2.9)
fl_heatel (1443)	turbulence%var0d%fl_heatel (vecflt.type) (9.4.1.2.9)
fl_ion (1443)	turbulence%var0d%fl_ion (matflt.type) (9.4.1.2.7)
fl_heation (1443)	turbulence%var0d%fl_heation (matflt.type) (9.4.1.2.7)
fl_magel (1443)	turbulence%var0d%fl_magel (vecflt.type) (9.4.1.2.9)
fl_magheatel (1443)	turbulence%var0d%fl_magheatel (vecflt.type) (9.4.1.2.9)
fl_magion (1443)	turbulence%var0d%fl_magion (matflt.type) (9.4.1.2.7)
flmagheation (1443)	turbulence%var0d%flmagheation (matflt.type) (9.4.1.2.7)
var1d (1087)	turbulence%var1d (turbvar1d) (9.4.1.3.401)
rho.tor_norm (1444)	turbulence%var1d%rho.tor_norm (vecflt.type) (9.4.1.2.9)
phi (1444)	turbulence%var1d%phi (vecflt.type) (9.4.1.2.9)
er (1444)	turbulence%var1d%er (vecflt.type) (9.4.1.2.9)
vor (1444)	turbulence%var1d%vor (vecflt.type) (9.4.1.2.9)
apl (1444)	turbulence%var1d%apl (vecflt.type) (9.4.1.2.9)
jpl (1444)	turbulence%var1d%jpl (vecflt.type) (9.4.1.2.9)
ne (1444)	turbulence%var1d%ne (vecflt.type) (9.4.1.2.9)
te (1444)	turbulence%var1d%te (vecflt.type) (9.4.1.2.9)
ni (1444)	turbulence%var1d%ni (matflt.type) (9.4.1.2.7)
ti (1444)	turbulence%var1d%ti (matflt.type) (9.4.1.2.7)
ui (1444)	turbulence%var1d%ui (matflt.type) (9.4.1.2.7)
var2d (1087)	turbulence%var2d (turbvar2d) (9.4.1.3.402)
rho.tor_norm (1445)	turbulence%var2d%rho.tor_norm (vecflt.type) (9.4.1.2.9)
theta (1445)	turbulence%var2d%theta (vecflt.type) (9.4.1.2.9)
phi (1445)	turbulence%var2d%phi (matflt.type) (9.4.1.2.7)
apl (1445)	turbulence%var2d%apl (matflt.type) (9.4.1.2.7)
jpl (1445)	turbulence%var2d%jpl (matflt.type) (9.4.1.2.7)
vor (1445)	turbulence%var2d%vor (matflt.type) (9.4.1.2.7)
ne (1445)	turbulence%var2d%ne (matflt.type) (9.4.1.2.7)
te (1445)	turbulence%var2d%te (matflt.type) (9.4.1.2.7)
ni (1445)	turbulence%var2d%ni (array3dflt.type) (9.4.1.2.1)
ti (1445)	turbulence%var2d%ti (array3dflt.type) (9.4.1.2.1)
ui (1445)	turbulence%var2d%ui (array3dflt.type) (9.4.1.2.1)
var3d (1087)	turbulence%var3d (turbvar3d) (9.4.1.3.403)
phi (1446)	turbulence%var3d%phi (array3dflt.type) (9.4.1.2.1)
vor (1446)	turbulence%var3d%vor (array3dflt.type) (9.4.1.2.1)
jpl (1446)	turbulence%var3d%jpl (array3dflt.type) (9.4.1.2.1)
ne (1446)	turbulence%var3d%ne (array3dflt.type) (9.4.1.2.1)
var4d (1087)	turbulence%var4d (turbvar4d) (9.4.1.3.404)
fe (1447)	turbulence%var4d%fe (array4dflt.type) (9.4.1.2.3)
fi (1447)	turbulence%var4d%fi (array5dflt.type) (9.4.1.2.4)
var5d (1087)	turbulence%var5d (turbvar5d) (9.4.1.3.405)

fe (1448)	turbulence%var5d%fe (array5dflt.type) (9.4.1.2.4)
fi (1448)	turbulence%var5d%fi (array6dflt.type) (9.4.1.2.5)
spec1d (1087)	turbulence%spec1d (turbspec1d) (9.4.1.3.399)
kperp (1442)	turbulence%spec1d%kperp (vecflt.type) (9.4.1.2.9)
phi (1442)	turbulence%spec1d%phi (vecflt.type) (9.4.1.2.9)
vor (1442)	turbulence%spec1d%vor (vecflt.type) (9.4.1.2.9)
b (1442)	turbulence%spec1d%b (vecflt.type) (9.4.1.2.9)
jpl (1442)	turbulence%spec1d%jpl (vecflt.type) (9.4.1.2.9)
ne (1442)	turbulence%spec1d%ne (vecflt.type) (9.4.1.2.9)
te (1442)	turbulence%spec1d%te (vecflt.type) (9.4.1.2.9)
ti (1442)	turbulence%spec1d%ti (matflt.type) (9.4.1.2.7)
fe (1442)	turbulence%spec1d%fe (vecflt.type) (9.4.1.2.9)
qe (1442)	turbulence%spec1d%qe (vecflt.type) (9.4.1.2.9)
qi (1442)	turbulence%spec1d%qi (matflt.type) (9.4.1.2.7)
me (1442)	turbulence%spec1d%me (vecflt.type) (9.4.1.2.9)
mi (1442)	turbulence%spec1d%mi (matflt.type) (9.4.1.2.7)
env1d (1087)	turbulence%env1d (turbenv1d) (9.4.1.3.397)
theta (1440)	turbulence%env1d%theta (vecflt.type) (9.4.1.2.9)
phi (1440)	turbulence%env1d%phi (vecflt.type) (9.4.1.2.9)
vor (1440)	turbulence%env1d%vor (vecflt.type) (9.4.1.2.9)
jpl (1440)	turbulence%env1d%jpl (vecflt.type) (9.4.1.2.9)
ne (1440)	turbulence%env1d%ne (vecflt.type) (9.4.1.2.9)
he (1440)	turbulence%env1d%he (vecflt.type) (9.4.1.2.9)
te (1440)	turbulence%env1d%te (vecflt.type) (9.4.1.2.9)
ni (1440)	turbulence%env1d%ni (matflt.type) (9.4.1.2.7)
ti (1440)	turbulence%env1d%ti (matflt.type) (9.4.1.2.7)
ui (1440)	turbulence%env1d%ui (matflt.type) (9.4.1.2.7)
fe (1440)	turbulence%env1d%fe (vecflt.type) (9.4.1.2.9)
qe (1440)	turbulence%env1d%qe (vecflt.type) (9.4.1.2.9)
qi (1440)	turbulence%env1d%qi (matflt.type) (9.4.1.2.7)
me (1440)	turbulence%env1d%me (vecflt.type) (9.4.1.2.9)
mi (1440)	turbulence%env1d%mi (matflt.type) (9.4.1.2.7)
codeparam (1087)	turbulence%codeparam (codeparam) (9.4.1.3.65)
codename (1108)	turbulence%codeparam%codename (string) (9.4.1.1.3)
codeversion (1108)	turbulence%codeparam%codeversion (string) (9.4.1.1.3)
parameters (1108)	turbulence%codeparam%parameters (string) (9.4.1.1.3)
output_diag (1108)	turbulence%codeparam%output_diag (string) (9.4.1.1.3)
output_flag (1108)	turbulence%codeparam%output_flag (integer) (9.4.1.1.2)
time (1087)	turbulence%time (float) (9.4.1.1.1)

### 9.4.2.1.43 vessel

datainfo (1088)	vessel%datainfo (datainfo) (9.4.1.3.120)
dataprovider (1163)	vessel%datainfo%dataprovider (string) (9.4.1.1.3)
putdate (1163)	vessel%datainfo%putdate (string) (9.4.1.1.3)
source (1163)	vessel%datainfo%source (string) (9.4.1.1.3)
comment (1163)	vessel%datainfo%comment (string) (9.4.1.1.3)
cocos (1163)	vessel%datainfo%cocos (integer) (9.4.1.1.2)
id (1163)	vessel%datainfo%id (integer) (9.4.1.1.2)
isref (1163)	vessel%datainfo%isref (integer) (9.4.1.1.2)
whatref (1163)	vessel%datainfo%whatref (whatref) (9.4.1.3.426)
user (1469)	vessel%datainfo%whatref%user (string) (9.4.1.1.3)
machine (1469)	vessel%datainfo%whatref%machine (string) (9.4.1.1.3)
shot (1469)	vessel%datainfo%whatref%shot (integer) (9.4.1.1.2)
run (1469)	vessel%datainfo%whatref%run (integer) (9.4.1.1.2)
occurrence (1469)	vessel%datainfo%whatref%occurrence (integer) (9.4.1.1.2)
putinfo (1163)	vessel%datainfo%putinfo (putinfo) (9.4.1.3.289)
putmethod (1332)	vessel%datainfo%putinfo%putmethod (string) (9.4.1.1.3)
putaccess (1332)	vessel%datainfo%putinfo%putaccess (string) (9.4.1.1.3)
putlocation (1332)	vessel%datainfo%putinfo%putlocation (string) (9.4.1.1.3)
rights (1332)	vessel%datainfo%putinfo%rights (string) (9.4.1.1.3)

position (1088)	vessel%position (rz1D) (9.4.1.3.319)
r (1362)	vessel%position%r (vecflt_type) (9.4.1.2.9)
z (1362)	vessel%position%z (vecflt_type) (9.4.1.2.9)

#### 9.4.2.1.44 wall

datainfo (1089)	wall%datainfo (datainfo) (9.4.1.3.120)
dataprovider (1163)	wall%datainfo%dataprovider (string) (9.4.1.1.3)
putdate (1163)	wall%datainfo%putdate (string) (9.4.1.1.3)
source (1163)	wall%datainfo%source (string) (9.4.1.1.3)
comment (1163)	wall%datainfo%comment (string) (9.4.1.1.3)
cocos (1163)	wall%datainfo%cocos (integer) (9.4.1.1.2)
id (1163)	wall%datainfo%id (integer) (9.4.1.1.2)
isref (1163)	wall%datainfo%isref (integer) (9.4.1.1.2)
whatref (1163)	wall%datainfo%whatref (whatref) (9.4.1.3.426)
user (1469)	wall%datainfo%whatref%user (string) (9.4.1.1.3)
machine (1469)	wall%datainfo%whatref%machine (string) (9.4.1.1.3)
shot (1469)	wall%datainfo%whatref%shot (integer) (9.4.1.1.2)
run (1469)	wall%datainfo%whatref%run (integer) (9.4.1.1.2)
occurrence (1469)	wall%datainfo%whatref%occurrence (integer) (9.4.1.1.2)
putinfo (1163)	wall%datainfo%putinfo (putinfo) (9.4.1.3.289)
putmethod (1332)	wall%datainfo%putinfo%putmethod (string) (9.4.1.1.3)
putaccess (1332)	wall%datainfo%putinfo%putaccess (string) (9.4.1.1.3)
putlocation (1332)	wall%datainfo%putinfo%putlocation (string) (9.4.1.1.3)
rights (1332)	wall%datainfo%putinfo%rights (string) (9.4.1.1.3)
wall2d_mhd (1089)	wall%wall2d_mhd (wall2d_mhd) (9.4.1.3.409)
wall_id (1452)	wall%wall2d_mhd%wall_id (identifier) (9.4.1.3.213)
id (1256)	wall%wall2d_mhd%wall_id%id (string) (9.4.1.1.3)
flag (1256)	wall%wall2d_mhd%wall_id%flag (integer) (9.4.1.1.2)
description (1256)	wall%wall2d_mhd%wall_id%description (string) (9.4.1.1.3)
res_wall (1452)	wall%wall2d_mhd%res_wall(:) (mhd_res_wall2d) (9.4.1.3.242)
walltype (1285)	wall%wall2d_mhd%res_wall(:)%walltype (identifier) (9.4.1.3.213)
id (1256)	wall%wall2d_mhd%res_wall(:)%walltype%id (string) (9.4.1.1.3)
flag (1256)	wall%wall2d_mhd%res_wall(:)%walltype%flag (integer) (9.4.1.1.2)
description (1256)	wall%wall2d_mhd%res_wall(:)%walltype%description (string) (9.4.1.1.3)
delta (1285)	wall%wall2d_mhd%res_wall(:)%delta (float) (9.4.1.1.1)
eta (1285)	wall%wall2d_mhd%res_wall(:)%eta (float) (9.4.1.1.1)
npoloidal (1285)	wall%wall2d_mhd%res_wall(:)%npoloidal (integer) (9.4.1.1.2)
position (1285)	wall%wall2d_mhd%res_wall(:)%position (rz1D) (9.4.1.3.319)
r (1362)	wall%wall2d_mhd%res_wall(:)%position%r (vecflt_type) (9.4.1.2.9)
z (1362)	wall%wall2d_mhd%res_wall(:)%position%z (vecflt_type) (9.4.1.2.9)
holes (1285)	wall%wall2d_mhd%res_wall(:)%holes (holes) (9.4.1.3.212)
n_holes (1255)	wall%wall2d_mhd%res_wall(:)%holes%n_holes (integer) (9.4.1.1.2)
coordinates (1255)	wall%wall2d_mhd%res_wall(:)%holes%coordinates (coordinates) (9.4.1.3.90)
theta (1133)	wall%wall2d_mhd%res_wall(:)%holes%coordinates%theta (vecflt_type) (9.4.1.2.9)
phi (1133)	wall%wall2d_mhd%res_wall(:)%holes%coordinates%phi (vecflt_type) (9.4.1.2.9)
width (1255)	wall%wall2d_mhd%res_wall(:)%holes%width (width) (9.4.1.3.427)
dtheta (1470)	wall%wall2d_mhd%res_wall(:)%holes%width%dtheta (vecflt_type) (9.4.1.2.9)
phi (1470)	wall%wall2d_mhd%res_wall(:)%holes%width%phi (vecflt_type) (9.4.1.2.9)
eta (1255)	wall%wall2d_mhd%res_wall(:)%holes%eta (vecflt_type) (9.4.1.2.9)
ideal_wall (1452)	wall%wall2d_mhd%ideal_wall (mhd_ideal_wall2d) (9.4.1.3.240)
walltype (1283)	wall%wall2d_mhd%ideal_wall%walltype (identifier) (9.4.1.3.213)
id (1256)	wall%wall2d_mhd%ideal_wall%walltype%id (string) (9.4.1.1.3)
flag (1256)	wall%wall2d_mhd%ideal_wall%walltype%flag (integer) (9.4.1.1.2)
description (1256)	wall%wall2d_mhd%ideal_wall%walltype%description (string) (9.4.1.1.3)
position (1283)	wall%wall2d_mhd%ideal_wall%position (rz1D) (9.4.1.3.319)
r (1362)	wall%wall2d_mhd%ideal_wall%position%r (vecflt_type) (9.4.1.2.9)
z (1362)	wall%wall2d_mhd%ideal_wall%position%z (vecflt_type) (9.4.1.2.9)
wall2d (1089)	wall%wall2d(:) (wall2d) (9.4.1.3.408)
wall_id (1451)	wall%wall2d(:)%wall_id (identifier) (9.4.1.3.213)
id (1256)	wall%wall2d(:)%wall_id%id (string) (9.4.1.1.3)

flag (1256)	wall%wall2d(:)%wall_id%flag (integer) (9.4.1.1.2)
description (1256)	wall%wall2d(:)%wall_id%description (string) (9.4.1.1.3)
limiter (1451)	wall%wall2d(:)%limiter (wall_limiter) (9.4.1.3.413)
limiter_unit (1456)	wall%wall2d(:)%limiter%limiter_unit(:) (limiter_unit) (9.4.1.3.230)
name (1273)	wall%wall2d(:)%limiter%limiter_unit(:)%name (string) (9.4.1.1.3)
closed (1273)	wall%wall2d(:)%limiter%limiter_unit(:)%closed (string) (9.4.1.1.3)
position (1273)	wall%wall2d(:)%limiter%limiter_unit(:)%position (rz1D) (9.4.1.3.319)
r (1362)	wall%wall2d(:)%limiter%limiter_unit(:)%position%r (vecflt_type) (9.4.1.2.9)
z (1362)	wall%wall2d(:)%limiter%limiter_unit(:)%position%z (vecflt_type) (9.4.1.2.9)
eta (1273)	wall%wall2d(:)%limiter%limiter_unit(:)%eta (float) (9.4.1.1.1)
delta (1273)	wall%wall2d(:)%limiter%limiter_unit(:)%delta (float) (9.4.1.1.1)
permeability (1273)	wall%wall2d(:)%limiter%limiter_unit(:)%permeability (float) (9.4.1.1.1)
vessel (1451)	wall%wall2d(:)%vessel (wall_vessel) (9.4.1.3.414)
vessel_unit (1457)	wall%wall2d(:)%vessel%vessel_unit(:) (wall_vessel_unit) (9.4.1.3.416)
annular (1459)	wall%wall2d(:)%vessel%vessel_unit(:)%annular (wall_vessel_annular) (9.4.1.3.415)
name (1458)	wall%wall2d(:)%vessel%vessel_unit(:)%annular%name (string) (9.4.1.1.3)
inside (1458)	wall%wall2d(:)%vessel%vessel_unit(:)%annular%inside (rz1D) (9.4.1.3.319)
r (1362)	wall%wall2d(:)%vessel%vessel_unit(:)%annular%inside%r (vecflt_type) (9.4.1.2.9)
z (1362)	wall%wall2d(:)%vessel%vessel_unit(:)%annular%inside%z (vecflt_type) (9.4.1.2.9)
outside (1458)	wall%wall2d(:)%vessel%vessel_unit(:)%annular%outside (rz1D) (9.4.1.3.319)
r (1362)	wall%wall2d(:)%vessel%vessel_unit(:)%annular%outside%r (vecflt_type) (9.4.1.2.9)
z (1362)	wall%wall2d(:)%vessel%vessel_unit(:)%annular%outside%z (vecflt_type) (9.4.1.2.9)
eta (1458)	wall%wall2d(:)%vessel%vessel_unit(:)%annular%eta (float) (9.4.1.1.1)
permeability (1458)	wall%wall2d(:)%vessel%vessel_unit(:)%annular%permeability (float) (9.4.1.1.1)
blocks (1459)	wall%wall2d(:)%vessel%vessel_unit(:)%blocks (wall_blocks) (9.4.1.3.411)
blocks_unit (1454)	wall%wall2d(:)%vessel%vessel_unit(:)%blocks%blocks_unit(:) (wall_blocks_unit) (9.4.1.3.412)
name (1455)	wall%wall2d(:)%vessel%vessel_unit(:)%blocks%blocks_unit(:)%name (string) (9.4.1.1.3)
position (1455)	wall%wall2d(:)%vessel%vessel_unit(:)%blocks%blocks_unit(:)%position (rz1D) (9.4.1.3.319)
r (1362)	wall%wall2d(:)%vessel%vessel_unit(:)%blocks%blocks_unit(:)%position%r (vecflt_type) (9.4.1.2.9)
z (1362)	wall%wall2d(:)%vessel%vessel_unit(:)%blocks%blocks_unit(:)%position%z (vecflt_type) (9.4.1.2.9)
eta (1455)	wall%wall2d(:)%vessel%vessel_unit(:)%blocks%blocks_unit(:)%eta (float) (9.4.1.1.1)
permeability (1455)	wall%wall2d(:)%vessel%vessel_unit(:)%blocks%blocks_unit(:)%permeability (float) (9.4.1.1.1)
wall3d (1089)	wall%wall3d(:) (wall3d) (9.4.1.3.410)
wall_id (1453)	wall%wall3d(:)%wall_id (identfier) (9.4.1.3.213)
id (1256)	wall%wall3d(:)%wall_id%id (string) (9.4.1.1.3)
flag (1256)	wall%wall3d(:)%wall_id%flag (integer) (9.4.1.1.2)
description (1256)	wall%wall3d(:)%wall_id%description (string) (9.4.1.1.3)
grid (1453)	wall%wall3d(:)%grid (complexgrid) (9.4.1.3.70)
uid (1113)	wall%wall3d(:)%grid%uid (integer) (9.4.1.1.2)
id (1113)	wall%wall3d(:)%grid%id (string) (9.4.1.1.3)
spaces (1113)	wall%wall3d(:)%grid%spaces(:) (complexgrid_space) (9.4.1.3.79)
geotype (1122)	wall%wall3d(:)%grid%spaces(:)%geotype (vecint_type) (9.4.1.2.10)
geotypeid (1122)	wall%wall3d(:)%grid%spaces(:)%geotypeid (vecstring_type) (9.4.1.2.11)
coordtype (1122)	wall%wall3d(:)%grid%spaces(:)%coordtype (matint_type) (9.4.1.2.8)
objects (1122)	wall%wall3d(:)%grid%spaces(:)%objects(:) (objects) (9.4.1.3.259)
boundary (1302)	wall%wall3d(:)%grid%spaces(:)%objects(:)%boundary (matint_type) (9.4.1.2.8)
neighbour (1302)	wall%wall3d(:)%grid%spaces(:)%objects(:)%neighbour (array3dint_type) (9.4.1.2.2)
geo (1302)	wall%wall3d(:)%grid%spaces(:)%objects(:)%geo (array4dflt_type) (9.4.1.2.3)
measure (1302)	wall%wall3d(:)%grid%spaces(:)%objects(:)%measure (matflt_type) (9.4.1.2.7)
xpoints (1122)	wall%wall3d(:)%grid%spaces(:)%xpoints (vecint_type) (9.4.1.2.10)
subgrids (1113)	wall%wall3d(:)%grid%subgrids(:) (complexgrid_subgrid) (9.4.1.3.80)
id (1123)	wall%wall3d(:)%grid%subgrids(:)%id (string) (9.4.1.1.3)
list (1123)	wall%wall3d(:)%grid%subgrids(:)%list(:) (complexgrid_objectlist) (9.4.1.3.74)
cls (1117)	wall%wall3d(:)%grid%subgrids(:)%list(:)%cls (vecint_type) (9.4.1.2.10)
indset (1117)	wall%wall3d(:)%grid%subgrids(:)%list(:)%indset(:) (complexgrid_indexlist) (9.4.1.3.72)
range (1115)	wall%wall3d(:)%grid%subgrids(:)%list(:)%indset(:)%range (vecint_type) (9.4.1.2.10)
ind (1115)	wall%wall3d(:)%grid%subgrids(:)%list(:)%indset(:)%ind (vecint_type) (9.4.1.2.10)
ind (1117)	wall%wall3d(:)%grid%subgrids(:)%list(:)%ind (matint_type) (9.4.1.2.8)
metric (1113)	wall%wall3d(:)%grid%metric (complexgrid_metric) (9.4.1.3.73)
measure (1116)	wall%wall3d(:)%grid%metric%measure(:) (complexgrid_scalar) (9.4.1.3.75)





vector (1118)	wall%wall3d(:)%grid%geo(:)%measure(:)%vector (matflt.type) (9.4.1.2.7)
matrix (1118)	wall%wall3d(:)%grid%geo(:)%measure(:)%matrix (array3dflt.type) (9.4.1.2.1)
bases (1113)	wall%wall3d(:)%grid%bases(:) (complexgrid_vector) (9.4.1.3.81)
griduid (1124)	wall%wall3d(:)%grid%bases(:)%griduid (integer) (9.4.1.1.2)
label (1124)	wall%wall3d(:)%grid%bases(:)%label (string) (9.4.1.1.3)
comp (1124)	wall%wall3d(:)%grid%bases(:)%comp(:) (complexgrid_scalar) (9.4.1.3.75)
griduid (1118)	wall%wall3d(:)%grid%bases(:)%comp(:)%griduid (integer) (9.4.1.1.2)
subgrid (1118)	wall%wall3d(:)%grid%bases(:)%comp(:)%subgrid (integer) (9.4.1.1.2)
scalar (1118)	wall%wall3d(:)%grid%bases(:)%comp(:)%scalar (vecflt.type) (9.4.1.2.9)
vector (1118)	wall%wall3d(:)%grid%bases(:)%comp(:)%vector (matflt.type) (9.4.1.2.7)
matrix (1118)	wall%wall3d(:)%grid%bases(:)%comp(:)%matrix (array3dflt.type) (9.4.1.2.1)
align (1124)	wall%wall3d(:)%grid%bases(:)%align (vecint.type) (9.4.1.2.10)
alignid (1124)	wall%wall3d(:)%grid%bases(:)%alignid (vecstring_type) (9.4.1.2.11)
basis (1124)	wall%wall3d(:)%grid%bases(:)%basis (integer) (9.4.1.1.2)
plasma (1089)	wall%plasma (plasma) (9.4.1.3.280)
flux (1323)	wall%plasma%flux(:) (complexgrid_scalar) (9.4.1.3.75)
griduid (1118)	wall%plasma%flux(:)%griduid (integer) (9.4.1.1.2)
subgrid (1118)	wall%plasma%flux(:)%subgrid (integer) (9.4.1.1.2)
scalar (1118)	wall%plasma%flux(:)%scalar (vecflt.type) (9.4.1.2.9)
vector (1118)	wall%plasma%flux(:)%vector (matflt.type) (9.4.1.2.7)
matrix (1118)	wall%plasma%flux(:)%matrix (array3dflt.type) (9.4.1.2.1)
b (1323)	wall%plasma%b (complexgrid_vector_simplestruct) (9.4.1.3.82)
label (1125)	wall%plasma%b%label (string) (9.4.1.1.3)
comp (1125)	wall%plasma%b%comp(:) (complexgrid_scalar) (9.4.1.3.75)
griduid (1118)	wall%plasma%b%comp(:)%griduid (integer) (9.4.1.1.2)
subgrid (1118)	wall%plasma%b%comp(:)%subgrid (integer) (9.4.1.1.2)
scalar (1118)	wall%plasma%b%comp(:)%scalar (vecflt.type) (9.4.1.2.9)
vector (1118)	wall%plasma%b%comp(:)%vector (matflt.type) (9.4.1.2.7)
matrix (1118)	wall%plasma%b%comp(:)%matrix (array3dflt.type) (9.4.1.2.1)
align (1125)	wall%plasma%b%align (vecint.type) (9.4.1.2.10)
alignid (1125)	wall%plasma%b%alignid (vecstring_type) (9.4.1.2.11)
energy (1323)	wall%plasma%energy(:) (complexgrid_scalar) (9.4.1.3.75)
griduid (1118)	wall%plasma%energy(:)%griduid (integer) (9.4.1.1.2)
subgrid (1118)	wall%plasma%energy(:)%subgrid (integer) (9.4.1.1.2)
scalar (1118)	wall%plasma%energy(:)%scalar (vecflt.type) (9.4.1.2.9)
vector (1118)	wall%plasma%energy(:)%vector (matflt.type) (9.4.1.2.7)
matrix (1118)	wall%plasma%energy(:)%matrix (array3dflt.type) (9.4.1.2.1)
species (1323)	wall%plasma%species(:) (species_desc) (9.4.1.3.370)
label (1413)	wall%plasma%species(:)%label (string) (9.4.1.1.3)
amn (1413)	wall%plasma%species(:)%amn (float) (9.4.1.1.1)
zn (1413)	wall%plasma%species(:)%zn (float) (9.4.1.1.1)
zmin (1413)	wall%plasma%species(:)%zmin (float) (9.4.1.1.1)
zmax (1413)	wall%plasma%species(:)%zmax (float) (9.4.1.1.1)
surface (1089)	wall%surface (surface) (9.4.1.3.379)
ref_wall_typ (1422)	wall%surface%ref_wall_typ(:) (ref_wall_typ) (9.4.1.3.313)
label (1356)	wall%surface%ref_wall_typ(:)%label (string) (9.4.1.1.3)
thickness (1356)	wall%surface%ref_wall_typ(:)%thickness (vecflt.type) (9.4.1.2.9)
stoichiometry (1356)	wall%surface%ref_wall_typ(:)%stoichiometry (matflt.type) (9.4.1.2.7)
dx (1356)	wall%surface%ref_wall_typ(:)%dx (matflt.type) (9.4.1.2.7)
wall_type (1422)	wall%surface%wall_type (complexgrid_scalar_int) (9.4.1.3.77)
griduid (1120)	wall%surface%wall_type%griduid (integer) (9.4.1.1.2)
subgrid (1120)	wall%surface%wall_type%subgrid (integer) (9.4.1.1.2)
scalar (1120)	wall%surface%wall_type%scalar (vecint.type) (9.4.1.2.10)
vector (1120)	wall%surface%wall_type%vector (matint.type) (9.4.1.2.8)
matrix (1120)	wall%surface%wall_type%matrix (array3dint.type) (9.4.1.2.2)
layers (1422)	wall%surface%layers (layers) (9.4.1.3.229)
density (1272)	wall%surface%layers%density (matflt.type) (9.4.1.2.7)
thickness (1272)	wall%surface%layers%thickness (matflt.type) (9.4.1.2.7)
roughness (1272)	wall%surface%layers%roughness (matflt.type) (9.4.1.2.7)
t (1272)	wall%surface%layers%t (array3dflt.type) (9.4.1.2.1)
element_frac (1272)	wall%surface%layers%element_frac (array3dflt.type) (9.4.1.2.1)



chem_comp (1272)	wall%surface%layers%chem_comp (array3dflt_type) (9.4.1.2.1)
h_inventory (1422)	wall%surface%h_inventory (h_inventory) (9.4.1.3.210)
surf_trap_de (1253)	wall%surface%h_inventory%surf_trap_de (array5dflt_type) (9.4.1.2.4)
bulk_trap_de (1253)	wall%surface%h_inventory%bulk_trap_de (array5dflt_type) (9.4.1.2.4)
bulk_D (1253)	wall%surface%h_inventory%bulk_D (array5dflt_type) (9.4.1.2.4)
surface_D (1253)	wall%surface%h_inventory%surface_D (array5dflt_type) (9.4.1.2.4)
bulk_C.s (1253)	wall%surface%h_inventory%bulk_C.s (array5dflt_type) (9.4.1.2.4)
surface_C.s (1253)	wall%surface%h_inventory%surface_C.s (array5dflt_type) (9.4.1.2.4)
bulk_C.t (1253)	wall%surface%h_inventory%bulk_C.t (array5dflt_type) (9.4.1.2.4)
surface_C.t (1253)	wall%surface%h_inventory%surface_C.t (array5dflt_type) (9.4.1.2.4)
surf_recreate (1253)	wall%surface%h_inventory%surf_recreate (array5dflt_type) (9.4.1.2.4)
elements (1422)	wall%surface%elements(:) (element_desc) (9.4.1.3.170)
label (1213)	wall%surface%elements(:)%label (string) (9.4.1.1.3)
zn (1213)	wall%surface%elements(:)%zn (integer) (9.4.1.1.2)
amn (1213)	wall%surface%elements(:)%amn (float) (9.4.1.1.1)
density (1213)	wall%surface%elements(:)%density (float) (9.4.1.1.1)
compounds (1422)	wall%surface%compounds(:) (compound_desc) (9.4.1.3.88)
label (1131)	wall%surface%compounds(:)%label (string) (9.4.1.1.3)
stoichiometry (1131)	wall%surface%compounds(:)%stoichiometry (vecflt_type) (9.4.1.2.9)
density (1131)	wall%surface%compounds(:)%density (float) (9.4.1.1.1)
time (1089)	wall%time (float) (9.4.1.1.1)

#### 9.4.2.1.45 waves

datainfo (1090)	waves%datainfo (datainfo) (9.4.1.3.120)
dataprovider (1163)	waves%datainfo%dataprovider (string) (9.4.1.1.3)
putdate (1163)	waves%datainfo%putdate (string) (9.4.1.1.3)
source (1163)	waves%datainfo%source (string) (9.4.1.1.3)
comment (1163)	waves%datainfo%comment (string) (9.4.1.1.3)
cocos (1163)	waves%datainfo%cocos (integer) (9.4.1.1.2)
id (1163)	waves%datainfo%id (integer) (9.4.1.1.2)
isref (1163)	waves%datainfo%isref (integer) (9.4.1.1.2)
whatref (1163)	waves%datainfo%whatref (whatref) (9.4.1.3.426)
user (1469)	waves%datainfo%whatref%user (string) (9.4.1.1.3)
machine (1469)	waves%datainfo%whatref%machine (string) (9.4.1.1.3)
shot (1469)	waves%datainfo%whatref%shot (integer) (9.4.1.1.2)
run (1469)	waves%datainfo%whatref%run (integer) (9.4.1.1.2)
occurrence (1469)	waves%datainfo%whatref%occurrence (integer) (9.4.1.1.2)
putinfo (1163)	waves%datainfo%putinfo (putinfo) (9.4.1.3.289)
putmethod (1332)	waves%datainfo%putinfo%putmethod (string) (9.4.1.1.3)
putaccess (1332)	waves%datainfo%putinfo%putaccess (string) (9.4.1.1.3)
putlocation (1332)	waves%datainfo%putinfo%putlocation (string) (9.4.1.1.3)
rights (1332)	waves%datainfo%putinfo%rights (string) (9.4.1.1.3)
coherentwave (1090)	waves%coherentwave(:) (coherentwave) (9.4.1.3.67)
wave_id (1110)	waves%coherentwave(:)%wave_id (enum_instance) (9.4.1.3.172)
type (1215)	waves%coherentwave(:)%wave_id%type (identifier) (9.4.1.3.213)
id (1256)	waves%coherentwave(:)%wave_id%type%id (string) (9.4.1.1.3)
flag (1256)	waves%coherentwave(:)%wave_id%type%flag (integer) (9.4.1.1.2)
description (1256)	waves%coherentwave(:)%wave_id%type%description (string) (9.4.1.1.3)
name (1215)	waves%coherentwave(:)%wave_id%name (string) (9.4.1.1.3)
index (1215)	waves%coherentwave(:)%wave_id%index (integer) (9.4.1.1.2)
composition (1110)	waves%coherentwave(:)%composition (composition) (9.4.1.3.83)
amn (1126)	waves%coherentwave(:)%composition%amn (vecflt_type) (9.4.1.2.9)
zn (1126)	waves%coherentwave(:)%composition%zn (vecflt_type) (9.4.1.2.9)
zion (1126)	waves%coherentwave(:)%composition%zion (vecflt_type) (9.4.1.2.9)
imp_flag (1126)	waves%coherentwave(:)%composition%imp_flag (vecint_type) (9.4.1.2.10)
label (1126)	waves%coherentwave(:)%composition%label (vecstring_type) (9.4.1.2.11)
compositions (1110)	waves%coherentwave(:)%compositions (compositions_type) (9.4.1.3.87)
nuclei (1130)	waves%coherentwave(:)%compositions%nuclei(:) (nuclei) (9.4.1.3.258)
zn (1301)	waves%coherentwave(:)%compositions%nuclei(:)%zn (float) (9.4.1.1.1)
amn (1301)	waves%coherentwave(:)%compositions%nuclei(:)%amn (float) (9.4.1.1.1)

label (1301)	waves%coherentwave(:)%compositions%nuclei(:)%label (string) (9.4.1.1.3)
ions (1130)	waves%coherentwave(:)%compositions%ions(:) (ions) (9.4.1.3.218)
nucindex (1261)	waves%coherentwave(:)%compositions%ions(:)%nucindex (integer) (9.4.1.1.2)
zion (1261)	waves%coherentwave(:)%compositions%ions(:)%zion (float) (9.4.1.1.1)
imp_flag (1261)	waves%coherentwave(:)%compositions%ions(:)%imp_flag (integer) (9.4.1.1.2)
label (1261)	waves%coherentwave(:)%compositions%ions(:)%label (string) (9.4.1.1.3)
impurities (1130)	waves%coherentwave(:)%compositions%impurities(:) (impurities) (9.4.1.3.215)
nucindex (1258)	waves%coherentwave(:)%compositions%impurities(:)%nucindex (integer) (9.4.1.1.2)
i_ion (1258)	waves%coherentwave(:)%compositions%impurities(:)%i_ion (integer) (9.4.1.1.2)
nzimp (1258)	waves%coherentwave(:)%compositions%impurities(:)%nzimp (integer) (9.4.1.1.2)
zmin (1258)	waves%coherentwave(:)%compositions%impurities(:)%zmin (vecflt_type) (9.4.1.2.9)
zmax (1258)	waves%coherentwave(:)%compositions%impurities(:)%zmax (vecflt_type) (9.4.1.2.9)
label (1258)	waves%coherentwave(:)%compositions%impurities(:)%label (vecstring_type) (9.4.1.2.11)
neutralscomp (1130)	waves%coherentwave(:)%compositions%neutralscomp(:) (composition_neutralscomp) (9.4.1.3.86)
neutcomp (1129)	waves%coherentwave(:)%compositions%neutralscomp(:)%neutcomp(:) (composition_neutrals_neutcomp) (9.4.1.3.85)
nucindex (1128)	waves%coherentwave(:)%compositions%neutralscomp(:)%neutcomp(:)%nucindex (integer) (9.4.1.1.2)
multiplicity (1128)	waves%coherentwave(:)%compositions%neutralscomp(:)%neutcomp(:)%multiplicity (integer) (9.4.1.1.2)
type (1129)	waves%coherentwave(:)%compositions%neutralscomp(:)%type(:) (identifier) (9.4.1.3.213)
id (1256)	waves%coherentwave(:)%compositions%neutralscomp(:)%type(:)%id (string) (9.4.1.1.3)
flag (1256)	waves%coherentwave(:)%compositions%neutralscomp(:)%type(:)%flag (integer) (9.4.1.1.2)
description (1256)	waves%coherentwave(:)%compositions%neutralscomp(:)%type(:)%description (string) (9.4.1.1.3)
label (1129)	waves%coherentwave(:)%compositions%neutralscomp(:)%label (string) (9.4.1.1.3)
edgespecies (1130)	waves%coherentwave(:)%compositions%edgespecies(:) (edgespecies) (9.4.1.3.169)
nucindex (1212)	waves%coherentwave(:)%compositions%edgespecies(:)%nucindex (integer) (9.4.1.1.2)
zmin (1212)	waves%coherentwave(:)%compositions%edgespecies(:)%zmin (float) (9.4.1.1.1)
zmax (1212)	waves%coherentwave(:)%compositions%edgespecies(:)%zmax (float) (9.4.1.1.1)
label (1212)	waves%coherentwave(:)%compositions%edgespecies(:)%label (string) (9.4.1.1.3)
signature (1130)	waves%coherentwave(:)%compositions%signature (identifier) (9.4.1.3.213)
id (1256)	waves%coherentwave(:)%compositions%signature%id (string) (9.4.1.1.3)
flag (1256)	waves%coherentwave(:)%compositions%signature%flag (integer) (9.4.1.1.2)
description (1256)	waves%coherentwave(:)%compositions%signature%description (string) (9.4.1.1.3)
global_param (1110)	waves%coherentwave(:)%global_param (waves_global_param) (9.4.1.3.418)
frequency (1461)	waves%coherentwave(:)%global_param%frequency (float) (9.4.1.1.1)
name (1461)	waves%coherentwave(:)%global_param%name (string) (9.4.1.1.3)
type (1461)	waves%coherentwave(:)%global_param%type (string) (9.4.1.1.3)
ntor (1461)	waves%coherentwave(:)%global_param%ntor (vecint_type) (9.4.1.2.10)
f_assumption (1461)	waves%coherentwave(:)%global_param%f_assumption (vecint_type) (9.4.1.2.10)
power_tot (1461)	waves%coherentwave(:)%global_param%power_tot (float) (9.4.1.1.1)
p_frac_ntor (1461)	waves%coherentwave(:)%global_param%p_frac_ntor (vecflt_type) (9.4.1.2.9)
pow_i (1461)	waves%coherentwave(:)%global_param%pow_i (vecflt_type) (9.4.1.2.9)
pow_e (1461)	waves%coherentwave(:)%global_param%pow_e (float) (9.4.1.1.1)
pow_ntor_i (1461)	waves%coherentwave(:)%global_param%pow_ntor_i (matflt_type) (9.4.1.2.7)
pow_ntor_e (1461)	waves%coherentwave(:)%global_param%pow_ntor_e (vecflt_type) (9.4.1.2.9)
cur_tor (1461)	waves%coherentwave(:)%global_param%cur_tor (float) (9.4.1.1.1)
cur_tor_ntor (1461)	waves%coherentwave(:)%global_param%cur_tor_ntor (vecflt_type) (9.4.1.2.9)
code_type (1461)	waves%coherentwave(:)%global_param%code_type (integer) (9.4.1.1.2)
toroid_field (1461)	waves%coherentwave(:)%global_param%toroid_field (b0r0) (9.4.1.3.55)
r0 (1098)	waves%coherentwave(:)%global_param%toroid_field%r0 (float) (9.4.1.1.1)
b0 (1098)	waves%coherentwave(:)%global_param%toroid_field%b0 (float) (9.4.1.1.1)
grid_1d (1110)	waves%coherentwave(:)%grid_1d (waves_grid_1d) (9.4.1.3.419)
rho_tor_norm (1462)	waves%coherentwave(:)%grid_1d%rho_tor_norm (vecflt_type) (9.4.1.2.9)
rho_tor (1462)	waves%coherentwave(:)%grid_1d%rho_tor (vecflt_type) (9.4.1.2.9)
psi (1462)	waves%coherentwave(:)%grid_1d%psi (vecflt_type) (9.4.1.2.9)
grid_2d (1110)	waves%coherentwave(:)%grid_2d (waves_grid_2d) (9.4.1.3.420)
grid_type (1463)	waves%coherentwave(:)%grid_2d%grid_type (integer) (9.4.1.1.2)
rho_tor_norm (1463)	waves%coherentwave(:)%grid_2d%rho_tor_norm (matflt_type) (9.4.1.2.7)
rho_tor (1463)	waves%coherentwave(:)%grid_2d%rho_tor (matflt_type) (9.4.1.2.7)
psi (1463)	waves%coherentwave(:)%grid_2d%psi (matflt_type) (9.4.1.2.7)

theta (1463)	waves%coherentwave(:)%grid_2d%theta (matflt_type) (9.4.1.2.7)
r (1463)	waves%coherentwave(:)%grid_2d%r (matflt_type) (9.4.1.2.7)
z (1463)	waves%coherentwave(:)%grid_2d%z (matflt_type) (9.4.1.2.7)
theta_info (1463)	waves%coherentwave(:)%grid_2d%theta_info (theta_info) (9.4.1.3.385)
angl_type (1428)	waves%coherentwave(:)%grid_2d%theta_info%angl_type (integer) (9.4.1.1.2)
th2th_pol (1428)	waves%coherentwave(:)%grid_2d%theta_info%th2th_pol (matflt_type) (9.4.1.2.7)
profiles_1d (1110)	waves%coherentwave(:)%profiles_1d (waves_profiles_1d) (9.4.1.3.421)
powd_tot (1464)	waves%coherentwave(:)%profiles_1d%powd_tot (vecflt_type) (9.4.1.2.9)
powd_e (1464)	waves%coherentwave(:)%profiles_1d%powd_e (vecflt_type) (9.4.1.2.9)
powd_i (1464)	waves%coherentwave(:)%profiles_1d%powd_i (matflt_type) (9.4.1.2.7)
powd_ntor (1464)	waves%coherentwave(:)%profiles_1d%powd_ntor (matflt_type) (9.4.1.2.7)
powd_ntor_e (1464)	waves%coherentwave(:)%profiles_1d%powd_ntor_e (matflt_type) (9.4.1.2.7)
powd_ntor_i (1464)	waves%coherentwave(:)%profiles_1d%powd_ntor_i (array3dflt_type) (9.4.1.2.1)
curd_tor (1464)	waves%coherentwave(:)%profiles_1d%curd_tor (vecflt_type) (9.4.1.2.9)
curd_torntor (1464)	waves%coherentwave(:)%profiles_1d%curd_torntor (matflt_type) (9.4.1.2.7)
pow_tot (1464)	waves%coherentwave(:)%profiles_1d%pow_tot (vecflt_type) (9.4.1.2.9)
pow_e (1464)	waves%coherentwave(:)%profiles_1d%pow_e (vecflt_type) (9.4.1.2.9)
pow_i (1464)	waves%coherentwave(:)%profiles_1d%pow_i (matflt_type) (9.4.1.2.7)
pow_ntor (1464)	waves%coherentwave(:)%profiles_1d%pow_ntor (array3dflt_type) (9.4.1.2.1)
pow_ntor_e (1464)	waves%coherentwave(:)%profiles_1d%pow_ntor_e (matflt_type) (9.4.1.2.7)
pow_ntor_i (1464)	waves%coherentwave(:)%profiles_1d%pow_ntor_i (array3dflt_type) (9.4.1.2.1)
curd_par (1464)	waves%coherentwave(:)%profiles_1d%curd_par (vecflt_type) (9.4.1.2.9)
curd_parntor (1464)	waves%coherentwave(:)%profiles_1d%curd_parntor (matflt_type) (9.4.1.2.7)
cur_tor (1464)	waves%coherentwave(:)%profiles_1d%cur_tor (vecflt_type) (9.4.1.2.9)
cur_tor_ntor (1464)	waves%coherentwave(:)%profiles_1d%cur_tor_ntor (matflt_type) (9.4.1.2.7)
profiles_2d (1110)	waves%coherentwave(:)%profiles_2d (waves_profiles_2d) (9.4.1.3.422)
powd_tot (1465)	waves%coherentwave(:)%profiles_2d%powd_tot (matflt_type) (9.4.1.2.7)
powd_e (1465)	waves%coherentwave(:)%profiles_2d%powd_e (matflt_type) (9.4.1.2.7)
powd_i (1465)	waves%coherentwave(:)%profiles_2d%powd_i (array3dflt_type) (9.4.1.2.1)
powd_ntor (1465)	waves%coherentwave(:)%profiles_2d%powd_ntor (array3dflt_type) (9.4.1.2.1)
powd_ntor_e (1465)	waves%coherentwave(:)%profiles_2d%powd_ntor_e (array3dflt_type) (9.4.1.2.1)
powd_ntor_i (1465)	waves%coherentwave(:)%profiles_2d%powd_ntor_i (array4dflt_type) (9.4.1.2.3)
powd_iharm (1465)	waves%coherentwave(:)%profiles_2d%powd_iharm (array5dflt_type) (9.4.1.2.4)
beamtracing (1110)	waves%coherentwave(:)%beamtracing(:) (beamtracing) (9.4.1.3.57)
npoints (1100)	waves%coherentwave(:)%beamtracing(:)%npoints (integer) (9.4.1.1.2)
power (1100)	waves%coherentwave(:)%beamtracing(:)%power (float) (9.4.1.1.1)
dnpar (1100)	waves%coherentwave(:)%beamtracing(:)%dnpar (vecflt_type) (9.4.1.2.9)
length (1100)	waves%coherentwave(:)%beamtracing(:)%length (vecflt_type) (9.4.1.2.9)
position (1100)	waves%coherentwave(:)%beamtracing(:)%position (waves_rtposition) (9.4.1.3.423)
r (1466)	waves%coherentwave(:)%beamtracing(:)%position%r (vecflt_type) (9.4.1.2.9)
z (1466)	waves%coherentwave(:)%beamtracing(:)%position%z (vecflt_type) (9.4.1.2.9)
phi (1466)	waves%coherentwave(:)%beamtracing(:)%position%phi (vecflt_type) (9.4.1.2.9)
psi (1466)	waves%coherentwave(:)%beamtracing(:)%position%psi (vecflt_type) (9.4.1.2.9)
theta (1466)	waves%coherentwave(:)%beamtracing(:)%position%theta (vecflt_type) (9.4.1.2.9)
wavevector (1100)	waves%coherentwave(:)%beamtracing(:)%wavevector (waves_rtwavevector) (9.4.1.3.424)
kr (1467)	waves%coherentwave(:)%beamtracing(:)%wavevector%kr (vecflt_type) (9.4.1.2.9)
kz (1467)	waves%coherentwave(:)%beamtracing(:)%wavevector%kz (vecflt_type) (9.4.1.2.9)
kphi (1467)	waves%coherentwave(:)%beamtracing(:)%wavevector%kphi (vecflt_type) (9.4.1.2.9)
npar (1467)	waves%coherentwave(:)%beamtracing(:)%wavevector%npar (vecflt_type) (9.4.1.2.9)
nperp (1467)	waves%coherentwave(:)%beamtracing(:)%wavevector%nperp (vecflt_type) (9.4.1.2.9)
ntor (1467)	waves%coherentwave(:)%beamtracing(:)%wavevector%ntor (vecflt_type) (9.4.1.2.9)
var_ntor (1467)	waves%coherentwave(:)%beamtracing(:)%wavevector%var_ntor (integer) (9.4.1.1.2)
polarization (1100)	waves%coherentwave(:)%beamtracing(:)%polarization (polarization) (9.4.1.3.284)
epol_p_re (1327)	waves%coherentwave(:)%beamtracing(:)%polarization%epol_p_re (vecflt_type) (9.4.1.2.9)
epol_p_im (1327)	waves%coherentwave(:)%beamtracing(:)%polarization%epol_p_im (vecflt_type) (9.4.1.2.9)
epol_m_re (1327)	waves%coherentwave(:)%beamtracing(:)%polarization%epol_m_re (vecflt_type) (9.4.1.2.9)
epol_m_im (1327)	waves%coherentwave(:)%beamtracing(:)%polarization%epol_m_im (vecflt_type) (9.4.1.2.9)
epol_par_re (1327)	waves%coherentwave(:)%beamtracing(:)%polarization%epol_par_re (vecflt_type) (9.4.1.2.9)
epol_par_im (1327)	waves%coherentwave(:)%beamtracing(:)%polarization%epol_par_im (vecflt_type) (9.4.1.2.9)
powerflow (1100)	waves%coherentwave(:)%beamtracing(:)%powerflow (powerflow) (9.4.1.3.285)
phi_perp (1328)	waves%coherentwave(:)%beamtracing(:)%powerflow%phi_perp (vecflt_type) (9.4.1.2.9)

phi_par (1328)	waves%coherentwave(:)%beamtracing(:)%powerflow%phi_par (vecflt_type) (9.4.1.2.9)
power_e (1328)	waves%coherentwave(:)%beamtracing(:)%powerflow%power_e (vecflt_type) (9.4.1.2.9)
power_i (1328)	waves%coherentwave(:)%beamtracing(:)%powerflow%power_i (matflt_type) (9.4.1.2.7)
fullwave (1110)	waves%coherentwave(:)%fullwave (fullwave) (9.4.1.3.189)
grid (1232)	waves%coherentwave(:)%fullwave%grid (complexgrid) (9.4.1.3.70)
uid (1113)	waves%coherentwave(:)%fullwave%grid%uid (integer) (9.4.1.1.2)
id (1113)	waves%coherentwave(:)%fullwave%grid%id (string) (9.4.1.1.3)
spaces (1113)	waves%coherentwave(:)%fullwave%grid%spaces(:) (complexgrid_space) (9.4.1.3.79)
geotype (1122)	waves%coherentwave(:)%fullwave%grid%spaces(:)%geotype (vecint_type) (9.4.1.2.10)
geotypeid (1122)	waves%coherentwave(:)%fullwave%grid%spaces(:)%geotypeid (vecstring_type) (9.4.1.2.11)
coordtype (1122)	waves%coherentwave(:)%fullwave%grid%spaces(:)%coordtype (matint_type) (9.4.1.2.8)
objects (1122)	waves%coherentwave(:)%fullwave%grid%spaces(:)%objects(:) (objects) (9.4.1.3.259)
boundary (1302)	waves%coherentwave(:)%fullwave%grid%spaces(:)%objects(:)%boundary (matint_type) (9.4.1.2.8)
neighbour (1302)	waves%coherentwave(:)%fullwave%grid%spaces(:)%objects(:)%neighbour (array3dint_type) (9.4.1.2.2)
geo (1302)	waves%coherentwave(:)%fullwave%grid%spaces(:)%objects(:)%geo (array4dflt_type) (9.4.1.2.3)
measure (1302)	waves%coherentwave(:)%fullwave%grid%spaces(:)%objects(:)%measure (matflt_type) (9.4.1.2.7)
xpoints (1122)	waves%coherentwave(:)%fullwave%grid%spaces(:)%xpoints (vecint_type) (9.4.1.2.10)
subgrids (1113)	waves%coherentwave(:)%fullwave%grid%subgrids(:) (complexgrid_subgrid) (9.4.1.3.80)
id (1123)	waves%coherentwave(:)%fullwave%grid%subgrids(:)%id (string) (9.4.1.1.3)
list (1123)	waves%coherentwave(:)%fullwave%grid%subgrids(:)%list(:) (complexgrid_objectlist) (9.4.1.3.74)
cls (1117)	waves%coherentwave(:)%fullwave%grid%subgrids(:)%list(:)%cls (vecint_type) (9.4.1.2.10)
indset (1117)	waves%coherentwave(:)%fullwave%grid%subgrids(:)%list(:)%indset(:) (complex_grid_indexlist) (9.4.1.3.72)
range (1115)	waves%coherentwave(:)%fullwave%grid%subgrids(:)%list(:)%indset(:)%range (vecint_type) (9.4.1.2.10)
ind (1115)	waves%coherentwave(:)%fullwave%grid%subgrids(:)%list(:)%indset(:)%ind (vecint_type) (9.4.1.2.10)
ind (1117)	waves%coherentwave(:)%fullwave%grid%subgrids(:)%list(:)%ind (matint_type) (9.4.1.2.8)
metric (1113)	waves%coherentwave(:)%fullwave%grid%metric (complexgrid_metric) (9.4.1.3.73)
measure (1116)	waves%coherentwave(:)%fullwave%grid%metric%measure(:) (complexgrid_scalar) (9.4.1.3.75)
griduid (1118)	waves%coherentwave(:)%fullwave%grid%metric%measure(:)%griduid (integer) (9.4.1.1.2)
subgrid (1118)	waves%coherentwave(:)%fullwave%grid%metric%measure(:)%subgrid (integer) (9.4.1.1.2)
scalar (1118)	waves%coherentwave(:)%fullwave%grid%metric%measure(:)%scalar (vecflt_type) (9.4.1.2.9)
vector (1118)	waves%coherentwave(:)%fullwave%grid%metric%measure(:)%vector (matflt_type) (9.4.1.2.7)
matrix (1118)	waves%coherentwave(:)%fullwave%grid%metric%measure(:)%matrix (array3dflt_type) (9.4.1.2.1)
g11 (1116)	waves%coherentwave(:)%fullwave%grid%metric%g11(:) (complexgrid_scalar) (9.4.1.3.75)
griduid (1118)	waves%coherentwave(:)%fullwave%grid%metric%g11(:)%griduid (integer) (9.4.1.1.2)
subgrid (1118)	waves%coherentwave(:)%fullwave%grid%metric%g11(:)%subgrid (integer) (9.4.1.1.2)
scalar (1118)	waves%coherentwave(:)%fullwave%grid%metric%g11(:)%scalar (vecflt_type) (9.4.1.2.9)
vector (1118)	waves%coherentwave(:)%fullwave%grid%metric%g11(:)%vector (matflt_type) (9.4.1.2.7)
matrix (1118)	waves%coherentwave(:)%fullwave%grid%metric%g11(:)%matrix (array3dflt_type) (9.4.1.2.1)
g12 (1116)	waves%coherentwave(:)%fullwave%grid%metric%g12(:) (complexgrid_scalar) (9.4.1.3.75)
griduid (1118)	waves%coherentwave(:)%fullwave%grid%metric%g12(:)%griduid (integer) (9.4.1.1.2)
subgrid (1118)	waves%coherentwave(:)%fullwave%grid%metric%g12(:)%subgrid (integer) (9.4.1.1.2)
scalar (1118)	waves%coherentwave(:)%fullwave%grid%metric%g12(:)%scalar (vecflt_type) (9.4.1.2.9)
vector (1118)	waves%coherentwave(:)%fullwave%grid%metric%g12(:)%vector (matflt_type) (9.4.1.2.7)
matrix (1118)	waves%coherentwave(:)%fullwave%grid%metric%g12(:)%matrix (array3dflt_type) (9.4.1.2.1)
g13 (1116)	waves%coherentwave(:)%fullwave%grid%metric%g13(:) (complexgrid_scalar) (9.4.1.3.75)
griduid (1118)	waves%coherentwave(:)%fullwave%grid%metric%g13(:)%griduid (integer) (9.4.1.1.2)
subgrid (1118)	waves%coherentwave(:)%fullwave%grid%metric%g13(:)%subgrid (integer) (9.4.1.1.2)
scalar (1118)	waves%coherentwave(:)%fullwave%grid%metric%g13(:)%scalar (vecflt_type) (9.4.1.2.9)
vector (1118)	waves%coherentwave(:)%fullwave%grid%metric%g13(:)%vector (matflt_type) (9.4.1.2.7)
matrix (1118)	waves%coherentwave(:)%fullwave%grid%metric%g13(:)%matrix (array3dflt_type) (9.4.1.2.1)
g22 (1116)	waves%coherentwave(:)%fullwave%grid%metric%g22(:) (complexgrid_scalar) (9.4.1.3.75)
griduid (1118)	waves%coherentwave(:)%fullwave%grid%metric%g22(:)%griduid (integer) (9.4.1.1.2)
subgrid (1118)	waves%coherentwave(:)%fullwave%grid%metric%g22(:)%subgrid (integer) (9.4.1.1.2)
scalar (1118)	waves%coherentwave(:)%fullwave%grid%metric%g22(:)%scalar (vecflt_type) (9.4.1.2.9)
vector (1118)	waves%coherentwave(:)%fullwave%grid%metric%g22(:)%vector (matflt_type) (9.4.1.2.7)

matrix (1118)	waves%coherentwave(:)%fullwave%grid%metric%g22(:)%matrix (array3dflt_type) (9.4.1.2.1)
g23 (1116)	waves%coherentwave(:)%fullwave%grid%metric%g23(:) (complexgrid_scalar) (9.4.1.3.75)
griduid (1118)	waves%coherentwave(:)%fullwave%grid%metric%g23(:)%griduid (integer) (9.4.1.1.2)
subgrid (1118)	waves%coherentwave(:)%fullwave%grid%metric%g23(:)%subgrid (integer) (9.4.1.1.2)
scalar (1118)	waves%coherentwave(:)%fullwave%grid%metric%g23(:)%scalar (vecflt_type) (9.4.1.2.9)
vector (1118)	waves%coherentwave(:)%fullwave%grid%metric%g23(:)%vector (matflt_type) (9.4.1.2.7)
matrix (1118)	waves%coherentwave(:)%fullwave%grid%metric%g23(:)%matrix (array3dflt_type) (9.4.1.2.1)
g33 (1116)	waves%coherentwave(:)%fullwave%grid%metric%g33(:) (complexgrid_scalar) (9.4.1.3.75)
griduid (1118)	waves%coherentwave(:)%fullwave%grid%metric%g33(:)%griduid (integer) (9.4.1.1.2)
subgrid (1118)	waves%coherentwave(:)%fullwave%grid%metric%g33(:)%subgrid (integer) (9.4.1.1.2)
scalar (1118)	waves%coherentwave(:)%fullwave%grid%metric%g33(:)%scalar (vecflt_type) (9.4.1.2.9)
vector (1118)	waves%coherentwave(:)%fullwave%grid%metric%g33(:)%vector (matflt_type) (9.4.1.2.7)
matrix (1118)	waves%coherentwave(:)%fullwave%grid%metric%g33(:)%matrix (array3dflt_type) (9.4.1.2.1)
jacobian (1116)	waves%coherentwave(:)%fullwave%grid%metric%jacobian(:) (complexgrid_scalar) (9.4.1.3.75)
griduid (1118)	waves%coherentwave(:)%fullwave%grid%metric%jacobian(:)%griduid (integer) (9.4.1.1.2)
subgrid (1118)	waves%coherentwave(:)%fullwave%grid%metric%jacobian(:)%subgrid (integer) (9.4.1.1.2)
scalar (1118)	waves%coherentwave(:)%fullwave%grid%metric%jacobian(:)%scalar (vecflt_type) (9.4.1.2.9)
vector (1118)	waves%coherentwave(:)%fullwave%grid%metric%jacobian(:)%vector (matflt_type) (9.4.1.2.7)
matrix (1118)	waves%coherentwave(:)%fullwave%grid%metric%jacobian(:)%matrix (array3dflt_type) (9.4.1.2.1)
geo (1113)	waves%coherentwave(:)%fullwave%grid%geo(:) (complexgrid_geo_global) (9.4.1.3.71)
geotype (1114)	waves%coherentwave(:)%fullwave%grid%geo(:)%geotype (integer) (9.4.1.1.2)
geotypeid (1114)	waves%coherentwave(:)%fullwave%grid%geo(:)%geotypeid (string) (9.4.1.1.3)
coordtype (1114)	waves%coherentwave(:)%fullwave%grid%geo(:)%coordtype (vecint_type) (9.4.1.2.10)
geo_matrix (1114)	waves%coherentwave(:)%fullwave%grid%geo(:)%geo_matrix(:) (complexgrid_scalar) (9.4.1.3.75)
griduid (1118)	waves%coherentwave(:)%fullwave%grid%geo(:)%geo_matrix(:)%griduid (integer) (9.4.1.1.2)
subgrid (1118)	waves%coherentwave(:)%fullwave%grid%geo(:)%geo_matrix(:)%subgrid (integer) (9.4.1.1.2)
scalar (1118)	waves%coherentwave(:)%fullwave%grid%geo(:)%geo_matrix(:)%scalar (vecflt_type) (9.4.1.2.9)
vector (1118)	waves%coherentwave(:)%fullwave%grid%geo(:)%geo_matrix(:)%vector (matflt_type) (9.4.1.2.7)
matrix (1118)	waves%coherentwave(:)%fullwave%grid%geo(:)%geo_matrix(:)%matrix (array3dflt_type) (9.4.1.2.1)
measure (1114)	waves%coherentwave(:)%fullwave%grid%geo(:)%measure(:) (complexgrid_scalar) (9.4.1.3.75)
griduid (1118)	waves%coherentwave(:)%fullwave%grid%geo(:)%measure(:)%griduid (integer) (9.4.1.1.2)
subgrid (1118)	waves%coherentwave(:)%fullwave%grid%geo(:)%measure(:)%subgrid (integer) (9.4.1.1.2)
scalar (1118)	waves%coherentwave(:)%fullwave%grid%geo(:)%measure(:)%scalar (vecflt_type) (9.4.1.2.9)
vector (1118)	waves%coherentwave(:)%fullwave%grid%geo(:)%measure(:)%vector (matflt_type) (9.4.1.2.7)
matrix (1118)	waves%coherentwave(:)%fullwave%grid%geo(:)%measure(:)%matrix (array3dflt_type) (9.4.1.2.1)
bases (1113)	waves%coherentwave(:)%fullwave%grid%bases(:) (complexgrid_vector) (9.4.1.3.81)
griduid (1124)	waves%coherentwave(:)%fullwave%grid%bases(:)%griduid (integer) (9.4.1.1.2)
label (1124)	waves%coherentwave(:)%fullwave%grid%bases(:)%label (string) (9.4.1.1.3)
comp (1124)	waves%coherentwave(:)%fullwave%grid%bases(:)%comp(:) (complexgrid_scalar) (9.4.1.3.75)
griduid (1118)	waves%coherentwave(:)%fullwave%grid%bases(:)%comp(:)%griduid (integer) (9.4.1.1.2)
subgrid (1118)	waves%coherentwave(:)%fullwave%grid%bases(:)%comp(:)%subgrid (integer) (9.4.1.1.2)
scalar (1118)	waves%coherentwave(:)%fullwave%grid%bases(:)%comp(:)%scalar (vecflt_type) (9.4.1.2.9)
vector (1118)	waves%coherentwave(:)%fullwave%grid%bases(:)%comp(:)%vector (matflt_type) (9.4.1.2.7)
matrix (1118)	waves%coherentwave(:)%fullwave%grid%bases(:)%comp(:)%matrix (array3dflt_type) (9.4.1.2.1)
align (1124)	waves%coherentwave(:)%fullwave%grid%bases(:)%align (vecint_type) (9.4.1.2.10)
alignid (1124)	waves%coherentwave(:)%fullwave%grid%bases(:)%alignid (vecstring_type) (9.4.1.2.11)
basis (1124)	waves%coherentwave(:)%fullwave%grid%bases(:)%basis (integer) (9.4.1.1.2)
e_components (1232)	waves%coherentwave(:)%fullwave%e_components (e_components) (9.4.1.3.157)
e_plus (1200)	waves%coherentwave(:)%fullwave%e_components%e_plus (complexgrid_scalar_cplx) (9.4.1.3.76)
griduid (1119)	waves%coherentwave(:)%fullwave%e_components%e_plus%griduid (integer) (9.4.1.1.2)
subgrid (1119)	waves%coherentwave(:)%fullwave%e_components%e_plus%subgrid (integer) (9.4.1.1.2)
scalar (1119)	waves%coherentwave(:)%fullwave%e_components%e_plus%scalar (vecplx_type) (9.4.1.3.406)
re (1449)	waves%coherentwave(:)%fullwave%e_components%e_plus%scalar%re (vecflt_type) (9.4.1.2.9)

im (1449)	waves%coherentwave(:)%fullwave%e_components%e_plus%scalar%im (9.4.1.2.9)	(vecflt.type)
vector (1119)	waves%coherentwave(:)%fullwave%e_components%e_plus%vector (9.4.1.3.238)	(matcplx.type)
re (1281)	waves%coherentwave(:)%fullwave%e_components%e_plus%vector%re (9.4.1.2.7)	(matflt.type)
im (1281)	waves%coherentwave(:)%fullwave%e_components%e_plus%vector%im (9.4.1.2.7)	(matflt.type)
matrix (1119)	waves%coherentwave(:)%fullwave%e_components%e_plus%matrix (9.4.1.3.54)	(array3dcplx.type)
re (1097)	waves%coherentwave(:)%fullwave%e_components%e_plus%matrix%re (9.4.1.2.1)	(array3dflt.type)
im (1097)	waves%coherentwave(:)%fullwave%e_components%e_plus%matrix%im (9.4.1.2.1)	(array3dflt.type)
e_minus (1200)	waves%coherentwave(:)%fullwave%e_components%e_minus (9.4.1.3.76)	(complexgrid_scalar_cplx)
griduid (1119)	waves%coherentwave(:)%fullwave%e_components%e_minus%griduid (integer) (9.4.1.1.2)	
subgrid (1119)	waves%coherentwave(:)%fullwave%e_components%e_minus%subgrid (integer) (9.4.1.1.2)	
scalar (1119)	waves%coherentwave(:)%fullwave%e_components%e_minus%scalar (9.4.1.3.406)	(vecplx.type)
re (1449)	waves%coherentwave(:)%fullwave%e_components%e_minus%scalar%re (9.4.1.2.9)	(vecflt.type)
im (1449)	waves%coherentwave(:)%fullwave%e_components%e_minus%scalar%im (9.4.1.2.9)	(vecflt.type)
vector (1119)	waves%coherentwave(:)%fullwave%e_components%e_minus%vector (9.4.1.3.238)	(matcplx.type)
re (1281)	waves%coherentwave(:)%fullwave%e_components%e_minus%vector%re (9.4.1.2.7)	(matflt.type)
im (1281)	waves%coherentwave(:)%fullwave%e_components%e_minus%vector%im (9.4.1.2.7)	(matflt.type)
matrix (1119)	waves%coherentwave(:)%fullwave%e_components%e_minus%matrix (9.4.1.3.54)	(array3dcplx.type)
re (1097)	waves%coherentwave(:)%fullwave%e_components%e_minus%matrix%re (9.4.1.2.1)	(array3dflt.type)
im (1097)	waves%coherentwave(:)%fullwave%e_components%e_minus%matrix%im (9.4.1.2.1)	(array3dflt.type)
e_para (1200)	waves%coherentwave(:)%fullwave%e_components%e_para (9.4.1.3.76)	(complexgrid_scalar_cplx)
griduid (1119)	waves%coherentwave(:)%fullwave%e_components%e_para%griduid (integer) (9.4.1.1.2)	
subgrid (1119)	waves%coherentwave(:)%fullwave%e_components%e_para%subgrid (integer) (9.4.1.1.2)	
scalar (1119)	waves%coherentwave(:)%fullwave%e_components%e_para%scalar (9.4.1.3.406)	(vecplx.type)
re (1449)	waves%coherentwave(:)%fullwave%e_components%e_para%scalar%re (9.4.1.2.9)	(vecflt.type)
im (1449)	waves%coherentwave(:)%fullwave%e_components%e_para%scalar%im (9.4.1.2.9)	(vecflt.type)
vector (1119)	waves%coherentwave(:)%fullwave%e_components%e_para%vector (9.4.1.3.238)	(matcplx.type)
re (1281)	waves%coherentwave(:)%fullwave%e_components%e_para%vector%re (9.4.1.2.7)	(matflt.type)
im (1281)	waves%coherentwave(:)%fullwave%e_components%e_para%vector%im (9.4.1.2.7)	(matflt.type)
matrix (1119)	waves%coherentwave(:)%fullwave%e_components%e_para%matrix (9.4.1.3.54)	(array3dcplx.type)
re (1097)	waves%coherentwave(:)%fullwave%e_components%e_para%matrix%re (9.4.1.2.1)	(array3dflt.type)
im (1097)	waves%coherentwave(:)%fullwave%e_components%e_para%matrix%im (9.4.1.2.1)	(array3dflt.type)
e_norm (1200)	waves%coherentwave(:)%fullwave%e_components%e_norm (9.4.1.3.76)	(complexgrid_scalar_cplx)
griduid (1119)	waves%coherentwave(:)%fullwave%e_components%e_norm%griduid (integer) (9.4.1.1.2)	
subgrid (1119)	waves%coherentwave(:)%fullwave%e_components%e_norm%subgrid (integer) (9.4.1.1.2)	
scalar (1119)	waves%coherentwave(:)%fullwave%e_components%e_norm%scalar (9.4.1.3.406)	(vecplx.type)
re (1449)	waves%coherentwave(:)%fullwave%e_components%e_norm%scalar%re (9.4.1.2.9)	(vecflt.type)
im (1449)	waves%coherentwave(:)%fullwave%e_components%e_norm%scalar%im (9.4.1.2.9)	(vecflt.type)
vector (1119)	waves%coherentwave(:)%fullwave%e_components%e_norm%vector (9.4.1.3.238)	(matcplx.type)
re (1281)	waves%coherentwave(:)%fullwave%e_components%e_norm%vector%re (9.4.1.2.7)	(matflt.type)



im (1281)	waves%coherentwave(:)%fullwave%e_components%e_norm%vector%im (9.4.1.2.7)	(matflt_type)
matrix (1119)	waves%coherentwave(:)%fullwave%e_components%e_norm%matrix (9.4.1.3.54)	(array3dcplx_type)
re (1097)	waves%coherentwave(:)%fullwave%e_components%e_norm%matrix%re (9.4.1.2.1)	(array3dfilt_type)
im (1097)	waves%coherentwave(:)%fullwave%e_components%e_norm%matrix%im (9.4.1.2.1)	(array3dfilt_type)
e_binorm (1200)	waves%coherentwave(:)%fullwave%e_components%e_binorm (9.4.1.3.76)	(complexgrid_scalar_cplx)
griduid (1119)	waves%coherentwave(:)%fullwave%e_components%e_binorm%griduid (integer) (9.4.1.1.2)	
subgrid (1119)	waves%coherentwave(:)%fullwave%e_components%e_binorm%subgrid (integer) (9.4.1.1.2)	
scalar (1119)	waves%coherentwave(:)%fullwave%e_components%e_binorm%scalar (9.4.1.3.406)	(vecplx_type)
re (1449)	waves%coherentwave(:)%fullwave%e_components%e_binorm%scalar%re (9.4.1.2.9)	(vecflt_type)
im (1449)	waves%coherentwave(:)%fullwave%e_components%e_binorm%scalar%im (9.4.1.2.9)	(vecflt_type)
vector (1119)	waves%coherentwave(:)%fullwave%e_components%e_binorm%vector (9.4.1.3.238)	(matcplx_type)
re (1281)	waves%coherentwave(:)%fullwave%e_components%e_binorm%vector%re (9.4.1.2.7)	(matflt_type)
im (1281)	waves%coherentwave(:)%fullwave%e_components%e_binorm%vector%im (9.4.1.2.7)	(matflt_type)
matrix (1119)	waves%coherentwave(:)%fullwave%e_components%e_binorm%matrix (9.4.1.3.54)	(array3dcplx_type)
re (1097)	waves%coherentwave(:)%fullwave%e_components%e_binorm%matrix%re (9.4.1.2.1)	(array3dfilt_type)
im (1097)	waves%coherentwave(:)%fullwave%e_components%e_binorm%matrix%im (9.4.1.2.1)	(array3dfilt_type)
b_norm (1200)	waves%coherentwave(:)%fullwave%e_components%b_norm (9.4.1.3.76)	(complexgrid_scalar_cplx)
griduid (1119)	waves%coherentwave(:)%fullwave%e_components%b_norm%griduid (integer) (9.4.1.1.2)	
subgrid (1119)	waves%coherentwave(:)%fullwave%e_components%b_norm%subgrid (integer) (9.4.1.1.2)	
scalar (1119)	waves%coherentwave(:)%fullwave%e_components%b_norm%scalar (9.4.1.3.406)	(vecplx_type)
re (1449)	waves%coherentwave(:)%fullwave%e_components%b_norm%scalar%re (9.4.1.2.9)	(vecflt_type)
im (1449)	waves%coherentwave(:)%fullwave%e_components%b_norm%scalar%im (9.4.1.2.9)	(vecflt_type)
vector (1119)	waves%coherentwave(:)%fullwave%e_components%b_norm%vector (9.4.1.3.238)	(matcplx_type)
re (1281)	waves%coherentwave(:)%fullwave%e_components%b_norm%vector%re (9.4.1.2.7)	(matflt_type)
im (1281)	waves%coherentwave(:)%fullwave%e_components%b_norm%vector%im (9.4.1.2.7)	(matflt_type)
matrix (1119)	waves%coherentwave(:)%fullwave%e_components%b_norm%matrix (9.4.1.3.54)	(array3dcplx_type)
re (1097)	waves%coherentwave(:)%fullwave%e_components%b_norm%matrix%re (9.4.1.2.1)	(array3dfilt_type)
im (1097)	waves%coherentwave(:)%fullwave%e_components%b_norm%matrix%im (9.4.1.2.1)	(array3dfilt_type)
b_binorm (1200)	waves%coherentwave(:)%fullwave%e_components%b_binorm (9.4.1.3.76)	(complexgrid_scalar_cplx)
griduid (1119)	waves%coherentwave(:)%fullwave%e_components%b_binorm%griduid (integer) (9.4.1.1.2)	
subgrid (1119)	waves%coherentwave(:)%fullwave%e_components%b_binorm%subgrid (integer) (9.4.1.1.2)	
scalar (1119)	waves%coherentwave(:)%fullwave%e_components%b_binorm%scalar (9.4.1.3.406)	(vecplx_type)
re (1449)	waves%coherentwave(:)%fullwave%e_components%b_binorm%scalar%re (9.4.1.2.9)	(vecflt_type)
im (1449)	waves%coherentwave(:)%fullwave%e_components%b_binorm%scalar%im (9.4.1.2.9)	(vecflt_type)
vector (1119)	waves%coherentwave(:)%fullwave%e_components%b_binorm%vector (9.4.1.3.238)	(matcplx_type)
re (1281)	waves%coherentwave(:)%fullwave%e_components%b_binorm%vector%re (9.4.1.2.7)	(matflt_type)
im (1281)	waves%coherentwave(:)%fullwave%e_components%b_binorm%vector%im (9.4.1.2.7)	(matflt_type)
matrix (1119)	waves%coherentwave(:)%fullwave%e_components%b_binorm%matrix (9.4.1.3.54)	(array3dcplx_type)
re (1097)	waves%coherentwave(:)%fullwave%e_components%b_binorm%matrix%re (9.4.1.2.1)	(array3dfilt_type)

im (1097)	waves%coherentwave(:)%fullwave%e_components%b_binorm%matrix%im (array3dflt_type) (9.4.1.2.1)
b_para (1200)	waves%coherentwave(:)%fullwave%e_components%b_para (complexgrid_scalar_cplx) (9.4.1.3.76)
griduid (1119)	waves%coherentwave(:)%fullwave%e_components%b_para%griduid (integer) (9.4.1.1.2)
subgrid (1119)	waves%coherentwave(:)%fullwave%e_components%b_para%subgrid (integer) (9.4.1.1.2)
scalar (1119)	waves%coherentwave(:)%fullwave%e_components%b_para%scalar (veccplx_type) (9.4.1.3.406)
re (1449)	waves%coherentwave(:)%fullwave%e_components%b_para%scalar%re (vecflt_type) (9.4.1.2.9)
im (1449)	waves%coherentwave(:)%fullwave%e_components%b_para%scalar%im (vecflt_type) (9.4.1.2.9)
vector (1119)	waves%coherentwave(:)%fullwave%e_components%b_para%vector (matcplx_type) (9.4.1.3.238)
re (1281)	waves%coherentwave(:)%fullwave%e_components%b_para%vector%re (matflt_type) (9.4.1.2.7)
im (1281)	waves%coherentwave(:)%fullwave%e_components%b_para%vector%im (matflt_type) (9.4.1.2.7)
matrix (1119)	waves%coherentwave(:)%fullwave%e_components%b_para%matrix (array3dcplx_type) (9.4.1.3.54)
re (1097)	waves%coherentwave(:)%fullwave%e_components%b_para%matrix%re (array3dflt_type) (9.4.1.2.1)
im (1097)	waves%coherentwave(:)%fullwave%e_components%b_para%matrix%im (array3dflt_type) (9.4.1.2.1)
pol_decomp (1232)	waves%coherentwave(:)%fullwave%pol_decomp (pol_decomp) (9.4.1.3.282)
mpol (1325)	waves%coherentwave(:)%fullwave%pol_decomp%mpol (vecint_type) (9.4.1.2.10)
e_plus (1325)	waves%coherentwave(:)%fullwave%pol_decomp%e_plus (array3dflt_type) (9.4.1.2.1)
e_plus_ph (1325)	waves%coherentwave(:)%fullwave%pol_decomp%e_plus_ph (array3dflt_type) (9.4.1.2.1)
e_minus (1325)	waves%coherentwave(:)%fullwave%pol_decomp%e_minus (array3dflt_type) (9.4.1.2.1)
e_minus_ph (1325)	waves%coherentwave(:)%fullwave%pol_decomp%e_minus_ph (array3dflt_type) (9.4.1.2.1)
e_norm (1325)	waves%coherentwave(:)%fullwave%pol_decomp%e_norm (array3dflt_type) (9.4.1.2.1)
e_norm_ph (1325)	waves%coherentwave(:)%fullwave%pol_decomp%e_norm_ph (array3dflt_type) (9.4.1.2.1)
e_binorm (1325)	waves%coherentwave(:)%fullwave%pol_decomp%e_binorm (array3dflt_type) (9.4.1.2.1)
e_binorm_ph (1325)	waves%coherentwave(:)%fullwave%pol_decomp%e_binorm_ph (array3dflt_type) (9.4.1.2.1)
e_para (1325)	waves%coherentwave(:)%fullwave%pol_decomp%e_para (array3dflt_type) (9.4.1.2.1)
e_para_ph (1325)	waves%coherentwave(:)%fullwave%pol_decomp%e_para_ph (array3dflt_type) (9.4.1.2.1)
b_norm (1325)	waves%coherentwave(:)%fullwave%pol_decomp%b_norm (array3dflt_type) (9.4.1.2.1)
b_norm_ph (1325)	waves%coherentwave(:)%fullwave%pol_decomp%b_norm_ph (array3dflt_type) (9.4.1.2.1)
b_binorm (1325)	waves%coherentwave(:)%fullwave%pol_decomp%b_binorm (array3dflt_type) (9.4.1.2.1)
b_binorm_ph (1325)	waves%coherentwave(:)%fullwave%pol_decomp%b_binorm_ph (array3dflt_type) (9.4.1.2.1)
b_para (1325)	waves%coherentwave(:)%fullwave%pol_decomp%b_para (array3dflt_type) (9.4.1.2.1)
b_para_ph (1325)	waves%coherentwave(:)%fullwave%pol_decomp%b_para_ph (array3dflt_type) (9.4.1.2.1)
local (1232)	waves%coherentwave(:)%fullwave%local (local) (9.4.1.3.234)
e_plus (1277)	waves%coherentwave(:)%fullwave%local%e_plus (array3dflt_type) (9.4.1.2.1)
e_plus_ph (1277)	waves%coherentwave(:)%fullwave%local%e_plus_ph (array3dflt_type) (9.4.1.2.1)
e_minus (1277)	waves%coherentwave(:)%fullwave%local%e_minus (array3dflt_type) (9.4.1.2.1)
e_minus_ph (1277)	waves%coherentwave(:)%fullwave%local%e_minus_ph (array3dflt_type) (9.4.1.2.1)
e_norm (1277)	waves%coherentwave(:)%fullwave%local%e_norm (array3dint_type) (9.4.1.2.2)
enorm_ph (1277)	waves%coherentwave(:)%fullwave%local%enorm_ph (array3dflt_type) (9.4.1.2.1)
e_binorm (1277)	waves%coherentwave(:)%fullwave%local%e_binorm (array3dflt_type) (9.4.1.2.1)
e_binorm_ph (1277)	waves%coherentwave(:)%fullwave%local%e_binorm_ph (array3dflt_type) (9.4.1.2.1)
e_para (1277)	waves%coherentwave(:)%fullwave%local%e_para (array3dflt_type) (9.4.1.2.1)
e_para_ph (1277)	waves%coherentwave(:)%fullwave%local%e_para_ph (array3dflt_type) (9.4.1.2.1)
b_norm (1277)	waves%coherentwave(:)%fullwave%local%b_norm (array3dflt_type) (9.4.1.2.1)
b_norm_ph (1277)	waves%coherentwave(:)%fullwave%local%b_norm_ph (array3dflt_type) (9.4.1.2.1)
b_binorm (1277)	waves%coherentwave(:)%fullwave%local%b_binorm (array3dflt_type) (9.4.1.2.1)
b_binorm_ph (1277)	waves%coherentwave(:)%fullwave%local%b_binorm_ph (array3dflt_type) (9.4.1.2.1)
b_para (1277)	waves%coherentwave(:)%fullwave%local%b_para (array3dflt_type) (9.4.1.2.1)
b_para_ph (1277)	waves%coherentwave(:)%fullwave%local%b_para_ph (array3dflt_type) (9.4.1.2.1)
codeparam (1110)	waves%coherentwave(:)%codeparam (codeparam) (9.4.1.3.65)
codename (1108)	waves%coherentwave(:)%codeparam%codename (string) (9.4.1.1.3)
codeversion (1108)	waves%coherentwave(:)%codeparam%codeversion (string) (9.4.1.1.3)
parameters (1108)	waves%coherentwave(:)%codeparam%parameters (string) (9.4.1.1.3)
output_diag (1108)	waves%coherentwave(:)%codeparam%output_diag (string) (9.4.1.1.3)
output_flag (1108)	waves%coherentwave(:)%codeparam%output_flag (integer) (9.4.1.1.2)



codeparam (1090)	waves%codeparam (codeparam) (9.4.1.3.65)
codename (1108)	waves%codeparam%codename (string) (9.4.1.1.3)
codeversion (1108)	waves%codeparam%codeversion (string) (9.4.1.1.3)
parameters (1108)	waves%codeparam%parameters (string) (9.4.1.1.3)
output_diag (1108)	waves%codeparam%output_diag (string) (9.4.1.1.3)
output_flag (1108)	waves%codeparam%output_flag (integer) (9.4.1.1.2)
time (1090)	waves%time (float) (9.4.1.1.1)

[cpoinstances](#) <sup>180</sup>

## 9.5 4.10a.3

### 9.5.1 ITM Types

Generated from the ITM data structure schemas. Time-dependent values are shown in green. Anonymous structure (complex) types in the schemas are given parent element names; a prefix or suffix (eg type\_, \_type, \_t) can be added if required.

#### 9.5.1.1 Primitive Types

Clear definitions required.

##### 9.5.1.1.1 float

##### 9.5.1.1.2 integer

##### 9.5.1.1.3 string

#### 9.5.1.2 Array Types

Clear definitions required.

##### 9.5.1.2.1 array3dflt\_type

Example: [[[1.0,2.0,3.0],[5.0,6.0,7.0]],[[1.0,2.0,3.0],[5.0,6.0,7.0]]]

##### 9.5.1.2.2 array3dint\_type

Example: [[[1,2,3],[5,6,7]],[[1,2,3],[5,6,7]]]

##### 9.5.1.2.3 array4dflt\_type

Example: [[[[[1.0,2.0,3.0],[5.0,6.0,7.0]],[[1.0,2.0,3.0],[5.0,6.0,7.0]]],[[[[1.0,2.0,3.0],[5.0,6.0,7.0]],[[1.0,2.0,3.0],[5.0,6.0,7.0]]]]]

##### 9.5.1.2.4 array5dflt\_type

Example: [[[[[[[1.0,2.0,3.0],[5.0,6.0,7.0]],[[1.0,2.0,3.0],[5.0,6.0,7.0]]],[[1.0,2.0,3.0],[5.0,6.0,7.0]],[[1.0,2.0,3.0],[5.0,6.0,7.0]]]]],[[[[1.0,2.0,3.0],[5.0,6.0,7.0]],[[1.0,2.0,3.0],[5.0,6.0,7.0]]]]]

##### 9.5.1.2.5 array6dflt\_type

Example: [[[[[[[[[1.0,2.0,3.0],[5.0,6.0,7.0]],[[1.0,2.0,3.0],[5.0,6.0,7.0]]],[[1.0,2.0,3.0],[5.0,6.0,7.0]],[[1.0,2.0,3.0],[5.0,6.0,7.0]]]]],[[[[1.0,2.0,3.0],[5.0,6.0,7.0]],[[1.0,2.0,3.0],[5.0,6.0,7.0]]]]]]]

##### 9.5.1.2.6 array7dflt\_type

Example: [[[[[[[[[[[1.0,2.0,3.0],[5.0,6.0,7.0]],[[1.0,2.0,3.0],[5.0,6.0,7.0]]],[[1.0,2.0,3.0],[5.0,6.0,7.0]],[[1.0,2.0,3.0],[5.0,6.0,7.0]]]]],[[[[1.0,2.0,3.0],[5.0,6.0,7.0]],[[1.0,2.0,3.0],[5.0,6.0,7.0]]]]]]]]]

##### 9.5.1.2.7 matflt\_type

Example: [[1.0,2.0,3.0],[5.0,6.0,7.0]]

<sup>180</sup>[https://www.efda-itm.eu/ITM/html/cpoinstances\\_\\_4.10a.html](https://www.efda-itm.eu/ITM/html/cpoinstances__4.10a.html)

### 9.5.1.2.8 matint\_type

Example: [[1,2,3],[4,5,6]]

### 9.5.1.2.9 vecflt\_type

Example: [1.0,-3e5,-4.0e-3]

### 9.5.1.2.10 vecint\_type

Example: [1,2,3]

### 9.5.1.2.11 vecstring\_type

Example: ["aaa","bb","cccc"]

## 9.5.1.3 Structure Types

### 9.5.1.3.1 CPO Structures

#### 9.5.1.3.2 amns

Description of AMNS processes for one species.

member	type	description
datainfo	datainfo (9.5.1.3.121)	Generic information on a data item
version	string (9.5.1.1.3)	Version of the data.
source	string (9.5.1.1.3)	Source of the data.
zn	integer (9.5.1.1.2)	Nuclear charge [units of elementary charge];
amn	float (9.5.1.1.1)	Mass of atom [amu]
zion	vecint_type (9.5.1.2.10)	Ion charge [units of elementary charge]. If negative value, means it is a bundle of charge state which cannot be described as single value. Vector of integers (nchargestates)
state_label	vecstring_type (9.5.1.2.11)	Label for charge state (e.g. D0, D1+, ...); Vector(nchargestates)
bundled	integer (9.5.1.1.2)	Flag indicating bundling status. Integer flag: 0=no bundling.
proc_label	vecstring_type (9.5.1.2.11)	Label for process (e.g. EI, RC; could also include error estimates); Vector(nprocs)
tables(:)	tables (9.5.1.3.390)	Rate tables for processes. Vector(nprocs)
tables_coord(:)	tables.coord (9.5.1.3.391)	Array of possible coordinate systems for tables. Vector(ncoordbases)
version_ind(:)	version_ind (9.5.1.3.416)	Array of releases/versions of the AMNS data; each element contains information about the AMNS data that is included in the release

#### 9.5.1.3.3 antennas

RF antenna list. Time-dependent CPO.

member	type	description
datainfo	datainfo (9.5.1.3.121)	Generic information on a data item
antenna_ec(:)	antenna_ec (9.5.1.3.50)	Vector of Electron Cyclotron antennas. Time-dependent
antenna_ic(:)	antenna_ic (9.5.1.3.51)	Vector of Ion Cyclotron antennas. Time-dependent
antenna_lh(:)	antenna_lh (9.5.1.3.52)	Vector of Lower Hybrid antennas. Time-dependent
codeparam	codeparam (9.5.1.3.66)	Code parameters
time	float (9.5.1.1.1)	Time [s]; Time-dependent; Scalar

#### 9.5.1.3.4 compositionc

Species description (ions, impurities, neutrals).

member	type	description
datainfo	datainfo (9.5.1.3.121)	Generic information on a data item
compositions	compositions.type (9.5.1.3.88)	Contains all the composition information for the simulation (main ions, impurities, neutrals, edge species).

### 9.5.1.3.5 coredelta

Generic instant change of the radial core profiles due to pellet, MHD, ... Time-dependent CPO.

member	type	description
datainfo	datainfo (9.5.1.3.121)	Generic information on a data item
composition	composition (9.5.1.3.84)	Plasma composition (description of ion species).
desc_impur	desc_impur (9.5.1.3.124)	Description of the impurities (list of ion species and possibly different charge states)
compositions	compositions.type (9.5.1.3.88)	Contains all the composition information for the simulation (main ions, impurities, neutrals, edge species).
values(:)	coredelta_values (9.5.1.3.93)	Description of the delta term for the various origins. Array of structure (ndelta). Time-dependent
codeparam	codeparam (9.5.1.3.66)	Code parameters
time	float (9.5.1.1.1)	Time [s]; Time-dependent; Scalar

### 9.5.1.3.6 coreimpur

Impurity species (i.e. ion species with multiple charge states), radial core profiles. For heavy impurities, some ionisation states can be grouped into "bundles". Can be the result of an impurity transport code or experimental measurements. Time-dependent CPO

member	type	description
datainfo	datainfo (9.5.1.3.121)	Generic information on a data item
rho_tor_norm	vecflt_type (9.5.1.2.9)	Normalised toroidal flux coordinate values (= rho_tor normalised to the value at the last grid point); Time-dependent; Vector (nrho)
rho_tor	vecflt_type (9.5.1.2.9)	Toroidal flux coordinate (not normalised, equivalent to rho_tor_norm) [m]; Vector (nrho). Time-dependent.
source	vecstring_type (9.5.1.2.11)	Source of the profile (any comment describing the origin of the impurity profiles : code, path to diagnostic signals, massaging, ...); Array of strings (nimp)
flag	vecint_type (9.5.1.2.10)	Flag describing how the profile has been processed : 0-not calculated; 1-interpretative; 2-calculated by the transport solver; 3-calculated by a separate code : in that case only, description of the code provided in codeparam at the same level; 4-used value from the previous time step; Time-dependent; Vector(nimp)
desc_impur	desc_impur (9.5.1.3.124)	Description of the impurities (list of ion species and possibly different charge states)
compositions	compositions.type (9.5.1.3.88)	Contains all the composition information for the simulation (main ions, impurities, neutrals, edge species).
atomic_data	vecstring_type (9.5.1.2.11)	Reference for the atomic data used for each impurity. Array of strings (nimp)
impurity(:)	impurity_type (9.5.1.3.217)	Array(nimp). Time-dependent
diagnostic	coreimpurediag_type (9.5.1.3.105)	NO DOCS
diagnosticsum	coreimpurediag_sum (9.5.1.3.103)	NO DOCS
codeparam	codeparam (9.5.1.3.66)	Code parameters
time	float (9.5.1.1.1)	Time [s]; Time-dependent; Scalar.

### 9.5.1.3.7 coreneutrals

Core plasma neutrals description. Time-dependent CPO.

member	type	description
datainfo	datainfo (9.5.1.3.121)	Generic information on a data item
rho_tor	vecflt_type (9.5.1.2.9)	Toroidal flux coordinate (not normalised, equivalent to rho_tor_norm) [m]; Vector (nrho). Time-dependent.
rho_tor_norm	vecflt_type (9.5.1.2.9)	Normalised toroidal flux coordinate values (= rho_tor normalised to the value at the last grid point); Time-dependent; Vector (nrho)
neutcompo	composition_neutrals (9.5.1.3.85)	Description of neutrals species
composition	composition (9.5.1.3.84)	Plasma composition (description of ion species).
desc_impur	desc_impur (9.5.1.3.124)	Description of the impurities (list of ion species and possibly different charge states)
compositions	compositions.type (9.5.1.3.88)	Contains all the composition information for the simulation (main ions, impurities, neutrals, edge species).
profiles(:)	neutral_complex_type (9.5.1.3.257)	Profiles derived from the fields solved in the transport equations, or from experiment. Array(nneut). Time-dependent
ioncoeff(:)	coefficients_neutrals (9.5.1.3.67)	Recycling and sputtering coefficients for each ion in composition. Array(nion). Time-dependent
impcoeff(:)	impcoeff (9.5.1.3.215)	Recycling and sputtering coefficients for each impurity ion in desc_impur. Array(nimp). Time-dependent.
codeparam	codeparam (9.5.1.3.66)	Code parameters

member	type	description
time	float (9.5.1.1.1)	Time [s]; Time-dependent; Scalar

### 9.5.1.3.8 coreprof

Core plasma 1D profiles as a function of the toroidal flux coordinate, obtained by solving the core transport equations (can be also fitted profiles from experimental data). The codeparam element here describes the parameters of the transport equation solver and/or those of the fitting program. Time-dependent CPO.

member	type	description
datainfo	datainfo (9.5.1.3.121)	Generic information on a data item
rho_tor_norm	vecflt.type (9.5.1.2.9)	Normalised toroidal flux coordinate values (= rho_tor normalised to the value at the last radial grid point, which is quasi at the Last Closed Flux Surface); Time-dependent; Vector (nrho)
rho_tor	vecflt.type (9.5.1.2.9)	Toroidal flux coordinate (not normalised, equivalent to rho_tor_norm) [m]; Vector (nrho). Time-dependent.
drho_dt	vecflt.type (9.5.1.2.9)	Time derivative of rho_tor [m/s]; Vector (nrho). Time-dependent.
toroid_field	toroid_field (9.5.1.3.396)	Toroidal field information entering the definition of rho_tor, for reference only. The physical value of the toroidal field should be taken from the toroidfield CPO. Time-dependent.
composition	composition (9.5.1.3.84)	Plasma composition (description of ion species).
desc_impur	desc_impur (9.5.1.3.124)	Description of the impurities (list of ion species and possibly different charge states)
compositions	compositions.type (9.5.1.3.88)	Contains all the composition information for the simulation (main ions, impurities, neutrals, edge species).
psi	psi (9.5.1.3.289)	Poloidal magnetic flux [Wb]; Time-dependent;
te	corefield (9.5.1.3.94)	Electron temperature [eV]; (source term in [W.m <sup>-3</sup> ]). Time-dependent;
ti	corefieldion (9.5.1.3.95)	Ion temperature [eV]; (source term in [W.m <sup>-3</sup> ]). Time-dependent;
ne	corefield (9.5.1.3.94)	Electron density [m <sup>-3</sup> ]; (source term in [m <sup>-3</sup> ]). Time-dependent;
ni	corefieldion (9.5.1.3.95)	Ion density [m <sup>-3</sup> ]; (source term in [m <sup>-3</sup> ]). Time-dependent;
vtor	corefieldion (9.5.1.3.95)	Toroidal velocity of the various ion species [m.s <sup>-1</sup> ]; Time-dependent;
profiles1d	profiles1d (9.5.1.3.287)	Profiles derived from the fields solved in the transport equations, or from experiment.
globalparam	globalparam (9.5.1.3.209)	Various global quantities calculated from the 1D profiles. Time-dependent
codeparam	codeparam (9.5.1.3.66)	Code parameters
time	float (9.5.1.1.1)	Time [s]; Time-dependent; Scalar

### 9.5.1.3.9 coresource

Generic source term for the core transport equations (radial profile). Time-dependent CPO.

member	type	description
datainfo	datainfo (9.5.1.3.121)	Generic information on a data item
composition	composition (9.5.1.3.84)	Plasma composition (description of ion species).
desc_impur	desc_impur (9.5.1.3.124)	Description of the impurities (list of ion species and possibly different charge states)
compositions	compositions.type (9.5.1.3.88)	Contains all the composition information for the simulation (main ions, impurities, neutrals, edge species).
toroid_field	b0r0 (9.5.1.3.56)	Characteristics of the vacuum toroidal field, redundant with the toroidfield CPO, to document the normalisation of rho and j in this CPO.
values(:)	coresource_values (9.5.1.3.112)	Description of the source terms of various origins. Array of structure (nsource). Time-dependent.
codeparam	codeparam (9.5.1.3.66)	Code parameters
time	float (9.5.1.1.1)	Time [s]; Time-dependent; Scalar

### 9.5.1.3.10 coretransp

Generic transport coefficients for the core transport equations (radial profile). Time-dependent CPO

member	type	description
datainfo	datainfo (9.5.1.3.121)	Generic information on a data item
composition	composition (9.5.1.3.84)	Plasma composition (description of ion species).
desc_impur	desc_impur (9.5.1.3.124)	Description of the impurities (list of ion species and possibly different charge states)
compositions	compositions.type (9.5.1.3.88)	Contains all the composition information for the simulation (main ions, impurities, neutrals, edge species).
values(:)	coretransp_values (9.5.1.3.116)	Description of transport term coming from various origins. Array of structure (ntransp). Time-dependent
codeparam	codeparam (9.5.1.3.66)	Code parameters
time	float (9.5.1.1.1)	Time [s]; Time-dependent; Scalar

### 9.5.1.3.11 cxdiag

Charge Exchange Diagnostic; Time-dependent CPO

member	type	description
datainfo	datainfo (9.5.1.3.121)	Generic information on a data item
setup	cxsetup (9.5.1.3.119)	diagnostic setup information
measure	cxmeasure (9.5.1.3.118)	Measured values
time	float (9.5.1.1.1)	Time [s]; Time-dependent; Scalar

### 9.5.1.3.12 distribution

Distribution function for electron and ion species. Normally output from a Fokker-Planck calculation; Time-dependent CPO

member	type	description
datainfo	datainfo (9.5.1.3.121)	Generic information on a data item
composition	composition (9.5.1.3.84)	Plasma composition (description of ion species).
compositions	compositions.type (9.5.1.3.88)	Contains all the composition information for the simulation (main ions, impurities, neutrals, edge species).
distri_vec(:)	distri_vec (9.5.1.3.151)	Vector over all distribution functions; Time-dependent. Structure array(ndistri_vec)
codeparam	codeparam (9.5.1.3.66)	Code parameters
time	float (9.5.1.1.1)	Time [s]; Time-dependent; Scalar

### 9.5.1.3.13 distsource

Sources of particles for input to kinetic equations, e.g. Fokker-Planck calculation. The sources could originate from e.g. NBI or fusion reactions. Time-dependent CPO

member	type	description
datainfo	datainfo (9.5.1.3.121)	Generic information on a data item
composition	composition (9.5.1.3.84)	Plasma composition (description of ion species).
compositions	compositions.type (9.5.1.3.88)	Contains detailed information on the plasma composition (main ions, impurities, neutrals, edge species).
source(:)	distsource_source (9.5.1.3.156)	Source. Time-dependent. Structure array(nsrtc_spec)
codeparam	codeparam (9.5.1.3.66)	Code parameters
time	float (9.5.1.1.1)	Time [s]; Time-dependent; scalar

### 9.5.1.3.14 ecediag

Electron Cyclotron Emission Diagnostic; Time-dependent CPO

member	type	description
datainfo	datainfo (9.5.1.3.121)	Generic information on a data item
setup	ecsetup (9.5.1.3.160)	diagnostic setup information
measure	ecmeasure (9.5.1.3.159)	Measured values
time	float (9.5.1.1.1)	Time [s]; Time-dependent; Scalar

### 9.5.1.3.15 edge

CPO for edge/SOL plasma description. Time-dependent CPO

member	type	description
datainfo	datainfo (9.5.1.3.121)	Generic information on a data item
grid	complexgrid (9.5.1.3.71)	Grid description
species(:)	species_desc (9.5.1.3.377)	Description of ion species. Array of structures(nspecies)
compositions	compositions.type (9.5.1.3.88)	Contains all the composition information for the simulation (main ions, impurities, neutrals, edge species).
fluid	edge_fluid (9.5.1.3.161)	Fluid description of edge plasma. Time-dependent.
kinetic	edge_kinetic (9.5.1.3.167)	Kinetic description of edge plasma. Time-dependent.
codeparam	codeparam (9.5.1.3.66)	Code parameters
time	float (9.5.1.1.1)	Time [s]; Time-dependent; Scalar

### 9.5.1.3.16 efcc

Error field correction coils. Time-dependent CPO.

member	type	description
datainfo	datainfo (9.5.1.3.121)	Generic information on a data item
coil(:)	coil (9.5.1.3.69)	Individual coil. Time-dependent. Structure array. Replicate this coil structure for coil element in the efcc array.
time	float (9.5.1.1.1)	Time [s]; Time-dependent; Scalar
codeparam	codeparam (9.5.1.3.66)	Code parameters

### 9.5.1.3.17 equilibrium

Description of a 2D, axi-symmetric, tokamak equilibrium; result of an equilibrium code. Time-dependent CPO

member	type	description
datainfo	datainfo (9.5.1.3.121)	Generic information on a data item
eqconstraint	eqconstraint (9.5.1.3.174)	measurements to constrain the equilibrium, output values and accuracy of the fit
eqgeometry	eqgeometry (9.5.1.3.175)	Geometry of the plasma boundary
flush	flush (9.5.1.3.185)	FLUSH package coefficients for the mapping of the equilibrium. The time grid of this structure is the same as the equilibrium structure above.
global_param	global_param (9.5.1.3.208)	0d output parameters
profiles.1d	profiles.1d (9.5.1.3.288)	output profiles as a function of the poloidal flux
profiles.2d(:)	equilibrium_profiles.2d (9.5.1.3.179)	Output profiles in the poloidal plane. Time-dependent
coord_sys	coord_sys (9.5.1.3.90)	flux surface coordinate system on a square grid of flux and angle
time	float (9.5.1.1.1)	Time [s]; Time-dependent; Scalar
codeparam	codeparam (9.5.1.3.66)	Code parameters

### 9.5.1.3.18 fusiondiag

Fusion product diagnostics; Time-dependent CPO

member	type	description
datainfo	datainfo (9.5.1.3.121)	Generic information on a data item
fus_product(:)	fusiondiag_fus_product (9.5.1.3.203)	Source. Time-dependent. Structure array. Replicate this source structure to accommodate neutron and gammas.
codeparam	codeparam (9.5.1.3.66)	Code parameters
time	float (9.5.1.1.1)	Time [s]; Time-dependent; Scalar

### 9.5.1.3.19 halphadiag

H/D alpha line integrated diagnostic; Time-dependent CPO

member	type	description
datainfo	datainfo (9.5.1.3.121)	Generic information on a data item
setup	halphadiag_setup (9.5.1.3.212)	setup for the lines of sight of the line integrated measurement
intensity	exp1D (9.5.1.3.181)	Measured light intensity (a.u.). Time-dependent. Vector (nlos)
time	float (9.5.1.1.1)	Time [s]; Time-dependent; Scalar

### 9.5.1.3.20 interfdiag

General line integral diagnostic

member	type	description
datainfo	datainfo (9.5.1.3.121)	Generic information on a data item
expression	string (9.5.1.1.3)	Formal expression for the line integral to be evaluated as a function of ne, ni, Te, Ti, Zeff, Br, Bz
setup_line	setup_line (9.5.1.3.362)	Geometric description of the lines of sight
measure	exp1D (9.5.1.3.181)	Measured value. Time-dependent; Vector (nchords)
time	float (9.5.1.1.1)	Time [s]; Time-dependent; Scalar

### 9.5.1.3.21 ironmodel

Model of the iron circuit; Time-dependent CPO

member	type	description
datainfo	datainfo (9.5.1.3.121)	Generic information on a data item
desc_iron	desc_iron (9.5.1.3.125)	Description of the iron segments
magnetise	magnetise (9.5.1.3.238)	Magnetisation $M$ of the iron segment, assumed to be constant inside a given iron segment. Reminder : $H = 1/\mu_0 * B - \text{mur} * M$ ; [A/m].
time	float (9.5.1.1.1)	Time [s]; Time-dependent; Scalar

### 9.5.1.3.22 langmuirdiag

Langmuir probes; Time-dependent CPO

member	type	description
datainfo	datainfo (9.5.1.3.121)	Generic information on a data item
potential	lang_measure (9.5.1.3.223)	Floating potential [V]. All children are vectors(npot)
bias	lang_measure (9.5.1.3.223)	Biasing potential [V]. All children are vectors(bias)
jsat	lang_measure (9.5.1.3.223)	Ion saturation current [A/m <sup>2</sup> ]. All children are vectors(njsat)
ne	lang_derived (9.5.1.3.222)	Electron density [m <sup>-3</sup> ]. All children are vectors(ndensity).
te	lang_derived (9.5.1.3.222)	Electron Temperature [eV]. All children are vectors(nte)
machpar	lang_derived (9.5.1.3.222)	Parallel Mach number. All children are vectors(nmach)
codeparam	codeparam (9.5.1.3.66)	Code parameters
time	float (9.5.1.1.1)	Time [s]; Time-dependent; Scalar

### 9.5.1.3.23 launches

RF wave launch conditions. Time-dependent CPO

member	type	description
datainfo	datainfo (9.5.1.3.121)	Generic information on a data item
name	vecstring_type (9.5.1.2.11)	Antenna name, Vector of strings (nantenna)
type	vecstring_type (9.5.1.2.11)	Wave type (LH, EC, IC, ...), Vector of strings (nantenna)
frequency	vecflt_type (9.5.1.2.9)	Wave frequency [Hz], Vector (nantenna).
mode	vecint_type (9.5.1.2.10)	Incoming wave mode (+ 1 : slow wave only; -1 both slow and fast wave modes). Vector of integers (nantenna). Time-dependent
position	rzphiID (9.5.1.3.331)	Reference global position of the antenna. Time-dependent
spectrum	spectrum (9.5.1.3.379)	Spectral properties of the wave.
beam	launchs_rfbeam (9.5.1.3.227)	Beam characteristics
codeparam	codeparam (9.5.1.3.66)	Code parameters
time	float (9.5.1.1.1)	Time [s]; Time-dependent; Scalar

### 9.5.1.3.24 limiter

Description of the immobile limiting surface(s) or plasma facing components for defining the Last Closed Flux Surface. CPO

member	type	description
datainfo	datainfo (9.5.1.3.121)	Generic information on a data item
limiter_unit(:)	limiter_unit (9.5.1.3.231)	Vector of limiting surfaces. Replicate this limiter_unit element ncomponents times. Each unit contains a plasma facing component that can have dedicated number of points. Array of structures (ncomponents)

### 9.5.1.3.25 lithiumdiag

Lithium Beam Diagnostic; Time-dependent CPO

member	type	description
datainfo	datainfo (9.5.1.3.121)	Generic information on a data item
setup	lithsetup (9.5.1.3.234)	diagnostic setup information
measure	lithmeasure (9.5.1.3.233)	Measured values
time	float (9.5.1.1.1)	Time [s]; Time-dependent; Scalar

### 9.5.1.3.26 magdiag

Magnetic diagnostics. Time-dependent CPO

member	type	description
datainfo	datainfo (9.5.1.3.121)	Generic information on a data item
ip	exp0D (9.5.1.3.180)	Plasma current [A]. Positive sign means anti-clockwise when viewed from above. Time-dependent. Scalar
diamagflux	exp0D (9.5.1.3.180)	Diamagnetic flux [Wb]; Time-dependent; Scalar
flux_loops	flux_loops (9.5.1.3.186)	Poloidal flux loops RZ coordinates have 1 component for the full loop and two if there is a negative reference loop
bpol_probes	bpol_probes (9.5.1.3.64)	Poloidal field probes
time	float (9.5.1.1.1)	Time [s]; Time-dependent; Scalar

### 9.5.1.3.27 mhd

MHD linear stability. Time-dependent CPO

member	type	description
datainfo	datainfo (9.5.1.3.121)	Generic information on a data item
n	vecint_type (9.5.1.2.10)	Toroidal mode number; Time-dependent; Vector (nn)
frequency	vecflt_type (9.5.1.2.9)	Frequency of the mode [Hz]; Time-dependent; Vector (nn)
growthrate	vecflt_type (9.5.1.2.9)	Linear growthrate of the mode [Hz]; Time-dependent; Vector (nn)
plasma	mhd_plasma (9.5.1.3.242)	MHD modes in the confined plasma
vacuum	mhd_vacuum (9.5.1.3.244)	External modes
time	float (9.5.1.1.1)	Time [s]; Time-dependent; Scalar.
codeparam	codeparam (9.5.1.3.66)	Code parameters

### 9.5.1.3.28 msediag

MSE Diagnostic; Time-dependent CPO

member	type	description
datainfo	datainfo (9.5.1.3.121)	Generic information on a data item
polarimetry	polarimetry (9.5.1.3.284)	This structure accomodates the polarimetry setup and measurements of a mse diagnostic, as widely used in fusion devices. The final measurement is the $\tan(\gamma)$ where $\gamma$ is the polarization angle of a particular spectral mse component.
spectral	spectral (9.5.1.3.378)	This structure accommodates the types needed on a spectral MSE diagnostic namely the emissivity and the radiance spectra. It will be subsequently upgraded with optical + photon detection elements since the structure will also be used for a synthetic spectral mse code.
time	float (9.5.1.1.1)	Time [s]; Time-dependent; Scalar

### 9.5.1.3.29 nbi

Neutral Beam Injection. Input to NBI source codes; describes the neutrals that are about to be launched into the torus; Time-dependent CPO

member	type	description
datainfo	datainfo (9.5.1.3.121)	Generic information on a data item
nbi.unit(:)	nbi_unit (9.5.1.3.255)	Vector of Neutral Beam Injector units. Structure array(nunits). Time-dependent
codeparam	codeparam (9.5.1.3.66)	Code parameters
time	float (9.5.1.1.1)	Time [s]; Time-dependent; Scalar

### 9.5.1.3.30 neoclassic

Neoclassical quantities (including transport coefficients). Time-dependent CPO

member	type	description
datainfo	datainfo (9.5.1.3.121)	Generic information on a data item
rho_tor_norm	vecflt_type (9.5.1.2.9)	Normalised toroidal flux coordinate values (= rho_tor normalised to the value at the last grid point); Vector (nrho)
rho_tor	vecflt_type (9.5.1.2.9)	Toroidal flux coordinate (not normalised, equivalent to rho_tor_norm) [m]; Vector (nrho). Time-dependent.
composition	composition (9.5.1.3.84)	Plasma composition (description of ion species).
desc_impur	desc_impur (9.5.1.3.124)	Description of the impurities (list of ion species and possibly different charge states)



member	type	description
compositions	compositions.type (9.5.1.3.88)	Contains all the composition information for the simulation (main ions, impurities, neutrals, edge species).
ni_neo	transcoefion (9.5.1.3.400)	Neoclassical transport coefficients for ion density equation. Time-dependent.
ne_neo	transcoefel (9.5.1.3.398)	Neoclassical transport coefficients for electron density equation. Time-dependent.
nz_neo(:)	transcoefimp (9.5.1.3.399)	Neoclassical transport coefficients for impurity (multiple charge state) density equation. Time-dependent.
ti_neo	transcoefion (9.5.1.3.400)	Neoclassical transport coefficients for ion temperature equation. Time-dependent.
te_neo	transcoefel (9.5.1.3.398)	Neoclassical transport coefficients for electron temperature equation. Time-dependent.
tz_neo(:)	transcoefimp (9.5.1.3.399)	Neoclassical transport coefficients for impurity (multiple charge state) temperature equation. Time-dependent.
mtor_neo	transcoefel (9.5.1.3.398)	Neoclassical transport coefficients for total toroidal momentum equation. Time-dependent.
sigma	vecflt.type (9.5.1.2.9)	Neoclassical conductivity [ $\text{ohm}^{-1} \cdot \text{m}^{-1}$ ]. Time-dependent. Vector(nrho).
jboot	vecflt.type (9.5.1.2.9)	Bootstrap current density [ $\text{A} \cdot \text{m}^{-2}$ ]. Time-dependent. Vector(nrho).
er	vecflt.type (9.5.1.2.9)	Radial electric field [ $\text{V}/\text{m}$ ]. Time-dependent. Vector(nrho).
vpol	matflt.type (9.5.1.2.7)	Neoclassical poloidal rotation of for each ion species [ $\text{m}/\text{s}$ ]. Time-dependent. Matrix(nrho,nion).
fext	array3dflt.type (9.5.1.2.1)	Moments of parallel external force on each ion species [ $\text{T} \cdot \text{J} \cdot \text{m}^{-3}$ ]. Time-dependent. Array3D(nrho,nion,nmoment).
jext	vecflt.type (9.5.1.2.9)	Current density response to fext [ $\text{A} \cdot \text{m}^{-2}$ ]. Time-dependent. Vector(nrho).
time	float (9.5.1.1.1)	Time [s]; Time-dependent; Scalar.
codeparam	codeparam (9.5.1.3.66)	Code parameters

### 9.5.1.3.31 orbit

Orbits for a set of particles. Time-dependent CPO

member	type	description
datainfo	datainfo (9.5.1.3.121)	Generic information on a data item
com	com (9.5.1.3.70)	COM (Constants Of Motion) parameters identifying an orbit
trace	trace (9.5.1.3.397)	Position of particle in 5D space (3D in real and 2D in velocity).
global_param	orbit_global_param (9.5.1.3.264)	Global quantities associated with an orbit.
codeparam	codeparam (9.5.1.3.66)	Code parameters
time	float (9.5.1.1.1)	Time [s]; Time-dependent; Scalar

### 9.5.1.3.32 pellets

Pellet injectors and diagnostic; Time-dependent CPO

member	type	description
datainfo	datainfo (9.5.1.3.121)	Generic information on a data item
toroid_field	b0r0 (9.5.1.3.56)	Characteristics of the vacuum toroidal field, redundant with the toroidfield CPO, to document the normalisation of rho in this CPO.
species	species (9.5.1.3.376)	Pellet composition
shape	shape (9.5.1.3.363)	Pellet shape
pelletpath	pelletpath (9.5.1.3.270)	Description of the flight path of the pellet (assumed a straight line)
velocity	float (9.5.1.1.1)	Pellet injection velocity (m/s). Time-dependent. Scalar
ablationrate	ablationrate (9.5.1.3.49)	Ablation rate data [particle/s]. Formally the ablation rate profile only makes sense after the pellet has fully penetrated inside the plasma. The assignment of a suitable time stamp to the profile should be made either to time of maximum penetration or to the mean of the time window of pellet lifetime. In the modelling however, the reference time is the time when the pellet crosses the separatrix. Time-dependent. Vector (npos)
deposprofile	deposprofile (9.5.1.3.122)	Deposition profile ( $\text{m}^{-3}$ ). This deposition profile only makes sense after the ablated pellet cloud interacts via some transport processes with the plasma. This is why we add a time delay stamp to the profile in reference to the ablation rate profile. Time-dependent. Vector (npos)
codeparam	codeparam (9.5.1.3.66)	Code parameters
time	float (9.5.1.1.1)	Time [s]; Time-dependent; Scalar

### 9.5.1.3.33 pfsystems

Description of the active poloidal coils, passive conductors, currents flowing in those and mutual electromagnetic effects of the device; Time-dependent CPO

member	type	description
datainfo	datainfo (9.5.1.3.121)	Generic information on a data item
pfcoils	pfcoils (9.5.1.3.273)	Active poloidal field coils
pfpassive	pfpassive (9.5.1.3.277)	Passive axisymmetric conductor description
pfcircuits	pfcircuits (9.5.1.3.272)	Circuits, connected to multiple coils and to multiple supplies, defining the current and voltage relationships in the system
pfsupplies	pfsupplies (9.5.1.3.278)	PF power supplies
time	float (9.5.1.1.1)	Time [s]; Time-dependent; Scalar

#### 9.5.1.3.34 polardiag

General line integral diagnostic

member	type	description
datainfo	datainfo (9.5.1.3.121)	Generic information on a data item
expression	string (9.5.1.1.3)	Formal expression for the line integral to be evaluated as a function of $n_e$ , $n_i$ , $T_e$ , $T_i$ , $Z_{eff}$ , $B_r$ , $B_z$
setup_line	setup_line (9.5.1.3.362)	Geometric description of the lines of sight
measure	exp1D (9.5.1.3.181)	Measured value. Time-dependent; Vector (nchords)
time	float (9.5.1.1.1)	Time [s]; Time-dependent; Scalar

#### 9.5.1.3.35 reference

Set of generic reference signals (for input e.g. to a controller); Time-dependent CPO

member	type	description
datainfo	datainfo (9.5.1.3.121)	Generic information on a data item
non_timed	ref_nt (9.5.1.3.294)	Time-independent references (parameters)
timed	ref_t (9.5.1.3.305)	Time-dependent references
time	float (9.5.1.1.1)	Time [s]; Time-dependent; Scalar

#### 9.5.1.3.36 reflectomet

Reflectometry CPO, contains antennas and received signals; Time-dependent CPO.

member	type	description
datainfo	datainfo (9.5.1.3.121)	Generic information on a data item
refl_receive(:)	refl_receive (9.5.1.3.315)	Reflectometry signal; experimental or code output. Time-dependent. Vector(nreceivers); If output from ERC3D, contains short, high-resolution (ps) time series anchored to the time of the CPO or, for a combination of runs, longer, coarse time signals. For experimental signals, time series may span much longer durations. For slowly varying signals, may contain only one point and have a separate CPO instance with different time field for every point. For code output, the signals are usually normalised to unity power.
antennas(:)	reflectometry_antennas (9.5.1.3.316)	Vector of reflectometry antenna descriptions. These include radiation fields as well as material antenna structures (feeds, horns, later mirrors); Vector(nantennas); refl_received entries refer to their antenna by index in this array. Time-dependent.
time	float (9.5.1.1.1)	Time [s]; Time-dependent; Scalar

#### 9.5.1.3.37 rfadiag

Retarding field analyser Diagnostic; Time-dependent CPO

member	type	description
datainfo	datainfo (9.5.1.3.121)	Generic information on a data item
setup	rfasetup (9.5.1.3.322)	diagnostic setup information
measure	rfameasure (9.5.1.3.321)	Measured values
time	float (9.5.1.1.1)	Time [s]; Time-dependent; Scalar

#### 9.5.1.3.38 sawteeth

Description of sawtooth events. Time-dependent CPO

member	type	description
member	type	description
datainfo	datainfo (9.5.1.3.121)	Generic information on a data item
crash_trig	integer (9.5.1.1.2)	Flag indicating whether a crash condition has been satisfied : 0 = no crash. N( $\zeta$ ;0) = crash triggered due to condition ii=N. Integer. Time-dependent.
composition	composition (9.5.1.3.84)	Plasma composition (description of ion species).
rho_tor_norm	vecflt_type (9.5.1.2.9)	Normalised toroidal flux coordinate values (= rho_tor normalised to the value at the last grid point); Vector (nrho)
rho_tor	vecflt_type (9.5.1.2.9)	Toroidal flux coordinate [m] given by $\sqrt{\phi/B_0/\pi}$ , where $B_0 = \text{toroidfield}\%bvac.r\%value / \text{toroidfield}\%r0$ . Vector (nrho). Time-dependent.
profiles1d	sawteeth_profiles1d (9.5.1.3.337)	Core profiles after sawtooth crash
diags	sawteeth_diags (9.5.1.3.336)	NO DOCS
codeparam	codeparam (9.5.1.3.66)	Code parameters
time	float (9.5.1.1.1)	Time [s]; Time-dependent; Scalar

### 9.5.1.3.39 scenario

Scenario characteristics, to be used as input or output of a whole discharge simulator. Time-dependent CPO.

member	type	description
datainfo	datainfo (9.5.1.3.121)	Generic information on a data item
centre	scenario_centre (9.5.1.3.338)	central values of the profiles (at magnetic axis)
composition	scenario_composition (9.5.1.3.339)	Plasma composition (description of ion species).
configs	scenario_configuration (9.5.1.3.340)	Strings describing the tokamak configuration
confinement	scenario_confinement (9.5.1.3.341)	characteristic confinement times
currents	scenario_currents (9.5.1.3.342)	data related to current sources and current diffusion
edge	scenario_edge (9.5.1.3.343)	edge value (@ LCMS)
energy	scenario_energy (9.5.1.3.344)	plasma energy content
eqgeometry	eqgeometry (9.5.1.3.175)	Geometry of the plasma boundary
global_param	scenario_global (9.5.1.3.345)	Global scalar values
heat_power	scenario_heat_power (9.5.1.3.346)	Power delivred to plasma (thermal and non thermal)
itb	scenario_itb (9.5.1.3.348)	Values characteristics of the Internal Transport Barrier
lim_div_wall	scenario_lim_div_wall (9.5.1.3.349)	values on the plate of divertor or on the limiter or on the wall (@ LCMS)
line_ave	scenario_line_ave (9.5.1.3.350)	line averaged value
neutron	scenario_neutron (9.5.1.3.351)	neutron flux for DD and DT reactions
ninety_five	scenario_ninety_five (9.5.1.3.352)	values at 95% of poloidal flux
pedestal	scenario_pedestal (9.5.1.3.353)	Values at the top of the H-mode pedestal
references	scenario_references (9.5.1.3.356)	References
reactor	scenario_reactor (9.5.1.3.354)	reactor data (such as electricity cost ...)
sol	scenario_sol (9.5.1.3.357)	SOL characteristic (@ LCMS)
vol_ave	scenario_vol_ave (9.5.1.3.358)	volume averaged value
codeparam	codeparam (9.5.1.3.66)	Code parameters
time	float (9.5.1.1.1)	Time [s]; Time-dependent; Scalar

### 9.5.1.3.40 summary

Set of reduced data summarising the main simulation parameters for the data base catalogue. CPO.

member	type	description
datainfo	datainfo (9.5.1.3.121)	Generic information on a data item
ip	reduced (9.5.1.3.293)	Plasma current [A]

member	type	description
bvac_r	reduced (9.5.1.3.293)	Vacuum field times radius in the toroidal field magnet [T.m];
geom_axis_r	reduced (9.5.1.3.293)	Major radius of the geometric axis [m]
a_minor	reduced (9.5.1.3.293)	Minor radius of the plasma boundary [m]
elongation	reduced (9.5.1.3.293)	Elongation of the plasma boundary [m]
tria_lower	reduced (9.5.1.3.293)	Lower triangularity of the plasma boundary [m]
tria_upper	reduced (9.5.1.3.293)	Upper triangularity of the plasma boundary [m]
tev	reduced (9.5.1.3.293)	volume averaged electron temperature [eV]
tiv	reduced (9.5.1.3.293)	volume averaged ion temperature [eV]
nev	reduced (9.5.1.3.293)	volume averaged electron density [m <sup>-3</sup> ]
zeffv	reduced (9.5.1.3.293)	volume averaged effective charge
beta_pol	reduced (9.5.1.3.293)	poloidal beta
beta_tor	reduced (9.5.1.3.293)	toroidal beta
beta_normal	reduced (9.5.1.3.293)	normalised beta
li	reduced (9.5.1.3.293)	internal inductance
volume	reduced (9.5.1.3.293)	total plasma volume [m <sup>3</sup> ]
area	reduced (9.5.1.3.293)	area poloidal cross section [m <sup>2</sup> ]
main_ion1_z	reduced (9.5.1.3.293)	Atomic number of the main ion #1 [a.m.u.]
main_ion1_a	reduced (9.5.1.3.293)	Atomic mass of the main ion #1 [a.m.u.]
main_ion2_z	reduced (9.5.1.3.293)	Atomic number of the main ion #2 [a.m.u.]
main_ion2_a	reduced (9.5.1.3.293)	Atomic mass of the main ion #2 [a.m.u.]
impur1_z	reduced (9.5.1.3.293)	Atomic number of the impurity #1 [a.m.u.]
impur1_a	reduced (9.5.1.3.293)	Atomic mass of the impurity #1 [a.m.u.]
time	float (9.5.1.1.1)	Time at which the OD variables of the summary are taken [s]. Scalar

#### 9.5.1.3.41 topinfo

General info about the database entry. CPO.

member	type	description
dataprovider	string (9.5.1.1.3)	Name of the main data provider (the person who filled the original data)
description	string (9.5.1.1.3)	Pulse/Entry description
firstputdate	string (9.5.1.1.3)	Date of the original data submission
lastupdate	string (9.5.1.1.3)	Date of the last data addition in the tree
source	string (9.5.1.1.3)	Exact reference of the data source (e.g. original reference in the native machine data base)
comment	string (9.5.1.1.3)	Any additional comment
dataversion	string (9.5.1.1.3)	Version of the data structure
workflow	string (9.5.1.1.3)	Workflow which has been used to produce the present entry. Exact format to be defined with the platform group. User-specific input files (if allowed) must be stored there as well.
entry	entry_def (9.5.1.3.172)	Definition of this database entry
parent_entry	entry_def (9.5.1.3.172)	Definition of the entry of the direct parent (if any)
mdinfo	mdinfo (9.5.1.3.240)	Information related to machine description for this entry

#### 9.5.1.3.42 toroidfield

Toroidal field. Time-dependent CPO

member	type	description
datainfo	datainfo (9.5.1.3.121)	Generic information on a data item
desc_tfcoils	tf_desc_tfcoils (9.5.1.3.392)	Description of the toroidal field coils
nturns	integer (9.5.1.1.2)	Number of total turns in the toroidal field coil
ncoils	integer (9.5.1.1.2)	Number of packets of coils
current	expOD (9.5.1.3.180)	Current in the toroidal field coils [A]; Time-dependent. Scalar.
bvac_r	expOD (9.5.1.3.180)	Vacuum field times radius in the toroidal field magnet [T.m]. Positive sign means anti-clockwise when viewed from above. Time-dependent. Scalar.
r0	float (9.5.1.1.1)	Characteristic major radius of the device (used in publications, usually middle of the vessel at the equatorial midplane) [m]. Scalar.
time	float (9.5.1.1.1)	Time [s]; Time-dependent. Scalar.

#### 9.5.1.3.43 tdiag

Thomson scattering Diagnostic; Time-dependent CPO

member	type	description
datainfo	datainfo (9.5.1.3.121)	Generic information on a data item
setup	tssetup (9.5.1.3.403)	diagnostic setup information
measure	tsmeasure (9.5.1.3.402)	Measured values
time	float (9.5.1.1.1)	Time [s]; Time-dependent; Scalar

#### 9.5.1.3.44 turbulence

Turbulence; Time-dependent CPO.

member	type	description
datainfo	datainfo (9.5.1.3.121)	Generic information on a data item
composition	turbcomposition (9.5.1.3.404)	Plasma composition (description of ion species).
coordsys	turbcoordsys (9.5.1.3.405)	Description of the coordinates and metric used by the codes.
var0d	turbvar0d (9.5.1.3.409)	Diagnostic fast time traces.
var1d	turbvar1d (9.5.1.3.410)	Dependent variable radial profile.
var2d	turbvar2d (9.5.1.3.411)	Dependent variable axisymmetric.
var3d	turbvar3d (9.5.1.3.412)	Dependent variable morphology. Grid is defined in coord_sys/turbgrid.
var4d	turbvar4d (9.5.1.3.413)	Gyrokinetic distribution function, axisymmetric component. Grid is defined in coord_sys/turbgrid.
var5d	turbvar5d (9.5.1.3.414)	Gyrokinetic distribution function. Grid is defined in coord_sys/turbgrid.
spec1d	turbspec1d (9.5.1.3.408)	Toroidal mode number spectra.
env1d	turbenv1d (9.5.1.3.406)	Parallel fluctuation envelope.
codeparam	codeparam (9.5.1.3.66)	Code parameters
time	float (9.5.1.1.1)	Time [s]; Time-dependent; Scalar.

#### 9.5.1.3.45 vessel

Mechanical structure of the vacuum vessel. CPO.

member	type	description
datainfo	datainfo (9.5.1.3.121)	Generic information on a data item
position	rz1D (9.5.1.3.325)	Vessel wall outline (list of R,Z co-ordinates) [m]; Vector (npoints)

#### 9.5.1.3.46 wall

General Wall representation. Time-dependent CPO.

member	type	description
datainfo	datainfo (9.5.1.3.121)	Generic information on a data item
wall2d_mhd	wall2d_mhd (9.5.1.3.418)	Simplified wall that encloses necessary information for RWM codes.
wall0d	wall.wall0d (9.5.1.3.426)	Simple 0D description of plasma-wall interaction
wall2d(:)	wall2d (9.5.1.3.417)	2D wall type. Structure array. Replicate this element for each type of possible physics configurations necessary (single contour limiter, disjoints gapped plasma facing components)
wall3d(:)	wall3d (9.5.1.3.419)	A 3D wall type; Structure array. Replicate this element for each type of possible physics configurations necessary (gas thight vs wall with ports and holes)
plasma	plasma (9.5.1.3.281)	Plasma flux from/to plasma facing wall surfaces
surface	surface (9.5.1.3.386)	State of plasma facing wall surfaces
time	float (9.5.1.1.1)	Time [s]; Time-dependent; Scalar

#### 9.5.1.3.47 waves

RF wave propagation and deposition. Time-dependent CPO

member	type	description
datainfo	datainfo (9.5.1.3.121)	Generic information on a data item
coherentwave(:)	coherentwave (9.5.1.3.68)	Wave description for each frequency. Time-dependent. Structure array(nfreq)
codeparam	codeparam (9.5.1.3.66)	Code parameters
time	float (9.5.1.1.1)	Time [s]; Time-dependent; Scalar

### 9.5.1.3.48 Utility Structures

#### 9.5.1.3.49 ablationrate

Ablation rate data [particle/s]. Formally the ablation rate profile only makes sense after the pellet has fully penetrated inside the plasma. The assignment of a suitable time stamp to the profile should be made either to time of maximum penetration or to the mean of the time window of pellet lifetime. In the modelling however, the reference time is the time when the pellet crosses the separatrix. Time-dependent. Vector (npos)

member	type	description
rho_tor	vecflt_type (9.5.1.2.9)	Toroidal flux coordinate [m], to be used by the ETS and in many CPOs (coreprof, ...). Defined as $\sqrt{\phi/\pi/B_0}$ , where $B_0$ = equilibrium/global.param/toroid.field/b0. Time-dependent; Vector (npos)
rate	vecflt_type (9.5.1.2.9)	Calculated ablation rate; (particle/s)
position	rzphi1D (9.5.1.3.331)	Coordinates for ablation rate

Type of: pellets:ablationrate (1547)

#### 9.5.1.3.50 antenna\_ec

Vector of Electron Cyclotron antennas. Time-dependent

member	type	description
name	string (9.5.1.1.3)	Antenna name
frequency	float (9.5.1.1.1)	Frequency [Hz]
power	exp0D (9.5.1.3.180)	Power [W]; Time-dependent
mode	integer (9.5.1.1.2)	Incoming wave mode (+ or -1 for O/X mode); Time-dependent
position	rzphi0D (9.5.1.3.330)	Launching position in the global reference system; Time-dependent
launchangles	launchangles (9.5.1.3.224)	Launching angles of the beam
beam	rfbeam (9.5.1.3.323)	Beam characteristics at the launching position
codeparam	codeparam (9.5.1.3.66)	Code parameters

Type of: antennas:antenna\_ec (1518)

#### 9.5.1.3.51 antenna\_ic

Vector of Ion Cyclotron antennas. Time-dependent

member	type	description
name	string (9.5.1.1.3)	Antenna name; String
frequency	exp0D (9.5.1.3.180)	Frequency [Hz]; Time-dependent; Exp0d
power	exp0D (9.5.1.3.180)	Power [W]; Time-dependent; Exp0d
setup	antennaic_setup (9.5.1.3.53)	Detailed description of IC antennas
codeparam	codeparam (9.5.1.3.66)	Code parameters

Type of: antennas:antenna\_ic (1518)

#### 9.5.1.3.52 antenna\_lh

Vector of Lower Hybrid antennas. Time-dependent

member	type	description
name	string (9.5.1.1.3)	Antenna name, String
frequency	float (9.5.1.1.1)	Frequency [Hz]
power	exp0D (9.5.1.3.180)	Power [W]; Exp0d. Time-dependent
n_par	float (9.5.1.1.1)	Main parallel refractive index of the launched spectrum, for multi-junction antennas. Time-dependent
position	rzphi0D (9.5.1.3.330)	Reference global antenna position. Time-dependent
setup	antennalh_setup (9.5.1.3.54)	Detailed description of LH antennas.
plasmaedge	plasmaedge (9.5.1.3.282)	Plasma edge characteristics in front of the antenna.
beam	rfbeam (9.5.1.3.323)	Beam characteristics
codeparam	codeparam (9.5.1.3.66)	Code parameters

Type of: antennas:antenna\_lh (1518)

### 9.5.1.3.53 antennaic\_setup

Detailed description of ICRH antennas

member	type	description
straps(:)	straps (9.5.1.3.385)	Properties of the IC antenna strap; Time-dependent; Vector(nstraps)

Type of: antenna\_ic:setup (1565)

### 9.5.1.3.54 antennalh\_setup

Detailed description of LH antennas

member	type	description
modules	modules (9.5.1.3.246)	Modules description. NB there are nmodules per antenna, distributed among nma_phi toroidal positions and nma_theta poloidal positions

Type of: antenna\_lh:setup (1566)

### 9.5.1.3.55 array3dcplx\_type

Temporary structure for real and imaginary part of complex numbers (3D)

member	type	description
re	array3dflt.type (9.5.1.2.1)	Real part
im	array3dflt.type (9.5.1.2.1)	Imaginary part

Type of: complexgrid\_scalar\_cplx:matrix (1591) I mhd\_plasma:disp\_par (1756) I mhd\_plasma:disp\_perp (1756) I mhd\_plasma:p\_pert (1756) I mhd\_plasma:rho\_mass\_pert (1756) I mhd\_plasma:temp\_pert (1756) I mhd\_vector:coord1 (1759) I mhd\_vector:coord2 (1759) I mhd\_vector:coord3 (1759)

### 9.5.1.3.56 b0r0

Characteristics of the vacuum toroidal field, redundant with the toroidfield CPO, normalisation used by the ETS

member	type	description
r0	float (9.5.1.1.1)	Characteristic major radius of the device (used in publications, usually middle of the vessel at the equatorial midplane) [m]. Scalar.
b0	float (9.5.1.1.1)	Vacuum field at r0 [T]; Positive sign means anti-clockwise when viewed from above. Scalar. Time-dependent.

Type of: coresource:toroid\_field (1524) I global\_param:toroid\_field (1722) I pellets:toroid\_field (1547) I waves\_global\_param:toroid\_field (1943)

### 9.5.1.3.57 beamlets

Detailed information on beamlets.

member	type	description
position	rzphi1D (9.5.1.3.331)	Position of beamlets. Vector rzphi1D (nbeamlets)
tang_rad_blt	vecflt.type (9.5.1.2.9)	Tangency radius (major radius where the central line of a beamlet is tangent to a circle around the torus) [m]; Vector(nbeamlets)
angle_blt	vecflt.type (9.5.1.2.9)	Angle of inclination between a line at the centre of a beamlet and the horizontal plane [rad]; Vector(nbeamlets)
pow_frc_blt	vecflt.type (9.5.1.2.9)	Fraction of power of a unit injected by a beamlet; Vector(nbeamlets)

Type of: setup\_inject:beamlets (1875)

### 9.5.1.3.58 beamtracing

Beam-tracing or ray-tracing solver. Vector(nbeams). Time-dependent

member	type	description
npoints	integer (9.5.1.1.2)	Number of points along each ray/beam. Integer
power	float (9.5.1.1.1)	Initial power in each ray/beam [W]. Float. Time-dependent
dnpar	vecflt.type (9.5.1.2.9)	Spectral width in refractive index associated with each ray/beam, Vector (npoints). Time-dependent
length	vecflt.type (9.5.1.2.9)	Ray/beam curvilinear length [m], Vector (npoints). Time-dependent
position	waves_rtposition (9.5.1.3.434)	Ray/beam position
wavevector	waves_rtwavevector (9.5.1.3.435)	Ray/beam wave vector.
polarization	polarization (9.5.1.3.285)	Wave field polarization along the ray/beam.
powerflow	powerflow (9.5.1.3.286)	Power flow along the ray/beam.

Type of: coherentwave:beamtracing (1582)

### 9.5.1.3.59 boundary

Boundary condition for the transport equation. Time-dependent.

member	type	description
value	vecflt.type (9.5.1.2.9)	Value of the boundary condition (in case flag = 2). Unit depends on type, respectively [1-Wb, 2-A, 3-V]. For type 1 to 3, only the first position in the vector is used. For type 5, all three positions are used, meaning respectively a1, a2, a3. Time-dependent. Vector(3).
source	string (9.5.1.1.3)	Source of the boundary condition (any comment describing its origin : code, path to diagnostic signals, massaging); String
type	integer (9.5.1.1.2)	Type of the boundary condition for the transport solver (in case flag = 2). 0- equation not solved; 1- edge value of poloidal flux; 2- total current inside boundary; 3- edge Vloop; 4- not defined; 5- generic boundary condition expressed as $a1*(dpsi.drho.tor)+a2*psi=a3$ . Time-dependent. Scalar
rho	float (9.5.1.1.1)	Position of the boundary condition (in terms of toroidal flux coordinate) for the transport solver [m]. Outside this boundary, the value of the data are considered to be prescribed. Scalar
codeparam	codeparam (9.5.1.3.66)	Code parameters

Type of: psi:boundary (1803)

### 9.5.1.3.60 boundary\_neutrals

Structure for the boundary condition of core transport equations (neutrals). Time-dependent;

member	type	description
value	vecflt.type (9.5.1.2.9)	Value of the boundary condition. Unit depends on type, respectively [1-field, 2-field.m <sup>-1</sup> , 3-m, 4-field.s <sup>-1</sup> ]. For type 1 to 4, only the first position in the vector is used. For type 5, all three positions are used, meaning respectively a1, a2, a3. Time-dependent. Array1D(3)
type	integer (9.5.1.1.2)	Type of the boundary condition for the transport solver. 0- equation not solved; 1- value of the field y; 2-radial derivative of the field (-dy/drho.tor); 3-scale length of the field y/(-dy/drho.tor); 4- flux; 5- generic boundary condition y expressed as $a1y'+a2y=a3$ . Time-dependent. Int
rho.tor	float (9.5.1.1.1)	Position of the boundary condition (in terms of toroidal flux coordinate) for the transport solver [m]. Outside this boundary, the value of the data are considered to be prescribed. Time-dependent. Float.

Type of: corefieldneutral:boundary (1610) I corefieldneutrals:boundary (1611) I corefieldneutralv:boundary (1612)

### 9.5.1.3.61 boundaryel

Structure for the boundary condition of core transport equations (electrons) Time-dependent;

member	type	description
value	vecflt.type (9.5.1.2.9)	Value of the boundary condition (in case flag = 2). Unit depends on type, respectively [1-field, 2-field.m <sup>-1</sup> , 3-m, 4-field.s <sup>-1</sup> ]. For type 1 to 4, only the first position in the vector is used. For type 5, all three positions are used, meaning respectively a1, a2, a3. Time-dependent. Vector(3).
source	string (9.5.1.1.3)	Source of the boundary condition (any comment describing its origin : code, path to diagnostic signals, massaging); String



member	type	description
type	integer (9.5.1.1.2)	Type of the boundary condition for the transport solver (in case flag = 2). 0- equation not solved; 1- value of the field $y$ ; 2-radial derivative of the field $(-dy/drho_{tor})$ ; 3-scale length of the field $y/(-dy/drho_{tor})$ ; 4- flux; 5- generic boundary condition $y$ expressed as $a_1y'+a_2y=a_3$ . Time-dependent. Scalar
rho_tor	float (9.5.1.1.1)	Position of the boundary condition (in terms of toroidal flux coordinate) for the transport solver [m]. Outside this boundary, the value of the data are considered to be prescribed. Time-dependent. Scalar

Type of: corefield:boundary (1608)

### 9.5.1.3.62 boundaryimp

Structure for the boundary condition of core transport equations (impurities) Time-dependent

member	type	description
value	matflt.type (9.5.1.2.7)	Value of the boundary condition (in case flag = 2). Unit depends on type, respectively [1-field, 2-field.m <sup>-1</sup> , 3-m, 4-field.s <sup>-1</sup> ]. For type 1 to 4, only the first position in the first dimension is used. For type 5, all three positions are used, meaning respectively a1, a2, a3. Time-dependent. Array 2D (3,nzimp)
source	string (9.5.1.1.3)	Source of the boundary condition (any comment describing its origin : code, path to diagnostic signals, massaging); String
type	vecint.type (9.5.1.2.10)	Type of the boundary condition for the transport solver (in case flag = 2). 0- equation not solved; 1- value of the field $y$ ; 2-radial derivative of the field $(-dy/drho_{tor})$ ; 3-scale length of the field $y/(-dy/drho_{tor})$ ; 4- flux; 5- generic boundary condition $y$ expressed as $a_1y'+a_2y=a_3$ . Time-dependent. Vector(nzimp)
rho	vecflt.type (9.5.1.2.9)	Position of the boundary condition (in terms of toroidal flux coordinate) for the transport solver [m]. Outside this boundary, the value of the data are considered to be prescribed. Time-dependent. Vector(nzimp)
codeparam	codeparam (9.5.1.3.66)	Code parameters

Type of: impurity\_type:boundary (1731)

### 9.5.1.3.63 boundaryion

Structure for the boundary condition of core transport equations (ions) Time-dependent

member	type	description
value	matflt.type (9.5.1.2.7)	Value of the boundary condition (in case flag = 2). Unit depends on type, respectively [1-field, 2-field.m <sup>-1</sup> , 3-m, 4-field.s <sup>-1</sup> ]. For type 1 to 4, only the first position in the first dimension is used. For type 5, all three positions are used, meaning respectively a1, a2, a3. Time-dependent. Matrix(3,nion)
source	vecstring.type (9.5.1.2.11)	Source of the boundary condition (any comment describing its origin : code, path to diagnostic signals, massaging); Array of strings (nion)
type	vecint.type (9.5.1.2.10)	Type of the boundary condition for the transport solver (in case flag = 2). 0- equation not solved; 1- value of the field $y$ ; 2-radial derivative of the field $(-dy/drho_{tor})$ ; 3-scale length of the field $y/(-dy/drho_{tor})$ ; 4- flux; 5- generic boundary condition $y$ expressed as $a_1y'+a_2y=a_3$ . Time-dependent. Vector(nion)
rho_tor	vecflt.type (9.5.1.2.9)	Position of the boundary condition (in terms of toroidal flux coordinate) for the transport solver [m]. Outside this boundary, the value of the data are considered to be prescribed. Time-dependent. Vector(nion)

Type of: corefieldion:boundary (1609)

### 9.5.1.3.64 bpol\_probes

Poloidal field probes

member	type	description
setup_bprobe	setup_bprobe (9.5.1.3.359)	diagnostic setup information
measure	exp1D (9.5.1.3.181)	Measured value [T]; Time-dependent; Vector (nprobes)

Type of: magdiag:bpol\_probes (1541)

### 9.5.1.3.65 circularcoil

Circular coil description

member	type	description
centre	rz0D (9.5.1.3.324)	Circular coil centre
hlength	float (9.5.1.1.1)	Half length along coil axis [m]
radialwidth	float (9.5.1.1.1)	Half width, (outer radius-inner radius)/2 [m]

Type of: `tf_desc_tfcoils:circularcoil` (1906)

### 9.5.1.3.66 codeparam

Code parameters

member	type	description
codename	string (9.5.1.1.3)	Name of the code
codeversion	string (9.5.1.1.3)	Version of the code (as in the ITM repository)
parameters	string (9.5.1.1.3)	List of the code specific parameters, string expected to be in XML format.
output_diag	string (9.5.1.1.3)	List of the code specific diagnostic/output, string expected to be in XML format.
output_flag	integer (9.5.1.1.2)	Output flag : 0 means the run is successful, other values meaning some difficulty has been encountered, the exact meaning is then code specific. Negative values mean the result shall not be used. Exact rules could discussed and implemented in the module wrapper. Time-dependent.

Type of: `antenna_ec:codeparam` (1564) I `antenna_ic:codeparam` (1565) I `antenna_lh:codeparam` (1566) I `antennas:codeparam` (1518) I `boundary:codeparam` (1573) I `boundaryimp:codeparam` (1576) I `coherentwave:codeparam` (1582) I `coredelta:codeparam` (1520) I `coredelta_values:codeparam` (1607) I `corefield:codeparam` (1608) I `corefieldion:codeparam` (1609) I `coreimpur:codeparam` (1521) I `coreneutrals:codeparam` (1522) I `coreprof:codeparam` (1523) I `coresource:codeparam` (1524) I `coresource_values:codeparam` (1626) I `coretransp:codeparam` (1525) I `coretransp_values:codeparam` (1630) I `distri_vec:codeparam` (1665) I `distribution:codeparam` (1527) I `distsource:codeparam` (1528) I `distsource_source:codeparam` (1670) I `edge:codeparam` (1530) I `efcc:codeparam` (1531) I `equilibrium:codeparam` (1532) I `flush:codeparam` (1699) I `fusiondiag:codeparam` (1533) I `fusiondiag_fus_product:codeparam` (1717) I `langmuirdiag:codeparam` (1537) I `launchs:codeparam` (1538) I `mhd:codeparam` (1542) I `nbi:codeparam` (1544) I `nbi_unit:codeparam` (1769) I `neoclassic:codeparam` (1545) I `orbit:codeparam` (1546) I `pellets:codeparam` (1547) I `psi:codeparam` (1803) I `refl_receive:codeparam` (1829) I `sawteeth:codeparam` (1553) I `scenario:codeparam` (1554) I `spectral:codeparam` (1892) I `turbulence:codeparam` (1559) I `waves:codeparam` (1562)

### 9.5.1.3.67 coefficients\_neutrals

Recycling and sputtering coefficients used by the neutral solver. The particular causing ion or impurity charge state is determined by the path.

member	type	description
recycling	recycling_neutrals (9.5.1.3.292)	Recycling coefficients
sputtering	sputtering_neutrals (9.5.1.3.381)	Sputtering coefficients

Type of: `coreneutrals:ioncoeff` (1522) I `impcoeff:chargestate` (1729)

### 9.5.1.3.68 coherentwave

Wave description for each frequency. Time-dependent. Structure array(`nfreq`)

member	type	description
wave_id	enum_instance (9.5.1.3.173)	Identifier for the coherent-wave, in terms of the type and name of the antenna driving the wave and an index separating waves driven by the same antenna. Possible types: EC/LH/IC; the field name should include the name of the antenna as specified in either <code>antennas(*)%ec.antenna%name</code> , <code>antennas(*)%ic.antenna%name</code> , or <code>antennas(*)%lh.antenna%name</code> ; the field index should separate different waves generated from a single antenna.
composition	composition (9.5.1.3.84)	Plasma composition (description of ion species).
compositions	compositions.type (9.5.1.3.88)	Contains detailed information on the plasma composition (main ions, impurities, neutrals, edge species).
global_param	waves_global_param (9.5.1.3.429)	Global wave deposition parameters
grid_1d	waves_grid_1d (9.5.1.3.430)	Grid points for 1D profiles.
grid_2d	waves_grid_2d (9.5.1.3.431)	Grid points for 2D profiles and for full wave solutions.
profiles_1d	waves_profiles_1d (9.5.1.3.432)	1D radial profiles

member	type	description
profiles_2d	waves_profiles_2d (9.5.1.3.433)	2D profiles in poloidal cross-section
beamtracing(:)	beamtracing (9.5.1.3.58)	Beam-tracing or ray-tracing solver. Vector(nbeams). Time-dependent
fullwave	fullwave (9.5.1.3.190)	Solution by full wave code
codeparam	codeparam (9.5.1.3.66)	Code parameters

Type of: waves:coherentwave (1562)

### 9.5.1.3.69 coil

Individual coil. Time-dependent. Structure array. Replicate this coil structure for coil element in the efcc array.

member	type	description
desc_coils	desc_coils (9.5.1.3.123)	Description of the coils
coilcurrent	expID (9.5.1.3.181)	Circuit feed current in the coil, defined positive if it flows from point 1 to point 2 of the geometry description [A]; Time-dependent
coilvoltage	expID (9.5.1.3.181)	Voltage on the full coil [V]; Time-dependent

Type of: efcc:coil (1531)

### 9.5.1.3.70 com

COM (Constants Of Motion) parameters identifying an orbit

member	type	description
amn	float (9.5.1.1.1)	Atomic mass of the particle; Scalar
zion	float (9.5.1.1.1)	Atomic charge of the particle; Scalar
energy	vecflt.type (9.5.1.2.9)	Energy of the particle [keV]; Time-dependent; Vector (norbits).
magn_mom	vecflt.type (9.5.1.2.9)	Magnetic momentum [kg m <sup>2</sup> / s <sup>2</sup> / T]; Time-dependent, Vector(norbits).
p_phi	vecflt.type (9.5.1.2.9)	toroidal angular momentum [kg m <sup>2</sup> / s]; Time-dependent; Vector(norbits);
sigma	vecint.type (9.5.1.2.10)	Sign of parallel velocity at psi=psi_max along the orbit; Time-dependent; Vector(norbits)

Type of: orbit:com (1546)

### 9.5.1.3.71 complexgrid

Generic definition of a complex grid

member	type	description
uid	integer (9.5.1.1.2)	Unique index of this grid. Used for handling multiple grids
id	string (9.5.1.1.3)	Name / identifier string for this grid
spaces(:)	complexgrid_space (9.5.1.3.80)	Definitions of grid spaces. Array of structures (number of spaces)
subgrids(:)	complexgrid_subgrid (9.5.1.3.81)	Definitions of subgrids. Array of structures (number of subgrids)
metric	complexgrid_metric (9.5.1.3.74)	Metric coefficients
geo(:)	complexgrid_geo_global (9.5.1.3.72)	Geometry data for implicit objects
bases(:)	complexgrid_vector (9.5.1.3.82)	Vector bases. Used for aligned vector representation. Array of structures (number of bases)

Type of: edge:grid (1530) I f.expansion:grid (1697) I fullwave:grid (1704) I source\_rate:grid (1885) I wall3d:grid (1933)

### 9.5.1.3.72 complexgrid\_geo\_global

Geometry information for implicitly defined grid objects (which cannot be stored in the space definitions); Array of structures (number of alternate geometries).

member	type	description
geotype	integer (9.5.1.1.2)	Type of geometry (id flag). A flag defining how the geometry data associated with grid objects is to be interpreted. If the field is undefined (0=GRID.UNDEFINED), the standard interpretation for; the given coordinate types is assumed.
geotypeid	string (9.5.1.1.3)	Type of geometry (id string).
coordtype	vecint.type (9.5.1.2.10)	Type of coordinates describing the physical space. Vector (number of space dimensions); The size of coordtype defines the dimension of the space.; For predefined integer constants for standard coordinates see; the documentation of the grid service library.
geo_matrix(:)	complexgrid_scalar (9.5.1.3.76)	Geometry data matrix associated with implicit objects. Array of structures (number of subgrids this information is stored on); The exact definition of the stored values depends on the geometry type of the geometry complexgrid_geo_global.geotype;
measure(:)	complexgrid_scalar (9.5.1.3.76)	Measure of object, i.e. physical size (length for 1d, area for 2d, volume for 3d objects) in this geometry. [m <sup>dim</sup> ]; Use this field to store measures of implicitly defined grid objects.; Array of structures (number of subgrids this information is stored on)

Type of: complexgrid:geo (1585)

### 9.5.1.3.73 complexgrid\_indexlist

An index list describing a list of indices or a range of indices.; If the explicit index list ind is defined and has nonzero size, the list is assumed to be an explicit index list.; Otherwise it is assumed to be a range of indices.; A single index can either be defined by using an explicit list with a single entry or as a range with identical; start and end index.

member	type	description
range	vecint.type (9.5.1.2.10)	Defines an index range enumerating from range[1] to range[2] (with both range[1] and range[2] included). If additionally a third value range(3) is given, it is used as a stride. If it is omitted, a stride of 1 is assumed. Vector(3)
ind	vecint.type (9.5.1.2.10)	An explicit list of indices. If this member is defined and has nonzero size, the list is assumed to be explicit. Vector(length of explicit index list)

Type of: complexgrid\_objectlist:indset (1589)

### 9.5.1.3.74 complexgrid\_metric

Metric information for grid objects

member	type	description
measure(:)	complexgrid_scalar (9.5.1.3.76)	Measure of object, i.e. physical size (length for 1d, area for 2d, volume for 3d objects). [m <sup>dim</sup> ]; Use this field to store measures of implicitly defined grid objects.; Array of structures (number of subgrids this information is stored on)
g11(:)	complexgrid_scalar (9.5.1.3.76)	Metric coefficients g11. Array of structures (number of subgrids this information is stored on)
g12(:)	complexgrid_scalar (9.5.1.3.76)	Metric coefficients g12. Array of structures (number of subgrids this information is stored on)
g13(:)	complexgrid_scalar (9.5.1.3.76)	Metric coefficients g13. Array of structures (number of subgrids this information is stored on)
g22(:)	complexgrid_scalar (9.5.1.3.76)	Metric coefficients g22. Array of structures (number of subgrids this information is stored on)
g23(:)	complexgrid_scalar (9.5.1.3.76)	Metric coefficients g23. Array of structures (number of subgrids this information is stored on)
g33(:)	complexgrid_scalar (9.5.1.3.76)	Metric coefficients g33. Array of structures (number of subgrids this information is stored on)
jacobian(:)	complexgrid_scalar (9.5.1.3.76)	Jacobian. Array of structures (number of subgrids this information is stored on)

Type of: complexgrid:metric (1585)

### 9.5.1.3.75 complexgrid\_objectlist

A list of grid objects with a common class, either in explicit or implicit form.; The list is explicit if the matrix ind is given and has nonzero size. In this case the index tuples are listed in ind.; Otherwise the list is implicit and the index tuples are defined by a list of index lists stored in indset.

member	type	description
cls	vecint.type (9.5.1.2.10)	Class tuple of the grid objects in this object list. Vector (number of grid spaces)

member	type	description
indset(:)	complexgrid_indexlist (9.5.1.3.73)	Implicit list of the object indices.; Array of structures (number of grid spaces = length of index tuple). Every index of the index tuple is described by an index set, which defines either a list of index values or a range of index values.
ind	matint.type (9.5.1.2.8)	Explicit list of index tuples. Matrix (number of objects, number of spaces in grid).; First dimension: object index, second dimension: index tuple/space index.; If this field is defined and has nonzero size, the object list is understood to be explicit.

Type of: complexgrid\_subgrid:list (1595)

### 9.5.1.3.76 complexgrid\_scalar

A quantity stored on a grid. The data is given either as a vector of scalars, vectors or matrices.; Note that the vector and matrix storage methods are not meant for multidimensional data, but; for complex data representations with multiple degrees of freedom.; To be used as arrays of structure; FIXME: add non-timedependent element "label" of type string

member	type	description
griduid	integer (9.5.1.1.2)	Unique identifier of the grid this scalar quantity is associated with.
subgrid	integer (9.5.1.1.2)	Index of the subgrid (as stored in grid.subgrids) the data is stored on.
scalar	vecflt.type (9.5.1.2.9)	Scalar representation of data. One scalar entry is stored per object in the subgrid.; The order is implicitly defined by the subgrid.; Float Vector(nobjects.subgrid). First dimension: object index.
vector	matflt.type (9.5.1.2.7)	Vector representation of data. One vector is stored per object in the subgrid. The order is implicitly defined by the subgrid.; Float matrix(nobjects.subgrid, ndata). First dimension: object index, second dimension: index of data vector.
matrix	array3dflt.type (9.5.1.2.1)	Matrix representation of data. One matrix is stored per object in the subgrid. The order is implicitly defined by the subgrid.; 3d float array(nobjects.subgrid, ndata1, ndata2). First dimension: object index, second dimension: matrix row, third dimension: matrix column.

Type of: complexgrid\_geo\_global:geo\_matrix (1586) I complexgrid\_geo\_global:measure (1586) I complexgrid\_metric:g11 (1588) I complexgrid\_metric:g12 (1588) I complexgrid\_metric:g13 (1588) I complexgrid\_metric:g22 (1588) I complexgrid\_metric:g23 (1588) I complexgrid\_metric:g33 (1588) I complexgrid\_metric:jacobian (1588) I complexgrid\_metric:measure (1588) I complexgrid\_vector:comp (1596) I complexgrid\_vector\_simplestruct:comp (1597) I edge\_fluid\_scalar:bdvalue (1676) I edge\_fluid\_scalar:source (1676) I edge\_fluid\_scalar:value (1676) I edge\_fluid\_scalar\_simplestruct:source (1677) I edge\_fluid\_scalar\_simplestruct:value (1677) I edge\_kinetic\_distribution:source (1682) I edge\_kinetic\_distribution:value (1682) I f\_expansion:values (1697) I plasma:energy (1795) I plasma:flux (1795) I source\_rate:value (1885)

### 9.5.1.3.77 complexgrid\_scalar\_cplx

A quantity stored on a grid. The data is given either as a vector of scalars, vectors or matrices.; Note that the vector and matrix storage methods are not meant for multidimensional data, but; for complex data representations with multiple degrees of freedom.; To be used as arrays of structure; FIXME: add non-timedependent element "label" of type string

member	type	description
griduid	integer (9.5.1.1.2)	Unique identifier of the grid this scalar quantity is associated with.
subgrid	integer (9.5.1.1.2)	Index of the subgrid (as stored in grid.subgrids) the data is stored on.
scalar	vecplx.type (9.5.1.3.415)	Scalar representation of data. One scalar entry is stored per object in the subgrid.; The order is implicitly defined by the subgrid.; Complex Vector(nobjects.subgrid). First dimension: object index.
vector	matcplx.type (9.5.1.3.239)	Vector representation of data. One vector is stored per object in the subgrid. The order is implicitly defined by the subgrid.; Complex matrix(nobjects.subgrid, ndata). First dimension: object index, second dimension: index of data vector.
matrix	array3dcplx.type (9.5.1.3.55)	Matrix representation of data. One matrix is stored per object in the subgrid. The order is implicitly defined by the subgrid.; 3d complex array(nobjects.subgrid, ndata1, ndata2). First dimension: object index, second dimension: matrix row, third dimension: matrix column.

Type of: e\_components:b\_binorm (1672) I e\_components:b\_norm (1672) I e\_components:b\_para (1672) I e\_components:e\_binorm (1672) I e\_components:e\_minus (1672) I e\_components:e\_norm (1672) I e\_components:e\_para (1672) I e\_components:e\_plus (1672)

### 9.5.1.3.78 complexgrid\_scalar\_int

A quantity stored on a grid. The data is given either as a vector of scalars, vectors or matrices.; Note that the vector and matrix storage methods are not meant for multidimensional data, but; for complex data represen-

tations with multiple degrees of freedom.; To be used as arrays of structure; FIXME: add non-timedependent element "label" of type string

member	type	description
griduid	integer (9.5.1.1.2)	Unique identifier of the grid this scalar quantity is associated with.
subgrid	integer (9.5.1.1.2)	Index of the subgrid (as stored in grid.subgrids) the data is stored on.
scalar	vecint.type (9.5.1.2.10)	Scalar representation of data. One scalar entry is stored per object in the subgrid.; The order is implicitly defined by the subgrid.; Float Vector(nobjects.subgrid). First dimension: object index.
vector	matint.type (9.5.1.2.8)	Vector representation of data. One vector is stored per object in the subgrid. The order is implicitly defined by the subgrid.; Float matrix(nobjects.subgrid, ndata). First dimension: object index, second dimension: index of data vector.
matrix	array3dint.type (9.5.1.2.2)	Matrix representation of data. One matrix is stored per object in the subgrid. The order is implicitly defined by the subgrid.; 3d float array(nobjects.subgrid, ndata1, ndata2). First dimension: object index, second dimension: matrix row, third dimension: matrix column.

Type of: surface:wall.type (1900)

### 9.5.1.3.79 complexgrid\_scalar\_simplestruct

A quantity stored on a grid. The data is given either as a vector of scalars, vectors or matrices.; Note that the vector and matrix storage methods are not meant for multidimensional data, but; for complex data representations with multiple degrees of freedom.; To be used as a simple structure; FIXME: add non-timedependent element "label" of type string

member	type	description
subgrid	integer (9.5.1.1.2)	Index of the subgrid (as stored in grid.subgrids) the data is stored on.
scalar	vecflt.type (9.5.1.2.9)	Scalar representation of data. One scalar entry is stored per object in the subgrid.; The order is implicitly defined by the subgrid.; Float Vector(nobjects.subgrid). First dimension: object index.
vector	matflt.type (9.5.1.2.7)	Vector representation of data. One vector is stored per object in the subgrid. The order is implicitly defined by the subgrid.; Float matrix(nobjects.subgrid, ndata). First dimension: object index, second dimension: index of data vector.
matrix	array3dflt.type (9.5.1.2.1)	Matrix representation of data. One matrix is stored per object in the subgrid. The order is implicitly defined by the subgrid.; 3d float array(nobjects.subgrid, ndata1, ndata2). First dimension: object index, second dimension: matrix row, third dimension: matrix column.

### 9.5.1.3.80 complexgrid\_space

Description of a grid space

member	type	description
geotype	vecint.type (9.5.1.2.10)	Type of space geometry (id flags). Flags defining how the geometry (objects.geo) fields associated with; space objects are to be interpreted. Array (number of geometries defined for this space);; first dimension: geometry index. A flag value of GRID.UNDEFINED=0 indicates the standard interpretation for; the given coordinates.
geotypeid	vecstring.type (9.5.1.2.11)	Type of space geometries (id string). See geotype.
coordtype	matint.type (9.5.1.2.8)	Type of coordinates describing the physical space. Vector (number of space dimensions); The size of coordtype defines the dimension of the space.; For predefined integer constants for standard coordinates see; the documentation of the grid service library.
objects(:)	objects (9.5.1.3.260)	Definition of the space objects.; Array of structures (dimension of highest-dimensional objects).; First dimension: dimension of the objects (1=nodes, 2=edges, 3=faces, 4=cells/volumes, ...)
xpoints	vecint.type (9.5.1.2.10)	List of indices of all nodes which are x-points. Vector (number of x-points)

Type of: complexgrid:spaces (1585)

### 9.5.1.3.81 complexgrid\_subgrid

Subgrid definition. A subgrid is a list of grid objects, given as a list of explicit or implicit object lists.

member	type	description
id	string (9.5.1.1.3)	ID string (name) of the subgrid.
list(:)	complexgrid.objectlist (9.5.1.3.75)	List of object lists. Array of structures (number of object lists).

Type of: complexgrid:subgrids (1585)

### 9.5.1.3.82 complexgrid\_vector

A vector quantity stored on a grid, with components possibly explicitly aligned to a coordinate direction. To be used as array of structure.

member	type	description
griduid	integer (9.5.1.1.2)	Unique identifier of the grid this vector quantity is associated with.
label	string (9.5.1.1.3)	Label describing the data
comp(:)	complexgrid_scalar (9.5.1.3.76)	Components of the vector. Array of structures (number of vector components). Time-dependent; FIXME: inherit time-dependence for this element
align	vecint.type (9.5.1.2.10)	Alignment flag for vector components. Integer vector (number of vector components).
alignid	vecstring.type (9.5.1.2.11)	Alignment id for vector components. String vector (number of vector components).
basis	integer (9.5.1.1.2)	Index of basis (defined in associated grid) this vector is aligned to; If set to GRID.UNDEFINED=0, the canonical basis of the default coordinates of the grid assumed.

Type of: complexgrid:bases (1585) I edge\_fluid:b (1675) I edge\_fluid\_scalar:bndflux (1676) I edge\_fluid\_scalar:flux (1676) I edge\_fluid\_scalar\_simplestruct:bndflux (1677) I edge\_fluid\_scalar\_simplestruct:flux (1677) I edge\_kinetic\_distribution (1682)

### 9.5.1.3.83 complexgrid\_vector\_simplestruct

A vector quantity stored on a grid, with components possibly explicitly aligned to a coordinate direction. To be used as simple structure

member	type	description
label	string (9.5.1.1.3)	Label describing the data
comp(:)	complexgrid_scalar (9.5.1.3.76)	Components of the vector. Vector of griddata(ndim). Time-dependent; FIXME: inherit time-dependence for this element
align	vecint.type (9.5.1.2.10)	Alignment of vector components, numerical flag. Int vector(ndim)
alignid	vecstring.type (9.5.1.2.11)	Alignment of vector components, string description. String vector(ndim)

Type of: edge\_fluid\_scalar\_transpcoeff:d (1678) I edge\_fluid\_scalar\_transpcoeff:v (1678) I plasma:b (1795)

### 9.5.1.3.84 composition

Plasma composition (description of ion species).

member	type	description
amn	vecflt.type (9.5.1.2.9)	Atomic mass number (lumped ions are allowed); Vector (nion)
zn	vecflt.type (9.5.1.2.9)	Nuclear charge (lumped ions are allowed); Vector (nion)
zion	vecflt.type (9.5.1.2.9)	Ion charge (of the dominant ionisation state; lumped ions are allowed); Vector (nion)
imp_flag	vecint.type (9.5.1.2.10)	Multiple charge state calculation flag : 0-Only one charge state is considered; 1-Multiple charge state are considered and are described in impurity CPO; Vector (nion)
label	vecstring.type (9.5.1.2.11)	Label for the ions - note the charge state is not included; String Vector (nion)

Type of: coherentwave:composition (1582) I coredelta:composition (1520) I coreneutrals:composition (1522) I coreprof:composition (1523) I coresource:composition (1524) I coretransp:composition (1525) I distribution:composition (1527) I distsource:composition (1528) I neoclassic:composition (1545) I sawteeth:composition (1553)

### 9.5.1.3.85 composition\_neutrals

Description of neutrals species

member	type	description
atomlist(:)	coreneutrals_atomlist (9.5.1.3.108)	List of the atoms that enter the composition of the neutral species. Vector(natm)
neutral(:)	composition_neutralscomp (9.5.1.3.87)	List of neutrals. Vector(nneut)

Type of: coreneutrals:neutcompo (1522)



### 9.5.1.3.86 composition\_neutrals\_neutcomp

Array of components to the atom or molecule. Vector (ncomp)

member	type	description
nucindex	integer (9.5.1.1.2)	Index into list of nuclei; int
multiplicity	integer (9.5.1.1.2)	Multiplicity of the atom; int

Type of: composition\_neutralscomp:neutcomp (1601)

### 9.5.1.3.87 composition\_neutralscomp

Array of neutrals.

member	type	description
neutcomp(:)	composition_neutrals_neutcomp (9.5.1.3.86)	Array of components to the atom or molecule. Vector (ncomp)
type(:)	identifier (9.5.1.3.214)	Type of neutral, in terms of energy : 0=cold, 1=thermal, 2= fast, 3=NBI. Vector (ntype) of identifiers
label	string (9.5.1.1.3)	String identifying the atom or molecule (e.g. D2, DT, CD4, ...)

Type of: composition\_neutrals:neutral (1599) I compositions\_type:neutralscomp (1602)

### 9.5.1.3.88 compositions\_type

Attempt to a generic declaration of Plasma composition for a simulation

member	type	description
nuclei(:)	nuclei (9.5.1.3.259)	Array of nuclei considered.
ions(:)	ions (9.5.1.3.219)	Array of main plasma ions.
impurities(:)	impurities (9.5.1.3.216)	Array of impurities.
neutralscomp(:)	composition_neutralscomp (9.5.1.3.87)	Array of neutrals.
edgespecies(:)	edgespecies (9.5.1.3.170)	Array of edge species.
signature	identifier (9.5.1.3.214)	Identifier for species choices. The goal of this is to uniquely capture the species blocks so that if the signatures are the same then the species blocks will also be the same.

Type of: coherentwave:compositions (1582) I compositionc:compositions (1519) I coredelta:compositions (1520) I coreimpur:compositions (1521) I coreneutrals:compositions (1522) I coreprof:compositions (1523) I coresource:compositions (1524) I coretransp:compositions (1525) I distribution:compositions (1527) I distsource:compositions (1528) I edge:compositions (1530) I neoclassic:compositions (1545)

### 9.5.1.3.89 compound\_desc

Description of chemical compounds used in wall element layer compositions

member	type	description
label	string (9.5.1.1.3)	Compound name/label
stoichiometry	vecflt_type (9.5.1.2.9)	Composition of the compound. Float vector, dimensions: 1. element number (numbering as in surface.elements array)
density	float (9.5.1.1.1)	Compound density (molecules/m <sup>3</sup> )

Type of: surface:compounds (1900)

### 9.5.1.3.90 coord\_sys

flux surface coordinate system on a square grid of flux and angle

member	type	description
grid_type	string (9.5.1.1.3)	Type of coordinate system
grid	reggrid (9.5.1.3.320)	Regular grid definition; Time-dependent
jacobian	matflt_type (9.5.1.2.7)	Jacobian of the coordinate system; Time-dependent; Matrix (ndim1, ndim2)



member	type	description
g_11	matflt.type (9.5.1.2.7)	metric coefficients g_11; $g_{ij}=g^{ij}$ are contravariant metric tensor for the grid described by grid_type. Time-dependent; Matrix (ndim1, ndim2)
g_12	matflt.type (9.5.1.2.7)	metric coefficients g_12; $g_{ij}=g^{ij}$ are contravariant metric tensor for the grid described by grid_type. Time-dependent; Matrix (ndim1, ndim2)
g_13	matflt.type (9.5.1.2.7)	metric coefficients g_13; $g_{ij}=g^{ij}$ are contravariant metric tensor for the grid described by grid_type. Time-dependent; Matrix (ndim1, ndim2)
g_22	matflt.type (9.5.1.2.7)	metric coefficients g_22; $g_{ij}=g^{ij}$ are contravariant metric tensor for the grid described by grid_type. Time-dependent; Matrix (ndim1, ndim2)
g_23	matflt.type (9.5.1.2.7)	metric coefficients g_23; $g_{ij}=g^{ij}$ are contravariant metric tensor for the grid described by grid_type. Time-dependent; Matrix (ndim1, ndim2)
g_33	matflt.type (9.5.1.2.7)	metric coefficients g_33; $g_{ij}=g^{ij}$ are contravariant metric tensor for the grid described by grid_type. Time-dependent; Matrix (ndim1, ndim2)
position	rz2D (9.5.1.3.328)	R and Z position of grid points; Time-dependent; Matrix (ndim1, ndim2)

Type of: equilibrium:coord\_sys (1532) I mhd\_plasma:coord\_sys (1756) I mhd\_vacuum:coord\_sys (1758)

### 9.5.1.3.91 coordinates

Poloidal and Toroidal coordinates of the center of each hole;

member	type	description
theta	vecflt.type (9.5.1.2.9)	Theta coordinate of holes center; Vector (n_holes)
phi	vecflt.type (9.5.1.2.9)	Toroidal coordinate of holes center; Vector (n_holes)

Type of: holes:coordinates (1727)

### 9.5.1.3.92 coords

Specification of coordinates in one dimension. Can be either a range of real values or a set of discrete values (if interp\_type=0).

member	type	description
coord	vecflt.type (9.5.1.2.9)	Coordinate values. Vector(npoints).
coord_label	vecstring.type (9.5.1.2.11)	String description of discrete coordinate values (if interp_type=0). Vector(npoints). E.g., for spectroscopic lines, the spectroscopic description of the transition.
extrap_type	vecint.type (9.5.1.2.10)	Extrapolation strategy when leaving the domain. Vector(2). Entry 1: behaviour at lower bound, entry 2: behaviour at upper bound.; Possible values: 0=none, report error; 1=boundary value; 2=linear extrapolation;
interp_type	integer (9.5.1.1.2)	Interpolation strategy in this coordinate direction. Integer flag: 0=discrete (no interpolation); 1=linear; ...
label	string (9.5.1.1.3)	Description of coordinate (e.g. "Electron temperature")
unit	string (9.5.1.1.3)	Units of coordinate (e.g. [eV])
transform	integer (9.5.1.1.2)	Coordinate transformation applied to coordinate values stored in coord. Integer flag: 0=none; 1=log10; 2=ln
spacing	integer (9.5.1.1.2)	Flag for specific coordinate spacing (for optimization purposes). Integer flag: 0=undefined; 1=uniform; ...

Type of: tables\_coord:coords (1905)

### 9.5.1.3.93 coredelta\_values

Description of the delta term for a given origin

member	type	description
deltaid	identifier (9.5.1.3.214)	Identifier for the origin of the delta terms (see conventions in the ITM website)
rho_tor	vecflt.type (9.5.1.2.9)	Toroidal flux coordinate (not normalised, equivalent to rho_tor_norm) [m]; Vector (nrho). Time-dependent.
rho_tor_norm	vecflt.type (9.5.1.2.9)	Normalised toroidal flux coordinate values (= rho_tor normalised to the value at the last grid point); Time-dependent; Vector (nrho)
delta_psi	vecflt.type (9.5.1.2.9)	Instant change of the poloidal flux [Wb]. Time-dependent. Vector(nrho).
delta_te	vecflt.type (9.5.1.2.9)	Instant change of the electron temperature [eV]. Time-dependent. Vector(nrho).
delta_ti	matflt.type (9.5.1.2.7)	Instant change of the ion temperature [eV]. Time-dependent. Matrix (nrho, nion).
delta_tz	array3dflt.type (9.5.1.2.1)	Instant change of the impurity (multiple charge states) temperature [eV]. Time-dependent. Array3d (nrho, nimp, max_nzimp).
delta_ne	vecflt.type (9.5.1.2.9)	Instant change of the electron density [ $m^{-3}$ ]. Time-dependent. Vector(nrho).

member	type	description
delta_ni	matflt.type (9.5.1.2.7)	Instant change of the ion density [ $\text{m}^{-3}$ ]. Time-dependent. Matrix (nrho,nion).
delta_nz	array3dflt.type (9.5.1.2.1)	Instant change of the impurity (multiple charge states) density [ $\text{m}^{-3}$ ]. Time-dependent. Array3d (nrho,nimp,max_nzimp).
delta_vtor	matflt.type (9.5.1.2.7)	Instant change of the toroidal toroidal velocity [ $\text{m.s}^{-1}$ ]. Time-dependent. Matrix (nrho,nion).
codeparam	codeparam (9.5.1.3.66)	Code parameters

Type of: `coredelta:values` (1520)

### 9.5.1.3.94 corefield

Structure for a main field of core transport equations; Time-dependent;

member	type	description
value	vecflt.type (9.5.1.2.9)	Signal value; Time-dependent; Vector (nrho)
ddrho	vecflt.type (9.5.1.2.9)	Radial derivative (dvalue/drho.tor) [signal.value.unit.m <sup>-1</sup> ]; Time-dependent; Vector (nrho)
d2drho2	vecflt.type (9.5.1.2.9)	Second order radial derivative (d2value/drho.tor <sup>2</sup> ) [signal.value.unit.m <sup>-2</sup> ]; Time-dependent; Vector (nrho)
ddt	vecflt.type (9.5.1.2.9)	Time derivative (dvalue/dtime) [signal.value.unit.s <sup>-1</sup> ]; Time-dependent; Vector (nrho)
source	string (9.5.1.1.3)	Source of the profile (any comment describing the origin of the profile : code, path to diagnostic signals, massaging, ...); String
flag	integer (9.5.1.1.2)	Flag describing how the profile has been processed : 0-not calculated 1-interpretative; 2-calculated by the transport solver; 3-calculated by a separate code : in that case only, description of the code provided in codeparam at the same level; 4-used value from the previous time step; Time-dependent; Scalar
boundary	boundaryel (9.5.1.3.61)	Boundary condition for the transport equation. Time-dependent.
source_term	sourceel (9.5.1.3.373)	Total source term for the transport equation. Time-dependent.
transp_coef	coretransel (9.5.1.3.113)	Total transport coefficients. Time-dependent.
flux	fluxel (9.5.1.3.187)	Fluxes of the quantity, two definitions. Time-dependent.
flux_dv_surf	vecflt.type (9.5.1.2.9)	Net flux through the magnetic surface, i.e. integral over the magnetic surface area of flux.dv. Time-dependent; Vector (nrho)
time_deriv	vecflt.type (9.5.1.2.9)	Integral of the time derivative term of the transport equation. Time-dependent. Vector (nrho)
codeparam	codeparam (9.5.1.3.66)	Code parameters

Type of: `coreprof:ne` (1523) | `coreprof:te` (1523)

### 9.5.1.3.95 corefieldion

Structure for an ion field of core transport equations; Time-dependent;

member	type	description
value	matflt.type (9.5.1.2.7)	Signal value; Time-dependent; Matrix (nrho,nion)
ddrho	matflt.type (9.5.1.2.7)	Radial derivative (dvalue/drho.tor) [signal.value.unit.m <sup>-1</sup> ]; Time-dependent; Matrix (nrho,nion)
d2drho2	matflt.type (9.5.1.2.7)	Second order radial derivative (d2value/drho.tor <sup>2</sup> ) [signal.value.unit.m <sup>-2</sup> ]; Time-dependent; Matrix (nrho,nion)
ddt	matflt.type (9.5.1.2.7)	Time derivative (dvalue/dtime) [signal.value.unit.s <sup>-1</sup> ]; Time-dependent; Matrix (nrho,nion)
source	vecstring.type (9.5.1.2.11)	Source of the profile (any comment describing the origin of the profile : code, path to diagnostic signals, massaging, ...); Array of strings (nion)
flag	vecint.type (9.5.1.2.10)	Flag describing how the profile has been processed : 0-not calculated 1-interpretative; 2-calculated by the transport solver; 3-calculated by a separate code : in that case only, description of the code provided in codeparam at the same level; 4-used value from the previous time step; Time-dependent; Vector(nion)
boundary	boundaryion (9.5.1.3.63)	Boundary condition for the transport equation
source_term	sourceion (9.5.1.3.375)	Total source term for the transport equation. Time-dependent.
transp_coef	coretransion (9.5.1.3.115)	Total transport coefficients. Time-dependent.
flux	fluxion (9.5.1.3.189)	Fluxes of the quantity, two definitions. Time-dependent.
flux_dv_surf	matflt.type (9.5.1.2.7)	Net flux through the magnetic surface, i.e. integral over the magnetic surface area of flux.dv. Time-dependent; Matrix(nrho,nion)
time_deriv	matflt.type (9.5.1.2.7)	Integral of the time derivative term of the transport equation. Time-dependent. Matrix (nrho,nion)
codeparam	codeparam (9.5.1.3.66)	Code parameters

Type of: `coreprof:ni` (1523) | `coreprof:ti` (1523) | `coreprof:vtor` (1523)

### 9.5.1.3.96 corefieldneutral

Structure for a main field of core neutral transport equations; Time-dependent;

member	type	description
value	vecflt_type (9.5.1.2.9)	Signal value; Array1D(nrho). Time-dependent
flux	vecflt_type (9.5.1.2.9)	Net neutral flux through the magnetic surface, positive values correspond to the direction from the center to the edge [ $s^{-1}$ ]. Array1D(nrho). Time-dependent;
boundary	boundary_neutrals (9.5.1.3.60)	Boundary condition for the transport equation. Time-dependent.

Type of: coreneutrals\_neutraltype:n0 (1623)

### 9.5.1.3.97 corefieldneutrals

Structure for a main field of core neutral transport equations, (Temperature, with flux as energy); Time-dependent;

member	type	description
value	vecflt_type (9.5.1.2.9)	Signal value; Array1D(nrho). Time-dependent
flux	vecflt_type (9.5.1.2.9)	Net flux of the kinetic energy through the magnetic surface ( $3/2 * E * n * V$ ), positive values correspond to the direction from the center to the edge [W]. Array1D(nrho). Time-dependent;
boundary	boundary_neutrals (9.5.1.3.60)	Boundary condition for the transport equation. Time-dependent.

Type of: coreneutrals\_neutraltype:t0 (1623)

### 9.5.1.3.98 corefieldneutralv

Structure for a main field of core neutral transport equations (without flux variable); Time-dependent;

member	type	description
value	vecflt_type (9.5.1.2.9)	Signal value; Vector(nrho). Time-dependent;
boundary	boundary_neutrals (9.5.1.3.60)	Boundary condition for the transport equation. Time-dependent.

Type of: corefieldneutralv0:poloidal (1613) I corefieldneutralv0:radial (1613) I corefieldneutralv0:toroidal (1613)

### 9.5.1.3.99 corefieldneutralv0

Neutral velocity

member	type	description
toroidal	corefieldneutralv (9.5.1.3.98)	Neutral velocity in the toroidal direction [ $m.s^{-1}$ ]. Positive is anti-clockwise when viewed from above. Time-dependent;
poloidal	corefieldneutralv (9.5.1.3.98)	Velocity of neutrals in the poloidal direction. 0 is directed towards low field side, pi is towards high field side. Positive is anti-clockwise when viewed with low field side at the right. [ $m.s^{-1}$ ]. Array3D(nrho,nneut,max_nstype). Time-dependent;
radial	corefieldneutralv (9.5.1.3.98)	Neutral velocity in the radial direction (perpendicular to the magnetic surface), positive is from the centre to the edge [ $m.s^{-1}$ ]. Array3D(nrho,nneut,max_nstype). Time-dependent;

Type of: coreneutrals\_neutraltype:v0 (1623)

### 9.5.1.3.100 coreimpurdiag\_sum\_radiation

member	type	description
line_rad	coreimpurediagsum_type (9.5.1.3.107)	NO DOCS
brem_radrec	coreimpurediagsum_type (9.5.1.3.107)	NO DOCS
sum	coreimpurediagsum_type (9.5.1.3.107)	NO DOCS

Type of: coreimpurediag\_sum:radiation (1617)

### 9.5.1.3.101 coreimpurediag\_energy

member	type	description
ionization	coreimpurediagprof.type (9.5.1.3.106)	NO DOCS
recombin	coreimpurediagprof.type (9.5.1.3.106)	NO DOCS
sum	coreimpurediagprof.type (9.5.1.3.106)	NO DOCS

Type of: coreimpurediag\_type:energy (1619)

### 9.5.1.3.102 coreimpurediag\_radiation

member	type	description
line_rad	coreimpurediagprof.type (9.5.1.3.106)	NO DOCS
brem_radrec	coreimpurediagprof.type (9.5.1.3.106)	NO DOCS
sum	coreimpurediagprof.type (9.5.1.3.106)	NO DOCS

Type of: coreimpurediag\_type:radiation (1619)

### 9.5.1.3.103 coreimpurediag\_sum

member	type	description
radiation	coreimpurdiag_sum_radiation (9.5.1.3.100)	NO DOCS
energy	coreimpurediag_sum.energy (9.5.1.3.104)	NO DOCS

Type of: coreimpur:diagnosticsum (1521)

### 9.5.1.3.104 coreimpurediag\_sum\_energy

member	type	description
ionization	coreimpurediagsum.type (9.5.1.3.107)	NO DOCS
recombin	coreimpurediagsum.type (9.5.1.3.107)	NO DOCS
sum	coreimpurediagsum.type (9.5.1.3.107)	NO DOCS

Type of: coreimpurediag\_sum:energy (1617)

### 9.5.1.3.105 coreimpurediag\_type

member	type	description
radiation	coreimpurediag_radiation (9.5.1.3.102)	NO DOCS
energy	coreimpurediag_energy (9.5.1.3.101)	NO DOCS

Type of: coreimpur:diagnostic (1521) | impurity\_type:diagnostic (1731)

### 9.5.1.3.106 coreimpurediagprof.type

member	type	description
profile	matflt.type (9.5.1.2.7)	Profile of the radiation or energy sources. Time-dependent. Array2D (nrho,nzimp or nimp)

member	type	description
integral	matflt.type (9.5.1.2.7)	Running integral over nrho of the radiation or energy sources. Time-dependent. Array2D (nrho,nzimp or nimp)

Type of: coreimpurediag\_energy:ionization (1615) I coreimpurediag\_energy:recombin (1615) I coreimpurediag\_energy:sum (1615) I coreimpurediag\_radiation:brem\_radrec (1616) I coreimpurediag\_radiation:line\_rad (1616) I coreimpurediag\_radiation:sum (1616)

### 9.5.1.3.107 coreimpurediagsum.type

member	type	description
profile	vecflt.type (9.5.1.2.9)	Profile of the radiation or energy sources. Time-dependent. Array1D (nrho)
integral	vecflt.type (9.5.1.2.9)	Running integral over nrho of the radiation or energy sources. Time-dependent. Array1D (nrho)

Type of: coreimpurdiag\_sum\_radiation:brem\_radrec (1614) I coreimpurdiag\_sum\_radiation:line\_rad (1614) I coreimpurdiag\_sum\_radiation:sum (1614) I coreimpurediag\_sum\_energy:ionization (1618) I coreimpurediag\_sum\_energy:recombin (1618) I coreimpurediag\_sum\_energy:sum (1618)

### 9.5.1.3.108 coreneutrals\_atomlist

List of the atoms that enter the composition of the neutral species. Vector(natm)

member	type	description
amn	float (9.5.1.1.1)	Atomic mass number; Float
zn	float (9.5.1.1.1)	Nuclear charge; Float
ionimptype	identifier (9.5.1.3.214)	Identifier whether ion in coreprof or impurity in coreimpur.
ionimpindex	integer (9.5.1.1.2)	Index in composition or desc_impur of the corresponding ion or impurity.

Type of: composition\_neutrals:atomlist (1599)

### 9.5.1.3.109 coreneutrals\_neutraltype

Array (ntype) over neutral types.

member	type	description
n0	corefieldneutral (9.5.1.3.96)	Neutral density [ $m^{-3}$ ]. Time-dependent;
t0	corefieldneutrals (9.5.1.3.97)	Neutral temperature [eV]. Time-dependent;
v0	corefieldneutralv0 (9.5.1.3.99)	Neutral velocity [ $m.s^{-1}$ ]. Time-dependent;

Type of: neutral\_complex.type:neutraltype (1771)

### 9.5.1.3.110 coreprofile

Structure for core plasma profile; Time-dependent

member	type	description
value	vecflt.type (9.5.1.2.9)	Signal value; Time-dependent; Vector (nrho)
source	string (9.5.1.1.3)	Source of the profile (any comment describing the origin of the profile : code, path to diagnostic signals, massaging, ...); String

Type of: profiles1d:bpol (1801) I profiles1d:dpedt (1801) I profiles1d:dpi\_totdt (1801) I profiles1d:dvprimedt (1801) I profiles1d:e\_b (1801) I profiles1d:eparallel (1801) I profiles1d:jni (1801) I profiles1d:joh (1801) I profiles1d:jphi (1801) I profiles1d:jtot (1801) I profiles1d:pe (1801) I profiles1d:pi\_tot (1801) I profiles1d:pr\_parallel (1801) I profiles1d:pr\_perp (1801) I profiles1d:pr\_th (1801) I profiles1d:q (1801) I profiles1d:qei (1801) I profiles1d:shear (1801) I profiles1d:sigmapar (1801) I profiles1d:vloop (1801) I profiles1d:zeff (1801) I psi:sigma\_par (1803)

### 9.5.1.3.111 coreprofion

Structure for core plasma ion profile; Time-dependent

member	type	description
value	matflt.type (9.5.1.2.7)	Signal value; Time-dependent; Vector (nrho,nion)
source	vecstring.type (9.5.1.2.11)	Source of the profile (any comment describing the origin of the profile : code, path to diagnostic signals, massaging, ...); Array of strings (nion)

Type of: profiles1d:mtor (1801) I profiles1d:ns (1801) I profiles1d:pi (1801) I profiles1d:wtor (1801)

### 9.5.1.3.112 coresource.values

Description of the source terms for a given origin

member	type	description
sourceid	identifier (9.5.1.3.214)	Identifier for the origin of the source terms (see conventions in the ITM website)
rho_tor	vecflt.type (9.5.1.2.9)	Toroidal flux coordinate (not normalised, equivalent to rho_tor.norm) [m]; Vector (nrho). Time-dependent.
rho_tor_norm	vecflt.type (9.5.1.2.9)	Normalised toroidal flux coordinate values (= rho_tor normalised to the value at the last grid point); Time-dependent; Vector (nrho)
j	vecflt.type (9.5.1.2.9)	Parallel current source for psi transport equation, = average(j.B) / B0, where B0 = core-source/toroid_field/b0 [A.m <sup>-2</sup> ]. Vector(nrho). Time-dependent.
sigma	vecflt.type (9.5.1.2.9)	Induced parallel conductivity [ohm <sup>-1</sup> .m <sup>-1</sup> ]. EXACT DEFINITION PENDING. Vector(nrho). Time-dependent.
si	source_ion (9.5.1.3.368)	Particle source for ion density transport equation [m <sup>-3</sup> .s <sup>-1</sup> ]. Time-dependent.
se	source_vec (9.5.1.3.372)	Particle source for electron density transport equation [m <sup>-3</sup> .s <sup>-1</sup> ]. Time-dependent.
sz(:)	source_imp (9.5.1.3.367)	Particle source for impurity density transport equation [m <sup>-3</sup> .s <sup>-1</sup> ]. Time-dependent.
qi	source_ion (9.5.1.3.368)	Heat source for ion heat transport equations [W.m <sup>-3</sup> ]. Time-dependent.
qe	source_vec (9.5.1.3.372)	Heat source for electron heat transport equation [W.m <sup>-3</sup> ]. Time-dependent.
qz(:)	source_imp (9.5.1.3.367)	Heat source for impurity heat transport equations [W.m <sup>-3</sup> ]. Time-dependent.
ui	source_ion (9.5.1.3.368)	Toroidal torque on individual ion species; for toroidal momentum transport equation [kg.m <sup>-1</sup> .s <sup>-2</sup> ]. Time-dependent.
ujxb	source_vec (9.5.1.3.372)	Toroidal jxB torque on bulk plasma; for toroidal momentum transport equation [kg.m <sup>-1</sup> .s <sup>-2</sup> ]. Here J is the return current from fast ion radial currents Jfast=-J. Time-dependent.
codeparam	codeparam (9.5.1.3.66)	Code parameters

Type of: coresource:values (1524)

### 9.5.1.3.113 coretransel

Structure for the transport coefficients for the transport equation (electrons). Time-dependent;

member	type	description
diff	vecflt.type (9.5.1.2.9)	Diffusion coefficient [m <sup>2</sup> .s <sup>-1</sup> ]. Time-dependent; Vector (nrho)
vconv	vecflt.type (9.5.1.2.9)	Convection coefficient [m.s <sup>-1</sup> ]. Time-dependent; Vector (nrho)
source	string (9.5.1.1.3)	Source of the profile (any comment describing the origin of the profile : code, path to diagnostic signals, massaging, ...); String

Type of: corefield:transp\_coef (1608)

### 9.5.1.3.114 coretransimp

Structure for the transport coefficients for the transport equation (impurities). Time-dependent;

member	type	description
diff	matflt.type (9.5.1.2.7)	Diffusion coefficient [m <sup>2</sup> .s <sup>-1</sup> ]. Time-dependent; Array2D(nrho,nzimp)
vconv	matflt.type (9.5.1.2.7)	Convection coefficient [m.s <sup>-1</sup> ]. Time-dependent; Array2D(nrho,nzimp)
source	vecstring.type (9.5.1.2.11)	Source of the profile (any comment describing the origin of the impurity profiles : code, path to diagnostic signals, massaging, ...); Array of strings (nimp)

Type of: impurity\_type:transp\_coef (1731)

### 9.5.1.3.115 coretransion

Structure for the transport coefficients for the transport equation (ions). Time-dependent;

member	type	description
diff	matflt.type (9.5.1.2.7)	Diffusion coefficient [ $m^2.s^{-1}$ ]. Time-dependent; Matrix (nrho,nion)
vconv	matflt.type (9.5.1.2.7)	Convection coefficient [ $m.s^{-1}$ ]. Time-dependent; Matrix (nrho,nion)
source	vecstring.type (9.5.1.2.11)	Source of the profile (any comment describing the origin of the profile : code, path to diagnostic signals, massaging, ...); Array of strings (nion)

Type of: corefieldion:transp\_coef (1609)

### 9.5.1.3.116 coretransp\_values

Description of transport term coming from various origins. Array of structure (ntransp)

member	type	description
transportid	identifier (9.5.1.3.214)	Identifier for the origin of the transport terms (see conventions in the ITM website)
rho_tor_norm	vecflt.type (9.5.1.2.9)	Normalised toroidal flux coordinate values (= rho_tor normalised to the value at the last grid point); Time-dependent; Vector (nrho)
rho_tor	vecflt.type (9.5.1.2.9)	Toroidal flux coordinate (not normalised, equivalent to rho_tor_norm) [m]; Vector (nrho). Time-dependent.
sigma	vecflt.type (9.5.1.2.9)	Parallel conductivity [ $ohm^{-1}.m^{-1}$ ]. Time-dependent. Vector(nrho).
ni_transp	ni_transp (9.5.1.3.258)	Transport coefficients for ion density equation. Time-dependent.
ne_transp	ne_transp (9.5.1.3.256)	Transport coefficients for electron density equation. Time-dependent.
nz_transp(:)	transcoefimp (9.5.1.3.399)	Transport coefficients for impurity (multiple charge state) density equation. Time-dependent.
ti_transp	transcoefion (9.5.1.3.400)	Transport coefficients for ion temperature equation. Time-dependent.
te_transp	transcoefel (9.5.1.3.398)	Transport coefficients for electron temperature equation. Time-dependent.
tz_transp(:)	transcoefimp (9.5.1.3.399)	Transport coefficients for impurity (multiple charge state) temperature equation. Time-dependent.
vtor_transp	transcoefvtor (9.5.1.3.401)	Transport coefficients for toroidal velocity equation. Time-dependent.
codeparam	codeparam (9.5.1.3.66)	Code parameters

Type of: coretransp:values (1525)

### 9.5.1.3.117 cplx\_type

Temporary structure for real and imaginary part of complex numbers (scalar)

member	type	description
re	float (9.5.1.1.1)	Real part
im	float (9.5.1.1.1)	Imaginary part

### 9.5.1.3.118 cxmeasure

Measured values

member	type	description
ti	exp1D (9.5.1.3.181)	Ion temperature [eV]. Vector (nchannels)
vtor	exp1D (9.5.1.3.181)	Toroidal velocity [m/s]. Vector (nchannels)
vpol	exp1D (9.5.1.3.181)	Poloidal velocity [m/s]. Vector (nchannels)

Type of: cxdiag:measure (1526)

### 9.5.1.3.119 cxsetup

diagnostic setup information

member	type	description
position	rzphi1Dexp (9.5.1.3.332)	Position of the measurement. Time-dependent. Vector (nchannels)

Type of: cxdiag:setup (1526)

### 9.5.1.3.120 data\_release

Stores information about each entry available at this version.

member	type	description
shot	integer (9.5.1.1.2)	Shot number = Mass*100+Nuclear.charge.
run	integer (9.5.1.1.2)	Which run number is the active run number for this version.
description	vecstring.type (9.5.1.2.11)	Possible description of why this version of the data is the current version.

Type of: version\_ind:data\_release (1930)

### 9.5.1.3.121 datainfo

Generic information on a data item

member	type	description
dataprovder	string (9.5.1.1.3)	Name of the actual data provider (the person who filled the data)
putdate	string (9.5.1.1.3)	Date at which the data has been put in the DB
source	string (9.5.1.1.3)	Exact reference of the data source (e.g. original reference in the native machine data base)
comment	string (9.5.1.1.3)	Any additional comment
cocos	integer (9.5.1.1.2)	COordinates COnventionS followed by this CPO
id	integer (9.5.1.1.2)	CPO id for checking its provenance in the workflow
isref	integer (9.5.1.1.2)	1 if the data can be found in the present data base entry; 2 if the data can be found in a parent data base entry; 0 if no data consistent with the present entry can be found.
whatref	whatref (9.5.1.3.437)	Structure defining a database entry and the CPO occurrence
putinfo	putinfo (9.5.1.3.290)	Level 2 information describing how to retrieve the actual data for the UAL. Not to be filled/used by the ITM user !

Type of: amns:datainfo (1517) I antennas:datainfo (1518) I compositionc:datainfo (1519) I coredelta:datainfo (1520) I coreimpur:datainfo (1521) I coreneutrals:datainfo (1522) I coreprof:datainfo (1523) I coresource:datainfo (1524) I coretransp:datainfo (1525) I cxdiag:datainfo (1526) I distribution:datainfo (1527) I distsource:datainfo (1528) I ecediag:datainfo (1529) I edge:datainfo (1530) I efcc:datainfo (1531) I equilibrium:datainfo (1532) I flush:datainfo (1699) I fusiondiag:datainfo (1533) I halphadiag:datainfo (1534) I ironmodel:datainfo (1536) I langmuirdiag:datainfo (1537) I launches:datainfo (1538) I limiter:datainfo (1539) I lineintegraldiag:datainfo (1746) I lithiumdiag:datainfo (1540) I magdiag:datainfo (1541) I mhd:datainfo (1542) I msdiag:datainfo (1543) I nbi:datainfo (1544) I neoclassic:datainfo (1545) I orbit:datainfo (1546) I pellets:datainfo (1547) I pfsystems:datainfo (1548) I reference:datainfo (1550) I reflectomet:datainfo (1551) I rfdiag:datainfo (1552) I sawteeth:datainfo (1553) I scenario:datainfo (1554) I summary:datainfo (1555) I toroidfield:datainfo (1557) I tsdiag:datainfo (1558) I turbulence:datainfo (1559) I vessel:datainfo (1560) I wall:datainfo (1561) I waves:datainfo (1562)

### 9.5.1.3.122 deposprofile

Deposition profile ( $m^{-3}$ ). This deposition profile only makes sense after the ablated pellet cloud interacts via some transport processes with the plasma. This is why we add a time delay stamp to the profile in reference to the ablation rate profile. Time-dependent. Vector (npos)

member	type	description
rho.tor	vecflt.type (9.5.1.2.9)	Toroidal flux coordinate [m], to be used by the ETS and in many CPOs (coreprof, ...). Defined as $\sqrt{\phi/\pi/B_0}$ , where $B_0 = \text{equilibrium/global.param/toroid.field}/b_0$ . Time-dependent; Vector (npos)
density	vecflt.type (9.5.1.2.9)	Density increase (deposition profile); ( $m^{-3}$ )
position	rzphi1D (9.5.1.3.331)	Coordinates for ablation rate
delay	float (9.5.1.1.1)	Time delay between the deposition profile and the ablation profile; Scalar; Time-dependent (s)

Type of: pellets:deposprofile (1547)

### 9.5.1.3.123 desc\_coils

Description of the coils

member	type	description
name	string (9.5.1.1.3)	Name of coil.
res	float (9.5.1.1.1)	Coil resistance [Ohm]
nturns	integer (9.5.1.1.2)	number of turns inside the coil



member	type	description
closed	string (9.5.1.1.3)	Identify whether the coil is closed (y) or open (n). For closed coils there is no need to replicate the first r,z,phi point as last point
edges(:)	edges (9.5.1.3.169)	Edges defining the coil volume faces. Structure array. Replicate this edge structure N-times for N-edge cross sections. Use just one for wire coil approximation.

Type of: coil:desc\_coils (1583)

#### 9.5.1.3.124 desc\_impur

Description of the impurities (list of ion species and possibly different charge states)

member	type	description
amn	vecflt.type (9.5.1.2.9)	Atomic mass number of the impurity; Vector (nimp)
zn	vecint.type (9.5.1.2.10)	Nuclear charge of the impurity; Vector (nimp)
i_ion	vecint.type (9.5.1.2.10)	Index of the impurity species in the coreprof ion species ordering. Vector (nimp)
nzimp	vecint.type (9.5.1.2.10)	Number of charge states (or bundles) considered for each impurity species. Vector (nimp)
zmin	matint.type (9.5.1.2.8)	Minimum Z of impurity ionisation state bundle. Matrix (nimp,max_nzimp)
zmax	matint.type (9.5.1.2.8)	Maximum Z of impurity ionisation state bundle. If no bundle, zmax=zmin. Matrix (nimp,max_nzimp)
label	vecstring.type (9.5.1.2.11)	Label for the impurities - note that the charge state is not included; String Vector (nimp)

Type of: coredelta:desc\_impur (1520) I coreimpur:desc\_impur (1521) I coreneutrals:desc\_impur (1522) I coreprof:desc\_impur (1523) I coresource:desc\_impur (1524) I coretransp:desc\_impur (1525) I neoclassic:desc\_impur (1545)

#### 9.5.1.3.125 desc\_iron

Description of the iron segments

member	type	description
name	vecstring.type (9.5.1.2.11)	Name of circuit. Array of strings (ncircuit).
id	vecstring.type (9.5.1.2.11)	ID of circuit. Array of strings (ncircuit).
permeability	permeability (9.5.1.3.271)	Permeability model (can be different for each iron segment)
geom_iron	geom_iron (9.5.1.3.207)	Geometry of the iron segments

Type of: ironmodel:desc\_iron (1536)

#### 9.5.1.3.126 desc\_pfcoils

Description of the coils

member	type	description
name	vecstring.type (9.5.1.2.11)	Name of coil. Array of strings (ncoils)
id	vecstring.type (9.5.1.2.11)	ID of coil. Array of strings (ncoils)
res	vecflt.type (9.5.1.2.9)	Coil resistance [Ohm]; Vector (ncoils)
emax	vecflt.type (9.5.1.2.9)	Maximum Energy to be dissipated in coils []; Vector (ncoils)
nelement	vecint.type (9.5.1.2.10)	Number of elements used to describe a coil; Vector (ncoils)
pfelement	pfelement (9.5.1.3.274)	Axisymmetric conductor description

Type of: pfcoils:desc\_pfcoils (1787)

#### 9.5.1.3.127 desc\_supply

Description of the power supplies

member	type	description
name	vecstring.type (9.5.1.2.11)	Name of the supply; Array of strings (nsupplies)
id	vecstring.type (9.5.1.2.11)	ID of the supply; Array of strings (nsupplies)
type	vecstring.type (9.5.1.2.11)	Type of supply; Array of strings (nsupplies)
delay	vecflt.type (9.5.1.2.9)	Pure delay in the supply [s]; Vector (nsupplies)

member	type	description
filter	filter (9.5.1.3.184)	Laplace proper filter
imin	vecflt_type (9.5.1.2.9)	Minimum current [A]; Vector (nsupplies)
imax	vecflt_type (9.5.1.2.9)	Maximum current [A]; Vector (nsupplies)
res	vecflt_type (9.5.1.2.9)	Supply internal resistance [Ohm]; Vector (nsupplies)
umin	vecflt_type (9.5.1.2.9)	Minimum voltage [V]; Vector (nsupplies)
umax	vecflt_type (9.5.1.2.9)	Maximum voltage [V]; Vector (nsupplies)
emax	vecflt_type (9.5.1.2.9)	Maximum Energy to be dissipated in supply [J]; Vector (nsupplies)

Type of: pfsupplies:desc\_supply (1792)

### 9.5.1.3.128 diag\_func

Structure to provide the description on the detector used and store the transfer matrix of the detector for that l.o.s.

member	type	description
description	string (9.5.1.1.3)	Short description of the detector with reference to the number of cells (ncells).
transf_mat	matflt_type (9.5.1.2.7)	Transfer matrix of the detector. Each l.o.s. might have a dedicated detector response function and energy resolution (and number of cells). Time-independent. Matrix (ncells, nenergy)

Type of: fusiondiag\_detect\_ct.energy:diag\_func (1714)

### 9.5.1.3.129 dist\_ff

Distribution function of e.g. ions, or electrons; the density of particles in the velocity space, the real space and spin state. The grid is split into topological regions, which could overlap in coordinate space (i.e. one coordinate can correspond to more than one orbit). The number of topological region is given by nregion\_topo. For nregion\_topo=2 the topology should be that of a high aspect ratio tokamak with two topological regions, where the passing orbits moving counter to the plasma current are stored in region\_topo=2 and all other orbits are stored in region\_topo=1. For nregion\_topo > 2 (e.g. for spherical tokamaks) the topology should be described in the field topology.

member	type	description
grid_info	dist_grid_info (9.5.1.3.133)	Specification of grids used in topo_regions. Grid coordinates could either be invariants of motion, or information at single point along orbit, e.g. xi and s for grid_coord=3. This point should always be on a so-called omnigenous surface (a generalised equatorial plane); $\text{grad}(\psi) \times \text{grad}(B) = 0$ . All closed orbits cross omnigenous surfaces at least two times. The omnigenous surfaces are described in omnigen_surf.
topo_regions(:)	topo_regions (9.5.1.3.395)	List with distribution function in each topological region; Time-dependent. Structure array(nregion_topo)

Type of: dist\_func:f\_expan\_topo (1644)

### 9.5.1.3.130 dist\_func

Distribution functions. The total distribution total distribution can either be given by a set of markers/test particles (in markers), or by a gridded function (dist\_expand). Note that the gridded distribution can be written as sum of successive approximations, where each term is given by an element in the vector dist\_expand. Finally, the distribution can be written as a sum of a marker distribution and a gridded distribution, e.g. for delta-f Monte Carlo solution.

member	type	description
is_delta_f	integer (9.5.1.1.2)	If is_full_f=1, then the distribution represents the deviation from a Maxwellian; is_full_f=0, then the distribution represents all particles, i.e. the full-f solution.
markers	weighted_markers (9.5.1.3.436)	Distribution represented by a set of markers (test particles).
f_expan_topo(:)	dist_ff (9.5.1.3.129)	TO BE REMOVED. KEPT TEMPORARILY AS AN ALTERNATIVE TO f_expansion. [Distribution function, f, expanded into a vector of successive approximations (topology-based formulation, without the grid-cpo). The first element in the vector (f_expansion(1)) is the zeroth order distribution function, while the K:th element in the vector (f_expansion(K)) is the K:th correction, such that the total distribution function is a sum over all elements in the f_expansion vector. Time-dependent. Structure array(Nf_expansion)]

member	type	description
f_expansion(:)	f_expansion (9.5.1.3.183)	Distribution function, f, expanded into a vector of successive approximations. The first element in the vector (f_expansion(1)) is the zeroth order distribution function, while the K:th element in the vector (f_expansion(K)) is the K:th correction, such that the total distribution function is a sum over all elements in the f_expansion vector. Time-dependent. Structure array(Nf_expansion)

Type of: distri\_vec:dist\_func (1665)

### 9.5.1.3.131 dist\_glob

Global parameters (in most cases volume integrated and surface averaged quantities).

member	type	description
n_particles	float (9.5.1.1.1)	Number of particles in the distribution (note: this is the number of real particles and not markers); Time-dependent
enrg	float (9.5.1.1.1)	Energy content of the distribution [J]; Time-dependent
enrg_para	float (9.5.1.1.1)	Parallel energy content of the distribution [J]; Time-dependent
pow_coll_i	vecflt_type (9.5.1.2.9)	Collisional power to ions [W]; Time-dependent; Matrix(nion)
pow_coll_e	float (9.5.1.1.1)	Collisional power to the electrons [W]; Time-dependent
therm_src	dist_src_snk_tot (9.5.1.3.148)	Source particles and power due to particles of the distribution species being thermalised (merging into the thermal plasma).
losses	dist_glob_dist_losses (9.5.1.3.132)	Losses of the distribution species (orbit losses and neutralisation losses).
cur_dr_tor	float (9.5.1.1.1)	Toroidal current of non-thermal particles (excluding electron back current for fast ions) [A]; Time-dependent.
trq_i	vecflt_type (9.5.1.2.9)	Collisional torque to background ions [N.m]; Time-dependent; Vector (nion)
trq_e	float (9.5.1.1.1)	Collisional torque to electrons [N.m]; Time-dependent
trq_j_rxb	float (9.5.1.1.1)	Torque due to radial currents of non-thermal particles [N.m]; Time-dependent.
nucl_reac_th	dist_nucl_reac_th (9.5.1.3.138)	Nuclear reactions between the calculated species and other species assumed to have thermal distributions.
nucl_reac_sf	dist_nucl_reac_sf (9.5.1.3.137)	Nuclear reactions of the calculated species with itself (thermal + non-thermal).

Type of: distri\_vec:global\_param (1665)

### 9.5.1.3.132 dist\_glob\_dist\_losses

Losses of the distribution species (orbit losses and neutralisation losses).

member	type	description
orb_loss	dist_src_snk_tot (9.5.1.3.148)	Losses due to orbits intersecting a material surface.
neutr_loss	dist_src_snk_tot (9.5.1.3.148)	Losses due to neutralisation of distribution ions (charge exchange etc.)

Type of: dist\_glob:losses (1645)

### 9.5.1.3.133 dist\_grid\_info

Specification of grids used in topo\_regions. Grid coordinates could either be invariants of motion, or information at single point along orbit, e.g. xi and s for grid\_coord=3. This point should always be on a so-called omnigenous surface (a generalised equatorial plane); grad(psi) x grad(B) = 0. All closed orbits cross omnigenous surfaces at least two times. The omnigenous surfaces are described in omnigen\_surf.

member	type	description
grid_type	integer (9.5.1.1.2)	Type of grid: 1=unstructured grid; 2=structured non-rectangular grid, here ndim11=ndim12=ndim13, ndim21=ndim22=ndim23, ndim31=ndim32=ndim33; 3=rectangular grid, where grid coordinates are stored in the vectors dim1(1:ndim1,1,1), dim2(1,1:ndim2,1), dim3(1,1,1:ndim3)
ngriddim	integer (9.5.1.1.2)	Number of grid dimension. For ngriddim=2 the grid is specified by dim1 and dim2 only, while dim3, dim4, dim5, dim6 can be ignored (should not be allocated). For ngriddim=3 also dim3 is used to describe the grid etc. E.g. if your distribution is given by the three variables the poloidal flux, perpendicular and parallel velocities, then ngriddim=3 and grid_coord(1)=15, grid_coord(1)=16, grid_coord(3)=6.

member	type	description
grid_coord	vecint.type (9.5.1.2.10)	Identifies the coordinates specified in dim1, dim2, dim3, dim4, dim5, and dim6. grid_coord(K) describes the coordinate represented in dimK, for K=1,2,...6. The possible coordinates are: 1=R, Major radius [m]; 2=Z, Vertical position [m]; 3=X, first cartesian coordinate in the horizontal plane [m]; 4=Y, second cartesian coordinate in the horizontal plane (grad(X) x grad(Y) = grad(Z)) [m]; 5=phi, toroidal angle [rad]; 6=psi, poloidal magnetic flux [T*m^2]; 7=rhotor, the square root of the toroidal flux; 8=theta, geometrical poloidal angle [rad]; 9=theta_b, Boozer poloidal angle [rad]; 10=vx, velocity in the x-direction [m/s]; 11=vy, velocity in the y-direction [m/s]; 12=vz, velocity in the z-direction [m/s]; 13=vel, total velocity [m/s]; 14=vphi, velocity in the phi-direction [m/s]; 15=vpar, velocity in the parallel direction [m/s]; 16=vperp, velocity in the perpendicular direction [m/s]; 17=E, Hamiltonian energy [J]; 18=Pphi, canonical toroidal angular momentum [kg m^2/s]; 19=mu, magnetic moment [J/T]; 20=Lambda=mu/E [1/T]; 21=pitch=vpar/v [-]; 22=s, the position of the omnigenous plane (generalised equatorial plane) as described by the fields omnigen_surf% <i>s</i> and omnigen_surf% <i>rz</i> ; 23=particle spin; 24=n_Legendre, the index of the Legendre polynomial of the pitch, e.g. if the k:th component of dim3(1,1,k,1,1)=5 then this refers to the 5:th Legendre polynomial P_5(xi). Vector (6)
thin_orbits	integer (9.5.1.1.2)	Specifies if guiding centre orbits are thin. Note: only used for orbit averaged distribution functions. For thin_orbits=1 the orbit are considered thin, i.e. each orbit is bound to follow a single flux surface; for thin_orbits=0 the orbits are assumed to follow guiding centre trajectories. E.g. thin_orbits=0 using constants of motion as given in a generalised equatorial plane, then the orbit outside the equatorial plane are described by the guiding centre equations of motion.
topology	string (9.5.1.1.3)	Description of the topology of the grid. NOTE: only used for nregion_topo>2.
omnigen_surf(:)	omnigen_surf (9.5.1.3.263)	List of omnigenous magnetic surfaces to which the s-coordinates in grid_coord refer. NOTE: only used for grid_coord=3. NOTE: all guiding centre orbits intersect at least one omnigenous (or stagnation) surfaces, i.e. the omnigenous generalised equatorial plane (the midplane). nsurfs=Number of omnigenous surfaces. Structure array(nregion_topo)

Type of: dist\_ff:grid\_info (1643)

### 9.5.1.3.134 dist\_input\_src

Input sources of particles and power for the distribution species (to aid diagnosing the code output).

member	type	description
particle_src	dist_particle_src (9.5.1.3.139)	Particle source
wave_src	dist_wave_src (9.5.1.3.150)	Auxiliary wave absorbed by the distribution species

Type of: distri\_vec:input\_src (1665)

### 9.5.1.3.135 dist\_markers

Distribution given as a set of markers (test particles).

member	type	description
nvar	float (9.5.1.1.1)	Number of variables associated with a marker (test particle)
var_id	vecint.type (9.5.1.2.10)	Identification of phase space variables. var_id(K) describe the variable represented in varK, for K=1,2,...7. The possible variables are: 1=R, Major radius [m]; 2=Z, Vertical position [m]; 3=X, first cartesian coordinate in the horizontal plane [m]; 4=Y, second cartesian coordinate in the horizontal plane (grad(X) x grad(Y) = grad(Z)) [m]; 5=phi, toroidal angle [rad]; 6=psi, poloidal magnetic flux [T*m^2]; 7=rhotor, the square root of the toroidal flux; 8=theta, geometrical poloidal angle [rad]; 9=theta_b, Boozer poloidal angle [rad]; 10=vx, velocity in the x-direction [m/s]; 11=vy, velocity in the y-direction [m/s]; 12=vz, velocity in the z-direction [m/s]; 13=vel, total velocity [m/s]; 14=vphi, velocity in the phi-direction [m/s]; 15=vpar, velocity in the parallel direction [m/s]; 16=vperp, velocity in the perpendicular direction [m/s]; 17=E, Hamiltonian energy [J]; 18=Pphi, canonical toroidal angular momentum [kg m^2/s]; 19=mu, magnetic moment [J/T]; 20=Lambda=mu/E [1/T]; 21=pitch=vpar/v [-]; 22=s, the position of the omnigenous plane (generalised equatorial plane) as described by the fields omnigen_surf% <i>s</i> and omnigen_surf% <i>rz</i> ; 23=particle spin. Vector (7)
var1	vecflt.type (9.5.1.2.9)	Phase space variables one characterising the markers; Time-dependent; Vector (npart)
var2	vecflt.type (9.5.1.2.9)	Phase space variables two characterising the markers; Time-dependent; Vector (npart)
var3	vecflt.type (9.5.1.2.9)	Phase space variables three characterising the markers; Time-dependent; Vector (npart)
var4	vecflt.type (9.5.1.2.9)	Phase space variables four characterising the markers; Time-dependent; Vector (npart)
var5	vecflt.type (9.5.1.2.9)	Phase space variables five characterising the markers; Time-dependent; Vector (npart)
var6	vecflt.type (9.5.1.2.9)	Phase space variables six characterising the markers; Time-dependent; Vector (npart)
var7	vecflt.type (9.5.1.2.9)	Phase space variables seven characterising the markers; Time-dependent; Vector (npart)
weight	vecflt.type (9.5.1.2.9)	Weight of the markers; Time-dependent; Vector (npart)

### 9.5.1.3.136 dist\_nucl\_reac

Information on nuclear reactions involving the calculated species.

member	type	description
point_reac	vecint.type (9.5.1.2.10)	Pointer to a species in composition who can undergo a nuclear reaction with the calculated species; Vector (nreac)
id_reac	vecint.type (9.5.1.2.10)	Identification of the reaction between the calculated species and a background species (including which branch if applicable); Time-dependent; Vector (nreac). Table defining the index of reactions to be provided.

Type of: `distri_vec:nucl_reac` (1665)

#### 9.5.1.3.137 `dist_nucl_reac_sf`

Nuclear reactions of the calculated species with itself (thermal + non-thermal).

member	type	description
rate	float (9.5.1.1.1)	Reaction rate [1/s]; Time-dependent
power	float (9.5.1.1.1)	Fusion reaction power[W]; Time-dependent

Type of: `dist_glob:nucl_reac_sf` (1645)

#### 9.5.1.3.138 `dist_nucl_reac_th`

Nuclear reactions between the calculated species and other species assumed to have thermal distributions.

member	type	description
rate	vecflt.type (9.5.1.2.9)	Reaction rate [1/s]; Time-dependent; Vector (nreac)
power	vecflt.type (9.5.1.2.9)	Fusion reaction power[W]; Time-dependent; Vector (nreac)

Type of: `dist_glob:nucl_reac_th` (1645)

#### 9.5.1.3.139 `dist_particle_src`

Particle source

member	type	description
total	dist_src_snk_tot (9.5.1.3.148)	Total source of particles and power (NBI, fusion products, pellets etc.)
volume_intgr	dist_src_snk_vol (9.5.1.3.149)	Volume integrated source of particles and power (NBI, fusion products, pellets etc.)
flux_surf_av	dist_src_snk_surf (9.5.1.3.147)	Flux surface averaged source of particles and power (NBI, fusion products, pellets etc.)

Type of: `dist_input_src:particle_src` (1648)

#### 9.5.1.3.140 `dist_prof_surf_dist_losses`

Losses of the distribution species.

member	type	description
orb_loss	dist_src_snk_surf (9.5.1.3.147)	Losses due to orbits intersecting a material surface.
neutr_loss	dist_src_snk_surf (9.5.1.3.147)	Losses due to neutralised ions, e.g. due to charge exchange events.

Type of: `dist_profiles:lossesd` (1660)

#### 9.5.1.3.141 `dist_prof_surf_nucl_reac_sf`

Nuclear reactions of the calculated species with itself (thermal + non-thermal).

member	type	description
rate	vecflt.type (9.5.1.2.9)	Reaction rate [ $s^{-1}.m^{-3}$ ]; Time-dependent; Matrix (npsi)
power	vecflt.type (9.5.1.2.9)	Fusion reaction power [ $W.m^{-3}$ ]; Time-dependent; Matrix (npsi)

Type of: `dist_profiles:nucl_rd_sf` (1660)

### 9.5.1.3.142 `dist_prof_surf_nucl_reac_th`

Nuclear reactions between the calculated species and other species assumed to have thermal distributions.

member	type	description
rated	matflt.type (9.5.1.2.7)	Reaction rate [ $s^{-1}.m^{-3}$ ]; Time-dependent; Matrix (nreac, max_npsi)
powerd	matflt.type (9.5.1.2.7)	Nuclear reaction power density [ $W.m^{-3}$ ]; Time-dependent; Matrix (nreac, max_npsi)

Type of: `dist_profiles:nucl_rd_th` (1660)

### 9.5.1.3.143 `dist_prof_vol_dist_losses`

Losses of the distribution species.

member	type	description
orb_loss	dist_src_snk_vol (9.5.1.3.149)	Losses due to orbits intersecting a material surface.
neutr_loss	dist_src_snk_vol (9.5.1.3.149)	Losses due to neutralised ions, e.g. due to charge exchange events.

Type of: `dist_profiles:losses` (1660)

### 9.5.1.3.144 `dist_prof_vol_nucl_reac_sf`

Nuclear reactions of the calculated species with itself (thermal + non-thermal).

member	type	description
rate	vecflt.type (9.5.1.2.9)	Reaction rate [1/s]; Time-dependent; Vector (npsi)
power	vecflt.type (9.5.1.2.9)	Fusion reaction power[W]; Time-dependent; Vector (npsi)

Type of: `dist_profiles:nucl_reac_sf` (1660)

### 9.5.1.3.145 `dist_prof_vol_nucl_reac_th`

Nuclear reactions between the calculated species and other species assumed to have thermal distributions.

member	type	description
rate	matflt.type (9.5.1.2.7)	Reaction rate [1/s]; Time-dependent; Matrix (nreac, npsi)
power	matflt.type (9.5.1.2.7)	Fusion reaction power[W]; Time-dependent; Matrix (nreac, npsi)

Type of: `dist_profiles:nucl_reac_th` (1660)

### 9.5.1.3.146 `dist_profiles`

Profiles (volume integrated and flux surface averaged)

member	type	description
rho_tor_norm	vecflt.type (9.5.1.2.9)	Normalised toroidal flux coordinate at the grid points for 1D profiles; Time-dependent; Vector (npsi)
rho_tor	vecflt.type (9.5.1.2.9)	Toroidal flux coordinate at the grid points for 1D profiles [m]. Defined as $\sqrt{\phi/\pi/B_0}$ , where $B_0 = \text{equilibrium/global.param/toroid.field}/b_0$ . Time-dependent; Vector (npsi)
psi	vecflt.type (9.5.1.2.9)	Poloidal flux at the grid points for 1D profiles [Wb], without $1/2\pi$ and such that $B_p =  \text{grad psi} /R/2/\pi$ . Time-dependent; Vector (npsi)
dens	vecflt.type (9.5.1.2.9)	Flux surface averaged particle density of the distribution [ $J/m^3$ ]; Time-dependent; Vector (npsi)
enrgd_tot	vecflt.type (9.5.1.2.9)	Flux surface averaged energy density of the distribution [ $J/m^3$ ]; Time-dependent; Vector (npsi)
enrgd_para	vecflt.type (9.5.1.2.9)	Flux surface averaged parallel energy density of the distribution [ $J/m^3$ ]; Time-dependent; Vector (npsi).
powd_coll_i	matflt.type (9.5.1.2.7)	Flux surface averaged collisional power to ions [ $W.m^{-3}$ ]; Time-dependent; Matrix (nion, npsi)
powd_coll_e	vecflt.type (9.5.1.2.9)	Flux surface averaged collisional power to the electrons [ $W.m^{-3}$ ]; Time-dependent; Vector (npsi)
therm_srcd	dist_src_snk_surf (9.5.1.3.147)	Flux surface averaged source of particles and power due to particles of the distribution species being thermalised (merging into the thermal plasma).
lossesd	dist_prof_surf_dist_losses (9.5.1.3.140)	Particle loss densities due to charge exchange events with neutrals or orbits intersecting material surfaces.

member	type	description
curd_fp	vecflt_type (9.5.1.2.9)	Flux surface averaged toroidal current density of non-thermal (fast) particles of the distribution species (excluding electron back current for fast ions) [A.m <sup>-2</sup> ]; Time-dependent; Vector (npsi).
curd_dr	vecflt_type (9.5.1.2.9)	Total toroidal driven current density (including electron back current in the presence of fast ions) [A]; Time-dependent; Vector (npsi)
trqd_i	matflt_type (9.5.1.2.7)	Flux surface averaged collisional toroidal torque to background ions [N.m <sup>-2</sup> ]; Time-dependent; Matrix (nion, npsi)
trqd_e	vecflt_type (9.5.1.2.9)	Flux surface averaged collisional toroidal torque density to electrons [N.m <sup>-2</sup> ]; Time-dependent; Vector (npsi)
trqd_jrxb	vecflt_type (9.5.1.2.9)	Toroidal torque density due to radial currents of non-thermal particles of the distribution species [N.m <sup>-2</sup> ]; Time-dependent; Vector (npsi)
nucl_rd_th	dist_prof_surf_nucl_reac_th (9.5.1.3.142)	Nuclear reaction rate densities for reactions between the cacluated species and other species assumed to have thermal distributions.
nucl_rd_sf	dist_prof_surf_nucl_reac_sf (9.5.1.3.141)	Nuclear reaction rate densities for reactions of the calculated species with itself (thermal + non-thermal).
enrg_tot	vecflt_type (9.5.1.2.9)	Energy content of of a distribution species [J] inside a flux surface; Time-dependent; Vector (npsi)
enrg_para	vecflt_type (9.5.1.2.9)	Parallel energy content of a distribution species [J] inside a flux surface; Time-dependent; Vector (npsi)
pow_coll_i	matflt_type (9.5.1.2.7)	Collisional power to ions inside a flux surface [W]; Time-dependent; Matrix(nion, npsi)
pow_coll_e	vecflt_type (9.5.1.2.9)	Collisional power to the electrons inside a flux surface [W]; Time-dependent; Vector(npsi)
therm_src	dist_src_snk_vol (9.5.1.3.149)	Source particles and power inside a flux surface due to particles of the distribution species being thermalised (merging into the thermal plasma).
losses	dist_prof_vol_dist_losses (9.5.1.3.143)	Particle loss inside flux surface due to charge exchange events.
cur_fp	vecflt_type (9.5.1.2.9)	Toroidal current of non-thermal (fast) particles driven inside a flux surface (does not include electron back current for fast ions) [A]; Time-dependent; Vector (npsi)
cur_dr	vecflt_type (9.5.1.2.9)	Total toroidal current driven inside a flux surface (including electron back current in the presence of fast ions) [A]; Time-dependent; Vector (npsi).
trq_i	matflt_type (9.5.1.2.7)	Collisional toroidal torque to background ions inside a flux surface [N.m]; Time-dependent; Matrix (nion, npsi)
trq_e	vecflt_type (9.5.1.2.9)	Collisional toroidal torque to electrons inside a flux surface [N.m]; Time-dependent; Vector (npsi)
trq_j_rxb	vecflt_type (9.5.1.2.9)	Toroidal torque due to radial currents of non-thermal particles of the distribution species [N.m]; Time-dependent; Vector (npsi)
nucl_reac_th	dist_prof_vol_nucl_reac_th (9.5.1.3.145)	Nuclear reactions inside a flux surface involving the distribution species and other species assumed to be thermal.
nucl_reac_sf	dist_prof_vol_nucl_reac_sf (9.5.1.3.144)	Nuclear reactions inside a flux surface of the calculated species with itself (thermal + non-thermal).

Type of: `distri_vec:profiles.1d` (1665)

### 9.5.1.3.147 `dist_src_snk_surf`

Losses due to orbits intersecting a material surface.

member	type	description
particlesd	vecflt_type (9.5.1.2.9)	Source/sink particles [s <sup>-1</sup> m <sup>-3</sup> ]; Time-dependendent; Vector (npsi)
powerd	vecflt_type (9.5.1.2.9)	Power density associated with the source/sink of particles [W.m <sup>-3</sup> ]; Time-dependent; Vector (npsi)
torqued	vecflt_type (9.5.1.2.9)	Torque density due to the source/sink of particles [N.m <sup>-2</sup> ]; Time-dependent; Vector (npsi)

Type of: `dist_particle_src:flux_surf_av` (1653) I `dist_prof_surf_dist_losses:neutr_loss` (1654) I `dist_prof_surf_dist_losses:orb_loss` (1654) I `dist_profiles:therm_srcd` (1660)

### 9.5.1.3.148 `dist_src_snk_tot`

Source particles and power due to particles of the distribution species being thermalised (merging into the thermal plasma).

member	type	description
particles	float (9.5.1.1.1)	Source/sink particles [1/s]; Time-dependendent
power	float (9.5.1.1.1)	Power associated with the source/sink of particles [W]; Time-dependent
torque	float (9.5.1.1.1)	Torque due to the source/sink of particles [N.m]; Time-dependent

Type of: `dist_glob:therm_src` (1645) I `dist_glob_dist_losses:neutr_loss` (1646) I `dist_glob_dist_losses:orb_loss` (1646) I `dist_particle_src:total` (1653)

### 9.5.1.3.149 dist\_src\_snk\_vol

Losses due to orbits intersecting a material surface.

member	type	description
particles	vecflt_type (9.5.1.2.9)	Source/sink particles [1/s]; Time-dependent; Vector (npsi)
power	vecflt_type (9.5.1.2.9)	Power associated with the source/sink of particles [W]; Time-dependent; Vector (npsi)
torque	vecflt_type (9.5.1.2.9)	Torque due to the source/sink of particles [N.m]; Time-dependent; Vector (npsi)

Type of: dist\_particle\_src:volume\_intgr (1653) I dist\_prof\_vol\_dist\_losses:neutr\_loss (1657) I dist\_prof\_vol\_dist\_losses:orb\_loss (1657) I dist\_profiles:therm\_src (1660)

### 9.5.1.3.150 dist\_wave\_src

Auxiliary wave absorbed by the distribution species

member	type	description
type	string (9.5.1.1.3)	Wave type (LH, EC, IC, ...), can be a combination of these if several wave types are absorbed by this species.
wave_power	float (9.5.1.1.1)	Auxiliary wave power absorbed by the distribution species [W]; Time-dependent.
wave_powerd	vecflt_type (9.5.1.2.9)	Auxiliary flux surface averaged wave power density absorbed by the distribution species [W/m <sup>3</sup> ]; Time-dependent; Vector (npsi)

Type of: dist\_input\_src:wave\_src (1648)

### 9.5.1.3.151 distri\_vec

Vector over all distribution functions; Time-dependent. Structure array(ndistri\_vec)

member	type	description
wave_id(:)	enum_instance (9.5.1.3.173)	List all waves affecting the distribution, as specified in waves(*)%coherentwave(*)%wave.id. Vector(n_antennas)
source_id(:)	enum_instance (9.5.1.3.173)	List all neutral beam injectors and reactions contributing to the source, as specified in dist_source(*)%source(*)%source.id. Vector(n_injectors_and_reactions)
calc_spec	integer (9.5.1.1.2)	Pointer to the species for which the distribution function(s) is/are calculated and whose characteristics are given in composition (for ions). Value 0 means electrons.
gyro_type	integer (9.5.1.1.2)	Defines how to interpret the spatial coordinates: 1 = given at the actual particle position; 2 = given at the gyro centre of the particle position.
global_param	dist_glob (9.5.1.3.131)	Global parameters (in most cases volume integrated and surface averaged quantities).
profiles_1d	dist_profiles (9.5.1.3.146)	Profiles (volume integrated and flux surface averaged)
dist_func	dist_func (9.5.1.3.130)	Distribution functions. The total distribution total distribution can either be given by the a set of markers/test particles (in markers), or by a gridded function (dist_expand). Note that the gridded distribution can be written as sum of successive approximations, where each term is given by an element in the vector dist_expand. Finally, the distribution can be written as a sum of a marker distribution and a gridded distribution, e.g. for delta-f Monte Carlo solution.
input_src	dist_input_src (9.5.1.3.134)	Input sources of particles and power for the distribution species (to aid diagnosing the code output).
nucl_reac	dist_nucl_reac (9.5.1.3.136)	Information on nuclear reactions involving the calculated species.
codeparam	codeparam (9.5.1.3.66)	Code parameters

Type of: distribution:distri\_vec (1527)

### 9.5.1.3.152 distsource\_global\_param

Global parameters (volume integrated).

member	type	description
src_pow	exp0D (9.5.1.3.180)	Total power source [W]; Time-dependent.
src_rate	exp0D (9.5.1.3.180)	Particle source rate [1/s]; Time-dependent.

Type of: distsource\_source:global\_param (1670)

### 9.5.1.3.153 distsource\_line\_src\_prof

1D profiles representation of a line source



member	type	description
rho_tor	vecflt_type (9.5.1.2.9)	Toroidal flux coordinate at the grid points for 1D profiles [m]. Defined as $\sqrt{\phi/\pi/B_0}$ , where $B_0 = \text{equilibrium}/\text{global.param}/\text{toroid.field}/b_0$ . Time-dependent; Vector (npsi)
rho_tor_norm	vecflt_type (9.5.1.2.9)	Normalised toroidal flux coordinate at the grid points for 1D profiles; Time-dependent; Vector (npsi)
psi	vecflt_type (9.5.1.2.9)	Poloidal flux at the grid points for 1D profiles [Wb], without $1/2\pi$ and such that $B_p =  \text{grad } \psi  / (R/2\pi)$ . Time-dependent; Vector (npsi)
R	vecflt_type (9.5.1.2.9)	Major radius at the line source. Time-dependent; Vector (npsi)
Z	vecflt_type (9.5.1.2.9)	Vertical position of the line source. Time-dependent; Vector (npsi)
theta	vecflt_type (9.5.1.2.9)	Poloidal angle [rad]. Time-dependent; Vector (npsi)
theta_id	vecflt_type (9.5.1.2.9)	Type of poloidal angle: 1 : same as the poloidal angle in the equilibrium cpo; 2 : geometrical polar angle, $\tan(\theta) = Z/(R-R_0)$ ; 3 : other. If option 3, a transformation to the geometrical poloidal angle is provided in th2th.pol.
th2th.pol	matflt_type (9.5.1.2.7)	Geometrical poloidal angle at grid points in theta, i.e. the transformation from theta to the polar poloidal angle; used only if angl_type=3; Time-dependent; Matrix (ndim1, ndim2)
pitch	vecflt_type (9.5.1.2.9)	Pitch (i.e. $v_{\text{parallel}}/v$ ) of source particles. Time-dependent; Vector (npsi)
energy	vecflt_type (9.5.1.2.9)	Kinetic energy of source particles [eV]. Time-dependent; Vector (npsi)
ang_momentum	vecflt_type (9.5.1.2.9)	Kinetic angular momentum of a single source particles, $R m v_{\phi}$ [Nms]. Time-dependent; Vector (npsi)
src_rate	vecflt_type (9.5.1.2.9)	Source density of particles [ $1/\text{m}^3/\text{s}$ ]. Time-dependent; Vector (npsi)

Type of: distsource\_source:line\_srcprof (1670)

### 9.5.1.3.154 distsource\_profiles\_1d

1D radial profiles

member	type	description
rho_tor_norm	vecflt_type (9.5.1.2.9)	Normalised toroidal flux coordinate at the grid points for 1D profiles; Time-dependent; Vector (npsi)
rho_tor	vecflt_type (9.5.1.2.9)	Toroidal flux coordinate at the grid points for 1D profiles [m]. Defined as $\sqrt{\phi/\pi/B_0}$ , where $B_0 = \text{equilibrium}/\text{global.param}/\text{toroid.field}/b_0$ . Time-dependent; Vector (npsi)
psi	vecflt_type (9.5.1.2.9)	Poloidal flux at the grid points for 1D profiles [Wb], without $1/2\pi$ and such that $B_p =  \text{grad } \psi  / (R/2\pi)$ . Time-dependent; Vector (npsi)
pow_den	exp1D (9.5.1.3.181)	Flux surface averaged power density [ $\text{W}/\text{m}^3$ ]; Time-dependent; Vector (npsi)
src_rate	exp1D (9.5.1.3.181)	Flux surface averaged total source density of particles [ $\text{m}^{-3}\text{s}^{-1}$ ]; Time-dependent; Vector (npsi)

Type of: distsource\_source:profiles\_1d (1670)

### 9.5.1.3.155 distsource\_profiles\_2d

2D source profiles in terms of two phase space coordinates

member	type	description
grid_coord	vecint_type (9.5.1.2.10)	Identifies the coordinates specifies in dim1 and dim2. grid_coord(1) and grid_coord(2) describe the coordinate represented in dim1 and dim2. The possible coordinates are: 1=R, Major radius [m]; 2=Z, Vertical position [m]; 3=X, first cartesian coordinate in the horizontal plane [m]; 4=Y, second cartesian coordinate in the horizontal plane ( $\text{grad}(X) \times \text{grad}(Y) = \text{grad}(Z)$ ) [m]; 5= $\phi$ , toroidal angle [rad]; 6= $\psi$ , poloidal magnetic flux [ $\text{T}^2\text{m}^2$ ]; 7= $\rho_{\text{tor}}$ , the square root of the toroidal flux; 8= $\theta$ , geometrical poloidal angle [rad]; 9= $\theta_{\text{b}}$ , Boozer poloidal angle [rad]; 10= $v_x$ , velocity in the x-direction [m/s]; 11= $v_y$ , velocity in the y-direction [m/s]; 12= $v_z$ , velocity in the z-direction [m/s]; 13= $v_{\text{vel}}$ , total velocity [m/s]; 14= $v_{\phi}$ , velocity in the phi-direction [m/s]; 15= $v_{\text{par}}$ , velocity in the parallel direction [m/s]; 16= $v_{\text{perp}}$ , velocity in the perpendicular direction [m/s]; 17=E, Hamiltonian energy [J]; 18=Pphi, canonical toroidal angular momentum [ $\text{kg m}^2/\text{s}$ ]; 19= $\mu$ , magnetic moment [J/T]; 20= $\Lambda = \mu/E$ [1/T]. Vector (2)
dim1	matflt_type (9.5.1.2.7)	First coordinate of 2D grid. Time-dependent; Vector (ndim1,ndim2)
dim2	matflt_type (9.5.1.2.7)	Second coordinate of 2D grid. Time-dependent; Vector (ndim1,ndim2)
g11	matflt_type (9.5.1.2.7)	11 component of the covariant metric tensor in the (dim1, dim2) coordiante system. Time-dependent; Vector (ndim1,ndim2)
g12	matflt_type (9.5.1.2.7)	12 component of the covariant metric tensor in the (dim1, dim2) coordiante system. Time-dependent; Vector (ndim1,ndim2)
g21	matflt_type (9.5.1.2.7)	21 component of the covariant metric tensor in the (dim1, dim2) coordiante system. Time-dependent; Vector (ndim1,ndim2)
g22	matflt_type (9.5.1.2.7)	22 component of the covariant metric tensor in the (dim1, dim2) coordiante system. Time-dependent; Vector (ndim1,ndim2)
pow_den	exp2D (9.5.1.3.182)	Source power density. Here $\sum(M,N=1,2; \text{pow\_den} * g_{NM} * \text{dimN} * \text{dimM})$ have unit [W]. Time-dependent; Vector (ndim1,ndim2)

member	type	description
src_rate	exp2D (9.5.1.3.182)	Source density of particles. Here $\sum(M,N=1,2; \text{src\_rate} * g_{NM} * \text{dimN} * \text{dimM})$ have unit [1/s]. Time-dependent; Vector (ndim1, ndim2)

Type of: `distsource_source:profiles_2d` (1670)

### 9.5.1.3.156 `distsource_source`

Source

member	type	description
source.id(:)	enum_instance (9.5.1.3.173)	List of identifiers for the source, in term the type and name of the injectors and reactions that provide the source, along with an index separating sources with the same name and type. Possible content for type: NBI or reaction names (see specifications on the ITM webpages); the field name should either be taken from <code>nbi(*)%nbi.unit(*)%name</code> , or describe the populations involved in the reaction, e.g. fast-thermal; the field index should separate different sources generated from a single injector or reaction. Vector(n_injectors_and_reactions)
src_spec	integer (9.5.1.1.2)	Pointer to the source species whose characteristics are given in composition.
gyro.type	integer (9.5.1.1.2)	Defines how to interpret the spatial coordinates: 1 = given at the actual particle birth point; 2 = given at the gyro centre of the birth point.
global_param	distsource_global_param (9.5.1.3.152)	Global parameters.
profiles_1d	distsource_profiles_1d (9.5.1.3.154)	1D radial profiles
profiles_2d	distsource_profiles_2d (9.5.1.3.155)	2D source profiles in terms of two phase space coordinates
line_srcprof(:)	distsource_line_src_prof (9.5.1.3.153)	1D profiles representation of a line source
source_rate	source_rate (9.5.1.3.371)	Source density of particles in phase space (real space, velocity space, spin state).
source_grid	source_on_grid (9.5.1.3.370)	TO BE REMOVED, being replaced by <code>source_rate</code> . Kept only to make smooth transition between data-type versions. [Source density of particles in phase space (real space, velocity space, spin state); simplified formulation, without the grid-cpo.]
markers	weighted_markers (9.5.1.3.436)	Source given as a set of markers (test particles) born per second.
codeparam	codeparam (9.5.1.3.66)	Code parameters

Type of: `distsource:source` (1528)

### 9.5.1.3.157 `divergence`

Detailed information on beamlet divergence. Divergens is described as a super position of Gaussian profiles with amplitude "`frac_divcomp`" and vertical/horizontal divergence "`div_vert`" / "`div_horiz`". Note that for positive ion NBI the divergence is well described by a single Gaussian.

member	type	description
frac_divcomp	vecflt_type (9.5.1.2.9)	Fraction of injected particles. Vector(ndiv_comp)
div_vert	vecflt_type (9.5.1.2.9)	Beam divergence for a unit in the vertical direction[rad]. Vector(ndiv_comp)
div_horiz	vecflt_type (9.5.1.2.9)	Beam divergence for a unit in the horizontal direction[rad]. Vector(ndiv_comp)

Type of: `setup_inject:divergence` (1875)

### 9.5.1.3.158 `e_components`

E-field representation in terms of the parallel and circularly polarised components

member	type	description
e_plus	complexgrid_scalar_cplx (9.5.1.3.77)	Left hand circularly polarised component of the perpendicular (to the static magnetic field) electric field [V/m]. Time-dependent; Complexgrid_scalar
e_minus	complexgrid_scalar_cplx (9.5.1.3.77)	Right hand circularly polarised component of the perpendicular (to the static magnetic field) electric field [V/m]. Time-dependent; Complexgrid_scalar
e_para	complexgrid_scalar_cplx (9.5.1.3.77)	Parallel (to the static magnetic field) component of electric field [V/m]. Time-dependent; Complexgrid_scalar
e_norm	complexgrid_scalar_cplx (9.5.1.3.77)	Magnitude of wave electric field normal to a flux surface [V/m]; Time-dependent; Complexgrid_scalar
e_binorm	complexgrid_scalar_cplx (9.5.1.3.77)	Magnitude of perpendicular (to the static magnetic field) wave electric field tangent to a flux surface [V/m]; Time-dependent; Complexgrid_scalar
b_norm	complexgrid_scalar_cplx (9.5.1.3.77)	Magnitude of perpendicular (to the static magnetic field) wave magnetic field normal to a flux surface [T]; Time-dependent; Complexgrid_scalar

member	type	description
b.binorm	complexgrid_scalar_cplx (9.5.1.3.77)	Magnitude of wave magnetic field tangent to a flux surface [T]; Time-dependent; Complex-grid_scalar
b.para	complexgrid_scalar_cplx (9.5.1.3.77)	Magnitude of wave magnetic field parallel to the equilibrium magnetic field [T]; Time-dependent; Complexgrid_scalar

Type of: fullwave:e\_components (1704)

### 9.5.1.3.159 ecemeasure

Measured values

member	type	description
harmonic	integer (9.5.1.1.2)	Harmonic detected by the ECE channels. Time-dependent.
position	rzphi1Dexp (9.5.1.3.332)	Position of the measurement. Time-dependent. Vector (nchannels)
te	exp1D (9.5.1.3.181)	Electron temperature [eV]. Time-dependent. Vector (nchannels)

Type of: ecediag:measure (1529)

### 9.5.1.3.160 ecsetup

diagnostic setup information

member	type	description
frequency	vecflt_type (9.5.1.2.9)	Frequency of the ECE channels. Vector (nchannels)
los	setup_line (9.5.1.3.362)	Geometry of the line of sight.

Type of: ecediag:setup (1529)

### 9.5.1.3.161 edge\_fluid

Fluid quantities

member	type	description
ne	edge_fluid_scalar_simplestruct (9.5.1.3.163)	Electron density [ $1/m^3$ ]; Time-dependent;
ni(:)	edge_fluid_scalar (9.5.1.3.162)	Ion density [ $1/m^3$ ] (per species). Array of structures(nspecies); Time-dependent;
ve	edge_fluid_vector_simplestruct (9.5.1.3.166)	Electron velocity [m/s]; Time-dependent;
vi(:)	edge_fluid_vector (9.5.1.3.165)	Ion velocity [m/s] (per species). Array of structures(nspecies); Time-dependent;
te	edge_fluid_scalar_simplestruct (9.5.1.3.163)	Electron temperature [eV]; Time-dependent;
ti(:)	edge_fluid_scalar (9.5.1.3.162)	Ion temperature [eV] (per species). Array of structures(nspecies); Time-dependent;
te_aniso	edge_fluid_vector_simplestruct (9.5.1.3.166)	Anisotropic electron temperature [eV]; Time-dependent;
ti_aniso(:)	edge_fluid_vector (9.5.1.3.165)	Anisotropic ion temperature [eV] (per species). Array of structures(nspecies); Time-dependent;
po	edge_fluid_scalar_simplestruct (9.5.1.3.163)	Electric potential [V]; Time-dependent;
j	edge_fluid_vector_simplestruct (9.5.1.3.166)	Electric current [A]; Time-dependent;
b(:)	complexgrid_vector (9.5.1.3.82)	Magnetic field vector [T]; Time-dependent;

Type of: edge:fluid (1530)

### 9.5.1.3.162 edge\_fluid\_scalar

A scalar fluid quantity. To be used as array of structure

member	type	description
value(:)	complexgrid_scalar (9.5.1.3.76)	Value of the quantity. Possibly stored on multiple subgrids.; Time-dependent; Array of structures (nsubgrid_quantity)
bndvalue(:)	complexgrid_scalar (9.5.1.3.76)	Boundary values of the quantity. Possibly stored on multiple (boundary) subgrids.; Time-dependent; Array of structures (nsubgrid_quantity)
flux(:)	complexgrid_vector (9.5.1.3.82)	Flux of the quantity. Possibly stored on multiple subgrids.; Time-dependent; Array of structures (nsubgrid_quantity)
bndflux(:)	complexgrid_vector (9.5.1.3.82)	Flux of the quantity. Possibly stored on multiple (boundary) subgrids.; Time-dependent; Array of structures (nsubgrid_quantity)
transpcoeff(:)	edge_fluid_scalar_transpcoeff (9.5.1.3.164)	Transport coefficients; Time-dependent; Array of structures (nsubgrid_quantity)
source(:)	complexgrid_scalar (9.5.1.3.76)	Source; Time-dependent; Array of structures (nsubgrid_quantity)

Type of: edge\_fluid:ni (1675) I edge\_fluid:ti (1675) I edge\_fluid\_vector:comps (1679) I edge\_fluid\_vector\_simplestruct:comps (1680)

### 9.5.1.3.163 edge\_fluid\_scalar\_simplestruct

A scalar fluid quantity. To be used as simple structure.

member	type	description
value(:)	complexgrid_scalar (9.5.1.3.76)	Value of the quantity. Possibly stored on multiple subgrids.; Time-dependent; Array of structures (nsubgrid_quantity)
bndvalue(:)	complexgrid_scalar (9.5.1.3.76)	Boundary values of the quantity. Possibly stored on multiple (boundary) subgrids.; Time-dependent; Array of structures (nsubgrid_quantity)
flux(:)	complexgrid_vector (9.5.1.3.82)	Flux of the quantity. Possibly stored on multiple subgrids.; Time-dependent; Array of structures (nsubgrid_quantity)
bndflux(:)	complexgrid_vector (9.5.1.3.82)	Flux of the quantity. Possibly stored on multiple (boundary) subgrids.; Time-dependent; Array of structures (nsubgrid_quantity)
transpcoeff(:)	edge_fluid_scalar_transpcoeff (9.5.1.3.164)	Transport coefficients; Time-dependent; Array of structures (nsubgrid_quantity)
source(:)	complexgrid_scalar (9.5.1.3.76)	Source; Time-dependent; Array of structures (nsubgrid_quantity)

Type of: edge\_fluid:ne (1675) I edge\_fluid:po (1675) I edge\_fluid:te (1675)

### 9.5.1.3.164 edge\_fluid\_scalar\_transpcoeff

Transport coefficients; Time-dependent; Array of structures (nsubgrid\_quantity)

member	type	description
d	complexgrid_vector_simplestruct (9.5.1.3.83)	Diffusivity [m <sup>2</sup> /s]; Time-dependent;
v	complexgrid_vector_simplestruct (9.5.1.3.83)	Velocity [m/s]; Time-dependent;

Type of: edge\_fluid\_scalar:transpcoeff (1676) I edge\_fluid\_scalar\_simplestruct:transpcoeff (1677)

### 9.5.1.3.165 edge\_fluid\_vector

A fluid vector quantity, with components possibly explicitly aligned to a coordinate direction. To be used as array of structure

member	type	description
griduid	integer (9.5.1.1.2)	Unique identifier of the grid this vector quantity is associated with.
basis	integer (9.5.1.1.2)	Index of basis (defined in associated grid) this vector is aligned to; If set to GRID.UNDEFINED=0, the canonical basis of the default coordinates of the grid assumed.
align	vecint_type (9.5.1.2.10)	Alignment of vector components, numerical flag. Int vector (number of vector components);
alignid	vecstring_type (9.5.1.2.11)	Alignment of vector components, string description. String vector (number of vector components);
comps(:)	edge_fluid_scalar (9.5.1.3.162)	Components of the vector. Array of structures (number of vector components); Time-dependent;

Type of: edge\_fluid:ti\_aniso (1675) I edge\_fluid:vi (1675)

### 9.5.1.3.166 edge\_fluid\_vector\_simplestruct

A fluid vector quantity, with components possibly explicitly aligned to a coordinate direction. To be used as simple structure.

member	type	description
griduid	integer (9.5.1.1.2)	Unique identifier of the grid this vector quantity is associated with.
basis	integer (9.5.1.1.2)	Index of basis (defined in associated grid) this vector is aligned to; If set to GRID.UNDEFINED=0, the canonical basis of the default coordinates of the grid assumed.
comps(:)	edge_fluid_scalar (9.5.1.3.162)	Components of the vector. Array of structures(ndim); Time-dependent;
align	vecint_type (9.5.1.2.10)	Alignment of vector components, numerical flag. Int vector(ndim);
alignid	vecstring_type (9.5.1.2.11)	Alignment of vector components, string description. String vector(ndim);

Type of: edge\_fluid:j (1675) I edge\_fluid:te\_aniso (1675) I edge\_fluid:ve (1675)

### 9.5.1.3.167 edge\_kinetic

Kinetic quantities

member	type	description
f(:)	edge_kinetic_distribution (9.5.1.3.168)	Distribution function $[1/m^3 (m/s)^{-3}]$ . Array of structuresr(nspecies); Time-dependent;

Type of: edge:kinetic (1530)

### 9.5.1.3.168 edge\_kinetic\_distribution

Distribution function  $[1/m^3 (m/s)^{-3}]$ . Array of structuresr(nspecies); Time-dependent;

member	type	description
value(:)	complexgrid_scalar (9.5.1.3.76)	Value of distribution function. Possibly stored on multiple subgrids.; Vector (nsubgrid_quantity). Time-dependent;
bndvalue(:)	complexgrid_scalar (9.5.1.3.76)	Boundary value of distribution function. Possibly stored on multiple subgrids.; Vector (nsubgrid_quantity). Time-dependent;
fluxes(:)	complexgrid_vector (9.5.1.3.82)	Fluxes in phase space. Possibly stored on multiple subgrids.; Vector (nsubgrid_quantity). Time-dependent;
source(:)	complexgrid_scalar (9.5.1.3.76)	Sources in phase space. Possibly stored on multiple subgrids.; Vector (nsubgrid_quantity). Time-dependent;

Type of: edge\_kinetic:f (1681)

### 9.5.1.3.169 edges

Edges defining the coil volume faces. Structure array. Replicate this edge structure N-times for N-edge cross sections. Use just one for wire coil approximation.

member	type	description
edge_rzphi	rzphiID (9.5.1.3.331)	Sequence of points describing a coil edge. Vector (npoints)

Type of: desc\_coils:edges (1637)

### 9.5.1.3.170 edgespecies

Array of edge species.

member	type	description
nucindex	integer (9.5.1.1.2)	Index into list of nuclei; int
zmin	float (9.5.1.1.1)	Minimum Z of species charge state bundle
zmax	float (9.5.1.1.1)	Maximum Z of species charge state bundle

member	type	description
label	string (9.5.1.1.3)	String identifying the species (e.g. D0, D+, C0, C+, C+2, ...)

Type of: compositions\_type:edgespecies (1602)

### 9.5.1.3.171 element\_desc

Description of atomic elements used in wall element layer compositions

member	type	description
label	string (9.5.1.1.3)	Element name/label
zn	integer (9.5.1.1.2)	Nuclear charge
amn	float (9.5.1.1.1)	Nuclear mass
density	float (9.5.1.1.1)	Material density (atoms/m <sup>3</sup> )

Type of: surface:elements (1900)

### 9.5.1.3.172 entry\_def

Structure defining a database entry

member	type	description
user	string (9.5.1.1.3)	Name of the user if private data. Value should be ITM if stored in the official common ITM tree
machine	string (9.5.1.1.3)	Name of the device
shot	integer (9.5.1.1.2)	Shot number
run	integer (9.5.1.1.2)	Run number

Type of: mdinfo:md\_entry (1754)

### 9.5.1.3.173 enum\_instance

Specifies a specific enumerated instance of an object or process in term of its type, name and an index. E.g. the input could be the wave with index=2, selected from all waves launched by the antenna with name=A2, where the antenna is of type=IC.

member	type	description
type	identifier (9.5.1.3.214)	Identify the type of the object or process.
name	string (9.5.1.1.3)	The name of the object or process. Here the object should be an instans of the type specified in the field type.
index	integer (9.5.1.1.2)	Index the separating objects or processes with the same name.

Type of: coherentwave:wave\_id (1582) I distri\_vec:source\_id (1665) I distri\_vec:wave\_id (1665) I distsource\_source:source\_id (1670)

### 9.5.1.3.174 eqconstraint

measurements to constrain the equilibrium, output values and accuracy of the fit

member	type	description
bpol	eqmes1D (9.5.1.3.177)	poloidal pickup coils [T]
bvac.r	eqmes0D (9.5.1.3.176)	Vacuum field times radius in the toroidal field magnet [T.m];
diamagflux	eqmes0D (9.5.1.3.176)	Diamagnetic flux [Wb], defined as integral (Btor - Btor,vac) dS where the integral is over the poloidal cross section of the plasma. It is measured by a single wire loop around the cross section of the torus (e.g. Wesson, Tokamaks, 1997, p.473). It gives information about the separation of the two source profiles p' and FF' of the Grad-Shafranov equation.
faraday	eqmes1D (9.5.1.3.177)	Faraday rotation angles [rad]
flux	eqmes1D (9.5.1.3.177)	Poloidal flux loops [Wb]
i.plasma	eqmes0D (9.5.1.3.176)	Plasma current [A];
isoflux	isoflux (9.5.1.3.220)	Point series at which the flux is considered the same
jsurf	eqmes1D (9.5.1.3.177)	Average of current density on the flux surface [A/m <sup>2</sup> ]
magnet.iron	magnet.iron (9.5.1.3.237)	Magnetisation in iron segments [T]
mse	eqmes1D (9.5.1.3.177)	MSE angles [rad]

member	type	description
ne	eqmes1D (9.5.1.3.177)	Electron density [ $m^{-3}$ for local measurement, $m^{-2}$ if line integrated]
pfcurrent	eqmes1D (9.5.1.3.177)	Current in poloidal field coils [A]
pressure	eqmes1D (9.5.1.3.177)	Total pressure [Pa]
q	q (9.5.1.3.291)	Safety factor
xpts	xpts (9.5.1.3.439)	Position of the X-point(s)

Type of: equilibrium:eqconstraint (1532)

### 9.5.1.3.175 eqgeometry

Geometry of the plasma boundary

member	type	description
source	string (9.5.1.1.3)	Comment describing the origin of the eqgeometry data; String
boundarytype	integer (9.5.1.1.2)	0 (limiter) or 1 (separatrix); Integer; Time-dependent
boundary(:)	rz1Dexp (9.5.1.3.327)	RZ description of the plasma boundary; This is formally declared as an array of structure to allow for time-dependent size of the R and Z vectors in the sub-structure below. However, boundary must be allocated to size 1. Time-dependent;
geom_axis	rz0D (9.5.1.3.324)	position of the geometric axis [m]; Time-dependent; Scalar
a_minor	float (9.5.1.1.1)	Minor radius of the plasma boundary [m]; Time-dependent; Scalar
elongation	float (9.5.1.1.1)	Elongation of the plasma boundary; Time-dependent; Scalar
elong_upper	float (9.5.1.1.1)	Elongation upper of the plasma boundary; Time-dependent; Scalar
elong_lower	float (9.5.1.1.1)	Elongation lower of the plasma boundary; Time-dependent; Scalar
tria_upper	float (9.5.1.1.1)	Upper triangularity of the plasma boundary; Time-dependent; Scalar
tria_lower	float (9.5.1.1.1)	Lower triangularity of the plasma boundary; Time-dependent; Scalar
xpts(:)	rz1Dexp (9.5.1.3.327)	Position of the Xpoints, first is the active xpoint if diverted [m]; This is formally declared as an array of structure to allow for time-dependent size of the R and Z vectors in the sub-structure below. However, xpts must be allocated to size 1. Time-dependent;
left_low_st	rz0D (9.5.1.3.324)	Position of the lower left strike point [m]; Time-dependent; Scalar
right_low_st	rz0D (9.5.1.3.324)	Position of the lower right strike point [m]; Time-dependent; Scalar
left_up_st	rz0D (9.5.1.3.324)	Position of the upper left strike point [m]; Time-dependent; Scalar
right_up_st	rz0D (9.5.1.3.324)	Position of the upper right strike point [m]; Time-dependent; Scalar
active_limit	rz0D (9.5.1.3.324)	Position of the active limiter point (point of the plasma boundary in contact with the limiter) [m]; Set R = 0 for X-point plasma; Time-dependent; Scalar
ang_lcms_upo	float (9.5.1.1.1)	Angle at the LMCS X point upper outer; Time-dependent; Scalar
ang_lcms_upi	float (9.5.1.1.1)	Angle at the LMCS X point upper inner; Time-dependent; Scalar
ang_lcms_lwo	float (9.5.1.1.1)	Angle at the LMCS X point lower outer; Time-dependent; Scalar
ang_lcms_lwi	float (9.5.1.1.1)	Angle at the LMCS X point lower inner; Time-dependent; Scalar

Type of: equilibrium:eqgeometry (1532) I scenario:eqgeometry (1554)

### 9.5.1.3.176 eqmes0D

Structure for equilibrium measurement 0D signal

member	type	description
measured	float (9.5.1.1.1)	Measured value of the signal; Time-dependent; Scalar.
source	string (9.5.1.1.3)	Path to the source signal (diagnostic or genprof, from which to read all info on the signal); String
time	float (9.5.1.1.1)	Time (exact time slice used from the time array of the source signal. If the time slice does not exist in the time array of the source signal, it means linear interpolation has been used); Time-dependent; Scalar.
exact	integer (9.5.1.1.2)	1 means exact data, is not fitted; 0 means the equilibrium code does a least square fit; scalar integer
weight	float (9.5.1.1.1)	weight given to the measurement ( $\zeta=0$ ); Time-dependent; Scalar.
sigma	float (9.5.1.1.1)	standard deviation of the measurement; Time-dependent; Scalar.
calculated	float (9.5.1.1.1)	Signal as recalculated by the equilibrium code; Time-dependent; Scalar.
chi2	float (9.5.1.1.1)	$\chi^2$ of (calculated-measured); Time-dependent; Scalar.

Type of: eqconstraint:bvac.r (1688) I eqconstraint:diamagflux (1688) I eqconstraint:i\_plasma (1688)

### 9.5.1.3.177 eqmes1D

Structure for equilibrium measurement 1D signal

member	type	description
measured	vecflt.type (9.5.1.2.9)	Measured value of the signal; Time-dependent; Array(nmeas)
source	string (9.5.1.1.3)	Path to the source signal (diagnostic or genprof, from which to read all info on the signal), e.g. 'magdiag/bpol.probes/measure/value'. String
time	float (9.5.1.1.1)	Exact time slice used from the time array of the source signal. If the time slice does not exist in the time array of the source signal, it means linear interpolation has been used); Time-dependent; Scalar
exact	vecint.type (9.5.1.2.10)	1 means exact data, is not fitted; 0 means the equilibrium code does a least square fit; Time-dependent; Array(nmeas)
weight	vecflt.type (9.5.1.2.9)	weight given to the measurement ( $\chi=0$ ); Time-dependent; Array(nmeas)
sigma	vecflt.type (9.5.1.2.9)	standard deviation of the measurement; Time-dependent; Array(nmeas)
calculated	vecflt.type (9.5.1.2.9)	Signal as recalculated by the equilibrium code; Time-dependent; Array(nmeas)
chi2	vecflt.type (9.5.1.2.9)	chi <sup>2</sup> of (calculated-measured); Time-dependent; Array(nmeas)

Type of: eqconstraint:bpol (1688) I eqconstraint:faraday (1688) I eqconstraint:flux (1688) I eqconstraint:jsurf (1688) I eqconstraint:mse (1688) I eqconstraint:ne (1688) I eqconstraint:pfcurent (1688) I eqconstraint:pressure (1688) I magnet\_iron:mr (1751) I magnet\_iron:mz (1751)

### 9.5.1.3.178 equilibrium\_profiles2d\_grid

definition of the 2D grid

member	type	description
dim1	vecflt.type (9.5.1.2.9)	First dimension values; Time-dependent; Vector (ndim1)
dim2	vecflt.type (9.5.1.2.9)	Second dimension values; Time-dependent; Vector (ndim2)
connect	matint.type (9.5.1.2.8)	In case of a finite elemnt representation, lists the points (3 for triangles, 4 for quadrangles) which define a finite element. In this case, ndim1=ndim2 and the value of grid_connect represents the index of the points in the list 1:ndim. E.g. : grid_connect(i,1:4) is a list of four integers [k1 k2 k3 k4] meaning that finite element #i is defined by the points (dim1(k1),dim2(k1)),(dim1(k2),dim2(k2)),(dim1(k3),dim2(k3)) and (dim1(k4),dim2(k4)); Time-dependent; Matrix of integers (nelement,4)

Type of: equilibrium\_profiles\_2d:grid (1693)

### 9.5.1.3.179 equilibrium\_profiles\_2d

output profiles in the poloidal plane

member	type	description
grid.type	vecstring.type (9.5.1.2.11)	Selection of one of a set of grid types. 1-rectangular (R,Z) grid, in this case the position arrays should not be filled since they are redundant with grid/dim1 and dim2.
grid	equilibrium_profiles2d_grid (9.5.1.3.178)	definition of the 2D grid
r	matflt.type (9.5.1.2.7)	values of the major radius on the grid [m]; Time-dependent; Matrix (ndim1, ndim2)
z	matflt.type (9.5.1.2.7)	values of the altitude on the grid [m]; Time-dependent; Matrix (ndim1, ndim2)
psi	matflt.type (9.5.1.2.7)	values of the poloidal flux at the grid in the poloidal plane [Wb]; Time-dependent; Matrix (ndim1, ndim2)
theta	matflt.type (9.5.1.2.7)	values of the poloidal angle on the grid [rad]; Time-dependent; Matrix (ndim1, ndim2)
phi	matflt.type (9.5.1.2.7)	Toroidal flux [Wb]. Time-dependent; Matrix (ndim1, ndim2)
jphi	matflt.type (9.5.1.2.7)	toroidal plasma current density [A m <sup>-2</sup> ]; Time-dependent; Matrix (ndim1, ndim2)
jpar	matflt.type (9.5.1.2.7)	parallel (to magnetic field) plasma current density [A m <sup>-2</sup> ]; Time-dependent; Matrix (ndim1, ndim2)
br	matflt.type (9.5.1.2.7)	R component of the poloidal magnetic field at the specified grid [T]; Time-dependent; Matrix (ndim1, ndim2)
bz	matflt.type (9.5.1.2.7)	Z component of the poloidal magnetic field at the specified grid [T]; Time-dependent; Matrix (ndim1, ndim2)
bphi	matflt.type (9.5.1.2.7)	toroidal component of the magnetic field at the specified grid [T]; Time-dependent; Matrix (ndim1, ndim2)
vphi	matflt.type (9.5.1.2.7)	toroidal flow velocity [m/s]; Time-dependent; Matrix (ndim1, ndim2)
vtheta	matflt.type (9.5.1.2.7)	Poloidal flow velocity [m/s]; Time-dependent; Matrix (ndim1, ndim2)
rho.mass	matflt.type (9.5.1.2.7)	Mass density [kg/m <sup>3</sup> ]; Time-dependent; Matrix (ndim1, ndim2)
pressure	matflt.type (9.5.1.2.7)	Pressure [Pa]; Time-dependent; Matrix (ndim1, ndim2)
temperature	matflt.type (9.5.1.2.7)	Temperature [eV]; Time-dependent; Matrix (ndim1, ndim2)



Type of: equilibrium:profiles\_2d (1532)

### 9.5.1.3.180 exp0D

Structure for experimental time-dependent scalar signal

member	type	description
value	float (9.5.1.1.1)	Signal value; Time-dependent; Scalar
abserror	float (9.5.1.1.1)	Absolute error on signal; Time-dependent; Scalar
relerror	float (9.5.1.1.1)	Relative error on signal (normalised to signal value); Time-dependent; Scalar

Type of: antenna\_ec:power (1564) I antenna\_ic:frequency (1565) I antenna\_ic:power (1565) I antenna\_lh:power (1566) I distsource\_global\_param:src\_pow (1666) I distsource\_global\_param:src\_rate (1666) I fusiondiag\_ct\_chords:energy (1712) I fusiondiag\_spec1d:energy (1718) I fusiondiag\_spec2d:energy (1719) I magdiag:diamagflux (1541) I magdiag:ip (1541) I nbi\_unit:inj\_eng\_unit (1769) I nbi\_unit:pow\_unit (1769) I straps:phase (1899) I toroidfield:bvac\_r (1557) I toroidfield:current (1557)

### 9.5.1.3.181 exp1D

Structure for experimental 1D signal

member	type	description
value	vecflt_type (9.5.1.2.9)	Signal value; Time-dependent; Vector
abserror	vecflt_type (9.5.1.2.9)	Absolute error on signal; Time-dependent; Vector
relerror	vecflt_type (9.5.1.2.9)	Relative error on signal (normalised to signal value); Time-dependent; Vector

Type of: bpol\_probes:measure (1578) I coil:coilcurrent (1583) I coil:coilvoltage (1583) I cxmeasure:ti (1632) I cxmeasure:vpol (1632) I cxmeasure:vtor (1632) I distsource\_profiles\_1d:pow\_den (1668) I distsource\_profiles\_1d:src\_rate (1668) I ecmeasure:te (1673) I flux\_loops:measure (1700) I fusiondiag\_ct\_chords:measure (1712) I fusiondiag\_ct\_energy:energy (1713) I fusiondiag\_ct\_energy:measure (1713) I fusiondiag\_detect\_ct\_energy:energy (1714) I fusiondiag\_detect\_ct\_energy:measure (1714) I fusiondiag\_emissivity1d:r (1715) I fusiondiag\_emissivity1d:z (1715) I fusiondiag\_spec1d:measure (1718) I halpha\_setup:solidangle (1726) I halphadiag:intensity (1534) I lang\_derived:measure (1736) I lang\_measure:area (1737) I lang\_measure:measure (1737) I lineintegraldiag:measure (1746) I lithmeasure:ne (1747) I magnetise:mr (1752) I magnetise:mz (1752) I modules:amplitude (1760) I modules:phase (1760) I msediag\_radia\_chord:totradiance (1764) I msediag\_radiance:wavelength (1765) I nbi\_unit:beamcurfrac (1769) I nbi\_unit:beampowfrac (1769) I pfcoils:coilcurrent (1787) I pfcoils:coilvoltage (1787) I pfsupplies:current (1792) I pfsupplies:voltage (1792) I polarimetry:measure (1798) I rfameasure:ti (1835) I rzphi1Dexp:phi (1846) I rzphi1Dexp:r (1846) I rzphi1Dexp:z (1846) I tsmeasure:ne (1916) I tsmeasure:te (1916)

### 9.5.1.3.182 exp2D

Structure for experimental 2D signal

member	type	description
value	matflt_type (9.5.1.2.7)	Signal value; Time-dependent; Matrix
abserror	matflt_type (9.5.1.2.7)	Absolute error on signal; Time-dependent; Matrix
relerror	matflt_type (9.5.1.2.7)	Relative error on signal (normalised to signal value); Time-dependent; Matrix

Type of: distsource\_profiles\_2d:pow\_den (1669) I distsource\_profiles\_2d:src\_rate (1669) I fusiondiag\_emissivity2d:r (1716) I fusiondiag\_emissivity2d:z (1716) I fusiondiag\_spec2d:measure (1719)

### 9.5.1.3.183 f\_expansion

Distribution function,  $f$ , expanded into a vector of successive approximations. The first element in the vector ( $f\_expansion(1)$ ) is the zeroth order distribution function, while the  $K$ :th element in the vector ( $f\_expansion(K)$ ) is the  $K$ :th correction, such that the total distribution function is a sum over all elements in the  $f\_expansion$  vector. Time-dependent. Structure array( $Nf\_expansion$ )

member	type	description
grid	complexgrid (9.5.1.3.71)	Grid for storing the distribution function. Time-dependent; Complexgrid

member	type	description
values	complexgrid_scalar (9.5.1.3.76)	Values of the distribution function [m <sup>-3</sup> (m/s) <sup>-3</sup> ]. Time-dependent; Complexgrid_scalar.

Type of: dist\_func:f\_expansion (1644)

### 9.5.1.3.184 filter

Laplace proper filter

member	type	description
num	matflt.type (9.5.1.2.7)	Coefficients of the numerator, in increasing order : a0 + a1*s + ... + an*s <sup>n</sup> ; Matrix (nsupplies,n)
den	matflt.type (9.5.1.2.7)	Coefficients of the denominator, in increasing order : b0 + b1*s + ... + bm*s <sup>m</sup> ; Matrix (nsupplies,m)

Type of: desc\_supply:filter (1641)

### 9.5.1.3.185 flush

FLUSH package coefficients for the mapping of the equilibrium. The time grid of this structure is the same as the equilibrium structure above.

member	type	description
datainfo	datainfo (9.5.1.3.121)	Generic information on a data item
position	rz1D (9.5.1.3.325)	Major radius and altitude of the FLUSH grid [m]; Time-dependent; Vectors resp. (nR) and (nZ)
coef	matflt.type (9.5.1.2.7)	Coefficients of the fit; Time-dependent; Matrix 2D (nR,nZ)
codeparam	codeparam (9.5.1.3.66)	Code parameters

Type of: equilibrium:flush (1532)

### 9.5.1.3.186 flux\_loops

Poloidal flux loops RZ coordinates have 1 component for the full loop and two if there is a negative reference loop

member	type	description
setup_floops	setup_floops (9.5.1.3.360)	diagnostic setup information
measure	exp1D (9.5.1.3.181)	Measured flux [Wb]; Time-dependent; Vector (nloops)

Type of: magdiag:flux\_loops (1541)

### 9.5.1.3.187 fluxel

Structure for the fluxes of a field of the core transport equations (electrons); Time-dependent;

member	type	description
flux_dv	vecflt.type (9.5.1.2.9)	Flux of the field calculated from the transport coefficients. Time-dependent; Vector (nrho)
flux_interp	vecflt.type (9.5.1.2.9)	Interpretative flux deduced from measured data, the integral of the source term, and the time derivative of the field. Time-dependent; Vector (nrho)

Type of: corefield:flux (1608)

### 9.5.1.3.188 fluximp

Structure for the fluxes of a field of the core transport equations (impurities); Time-dependent;

member	type	description
flux_dv	matflt.type (9.5.1.2.7)	Flux of the field calculated from the transport coefficients. Time-dependent; Array2D (nrho,nzimp)
flux_interp	matflt.type (9.5.1.2.7)	Interpretative flux deduced from measured data, the integral of the source term, and the time derivative of the field. Time-dependent; Array2D (nrho,nzimp)

Type of: `impurity_type:flux` (1731)

### 9.5.1.3.189 fluxion

Structure for the fluxes of a field of the core transport equations (ions); Time-dependent;

member	type	description
<code>flux_dv</code>	<code>matflt.type</code> (9.5.1.2.7)	Flux of the field calculated from the transport coefficients. Time-dependent; Matrix (nrho,nion)
<code>flux_interp</code>	<code>matflt.type</code> (9.5.1.2.7)	Interpretative flux deduced from measured data, the integral of the source term, and the time derivative of the field. Time-dependent; Matrix (nrho,nion)

Type of: `corefieldion:flux` (1609)

### 9.5.1.3.190 fullwave

Solution by full wave code

member	type	description
<code>grid</code>	<code>complexgrid</code> (9.5.1.3.71)	Grid for storing the components of the wave field; Time-dependent
<code>e.components</code>	<code>e.components</code> (9.5.1.3.158)	E-field representation in terms of the parallel and circularly polarised components
<code>pol.decomp</code>	<code>pol.decomp</code> (9.5.1.3.283)	TO BE REMOVED, being replaced by <code>e.components</code> and <code>grid</code> . Kept only to make smooth transition between data-type versions. [Poloidal decomposition of the wave fields. Uses the flux surface grid in <code>grid_1d</code> .]
<code>local</code>	<code>local</code> (9.5.1.3.235)	TO BE REMOVED, being replaced by <code>e.components</code> and <code>grid</code> . Kept only to make smooth transition between data-type versions. [Local description of the wave fields. Uses the grid in <code>grid_2d</code> .]

Type of: `coherentwave:fullwave` (1582)

### 9.5.1.3.191 fusiondiag\_colli\_3d

Geometry of each channel of detector for arbitrary cross section. Replicate this structure for each channel.

member	type	description
<code>name</code>	<code>string</code> (9.5.1.1.3)	Name tag for the chord. String.
<code>voxels(:)</code>	<code>fusiondiag_voxels</code> (9.5.1.3.206)	Array of voxel structures defining the plasma region viewed from each collimator and scaling factor for effective solid angle for sources.

Type of: `fusiondiag_collimator:colli_3d` (1708)

### 9.5.1.3.192 fusiondiag\_colli\_circ

Geometry of each channel of detector for circular cross section. Replicate this structure for each channel.

member	type	description
<code>name</code>	<code>string</code> (9.5.1.1.3)	Name tag for the chord.
<code>setup_line</code>	<code>setup_line</code> (9.5.1.3.362)	Geometric description of the line of sight. First pivot close to detector position and second pivot at first wall hit.
<code>colliunit(:)</code>	<code>fusiondiag_colliunit_circ</code> (9.5.1.3.195)	Detail of each collimator unit of each chord. Replicate this structure for each collimator.

Type of: `fusiondiag_collimator:colli_circ` (1708)

### 9.5.1.3.193 fusiondiag\_colli\_poly

Geometry of each channel of detector for polygon cross section. Replicate this structure for each channel.

member	type	description
<code>name</code>	<code>string</code> (9.5.1.1.3)	Name tag for the chord.
<code>setup_line</code>	<code>setup_line</code> (9.5.1.3.362)	Geometric description of the line of sight. First pivot close to detector position and second pivot at first wall hit.
<code>colliunit(:)</code>	<code>fusiondiag_colliunit_poly</code> (9.5.1.3.196)	Detail of each collimator unit of each chord. Replicate this structure for each collimator.

Type of: fusiondiag\_collimator:colli\_poly (1708)

### 9.5.1.3.194 fusiondiag\_collimator

Collimator array.

member	type	description
colli_circ(:)	fusiondiag_colli_circ (9.5.1.3.192)	Geometry of each channel of detector for circular cross section. Replicate this structure for each channel.
colli_poly(:)	fusiondiag_colli_poly (9.5.1.3.193)	Geometry of each channel of detector for polygon cross section. Replicate this structure for each channel.
colli_3d(:)	fusiondiag_colli_3d (9.5.1.3.191)	Geometry of each channel of detector for arbitrary cross section. Replicate this structure for each channel.

Type of: fusiondiag\_fus\_product:collimator (1717)

### 9.5.1.3.195 fusiondiag\_colliunit\_circ

Detail of each collimator unit of each chord. Replicate this structure for each collimator.

member	type	description
radius	vecflt_type (9.5.1.2.9)	Radius of cross section; Typically dim=2 for just entry and exit of collimator; Vector (dim)
centre	rzphi1D (9.5.1.3.331)	Position of cross section centre; Typically dim=2 for just entry and exit of collimator; Vector (dim)

Type of: fusiondiag\_colli\_circ:colliunit (1706)

### 9.5.1.3.196 fusiondiag\_colliunit\_poly

Detail of each collimator unit of each chord. Replicate this structure for each collimator.

member	type	description
dimension	float (9.5.1.1.1)	Number of edges of cross section.
nodes	rzphi2D (9.5.1.3.333)	Coordinates of nodes defining each cross section; Typically dim=2 for just entry and exit of collimator; Vector (dim, nnodes)

Type of: fusiondiag\_colli\_poly:colliunit (1707)

### 9.5.1.3.197 fusiondiag\_counts

Integrated emissivity [ $s^{-1}$ ].

member	type	description
units	string (9.5.1.1.3)	Energy units (ev, tof - time of flight)
ct_chords(:)	fusiondiag_ct_chords (9.5.1.3.198)	Integrated emissivity for all spatial chords. Replicate the structure for each energy bin [ $s^{-1}$ ].
ct_energy(:)	fusiondiag_ct_energy (9.5.1.3.199)	Integrated emissivity for each chord as function of energy like variable. Replicate this structure for each chord [ $s^{-1}$ ].
detect_ct(:)	fusiondiag_detect_ct_energy (9.5.1.3.200)	Detected integrated emissivity for each chord as function of energy like variable. Replicate this structure for each chord. This structure contains the actual experimental data as obtained from the detector. To get from species emissivity to the detector counts a detector transfer matrix is used (should be shot independent) since a monoenergetic beam will ultimately show up with a given spread in the detector channels. Each detector type or l.o.s. might have a dedicated detector transfer matrix since the energy discrimination can vary. [ $s^{-1}$ ].

Type of: fusiondiag\_fus\_product:counts (1717)

### 9.5.1.3.198 fusiondiag\_ct\_chords

Integrated emissivity for all spatial chords. Replicate the structure for each energy bin [ $s^{-1}$ ].

member	type	description
name	vecstring_type (9.5.1.2.11)	Name tag for each chord. Vector (nchords)
energy	exp0D (9.5.1.3.180)	Energy like variable span. Use minimum energy when no energy spectra is resolved.

member	type	description
measure	exp1D (9.5.1.3.181)	Measured counts. Vector (nchords)

Type of: fusiondiag\_counts:ct\_chords (1711)

### 9.5.1.3.199 fusiondiag\_ct\_energy

Integrated emissivity for each chord as function of energy like variable. Replicate this structure for each chord [s<sup>-1</sup>].

member	type	description
energy	exp1D (9.5.1.3.181)	Energy array of detected counts spectra. Vector (nenergy)
measure	exp1D (9.5.1.3.181)	Measured counts spectra. Vector (nenergy)

Type of: fusiondiag\_counts:ct\_energy (1711)

### 9.5.1.3.200 fusiondiag\_detect\_ct\_energy

Detected integrated emissivity for each chord as function of energy like variable. Replicate this structure for each chord. This structure contains the actual experimental data as obtained from the detector. To get from species emissivity to the detector counts a detector transfer matrix is used (should be shot independent) since a monoenergetic beam will ultimately show up with a given spread in the detector channels. Each detector type or l.o.s. might have a dedicated detector transfer matrix since the energy discrimination can vary. [s<sup>-1</sup>].

member	type	description
energy	exp1D (9.5.1.3.181)	Energy array of detected counts spectra. Vector (nenergy)
measure	exp1D (9.5.1.3.181)	Measured counts spectra. Vector (nenergy)
diag_func	diag_func (9.5.1.3.128)	Structure to provide the description on the detector used and store the transfer matrix of the detector for that l.o.s.

Type of: fusiondiag\_counts:detect\_ct (1711)

### 9.5.1.3.201 fusiondiag\_emissivity1d

Reconstructed 1D emissivity [counts.m<sup>-3</sup>.s<sup>-1</sup>].

member	type	description
units	string (9.5.1.1.3)	Energy units (ev, tof - time of flight)
r	exp1D (9.5.1.3.181)	horizontal grid. Vector (dim)
z	exp1D (9.5.1.3.181)	vertical grid. Vector (dim)
spec1d(:)	fusiondiag_spec1d (9.5.1.3.204)	Emissivity in given energy like variable range [counts.m <sup>-3</sup> .s <sup>-1</sup> ].

Type of: fusiondiag\_fus\_product:emissivity1d (1717)

### 9.5.1.3.202 fusiondiag\_emissivity2d

Reconstructed 2D emissivity [counts.m<sup>-3</sup>.s<sup>-1</sup>].

member	type	description
units	string (9.5.1.1.3)	Energy units (ev, tof - time of flight)
r	exp2D (9.5.1.3.182)	radial grid. Vector (dim1,dim2)
z	exp2D (9.5.1.3.182)	vertical grid. Vector (dim1,dim2)
spec2d(:)	fusiondiag_spec2d (9.5.1.3.205)	Emissivity in given energy like variable range [counts.m <sup>-3</sup> .s <sup>-1</sup> ].

Type of: fusiondiag\_fus\_product:emissivity2d (1717)

### 9.5.1.3.203 fusiondiag\_fus\_product

Source. Time-dependent. Structure array. Replicate this source structure to accommodate neutron and gammas.

member	type	description
product	string (9.5.1.1.3)	Type of fusion product (neutron,gamma)
reaction	string (9.5.1.1.3)	Type of reaction involved (e.g. DD neutron, Be-alpha,n,gamma-C)
collimator	fusiondiag_collimator (9.5.1.3.194)	Collimator array.
counts	fusiondiag_counts (9.5.1.3.197)	Integrated emissivity [s <sup>-1</sup> ].
emissivity1d	fusiondiag_emissivity1d (9.5.1.3.201)	Reconstructed 1D emissivity [counts.m <sup>-3</sup> .s <sup>-1</sup> ].
emissivity2d	fusiondiag_emissivity2d (9.5.1.3.202)	Reconstructed 2D emissivity [counts.m <sup>-3</sup> .s <sup>-1</sup> ].
codeparam	codeparam (9.5.1.3.66)	Code parameters

Type of: fusiondiag:fus\_product (1533)

#### 9.5.1.3.204 fusiondiag\_spec1d

Emissivity in given energy like variable range [counts.m<sup>-3</sup>.s<sup>-1</sup>].

member	type	description
energy	exp0D (9.5.1.3.180)	Energy like variable span. Use minimum energy when no energy spectra is resolved. Scalar
measure	exp1D (9.5.1.3.181)	reconstruction. Vector (dim)

Type of: fusiondiag\_emissivity1d:spec1d (1715)

#### 9.5.1.3.205 fusiondiag\_spec2d

Emissivity in given energy like variable range [counts.m<sup>-3</sup>.s<sup>-1</sup>].

member	type	description
energy	exp0D (9.5.1.3.180)	Energy like variable span. Use minimum energy when no energy spectra is resolved. Scalar
measure	exp2D (9.5.1.3.182)	reconstruction. Vector (dim1,dim2)

Type of: fusiondiag\_emissivity2d:spec2d (1716)

#### 9.5.1.3.206 fusiondiag\_voxels

Array of voxel structures defining the plasma region viewed from each collimator and scaling factor for effective solid angle for sources.

member	type	description
centre	rzphi0D (9.5.1.3.330)	Centre of voxel; used also as origin of direction to detector
direction	rzphi0D (9.5.1.3.330)	Second point defining the direction to detector.
volume	float (9.5.1.1.1)	Voxel Volume
solid_angle	float (9.5.1.1.1)	effective solid angle (divided by 4pi) of the voxel towards detector.

Type of: fusiondiag\_colli\_3d:voxels (1705)

#### 9.5.1.3.207 geom\_iron

Geometry of the iron segments

member	type	description
npoints	vecint.type (9.5.1.2.10)	Number of points describing an element (irregular outline rzcoordinate); Vector (nsegment)
rzcoordinate	rz2D (9.5.1.3.328)	Irregular outline [m]; 2D arrays (nsegment,max_npoints)

Type of: desc\_iron:geom\_iron (1639)

#### 9.5.1.3.208 global\_param

0d output parameters

member	type	description
beta_pol	float (9.5.1.1.1)	poloidal beta; Time-dependent; Scalar
beta_tor	float (9.5.1.1.1)	toroidal beta; Time-dependent; Scalar
beta_normal	float (9.5.1.1.1)	normalised beta; Time-dependent; Scalar
i_plasma	float (9.5.1.1.1)	total toroidal plasma current [A]; Positive sign means anti-clockwise when viewed from above. Time-dependent; Scalar
li	float (9.5.1.1.1)	internal inductance; Time-dependent; Scalar
volume	float (9.5.1.1.1)	total plasma volume [m <sup>3</sup> ]; Time-dependent; Scalar
area	float (9.5.1.1.1)	area poloidal cross section [m <sup>2</sup> ]; Time-dependent; Scalar
psi_ax	float (9.5.1.1.1)	poloidal flux at the magnetic axis [Wb]; Time-dependent; Scalar
psi_bound	float (9.5.1.1.1)	poloidal flux at the selected plasma boundary (separatrix for a free boundary code; fixed boundary for fixed boundary code) [Wb]; Time-dependent; Scalar
mag_axis	mag_axis (9.5.1.3.236)	Magnetic axis values
q_95	float (9.5.1.1.1)	q at the 95% poloidal flux surface; Time-dependent; Scalar
q_min	float (9.5.1.1.1)	minimum q value in the plasma; Time-dependent; Scalar
toroid.field	b0r0 (9.5.1.3.56)	Characteristics of the vacuum toroidal field, redundant with the toroidfield CPO, to be used by the ETS
w_mhd	float (9.5.1.1.1)	Plasma energy content = $3/2 * \int(p,dV)$ with p being the total pressure (thermal + fast particles) [J]. Time-dependent; Scalar
gamma	float (9.5.1.1.1)	Adiabatic index. Time-dependent; Scalar

Type of: equilibrium:global\_param (1532)

### 9.5.1.3.209 globalparam

Various global quantities calculated from the 1D profiles. Time-dependent

member	type	description
current.tot	float (9.5.1.1.1)	Total plasma current [A]; Time-dependent; Scalar
current.bnd	float (9.5.1.1.1)	Plasma current inside transport solver boundary rho_tor_bnd [A]; Time-dependent; Scalar
current.ni	float (9.5.1.1.1)	Total non-inductive parallel current [A]; Time-dependent; Scalar
vloop	float (9.5.1.1.1)	Toroidal loop voltage [V]; Time-dependent; Scalar
li	float (9.5.1.1.1)	Internal inductance; Time-dependent; Scalar
beta_tor	float (9.5.1.1.1)	toroidal beta; Time-dependent; Scalar
beta_normal	float (9.5.1.1.1)	normalised beta; Time-dependent; Scalar
beta_pol	float (9.5.1.1.1)	poloidal beta; Time-dependent; Scalar
w_dia	float (9.5.1.1.1)	Plasma energy content = $3/2 * \int(p,dV)$ with p being the total pressure (pr.th + pr.perp). Time-dependent; Scalar

Type of: coreprof:globalparam (1523)

### 9.5.1.3.210 grid info

Specifying the grid; type of the grid (unstructured/structured/rectangular), the grid coordinate, in what variables the source is continuous/discrete, if the source is given at gyrocentre or real particle position.

member	type	description
grid.type	integer (9.5.1.1.2)	Type of grid in continuous dimensions: 1=unstructured grid, 2=structured non-rectangular grid, 3=rectangular. For rectangular grids, and/or dimensions with discrete source, the grid coordinates dim1,dim2,... is stored in vectors dim1(1:ndim1,1,1,1), dim1(1,1:ndim2,1,1),...
ngriddim	integer (9.5.1.1.2)	Number of grid dimension. For ngriddim=2 the grid is specified by dim1 and dim2 only, while dim3, dim4, dim5, and dim6 can be ignored (should not be allocated). For ngriddim=3 also dim3 is used to describe the grid etc. E.g. if your distribution is given by the three variables the poloidal flux, perpendicular and parallel velocities, then ngriddim=3 and grid.coord(1)=15, grid.coord(1)=16, grid.coord(3)=6.

member	type	description
grid_coord	vecint.type (9.5.1.2.10)	Identifies the coordinates specified in dim1, dim2, dim3, dim4, dim5, and dim6. grid_coord(K) describe the coordinate represented in dimK, for K=1,2...6. The possible coordinates are: 1=R, Major radius [m]; 2=Z, Vertical position [m]; 3=X, first cartesian coordinate in the horizontal plane [m]; 4=Y, second cartesian coordinate in the horizontal plane (grad(X) x grad(Y) = grad(Z)) [m]; 5=phi, toroidal angle [rad]; 6=psi, poloidal magnetic flux [T*m <sup>2</sup> ]; 7=rhotor, the square root of the toroidal flux; 8=theta, geometrical poloidal angle [rad]; 9=theta_b, Boozer poloidal angle [rad]; 10=vx, velocity in the x-direction [m/s]; 11=vy, velocity in the y-direction [m/s]; 12=vz, velocity in the z-direction [m/s]; 13=vel, total velocity [m/s]; 14=vphi, velocity in the phi-direction [m/s]; 15=vpar, velocity in the parallel direction [m/s]; 16=vperp, velocity in the perpendicular direction [m/s]; 17=E, Hamiltonian energy [J]; 18=Pphi, canonical toroidal angular momentum [kg m <sup>2</sup> /s]; 19=mu, magnetic moment [J/T]; 20=Lambda=mu/E [1/T]; 21=pitch=vpar/v [-]; 22=s, the position of the omnigenous plane (generalised equatorial plane) as described by the fields omnigen_surf% <i>s</i> and omnigen_surf% <i>rz</i> ; 23=particle spin; 24=n_Legendre, the index of the Legendre polynomial of the pitch, e.g. if the k:th component of dim3(1,1,k,1,1)=5 then this refer to the 5:th Legendre polynomial P_5(xi). Vector (6)
discrete_dims	vecint.type (9.5.1.2.10)	Specifies discrete or continuous grid in each dimension separately. For discrete_dims(K)=1, K=1,2...6: the source is discretely distributed at the grid points of the dimK-grid (e.g. to treat the discrete energies injected with NBI); for discrete_dims(K)=0: continuous source, i.e. the source is distributed over the continuous variable dimK (e.g. the source density is a continuous function of the major radius). Vector (6)

Type of: source\_on\_grid:grid\_info (1884)

### 9.5.1.3.211 h\_inventory

Data on wall element hydrogen inventories

member	type	description
surf_trap_de	array5dflt.type (9.5.1.2.4)	Density of hydrogen traps on internal surfaces [1/m <sup>2</sup> ]; Time-dependent; 5d float array; Dimensions: 1. compound type (indexing as in chemical_comp), 2. trap type, 3. cell index of 1d layer height discretization; 4. layer index; 5. wall element index
bulk_trap_de	array5dflt.type (9.5.1.2.4)	Density of hydrogen traps in bulk material [1/m <sup>3</sup> ]; Time-dependent; 5d float array; Dimensions: see surface_trap_density
bulk_D	array5dflt.type (9.5.1.2.4)	Diffusivity of hydrogen species in bulks of different compounds; Time-dependent; 5d float array. Dimensions: 1. index of compound (indexing as in chemical_comp), 2. index of hydrogen isotope, 3. cell index of 1d layer height discretization, 4. layer index, 5. wall element index
surface_D	array5dflt.type (9.5.1.2.4)	Diffusivity of hydrogen species of surface of different compounds; Time-dependent; Dimensions: see bulk_D
bulk_C_s	array5dflt.type (9.5.1.2.4)	Bulk mobile (solute) concentration [atoms/m <sup>3</sup> ]; Time-dependent; Dimensions: see bulk_D
surface_C_s	array5dflt.type (9.5.1.2.4)	Surface mobile (solute) concentration [atoms/m <sup>2</sup> ]; Time-dependent; Dimensions: see bulk_D
bulk_C_t	array5dflt.type (9.5.1.2.4)	Bulk trapped concentration [atoms/m <sup>3</sup> ]; Time-dependent; Dimensions: see bulk_D
surface_C_t	array5dflt.type (9.5.1.2.4)	Surface trapped concentration [atoms/m <sup>2</sup> ]; Time-dependent; Dimensions: see bulk_D
surf_recreate	array5dflt.type (9.5.1.2.4)	Recombination rate on surface (only for pure elements, not compounds) [molecules*m <sup>-2</sup> /s]; Time-dependent; Dimensions: see bulk_D

Type of: surface:h\_inventory (1900)

### 9.5.1.3.212 halpha\_setup

setup for the lines of sight of the line integrated measurement

member	type	description
name	vecstring.type (9.5.1.2.11)	Name of the channel. Array of strings (nlos).
pivot_point	rzphi1D (9.5.1.3.331)	Pivot point of l.o.s. it can be either the collimator position or entry point on the vessel. Vector (nlos)
horchordang	vecflt.type (9.5.1.2.9)	Angle [rad] of horizontal projection of l.o.s. with poloidal cross section (0 for HFS to LFS trajectory - see Convention_angles_interfdiag.pdf) [rad]. Vector (nlos)
verchordang	vecflt.type (9.5.1.2.9)	Angle of l.o.s. with vertical axis (0 for bottom-top trajectory, Pi for top-bottom trajectory - see Convention_angles_interfdiag.pdf) [rad]; Vector (npos)
second_point	rzphi1D (9.5.1.3.331)	Second point defining the l.o.s. together with the pivot_point. Vector (nlos)
solidangle	exp1D (9.5.1.3.181)	Solid angle of the detector; [sr] Vector (nlos)

Type of: halphadiag:setup (1534)

### 9.5.1.3.213 holes

Structure to describe the placing and properties of the holes



member	type	description
n_holes	integer (9.5.1.1.2)	Number of holes on each wall;
coordinates	coordinates (9.5.1.3.91)	Poloidal and Toroidal coordinates of the center of each hole;
width	width (9.5.1.3.438)	Angular width of each in the poloidal and toroidal direction;
eta	vecflt_type (9.5.1.2.9)	Resistivity of each hole [ohm.m]; Vector (n_holes)

Type of: mhd\_res\_wall2d:holes (1757)

#### 9.5.1.3.214 identifier

Standard type for identifiers. The three fields: id, flag and description are all representations of the same information. Associated with each application of this identifier-type, there should be a translation table defining the three fields for all objects to be identified.

member	type	description
id	string (9.5.1.1.3)	Short string identifier
flag	integer (9.5.1.1.2)	Integer identifier
description	string (9.5.1.1.3)	Verbose description of identifier

Type of: composition\_neutralscomp:type (1601) I compositions\_type:signature (1602) I coredelta\_values:deltaid (1607) I coreneutrals\_atomlist:ionimptype (1622) I coresource\_values:sourceid (1626) I coretransp\_values:transportid (1630) I enum\_instance:type (1687) I mhd\_ideal\_wall2d:walltype (1755) I mhd\_res\_wall2d:walltype (1757) I msediag\_polarization:type (1763) I msediag\_stokes:type (1768) I reflectometry\_antennas:type (1830) I reflectometry\_radfield:type (1831) I simp\_apert:type (1880) I wall2d:wall\_id (1931) I wall2d\_mhd:wall\_id (1932) I wall3d:wall\_id (1933) I weighted\_markers:variable\_ids (1950)

#### 9.5.1.3.215 impcoeff

Array over charge states for this particular impurity.

member	type	description
chargestate(:)	coefficients_neutrals (9.5.1.3.67)	NO DOCS

Type of: coreneutrals:impcoeff (1522)

#### 9.5.1.3.216 impurities

Array of impurities.

member	type	description
nucindex	integer (9.5.1.1.2)	Index into list of nuclei; int
i_ion	integer (9.5.1.1.2)	Index of the impurity species in the coreprof ion species ordering. Vector (nimp)
nzimp	integer (9.5.1.1.2)	Number of charge states (or bundles) considered for this impurity species.
zmin	vecflt_type (9.5.1.2.9)	Minimum Z of impurity ionisation state bundle. Vector (nzimp)
zmax	vecflt_type (9.5.1.2.9)	Maximum Z of impurity ionisation state bundle. If no bundle, zmax=zmin. Vector (nzimp)
label	vecstring_type (9.5.1.2.11)	String array (nzimp) identifying impurities (e.g. C+, C+2, C+3, C+4, C+5, C+6, ...)

Type of: compositions\_type:impurities (1602)

#### 9.5.1.3.217 impurity\_type

Array(nimp). Time-dependent

member	type	description
z	matflt_type (9.5.1.2.7)	Impurity ionisation state (averaged for bundle); Time-dependent; Array2D (nrho,nzimp)
zsqr	matflt_type (9.5.1.2.7)	Z <sup>2</sup> , Square of impurity ionisation state (averaged for bundle); Time-dependent; Array2D (nrho,nzimp)
nz	matflt_type (9.5.1.2.7)	Density of impurity in a given charge state [m <sup>-3</sup> ]. Time-dependent; Array2D (nrho,nzimp)

member	type	description
source_term	sourceimp (9.5.1.3.374)	Source term for each charge state. Time-dependent.
boundary	boundaryimp (9.5.1.3.62)	Boundary condition for each charge state. Time-dependent
transp_coef	coretransimp (9.5.1.3.114)	Transport coefficients for each charge state
flux	fluximp (9.5.1.3.188)	Fluxes of impurity particles, two definitions [ $m^{-2}.s^{-1}$ ]. Time-dependent.
time_deriv	matflt.type (9.5.1.2.7)	Integral of the time derivative term of the transport equation. Time-dependent. Array2D (nrho,nzimp)
diagnostic	coreimpurediag_type (9.5.1.3.105)	NO DOCS

Type of: coreimpur:impurity (1521)

### 9.5.1.3.218 inj\_spec

Injected species

member	type	description
amn	float (9.5.1.1.1)	Atomic mass number
zn	float (9.5.1.1.1)	Nuclear charge

Type of: nbi\_unit:inj\_spec (1769)

### 9.5.1.3.219 ions

Array of main plasma ions.

member	type	description
nucindex	integer (9.5.1.1.2)	Index into list of nuclei; int
zion	float (9.5.1.1.1)	Ion charge (of the dominant ionisation state; lumped ions are allowed); Vector (nion)
imp_flag	integer (9.5.1.1.2)	Multiple charge state calculation flag : 0-Only one charge state is considered; 1-Multiple charge state are considered and are described in impurity CPO; Vector (nion)
label	string (9.5.1.1.3)	String identifying ion (e.g. H+, D+, T+, He+2, C+, ...)

Type of: compositions\_type:ions (1602)

### 9.5.1.3.220 isoflux

Point series at which the flux is considered the same

member	type	description
position	rz1D (9.5.1.3.325)	Position of the points at which the flux is considered the same; Time-dependent; Vector (nmeas)
source	string (9.5.1.1.3)	Description or path to the source signal (diagnostic or genprof, from which to read all info on the signal), e.g. 'magdiag/bpol_probes/measure/value'. String
weight	vecflt.type (9.5.1.2.9)	weight given to the measurement ( $z=0$ ); -1 if exact data; Time-dependent; Vector (nmeas)
sigma	vecflt.type (9.5.1.2.9)	standard deviation of the measurement; Time-dependent; Vector (nmeas)
calculated	vecflt.type (9.5.1.2.9)	Signal as recalculated by the equilibrium code; Time-dependent; Vector (nmeas)
chi2	vecflt.type (9.5.1.2.9)	chi <sup>2</sup> of (calculated-measured); Time-dependent; Vector (nmeas)

Type of: eqconstraint:isoflux (1688)

### 9.5.1.3.221 jni

Non-inductive parallel current density [ $A/m^2$ ]; Time-dependent;

member	type	description
value	vecflt.type (9.5.1.2.9)	Value of jni; Time-dependent; Vector (nrho)
integral	vecflt.type (9.5.1.2.9)	Integral from 0 to rho of jni. Time-dependent; Vector (nrho)
source	string (9.5.1.1.3)	Source of the profile (any comment describing the origin of the profile : code, path to diagnostic signals, massaging, ...); String

Type of: psi:jni (1803)

### 9.5.1.3.222 lang\_derived

Structure for physics quantities derived from Langmuir probe measurements

member	type	description
source	vecstring.type (9.5.1.2.11)	Probes in probe holder used to derive measure. String vector
position	rzphiIDexp (9.5.1.3.332)	Position of the measurement. Time-dependent.
measure	expID (9.5.1.3.181)	Measured quantity. Time-dependent.

Type of: langmuirdiag:machpar (1537) I langmuirdiag:ne (1537) I langmuirdiag:te (1537)

### 9.5.1.3.223 lang\_measure

Structure for elementary Langmuir probe measurement

member	type	description
name	vecstring.type (9.5.1.2.11)	Name of the probe e.g. Jsatur1,Vfloat1). String vector
direction	vecstring.type (9.5.1.2.11)	Direction of the probe w.r.t. magnetic field. For Mach arrangement use 'co' (co-field) and 'ct' (counter field) for the pair, otherwise use 'both'. String vector
area	expID (9.5.1.3.181)	Effective area of probe [m <sup>2</sup> ]. Time-dependent.
position	rzphiIDexp (9.5.1.3.332)	Position of the measurement. Time-dependent.
measure	expID (9.5.1.3.181)	Measured quantity. Time-dependent.

Type of: langmuirdiag:bias (1537) I langmuirdiag:jsat (1537) I langmuirdiag:potential (1537)

### 9.5.1.3.224 launchangles

Launching angles of the beam

member	type	description
alpha	float (9.5.1.1.1)	Poloidal launching angle between the horizontal plane and the poloidal component of the nominal beam centerline [rad], $\tan(\alpha) = -k_z/k_R$ ; Time-dependent
beta	float (9.5.1.1.1)	Toroidal launching angle between the poloidal plane and the nominal beam centerline [rad], $\sin(\beta) = k_\phi$ ; Time-dependent

Type of: antenna.ec:launchangles (1564)

### 9.5.1.3.225 launches\_parallel

Power spectrum as a function of the parallel refractive index.

member	type	description
nn_par	vecint.type (9.5.1.2.10)	Number of points for the discretization of the spectrum in the poloidal direction, Vector of integers (nantenna).
n_par	matflt.type (9.5.1.2.7)	Refraction index in the parallel direction, Matrix (nantenna,max_nn_par).
power	vecflt.type (9.5.1.2.9)	$W/dN_{par}$ [W], Matrix(nantenna, max_nn_par). Time-dependent

Type of: spectrum:parallel (1893)

### 9.5.1.3.226 launches\_phi\_theta

Power spectrum as a function of the refractive index in the toroidal and poloidal directions.

member	type	description
nn_phi	vecint.type (9.5.1.2.10)	Number of points for the discretization of the spectrum in the toroidal direction, Vector of integers (nantenna).
nn_theta	vecint.type (9.5.1.2.10)	Number of points for the discretization of the spectrum in the poloidal direction, Vector of integers (nantenna).
n_phi	matflt.type (9.5.1.2.7)	Refraction index in the toroidal direction, Matrix (nantenna,max_nn_phi).
n_theta	matflt.type (9.5.1.2.7)	Refraction index in poloidal direction, Matrix (nantenna,max_nn_theta).
power	array3dflt.type (9.5.1.2.1)	$W/dN_{phi}/dN_{theta}$ [W], Array (nantenna, max_nn_phi, max_nn_theta). Time-dependent

Type of: spectrum:phi\_theta (1893)

### 9.5.1.3.227 launches\_rfbeam

Beam characteristics (RF wave description)

member	type	description
spot	launchs_rfbeam_spot (9.5.1.3.229)	Spot characteristics
phaseellipse	launchs_rfbeam_phaseellipse (9.5.1.3.228)	Phase ellipse characteristics of the spot

Type of: launchs:beam (1538)

### 9.5.1.3.228 launchs\_rfbeam\_phaseellipse

Phase ellipse characteristics of the spot

member	type	description
invcurvrad	matflt.type (9.5.1.2.7)	Inverse curvature radii for the phase ellipse [m-1], Matrix (nantenna,2). Time-dependent
angle	vecflt.type (9.5.1.2.9)	Rotation angle for the phase ellipse [rd], Vector(nantenna). Time-dependent

Type of: launchs\_rfbeam:phaseellipse (1741)

### 9.5.1.3.229 launchs\_rfbeam\_spot

Spot characteristics

member	type	description
waist	matflt.type (9.5.1.2.7)	Waist for the spot ellipse [m], Matrix (nantenna,2). Time-dependent
angle	vecflt.type (9.5.1.2.9)	Rotation angle for the spot ellipse [rd], Vector(nantenna). Time-dependent

Type of: launchs\_rfbeam:spot (1741)

### 9.5.1.3.230 layers

Data on wall element layers

member	type	description
density	matflt.type (9.5.1.2.7)	Density of the surface layers [kg/m <sup>3</sup> ]; Time-dependent; Float matrix (max. number of layers, number of elements); First dimension: index of surface layer, second element: index of wall element
thickness	matflt.type (9.5.1.2.7)	Thickness of surface layer [m]; Time-dependent; Float matrix (max. number of layers, number of elements); First dimension: index of surface layer, second element: index of wall element
roughness	matflt.type (9.5.1.2.7)	Surface roughness [m] (surface between this layer and the one above it towards the plasma); Time-dependent; Float matrix (max. number of layers, number of elements); First dimension: index of surface layer, second element: index of wall element
t	array3dflt.type (9.5.1.2.1)	Temperature in layer [K]; Time-dependent; 3d float array, dimensions: 1. cell index of 1d layer height discretization, 2. layer index, 3. wall element index
element_frac	array3dflt.type (9.5.1.2.1)	Elemental composition; Time-dependent; Float 3d array (max. number of tracked elements, max. number of layers, number of wall elements); Dimensions: 1. index of tracked element (c.f. surface.elements list), 2. layer index, 3. wall element index
chem_comp	array3dflt.type (9.5.1.2.1)	Chemical composition, referring to the list surface.compounds; Time-dependent; 3d float array, dimensions: 1. index of tracked compound, 2. index of layer, 3. index of wall element

Type of: surface:layers (1900)

### 9.5.1.3.231 limiter\_unit

Vector of limiting surfaces. Replicate this limiter\_unit element ncomponents times. Each unit contains a plasma facing component that can have dedicated number of points. Array of structures (ncomponents)

member	type	description
name	string (9.5.1.1.3)	Name or description of the limiter_unit

member	type	description
closed	string (9.5.1.1.3)	Identify whether the contour is closed (y) or open (n)
position	rz1D (9.5.1.3.325)	Position (R,Z coordinates) of a limiting surface. No need to repeat first point for closed contours [m]; Vector(npoints)
eta	float (9.5.1.1.1)	Wall resistivity [ohm.m]; Scalar
delta	float (9.5.1.1.1)	Wall thickness [m] (Optional if a closed facing component is given but useful for simpler closed contour limiter); Time-dependent; Scalar
permeability	float (9.5.1.1.1)	Vessel relative permeability; Scalar

Type of: limiter:limiter\_unit (1539) I wall\_limiter:limiter\_unit (1936)

### 9.5.1.3.232 lineintegraldiag

General line integral diagnostic

member	type	description
datainfo	datainfo (9.5.1.3.121)	Generic information on a data item
expression	string (9.5.1.1.3)	Formal expression for the line integral to be evaluated as a function of ne, ni, Te, Ti, Zeff, Br, Bz
setup_line	setup_line (9.5.1.3.362)	Geometric description of the lines of sight
measure	expID (9.5.1.3.181)	Measured value. Time-dependent; Vector (nchords)
time	float (9.5.1.1.1)	Time [s]; Time-dependent; Scalar

### 9.5.1.3.233 lithmeasure

Measured values

member	type	description
ne	expID (9.5.1.3.181)	Electron density [m <sup>-3</sup> ]. Vector (nchannels)

Type of: lithiumdiag:measure (1540)

### 9.5.1.3.234 lithsetup

diagnostic setup information

member	type	description
position	rzphi1D (9.5.1.3.331)	Position of the measurement. Vector (nchannels)

Type of: lithiumdiag:setup (1540)

### 9.5.1.3.235 local

TO BE REMOVED, being replaced by e\_components and grid. Kept only to make smooth transition between data-type versions. [Local description of the wave fields. Uses the grid in grid\_2d].

member	type	description
e.plus	array3dfilt.type (9.5.1.2.1)	Magnitude of left hand polarised component of the wave electric field [V/m]; Time-dependent; Array 3D (ntor, ndim1, ndim2)
e.plus.ph	array3dfilt.type (9.5.1.2.1)	Phase of left hand polarised component of the wave electric field [rad]; Time-dependent; Array 3D (ntor, ndim1, ndim2)
e.minus	array3dfilt.type (9.5.1.2.1)	Magnitude of right hand polarised component of the wave electric field [v/m]; Time-dependent; Array 3D (ntor, ndim1, ndim2)
e.minus.ph	array3dfilt.type (9.5.1.2.1)	Phase of right hand polarised component of the wave electric field [rad]; Time-dependent; Array 3D (ntor, ndim1, ndim2)
e.norm	array3dint.type (9.5.1.2.2)	Magnitude of wave electric field normal to a flux surface [V/m]; Time-dependent; 3D (ntor, ndim1, ndim2)
enorm.ph	array3dfilt.type (9.5.1.2.1)	Phase of wave electric field normal to a flux surface [rad]; Time-dependent; 3D (ntor, ndim1, ndim2)
e.binorm	array3dfilt.type (9.5.1.2.1)	Magnitude of wave electric field tangent to a flux surface [V/m]; Time-dependent; 3D (ntor, ndim1, ndim2)
e.binorm.ph	array3dfilt.type (9.5.1.2.1)	Phase of wave electric field tangent to a flux surface [rad]; Time-dependent; 3D (ntor, ndim1, ndim2)
e.para	array3dfilt.type (9.5.1.2.1)	Magnitude of parallel wave electric field [V/m]; Time-dependent; Array 3D (ntor, ndim1, ndim2)

member	type	description
e_para_ph	array3dflt.type (9.5.1.2.1)	Phase of parallel wave electric field [rad]; Time-dependent; Array 3D (ntor, ndim1, ndim2)
b_norm	array3dflt.type (9.5.1.2.1)	Magnitude of wave magnetic field normal to a flux surface [T]; Time-dependent; Array 3D (ntor, ndim1, ndim2)
b_norm_ph	array3dflt.type (9.5.1.2.1)	Phase of wave magnetic field normal to a flux surface [rad]; Time-dependent; Array 3D (ntor, ndim1, ndim2)
b_binorm	array3dflt.type (9.5.1.2.1)	Magnitude of wave magnetic field tangent to a flux surface [T]; Time-dependent; Array 3D (ntor, ndim1, ndim2)
b_binorm_ph	array3dflt.type (9.5.1.2.1)	Phase of wave magnetic field tangent to a flux surface [rad]; Time-dependent; Array 3D (ntor, ndim1, ndim2)
b_para	array3dflt.type (9.5.1.2.1)	Magnitude of wave magnetic field parallel to the equilibrium magnetic field [T]; Time-dependent; Array 3D (ntor, ndim1, ndim2)
b_para_ph	array3dflt.type (9.5.1.2.1)	Phase of wave magnetic field parallel to the equilibrium magnetic field [rad]; Time-dependent; Array 3D (ntor, ndim1, ndim2)

Type of: fullwave:local (1704)

### 9.5.1.3.236 mag\_axis

Magnetic axis values

member	type	description
position	rz0D (9.5.1.3.324)	Position of the magnetic axis [m]; Time-dependent; Scalar;
bphi	float (9.5.1.1.1)	Total toroidal magnetic field at the magnetic axis [T]; Time-dependent; Scalar
q	float (9.5.1.1.1)	q at the magnetic axis; Time-dependent; Scalar

Type of: global\_param:mag\_axis (1722)

### 9.5.1.3.237 magnet\_iron

Magnetisation in iron segments [T]

member	type	description
mr	eqmes1D (9.5.1.3.177)	Magnetisation along the R axis [T];
mz	eqmes1D (9.5.1.3.177)	Magnetisation along the Z axis [T];

Type of: eqconstraint:magnet\_iron (1688)

### 9.5.1.3.238 magnetise

Magnetisation  $M$  of the iron segment, assumed to be constant inside a given iron segment. Reminder :  $H = 1/\mu_0 * B - \mu_r * M$ ; [A/m].

member	type	description
mr	exp1D (9.5.1.3.181)	Magnetisation along the R axis [T]; Time-dependent; Vector (nsegment)
mz	exp1D (9.5.1.3.181)	Magnetisation along the Z axis [T]; Time-dependent; Vector (nsegment)

Type of: ironmodel:magnetise (1536)

### 9.5.1.3.239 matcplx.type

Temporary structure for real and imaginary part of complex numbers (matrix)

member	type	description
re	matflt.type (9.5.1.2.7)	Real part
im	matflt.type (9.5.1.2.7)	Imaginary part

Type of: complexgrid\_scalar\_cplx:vector (1591) I reflectometry\_radifield\_efield:e1 (1833) I reflectometry\_radifield\_efield:e2 (1833)

### 9.5.1.3.240 mdfinfo

Information related to machine description for this entry

member	type	description
shot_min	integer (9.5.1.1.2)	Minimum shot number to which the machine description applies
shot_max	integer (9.5.1.1.2)	Maximum shot number to which the machine description applies
md_entry	entry_def (9.5.1.3.172)	Entry of the machine description used. NB : just for information : for the moment, no guarantee that machine description data have not been modified with respect to the data in md_entry. Machine description data are written explicitly in each CPO.

Type of

### 9.5.1.3.241 mhd\_ideal\_wall2d

Ideal wall

member	type	description
walltype	identifier (9.5.1.3.214)	Tag the type of wall to be used, 0 (conformal) or 1 (free)
position	rz1D (9.5.1.3.325)	RZ description of the wall;

Type of: wall2d\_mhd:ideal\_wall (1932)

### 9.5.1.3.242 mhd\_plasma

MHD modes in the confined plasma

member	type	description
psi	vecflt.type (9.5.1.2.9)	Position in poloidal flux [Wb] (without $1/2\pi$ and such that $B_p =  \text{grad } \psi  / R/2/\pi$ ). Time-dependent; Vector (npsi)
m	array3dflt.type (9.5.1.2.1)	Poloidal mode number; Time-dependent; Array3D (npsi,nn,nm)
disp_perp	array3dcplx.type (9.5.1.3.55)	Perpendicular displacement of the mode (in Fourier space) [m]; Time-dependent; Array 3D (npsi,nn,nm)
disp_par	array3dcplx.type (9.5.1.3.55)	Parallel displacement of the mode (in Fourier space) [m]; Time-dependent; Array 3D (npsi,nn,nm)
tau_alfven	vecflt.type (9.5.1.2.9)	Alven time= $R/v_A=R0 \sqrt{\mu_0 \rho_0} / B_0$ [s]; Definitions of $R_0$ , $B_0$ , $\mu_0$ , $\rho_0$ to be clarified. rho grid should be included in the MHD CPO ? Time-dependent; Vector (npsi)
tau_resistive	vecflt.type (9.5.1.2.9)	Resistive time = $\mu_0 \rho_0 r_0^2 / 1.22 / \eta_{\text{neo}}$ [s]; Source of $\eta_{\text{neo}}$ to be clarified. Time-dependent; Vector (npsi)
coord_sys	coord_sys (9.5.1.3.90)	flux surface coordinate system on a square grid of flux and angle
a_pert	mhd_vector (9.5.1.3.245)	Perturbed vector potential (in Fourier space) [T.m]
b_pert	mhd_vector (9.5.1.3.245)	Perturbed magnetic field (in Fourier space) [T]
v_pert	mhd_vector (9.5.1.3.245)	Perturbed velocity (in Fourier space) [m/s]
p_pert	array3dcplx.type (9.5.1.3.55)	Perturbed pressure (in Fourier space) [Pa]; Time-dependent; Array 3D (npsi,nn,nm)
rho_mass_pert	array3dcplx.type (9.5.1.3.55)	Perturbed mass density (in Fourier space) [kg/m <sup>3</sup> ]; Time-dependent; Array 3D (npsi,nn,nm)
temp_pert	array3dcplx.type (9.5.1.3.55)	Perturbed temperature (in Fourier space) [eV]; Time-dependent; Array 3D (npsi,nn,nm)

Type of: mhd:plasma (1542)

### 9.5.1.3.243 mhd\_res\_wall2d

Resistive wall

member	type	description
walltype	identifier (9.5.1.3.214)	Tag the type of wall to be used, 0 (conformal) or 1 (free)
delta	float (9.5.1.1.1)	Wall thickness [m]; Scalar
eta	float (9.5.1.1.1)	Wall resistivity [ohm.m]; Scalar
npoloidal	integer (9.5.1.1.2)	Number of poloidal coordinates for each wall (dimension of R and Z);
position	rz1D (9.5.1.3.325)	RZ description of the wall; wall coordinates are defined at a middle line (line passing through the middle of the real wall as defined by thickness parameter delta)
holes	holes (9.5.1.3.213)	Structure to describe the placing and properties of the holes

Type of: wall2d\_mhd:res\_wall (1932)

### 9.5.1.3.244 mhd\_vacuum

External modes

member	type	description
m	array3dflt.type (9.5.1.2.1)	Poloidal mode number; Time-dependent; Array3D (npsi,nn,nm)
coord_sys	coord_sys (9.5.1.3.90)	flux surface coordinate system on a square grid of flux and angle
a_pert	mhd_vector (9.5.1.3.245)	Pertubed vector potential (in Fourier space) [T.m]
b_pert	mhd_vector (9.5.1.3.245)	Perturbed magnetic field (in Fourier space) [T]

Type of: mhd:vacuum (1542)

### 9.5.1.3.245 mhd\_vector

Vector structure for MHD CPO

member	type	description
coord1	array3dcplx.type (9.5.1.3.55)	Fourier components of first coordinate; Time-dependent; Array 3D (npsi,nn,nm)
coord2	array3dcplx.type (9.5.1.3.55)	Fourier components of second coordinate; Time-dependent; Array 3D (npsi,nn,nm)
coord3	array3dcplx.type (9.5.1.3.55)	Fourier components of third coordinate; Time-dependent; Array 3D (npsi,nn,nm)

Type of: mhd\_plasma:a\_pert (1756) I mhd\_plasma:b\_pert (1756) I mhd\_plasma:v\_pert (1756) I mhd\_vacuum:a\_pert (1758) I mhd\_vacuum:b\_pert (1758)

### 9.5.1.3.246 modules

Modules description. NB there are nmodules per antenna, distributed among nma\_phi toroidal positions and nma\_theta poloidal positions

member	type	description
nma_theta	integer (9.5.1.1.2)	Number of modules per antenna in the poloidal direction.
nma_phi	integer (9.5.1.1.2)	Number of modules per antenna in the toroidal direction.
ima_theta	vecint.type (9.5.1.2.10)	Position index of the module in the poloidal direction (from low theta to high theta, i.e. from bottom to top if the antenna is on LFS). Vector of integers (nmodules).
ima_phi	vecint.type (9.5.1.2.10)	Position index of the module in the toroidal direction (from low phi to high phi, counter-clockwise when seen from above). Vector of integers (nmodules).
sm_theta	float (9.5.1.1.1)	Spacing between poloidally neighboring modules [m]
amplitude	exp1D (9.5.1.3.181)	Amplitude of the TE10 mode injected in the module [W], Vector exp1d (nmodules). Time-dependent
phase	exp1D (9.5.1.3.181)	Phase of the TE10 mode injected in the module [radians], Vector exp1d (nmodules). Time-dependent
waveguides	waveguides (9.5.1.3.428)	Waveguides description

Type of: antennalh\_setup:modules (1568)

### 9.5.1.3.247 msediag\_emiss\_chord

MSE Emissivity characterization. This structure is used for each line of sight of the MSE setup and contains the geometry of the line of sight, the emissivity(wavelength,pos) for each polarization state along the line of sight, the quantization axis and the emission volume. Replicate the structure for each line of sight.

member	type	description
volume	float (9.5.1.1.1)	Emitting volume (m <sup>-3</sup> ). Scalar
setup	rzphi1D (9.5.1.3.331)	Description of the line of sight (for the moment a line - not a cone of sight). Vector (npos).
polarization(:)	msediag_polarization (9.5.1.3.249)	Polarized and unpolarized emissivity of the relevant MSE spectral lines. Structure Array (ncomp). Time-dependent.
quantiaxis	vecflt.type (9.5.1.2.9)	Quantization axis for the line of sight (eR,ePhi,eZ). It is a unitary vector associated to the line of sight and to the emissivity, e.g. the Lorentzian electric field direction); Vector (3). Time-dependent



Type of: msediag\_emissivity:emiss\_chord (1762)

### 9.5.1.3.248 msediag\_emissivity

Emissivity characteristics.

member	type	description
wavelength	vecflt.type (9.5.1.2.9)	Wavelength [m]. Vector (nwavelength)
emiss_chord(:)	msediag_emiss_chord (9.5.1.3.247)	MSE Emissivity characterization. This structure is used for each line of sight of the MSE setup and contains the geometry of the line of sight, the emissivity(wavelength,pos) for each polarization state along the line of sight, the quantization axis and the emission volume. Replicate the structure for each line of sight.

Type of: spectral:emissivity (1892)

### 9.5.1.3.249 msediag\_polarization

Polarized and unpolarized emissivity of the relevant MSE spectral lines. Structure Array (ncomp). Time-dependent.

member	type	description
type	identifier (9.5.1.3.214)	Type of the polarization. 0 for unpolarised, 1 for Pi, 2 for sigma <sup>+</sup> and 3 for sigma <sup>-</sup>
spec.emiss	matflt.type (9.5.1.2.7)	Spectral emissivity of a particular polarization ( $Wm^{-3}sr^{-1}$ ). Matrix (npos,nwavelength). Time-dependent

Type of: msediag\_emiss\_chord:polarization (1761)

### 9.5.1.3.250 msediag\_radia\_chord

MSE radiance characterization. This structure is used for each line of sight of the MSE setup and contains the geometry of the line of sight, the radiance(wavelength) for each polarization state, the quantization axis. Replicate the structure for each line of sight.

member	type	description
setup	msediag_setup (9.5.1.3.252)	Geometry for the observation line of sight
stokes(:)	msediag_stokes (9.5.1.3.254)	Stokes vector (I,U,S,V) as a function of the wavelength for the polarized and unpolarized relevant MSE spectral lines. Replicate for each spectral component. Structure array (ncomp). Time-dependent.
totradiance	exp1D (9.5.1.3.181)	Total Radiance integrated along the lines of sight ( $Wm^{-2}sr^{-1}$ ). Vector (nwavelength)

Type of: msediag\_radiance:radia\_chord (1765)

### 9.5.1.3.251 msediag\_radiance

Emissivity characteristics.

member	type	description
wavelength	exp1D (9.5.1.3.181)	Wavelength [m]. Vector (nwavelength)
radia_chord(:)	msediag_radia_chord (9.5.1.3.250)	MSE radiance characterization. This structure is used for each line of sight of the MSE setup and contains the geometry of the line of sight, the radiance(wavelength) for each polarization state, the quantization axis. Replicate the structure for each line of sight.

Type of: spectral:radiance (1892)

### 9.5.1.3.252 msediag\_setup

Geometry for the observation line of sight

member	type	description
pivot.point	rzphi0D (9.5.1.3.330)	Pivot point of mse line of sight. Scalar
horchordang	float (9.5.1.1.1)	Angle [rad] of horizontal projection of mse line of sight with poloidal cross section (0 for HFS to LFS trajectory - see Convention_angles_interfdiag.pdf) [rad]. Scalar
verchordang	float (9.5.1.1.1)	Angle of mse line of sight with vertical axis (0 for bottom-top trajectory, Pi for top-bottom trajectory - see Convention_angles_interfdiag.pdf) [rad]; Scalar

member	type	description
second_point	rzphi0D (9.5.1.3.330)	Second point defining the mse line of sight together with the pivot_point. Scalar

Type of: msediag\_radia\_chord:setup (1764)

### 9.5.1.3.253 msediag\_setup\_polarimetry

diagnostic setup information

member	type	description
rzgamma	rzphidrdzdpfiID (9.5.1.3.335)	Position and width of the intersection between beam and line of sight. Vectors (nchords)
geom_coef	matflt.type (9.5.1.2.7)	Geometric coefficients (9) describing the angle between beam and line of sight; The first dimension contains successively : numerator, coefficients of BZ, BR, Bphi, ER; denominator, coefficients of BZ, BR, Bphi, ER, EZ; Matrix (9,nchords). In versions of the data structure before 4.08, there were only 6 coefficients namely : numerator, coefficients of BZ, BR, Bphi; denominator, coefficients of BZ, BR, Bphi.

Type of: polarimetry:setup (1798)

### 9.5.1.3.254 msediag\_stokes

Stokes vector (I,U,S,V) as a function of the wavelength for the polarized and unpolarized relevant MSE spectral lines. Replicate for each spectral component. Structure array (ncomp). Time-dependent.

member	type	description
type	identifier (9.5.1.3.214)	Type of the polarization. 0 for unpolarised, 1 for Pi, 2 for sigma <sup>+</sup> and 3 for sigma <sup>-</sup>
vector	matflt.type (9.5.1.2.7)	Stokes vector (I,U,S,V) as a function of the wavelength. Vector (4,nwavelength).

Type of: msediag\_radia\_chord:stokes (1764)

### 9.5.1.3.255 nbi\_unit

Vector of Neutral Beam Injector units. Structure array(nunits). Time-dependent

member	type	description
name	string (9.5.1.1.3)	Name of the neutral beam injector
inj_spec	inj_spec (9.5.1.3.218)	Injected species
pow_unit	exp0D (9.5.1.3.180)	Power delivered by an NBI unit [W]; Time-dependent
inj_eng_unit	exp0D (9.5.1.3.180)	Full injection energy of a unit [ev]; Time-dependent
beamcurfrac	exp1D (9.5.1.3.181)	Beam current fractions; beamcurfrac(j) is the fraction of the beam current from beam neutrals with the j:th harmonic energy, inj_eng_unit. Vector(3); Time-dependent
beampowfrac	exp1D (9.5.1.3.181)	Beam power fractions; beampowfrac(j) is the fraction of the beam power from beam neutrals with the j:th harmonic energy, inj_eng_unit;. Vector(3); Time-dependent
setup_inject	setup_inject (9.5.1.3.361)	Detailed information on an injection unit.
codeparam	codeparam (9.5.1.3.66)	Code parameters

Type of: nbi:nbi\_unit (1544)

### 9.5.1.3.256 ne\_transp

Transport coefficients for electron density equation. Time-dependent.

member	type	description
diff_eff	matflt.type (9.5.1.2.7)	Effective diffusivity [m <sup>2</sup> .s <sup>-1</sup> ]. The last index of the array describes which multiplier should be applied to the particule flux when adding its contribution in the expression of the heat flux : position 1 is multiplied by 0, 2 is multiplied by 3/2, 3 is multiplied by 5/2. The total particle flux (for the particle transport equation) is obtained as the sum over the three positions. Time-dependent. Matrix (nrho,3)
vconv_eff	matflt.type (9.5.1.2.7)	Effective convection [m.s <sup>-1</sup> ]. The last index of the array describes which multiplier should be applied to the particule flux when adding its contribution in the expression of the heat flux : position 1 is multiplied by 0, 2 is multiplied by 3/2, 3 is multiplied by 5/2. The total particle flux (for the particle transport equation) is obtained as the sum over the three positions. Time-dependent. Matrix (nrho,3)
flux	vecflt.type (9.5.1.2.9)	Flux. Not used in transport equations [field.m.s <sup>-1</sup> ,m <sup>-3</sup> if field is not a density itself]. Time-dependent. Vector (nrho)

member	type	description
off_diagonal	offdiagel ( <a href="#">9.5.1.3.261</a> )	Details of the transport matrix, just for diagnostic (not used in transport equations). Time-dependent.
flag	integer ( <a href="#">9.5.1.1.2</a> )	Flag describing the form of transport produced by the original model : 0- not calculated, 1- D and V, 2- flux, 3- full transport matrix. Scalar.

Type of: coretransp\_values:ne\_transp ([1630](#))

### 9.5.1.3.257 neutral\_complex\_type

Profiles derived from the fields solved in the transport equations, or from experiment. Array(nneut). Time-dependent

member	type	description
neutraltype(:)	coreneutrals_neutraltype ( <a href="#">9.5.1.3.109</a> )	Array (ntype) over neutral types. Time-dependent.
prad0	vecflt_type ( <a href="#">9.5.1.2.9</a> )	Power radiated by neutrals [W.m <sup>-3</sup> ]. Vector (nrho). Time-dependent.

Type of: coreneutrals:profiles ([1522](#))

### 9.5.1.3.258 ni\_transp

Transport coefficients for ion density equation. Time-dependent.

member	type	description
diff_eff	array3dflt_type ( <a href="#">9.5.1.2.1</a> )	Effective diffusivity [m <sup>2</sup> .s <sup>-1</sup> ]. The last index of the array describes which multiplier should be applied to the particule flux when adding its contribution in the expression of the heat flux : position 1 is multiplied by 0, 2 is multiplied by 3/2, 3 is multiplied by 5/2. The total particle flux (for the particle transport equation) is obtained as the sum over the three positions. Time-dependent. Array3d (nrho,nion,3)
vconv_eff	array3dflt_type ( <a href="#">9.5.1.2.1</a> )	Effective convection [m.s <sup>-1</sup> ]. The last index of the array describes which multiplier should be applied to the particule flux when adding its contribution in the expression of the heat flux : position 1 is multiplied by 0, 2 is multiplied by 3/2, 3 is multiplied by 5/2. The total particle flux (for the particle transport equation) is obtained as the sum over the three positions. Time-dependent. Array3d (nrho,nion,3)
flux	matflt_type ( <a href="#">9.5.1.2.7</a> )	Flux. Not used in transport equations [field.m.s <sup>-1</sup> ,m <sup>-3</sup> if field is not a density itself]. Time-dependent. Matrix (nrho,nion)
off_diagonal	offdiagion ( <a href="#">9.5.1.3.262</a> )	Details of the transport matrix, just for diagnostic (not used in transport equations). Time-dependent.
flag	integer ( <a href="#">9.5.1.1.2</a> )	Flag describing the form of transport produced by the original model : 0- not calculated, 1- D and V, 2- flux, 3- full transport matrix. Scalar.

Type of: coretransp\_values:ni\_transp ([1630](#))

### 9.5.1.3.259 nuclei

Array of nuclei considered.

member	type	description
zn	float ( <a href="#">9.5.1.1.1</a> )	Nuclear charge [units of elementary charge];
amn	float ( <a href="#">9.5.1.1.1</a> )	Mass of atom [amu]
label	string ( <a href="#">9.5.1.1.3</a> )	String identifying element (e.g. H, D, T, He, C, ...)

Type of: compositions\_type:nuclei ([1602](#))

### 9.5.1.3.260 objects

Definition of space objects (nodes, edges, faces, cells, ...); A space object of dimension n is defined; by enumerating the (n-1)-dimensional space objects defining its boundaries

member	type	description
boundary	matint_type ( <a href="#">9.5.1.2.8</a> )	Lists of (n-1)-dimensional space objects defining the boundary of an n-dimensional space object.; Matrix(number of objects of dimension n, maximum number of boundary objects).; First dimension: object index, second dimension: boundary object index

member	type	description
neighbour	array3dint.type (9.5.1.2.2)	Connectivity information. Array (number of objects, maximum number of boundaries per object, maximum number of neighbours per boundary).; Stores the indices of the n-dimensional objects adjacent to the given n-dimensional object.;An object can possibly have multiple neighbours on every boundary.; First dimension: object index, second dimension: boundary index, third dimension: neighbour index on the boundary.
geo	array4dflt.type (9.5.1.2.3)	Geometry data matrix associated with every object. Float array (number of objects, number of geometry coeff. 1, number of geometry coeff. 2, number of geometries).; The exact definition depends on the geometry type of the space (complexgrid_space.geotype).; First dimension: object index, second+third dimension: geometry coefficient matrix row+column, third dimension: geometry index (for definition of multiple geometries).
measure	matflt.type (9.5.1.2.7)	Measure of space objects, i.e. physical size (length for 1d, area for 2d, volume for 3d objects,...). [m <sup>dim</sup> ].; First dimension: object index, second dimension: geometry index

Type of: complexgrid\_space:objects (1594)

### 9.5.1.3.261 offdiagel

Subtree containing the full transport matrix from a transport model, for the electrons. Time-dependent.

member	type	description
d.ni	matflt.type (9.5.1.2.7)	Off-Diagonal term coupling ion density gradient to the transport equation [m. <sup>2</sup> .s <sup>-1</sup> ]. Time-dependent. Matrix (nrho,nion)
d.ti	matflt.type (9.5.1.2.7)	Off-Diagonal term coupling ion density gradient to the transport equation [m. <sup>2</sup> .s <sup>-1</sup> ]. Time-dependent. Matrix (nrho,nion)
d.ne	vecflt.type (9.5.1.2.9)	Off-Diagonal term coupling electron density gradient to the transport equation [m. <sup>2</sup> .s <sup>-1</sup> ]. Time-dependent. Vector (nrho)
d.te	vecflt.type (9.5.1.2.9)	Off-Diagonal term coupling electron temperature gradient to the transport equation [m. <sup>2</sup> .s <sup>-1</sup> ]. Time-dependent. Vector (nrho)
d.epar	vecflt.type (9.5.1.2.9)	Off-Diagonal term coupling parallel electric field to the transport equation [m. <sup>2</sup> .s <sup>-1</sup> ]. Time-dependent. Vector (nrho)
d.mtor	vecflt.type (9.5.1.2.9)	Off-Diagonal term coupling total toroidal momentum to the transport equation [m. <sup>2</sup> .s <sup>-1</sup> ]. Time-dependent. Vector (nrho)

Type of: ne\_transp:off\_diagonal (1770) I transcoefel:off\_diagonal (1912)

### 9.5.1.3.262 offdiagion

Subtree containing the full transport matrix from a transport model, for the various ion species

member	type	description
d.ni	array3dflt.type (9.5.1.2.1)	Off-Diagonal term coupling ion density gradient to the transport equation [m. <sup>2</sup> .s <sup>-1</sup> ]. Time-dependent. Array3d (nrho,nion,nion)
d.ti	array3dflt.type (9.5.1.2.1)	Off-Diagonal term coupling ion density gradient to the transport equation [m. <sup>2</sup> .s <sup>-1</sup> ]. Time-dependent. Array3d (nrho,nion,nion)
d.ne	matflt.type (9.5.1.2.7)	Off-Diagonal term coupling electron density gradient to the transport equation [m. <sup>2</sup> .s <sup>-1</sup> ]. Time-dependent. Matrix (nrho,nion)
d.te	matflt.type (9.5.1.2.7)	Off-Diagonal term coupling electron temperature gradient to the transport equation [m. <sup>2</sup> .s <sup>-1</sup> ]. Time-dependent. Matrix (nrho,nion)
d.epar	matflt.type (9.5.1.2.7)	Off-Diagonal term coupling parallel electric field to the transport equation [m. <sup>2</sup> .s <sup>-1</sup> ]. Time-dependent. Matrix (nrho,nion)
d.mtor	matflt.type (9.5.1.2.7)	Off-Diagonal term coupling total toroidal momentum to the transport equation [m. <sup>2</sup> .s <sup>-1</sup> ]. Time-dependent. Matrix (nrho,nion)

Type of: ni\_transp:off\_diagonal (1772) I transcoefion:off\_diagonal (1914) I transcoefvtor:off\_diagonal (1915)

### 9.5.1.3.263 omnigen\_surf

List of omnigenous magnetic surfaces to which the s-coordinates in grid\_coord refer. NOTE: only used for gridcoord=3. NOTE: all guiding centre orbits intersect at least one omnigenous (or stagnation) surfaces, i.e. the omnigenous generalised the equatorial plane (the midplane). nsurfs=Number of omnigenous surfaces. Structure array(nregion\_topo)

member	type	description
rz	rz1D (9.5.1.3.325)	(R,z) coordinates of the omnigenous magnetic surfaces (generalised equatorial plane). NOTE: only used for gridcoord=3. Vector rz1d (nsurfs)
s	vecflt.type (9.5.1.2.9)	Coordinates which uniquely maps the omnigenous magnetic surfaces (generalised equatorial plane). NOTE: only used for gridcoord=3. Vector (nsurfs)

Type of: `dist_grid_info:omnigen_surf` (1647)

### 9.5.1.3.264 `orbit_global_param`

Global quantities associated with an orbit.

member	type	description
<code>orbit_type</code>	<code>vecint_type</code> (9.5.1.2.10)	Identifier of orbit type: 0 trapped, -1 co-passing, + 1 counter-passing ; Time-dependent; Vector (norbits)
<code>omega_b</code>	<code>vecflt_type</code> (9.5.1.2.9)	Bounce angular frequency rad/s; Time-dependent; Vector (norbits)
<code>omega_phi</code>	<code>vecflt_type</code> (9.5.1.2.9)	Toroidal angular precession frequency [rad/s]; Time-dependent; Vector (norbits).
<code>omega_c_av</code>	<code>vecflt_type</code> (9.5.1.2.9)	Orbit averaged cyclotron frequency [rad/a]; Time-dependent; Vector(norbits).
<code>special_pos</code>	<code>orbit_special_pos</code> (9.5.1.3.267)	Special positions along an orbit (like turning points).

Type of: `orbit:global_param` (1546)

### 9.5.1.3.265 `orbit_midplane`

Intersections with the midplane

member	type	description
<code>outer</code>	<code>orbit_pos</code> (9.5.1.3.266)	Position at outer mid-plane
<code>inner</code>	<code>orbit_pos</code> (9.5.1.3.266)	Position at inner mid-plane

Type of: `orbit_special_pos:midplane` (1781)

### 9.5.1.3.266 `orbit_pos`

Complex type for orbit position (Vector)

member	type	description
<code>r</code>	<code>vecflt_type</code> (9.5.1.2.9)	Major radius [m]; Time-dependent; Vector (norbits).
<code>z</code>	<code>vecflt_type</code> (9.5.1.2.9)	Altitude [m]; Time-dependent; Vector (norbits).
<code>phi</code>	<code>vecflt_type</code> (9.5.1.2.9)	Toroidal angle [rad]; Time-dependent; Vector (norbits).
<code>psi</code>	<code>vecflt_type</code> (9.5.1.2.9)	Position in psi [normalised poloidal flux]; Time-dependent; Vector (norbits).
<code>theta_b</code>	<code>vecflt_type</code> (9.5.1.2.9)	Poloidal Boozer angle [rad]; Time-dependent; Vector (norbits).

Type of: `orbit_midplane:inner` (1779) | `orbit_midplane:outer` (1779) | `orbit_turning_pts:lower` (1782) | `orbit_turning_pts:upper` (1782)

### 9.5.1.3.267 `orbit_special_pos`

Special positions along an orbit (like turning points).

member	type	description
<code>midplane</code>	<code>orbit_midplane</code> (9.5.1.3.265)	Intersections with the midplane
<code>turning_pts</code>	<code>orbit_turning_pts</code> (9.5.1.3.268)	Location of turning points

Type of: `orbit_global_param:special_pos` (1778)

### 9.5.1.3.268 `orbit_turning_pts`

Location of turning points

member	type	description
<code>upper</code>	<code>orbit_pos</code> (9.5.1.3.266)	Position at upper turning point
<code>lower</code>	<code>orbit_pos</code> (9.5.1.3.266)	Position at lower turning point

Type of: orbit\_special\_pos:turning\_pts (1781)

### 9.5.1.3.269 param

Code parameters block passed from the wrapper to the subroutine. Does not appear as such in the data structure (in fact each string is an instance of coparam/parameters). This is inserted in utilities.xsd for automatic declaration in the Fortran type definitions.

member	type	description
parameters	string (9.5.1.1.3)	Actual value of the code parameters (instance of coparam/parameters in XML format).
default_param	string (9.5.1.1.3)	Default value of the code parameters (instance of coparam/parameters in XML format).
schema	string (9.5.1.1.3)	Code parameters schema.

Type of

### 9.5.1.3.270 pelletpath

Description of the flight path of the pellet (assumed a straight line)

member	type	description
pivot_point	rzphi0D (9.5.1.3.330)	Pivot point of pellet path line. Scalar
horchordang	float (9.5.1.1.1)	Angle [rad] of horizontal projection of pellet path line with poloidal cross section (0 for HFS to LFS trajectory - see Convention_angles_interfdiag.pdf) [rad]. Scalar
verchordang	float (9.5.1.1.1)	Angle of pellet path with vertical axis (0 for bottom-top trajectory, Pi for top-bottom trajectory - see Convention_angles_interfdiag.pdf) [rad]; Scalar
second_point	rzphi0D (9.5.1.3.330)	Second point defining the pellet path line together with the pivot_point. Scalar

Type of: pellets:pelletpath (1547)

### 9.5.1.3.271 permeability

Permeability model (can be different for each iron segment)

member	type	description
b	matflt.type (9.5.1.2.7)	List of B values for description of the mur(B) dependence [T]; Matrix (nsegment,nB)
mur	matflt.type (9.5.1.2.7)	Relative permeability mur(B) [dimensionless]; Matrix (nsegment,nB)

Type of: desc\_iron:permeability (1639)

### 9.5.1.3.272 pfcircuits

Circuits, connected to multiple coils and to multiple supplies, defining the current and voltage relationships in the system

member	type	description
name	vecstring.type (9.5.1.2.11)	Name of circuit, array of strings (ncircuits)
id	vecstring.type (9.5.1.2.11)	ID of circuit, array of strings (ncircuits)
type	vecstring.type (9.5.1.2.11)	Type of circuit, array of strings (ncircuits)
nnodes	vecint.type (9.5.1.2.10)	Number of nodes used to describe a circuit. Vector (ncircuits)
connections	array3dint.type (9.5.1.2.2)	Description of the supplies and coils connections (nodes) across each circuit. Array 3D (ncircuits,max_nnodes,2*ncomponents), describing for each node which component are connected to it (1 if connected, 0 otherwise). There are 2 sides at each component, thus 2*ncomponents as the size of the third dimension, listing first all supplies, then all coils (in the same order as listed in PFSUPPLIES and PFCOILS). An example can be found in the data structure documentation PFCconnections.pdf

Type of: pfsystems:pfcircuits (1548)

### 9.5.1.3.273 pfcoids

Active poloidal field coils

member	type	description
desc.pfcoils	desc.pfcoils (9.5.1.3.126)	Description of the coils
coilcurrent	exp1D (9.5.1.3.181)	Circuit feed current in the coil , defined positive if it flows from point 1 to point 2 of the component in the pfrcircuit description [A]; Time-dependent; Vector (ncoils)
coilvoltage	exp1D (9.5.1.3.181)	Voltage on the full coil [V]; Time-dependent; Vector (ncoils)

Type of: pfsystems:pfcoils (1548)

### 9.5.1.3.274 pfelement

Axisymmetric conductor description

member	type	description
name	vecstring.type (9.5.1.2.11)	Name of this element. Should be a matrix of strings (ncoils,max_nelements), but not supported by the UAL yet.
id	vecstring.type (9.5.1.2.11)	ID of this element. Should be a matrix of strings (ncoils,max_nelements), but not supported by the UAL yet.
turnsign	matflt.type (9.5.1.2.7)	Sign of turn and fraction of a turn for calculating magnetic field of the Element; Matrix (ncoils,max_nelements)
area	matflt.type (9.5.1.2.7)	Surface area of this element [m <sup>2</sup> ]; Matrix (ncoils,max_nelements)
pfgeometry	pfgeometry (9.5.1.3.275)	Shape of a PF Coil Element

Type of: desc.pfcoils:pfelement (1640)

### 9.5.1.3.275 pfgeometry

Shape of a PF Coil Element

member	type	description
type	matint.type (9.5.1.2.8)	Type used to describe a coil shape (0 for 'rzcoordinates' or 1 for 'rzdrdz'); Matrix of integers (ncoils,max_nelements)
npoints	matint.type (9.5.1.2.8)	Number of points describing an element (irregular outline rzcoordinates); Matrix (ncoils,max_nelements)
rzcoordinate	rz3D (9.5.1.3.329)	Irregular outline [m]; 3D arrays (ncoils,max_nelements,max_npoints)
rzdrdz	array3dflt.type (9.5.1.2.1)	4-vector defining Centre R,Z and full extents dR, dZ [m]; 3D Array (ncoils,max_nelements,4)

Type of: pfelement:pfgeometry (1788)

### 9.5.1.3.276 pfpageometry

Geometry of the passive elements

member	type	description
type	vecint.type (9.5.1.2.10)	Type used to describe the shape (0 for 'rzcoordinates' or 1 for 'rzdrdz'); Vector of integers (nelements)
npoints	vecint.type (9.5.1.2.10)	Number of points describing an element (irregular outline rzcoordinates); Vector of integers (nelements)
rzcoordinate	rz2D (9.5.1.3.328)	Irregular outline [m]; Matrix (nelements,max_npoints)
rzdrdz	matflt.type (9.5.1.2.7)	4-vector defining Centre R,Z and full extents dR, dZ [m]; Matrix (nelements,4)

Type of: pfpassive:pfpageometry (1791)

### 9.5.1.3.277 pfpassive

Passive axisymmetric conductor description

member	type	description
name	vecstring.type (9.5.1.2.11)	Name of coil. Array of strings (nelements)
area	vecflt.type (9.5.1.2.9)	Surface area of this passive element [m <sup>2</sup> ]; Vector (nelements)
res	vecflt.type (9.5.1.2.9)	Passive element resistance [Ohm]; Vector (nelements)
eta	vecflt.type (9.5.1.2.9)	Passive element resistivity [Ohm.m]; Vector (nelements)

member	type	description
pfpageometry	pfpageometry (9.5.1.3.276)	Geometry of the passive elements

Type of: pfsystems:pfpasive (1548)

### 9.5.1.3.278 pfsupplies

PF power supplies

member	type	description
desc_supply	desc_supply (9.5.1.3.127)	Description of the power supplies
voltage	exp1D (9.5.1.3.181)	Voltage at the supply output [V]; Time-dependent; Vector (nsupplies)
current	exp1D (9.5.1.3.181)	Current at the supply output, defined positive if it flows from point 1 to point 2 of the component in the pfcircuit description [A]; Time-dependent; Vector (nsupplies)

Type of: pfsystems:pfsupplies (1548)

### 9.5.1.3.279 phaseellipse

Phase ellipse characteristics

member	type	description
invcurvrad	vecflt_type (9.5.1.2.9)	Inverse curvature radii for the phase ellipse [m <sup>-1</sup> ], positive/negative for divergent/convergent beams, Vector (2). Time-dependent
angle	float (9.5.1.1.1)	Rotation angle for the phase ellipse [rd], Float. Time-dependent

Type of: rfbeam:phaseellipse (1837)

### 9.5.1.3.280 planecoil

Plane coil description

member	type	description
coordinates	rz1D (9.5.1.3.325)	Coordinate points of centre of conductor; vectors(nelements)
hlength	vecflt_type (9.5.1.2.9)	Half length perpendicular to plane where coil is defined; vector(nelements) [m].
radialhwidth	vecflt_type (9.5.1.2.9)	Half width, (outer contour-inner contour)/2; vector(nelements) [m].

Type of: tf\_desc\_tfcoils:planecoil (1906)

### 9.5.1.3.281 plasma

Plasma flux from/to plasma facing wall surfaces

member	type	description
flux(:)	complexgrid_scalar (9.5.1.3.76)	Flux density of incoming particle flux [particles/(m <sup>2</sup> s)]; Time-dependent; Array of structures(number of plasma species); First dimension: index of plasma species (as given in species array)
b	complexgrid_vector_simplestructure (9.5.1.3.83)	Magnetic field vector at the surface [T]; Time-dependent;
energy(:)	complexgrid_scalar (9.5.1.3.76)	Average energy of incoming particles [eV]; Time-dependent; Array of structures (number of plasma species)
species(:)	species_desc (9.5.1.3.377)	Definition of plasma species (ions+neutrals); Array of structures (number of species)

Type of: wall:plasma (1561)

### 9.5.1.3.282 plasmaedge

Plasma edge characteristics in front of the antenna.

member	type	description
npoints	integer (9.5.1.1.2)	Number of points in the distance grid. Integer



member	type	description
distance	vecflt_type (9.5.1.2.9)	Grid for electron density, defined as the perpendicular distance to the antenna waveguide plane (the origin being described in the position sub-structure) [m]. Vector (npoints). Time-dependent.
density	vecflt_type (9.5.1.2.9)	Electron density in front of the antenna [m <sup>-3</sup> ]. Vector (npoints). Time-dependent.

Type of: antenna.lh:plasmaedge (1566)

### 9.5.1.3.283 pol\_decomp

TO BE REMOVED, being replaced by e\_components and grid. Kept only to make smooth transition between data-type versions. [Poloidal decomposition of the wave fields. Uses the flux surface grid in grid.1d.]

member	type	description
mpol	vecint_type (9.5.1.2.10)	Poloidal mode numbers; Vector (nmpol)
e_plus	array3dflt_type (9.5.1.2.1)	Magnitude of poloidal Fourier decomposition of left hand polarised component of the wave electric field [V/m]; Time-dependent; Array 3D (ntor, npsi, nmpol)
e_plus_ph	array3dflt_type (9.5.1.2.1)	Phase of poloidal Fourier decomposition of left hand polarised component of the wave electric field [rad]; Time-dependent; Array 3D (ntor, npsi, nmpol)
e_minus	array3dflt_type (9.5.1.2.1)	Magnitude of poloidal Fourier decomposition of right hand polarised component of the wave electric field; Time-dependent (V/m); Array 3D (ntor, npsi, nmpol)
e_minus_ph	array3dflt_type (9.5.1.2.1)	Phase of poloidal Fourier decomposition of right hand polarised component of the wave electric field [rad]; Time-dependent; Array 3D (ntor, npsi, nmpol)
e_norm	array3dflt_type (9.5.1.2.1)	Magnitude of poloidal Fourier decomposition of wave electric field normal to a flux surface [V/m]; Time-dependent; Array 3D (ntor, npsi, nmpol)
e_norm_ph	array3dflt_type (9.5.1.2.1)	Phase of poloidal Fourier decomposition of wave electric field normal to a flux surface [rad]; Time-dependent; Array 3D (ntor, npsi, nmpol)
e_binorm	array3dflt_type (9.5.1.2.1)	Magnitude of poloidal Fourier decomposition of wave electric field tangent to a flux surface [V/m]; Time-dependent; Array 3D (ntor, npsi, nmpol)
e_binorm_ph	array3dflt_type (9.5.1.2.1)	Phase of poloidal Fourier decomposition of wave electric field tangent to a flux surface [rad]; Time-dependent; Array 3D (ntor, npsi, nmpol)
e_para	array3dflt_type (9.5.1.2.1)	Magnitude of poloidal Fourier decomposition of parallel wave electric field [V/m]; Time-dependent; Array 3D (ntor, npsi, nmpol)
e_para_ph	array3dflt_type (9.5.1.2.1)	Phase of poloidal Fourier decomposition of parallel wave electric field [rad]; Time-dependent; Array 3D (ntor, npsi, nmpol)
b_norm	array3dflt_type (9.5.1.2.1)	Magnitude of poloidal Fourier decomposition of wave magnetic field normal to a flux surface [T]; Time-dependent; Array 3D (ntor, npsi, nmpol)
b_norm_ph	array3dflt_type (9.5.1.2.1)	Phase of poloidal Fourier decomposition of parallel wave electric field [rad]; Time-dependent; Array 3D (ntor, npsi, nmpol)
b_binorm	array3dflt_type (9.5.1.2.1)	Magnitude of poloidal Fourier decomposition of wave magnetic field tangent to a flux surface [T]; Time-dependent; Array 3D (ntor, npsi, nmpol)
b_binorm_ph	array3dflt_type (9.5.1.2.1)	Phase of poloidal Fourier decomposition of wave magnetic field tangent to a flux surface [rad]; Time-dependent; Array 3D (ntor, npsi, nmpol)
b_para	array3dflt_type (9.5.1.2.1)	Magnitude of Fourier decomposition of wave magnetic field parallel to the equilibrium magnetic field [T]; Time-dependent; Array 3D (ntor, npsi, nmpol)
b_para_ph	array3dflt_type (9.5.1.2.1)	Phase of Fourier decomposition of wave magnetic field parallel to the equilibrium magnetic field [T]; Time-dependent; Array 3D (ntor, npsi, nmpol)

Type of: fullwave:pol\_decomp (1704)

### 9.5.1.3.284 polarimetry

This structure accomodates the polarimetry setup and measurements of a mse diagnostic, as widely used in fusion devices. The final measurement is the tan( $\gamma$ ) where  $\gamma$  is the polarization angle of a particular spectral mse component.

member	type	description
setup	msediag_setup_polarimetry (9.5.1.3.253)	diagnostic setup information
measure	exp1D (9.5.1.3.181)	Measured value (MSE angle $\gamma$ [rad]). Time-dependent; Vector (nchords)

Type of: msediag:polarimetry (1543)

### 9.5.1.3.285 polarization

Wave field polarization along the ray/beam.

member	type	description
epol.p.re	vecflt.type (9.5.1.2.9)	Real part of the left hand polarized electric field (rotating with the ions), Vector (npoints). Time-dependent
epol.p.im	vecflt.type (9.5.1.2.9)	Imaginary part of the left hand polarized electric field (rotating with the ions), Vector (npoints). Time-dependent
epol.m.re	vecflt.type (9.5.1.2.9)	Real part of the right hand polarized electric field (rotating with the electrons), Vector (npoints). Time-dependent
epol.m.im	vecflt.type (9.5.1.2.9)	Imaginary part of the right hand polarized electric field (rotating with the electrons), Vector (npoints). Time-dependent
epol.par.re	vecflt.type (9.5.1.2.9)	Real part of the electric field polarization vector in the magnetic field direction, Vector (npoints). Time-dependent
epol.par.im	vecflt.type (9.5.1.2.9)	Imaginary part of the electric field polarization vector in the magnetic field direction, Vector (npoints). Time-dependent

Type of: beamtracing:polarization (1572)

### 9.5.1.3.286 powerflow

Power flow along the ray/beam.

member	type	description
phi.perp	vecflt.type (9.5.1.2.9)	Normalized power flow in the direction perpendicular to the magnetic field; Vector (npoints). Time-dependent
phi.par	vecflt.type (9.5.1.2.9)	Normalized power flow in the direction parallel to the magnetic field; Vector (npoints). Time-dependent
power.e	vecflt.type (9.5.1.2.9)	Power absorbed along the beam by electrons [W]; Vector (npoints). Time-dependent
power.i	matflt.type (9.5.1.2.7)	Power absorbed along the beam by an ion species [W]; Matrix (npoints, nion). Time-dependent

Type of: beamtracing:powerflow (1572)

### 9.5.1.3.287 profiles1d

Profiles derived from the fields solved in the transport equations, or from experiment.

member	type	description
pe	coreprofile (9.5.1.3.110)	Electron pressure [Pa]; Time-dependent;
dpedt	coreprofile (9.5.1.3.110)	Time derivative of the electron pressure [Pa/s]; Time-dependent;
pi	corepfion (9.5.1.3.111)	Ion pressure [Pa]; Time-dependent;
pi_tot	coreprofile (9.5.1.3.110)	Total ion pressure (sum of the species) [Pa]; Time-dependent;
dpi_totdt	coreprofile (9.5.1.3.110)	Time derivative of the total ion pressure [Pa/s]; Time-dependent;
pr.th	coreprofile (9.5.1.3.110)	Thermal pressure (electrons+ions) [Pa]; Time-dependent;
pr.perp	coreprofile (9.5.1.3.110)	Total perpendicular pressure (electrons+ions, thermal+non-thermal) [Pa]; Time-dependent;
pr.parallel	coreprofile (9.5.1.3.110)	Total parallel pressure (electrons+ions, thermal+non-thermal) [Pa]; Time-dependent;
jtot	coreprofile (9.5.1.3.110)	total parallel current density = average(jtot.B) / B0, where B0 = coreprof/toroid.field/b0 [A/m <sup>2</sup> ]; Time-dependent;
jni	coreprofile (9.5.1.3.110)	non-inductive parallel current density = average(jni.B) / B0, where B0 = coreprof/toroid.field/b0 [A/m <sup>2</sup> ]; Time-dependent;
jphi	coreprofile (9.5.1.3.110)	total toroidal current density = average(jphi/R) / average(1/R) [A/m <sup>2</sup> ]; Time-dependent;
joh	coreprofile (9.5.1.3.110)	ohmic parallel current density = average(joh.B) / B0, where B0 = coreprof/toroid.field/b0 [A/m <sup>2</sup> ]; Time-dependent;
vloop	coreprofile (9.5.1.3.110)	Toroidal loop voltage [V]. Time-dependent.
sigmapar	coreprofile (9.5.1.3.110)	Parallel conductivity [ohm <sup>-1</sup> .m <sup>-1</sup> ]. Time-dependent.
qoh	sourcecel (9.5.1.3.373)	ohmic heating [W/m <sup>3</sup> ]; Time-dependent;
qei	coreprofile (9.5.1.3.110)	Collisional heat transfer from electrons to ions (equipartition term) [W/m <sup>3</sup> ]; Time-dependent;
eparallel	coreprofile (9.5.1.3.110)	Parallel electric field = average(E.B) / B0, where B0 = coreprof/toroid.field/b0 [V.m <sup>-1</sup> ]. Time-dependent.
e.b	coreprofile (9.5.1.3.110)	Average(E.B) [V.T.m <sup>-1</sup> ]. Time-dependent.
q	coreprofile (9.5.1.3.110)	Safety factor profile; Time-dependent;
shear	coreprofile (9.5.1.3.110)	Magnetic shear profile; Time-dependent;
ns	corepfion (9.5.1.3.111)	Density of fast ions, for the various ion species [m <sup>-3</sup> ]; Time-dependent;
mtor	corepfion (9.5.1.3.111)	Toroidal momentum of the various ion species [UNITS?]; Time-dependent;
wtor	corepfion (9.5.1.3.111)	Angular toroidal rotation frequency of the various ion species [s <sup>-1</sup> ]; Time-dependent;
zeff	coreprofile (9.5.1.3.110)	Effective charge profile; Time-dependent;
bpol	coreprofile (9.5.1.3.110)	Average poloidal magnetic field, defined as sqrt(ave(grad rho <sup>2</sup> /R <sup>2</sup> )).dpsi/drho [T]. Time-dependent.

member	type	description
dvprimedt	coreprofile (9.5.1.3.110)	Time derivative of the radial derivative of the volume enclosed in the flux surface, i.e. $d/dt(dV/drho\_tor)$ [ $m^2.s^{-1}$ ]; Time-dependent.

Type of: coreprof:profiles1d (1523)

### 9.5.1.3.288 profiles\_1d

output profiles as a function of the poloidal flux

member	type	description
psi	vecflt_type (9.5.1.2.9)	Poloidal flux [Wb], without $1/2\pi$ and such that $B_p =  \text{grad } \psi  R/2/\pi$ . Time-dependent; Vector (npsi)
phi	vecflt_type (9.5.1.2.9)	toroidal flux [Wb]; Time-dependent; Vector (npsi)
pressure	vecflt_type (9.5.1.2.9)	pressure profile as a function of the poloidal flux [Pa]; Time-dependent; Vector (npsi)
F_dia	vecflt_type (9.5.1.2.9)	diamagnetic profile (R B_phi) [T m]; Time-dependent; Vector (npsi)
pprime	vecflt_type (9.5.1.2.9)	psi derivative of the pressure profile [Pa/Wb]; Time-dependent; Vector (npsi)
ffprime	vecflt_type (9.5.1.2.9)	psi derivative of F_dia multiplied with F_dia [ $T^2 m^2/Wb$ ]; Time-dependent; Vector (npsi)
jphi	vecflt_type (9.5.1.2.9)	flux surface averaged toroidal current density = $\text{average}(j_{\phi}/R) / \text{average}(1/R)$ [ $A/m^2$ ]; Time-dependent; Vector (npsi)
jparallel	vecflt_type (9.5.1.2.9)	flux surface averaged parallel current density = $\text{average}(j_{\parallel}) / B_0$ , where $B_0 = \text{equilibrium}/\text{global\_param}/\text{toroid\_field}/b_0$ ; [ $A/m^2$ ]; Time-dependent; Vector (npsi)
q	vecflt_type (9.5.1.2.9)	Safety factor = $d\psi/d\psi_{\text{tor}}$ [-]; Time-dependent; Vector (npsi)
r_inboard	vecflt_type (9.5.1.2.9)	radial coordinate (major radius) at the height and on the left of the magnetic axis [m]; Time-dependent; Vector (npsi)
r_outboard	vecflt_type (9.5.1.2.9)	radial coordinate (major radius) at the height and on the right of the magnetic axis [m]; Time-dependent; Vector (npsi)
rho_tor	vecflt_type (9.5.1.2.9)	Toroidal flux coordinate [m], to be used by the ETS and in many CPOs (coreprof, ...). Defined as $\sqrt{(\psi/\pi)/B_0}$ , where $B_0 = \text{equilibrium}/\text{global\_param}/\text{toroid\_field}/b_0$ . Time-dependent; Vector (npsi)
dpsidrho_tor	vecflt_type (9.5.1.2.9)	$d\psi/drho\_tor$ [Wb/m]; Time-dependent; Vector (npsi)
rho_vol	vecflt_type (9.5.1.2.9)	Normalised radial coordinate related to the plasma volume. Defined as $\sqrt{(\text{volume} / \text{volume}[\text{LCFS}])}$ . Time-dependent; Vector (npsi)
beta_pol	vecflt_type (9.5.1.2.9)	poloidal beta (inside the magnetic surface); Time-dependent; Vector (npsi)
li	vecflt_type (9.5.1.2.9)	internal inductance (inside the magnetic surface); Time-dependent; Vector (npsi)
elongation	vecflt_type (9.5.1.2.9)	Elongation; Time-dependent; Vector (npsi)
tria_upper	vecflt_type (9.5.1.2.9)	Upper triangularity profile; Time-dependent; Vector (npsi)
tria_lower	vecflt_type (9.5.1.2.9)	Lower triangularity profile; Time-dependent; Vector (npsi)
volume	vecflt_type (9.5.1.2.9)	Volume enclosed in the flux surface [ $m^3$ ]; Time-dependent; Vector (npsi)
vprime	vecflt_type (9.5.1.2.9)	Radial derivative of the volume enclosed in the flux surface with respect to psi, i.e. $dV/d\psi$ [ $m^3/Wb$ ]; Time-dependent; Vector (npsi)
dvdrho	vecflt_type (9.5.1.2.9)	Radial derivative of the volume enclosed in the flux surface with respect to rho_tor, i.e. $dV/drho\_tor$ [ $m^2$ ]; Time-dependent; Vector (npsi)
area	vecflt_type (9.5.1.2.9)	Cross-sectional area of the flux surface [ $m^2$ ]; Time-dependent; Vector (npsi)
aprime	vecflt_type (9.5.1.2.9)	Radial derivative of the cross-sectional area of the flux surface with respect to psi, i.e. $darea/d\psi$ [ $m^2/Wb$ ]; Time-dependent; Vector (npsi)
surface	vecflt_type (9.5.1.2.9)	Surface area of the flux surface [ $m^2$ ]; Time-dependent; Vector (npsi)
frap	vecflt_type (9.5.1.2.9)	Trapped particle fraction; Time-dependent; Vector (npsi)
gm1	vecflt_type (9.5.1.2.9)	$\text{average}(1/R^2)$ ; Time-dependent; Vector (npsi)
gm2	vecflt_type (9.5.1.2.9)	$\text{average}(\text{grad\_rho}^2/R^2)$ ; Time-dependent; Vector (npsi)
gm3	vecflt_type (9.5.1.2.9)	$\text{average}(\text{grad\_rho}^2)$ ; Time-dependent; Vector (npsi)
gm4	vecflt_type (9.5.1.2.9)	$\text{average}(1/B^2)$ [ $T^{-2}$ ]; Time-dependent; Vector (npsi)
gm5	vecflt_type (9.5.1.2.9)	$\text{average}(B^2)$ [ $T^2$ ]; Time-dependent; Vector (npsi)
gm6	vecflt_type (9.5.1.2.9)	$\text{average}(\text{grad\_rho}^2/B^2)$ [ $T^{-2}$ ]; Time-dependent; Vector (npsi)
gm7	vecflt_type (9.5.1.2.9)	$\text{average}(\text{grad\_rho})$ ; Time-dependent; Vector (npsi)
gm8	vecflt_type (9.5.1.2.9)	$\text{average}(R)$ ; Time-dependent; Vector (npsi)
gm9	vecflt_type (9.5.1.2.9)	$\text{average}(1/R)$ ; Time-dependent; Vector (npsi)
b_av	vecflt_type (9.5.1.2.9)	$\text{average}(B)$ ; Time-dependent; Vector (npsi)
b_min	vecflt_type (9.5.1.2.9)	minimum(B) on the flux surface; Time-dependent; Vector (npsi)
b_max	vecflt_type (9.5.1.2.9)	maximum(B) on the flux surface; Time-dependent; Vector (npsi)
omega	vecflt_type (9.5.1.2.9)	Toroidal rotation angular frequency (assumed constant on the flux surface) [rad/s]; Time-dependent; Vector (npsi)
omegaprime	vecflt_type (9.5.1.2.9)	Psi derivative of the toroidal rotation angular frequency (assumed constant on the flux surface) [rad/(s.Wb)]; Time-dependent; Vector (npsi)
mach_a	vecflt_type (9.5.1.2.9)	Alfvenic Mach number; Time-dependent; Vector (npsi)
phi_flow	vecflt_type (9.5.1.2.9)	Poloidal flow function $\phi\_flow = \rho^*v\_pol*B\_pol$ [ $kg/(V.s^2)$ ]; Time-dependent; Vector (npsi)

member	type	description
s_flow	vecflt_type (9.5.1.2.9)	Definition to be provided; Time-dependent; Vector (npsi)
h_flow	vecflt_type (9.5.1.2.9)	flow function $h\_flow = \gamma / (\gamma - 1) * s\_flow * \rho^\gamma + 0.5 * (\phi\_flow * B / \rho)^2 - 0.5 * (R * \omega)^2 [m^2 / s^2]$ ; Time-dependent; Vector (npsi)
rho_mass	vecflt_type (9.5.1.2.9)	Mass density $[kg / m^3]$ ; Time-dependent; Vector (npsi)

Type of: equilibrium:profiles\_1d (1532)

### 9.5.1.3.289 psi

Poloidal magnetic flux [Wb]; Time-dependent;

member	type	description
value	vecflt_type (9.5.1.2.9)	Signal value [Wb]; Time-dependent; Vector (nrho)
ddrho	vecflt_type (9.5.1.2.9)	Radial derivative ( $dvalue / drho\_tor$ ) $[Wb.m^{-1}]$ ; Time-dependent; Vector (nrho)
d2drho2	vecflt_type (9.5.1.2.9)	Second order radial derivative ( $d2value / drho\_tor2$ ) $[Wb.m^{-2}]$ ; Time-dependent; Vector (nrho)
ddt_rhotorn	vecflt_type (9.5.1.2.9)	Time derivative of the poloidal flux at constant $rho\_tor\_norm$ [V]. Time-dependent.
ddt_phi	vecflt_type (9.5.1.2.9)	Time derivative of the poloidal flux at constant toroidal flux [V]. Time-dependent.
source	string (9.5.1.1.3)	Source of the profile (any comment describing the origin of the profile : code, path to diagnostic signals, massaging, ...); String
flag	integer (9.5.1.1.2)	Flag describing how the profile has been processed : 0-not calculated; 1-interpretative; 2-calculated by the transport solver; 3-calculated by a separate code : in that case only, description of the code provided in codeparam at the same level; 4-used value from the previous time step; Time-dependent; Scalar
boundary	boundary (9.5.1.3.59)	Boundary condition for the transport equation. Time-dependent.
jni	jni (9.5.1.3.221)	Non-inductive parallel current density $[A / m^2]$ ; Time-dependent;
sigma_par	coreprofile (9.5.1.3.110)	Parallel conductivity $[ohm^{-1}.m^{-1}]$ . Time-dependent
codeparam	codeparam (9.5.1.3.66)	Code parameters

Type of: coreprof:psi (1523)

### 9.5.1.3.290 putinfo

Structure which is type independent, describing the data item

member	type	description
putmethod	string (9.5.1.1.3)	Storage method for this data
putaccess	string (9.5.1.1.3)	Instructions to access the data using this method
putlocation	string (9.5.1.1.3)	Name of this data under this method
rights	string (9.5.1.1.3)	Access rights to this data

Type of: datainfo:putinfo (1635)

### 9.5.1.3.291 q

Safety factor

member	type	description
qvalue	vecflt_type (9.5.1.2.9)	Safety factor values; Time-dependent; Vector (nmeas)
position	rz1D (9.5.1.3.325)	Major radius of the given safety factor values [m]; Time-dependent; Vector (nmeas)
source	string (9.5.1.1.3)	Description or path to the source signal (diagnostic or genprof, from which to read all info on the signal), e.g. 'magdiag/bpol_probes/measure/value'. String
exact	integer (9.5.1.1.2)	1 means exact data, is not fitted; 0 means the equilibrium code does a least square fit; scalar integer
weight	vecflt_type (9.5.1.2.9)	weight given to the measurement ( $\lambda = 0$ ); Time-dependent; Vector (nmeas)
sigma	vecflt_type (9.5.1.2.9)	standard deviation of the measurement; Time-dependent; Vector (nmeas)
calculated	vecflt_type (9.5.1.2.9)	Signal as recalculated by the equilibrium code; Time-dependent; Vector (nmeas)
chi2	vecflt_type (9.5.1.2.9)	$\chi^2$ of (calculated-measured); Time-dependent; Vector (nmeas)

Type of: eqconstraint:q (1688)

### 9.5.1.3.292 recycling\_neutrals

Recycling coefficients

member	type	description
particles	vecflt_type (9.5.1.2.9)	Particle recycling coefficient corresponding to the conversion to the neutral type INEUT. Vector(nneut). Time-dependent.
energy	vecflt_type (9.5.1.2.9)	Energy recycling coefficient corresponding to the conversion to the neutral type INEUT. Vector(nneut). Time-dependent.

Type of: coefficients\_neutrals:recycling (1581)

### 9.5.1.3.293 reduced

Structure for a reduced data signal (0D data)

member	type	description
value	float (9.5.1.1.1)	Data value; Real
source	string (9.5.1.1.3)	Path to the source signal (diagnostic or genprof, from which to read all info on the signal); String
time	float (9.5.1.1.1)	Time (exact time slice used from the time array of the source signal); Real

Type of: summary:a\_minor (1555) I summary:area (1555) I summary:beta\_normal (1555) I summary:beta\_pol (1555) I summary:beta\_tor (1555) I summary:bvac\_r (1555) I summary:elongation (1555) I summary:geom\_axis\_r (1555) I summary:impur1\_a (1555) I summary:impur1\_z (1555) I summary:ip (1555) I summary:li (1555) I summary:main\_ion1\_a (1555) I summary:main\_ion1\_z (1555) I summary:main\_ion2\_a (1555) I summary:main\_ion2\_z (1555) I summary:nev (1555) I summary:tev (1555) I summary:tiv (1555) I summary:tria\_lower (1555) I summary:tria\_upper (1555) I summary:volume (1555) I summary:zeffv (1555)

### 9.5.1.3.294 ref\_nt

set of non-timed references

member	type	description
zerod_real	ref_nt_0dr (9.5.1.3.297)	0d reference of real type
zerod_int	ref_nt_0di (9.5.1.3.295)	0d reference of integer type
zerod_string	ref_nt_0ds (9.5.1.3.299)	0d reference of string type
oned_real	ref_nt_1dr (9.5.1.3.303)	1d reference of real type
oned_int	ref_nt_1di (9.5.1.3.301)	1d reference of integer type

Type of: reference:non\_timed (1550)

### 9.5.1.3.295 ref\_nt\_0di

set of non-timed references of integer type

member	type	description
ref1	ref_nt_0di_ref (9.5.1.3.296)	Reference signal #1
ref2	ref_nt_0di_ref (9.5.1.3.296)	Reference signal #2
ref3	ref_nt_0di_ref (9.5.1.3.296)	Reference signal #3
ref4	ref_nt_0di_ref (9.5.1.3.296)	Reference signal #4

Type of: ref\_nt:zerod\_int (1808)

### 9.5.1.3.296 ref\_nt\_0di\_ref

a non-timed reference of integer type

member	type	description
value	integer (9.5.1.1.2)	Value of the reference. Integer scalar.
description	string (9.5.1.1.3)	Description of the reference. String.

Type of: ref\_nt\_0di:ref1 (1809) I ref\_nt\_0di:ref2 (1809) I ref\_nt\_0di:ref3 (1809) I ref\_nt\_0di:ref4 (1809)

### 9.5.1.3.297 ref\_nt\_0dr

set of non-timed references of real type

member	type	description
ref1	ref_nt_0dr_ref (9.5.1.3.298)	Reference signal #1
ref2	ref_nt_0dr_ref (9.5.1.3.298)	Reference signal #2
ref3	ref_nt_0dr_ref (9.5.1.3.298)	Reference signal #3
ref4	ref_nt_0dr_ref (9.5.1.3.298)	Reference signal #4
ref5	ref_nt_0dr_ref (9.5.1.3.298)	Reference signal #5
ref6	ref_nt_0dr_ref (9.5.1.3.298)	Reference signal #6
ref7	ref_nt_0dr_ref (9.5.1.3.298)	Reference signal #7

Type of: ref\_nt:zerod\_real (1808)

### 9.5.1.3.298 ref\_nt\_0dr\_ref

a non-timed reference of real type

member	type	description
value	float (9.5.1.1.1)	Value of the reference. Real scalar.
description	string (9.5.1.1.3)	Description of the reference. String.

Type of: ref\_nt\_0dr:ref1 (1811) I ref\_nt\_0dr:ref2 (1811) I ref\_nt\_0dr:ref3 (1811) I ref\_nt\_0dr:ref4 (1811) I ref\_nt\_0dr:ref5 (1811) I ref\_nt\_0dr:ref6 (1811) I ref\_nt\_0dr:ref7 (1811)

### 9.5.1.3.299 ref\_nt\_0ds

set of non-timed references of string type

member	type	description
ref1	ref_nt_0ds_ref (9.5.1.3.300)	Reference signal #1
ref2	ref_nt_0ds_ref (9.5.1.3.300)	Reference signal #2

Type of: ref\_nt:zerod\_string (1808)

### 9.5.1.3.300 ref\_nt\_0ds\_ref

a non-timed reference of string type

member	type	description
value	string (9.5.1.1.3)	Value of the reference. String
description	string (9.5.1.1.3)	Description of the reference. String.

Type of: ref\_nt\_0ds:ref1 (1813) I ref\_nt\_0ds:ref2 (1813)

### 9.5.1.3.301 ref\_nt\_1di

set of non-timed references of vecint type

member	type	description
ref1	ref_nt_1di_ref (9.5.1.3.302)	Reference signal #1
ref2	ref_nt_1di_ref (9.5.1.3.302)	Reference signal #2
ref3	ref_nt_1di_ref (9.5.1.3.302)	Reference signal #3
ref4	ref_nt_1di_ref (9.5.1.3.302)	Reference signal #4

Type of: ref\_nt:oned\_int (1808)

### 9.5.1.3.302 ref\_nt\_1di\_ref

a non-timed reference of vecint type

member	type	description
value	vecint.type (9.5.1.2.10)	Value of the reference. Vector of integers.
description	string (9.5.1.1.3)	Description of the reference. String.

Type of: ref\_nt\_1di:ref1 (1815) I ref\_nt\_1di:ref2 (1815) I ref\_nt\_1di:ref3 (1815) I ref\_nt\_1di:ref4 (1815)

### 9.5.1.3.303 ref\_nt\_1dr

set of non-timed references of vecflt type

member	type	description
ref1	ref_nt_1dr_ref (9.5.1.3.304)	Reference signal #1
ref2	ref_nt_1dr_ref (9.5.1.3.304)	Reference signal #2
ref3	ref_nt_1dr_ref (9.5.1.3.304)	Reference signal #3
ref4	ref_nt_1dr_ref (9.5.1.3.304)	Reference signal #4
ref5	ref_nt_1dr_ref (9.5.1.3.304)	Reference signal #5

Type of: ref\_nt:oned\_real (1808)

### 9.5.1.3.304 ref\_nt\_1dr\_ref

a non-timed reference of vecflt type

member	type	description
value	vecflt.type (9.5.1.2.9)	Value of the reference. Vector.
description	string (9.5.1.1.3)	Description of the reference. String.

Type of: ref\_nt\_1dr:ref1 (1817) I ref\_nt\_1dr:ref2 (1817) I ref\_nt\_1dr:ref3 (1817) I ref\_nt\_1dr:ref4 (1817) I ref\_nt\_1dr:ref5 (1817)

### 9.5.1.3.305 ref\_t

set of timed references

member	type	description
zerod_real	ref_t.0dr (9.5.1.3.308)	0d reference of real type
zerod_int	ref_t.0di (9.5.1.3.306)	0d reference of integer type
oned_real	ref_t.1dr (9.5.1.3.312)	1d reference of real type
oned_int	ref_t.1di (9.5.1.3.310)	1d reference of integer type

Type of: reference:timed (1550)

### 9.5.1.3.306 ref\_t.0di

set of timed references of integer type

member	type	description
ref1	ref_t.0di_ref (9.5.1.3.307)	Reference signal #1
ref2	ref_t.0di_ref (9.5.1.3.307)	Reference signal #2
ref3	ref_t.0di_ref (9.5.1.3.307)	Reference signal #3
ref4	ref_t.0di_ref (9.5.1.3.307)	Reference signal #4

Type of: ref\_t:zerod\_int (1819)

### 9.5.1.3.307 ref\_t.0di\_ref

a timed reference of integer type

member	type	description
value	integer (9.5.1.1.2)	Value of the reference. Integer scalar. Time-dependent.
description	string (9.5.1.1.3)	Description of the reference. String.

Type of: [ref\\_t\\_0di:ref1 \(1820\)](#) | [ref\\_t\\_0di:ref2 \(1820\)](#) | [ref\\_t\\_0di:ref3 \(1820\)](#) | [ref\\_t\\_0di:ref4 \(1820\)](#)

### 9.5.1.3.308 ref\_t\_0dr

set of timed references of real type

member	type	description
ref1	ref_t_0dr_ref (9.5.1.3.309)	Reference signal #1
ref2	ref_t_0dr_ref (9.5.1.3.309)	Reference signal #2
ref3	ref_t_0dr_ref (9.5.1.3.309)	Reference signal #3
ref4	ref_t_0dr_ref (9.5.1.3.309)	Reference signal #4
ref5	ref_t_0dr_ref (9.5.1.3.309)	Reference signal #5
ref6	ref_t_0dr_ref (9.5.1.3.309)	Reference signal #6
ref7	ref_t_0dr_ref (9.5.1.3.309)	Reference signal #7
ref8	ref_t_0dr_ref (9.5.1.3.309)	Reference signal #8
ref9	ref_t_0dr_ref (9.5.1.3.309)	Reference signal #9
ref10	ref_t_0dr_ref (9.5.1.3.309)	Reference signal #10

Type of: [ref\\_t:zerod\\_real \(1819\)](#)

### 9.5.1.3.309 ref\_t\_0dr\_ref

a timed reference of real type

member	type	description
value	float (9.5.1.1.1)	Value of the reference. Real scalar. Time-dependent.
description	string (9.5.1.1.3)	Description of the reference. String.

Type of: [ref\\_t\\_0dr:ref1 \(1822\)](#) | [ref\\_t\\_0dr:ref10 \(1822\)](#) | [ref\\_t\\_0dr:ref2 \(1822\)](#) | [ref\\_t\\_0dr:ref3 \(1822\)](#) | [ref\\_t\\_0dr:ref4 \(1822\)](#) | [ref\\_t\\_0dr:ref5 \(1822\)](#) | [ref\\_t\\_0dr:ref6 \(1822\)](#) | [ref\\_t\\_0dr:ref7 \(1822\)](#) | [ref\\_t\\_0dr:ref8 \(1822\)](#) | [ref\\_t\\_0dr:ref9 \(1822\)](#)

### 9.5.1.3.310 ref\_t\_1di

set of timed references of vecint type

member	type	description
ref1	ref_t_1di_ref (9.5.1.3.311)	Reference signal #1
ref2	ref_t_1di_ref (9.5.1.3.311)	Reference signal #2
ref3	ref_t_1di_ref (9.5.1.3.311)	Reference signal #3
ref4	ref_t_1di_ref (9.5.1.3.311)	Reference signal #4

Type of: [ref\\_t:oned\\_int \(1819\)](#)

### 9.5.1.3.311 ref\_t\_1di\_ref

a timed reference of vecint type

member	type	description
value	vecint.type (9.5.1.2.10)	Value of the reference. Vector of integers. Time-dependent.
description	string (9.5.1.1.3)	Description of the reference. String.

Type of: [ref\\_t\\_1di:ref1 \(1824\)](#) | [ref\\_t\\_1di:ref2 \(1824\)](#) | [ref\\_t\\_1di:ref3 \(1824\)](#) | [ref\\_t\\_1di:ref4 \(1824\)](#)



### 9.5.1.3.312 ref\_t\_1dr

set of timed references of vecflt type

member	type	description
ref1	ref_t_1dr_ref (9.5.1.3.313)	Reference signal #1
ref2	ref_t_1dr_ref (9.5.1.3.313)	Reference signal #2
ref3	ref_t_1dr_ref (9.5.1.3.313)	Reference signal #3
ref4	ref_t_1dr_ref (9.5.1.3.313)	Reference signal #4
ref5	ref_t_1dr_ref (9.5.1.3.313)	Reference signal #5

Type of: ref\_t:oned\_real (1819)

### 9.5.1.3.313 ref\_t\_1dr\_ref

a timed reference of vecflt type

member	type	description
value	vecflt_type (9.5.1.2.9)	Value of the reference. Vector. Time-dependent.
description	string (9.5.1.1.3)	Description of the reference. String.

Type of: ref\_t\_1dr:ref1 (1826) | ref\_t\_1dr:ref2 (1826) | ref\_t\_1dr:ref3 (1826) | ref\_t\_1dr:ref4 (1826) | ref\_t\_1dr:ref5 (1826)

### 9.5.1.3.314 ref\_wall\_typ

List of reference wall compositions; Array of structures (number of reference compositions)

member	type	description
label	string (9.5.1.1.3)	Label for this reference wall type
thickness	vecflt_type (9.5.1.2.9)	Thickness(m). Float vector, dimensions: 1. layer index
stoichiometry	matflt_type (9.5.1.2.7)	Material composition of layer. Float matrix, dimensions: 1. layer index, 2. element number (numbering as in surface.elements/surface.compound array)
dx	matflt_type (9.5.1.2.7)	Cell spacings for 1d layer height discretization; Float matrix (max. number of cells for layer, layer index), dimensions: 1. cell index, 2. layer index

Type of: surface:ref\_wall\_typ (1900)

### 9.5.1.3.315 refl\_receive

Reflectometry signal; experimental or code output. Time-dependent. Vector(nreceivers); If output from ERC3D, contains short, high-resolution (ps) time series anchored to the time of the CPO or, for a combination of runs, longer, coarse time signals. For experimental signals, time series may span much longer durations. For slowly varying signals, may contain only one point and have a separate CPO instance with different time field for every point. For code output, the signals are usually normalised to unity power.

member	type	description
name	string (9.5.1.1.3)	Signal name
raw_signal	t_series_real (9.5.1.3.388)	Raw antenna signal, possibly code dependent, may not always be available; usually without mixing of local oscillator; Time series; Vector (ntime_raw)
io_signal	t_series_real (9.5.1.3.388)	Local oscillator signal, for mixing with raw signal; Time series; Vector (ntime_raw)
iq_receiver	t_series_cplx (9.5.1.3.387)	I and Q signals from the receiver; already processed by code (or hardware); Time series; Vector (ntime_receiver)
antenna_ind	integer (9.5.1.1.2)	Index of the receiving antenna in the antennas vector, starting at 0
codeparam	codeparam (9.5.1.3.66)	Code parameters

Type of: reflectomet:refl\_receive (1551)

### 9.5.1.3.316 reflectometry\_antennas

Vector of reflectometry antenna descriptions. These include radiation fields as well as material antenna structures (feeds, horns, later mirrors); Vector(nantennas); refl\_received entries refer to their antenna by index in this array.

member	type	description
name	string (9.5.1.1.3)	Antenna name
type	identifier (9.5.1.3.214)	Antenna type: 1: sending, 2: receiving, 3: both
origin	float (9.5.1.1.1)	To be defined: annotation and type
radfield	reflectometry_radfield (9.5.1.3.317)	Complex valued radiation field for injection into grid; Can be a Gaussian, or a waveguide mode, or an arbitrary E field. The latter method can be used with measured radiation patterns of actual antennas. Needs to be matched with any material structures in the geometry section of this CPO. Frequency dependence: in the launchsignal part, the launch frequency can be varied arbitrarily, which changes the radiation field (or Gaussian waist sizes) when radiated from a fixed size antenna; therefore, all entries here can be specified frequency-dependent
geometry	float (9.5.1.1.1)	To be defined: annotation and type
launchsignal	float (9.5.1.1.1)	To be defined: annotation and type

Type of: reflectomet:antennas (1551)

### 9.5.1.3.317 reflectometry\_radfield

Complex valued radiation field for injection into grid; Can be a Gaussian, or a waveguide mode, or an arbitrary E field. The latter method can be used with measured radiation patterns of actual antennas. Needs to be matched with any material structures in the geometry section of this CPO. Frequency dependence: in the launchsignal part, the launch frequency can be varied arbitrarily, which changes the radiation field (or Gaussian waist sizes) when radiated from a fixed size antenna; therefore, all entries here can be specified frequency-dependent

member	type	description
type	identifier (9.5.1.3.214)	Identify type of source: 0: Gaussian, 1: waveguide mode, 2: arbitrary E field; corresponding sub-structure must be filled to provide the information.
position	vecflt_type (9.5.1.2.9)	Center position in local x-y-z coordinate system [m]; Vector(3)
gaussian(:)	reflectometry_radfield_gaussian (9.5.1.3.318)	Parameters if radiation field is a pure Gaussian; major axes of the Gaussian are aligned with the x and y axis of the local coordinate system given in origin; linear polarisation only. Time-dependent
efield(:)	reflectometry_radfield_efield (9.5.1.3.319)	complex electric field at the aperture, given as a 2d grid in the local x and y directions (corresponding to dim1 and dim2)

Type of: reflectometry\_antennas:radfield (1830)

### 9.5.1.3.318 reflectometry\_radfield\_gaussian

Parameters if radiation field is a pure Gaussian; major axes of the Gaussian are aligned with the x and y axis of the local coordinate system given in origin; linear polarisation only

member	type	description
aperture	simp_apert (9.5.1.3.366)	Physical limits of the Gaussian wave field; any rotation here is at odds with the Gaussian geometry
waistsize	vecflt_type (9.5.1.2.9)	Beam waist size [m]; Vector(2)
waistzpos	vecflt_type (9.5.1.2.9)	Beam waist position along local z axis [m]; Vector(2)
tiltangle	vecflt_type (9.5.1.2.9)	tilt angle relative to local z axis [rad]; Vector(2)
polar_angle	vecflt_type (9.5.1.2.9)	Polarisation angle around local z [rad]; 0 means along the local x axis, i.e. vertical if all angles in the origin field are 0; Scalar
frequency	float (9.5.1.1.1)	Frequency for this occurrence of the gaussian/efield/wgmode CPO [Hz]; Scalar; can be zero of no frequency dependence is desired and only one CPO is given

Type of: reflectometry\_radfield:gaussian (1831)

### 9.5.1.3.319 reflectometry\_radfield\_efield

complex electric field at the aperture, given as a 2d grid in the local x and y directions (corresponding to dim1 and dim2)

member	type	description
grid2d	reggrid (9.5.1.3.320)	Coordinate values for the grid for the electric field arrays. Vector(ndim1) and Vector(ndim2)
e1	matcplx_type (9.5.1.3.239)	Electric field component along local x direction [V/m]. Matrix(ndim1,ndim2)
e2	matcplx_type (9.5.1.3.239)	Electric field component along local y direction [V/m]. Matrix(ndim1,ndim2)
frequency	float (9.5.1.1.1)	Frequency for this occurrence of the gaussian/efield/wgmode CPO [Hz]; Scalar; can be zero of no frequency dependence is desired and only one CPO is given

Type of: reflectometry\_radfield:efield (1831)

### 9.5.1.3.320 reggrid

Generic structure for a regular grid

member	type	description
dim1	vecflt.type (9.5.1.2.9)	First dimension values; Vector (ndim1)
dim2	vecflt.type (9.5.1.2.9)	Second dimension values; Vector (ndim2)

Type of: coord\_sys:grid (1604) I reflectometry\_radfield\_efield:grid2d (1833)

### 9.5.1.3.321 rfmeasure

Measured values

member	type	description
ti	expID (9.5.1.3.181)	Ion temperature [eV]. Vector (nchannels)

Type of: rfdiag:measure (1552)

### 9.5.1.3.322 rfsetup

diagnostic setup information

member	type	description
position	rzphiIDexp (9.5.1.3.332)	Position of the measurement. Time-dependent. Vector (nchannels)

Type of: rfdiag:setup (1552)

### 9.5.1.3.323 rfbeam

Beam characteristics

member	type	description
spot	spot (9.5.1.3.380)	Spot characteristics
phaseellipse	phaseellipse (9.5.1.3.279)	Phase ellipse characteristics

Type of: antenna\_ec:beam (1564) I antenna\_lh:beam (1566)

### 9.5.1.3.324 rz0D

Structure for one (R,Z) position (0D)

member	type	description
r	float (9.5.1.1.1)	Major radius [m]
z	float (9.5.1.1.1)	Altitude [m]

Type of: circularcoil:centre (1579) I eqgeometry:active\_limit (1689) I eqgeometry:geom\_axis (1689) I eqgeometry:left\_low\_st (1689) I eqgeometry:left\_up\_st (1689) I eqgeometry:right\_low\_st (1689) I eqgeometry:right\_up\_st (1689) I mag\_axis:position (1750)

### 9.5.1.3.325 rz1D

Structure for list of R,Z positions (1D)

member	type	description
r	vecflt.type (9.5.1.2.9)	Major radius [m]
z	vecflt.type (9.5.1.2.9)	Altitude [m]

Type of: flush:position (1699) I isoflux:position (1734) I limiter\_unit:position (1745) I mhd\_ideal\_wall2d:position (1755) I mhd\_res\_wall2d:position (1757) I omnigen\_surf:rz (1777) I planecoil:coordinates (1794) I q:position (1805) I setup\_bprobe:position (1873) I straps:coord\_strap (1899) I vessel:position (1560) I wall\_blocks\_unit:position (1935) I wall\_vessel\_annular:inside (1938) I wall\_vessel\_annular:outside (1938) I xpts:position (1953)

### 9.5.1.3.326 rz1D\_npoints

Structure for list of R,Z positions (1D), with mention of the number of points relevant for a given time slice

member	type	description
r	vecflt_type (9.5.1.2.9)	Major radius [m]. Vector(max_npoints). Time-dependent
z	vecflt_type (9.5.1.2.9)	Altitude [m]. Vector(max_npoints). Time-dependent
npoints	integer (9.5.1.1.2)	Number of meaningful points in the above vectors at a given time slice. Time-dependent

### 9.5.1.3.327 rz1Dexp

Structure for list of R,Z positions (1D), with R and Z time-depent and experimental.

member	type	description
r	vecflt_type (9.5.1.2.9)	Major radius [m]. Vector(npoints). Time-dependent
z	vecflt_type (9.5.1.2.9)	Altitude [m]. Vector(npoints). Time-dependent

Type of: eqgeometry:boundary (1689) I eqgeometry:xpts (1689)

### 9.5.1.3.328 rz2D

Structure for list of R,Z positions (2D)

member	type	description
r	matflt_type (9.5.1.2.7)	Major radius [m]
z	matflt_type (9.5.1.2.7)	Altitude [m]

Type of: coord\_sys:position (1604) I geom\_iron:rzcoordinate (1721) I pfpageometry:rzcoordinate (1790)

### 9.5.1.3.329 rz3D

Structure for list of R,Z positions (3D)

member	type	description
r	array3dfilt_type (9.5.1.2.1)	Major radius [m]
z	array3dfilt_type (9.5.1.2.1)	Altitude [m]

Type of: pfgeometry:rzcoordinate (1789)

### 9.5.1.3.330 rzphi0D

Structure for a single R,Z,phi position (0D)

member	type	description
r	float (9.5.1.1.1)	Major radius [m]
z	float (9.5.1.1.1)	Altitude [m]
phi	float (9.5.1.1.1)	Toroidal angle [rad]

Type of: antenna\_ec:position (1564) I antenna\_lh:position (1566) I fusiondiag\_voxels:centre (1720) I fusiondiag\_voxels:direction (1720) I msediag\_setup:pivot\_point (1766) I msediag\_setup:second\_point (1766) I pelletpath:pivot\_point (1784) I pelletpath:second\_point (1784) I setup\_inject:position (1875)

### 9.5.1.3.331 rzphi1D

Structure for list of R,Z,phi positions (1D)

member	type	description
r	vecflt.type (9.5.1.2.9)	Major radius [m]
z	vecflt.type (9.5.1.2.9)	Altitude [m]
phi	vecflt.type (9.5.1.2.9)	Toroidal angle [rad]

Type of: ablationrate:position (1563) I beamlets:position (1571) I deposprofile:position (1636) I edges:edge\_rzphi (1683) I fusiondiag\_colliunit\_circ:centre (1709) I halpha\_setup:pivot\_point (1726) I halpha\_setup:second\_point (1726) I launches:position (1538) I lithsetup:position (1748) I msediag\_emiss\_chord:setup (1761) I setup\_line:pivot\_point (1876) I setup\_line:second\_point (1876) I setup\_line:third\_point (1876) I tsetup:position (1917)

### 9.5.1.3.332 rzphi1Dexp

Structure for list of R,Z,phi positions (1D)

member	type	description
r	exp1D (9.5.1.3.181)	Major radius [m]
z	exp1D (9.5.1.3.181)	Altitude [m]
phi	exp1D (9.5.1.3.181)	Toroidal angle [rad]

Type of: cxsetup:position (1633) I ecemeasure:position (1673) I lang\_derived:position (1736) I lang\_measure:position (1737) I rfasetup:position (1836)

### 9.5.1.3.333 rzphi2D

Structure for list of R,Z,phi positions (2D)

member	type	description
r	matflt.type (9.5.1.2.7)	Major radius [m]
z	matflt.type (9.5.1.2.7)	Altitude [m]
phi	matflt.type (9.5.1.2.7)	Toroidal angle [rad]

Type of: fusiondiag\_colliunit\_poly:nodes (1710) I setup\_floops:position (1874)

### 9.5.1.3.334 rzphi3D

Structure for list of R,Z,phi positions (3D)

member	type	description
r	array3dflt.type (9.5.1.2.1)	Major radius [m]
z	array3dflt.type (9.5.1.2.1)	Altitude [m]
phi	array3dflt.type (9.5.1.2.1)	Toroidal angle [rad]

Type of: turbcoordsys:position (1919)

### 9.5.1.3.335 rzphidrdzdphi1D

Structure for list of R,Z,phi positions and width dR dZ dphi (1D)

member	type	description
r	vecflt.type (9.5.1.2.9)	Position : major radius [m]
z	vecflt.type (9.5.1.2.9)	Position : altitude [m]
phi	vecflt.type (9.5.1.2.9)	Position : toroidal angle [rad]
dr	vecflt.type (9.5.1.2.9)	Width : major radius [m]
dz	vecflt.type (9.5.1.2.9)	Width : altitude [m]
dphi	vecflt.type (9.5.1.2.9)	Width : toroidal angle [rad]

Type of: msediag\_setup\_polarimetry:rzgamma (1767)

### 9.5.1.3.336 sawteeth\_diags

Inversion and mixing radii

member	type	description
shear1	float (9.5.1.1.1)	Magnetic shear at $q = 1$ [-]. Time-dependent. Real scalar.
rhotorn_q1	float (9.5.1.1.1)	Rho_tor_norm at $q=1$ radius [-]. Time-dependent. Real scalar.
rhotorn_inv	float (9.5.1.1.1)	Rho_tor_norm at inversion radius [-]. Time-dependent. Real scalar.
rhotorn_mix	float (9.5.1.1.1)	Rho_tor_norm at mixing radius [-]. Time-dependent. Real scalar.

Type of: sawteeth:diags (1553)

### 9.5.1.3.337 sawteeth\_profiles1d

Core profiles after sawtooth crash

member	type	description
ne	vecflt.type (9.5.1.2.9)	Electron density [ $m^{-3}$ ]. Time-dependent. Vector (nrho).
ni	matflt.type (9.5.1.2.7)	Ion density [ $m^{-3}$ ]. Time-dependent. Matrix (nrho,nion).
te	vecflt.type (9.5.1.2.9)	Electron temperature [eV]. Time-dependent. Vector (nrho).
ti	matflt.type (9.5.1.2.7)	Ion temperature [eV]. Time-dependent. Matrix (nrho,nion).
psi	vecflt.type (9.5.1.2.9)	Poloidal flux [Wb], without $1/2\pi$ and such that $B_p =  \text{grad } \psi  / R/2/\pi$ . Time-dependent. Vector (nrho).
phi	vecflt.type (9.5.1.2.9)	Toroidal flux [Wb]. Time-dependent. Vector (nrho).
psistar	vecflt.type (9.5.1.2.9)	$\Psi^* = \psi - \phi$ [Wb]. Time-dependent. Vector (nrho).
volume	vecflt.type (9.5.1.2.9)	Volume enclosed in the flux surface [ $m^3$ ]. Required to ensure particle and energy conservation during reconnection process (ndV and (nT)dV are conserved). Time-dependent. Vector (nrho).
q	vecflt.type (9.5.1.2.9)	Safety factor = $d\phi/d\psi$ [-]. Time-dependent. Vector (nrho).

Type of: sawteeth:profiles1d (1553)

### 9.5.1.3.338 scenario\_centre

central values of the profiles (at magnetic axis)

member	type	description
te0	scenario.ref (9.5.1.3.355)	central electron temperature [eV]. Time-dependent.
ti0	scenario.ref (9.5.1.3.355)	central ion temperature [eV]. Time-dependent.
ne0	scenario.ref (9.5.1.3.355)	central electron density [ $m^{-3}$ ]. Time-dependent.
ni0	scenario.ref (9.5.1.3.355)	central ion density [ $m^{-3}$ ]. Time-dependent.
shift0	scenario.ref (9.5.1.3.355)	central value of Shafranov shift [m]. Time-dependent.
psi0	scenario.ref (9.5.1.3.355)	pedestal poloidal flux [Wb]. Time-dependent.
phi0	scenario.ref (9.5.1.3.355)	central toroidal flux [Wb]. Time-dependent.
q0	scenario.ref (9.5.1.3.355)	central safety factor value []. Time-dependent.
Rmag	scenario.ref (9.5.1.3.355)	radius of magnetic axis [R]. Time-dependent.
Zmag	scenario.ref (9.5.1.3.355)	Z coordinate of magnetic axis [R]. Time-dependent.
vtor_0	scenario.ref (9.5.1.3.355)	central rotation velocity of selected impurity [m/s]. Time-dependent.

Type of: scenario:centre (1554)

### 9.5.1.3.339 scenario\_composition

Plasma composition (description of ion species).

member	type	description
amn	vecflt.type (9.5.1.2.9)	Atomic mass number (lumped ions are allowed); Vector (nion)
zn	vecflt.type (9.5.1.2.9)	Nuclear charge (lumped ions are allowed); Vector (nion)
zion	vecflt.type (9.5.1.2.9)	Ion charge (of the dominant ionisation state; lumped ions are allowed); Vector (nion)
imp_flag	vecint.type (9.5.1.2.10)	Multiple charge state calculation flag : 0-Only one charge state is considered; 1-Multiple charge state are considered and are described in impurity CPO; Vector (nion)
rot_imp_flag	vecint.type (9.5.1.2.10)	set to 1 for the impurity corresponding at the given toroidal rotation, otherwise = 0
pellet_amn	vecflt.type (9.5.1.2.9)	Atomic mass number (for pellet injector); Vector (nion)

member	type	description
pellet_zn	vecflt_type (9.5.1.2.9)	Nuclear charge (pellet injector); Vector (nion)
nbi_amn	vecflt_type (9.5.1.2.9)	Atomic mass number (for neutral beam injection); Vector (nion)
nbi_zn	vecflt_type (9.5.1.2.9)	Nuclear charge (for neutral beam injection); Vector (nion)

Type of: scenario:composition (1554)

### 9.5.1.3.340 scenario\_configuration

Strings describing the tokamak configuration

member	type	description
config	scenario_int (9.5.1.3.347)	plasma configuration (limiter/divertor ...) []. Time-dependent. Possible values : 0 = undetermined; 1 = poloidal limiter (ring); 2 = poloidal limiter (LFS); 3 = poloidal limiter (HFS); 4 = toroidal limiter (ring); 5 = toroidal limiter (segment); 6 = poloidal divertor; 7 = toroidal divertor (single null, ion drift in direction of divertor); 8 = toroidal divertor (single null, ion drift in opposite direction of divertor); 9 = toroidal divertor (double null).
lmode_sc	string (9.5.1.1.3)	name of the L-mode scaling law. String.
hmode_sc	string (9.5.1.1.3)	name of the H-mode scaling law. String.
core_sc	string (9.5.1.1.3)	name of the core plasma energy scaling law. String.
pedestal_sc	string (9.5.1.1.3)	name of the pedestal energy scaling law. String.
helium_sc	string (9.5.1.1.3)	name of the helium confinement time scaling law. String.
impurity_sc	string (9.5.1.1.3)	name of the impurities confinement time scaling law
l2h_sc	string (9.5.1.1.3)	name of the L-mode to H-mode power threshold scaling law. String.
tor_rot_sc	string (9.5.1.1.3)	name of the toroidal spontaneous rotation scaling law. String.
wall_mat	string (9.5.1.1.3)	chemical composition of the wall. String.
evap_mat	string (9.5.1.1.3)	chemical composition evaporated wall conditioning material. String.
lim_mat	string (9.5.1.1.3)	chemical composition of the limiter. String.
div_mat	string (9.5.1.1.3)	chemical composition of the divertor
coordinate	string (9.5.1.1.3)	name/definition of the internal coordinate of the simulator that are given by the data named rho
ecrh_freq	scenario_ref (9.5.1.3.355)	ECRH frequency [Hz]. Time-dependent.
ecrh_loc	scenario_ref (9.5.1.3.355)	position of maximum ECRH deposition on scale of rho [rho]. Time-dependent.
ecrh_mode	scenario_int (9.5.1.3.347)	polarisation of ecrh wave (0 = O mode, 1 = X mode) []. Time-dependent.
ecrh_tor_ang	scenario_ref (9.5.1.3.355)	toroidal angle of ECRH at resonance [rad] Time-dependent.
ecrh_pol_ang	scenario_ref (9.5.1.3.355)	poloidal angle of ECRH resonance position (0= LFS, pi/2 = top, -pi/2 = down, pi = HFS) [rad]. Time-dependent.
ecrh_harm	scenario_int (9.5.1.3.347)	harmonic number of the absorbed ecrh wave []. Time-dependent.
enbi	scenario_ref (9.5.1.3.355)	energy of the neutral beam [eV]. Time-dependent.
r_nbi	scenario_ref (9.5.1.3.355)	Major radius of tangence of NBI [m]. Time-dependent.
grad_b_drift	scenario_int (9.5.1.3.347)	direction of ion grad-B drift (1= to lower divertor, -1 = from lower divertor) []. Time-dependent.
icrh_freq	scenario_ref (9.5.1.3.355)	ICRH frequency [Hz]. Time-dependent.
icrh_scheme	string (9.5.1.1.3)	icrh scheme either : H_min_1; He3_min; T_harm_2; FW; FW_CD; FW_CCD
icrh_phase	scenario_ref (9.5.1.3.355)	ICRH antenna phasing [rad]. Time-dependent.
LH_freq	scenario_ref (9.5.1.3.355)	LHCD frequency [Hz]. Time-dependent.
LH_npar	scenario_ref (9.5.1.3.355)	LHCD parallel indice []. Time-dependent.
pellet_ang	scenario_ref (9.5.1.3.355)	pellet injection position (0= LFS, pi/2 = top, -pi/2 = down, pi = HFS) [rad]. Time-dependent.
pellet_v	scenario_ref (9.5.1.3.355)	pellet injection velocity [m/s]. Time-dependent.
pellet_nba	scenario_ref (9.5.1.3.355)	initial number of atoms in pellet []. Time-dependent.

Type of: scenario:configs (1554)

### 9.5.1.3.341 scenario\_confinement

characteristic confinement times

member	type	description
tau_e	scenario_ref (9.5.1.3.355)	thermal energy confinement time [s]. Time-dependent.
tau_l_sc	scenario_ref (9.5.1.3.355)	confinement time given by the selected L-mode scaling law [s]. Time-dependent.
tau_h_sc	scenario_ref (9.5.1.3.355)	confinement time given by the selected H-mode scaling law [s]. Time-dependent.
tau_he	scenario_ref (9.5.1.3.355)	Helium ashes confinement time [s]. Time-dependent.
tau_e_ee	scenario_ref (9.5.1.3.355)	electron energy confinement time [s]. Time-dependent.
tau_e_ii	scenario_ref (9.5.1.3.355)	ion energy confinement time [s]. Time-dependent.

member	type	description
tau_e_ei	scenario_ref (9.5.1.3.355)	energy equipartition characteristic time [s]. Time-dependent.
tau_cur_diff	scenario_ref (9.5.1.3.355)	characteristic time for current diffusion [s]. Time-dependent.
tau_i_rol	scenario_ref (9.5.1.3.355)	characteristic time for current decrease in tokamak equivalent R/L circuit [s]. Time-dependent.

Type of: scenario:confinement (1554)

### 9.5.1.3.342 scenario\_currents

data related to current sources and current diffusion

member	type	description
RR	scenario_ref (9.5.1.3.355)	plasma resistivity [ohm]. Time-dependent.
i_align	scenario_ref (9.5.1.3.355)	current drive alignment quality parameter (1 = good , 0 = bad). Time-dependent.
i_boot	scenario_ref (9.5.1.3.355)	bootstrap current [A]. Time-dependent.
i_cd_tot	scenario_ref (9.5.1.3.355)	total current drive [A]. Time-dependent.
i_eccd	scenario_ref (9.5.1.3.355)	Electron Cyclotron current drive [A]. Time-dependent.
i_fast_ion	scenario_ref (9.5.1.3.355)	fast ions bootstrap like current drive (i.e. fast alpha) [A]. Time-dependent.
i_fwcd	scenario_ref (9.5.1.3.355)	Fast Wave current drive [A]. Time-dependent.
i_lhcd	scenario_ref (9.5.1.3.355)	Lower Hybrid current drive [A]. Time-dependent.
i_nbicd	scenario_ref (9.5.1.3.355)	Neutral Beam Injection current drive [A]. Time-dependent.
i_ni_tot	scenario_ref (9.5.1.3.355)	total non inductive current [A]. Time-dependent.
i_ohm	scenario_ref (9.5.1.3.355)	ohmic current [A]. Time-dependent.
i_par	scenario_ref (9.5.1.3.355)	total plasma current (projected on B : <J.B <sub>z</sub> /B <sub>0</sub> ) [A]. Time-dependent.
i_runaway	scenario_ref (9.5.1.3.355)	runaway current [A]. Time-dependent.
v_loop	scenario_ref (9.5.1.3.355)	loop voltage @ LCMS / LFS , equatorial point [V]. Time-dependent.
v_meas	scenario_ref (9.5.1.3.355)	loop voltage measured on a coil [V]. Time-dependent.

Type of: scenario:currents (1554)

### 9.5.1.3.343 scenario\_edge

edge value (@ LCMS)

member	type	description
te_edge	scenario_ref (9.5.1.3.355)	edge electron temperature [eV]. Time-dependent.
ti_edge	scenario_ref (9.5.1.3.355)	edge ion temperature [eV]. Time-dependent.
ne_edge	scenario_ref (9.5.1.3.355)	edge electron density [m <sup>-3</sup> ]. Time-dependent.
ni_edge	scenario_ref (9.5.1.3.355)	edge ion density [m <sup>-3</sup> ]. Time-dependent.
psi_edge	scenario_ref (9.5.1.3.355)	edge poloidal flux [Wb]. Time-dependent.
phi_edge	scenario_ref (9.5.1.3.355)	edge toroidal flux [Wb]. Time-dependent.
rho_edge	scenario_ref (9.5.1.3.355)	edge value of internal simulator coordinate [m]. Time-dependent.
drho_edge_dt	scenario_ref (9.5.1.3.355)	time derivative of edge value of internal simulator coordinate [m/s]. Time-dependent.
q_edge	scenario_ref (9.5.1.3.355)	edge or effective safety factor value []. Time-dependent.
neutral_flux	scenario_ref (9.5.1.3.355)	number of cold neutral (in equivalent electron for Z <1) that input in plasma at the edge every second coming from recycling and gaz puff [s <sup>-1</sup> ]. Time-dependent.
phi_plasma	scenario_ref (9.5.1.3.355)	contribution of the plasma to the toroidal flux (used for toroidal coils heat load computation) [Wb]. Time-dependent.
vtor_edge	scenario_ref (9.5.1.3.355)	rotation velocity of selected impurity on the separatrix [m/s]. Time-dependent.

Type of: scenario:edge (1554)

### 9.5.1.3.344 scenario\_energy

plasma energy content

member	type	description
w_tot	scenario_ref (9.5.1.3.355)	total plasma energy [J]. Time-dependent.
w_b_pol	scenario_ref (9.5.1.3.355)	poloidal field energy of the plasma [J]. Time-dependent.
w_dia	scenario_ref (9.5.1.3.355)	3/2 perpendicular plasma energy [J]. Time-dependent.
dwdia_dt	scenario_ref (9.5.1.3.355)	time derivative of Wdia [W]. Time-dependent.



member	type	description
w_b_tor_pla	scenario_ref (9.5.1.3.355)	toroidal magnetic plasma energy [J]. Time-dependent.
w_th	scenario_ref (9.5.1.3.355)	thermal plasma energy [J]. Time-dependent.
dwtot_dt	scenario_ref (9.5.1.3.355)	time derivative of total plasma energy [W]. Time-dependent.
dwbpol_dt	scenario_ref (9.5.1.3.355)	time derivative of plasma poloidal field energy [W]. Time-dependent.
dwbtorpla_dt	scenario_ref (9.5.1.3.355)	time derivative of toroidal magnetic plasma energy [W]. Time-dependent.
dwth_dt	scenario_ref (9.5.1.3.355)	time derivative of thermal plasma energy [W]. Time-dependent.
esup_icrhtot	scenario_ref (9.5.1.3.355)	total suprathermal energy of fast ions accelerated by ICRH [J]. Time-dependent.
esup_icrhper	scenario_ref (9.5.1.3.355)	perpendicular part of suprathermal energy of fast ions accelerated by ICRH [J]. Time-dependent.
esup_nbitot	scenario_ref (9.5.1.3.355)	total suprathermal energy of fast ions from NBI ionisation [J]. Time-dependent.
esup_nbiperp	scenario_ref (9.5.1.3.355)	perpendicular part of suprathermal energy of fast ions from NBI ionisation [J]. Time-dependent.
esup_lhcd	scenario_ref (9.5.1.3.355)	total suprathermal energy of fast electron from LHCD [J]. Time-dependent.
esup_alpha	scenario_ref (9.5.1.3.355)	total suprathermal energy of fast alpha particules [J]. Time-dependent.

Type of: scenario:energy (1554)

### 9.5.1.3.345 scenario\_global

global scalar value

member	type	description
ip	scenario_ref (9.5.1.3.355)	Plasma current [A]. Time-dependent.
dip_dt	scenario_ref (9.5.1.3.355)	time derivative of plasma current [A/s]. Time-dependent.
beta_pol	scenario_ref (9.5.1.3.355)	poloidal beta []. Time-dependent.
beta_tor	scenario_ref (9.5.1.3.355)	toroidal beta []. Time-dependent.
beta_normal	scenario_ref (9.5.1.3.355)	normalised beta []. Time-dependent.
li	scenario_ref (9.5.1.3.355)	internal inductance (definition 3). Time-dependent.
volume	scenario_ref (9.5.1.3.355)	total plasma volume [m <sup>3</sup> ]. Time-dependent.
area_pol	scenario_ref (9.5.1.3.355)	area poloidal cross section [m <sup>2</sup> ]. Time-dependent.
area_ext	scenario_ref (9.5.1.3.355)	external plasma surface [m <sup>2</sup> ]. Time-dependent.
len_sepa	scenario_ref (9.5.1.3.355)	length of the separatrix [m]. Time-dependent.
beta_pol_th	scenario_ref (9.5.1.3.355)	poloidal beta, thermal contribution []. Time-dependent.
beta_tor_th	scenario_ref (9.5.1.3.355)	toroidal beta, thermal contribution []. Time-dependent.
beta_n_th	scenario_ref (9.5.1.3.355)	normalised beta, thermal contribution []. Time-dependent.
disruption	scenario_ref (9.5.1.3.355)	flag for disruption (set to 1 for disruption, otherwise equal 0) []. Time-dependent.
mode_h	scenario_ref (9.5.1.3.355)	confinement mode versus time: 0 = L-mode et 1 = H-mode []. Time-dependent.
s_alpha	scenario_ref (9.5.1.3.355)	total number of alpha fusion particules from D-T ractions per second [s <sup>-1</sup> ]. Time-dependent.

Type of: scenario:global\_param (1554)

### 9.5.1.3.346 scenario\_heat\_power

Power delivred to plasma (thermal an non thermal)

member	type	description
plh	scenario_ref (9.5.1.3.355)	Lower hybrid power [W]. Time-dependent.
pohmic	scenario_ref (9.5.1.3.355)	ohmic power (thermal species contribution only) [W]. Time-dependent.
picrh	scenario_ref (9.5.1.3.355)	Ion cyclotron resonance heating power [W]. Time-dependent.
pecrh	scenario_ref (9.5.1.3.355)	electron cyclotron resonance heating power [W]. Time-dependent.
pnbi	scenario_ref (9.5.1.3.355)	neutral beam injection power [W]. Time-dependent.
pnbi_co_cur	scenario_ref (9.5.1.3.355)	neutral beam injection power injeted in co-current direction [W]. Time-dependent.
pnbi_counter	scenario_ref (9.5.1.3.355)	neutral beam injection power injeted in counter-current direction [W]. Time-dependent.
plh_th	scenario_ref (9.5.1.3.355)	lower hybrid power deposited on thermal electrons [W]. Time-dependent.
picrh_th	scenario_ref (9.5.1.3.355)	ion cyclotron resonance heating power deposited on thermal species [W]. Time-dependent.
pecrh_th	scenario_ref (9.5.1.3.355)	electron cyclotron resonance heating power deposited on thermal electrons [W]. Time-dependent.
pnbi_th	scenario_ref (9.5.1.3.355)	neutral beam injection power deposited on thermal species [W]. Time-dependent.
ploss_icrh	scenario_ref (9.5.1.3.355)	Ion cyclotron resonance heating power losses [W]. Time-dependent.
ploss_nbi	scenario_ref (9.5.1.3.355)	neutral beam injection power losses (including shine-through) [W]. Time-dependent.
pbrem	scenario_ref (9.5.1.3.355)	Bremsstrahlung radition losses [W]. Time-dependent.

member	type	description
pcyclo	scenario_ref (9.5.1.3.355)	cyclotron radiation losses [W]. Time-dependent.
prad	scenario_ref (9.5.1.3.355)	impurity radiation losses in core plasma, without Bremsstrahlung [W]. Time-dependent.
pdd_fus	scenario_ref (9.5.1.3.355)	fusion power due to DD reactions [W]. Time-dependent.
pei	scenario_ref (9.5.1.3.355)	power exchange between electron and ion (equipartition) [W]. Time-dependent.
pel_tot	scenario_ref (9.5.1.3.355)	total thermal electron power deposition without equipartition [W]. Time-dependent.
pel_fus	scenario_ref (9.5.1.3.355)	fusion electron power deposition [W]. Time-dependent.
pel_icrh	scenario_ref (9.5.1.3.355)	ICRH electron power deposition [W]. Time-dependent.
pel_nbi	scenario_ref (9.5.1.3.355)	NBI electron power deposition [W]. Time-dependent.
pfus_dt	scenario_ref (9.5.1.3.355)	total D-T fusion power of alpha [W]. Time-dependent.
ploss_fus	scenario_ref (9.5.1.3.355)	D-T fusion power of alpha losses [W]. Time-dependent.
pfus_nbi	scenario_ref (9.5.1.3.355)	NBI induce D-T fusion power of alpha [W]. Time-dependent.
pfus_th	scenario_ref (9.5.1.3.355)	alpha (from DT fusion reaction) power deposited on thermal species [W]. Time-dependent.
padd_tot	scenario_ref (9.5.1.3.355)	total power input to the plasma, including ohmic power and fusion power [W]. Time-dependent.
pion_tot	scenario_ref (9.5.1.3.355)	total thermal ion power deposition without equipartition [W]. Time-dependent.
pion_fus	scenario_ref (9.5.1.3.355)	fusion ion power deposition [W]. Time-dependent.
pion_icrh	scenario_ref (9.5.1.3.355)	ICRH ion power deposition [W]. Time-dependent.
pion_nbi	scenario_ref (9.5.1.3.355)	NBI ion power deposition [W]. Time-dependent.
pioniz	scenario_ref (9.5.1.3.355)	power losses due to cold neutral ionization [W]. Time-dependent.
ploss	scenario_ref (9.5.1.3.355)	plasma losses power, as define in ITER basis [W]. Time-dependent.
p_wth	scenario_ref (9.5.1.3.355)	thermal power input, define as $\tau_e \cdot P_{th} = W_{th}$ [W]. Time-dependent.
p_w	scenario_ref (9.5.1.3.355)	effective power define as $\tau_e \cdot P_w = W_{tot}$ [W]. Time-dependent.
p_l2h_thr	scenario_ref (9.5.1.3.355)	additional power crossing the LCMS; must be compare to L- $\zeta$ H threshold power (Ryter PPCF 2002) [W]. Time-dependent.
p_l2h_sc	scenario_ref (9.5.1.3.355)	threshold power given by the choosen scaling law for transition from L-mode to H-mode [W]. Time-dependent.
p_nbi_icrh	scenario_ref (9.5.1.3.355)	beam power increase due to ICRH effects [W]. Time-dependent.

Type of: scenario:heat\_power (1554)

### 9.5.1.3.347 scenario\_int

Structure for scenario integer flag; Time-dependent

member	type	description
value	integer (9.5.1.1.2)	Signal value; Time-dependent; Scalar Integer.
source	string (9.5.1.1.3)	Source of the signal (any comment describing the origin of the signal : code, path to diagnostic signals, massaging, ...); String

Type of: scenario\_configuration:config (1854) I scenario\_configuration:ecrh\_harm (1854) I scenario\_configuration:ecrh\_mode (1854) I scenario\_configuration:grad\_b\_drift (1854) I scenario\_itb:itb\_type (1862)

### 9.5.1.3.348 scenario\_itb

Values characteristics of the Internal Transport Barrier

member	type	description
q_min	scenario_ref (9.5.1.3.355)	minimal value of safety factor []. Time-dependent.
te_itb	scenario_ref (9.5.1.3.355)	electron temperature @ $q = q_{min}$ [eV]. Time-dependent.
ti_itb	scenario_ref (9.5.1.3.355)	ion temperature @ $q = q_{min}$ [eV]. Time-dependent.
ne_itb	scenario_ref (9.5.1.3.355)	electron density @ $q = q_{min}$ [ $m^{-3}$ ]. Time-dependent.
ni_itb	scenario_ref (9.5.1.3.355)	ion density @ $q = q_{min}$ [ $m^{-3}$ ]. Time-dependent.
psi_itb	scenario_ref (9.5.1.3.355)	poloidal flux @ $q = q_{min}$ [Wb]. Time-dependent.
phi_itb	scenario_ref (9.5.1.3.355)	toroidal flux @ $q = q_{min}$ [Wb]. Time-dependent.
rho_itb	scenario_ref (9.5.1.3.355)	value of internal simulator coordinate @ $q = q_{min}$ [m]. Time-dependent.
h_itb	scenario_ref (9.5.1.3.355)	energy enhancement ITB factor [m]. Time-dependent.
width_itb	scenario_ref (9.5.1.3.355)	width of the high pressure gradient region (on scale of rho_itb) [m]. Time-dependent.
vtor_itb	scenario_ref (9.5.1.3.355)	rotation velocity of selected impurity @ rho_itb [m/s]. Time-dependent.
itb_type	scenario_int (9.5.1.3.347)	itb type []. Time-dependent. Any combinaison of : 0 = none; 1 = on T.i; 2 = on T.e; 4 = on n.e; 8 = reverse shear triggered; 16 = toroidal rotation triggered; 32 = alpha stabilisation triggered; 64 = T.i / T.e triggered; 128 = radiation triggered; 256 = ratiional q triggered

Type of: scenario:itb (1554)

### 9.5.1.3.349 scenario\_lim\_div\_wall

values on the plate of divertor or on the limiter or on the wall (@ LCMS)

member	type	description
te_lim_div	scenario_ref (9.5.1.3.355)	limiter/divertor electron temperature [eV]. Time-dependent.
ti_lim_div	scenario_ref (9.5.1.3.355)	limiter/divertor ion temperature [eV]. Time-dependent.
ne_lim_div	scenario_ref (9.5.1.3.355)	limiter/divertor electron density [ $m^{-3}$ ]. Time-dependent.
ni_lim_div	scenario_ref (9.5.1.3.355)	limiter/divertor ion density [ $m^{-3}$ ]. Time-dependent.
p_peak_div	scenario_ref (9.5.1.3.355)	peak power on divertor [W]. Time-dependent.
surf_temp	scenario_ref (9.5.1.3.355)	limiter surface or divertor plate temperature [K]. Time-dependent.
p_lim_div	scenario_ref (9.5.1.3.355)	Power flux on limiter or divertor plate [W]. Time-dependent.
p_rad_div	scenario_ref (9.5.1.3.355)	radiative power in the divertor zone [W]. Time-dependent.
wall_temp	scenario_ref (9.5.1.3.355)	wall temperature [K]. Time-dependent.
wall_state	scenario_ref (9.5.1.3.355)	saturation state of the wall (0 = completely pumping wall, 1 = completely saturate wall) []. Time-dependent.
detach_state	scenario_ref (9.5.1.3.355)	plasma detachment state (0= attach plasma, 1 = completely detach plasma) []. Time-dependent.
pump_flux	scenario_ref (9.5.1.3.355)	flux pump out for each ion species [ $s^{-1}$ ]. Time-dependent.

Type of: scenario:lim\_div\_wall (1554)

### 9.5.1.3.350 scenario\_line\_ave

line averaged value

member	type	description
ne_line	scenario_ref (9.5.1.3.355)	line averaged electron density [ $m^{-3}$ ]. Time-dependent.
zeff_line	scenario_ref (9.5.1.3.355)	line averaged effective charge. Time-dependent.
ne_zeff_line	scenario_ref (9.5.1.3.355)	line averaged electron density * Zeff . Time-dependent.
dne_line_dt	scenario_ref (9.5.1.3.355)	time derivative of line averaged electron density [ $m^{-3}/s$ ]. Time-dependent.

Type of: scenario:line\_ave (1554)

### 9.5.1.3.351 scenario\_neutron

neutron flux for DD and DT reactions

member	type	description
ndd_tot	scenario_ref (9.5.1.3.355)	total neutron flux coming from DD reactions [Hz]. Time-dependent.
ndd_th	scenario_ref (9.5.1.3.355)	neutron flux coming from thermal DD reactions [Hz]. Time-dependent.
ndd_nbi_th	scenario_ref (9.5.1.3.355)	neutron flux coming from beam/plasma DD reactions [Hz]. Time-dependent.
ndd_nbi_nbi	scenario_ref (9.5.1.3.355)	neutron flux coming from beam/beam DD reactions [Hz]. Time-dependent.
ndt_tot	scenario_ref (9.5.1.3.355)	total neutron flux coming from DT reactions [Hz]. Time-dependent.
ndt_th	scenario_ref (9.5.1.3.355)	neutron flux coming from thermal DT reactions [Hz]. Time-dependent.

Type of: scenario:neutron (1554)

### 9.5.1.3.352 scenario\_ninety\_five

values at 95% of poloidal flux

member	type	description
q_95	scenario_ref (9.5.1.3.355)	safety factor value @ 95 % of poloidal flux span []. Time-dependent.
elong_95	scenario_ref (9.5.1.3.355)	plasma elongation @ 95 % of poloidal flux span []. Time-dependent.
tria_95	scenario_ref (9.5.1.3.355)	averaged plasma triangularity @ 95 % of poloidal flux span []. Time-dependent.
tria_up_95	scenario_ref (9.5.1.3.355)	upper plasma triangularity @ 95 % of poloidal flux span []. Time-dependent.
tria_lo_95	scenario_ref (9.5.1.3.355)	lower plasma triangularity @ 95 % of poloidal flux span []. Time-dependent.
te_95	scenario_ref (9.5.1.3.355)	electron temperature @ 95 % of poloidal flux [eV]. Time-dependent.
ti_95	scenario_ref (9.5.1.3.355)	ion temperature @ 95 % of poloidal flux [eV]. Time-dependent.

member	type	description
ne_95	scenario_ref (9.5.1.3.355)	electron density @ 95 % of poloidal flux [m <sup>-3</sup> ]. Time-dependent.
ni_95	scenario_ref (9.5.1.3.355)	ion density @ 95 % of poloidal flux [m <sup>-3</sup> ]. Time-dependent.
phi_95	scenario_ref (9.5.1.3.355)	toroidal flux @ 95 % of poloidal flux [Wb]. Time-dependent.
rho_95	scenario_ref (9.5.1.3.355)	value of internal simulator coordinate @ 95 % of poloidal flux [m]. Time-dependent.
vtor_95	scenario_ref (9.5.1.3.355)	rotation velocity of selected impurity @ 95 % of poloidal flux [m/s]. Time-dependent.

Type of: scenario:ninety\_five (1554)

### 9.5.1.3.353 scenario\_pedestal

Values at the top of the H-mode pedestal

member	type	description
te_ped	scenario_ref (9.5.1.3.355)	pedestal electron temperature [eV]. Time-dependent.
ti_ped	scenario_ref (9.5.1.3.355)	pedestal ion temperature [eV]. Time-dependent.
ne_ped	scenario_ref (9.5.1.3.355)	pedestal electron density [m <sup>-3</sup> ]. Time-dependent.
ni_ped	scenario_ref (9.5.1.3.355)	pedestal ion density [m <sup>-3</sup> ]. Time-dependent.
psi_ped	scenario_ref (9.5.1.3.355)	pedestal poloidal flux [Wb]. Time-dependent.
phi_ped	scenario_ref (9.5.1.3.355)	pedestal toroidal flux [Wb]. Time-dependent.
rho_ped	scenario_ref (9.5.1.3.355)	top pedestal value of internal simulator coordinate [m]. Time-dependent.
q_ped	scenario_ref (9.5.1.3.355)	top pedestal safety factor value []. Time-dependent.
pressure_ped	scenario_ref (9.5.1.3.355)	top pedestal thermal pressure (n.e * T.e + n.i * T.i) [Pa]. Time-dependent.
vtor_ped	scenario_ref (9.5.1.3.355)	top pedestal value of rotation velocity of selected impurity [m/s]. Time-dependent.

Type of: scenario:pedestal (1554)

### 9.5.1.3.354 scenario\_reactor

reactor data (such as electricity cost ...)

member	type	description
pnetwork	float (9.5.1.1.1)	reactor electric power provide to the network [W].

Type of: scenario:reactor (1554)

### 9.5.1.3.355 scenario\_ref

Structure for scenario reference; Time-dependent

member	type	description
value	float (9.5.1.1.1)	Signal value; Time-dependent; Scalar
source	string (9.5.1.1.3)	Source of the signal (any comment describing the origin of the signal : code, path to diagnostic signals, massaging, ...); String

Type of: scenario\_centre:Rmag (1852) I scenario\_centre:Zmag (1852) I scenario\_centre:ne0 (1852) I scenario\_centre:ni0 (1852) I scenario\_centre:phi0 (1852) I scenario\_centre:psi0 (1852) I scenario\_centre:q0 (1852) I scenario\_centre:shift0 (1852) I scenario\_centre:te0 (1852) I scenario\_centre:ti0 (1852) I scenario\_centre:vtor\_0 (1852) I scenario\_configuration:LH\_freq (1854) I scenario\_configuration:LH\_npar (1854) I scenario\_configuration:ecrh\_freq (1854) I scenario\_configuration:ecrh\_loc (1854) I scenario\_configuration:ecrh\_pol\_ang (1854) I scenario\_configuration:ecrh\_tor\_ang (1854) I scenario\_configuration:enb (1854) I scenario\_configuration:icrh\_freq (1854) I scenario\_configuration:icrh\_phase (1854) I scenario\_configuration:pellet\_ang (1854) I scenario\_configuration:pellet\_nba (1854) I scenario\_configuration:pellet\_v (1854) I scenario\_configuration:r\_nbi (1854) I scenario\_confinement:tau\_cur\_diff (1855) I scenario\_confinement:tau\_e (1855) I scenario\_confinement:tau\_e\_ee (1855) I scenario\_confinement:tau\_e\_ei (1855) I scenario\_confinement:tau\_e\_ii (1855) I scenario\_confinement:tau\_h\_sc (1855) I scenario\_confinement:tau\_he (1855) I scenario\_confinement:tau\_i\_rol (1855) I scenario\_confinement:tau\_l\_sc (1855) I scenario\_currents:RR (1856) I scenario\_currents:i\_align (1856) I scenario\_currents:i.boot (1856) I scenario\_currents:i\_cd\_tot (1856) I scenario\_currents:i\_eccd (1856) I scenario\_currents:i\_fast\_ion (1856) I scenario\_currents:i\_fwcd (1856) I scenario\_currents:i\_lhcd (1856) I scenario\_currents:i\_nbicd (1856) I scenario\_currents:i\_ni\_tot (1856) I scenario\_currents:i\_ohm (1856) I scenario\_currents:i\_par (1856) I scenario\_currents:i\_runaway (1856) I scenario\_currents:v\_loop (1856) I scenario\_currents:v\_meas (1856) I scenario\_edge:drho\_edge\_dt (1857) I scenario\_edge:ne\_edge (1857) I

scenario\_edge:neutral\_flux (1857) I scenario\_edge:ni\_edge (1857) I scenario\_edge:phi\_edge (1857) I scenario\_edge:phi\_plasma (1857) I scenario\_edge:psi\_edge (1857) I scenario\_edge:q\_edge (1857) I scenario\_edge:rho\_edge (1857) I scenario\_edge:te\_edge (1857) I scenario\_edge:ti\_edge (1857) I scenario\_edge:vtor\_edge (1857) I scenario\_energy:dwbpol\_dt (1858) I scenario\_energy:dwbtorpla\_dt (1858) I scenario\_energy:dwdia\_dt (1858) I scenario\_energy:dwth\_dt (1858) I scenario\_energy:dwtot\_dt (1858) I scenario\_energy:esup\_alpha (1858) I scenario\_energy:esup\_ichper (1858) I scenario\_energy:esup\_ichrtot (1858) I scenario\_energy:esup\_lhcd (1858) I scenario\_energy:esup\_nbiperp (1858) I scenario\_energy:esup\_nbitot (1858) I scenario\_energy:w\_b\_pol (1858) I scenario\_energy:w\_b\_tor\_pla (1858) I scenario\_energy:w\_dia (1858) I scenario\_energy:w\_th (1858) I scenario\_energy:w\_tot (1858) I scenario\_global:area\_ext (1859) I scenario\_global:area\_pol (1859) I scenario\_global:beta\_n\_th (1859) I scenario\_global:beta\_normal (1859) I scenario\_global:beta\_pol (1859) I scenario\_global:beta\_pol.th (1859) I scenario\_global:beta.tor (1859) I scenario\_global:beta.tor.th (1859) I scenario\_global:dip\_dt (1859) I scenario\_global:disruption (1859) I scenario\_global:ip (1859) I scenario\_global:len\_sepa (1859) I scenario\_global:li (1859) I scenario\_global:mode\_h (1859) I scenario\_global:s.alpha (1859) I scenario\_global:volume (1859) I scenario\_heat\_power:p\_l2h\_sc (1860) I scenario\_heat\_power:p\_l2h\_thr (1860) I scenario\_heat\_power:p\_nbi\_ich (1860) I scenario\_heat\_power:p\_w (1860) I scenario\_heat\_power:p\_wth (1860) I scenario\_heat\_power:padd\_tot (1860) I scenario\_heat\_power:pbrem (1860) I scenario\_heat\_power:pcyclo (1860) I scenario\_heat\_power:pdd\_fus (1860) I scenario\_heat\_power:pecrh (1860) I scenario\_heat\_power:pecrh.th (1860) I scenario\_heat\_power:pei (1860) I scenario\_heat\_power:pel\_fus (1860) I scenario\_heat\_power:pel\_ich (1860) I scenario\_heat\_power:pel\_nbi (1860) I scenario\_heat\_power:pel\_tot (1860) I scenario\_heat\_power:pfus\_dt (1860) I scenario\_heat\_power:pfus\_nbi (1860) I scenario\_heat\_power:pfus.th (1860) I scenario\_heat\_power:picrh (1860) I scenario\_heat\_power:picrh.th (1860) I scenario\_heat\_power:pion\_fus (1860) I scenario\_heat\_power:pion\_ich (1860) I scenario\_heat\_power:pion\_nbi (1860) I scenario\_heat\_power:pion\_tot (1860) I scenario\_heat\_power:pioniz (1860) I scenario\_heat\_power:plh (1860) I scenario\_heat\_power:plh.th (1860) I scenario\_heat\_power:ploss (1860) I scenario\_heat\_power:ploss\_fus (1860) I scenario\_heat\_power:ploss\_ich (1860) I scenario\_heat\_power:ploss\_nbi (1860) I scenario\_heat\_power:pnbi (1860) I scenario\_heat\_power:pnbi\_co\_cur (1860) I scenario\_heat\_power:pnbi\_counter (1860) I scenario\_heat\_power:pnbi.th (1860) I scenario\_heat\_power:pohmic (1860) I scenario\_heat\_power:prad (1860) I scenario\_itb:h\_itb (1862) I scenario\_itb:ne\_itb (1862) I scenario\_itb:ni\_itb (1862) I scenario\_itb:phi\_itb (1862) I scenario\_itb:psi\_itb (1862) I scenario\_itb:q\_min (1862) I scenario\_itb:rho\_itb (1862) I scenario\_itb:te\_itb (1862) I scenario\_itb:ti\_itb (1862) I scenario\_itb:vtor\_itb (1862) I scenario\_itb:width\_itb (1862) I scenario\_lim\_div\_wall:detach\_st (1863) I scenario\_lim\_div\_wall:ne\_lim\_div (1863) I scenario\_lim\_div\_wall:ni\_lim\_div (1863) I scenario\_lim\_div\_wall:p\_lim\_div (1863) I scenario\_lim\_div\_wall:p\_peak\_div (1863) I scenario\_lim\_div\_wall:p\_rad\_div (1863) I scenario\_lim\_div\_wall:pump\_flux (1863) I scenario\_lim\_div\_wall:surf\_temp (1863) I scenario\_lim\_div\_wall:te\_lim\_div (1863) I scenario\_lim\_div\_wall:ti\_lim\_div (1863) I scenario\_lim\_div\_wall:wall\_state (1863) I scenario\_lim\_div\_wall:wall\_temp (1863) I scenario\_line\_ave:dne\_line\_dt (1864) I scenario\_line\_ave:ne\_line (1864) I scenario\_line\_ave:ne\_zeff\_line (1864) I scenario\_line\_ave:zeff\_line (1864) I scenario\_neutron:ndd\_nbi\_nbi (1865) I scenario\_neutron:ndd\_nbi.th (1865) I scenario\_neutron:ndd.th (1865) I scenario\_neutron:ndd\_tot (1865) I scenario\_neutron:ndt.th (1865) I scenario\_neutron:ndt\_tot (1865) I scenario\_ninety\_five:elom (1866) I scenario\_ninety\_five:ne\_95 (1866) I scenario\_ninety\_five:ni\_95 (1866) I scenario\_ninety\_five:phi\_95 (1866) I scenario\_ninety\_five:q\_95 (1866) I scenario\_ninety\_five:rho\_95 (1866) I scenario\_ninety\_five:te\_95 (1866) I scenario\_ninety\_five:ti\_95 (1866) I scenario\_ninety\_five:tria\_95 (1866) I scenario\_ninety\_five:tria\_lo\_95 (1866) I scenario\_ninety\_five:tria\_up\_95 (1866) I scenario\_ninety\_five:vtor\_95 (1866) I scenario\_pedestal:ne\_ped (1867) I scenario\_pedestal:ni\_ped (1867) I scenario\_pedestal:phi\_ped (1867) I scenario\_pedestal:pressure\_ped (1867) I scenario\_pedestal:psi\_ped (1867) I scenario\_pedestal:q\_ped (1867) I scenario\_pedestal:rho\_ped (1867) I scenario\_pedestal:te\_ped (1867) I scenario\_pedestal:ti\_ped (1867) I scenario\_pedestal:vtor\_ped (1867) I scenario\_references:bvac\_r (1870) I scenario\_references:enhancement (1870) I scenario\_references:gas\_puff (1870) I scenario\_references:ip (1870) I scenario\_references:isotopic (1870) I scenario\_references:nbar (1870) I scenario\_references:nbi\_td\_ratio (1870) I scenario\_references:pecrh (1870) I scenario\_references:picrh (1870) I scenario\_references:plh (1870) I scenario\_references:pnbi (1870) I scenario\_references:pol\_flux (1870) I scenario\_references:xecrh (1870) I scenario\_references:zeffl (1870) I scenario\_sol:gas\_puff (1871) I scenario\_sol:l\_ne\_sol (1871) I scenario\_sol:l\_ni\_sol (1871) I scenario\_sol:l\_qe\_sol (1871) I scenario\_sol:l\_qi\_sol (1871) I scenario\_sol:l\_te\_sol (1871) I scenario\_sol:l\_ti\_sol (1871) I scenario\_sol:p\_rad\_sol (1871) I scenario\_vol\_ave:dne\_ave\_dt (1872) I scenario\_vol\_ave:meff\_ave (1872) I scenario\_vol\_ave:ne\_ave (1872) I scenario\_vol\_ave:ni\_ave (1872) I scenario\_vol\_ave:omega\_ave (1872) I scenario\_vol\_ave:pellet\_flux (1872) I scenario\_vol\_ave:te\_ave (1872) I scenario\_vol\_ave:ti\_ave (1872) I scenario\_vol\_ave:ti\_o\_te\_ave (1872) I scenario\_vol\_ave:zeff\_ave (1872)

### 9.5.1.3.356 scenario\_references

#### References

member	type	description
plh	scenario_ref (9.5.1.3.355)	Lower hybrid power [W]. Time-dependent.
picrh	scenario_ref (9.5.1.3.355)	Ion cyclotron resonance heating power [W]. Time-dependent.
pecrh	scenario_ref (9.5.1.3.355)	electron cyclotron resonance heating power [W]. Time-dependent.
pnbi	scenario_ref (9.5.1.3.355)	neutral beam injection power [W]. Time-dependent.

member	type	description
ip	scenario_ref (9.5.1.3.355)	Plasma current [A]. Time-dependent.
bvac_r	scenario_ref (9.5.1.3.355)	Vacuum field times radius in the toroidal field magnet [T.m]. Time-dependent.
zeffl	scenario_ref (9.5.1.3.355)	line averaged effective charge []. Time-dependent.
nbar	scenario_ref (9.5.1.3.355)	line averaged electron density [m <sup>-3</sup> ]. Time-dependent.
xecrh	scenario_ref (9.5.1.3.355)	position of maximum (normalized rho coordinate) of electron cyclotron resonance heating power []. Time-dependent.
pol_flux	scenario_ref (9.5.1.3.355)	separatrix poloidal flux [Wb]. Time-dependent.
enhancement	scenario_ref (9.5.1.3.355)	energy enhancement factor []. Time-dependent.
isotopic	scenario_ref (9.5.1.3.355)	ratio between tritium and deuterium density (for burning plasma) []. Time-dependent.
nbi_td_ratio	scenario_ref (9.5.1.3.355)	ratio between tritium and deuterium power in neutral beam injection []. Time-dependent.
gas_puff	scenario_ref (9.5.1.3.355)	gas puff flux reference, in equivalent [electrons.s <sup>-1</sup> ]. Time-dependent.

Type of: scenario:references (1554)

### 9.5.1.3.357 scenario\_sol

SOL characteristic (@ LCMS)

member	type	description
lte_sol	scenario_ref (9.5.1.3.355)	electron temperature radial decay length [m]. Time-dependent.
lti_sol	scenario_ref (9.5.1.3.355)	ion temperature radial decay length [m]. Time-dependent.
lne_sol	scenario_ref (9.5.1.3.355)	electron density radial decay length [m]. Time-dependent.
lni_sol	scenario_ref (9.5.1.3.355)	ion density radial decay length [m]. Time-dependent.
lqe_sol	scenario_ref (9.5.1.3.355)	electron heat flux radial decay length [m]. Time-dependent.
lqi_sol	scenario_ref (9.5.1.3.355)	ion heat flux radial decay length [m]. Time-dependent.
p_rad_sol	scenario_ref (9.5.1.3.355)	radiative power of the SOL [W]. Time-dependent.
gas_puff	scenario_ref (9.5.1.3.355)	gas puff flux for each ion species [s <sup>-1</sup> ]. Time-dependent.

Type of: scenario:sol (1554)

### 9.5.1.3.358 scenario\_vol\_ave

volume averaged values

member	type	description
te_ave	scenario_ref (9.5.1.3.355)	volume averaged electron temperature [eV]. Time-dependent.
ti_ave	scenario_ref (9.5.1.3.355)	volume averaged ion temperature [eV]. Time-dependent.
ne_ave	scenario_ref (9.5.1.3.355)	volume averaged electron density [m <sup>-3</sup> ]. Time-dependent.
dne_ave_dt	scenario_ref (9.5.1.3.355)	time derivative of volume averaged electron density [m <sup>-3</sup> /s]. Time-dependent.
ni_ave	scenario_ref (9.5.1.3.355)	volume averaged ion density ( $\langle \sum(n_k)_z, k \text{ in species} \rangle$ ) [m <sup>-3</sup> ]. Time-dependent.
zeff_ave	scenario_ref (9.5.1.3.355)	volume averaged effective charge. Time-dependent.
ti_o_te_ave	scenario_ref (9.5.1.3.355)	volume averaged ion temperature over electron temperature ( $\langle Ti/Te \rangle$ ) []. Time-dependent.
meff_ave	scenario_ref (9.5.1.3.355)	volume averaged effective mass ( $\langle \sum(n_k * m_k) / \langle \sum(n_k) \rangle$ ) []. Time-dependent.
pellet_flux	scenario_ref (9.5.1.3.355)	number of electrons fuelling the plasma every second coming from pellet injection [s <sup>-1</sup> ]. Time-dependent.
nions_ave	vecflt_type (9.5.1.2.9)	volume averaged ions densities (vector, one element per ion species) [m <sup>-3</sup> ]. Time-dependent.
omega_ave	scenario_ref (9.5.1.3.355)	bulk volume average toroidal rotation velocity (whole plasma) [rad/s]. Time-dependent.

Type of: scenario:vol\_ave (1554)

### 9.5.1.3.359 setup\_bprobe

diagnostic setup information

member	type	description
name	vecstring_type (9.5.1.2.11)	Name of the probe. Array of strings (nprobes).
id	vecstring_type (9.5.1.2.11)	ID of the probe. Array of strings (nprobes).
position	rz1D (9.5.1.3.325)	RZ of coil centre [m]; Vector (nprobes)
polangle	vecflt_type (9.5.1.2.9)	Poloidal angle of coil orientation (w.r.t. horizontal ?? to be checked) [rad]; Vector (nprobes)
torangle	vecflt_type (9.5.1.2.9)	Toroidal angle of coil orientation (0 if fully in the poloidal plane) [rad] ; Vector (nprobes)



member	type	description
area	vecflt.type (9.5.1.2.9)	Area of coil [m <sup>2</sup> ]; Vector (nprobes)
length	vecflt.type (9.5.1.2.9)	Length of coil [m]; Vector (nprobes)
turns	vecint.type (9.5.1.2.10)	Turns in the coil; Vector (nprobes)

Type of: bpol\_probes:setup\_bprobe (1578)

### 9.5.1.3.360 setup\_floops

diagnostic setup information

member	type	description
name	vecstring.type (9.5.1.2.11)	Name of loop. Array of strings (nloops).
id	vecstring.type (9.5.1.2.11)	ID of loop. Array of strings (nloops).
position	rzphi2D (9.5.1.3.333)	List of (R,Z,phi) points defining the position of the loop (see data structure documentation FLUXLOOPposition.pdf); Matrices (nloops, max_npoints)
npoints	vecint.type (9.5.1.2.10)	Number of points describing each loop in the "position" matrices. Vector (nloops)

Type of: flux\_loops:setup\_floops (1700)

### 9.5.1.3.361 setup\_inject

Detailed information on an injection unit.

member	type	description
position	rzphi0D (9.5.1.3.330)	Position of centre of injection unit surface.
tang_rad	float (9.5.1.1.1)	Tagency radius (major radius where the central line of a NBI unit is tangent to a circle around the torus) [m]
angle	float (9.5.1.1.1)	Angle of inclination between a line at the centre of the injection unit surface and the horizontal plane [rad]
direction	integer (9.5.1.1.2)	Direction of the beam seen from above the torus: -1 = clockwise; 1 = counter clockwise
focal_len_hz	float (9.5.1.1.1)	Horizontal focal length along the beam line [m]
focal_len_vc	float (9.5.1.1.1)	Vertical focal length along the beam line [m]
divergence	divergence (9.5.1.3.157)	Detailed information on beamlet divergence. Divergens is described as a super position of Gaussian profiles with amplitude "frac.divcomp" and vertical/horizontal divergence "div_vert"/"div_horiz". Note that for positive ion NBI the divergence is well described by a single Gaussian.
beamlets	beamlets (9.5.1.3.57)	Detailed information on beamlets.

Type of: nbi\_unit:setup\_inject (1769)

### 9.5.1.3.362 setup\_line

Geometric description of the lines of sight for line integral diagnostic

member	type	description
pivot_point	rzphi1D (9.5.1.3.331)	Pivot point of each line of sight; Vector (nchords)
horchordang1	vecflt.type (9.5.1.2.9)	Angle [rad] of horizontal projection of l.o.s. with poloidal cross section (0 for HFS to LFS chord - see Convention.angles.interfdiag.pdf) [rad]. Vector (nchords)
verchordang1	vecflt.type (9.5.1.2.9)	Angle of chord with vertical axis (0 for bottom-top chord, Pi for top-bottom chord - see Convention.angles.interfdiag.pdf) [rad]; Vector (nchords)
width	vecflt.type (9.5.1.2.9)	Width of the laser beam (1/e) [m]; Vector (nchords)
second_point	rzphi1D (9.5.1.3.331)	Second point defining the line of sight together with the pivot_point. In case the probing wave is reflected, this should be the position of the mirror. This data is redundant with horchordang1 and verchordang1. Vector (nchords).
horchordang2	vecflt.type (9.5.1.2.9)	For reflected l.o.s. only (undefined otherwise) : Angle [rad] of horizontal projection of reflected l.o.s. with poloidal cross section (0 for HFS to LFS chord - see Convention.angles.interfdiag.pdf) [rad]. Vector (nchords)
verchordang2	vecflt.type (9.5.1.2.9)	For reflected l.o.s. only (undefined otherwise) : Angle of reflected chord with vertical axis (0 for bottom-top chord, Pi for top-bottom chord - see Convention.angles.interfdiag.pdf) [rad]; Vector (nchords)
third_point	rzphi1D (9.5.1.3.331)	Third point defining the reflected line of sight together with the second_point (undefined if the probing wave is not reflected). This data is redundant with horchordang2 and verchordang2. Vector (nchords).
nchordpoints	integer (9.5.1.1.2)	Number of points along the viewing chords (used for synthetic diagnostic signal reconstruction)

Type of: [ecesetup:los \(1674\)](#) I [fusiondiag\\_colli\\_circ:setup\\_line \(1706\)](#) I [fusiondiag\\_colli\\_poly:setup\\_line \(1707\)](#) I [lineintegraldiag:setup\\_line \(1746\)](#)

### 9.5.1.3.363 **shape**

Pellet shape

member	type	description
shape_sph	<a href="#">shape_sph (9.5.1.3.365)</a>	Pellet shape
shape_cyl	<a href="#">shape_cyl (9.5.1.3.364)</a>	Pellet shape

Type of: [pellets:shape \(1547\)](#)

### 9.5.1.3.364 **shape\_cyl**

Pellet shape

member	type	description
radius	<a href="#">float (9.5.1.1.1)</a>	Pellet radius (m)
height	<a href="#">float (9.5.1.1.1)</a>	Pellet height (m)

Type of: [shape:shape\\_cyl \(1877\)](#)

### 9.5.1.3.365 **shape\_sph**

Pellet shape

member	type	description
radius	<a href="#">float (9.5.1.1.1)</a>	Pellet radius (m)

Type of: [shape:shape\\_sph \(1877\)](#)

### 9.5.1.3.366 **simp\_apert**

Simple aperture specification: rectangular or elliptical

member	type	description
type	<a href="#">identifier (9.5.1.3.214)</a>	Shape identifier; 0: rectangular, 1: elliptical
sizes	<a href="#">vecflt_type (9.5.1.2.9)</a>	Rectangular size a, b or diameters for elliptical shapes [m]; Time-dependent; Vector (2)
angle	<a href="#">float (9.5.1.1.1)</a>	Rotation of aperture around its center [rad]

Type of: [reflectometry\\_radfield\\_gaussian:aperture \(1832\)](#)

### 9.5.1.3.367 **source\_imp**

Subtree containing source terms for the impurity species

member	type	description
exp	<a href="#">matflt_type (9.5.1.2.7)</a>	Explicit source term [same unit as root quantity]. Time-dependent. Array2d (nrho,nzimp)
imp	<a href="#">matflt_type (9.5.1.2.7)</a>	Implicit source term [ $s^{-1}.m^{-3}$ ]. Time-dependent. Array2d (nrho,nzimp)

Type of: [coresource\\_values:qz \(1626\)](#) I [coresource\\_values:sz \(1626\)](#)

### 9.5.1.3.368 **source\_ion**

Subtree containing source terms for the various ion species

member	type	description
exp	<a href="#">matflt_type (9.5.1.2.7)</a>	Explicit source term [same unit as root quantity]. Time-dependent. Matrix (nrho,nion)
imp	<a href="#">matflt_type (9.5.1.2.7)</a>	Implicit source term [ $s^{-1}.m^{-3}$ ]. Time-dependent. Matrix (nrho,nion)



Type of: coresource\_values:qi (1626) I coresource\_values:si (1626) I coresource\_values:ui (1626)

### 9.5.1.3.369 source\_mark

Source given as a set of markers (test particles)

member	type	description
var.coord	vecint.type (9.5.1.2.10)	Identifies the coordinates specified in var1, var2, var3, var4, var5, var6 and var7. var.coord(K) describe the coordinate represented in varK, for K=1,2,...7. The possible coordinates are: 1=R, Major radius [m]; 2=Z, Vertical position [m]; 3=X, first cartesian coordinate in the horizontal plane [m]; 4=Y, second cartesian coordinate in the horizontal plane ( $\text{grad}(X) \times \text{grad}(Y) = \text{grad}(Z)$ ) [m]; 5=phi, toroidal angle [rad]; 6=psi, poloidal magnetic flux [ $T^*m^2$ ]; 7=rhotor, the square root of the toroidal flux; 8=theta, geometrical poloidal angle [rad]; 9=theta.b, Boozer poloidal angle [rad]; 10=vx, velocity in the x-direction [m/s]; 11=vy, velocity in the y-direction [m/s]; 12=vz, velocity in the z-direction [m/s]; 13=vel, total velocity [m/s]; 14=vphi, velocity in the phi-direction [m/s]; 15=vpar, velocity in the parallel direction [m/s]; 16=vperp, velocity in the perpendicular direction [m/s]; 17=E, Hamiltonian energy [J]; 18=Pphi, canonical toroidal angular momentum [ $kg\ m^2/s$ ]; 19=mu, magnetic moment [J/T]; 20=Lambda=mu/E [1/T]; 21=pitch=vpar/v [-]; 22=s, the position of the omnigenous plane (generalised equatorial plane) as described by the fields $\text{omnigen\_surf}\%s$ and $\text{omnigen\_surf}\%z$ ; 23=particle spin. Vector (7)
var1	vecflt.type (9.5.1.2.9)	Phase space variable number one characterising the markers. Time-dependent; Vector (n.particles)
var2	vecflt.type (9.5.1.2.9)	Phase space variable number two characterising the markers. Time-dependent; Vector (n.particles)
var3	vecflt.type (9.5.1.2.9)	Phase space variable number three characterising the markers. Time-dependent; Vector (n.particles)
var4	vecflt.type (9.5.1.2.9)	Phase space variable number four characterising the markers. Time-dependent; Vector (n.particles)
var5	vecflt.type (9.5.1.2.9)	Phase space variable number five characterising the markers. Time-dependent; Vector (n.particles)
var6	vecflt.type (9.5.1.2.9)	Phase space variable number six characterising the markers. Time-dependent; Vector (n.particles)
var7	vecflt.type (9.5.1.2.9)	Phase space variable number seven characterising the markers. Time-dependent; Vector (n.particles)
weight	vecflt.type (9.5.1.2.9)	Weight of the markers; Time-dependent; Vector (n.particles)

### 9.5.1.3.370 source\_on\_grid

Source density of particles in phase space (real space, velocity space, spin state).

member	type	description
grid.info	grid.info (9.5.1.3.210)	Specifying the grid; type of the grid (unstructured/structured/rectangular), the grid coordinate, in what variables the source is continuous/discrete, if the source is given at gyrocentre or real particle position.
dim1	array6dflt.type (9.5.1.2.5)	Grid in the first dimension in phase space (as specified in grid.coord). Time-dependent; Array6d (ndim1, ndim2, ndim3, ndim4, ndim5, ndim6)
dim2	array6dflt.type (9.5.1.2.5)	Grid in the second dimension in phase space (as specified in grid.coord). Time-dependent; Array6d (ndim1, ndim2, ndim3, ndim4, ndim5, ndim6)
dim3	array6dflt.type (9.5.1.2.5)	Grid in the third dimension in phase space (as specified in grid.coord). Time-dependent; Array6d (ndim1, ndim2, ndim3, ndim4, ndim5, ndim6)
dim4	array6dflt.type (9.5.1.2.5)	Grid in the fourth dimension in phase space (as specified in grid.coord). Time-dependent; Array6d (ndim1, ndim2, ndim3, ndim4, ndim5, ndim6)
dim5	array6dflt.type (9.5.1.2.5)	Grid in the fifth dimension in phase space (as specified in grid.coord). Time-dependent; Array6d (ndim1, ndim2, ndim3, ndim4, ndim5, ndim6)
dim6	array6dflt.type (9.5.1.2.5)	Grid in the sixth dimension in phase space (as specified in grid.coord). Time-dependent; Array6d (ndim1, ndim2, ndim3, ndim4, ndim5, ndim6)
jacobian	array6dflt.type (9.5.1.2.5)	Jacobian of the phase space grid coordinate system specified in grid.coord. Time-dependent; Array6d (ndim1, ndim2, ndim3, ndim4, ndim5, ndim6)
source	array6dflt.type (9.5.1.2.5)	Source rate of particles in phase space. The units depend on the grid.type: [ $m^{-3} s^{-1}$ ] if the grid is discrete in energy/velocity and [ $(m/s)^{-3} m^{-3} s^{-1}$ ] if continuous. Time-dependent; Array6d (ndim1, ndim2, ndim3, ndim4, ndim5, ndim6)

Type of: distsource\_source:source\_grid (1670)

### 9.5.1.3.371 source\_rate

Source density of particles in phase space (real space, velocity space, spin state).

member	type	description
grid	complexgrid (9.5.1.3.71)	Grid for storing the source-rate. Time-dependent; Complexgrid

member	type	description
value	complexgrid_scalar (9.5.1.3.76)	The source-rate of particles in phase space, given on GRID. The units depend on the grid_type: $[m^{-3} s^{-1}]$ if the grid is discrete in energy/velocity and $[(m/s)^{-3} m^{-3} s^{-1}]$ if the grid is continuous. Time-dependent; Complexgrid_scalar

Type of: distsource\_source:source\_rate (1670)

### 9.5.1.3.372 source\_vec

Subtree containing vector source term (radial dimension only)

member	type	description
exp	vecflt_type (9.5.1.2.9)	Explicit source term [same unit as root quantity]. Time-dependent. Vector (nrho)
imp	vecflt_type (9.5.1.2.9)	Implicit source term $[s^{-1}.m^{-3}]$ . Time-dependent. Vector (nrho)

Type of: coresource\_values:qe (1626) I coresource\_values:se (1626) I coresource\_values:ujxb (1626)

### 9.5.1.3.373 sourcecel

Structure for the total source term for the transport equation (electrons). Time-dependent;

member	type	description
value	vecflt_type (9.5.1.2.9)	Value of the source term; Time-dependent; Vector (nrho)
integral	vecflt_type (9.5.1.2.9)	Integral from 0 to rho of the source term. Time-dependent; Vector (nrho)
source	string (9.5.1.1.3)	Source of the profile (any comment describing the origin of the profile : code, path to diagnostic signals, massaging, ...); String

Type of: corefield:source\_term (1608) I profiles1d:qoh (1801)

### 9.5.1.3.374 sourceimp

Structure for the total source term for the transport equation (impurities). Time-dependent;

member	type	description
value	matflt_type (9.5.1.2.7)	Value of the source term $[m^{-3}.s^{-1}]$ ; Time-dependent; Array2D (nrho,nzimp)
integral	matflt_type (9.5.1.2.7)	Integral from 0 to rho of the source term. Time-dependent; Array2D(nrho,nzimp)
source	vecstring_type (9.5.1.2.11)	Source of the profile (any comment describing the origin of the impurity profiles : code, path to diagnostic signals, massaging, ...); Array of strings (nimp)

Type of: impurity\_type:source\_term (1731)

### 9.5.1.3.375 sourceion

Structure for the total source term for the transport equation (ions). Time-dependent;

member	type	description
value	matflt_type (9.5.1.2.7)	Value of the source term; Time-dependent; Matrix (nrho,nion)
integral	matflt_type (9.5.1.2.7)	Integral from 0 to rho of the source term. Time-dependent; Matrix (nrho,nion)
source	vecstring_type (9.5.1.2.11)	Source of the profile (any comment describing the origin of the profile : code, path to diagnostic signals, massaging, ...); Array of strings (nion)

Type of: corefieldion:source\_term (1609)

### 9.5.1.3.376 species

Pellet composition

member	type	description
amn	vecflt_type (9.5.1.2.9)	Atomic mass number (lumped species are allowed); Vector (nspecies)
zn	vecflt_type (9.5.1.2.9)	Nuclear charge (lumped species are allowed); Vector (nspecies)
concentr	vecflt_type (9.5.1.2.9)	Concentration of species on pellet ranging from 0 to 1; Vector (nspecies)

member	type	description
subl.energy	vecflt.type (9.5.1.2.9)	Sublimation energy per atom of species on pellet in eV; Vector (nspecies)

Type of: pellets:species (1547)

### 9.5.1.3.377 species\_desc

Description of a single ion species or bundled charge state.

member	type	description
label	string (9.5.1.1.3)	Name of species
amn	float (9.5.1.1.1)	Atomic mass number of the species
zn	float (9.5.1.1.1)	Nuclear charge of the impurity
zmin	float (9.5.1.1.1)	Minimum Z of species charge state bundle
zmax	float (9.5.1.1.1)	Maximum Z of species charge state bundle

Type of: edge:species (1530) I plasma:species (1795)

### 9.5.1.3.378 spectral

This structure accommodates the types needed on a spectral MSE diagnostic namely the emissivity and the radiance spectra. It will be subsequently upgraded with optical + photon detection elements since the structure will also be used for a synthetic spectral mse code.

member	type	description
emissivity	msediag_emissivity (9.5.1.3.248)	Emissivity characteristics.
radiance	msediag_radiance (9.5.1.3.251)	Emissivity characteristics.
codeparam	codeparam (9.5.1.3.66)	Code parameters

Type of: msediag:spectral (1543)

### 9.5.1.3.379 spectrum

Spectral properties of the wave.

member	type	description
phi.theta	launchs_phi.theta (9.5.1.3.226)	Power spectrum as a function of the refractive index in the toroidal and poloidal directions.
parallel	launchs_parallel (9.5.1.3.225)	Power spectrum as a function of the parallel refractive index.

Type of: launchs:spectrum (1538)

### 9.5.1.3.380 spot

Spot characteristics

member	type	description
size	vecflt.type (9.5.1.2.9)	Size of the spot ellipse [m], Vector (2). Time-dependent
angle	float (9.5.1.1.1)	Rotation angle for the spot ellipse [rd], Float. Time-dependent

Type of: rfbeam:spot (1837)

### 9.5.1.3.381 sputtering neutrals

Sputtering coefficients

member	type	description
physical	vecflt_type (9.5.1.2.9)	Effective coefficient of physical sputtering of the neutral type INEUT. Vector(nneut). Time-dependent.
chemical	vecflt_type (9.5.1.2.9)	Effective coefficient of chemical sputtering of the neutral type INEUT. Vector(nneut). Time-dependent.

Type of: coefficients\_neutrals:sputtering (1581)

### 9.5.1.3.382 src\_snk\_fav

member	type	description
particles	vecflt_type (9.5.1.2.9)	Source/sink particles [ $s^{-1} m^{-3}$ ]; Time-dependendent; Vector (npsi)
power	vecflt_type (9.5.1.2.9)	Power density associated with the source/sink of particles [ $W/m^3$ ]; Time-dependent; Vector (npsi)
torque	vecflt_type (9.5.1.2.9)	Torque density due to the source/sink of particles [ $Nm/m^3$ ]; Time-dependent; Vector (npsi)

### 9.5.1.3.383 src\_snk\_int

member	type	description
particles	vecflt_type (9.5.1.2.9)	Source/sink particles [ $s^{-1} m^{-3}$ ]; Time-dependendent; Vector (npsi)
power	vecflt_type (9.5.1.2.9)	Power associated with the source/sink of particles [ $MW/m^3$ ]; Time-dependent; Vector(npsi)
torque	vecflt_type (9.5.1.2.9)	Torque due to the source/sink of particles [ $Nm/m^3$ ]; Time-dependent; Vector (npsi)

### 9.5.1.3.384 src\_snk\_tot

member	type	description
particles	float (9.5.1.1.1)	Source/sink particles [1/s]; Time-dependendent
power	float (9.5.1.1.1)	Power associated with the source/sink of particles [W]; Time-dependent
torque	float (9.5.1.1.1)	Torque due to the source/sink of particles [Nm]; Time-dependent

### 9.5.1.3.385 straps

Properties of the IC antenna strap; Time-dependent; Vector(nstraps)

member	type	description
phase	exp0D (9.5.1.3.180)	Phase of strap current [rad]; Time-dependent; exp0D
phi_centre	float (9.5.1.1.1)	Toroidal angle at the centre of the strap [rad]; Float
width	float (9.5.1.1.1)	Width of strap in the toroidal direction [m]; Float
dist2wall	float (9.5.1.1.1)	Distance to conducting wall or other conductor behind the antenna straps [m]; Float
coord_strap	rz1D (9.5.1.3.325)	Coordinates (R,z) of polygon describing the antenna in the poloidal plane; rz1d vector (ncoord_strap)

Type of: antennaic\_setup:straps (1567)

### 9.5.1.3.386 surface

State of plasma facing wall surfaces

member	type	description
ref_wall_typ(:)	ref_wall_typ (9.5.1.3.314)	List of reference wall compositions; Array of structures (number of reference compositions)
wall_type	complexgrid_scalar_int (9.5.1.3.78)	Definition of reference wall composition for every wall element; All other fields in this surface data structure refer to the geometric objects identified by the grid/subgrid in this field, in exactly the order given by the subgrid.
layers	layers (9.5.1.3.230)	Data on wall element layers
h_inventory	h_inventory (9.5.1.3.211)	Data on wall element hydrogen inventories
elements(:)	element_desc (9.5.1.3.171)	Description of atomic elements used in wall element layer compositions
compounds(:)	compound_desc (9.5.1.3.89)	Description of chemical compounds used in wall element layer compositions

Type of: wall:surface (1561)

### 9.5.1.3.387 t\_series\_cplx

Time series

member	type	description
time_wind	vecflt_type (9.5.1.2.9)	Time trace [s]; Time-dependent; Vector (n)
values_re	vecflt_type (9.5.1.2.9)	Real part of data; Time-dependent; Vector (n)
values_im	vecflt_type (9.5.1.2.9)	Imaginary part of data; Time-dependent; Vector (n)

Type of: refl\_receive:iq\_receiver (1829)

### 9.5.1.3.388 t\_series\_real

Time series

member	type	description
time_wind	vecflt_type (9.5.1.2.9)	Time trace [s]; Time-dependent; Vector (n)
values	vecflt_type (9.5.1.2.9)	Values of the signal; Time-dependent; Vector (n)

Type of: refl\_receive:io\_signal (1829) | refl\_receive:raw\_signal (1829)

### 9.5.1.3.389 table

Stores the interpolation table (0d to 7d). Only one entry should be used.

member	type	description
table_0d	float (9.5.1.1.1)	NO DOCS
table_1d	vecflt_type (9.5.1.2.9)	NO DOCS
table_2d	matflt_type (9.5.1.2.7)	NO DOCS
table_3d	array3dflt_type (9.5.1.2.1)	NO DOCS
table_4d	array4dflt_type (9.5.1.2.3)	NO DOCS
table_5d	array5dflt_type (9.5.1.2.4)	NO DOCS
table_6d	array6dflt_type (9.5.1.2.5)	NO DOCS

Type of: tables:table (1904)

### 9.5.1.3.390 tables

Definition of a process

member	type	description
ndim	integer (9.5.1.1.2)	Table dimensionality of the process. Indicates which of the tables is filled.
coord_index	integer (9.5.1.1.2)	Index in tables.coord, specifying what coordinate specification to use for this table.
result_label	string (9.5.1.1.3)	Description of the process result (rate, cross section, sputtering yield, ...)
result_unit	string (9.5.1.1.3)	Unit of the process result
result_trans	integer (9.5.1.1.2)	Transformation of the process result. Integer flag: 0=no transformation; 1=10 <sup>-7</sup> ; 2=exp()
table(:)	table (9.5.1.3.389)	Array of data tables, one entry per species. Vector(nchargestates)
data_source	string (9.5.1.1.3)	Filename or subroutine name used to provide this data.
data_provide	string (9.5.1.1.3)	ITM responsible person for this data.
data_citation	string (9.5.1.1.3)	Reference to publication(s).

Type of: amns:tables (1517)

### 9.5.1.3.391 tables\_coord

Definition of coordinates for one specific coordinate system used in one or more tables.

member	type	description
coords(:)	coords (9.5.1.3.92)	Vector(ndim) of coordinates. ndim is number of parameters for a process.

Type of: amns:tables\_coord (1517)

### 9.5.1.3.392 tf\_desc\_tfcoils

Description of the toroidal field coils

member	type	description
type	integer (9.5.1.1.2)	Type of coil, 0=circular coil, 1=plane coil with arbitrary shape.
phi	float (9.5.1.1.1)	Toroidal angle of centre of coil 1, assuming all coils are identical and evenly distributed around the torus [rad]. Scalar
circularcoil	circularcoil (9.5.1.3.65)	Circular coil description
planecoil	planecoil (9.5.1.3.280)	Plane coil description
structure	tf_structure (9.5.1.3.393)	Inner TF coil structure

Type of: toroidfield:desc\_tfcoils (1557)

### 9.5.1.3.393 tf\_structure

Inner TF coil structure

member	type	description
jcable	float (9.5.1.1.1)	CICS cable in current density [A/m]; Scalar
tisof	float (9.5.1.1.1)	Insulation thickness of TF conductor [m]; Scalar
efcasing	float (9.5.1.1.1)	Thickness front casing [m]; Scalar
escasing	float (9.5.1.1.1)	Thickness side casing [m]; Scalar
sigjackettf	float (9.5.1.1.1)	Jacket stress limit [Pa]; Scalar
sigvaulttf	float (9.5.1.1.1)	Vault stress limit [Pa]; Scalar
ktf	float (9.5.1.1.1)	Amplification factor for magnetic field
ritf	float (9.5.1.1.1)	Internal TF coil radius [m]; Scalar
riitf	float (9.5.1.1.1)	Internal vault TF coil radius [m]; Scalar
ref	float (9.5.1.1.1)	External TF coil radius [m]; Scalar

Type of: tf\_desc\_tfcoils:structure (1906)

### 9.5.1.3.394 theta\_info

Information on the poloidal angle theta.

member	type	description
angl.type	integer (9.5.1.1.2)	Type of poloidal angle: 1 : same as the poloidal angle in the equilibrium cpo; 2 : geometrical polar angle, $\tan(\theta) = Z/(R-R_0)$ ; 3 : other. If option 3, a transformation to the geometrical poloidal angle is provided in th2th.pol.
th2th.pol	matflt.type (9.5.1.2.7)	Geometrical poloidal angle at grid points in theta, i.e. the transformation from theta to the polar poloidal angle; used only if angl.type=3; Time-dependent; Matrix (ndim1, ndim2)

Type of: waves\_grid\_2d:theta\_info (1945)

### 9.5.1.3.395 topo\_regions

List with distribution function in each topological region; Time-dependent. Structure array(nregion\_topo)

member	type	description
ind_omnigen	integer (9.5.1.1.2)	Index of the omnigenous magnetic surfaces (generalised equatorial plane) to which the s-coordinates refer. NOTE: only used for gridcoord=3.
dim1	array6dflt.type (9.5.1.2.5)	First dimension in phase space; Time-dependent; Array6d(ndim11, ndim21, ndim31, ndim41, ndim51, ndim61).
dim2	array6dflt.type (9.5.1.2.5)	Second dimension in phase space; Time-dependent; Array6d(ndim12, ndim22, ndim32, ndim42, ndim52, ndim62).
dim3	array6dflt.type (9.5.1.2.5)	Third dimension in phase space; Time-dependent; Array6d(ndim13, ndim23, ndim33, ndim43, ndim53, ndim63).
dim4	array6dflt.type (9.5.1.2.5)	Fourth dimension in phase space; Time-dependent; Array6d(ndim14, ndim24, ndim34, ndim44, ndim54, ndim64).
dim5	array6dflt.type (9.5.1.2.5)	Fifth dimension in phase space; Time-dependent; Array6d(ndim15, ndim25, ndim35, ndim45, ndim55, ndim65).
dim6	array6dflt.type (9.5.1.2.5)	Sixth dimension in phase space; Time-dependent; Array6d(ndim16, ndim26, ndim36, ndim46, ndim56, ndim66).
jacobian	array6dflt.type (9.5.1.2.5)	Jacobian of the transformation of the phase space grid variables; Time-dependent; Array6d(ndim11, ndim22, ndim33, ndim44, ndim55, ndim66).

member	type	description
distfunc	array6dflt.type (9.5.1.2.5)	Orbit (or bounce) averaged distribution function given on a grid [1/m <sup>3</sup> (m/s) <sup>-3</sup> ]; Time-dependent; Array6d(ndim11, ndim22, ndim33, ndim44, ndim55, ndim66).

### 9.5.1.3.396 toroid\_field

Toroidal field information entering the definition of rho.tor, for reference only. The physical value of the toroidal field should be taken from the toroidfield CPO. Time-dependent.

member	type	description
b0	float (9.5.1.1.1)	Vacuum field at r0 [T]; Time-dependent. Scalar.
b0prime	float (9.5.1.1.1)	Time derivative of the vacuum field at r0 [T/s]; Time-dependent. Scalar.
r0	float (9.5.1.1.1)	Characteristic major radius of the device (used in publications, usually middle of the vessel at the equatorial midplane) [m]. Scalar.
time	float (9.5.1.1.1)	Time [s] (exact time slice used from the time array of the source signal, here the toroidfield CPO. If the time slice does not exist in the time array of the source signal, it means linear interpolation has been used); Time-dependent; Scalar.

Type of: coreprof:toroid\_field (1523)

### 9.5.1.3.397 trace

Position of particle in 5D space (3D in real and 2D in velocity).

member	type	description
time_orb	matflt.type (9.5.1.2.7)	Time along the orbit [s]; Time-dependent; Matrix (norbits, max_ntorb)
ntorb	vecint.type (9.5.1.2.10)	Number of time slices along the orbit, for each orbit. Time-dependent; Vector (norbits)
r	matflt.type (9.5.1.2.7)	Major radius of the guiding centre [m], Major radius; Time-dependent; Matrix (norbits, max_ntorb).
z	matflt.type (9.5.1.2.7)	Altitude of the guiding centre [m]; Time-dependent; Matrix (norbits, max_ntorb).
phi	matflt.type (9.5.1.2.7)	Toroidal angle of the guiding centre [rad]; Time-dependent; Matrix (norbits, max_ntorb).
psi	matflt.type (9.5.1.2.7)	Guiding centre position in psi [normalised poloidal flux]; Time-dependent; Matrix (norbits, max_ntorb).
theta_b	matflt.type (9.5.1.2.7)	Position of the guiding centre in poloidal Boozer angle [rad]; Time-dependent; Matrix (norbits, max_ntorb).
v_parallel	matflt.type (9.5.1.2.7)	Parallel velocity along the orbit [m/s]; Time-dependent; Matrix (norbits, max_ntorb).
v_perp	matflt.type (9.5.1.2.7)	Perpendicular velocity along the orbit [m/s]; Time-dependent; Matrix (norbits, max_ntorb).

Type of: orbit:trace (1546)

### 9.5.1.3.398 transcoefel

Subtree containing transport coefficients from a transport model, for the electrons

member	type	description
diff_eff	vecflt.type (9.5.1.2.9)	Effective diffusivity [m <sup>2</sup> .s <sup>-1</sup> ]. Time-dependent. Vector (nrho)
vconv_eff	vecflt.type (9.5.1.2.9)	Effective convection [m.s <sup>-1</sup> ]. Time-dependent. Vector (nrho)
flux	vecflt.type (9.5.1.2.9)	Flux. Not used in transport equations [field.m.s <sup>-1</sup> ,m <sup>-3</sup> if field is not a density itself]. Time-dependent. Vector (nrho)
off.diagonal	offdiagel (9.5.1.3.261)	Details of the transport matrix, just for diagnostic (not used in transport equations). Time-dependent.
flag	integer (9.5.1.1.2)	Flag describing the form of transport produced by the original model : 0- not calculated, 1- D and V, 2- flux, 3- full transport matrix. Scalar.

Type of: coretransp\_values:te\_transp (1630) I neoclassic:mtor\_neo (1545) I neoclassic:ne\_neo (1545) I neoclassic:te\_neo (1545)

### 9.5.1.3.399 transcoefimp

Subtree containing transport coefficients from a transport model, for the various impurity species (multiple charge states)

member	type	description
diff_eff	matflt.type (9.5.1.2.7)	Effective diffusivity [m <sup>2</sup> .s <sup>-1</sup> ]. Time-dependent. Array2d (nrho,nzimp)

member	type	description
vconv_eff	matflt.type (9.5.1.2.7)	Effective convection [m.s <sup>-1</sup> ]. Time-dependent. Array2d (nrho,nzimp)
exchange	matflt.type (9.5.1.2.7)	Ion to electron energy exchange [W.m <sup>-3</sup> ]. Time-dependent. Array2d (nrho,nzimp)
flux	matflt.type (9.5.1.2.7)	Flux. Not used in transport equations [field.m.s <sup>-1</sup> ,m <sup>-3</sup> if field is not a density itself]. Time-dependent. Array2d (nrho,nzimp)
flag	integer (9.5.1.1.2)	Flag describing the form of transport produced by the original model : 0- not calculated, 1- D and V, 2- flux, 3- full transport matrix (off-diagonal subtree not available for impurities for the moment). Scalar.

Type of: coretransp\_values:nz\_transp (1630) I coretransp\_values:tz\_transp (1630) I neoclassic:nz\_neo (1545) I neoclassic:tz\_neo (1545)

#### 9.5.1.3.400 transcoefion

Subtree containing transport coefficients from a transport model, for the various ion species, including the energy exchange term qgi.

member	type	description
diff_eff	matflt.type (9.5.1.2.7)	Effective diffusivity [m <sup>2</sup> .s <sup>-1</sup> ]. Time-dependent. Matrix (nrho,nion)
vconv_eff	matflt.type (9.5.1.2.7)	Effective convection [m.s <sup>-1</sup> ]. Time-dependent. Matrix (nrho,nion)
exchange	matflt.type (9.5.1.2.7)	Ion to electron energy exchange [W.m <sup>-3</sup> ]. Time-dependent. Matrix(nrho,nion).
qgi	matflt.type (9.5.1.2.7)	Energy exchange term due to transport. [W.m <sup>-3</sup> ]. Time-dependent. Matrix (nrho,nion)
flux	matflt.type (9.5.1.2.7)	Flux. Not used in transport equations [field.m.s <sup>-1</sup> ,m <sup>-3</sup> if field is not a density itself]. Time-dependent. Matrix (nrho,nion)
off_diagonal	offdiagion (9.5.1.3.262)	Details of the transport matrix, just for diagnostic (not used in transport equations). Time-dependent.
flag	integer (9.5.1.1.2)	Flag describing the form of transport produced by the original model : 0- not calculated, 1- D and V, 2- flux, 3- full transport matrix. Scalar.

Type of: coretransp\_values:ti\_transp (1630) I neoclassic:ni\_neo (1545) I neoclassic:ti\_neo (1545)

#### 9.5.1.3.401 transcoefvtr

Subtree containing transport coefficients from a transport model, for the various ion species

member	type	description
diff_eff	matflt.type (9.5.1.2.7)	Effective diffusivity [m <sup>2</sup> .s <sup>-1</sup> ]. Time-dependent. Matrix (nrho,nion)
vconv_eff	matflt.type (9.5.1.2.7)	Effective convection [m.s <sup>-1</sup> ]. Time-dependent. Matrix (nrho,nion)
flux	matflt.type (9.5.1.2.7)	Flux. Not used in transport equations [field.m.s <sup>-1</sup> ,m <sup>-3</sup> if field is not a density itself]. Time-dependent. Matrix (nrho,nion)
off_diagonal	offdiagion (9.5.1.3.262)	Details of the transport matrix, just for diagnostic (not used in transport equations). Time-dependent.
flag	integer (9.5.1.1.2)	Flag describing the form of transport produced by the original model : 0- not calculated, 1- D and V, 2- flux, 3- full transport matrix. Scalar.

Type of: coretransp\_values:vtr\_transp (1630)

#### 9.5.1.3.402 tsmeasure

Measured values (Thomson scattering)

member	type	description
te	exp1D (9.5.1.3.181)	Electron temperature [eV]. Vector (nchords)
ne	exp1D (9.5.1.3.181)	Electron density [m <sup>-3</sup> ]. Vector (nchords)

Type of: tsdiag:measure (1558)

#### 9.5.1.3.403 tssetup

diagnostic setup information

member	type	description
position	rzphi1D (9.5.1.3.331)	Position of intersection between laser and line of sight; Vector (nchords)



Type of: `tsdiag:setup` (1558)

#### 9.5.1.3.404 `turbcomposition`

Plasma composition (description of ion species).

member	type	description
amn	vecflt.type (9.5.1.2.9)	Atomic mass number (lumped ions are allowed); Vector (nion)
zn	vecflt.type (9.5.1.2.9)	Nuclear charge (lumped ions are allowed); Vector (nion)
zion	vecflt.type (9.5.1.2.9)	Ion charge (of the dominant ionisation state; lumped ions are allowed); Vector (nion)
ie.mass	vecflt.type (9.5.1.2.9)	Ion to electron mass ratio as used in the code for each species. To be used only by models which keep electron inertia. Vector (nion)

Type of: `turbulence:composition` (1559)

#### 9.5.1.3.405 `turbcoordsys`

Description of the coordinates and metric.

member	type	description
grid.type	string (9.5.1.1.3)	Type of coordinate system.
turbgrid	turbgrid (9.5.1.3.407)	Turbulence grid used by the codes; Time-dependent.
jacobian	matflt.type (9.5.1.2.7)	Jacobian of the coordinate system; Time-dependent; Matrix (ndim1, ndim2).
g_11	matflt.type (9.5.1.2.7)	metric coefficients g_11; Time-dependent; Matrix (ndim1, ndim2).
g_12	matflt.type (9.5.1.2.7)	metric coefficients g_12; Time-dependent; Matrix (ndim1, ndim2).
g_13	matflt.type (9.5.1.2.7)	metric coefficients g_13; Time-dependent; Matrix (ndim1, ndim2).
g_22	matflt.type (9.5.1.2.7)	metric coefficients g_22; Time-dependent; Matrix (ndim1, ndim2).
g_23	matflt.type (9.5.1.2.7)	metric coefficients g_23; Time-dependent; Matrix (ndim1, ndim2).
g_33	matflt.type (9.5.1.2.7)	metric coefficients g_33; Time-dependent; Matrix (ndim1, ndim2).
position	rzphi3D (9.5.1.3.334)	R Z phi positions of grid points; Time-dependent; Array3D (ndim1, ndim2, ndim3).

Type of: `turbulence:coordsys` (1559)

#### 9.5.1.3.406 `turbenv1d`

Parallel fluctuation envelope.

member	type	description
theta	vecflt.type (9.5.1.2.9)	Straight field line poloidal angle [rad]; Vector (ntheta.env).
phi	vecflt.type (9.5.1.2.9)	Electrostatic potential [V <sup>2</sup> ]; Time-dependent; Vector (ntheta.env).
vor	vecflt.type (9.5.1.2.9)	Vorticity [coulomb <sup>2</sup> /m <sup>6</sup> ]; Time-dependent; Vector (ntheta.env).
jpl	vecflt.type (9.5.1.2.9)	Parallel current [A <sup>2</sup> /m <sup>4</sup> ]; Time-dependent; Vector (ntheta.env).
ne	vecflt.type (9.5.1.2.9)	Electron density [m <sup>-6</sup> ]; Time-dependent; Vector (ntheta.env).
he	vecflt.type (9.5.1.2.9)	Nonadiabatic electron density [m <sup>-6</sup> ]; Time-dependent; Vector (ntheta.env).
te	vecflt.type (9.5.1.2.9)	Electron temperature [eV <sup>2</sup> ]; Time-dependent; Vector (ntheta.env).
ni	matflt.type (9.5.1.2.7)	Ion density [m <sup>-6</sup> ]; Time-dependent; Matrix(ntheta.env,nion).
ti	matflt.type (9.5.1.2.7)	Ion temperature [eV <sup>2</sup> ]; Time-dependent; Matrix(ntheta.env,nion).
ui	matflt.type (9.5.1.2.7)	Ion parallel velocity [m <sup>2</sup> /s <sup>2</sup> ]; Time-dependent; Matrix (ntheta.env,nion).
fe	vecflt.type (9.5.1.2.9)	Electron particle flux [m <sup>-2</sup> /s per mode]; Time-dependent; Vector (ntheta.env).
qe	vecflt.type (9.5.1.2.9)	Electron conductive heat flux [W.m <sup>-2</sup> per mode]; Time-dependent; Vector (ntheta.env).
qi	matflt.type (9.5.1.2.7)	Ion conductive heat flux [W. m <sup>-2</sup> per mode]; Time-dependent; Matrix(ntheta.env,nion).
me	vecflt.type (9.5.1.2.9)	Magnetic electron heat flux [W.m <sup>-2</sup> per mode]; Time-dependent; Vector (ntheta.env).
mi	matflt.type (9.5.1.2.7)	Magnetic ion heat flux [W. m <sup>-2</sup> per mode]; Time-dependent; Matrix(ntheta.env,nion).

Type of: `turbulence:env1d` (1559)

#### 9.5.1.3.407 `turbgrid`

Generic structure for a turbulence grid.

member	type	description
dim1	vecflt_type (9.5.1.2.9)	First dimension values; Vector (ndim1).
dim2	vecflt_type (9.5.1.2.9)	Second dimension values; Vector (ndim2).
dim3	vecflt_type (9.5.1.2.9)	Third dimension values; Vector (ndim3).
dim.v1	vecflt_type (9.5.1.2.9)	First v-space dimension values; Vector (ndim.v1).
dim.v2	vecflt_type (9.5.1.2.9)	Second v-space dimension values; Vector (ndim.v2).

Type of: turbcoordsys:turbgrid (1919)

### 9.5.1.3.408 turbspec1d

Perpendicular wavenumber spectra.

member	type	description
kperp	vecflt_type (9.5.1.2.9)	Perpendicular wavenumber [ $\text{m}^{-1}$ ]; Vector (ndim_spec).
phi	vecflt_type (9.5.1.2.9)	Electrostatic potential [ $\text{V}^2$ per mode]; Time-dependent; Vector (ndim_spec).
vor	vecflt_type (9.5.1.2.9)	Vorticity [ $\text{s}^{-2}$ per mode]; Time-dependent; Vector (ndim_spec).
b	vecflt_type (9.5.1.2.9)	Magnetic energy [ $\text{T}^2$ per mode]; Time-dependent; Vector (ndim_spec).
jpl	vecflt_type (9.5.1.2.9)	Current [ $\text{A}^2/\text{m}^4$ per mode]; Time-dependent; Vector (ndim_spec).
ne	vecflt_type (9.5.1.2.9)	Electron density [ $\text{m}^{-6}$ per mode]; Time-dependent; Vector (ndim_spec).
te	vecflt_type (9.5.1.2.9)	Electron temperature [ $\text{eV}^2$ per mode]; Time-dependent; Vector (ndim_spec).
ti	matflt_type (9.5.1.2.7)	Ion temperature [ $\text{eV}^2$ per mode]; Time-dependent; Matrix (ndim_spec,nion).
fe	vecflt_type (9.5.1.2.9)	Electron particle flux [ $\text{m}^{-2}/\text{s}$ per mode]; Time-dependent; Vector (ndim_spec).
qe	vecflt_type (9.5.1.2.9)	Electron conductive heat flux [ $\text{W.m}^{-2}$ per mode]; Time-dependent; Vector (ndim_spec).
qi	matflt_type (9.5.1.2.7)	Ion conductive heat flux [ $\text{W.m}^{-2}$ per mode]; Time-dependent; Matrix(ndim_spec,nion).
me	vecflt_type (9.5.1.2.9)	Magnetic electron heat flux [ $\text{W.m}^{-2}$ per mode]; Time-dependent; Matrix (ndim_spec).
mi	matflt_type (9.5.1.2.7)	Magnetic ion heat flux [ $\text{W.m}^{-2}$ per mode]; Time-dependent; Matrix (ndim_spec,nion).

Type of: turbulence:spec1d (1559)

### 9.5.1.3.409 turbvar0d

Time traces.

member	type	description
dtime_type	string (9.5.1.1.3)	Description of time trace e.g. last ndtime points.
dtime	vecflt_type (9.5.1.2.9)	Fast diagnostic time [s]; Time-dependent; Vector (ndtime).
en_exb	vecflt_type (9.5.1.2.9)	ExB energy [ $\text{J}/\text{m}^3$ ]; Time-dependent; Vector (ndtime).
en_mag	vecflt_type (9.5.1.2.9)	Magnetic energy [ $\text{J}/\text{m}^3$ ]; Time-dependent; Vector (ndtime).
en_el.th	vecflt_type (9.5.1.2.9)	electron thermal energy or free energy [ $\text{J}/\text{m}^3$ ]; Time-dependent.
en_ion.th	matflt_type (9.5.1.2.7)	Ion thermal energy or free energy [ $\text{J}/\text{m}^3$ ]; Time-dependent; Matrix (ndtime, nion).
en_el.par	vecflt_type (9.5.1.2.9)	Electron parallel energy [ $\text{J}/\text{m}^3$ ]; Time-dependent; Vector (ndtime).
en_ion.par	matflt_type (9.5.1.2.7)	Ion parallel energy [ $\text{J}/\text{m}^3$ ]; Time-dependent; Matrix (ndtime,nion).
en_tot	vecflt_type (9.5.1.2.9)	Total energy or free energy [ $\text{J}/\text{m}^3$ ]; Time-dependent; Vector (ndtime).
fl_el	vecflt_type (9.5.1.2.9)	Electron flux [ $\text{m}^{-2} \text{s}^{-1}$ ]; Time-dependent; Vector (ndtime).
fl_heatel	vecflt_type (9.5.1.2.9)	Conductive electron heat flux [ $\text{W.m}^{-2}$ ]; Time-dependent; Vector (ndtime).
fl_ion	matflt_type (9.5.1.2.7)	Ion flux [ $\text{m}^{-2} \text{s}^{-1}$ ]; Time-dependent; Matrix (ndtime, nion).
fl_heation	matflt_type (9.5.1.2.7)	Conductive ion heat flux [ $\text{W.m}^{-2}$ ]; Time-dependent; Matrix (ndtime, nion).
fl_magel	vecflt_type (9.5.1.2.9)	Electron flux [ $\text{m}^{-2} \text{s}^{-1}$ ]; Time-dependent; Vector (ndtime).
fl_magheatel	vecflt_type (9.5.1.2.9)	Conductive electron heat flux [ $\text{W.m}^{-2}$ ]; Time-dependent; Vector (ndtime).
fl_magion	matflt_type (9.5.1.2.7)	Ion flux [ $\text{m}^{-2} \text{s}^{-1}$ ]; Time-dependent; Matrix (ndtime, nion).
flmagheation	matflt_type (9.5.1.2.7)	Conductive ion heat flux [ $\text{W.m}^{-2}$ ]; Time-dependent; Matrix (ndtime, nion).

Type of: turbulence:var0d (1559)

### 9.5.1.3.410 turbvar1d

Dependent variable zonal average radial profile.

member	type	description
rho_tor_norm	vecflt_type (9.5.1.2.9)	Normalised toroidal flux coordinate. Vector(nrho1d)
phi	vecflt_type (9.5.1.2.9)	Electrostatic potential [V]; Time-dependent; Vector (nrho1d).
er	vecflt_type (9.5.1.2.9)	Radial electric field [V/m]; Time-dependent; Vector (nrho1d).
vor	vecflt_type (9.5.1.2.9)	Vorticity [s <sup>-1</sup> ]; Time-dependent; Vector (nrho1d).
apl	vecflt_type (9.5.1.2.9)	Parallel magnetic potential divided by B [m]; Time-dependent; Vector (nrho1d).
jpl	vecflt_type (9.5.1.2.9)	Parallel current divided by B [A/m <sup>2</sup> per T]; Time-dependent; Vector (nrho1d).
ne	vecflt_type (9.5.1.2.9)	Electron density [m <sup>-3</sup> ]; Time-dependent; Vector (nrho1d).
te	vecflt_type (9.5.1.2.9)	Electron temperature [eV]; Time-dependent; Vector (nrho1d).
ni	matflt_type (9.5.1.2.7)	Ion density [m <sup>-3</sup> ]; Time-dependent; Matrix (nrho1d,nion).
ti	matflt_type (9.5.1.2.7)	Ion temperature [eV]; Time-dependent; Matrix (nrho1d,nion).
ui	matflt_type (9.5.1.2.7)	Ion parallel velocity divided by B [m/s per T]; Time-dependent; Matrix (nrho1d,nion).

Type of: turbulence:var1d (1559)

### 9.5.1.3.411 turbvar2d

Dependent variable axisymmetric component.

member	type	description
rho_tor_norm	vecflt_type (9.5.1.2.9)	Normalised toroidal flux coordinate. Vector(nrho2d)
theta	vecflt_type (9.5.1.2.9)	Straight field line poloidal angle [rad]. Vector(ntheta2d)
phi	matflt_type (9.5.1.2.7)	Electrostatic potential [V]; Time-dependent; Matrix (nrho2d,ntheta2d).
apl	matflt_type (9.5.1.2.7)	Parallel magnetic potential divided by B [m]; Time-dependent; Matrix(nrho2d,ntheta2d).
jpl	matflt_type (9.5.1.2.7)	Parallel current divided by B [A/m <sup>2</sup> per T]; Time-dependent; Matrix (nrho2d,ntheta2d).
vor	matflt_type (9.5.1.2.7)	Vorticity [s <sup>-1</sup> ]; Time-dependent; Matrix(nrho2d,ntheta2d).
ne	matflt_type (9.5.1.2.7)	Electron density [m <sup>-3</sup> ]; Time-dependent; Matrix (nrho2d,ntheta2d).
te	matflt_type (9.5.1.2.7)	Electron temperature [eV]; Time-dependent; Matrix (nrho2d,ntheta2d).
ni	array3dfilt_type (9.5.1.2.1)	Ion density [m <sup>-3</sup> ]; Time-dependent; Array3D (nrho2d,ntheta2d,nion).
ti	array3dfilt_type (9.5.1.2.1)	Ion temperature [eV]; Time-dependent; Array3D (nrho2d,ntheta2d,nion).
ui	array3dfilt_type (9.5.1.2.1)	Ion parallel velocity divided by B [m/s per T]; Time-dependent; Array3D(nrho2d,ntheta2d,nion).

Type of: turbulence:var2d (1559)

### 9.5.1.3.412 turbvar3d

Dependent variable morphology (on the internal grid code coord\_sys/turbgrid).

member	type	description
phi	array3dfilt_type (9.5.1.2.1)	Electrostatic potential [V]; Time-dependent; Array3D(ndim1,ndim2,ndim3).
vor	array3dfilt_type (9.5.1.2.1)	Vorticity [s <sup>-1</sup> ]; Time-dependent; Array3D(ndim1,ndim2,ndim3).
jpl	array3dfilt_type (9.5.1.2.1)	Parallel current [A/m <sup>2</sup> ]; Time-dependent; Array3D(ndim1,ndim2,ndim3).
ne	array3dfilt_type (9.5.1.2.1)	Electron density [m <sup>-3</sup> ]; Time-dependent; Array3D(ndim1,ndim2,ndim3).

Type of: turbulence:var3d (1559)

### 9.5.1.3.413 turbvar4d

Gyrokinetic distribution function, axisymmetric component. Grid is defined in coord\_sys/turbgrid.

member	type	description
fe	array4dfilt_type (9.5.1.2.3)	Electron distribution function times V-space volume element, axisymmetric component [m <sup>-3</sup> ]; Time-dependent; Array4D(ndim1,ndim2,ndim3,ndim.v1).
fi	array5dfilt_type (9.5.1.2.4)	Ion distribution function times V-space volume element, axisymmetric component [m <sup>-3</sup> ]; Time-dependent; Array5D(ndim1,ndim2,ndim3,ndim.v1,nion).

Type of: turbulence:var4d (1559)

### 9.5.1.3.414 turbvar5d

Gyrokinetic distribution function. Grid is defined in coord\_sys/turbgrid.

member	type	description
fe	array5dflt.type (9.5.1.2.4)	Electron distribution function times V-space volume element [m <sup>-3</sup> ]; Time-dependent; Array5D(ndim1,ndim2,ndim3,ndim.v1,ndim.v2).
fi	array6dflt.type (9.5.1.2.5)	Ion distribution function times V-space volume element [m <sup>-3</sup> ]; Time-dependent; Array6D(ndim1,ndim2,ndim3,ndim.v1,ndim.v2,nion).

Type of: turbulence:var5d (1559)

### 9.5.1.3.415 veccplx\_type

Temporary structure for real and imaginary part of complex numbers (vector)

member	type	description
re	vecflt.type (9.5.1.2.9)	Real part
im	vecflt.type (9.5.1.2.9)	Imaginary part

Type of: complexgrid\_scalar\_cplx:scalar (1591)

### 9.5.1.3.416 version\_ind

Used by shot/run=0/0 to store information about available versions.

member	type	description
description	vecstring.type (9.5.1.2.11)	Description of each version.
releasedate	string (9.5.1.1.3)	Release date
data_release(:)	data.release (9.5.1.3.120)	For this release, an array over each data item (i.e. shot/run pair containing the actual data) included in this release

Type of: amns:version\_ind (1517)

### 9.5.1.3.417 wall2d

2D wall type. Structure array. Replicate this element for each type of possible physics configurations necessary (single contour limiter, disjoints gapped plasma facing components)

member	type	description
wall_id	identifier (9.5.1.3.214)	Use this identifier to tag the type of 2d wall you are using. Use 0 for single contour limiter and 1 for disjoint PFC structure like first wall.
limiter	wall.limiter (9.5.1.3.422)	Description of the immobile limiting surface(s) or plasma facing components for defining the Last Closed Flux Surface.
vessel	wall.vessel (9.5.1.3.423)	Mechanical structure of the vacuum vessel. Vessel assumed as set of nested layers with given physics properties; Each vessel layer can be either a simple annular structure of given radial thickness or be made from a set of individual blocks with a given resistivity.

Type of: wall:wall2d (1561)

### 9.5.1.3.418 wall2d\_mhd

Simplified wall that encloses necessary information for RWM codes.

member	type	description
wall_id	identifier (9.5.1.3.214)	NO DOCS
res_wall(:)	mhd.res_wall2d (9.5.1.3.243)	Resistive Wall(s).
ideal_wall	mhd.ideal_wall2d (9.5.1.3.241)	Ideal wall

Type of: wall:wall2d\_mhd (1561)

### 9.5.1.3.419 wall3d

A 3D wall type; Structure array. Replicate this element for each type of possible physics configurations necessary (gas thight vs wall with ports and holes)

member	type	description
wall_id	identifier (9.5.1.3.214)	NO DOCS
grid	complexgrid (9.5.1.3.71)	Grid description

Type of: wall:wall3d (1561)

#### 9.5.1.3.420 wall\_blocks

Vector of vacuum vessel units. Replicate this vessel\_unit element ncomponents times. Each unit contains a mechanical structure of the vessel with distinct physics properties. Array of structures (ncomponents)

member	type	description
blocks.unit(:)	wall_blocks.unit (9.5.1.3.421)	Vector of blocks that build of the vessel layer. Replicate this element nblocks times. Each unit contains a building block of the vessel and can have dedicated number of points. Array of structures (nblocks)

Type of: wall\_vessel\_unit:blocks (1939)

#### 9.5.1.3.421 wall\_blocks\_unit

Vector of blocks that build of the vessel layer. Replicate this element nblocks times. Each unit contains a building block of the vessel and can have dedicated number of points. Array of structures (nblocks)

member	type	description
name	string (9.5.1.1.3)	Name or description of the blocks.unit
position	rz1D (9.5.1.3.325)	Position (R,Z coordinates) of a vessel segment. No need to repeat first point for closed contours [m]; Vector(npoints)
eta	float (9.5.1.1.1)	Resistivity of the vessel segment [ohm.m]; Scalar
permeability	float (9.5.1.1.1)	Vessel relative permeability; Scalar

Type of: wall\_blocks:blocks\_unit (1934)

#### 9.5.1.3.422 wall\_limiter

Description of the immobile limiting surface(s) or plasma facing components for defining the Last Closed Flux Surface.

member	type	description
limiter.unit(:)	limiter_unit (9.5.1.3.231)	Vector of limiting surfaces. Replicate this limiter_unit element ncomponents times. Each unit contains a plasma facing component that can have dedicated number of points. Array of structures (ncomponents)

Type of: wall2d:limiter (1931)

#### 9.5.1.3.423 wall\_vessel

Mechanical structure of the vacuum vessel. Vessel assumed as set of nested layers with given physics properties; Each vessel layer can be either a simple annular structure of given radial thickness or be made from a set of individual blocks with a given resistivity.

member	type	description
vessel.unit(:)	wall_vessel.unit (9.5.1.3.425)	Vector of vacuum vessel units. Replicate this vessel_unit element ncomponents times. Each unit contains a mechanical structure of the vessel with distinct physics properties. Array of structures (ncomponents)

Type of: wall2d:vessel (1931)

#### 9.5.1.3.424 wall\_vessel\_annular

Vector of vacuum vessel units. Replicate this vessel\_unit element ncomponents times. Each unit contains a mechanical structure of the vessel with distinct physics properties. Array of structures (ncomponents)

member	type	description
name	string (9.5.1.1.3)	Name or description of the vessel.unit

member	type	description
inside	rz1D (9.5.1.3.325)	Inner Vessel wall outline (list of R,Z co-ordinates) [m]; Vector (npoints_inner)
outside	rz1D (9.5.1.3.325)	Outer Vessel wall outline (list of R,Z co-ordinates) [m]; Vector (npoints_inner)
eta	float (9.5.1.1.1)	Vessel resistivity [ohm.m]; Scalar
permeability	float (9.5.1.1.1)	Vessel relative permeability; Scalar

Type of: wall\_vessel\_unit:annular (1939)

#### 9.5.1.3.425 wall\_vessel\_unit

Vector of vacuum vessel units. Replicate this vessel\_unit element ncomponents times. Each unit contains a mechanical structure of the vessel with distinct physics properties. Array of structures (ncomponents)

member	type	description
annular	wall_vessel_annular (9.5.1.3.424)	Vector of vacuum vessel units. Replicate this vessel_unit element ncomponents times. Each unit contains a mechanical structure of the vessel with distinct physics properties. Array of structures (ncomponents)
blocks	wall_blocks (9.5.1.3.420)	Vector of vacuum vessel units. Replicate this vessel_unit element ncomponents times. Each unit contains a mechanical structure of the vessel with distinct physics properties. Array of structures (ncomponents)

Type of: wall\_vessel:vessel\_unit (1937)

#### 9.5.1.3.426 wall\_wall0d

Simple 0D description of plasma-wall interaction

member	type	description
pumping_speed	vecflt_type (9.5.1.2.9)	pumping speed; Time-dependent. vector(nneut); [particles/s]
gas_puff	vecflt_type (9.5.1.2.9)	gas puff; vector(nneut); Time-dependent. [particles/s]
wall_inventory	vecflt_type (9.5.1.2.9)	wall inventory; vector(nneut); Time-dependent. [particles]
recycling_coefficient	vecflt_type (9.5.1.2.9)	Recycling coefficient. Vector(nneut) Time-dependent.
wall_temperature	float (9.5.1.1.1)	Wall temperature [K]. Time-dependent. Scalar
power_from_plasma	float (9.5.1.1.1)	Power flowing from the plasma to the wall [W]. Time-dependent. Scalar
power_to_cooling	float (9.5.1.1.1)	Power to cooling systems [W]. Time-dependent. Scalar
plasma	wall_wall0d_plasma (9.5.1.3.427)	NO DOCS

Type of: wall:wall0d (1561)

#### 9.5.1.3.427 wall\_wall0d\_plasma

member	type	description
species_index	matint.type (9.5.1.2.8)	Index of species into wall/compositions; matrix(nspecies,3); 1st element indicates {1: main ions; 2:impurities; 3:neutrals; 4:edge species}; 2nd element indicates index into that array; 3rd index indicates charge state if 1st element points to impurities or neutral type if 1st element points to neutrals;
flux	vecflt_type (9.5.1.2.9)	flux of species indicated by species_index; array of nspecies; positive implies incoming onto wall; negative implies sent back into plasma; time-dependent; [particles/s]
energy	vecflt_type (9.5.1.2.9)	energy flux of species indicated by species_index; array of nspecies; positive implies incoming onto wall; negative implies sent back into plasma; time-dependent; [W]

Type of: wall\_wall0d:plasma (1940)

#### 9.5.1.3.428 waveguides

Waveguides description

member	type	description
nwm_theta	integer (9.5.1.1.2)	Number of waveguides per module in the poloidal direction.
nwm_phi	integer (9.5.1.1.2)	Number of waveguides per module in the toroidal direction.
mask	vecint.type (9.5.1.2.10)	Mask of passive and active waveguides for an internal module; Vector of integers (nwm_phi)
npwbm_phi	integer (9.5.1.1.2)	Number of passive waveguide between modules in the toroidal direction
npwe_phi	integer (9.5.1.1.2)	Number of passive waveguides on each antenna edge in the toroidal direction
sw_theta	float (9.5.1.1.1)	Spacing between poloidally neighboring waveguides [m]
hw_theta	float (9.5.1.1.1)	Height of waveguides in the poloidal direction [m]
bwa	float (9.5.1.1.1)	Width of active waveguides [m]; Float
biwp	float (9.5.1.1.1)	Width of internal passive waveguides [m]; Float
bewp	float (9.5.1.1.1)	Width of edge passive waveguides [m]; Float
e_phi	vecflt.type (9.5.1.2.9)	Thickness between waveguides in the toroidal direction [m], Vector (nthick_phi). Reminder : nthick_phi = nmp_phi*nwm_phi + (nmp_phi - 1)*npwbm_phi + 2*npwe_phi
scl	vecflt.type (9.5.1.2.9)	Short circuit length for passive waveguides [m], Vector (nshort_phi). Reminder : nshort_phi = nmp_phi*npwm_phi + (nmp_phi - 1)*npwbm_phi + 2*npwe_phi

Type of: modules:waveguides (1760)

### 9.5.1.3.429 waves\_global\_param

Global wave deposition parameters

member	type	description
frequency	float (9.5.1.1.1)	Wave frequency [Hz]; Time-dependent, floating
name	string (9.5.1.1.3)	Antenna name, String
type	string (9.5.1.1.3)	Wave type (LH, EC, IC, ...), String
ntor	vecint.type (9.5.1.2.10)	Toroidal mode numbers; Time-dependent; Vector (ntor)
f_assumption	vecint.type (9.5.1.2.10)	Assumption on the functions distribution used by the wave solver to calculate the power deposition : 0 = Maxwellian (linear absorption); 1 = quasi-linear (F given by a distribution function CPO). Integer vector (nion+1). The first value corresponds to the electrons, then to the other ion species. Time-dependent.
power_tot	float (9.5.1.1.1)	Total absorbed wave power [W]; Time-dependent
p_frac_ntor	vecflt.type (9.5.1.2.9)	Fraction of wave power per toroidal mode number; Time-dependent; Vector (ntor)
pow_i	vecflt.type (9.5.1.2.9)	Wave power absorbed by an ion species [W]; Time-dependent; Vector (nion)
pow_e	float (9.5.1.1.1)	Wave power absorbed by the electrons [W]; Time-dependent; Float
pow_ntor_i	matflt.type (9.5.1.2.7)	Wave power absorbed by an ion species per toroidal mode number [W]; Time-dependent; Matrix (ntor,nion)
pow_ntor_e	vecflt.type (9.5.1.2.9)	Wave power absorbed by the electrons per toroidal mode number [W]; Time-dependent; Vector (ntor)
cur_tor	float (9.5.1.1.1)	Wave driven toroidal current from a stand alone calculation (not consistent with other sources) [A]; Time-dependent, Float
cur_tor_ntor	vecflt.type (9.5.1.2.9)	Wave driven toroidal current for each toroidal mode number from a stand alone calculation (not consistent with other sources) [A]; Time-dependent; Vector (ntor)
code.type	integer (9.5.1.1.2)	Type of wave deposition code for a given frequency: 1=beam/ray tracing; 2=full wave; Integer
toroid_field	b0r0 (9.5.1.3.56)	Characteristics of the vacuum toroidal field, redundant with the toroidfield CPO, to document the normalisation of parallel current densities in this CPO; Float.

Type of: coherentwave:global\_param (1582)

### 9.5.1.3.430 waves\_grid\_1d

Grid points for profiles

member	type	description
rho_tor_norm	vecflt.type (9.5.1.2.9)	Normalised toroidal flux coordinate at the grid points for 1D profiles; Time-dependent; Vector (npsi)
rho_tor	vecflt.type (9.5.1.2.9)	Toroidal flux coordinate at the grid points for 1D profiles [m]; Time-dependent; Vector (npsi)
psi	vecflt.type (9.5.1.2.9)	Grid points in poloidal flux function [Wb], without 1/2pi and such that Bp=  grad psi  /R/2/pi. Time-dependent; Vector (npsi)

Type of: coherentwave:grid.1d (1582)

### 9.5.1.3.431 waves\_grid\_2d

Grid points for 2D profiles

member	type	description
grid.type	integer (9.5.1.1.2)	Grid type. 1: rectangular grid in (R,Z). 2: rectangular grid in (psi, theta). 3: unstructured grid. Integer.
rho.tor_norm	matflt.type (9.5.1.2.7)	Normalised toroidal flux coordinate at the grid points for the 2D profiles; Time-dependent; Matrix (ndim1, ndim2)
rho.tor	matflt.type (9.5.1.2.7)	Toroidal flux coordinate at the grid points for the 2D profiles [m]; Time-dependent; Matrix (ndim1, ndim2)
psi	matflt.type (9.5.1.2.7)	Grid points in poloidal flux function [Wb], without $1/2\pi$ and such that $B_p =  \text{grad } \psi  / R / 2 / \pi$ . Time-dependent; Matrix (ndim1, ndim2)
theta	matflt.type (9.5.1.2.7)	Poloidal angle at the grid points (see theta.info for detailed definition); Time-dependent; Matrix (ndim1, ndim2)
r	matflt.type (9.5.1.2.7)	R (major radius) of grid points; Time-dependent; Matrix(ndim1, ndim2)
z	matflt.type (9.5.1.2.7)	Z (altitude) of grid points; Time-dependent; Matrix (ndim1, ndim2)
theta.info	theta.info (9.5.1.3.394)	Information on the poloidal angle theta.

Type of: coherentwave:grid\_2d (1582)

### 9.5.1.3.432 waves\_profiles\_1d

waves 1D radial profiles

member	type	description
powd.tot	vecflt.type (9.5.1.2.9)	Total flux surface averaged wave power density [ $\text{W}/\text{m}^3$ ]; Time-dependent; Vector (npsi)
powd.e	vecflt.type (9.5.1.2.9)	Flux surface averaged absorbed wave power density on electrons [ $\text{W}/\text{m}^3$ ]; Time-dependent; Vector (npsi)
powd.i	matflt.type (9.5.1.2.7)	Flux surface averaged absorbed wave power density on ion species [ $\text{W}/\text{m}^3$ ]; Time-dependent; Matrix (npsi, nion)
powd.ntor	matflt.type (9.5.1.2.7)	Flux surface averaged power density for each toroidal mode number [ $\text{W}/\text{m}^3$ ]; Time-dependent; Matrix(npsi, ntor)
powd.ntor.e	matflt.type (9.5.1.2.7)	Flux surface averaged absorbed power density for each toroidal mode number on electrons [ $\text{W}/\text{m}^3$ ]; Time-dependent; Matrix (npsi, ntor)
powd.ntor.i	array3dflt.type (9.5.1.2.1)	Flux surface averaged power density for each toroidal mode number on each ions species [ $\text{W}/\text{m}^3$ ]; Time-dependent; Array3D (npsi, ntor, nion)
curd.tor	vecflt.type (9.5.1.2.9)	Flux surface averaged wave driven toroidal current density = $\text{average}(j_{\phi}/R) / \text{average}(1/R)$ [ $\text{A}/\text{m}^2$ ]; Time-dependent; Vector (npsi)
curd.torntor	matflt.type (9.5.1.2.7)	Flux surface averaged wave driven toroidal current density for each toroidal mode number = $\text{average}(j_{\phi}/R) / \text{average}(1/R)$ [ $\text{A}/\text{m}^2$ ]; Time-dependent; Matrix (npsi, ntor)
pow.tot	vecflt.type (9.5.1.2.9)	Volume integrated absorbed wave power density [W]; Time-dependent; Vector (npsi)
pow.e	vecflt.type (9.5.1.2.9)	Volume integrated absorbed wave power density on electrons [W]; Time-dependent; Vector (npsi)
pow.i	matflt.type (9.5.1.2.7)	Volume integrated absorbed wave power density on ion species [W]; Time-dependent; Matrix (npsi, nion)
pow.ntor	array3dflt.type (9.5.1.2.1)	Volume integrated power density for each toroidal mode number [W]; Time-dependent; Matrix (npsi, ntor)
pow.ntor.e	matflt.type (9.5.1.2.7)	Volume integrated power density for each toroidal mode number on the electrons [W]; Time-dependent; Matrix (npsi, ntor)
pow.ntor.i	array3dflt.type (9.5.1.2.1)	Volume integrated power density for each toroidal mode number on each ions species [W]; Time-dependent; Array3D (npsi, ntor, nion)
curd.par	vecflt.type (9.5.1.2.9)	Flux surface averaged wave driven parallel current density = $\text{average}(j_{\parallel}) / B_0$ , where $B_0$ is in $\text{global\_param}/\text{toroid\_field}/b_0$ , from stand alone calculation (not consistent with other sources) ; [ $\text{A}/\text{m}^2$ ]; Time-dependent; Vector (npsi)
curd.parntor	matflt.type (9.5.1.2.7)	Flux surface averaged wave driven parallel current density for each toroidal mode number = $\text{average}(j_{\parallel}) / B_0$ , where $B_0$ is in $\text{global\_param}/\text{toroid\_field}/b_0$ , from stand alone calculation (not consistent with other sources) ; [ $\text{A}/\text{m}^2$ ]; Time-dependent; Matrix (npsi, ntor)
cur.tor	vecflt.type (9.5.1.2.9)	Wave driven toroidal current inside a flux surface from stand alone calculation (not consistent with other sources) [A]; Time-dependent; Vector (npsi)
cur.tor.ntor	matflt.type (9.5.1.2.7)	Wave driven toroidal current inside a flux surface for each toroidal mode number from a stand alone calculation (not consistent with other sources) [A]; Time-dependent; Matrix (npsi, ntor)

Type of: coherentwave:profiles\_1d (1582)

### 9.5.1.3.433 waves\_profiles\_2d

waves 2D profiles in poloidal cross-section



member	type	description
powd_tot	matflt.type (9.5.1.2.7)	Total wave power density; Time-dependent [W/m <sup>3</sup> ]; Matrix (ndim1, ndim2)
powd_e	matflt.type (9.5.1.2.7)	Absorbed wave power density on electrons [W/m <sup>3</sup> ]; Time-dependent; Matrix (ndim1, ndim2)
powd_i	array3dflt.type (9.5.1.2.1)	Absorbed wave power density on ion species [W/m <sup>3</sup> ]; Time-dependent; Array3D (ndim1, ndim2, nion)
powd_ntor	array3dflt.type (9.5.1.2.1)	Absorbed power density for each toroidal mode number [W/m <sup>3</sup> ]; Time-dependent; Array 3D (ndim1, ndim2, ntor)
powd_ntor_e	array3dflt.type (9.5.1.2.1)	Absorbed power density for each toroidal mode number on electrons [W/m <sup>3</sup> ]; Time-dependent; Array 3D (ndim1, ndim2, ntor)
powd_ntor_i	array4dflt.type (9.5.1.2.3)	Absorbed power density for each toroidal mode number on each ions species [W/m <sup>3</sup> ]; Time-dependent; Array4D (ndim1, ndim2, ntor, nion)
powd_iharm	array5dflt.type (9.5.1.2.4)	Power density absorbed by an ion species for each toroidal mode number at a given harmonic cyclotron resonance ; Time-dependent (W/m <sup>3</sup> ); Array5D (ndim1, ndim2, ntor, nion, nharm)

Type of: coherentwave:profiles\_2d (1582)

### 9.5.1.3.434 waves\_rtposition

Ray/beam position

member	type	description
r	vecflt.type (9.5.1.2.9)	Major radius location [m]; Time-dependent; Vector (npoints)
z	vecflt.type (9.5.1.2.9)	Vertical location [m]; Time-dependent; Vector (npoints)
phi	vecflt.type (9.5.1.2.9)	Toroidal angle location [rad]; Time-dependent; Vector (npoints)
psi	vecflt.type (9.5.1.2.9)	Poloidal magnetic flux coordinate [Wb], without 1/2pi and such that Bp= grad psi  /R/2/pi; Time-dependent; Vector (npoints)
theta	vecflt.type (9.5.1.2.9)	Poloidal angle location [rad]; Time-dependent; Vector (npoints). PRECISE THE DEFINITION OF THE POLOIDAL ANGLE, SEE WAVES/COHERENTWAVE(:)/GRID_2D.

Type of: beamtracing:position (1572)

### 9.5.1.3.435 waves\_rtwavevector

Ray/beam wave vector

member	type	description
kr	vecflt.type (9.5.1.2.9)	Wave vector in the major radius direction [m <sup>-1</sup> ], Vector (npoints). Time-dependent
kz	vecflt.type (9.5.1.2.9)	Wave vector in the vertical direction [m <sup>-1</sup> ], Vector (npoints). Time-dependent
kphi	vecflt.type (9.5.1.2.9)	Wave vector in the toroidal direction [m <sup>-1</sup> ], Vector (npoints). Time-dependent
npar	vecflt.type (9.5.1.2.9)	Parallel refractive index, Vector (npoints). Time-dependent
nperp	vecflt.type (9.5.1.2.9)	Perpendicular refractive index, Vector (npoints). Time-dependent
ntor	vecflt.type (9.5.1.2.9)	Toroidal wave number, Vector (npoints/1). If var_ntor=0, ntor is constant along the ray path and the last dimension is of size 1 in order to avoid useless repetition of ntor constant value. Time-dependent
var_ntor	integer (9.5.1.1.2)	Flag telling whether ntor is constant along the ray path (0) or varying (1). Integer

Type of: beamtracing:wavevector (1572)

### 9.5.1.3.436 weighted\_markers

Array of NMARK weighted markers in NDIM dimensions

member	type	description
variable_ids(:)	identifier (9.5.1.3.214)	Integer identification of the variables stored in the coord matrix. Vector(NDIM)
coord	matflt.type (9.5.1.2.7)	Coordinates of the markers. The coordinates used is specified in variable_ids. Time-dependent; Float(NMARK,NDIM)
weight	vecflt.type (9.5.1.2.9)	Weight of the marker; number of real particles represented by the marker. Time-dependent; Float(NMARK)

Type of: dist\_func:markers (1644) I distsource\_source:markers (1670)

### 9.5.1.3.437 whatref

Structure defining a database entry and the CPO occurrence

member	type	description
user	string (9.5.1.1.3)	Name of the user if private data, public if public ITM database.
machine	string (9.5.1.1.3)	Name of the device
shot	integer (9.5.1.1.2)	Shot number
run	integer (9.5.1.1.2)	Run number
occurrence	integer (9.5.1.1.2)	Occurrence number of the CPO in the reference entry

Type of: datainfo:whatref (1635)

### 9.5.1.3.438 width

Angular width of each in the poloidal and toroidal direction;

member	type	description
dtheta	vecflt.type (9.5.1.2.9)	Angular poloidal width of holes; Vector (n_holes)
phi	vecflt.type (9.5.1.2.9)	Angular toroidal width of holes; Vector (n_holes)

Type of: holes:width (1727)

### 9.5.1.3.439 xpts

Position of the X-point(s)

member	type	description
position	rz1D (9.5.1.3.325)	Position of the X-point(s); Time-dependent; Vector (nmeas)
source	string (9.5.1.1.3)	Description or path to the source signal (diagnostic or genprof, from which to read all info on the signal), e.g. 'magdiag/bpol_probes/measure/value'. String
weight	vecflt.type (9.5.1.2.9)	weight given to the measurement ( $\zeta=0$ ); -1 if exact data; Time-dependent; Vector (nmeas)
sigma	vecflt.type (9.5.1.2.9)	standard deviation of the measurement; Time-dependent; Vector (nmeas)
calculated	vecflt.type (9.5.1.2.9)	Signal as recalculated by the equilibrium code; Time-dependent; Vector (nmeas)
chi2	vecflt.type (9.5.1.2.9)	chi <sup>2</sup> of (calculated-measured); Time-dependent; Vector (nmeas)

Type of: eqconstraint:xpts (1688) itmtypes <sup>181</sup>

## 9.5.2 CPO Instances

Generated from the ITM data structure schemas.

### 9.5.2.1 Fortran

#### 9.5.2.1.1 amns

datainfo (1517)	amns%datainfo (datainfo) (9.5.1.3.121)
dataproducer (1635)	amns%datainfo%dataproducer (string) (9.5.1.1.3)
putdate (1635)	amns%datainfo%putdate (string) (9.5.1.1.3)
source (1635)	amns%datainfo%source (string) (9.5.1.1.3)
comment (1635)	amns%datainfo%comment (string) (9.5.1.1.3)
cocos (1635)	amns%datainfo%cocos (integer) (9.5.1.1.2)
id (1635)	amns%datainfo%id (integer) (9.5.1.1.2)
isref (1635)	amns%datainfo%isref (integer) (9.5.1.1.2)
whatref (1635)	amns%datainfo%whatref (whatref) (9.5.1.3.437)
user (1951)	amns%datainfo%whatref%user (string) (9.5.1.1.3)
machine (1951)	amns%datainfo%whatref%machine (string) (9.5.1.1.3)
shot (1951)	amns%datainfo%whatref%shot (integer) (9.5.1.1.2)
run (1951)	amns%datainfo%whatref%run (integer) (9.5.1.1.2)
occurrence (1951)	amns%datainfo%whatref%occurrence (integer) (9.5.1.1.2)
putinfo (1635)	amns%datainfo%putinfo (putinfo) (9.5.1.3.290)
putmethod (1804)	amns%datainfo%putinfo%putmethod (string) (9.5.1.1.3)
putaccess (1804)	amns%datainfo%putinfo%putaccess (string) (9.5.1.1.3)

<sup>181</sup>[https://www.efda-itm.eu/ITM/html/itmtypes\\_\\_4.10a.3.html](https://www.efda-itm.eu/ITM/html/itmtypes__4.10a.3.html)

putlocation (1804)	amns%datainfo%putinfo%putlocation (string) (9.5.1.1.3)
rights (1804)	amns%datainfo%putinfo%rights (string) (9.5.1.1.3)
version (1517)	amns%version (string) (9.5.1.1.3)
source (1517)	amns%source (string) (9.5.1.1.3)
zn (1517)	amns%zn (integer) (9.5.1.1.2)
amn (1517)	amns%amn (float) (9.5.1.1.1)
zion (1517)	amns%zion (vecint_type) (9.5.1.2.10)
state_label (1517)	amns%state_label (vecstring_type) (9.5.1.2.11)
bundled (1517)	amns%bundled (integer) (9.5.1.1.2)
proc_label (1517)	amns%proc_label (vecstring_type) (9.5.1.2.11)
tables (1517)	amns%tables(:) (tables) (9.5.1.3.390)
ndim (1904)	amns%tables(:)%ndim (integer) (9.5.1.1.2)
coord_index (1904)	amns%tables(:)%coord_index (integer) (9.5.1.1.2)
result_label (1904)	amns%tables(:)%result_label (string) (9.5.1.1.3)
result_unit (1904)	amns%tables(:)%result_unit (string) (9.5.1.1.3)
result_trans (1904)	amns%tables(:)%result_trans (integer) (9.5.1.1.2)
table (1904)	amns%tables(:)%table(:) (table) (9.5.1.3.389)
table_0d (1903)	amns%tables(:)%table(:)%table_0d (float) (9.5.1.1.1)
table_1d (1903)	amns%tables(:)%table(:)%table_1d (vecflt_type) (9.5.1.2.9)
table_2d (1903)	amns%tables(:)%table(:)%table_2d (matflt_type) (9.5.1.2.7)
table_3d (1903)	amns%tables(:)%table(:)%table_3d (array3dffit_type) (9.5.1.2.1)
table_4d (1903)	amns%tables(:)%table(:)%table_4d (array4dffit_type) (9.5.1.2.3)
table_5d (1903)	amns%tables(:)%table(:)%table_5d (array5dffit_type) (9.5.1.2.4)
table_6d (1903)	amns%tables(:)%table(:)%table_6d (array6dffit_type) (9.5.1.2.5)
data_source (1904)	amns%tables(:)%data_source (string) (9.5.1.1.3)
data_provide (1904)	amns%tables(:)%data_provide (string) (9.5.1.1.3)
data_citation (1904)	amns%tables(:)%data_citation (string) (9.5.1.1.3)
tables_coord (1517)	amns%tables_coord(:) (tables_coord) (9.5.1.3.391)
coords (1905)	amns%tables_coord(:)%coords(:) (coords) (9.5.1.3.92)
coord (1606)	amns%tables_coord(:)%coords(:)%coord (vecflt_type) (9.5.1.2.9)
coord_label (1606)	amns%tables_coord(:)%coords(:)%coord_label (vecstring_type) (9.5.1.2.11)
extrap_type (1606)	amns%tables_coord(:)%coords(:)%extrap_type (vecint_type) (9.5.1.2.10)
interp_type (1606)	amns%tables_coord(:)%coords(:)%interp_type (integer) (9.5.1.1.2)
label (1606)	amns%tables_coord(:)%coords(:)%label (string) (9.5.1.1.3)
unit (1606)	amns%tables_coord(:)%coords(:)%unit (string) (9.5.1.1.3)
transform (1606)	amns%tables_coord(:)%coords(:)%transform (integer) (9.5.1.1.2)
spacing (1606)	amns%tables_coord(:)%coords(:)%spacing (integer) (9.5.1.1.2)
version_ind (1517)	amns%version_ind(:) (version_ind) (9.5.1.3.416)
description (1930)	amns%version_ind(:)%description (vecstring_type) (9.5.1.2.11)
releasedate (1930)	amns%version_ind(:)%releasedate (string) (9.5.1.1.3)
data_release (1930)	amns%version_ind(:)%data_release(:) (data_release) (9.5.1.3.120)
shot (1634)	amns%version_ind(:)%data_release(:)%shot (integer) (9.5.1.1.2)
run (1634)	amns%version_ind(:)%data_release(:)%run (integer) (9.5.1.1.2)
description (1634)	amns%version_ind(:)%data_release(:)%description (vecstring_type) (9.5.1.2.11)

### 9.5.2.1.2 antennas

datainfo (1518)	antennas%datainfo (datainfo) (9.5.1.3.121)
dataprovider (1635)	antennas%datainfo%dataprovider (string) (9.5.1.1.3)
putdate (1635)	antennas%datainfo%putdate (string) (9.5.1.1.3)
source (1635)	antennas%datainfo%source (string) (9.5.1.1.3)
comment (1635)	antennas%datainfo%comment (string) (9.5.1.1.3)
cocos (1635)	antennas%datainfo%cocos (integer) (9.5.1.1.2)
id (1635)	antennas%datainfo%id (integer) (9.5.1.1.2)
isref (1635)	antennas%datainfo%isref (integer) (9.5.1.1.2)
whatref (1635)	antennas%datainfo%whatref (whatref) (9.5.1.3.437)
user (1951)	antennas%datainfo%whatref%user (string) (9.5.1.1.3)
machine (1951)	antennas%datainfo%whatref%machine (string) (9.5.1.1.3)
shot (1951)	antennas%datainfo%whatref%shot (integer) (9.5.1.1.2)
run (1951)	antennas%datainfo%whatref%run (integer) (9.5.1.1.2)
occurrence (1951)	antennas%datainfo%whatref%occurrence (integer) (9.5.1.1.2)

putinfo (1635)	antennas%datainfo%putinfo (putinfo) (9.5.1.3.290)
putmethod (1804)	antennas%datainfo%putinfo%putmethod (string) (9.5.1.1.3)
putaccess (1804)	antennas%datainfo%putinfo%putaccess (string) (9.5.1.1.3)
putlocation (1804)	antennas%datainfo%putinfo%putlocation (string) (9.5.1.1.3)
rights (1804)	antennas%datainfo%putinfo%rights (string) (9.5.1.1.3)
antenna_ec (1518)	antennas%antenna_ec(:) (antenna_ec) (9.5.1.3.50)
name (1564)	antennas%antenna_ec(:)%name (string) (9.5.1.1.3)
frequency (1564)	antennas%antenna_ec(:)%frequency (float) (9.5.1.1.1)
power (1564)	antennas%antenna_ec(:)%power (exp0D) (9.5.1.3.180)
value (1694)	antennas%antenna_ec(:)%power%value (float) (9.5.1.1.1)
abserror (1694)	antennas%antenna_ec(:)%power%abserror (float) (9.5.1.1.1)
releror (1694)	antennas%antenna_ec(:)%power%releror (float) (9.5.1.1.1)
mode (1564)	antennas%antenna_ec(:)%mode (integer) (9.5.1.1.2)
position (1564)	antennas%antenna_ec(:)%position (rzphi0D) (9.5.1.3.330)
r (1844)	antennas%antenna_ec(:)%position%r (float) (9.5.1.1.1)
z (1844)	antennas%antenna_ec(:)%position%z (float) (9.5.1.1.1)
phi (1844)	antennas%antenna_ec(:)%position%phi (float) (9.5.1.1.1)
launchangles (1564)	antennas%antenna_ec(:)%launchangles (launchangles) (9.5.1.3.224)
alpha (1738)	antennas%antenna_ec(:)%launchangles%alpha (float) (9.5.1.1.1)
beta (1738)	antennas%antenna_ec(:)%launchangles%beta (float) (9.5.1.1.1)
beam (1564)	antennas%antenna_ec(:)%beam (rfbeam) (9.5.1.3.323)
spot (1837)	antennas%antenna_ec(:)%beam%spot (spot) (9.5.1.3.380)
size (1894)	antennas%antenna_ec(:)%beam%spot%size (vecflt_type) (9.5.1.2.9)
angle (1894)	antennas%antenna_ec(:)%beam%spot%angle (float) (9.5.1.1.1)
phaseellipse (1837)	antennas%antenna_ec(:)%beam%phaseellipse (phaseellipse) (9.5.1.3.279)
invcurvrad (1793)	antennas%antenna_ec(:)%beam%phaseellipse%invcurvrad (vecflt_type) (9.5.1.2.9)
angle (1793)	antennas%antenna_ec(:)%beam%phaseellipse%angle (float) (9.5.1.1.1)
codeparam (1564)	antennas%antenna_ec(:)%codeparam (codeparam) (9.5.1.3.66)
codename (1580)	antennas%antenna_ec(:)%codeparam%codename (string) (9.5.1.1.3)
codeversion (1580)	antennas%antenna_ec(:)%codeparam%codeversion (string) (9.5.1.1.3)
parameters (1580)	antennas%antenna_ec(:)%codeparam%parameters (string) (9.5.1.1.3)
output_diag (1580)	antennas%antenna_ec(:)%codeparam%output_diag (string) (9.5.1.1.3)
output_flag (1580)	antennas%antenna_ec(:)%codeparam%output_flag (integer) (9.5.1.1.2)
antenna_ic (1518)	antennas%antenna_ic(:) (antenna_ic) (9.5.1.3.51)
name (1565)	antennas%antenna_ic(:)%name (string) (9.5.1.1.3)
frequency (1565)	antennas%antenna_ic(:)%frequency (exp0D) (9.5.1.3.180)
value (1694)	antennas%antenna_ic(:)%frequency%value (float) (9.5.1.1.1)
abserror (1694)	antennas%antenna_ic(:)%frequency%abserror (float) (9.5.1.1.1)
releror (1694)	antennas%antenna_ic(:)%frequency%releror (float) (9.5.1.1.1)
power (1565)	antennas%antenna_ic(:)%power (exp0D) (9.5.1.3.180)
value (1694)	antennas%antenna_ic(:)%power%value (float) (9.5.1.1.1)
abserror (1694)	antennas%antenna_ic(:)%power%abserror (float) (9.5.1.1.1)
releror (1694)	antennas%antenna_ic(:)%power%releror (float) (9.5.1.1.1)
setup (1565)	antennas%antenna_ic(:)%setup (antennaic_setup) (9.5.1.3.53)
straps (1567)	antennas%antenna_ic(:)%setup%straps(:) (straps) (9.5.1.3.385)
phase (1899)	antennas%antenna_ic(:)%setup%straps(:)%phase (exp0D) (9.5.1.3.180)
value (1694)	antennas%antenna_ic(:)%setup%straps(:)%phase%value (float) (9.5.1.1.1)
abserror (1694)	antennas%antenna_ic(:)%setup%straps(:)%phase%abserror (float) (9.5.1.1.1)
releror (1694)	antennas%antenna_ic(:)%setup%straps(:)%phase%releror (float) (9.5.1.1.1)
phi_centre (1899)	antennas%antenna_ic(:)%setup%straps(:)%phi_centre (float) (9.5.1.1.1)
width (1899)	antennas%antenna_ic(:)%setup%straps(:)%width (float) (9.5.1.1.1)
dist2wall (1899)	antennas%antenna_ic(:)%setup%straps(:)%dist2wall (float) (9.5.1.1.1)
coord_strap (1899)	antennas%antenna_ic(:)%setup%straps(:)%coord_strap (rz1D) (9.5.1.3.325)
r (1839)	antennas%antenna_ic(:)%setup%straps(:)%coord_strap%r (vecflt_type) (9.5.1.2.9)
z (1839)	antennas%antenna_ic(:)%setup%straps(:)%coord_strap%z (vecflt_type) (9.5.1.2.9)
codeparam (1565)	antennas%antenna_ic(:)%codeparam (codeparam) (9.5.1.3.66)
codename (1580)	antennas%antenna_ic(:)%codeparam%codename (string) (9.5.1.1.3)
codeversion (1580)	antennas%antenna_ic(:)%codeparam%codeversion (string) (9.5.1.1.3)
parameters (1580)	antennas%antenna_ic(:)%codeparam%parameters (string) (9.5.1.1.3)
output_diag (1580)	antennas%antenna_ic(:)%codeparam%output_diag (string) (9.5.1.1.3)
output_flag (1580)	antennas%antenna_ic(:)%codeparam%output_flag (integer) (9.5.1.1.2)

antenna.lh (1518)	antennas%antenna.lh(:) (antenna.lh) (9.5.1.3.52)
name (1566)	antennas%antenna.lh(:)%name (string) (9.5.1.1.3)
frequency (1566)	antennas%antenna.lh(:)%frequency (float) (9.5.1.1.1)
power (1566)	antennas%antenna.lh(:)%power (exp0D) (9.5.1.3.180)
value (1694)	antennas%antenna.lh(:)%power%value (float) (9.5.1.1.1)
abserror (1694)	antennas%antenna.lh(:)%power%abserror (float) (9.5.1.1.1)
releror (1694)	antennas%antenna.lh(:)%power%releror (float) (9.5.1.1.1)
n_par (1566)	antennas%antenna.lh(:)%n_par (float) (9.5.1.1.1)
position (1566)	antennas%antenna.lh(:)%position (rzphi0D) (9.5.1.3.330)
r (1844)	antennas%antenna.lh(:)%position%r (float) (9.5.1.1.1)
z (1844)	antennas%antenna.lh(:)%position%z (float) (9.5.1.1.1)
phi (1844)	antennas%antenna.lh(:)%position%phi (float) (9.5.1.1.1)
setup (1566)	antennas%antenna.lh(:)%setup (antennalh_setup) (9.5.1.3.54)
modules (1568)	antennas%antenna.lh(:)%setup%modules (modules) (9.5.1.3.246)
nma_theta (1760)	antennas%antenna.lh(:)%setup%modules%nma_theta (integer) (9.5.1.1.2)
nma_phi (1760)	antennas%antenna.lh(:)%setup%modules%nma_phi (integer) (9.5.1.1.2)
ima_theta (1760)	antennas%antenna.lh(:)%setup%modules%ima_theta (vecint.type) (9.5.1.2.10)
ima_phi (1760)	antennas%antenna.lh(:)%setup%modules%ima_phi (vecint.type) (9.5.1.2.10)
sm_theta (1760)	antennas%antenna.lh(:)%setup%modules%sm_theta (float) (9.5.1.1.1)
amplitude (1760)	antennas%antenna.lh(:)%setup%modules%amplitude (exp1D) (9.5.1.3.181)
value (1695)	antennas%antenna.lh(:)%setup%modules%amplitude%value (vecflt.type) (9.5.1.2.9)
abserror (1695)	antennas%antenna.lh(:)%setup%modules%amplitude%abserror (vecflt.type) (9.5.1.2.9)
releror (1695)	antennas%antenna.lh(:)%setup%modules%amplitude%releror (vecflt.type) (9.5.1.2.9)
phase (1760)	antennas%antenna.lh(:)%setup%modules%phase (exp1D) (9.5.1.3.181)
value (1695)	antennas%antenna.lh(:)%setup%modules%phase%value (vecflt.type) (9.5.1.2.9)
abserror (1695)	antennas%antenna.lh(:)%setup%modules%phase%abserror (vecflt.type) (9.5.1.2.9)
releror (1695)	antennas%antenna.lh(:)%setup%modules%phase%releror (vecflt.type) (9.5.1.2.9)
waveguides (1760)	antennas%antenna.lh(:)%setup%modules%waveguides (waveguides) (9.5.1.3.428)
nwm_theta (1942)	antennas%antenna.lh(:)%setup%modules%waveguides%nwm_theta (integer) (9.5.1.1.2)
nwm_phi (1942)	antennas%antenna.lh(:)%setup%modules%waveguides%nwm_phi (integer) (9.5.1.1.2)
mask (1942)	antennas%antenna.lh(:)%setup%modules%waveguides%mask (vecint.type) (9.5.1.2.10)
npwbm_phi (1942)	antennas%antenna.lh(:)%setup%modules%waveguides%npwbm_phi (integer) (9.5.1.1.2)
npwe_phi (1942)	antennas%antenna.lh(:)%setup%modules%waveguides%npwe_phi (integer) (9.5.1.1.2)
sw_theta (1942)	antennas%antenna.lh(:)%setup%modules%waveguides%sw_theta (float) (9.5.1.1.1)
hw_theta (1942)	antennas%antenna.lh(:)%setup%modules%waveguides%hw_theta (float) (9.5.1.1.1)
bwa (1942)	antennas%antenna.lh(:)%setup%modules%waveguides%bwa (float) (9.5.1.1.1)
biwp (1942)	antennas%antenna.lh(:)%setup%modules%waveguides%biwp (float) (9.5.1.1.1)
bewp (1942)	antennas%antenna.lh(:)%setup%modules%waveguides%bewp (float) (9.5.1.1.1)
e_phi (1942)	antennas%antenna.lh(:)%setup%modules%waveguides%e_phi (vecflt.type) (9.5.1.2.9)
scl (1942)	antennas%antenna.lh(:)%setup%modules%waveguides%scl (vecflt.type) (9.5.1.2.9)
plasmaedge (1566)	antennas%antenna.lh(:)%plasmaedge (plasmaedge) (9.5.1.3.282)
npoints (1796)	antennas%antenna.lh(:)%plasmaedge%npoints (integer) (9.5.1.1.2)
distance (1796)	antennas%antenna.lh(:)%plasmaedge%distance (vecflt.type) (9.5.1.2.9)
density (1796)	antennas%antenna.lh(:)%plasmaedge%density (vecflt.type) (9.5.1.2.9)
beam (1566)	antennas%antenna.lh(:)%beam (rfbeam) (9.5.1.3.323)
spot (1837)	antennas%antenna.lh(:)%beam%spot (spot) (9.5.1.3.380)
size (1894)	antennas%antenna.lh(:)%beam%spot%size (vecflt.type) (9.5.1.2.9)
angle (1894)	antennas%antenna.lh(:)%beam%spot%angle (float) (9.5.1.1.1)
phaseellipse (1837)	antennas%antenna.lh(:)%beam%phaseellipse (phaseellipse) (9.5.1.3.279)
invcurvrad (1793)	antennas%antenna.lh(:)%beam%phaseellipse%invcurvrad (vecflt.type) (9.5.1.2.9)
angle (1793)	antennas%antenna.lh(:)%beam%phaseellipse%angle (float) (9.5.1.1.1)
codeparam (1566)	antennas%antenna.lh(:)%codeparam (codeparam) (9.5.1.3.66)
codename (1580)	antennas%antenna.lh(:)%codeparam%codename (string) (9.5.1.1.3)
codeversion (1580)	antennas%antenna.lh(:)%codeparam%codeversion (string) (9.5.1.1.3)
parameters (1580)	antennas%antenna.lh(:)%codeparam%parameters (string) (9.5.1.1.3)
output.diag (1580)	antennas%antenna.lh(:)%codeparam%output.diag (string) (9.5.1.1.3)
output.flag (1580)	antennas%antenna.lh(:)%codeparam%output.flag (integer) (9.5.1.1.2)
codeparam (1518)	antennas%codeparam (codeparam) (9.5.1.3.66)
codename (1580)	antennas%codeparam%codename (string) (9.5.1.1.3)
codeversion (1580)	antennas%codeparam%codeversion (string) (9.5.1.1.3)
parameters (1580)	antennas%codeparam%parameters (string) (9.5.1.1.3)

output_diag (1580)	antennas%codeparam%output_diag (string) (9.5.1.1.3)
output_flag (1580)	antennas%codeparam%output_flag (integer) (9.5.1.1.2)
time (1518)	antennas%time (float) (9.5.1.1.1)

### 9.5.2.1.3 compositionc

datainfo (1519)	compositionc%datainfo (datainfo) (9.5.1.3.121)
dataprovider (1635)	compositionc%datainfo%dataprovider (string) (9.5.1.1.3)
putdate (1635)	compositionc%datainfo%putdate (string) (9.5.1.1.3)
source (1635)	compositionc%datainfo%source (string) (9.5.1.1.3)
comment (1635)	compositionc%datainfo%comment (string) (9.5.1.1.3)
cocos (1635)	compositionc%datainfo%cocos (integer) (9.5.1.1.2)
id (1635)	compositionc%datainfo%id (integer) (9.5.1.1.2)
isref (1635)	compositionc%datainfo%isref (integer) (9.5.1.1.2)
whatref (1635)	compositionc%datainfo%whatref (whatref) (9.5.1.3.437)
user (1951)	compositionc%datainfo%whatref%user (string) (9.5.1.1.3)
machine (1951)	compositionc%datainfo%whatref%machine (string) (9.5.1.1.3)
shot (1951)	compositionc%datainfo%whatref%shot (integer) (9.5.1.1.2)
run (1951)	compositionc%datainfo%whatref%run (integer) (9.5.1.1.2)
occurrence (1951)	compositionc%datainfo%whatref%occurrence (integer) (9.5.1.1.2)
putinfo (1635)	compositionc%datainfo%putinfo (putinfo) (9.5.1.3.290)
putmethod (1804)	compositionc%datainfo%putinfo%putmethod (string) (9.5.1.1.3)
putaccess (1804)	compositionc%datainfo%putinfo%putaccess (string) (9.5.1.1.3)
putlocation (1804)	compositionc%datainfo%putinfo%putlocation (string) (9.5.1.1.3)
rights (1804)	compositionc%datainfo%putinfo%rights (string) (9.5.1.1.3)
compositions (1519)	compositionc%compositions (compositions.type) (9.5.1.3.88)
nuclei (1602)	compositionc%compositions%nuclei(:) (nuclei) (9.5.1.3.259)
zn (1773)	compositionc%compositions%nuclei(:)%zn (float) (9.5.1.1.1)
amn (1773)	compositionc%compositions%nuclei(:)%amn (float) (9.5.1.1.1)
label (1773)	compositionc%compositions%nuclei(:)%label (string) (9.5.1.1.3)
ions (1602)	compositionc%compositions%ions(:) (ions) (9.5.1.3.219)
nucindex (1733)	compositionc%compositions%ions(:)%nucindex (integer) (9.5.1.1.2)
zion (1733)	compositionc%compositions%ions(:)%zion (float) (9.5.1.1.1)
imp_flag (1733)	compositionc%compositions%ions(:)%imp_flag (integer) (9.5.1.1.2)
label (1733)	compositionc%compositions%ions(:)%label (string) (9.5.1.1.3)
impurities (1602)	compositionc%compositions%impurities(:) (impurities) (9.5.1.3.216)
nucindex (1730)	compositionc%compositions%impurities(:)%nucindex (integer) (9.5.1.1.2)
i_ion (1730)	compositionc%compositions%impurities(:)%i_ion (integer) (9.5.1.1.2)
nzimp (1730)	compositionc%compositions%impurities(:)%nzimp (integer) (9.5.1.1.2)
zmin (1730)	compositionc%compositions%impurities(:)%zmin (vecflt.type) (9.5.1.2.9)
zmax (1730)	compositionc%compositions%impurities(:)%zmax (vecflt.type) (9.5.1.2.9)
label (1730)	compositionc%compositions%impurities(:)%label (vecstring.type) (9.5.1.2.11)
neutralscomp (1602)	compositionc%compositions%neutralscomp(:) (composition_neutralscomp) (9.5.1.3.87)
neutcomp (1601)	compositionc%compositions%neutralscomp(:)%neutcomp(:) (composition_neutrals_neutcomp) (9.5.1.3.86)
nucindex (1600)	compositionc%compositions%neutralscomp(:)%neutcomp(:)%nucindex (integer) (9.5.1.1.2)
multiplicity (1600)	compositionc%compositions%neutralscomp(:)%neutcomp(:)%multiplicity (integer) (9.5.1.1.2)
type (1601)	compositionc%compositions%neutralscomp(:)%type(:) (identifier) (9.5.1.3.214)
id (1728)	compositionc%compositions%neutralscomp(:)%type(:)%id (string) (9.5.1.1.3)
flag (1728)	compositionc%compositions%neutralscomp(:)%type(:)%flag (integer) (9.5.1.1.2)
description (1728)	compositionc%compositions%neutralscomp(:)%type(:)%description (string) (9.5.1.1.3)
label (1601)	compositionc%compositions%neutralscomp(:)%label (string) (9.5.1.1.3)
edgespecies (1602)	compositionc%compositions%edgespecies(:) (edgespecies) (9.5.1.3.170)
nucindex (1684)	compositionc%compositions%edgespecies(:)%nucindex (integer) (9.5.1.1.2)
zmin (1684)	compositionc%compositions%edgespecies(:)%zmin (float) (9.5.1.1.1)
zmax (1684)	compositionc%compositions%edgespecies(:)%zmax (float) (9.5.1.1.1)
label (1684)	compositionc%compositions%edgespecies(:)%label (string) (9.5.1.1.3)
signature (1602)	compositionc%compositions%signature (identifier) (9.5.1.3.214)
id (1728)	compositionc%compositions%signature%id (string) (9.5.1.1.3)
flag (1728)	compositionc%compositions%signature%flag (integer) (9.5.1.1.2)
description (1728)	compositionc%compositions%signature%description (string) (9.5.1.1.3)

## 9.5.2.1.4 coredelta

datainfo (1520)	coredelta%datainfo (datainfo) (9.5.1.3.121)
dataprovider (1635)	coredelta%datainfo%dataprovider (string) (9.5.1.1.3)
putdate (1635)	coredelta%datainfo%putdate (string) (9.5.1.1.3)
source (1635)	coredelta%datainfo%source (string) (9.5.1.1.3)
comment (1635)	coredelta%datainfo%comment (string) (9.5.1.1.3)
cocos (1635)	coredelta%datainfo%cocos (integer) (9.5.1.1.2)
id (1635)	coredelta%datainfo%id (integer) (9.5.1.1.2)
isref (1635)	coredelta%datainfo%isref (integer) (9.5.1.1.2)
whatref (1635)	coredelta%datainfo%whatref (whatref) (9.5.1.3.437)
user (1951)	coredelta%datainfo%whatref%user (string) (9.5.1.1.3)
machine (1951)	coredelta%datainfo%whatref%machine (string) (9.5.1.1.3)
shot (1951)	coredelta%datainfo%whatref%shot (integer) (9.5.1.1.2)
run (1951)	coredelta%datainfo%whatref%run (integer) (9.5.1.1.2)
occurrence (1951)	coredelta%datainfo%whatref%occurrence (integer) (9.5.1.1.2)
putinfo (1635)	coredelta%datainfo%putinfo (putinfo) (9.5.1.3.290)
putmethod (1804)	coredelta%datainfo%putinfo%putmethod (string) (9.5.1.1.3)
putaccess (1804)	coredelta%datainfo%putinfo%putaccess (string) (9.5.1.1.3)
putlocation (1804)	coredelta%datainfo%putinfo%putlocation (string) (9.5.1.1.3)
rights (1804)	coredelta%datainfo%putinfo%rights (string) (9.5.1.1.3)
composition (1520)	coredelta%composition (composition) (9.5.1.3.84)
amn (1598)	coredelta%composition%amn (vecflt_type) (9.5.1.2.9)
zn (1598)	coredelta%composition%zn (vecflt_type) (9.5.1.2.9)
zion (1598)	coredelta%composition%zion (vecflt_type) (9.5.1.2.9)
imp_flag (1598)	coredelta%composition%imp_flag (vecint_type) (9.5.1.2.10)
label (1598)	coredelta%composition%label (vecstring_type) (9.5.1.2.11)
desc_impur (1520)	coredelta%desc_impur (desc_impur) (9.5.1.3.124)
amn (1638)	coredelta%desc_impur%amn (vecflt_type) (9.5.1.2.9)
zn (1638)	coredelta%desc_impur%zn (vecint_type) (9.5.1.2.10)
i_ion (1638)	coredelta%desc_impur%i_ion (vecint_type) (9.5.1.2.10)
nzimp (1638)	coredelta%desc_impur%nzimp (vecint_type) (9.5.1.2.10)
zmin (1638)	coredelta%desc_impur%zmin (matint_type) (9.5.1.2.8)
zmax (1638)	coredelta%desc_impur%zmax (matint_type) (9.5.1.2.8)
label (1638)	coredelta%desc_impur%label (vecstring_type) (9.5.1.2.11)
compositions (1520)	coredelta%compositions (compositions_type) (9.5.1.3.88)
nuclei (1602)	coredelta%compositions%nuclei(:) (nuclei) (9.5.1.3.259)
zn (1773)	coredelta%compositions%nuclei(:)%zn (float) (9.5.1.1.1)
amn (1773)	coredelta%compositions%nuclei(:)%amn (float) (9.5.1.1.1)
label (1773)	coredelta%compositions%nuclei(:)%label (string) (9.5.1.1.3)
ions (1602)	coredelta%compositions%ions(:) (ions) (9.5.1.3.219)
nucindex (1733)	coredelta%compositions%ions(:)%nucindex (integer) (9.5.1.1.2)
zion (1733)	coredelta%compositions%ions(:)%zion (float) (9.5.1.1.1)
imp_flag (1733)	coredelta%compositions%ions(:)%imp_flag (integer) (9.5.1.1.2)
label (1733)	coredelta%compositions%ions(:)%label (string) (9.5.1.1.3)
impurities (1602)	coredelta%compositions%impurities(:) (impurities) (9.5.1.3.216)
nucindex (1730)	coredelta%compositions%impurities(:)%nucindex (integer) (9.5.1.1.2)
i_ion (1730)	coredelta%compositions%impurities(:)%i_ion (integer) (9.5.1.1.2)
nzimp (1730)	coredelta%compositions%impurities(:)%nzimp (integer) (9.5.1.1.2)
zmin (1730)	coredelta%compositions%impurities(:)%zmin (vecflt_type) (9.5.1.2.9)
zmax (1730)	coredelta%compositions%impurities(:)%zmax (vecflt_type) (9.5.1.2.9)
label (1730)	coredelta%compositions%impurities(:)%label (vecstring_type) (9.5.1.2.11)
neutralscomp (1602)	coredelta%compositions%neutralscomp(:) (composition_neutralscomp) (9.5.1.3.87)
neutcomp (1601)	coredelta%compositions%neutralscomp(:)%neutcomp(:) (composition_neutrals_neutcomp) (9.5.1.3.86)
nucindex (1600)	coredelta%compositions%neutralscomp(:)%neutcomp(:)%nucindex (integer) (9.5.1.1.2)
multiplicity (1600)	coredelta%compositions%neutralscomp(:)%neutcomp(:)%multiplicity (integer) (9.5.1.1.2)
type (1601)	coredelta%compositions%neutralscomp(:)%type(:) (identifier) (9.5.1.3.214)
id (1728)	coredelta%compositions%neutralscomp(:)%type(:)%id (string) (9.5.1.1.3)
flag (1728)	coredelta%compositions%neutralscomp(:)%type(:)%flag (integer) (9.5.1.1.2)
description (1728)	coredelta%compositions%neutralscomp(:)%type(:)%description (string) (9.5.1.1.3)
label (1601)	coredelta%compositions%neutralscomp(:)%label (string) (9.5.1.1.3)



edgespecies (1602)	coredelta%compositions%edgespecies(:) (edgespecies) (9.5.1.3.170)
nucindex (1684)	coredelta%compositions%edgespecies(:)%nucindex (integer) (9.5.1.1.2)
zmin (1684)	coredelta%compositions%edgespecies(:)%zmin (float) (9.5.1.1.1)
zmax (1684)	coredelta%compositions%edgespecies(:)%zmax (float) (9.5.1.1.1)
label (1684)	coredelta%compositions%edgespecies(:)%label (string) (9.5.1.1.3)
signature (1602)	coredelta%compositions%signature (identifier) (9.5.1.3.214)
id (1728)	coredelta%compositions%signature%id (string) (9.5.1.1.3)
flag (1728)	coredelta%compositions%signature%flag (integer) (9.5.1.1.2)
description (1728)	coredelta%compositions%signature%description (string) (9.5.1.1.3)
values (1520)	coredelta%values(:) (coredelta_values) (9.5.1.3.93)
deltaid (1607)	coredelta%values(:)%deltaid (identifier) (9.5.1.3.214)
id (1728)	coredelta%values(:)%deltaid%id (string) (9.5.1.1.3)
flag (1728)	coredelta%values(:)%deltaid%flag (integer) (9.5.1.1.2)
description (1728)	coredelta%values(:)%deltaid%description (string) (9.5.1.1.3)
rho.tor (1607)	coredelta%values(:)%rho.tor (vecflt.type) (9.5.1.2.9)
rho.tor_norm (1607)	coredelta%values(:)%rho.tor_norm (vecflt.type) (9.5.1.2.9)
delta_psi (1607)	coredelta%values(:)%delta_psi (vecflt.type) (9.5.1.2.9)
delta_te (1607)	coredelta%values(:)%delta_te (vecflt.type) (9.5.1.2.9)
delta_ti (1607)	coredelta%values(:)%delta_ti (matflt.type) (9.5.1.2.7)
delta_tz (1607)	coredelta%values(:)%delta_tz (array3dflt.type) (9.5.1.2.1)
delta_ne (1607)	coredelta%values(:)%delta_ne (vecflt.type) (9.5.1.2.9)
delta_ni (1607)	coredelta%values(:)%delta_ni (matflt.type) (9.5.1.2.7)
delta_nz (1607)	coredelta%values(:)%delta_nz (array3dflt.type) (9.5.1.2.1)
delta_vtor (1607)	coredelta%values(:)%delta_vtor (matflt.type) (9.5.1.2.7)
codeparam (1607)	coredelta%values(:)%codeparam (codeparam) (9.5.1.3.66)
codename (1580)	coredelta%values(:)%codeparam%codename (string) (9.5.1.1.3)
codeversion (1580)	coredelta%values(:)%codeparam%codeversion (string) (9.5.1.1.3)
parameters (1580)	coredelta%values(:)%codeparam%parameters (string) (9.5.1.1.3)
output_diag (1580)	coredelta%values(:)%codeparam%output_diag (string) (9.5.1.1.3)
output_flag (1580)	coredelta%values(:)%codeparam%output_flag (integer) (9.5.1.1.2)
codeparam (1520)	coredelta%codeparam (codeparam) (9.5.1.3.66)
codename (1580)	coredelta%codeparam%codename (string) (9.5.1.1.3)
codeversion (1580)	coredelta%codeparam%codeversion (string) (9.5.1.1.3)
parameters (1580)	coredelta%codeparam%parameters (string) (9.5.1.1.3)
output_diag (1580)	coredelta%codeparam%output_diag (string) (9.5.1.1.3)
output_flag (1580)	coredelta%codeparam%output_flag (integer) (9.5.1.1.2)
time (1520)	coredelta%time (float) (9.5.1.1.1)

### 9.5.2.1.5 coreimpur

datainfo (1521)	coreimpur%datainfo (datainfo) (9.5.1.3.121)
dataprovider (1635)	coreimpur%datainfo%dataprovider (string) (9.5.1.1.3)
putdate (1635)	coreimpur%datainfo%putdate (string) (9.5.1.1.3)
source (1635)	coreimpur%datainfo%source (string) (9.5.1.1.3)
comment (1635)	coreimpur%datainfo%comment (string) (9.5.1.1.3)
cocos (1635)	coreimpur%datainfo%cocos (integer) (9.5.1.1.2)
id (1635)	coreimpur%datainfo%id (integer) (9.5.1.1.2)
isref (1635)	coreimpur%datainfo%isref (integer) (9.5.1.1.2)
whatref (1635)	coreimpur%datainfo%whatref (whatref) (9.5.1.3.437)
user (1951)	coreimpur%datainfo%whatref%user (string) (9.5.1.1.3)
machine (1951)	coreimpur%datainfo%whatref%machine (string) (9.5.1.1.3)
shot (1951)	coreimpur%datainfo%whatref%shot (integer) (9.5.1.1.2)
run (1951)	coreimpur%datainfo%whatref%run (integer) (9.5.1.1.2)
occurrence (1951)	coreimpur%datainfo%whatref%occurrence (integer) (9.5.1.1.2)
putinfo (1635)	coreimpur%datainfo%putinfo (putinfo) (9.5.1.3.290)
putmethod (1804)	coreimpur%datainfo%putinfo%putmethod (string) (9.5.1.1.3)
putaccess (1804)	coreimpur%datainfo%putinfo%putaccess (string) (9.5.1.1.3)
putlocation (1804)	coreimpur%datainfo%putinfo%putlocation (string) (9.5.1.1.3)
rights (1804)	coreimpur%datainfo%putinfo%rights (string) (9.5.1.1.3)
rho.tor_norm (1521)	coreimpur%rho.tor_norm (vecflt.type) (9.5.1.2.9)
rho.tor (1521)	coreimpur%rho.tor (vecflt.type) (9.5.1.2.9)



source (1521)	coreimpur%source (vecstring_type) (9.5.1.2.11)
flag (1521)	coreimpur%flag (vecint_type) (9.5.1.2.10)
desc_impur (1521)	coreimpur%desc_impur (desc_impur) (9.5.1.3.124)
amn (1638)	coreimpur%desc_impur%amn (vecflt_type) (9.5.1.2.9)
zn (1638)	coreimpur%desc_impur%zn (vecint_type) (9.5.1.2.10)
i_ion (1638)	coreimpur%desc_impur%i_ion (vecint_type) (9.5.1.2.10)
nzimp (1638)	coreimpur%desc_impur%nzimp (vecint_type) (9.5.1.2.10)
zmin (1638)	coreimpur%desc_impur%zmin (matint_type) (9.5.1.2.8)
zmax (1638)	coreimpur%desc_impur%zmax (matint_type) (9.5.1.2.8)
label (1638)	coreimpur%desc_impur%label (vecstring_type) (9.5.1.2.11)
compositions (1521)	coreimpur%compositions (compositions_type) (9.5.1.3.88)
nuclei (1602)	coreimpur%compositions%nuclei(:) (nuclei) (9.5.1.3.259)
zn (1773)	coreimpur%compositions%nuclei(:)%zn (float) (9.5.1.1.1)
amn (1773)	coreimpur%compositions%nuclei(:)%amn (float) (9.5.1.1.1)
label (1773)	coreimpur%compositions%nuclei(:)%label (string) (9.5.1.1.3)
ions (1602)	coreimpur%compositions%ions(:) (ions) (9.5.1.3.219)
nucindex (1733)	coreimpur%compositions%ions(:)%nucindex (integer) (9.5.1.1.2)
zion (1733)	coreimpur%compositions%ions(:)%zion (float) (9.5.1.1.1)
imp_flag (1733)	coreimpur%compositions%ions(:)%imp_flag (integer) (9.5.1.1.2)
label (1733)	coreimpur%compositions%ions(:)%label (string) (9.5.1.1.3)
impurities (1602)	coreimpur%compositions%impurities(:) (impurities) (9.5.1.3.216)
nucindex (1730)	coreimpur%compositions%impurities(:)%nucindex (integer) (9.5.1.1.2)
i_ion (1730)	coreimpur%compositions%impurities(:)%i_ion (integer) (9.5.1.1.2)
nzimp (1730)	coreimpur%compositions%impurities(:)%nzimp (integer) (9.5.1.1.2)
zmin (1730)	coreimpur%compositions%impurities(:)%zmin (vecflt_type) (9.5.1.2.9)
zmax (1730)	coreimpur%compositions%impurities(:)%zmax (vecflt_type) (9.5.1.2.9)
label (1730)	coreimpur%compositions%impurities(:)%label (vecstring_type) (9.5.1.2.11)
neutralscomp (1602)	coreimpur%compositions%neutralscomp(:) (composition_neutralscomp) (9.5.1.3.87)
neutcomp (1601)	coreimpur%compositions%neutralscomp(:)%neutcomp(:) (composition_neutrals_neutcomp) (9.5.1.3.86)
nucindex (1600)	coreimpur%compositions%neutralscomp(:)%neutcomp(:)%nucindex (integer) (9.5.1.1.2)
multiplicity (1600)	coreimpur%compositions%neutralscomp(:)%neutcomp(:)%multiplicity (integer) (9.5.1.1.2)
type (1601)	coreimpur%compositions%neutralscomp(:)%type(:) (identifier) (9.5.1.3.214)
id (1728)	coreimpur%compositions%neutralscomp(:)%type(:)%id (string) (9.5.1.1.3)
flag (1728)	coreimpur%compositions%neutralscomp(:)%type(:)%flag (integer) (9.5.1.1.2)
description (1728)	coreimpur%compositions%neutralscomp(:)%type(:)%description (string) (9.5.1.1.3)
label (1601)	coreimpur%compositions%neutralscomp(:)%label (string) (9.5.1.1.3)
edgespecies (1602)	coreimpur%compositions%edgespecies(:) (edgespecies) (9.5.1.3.170)
nucindex (1684)	coreimpur%compositions%edgespecies(:)%nucindex (integer) (9.5.1.1.2)
zmin (1684)	coreimpur%compositions%edgespecies(:)%zmin (float) (9.5.1.1.1)
zmax (1684)	coreimpur%compositions%edgespecies(:)%zmax (float) (9.5.1.1.1)
label (1684)	coreimpur%compositions%edgespecies(:)%label (string) (9.5.1.1.3)
signature (1602)	coreimpur%compositions%signature (identifier) (9.5.1.3.214)
id (1728)	coreimpur%compositions%signature%id (string) (9.5.1.1.3)
flag (1728)	coreimpur%compositions%signature%flag (integer) (9.5.1.1.2)
description (1728)	coreimpur%compositions%signature%description (string) (9.5.1.1.3)
atomic_data (1521)	coreimpur%atomic_data (vecstring_type) (9.5.1.2.11)
impurity (1521)	coreimpur%impurity(:) (impurity_type) (9.5.1.3.217)
z (1731)	coreimpur%impurity(:)%z (matflt_type) (9.5.1.2.7)
zsq (1731)	coreimpur%impurity(:)%zsq (matflt_type) (9.5.1.2.7)
nz (1731)	coreimpur%impurity(:)%nz (matflt_type) (9.5.1.2.7)
source_term (1731)	coreimpur%impurity(:)%source_term (sourceimp) (9.5.1.3.374)
value (1888)	coreimpur%impurity(:)%source_term%value (matflt_type) (9.5.1.2.7)
integral (1888)	coreimpur%impurity(:)%source_term%integral (matflt_type) (9.5.1.2.7)
source (1888)	coreimpur%impurity(:)%source_term%source (vecstring_type) (9.5.1.2.11)
boundary (1731)	coreimpur%impurity(:)%boundary (boundaryimp) (9.5.1.3.62)
value (1576)	coreimpur%impurity(:)%boundary%value (matflt_type) (9.5.1.2.7)
source (1576)	coreimpur%impurity(:)%boundary%source (string) (9.5.1.1.3)
type (1576)	coreimpur%impurity(:)%boundary%type (vecint_type) (9.5.1.2.10)
rho (1576)	coreimpur%impurity(:)%boundary%rho (vecflt_type) (9.5.1.2.9)
codeparam (1576)	coreimpur%impurity(:)%boundary%codeparam (codeparam) (9.5.1.3.66)
codename (1580)	coreimpur%impurity(:)%boundary%codeparam%codename (string) (9.5.1.1.3)

codeversion (1580)	coreimpur%impurity(:)%boundary%codeparam%codeversion (string) (9.5.1.1.3)
parameters (1580)	coreimpur%impurity(:)%boundary%codeparam%parameters (string) (9.5.1.1.3)
output_diag (1580)	coreimpur%impurity(:)%boundary%codeparam%output_diag (string) (9.5.1.1.3)
output_flag (1580)	coreimpur%impurity(:)%boundary%codeparam%output_flag (integer) (9.5.1.1.2)
transp_coef (1731)	coreimpur%impurity(:)%transp_coef (coretransimp) (9.5.1.3.114)
diff (1628)	coreimpur%impurity(:)%transp_coef%diff (matflt_type) (9.5.1.2.7)
vconv (1628)	coreimpur%impurity(:)%transp_coef%vconv (matflt_type) (9.5.1.2.7)
source (1628)	coreimpur%impurity(:)%transp_coef%source (vecstring_type) (9.5.1.2.11)
flux (1731)	coreimpur%impurity(:)%flux (fluximp) (9.5.1.3.188)
flux_dv (1702)	coreimpur%impurity(:)%flux%flux_dv (matflt_type) (9.5.1.2.7)
flux_interp (1702)	coreimpur%impurity(:)%flux%flux_interp (matflt_type) (9.5.1.2.7)
time_deriv (1731)	coreimpur%impurity(:)%time_deriv (matflt_type) (9.5.1.2.7)
diagnostic (1731)	coreimpur%impurity(:)%diagnostic (coreimpurediag_type) (9.5.1.3.105)
radiation (1619)	coreimpur%impurity(:)%diagnostic%radiation (coreimpurediag_radiation) (9.5.1.3.102)
line_rad (1616)	coreimpur%impurity(:)%diagnostic%radiation%line_rad (coreimpurediagprof_type) (9.5.1.3.106)
profile (1620)	coreimpur%impurity(:)%diagnostic%radiation%line_rad%profile (matflt_type) (9.5.1.2.7)
integral (1620)	coreimpur%impurity(:)%diagnostic%radiation%line_rad%integral (matflt_type) (9.5.1.2.7)
brem_radrec (1616)	coreimpur%impurity(:)%diagnostic%radiation%brem_radrec (coreimpurediagprof_type) (9.5.1.3.106)
profile (1620)	coreimpur%impurity(:)%diagnostic%radiation%brem_radrec%profile (matflt_type) (9.5.1.2.7)
integral (1620)	coreimpur%impurity(:)%diagnostic%radiation%brem_radrec%integral (matflt_type) (9.5.1.2.7)
sum (1616)	coreimpur%impurity(:)%diagnostic%radiation%sum (coreimpurediagprof_type) (9.5.1.3.106)
profile (1620)	coreimpur%impurity(:)%diagnostic%radiation%sum%profile (matflt_type) (9.5.1.2.7)
integral (1620)	coreimpur%impurity(:)%diagnostic%radiation%sum%integral (matflt_type) (9.5.1.2.7)
energy (1619)	coreimpur%impurity(:)%diagnostic%energy (coreimpurediag_energy) (9.5.1.3.101)
ionization (1615)	coreimpur%impurity(:)%diagnostic%energy%ionization (coreimpurediagprof_type) (9.5.1.3.106)
profile (1620)	coreimpur%impurity(:)%diagnostic%energy%ionization%profile (matflt_type) (9.5.1.2.7)
integral (1620)	coreimpur%impurity(:)%diagnostic%energy%ionization%integral (matflt_type) (9.5.1.2.7)
recombin (1615)	coreimpur%impurity(:)%diagnostic%energy%recombin (coreimpurediagprof_type) (9.5.1.3.106)
profile (1620)	coreimpur%impurity(:)%diagnostic%energy%recombin%profile (matflt_type) (9.5.1.2.7)
integral (1620)	coreimpur%impurity(:)%diagnostic%energy%recombin%integral (matflt_type) (9.5.1.2.7)
sum (1615)	coreimpur%impurity(:)%diagnostic%energy%sum (coreimpurediagprof_type) (9.5.1.3.106)
profile (1620)	coreimpur%impurity(:)%diagnostic%energy%sum%profile (matflt_type) (9.5.1.2.7)
integral (1620)	coreimpur%impurity(:)%diagnostic%energy%sum%integral (matflt_type) (9.5.1.2.7)
diagnostic (1521)	coreimpur%diagnostic (coreimpurediag_type) (9.5.1.3.105)
radiation (1619)	coreimpur%diagnostic%radiation (coreimpurediag_radiation) (9.5.1.3.102)
line_rad (1616)	coreimpur%diagnostic%radiation%line_rad (coreimpurediagprof_type) (9.5.1.3.106)
profile (1620)	coreimpur%diagnostic%radiation%line_rad%profile (matflt_type) (9.5.1.2.7)
integral (1620)	coreimpur%diagnostic%radiation%line_rad%integral (matflt_type) (9.5.1.2.7)
brem_radrec (1616)	coreimpur%diagnostic%radiation%brem_radrec (coreimpurediagprof_type) (9.5.1.3.106)
profile (1620)	coreimpur%diagnostic%radiation%brem_radrec%profile (matflt_type) (9.5.1.2.7)
integral (1620)	coreimpur%diagnostic%radiation%brem_radrec%integral (matflt_type) (9.5.1.2.7)
sum (1616)	coreimpur%diagnostic%radiation%sum (coreimpurediagprof_type) (9.5.1.3.106)
profile (1620)	coreimpur%diagnostic%radiation%sum%profile (matflt_type) (9.5.1.2.7)
integral (1620)	coreimpur%diagnostic%radiation%sum%integral (matflt_type) (9.5.1.2.7)
energy (1619)	coreimpur%diagnostic%energy (coreimpurediag_energy) (9.5.1.3.101)
ionization (1615)	coreimpur%diagnostic%energy%ionization (coreimpurediagprof_type) (9.5.1.3.106)
profile (1620)	coreimpur%diagnostic%energy%ionization%profile (matflt_type) (9.5.1.2.7)
integral (1620)	coreimpur%diagnostic%energy%ionization%integral (matflt_type) (9.5.1.2.7)
recombin (1615)	coreimpur%diagnostic%energy%recombin (coreimpurediagprof_type) (9.5.1.3.106)
profile (1620)	coreimpur%diagnostic%energy%recombin%profile (matflt_type) (9.5.1.2.7)
integral (1620)	coreimpur%diagnostic%energy%recombin%integral (matflt_type) (9.5.1.2.7)
sum (1615)	coreimpur%diagnostic%energy%sum (coreimpurediagprof_type) (9.5.1.3.106)
profile (1620)	coreimpur%diagnostic%energy%sum%profile (matflt_type) (9.5.1.2.7)
integral (1620)	coreimpur%diagnostic%energy%sum%integral (matflt_type) (9.5.1.2.7)
diagnosticsum (1521)	coreimpur%diagnosticsum (coreimpurediag_sum) (9.5.1.3.103)
radiation (1617)	coreimpur%diagnosticsum%radiation (coreimpurdiag_sum_radiation) (9.5.1.3.100)
line_rad (1614)	coreimpur%diagnosticsum%radiation%line_rad (coreimpurediagsum_type) (9.5.1.3.107)
profile (1621)	coreimpur%diagnosticsum%radiation%line_rad%profile (vecflt_type) (9.5.1.2.9)

integral (1621)	coreimpur%diagnosticsum%radiation%line_rad%integral (vecflt.type) (9.5.1.2.9)
brem_radrec (1614)	coreimpur%diagnosticsum%radiation%brem_radrec (coreimpurediagsum.type) (9.5.1.3.107)
profile (1621)	coreimpur%diagnosticsum%radiation%brem_radrec%profile (vecflt.type) (9.5.1.2.9)
integral (1621)	coreimpur%diagnosticsum%radiation%brem_radrec%integral (vecflt.type) (9.5.1.2.9)
sum (1614)	coreimpur%diagnosticsum%radiation%sum (coreimpurediagsum.type) (9.5.1.3.107)
profile (1621)	coreimpur%diagnosticsum%radiation%sum%profile (vecflt.type) (9.5.1.2.9)
integral (1621)	coreimpur%diagnosticsum%radiation%sum%integral (vecflt.type) (9.5.1.2.9)
energy (1617)	coreimpur%diagnosticsum%energy (coreimpurediag_sum.energy) (9.5.1.3.104)
ionization (1618)	coreimpur%diagnosticsum%energy%ionization (coreimpurediagsum.type) (9.5.1.3.107)
profile (1621)	coreimpur%diagnosticsum%energy%ionization%profile (vecflt.type) (9.5.1.2.9)
integral (1621)	coreimpur%diagnosticsum%energy%ionization%integral (vecflt.type) (9.5.1.2.9)
recombin (1618)	coreimpur%diagnosticsum%energy%recombin (coreimpurediagsum.type) (9.5.1.3.107)
profile (1621)	coreimpur%diagnosticsum%energy%recombin%profile (vecflt.type) (9.5.1.2.9)
integral (1621)	coreimpur%diagnosticsum%energy%recombin%integral (vecflt.type) (9.5.1.2.9)
sum (1618)	coreimpur%diagnosticsum%energy%sum (coreimpurediagsum.type) (9.5.1.3.107)
profile (1621)	coreimpur%diagnosticsum%energy%sum%profile (vecflt.type) (9.5.1.2.9)
integral (1621)	coreimpur%diagnosticsum%energy%sum%integral (vecflt.type) (9.5.1.2.9)
codeparam (1521)	coreimpur%codeparam (codeparam) (9.5.1.3.66)
codename (1580)	coreimpur%codeparam%codename (string) (9.5.1.1.3)
codeversion (1580)	coreimpur%codeparam%codeversion (string) (9.5.1.1.3)
parameters (1580)	coreimpur%codeparam%parameters (string) (9.5.1.1.3)
output_diag (1580)	coreimpur%codeparam%output_diag (string) (9.5.1.1.3)
output_flag (1580)	coreimpur%codeparam%output_flag (integer) (9.5.1.1.2)
time (1521)	coreimpur%time (float) (9.5.1.1.1)

### 9.5.2.1.6 coreneutrals

datainfo (1522)	coreneutrals%datainfo (datainfo) (9.5.1.3.121)
dataprovider (1635)	coreneutrals%datainfo%dataprovider (string) (9.5.1.1.3)
putdate (1635)	coreneutrals%datainfo%putdate (string) (9.5.1.1.3)
source (1635)	coreneutrals%datainfo%source (string) (9.5.1.1.3)
comment (1635)	coreneutrals%datainfo%comment (string) (9.5.1.1.3)
cocos (1635)	coreneutrals%datainfo%cocos (integer) (9.5.1.1.2)
id (1635)	coreneutrals%datainfo%id (integer) (9.5.1.1.2)
isref (1635)	coreneutrals%datainfo%isref (integer) (9.5.1.1.2)
whatref (1635)	coreneutrals%datainfo%whatref (whatref) (9.5.1.3.437)
user (1951)	coreneutrals%datainfo%whatref%user (string) (9.5.1.1.3)
machine (1951)	coreneutrals%datainfo%whatref%machine (string) (9.5.1.1.3)
shot (1951)	coreneutrals%datainfo%whatref%shot (integer) (9.5.1.1.2)
run (1951)	coreneutrals%datainfo%whatref%run (integer) (9.5.1.1.2)
occurrence (1951)	coreneutrals%datainfo%whatref%occurrence (integer) (9.5.1.1.2)
putinfo (1635)	coreneutrals%datainfo%putinfo (putinfo) (9.5.1.3.290)
putmethod (1804)	coreneutrals%datainfo%putinfo%putmethod (string) (9.5.1.1.3)
putaccess (1804)	coreneutrals%datainfo%putinfo%putaccess (string) (9.5.1.1.3)
putlocation (1804)	coreneutrals%datainfo%putinfo%putlocation (string) (9.5.1.1.3)
rights (1804)	coreneutrals%datainfo%putinfo%rights (string) (9.5.1.1.3)
rho_tor (1522)	coreneutrals%rho_tor (vecflt.type) (9.5.1.2.9)
rho_tor_norm (1522)	coreneutrals%rho_tor_norm (vecflt.type) (9.5.1.2.9)
neutcompo (1522)	coreneutrals%neutcompo (composition_neutrals) (9.5.1.3.85)
atomlist (1599)	coreneutrals%neutcompo%atomlist(:) (coreneutrals_atomlist) (9.5.1.3.108)
amn (1622)	coreneutrals%neutcompo%atomlist(:)%amn (float) (9.5.1.1.1)
zn (1622)	coreneutrals%neutcompo%atomlist(:)%zn (float) (9.5.1.1.1)
ionimptype (1622)	coreneutrals%neutcompo%atomlist(:)%ionimptype (identifier) (9.5.1.3.214)
id (1728)	coreneutrals%neutcompo%atomlist(:)%ionimptype%id (string) (9.5.1.1.3)
flag (1728)	coreneutrals%neutcompo%atomlist(:)%ionimptype%flag (integer) (9.5.1.1.2)
description (1728)	coreneutrals%neutcompo%atomlist(:)%ionimptype%description (string) (9.5.1.1.3)
ionimpindex (1622)	coreneutrals%neutcompo%atomlist(:)%ionimpindex (integer) (9.5.1.1.2)
neutral (1599)	coreneutrals%neutcompo%neutral(:) (composition_neutralscomp) (9.5.1.3.87)
neutcomp (1601)	coreneutrals%neutcompo%neutral(:)%neutcomp(:) (composition_neutrals_neutcomp) (9.5.1.3.86)
nucindex (1600)	coreneutrals%neutcompo%neutral(:)%neutcomp(:)%nucindex (integer) (9.5.1.1.2)
multiplicity (1600)	coreneutrals%neutcompo%neutral(:)%neutcomp(:)%multiplicity (integer) (9.5.1.1.2)

type (1601)	coreneutrals%neutcompo%neutral(:)%type(:) (identifier) (9.5.1.3.214)
id (1728)	coreneutrals%neutcompo%neutral(:)%type(:)%id (string) (9.5.1.1.3)
flag (1728)	coreneutrals%neutcompo%neutral(:)%type(:)%flag (integer) (9.5.1.1.2)
description (1728)	coreneutrals%neutcompo%neutral(:)%type(:)%description (string) (9.5.1.1.3)
label (1601)	coreneutrals%neutcompo%neutral(:)%label (string) (9.5.1.1.3)
composition (1522)	coreneutrals%composition (composition) (9.5.1.3.84)
amn (1598)	coreneutrals%composition%amn (vecflt.type) (9.5.1.2.9)
zn (1598)	coreneutrals%composition%zn (vecflt.type) (9.5.1.2.9)
zion (1598)	coreneutrals%composition%zion (vecflt.type) (9.5.1.2.9)
imp_flag (1598)	coreneutrals%composition%imp_flag (vecint.type) (9.5.1.2.10)
label (1598)	coreneutrals%composition%label (vecstring.type) (9.5.1.2.11)
desc_impur (1522)	coreneutrals%desc_impur (desc_impur) (9.5.1.3.124)
amn (1638)	coreneutrals%desc_impur%amn (vecflt.type) (9.5.1.2.9)
zn (1638)	coreneutrals%desc_impur%zn (vecint.type) (9.5.1.2.10)
i_ion (1638)	coreneutrals%desc_impur%i_ion (vecint.type) (9.5.1.2.10)
nzimp (1638)	coreneutrals%desc_impur%nzimp (vecint.type) (9.5.1.2.10)
zmin (1638)	coreneutrals%desc_impur%zmin (matint.type) (9.5.1.2.8)
zmax (1638)	coreneutrals%desc_impur%zmax (matint.type) (9.5.1.2.8)
label (1638)	coreneutrals%desc_impur%label (vecstring.type) (9.5.1.2.11)
compositions (1522)	coreneutrals%compositions (compositions.type) (9.5.1.3.88)
nuclei (1602)	coreneutrals%compositions%nuclei(:) (nuclei) (9.5.1.3.259)
zn (1773)	coreneutrals%compositions%nuclei(:)%zn (float) (9.5.1.1.1)
amn (1773)	coreneutrals%compositions%nuclei(:)%amn (float) (9.5.1.1.1)
label (1773)	coreneutrals%compositions%nuclei(:)%label (string) (9.5.1.1.3)
ions (1602)	coreneutrals%compositions%ions(:) (ions) (9.5.1.3.219)
nucindex (1733)	coreneutrals%compositions%ions(:)%nucindex (integer) (9.5.1.1.2)
zion (1733)	coreneutrals%compositions%ions(:)%zion (float) (9.5.1.1.1)
imp_flag (1733)	coreneutrals%compositions%ions(:)%imp_flag (integer) (9.5.1.1.2)
label (1733)	coreneutrals%compositions%ions(:)%label (string) (9.5.1.1.3)
impurities (1602)	coreneutrals%compositions%impurities(:) (impurities) (9.5.1.3.216)
nucindex (1730)	coreneutrals%compositions%impurities(:)%nucindex (integer) (9.5.1.1.2)
i_ion (1730)	coreneutrals%compositions%impurities(:)%i_ion (integer) (9.5.1.1.2)
nzimp (1730)	coreneutrals%compositions%impurities(:)%nzimp (integer) (9.5.1.1.2)
zmin (1730)	coreneutrals%compositions%impurities(:)%zmin (vecflt.type) (9.5.1.2.9)
zmax (1730)	coreneutrals%compositions%impurities(:)%zmax (vecflt.type) (9.5.1.2.9)
label (1730)	coreneutrals%compositions%impurities(:)%label (vecstring.type) (9.5.1.2.11)
neutralscomp (1602)	coreneutrals%compositions%neutralscomp(:) (composition_neutralscomp) (9.5.1.3.87)
neutcomp (1601)	coreneutrals%compositions%neutralscomp(:)%neutcomp(:) (composition_neutrals_neutcomp) (9.5.1.3.86)
nucindex (1600)	coreneutrals%compositions%neutralscomp(:)%neutcomp(:)%nucindex (integer) (9.5.1.1.2)
multiplicity (1600)	coreneutrals%compositions%neutralscomp(:)%neutcomp(:)%multiplicity (integer) (9.5.1.1.2)
type (1601)	coreneutrals%compositions%neutralscomp(:)%type(:) (identifier) (9.5.1.3.214)
id (1728)	coreneutrals%compositions%neutralscomp(:)%type(:)%id (string) (9.5.1.1.3)
flag (1728)	coreneutrals%compositions%neutralscomp(:)%type(:)%flag (integer) (9.5.1.1.2)
description (1728)	coreneutrals%compositions%neutralscomp(:)%type(:)%description (string) (9.5.1.1.3)
label (1601)	coreneutrals%compositions%neutralscomp(:)%label (string) (9.5.1.1.3)
edgespecies (1602)	coreneutrals%compositions%edgespecies(:) (edgespecies) (9.5.1.3.170)
nucindex (1684)	coreneutrals%compositions%edgespecies(:)%nucindex (integer) (9.5.1.1.2)
zmin (1684)	coreneutrals%compositions%edgespecies(:)%zmin (float) (9.5.1.1.1)
zmax (1684)	coreneutrals%compositions%edgespecies(:)%zmax (float) (9.5.1.1.1)
label (1684)	coreneutrals%compositions%edgespecies(:)%label (string) (9.5.1.1.3)
signature (1602)	coreneutrals%compositions%signature (identifier) (9.5.1.3.214)
id (1728)	coreneutrals%compositions%signature%id (string) (9.5.1.1.3)
flag (1728)	coreneutrals%compositions%signature%flag (integer) (9.5.1.1.2)
description (1728)	coreneutrals%compositions%signature%description (string) (9.5.1.1.3)
profiles (1522)	coreneutrals%profiles(:) (neutral_complex.type) (9.5.1.3.257)
neutraltype (1771)	coreneutrals%profiles(:)%neutraltype(:) (coreneutrals_neutraltype) (9.5.1.3.109)
n0 (1623)	coreneutrals%profiles(:)%neutraltype(:)%n0 (corefieldneutral) (9.5.1.3.96)
value (1610)	coreneutrals%profiles(:)%neutraltype(:)%n0%value (vecflt.type) (9.5.1.2.9)
flux (1610)	coreneutrals%profiles(:)%neutraltype(:)%n0%flux (vecflt.type) (9.5.1.2.9)
boundary (1610)	coreneutrals%profiles(:)%neutraltype(:)%n0%boundary (boundary_neutrals) (9.5.1.3.60)
value (1574)	coreneutrals%profiles(:)%neutraltype(:)%n0%boundary%value (vecflt.type) (9.5.1.2.9)

type (1574)	coreneutrals%profiles(:)%neutralitytype(:)%n0%boundary%type (integer) (9.5.1.1.2)
rho_tor (1574)	coreneutrals%profiles(:)%neutralitytype(:)%n0%boundary%rho_tor (float) (9.5.1.1.1)
t0 (1623)	coreneutrals%profiles(:)%neutralitytype(:)%t0 (corefieldneutrals) (9.5.1.3.97)
value (1611)	coreneutrals%profiles(:)%neutralitytype(:)%t0%value (vecflt_type) (9.5.1.2.9)
flux (1611)	coreneutrals%profiles(:)%neutralitytype(:)%t0%flux (vecflt_type) (9.5.1.2.9)
boundary (1611)	coreneutrals%profiles(:)%neutralitytype(:)%t0%boundary (boundary_neutrals) (9.5.1.3.60)
value (1574)	coreneutrals%profiles(:)%neutralitytype(:)%t0%boundary%value (vecflt_type) (9.5.1.2.9)
type (1574)	coreneutrals%profiles(:)%neutralitytype(:)%t0%boundary%type (integer) (9.5.1.1.2)
rho_tor (1574)	coreneutrals%profiles(:)%neutralitytype(:)%t0%boundary%rho_tor (float) (9.5.1.1.1)
v0 (1623)	coreneutrals%profiles(:)%neutralitytype(:)%v0 (corefieldneutralv0) (9.5.1.3.99)
toroidal (1613)	coreneutrals%profiles(:)%neutralitytype(:)%v0%toroidal (corefieldneutralv) (9.5.1.3.98)
value (1612)	coreneutrals%profiles(:)%neutralitytype(:)%v0%toroidal%value (vecflt_type) (9.5.1.2.9)
boundary (1612)	coreneutrals%profiles(:)%neutralitytype(:)%v0%toroidal%boundary (boundary_neutrals) (9.5.1.3.60)
value (1574)	coreneutrals%profiles(:)%neutralitytype(:)%v0%toroidal%boundary%value (vecflt_type) (9.5.1.2.9)
type (1574)	coreneutrals%profiles(:)%neutralitytype(:)%v0%toroidal%boundary%type (integer) (9.5.1.1.2)
rho_tor (1574)	coreneutrals%profiles(:)%neutralitytype(:)%v0%toroidal%boundary%rho_tor (float) (9.5.1.1.1)
poloidal (1613)	coreneutrals%profiles(:)%neutralitytype(:)%v0%poloidal (corefieldneutralv) (9.5.1.3.98)
value (1612)	coreneutrals%profiles(:)%neutralitytype(:)%v0%poloidal%value (vecflt_type) (9.5.1.2.9)
boundary (1612)	coreneutrals%profiles(:)%neutralitytype(:)%v0%poloidal%boundary (boundary_neutrals) (9.5.1.3.60)
value (1574)	coreneutrals%profiles(:)%neutralitytype(:)%v0%poloidal%boundary%value (vecflt_type) (9.5.1.2.9)
type (1574)	coreneutrals%profiles(:)%neutralitytype(:)%v0%poloidal%boundary%type (integer) (9.5.1.1.2)
rho_tor (1574)	coreneutrals%profiles(:)%neutralitytype(:)%v0%poloidal%boundary%rho_tor (float) (9.5.1.1.1)
radial (1613)	coreneutrals%profiles(:)%neutralitytype(:)%v0%radial (corefieldneutralv) (9.5.1.3.98)
value (1612)	coreneutrals%profiles(:)%neutralitytype(:)%v0%radial%value (vecflt_type) (9.5.1.2.9)
boundary (1612)	coreneutrals%profiles(:)%neutralitytype(:)%v0%radial%boundary (boundary_neutrals) (9.5.1.3.60)
value (1574)	coreneutrals%profiles(:)%neutralitytype(:)%v0%radial%boundary%value (vecflt_type) (9.5.1.2.9)
type (1574)	coreneutrals%profiles(:)%neutralitytype(:)%v0%radial%boundary%type (integer) (9.5.1.1.2)
rho_tor (1574)	coreneutrals%profiles(:)%neutralitytype(:)%v0%radial%boundary%rho_tor (float) (9.5.1.1.1)
prad0 (1771)	coreneutrals%profiles(:)%prad0 (vecflt_type) (9.5.1.2.9)
ioncoeff (1522)	coreneutrals%ioncoeff(:) (coefficients_neutrals) (9.5.1.3.67)
recycling (1581)	coreneutrals%ioncoeff(:)%recycling (recycling_neutrals) (9.5.1.3.292)
particles (1806)	coreneutrals%ioncoeff(:)%recycling%particles (vecflt_type) (9.5.1.2.9)
energy (1806)	coreneutrals%ioncoeff(:)%recycling%energy (vecflt_type) (9.5.1.2.9)
sputtering (1581)	coreneutrals%ioncoeff(:)%sputtering (sputtering_neutrals) (9.5.1.3.381)
physical (1895)	coreneutrals%ioncoeff(:)%sputtering%physical (vecflt_type) (9.5.1.2.9)
chemical (1895)	coreneutrals%ioncoeff(:)%sputtering%chemical (vecflt_type) (9.5.1.2.9)
impcoeff (1522)	coreneutrals%impcoeff(:) (impcoeff) (9.5.1.3.215)
chargestate (1729)	coreneutrals%impcoeff(:)%chargestate(:) (coefficients_neutrals) (9.5.1.3.67)
recycling (1581)	coreneutrals%impcoeff(:)%chargestate(:)%recycling (recycling_neutrals) (9.5.1.3.292)
particles (1806)	coreneutrals%impcoeff(:)%chargestate(:)%recycling%particles (vecflt_type) (9.5.1.2.9)
energy (1806)	coreneutrals%impcoeff(:)%chargestate(:)%recycling%energy (vecflt_type) (9.5.1.2.9)
sputtering (1581)	coreneutrals%impcoeff(:)%chargestate(:)%sputtering (sputtering_neutrals) (9.5.1.3.381)
physical (1895)	coreneutrals%impcoeff(:)%chargestate(:)%sputtering%physical (vecflt_type) (9.5.1.2.9)
chemical (1895)	coreneutrals%impcoeff(:)%chargestate(:)%sputtering%chemical (vecflt_type) (9.5.1.2.9)
codeparam (1522)	coreneutrals%codeparam (codeparam) (9.5.1.3.66)
codename (1580)	coreneutrals%codeparam%codename (string) (9.5.1.1.3)
codeversion (1580)	coreneutrals%codeparam%codeversion (string) (9.5.1.1.3)
parameters (1580)	coreneutrals%codeparam%parameters (string) (9.5.1.1.3)
output_diag (1580)	coreneutrals%codeparam%output_diag (string) (9.5.1.1.3)
output_flag (1580)	coreneutrals%codeparam%output_flag (integer) (9.5.1.1.2)
time (1522)	coreneutrals%time (float) (9.5.1.1.1)

### 9.5.2.1.7 coreprof

datainfo (1523)	coreprof%datainfo (datainfo) (9.5.1.3.121)
dataprovder (1635)	coreprof%datainfo%dataprovder (string) (9.5.1.1.3)
putdate (1635)	coreprof%datainfo%putdate (string) (9.5.1.1.3)



source (1635)	coreprof%datainfo%source (string) (9.5.1.1.3)
comment (1635)	coreprof%datainfo%comment (string) (9.5.1.1.3)
cocos (1635)	coreprof%datainfo%cocos (integer) (9.5.1.1.2)
id (1635)	coreprof%datainfo%id (integer) (9.5.1.1.2)
isref (1635)	coreprof%datainfo%isref (integer) (9.5.1.1.2)
whatref (1635)	coreprof%datainfo%whatref (whatref) (9.5.1.3.437)
user (1951)	coreprof%datainfo%whatref%user (string) (9.5.1.1.3)
machine (1951)	coreprof%datainfo%whatref%machine (string) (9.5.1.1.3)
shot (1951)	coreprof%datainfo%whatref%shot (integer) (9.5.1.1.2)
run (1951)	coreprof%datainfo%whatref%run (integer) (9.5.1.1.2)
occurrence (1951)	coreprof%datainfo%whatref%occurrence (integer) (9.5.1.1.2)
putinfo (1635)	coreprof%datainfo%putinfo (putinfo) (9.5.1.3.290)
putmethod (1804)	coreprof%datainfo%putinfo%putmethod (string) (9.5.1.1.3)
putaccess (1804)	coreprof%datainfo%putinfo%putaccess (string) (9.5.1.1.3)
putlocation (1804)	coreprof%datainfo%putinfo%putlocation (string) (9.5.1.1.3)
rights (1804)	coreprof%datainfo%putinfo%rights (string) (9.5.1.1.3)
rho_tor_norm (1523)	coreprof%rho_tor_norm (vecflt_type) (9.5.1.2.9)
rho_tor (1523)	coreprof%rho_tor (vecflt_type) (9.5.1.2.9)
drho_dt (1523)	coreprof%drho_dt (vecflt_type) (9.5.1.2.9)
toroid_field (1523)	coreprof%toroid_field (toroid_field) (9.5.1.3.396)
b0 (1910)	coreprof%toroid_field%b0 (float) (9.5.1.1.1)
b0prime (1910)	coreprof%toroid_field%b0prime (float) (9.5.1.1.1)
r0 (1910)	coreprof%toroid_field%r0 (float) (9.5.1.1.1)
time (1910)	coreprof%toroid_field%time (float) (9.5.1.1.1)
composition (1523)	coreprof%composition (composition) (9.5.1.3.84)
amn (1598)	coreprof%composition%amn (vecflt_type) (9.5.1.2.9)
zn (1598)	coreprof%composition%zn (vecflt_type) (9.5.1.2.9)
zion (1598)	coreprof%composition%zion (vecflt_type) (9.5.1.2.9)
imp_flag (1598)	coreprof%composition%imp_flag (vecint_type) (9.5.1.2.10)
label (1598)	coreprof%composition%label (vecstring_type) (9.5.1.2.11)
desc_impur (1523)	coreprof%desc_impur (desc_impur) (9.5.1.3.124)
amn (1638)	coreprof%desc_impur%amn (vecflt_type) (9.5.1.2.9)
zn (1638)	coreprof%desc_impur%zn (vecint_type) (9.5.1.2.10)
i_ion (1638)	coreprof%desc_impur%i_ion (vecint_type) (9.5.1.2.10)
nzimp (1638)	coreprof%desc_impur%nzimp (vecint_type) (9.5.1.2.10)
zmin (1638)	coreprof%desc_impur%zmin (matint_type) (9.5.1.2.8)
zmax (1638)	coreprof%desc_impur%zmax (matint_type) (9.5.1.2.8)
label (1638)	coreprof%desc_impur%label (vecstring_type) (9.5.1.2.11)
compositions (1523)	coreprof%compositions (compositions_type) (9.5.1.3.88)
nuclei (1602)	coreprof%compositions%nuclei(:) (nuclei) (9.5.1.3.259)
zn (1773)	coreprof%compositions%nuclei(:)%zn (float) (9.5.1.1.1)
amn (1773)	coreprof%compositions%nuclei(:)%amn (float) (9.5.1.1.1)
label (1773)	coreprof%compositions%nuclei(:)%label (string) (9.5.1.1.3)
ions (1602)	coreprof%compositions%ions(:) (ions) (9.5.1.3.219)
nucindex (1733)	coreprof%compositions%ions(:)%nucindex (integer) (9.5.1.1.2)
zion (1733)	coreprof%compositions%ions(:)%zion (float) (9.5.1.1.1)
imp_flag (1733)	coreprof%compositions%ions(:)%imp_flag (integer) (9.5.1.1.2)
label (1733)	coreprof%compositions%ions(:)%label (string) (9.5.1.1.3)
impurities (1602)	coreprof%compositions%impurities(:) (impurities) (9.5.1.3.216)
nucindex (1730)	coreprof%compositions%impurities(:)%nucindex (integer) (9.5.1.1.2)
i_ion (1730)	coreprof%compositions%impurities(:)%i_ion (integer) (9.5.1.1.2)
nzimp (1730)	coreprof%compositions%impurities(:)%nzimp (integer) (9.5.1.1.2)
zmin (1730)	coreprof%compositions%impurities(:)%zmin (vecflt_type) (9.5.1.2.9)
zmax (1730)	coreprof%compositions%impurities(:)%zmax (vecflt_type) (9.5.1.2.9)
label (1730)	coreprof%compositions%impurities(:)%label (vecstring_type) (9.5.1.2.11)
neutralscomp (1602)	coreprof%compositions%neutralscomp(:) (composition_neutralscomp) (9.5.1.3.87)
neutcomp (1601)	coreprof%compositions%neutralscomp(:)%neutcomp(:) (composition_neutrals_neutcomp) (9.5.1.3.86)
nucindex (1600)	coreprof%compositions%neutralscomp(:)%neutcomp(:)%nucindex (integer) (9.5.1.1.2)
multiplicity (1600)	coreprof%compositions%neutralscomp(:)%neutcomp(:)%multiplicity (integer) (9.5.1.1.2)
type (1601)	coreprof%compositions%neutralscomp(:)%type(:) (identifier) (9.5.1.3.214)
id (1728)	coreprof%compositions%neutralscomp(:)%type(:)%id (string) (9.5.1.1.3)

flag (1728)	coreprof%compositions%neutralscomp(:)%type(:)%flag (integer) (9.5.1.1.2)
description (1728)	coreprof%compositions%neutralscomp(:)%type(:)%description (string) (9.5.1.1.3)
label (1601)	coreprof%compositions%neutralscomp(:)%label (string) (9.5.1.1.3)
edgespecies (1602)	coreprof%compositions%edgespecies(:) (edgespecies) (9.5.1.3.170)
nucindex (1684)	coreprof%compositions%edgespecies(:)%nucindex (integer) (9.5.1.1.2)
zmin (1684)	coreprof%compositions%edgespecies(:)%zmin (float) (9.5.1.1.1)
zmax (1684)	coreprof%compositions%edgespecies(:)%zmax (float) (9.5.1.1.1)
label (1684)	coreprof%compositions%edgespecies(:)%label (string) (9.5.1.1.3)
signature (1602)	coreprof%compositions%signature (identifier) (9.5.1.3.214)
id (1728)	coreprof%compositions%signature%id (string) (9.5.1.1.3)
flag (1728)	coreprof%compositions%signature%flag (integer) (9.5.1.1.2)
description (1728)	coreprof%compositions%signature%description (string) (9.5.1.1.3)
psi (1523)	coreprof%psi (psi) (9.5.1.3.289)
value (1803)	coreprof%psi%value (vecflt.type) (9.5.1.2.9)
ddrho (1803)	coreprof%psi%ddrho (vecflt.type) (9.5.1.2.9)
d2drho2 (1803)	coreprof%psi%d2drho2 (vecflt.type) (9.5.1.2.9)
ddt_rhotorn (1803)	coreprof%psi%ddt_rhotorn (vecflt.type) (9.5.1.2.9)
ddt_phi (1803)	coreprof%psi%ddt_phi (vecflt.type) (9.5.1.2.9)
source (1803)	coreprof%psi%source (string) (9.5.1.1.3)
flag (1803)	coreprof%psi%flag (integer) (9.5.1.1.2)
boundary (1803)	coreprof%psi%boundary (boundary) (9.5.1.3.59)
value (1573)	coreprof%psi%boundary%value (vecflt.type) (9.5.1.2.9)
source (1573)	coreprof%psi%boundary%source (string) (9.5.1.1.3)
type (1573)	coreprof%psi%boundary%type (integer) (9.5.1.1.2)
rho (1573)	coreprof%psi%boundary%rho (float) (9.5.1.1.1)
codeparam (1573)	coreprof%psi%boundary%codeparam (codeparam) (9.5.1.3.66)
codename (1580)	coreprof%psi%boundary%codeparam%codename (string) (9.5.1.1.3)
codeversion (1580)	coreprof%psi%boundary%codeparam%codeversion (string) (9.5.1.1.3)
parameters (1580)	coreprof%psi%boundary%codeparam%parameters (string) (9.5.1.1.3)
output_diag (1580)	coreprof%psi%boundary%codeparam%output_diag (string) (9.5.1.1.3)
output_flag (1580)	coreprof%psi%boundary%codeparam%output_flag (integer) (9.5.1.1.2)
jni (1803)	coreprof%psi%jni (jni) (9.5.1.3.221)
value (1735)	coreprof%psi%jni%value (vecflt.type) (9.5.1.2.9)
integral (1735)	coreprof%psi%jni%integral (vecflt.type) (9.5.1.2.9)
source (1735)	coreprof%psi%jni%source (string) (9.5.1.1.3)
sigma_par (1803)	coreprof%psi%sigma_par (coreprofile) (9.5.1.3.110)
value (1624)	coreprof%psi%sigma_par%value (vecflt.type) (9.5.1.2.9)
source (1624)	coreprof%psi%sigma_par%source (string) (9.5.1.1.3)
codeparam (1803)	coreprof%psi%codeparam (codeparam) (9.5.1.3.66)
codename (1580)	coreprof%psi%codeparam%codename (string) (9.5.1.1.3)
codeversion (1580)	coreprof%psi%codeparam%codeversion (string) (9.5.1.1.3)
parameters (1580)	coreprof%psi%codeparam%parameters (string) (9.5.1.1.3)
output_diag (1580)	coreprof%psi%codeparam%output_diag (string) (9.5.1.1.3)
output_flag (1580)	coreprof%psi%codeparam%output_flag (integer) (9.5.1.1.2)
te (1523)	coreprof%te (corefield) (9.5.1.3.94)
value (1608)	coreprof%te%value (vecflt.type) (9.5.1.2.9)
ddrho (1608)	coreprof%te%ddrho (vecflt.type) (9.5.1.2.9)
d2drho2 (1608)	coreprof%te%d2drho2 (vecflt.type) (9.5.1.2.9)
ddt (1608)	coreprof%te%ddt (vecflt.type) (9.5.1.2.9)
source (1608)	coreprof%te%source (string) (9.5.1.1.3)
flag (1608)	coreprof%te%flag (integer) (9.5.1.1.2)
boundary (1608)	coreprof%te%boundary (boundaryel) (9.5.1.3.61)
value (1575)	coreprof%te%boundary%value (vecflt.type) (9.5.1.2.9)
source (1575)	coreprof%te%boundary%source (string) (9.5.1.1.3)
type (1575)	coreprof%te%boundary%type (integer) (9.5.1.1.2)
rho_tor (1575)	coreprof%te%boundary%rho_tor (float) (9.5.1.1.1)
source_term (1608)	coreprof%te%source_term (sourceel) (9.5.1.3.373)
value (1887)	coreprof%te%source_term%value (vecflt.type) (9.5.1.2.9)
integral (1887)	coreprof%te%source_term%integral (vecflt.type) (9.5.1.2.9)
source (1887)	coreprof%te%source_term%source (string) (9.5.1.1.3)
transp_coef (1608)	coreprof%te%transp_coef (coretransel) (9.5.1.3.113)

diff (1627)	coreprof%te%transp_coef%diff (vecflt.type) (9.5.1.2.9)
vconv (1627)	coreprof%te%transp_coef%vconv (vecflt.type) (9.5.1.2.9)
source (1627)	coreprof%te%transp_coef%source (string) (9.5.1.1.3)
flux (1608)	coreprof%te%flux (fluxel) (9.5.1.3.187)
flux_dv (1701)	coreprof%te%flux%flux_dv (vecflt.type) (9.5.1.2.9)
flux_interp (1701)	coreprof%te%flux%flux_interp (vecflt.type) (9.5.1.2.9)
flux_dv_surf (1608)	coreprof%te%flux_dv_surf (vecflt.type) (9.5.1.2.9)
time_deriv (1608)	coreprof%te%time_deriv (vecflt.type) (9.5.1.2.9)
codeparam (1608)	coreprof%te%codeparam (codeparam) (9.5.1.3.66)
codename (1580)	coreprof%te%codeparam%codename (string) (9.5.1.1.3)
codeversion (1580)	coreprof%te%codeparam%codeversion (string) (9.5.1.1.3)
parameters (1580)	coreprof%te%codeparam%parameters (string) (9.5.1.1.3)
output_diag (1580)	coreprof%te%codeparam%output_diag (string) (9.5.1.1.3)
output_flag (1580)	coreprof%te%codeparam%output_flag (integer) (9.5.1.1.2)
ti (1523)	coreprof%ti (corefieldion) (9.5.1.3.95)
value (1609)	coreprof%ti%value (matflt.type) (9.5.1.2.7)
ddrho (1609)	coreprof%ti%ddrho (matflt.type) (9.5.1.2.7)
d2drho2 (1609)	coreprof%ti%d2drho2 (matflt.type) (9.5.1.2.7)
ddt (1609)	coreprof%ti%ddt (matflt.type) (9.5.1.2.7)
source (1609)	coreprof%ti%source (vecstring.type) (9.5.1.2.11)
flag (1609)	coreprof%ti%flag (vecint.type) (9.5.1.2.10)
boundary (1609)	coreprof%ti%boundary (boundaryion) (9.5.1.3.63)
value (1577)	coreprof%ti%boundary%value (matflt.type) (9.5.1.2.7)
source (1577)	coreprof%ti%boundary%source (vecstring.type) (9.5.1.2.11)
type (1577)	coreprof%ti%boundary%type (vecint.type) (9.5.1.2.10)
rho_tor (1577)	coreprof%ti%boundary%rho_tor (vecflt.type) (9.5.1.2.9)
source_term (1609)	coreprof%ti%source_term (sourceion) (9.5.1.3.375)
value (1889)	coreprof%ti%source_term%value (matflt.type) (9.5.1.2.7)
integral (1889)	coreprof%ti%source_term%integral (matflt.type) (9.5.1.2.7)
source (1889)	coreprof%ti%source_term%source (vecstring.type) (9.5.1.2.11)
transp_coef (1609)	coreprof%ti%transp_coef (coretransion) (9.5.1.3.115)
diff (1629)	coreprof%ti%transp_coef%diff (matflt.type) (9.5.1.2.7)
vconv (1629)	coreprof%ti%transp_coef%vconv (matflt.type) (9.5.1.2.7)
source (1629)	coreprof%ti%transp_coef%source (vecstring.type) (9.5.1.2.11)
flux (1609)	coreprof%ti%flux (fluxion) (9.5.1.3.189)
flux_dv (1703)	coreprof%ti%flux%flux_dv (matflt.type) (9.5.1.2.7)
flux_interp (1703)	coreprof%ti%flux%flux_interp (matflt.type) (9.5.1.2.7)
flux_dv_surf (1609)	coreprof%ti%flux_dv_surf (matflt.type) (9.5.1.2.7)
time_deriv (1609)	coreprof%ti%time_deriv (matflt.type) (9.5.1.2.7)
codeparam (1609)	coreprof%ti%codeparam (codeparam) (9.5.1.3.66)
codename (1580)	coreprof%ti%codeparam%codename (string) (9.5.1.1.3)
codeversion (1580)	coreprof%ti%codeparam%codeversion (string) (9.5.1.1.3)
parameters (1580)	coreprof%ti%codeparam%parameters (string) (9.5.1.1.3)
output_diag (1580)	coreprof%ti%codeparam%output_diag (string) (9.5.1.1.3)
output_flag (1580)	coreprof%ti%codeparam%output_flag (integer) (9.5.1.1.2)
ne (1523)	coreprof%ne (corefield) (9.5.1.3.94)
value (1608)	coreprof%ne%value (vecflt.type) (9.5.1.2.9)
ddrho (1608)	coreprof%ne%ddrho (vecflt.type) (9.5.1.2.9)
d2drho2 (1608)	coreprof%ne%d2drho2 (vecflt.type) (9.5.1.2.9)
ddt (1608)	coreprof%ne%ddt (vecflt.type) (9.5.1.2.9)
source (1608)	coreprof%ne%source (string) (9.5.1.1.3)
flag (1608)	coreprof%ne%flag (integer) (9.5.1.1.2)
boundary (1608)	coreprof%ne%boundary (boundaryel) (9.5.1.3.61)
value (1575)	coreprof%ne%boundary%value (vecflt.type) (9.5.1.2.9)
source (1575)	coreprof%ne%boundary%source (string) (9.5.1.1.3)
type (1575)	coreprof%ne%boundary%type (integer) (9.5.1.1.2)
rho_tor (1575)	coreprof%ne%boundary%rho_tor (float) (9.5.1.1.1)
source_term (1608)	coreprof%ne%source_term (sourceel) (9.5.1.3.373)
value (1887)	coreprof%ne%source_term%value (vecflt.type) (9.5.1.2.9)
integral (1887)	coreprof%ne%source_term%integral (vecflt.type) (9.5.1.2.9)
source (1887)	coreprof%ne%source_term%source (string) (9.5.1.1.3)



transp_coef (1608)	coreprof%ne%transp_coef (coretransel) (9.5.1.3.113)
diff (1627)	coreprof%ne%transp_coef%diff (vecflt.type) (9.5.1.2.9)
vconv (1627)	coreprof%ne%transp_coef%vconv (vecflt.type) (9.5.1.2.9)
source (1627)	coreprof%ne%transp_coef%source (string) (9.5.1.1.3)
flux (1608)	coreprof%ne%flux (fluxel) (9.5.1.3.187)
flux_dv (1701)	coreprof%ne%flux%flux_dv (vecflt.type) (9.5.1.2.9)
flux_interp (1701)	coreprof%ne%flux%flux_interp (vecflt.type) (9.5.1.2.9)
flux_dv_surf (1608)	coreprof%ne%flux_dv_surf (vecflt.type) (9.5.1.2.9)
time_deriv (1608)	coreprof%ne%time_deriv (vecflt.type) (9.5.1.2.9)
codeparam (1608)	coreprof%ne%codeparam (codeparam) (9.5.1.3.66)
codename (1580)	coreprof%ne%codeparam%codename (string) (9.5.1.1.3)
codeversion (1580)	coreprof%ne%codeparam%codeversion (string) (9.5.1.1.3)
parameters (1580)	coreprof%ne%codeparam%parameters (string) (9.5.1.1.3)
output_diag (1580)	coreprof%ne%codeparam%output_diag (string) (9.5.1.1.3)
output_flag (1580)	coreprof%ne%codeparam%output_flag (integer) (9.5.1.1.2)
ni (1523)	coreprof%ni (corefieldion) (9.5.1.3.95)
value (1609)	coreprof%ni%value (matflt.type) (9.5.1.2.7)
ddrho (1609)	coreprof%ni%ddrho (matflt.type) (9.5.1.2.7)
d2drho2 (1609)	coreprof%ni%d2drho2 (matflt.type) (9.5.1.2.7)
ddt (1609)	coreprof%ni%ddt (matflt.type) (9.5.1.2.7)
source (1609)	coreprof%ni%source (vecstring.type) (9.5.1.2.11)
flag (1609)	coreprof%ni%flag (vecint.type) (9.5.1.2.10)
boundary (1609)	coreprof%ni%boundary (boundaryion) (9.5.1.3.63)
value (1577)	coreprof%ni%boundary%value (matflt.type) (9.5.1.2.7)
source (1577)	coreprof%ni%boundary%source (vecstring.type) (9.5.1.2.11)
type (1577)	coreprof%ni%boundary%type (vecint.type) (9.5.1.2.10)
rho_tor (1577)	coreprof%ni%boundary%rho_tor (vecflt.type) (9.5.1.2.9)
source_term (1609)	coreprof%ni%source_term (sourceion) (9.5.1.3.375)
value (1889)	coreprof%ni%source_term%value (matflt.type) (9.5.1.2.7)
integral (1889)	coreprof%ni%source_term%integral (matflt.type) (9.5.1.2.7)
source (1889)	coreprof%ni%source_term%source (vecstring.type) (9.5.1.2.11)
transp_coef (1609)	coreprof%ni%transp_coef (coretransion) (9.5.1.3.115)
diff (1629)	coreprof%ni%transp_coef%diff (matflt.type) (9.5.1.2.7)
vconv (1629)	coreprof%ni%transp_coef%vconv (matflt.type) (9.5.1.2.7)
source (1629)	coreprof%ni%transp_coef%source (vecstring.type) (9.5.1.2.11)
flux (1609)	coreprof%ni%flux (fluxion) (9.5.1.3.189)
flux_dv (1703)	coreprof%ni%flux%flux_dv (matflt.type) (9.5.1.2.7)
flux_interp (1703)	coreprof%ni%flux%flux_interp (matflt.type) (9.5.1.2.7)
flux_dv_surf (1609)	coreprof%ni%flux_dv_surf (matflt.type) (9.5.1.2.7)
time_deriv (1609)	coreprof%ni%time_deriv (matflt.type) (9.5.1.2.7)
codeparam (1609)	coreprof%ni%codeparam (codeparam) (9.5.1.3.66)
codename (1580)	coreprof%ni%codeparam%codename (string) (9.5.1.1.3)
codeversion (1580)	coreprof%ni%codeparam%codeversion (string) (9.5.1.1.3)
parameters (1580)	coreprof%ni%codeparam%parameters (string) (9.5.1.1.3)
output_diag (1580)	coreprof%ni%codeparam%output_diag (string) (9.5.1.1.3)
output_flag (1580)	coreprof%ni%codeparam%output_flag (integer) (9.5.1.1.2)
vtor (1523)	coreprof%vtor (corefieldion) (9.5.1.3.95)
value (1609)	coreprof%vtor%value (matflt.type) (9.5.1.2.7)
ddrho (1609)	coreprof%vtor%ddrho (matflt.type) (9.5.1.2.7)
d2drho2 (1609)	coreprof%vtor%d2drho2 (matflt.type) (9.5.1.2.7)
ddt (1609)	coreprof%vtor%ddt (matflt.type) (9.5.1.2.7)
source (1609)	coreprof%vtor%source (vecstring.type) (9.5.1.2.11)
flag (1609)	coreprof%vtor%flag (vecint.type) (9.5.1.2.10)
boundary (1609)	coreprof%vtor%boundary (boundaryion) (9.5.1.3.63)
value (1577)	coreprof%vtor%boundary%value (matflt.type) (9.5.1.2.7)
source (1577)	coreprof%vtor%boundary%source (vecstring.type) (9.5.1.2.11)
type (1577)	coreprof%vtor%boundary%type (vecint.type) (9.5.1.2.10)
rho_tor (1577)	coreprof%vtor%boundary%rho_tor (vecflt.type) (9.5.1.2.9)
source_term (1609)	coreprof%vtor%source_term (sourceion) (9.5.1.3.375)
value (1889)	coreprof%vtor%source_term%value (matflt.type) (9.5.1.2.7)
integral (1889)	coreprof%vtor%source_term%integral (matflt.type) (9.5.1.2.7)

source (1889)	coreprof%vtor%source_term%source (vecstring_type) (9.5.1.2.11)
transp_coef (1609)	coreprof%vtor%transp_coef (coretransion) (9.5.1.3.115)
diff (1629)	coreprof%vtor%transp_coef%diff (matflt_type) (9.5.1.2.7)
vconv (1629)	coreprof%vtor%transp_coef%vconv (matflt_type) (9.5.1.2.7)
source (1629)	coreprof%vtor%transp_coef%source (vecstring_type) (9.5.1.2.11)
flux (1609)	coreprof%vtor%flux (fluxion) (9.5.1.3.189)
flux_dv (1703)	coreprof%vtor%flux%flux_dv (matflt_type) (9.5.1.2.7)
flux_interp (1703)	coreprof%vtor%flux%flux_interp (matflt_type) (9.5.1.2.7)
flux_dv_surf (1609)	coreprof%vtor%flux_dv_surf (matflt_type) (9.5.1.2.7)
time_deriv (1609)	coreprof%vtor%time_deriv (matflt_type) (9.5.1.2.7)
codeparam (1609)	coreprof%vtor%codeparam (codeparam) (9.5.1.3.66)
codename (1580)	coreprof%vtor%codeparam%codename (string) (9.5.1.1.3)
codeversion (1580)	coreprof%vtor%codeparam%codeversion (string) (9.5.1.1.3)
parameters (1580)	coreprof%vtor%codeparam%parameters (string) (9.5.1.1.3)
output_diag (1580)	coreprof%vtor%codeparam%output_diag (string) (9.5.1.1.3)
output_flag (1580)	coreprof%vtor%codeparam%output_flag (integer) (9.5.1.1.2)
profiles1d (1523)	coreprof%profiles1d (profiles1d) (9.5.1.3.287)
pe (1801)	coreprof%profiles1d%pe (coreprofile) (9.5.1.3.110)
value (1624)	coreprof%profiles1d%pe%value (vecflt_type) (9.5.1.2.9)
source (1624)	coreprof%profiles1d%pe%source (string) (9.5.1.1.3)
dpedt (1801)	coreprof%profiles1d%dpedt (coreprofile) (9.5.1.3.110)
value (1624)	coreprof%profiles1d%dpedt%value (vecflt_type) (9.5.1.2.9)
source (1624)	coreprof%profiles1d%dpedt%source (string) (9.5.1.1.3)
pi (1801)	coreprof%profiles1d%pi (coreprofion) (9.5.1.3.111)
value (1625)	coreprof%profiles1d%pi%value (matflt_type) (9.5.1.2.7)
source (1625)	coreprof%profiles1d%pi%source (vecstring_type) (9.5.1.2.11)
pi_tot (1801)	coreprof%profiles1d%pi_tot (coreprofile) (9.5.1.3.110)
value (1624)	coreprof%profiles1d%pi_tot%value (vecflt_type) (9.5.1.2.9)
source (1624)	coreprof%profiles1d%pi_tot%source (string) (9.5.1.1.3)
dpi_totdt (1801)	coreprof%profiles1d%dpi_totdt (coreprofile) (9.5.1.3.110)
value (1624)	coreprof%profiles1d%dpi_totdt%value (vecflt_type) (9.5.1.2.9)
source (1624)	coreprof%profiles1d%dpi_totdt%source (string) (9.5.1.1.3)
pr_th (1801)	coreprof%profiles1d%pr_th (coreprofile) (9.5.1.3.110)
value (1624)	coreprof%profiles1d%pr_th%value (vecflt_type) (9.5.1.2.9)
source (1624)	coreprof%profiles1d%pr_th%source (string) (9.5.1.1.3)
pr_perp (1801)	coreprof%profiles1d%pr_perp (coreprofile) (9.5.1.3.110)
value (1624)	coreprof%profiles1d%pr_perp%value (vecflt_type) (9.5.1.2.9)
source (1624)	coreprof%profiles1d%pr_perp%source (string) (9.5.1.1.3)
pr_parallel (1801)	coreprof%profiles1d%pr_parallel (coreprofile) (9.5.1.3.110)
value (1624)	coreprof%profiles1d%pr_parallel%value (vecflt_type) (9.5.1.2.9)
source (1624)	coreprof%profiles1d%pr_parallel%source (string) (9.5.1.1.3)
jtot (1801)	coreprof%profiles1d%jtot (coreprofile) (9.5.1.3.110)
value (1624)	coreprof%profiles1d%jtot%value (vecflt_type) (9.5.1.2.9)
source (1624)	coreprof%profiles1d%jtot%source (string) (9.5.1.1.3)
jni (1801)	coreprof%profiles1d%jni (coreprofile) (9.5.1.3.110)
value (1624)	coreprof%profiles1d%jni%value (vecflt_type) (9.5.1.2.9)
source (1624)	coreprof%profiles1d%jni%source (string) (9.5.1.1.3)
jphi (1801)	coreprof%profiles1d%jphi (coreprofile) (9.5.1.3.110)
value (1624)	coreprof%profiles1d%jphi%value (vecflt_type) (9.5.1.2.9)
source (1624)	coreprof%profiles1d%jphi%source (string) (9.5.1.1.3)
joh (1801)	coreprof%profiles1d%joh (coreprofile) (9.5.1.3.110)
value (1624)	coreprof%profiles1d%joh%value (vecflt_type) (9.5.1.2.9)
source (1624)	coreprof%profiles1d%joh%source (string) (9.5.1.1.3)
vloop (1801)	coreprof%profiles1d%vloop (coreprofile) (9.5.1.3.110)
value (1624)	coreprof%profiles1d%vloop%value (vecflt_type) (9.5.1.2.9)
source (1624)	coreprof%profiles1d%vloop%source (string) (9.5.1.1.3)
sigmapar (1801)	coreprof%profiles1d%sigmapar (coreprofile) (9.5.1.3.110)
value (1624)	coreprof%profiles1d%sigmapar%value (vecflt_type) (9.5.1.2.9)
source (1624)	coreprof%profiles1d%sigmapar%source (string) (9.5.1.1.3)
qoh (1801)	coreprof%profiles1d%qoh (sourceel) (9.5.1.3.373)
value (1887)	coreprof%profiles1d%qoh%value (vecflt_type) (9.5.1.2.9)

integral (1887)	coreprof%profiles1d%qoh%integral (vecflt.type) (9.5.1.2.9)
source (1887)	coreprof%profiles1d%qoh%source (string) (9.5.1.1.3)
qei (1801)	coreprof%profiles1d%qei (coreprofile) (9.5.1.3.110)
value (1624)	coreprof%profiles1d%qei%value (vecflt.type) (9.5.1.2.9)
source (1624)	coreprof%profiles1d%qei%source (string) (9.5.1.1.3)
eparallel (1801)	coreprof%profiles1d%eparallel (coreprofile) (9.5.1.3.110)
value (1624)	coreprof%profiles1d%eparallel%value (vecflt.type) (9.5.1.2.9)
source (1624)	coreprof%profiles1d%eparallel%source (string) (9.5.1.1.3)
e_b (1801)	coreprof%profiles1d%e_b (coreprofile) (9.5.1.3.110)
value (1624)	coreprof%profiles1d%e_b%value (vecflt.type) (9.5.1.2.9)
source (1624)	coreprof%profiles1d%e_b%source (string) (9.5.1.1.3)
q (1801)	coreprof%profiles1d%q (coreprofile) (9.5.1.3.110)
value (1624)	coreprof%profiles1d%q%value (vecflt.type) (9.5.1.2.9)
source (1624)	coreprof%profiles1d%q%source (string) (9.5.1.1.3)
shear (1801)	coreprof%profiles1d%shear (coreprofile) (9.5.1.3.110)
value (1624)	coreprof%profiles1d%shear%value (vecflt.type) (9.5.1.2.9)
source (1624)	coreprof%profiles1d%shear%source (string) (9.5.1.1.3)
ns (1801)	coreprof%profiles1d%ns (coreprofion) (9.5.1.3.111)
value (1625)	coreprof%profiles1d%ns%value (matflt.type) (9.5.1.2.7)
source (1625)	coreprof%profiles1d%ns%source (vecstring.type) (9.5.1.2.11)
mtor (1801)	coreprof%profiles1d%mtor (coreprofion) (9.5.1.3.111)
value (1625)	coreprof%profiles1d%mtor%value (matflt.type) (9.5.1.2.7)
source (1625)	coreprof%profiles1d%mtor%source (vecstring.type) (9.5.1.2.11)
wtor (1801)	coreprof%profiles1d%wtor (coreprofion) (9.5.1.3.111)
value (1625)	coreprof%profiles1d%wtor%value (matflt.type) (9.5.1.2.7)
source (1625)	coreprof%profiles1d%wtor%source (vecstring.type) (9.5.1.2.11)
zeff (1801)	coreprof%profiles1d%zeff (coreprofile) (9.5.1.3.110)
value (1624)	coreprof%profiles1d%zeff%value (vecflt.type) (9.5.1.2.9)
source (1624)	coreprof%profiles1d%zeff%source (string) (9.5.1.1.3)
bpol (1801)	coreprof%profiles1d%bpol (coreprofile) (9.5.1.3.110)
value (1624)	coreprof%profiles1d%bpol%value (vecflt.type) (9.5.1.2.9)
source (1624)	coreprof%profiles1d%bpol%source (string) (9.5.1.1.3)
dvprimedt (1801)	coreprof%profiles1d%dvprimedt (coreprofile) (9.5.1.3.110)
value (1624)	coreprof%profiles1d%dvprimedt%value (vecflt.type) (9.5.1.2.9)
source (1624)	coreprof%profiles1d%dvprimedt%source (string) (9.5.1.1.3)
globalparam (1523)	coreprof%globalparam (globalparam) (9.5.1.3.209)
current_tot (1723)	coreprof%globalparam%current_tot (float) (9.5.1.1.1)
current_bnd (1723)	coreprof%globalparam%current_bnd (float) (9.5.1.1.1)
current_ni (1723)	coreprof%globalparam%current_ni (float) (9.5.1.1.1)
vloop (1723)	coreprof%globalparam%vloop (float) (9.5.1.1.1)
li (1723)	coreprof%globalparam%li (float) (9.5.1.1.1)
beta_tor (1723)	coreprof%globalparam%beta_tor (float) (9.5.1.1.1)
beta_normal (1723)	coreprof%globalparam%beta_normal (float) (9.5.1.1.1)
beta_pol (1723)	coreprof%globalparam%beta_pol (float) (9.5.1.1.1)
w_dia (1723)	coreprof%globalparam%w_dia (float) (9.5.1.1.1)
codeparam (1523)	coreprof%codeparam (codeparam) (9.5.1.3.66)
codename (1580)	coreprof%codeparam%codename (string) (9.5.1.1.3)
codeversion (1580)	coreprof%codeparam%codeversion (string) (9.5.1.1.3)
parameters (1580)	coreprof%codeparam%parameters (string) (9.5.1.1.3)
output_diag (1580)	coreprof%codeparam%output_diag (string) (9.5.1.1.3)
output_flag (1580)	coreprof%codeparam%output_flag (integer) (9.5.1.1.2)
time (1523)	coreprof%time (float) (9.5.1.1.1)

### 9.5.2.1.8 coresource

datainfo (1524)	coresource%datainfo (datainfo) (9.5.1.3.121)
dataprovder (1635)	coresource%datainfo%dataprovder (string) (9.5.1.1.3)
putdate (1635)	coresource%datainfo%putdate (string) (9.5.1.1.3)
source (1635)	coresource%datainfo%source (string) (9.5.1.1.3)
comment (1635)	coresource%datainfo%comment (string) (9.5.1.1.3)
cocos (1635)	coresource%datainfo%cocos (integer) (9.5.1.1.2)

id (1635)	coresource%datainfo%id (integer) (9.5.1.1.2)
isref (1635)	coresource%datainfo%isref (integer) (9.5.1.1.2)
whatref (1635)	coresource%datainfo%whatref (whatref) (9.5.1.3.437)
user (1951)	coresource%datainfo%whatref%user (string) (9.5.1.1.3)
machine (1951)	coresource%datainfo%whatref%machine (string) (9.5.1.1.3)
shot (1951)	coresource%datainfo%whatref%shot (integer) (9.5.1.1.2)
run (1951)	coresource%datainfo%whatref%run (integer) (9.5.1.1.2)
occurrence (1951)	coresource%datainfo%whatref%occurrence (integer) (9.5.1.1.2)
putinfo (1635)	coresource%datainfo%putinfo (putinfo) (9.5.1.3.290)
putmethod (1804)	coresource%datainfo%putinfo%putmethod (string) (9.5.1.1.3)
putaccess (1804)	coresource%datainfo%putinfo%putaccess (string) (9.5.1.1.3)
putlocation (1804)	coresource%datainfo%putinfo%putlocation (string) (9.5.1.1.3)
rights (1804)	coresource%datainfo%putinfo%rights (string) (9.5.1.1.3)
composition (1524)	coresource%composition (composition) (9.5.1.3.84)
amn (1598)	coresource%composition%amn (vecflt_type) (9.5.1.2.9)
zn (1598)	coresource%composition%zn (vecflt_type) (9.5.1.2.9)
zion (1598)	coresource%composition%zion (vecflt_type) (9.5.1.2.9)
imp_flag (1598)	coresource%composition%imp_flag (vecint_type) (9.5.1.2.10)
label (1598)	coresource%composition%label (vecstring_type) (9.5.1.2.11)
desc_impur (1524)	coresource%desc_impur (desc_impur) (9.5.1.3.124)
amn (1638)	coresource%desc_impur%amn (vecflt_type) (9.5.1.2.9)
zn (1638)	coresource%desc_impur%zn (vecint_type) (9.5.1.2.10)
i_ion (1638)	coresource%desc_impur%i_ion (vecint_type) (9.5.1.2.10)
nzimp (1638)	coresource%desc_impur%nzimp (vecint_type) (9.5.1.2.10)
zmin (1638)	coresource%desc_impur%zmin (matint_type) (9.5.1.2.8)
zmax (1638)	coresource%desc_impur%zmax (matint_type) (9.5.1.2.8)
label (1638)	coresource%desc_impur%label (vecstring_type) (9.5.1.2.11)
compositions (1524)	coresource%compositions (compositions_type) (9.5.1.3.88)
nuclei (1602)	coresource%compositions%nuclei(:) (nuclei) (9.5.1.3.259)
zn (1773)	coresource%compositions%nuclei(:)%zn (float) (9.5.1.1.1)
amn (1773)	coresource%compositions%nuclei(:)%amn (float) (9.5.1.1.1)
label (1773)	coresource%compositions%nuclei(:)%label (string) (9.5.1.1.3)
ions (1602)	coresource%compositions%ions(:) (ions) (9.5.1.3.219)
nucindex (1733)	coresource%compositions%ions(:)%nucindex (integer) (9.5.1.1.2)
zion (1733)	coresource%compositions%ions(:)%zion (float) (9.5.1.1.1)
imp_flag (1733)	coresource%compositions%ions(:)%imp_flag (integer) (9.5.1.1.2)
label (1733)	coresource%compositions%ions(:)%label (string) (9.5.1.1.3)
impurities (1602)	coresource%compositions%impurities(:) (impurities) (9.5.1.3.216)
nucindex (1730)	coresource%compositions%impurities(:)%nucindex (integer) (9.5.1.1.2)
i_ion (1730)	coresource%compositions%impurities(:)%i_ion (integer) (9.5.1.1.2)
nzimp (1730)	coresource%compositions%impurities(:)%nzimp (integer) (9.5.1.1.2)
zmin (1730)	coresource%compositions%impurities(:)%zmin (vecflt_type) (9.5.1.2.9)
zmax (1730)	coresource%compositions%impurities(:)%zmax (vecflt_type) (9.5.1.2.9)
label (1730)	coresource%compositions%impurities(:)%label (vecstring_type) (9.5.1.2.11)
neutralscomp (1602)	coresource%compositions%neutralscomp(:) (composition_neutralscomp) (9.5.1.3.87)
neutcomp (1601)	coresource%compositions%neutralscomp(:)%neutcomp(:) (composition_neutrals_neutcomp) (9.5.1.3.86)
nucindex (1600)	coresource%compositions%neutralscomp(:)%neutcomp(:)%nucindex (integer) (9.5.1.1.2)
multiplicity (1600)	coresource%compositions%neutralscomp(:)%neutcomp(:)%multiplicity (integer) (9.5.1.1.2)
type (1601)	coresource%compositions%neutralscomp(:)%type(:) (identifier) (9.5.1.3.214)
id (1728)	coresource%compositions%neutralscomp(:)%type(:)%id (string) (9.5.1.1.3)
flag (1728)	coresource%compositions%neutralscomp(:)%type(:)%flag (integer) (9.5.1.1.2)
description (1728)	coresource%compositions%neutralscomp(:)%type(:)%description (string) (9.5.1.1.3)
label (1601)	coresource%compositions%neutralscomp(:)%label (string) (9.5.1.1.3)
edgespecies (1602)	coresource%compositions%edgespecies(:) (edgespecies) (9.5.1.3.170)
nucindex (1684)	coresource%compositions%edgespecies(:)%nucindex (integer) (9.5.1.1.2)
zmin (1684)	coresource%compositions%edgespecies(:)%zmin (float) (9.5.1.1.1)
zmax (1684)	coresource%compositions%edgespecies(:)%zmax (float) (9.5.1.1.1)
label (1684)	coresource%compositions%edgespecies(:)%label (string) (9.5.1.1.3)
signature (1602)	coresource%compositions%signature (identifier) (9.5.1.3.214)
id (1728)	coresource%compositions%signature%id (string) (9.5.1.1.3)
flag (1728)	coresource%compositions%signature%flag (integer) (9.5.1.1.2)

description (1728)	coresource%compositions%signature%description (string) (9.5.1.1.3)
toroid_field (1524)	coresource%toroid_field (b0r0) (9.5.1.3.56)
r0 (1570)	coresource%toroid_field%r0 (float) (9.5.1.1.1)
b0 (1570)	coresource%toroid_field%b0 (float) (9.5.1.1.1)
values (1524)	coresource%values(:) (coresource_values) (9.5.1.3.112)
sourceid (1626)	coresource%values(:)%sourceid (identifier) (9.5.1.3.214)
id (1728)	coresource%values(:)%sourceid%id (string) (9.5.1.1.3)
flag (1728)	coresource%values(:)%sourceid%flag (integer) (9.5.1.1.2)
description (1728)	coresource%values(:)%sourceid%description (string) (9.5.1.1.3)
rho.tor (1626)	coresource%values(:)%rho.tor (vecflt.type) (9.5.1.2.9)
rho.tor.norm (1626)	coresource%values(:)%rho.tor.norm (vecflt.type) (9.5.1.2.9)
j (1626)	coresource%values(:)%j (vecflt.type) (9.5.1.2.9)
sigma (1626)	coresource%values(:)%sigma (vecflt.type) (9.5.1.2.9)
si (1626)	coresource%values(:)%si (source_ion) (9.5.1.3.368)
exp (1882)	coresource%values(:)%si%exp (matflt.type) (9.5.1.2.7)
imp (1882)	coresource%values(:)%si%imp (matflt.type) (9.5.1.2.7)
se (1626)	coresource%values(:)%se (source_vec) (9.5.1.3.372)
exp (1886)	coresource%values(:)%se%exp (vecflt.type) (9.5.1.2.9)
imp (1886)	coresource%values(:)%se%imp (vecflt.type) (9.5.1.2.9)
sz (1626)	coresource%values(:)%sz(:) (source_imp) (9.5.1.3.367)
exp (1881)	coresource%values(:)%sz(:)%exp (matflt.type) (9.5.1.2.7)
imp (1881)	coresource%values(:)%sz(:)%imp (matflt.type) (9.5.1.2.7)
qi (1626)	coresource%values(:)%qi (source_ion) (9.5.1.3.368)
exp (1882)	coresource%values(:)%qi%exp (matflt.type) (9.5.1.2.7)
imp (1882)	coresource%values(:)%qi%imp (matflt.type) (9.5.1.2.7)
qe (1626)	coresource%values(:)%qe (source_vec) (9.5.1.3.372)
exp (1886)	coresource%values(:)%qe%exp (vecflt.type) (9.5.1.2.9)
imp (1886)	coresource%values(:)%qe%imp (vecflt.type) (9.5.1.2.9)
qz (1626)	coresource%values(:)%qz(:) (source_imp) (9.5.1.3.367)
exp (1881)	coresource%values(:)%qz(:)%exp (matflt.type) (9.5.1.2.7)
imp (1881)	coresource%values(:)%qz(:)%imp (matflt.type) (9.5.1.2.7)
ui (1626)	coresource%values(:)%ui (source_ion) (9.5.1.3.368)
exp (1882)	coresource%values(:)%ui%exp (matflt.type) (9.5.1.2.7)
imp (1882)	coresource%values(:)%ui%imp (matflt.type) (9.5.1.2.7)
ujxb (1626)	coresource%values(:)%ujxb (source_vec) (9.5.1.3.372)
exp (1886)	coresource%values(:)%ujxb%exp (vecflt.type) (9.5.1.2.9)
imp (1886)	coresource%values(:)%ujxb%imp (vecflt.type) (9.5.1.2.9)
codeparam (1626)	coresource%values(:)%codeparam (codeparam) (9.5.1.3.66)
codename (1580)	coresource%values(:)%codeparam%codename (string) (9.5.1.1.3)
codeversion (1580)	coresource%values(:)%codeparam%codeversion (string) (9.5.1.1.3)
parameters (1580)	coresource%values(:)%codeparam%parameters (string) (9.5.1.1.3)
output_diag (1580)	coresource%values(:)%codeparam%output_diag (string) (9.5.1.1.3)
output_flag (1580)	coresource%values(:)%codeparam%output_flag (integer) (9.5.1.1.2)
codeparam (1524)	coresource%codeparam (codeparam) (9.5.1.3.66)
codename (1580)	coresource%codeparam%codename (string) (9.5.1.1.3)
codeversion (1580)	coresource%codeparam%codeversion (string) (9.5.1.1.3)
parameters (1580)	coresource%codeparam%parameters (string) (9.5.1.1.3)
output_diag (1580)	coresource%codeparam%output_diag (string) (9.5.1.1.3)
output_flag (1580)	coresource%codeparam%output_flag (integer) (9.5.1.1.2)
time (1524)	coresource%time (float) (9.5.1.1.1)

### 9.5.2.1.9 coretransp

datainfo (1525)	coretransp%datainfo (datainfo) (9.5.1.3.121)
dataprovider (1635)	coretransp%datainfo%dataprovider (string) (9.5.1.1.3)
putdate (1635)	coretransp%datainfo%putdate (string) (9.5.1.1.3)
source (1635)	coretransp%datainfo%source (string) (9.5.1.1.3)
comment (1635)	coretransp%datainfo%comment (string) (9.5.1.1.3)
cocos (1635)	coretransp%datainfo%cocos (integer) (9.5.1.1.2)
id (1635)	coretransp%datainfo%id (integer) (9.5.1.1.2)
isref (1635)	coretransp%datainfo%isref (integer) (9.5.1.1.2)

whatref (1635)	coretransp%datainfo%whatref (whatref) (9.5.1.3.437)
user (1951)	coretransp%datainfo%whatref%user (string) (9.5.1.1.3)
machine (1951)	coretransp%datainfo%whatref%machine (string) (9.5.1.1.3)
shot (1951)	coretransp%datainfo%whatref%shot (integer) (9.5.1.1.2)
run (1951)	coretransp%datainfo%whatref%run (integer) (9.5.1.1.2)
occurrence (1951)	coretransp%datainfo%whatref%occurrence (integer) (9.5.1.1.2)
putinfo (1635)	coretransp%datainfo%putinfo (putinfo) (9.5.1.3.290)
putmethod (1804)	coretransp%datainfo%putinfo%putmethod (string) (9.5.1.1.3)
putaccess (1804)	coretransp%datainfo%putinfo%putaccess (string) (9.5.1.1.3)
putlocation (1804)	coretransp%datainfo%putinfo%putlocation (string) (9.5.1.1.3)
rights (1804)	coretransp%datainfo%putinfo%rights (string) (9.5.1.1.3)
composition (1525)	coretransp%composition (composition) (9.5.1.3.84)
amn (1598)	coretransp%composition%amn (vecflt_type) (9.5.1.2.9)
zn (1598)	coretransp%composition%zn (vecflt_type) (9.5.1.2.9)
zion (1598)	coretransp%composition%zion (vecflt_type) (9.5.1.2.9)
imp_flag (1598)	coretransp%composition%imp_flag (vecint_type) (9.5.1.2.10)
label (1598)	coretransp%composition%label (vecstring_type) (9.5.1.2.11)
desc_impur (1525)	coretransp%desc_impur (desc_impur) (9.5.1.3.124)
amn (1638)	coretransp%desc_impur%amn (vecflt_type) (9.5.1.2.9)
zn (1638)	coretransp%desc_impur%zn (vecint_type) (9.5.1.2.10)
i_ion (1638)	coretransp%desc_impur%i_ion (vecint_type) (9.5.1.2.10)
nzimp (1638)	coretransp%desc_impur%nzimp (vecint_type) (9.5.1.2.10)
zmin (1638)	coretransp%desc_impur%zmin (matint_type) (9.5.1.2.8)
zmax (1638)	coretransp%desc_impur%zmax (matint_type) (9.5.1.2.8)
label (1638)	coretransp%desc_impur%label (vecstring_type) (9.5.1.2.11)
compositions (1525)	coretransp%compositions (compositions_type) (9.5.1.3.88)
nuclei (1602)	coretransp%compositions%nuclei(:) (nuclei) (9.5.1.3.259)
zn (1773)	coretransp%compositions%nuclei(:)%zn (float) (9.5.1.1.1)
amn (1773)	coretransp%compositions%nuclei(:)%amn (float) (9.5.1.1.1)
label (1773)	coretransp%compositions%nuclei(:)%label (string) (9.5.1.1.3)
ions (1602)	coretransp%compositions%ions(:) (ions) (9.5.1.3.219)
nucindex (1733)	coretransp%compositions%ions(:)%nucindex (integer) (9.5.1.1.2)
zion (1733)	coretransp%compositions%ions(:)%zion (float) (9.5.1.1.1)
imp_flag (1733)	coretransp%compositions%ions(:)%imp_flag (integer) (9.5.1.1.2)
label (1733)	coretransp%compositions%ions(:)%label (string) (9.5.1.1.3)
impurities (1602)	coretransp%compositions%impurities(:) (impurities) (9.5.1.3.216)
nucindex (1730)	coretransp%compositions%impurities(:)%nucindex (integer) (9.5.1.1.2)
i_ion (1730)	coretransp%compositions%impurities(:)%i_ion (integer) (9.5.1.1.2)
nzimp (1730)	coretransp%compositions%impurities(:)%nzimp (integer) (9.5.1.1.2)
zmin (1730)	coretransp%compositions%impurities(:)%zmin (vecflt_type) (9.5.1.2.9)
zmax (1730)	coretransp%compositions%impurities(:)%zmax (vecflt_type) (9.5.1.2.9)
label (1730)	coretransp%compositions%impurities(:)%label (vecstring_type) (9.5.1.2.11)
neutralscomp (1602)	coretransp%compositions%neutralscomp(:) (composition_neutralscomp) (9.5.1.3.87)
neutcomp (1601)	coretransp%compositions%neutralscomp(:)%neutcomp(:) (composition_neutrals_neutcomp) (9.5.1.3.86)
nucindex (1600)	coretransp%compositions%neutralscomp(:)%neutcomp(:)%nucindex (integer) (9.5.1.1.2)
multiplicity (1600)	coretransp%compositions%neutralscomp(:)%neutcomp(:)%multiplicity (integer) (9.5.1.1.2)
type (1601)	coretransp%compositions%neutralscomp(:)%type(:) (identifier) (9.5.1.3.214)
id (1728)	coretransp%compositions%neutralscomp(:)%type(:)%id (string) (9.5.1.1.3)
flag (1728)	coretransp%compositions%neutralscomp(:)%type(:)%flag (integer) (9.5.1.1.2)
description (1728)	coretransp%compositions%neutralscomp(:)%type(:)%description (string) (9.5.1.1.3)
label (1601)	coretransp%compositions%neutralscomp(:)%label (string) (9.5.1.1.3)
edgespecies (1602)	coretransp%compositions%edgespecies(:) (edgespecies) (9.5.1.3.170)
nucindex (1684)	coretransp%compositions%edgespecies(:)%nucindex (integer) (9.5.1.1.2)
zmin (1684)	coretransp%compositions%edgespecies(:)%zmin (float) (9.5.1.1.1)
zmax (1684)	coretransp%compositions%edgespecies(:)%zmax (float) (9.5.1.1.1)
label (1684)	coretransp%compositions%edgespecies(:)%label (string) (9.5.1.1.3)
signature (1602)	coretransp%compositions%signature (identifier) (9.5.1.3.214)
id (1728)	coretransp%compositions%signature%id (string) (9.5.1.1.3)
flag (1728)	coretransp%compositions%signature%flag (integer) (9.5.1.1.2)
description (1728)	coretransp%compositions%signature%description (string) (9.5.1.1.3)
values (1525)	coretransp%values(:) (coretransp_values) (9.5.1.3.116)



transportid (1630)	coretransp%values(:)%transportid (identifier) (9.5.1.3.214)
id (1728)	coretransp%values(:)%transportid%id (string) (9.5.1.1.3)
flag (1728)	coretransp%values(:)%transportid%flag (integer) (9.5.1.1.2)
description (1728)	coretransp%values(:)%transportid%description (string) (9.5.1.1.3)
rho_tor_norm (1630)	coretransp%values(:)%rho_tor_norm (vecflt_type) (9.5.1.2.9)
rho_tor (1630)	coretransp%values(:)%rho_tor (vecflt_type) (9.5.1.2.9)
sigma (1630)	coretransp%values(:)%sigma (vecflt_type) (9.5.1.2.9)
ni_transp (1630)	coretransp%values(:)%ni_transp (ni_transp) (9.5.1.3.258)
diff_eff (1772)	coretransp%values(:)%ni_transp%diff_eff (array3dflt_type) (9.5.1.2.1)
vconv_eff (1772)	coretransp%values(:)%ni_transp%vconv_eff (array3dflt_type) (9.5.1.2.1)
flux (1772)	coretransp%values(:)%ni_transp%flux (matflt_type) (9.5.1.2.7)
off_diagonal (1772)	coretransp%values(:)%ni_transp%off_diagonal (offdiagion) (9.5.1.3.262)
d_ni (1776)	coretransp%values(:)%ni_transp%off_diagonal%d_ni (array3dflt_type) (9.5.1.2.1)
d_ti (1776)	coretransp%values(:)%ni_transp%off_diagonal%d_ti (array3dflt_type) (9.5.1.2.1)
d_ne (1776)	coretransp%values(:)%ni_transp%off_diagonal%d_ne (matflt_type) (9.5.1.2.7)
d_te (1776)	coretransp%values(:)%ni_transp%off_diagonal%d_te (matflt_type) (9.5.1.2.7)
d_epar (1776)	coretransp%values(:)%ni_transp%off_diagonal%d_epar (matflt_type) (9.5.1.2.7)
d_mtor (1776)	coretransp%values(:)%ni_transp%off_diagonal%d_mtor (matflt_type) (9.5.1.2.7)
flag (1772)	coretransp%values(:)%ni_transp%flag (integer) (9.5.1.1.2)
ne_transp (1630)	coretransp%values(:)%ne_transp (ne_transp) (9.5.1.3.256)
diff_eff (1770)	coretransp%values(:)%ne_transp%diff_eff (matflt_type) (9.5.1.2.7)
vconv_eff (1770)	coretransp%values(:)%ne_transp%vconv_eff (matflt_type) (9.5.1.2.7)
flux (1770)	coretransp%values(:)%ne_transp%flux (vecflt_type) (9.5.1.2.9)
off_diagonal (1770)	coretransp%values(:)%ne_transp%off_diagonal (offdiagel) (9.5.1.3.261)
d_ni (1775)	coretransp%values(:)%ne_transp%off_diagonal%d_ni (matflt_type) (9.5.1.2.7)
d_ti (1775)	coretransp%values(:)%ne_transp%off_diagonal%d_ti (matflt_type) (9.5.1.2.7)
d_ne (1775)	coretransp%values(:)%ne_transp%off_diagonal%d_ne (vecflt_type) (9.5.1.2.9)
d_te (1775)	coretransp%values(:)%ne_transp%off_diagonal%d_te (vecflt_type) (9.5.1.2.9)
d_epar (1775)	coretransp%values(:)%ne_transp%off_diagonal%d_epar (vecflt_type) (9.5.1.2.9)
d_mtor (1775)	coretransp%values(:)%ne_transp%off_diagonal%d_mtor (vecflt_type) (9.5.1.2.9)
flag (1770)	coretransp%values(:)%ne_transp%flag (integer) (9.5.1.1.2)
nz_transp (1630)	coretransp%values(:)%nz_transp(:) (transcoefimp) (9.5.1.3.399)
diff_eff (1913)	coretransp%values(:)%nz_transp(:)%diff_eff (matflt_type) (9.5.1.2.7)
vconv_eff (1913)	coretransp%values(:)%nz_transp(:)%vconv_eff (matflt_type) (9.5.1.2.7)
exchange (1913)	coretransp%values(:)%nz_transp(:)%exchange (matflt_type) (9.5.1.2.7)
flux (1913)	coretransp%values(:)%nz_transp(:)%flux (matflt_type) (9.5.1.2.7)
flag (1913)	coretransp%values(:)%nz_transp(:)%flag (integer) (9.5.1.1.2)
ti_transp (1630)	coretransp%values(:)%ti_transp (transcoefion) (9.5.1.3.400)
diff_eff (1914)	coretransp%values(:)%ti_transp%diff_eff (matflt_type) (9.5.1.2.7)
vconv_eff (1914)	coretransp%values(:)%ti_transp%vconv_eff (matflt_type) (9.5.1.2.7)
exchange (1914)	coretransp%values(:)%ti_transp%exchange (matflt_type) (9.5.1.2.7)
qgi (1914)	coretransp%values(:)%ti_transp%qgi (matflt_type) (9.5.1.2.7)
flux (1914)	coretransp%values(:)%ti_transp%flux (matflt_type) (9.5.1.2.7)
off_diagonal (1914)	coretransp%values(:)%ti_transp%off_diagonal (offdiagion) (9.5.1.3.262)
d_ni (1776)	coretransp%values(:)%ti_transp%off_diagonal%d_ni (array3dflt_type) (9.5.1.2.1)
d_ti (1776)	coretransp%values(:)%ti_transp%off_diagonal%d_ti (array3dflt_type) (9.5.1.2.1)
d_ne (1776)	coretransp%values(:)%ti_transp%off_diagonal%d_ne (matflt_type) (9.5.1.2.7)
d_te (1776)	coretransp%values(:)%ti_transp%off_diagonal%d_te (matflt_type) (9.5.1.2.7)
d_epar (1776)	coretransp%values(:)%ti_transp%off_diagonal%d_epar (matflt_type) (9.5.1.2.7)
d_mtor (1776)	coretransp%values(:)%ti_transp%off_diagonal%d_mtor (matflt_type) (9.5.1.2.7)
flag (1914)	coretransp%values(:)%ti_transp%flag (integer) (9.5.1.1.2)
te_transp (1630)	coretransp%values(:)%te_transp (transcoefel) (9.5.1.3.398)
diff_eff (1912)	coretransp%values(:)%te_transp%diff_eff (vecflt_type) (9.5.1.2.9)
vconv_eff (1912)	coretransp%values(:)%te_transp%vconv_eff (vecflt_type) (9.5.1.2.9)
flux (1912)	coretransp%values(:)%te_transp%flux (vecflt_type) (9.5.1.2.9)
off_diagonal (1912)	coretransp%values(:)%te_transp%off_diagonal (offdiagel) (9.5.1.3.261)
d_ni (1775)	coretransp%values(:)%te_transp%off_diagonal%d_ni (matflt_type) (9.5.1.2.7)
d_ti (1775)	coretransp%values(:)%te_transp%off_diagonal%d_ti (matflt_type) (9.5.1.2.7)
d_ne (1775)	coretransp%values(:)%te_transp%off_diagonal%d_ne (vecflt_type) (9.5.1.2.9)
d_te (1775)	coretransp%values(:)%te_transp%off_diagonal%d_te (vecflt_type) (9.5.1.2.9)
d_epar (1775)	coretransp%values(:)%te_transp%off_diagonal%d_epar (vecflt_type) (9.5.1.2.9)

d_mtor (1775)	coretransp%values(:)%te_transp%off_diagonal%d_mtor (vecflt_type) (9.5.1.2.9)
flag (1912)	coretransp%values(:)%te_transp%flag (integer) (9.5.1.1.2)
tz_transp (1630)	coretransp%values(:)%tz_transp(:) (transcoefimp) (9.5.1.3.399)
diff_eff (1913)	coretransp%values(:)%tz_transp(:)%diff_eff (matflt_type) (9.5.1.2.7)
vconv_eff (1913)	coretransp%values(:)%tz_transp(:)%vconv_eff (matflt_type) (9.5.1.2.7)
exchange (1913)	coretransp%values(:)%tz_transp(:)%exchange (matflt_type) (9.5.1.2.7)
flux (1913)	coretransp%values(:)%tz_transp(:)%flux (matflt_type) (9.5.1.2.7)
flag (1913)	coretransp%values(:)%tz_transp(:)%flag (integer) (9.5.1.1.2)
vtor_transp (1630)	coretransp%values(:)%vtor_transp (transcoefvtor) (9.5.1.3.401)
diff_eff (1915)	coretransp%values(:)%vtor_transp%diff_eff (matflt_type) (9.5.1.2.7)
vconv_eff (1915)	coretransp%values(:)%vtor_transp%vconv_eff (matflt_type) (9.5.1.2.7)
flux (1915)	coretransp%values(:)%vtor_transp%flux (matflt_type) (9.5.1.2.7)
off_diagonal (1915)	coretransp%values(:)%vtor_transp%off_diagonal (offdiagon) (9.5.1.3.262)
d_ni (1776)	coretransp%values(:)%vtor_transp%off_diagonal%d_ni (array3dfilt_type) (9.5.1.2.1)
d_ti (1776)	coretransp%values(:)%vtor_transp%off_diagonal%d_ti (array3dfilt_type) (9.5.1.2.1)
d_ne (1776)	coretransp%values(:)%vtor_transp%off_diagonal%d_ne (matflt_type) (9.5.1.2.7)
d_te (1776)	coretransp%values(:)%vtor_transp%off_diagonal%d_te (matflt_type) (9.5.1.2.7)
d_epar (1776)	coretransp%values(:)%vtor_transp%off_diagonal%d_epar (matflt_type) (9.5.1.2.7)
d_mtor (1776)	coretransp%values(:)%vtor_transp%off_diagonal%d_mtor (matflt_type) (9.5.1.2.7)
flag (1915)	coretransp%values(:)%vtor_transp%flag (integer) (9.5.1.1.2)
codeparam (1630)	coretransp%values(:)%codeparam (codeparam) (9.5.1.3.66)
codename (1580)	coretransp%values(:)%codeparam%codename (string) (9.5.1.1.3)
codeversion (1580)	coretransp%values(:)%codeparam%codeversion (string) (9.5.1.1.3)
parameters (1580)	coretransp%values(:)%codeparam%parameters (string) (9.5.1.1.3)
output_diag (1580)	coretransp%values(:)%codeparam%output_diag (string) (9.5.1.1.3)
output_flag (1580)	coretransp%values(:)%codeparam%output_flag (integer) (9.5.1.1.2)
codeparam (1525)	coretransp%codeparam (codeparam) (9.5.1.3.66)
codename (1580)	coretransp%codeparam%codename (string) (9.5.1.1.3)
codeversion (1580)	coretransp%codeparam%codeversion (string) (9.5.1.1.3)
parameters (1580)	coretransp%codeparam%parameters (string) (9.5.1.1.3)
output_diag (1580)	coretransp%codeparam%output_diag (string) (9.5.1.1.3)
output_flag (1580)	coretransp%codeparam%output_flag (integer) (9.5.1.1.2)
time (1525)	coretransp%time (float) (9.5.1.1.1)

### 9.5.2.1.10 cxdiag

datainfo (1526)	cxdiag%datainfo (datainfo) (9.5.1.3.121)
dataprovider (1635)	cxdiag%datainfo%dataprovider (string) (9.5.1.1.3)
putdate (1635)	cxdiag%datainfo%putdate (string) (9.5.1.1.3)
source (1635)	cxdiag%datainfo%source (string) (9.5.1.1.3)
comment (1635)	cxdiag%datainfo%comment (string) (9.5.1.1.3)
cocos (1635)	cxdiag%datainfo%cocos (integer) (9.5.1.1.2)
id (1635)	cxdiag%datainfo%id (integer) (9.5.1.1.2)
isref (1635)	cxdiag%datainfo%isref (integer) (9.5.1.1.2)
whatref (1635)	cxdiag%datainfo%whatref (whatref) (9.5.1.3.437)
user (1951)	cxdiag%datainfo%whatref%user (string) (9.5.1.1.3)
machine (1951)	cxdiag%datainfo%whatref%machine (string) (9.5.1.1.3)
shot (1951)	cxdiag%datainfo%whatref%shot (integer) (9.5.1.1.2)
run (1951)	cxdiag%datainfo%whatref%run (integer) (9.5.1.1.2)
occurrence (1951)	cxdiag%datainfo%whatref%occurrence (integer) (9.5.1.1.2)
putinfo (1635)	cxdiag%datainfo%putinfo (putinfo) (9.5.1.3.290)
putmethod (1804)	cxdiag%datainfo%putinfo%putmethod (string) (9.5.1.1.3)
putaccess (1804)	cxdiag%datainfo%putinfo%putaccess (string) (9.5.1.1.3)
putlocation (1804)	cxdiag%datainfo%putinfo%putlocation (string) (9.5.1.1.3)
rights (1804)	cxdiag%datainfo%putinfo%rights (string) (9.5.1.1.3)
setup (1526)	cxdiag%setup (cxsetup) (9.5.1.3.119)
position (1633)	cxdiag%setup%position (rzphi1Dexp) (9.5.1.3.332)
r (1846)	cxdiag%setup%position%r (exp1D) (9.5.1.3.181)
value (1695)	cxdiag%setup%position%r%value (vecflt_type) (9.5.1.2.9)
abserror (1695)	cxdiag%setup%position%r%abserror (vecflt_type) (9.5.1.2.9)
releror (1695)	cxdiag%setup%position%r%releror (vecflt_type) (9.5.1.2.9)



z (1846)	cxdiag%setup%position%z (exp1D) (9.5.1.3.181)
value (1695)	cxdiag%setup%position%z%value (vecflt_type) (9.5.1.2.9)
abserror (1695)	cxdiag%setup%position%z%abserror (vecflt_type) (9.5.1.2.9)
releror (1695)	cxdiag%setup%position%z%releror (vecflt_type) (9.5.1.2.9)
phi (1846)	cxdiag%setup%position%phi (exp1D) (9.5.1.3.181)
value (1695)	cxdiag%setup%position%phi%value (vecflt_type) (9.5.1.2.9)
abserror (1695)	cxdiag%setup%position%phi%abserror (vecflt_type) (9.5.1.2.9)
releror (1695)	cxdiag%setup%position%phi%releror (vecflt_type) (9.5.1.2.9)
measure (1526)	cxdiag%measure (cxmeasure) (9.5.1.3.118)
ti (1632)	cxdiag%measure%ti (exp1D) (9.5.1.3.181)
value (1695)	cxdiag%measure%ti%value (vecflt_type) (9.5.1.2.9)
abserror (1695)	cxdiag%measure%ti%abserror (vecflt_type) (9.5.1.2.9)
releror (1695)	cxdiag%measure%ti%releror (vecflt_type) (9.5.1.2.9)
vtor (1632)	cxdiag%measure%vtor (exp1D) (9.5.1.3.181)
value (1695)	cxdiag%measure%vtor%value (vecflt_type) (9.5.1.2.9)
abserror (1695)	cxdiag%measure%vtor%abserror (vecflt_type) (9.5.1.2.9)
releror (1695)	cxdiag%measure%vtor%releror (vecflt_type) (9.5.1.2.9)
vpol (1632)	cxdiag%measure%vpol (exp1D) (9.5.1.3.181)
value (1695)	cxdiag%measure%vpol%value (vecflt_type) (9.5.1.2.9)
abserror (1695)	cxdiag%measure%vpol%abserror (vecflt_type) (9.5.1.2.9)
releror (1695)	cxdiag%measure%vpol%releror (vecflt_type) (9.5.1.2.9)
time (1526)	cxdiag%time (float) (9.5.1.1.1)

### 9.5.2.1.11 distribution

datainfo (1527)	distribution%datainfo (datainfo) (9.5.1.3.121)
dataprovider (1635)	distribution%datainfo%dataprovider (string) (9.5.1.1.3)
putdate (1635)	distribution%datainfo%putdate (string) (9.5.1.1.3)
source (1635)	distribution%datainfo%source (string) (9.5.1.1.3)
comment (1635)	distribution%datainfo%comment (string) (9.5.1.1.3)
cocos (1635)	distribution%datainfo%cocos (integer) (9.5.1.1.2)
id (1635)	distribution%datainfo%id (integer) (9.5.1.1.2)
isref (1635)	distribution%datainfo%isref (integer) (9.5.1.1.2)
whatref (1635)	distribution%datainfo%whatref (whatref) (9.5.1.3.437)
user (1951)	distribution%datainfo%whatref%user (string) (9.5.1.1.3)
machine (1951)	distribution%datainfo%whatref%machine (string) (9.5.1.1.3)
shot (1951)	distribution%datainfo%whatref%shot (integer) (9.5.1.1.2)
run (1951)	distribution%datainfo%whatref%run (integer) (9.5.1.1.2)
occurrence (1951)	distribution%datainfo%whatref%occurrence (integer) (9.5.1.1.2)
putinfo (1635)	distribution%datainfo%putinfo (putinfo) (9.5.1.3.290)
putmethod (1804)	distribution%datainfo%putinfo%putmethod (string) (9.5.1.1.3)
putaccess (1804)	distribution%datainfo%putinfo%putaccess (string) (9.5.1.1.3)
putlocation (1804)	distribution%datainfo%putinfo%putlocation (string) (9.5.1.1.3)
rights (1804)	distribution%datainfo%putinfo%rights (string) (9.5.1.1.3)
composition (1527)	distribution%composition (composition) (9.5.1.3.84)
amn (1598)	distribution%composition%amn (vecflt_type) (9.5.1.2.9)
zn (1598)	distribution%composition%zn (vecflt_type) (9.5.1.2.9)
zion (1598)	distribution%composition%zion (vecflt_type) (9.5.1.2.9)
imp_flag (1598)	distribution%composition%imp_flag (vecint_type) (9.5.1.2.10)
label (1598)	distribution%composition%label (vecstring_type) (9.5.1.2.11)
compositions (1527)	distribution%compositions (compositions_type) (9.5.1.3.88)
nuclei (1602)	distribution%compositions%nuclei(:) (nuclei) (9.5.1.3.259)
zn (1773)	distribution%compositions%nuclei(:)%zn (float) (9.5.1.1.1)
amn (1773)	distribution%compositions%nuclei(:)%amn (float) (9.5.1.1.1)
label (1773)	distribution%compositions%nuclei(:)%label (string) (9.5.1.1.3)
ions (1602)	distribution%compositions%ions(:) (ions) (9.5.1.3.219)
nucindex (1733)	distribution%compositions%ions(:)%nucindex (integer) (9.5.1.1.2)
zion (1733)	distribution%compositions%ions(:)%zion (float) (9.5.1.1.1)
imp_flag (1733)	distribution%compositions%ions(:)%imp_flag (integer) (9.5.1.1.2)
label (1733)	distribution%compositions%ions(:)%label (string) (9.5.1.1.3)
impurities (1602)	distribution%compositions%impurities(:) (impurities) (9.5.1.3.216)

nucindex (1730)	distribution%compositions%impurities(:)%nucindex (integer) (9.5.1.1.2)
i.ion (1730)	distribution%compositions%impurities(:)%i.ion (integer) (9.5.1.1.2)
nzimp (1730)	distribution%compositions%impurities(:)%nzimp (integer) (9.5.1.1.2)
zmin (1730)	distribution%compositions%impurities(:)%zmin (vecflt_type) (9.5.1.2.9)
zmax (1730)	distribution%compositions%impurities(:)%zmax (vecflt_type) (9.5.1.2.9)
label (1730)	distribution%compositions%impurities(:)%label (vecstring_type) (9.5.1.2.11)
neutralscomp (1602)	distribution%compositions%neutralscomp(:) (composition_neutralscomp) (9.5.1.3.87)
neutcomp (1601)	distribution%compositions%neutralscomp(:)%neutcomp(:) (composition_neutrals_neutcomp) (9.5.1.3.86)
nucindex (1600)	distribution%compositions%neutralscomp(:)%neutcomp(:)%nucindex (integer) (9.5.1.1.2)
multiplicity (1600)	distribution%compositions%neutralscomp(:)%neutcomp(:)%multiplicity (integer) (9.5.1.1.2)
type (1601)	distribution%compositions%neutralscomp(:)%type(:) (identifier) (9.5.1.3.214)
id (1728)	distribution%compositions%neutralscomp(:)%type(:)%id (string) (9.5.1.1.3)
flag (1728)	distribution%compositions%neutralscomp(:)%type(:)%flag (integer) (9.5.1.1.2)
description (1728)	distribution%compositions%neutralscomp(:)%type(:)%description (string) (9.5.1.1.3)
label (1601)	distribution%compositions%neutralscomp(:)%label (string) (9.5.1.1.3)
edgespecies (1602)	distribution%compositions%edgespecies(:) (edgespecies) (9.5.1.3.170)
nucindex (1684)	distribution%compositions%edgespecies(:)%nucindex (integer) (9.5.1.1.2)
zmin (1684)	distribution%compositions%edgespecies(:)%zmin (float) (9.5.1.1.1)
zmax (1684)	distribution%compositions%edgespecies(:)%zmax (float) (9.5.1.1.1)
label (1684)	distribution%compositions%edgespecies(:)%label (string) (9.5.1.1.3)
signature (1602)	distribution%compositions%signature (identifier) (9.5.1.3.214)
id (1728)	distribution%compositions%signature%id (string) (9.5.1.1.3)
flag (1728)	distribution%compositions%signature%flag (integer) (9.5.1.1.2)
description (1728)	distribution%compositions%signature%description (string) (9.5.1.1.3)
distri_vec (1527)	distribution%distri_vec(:) (distri_vec) (9.5.1.3.151)
wave_id (1665)	distribution%distri_vec(:)%wave_id(:) (enum_instance) (9.5.1.3.173)
type (1687)	distribution%distri_vec(:)%wave_id(:)%type (identifier) (9.5.1.3.214)
id (1728)	distribution%distri_vec(:)%wave_id(:)%type%id (string) (9.5.1.1.3)
flag (1728)	distribution%distri_vec(:)%wave_id(:)%type%flag (integer) (9.5.1.1.2)
description (1728)	distribution%distri_vec(:)%wave_id(:)%type%description (string) (9.5.1.1.3)
name (1687)	distribution%distri_vec(:)%wave_id(:)%name (string) (9.5.1.1.3)
index (1687)	distribution%distri_vec(:)%wave_id(:)%index (integer) (9.5.1.1.2)
source_id (1665)	distribution%distri_vec(:)%source_id(:) (enum_instance) (9.5.1.3.173)
type (1687)	distribution%distri_vec(:)%source_id(:)%type (identifier) (9.5.1.3.214)
id (1728)	distribution%distri_vec(:)%source_id(:)%type%id (string) (9.5.1.1.3)
flag (1728)	distribution%distri_vec(:)%source_id(:)%type%flag (integer) (9.5.1.1.2)
description (1728)	distribution%distri_vec(:)%source_id(:)%type%description (string) (9.5.1.1.3)
name (1687)	distribution%distri_vec(:)%source_id(:)%name (string) (9.5.1.1.3)
index (1687)	distribution%distri_vec(:)%source_id(:)%index (integer) (9.5.1.1.2)
calc_spec (1665)	distribution%distri_vec(:)%calc_spec (integer) (9.5.1.1.2)
gyro_type (1665)	distribution%distri_vec(:)%gyro_type (integer) (9.5.1.1.2)
global_param (1665)	distribution%distri_vec(:)%global_param (dist_glob) (9.5.1.3.131)
n_particles (1645)	distribution%distri_vec(:)%global_param%n_particles (float) (9.5.1.1.1)
enrg (1645)	distribution%distri_vec(:)%global_param%enrg (float) (9.5.1.1.1)
enrg_para (1645)	distribution%distri_vec(:)%global_param%enrg_para (float) (9.5.1.1.1)
pow_coll_i (1645)	distribution%distri_vec(:)%global_param%pow_coll_i (vecflt_type) (9.5.1.2.9)
pow_coll_e (1645)	distribution%distri_vec(:)%global_param%pow_coll_e (float) (9.5.1.1.1)
therm_src (1645)	distribution%distri_vec(:)%global_param%therm_src (dist_src_snk_tot) (9.5.1.3.148)
particles (1662)	distribution%distri_vec(:)%global_param%therm_src%particles (float) (9.5.1.1.1)
power (1662)	distribution%distri_vec(:)%global_param%therm_src%power (float) (9.5.1.1.1)
torque (1662)	distribution%distri_vec(:)%global_param%therm_src%torque (float) (9.5.1.1.1)
losses (1645)	distribution%distri_vec(:)%global_param%losses (dist_glob_dist_losses) (9.5.1.3.132)
orb_loss (1646)	distribution%distri_vec(:)%global_param%losses%orb_loss (dist_src_snk_tot) (9.5.1.3.148)
particles (1662)	distribution%distri_vec(:)%global_param%losses%orb_loss%particles (float) (9.5.1.1.1)
power (1662)	distribution%distri_vec(:)%global_param%losses%orb_loss%power (float) (9.5.1.1.1)
torque (1662)	distribution%distri_vec(:)%global_param%losses%orb_loss%torque (float) (9.5.1.1.1)
neutr_loss (1646)	distribution%distri_vec(:)%global_param%losses%neutr_loss (dist_src_snk_tot) (9.5.1.3.148)
particles (1662)	distribution%distri_vec(:)%global_param%losses%neutr_loss%particles (float) (9.5.1.1.1)
power (1662)	distribution%distri_vec(:)%global_param%losses%neutr_loss%power (float) (9.5.1.1.1)
torque (1662)	distribution%distri_vec(:)%global_param%losses%neutr_loss%torque (float) (9.5.1.1.1)
cur_dr_tor (1645)	distribution%distri_vec(:)%global_param%cur_dr_tor (float) (9.5.1.1.1)

trq_i (1645)	distribution%distri_vec(:)%global_param%trq_i (vecflt_type) (9.5.1.2.9)
trq_e (1645)	distribution%distri_vec(:)%global_param%trq_e (float) (9.5.1.1.1)
trq_j_rxb (1645)	distribution%distri_vec(:)%global_param%trq_j_rxb (float) (9.5.1.1.1)
nucl_reac_th (1645)	distribution%distri_vec(:)%global_param%nucl_reac_th (dist_nucl_reac_th) (9.5.1.3.138)
rate (1652)	distribution%distri_vec(:)%global_param%nucl_reac_th%rate (vecflt_type) (9.5.1.2.9)
power (1652)	distribution%distri_vec(:)%global_param%nucl_reac_th%power (vecflt_type) (9.5.1.2.9)
nucl_reac_sf (1645)	distribution%distri_vec(:)%global_param%nucl_reac_sf (dist_nucl_reac_sf) (9.5.1.3.137)
rate (1651)	distribution%distri_vec(:)%global_param%nucl_reac_sf%rate (float) (9.5.1.1.1)
power (1651)	distribution%distri_vec(:)%global_param%nucl_reac_sf%power (float) (9.5.1.1.1)
profiles_1d (1665)	distribution%distri_vec(:)%profiles_1d (dist_profiles) (9.5.1.3.146)
rho_tor_norm (1660)	distribution%distri_vec(:)%profiles_1d%rho_tor_norm (vecflt_type) (9.5.1.2.9)
rho_tor (1660)	distribution%distri_vec(:)%profiles_1d%rho_tor (vecflt_type) (9.5.1.2.9)
psi (1660)	distribution%distri_vec(:)%profiles_1d%psi (vecflt_type) (9.5.1.2.9)
dens (1660)	distribution%distri_vec(:)%profiles_1d%dens (vecflt_type) (9.5.1.2.9)
enrgd_tot (1660)	distribution%distri_vec(:)%profiles_1d%enrgd_tot (vecflt_type) (9.5.1.2.9)
enrgd_para (1660)	distribution%distri_vec(:)%profiles_1d%enrgd_para (vecflt_type) (9.5.1.2.9)
powd_coll_i (1660)	distribution%distri_vec(:)%profiles_1d%powd_coll_i (matflt_type) (9.5.1.2.7)
powd_coll_e (1660)	distribution%distri_vec(:)%profiles_1d%powd_coll_e (vecflt_type) (9.5.1.2.9)
therm_srcd (1660)	distribution%distri_vec(:)%profiles_1d%therm_srcd (dist_src_snk_surf) (9.5.1.3.147)
particlesd (1661)	distribution%distri_vec(:)%profiles_1d%therm_srcd%particlesd (vecflt_type) (9.5.1.2.9)
powerd (1661)	distribution%distri_vec(:)%profiles_1d%therm_srcd%powerd (vecflt_type) (9.5.1.2.9)
torqued (1661)	distribution%distri_vec(:)%profiles_1d%therm_srcd%torqued (vecflt_type) (9.5.1.2.9)
lossesd (1660)	distribution%distri_vec(:)%profiles_1d%lossesd (dist_prof_surf_dist_losses) (9.5.1.3.140)
orb_loss (1654)	distribution%distri_vec(:)%profiles_1d%lossesd%orb_loss (dist_src_snk_surf) (9.5.1.3.147)
particlesd (1661)	distribution%distri_vec(:)%profiles_1d%lossesd%orb_loss%particlesd (vecflt_type) (9.5.1.2.9)
powerd (1661)	distribution%distri_vec(:)%profiles_1d%lossesd%orb_loss%powerd (vecflt_type) (9.5.1.2.9)
torqued (1661)	distribution%distri_vec(:)%profiles_1d%lossesd%orb_loss%torqued (vecflt_type) (9.5.1.2.9)
neutr_loss (1654)	distribution%distri_vec(:)%profiles_1d%lossesd%neutr_loss (dist_src_snk_surf) (9.5.1.3.147)
particlesd (1661)	distribution%distri_vec(:)%profiles_1d%lossesd%neutr_loss%particlesd (vecflt_type) (9.5.1.2.9)
powerd (1661)	distribution%distri_vec(:)%profiles_1d%lossesd%neutr_loss%powerd (vecflt_type) (9.5.1.2.9)
torqued (1661)	distribution%distri_vec(:)%profiles_1d%lossesd%neutr_loss%torqued (vecflt_type) (9.5.1.2.9)
curd_fp (1660)	distribution%distri_vec(:)%profiles_1d%curd_fp (vecflt_type) (9.5.1.2.9)
curd_dr (1660)	distribution%distri_vec(:)%profiles_1d%curd_dr (vecflt_type) (9.5.1.2.9)
trqd_i (1660)	distribution%distri_vec(:)%profiles_1d%trqd_i (matflt_type) (9.5.1.2.7)
trqd_e (1660)	distribution%distri_vec(:)%profiles_1d%trqd_e (vecflt_type) (9.5.1.2.9)
trqd_j_rxb (1660)	distribution%distri_vec(:)%profiles_1d%trqd_j_rxb (vecflt_type) (9.5.1.2.9)
nucl_rd_th (1660)	distribution%distri_vec(:)%profiles_1d%nucl_rd_th (dist_prof_surf_nucl_reac_th) (9.5.1.3.142)
rated (1656)	distribution%distri_vec(:)%profiles_1d%nucl_rd_th%rated (matflt_type) (9.5.1.2.7)
powerd (1656)	distribution%distri_vec(:)%profiles_1d%nucl_rd_th%powerd (matflt_type) (9.5.1.2.7)
nucl_rd_sf (1660)	distribution%distri_vec(:)%profiles_1d%nucl_rd_sf (dist_prof_surf_nucl_reac_sf) (9.5.1.3.141)
rate (1655)	distribution%distri_vec(:)%profiles_1d%nucl_rd_sf%rate (vecflt_type) (9.5.1.2.9)
power (1655)	distribution%distri_vec(:)%profiles_1d%nucl_rd_sf%power (vecflt_type) (9.5.1.2.9)
eng_tot (1660)	distribution%distri_vec(:)%profiles_1d%eng_tot (vecflt_type) (9.5.1.2.9)
eng_para (1660)	distribution%distri_vec(:)%profiles_1d%eng_para (vecflt_type) (9.5.1.2.9)
pow_coll_i (1660)	distribution%distri_vec(:)%profiles_1d%pow_coll_i (matflt_type) (9.5.1.2.7)
pow_coll_e (1660)	distribution%distri_vec(:)%profiles_1d%pow_coll_e (vecflt_type) (9.5.1.2.9)
therm_src (1660)	distribution%distri_vec(:)%profiles_1d%therm_src (dist_src_snk_vol) (9.5.1.3.149)
particles (1663)	distribution%distri_vec(:)%profiles_1d%therm_src%particles (vecflt_type) (9.5.1.2.9)
power (1663)	distribution%distri_vec(:)%profiles_1d%therm_src%power (vecflt_type) (9.5.1.2.9)
torque (1663)	distribution%distri_vec(:)%profiles_1d%therm_src%torque (vecflt_type) (9.5.1.2.9)
losses (1660)	distribution%distri_vec(:)%profiles_1d%losses (dist_prof_vol_dist_losses) (9.5.1.3.143)
orb_loss (1657)	distribution%distri_vec(:)%profiles_1d%losses%orb_loss (dist_src_snk_vol) (9.5.1.3.149)
particles (1663)	distribution%distri_vec(:)%profiles_1d%losses%orb_loss%particles (vecflt_type) (9.5.1.2.9)
power (1663)	distribution%distri_vec(:)%profiles_1d%losses%orb_loss%power (vecflt_type) (9.5.1.2.9)
torque (1663)	distribution%distri_vec(:)%profiles_1d%losses%orb_loss%torque (vecflt_type) (9.5.1.2.9)
neutr_loss (1657)	distribution%distri_vec(:)%profiles_1d%losses%neutr_loss (dist_src_snk_vol) (9.5.1.3.149)
particles (1663)	distribution%distri_vec(:)%profiles_1d%losses%neutr_loss%particles (vecflt_type) (9.5.1.2.9)
power (1663)	distribution%distri_vec(:)%profiles_1d%losses%neutr_loss%power (vecflt_type) (9.5.1.2.9)
torque (1663)	distribution%distri_vec(:)%profiles_1d%losses%neutr_loss%torque (vecflt_type) (9.5.1.2.9)
cur_fp (1660)	distribution%distri_vec(:)%profiles_1d%cur_fp (vecflt_type) (9.5.1.2.9)
cur_dr (1660)	distribution%distri_vec(:)%profiles_1d%cur_dr (vecflt_type) (9.5.1.2.9)

trq_i (1660)	distribution%distri_vec(:)%profiles_1d%trq_i (matflt.type) (9.5.1.2.7)
trq_e (1660)	distribution%distri_vec(:)%profiles_1d%trq_e (vecflt.type) (9.5.1.2.9)
trq_j_rxb (1660)	distribution%distri_vec(:)%profiles_1d%trq_j_rxb (vecflt.type) (9.5.1.2.9)
nucl_reac_th (1660)	distribution%distri_vec(:)%profiles_1d%nucl_reac.th (dist_prof.vol_nucl_reac.th) (9.5.1.3.145)
rate (1659)	distribution%distri_vec(:)%profiles_1d%nucl_reac.th%rate (matflt.type) (9.5.1.2.7)
power (1659)	distribution%distri_vec(:)%profiles_1d%nucl_reac.th%power (matflt.type) (9.5.1.2.7)
nucl_reac_sf (1660)	distribution%distri_vec(:)%profiles_1d%nucl_reac.sf (dist_prof.vol_nucl_reac.sf) (9.5.1.3.144)
rate (1658)	distribution%distri_vec(:)%profiles_1d%nucl_reac.sf%rate (vecflt.type) (9.5.1.2.9)
power (1658)	distribution%distri_vec(:)%profiles_1d%nucl_reac.sf%power (vecflt.type) (9.5.1.2.9)
dist_func (1665)	distribution%distri_vec(:)%dist_func (dist_func) (9.5.1.3.130)
is_delta_f (1644)	distribution%distri_vec(:)%dist_func%is_delta_f (integer) (9.5.1.1.2)
markers (1644)	distribution%distri_vec(:)%dist_func%markers (weighted_markers) (9.5.1.3.436)
variable_ids (1950)	distribution%distri_vec(:)%dist_func%markers%variable_ids(:) (identifier) (9.5.1.3.214)
id (1728)	distribution%distri_vec(:)%dist_func%markers%variable_ids(:)%id (string) (9.5.1.1.3)
flag (1728)	distribution%distri_vec(:)%dist_func%markers%variable_ids(:)%flag (integer) (9.5.1.1.2)
description (1728)	distribution%distri_vec(:)%dist_func%markers%variable_ids(:)%description (string) (9.5.1.1.3)
coord (1950)	distribution%distri_vec(:)%dist_func%markers%coord (matflt.type) (9.5.1.2.7)
weight (1950)	distribution%distri_vec(:)%dist_func%markers%weight (vecflt.type) (9.5.1.2.9)
f.expan_topo (1644)	distribution%distri_vec(:)%dist_func%f.expan_topo(:) (dist_ff) (9.5.1.3.129)
grid_info (1643)	distribution%distri_vec(:)%dist_func%f.expan_topo(:)%grid_info (dist_grid_info) (9.5.1.3.133)
grid_type (1647)	distribution%distri_vec(:)%dist_func%f.expan_topo(:)%grid_info%grid_type (integer) (9.5.1.1.2)
ngriddim (1647)	distribution%distri_vec(:)%dist_func%f.expan_topo(:)%grid_info%ngriddim (integer) (9.5.1.1.2)
grid_coord (1647)	distribution%distri_vec(:)%dist_func%f.expan_topo(:)%grid_info%grid_coord (vecint.type) (9.5.1.2.10)
thin_orbits (1647)	distribution%distri_vec(:)%dist_func%f.expan_topo(:)%grid_info%thin_orbits (integer) (9.5.1.1.2)
topology (1647)	distribution%distri_vec(:)%dist_func%f.expan_topo(:)%grid_info%topology (string) (9.5.1.1.3)
omnigen_surf (1647)	distribution%distri_vec(:)%dist_func%f.expan_topo(:)%grid_info%omnigen_surf(:) (omnigen_surf) (9.5.1.3.263)
rz (1777)	distribution%distri_vec(:)%dist_func%f.expan_topo(:)%grid_info%omnigen_surf(:)%rz (rz1D) (9.5.1.3.325)
r (1839)	distribution%distri_vec(:)%dist_func%f.expan_topo(:)%grid_info%omnigen_surf(:)%rz%r (vecflt.type) (9.5.1.2.9)
z (1839)	distribution%distri_vec(:)%dist_func%f.expan_topo(:)%grid_info%omnigen_surf(:)%rz%z (vecflt.type) (9.5.1.2.9)
s (1777)	distribution%distri_vec(:)%dist_func%f.expan_topo(:)%grid_info%omnigen_surf(:)%s (vecflt.type) (9.5.1.2.9)
topo_regions (1643)	distribution%distri_vec(:)%dist_func%f.expan_topo(:)%topo_regions(:) (topo_regions) (9.5.1.3.395)
ind_omnigen (1909)	distribution%distri_vec(:)%dist_func%f.expan_topo(:)%topo_regions(:)%ind_omnigen (integer) (9.5.1.1.2)
dim1 (1909)	distribution%distri_vec(:)%dist_func%f.expan_topo(:)%topo_regions(:)%dim1 (array6dflt.type) (9.5.1.2.5)
dim2 (1909)	distribution%distri_vec(:)%dist_func%f.expan_topo(:)%topo_regions(:)%dim2 (array6dflt.type) (9.5.1.2.5)
dim3 (1909)	distribution%distri_vec(:)%dist_func%f.expan_topo(:)%topo_regions(:)%dim3 (array6dflt.type) (9.5.1.2.5)
dim4 (1909)	distribution%distri_vec(:)%dist_func%f.expan_topo(:)%topo_regions(:)%dim4 (array6dflt.type) (9.5.1.2.5)
dim5 (1909)	distribution%distri_vec(:)%dist_func%f.expan_topo(:)%topo_regions(:)%dim5 (array6dflt.type) (9.5.1.2.5)
dim6 (1909)	distribution%distri_vec(:)%dist_func%f.expan_topo(:)%topo_regions(:)%dim6 (array6dflt.type) (9.5.1.2.5)
jacobian (1909)	distribution%distri_vec(:)%dist_func%f.expan_topo(:)%topo_regions(:)%jacobian (array6dflt.type) (9.5.1.2.5)
distfunc (1909)	distribution%distri_vec(:)%dist_func%f.expan_topo(:)%topo_regions(:)%distfunc (array6dflt.type) (9.5.1.2.5)
f.expansion (1644)	distribution%distri_vec(:)%dist_func%f.expansion(:) (f.expansion) (9.5.1.3.183)
grid (1697)	distribution%distri_vec(:)%dist_func%f.expansion(:)%grid (complexgrid) (9.5.1.3.71)
uid (1585)	distribution%distri_vec(:)%dist_func%f.expansion(:)%grid%uid (integer) (9.5.1.1.2)
id (1585)	distribution%distri_vec(:)%dist_func%f.expansion(:)%grid%id (string) (9.5.1.1.3)
spaces (1585)	distribution%distri_vec(:)%dist_func%f.expansion(:)%grid%spaces(:) (complexgrid.space) (9.5.1.3.80)
geotype (1594)	distribution%distri_vec(:)%dist_func%f.expansion(:)%grid%spaces(:)%geotype (vecint.type) (9.5.1.2.10)
geotypeid (1594)	distribution%distri_vec(:)%dist_func%f.expansion(:)%grid%spaces(:)%geotypeid (vecstring.type) (9.5.1.2.11)

coordtype (1594)	distribution%distri_vec(:)%dist_func%of_expansion(:)%grid%spaces(:)%coordtype (matint_type) (9.5.1.2.8)
objects (1594)	distribution%distri_vec(:)%dist_func%of_expansion(:)%grid%spaces(:)%objects(:) (objects) (9.5.1.3.260)
boundary (1774)	distribution%distri_vec(:)%dist_func%of_expansion(:)%grid%spaces(:)%objects(:)%boundary (matint_type) (9.5.1.2.8)
neighbour (1774)	distribution%distri_vec(:)%dist_func%of_expansion(:)%grid%spaces(:)%objects(:)%neighbour (array3dint_type) (9.5.1.2.2)
geo (1774)	distribution%distri_vec(:)%dist_func%of_expansion(:)%grid%spaces(:)%objects(:)%geo (array4dflt_type) (9.5.1.2.3)
measure (1774)	distribution%distri_vec(:)%dist_func%of_expansion(:)%grid%spaces(:)%objects(:)%measure (matflt_type) (9.5.1.2.7)
xpoints (1594)	distribution%distri_vec(:)%dist_func%of_expansion(:)%grid%spaces(:)%xpoints (vecint_type) (9.5.1.2.10)
subgrids (1585)	distribution%distri_vec(:)%dist_func%of_expansion(:)%grid%subgrids(:) (complex_grid_subgrid) (9.5.1.3.81)
id (1595)	distribution%distri_vec(:)%dist_func%of_expansion(:)%grid%subgrids(:)%id (string) (9.5.1.1.3)
list (1595)	distribution%distri_vec(:)%dist_func%of_expansion(:)%grid%subgrids(:)%list(:) (complex_grid_objectlist) (9.5.1.3.75)
cls (1589)	distribution%distri_vec(:)%dist_func%of_expansion(:)%grid%subgrids(:)%list(:)%cls (vecint_type) (9.5.1.2.10)
indset (1589)	distribution%distri_vec(:)%dist_func%of_expansion(:)%grid%subgrids(:)%list(:)%indset(:) (complex_grid_indexlist) (9.5.1.3.73)
range (1587)	distribution%distri_vec(:)%dist_func%of_expansion(:)%grid%subgrids(:)%list(:)%indset(:)%range (vecint_type) (9.5.1.2.10)
ind (1587)	distribution%distri_vec(:)%dist_func%of_expansion(:)%grid%subgrids(:)%list(:)%indset(:)%ind (vecint_type) (9.5.1.2.10)
ind (1589)	distribution%distri_vec(:)%dist_func%of_expansion(:)%grid%subgrids(:)%list(:)%ind (matint_type) (9.5.1.2.8)
metric (1585)	distribution%distri_vec(:)%dist_func%of_expansion(:)%grid%metric (complex_grid_metric) (9.5.1.3.74)
measure (1588)	distribution%distri_vec(:)%dist_func%of_expansion(:)%grid%metric%measure(:) (complex_grid_scalar) (9.5.1.3.76)
griduid (1590)	distribution%distri_vec(:)%dist_func%of_expansion(:)%grid%metric%measure(:)%griduid (integer) (9.5.1.1.2)
subgrid (1590)	distribution%distri_vec(:)%dist_func%of_expansion(:)%grid%metric%measure(:)%subgrid (integer) (9.5.1.1.2)
scalar (1590)	distribution%distri_vec(:)%dist_func%of_expansion(:)%grid%metric%measure(:)%scalar (vecflt_type) (9.5.1.2.9)
vector (1590)	distribution%distri_vec(:)%dist_func%of_expansion(:)%grid%metric%measure(:)%vector (matflt_type) (9.5.1.2.7)
matrix (1590)	distribution%distri_vec(:)%dist_func%of_expansion(:)%grid%metric%measure(:)%matrix (array3dflt_type) (9.5.1.2.1)
g11 (1588)	distribution%distri_vec(:)%dist_func%of_expansion(:)%grid%metric%g11(:) (complex_grid_scalar) (9.5.1.3.76)
griduid (1590)	distribution%distri_vec(:)%dist_func%of_expansion(:)%grid%metric%g11(:)%griduid (integer) (9.5.1.1.2)
subgrid (1590)	distribution%distri_vec(:)%dist_func%of_expansion(:)%grid%metric%g11(:)%subgrid (integer) (9.5.1.1.2)
scalar (1590)	distribution%distri_vec(:)%dist_func%of_expansion(:)%grid%metric%g11(:)%scalar (vecflt_type) (9.5.1.2.9)
vector (1590)	distribution%distri_vec(:)%dist_func%of_expansion(:)%grid%metric%g11(:)%vector (matflt_type) (9.5.1.2.7)
matrix (1590)	distribution%distri_vec(:)%dist_func%of_expansion(:)%grid%metric%g11(:)%matrix (array3dflt_type) (9.5.1.2.1)
g12 (1588)	distribution%distri_vec(:)%dist_func%of_expansion(:)%grid%metric%g12(:) (complex_grid_scalar) (9.5.1.3.76)
griduid (1590)	distribution%distri_vec(:)%dist_func%of_expansion(:)%grid%metric%g12(:)%griduid (integer) (9.5.1.1.2)
subgrid (1590)	distribution%distri_vec(:)%dist_func%of_expansion(:)%grid%metric%g12(:)%subgrid (integer) (9.5.1.1.2)
scalar (1590)	distribution%distri_vec(:)%dist_func%of_expansion(:)%grid%metric%g12(:)%scalar (vecflt_type) (9.5.1.2.9)
vector (1590)	distribution%distri_vec(:)%dist_func%of_expansion(:)%grid%metric%g12(:)%vector (matflt_type) (9.5.1.2.7)
matrix (1590)	distribution%distri_vec(:)%dist_func%of_expansion(:)%grid%metric%g12(:)%matrix (array3dflt_type) (9.5.1.2.1)
g13 (1588)	distribution%distri_vec(:)%dist_func%of_expansion(:)%grid%metric%g13(:) (complex_grid_scalar) (9.5.1.3.76)
griduid (1590)	distribution%distri_vec(:)%dist_func%of_expansion(:)%grid%metric%g13(:)%griduid (integer) (9.5.1.1.2)
subgrid (1590)	distribution%distri_vec(:)%dist_func%of_expansion(:)%grid%metric%g13(:)%subgrid (integer) (9.5.1.1.2)

scalar (1590)	distribution%distri_vec(:)%dist_func%of_expansion(:)%grid%metric%g13(:)%scalar (vecflt_type) (9.5.1.2.9)
vector (1590)	distribution%distri_vec(:)%dist_func%of_expansion(:)%grid%metric%g13(:)%vector (matflt_type) (9.5.1.2.7)
matrix (1590)	distribution%distri_vec(:)%dist_func%of_expansion(:)%grid%metric%g13(:)%matrix (array3dflt_type) (9.5.1.2.1)
g22 (1588)	distribution%distri_vec(:)%dist_func%of_expansion(:)%grid%metric%g22(:) (complex-grid_scalar) (9.5.1.3.76)
griduid (1590)	distribution%distri_vec(:)%dist_func%of_expansion(:)%grid%metric%g22(:)%griduid (integer) (9.5.1.1.2)
subgrid (1590)	distribution%distri_vec(:)%dist_func%of_expansion(:)%grid%metric%g22(:)%subgrid (integer) (9.5.1.1.2)
scalar (1590)	distribution%distri_vec(:)%dist_func%of_expansion(:)%grid%metric%g22(:)%scalar (vecflt_type) (9.5.1.2.9)
vector (1590)	distribution%distri_vec(:)%dist_func%of_expansion(:)%grid%metric%g22(:)%vector (matflt_type) (9.5.1.2.7)
matrix (1590)	distribution%distri_vec(:)%dist_func%of_expansion(:)%grid%metric%g22(:)%matrix (array3dflt_type) (9.5.1.2.1)
g23 (1588)	distribution%distri_vec(:)%dist_func%of_expansion(:)%grid%metric%g23(:) (complex-grid_scalar) (9.5.1.3.76)
griduid (1590)	distribution%distri_vec(:)%dist_func%of_expansion(:)%grid%metric%g23(:)%griduid (integer) (9.5.1.1.2)
subgrid (1590)	distribution%distri_vec(:)%dist_func%of_expansion(:)%grid%metric%g23(:)%subgrid (integer) (9.5.1.1.2)
scalar (1590)	distribution%distri_vec(:)%dist_func%of_expansion(:)%grid%metric%g23(:)%scalar (vecflt_type) (9.5.1.2.9)
vector (1590)	distribution%distri_vec(:)%dist_func%of_expansion(:)%grid%metric%g23(:)%vector (matflt_type) (9.5.1.2.7)
matrix (1590)	distribution%distri_vec(:)%dist_func%of_expansion(:)%grid%metric%g23(:)%matrix (array3dflt_type) (9.5.1.2.1)
g33 (1588)	distribution%distri_vec(:)%dist_func%of_expansion(:)%grid%metric%g33(:) (complex-grid_scalar) (9.5.1.3.76)
griduid (1590)	distribution%distri_vec(:)%dist_func%of_expansion(:)%grid%metric%g33(:)%griduid (integer) (9.5.1.1.2)
subgrid (1590)	distribution%distri_vec(:)%dist_func%of_expansion(:)%grid%metric%g33(:)%subgrid (integer) (9.5.1.1.2)
scalar (1590)	distribution%distri_vec(:)%dist_func%of_expansion(:)%grid%metric%g33(:)%scalar (vecflt_type) (9.5.1.2.9)
vector (1590)	distribution%distri_vec(:)%dist_func%of_expansion(:)%grid%metric%g33(:)%vector (matflt_type) (9.5.1.2.7)
matrix (1590)	distribution%distri_vec(:)%dist_func%of_expansion(:)%grid%metric%g33(:)%matrix (array3dflt_type) (9.5.1.2.1)
jacobian (1588)	distribution%distri_vec(:)%dist_func%of_expansion(:)%grid%metric%jacobian(:) (complex-grid_scalar) (9.5.1.3.76)
griduid (1590)	distribution%distri_vec(:)%dist_func%of_expansion(:)%grid%metric%jacobian(:)%griduid (integer) (9.5.1.1.2)
subgrid (1590)	distribution%distri_vec(:)%dist_func%of_expansion(:)%grid%metric%jacobian(:)%subgrid (integer) (9.5.1.1.2)
scalar (1590)	distribution%distri_vec(:)%dist_func%of_expansion(:)%grid%metric%jacobian(:)%scalar (vecflt_type) (9.5.1.2.9)
vector (1590)	distribution%distri_vec(:)%dist_func%of_expansion(:)%grid%metric%jacobian(:)%vector (matflt_type) (9.5.1.2.7)
matrix (1590)	distribution%distri_vec(:)%dist_func%of_expansion(:)%grid%metric%jacobian(:)%matrix (array3dflt_type) (9.5.1.2.1)
geo (1585)	distribution%distri_vec(:)%dist_func%of_expansion(:)%grid%geo(:) (complexgrid_geo_global) (9.5.1.3.72)
geotype (1586)	distribution%distri_vec(:)%dist_func%of_expansion(:)%grid%geo(:)%geotype (integer) (9.5.1.1.2)
geotypeid (1586)	distribution%distri_vec(:)%dist_func%of_expansion(:)%grid%geo(:)%geotypeid (string) (9.5.1.1.3)
coordtype (1586)	distribution%distri_vec(:)%dist_func%of_expansion(:)%grid%geo(:)%coordtype (vecint_type) (9.5.1.2.10)
geo_matrix (1586)	distribution%distri_vec(:)%dist_func%of_expansion(:)%grid%geo(:)%geo_matrix(:) (complex-grid_scalar) (9.5.1.3.76)
griduid (1590)	distribution%distri_vec(:)%dist_func%of_expansion(:)%grid%geo(:)%geo_matrix(:)%griduid (integer) (9.5.1.1.2)
subgrid (1590)	distribution%distri_vec(:)%dist_func%of_expansion(:)%grid%geo(:)%geo_matrix(:)%subgrid (integer) (9.5.1.1.2)
scalar (1590)	distribution%distri_vec(:)%dist_func%of_expansion(:)%grid%geo(:)%geo_matrix(:)%scalar (vecflt_type) (9.5.1.2.9)
vector (1590)	distribution%distri_vec(:)%dist_func%of_expansion(:)%grid%geo(:)%geo_matrix(:)%vector (matflt_type) (9.5.1.2.7)
matrix (1590)	distribution%distri_vec(:)%dist_func%of_expansion(:)%grid%geo(:)%geo_matrix(:)%matrix (array3dflt_type) (9.5.1.2.1)



measure (1586)	distribution%distri_vec(:)%dist_func%of_expansion(:)%grid%geo(:)%measure(:) (complexgrid_scalar) (9.5.1.3.76)
griduid (1590)	distribution%distri_vec(:)%dist_func%of_expansion(:)%grid%geo(:)%measure(:)%griduid (integer) (9.5.1.1.2)
subgrid (1590)	distribution%distri_vec(:)%dist_func%of_expansion(:)%grid%geo(:)%measure(:)%subgrid (integer) (9.5.1.1.2)
scalar (1590)	distribution%distri_vec(:)%dist_func%of_expansion(:)%grid%geo(:)%measure(:)%scalar (vecflt_type) (9.5.1.2.9)
vector (1590)	distribution%distri_vec(:)%dist_func%of_expansion(:)%grid%geo(:)%measure(:)%vector (matflt_type) (9.5.1.2.7)
matrix (1590)	distribution%distri_vec(:)%dist_func%of_expansion(:)%grid%geo(:)%measure(:)%matrix (array3dflt_type) (9.5.1.2.1)
bases (1585)	distribution%distri_vec(:)%dist_func%of_expansion(:)%grid%bases(:) (complexgrid_vector) (9.5.1.3.82)
griduid (1596)	distribution%distri_vec(:)%dist_func%of_expansion(:)%grid%bases(:)%griduid (integer) (9.5.1.1.2)
label (1596)	distribution%distri_vec(:)%dist_func%of_expansion(:)%grid%bases(:)%label (string) (9.5.1.1.3)
comp (1596)	distribution%distri_vec(:)%dist_func%of_expansion(:)%grid%bases(:)%comp(:) (complexgrid_scalar) (9.5.1.3.76)
griduid (1590)	distribution%distri_vec(:)%dist_func%of_expansion(:)%grid%bases(:)%comp(:)%griduid (integer) (9.5.1.1.2)
subgrid (1590)	distribution%distri_vec(:)%dist_func%of_expansion(:)%grid%bases(:)%comp(:)%subgrid (integer) (9.5.1.1.2)
scalar (1590)	distribution%distri_vec(:)%dist_func%of_expansion(:)%grid%bases(:)%comp(:)%scalar (vecflt_type) (9.5.1.2.9)
vector (1590)	distribution%distri_vec(:)%dist_func%of_expansion(:)%grid%bases(:)%comp(:)%vector (matflt_type) (9.5.1.2.7)
matrix (1590)	distribution%distri_vec(:)%dist_func%of_expansion(:)%grid%bases(:)%comp(:)%matrix (array3dflt_type) (9.5.1.2.1)
align (1596)	distribution%distri_vec(:)%dist_func%of_expansion(:)%grid%bases(:)%align (vecint_type) (9.5.1.2.10)
alignid (1596)	distribution%distri_vec(:)%dist_func%of_expansion(:)%grid%bases(:)%alignid (vecstring_type) (9.5.1.2.11)
basis (1596)	distribution%distri_vec(:)%dist_func%of_expansion(:)%grid%bases(:)%basis (integer) (9.5.1.1.2)
values (1697)	distribution%distri_vec(:)%dist_func%of_expansion(:)%values (complexgrid_scalar) (9.5.1.3.76)
griduid (1590)	distribution%distri_vec(:)%dist_func%of_expansion(:)%values%griduid (integer) (9.5.1.1.2)
subgrid (1590)	distribution%distri_vec(:)%dist_func%of_expansion(:)%values%subgrid (integer) (9.5.1.1.2)
scalar (1590)	distribution%distri_vec(:)%dist_func%of_expansion(:)%values%scalar (vecflt_type) (9.5.1.2.9)
vector (1590)	distribution%distri_vec(:)%dist_func%of_expansion(:)%values%vector (matflt_type) (9.5.1.2.7)
matrix (1590)	distribution%distri_vec(:)%dist_func%of_expansion(:)%values%matrix (array3dflt_type) (9.5.1.2.1)
input_src (1665)	distribution%distri_vec(:)%input_src (dist_input_src) (9.5.1.3.134)
particle_src (1648)	distribution%distri_vec(:)%input_src%particle_src (dist_particle_src) (9.5.1.3.139)
total (1653)	distribution%distri_vec(:)%input_src%particle_src%total (dist_src_snk_tot) (9.5.1.3.148)
particles (1662)	distribution%distri_vec(:)%input_src%particle_src%total%particles (float) (9.5.1.1.1)
power (1662)	distribution%distri_vec(:)%input_src%particle_src%total%power (float) (9.5.1.1.1)
torque (1662)	distribution%distri_vec(:)%input_src%particle_src%total%torque (float) (9.5.1.1.1)
volume_intgr (1653)	distribution%distri_vec(:)%input_src%particle_src%volume_intgr (dist_src_snk_vol) (9.5.1.3.149)
particles (1663)	distribution%distri_vec(:)%input_src%particle_src%volume_intgr%particles (vecflt_type) (9.5.1.2.9)
power (1663)	distribution%distri_vec(:)%input_src%particle_src%volume_intgr%power (vecflt_type) (9.5.1.2.9)
torque (1663)	distribution%distri_vec(:)%input_src%particle_src%volume_intgr%torque (vecflt_type) (9.5.1.2.9)
flux_surf_av (1653)	distribution%distri_vec(:)%input_src%particle_src%flux_surf_av (dist_src_snk_surf) (9.5.1.3.147)
particlesd (1661)	distribution%distri_vec(:)%input_src%particle_src%flux_surf_av%particlesd (vecflt_type) (9.5.1.2.9)
powerd (1661)	distribution%distri_vec(:)%input_src%particle_src%flux_surf_av%powerd (vecflt_type) (9.5.1.2.9)
torqued (1661)	distribution%distri_vec(:)%input_src%particle_src%flux_surf_av%torqued (vecflt_type) (9.5.1.2.9)
wave_src (1648)	distribution%distri_vec(:)%input_src%wave_src (dist_wave_src) (9.5.1.3.150)
type (1664)	distribution%distri_vec(:)%input_src%wave_src%type (string) (9.5.1.1.3)
wave_power (1664)	distribution%distri_vec(:)%input_src%wave_src%wave_power (float) (9.5.1.1.1)
wave_powerd (1664)	distribution%distri_vec(:)%input_src%wave_src%wave_powerd (vecflt_type) (9.5.1.2.9)
nucl_reac (1665)	distribution%distri_vec(:)%nucl_reac (dist_nucl_reac) (9.5.1.3.136)
point_reac (1650)	distribution%distri_vec(:)%nucl_reac%point_reac (vecint_type) (9.5.1.2.10)

id_reac (1650)	distribution%distri_vec(:)%nucl_reac%id_reac (vecint_type) (9.5.1.2.10)
codeparam (1665)	distribution%distri_vec(:)%codeparam (codeparam) (9.5.1.3.66)
codename (1580)	distribution%distri_vec(:)%codeparam%codename (string) (9.5.1.1.3)
codeversion (1580)	distribution%distri_vec(:)%codeparam%codeversion (string) (9.5.1.1.3)
parameters (1580)	distribution%distri_vec(:)%codeparam%parameters (string) (9.5.1.1.3)
output_diag (1580)	distribution%distri_vec(:)%codeparam%output_diag (string) (9.5.1.1.3)
output_flag (1580)	distribution%distri_vec(:)%codeparam%output_flag (integer) (9.5.1.1.2)
codeparam (1527)	distribution%codeparam (codeparam) (9.5.1.3.66)
codename (1580)	distribution%codeparam%codename (string) (9.5.1.1.3)
codeversion (1580)	distribution%codeparam%codeversion (string) (9.5.1.1.3)
parameters (1580)	distribution%codeparam%parameters (string) (9.5.1.1.3)
output_diag (1580)	distribution%codeparam%output_diag (string) (9.5.1.1.3)
output_flag (1580)	distribution%codeparam%output_flag (integer) (9.5.1.1.2)
time (1527)	distribution%time (float) (9.5.1.1.1)

### 9.5.2.1.12 distsource

datainfo (1528)	distsource%datainfo (datainfo) (9.5.1.3.121)
dataprovder (1635)	distsource%datainfo%dataprovder (string) (9.5.1.1.3)
putdate (1635)	distsource%datainfo%putdate (string) (9.5.1.1.3)
source (1635)	distsource%datainfo%source (string) (9.5.1.1.3)
comment (1635)	distsource%datainfo%comment (string) (9.5.1.1.3)
cocos (1635)	distsource%datainfo%cocos (integer) (9.5.1.1.2)
id (1635)	distsource%datainfo%id (integer) (9.5.1.1.2)
isref (1635)	distsource%datainfo%isref (integer) (9.5.1.1.2)
whatref (1635)	distsource%datainfo%whatref (whatref) (9.5.1.3.437)
user (1951)	distsource%datainfo%whatref%user (string) (9.5.1.1.3)
machine (1951)	distsource%datainfo%whatref%machine (string) (9.5.1.1.3)
shot (1951)	distsource%datainfo%whatref%shot (integer) (9.5.1.1.2)
run (1951)	distsource%datainfo%whatref%run (integer) (9.5.1.1.2)
occurrence (1951)	distsource%datainfo%whatref%occurrence (integer) (9.5.1.1.2)
putinfo (1635)	distsource%datainfo%putinfo (putinfo) (9.5.1.3.290)
putmethod (1804)	distsource%datainfo%putinfo%putmethod (string) (9.5.1.1.3)
putaccess (1804)	distsource%datainfo%putinfo%putaccess (string) (9.5.1.1.3)
putlocation (1804)	distsource%datainfo%putinfo%putlocation (string) (9.5.1.1.3)
rights (1804)	distsource%datainfo%putinfo%rights (string) (9.5.1.1.3)
composition (1528)	distsource%composition (composition) (9.5.1.3.84)
amn (1598)	distsource%composition%amn (vecflt_type) (9.5.1.2.9)
zn (1598)	distsource%composition%zn (vecflt_type) (9.5.1.2.9)
zion (1598)	distsource%composition%zion (vecflt_type) (9.5.1.2.9)
imp_flag (1598)	distsource%composition%imp_flag (vecint_type) (9.5.1.2.10)
label (1598)	distsource%composition%label (vecstring_type) (9.5.1.2.11)
compositions (1528)	distsource%compositions (compositions_type) (9.5.1.3.88)
nuclei (1602)	distsource%compositions%nuclei(:) (nuclei) (9.5.1.3.259)
zn (1773)	distsource%compositions%nuclei(:)%zn (float) (9.5.1.1.1)
amn (1773)	distsource%compositions%nuclei(:)%amn (float) (9.5.1.1.1)
label (1773)	distsource%compositions%nuclei(:)%label (string) (9.5.1.1.3)
ions (1602)	distsource%compositions%ions(:) (ions) (9.5.1.3.219)
nucindex (1733)	distsource%compositions%ions(:)%nucindex (integer) (9.5.1.1.2)
zion (1733)	distsource%compositions%ions(:)%zion (float) (9.5.1.1.1)
imp_flag (1733)	distsource%compositions%ions(:)%imp_flag (integer) (9.5.1.1.2)
label (1733)	distsource%compositions%ions(:)%label (string) (9.5.1.1.3)
impurities (1602)	distsource%compositions%impurities(:) (impurities) (9.5.1.3.216)
nucindex (1730)	distsource%compositions%impurities(:)%nucindex (integer) (9.5.1.1.2)
i_ion (1730)	distsource%compositions%impurities(:)%i_ion (integer) (9.5.1.1.2)
nzimp (1730)	distsource%compositions%impurities(:)%nzimp (integer) (9.5.1.1.2)
zmin (1730)	distsource%compositions%impurities(:)%zmin (vecflt_type) (9.5.1.2.9)
zmax (1730)	distsource%compositions%impurities(:)%zmax (vecflt_type) (9.5.1.2.9)
label (1730)	distsource%compositions%impurities(:)%label (vecstring_type) (9.5.1.2.11)
neutralscomp (1602)	distsource%compositions%neutralscomp(:) (composition_neutralscomp) (9.5.1.3.87)
neutcomp (1601)	distsource%compositions%neutralscomp(:)%neutcomp(:) (composition_neutrals_neutcomp) (9.5.1.3.86)



nucindex (1600)	distsource%compositions%neutralscomp(:)%neutcomp(:)%nucindex (integer) (9.5.1.1.2)
multiplicity (1600)	distsource%compositions%neutralscomp(:)%neutcomp(:)%multiplicity (integer) (9.5.1.1.2)
type (1601)	distsource%compositions%neutralscomp(:)%type(:) (identifier) (9.5.1.3.214)
id (1728)	distsource%compositions%neutralscomp(:)%type(:)%id (string) (9.5.1.1.3)
flag (1728)	distsource%compositions%neutralscomp(:)%type(:)%flag (integer) (9.5.1.1.2)
description (1728)	distsource%compositions%neutralscomp(:)%type(:)%description (string) (9.5.1.1.3)
label (1601)	distsource%compositions%neutralscomp(:)%label (string) (9.5.1.1.3)
edgespecies (1602)	distsource%compositions%edgespecies(:) (edgespecies) (9.5.1.3.170)
nucindex (1684)	distsource%compositions%edgespecies(:)%nucindex (integer) (9.5.1.1.2)
zmin (1684)	distsource%compositions%edgespecies(:)%zmin (float) (9.5.1.1.1)
zmax (1684)	distsource%compositions%edgespecies(:)%zmax (float) (9.5.1.1.1)
label (1684)	distsource%compositions%edgespecies(:)%label (string) (9.5.1.1.3)
signature (1602)	distsource%compositions%signature (identifier) (9.5.1.3.214)
id (1728)	distsource%compositions%signature%id (string) (9.5.1.1.3)
flag (1728)	distsource%compositions%signature%flag (integer) (9.5.1.1.2)
description (1728)	distsource%compositions%signature%description (string) (9.5.1.1.3)
source (1528)	distsource%source(:) (distsource_source) (9.5.1.3.156)
source_id (1670)	distsource%source(:)%source_id(:) (enum_instance) (9.5.1.3.173)
type (1687)	distsource%source(:)%source_id(:)%type (identifier) (9.5.1.3.214)
id (1728)	distsource%source(:)%source_id(:)%type%id (string) (9.5.1.1.3)
flag (1728)	distsource%source(:)%source_id(:)%type%flag (integer) (9.5.1.1.2)
description (1728)	distsource%source(:)%source_id(:)%type%description (string) (9.5.1.1.3)
name (1687)	distsource%source(:)%source_id(:)%name (string) (9.5.1.1.3)
index (1687)	distsource%source(:)%source_id(:)%index (integer) (9.5.1.1.2)
src_spec (1670)	distsource%source(:)%src_spec (integer) (9.5.1.1.2)
gyro_type (1670)	distsource%source(:)%gyro_type (integer) (9.5.1.1.2)
global_param (1670)	distsource%source(:)%global_param (distsource_global_param) (9.5.1.3.152)
src_pow (1666)	distsource%source(:)%global_param%src_pow (exp0D) (9.5.1.3.180)
value (1694)	distsource%source(:)%global_param%src_pow%value (float) (9.5.1.1.1)
abserror (1694)	distsource%source(:)%global_param%src_pow%abserror (float) (9.5.1.1.1)
releror (1694)	distsource%source(:)%global_param%src_pow%releror (float) (9.5.1.1.1)
src_rate (1666)	distsource%source(:)%global_param%src_rate (exp0D) (9.5.1.3.180)
value (1694)	distsource%source(:)%global_param%src_rate%value (float) (9.5.1.1.1)
abserror (1694)	distsource%source(:)%global_param%src_rate%abserror (float) (9.5.1.1.1)
releror (1694)	distsource%source(:)%global_param%src_rate%releror (float) (9.5.1.1.1)
profiles_1d (1670)	distsource%source(:)%profiles_1d (distsource_profiles_1d) (9.5.1.3.154)
rho_tor_norm (1668)	distsource%source(:)%profiles_1d%rho_tor_norm (vecflt_type) (9.5.1.2.9)
rho_tor (1668)	distsource%source(:)%profiles_1d%rho_tor (vecflt_type) (9.5.1.2.9)
psi (1668)	distsource%source(:)%profiles_1d%psi (vecflt_type) (9.5.1.2.9)
pow_den (1668)	distsource%source(:)%profiles_1d%pow_den (exp1D) (9.5.1.3.181)
value (1695)	distsource%source(:)%profiles_1d%pow_den%value (vecflt_type) (9.5.1.2.9)
abserror (1695)	distsource%source(:)%profiles_1d%pow_den%abserror (vecflt_type) (9.5.1.2.9)
releror (1695)	distsource%source(:)%profiles_1d%pow_den%releror (vecflt_type) (9.5.1.2.9)
src_rate (1668)	distsource%source(:)%profiles_1d%src_rate (exp1D) (9.5.1.3.181)
value (1695)	distsource%source(:)%profiles_1d%src_rate%value (vecflt_type) (9.5.1.2.9)
abserror (1695)	distsource%source(:)%profiles_1d%src_rate%abserror (vecflt_type) (9.5.1.2.9)
releror (1695)	distsource%source(:)%profiles_1d%src_rate%releror (vecflt_type) (9.5.1.2.9)
profiles_2d (1670)	distsource%source(:)%profiles_2d (distsource_profiles_2d) (9.5.1.3.155)
grid_coord (1669)	distsource%source(:)%profiles_2d%grid_coord (vecint_type) (9.5.1.2.10)
dim1 (1669)	distsource%source(:)%profiles_2d%dim1 (matflt_type) (9.5.1.2.7)
dim2 (1669)	distsource%source(:)%profiles_2d%dim2 (matflt_type) (9.5.1.2.7)
g11 (1669)	distsource%source(:)%profiles_2d%g11 (matflt_type) (9.5.1.2.7)
g12 (1669)	distsource%source(:)%profiles_2d%g12 (matflt_type) (9.5.1.2.7)
g21 (1669)	distsource%source(:)%profiles_2d%g21 (matflt_type) (9.5.1.2.7)
g22 (1669)	distsource%source(:)%profiles_2d%g22 (matflt_type) (9.5.1.2.7)
pow_den (1669)	distsource%source(:)%profiles_2d%pow_den (exp2D) (9.5.1.3.182)
value (1696)	distsource%source(:)%profiles_2d%pow_den%value (matflt_type) (9.5.1.2.7)
abserror (1696)	distsource%source(:)%profiles_2d%pow_den%abserror (matflt_type) (9.5.1.2.7)
releror (1696)	distsource%source(:)%profiles_2d%pow_den%releror (matflt_type) (9.5.1.2.7)
src_rate (1669)	distsource%source(:)%profiles_2d%src_rate (exp2D) (9.5.1.3.182)
value (1696)	distsource%source(:)%profiles_2d%src_rate%value (matflt_type) (9.5.1.2.7)

abserror (1696)	distsource%source(:)%profiles_2d%src_rate%abserror (matflt_type) (9.5.1.2.7)
releror (1696)	distsource%source(:)%profiles_2d%src_rate%releror (matflt_type) (9.5.1.2.7)
line_srcprof (1670)	distsource%source(:)%line_srcprof(:) (distsource_line_src_prof) (9.5.1.3.153)
rho_tor (1667)	distsource%source(:)%line_srcprof(:)%rho_tor (vecflt_type) (9.5.1.2.9)
rho_tor_norm (1667)	distsource%source(:)%line_srcprof(:)%rho_tor_norm (vecflt_type) (9.5.1.2.9)
psi (1667)	distsource%source(:)%line_srcprof(:)%psi (vecflt_type) (9.5.1.2.9)
R (1667)	distsource%source(:)%line_srcprof(:)%R (vecflt_type) (9.5.1.2.9)
Z (1667)	distsource%source(:)%line_srcprof(:)%Z (vecflt_type) (9.5.1.2.9)
theta (1667)	distsource%source(:)%line_srcprof(:)%theta (vecflt_type) (9.5.1.2.9)
theta_id (1667)	distsource%source(:)%line_srcprof(:)%theta_id (vecflt_type) (9.5.1.2.9)
th2th_pol (1667)	distsource%source(:)%line_srcprof(:)%th2th_pol (matflt_type) (9.5.1.2.7)
pitch (1667)	distsource%source(:)%line_srcprof(:)%pitch (vecflt_type) (9.5.1.2.9)
energy (1667)	distsource%source(:)%line_srcprof(:)%energy (vecflt_type) (9.5.1.2.9)
ang_momentum (1667)	distsource%source(:)%line_srcprof(:)%ang_momentum (vecflt_type) (9.5.1.2.9)
src_rate (1667)	distsource%source(:)%line_srcprof(:)%src_rate (vecflt_type) (9.5.1.2.9)
source_rate (1670)	distsource%source(:)%source_rate (source_rate) (9.5.1.3.371)
grid (1885)	distsource%source(:)%source_rate%grid (complexgrid) (9.5.1.3.71)
uid (1585)	distsource%source(:)%source_rate%grid%uid (integer) (9.5.1.1.2)
id (1585)	distsource%source(:)%source_rate%grid%id (string) (9.5.1.1.3)
spaces (1585)	distsource%source(:)%source_rate%grid%spaces(:) (complexgrid_space) (9.5.1.3.80)
geotype (1594)	distsource%source(:)%source_rate%grid%spaces(:)%geotype (vecint_type) (9.5.1.2.10)
geotypeid (1594)	distsource%source(:)%source_rate%grid%spaces(:)%geotypeid (vecstring_type) (9.5.1.2.11)
coordtype (1594)	distsource%source(:)%source_rate%grid%spaces(:)%coordtype (matint_type) (9.5.1.2.8)
objects (1594)	distsource%source(:)%source_rate%grid%spaces(:)%objects(:) (objects) (9.5.1.3.260)
boundary (1774)	distsource%source(:)%source_rate%grid%spaces(:)%objects(:)%boundary (matint_type) (9.5.1.2.8)
neighbour (1774)	distsource%source(:)%source_rate%grid%spaces(:)%objects(:)%neighbour (array3dint_type) (9.5.1.2.2)
geo (1774)	distsource%source(:)%source_rate%grid%spaces(:)%objects(:)%geo (array4dflt_type) (9.5.1.2.3)
measure (1774)	distsource%source(:)%source_rate%grid%spaces(:)%objects(:)%measure (matflt_type) (9.5.1.2.7)
xpoints (1594)	distsource%source(:)%source_rate%grid%spaces(:)%xpoints (vecint_type) (9.5.1.2.10)
subgrids (1585)	distsource%source(:)%source_rate%grid%subgrids(:) (complexgrid_subgrid) (9.5.1.3.81)
id (1595)	distsource%source(:)%source_rate%grid%subgrids(:)%id (string) (9.5.1.1.3)
list (1595)	distsource%source(:)%source_rate%grid%subgrids(:)%list(:) (complexgrid_objectlist) (9.5.1.3.75)
cls (1589)	distsource%source(:)%source_rate%grid%subgrids(:)%list(:)%cls (vecint_type) (9.5.1.2.10)
indset (1589)	distsource%source(:)%source_rate%grid%subgrids(:)%list(:)%indset(:) (complex_grid_indexlist) (9.5.1.3.73)
range (1587)	distsource%source(:)%source_rate%grid%subgrids(:)%list(:)%indset(:)%range (vecint_type) (9.5.1.2.10)
ind (1587)	distsource%source(:)%source_rate%grid%subgrids(:)%list(:)%indset(:)%ind (vecint_type) (9.5.1.2.10)
ind (1589)	distsource%source(:)%source_rate%grid%subgrids(:)%list(:)%ind (matint_type) (9.5.1.2.8)
metric (1585)	distsource%source(:)%source_rate%grid%metric (complexgrid_metric) (9.5.1.3.74)
measure (1588)	distsource%source(:)%source_rate%grid%metric%measure(:) (complexgrid_scalar) (9.5.1.3.76)
griduid (1590)	distsource%source(:)%source_rate%grid%metric%measure(:)%griduid (integer) (9.5.1.1.2)
subgrid (1590)	distsource%source(:)%source_rate%grid%metric%measure(:)%subgrid (integer) (9.5.1.1.2)
scalar (1590)	distsource%source(:)%source_rate%grid%metric%measure(:)%scalar (vecflt_type) (9.5.1.2.9)
vector (1590)	distsource%source(:)%source_rate%grid%metric%measure(:)%vector (matflt_type) (9.5.1.2.7)
matrix (1590)	distsource%source(:)%source_rate%grid%metric%measure(:)%matrix (array3dflt_type) (9.5.1.2.1)
g11 (1588)	distsource%source(:)%source_rate%grid%metric%g11(:) (complexgrid_scalar) (9.5.1.3.76)
griduid (1590)	distsource%source(:)%source_rate%grid%metric%g11(:)%griduid (integer) (9.5.1.1.2)
subgrid (1590)	distsource%source(:)%source_rate%grid%metric%g11(:)%subgrid (integer) (9.5.1.1.2)
scalar (1590)	distsource%source(:)%source_rate%grid%metric%g11(:)%scalar (vecflt_type) (9.5.1.2.9)
vector (1590)	distsource%source(:)%source_rate%grid%metric%g11(:)%vector (matflt_type) (9.5.1.2.7)
matrix (1590)	distsource%source(:)%source_rate%grid%metric%g11(:)%matrix (array3dflt_type) (9.5.1.2.1)
g12 (1588)	distsource%source(:)%source_rate%grid%metric%g12(:) (complexgrid_scalar) (9.5.1.3.76)
griduid (1590)	distsource%source(:)%source_rate%grid%metric%g12(:)%griduid (integer) (9.5.1.1.2)
subgrid (1590)	distsource%source(:)%source_rate%grid%metric%g12(:)%subgrid (integer) (9.5.1.1.2)
scalar (1590)	distsource%source(:)%source_rate%grid%metric%g12(:)%scalar (vecflt_type) (9.5.1.2.9)
vector (1590)	distsource%source(:)%source_rate%grid%metric%g12(:)%vector (matflt_type) (9.5.1.2.7)



alignid (1596)	distsource%source(:)%source_rate%grid%bases(:)%alignid (vecstring_type) (9.5.1.2.11)
basis (1596)	distsource%source(:)%source_rate%grid%bases(:)%basis (integer) (9.5.1.1.2)
value (1885)	distsource%source(:)%source_rate%value (complexgrid_scalar) (9.5.1.3.76)
griduid (1590)	distsource%source(:)%source_rate%value%griduid (integer) (9.5.1.1.2)
subgrid (1590)	distsource%source(:)%source_rate%value%subgrid (integer) (9.5.1.1.2)
scalar (1590)	distsource%source(:)%source_rate%value%scalar (vecflt_type) (9.5.1.2.9)
vector (1590)	distsource%source(:)%source_rate%value%vector (matflt_type) (9.5.1.2.7)
matrix (1590)	distsource%source(:)%source_rate%value%matrix (array3dflt_type) (9.5.1.2.1)
source_grid (1670)	distsource%source(:)%source_grid (source_on_grid) (9.5.1.3.370)
grid_info (1884)	distsource%source(:)%source_grid%grid_info (grid_info) (9.5.1.3.210)
grid_type (1724)	distsource%source(:)%source_grid%grid_info%grid_type (integer) (9.5.1.1.2)
ngriddim (1724)	distsource%source(:)%source_grid%grid_info%ngriddim (integer) (9.5.1.1.2)
grid_coord (1724)	distsource%source(:)%source_grid%grid_info%grid_coord (vecint_type) (9.5.1.2.10)
discrete_dims (1724)	distsource%source(:)%source_grid%grid_info%discrete_dims (vecint_type) (9.5.1.2.10)
dim1 (1884)	distsource%source(:)%source_grid%dim1 (array6dflt_type) (9.5.1.2.5)
dim2 (1884)	distsource%source(:)%source_grid%dim2 (array6dflt_type) (9.5.1.2.5)
dim3 (1884)	distsource%source(:)%source_grid%dim3 (array6dflt_type) (9.5.1.2.5)
dim4 (1884)	distsource%source(:)%source_grid%dim4 (array6dflt_type) (9.5.1.2.5)
dim5 (1884)	distsource%source(:)%source_grid%dim5 (array6dflt_type) (9.5.1.2.5)
dim6 (1884)	distsource%source(:)%source_grid%dim6 (array6dflt_type) (9.5.1.2.5)
jacobian (1884)	distsource%source(:)%source_grid%jacobian (array6dflt_type) (9.5.1.2.5)
source (1884)	distsource%source(:)%source_grid%source (array6dflt_type) (9.5.1.2.5)
markers (1670)	distsource%source(:)%markers (weighted_markers) (9.5.1.3.436)
variable_ids (1950)	distsource%source(:)%markers%variable_ids(:) (identifier) (9.5.1.3.214)
id (1728)	distsource%source(:)%markers%variable_ids(:)%id (string) (9.5.1.1.3)
flag (1728)	distsource%source(:)%markers%variable_ids(:)%flag (integer) (9.5.1.1.2)
description (1728)	distsource%source(:)%markers%variable_ids(:)%description (string) (9.5.1.1.3)
coord (1950)	distsource%source(:)%markers%coord (matflt_type) (9.5.1.2.7)
weight (1950)	distsource%source(:)%markers%weight (vecflt_type) (9.5.1.2.9)
codeparam (1670)	distsource%source(:)%codeparam (codeparam) (9.5.1.3.66)
codename (1580)	distsource%source(:)%codeparam%codename (string) (9.5.1.1.3)
codeversion (1580)	distsource%source(:)%codeparam%codeversion (string) (9.5.1.1.3)
parameters (1580)	distsource%source(:)%codeparam%parameters (string) (9.5.1.1.3)
output_diag (1580)	distsource%source(:)%codeparam%output_diag (string) (9.5.1.1.3)
output_flag (1580)	distsource%source(:)%codeparam%output_flag (integer) (9.5.1.1.2)
codeparam (1528)	distsource%codeparam (codeparam) (9.5.1.3.66)
codename (1580)	distsource%codeparam%codename (string) (9.5.1.1.3)
codeversion (1580)	distsource%codeparam%codeversion (string) (9.5.1.1.3)
parameters (1580)	distsource%codeparam%parameters (string) (9.5.1.1.3)
output_diag (1580)	distsource%codeparam%output_diag (string) (9.5.1.1.3)
output_flag (1580)	distsource%codeparam%output_flag (integer) (9.5.1.1.2)
time (1528)	distsource%time (float) (9.5.1.1.1)

### 9.5.2.1.13 ecediag

datainfo (1529)	eceddiag%datainfo (datainfo) (9.5.1.3.121)
dataprovider (1635)	eceddiag%datainfo%dataprovider (string) (9.5.1.1.3)
putdate (1635)	eceddiag%datainfo%putdate (string) (9.5.1.1.3)
source (1635)	eceddiag%datainfo%source (string) (9.5.1.1.3)
comment (1635)	eceddiag%datainfo%comment (string) (9.5.1.1.3)
cocos (1635)	eceddiag%datainfo%cocos (integer) (9.5.1.1.2)
id (1635)	eceddiag%datainfo%id (integer) (9.5.1.1.2)
isref (1635)	eceddiag%datainfo%isref (integer) (9.5.1.1.2)
whatref (1635)	eceddiag%datainfo%whatref (whatref) (9.5.1.3.437)
user (1951)	eceddiag%datainfo%whatref%user (string) (9.5.1.1.3)
machine (1951)	eceddiag%datainfo%whatref%machine (string) (9.5.1.1.3)
shot (1951)	eceddiag%datainfo%whatref%shot (integer) (9.5.1.1.2)
run (1951)	eceddiag%datainfo%whatref%run (integer) (9.5.1.1.2)
occurrence (1951)	eceddiag%datainfo%whatref%occurrence (integer) (9.5.1.1.2)
putinfo (1635)	eceddiag%datainfo%putinfo (putinfo) (9.5.1.3.290)
putmethod (1804)	eceddiag%datainfo%putinfo%putmethod (string) (9.5.1.1.3)

putaccess (1804)	ecediag%datainfo%putinfo%putaccess (string) (9.5.1.1.3)
putlocation (1804)	ecediag%datainfo%putinfo%putlocation (string) (9.5.1.1.3)
rights (1804)	ecediag%datainfo%putinfo%rights (string) (9.5.1.1.3)
setup (1529)	ecediag%setup (ecesetup) (9.5.1.3.160)
frequency (1674)	ecediag%setup%frequency (vecflt.type) (9.5.1.2.9)
los (1674)	ecediag%setup%los (setup_line) (9.5.1.3.362)
pivot_point (1876)	ecediag%setup%los%pivot_point (rzphi1D) (9.5.1.3.331)
r (1845)	ecediag%setup%los%pivot_point%r (vecflt.type) (9.5.1.2.9)
z (1845)	ecediag%setup%los%pivot_point%z (vecflt.type) (9.5.1.2.9)
phi (1845)	ecediag%setup%los%pivot_point%phi (vecflt.type) (9.5.1.2.9)
horchordang1 (1876)	ecediag%setup%los%horchordang1 (vecflt.type) (9.5.1.2.9)
verchordang1 (1876)	ecediag%setup%los%verchordang1 (vecflt.type) (9.5.1.2.9)
width (1876)	ecediag%setup%los%width (vecflt.type) (9.5.1.2.9)
second_point (1876)	ecediag%setup%los%second_point (rzphi1D) (9.5.1.3.331)
r (1845)	ecediag%setup%los%second_point%r (vecflt.type) (9.5.1.2.9)
z (1845)	ecediag%setup%los%second_point%z (vecflt.type) (9.5.1.2.9)
phi (1845)	ecediag%setup%los%second_point%phi (vecflt.type) (9.5.1.2.9)
horchordang2 (1876)	ecediag%setup%los%horchordang2 (vecflt.type) (9.5.1.2.9)
verchordang2 (1876)	ecediag%setup%los%verchordang2 (vecflt.type) (9.5.1.2.9)
third_point (1876)	ecediag%setup%los%third_point (rzphi1D) (9.5.1.3.331)
r (1845)	ecediag%setup%los%third_point%r (vecflt.type) (9.5.1.2.9)
z (1845)	ecediag%setup%los%third_point%z (vecflt.type) (9.5.1.2.9)
phi (1845)	ecediag%setup%los%third_point%phi (vecflt.type) (9.5.1.2.9)
nchordpoints (1876)	ecediag%setup%los%nchordpoints (integer) (9.5.1.1.2)
measure (1529)	ecediag%measure (ecemeasure) (9.5.1.3.159)
harmonic (1673)	ecediag%measure%harmonic (integer) (9.5.1.1.2)
position (1673)	ecediag%measure%position (rzphi1Dexp) (9.5.1.3.332)
r (1846)	ecediag%measure%position%r (exp1D) (9.5.1.3.181)
value (1695)	ecediag%measure%position%r%value (vecflt.type) (9.5.1.2.9)
abserror (1695)	ecediag%measure%position%r%abserror (vecflt.type) (9.5.1.2.9)
relerror (1695)	ecediag%measure%position%r%relerror (vecflt.type) (9.5.1.2.9)
z (1846)	ecediag%measure%position%z (exp1D) (9.5.1.3.181)
value (1695)	ecediag%measure%position%z%value (vecflt.type) (9.5.1.2.9)
abserror (1695)	ecediag%measure%position%z%abserror (vecflt.type) (9.5.1.2.9)
relerror (1695)	ecediag%measure%position%z%relerror (vecflt.type) (9.5.1.2.9)
phi (1846)	ecediag%measure%position%phi (exp1D) (9.5.1.3.181)
value (1695)	ecediag%measure%position%phi%value (vecflt.type) (9.5.1.2.9)
abserror (1695)	ecediag%measure%position%phi%abserror (vecflt.type) (9.5.1.2.9)
relerror (1695)	ecediag%measure%position%phi%relerror (vecflt.type) (9.5.1.2.9)
te (1673)	ecediag%measure%te (exp1D) (9.5.1.3.181)
value (1695)	ecediag%measure%te%value (vecflt.type) (9.5.1.2.9)
abserror (1695)	ecediag%measure%te%abserror (vecflt.type) (9.5.1.2.9)
relerror (1695)	ecediag%measure%te%relerror (vecflt.type) (9.5.1.2.9)
time (1529)	ecediag%time (float) (9.5.1.1.1)

### 9.5.2.1.14 edge

datainfo (1530)	edge%datainfo (datainfo) (9.5.1.3.121)
dataprovider (1635)	edge%datainfo%dataprovider (string) (9.5.1.1.3)
putdate (1635)	edge%datainfo%putdate (string) (9.5.1.1.3)
source (1635)	edge%datainfo%source (string) (9.5.1.1.3)
comment (1635)	edge%datainfo%comment (string) (9.5.1.1.3)
cocos (1635)	edge%datainfo%cocos (integer) (9.5.1.1.2)
id (1635)	edge%datainfo%id (integer) (9.5.1.1.2)
isref (1635)	edge%datainfo%isref (integer) (9.5.1.1.2)
whatref (1635)	edge%datainfo%whatref (whatref) (9.5.1.3.437)
user (1951)	edge%datainfo%whatref%user (string) (9.5.1.1.3)
machine (1951)	edge%datainfo%whatref%machine (string) (9.5.1.1.3)
shot (1951)	edge%datainfo%whatref%shot (integer) (9.5.1.1.2)
run (1951)	edge%datainfo%whatref%run (integer) (9.5.1.1.2)
occurrence (1951)	edge%datainfo%whatref%occurrence (integer) (9.5.1.1.2)

putinfo (1635)	edge%datainfo%putinfo (putinfo) (9.5.1.3.290)
putmethod (1804)	edge%datainfo%putinfo%putmethod (string) (9.5.1.1.3)
putaccess (1804)	edge%datainfo%putinfo%putaccess (string) (9.5.1.1.3)
putlocation (1804)	edge%datainfo%putinfo%putlocation (string) (9.5.1.1.3)
rights (1804)	edge%datainfo%putinfo%rights (string) (9.5.1.1.3)
grid (1530)	edge%grid (complexgrid) (9.5.1.3.71)
uid (1585)	edge%grid%uid (integer) (9.5.1.1.2)
id (1585)	edge%grid%id (string) (9.5.1.1.3)
spaces (1585)	edge%grid%spaces(:) (complexgrid.space) (9.5.1.3.80)
geotype (1594)	edge%grid%spaces(:)%geotype (vecint.type) (9.5.1.2.10)
geotypeid (1594)	edge%grid%spaces(:)%geotypeid (vecstring.type) (9.5.1.2.11)
coordtype (1594)	edge%grid%spaces(:)%coordtype (matint.type) (9.5.1.2.8)
objects (1594)	edge%grid%spaces(:)%objects(:) (objects) (9.5.1.3.260)
boundary (1774)	edge%grid%spaces(:)%objects(:)%boundary (matint.type) (9.5.1.2.8)
neighbour (1774)	edge%grid%spaces(:)%objects(:)%neighbour (array3dint.type) (9.5.1.2.2)
geo (1774)	edge%grid%spaces(:)%objects(:)%geo (array4dflt.type) (9.5.1.2.3)
measure (1774)	edge%grid%spaces(:)%objects(:)%measure (matflt.type) (9.5.1.2.7)
xpoints (1594)	edge%grid%spaces(:)%xpoints (vecint.type) (9.5.1.2.10)
subgrids (1585)	edge%grid%subgrids(:) (complexgrid.subgrid) (9.5.1.3.81)
id (1595)	edge%grid%subgrids(:)%id (string) (9.5.1.1.3)
list (1595)	edge%grid%subgrids(:)%list(:) (complexgrid.objectlist) (9.5.1.3.75)
cls (1589)	edge%grid%subgrids(:)%list(:)%cls (vecint.type) (9.5.1.2.10)
indset (1589)	edge%grid%subgrids(:)%list(:)%indset(:) (complexgrid.indexlist) (9.5.1.3.73)
range (1587)	edge%grid%subgrids(:)%list(:)%indset(:)%range (vecint.type) (9.5.1.2.10)
ind (1587)	edge%grid%subgrids(:)%list(:)%indset(:)%ind (vecint.type) (9.5.1.2.10)
ind (1589)	edge%grid%subgrids(:)%list(:)%ind (matint.type) (9.5.1.2.8)
metric (1585)	edge%grid%metric (complexgrid.metric) (9.5.1.3.74)
measure (1588)	edge%grid%metric%measure(:) (complexgrid.scalar) (9.5.1.3.76)
griduid (1590)	edge%grid%metric%measure(:)%griduid (integer) (9.5.1.1.2)
subgrid (1590)	edge%grid%metric%measure(:)%subgrid (integer) (9.5.1.1.2)
scalar (1590)	edge%grid%metric%measure(:)%scalar (vecflt.type) (9.5.1.2.9)
vector (1590)	edge%grid%metric%measure(:)%vector (matflt.type) (9.5.1.2.7)
matrix (1590)	edge%grid%metric%measure(:)%matrix (array3dflt.type) (9.5.1.2.1)
g11 (1588)	edge%grid%metric%g11(:) (complexgrid.scalar) (9.5.1.3.76)
griduid (1590)	edge%grid%metric%g11(:)%griduid (integer) (9.5.1.1.2)
subgrid (1590)	edge%grid%metric%g11(:)%subgrid (integer) (9.5.1.1.2)
scalar (1590)	edge%grid%metric%g11(:)%scalar (vecflt.type) (9.5.1.2.9)
vector (1590)	edge%grid%metric%g11(:)%vector (matflt.type) (9.5.1.2.7)
matrix (1590)	edge%grid%metric%g11(:)%matrix (array3dflt.type) (9.5.1.2.1)
g12 (1588)	edge%grid%metric%g12(:) (complexgrid.scalar) (9.5.1.3.76)
griduid (1590)	edge%grid%metric%g12(:)%griduid (integer) (9.5.1.1.2)
subgrid (1590)	edge%grid%metric%g12(:)%subgrid (integer) (9.5.1.1.2)
scalar (1590)	edge%grid%metric%g12(:)%scalar (vecflt.type) (9.5.1.2.9)
vector (1590)	edge%grid%metric%g12(:)%vector (matflt.type) (9.5.1.2.7)
matrix (1590)	edge%grid%metric%g12(:)%matrix (array3dflt.type) (9.5.1.2.1)
g13 (1588)	edge%grid%metric%g13(:) (complexgrid.scalar) (9.5.1.3.76)
griduid (1590)	edge%grid%metric%g13(:)%griduid (integer) (9.5.1.1.2)
subgrid (1590)	edge%grid%metric%g13(:)%subgrid (integer) (9.5.1.1.2)
scalar (1590)	edge%grid%metric%g13(:)%scalar (vecflt.type) (9.5.1.2.9)
vector (1590)	edge%grid%metric%g13(:)%vector (matflt.type) (9.5.1.2.7)
matrix (1590)	edge%grid%metric%g13(:)%matrix (array3dflt.type) (9.5.1.2.1)
g22 (1588)	edge%grid%metric%g22(:) (complexgrid.scalar) (9.5.1.3.76)
griduid (1590)	edge%grid%metric%g22(:)%griduid (integer) (9.5.1.1.2)
subgrid (1590)	edge%grid%metric%g22(:)%subgrid (integer) (9.5.1.1.2)
scalar (1590)	edge%grid%metric%g22(:)%scalar (vecflt.type) (9.5.1.2.9)
vector (1590)	edge%grid%metric%g22(:)%vector (matflt.type) (9.5.1.2.7)
matrix (1590)	edge%grid%metric%g22(:)%matrix (array3dflt.type) (9.5.1.2.1)
g23 (1588)	edge%grid%metric%g23(:) (complexgrid.scalar) (9.5.1.3.76)
griduid (1590)	edge%grid%metric%g23(:)%griduid (integer) (9.5.1.1.2)
subgrid (1590)	edge%grid%metric%g23(:)%subgrid (integer) (9.5.1.1.2)
scalar (1590)	edge%grid%metric%g23(:)%scalar (vecflt.type) (9.5.1.2.9)



vector (1590)	edge%grid%metric%g23(:)%vector (matflt.type) (9.5.1.2.7)
matrix (1590)	edge%grid%metric%g23(:)%matrix (array3dflt.type) (9.5.1.2.1)
g33 (1588)	edge%grid%metric%g33(:) (complexgrid_scalar) (9.5.1.3.76)
griduid (1590)	edge%grid%metric%g33(:)%griduid (integer) (9.5.1.1.2)
subgrid (1590)	edge%grid%metric%g33(:)%subgrid (integer) (9.5.1.1.2)
scalar (1590)	edge%grid%metric%g33(:)%scalar (vecflt.type) (9.5.1.2.9)
vector (1590)	edge%grid%metric%g33(:)%vector (matflt.type) (9.5.1.2.7)
matrix (1590)	edge%grid%metric%g33(:)%matrix (array3dflt.type) (9.5.1.2.1)
jacobian (1588)	edge%grid%metric%jacobian(:) (complexgrid_scalar) (9.5.1.3.76)
griduid (1590)	edge%grid%metric%jacobian(:)%griduid (integer) (9.5.1.1.2)
subgrid (1590)	edge%grid%metric%jacobian(:)%subgrid (integer) (9.5.1.1.2)
scalar (1590)	edge%grid%metric%jacobian(:)%scalar (vecflt.type) (9.5.1.2.9)
vector (1590)	edge%grid%metric%jacobian(:)%vector (matflt.type) (9.5.1.2.7)
matrix (1590)	edge%grid%metric%jacobian(:)%matrix (array3dflt.type) (9.5.1.2.1)
geo (1585)	edge%grid%geo(:) (complexgrid_geo_global) (9.5.1.3.72)
geotype (1586)	edge%grid%geo(:)%geotype (integer) (9.5.1.1.2)
geotypeid (1586)	edge%grid%geo(:)%geotypeid (string) (9.5.1.1.3)
coordtype (1586)	edge%grid%geo(:)%coordtype (vecint.type) (9.5.1.2.10)
geo_matrix (1586)	edge%grid%geo(:)%geo_matrix(:) (complexgrid_scalar) (9.5.1.3.76)
griduid (1590)	edge%grid%geo(:)%geo_matrix(:)%griduid (integer) (9.5.1.1.2)
subgrid (1590)	edge%grid%geo(:)%geo_matrix(:)%subgrid (integer) (9.5.1.1.2)
scalar (1590)	edge%grid%geo(:)%geo_matrix(:)%scalar (vecflt.type) (9.5.1.2.9)
vector (1590)	edge%grid%geo(:)%geo_matrix(:)%vector (matflt.type) (9.5.1.2.7)
matrix (1590)	edge%grid%geo(:)%geo_matrix(:)%matrix (array3dflt.type) (9.5.1.2.1)
measure (1586)	edge%grid%geo(:)%measure(:) (complexgrid_scalar) (9.5.1.3.76)
griduid (1590)	edge%grid%geo(:)%measure(:)%griduid (integer) (9.5.1.1.2)
subgrid (1590)	edge%grid%geo(:)%measure(:)%subgrid (integer) (9.5.1.1.2)
scalar (1590)	edge%grid%geo(:)%measure(:)%scalar (vecflt.type) (9.5.1.2.9)
vector (1590)	edge%grid%geo(:)%measure(:)%vector (matflt.type) (9.5.1.2.7)
matrix (1590)	edge%grid%geo(:)%measure(:)%matrix (array3dflt.type) (9.5.1.2.1)
bases (1585)	edge%grid%bases(:) (complexgrid_vector) (9.5.1.3.82)
griduid (1596)	edge%grid%bases(:)%griduid (integer) (9.5.1.1.2)
label (1596)	edge%grid%bases(:)%label (string) (9.5.1.1.3)
comp (1596)	edge%grid%bases(:)%comp(:) (complexgrid_scalar) (9.5.1.3.76)
griduid (1590)	edge%grid%bases(:)%comp(:)%griduid (integer) (9.5.1.1.2)
subgrid (1590)	edge%grid%bases(:)%comp(:)%subgrid (integer) (9.5.1.1.2)
scalar (1590)	edge%grid%bases(:)%comp(:)%scalar (vecflt.type) (9.5.1.2.9)
vector (1590)	edge%grid%bases(:)%comp(:)%vector (matflt.type) (9.5.1.2.7)
matrix (1590)	edge%grid%bases(:)%comp(:)%matrix (array3dflt.type) (9.5.1.2.1)
align (1596)	edge%grid%bases(:)%align (vecint.type) (9.5.1.2.10)
alignid (1596)	edge%grid%bases(:)%alignid (vecstring.type) (9.5.1.2.11)
basis (1596)	edge%grid%bases(:)%basis (integer) (9.5.1.1.2)
species (1530)	edge%species(:) (species_desc) (9.5.1.3.377)
label (1891)	edge%species(:)%label (string) (9.5.1.1.3)
amn (1891)	edge%species(:)%amn (float) (9.5.1.1.1)
zn (1891)	edge%species(:)%zn (float) (9.5.1.1.1)
zmin (1891)	edge%species(:)%zmin (float) (9.5.1.1.1)
zmax (1891)	edge%species(:)%zmax (float) (9.5.1.1.1)
compositions (1530)	edge%compositions (compositions_type) (9.5.1.3.88)
nuclei (1602)	edge%compositions%nuclei(:) (nuclei) (9.5.1.3.259)
zn (1773)	edge%compositions%nuclei(:)%zn (float) (9.5.1.1.1)
amn (1773)	edge%compositions%nuclei(:)%amn (float) (9.5.1.1.1)
label (1773)	edge%compositions%nuclei(:)%label (string) (9.5.1.1.3)
ions (1602)	edge%compositions%ions(:) (ions) (9.5.1.3.219)
nucindex (1733)	edge%compositions%ions(:)%nucindex (integer) (9.5.1.1.2)
zion (1733)	edge%compositions%ions(:)%zion (float) (9.5.1.1.1)
imp_flag (1733)	edge%compositions%ions(:)%imp_flag (integer) (9.5.1.1.2)
label (1733)	edge%compositions%ions(:)%label (string) (9.5.1.1.3)
impurities (1602)	edge%compositions%impurities(:) (impurities) (9.5.1.3.216)
nucindex (1730)	edge%compositions%impurities(:)%nucindex (integer) (9.5.1.1.2)
i_ion (1730)	edge%compositions%impurities(:)%i_ion (integer) (9.5.1.1.2)

nzimp (1730)	edge%compositions%impurities(:)%nzimp (integer) (9.5.1.1.2)
zmin (1730)	edge%compositions%impurities(:)%zmin (vecflt_type) (9.5.1.2.9)
zmax (1730)	edge%compositions%impurities(:)%zmax (vecflt_type) (9.5.1.2.9)
label (1730)	edge%compositions%impurities(:)%label (vecstring_type) (9.5.1.2.11)
neutralscomp (1602)	edge%compositions%neutralscomp(:) (composition_neutralscomp) (9.5.1.3.87)
neutcomp (1601)	edge%compositions%neutralscomp(:)%neutcomp(:) (composition_neutrals_neutcomp) (9.5.1.3.86)
nucindex (1600)	edge%compositions%neutralscomp(:)%neutcomp(:)%nucindex (integer) (9.5.1.1.2)
multiplicity (1600)	edge%compositions%neutralscomp(:)%neutcomp(:)%multiplicity (integer) (9.5.1.1.2)
type (1601)	edge%compositions%neutralscomp(:)%type(:) (identifier) (9.5.1.3.214)
id (1728)	edge%compositions%neutralscomp(:)%type(:)%id (string) (9.5.1.1.3)
flag (1728)	edge%compositions%neutralscomp(:)%type(:)%flag (integer) (9.5.1.1.2)
description (1728)	edge%compositions%neutralscomp(:)%type(:)%description (string) (9.5.1.1.3)
label (1601)	edge%compositions%neutralscomp(:)%label (string) (9.5.1.1.3)
edgespecies (1602)	edge%compositions%edgespecies(:) (edgespecies) (9.5.1.3.170)
nucindex (1684)	edge%compositions%edgespecies(:)%nucindex (integer) (9.5.1.1.2)
zmin (1684)	edge%compositions%edgespecies(:)%zmin (float) (9.5.1.1.1)
zmax (1684)	edge%compositions%edgespecies(:)%zmax (float) (9.5.1.1.1)
label (1684)	edge%compositions%edgespecies(:)%label (string) (9.5.1.1.3)
signature (1602)	edge%compositions%signature (identifier) (9.5.1.3.214)
id (1728)	edge%compositions%signature%id (string) (9.5.1.1.3)
flag (1728)	edge%compositions%signature%flag (integer) (9.5.1.1.2)
description (1728)	edge%compositions%signature%description (string) (9.5.1.1.3)
fluid (1530)	edge%fluid (edge_fluid) (9.5.1.3.161)
ne (1675)	edge%fluid%ne (edge_fluid_scalar_simplestruct) (9.5.1.3.163)
value (1677)	edge%fluid%ne%value(:) (complexgrid_scalar) (9.5.1.3.76)
griduid (1590)	edge%fluid%ne%value(:)%griduid (integer) (9.5.1.1.2)
subgrid (1590)	edge%fluid%ne%value(:)%subgrid (integer) (9.5.1.1.2)
scalar (1590)	edge%fluid%ne%value(:)%scalar (vecflt_type) (9.5.1.2.9)
vector (1590)	edge%fluid%ne%value(:)%vector (matflt_type) (9.5.1.2.7)
matrix (1590)	edge%fluid%ne%value(:)%matrix (array3dflt_type) (9.5.1.2.1)
bndvalue (1677)	edge%fluid%ne%bndvalue(:) (complexgrid_scalar) (9.5.1.3.76)
griduid (1590)	edge%fluid%ne%bndvalue(:)%griduid (integer) (9.5.1.1.2)
subgrid (1590)	edge%fluid%ne%bndvalue(:)%subgrid (integer) (9.5.1.1.2)
scalar (1590)	edge%fluid%ne%bndvalue(:)%scalar (vecflt_type) (9.5.1.2.9)
vector (1590)	edge%fluid%ne%bndvalue(:)%vector (matflt_type) (9.5.1.2.7)
matrix (1590)	edge%fluid%ne%bndvalue(:)%matrix (array3dflt_type) (9.5.1.2.1)
flux (1677)	edge%fluid%ne%flux(:) (complexgrid_vector) (9.5.1.3.82)
griduid (1596)	edge%fluid%ne%flux(:)%griduid (integer) (9.5.1.1.2)
label (1596)	edge%fluid%ne%flux(:)%label (string) (9.5.1.1.3)
comp (1596)	edge%fluid%ne%flux(:)%comp(:) (complexgrid_scalar) (9.5.1.3.76)
griduid (1590)	edge%fluid%ne%flux(:)%comp(:)%griduid (integer) (9.5.1.1.2)
subgrid (1590)	edge%fluid%ne%flux(:)%comp(:)%subgrid (integer) (9.5.1.1.2)
scalar (1590)	edge%fluid%ne%flux(:)%comp(:)%scalar (vecflt_type) (9.5.1.2.9)
vector (1590)	edge%fluid%ne%flux(:)%comp(:)%vector (matflt_type) (9.5.1.2.7)
matrix (1590)	edge%fluid%ne%flux(:)%comp(:)%matrix (array3dflt_type) (9.5.1.2.1)
align (1596)	edge%fluid%ne%flux(:)%align (vecint_type) (9.5.1.2.10)
alignid (1596)	edge%fluid%ne%flux(:)%alignid (vecstring_type) (9.5.1.2.11)
basis (1596)	edge%fluid%ne%flux(:)%basis (integer) (9.5.1.1.2)
bndflux (1677)	edge%fluid%ne%bndflux(:) (complexgrid_vector) (9.5.1.3.82)
griduid (1596)	edge%fluid%ne%bndflux(:)%griduid (integer) (9.5.1.1.2)
label (1596)	edge%fluid%ne%bndflux(:)%label (string) (9.5.1.1.3)
comp (1596)	edge%fluid%ne%bndflux(:)%comp(:) (complexgrid_scalar) (9.5.1.3.76)
griduid (1590)	edge%fluid%ne%bndflux(:)%comp(:)%griduid (integer) (9.5.1.1.2)
subgrid (1590)	edge%fluid%ne%bndflux(:)%comp(:)%subgrid (integer) (9.5.1.1.2)
scalar (1590)	edge%fluid%ne%bndflux(:)%comp(:)%scalar (vecflt_type) (9.5.1.2.9)
vector (1590)	edge%fluid%ne%bndflux(:)%comp(:)%vector (matflt_type) (9.5.1.2.7)
matrix (1590)	edge%fluid%ne%bndflux(:)%comp(:)%matrix (array3dflt_type) (9.5.1.2.1)
align (1596)	edge%fluid%ne%bndflux(:)%align (vecint_type) (9.5.1.2.10)
alignid (1596)	edge%fluid%ne%bndflux(:)%alignid (vecstring_type) (9.5.1.2.11)
basis (1596)	edge%fluid%ne%bndflux(:)%basis (integer) (9.5.1.1.2)
transpcoeff (1677)	edge%fluid%ne%transpcoeff(:) (edge_fluid_scalar_transpcoeff) (9.5.1.3.164)



d (1678)	edge%fluid%ne%transpcoeff(:)%d (complexgrid_vector_simplestruct) (9.5.1.3.83)
label (1597)	edge%fluid%ne%transpcoeff(:)%d%label (string) (9.5.1.1.3)
comp (1597)	edge%fluid%ne%transpcoeff(:)%d%comp(:) (complexgrid_scalar) (9.5.1.3.76)
griduid (1590)	edge%fluid%ne%transpcoeff(:)%d%comp(:)%griduid (integer) (9.5.1.1.2)
subgrid (1590)	edge%fluid%ne%transpcoeff(:)%d%comp(:)%subgrid (integer) (9.5.1.1.2)
scalar (1590)	edge%fluid%ne%transpcoeff(:)%d%comp(:)%scalar (vecflt_type) (9.5.1.2.9)
vector (1590)	edge%fluid%ne%transpcoeff(:)%d%comp(:)%vector (matflt_type) (9.5.1.2.7)
matrix (1590)	edge%fluid%ne%transpcoeff(:)%d%comp(:)%matrix (array3dflt_type) (9.5.1.2.1)
align (1597)	edge%fluid%ne%transpcoeff(:)%d%align (vecint_type) (9.5.1.2.10)
alignid (1597)	edge%fluid%ne%transpcoeff(:)%d%alignid (vecstring_type) (9.5.1.2.11)
v (1678)	edge%fluid%ne%transpcoeff(:)%v (complexgrid_vector_simplestruct) (9.5.1.3.83)
label (1597)	edge%fluid%ne%transpcoeff(:)%v%label (string) (9.5.1.1.3)
comp (1597)	edge%fluid%ne%transpcoeff(:)%v%comp(:) (complexgrid_scalar) (9.5.1.3.76)
griduid (1590)	edge%fluid%ne%transpcoeff(:)%v%comp(:)%griduid (integer) (9.5.1.1.2)
subgrid (1590)	edge%fluid%ne%transpcoeff(:)%v%comp(:)%subgrid (integer) (9.5.1.1.2)
scalar (1590)	edge%fluid%ne%transpcoeff(:)%v%comp(:)%scalar (vecflt_type) (9.5.1.2.9)
vector (1590)	edge%fluid%ne%transpcoeff(:)%v%comp(:)%vector (matflt_type) (9.5.1.2.7)
matrix (1590)	edge%fluid%ne%transpcoeff(:)%v%comp(:)%matrix (array3dflt_type) (9.5.1.2.1)
align (1597)	edge%fluid%ne%transpcoeff(:)%v%align (vecint_type) (9.5.1.2.10)
alignid (1597)	edge%fluid%ne%transpcoeff(:)%v%alignid (vecstring_type) (9.5.1.2.11)
source (1677)	edge%fluid%ne%source(:) (complexgrid_scalar) (9.5.1.3.76)
griduid (1590)	edge%fluid%ne%source(:)%griduid (integer) (9.5.1.1.2)
subgrid (1590)	edge%fluid%ne%source(:)%subgrid (integer) (9.5.1.1.2)
scalar (1590)	edge%fluid%ne%source(:)%scalar (vecflt_type) (9.5.1.2.9)
vector (1590)	edge%fluid%ne%source(:)%vector (matflt_type) (9.5.1.2.7)
matrix (1590)	edge%fluid%ne%source(:)%matrix (array3dflt_type) (9.5.1.2.1)
ni (1675)	edge%fluid%ni(:) (edge_fluid_scalar) (9.5.1.3.162)
value (1676)	edge%fluid%ni(:)%value(:) (complexgrid_scalar) (9.5.1.3.76)
griduid (1590)	edge%fluid%ni(:)%value(:)%griduid (integer) (9.5.1.1.2)
subgrid (1590)	edge%fluid%ni(:)%value(:)%subgrid (integer) (9.5.1.1.2)
scalar (1590)	edge%fluid%ni(:)%value(:)%scalar (vecflt_type) (9.5.1.2.9)
vector (1590)	edge%fluid%ni(:)%value(:)%vector (matflt_type) (9.5.1.2.7)
matrix (1590)	edge%fluid%ni(:)%value(:)%matrix (array3dflt_type) (9.5.1.2.1)
bndvalue (1676)	edge%fluid%ni(:)%bndvalue(:) (complexgrid_scalar) (9.5.1.3.76)
griduid (1590)	edge%fluid%ni(:)%bndvalue(:)%griduid (integer) (9.5.1.1.2)
subgrid (1590)	edge%fluid%ni(:)%bndvalue(:)%subgrid (integer) (9.5.1.1.2)
scalar (1590)	edge%fluid%ni(:)%bndvalue(:)%scalar (vecflt_type) (9.5.1.2.9)
vector (1590)	edge%fluid%ni(:)%bndvalue(:)%vector (matflt_type) (9.5.1.2.7)
matrix (1590)	edge%fluid%ni(:)%bndvalue(:)%matrix (array3dflt_type) (9.5.1.2.1)
flux (1676)	edge%fluid%ni(:)%flux(:) (complexgrid_vector) (9.5.1.3.82)
griduid (1596)	edge%fluid%ni(:)%flux(:)%griduid (integer) (9.5.1.1.2)
label (1596)	edge%fluid%ni(:)%flux(:)%label (string) (9.5.1.1.3)
comp (1596)	edge%fluid%ni(:)%flux(:)%comp(:) (complexgrid_scalar) (9.5.1.3.76)
griduid (1590)	edge%fluid%ni(:)%flux(:)%comp(:)%griduid (integer) (9.5.1.1.2)
subgrid (1590)	edge%fluid%ni(:)%flux(:)%comp(:)%subgrid (integer) (9.5.1.1.2)
scalar (1590)	edge%fluid%ni(:)%flux(:)%comp(:)%scalar (vecflt_type) (9.5.1.2.9)
vector (1590)	edge%fluid%ni(:)%flux(:)%comp(:)%vector (matflt_type) (9.5.1.2.7)
matrix (1590)	edge%fluid%ni(:)%flux(:)%comp(:)%matrix (array3dflt_type) (9.5.1.2.1)
align (1596)	edge%fluid%ni(:)%flux(:)%align (vecint_type) (9.5.1.2.10)
alignid (1596)	edge%fluid%ni(:)%flux(:)%alignid (vecstring_type) (9.5.1.2.11)
basis (1596)	edge%fluid%ni(:)%flux(:)%basis (integer) (9.5.1.1.2)
bndflux (1676)	edge%fluid%ni(:)%bndflux(:) (complexgrid_vector) (9.5.1.3.82)
griduid (1596)	edge%fluid%ni(:)%bndflux(:)%griduid (integer) (9.5.1.1.2)
label (1596)	edge%fluid%ni(:)%bndflux(:)%label (string) (9.5.1.1.3)
comp (1596)	edge%fluid%ni(:)%bndflux(:)%comp(:) (complexgrid_scalar) (9.5.1.3.76)
griduid (1590)	edge%fluid%ni(:)%bndflux(:)%comp(:)%griduid (integer) (9.5.1.1.2)
subgrid (1590)	edge%fluid%ni(:)%bndflux(:)%comp(:)%subgrid (integer) (9.5.1.1.2)
scalar (1590)	edge%fluid%ni(:)%bndflux(:)%comp(:)%scalar (vecflt_type) (9.5.1.2.9)
vector (1590)	edge%fluid%ni(:)%bndflux(:)%comp(:)%vector (matflt_type) (9.5.1.2.7)
matrix (1590)	edge%fluid%ni(:)%bndflux(:)%comp(:)%matrix (array3dflt_type) (9.5.1.2.1)
align (1596)	edge%fluid%ni(:)%bndflux(:)%align (vecint_type) (9.5.1.2.10)

alignid (1596)	edge%fluid%ni(:)%bndflux(:)%alignid (vecstring_type) (9.5.1.2.11)
basis (1596)	edge%fluid%ni(:)%bndflux(:)%basis (integer) (9.5.1.1.2)
transpcoeff (1676)	edge%fluid%ni(:)%transpcoeff(:) (edge_fluid_scalar_transpcoeff) (9.5.1.3.164)
d (1678)	edge%fluid%ni(:)%transpcoeff(:)%d (complexgrid_vector_simplestruct) (9.5.1.3.83)
label (1597)	edge%fluid%ni(:)%transpcoeff(:)%d%label (string) (9.5.1.1.3)
comp (1597)	edge%fluid%ni(:)%transpcoeff(:)%d%comp(:) (complexgrid_scalar) (9.5.1.3.76)
griduid (1590)	edge%fluid%ni(:)%transpcoeff(:)%d%comp(:)%griduid (integer) (9.5.1.1.2)
subgrid (1590)	edge%fluid%ni(:)%transpcoeff(:)%d%comp(:)%subgrid (integer) (9.5.1.1.2)
scalar (1590)	edge%fluid%ni(:)%transpcoeff(:)%d%comp(:)%scalar (vecflt_type) (9.5.1.2.9)
vector (1590)	edge%fluid%ni(:)%transpcoeff(:)%d%comp(:)%vector (matflt_type) (9.5.1.2.7)
matrix (1590)	edge%fluid%ni(:)%transpcoeff(:)%d%comp(:)%matrix (array3dflt_type) (9.5.1.2.1)
align (1597)	edge%fluid%ni(:)%transpcoeff(:)%d%align (vecint_type) (9.5.1.2.10)
alignid (1597)	edge%fluid%ni(:)%transpcoeff(:)%d%alignid (vecstring_type) (9.5.1.2.11)
v (1678)	edge%fluid%ni(:)%transpcoeff(:)%v (complexgrid_vector_simplestruct) (9.5.1.3.83)
label (1597)	edge%fluid%ni(:)%transpcoeff(:)%v%label (string) (9.5.1.1.3)
comp (1597)	edge%fluid%ni(:)%transpcoeff(:)%v%comp(:) (complexgrid_scalar) (9.5.1.3.76)
griduid (1590)	edge%fluid%ni(:)%transpcoeff(:)%v%comp(:)%griduid (integer) (9.5.1.1.2)
subgrid (1590)	edge%fluid%ni(:)%transpcoeff(:)%v%comp(:)%subgrid (integer) (9.5.1.1.2)
scalar (1590)	edge%fluid%ni(:)%transpcoeff(:)%v%comp(:)%scalar (vecflt_type) (9.5.1.2.9)
vector (1590)	edge%fluid%ni(:)%transpcoeff(:)%v%comp(:)%vector (matflt_type) (9.5.1.2.7)
matrix (1590)	edge%fluid%ni(:)%transpcoeff(:)%v%comp(:)%matrix (array3dflt_type) (9.5.1.2.1)
align (1597)	edge%fluid%ni(:)%transpcoeff(:)%v%align (vecint_type) (9.5.1.2.10)
alignid (1597)	edge%fluid%ni(:)%transpcoeff(:)%v%alignid (vecstring_type) (9.5.1.2.11)
source (1676)	edge%fluid%ni(:)%source(:) (complexgrid_scalar) (9.5.1.3.76)
griduid (1590)	edge%fluid%ni(:)%source(:)%griduid (integer) (9.5.1.1.2)
subgrid (1590)	edge%fluid%ni(:)%source(:)%subgrid (integer) (9.5.1.1.2)
scalar (1590)	edge%fluid%ni(:)%source(:)%scalar (vecflt_type) (9.5.1.2.9)
vector (1590)	edge%fluid%ni(:)%source(:)%vector (matflt_type) (9.5.1.2.7)
matrix (1590)	edge%fluid%ni(:)%source(:)%matrix (array3dflt_type) (9.5.1.2.1)
ve (1675)	edge%fluid%ve (edge_fluid_vector_simplestruct) (9.5.1.3.166)
griduid (1680)	edge%fluid%ve%griduid (integer) (9.5.1.1.2)
basis (1680)	edge%fluid%ve%basis (integer) (9.5.1.1.2)
comps (1680)	edge%fluid%ve%comps(:) (edge_fluid_scalar) (9.5.1.3.162)
value (1676)	edge%fluid%ve%comps(:)%value(:) (complexgrid_scalar) (9.5.1.3.76)
griduid (1590)	edge%fluid%ve%comps(:)%value(:)%griduid (integer) (9.5.1.1.2)
subgrid (1590)	edge%fluid%ve%comps(:)%value(:)%subgrid (integer) (9.5.1.1.2)
scalar (1590)	edge%fluid%ve%comps(:)%value(:)%scalar (vecflt_type) (9.5.1.2.9)
vector (1590)	edge%fluid%ve%comps(:)%value(:)%vector (matflt_type) (9.5.1.2.7)
matrix (1590)	edge%fluid%ve%comps(:)%value(:)%matrix (array3dflt_type) (9.5.1.2.1)
bndvalue (1676)	edge%fluid%ve%comps(:)%bndvalue(:) (complexgrid_scalar) (9.5.1.3.76)
griduid (1590)	edge%fluid%ve%comps(:)%bndvalue(:)%griduid (integer) (9.5.1.1.2)
subgrid (1590)	edge%fluid%ve%comps(:)%bndvalue(:)%subgrid (integer) (9.5.1.1.2)
scalar (1590)	edge%fluid%ve%comps(:)%bndvalue(:)%scalar (vecflt_type) (9.5.1.2.9)
vector (1590)	edge%fluid%ve%comps(:)%bndvalue(:)%vector (matflt_type) (9.5.1.2.7)
matrix (1590)	edge%fluid%ve%comps(:)%bndvalue(:)%matrix (array3dflt_type) (9.5.1.2.1)
flux (1676)	edge%fluid%ve%comps(:)%flux(:) (complexgrid_vector) (9.5.1.3.82)
griduid (1596)	edge%fluid%ve%comps(:)%flux(:)%griduid (integer) (9.5.1.1.2)
label (1596)	edge%fluid%ve%comps(:)%flux(:)%label (string) (9.5.1.1.3)
comp (1596)	edge%fluid%ve%comps(:)%flux(:)%comp(:) (complexgrid_scalar) (9.5.1.3.76)
griduid (1590)	edge%fluid%ve%comps(:)%flux(:)%comp(:)%griduid (integer) (9.5.1.1.2)
subgrid (1590)	edge%fluid%ve%comps(:)%flux(:)%comp(:)%subgrid (integer) (9.5.1.1.2)
scalar (1590)	edge%fluid%ve%comps(:)%flux(:)%comp(:)%scalar (vecflt_type) (9.5.1.2.9)
vector (1590)	edge%fluid%ve%comps(:)%flux(:)%comp(:)%vector (matflt_type) (9.5.1.2.7)
matrix (1590)	edge%fluid%ve%comps(:)%flux(:)%comp(:)%matrix (array3dflt_type) (9.5.1.2.1)
align (1596)	edge%fluid%ve%comps(:)%flux(:)%align (vecint_type) (9.5.1.2.10)
alignid (1596)	edge%fluid%ve%comps(:)%flux(:)%alignid (vecstring_type) (9.5.1.2.11)
basis (1596)	edge%fluid%ve%comps(:)%flux(:)%basis (integer) (9.5.1.1.2)
bndflux (1676)	edge%fluid%ve%comps(:)%bndflux(:) (complexgrid_vector) (9.5.1.3.82)
griduid (1596)	edge%fluid%ve%comps(:)%bndflux(:)%griduid (integer) (9.5.1.1.2)
label (1596)	edge%fluid%ve%comps(:)%bndflux(:)%label (string) (9.5.1.1.3)
comp (1596)	edge%fluid%ve%comps(:)%bndflux(:)%comp(:) (complexgrid_scalar) (9.5.1.3.76)

griduid (1590)	edge%fluid%ve%comps(:)%bndflux(:)%comp(:)%griduid (integer) (9.5.1.1.2)
subgrid (1590)	edge%fluid%ve%comps(:)%bndflux(:)%comp(:)%subgrid (integer) (9.5.1.1.2)
scalar (1590)	edge%fluid%ve%comps(:)%bndflux(:)%comp(:)%scalar (vecflt_type) (9.5.1.2.9)
vector (1590)	edge%fluid%ve%comps(:)%bndflux(:)%comp(:)%vector (matflt_type) (9.5.1.2.7)
matrix (1590)	edge%fluid%ve%comps(:)%bndflux(:)%comp(:)%matrix (array3dflt_type) (9.5.1.2.1)
align (1596)	edge%fluid%ve%comps(:)%bndflux(:)%align (vecint_type) (9.5.1.2.10)
alignid (1596)	edge%fluid%ve%comps(:)%bndflux(:)%alignid (vecstring_type) (9.5.1.2.11)
basis (1596)	edge%fluid%ve%comps(:)%bndflux(:)%basis (integer) (9.5.1.1.2)
transpcoeff (1676)	edge%fluid%ve%comps(:)%transpcoeff(:) (edge_fluid_scalar_transpcoeff) (9.5.1.3.164)
d (1678)	edge%fluid%ve%comps(:)%transpcoeff(:)%d (complexgrid_vector_simplestruct) (9.5.1.3.83)
label (1597)	edge%fluid%ve%comps(:)%transpcoeff(:)%d%label (string) (9.5.1.1.3)
comp (1597)	edge%fluid%ve%comps(:)%transpcoeff(:)%d%comp(:) (complexgrid_scalar) (9.5.1.3.76)
griduid (1590)	edge%fluid%ve%comps(:)%transpcoeff(:)%d%comp(:)%griduid (integer) (9.5.1.1.2)
subgrid (1590)	edge%fluid%ve%comps(:)%transpcoeff(:)%d%comp(:)%subgrid (integer) (9.5.1.1.2)
scalar (1590)	edge%fluid%ve%comps(:)%transpcoeff(:)%d%comp(:)%scalar (vecflt_type) (9.5.1.2.9)
vector (1590)	edge%fluid%ve%comps(:)%transpcoeff(:)%d%comp(:)%vector (matflt_type) (9.5.1.2.7)
matrix (1590)	edge%fluid%ve%comps(:)%transpcoeff(:)%d%comp(:)%matrix (array3dflt_type) (9.5.1.2.1)
align (1597)	edge%fluid%ve%comps(:)%transpcoeff(:)%d%align (vecint_type) (9.5.1.2.10)
alignid (1597)	edge%fluid%ve%comps(:)%transpcoeff(:)%d%alignid (vecstring_type) (9.5.1.2.11)
v (1678)	edge%fluid%ve%comps(:)%transpcoeff(:)%v (complexgrid_vector_simplestruct) (9.5.1.3.83)
label (1597)	edge%fluid%ve%comps(:)%transpcoeff(:)%v%label (string) (9.5.1.1.3)
comp (1597)	edge%fluid%ve%comps(:)%transpcoeff(:)%v%comp(:) (complexgrid_scalar) (9.5.1.3.76)
griduid (1590)	edge%fluid%ve%comps(:)%transpcoeff(:)%v%comp(:)%griduid (integer) (9.5.1.1.2)
subgrid (1590)	edge%fluid%ve%comps(:)%transpcoeff(:)%v%comp(:)%subgrid (integer) (9.5.1.1.2)
scalar (1590)	edge%fluid%ve%comps(:)%transpcoeff(:)%v%comp(:)%scalar (vecflt_type) (9.5.1.2.9)
vector (1590)	edge%fluid%ve%comps(:)%transpcoeff(:)%v%comp(:)%vector (matflt_type) (9.5.1.2.7)
matrix (1590)	edge%fluid%ve%comps(:)%transpcoeff(:)%v%comp(:)%matrix (array3dflt_type) (9.5.1.2.1)
align (1597)	edge%fluid%ve%comps(:)%transpcoeff(:)%v%align (vecint_type) (9.5.1.2.10)
alignid (1597)	edge%fluid%ve%comps(:)%transpcoeff(:)%v%alignid (vecstring_type) (9.5.1.2.11)
source (1676)	edge%fluid%ve%comps(:)%source(:) (complexgrid_scalar) (9.5.1.3.76)
griduid (1590)	edge%fluid%ve%comps(:)%source(:)%griduid (integer) (9.5.1.1.2)
subgrid (1590)	edge%fluid%ve%comps(:)%source(:)%subgrid (integer) (9.5.1.1.2)
scalar (1590)	edge%fluid%ve%comps(:)%source(:)%scalar (vecflt_type) (9.5.1.2.9)
vector (1590)	edge%fluid%ve%comps(:)%source(:)%vector (matflt_type) (9.5.1.2.7)
matrix (1590)	edge%fluid%ve%comps(:)%source(:)%matrix (array3dflt_type) (9.5.1.2.1)
align (1680)	edge%fluid%ve%align (vecint_type) (9.5.1.2.10)
alignid (1680)	edge%fluid%ve%alignid (vecstring_type) (9.5.1.2.11)
vi (1675)	edge%fluid%ve%vi(:) (edge_fluid_vector) (9.5.1.3.165)
griduid (1679)	edge%fluid%ve%vi(:)%griduid (integer) (9.5.1.1.2)
basis (1679)	edge%fluid%ve%vi(:)%basis (integer) (9.5.1.1.2)
align (1679)	edge%fluid%ve%vi(:)%align (vecint_type) (9.5.1.2.10)
alignid (1679)	edge%fluid%ve%vi(:)%alignid (vecstring_type) (9.5.1.2.11)
comps (1679)	edge%fluid%ve%vi(:)%comps(:) (edge_fluid_scalar) (9.5.1.3.162)
value (1676)	edge%fluid%ve%vi(:)%comps(:)%value(:) (complexgrid_scalar) (9.5.1.3.76)
griduid (1590)	edge%fluid%ve%vi(:)%comps(:)%value(:)%griduid (integer) (9.5.1.1.2)
subgrid (1590)	edge%fluid%ve%vi(:)%comps(:)%value(:)%subgrid (integer) (9.5.1.1.2)
scalar (1590)	edge%fluid%ve%vi(:)%comps(:)%value(:)%scalar (vecflt_type) (9.5.1.2.9)
vector (1590)	edge%fluid%ve%vi(:)%comps(:)%value(:)%vector (matflt_type) (9.5.1.2.7)
matrix (1590)	edge%fluid%ve%vi(:)%comps(:)%value(:)%matrix (array3dflt_type) (9.5.1.2.1)
bndvalue (1676)	edge%fluid%ve%vi(:)%comps(:)%bndvalue(:) (complexgrid_scalar) (9.5.1.3.76)
griduid (1590)	edge%fluid%ve%vi(:)%comps(:)%bndvalue(:)%griduid (integer) (9.5.1.1.2)
subgrid (1590)	edge%fluid%ve%vi(:)%comps(:)%bndvalue(:)%subgrid (integer) (9.5.1.1.2)
scalar (1590)	edge%fluid%ve%vi(:)%comps(:)%bndvalue(:)%scalar (vecflt_type) (9.5.1.2.9)
vector (1590)	edge%fluid%ve%vi(:)%comps(:)%bndvalue(:)%vector (matflt_type) (9.5.1.2.7)
matrix (1590)	edge%fluid%ve%vi(:)%comps(:)%bndvalue(:)%matrix (array3dflt_type) (9.5.1.2.1)
flux (1676)	edge%fluid%ve%vi(:)%comps(:)%flux(:) (complexgrid_vector) (9.5.1.3.82)
griduid (1596)	edge%fluid%ve%vi(:)%comps(:)%flux(:)%griduid (integer) (9.5.1.1.2)
label (1596)	edge%fluid%ve%vi(:)%comps(:)%flux(:)%label (string) (9.5.1.1.3)
comp (1596)	edge%fluid%ve%vi(:)%comps(:)%flux(:)%comp(:) (complexgrid_scalar) (9.5.1.3.76)
griduid (1590)	edge%fluid%ve%vi(:)%comps(:)%flux(:)%comp(:)%griduid (integer) (9.5.1.1.2)
subgrid (1590)	edge%fluid%ve%vi(:)%comps(:)%flux(:)%comp(:)%subgrid (integer) (9.5.1.1.2)

scalar (1590)	edge%fluid%vi()%comps():%flux():%comp():%scalar (vecflt_type) (9.5.1.2.9)
vector (1590)	edge%fluid%vi()%comps():%flux():%comp():%vector (matflt_type) (9.5.1.2.7)
matrix (1590)	edge%fluid%vi()%comps():%flux():%comp():%matrix (array3dflt_type) (9.5.1.2.1)
align (1596)	edge%fluid%vi()%comps():%flux():%align (vecint_type) (9.5.1.2.10)
alignid (1596)	edge%fluid%vi()%comps():%flux():%alignid (vecstring_type) (9.5.1.2.11)
basis (1596)	edge%fluid%vi()%comps():%flux():%basis (integer) (9.5.1.1.2)
bndflux (1676)	edge%fluid%vi()%comps():%bndflux() (complexgrid_vector) (9.5.1.3.82)
griduid (1596)	edge%fluid%vi()%comps():%bndflux():%griduid (integer) (9.5.1.1.2)
label (1596)	edge%fluid%vi()%comps():%bndflux():%label (string) (9.5.1.1.3)
comp (1596)	edge%fluid%vi()%comps():%bndflux():%comp() (complexgrid_scalar) (9.5.1.3.76)
griduid (1590)	edge%fluid%vi()%comps():%bndflux():%comp():%griduid (integer) (9.5.1.1.2)
subgrid (1590)	edge%fluid%vi()%comps():%bndflux():%comp():%subgrid (integer) (9.5.1.1.2)
scalar (1590)	edge%fluid%vi()%comps():%bndflux():%comp():%scalar (vecflt_type) (9.5.1.2.9)
vector (1590)	edge%fluid%vi()%comps():%bndflux():%comp():%vector (matflt_type) (9.5.1.2.7)
matrix (1590)	edge%fluid%vi()%comps():%bndflux():%comp():%matrix (array3dflt_type) (9.5.1.2.1)
align (1596)	edge%fluid%vi()%comps():%bndflux():%align (vecint_type) (9.5.1.2.10)
alignid (1596)	edge%fluid%vi()%comps():%bndflux():%alignid (vecstring_type) (9.5.1.2.11)
basis (1596)	edge%fluid%vi()%comps():%bndflux():%basis (integer) (9.5.1.1.2)
transpcoeff (1676)	edge%fluid%vi()%comps():%transpcoeff() (edge_fluid_scalar_transpcoeff) (9.5.1.3.164)
d (1678)	edge%fluid%vi()%comps():%transpcoeff():%d (complexgrid_vector_simplestruct) (9.5.1.3.83)
label (1597)	edge%fluid%vi()%comps():%transpcoeff():%d%label (string) (9.5.1.1.3)
comp (1597)	edge%fluid%vi()%comps():%transpcoeff():%d%comp() (complexgrid_scalar) (9.5.1.3.76)
griduid (1590)	edge%fluid%vi()%comps():%transpcoeff():%d%comp():%griduid (integer) (9.5.1.1.2)
subgrid (1590)	edge%fluid%vi()%comps():%transpcoeff():%d%comp():%subgrid (integer) (9.5.1.1.2)
scalar (1590)	edge%fluid%vi()%comps():%transpcoeff():%d%comp():%scalar (vecflt_type) (9.5.1.2.9)
vector (1590)	edge%fluid%vi()%comps():%transpcoeff():%d%comp():%vector (matflt_type) (9.5.1.2.7)
matrix (1590)	edge%fluid%vi()%comps():%transpcoeff():%d%comp():%matrix (array3dflt_type) (9.5.1.2.1)
align (1597)	edge%fluid%vi()%comps():%transpcoeff():%d%align (vecint_type) (9.5.1.2.10)
alignid (1597)	edge%fluid%vi()%comps():%transpcoeff():%d%alignid (vecstring_type) (9.5.1.2.11)
v (1678)	edge%fluid%vi()%comps():%transpcoeff():%v (complexgrid_vector_simplestruct) (9.5.1.3.83)
label (1597)	edge%fluid%vi()%comps():%transpcoeff():%v%label (string) (9.5.1.1.3)
comp (1597)	edge%fluid%vi()%comps():%transpcoeff():%v%comp() (complexgrid_scalar) (9.5.1.3.76)
griduid (1590)	edge%fluid%vi()%comps():%transpcoeff():%v%comp():%griduid (integer) (9.5.1.1.2)
subgrid (1590)	edge%fluid%vi()%comps():%transpcoeff():%v%comp():%subgrid (integer) (9.5.1.1.2)
scalar (1590)	edge%fluid%vi()%comps():%transpcoeff():%v%comp():%scalar (vecflt_type) (9.5.1.2.9)
vector (1590)	edge%fluid%vi()%comps():%transpcoeff():%v%comp():%vector (matflt_type) (9.5.1.2.7)
matrix (1590)	edge%fluid%vi()%comps():%transpcoeff():%v%comp():%matrix (array3dflt_type) (9.5.1.2.1)
align (1597)	edge%fluid%vi()%comps():%transpcoeff():%v%align (vecint_type) (9.5.1.2.10)
alignid (1597)	edge%fluid%vi()%comps():%transpcoeff():%v%alignid (vecstring_type) (9.5.1.2.11)
source (1676)	edge%fluid%vi()%comps():%source() (complexgrid_scalar) (9.5.1.3.76)
griduid (1590)	edge%fluid%vi()%comps():%source():%griduid (integer) (9.5.1.1.2)
subgrid (1590)	edge%fluid%vi()%comps():%source():%subgrid (integer) (9.5.1.1.2)
scalar (1590)	edge%fluid%vi()%comps():%source():%scalar (vecflt_type) (9.5.1.2.9)
vector (1590)	edge%fluid%vi()%comps():%source():%vector (matflt_type) (9.5.1.2.7)
matrix (1590)	edge%fluid%vi()%comps():%source():%matrix (array3dflt_type) (9.5.1.2.1)
te (1675)	edge%fluid%te (edge_fluid_scalar_simplestruct) (9.5.1.3.163)
value (1677)	edge%fluid%te%value() (complexgrid_scalar) (9.5.1.3.76)
griduid (1590)	edge%fluid%te%value():%griduid (integer) (9.5.1.1.2)
subgrid (1590)	edge%fluid%te%value():%subgrid (integer) (9.5.1.1.2)
scalar (1590)	edge%fluid%te%value():%scalar (vecflt_type) (9.5.1.2.9)
vector (1590)	edge%fluid%te%value():%vector (matflt_type) (9.5.1.2.7)
matrix (1590)	edge%fluid%te%value():%matrix (array3dflt_type) (9.5.1.2.1)
bndvalue (1677)	edge%fluid%te%bndvalue() (complexgrid_scalar) (9.5.1.3.76)
griduid (1590)	edge%fluid%te%bndvalue():%griduid (integer) (9.5.1.1.2)
subgrid (1590)	edge%fluid%te%bndvalue():%subgrid (integer) (9.5.1.1.2)
scalar (1590)	edge%fluid%te%bndvalue():%scalar (vecflt_type) (9.5.1.2.9)
vector (1590)	edge%fluid%te%bndvalue():%vector (matflt_type) (9.5.1.2.7)
matrix (1590)	edge%fluid%te%bndvalue():%matrix (array3dflt_type) (9.5.1.2.1)
flux (1677)	edge%fluid%te%flux() (complexgrid_vector) (9.5.1.3.82)
griduid (1596)	edge%fluid%te%flux():%griduid (integer) (9.5.1.1.2)
label (1596)	edge%fluid%te%flux():%label (string) (9.5.1.1.3)

comp (1596)	edge%fluid%te%flux(:)%comp(:) (complexgrid_scalar) (9.5.1.3.76)
griduid (1590)	edge%fluid%te%flux(:)%comp(:)%griduid (integer) (9.5.1.1.2)
subgrid (1590)	edge%fluid%te%flux(:)%comp(:)%subgrid (integer) (9.5.1.1.2)
scalar (1590)	edge%fluid%te%flux(:)%comp(:)%scalar (vecflt_type) (9.5.1.2.9)
vector (1590)	edge%fluid%te%flux(:)%comp(:)%vector (matflt_type) (9.5.1.2.7)
matrix (1590)	edge%fluid%te%flux(:)%comp(:)%matrix (array3dflt_type) (9.5.1.2.1)
align (1596)	edge%fluid%te%flux(:)%align (vecint_type) (9.5.1.2.10)
alignid (1596)	edge%fluid%te%flux(:)%alignid (vecstring_type) (9.5.1.2.11)
basis (1596)	edge%fluid%te%flux(:)%basis (integer) (9.5.1.1.2)
bndflux (1677)	edge%fluid%te%bndflux(:) (complexgrid_vector) (9.5.1.3.82)
griduid (1596)	edge%fluid%te%bndflux(:)%griduid (integer) (9.5.1.1.2)
label (1596)	edge%fluid%te%bndflux(:)%label (string) (9.5.1.1.3)
comp (1596)	edge%fluid%te%bndflux(:)%comp(:) (complexgrid_scalar) (9.5.1.3.76)
griduid (1590)	edge%fluid%te%bndflux(:)%comp(:)%griduid (integer) (9.5.1.1.2)
subgrid (1590)	edge%fluid%te%bndflux(:)%comp(:)%subgrid (integer) (9.5.1.1.2)
scalar (1590)	edge%fluid%te%bndflux(:)%comp(:)%scalar (vecflt_type) (9.5.1.2.9)
vector (1590)	edge%fluid%te%bndflux(:)%comp(:)%vector (matflt_type) (9.5.1.2.7)
matrix (1590)	edge%fluid%te%bndflux(:)%comp(:)%matrix (array3dflt_type) (9.5.1.2.1)
align (1596)	edge%fluid%te%bndflux(:)%align (vecint_type) (9.5.1.2.10)
alignid (1596)	edge%fluid%te%bndflux(:)%alignid (vecstring_type) (9.5.1.2.11)
basis (1596)	edge%fluid%te%bndflux(:)%basis (integer) (9.5.1.1.2)
transpcoeff (1677)	edge%fluid%te%transpcoeff(:) (edge_fluid_scalar_transpcoeff) (9.5.1.3.164)
d (1678)	edge%fluid%te%transpcoeff(:)%d (complexgrid_vector_simplestruct) (9.5.1.3.83)
label (1597)	edge%fluid%te%transpcoeff(:)%d%label (string) (9.5.1.1.3)
comp (1597)	edge%fluid%te%transpcoeff(:)%d%comp(:) (complexgrid_scalar) (9.5.1.3.76)
griduid (1590)	edge%fluid%te%transpcoeff(:)%d%comp(:)%griduid (integer) (9.5.1.1.2)
subgrid (1590)	edge%fluid%te%transpcoeff(:)%d%comp(:)%subgrid (integer) (9.5.1.1.2)
scalar (1590)	edge%fluid%te%transpcoeff(:)%d%comp(:)%scalar (vecflt_type) (9.5.1.2.9)
vector (1590)	edge%fluid%te%transpcoeff(:)%d%comp(:)%vector (matflt_type) (9.5.1.2.7)
matrix (1590)	edge%fluid%te%transpcoeff(:)%d%comp(:)%matrix (array3dflt_type) (9.5.1.2.1)
align (1597)	edge%fluid%te%transpcoeff(:)%d%align (vecint_type) (9.5.1.2.10)
alignid (1597)	edge%fluid%te%transpcoeff(:)%d%alignid (vecstring_type) (9.5.1.2.11)
v (1678)	edge%fluid%te%transpcoeff(:)%v (complexgrid_vector_simplestruct) (9.5.1.3.83)
label (1597)	edge%fluid%te%transpcoeff(:)%v%label (string) (9.5.1.1.3)
comp (1597)	edge%fluid%te%transpcoeff(:)%v%comp(:) (complexgrid_scalar) (9.5.1.3.76)
griduid (1590)	edge%fluid%te%transpcoeff(:)%v%comp(:)%griduid (integer) (9.5.1.1.2)
subgrid (1590)	edge%fluid%te%transpcoeff(:)%v%comp(:)%subgrid (integer) (9.5.1.1.2)
scalar (1590)	edge%fluid%te%transpcoeff(:)%v%comp(:)%scalar (vecflt_type) (9.5.1.2.9)
vector (1590)	edge%fluid%te%transpcoeff(:)%v%comp(:)%vector (matflt_type) (9.5.1.2.7)
matrix (1590)	edge%fluid%te%transpcoeff(:)%v%comp(:)%matrix (array3dflt_type) (9.5.1.2.1)
align (1597)	edge%fluid%te%transpcoeff(:)%v%align (vecint_type) (9.5.1.2.10)
alignid (1597)	edge%fluid%te%transpcoeff(:)%v%alignid (vecstring_type) (9.5.1.2.11)
source (1677)	edge%fluid%te%source(:) (complexgrid_scalar) (9.5.1.3.76)
griduid (1590)	edge%fluid%te%source(:)%griduid (integer) (9.5.1.1.2)
subgrid (1590)	edge%fluid%te%source(:)%subgrid (integer) (9.5.1.1.2)
scalar (1590)	edge%fluid%te%source(:)%scalar (vecflt_type) (9.5.1.2.9)
vector (1590)	edge%fluid%te%source(:)%vector (matflt_type) (9.5.1.2.7)
matrix (1590)	edge%fluid%te%source(:)%matrix (array3dflt_type) (9.5.1.2.1)
ti (1675)	edge%fluid%ti(:) (edge_fluid_scalar) (9.5.1.3.162)
value (1676)	edge%fluid%ti(:)%value(:) (complexgrid_scalar) (9.5.1.3.76)
griduid (1590)	edge%fluid%ti(:)%value(:)%griduid (integer) (9.5.1.1.2)
subgrid (1590)	edge%fluid%ti(:)%value(:)%subgrid (integer) (9.5.1.1.2)
scalar (1590)	edge%fluid%ti(:)%value(:)%scalar (vecflt_type) (9.5.1.2.9)
vector (1590)	edge%fluid%ti(:)%value(:)%vector (matflt_type) (9.5.1.2.7)
matrix (1590)	edge%fluid%ti(:)%value(:)%matrix (array3dflt_type) (9.5.1.2.1)
bndvalue (1676)	edge%fluid%ti(:)%bndvalue(:) (complexgrid_scalar) (9.5.1.3.76)
griduid (1590)	edge%fluid%ti(:)%bndvalue(:)%griduid (integer) (9.5.1.1.2)
subgrid (1590)	edge%fluid%ti(:)%bndvalue(:)%subgrid (integer) (9.5.1.1.2)
scalar (1590)	edge%fluid%ti(:)%bndvalue(:)%scalar (vecflt_type) (9.5.1.2.9)
vector (1590)	edge%fluid%ti(:)%bndvalue(:)%vector (matflt_type) (9.5.1.2.7)
matrix (1590)	edge%fluid%ti(:)%bndvalue(:)%matrix (array3dflt_type) (9.5.1.2.1)



flux (1676)	edge%fluid%ti(:)%flux(:) (complexgrid_vector) (9.5.1.3.82)
griduid (1596)	edge%fluid%ti(:)%flux(:)%griduid (integer) (9.5.1.1.2)
label (1596)	edge%fluid%ti(:)%flux(:)%label (string) (9.5.1.1.3)
comp (1596)	edge%fluid%ti(:)%flux(:)%comp(:) (complexgrid_scalar) (9.5.1.3.76)
griduid (1590)	edge%fluid%ti(:)%flux(:)%comp(:)%griduid (integer) (9.5.1.1.2)
subgrid (1590)	edge%fluid%ti(:)%flux(:)%comp(:)%subgrid (integer) (9.5.1.1.2)
scalar (1590)	edge%fluid%ti(:)%flux(:)%comp(:)%scalar (vecflt_type) (9.5.1.2.9)
vector (1590)	edge%fluid%ti(:)%flux(:)%comp(:)%vector (matflt_type) (9.5.1.2.7)
matrix (1590)	edge%fluid%ti(:)%flux(:)%comp(:)%matrix (array3dflt_type) (9.5.1.2.1)
align (1596)	edge%fluid%ti(:)%flux(:)%align (vecint_type) (9.5.1.2.10)
alignid (1596)	edge%fluid%ti(:)%flux(:)%alignid (vecstring_type) (9.5.1.2.11)
basis (1596)	edge%fluid%ti(:)%flux(:)%basis (integer) (9.5.1.1.2)
bndflux (1676)	edge%fluid%ti(:)%bndflux(:) (complexgrid_vector) (9.5.1.3.82)
griduid (1596)	edge%fluid%ti(:)%bndflux(:)%griduid (integer) (9.5.1.1.2)
label (1596)	edge%fluid%ti(:)%bndflux(:)%label (string) (9.5.1.1.3)
comp (1596)	edge%fluid%ti(:)%bndflux(:)%comp(:) (complexgrid_scalar) (9.5.1.3.76)
griduid (1590)	edge%fluid%ti(:)%bndflux(:)%comp(:)%griduid (integer) (9.5.1.1.2)
subgrid (1590)	edge%fluid%ti(:)%bndflux(:)%comp(:)%subgrid (integer) (9.5.1.1.2)
scalar (1590)	edge%fluid%ti(:)%bndflux(:)%comp(:)%scalar (vecflt_type) (9.5.1.2.9)
vector (1590)	edge%fluid%ti(:)%bndflux(:)%comp(:)%vector (matflt_type) (9.5.1.2.7)
matrix (1590)	edge%fluid%ti(:)%bndflux(:)%comp(:)%matrix (array3dflt_type) (9.5.1.2.1)
align (1596)	edge%fluid%ti(:)%bndflux(:)%align (vecint_type) (9.5.1.2.10)
alignid (1596)	edge%fluid%ti(:)%bndflux(:)%alignid (vecstring_type) (9.5.1.2.11)
basis (1596)	edge%fluid%ti(:)%bndflux(:)%basis (integer) (9.5.1.1.2)
transpcoeff (1676)	edge%fluid%ti(:)%transpcoeff(:) (edge_fluid_scalar_transpcoeff) (9.5.1.3.164)
d (1678)	edge%fluid%ti(:)%transpcoeff(:)%d (complexgrid_vector_simplestruct) (9.5.1.3.83)
label (1597)	edge%fluid%ti(:)%transpcoeff(:)%d%label (string) (9.5.1.1.3)
comp (1597)	edge%fluid%ti(:)%transpcoeff(:)%d%comp(:) (complexgrid_scalar) (9.5.1.3.76)
griduid (1590)	edge%fluid%ti(:)%transpcoeff(:)%d%comp(:)%griduid (integer) (9.5.1.1.2)
subgrid (1590)	edge%fluid%ti(:)%transpcoeff(:)%d%comp(:)%subgrid (integer) (9.5.1.1.2)
scalar (1590)	edge%fluid%ti(:)%transpcoeff(:)%d%comp(:)%scalar (vecflt_type) (9.5.1.2.9)
vector (1590)	edge%fluid%ti(:)%transpcoeff(:)%d%comp(:)%vector (matflt_type) (9.5.1.2.7)
matrix (1590)	edge%fluid%ti(:)%transpcoeff(:)%d%comp(:)%matrix (array3dflt_type) (9.5.1.2.1)
align (1597)	edge%fluid%ti(:)%transpcoeff(:)%d%align (vecint_type) (9.5.1.2.10)
alignid (1597)	edge%fluid%ti(:)%transpcoeff(:)%d%alignid (vecstring_type) (9.5.1.2.11)
v (1678)	edge%fluid%ti(:)%transpcoeff(:)%v (complexgrid_vector_simplestruct) (9.5.1.3.83)
label (1597)	edge%fluid%ti(:)%transpcoeff(:)%v%label (string) (9.5.1.1.3)
comp (1597)	edge%fluid%ti(:)%transpcoeff(:)%v%comp(:) (complexgrid_scalar) (9.5.1.3.76)
griduid (1590)	edge%fluid%ti(:)%transpcoeff(:)%v%comp(:)%griduid (integer) (9.5.1.1.2)
subgrid (1590)	edge%fluid%ti(:)%transpcoeff(:)%v%comp(:)%subgrid (integer) (9.5.1.1.2)
scalar (1590)	edge%fluid%ti(:)%transpcoeff(:)%v%comp(:)%scalar (vecflt_type) (9.5.1.2.9)
vector (1590)	edge%fluid%ti(:)%transpcoeff(:)%v%comp(:)%vector (matflt_type) (9.5.1.2.7)
matrix (1590)	edge%fluid%ti(:)%transpcoeff(:)%v%comp(:)%matrix (array3dflt_type) (9.5.1.2.1)
align (1597)	edge%fluid%ti(:)%transpcoeff(:)%v%align (vecint_type) (9.5.1.2.10)
alignid (1597)	edge%fluid%ti(:)%transpcoeff(:)%v%alignid (vecstring_type) (9.5.1.2.11)
source (1676)	edge%fluid%ti(:)%source(:) (complexgrid_scalar) (9.5.1.3.76)
griduid (1590)	edge%fluid%ti(:)%source(:)%griduid (integer) (9.5.1.1.2)
subgrid (1590)	edge%fluid%ti(:)%source(:)%subgrid (integer) (9.5.1.1.2)
scalar (1590)	edge%fluid%ti(:)%source(:)%scalar (vecflt_type) (9.5.1.2.9)
vector (1590)	edge%fluid%ti(:)%source(:)%vector (matflt_type) (9.5.1.2.7)
matrix (1590)	edge%fluid%ti(:)%source(:)%matrix (array3dflt_type) (9.5.1.2.1)
te_aniso (1675)	edge%fluid%te_aniso (edge_fluid_vector_simplestruct) (9.5.1.3.166)
griduid (1680)	edge%fluid%te_aniso%griduid (integer) (9.5.1.1.2)
basis (1680)	edge%fluid%te_aniso%basis (integer) (9.5.1.1.2)
comps (1680)	edge%fluid%te_aniso%comps(:) (edge_fluid_scalar) (9.5.1.3.162)
value (1676)	edge%fluid%te_aniso%comps(:)%value(:) (complexgrid_scalar) (9.5.1.3.76)
griduid (1590)	edge%fluid%te_aniso%comps(:)%value(:)%griduid (integer) (9.5.1.1.2)
subgrid (1590)	edge%fluid%te_aniso%comps(:)%value(:)%subgrid (integer) (9.5.1.1.2)
scalar (1590)	edge%fluid%te_aniso%comps(:)%value(:)%scalar (vecflt_type) (9.5.1.2.9)
vector (1590)	edge%fluid%te_aniso%comps(:)%value(:)%vector (matflt_type) (9.5.1.2.7)
matrix (1590)	edge%fluid%te_aniso%comps(:)%value(:)%matrix (array3dflt_type) (9.5.1.2.1)

bndvalue (1676)	edge%fluid%te_aniso%comps(:)%bndvalue(:) (complexgrid_scalar) (9.5.1.3.76)
griduid (1590)	edge%fluid%te_aniso%comps(:)%bndvalue(:)%griduid (integer) (9.5.1.1.2)
subgrid (1590)	edge%fluid%te_aniso%comps(:)%bndvalue(:)%subgrid (integer) (9.5.1.1.2)
scalar (1590)	edge%fluid%te_aniso%comps(:)%bndvalue(:)%scalar (vecflt_type) (9.5.1.2.9)
vector (1590)	edge%fluid%te_aniso%comps(:)%bndvalue(:)%vector (matflt_type) (9.5.1.2.7)
matrix (1590)	edge%fluid%te_aniso%comps(:)%bndvalue(:)%matrix (array3dflt_type) (9.5.1.2.1)
flux (1676)	edge%fluid%te_aniso%comps(:)%flux(:) (complexgrid_vector) (9.5.1.3.82)
griduid (1596)	edge%fluid%te_aniso%comps(:)%flux(:)%griduid (integer) (9.5.1.1.2)
label (1596)	edge%fluid%te_aniso%comps(:)%flux(:)%label (string) (9.5.1.1.3)
comp (1596)	edge%fluid%te_aniso%comps(:)%flux(:)%comp(:) (complexgrid_scalar) (9.5.1.3.76)
griduid (1590)	edge%fluid%te_aniso%comps(:)%flux(:)%comp(:)%griduid (integer) (9.5.1.1.2)
subgrid (1590)	edge%fluid%te_aniso%comps(:)%flux(:)%comp(:)%subgrid (integer) (9.5.1.1.2)
scalar (1590)	edge%fluid%te_aniso%comps(:)%flux(:)%comp(:)%scalar (vecflt_type) (9.5.1.2.9)
vector (1590)	edge%fluid%te_aniso%comps(:)%flux(:)%comp(:)%vector (matflt_type) (9.5.1.2.7)
matrix (1590)	edge%fluid%te_aniso%comps(:)%flux(:)%comp(:)%matrix (array3dflt_type) (9.5.1.2.1)
align (1596)	edge%fluid%te_aniso%comps(:)%flux(:)%align (vecint_type) (9.5.1.2.10)
alignid (1596)	edge%fluid%te_aniso%comps(:)%flux(:)%alignid (vecstring_type) (9.5.1.2.11)
basis (1596)	edge%fluid%te_aniso%comps(:)%flux(:)%basis (integer) (9.5.1.1.2)
bndflux (1676)	edge%fluid%te_aniso%comps(:)%bndflux(:) (complexgrid_vector) (9.5.1.3.82)
griduid (1596)	edge%fluid%te_aniso%comps(:)%bndflux(:)%griduid (integer) (9.5.1.1.2)
label (1596)	edge%fluid%te_aniso%comps(:)%bndflux(:)%label (string) (9.5.1.1.3)
comp (1596)	edge%fluid%te_aniso%comps(:)%bndflux(:)%comp(:) (complexgrid_scalar) (9.5.1.3.76)
griduid (1590)	edge%fluid%te_aniso%comps(:)%bndflux(:)%comp(:)%griduid (integer) (9.5.1.1.2)
subgrid (1590)	edge%fluid%te_aniso%comps(:)%bndflux(:)%comp(:)%subgrid (integer) (9.5.1.1.2)
scalar (1590)	edge%fluid%te_aniso%comps(:)%bndflux(:)%comp(:)%scalar (vecflt_type) (9.5.1.2.9)
vector (1590)	edge%fluid%te_aniso%comps(:)%bndflux(:)%comp(:)%vector (matflt_type) (9.5.1.2.7)
matrix (1590)	edge%fluid%te_aniso%comps(:)%bndflux(:)%comp(:)%matrix (array3dflt_type) (9.5.1.2.1)
align (1596)	edge%fluid%te_aniso%comps(:)%bndflux(:)%align (vecint_type) (9.5.1.2.10)
alignid (1596)	edge%fluid%te_aniso%comps(:)%bndflux(:)%alignid (vecstring_type) (9.5.1.2.11)
basis (1596)	edge%fluid%te_aniso%comps(:)%bndflux(:)%basis (integer) (9.5.1.1.2)
transpcoeff (1676)	edge%fluid%te_aniso%comps(:)%transpcoeff(:) (edge_fluid_scalar_transpcoeff) (9.5.1.3.164)
d (1678)	edge%fluid%te_aniso%comps(:)%transpcoeff(:)%d (complexgrid_vector_simplestruct) (9.5.1.3.83)
label (1597)	edge%fluid%te_aniso%comps(:)%transpcoeff(:)%d%label (string) (9.5.1.1.3)
comp (1597)	edge%fluid%te_aniso%comps(:)%transpcoeff(:)%d%comp(:) (complexgrid_scalar) (9.5.1.3.76)
griduid (1590)	edge%fluid%te_aniso%comps(:)%transpcoeff(:)%d%comp(:)%griduid (integer) (9.5.1.1.2)
subgrid (1590)	edge%fluid%te_aniso%comps(:)%transpcoeff(:)%d%comp(:)%subgrid (integer) (9.5.1.1.2)
scalar (1590)	edge%fluid%te_aniso%comps(:)%transpcoeff(:)%d%comp(:)%scalar (vecflt_type) (9.5.1.2.9)
vector (1590)	edge%fluid%te_aniso%comps(:)%transpcoeff(:)%d%comp(:)%vector (matflt_type) (9.5.1.2.7)
matrix (1590)	edge%fluid%te_aniso%comps(:)%transpcoeff(:)%d%comp(:)%matrix (array3dflt_type) (9.5.1.2.1)
align (1597)	edge%fluid%te_aniso%comps(:)%transpcoeff(:)%d%align (vecint_type) (9.5.1.2.10)
alignid (1597)	edge%fluid%te_aniso%comps(:)%transpcoeff(:)%d%alignid (vecstring_type) (9.5.1.2.11)
v (1678)	edge%fluid%te_aniso%comps(:)%transpcoeff(:)%v (complexgrid_vector_simplestruct) (9.5.1.3.83)
label (1597)	edge%fluid%te_aniso%comps(:)%transpcoeff(:)%v%label (string) (9.5.1.1.3)
comp (1597)	edge%fluid%te_aniso%comps(:)%transpcoeff(:)%v%comp(:) (complexgrid_scalar) (9.5.1.3.76)
griduid (1590)	edge%fluid%te_aniso%comps(:)%transpcoeff(:)%v%comp(:)%griduid (integer) (9.5.1.1.2)
subgrid (1590)	edge%fluid%te_aniso%comps(:)%transpcoeff(:)%v%comp(:)%subgrid (integer) (9.5.1.1.2)
scalar (1590)	edge%fluid%te_aniso%comps(:)%transpcoeff(:)%v%comp(:)%scalar (vecflt_type) (9.5.1.2.9)
vector (1590)	edge%fluid%te_aniso%comps(:)%transpcoeff(:)%v%comp(:)%vector (matflt_type) (9.5.1.2.7)
matrix (1590)	edge%fluid%te_aniso%comps(:)%transpcoeff(:)%v%comp(:)%matrix (array3dflt_type) (9.5.1.2.1)
align (1597)	edge%fluid%te_aniso%comps(:)%transpcoeff(:)%v%align (vecint_type) (9.5.1.2.10)
alignid (1597)	edge%fluid%te_aniso%comps(:)%transpcoeff(:)%v%alignid (vecstring_type) (9.5.1.2.11)
source (1676)	edge%fluid%te_aniso%comps(:)%source(:) (complexgrid_scalar) (9.5.1.3.76)
griduid (1590)	edge%fluid%te_aniso%comps(:)%source(:)%griduid (integer) (9.5.1.1.2)
subgrid (1590)	edge%fluid%te_aniso%comps(:)%source(:)%subgrid (integer) (9.5.1.1.2)
scalar (1590)	edge%fluid%te_aniso%comps(:)%source(:)%scalar (vecflt_type) (9.5.1.2.9)
vector (1590)	edge%fluid%te_aniso%comps(:)%source(:)%vector (matflt_type) (9.5.1.2.7)
matrix (1590)	edge%fluid%te_aniso%comps(:)%source(:)%matrix (array3dflt_type) (9.5.1.2.1)
align (1680)	edge%fluid%te_aniso%align (vecint_type) (9.5.1.2.10)
alignid (1680)	edge%fluid%te_aniso%alignid (vecstring_type) (9.5.1.2.11)

ti_aniso (1675)	edge%fluid%ti_aniso(:) (edge_fluid_vector) (9.5.1.3.165)
griduid (1679)	edge%fluid%ti_aniso(:)%griduid (integer) (9.5.1.1.2)
basis (1679)	edge%fluid%ti_aniso(:)%basis (integer) (9.5.1.1.2)
align (1679)	edge%fluid%ti_aniso(:)%align (vecint_type) (9.5.1.2.10)
alignid (1679)	edge%fluid%ti_aniso(:)%alignid (vecstring_type) (9.5.1.2.11)
comps (1679)	edge%fluid%ti_aniso(:)%comps(:) (edge_fluid_scalar) (9.5.1.3.162)
value (1676)	edge%fluid%ti_aniso(:)%comps(:)%value(:) (complexgrid_scalar) (9.5.1.3.76)
griduid (1590)	edge%fluid%ti_aniso(:)%comps(:)%value(:)%griduid (integer) (9.5.1.1.2)
subgrid (1590)	edge%fluid%ti_aniso(:)%comps(:)%value(:)%subgrid (integer) (9.5.1.1.2)
scalar (1590)	edge%fluid%ti_aniso(:)%comps(:)%value(:)%scalar (vecflt_type) (9.5.1.2.9)
vector (1590)	edge%fluid%ti_aniso(:)%comps(:)%value(:)%vector (matflt_type) (9.5.1.2.7)
matrix (1590)	edge%fluid%ti_aniso(:)%comps(:)%value(:)%matrix (array3dflt_type) (9.5.1.2.1)
bndvalue (1676)	edge%fluid%ti_aniso(:)%comps(:)%bndvalue(:) (complexgrid_scalar) (9.5.1.3.76)
griduid (1590)	edge%fluid%ti_aniso(:)%comps(:)%bndvalue(:)%griduid (integer) (9.5.1.1.2)
subgrid (1590)	edge%fluid%ti_aniso(:)%comps(:)%bndvalue(:)%subgrid (integer) (9.5.1.1.2)
scalar (1590)	edge%fluid%ti_aniso(:)%comps(:)%bndvalue(:)%scalar (vecflt_type) (9.5.1.2.9)
vector (1590)	edge%fluid%ti_aniso(:)%comps(:)%bndvalue(:)%vector (matflt_type) (9.5.1.2.7)
matrix (1590)	edge%fluid%ti_aniso(:)%comps(:)%bndvalue(:)%matrix (array3dflt_type) (9.5.1.2.1)
flux (1676)	edge%fluid%ti_aniso(:)%comps(:)%flux(:) (complexgrid_vector) (9.5.1.3.82)
griduid (1596)	edge%fluid%ti_aniso(:)%comps(:)%flux(:)%griduid (integer) (9.5.1.1.2)
label (1596)	edge%fluid%ti_aniso(:)%comps(:)%flux(:)%label (string) (9.5.1.1.3)
comp (1596)	edge%fluid%ti_aniso(:)%comps(:)%flux(:)%comp(:) (complexgrid_scalar) (9.5.1.3.76)
griduid (1590)	edge%fluid%ti_aniso(:)%comps(:)%flux(:)%comp(:)%griduid (integer) (9.5.1.1.2)
subgrid (1590)	edge%fluid%ti_aniso(:)%comps(:)%flux(:)%comp(:)%subgrid (integer) (9.5.1.1.2)
scalar (1590)	edge%fluid%ti_aniso(:)%comps(:)%flux(:)%comp(:)%scalar (vecflt_type) (9.5.1.2.9)
vector (1590)	edge%fluid%ti_aniso(:)%comps(:)%flux(:)%comp(:)%vector (matflt_type) (9.5.1.2.7)
matrix (1590)	edge%fluid%ti_aniso(:)%comps(:)%flux(:)%comp(:)%matrix (array3dflt_type) (9.5.1.2.1)
align (1596)	edge%fluid%ti_aniso(:)%comps(:)%flux(:)%align (vecint_type) (9.5.1.2.10)
alignid (1596)	edge%fluid%ti_aniso(:)%comps(:)%flux(:)%alignid (vecstring_type) (9.5.1.2.11)
basis (1596)	edge%fluid%ti_aniso(:)%comps(:)%flux(:)%basis (integer) (9.5.1.1.2)
bndflux (1676)	edge%fluid%ti_aniso(:)%comps(:)%bndflux(:) (complexgrid_vector) (9.5.1.3.82)
griduid (1596)	edge%fluid%ti_aniso(:)%comps(:)%bndflux(:)%griduid (integer) (9.5.1.1.2)
label (1596)	edge%fluid%ti_aniso(:)%comps(:)%bndflux(:)%label (string) (9.5.1.1.3)
comp (1596)	edge%fluid%ti_aniso(:)%comps(:)%bndflux(:)%comp(:) (complexgrid_scalar) (9.5.1.3.76)
griduid (1590)	edge%fluid%ti_aniso(:)%comps(:)%bndflux(:)%comp(:)%griduid (integer) (9.5.1.1.2)
subgrid (1590)	edge%fluid%ti_aniso(:)%comps(:)%bndflux(:)%comp(:)%subgrid (integer) (9.5.1.1.2)
scalar (1590)	edge%fluid%ti_aniso(:)%comps(:)%bndflux(:)%comp(:)%scalar (vecflt_type) (9.5.1.2.9)
vector (1590)	edge%fluid%ti_aniso(:)%comps(:)%bndflux(:)%comp(:)%vector (matflt_type) (9.5.1.2.7)
matrix (1590)	edge%fluid%ti_aniso(:)%comps(:)%bndflux(:)%comp(:)%matrix (array3dflt_type) (9.5.1.2.1)
align (1596)	edge%fluid%ti_aniso(:)%comps(:)%bndflux(:)%align (vecint_type) (9.5.1.2.10)
alignid (1596)	edge%fluid%ti_aniso(:)%comps(:)%bndflux(:)%alignid (vecstring_type) (9.5.1.2.11)
basis (1596)	edge%fluid%ti_aniso(:)%comps(:)%bndflux(:)%basis (integer) (9.5.1.1.2)
transpcoeff (1676)	edge%fluid%ti_aniso(:)%comps(:)%transpcoeff(:) (edge_fluid_scalar_transpcoeff) (9.5.1.3.164)
d (1678)	edge%fluid%ti_aniso(:)%comps(:)%transpcoeff(:)%d (complexgrid_vector_simplestruct) (9.5.1.3.83)
label (1597)	edge%fluid%ti_aniso(:)%comps(:)%transpcoeff(:)%d%label (string) (9.5.1.1.3)
comp (1597)	edge%fluid%ti_aniso(:)%comps(:)%transpcoeff(:)%d%comp(:) (complexgrid_scalar) (9.5.1.3.76)
griduid (1590)	edge%fluid%ti_aniso(:)%comps(:)%transpcoeff(:)%d%comp(:)%griduid (integer) (9.5.1.1.2)
subgrid (1590)	edge%fluid%ti_aniso(:)%comps(:)%transpcoeff(:)%d%comp(:)%subgrid (integer) (9.5.1.1.2)
scalar (1590)	edge%fluid%ti_aniso(:)%comps(:)%transpcoeff(:)%d%comp(:)%scalar (vecflt_type) (9.5.1.2.9)
vector (1590)	edge%fluid%ti_aniso(:)%comps(:)%transpcoeff(:)%d%comp(:)%vector (matflt_type) (9.5.1.2.7)
matrix (1590)	edge%fluid%ti_aniso(:)%comps(:)%transpcoeff(:)%d%comp(:)%matrix (array3dflt_type) (9.5.1.2.1)
align (1597)	edge%fluid%ti_aniso(:)%comps(:)%transpcoeff(:)%d%align (vecint_type) (9.5.1.2.10)
alignid (1597)	edge%fluid%ti_aniso(:)%comps(:)%transpcoeff(:)%d%alignid (vecstring_type) (9.5.1.2.11)
v (1678)	edge%fluid%ti_aniso(:)%comps(:)%transpcoeff(:)%v (complexgrid_vector_simplestruct) (9.5.1.3.83)
label (1597)	edge%fluid%ti_aniso(:)%comps(:)%transpcoeff(:)%v%label (string) (9.5.1.1.3)
comp (1597)	edge%fluid%ti_aniso(:)%comps(:)%transpcoeff(:)%v%comp(:) (complexgrid_scalar) (9.5.1.3.76)
griduid (1590)	edge%fluid%ti_aniso(:)%comps(:)%transpcoeff(:)%v%comp(:)%griduid (integer) (9.5.1.1.2)
subgrid (1590)	edge%fluid%ti_aniso(:)%comps(:)%transpcoeff(:)%v%comp(:)%subgrid (integer) (9.5.1.1.2)



scalar (1590)	edge%fluid%ti_aniso(:)%comps(:)%transpcoeff(:)%v%comp(:)%scalar (vecflt_type) (9.5.1.2.9)
vector (1590)	edge%fluid%ti_aniso(:)%comps(:)%transpcoeff(:)%v%comp(:)%vector (matflt_type) (9.5.1.2.7)
matrix (1590)	edge%fluid%ti_aniso(:)%comps(:)%transpcoeff(:)%v%comp(:)%matrix (array3dflt_type) (9.5.1.2.1)
align (1597)	edge%fluid%ti_aniso(:)%comps(:)%transpcoeff(:)%v%align (vecint_type) (9.5.1.2.10)
alignid (1597)	edge%fluid%ti_aniso(:)%comps(:)%transpcoeff(:)%v%alignid (vecstring_type) (9.5.1.2.11)
source (1676)	edge%fluid%ti_aniso(:)%comps(:)%source(:) (complexgrid_scalar) (9.5.1.3.76)
griduid (1590)	edge%fluid%ti_aniso(:)%comps(:)%source(:)%griduid (integer) (9.5.1.1.2)
subgrid (1590)	edge%fluid%ti_aniso(:)%comps(:)%source(:)%subgrid (integer) (9.5.1.1.2)
scalar (1590)	edge%fluid%ti_aniso(:)%comps(:)%source(:)%scalar (vecflt_type) (9.5.1.2.9)
vector (1590)	edge%fluid%ti_aniso(:)%comps(:)%source(:)%vector (matflt_type) (9.5.1.2.7)
matrix (1590)	edge%fluid%ti_aniso(:)%comps(:)%source(:)%matrix (array3dflt_type) (9.5.1.2.1)
po (1675)	edge%fluid%po (edge_fluid_scalar_simplestruct) (9.5.1.3.163)
value (1677)	edge%fluid%po%value(:) (complexgrid_scalar) (9.5.1.3.76)
griduid (1590)	edge%fluid%po%value(:)%griduid (integer) (9.5.1.1.2)
subgrid (1590)	edge%fluid%po%value(:)%subgrid (integer) (9.5.1.1.2)
scalar (1590)	edge%fluid%po%value(:)%scalar (vecflt_type) (9.5.1.2.9)
vector (1590)	edge%fluid%po%value(:)%vector (matflt_type) (9.5.1.2.7)
matrix (1590)	edge%fluid%po%value(:)%matrix (array3dflt_type) (9.5.1.2.1)
bndvalue (1677)	edge%fluid%po%bndvalue(:) (complexgrid_scalar) (9.5.1.3.76)
griduid (1590)	edge%fluid%po%bndvalue(:)%griduid (integer) (9.5.1.1.2)
subgrid (1590)	edge%fluid%po%bndvalue(:)%subgrid (integer) (9.5.1.1.2)
scalar (1590)	edge%fluid%po%bndvalue(:)%scalar (vecflt_type) (9.5.1.2.9)
vector (1590)	edge%fluid%po%bndvalue(:)%vector (matflt_type) (9.5.1.2.7)
matrix (1590)	edge%fluid%po%bndvalue(:)%matrix (array3dflt_type) (9.5.1.2.1)
flux (1677)	edge%fluid%po%flux(:) (complexgrid_vector) (9.5.1.3.82)
griduid (1596)	edge%fluid%po%flux(:)%griduid (integer) (9.5.1.1.2)
label (1596)	edge%fluid%po%flux(:)%label (string) (9.5.1.1.3)
comp (1596)	edge%fluid%po%flux(:)%comp(:) (complexgrid_scalar) (9.5.1.3.76)
griduid (1590)	edge%fluid%po%flux(:)%comp(:)%griduid (integer) (9.5.1.1.2)
subgrid (1590)	edge%fluid%po%flux(:)%comp(:)%subgrid (integer) (9.5.1.1.2)
scalar (1590)	edge%fluid%po%flux(:)%comp(:)%scalar (vecflt_type) (9.5.1.2.9)
vector (1590)	edge%fluid%po%flux(:)%comp(:)%vector (matflt_type) (9.5.1.2.7)
matrix (1590)	edge%fluid%po%flux(:)%comp(:)%matrix (array3dflt_type) (9.5.1.2.1)
align (1596)	edge%fluid%po%flux(:)%align (vecint_type) (9.5.1.2.10)
alignid (1596)	edge%fluid%po%flux(:)%alignid (vecstring_type) (9.5.1.2.11)
basis (1596)	edge%fluid%po%flux(:)%basis (integer) (9.5.1.1.2)
bndflux (1677)	edge%fluid%po%bndflux(:) (complexgrid_vector) (9.5.1.3.82)
griduid (1596)	edge%fluid%po%bndflux(:)%griduid (integer) (9.5.1.1.2)
label (1596)	edge%fluid%po%bndflux(:)%label (string) (9.5.1.1.3)
comp (1596)	edge%fluid%po%bndflux(:)%comp(:) (complexgrid_scalar) (9.5.1.3.76)
griduid (1590)	edge%fluid%po%bndflux(:)%comp(:)%griduid (integer) (9.5.1.1.2)
subgrid (1590)	edge%fluid%po%bndflux(:)%comp(:)%subgrid (integer) (9.5.1.1.2)
scalar (1590)	edge%fluid%po%bndflux(:)%comp(:)%scalar (vecflt_type) (9.5.1.2.9)
vector (1590)	edge%fluid%po%bndflux(:)%comp(:)%vector (matflt_type) (9.5.1.2.7)
matrix (1590)	edge%fluid%po%bndflux(:)%comp(:)%matrix (array3dflt_type) (9.5.1.2.1)
align (1596)	edge%fluid%po%bndflux(:)%align (vecint_type) (9.5.1.2.10)
alignid (1596)	edge%fluid%po%bndflux(:)%alignid (vecstring_type) (9.5.1.2.11)
basis (1596)	edge%fluid%po%bndflux(:)%basis (integer) (9.5.1.1.2)
transpcoeff (1677)	edge%fluid%po%transpcoeff(:) (edge_fluid_scalar_transpcoeff) (9.5.1.3.164)
d (1678)	edge%fluid%po%transpcoeff(:)%d (complexgrid_vector_simplestruct) (9.5.1.3.83)
label (1597)	edge%fluid%po%transpcoeff(:)%d%label (string) (9.5.1.1.3)
comp (1597)	edge%fluid%po%transpcoeff(:)%d%comp(:) (complexgrid_scalar) (9.5.1.3.76)
griduid (1590)	edge%fluid%po%transpcoeff(:)%d%comp(:)%griduid (integer) (9.5.1.1.2)
subgrid (1590)	edge%fluid%po%transpcoeff(:)%d%comp(:)%subgrid (integer) (9.5.1.1.2)
scalar (1590)	edge%fluid%po%transpcoeff(:)%d%comp(:)%scalar (vecflt_type) (9.5.1.2.9)
vector (1590)	edge%fluid%po%transpcoeff(:)%d%comp(:)%vector (matflt_type) (9.5.1.2.7)
matrix (1590)	edge%fluid%po%transpcoeff(:)%d%comp(:)%matrix (array3dflt_type) (9.5.1.2.1)
align (1597)	edge%fluid%po%transpcoeff(:)%d%align (vecint_type) (9.5.1.2.10)
alignid (1597)	edge%fluid%po%transpcoeff(:)%d%alignid (vecstring_type) (9.5.1.2.11)
v (1678)	edge%fluid%po%transpcoeff(:)%v (complexgrid_vector_simplestruct) (9.5.1.3.83)
label (1597)	edge%fluid%po%transpcoeff(:)%v%label (string) (9.5.1.1.3)

comp (1597)	edge%fluid%po%transpcoeff(:)%v%comp(:) (complexgrid_scalar) (9.5.1.3.76)
griduid (1590)	edge%fluid%po%transpcoeff(:)%v%comp(:)%griduid (integer) (9.5.1.1.2)
subgrid (1590)	edge%fluid%po%transpcoeff(:)%v%comp(:)%subgrid (integer) (9.5.1.1.2)
scalar (1590)	edge%fluid%po%transpcoeff(:)%v%comp(:)%scalar (vecflt_type) (9.5.1.2.9)
vector (1590)	edge%fluid%po%transpcoeff(:)%v%comp(:)%vector (matflt_type) (9.5.1.2.7)
matrix (1590)	edge%fluid%po%transpcoeff(:)%v%comp(:)%matrix (array3dflt_type) (9.5.1.2.1)
align (1597)	edge%fluid%po%transpcoeff(:)%v%align (vecint_type) (9.5.1.2.10)
alignid (1597)	edge%fluid%po%transpcoeff(:)%v%alignid (vecstring_type) (9.5.1.2.11)
source (1677)	edge%fluid%po%source(:) (complexgrid_scalar) (9.5.1.3.76)
griduid (1590)	edge%fluid%po%source(:)%griduid (integer) (9.5.1.1.2)
subgrid (1590)	edge%fluid%po%source(:)%subgrid (integer) (9.5.1.1.2)
scalar (1590)	edge%fluid%po%source(:)%scalar (vecflt_type) (9.5.1.2.9)
vector (1590)	edge%fluid%po%source(:)%vector (matflt_type) (9.5.1.2.7)
matrix (1590)	edge%fluid%po%source(:)%matrix (array3dflt_type) (9.5.1.2.1)
j (1675)	edge%fluid%j (edge_fluid_vector_simplestruct) (9.5.1.3.166)
griduid (1680)	edge%fluid%j%griduid (integer) (9.5.1.1.2)
basis (1680)	edge%fluid%j%basis (integer) (9.5.1.1.2)
comps (1680)	edge%fluid%j%comps(:) (edge_fluid_scalar) (9.5.1.3.162)
value (1676)	edge%fluid%j%comps(:)%value(:) (complexgrid_scalar) (9.5.1.3.76)
griduid (1590)	edge%fluid%j%comps(:)%value(:)%griduid (integer) (9.5.1.1.2)
subgrid (1590)	edge%fluid%j%comps(:)%value(:)%subgrid (integer) (9.5.1.1.2)
scalar (1590)	edge%fluid%j%comps(:)%value(:)%scalar (vecflt_type) (9.5.1.2.9)
vector (1590)	edge%fluid%j%comps(:)%value(:)%vector (matflt_type) (9.5.1.2.7)
matrix (1590)	edge%fluid%j%comps(:)%value(:)%matrix (array3dflt_type) (9.5.1.2.1)
bndvalue (1676)	edge%fluid%j%comps(:)%bndvalue(:) (complexgrid_scalar) (9.5.1.3.76)
griduid (1590)	edge%fluid%j%comps(:)%bndvalue(:)%griduid (integer) (9.5.1.1.2)
subgrid (1590)	edge%fluid%j%comps(:)%bndvalue(:)%subgrid (integer) (9.5.1.1.2)
scalar (1590)	edge%fluid%j%comps(:)%bndvalue(:)%scalar (vecflt_type) (9.5.1.2.9)
vector (1590)	edge%fluid%j%comps(:)%bndvalue(:)%vector (matflt_type) (9.5.1.2.7)
matrix (1590)	edge%fluid%j%comps(:)%bndvalue(:)%matrix (array3dflt_type) (9.5.1.2.1)
flux (1676)	edge%fluid%j%comps(:)%flux(:) (complexgrid_vector) (9.5.1.3.82)
griduid (1596)	edge%fluid%j%comps(:)%flux(:)%griduid (integer) (9.5.1.1.2)
label (1596)	edge%fluid%j%comps(:)%flux(:)%label (string) (9.5.1.1.3)
comp (1596)	edge%fluid%j%comps(:)%flux(:)%comp(:) (complexgrid_scalar) (9.5.1.3.76)
griduid (1590)	edge%fluid%j%comps(:)%flux(:)%comp(:)%griduid (integer) (9.5.1.1.2)
subgrid (1590)	edge%fluid%j%comps(:)%flux(:)%comp(:)%subgrid (integer) (9.5.1.1.2)
scalar (1590)	edge%fluid%j%comps(:)%flux(:)%comp(:)%scalar (vecflt_type) (9.5.1.2.9)
vector (1590)	edge%fluid%j%comps(:)%flux(:)%comp(:)%vector (matflt_type) (9.5.1.2.7)
matrix (1590)	edge%fluid%j%comps(:)%flux(:)%comp(:)%matrix (array3dflt_type) (9.5.1.2.1)
align (1596)	edge%fluid%j%comps(:)%flux(:)%align (vecint_type) (9.5.1.2.10)
alignid (1596)	edge%fluid%j%comps(:)%flux(:)%alignid (vecstring_type) (9.5.1.2.11)
basis (1596)	edge%fluid%j%comps(:)%flux(:)%basis (integer) (9.5.1.1.2)
bndflux (1676)	edge%fluid%j%comps(:)%bndflux(:) (complexgrid_vector) (9.5.1.3.82)
griduid (1596)	edge%fluid%j%comps(:)%bndflux(:)%griduid (integer) (9.5.1.1.2)
label (1596)	edge%fluid%j%comps(:)%bndflux(:)%label (string) (9.5.1.1.3)
comp (1596)	edge%fluid%j%comps(:)%bndflux(:)%comp(:) (complexgrid_scalar) (9.5.1.3.76)
griduid (1590)	edge%fluid%j%comps(:)%bndflux(:)%comp(:)%griduid (integer) (9.5.1.1.2)
subgrid (1590)	edge%fluid%j%comps(:)%bndflux(:)%comp(:)%subgrid (integer) (9.5.1.1.2)
scalar (1590)	edge%fluid%j%comps(:)%bndflux(:)%comp(:)%scalar (vecflt_type) (9.5.1.2.9)
vector (1590)	edge%fluid%j%comps(:)%bndflux(:)%comp(:)%vector (matflt_type) (9.5.1.2.7)
matrix (1590)	edge%fluid%j%comps(:)%bndflux(:)%comp(:)%matrix (array3dflt_type) (9.5.1.2.1)
align (1596)	edge%fluid%j%comps(:)%bndflux(:)%align (vecint_type) (9.5.1.2.10)
alignid (1596)	edge%fluid%j%comps(:)%bndflux(:)%alignid (vecstring_type) (9.5.1.2.11)
basis (1596)	edge%fluid%j%comps(:)%bndflux(:)%basis (integer) (9.5.1.1.2)
transpcoeff (1676)	edge%fluid%j%comps(:)%transpcoeff(:) (edge_fluid_scalar_transpcoeff) (9.5.1.3.164)
d (1678)	edge%fluid%j%comps(:)%transpcoeff(:)%d (complexgrid_vector_simplestruct) (9.5.1.3.83)
label (1597)	edge%fluid%j%comps(:)%transpcoeff(:)%d%label (string) (9.5.1.1.3)
comp (1597)	edge%fluid%j%comps(:)%transpcoeff(:)%d%comp(:) (complexgrid_scalar) (9.5.1.3.76)
griduid (1590)	edge%fluid%j%comps(:)%transpcoeff(:)%d%comp(:)%griduid (integer) (9.5.1.1.2)
subgrid (1590)	edge%fluid%j%comps(:)%transpcoeff(:)%d%comp(:)%subgrid (integer) (9.5.1.1.2)
scalar (1590)	edge%fluid%j%comps(:)%transpcoeff(:)%d%comp(:)%scalar (vecflt_type) (9.5.1.2.9)

vector (1590)	edge%fluid%j%comps(:)%transpcoeff(:)%d%comp(:)%vector (matflt_type) (9.5.1.2.7)
matrix (1590)	edge%fluid%j%comps(:)%transpcoeff(:)%d%comp(:)%matrix (array3dflt_type) (9.5.1.2.1)
align (1597)	edge%fluid%j%comps(:)%transpcoeff(:)%d%align (vecint_type) (9.5.1.2.10)
alignid (1597)	edge%fluid%j%comps(:)%transpcoeff(:)%d%alignid (vecstring_type) (9.5.1.2.11)
v (1678)	edge%fluid%j%comps(:)%transpcoeff(:)%v (complexgrid_vector_simplestruct) (9.5.1.3.83)
label (1597)	edge%fluid%j%comps(:)%transpcoeff(:)%v%label (string) (9.5.1.1.3)
comp (1597)	edge%fluid%j%comps(:)%transpcoeff(:)%v%comp(:) (complexgrid_scalar) (9.5.1.3.76)
griduid (1590)	edge%fluid%j%comps(:)%transpcoeff(:)%v%comp(:)%griduid (integer) (9.5.1.1.2)
subgrid (1590)	edge%fluid%j%comps(:)%transpcoeff(:)%v%comp(:)%subgrid (integer) (9.5.1.1.2)
scalar (1590)	edge%fluid%j%comps(:)%transpcoeff(:)%v%comp(:)%scalar (vecflt_type) (9.5.1.2.9)
vector (1590)	edge%fluid%j%comps(:)%transpcoeff(:)%v%comp(:)%vector (matflt_type) (9.5.1.2.7)
matrix (1590)	edge%fluid%j%comps(:)%transpcoeff(:)%v%comp(:)%matrix (array3dflt_type) (9.5.1.2.1)
align (1597)	edge%fluid%j%comps(:)%transpcoeff(:)%v%align (vecint_type) (9.5.1.2.10)
alignid (1597)	edge%fluid%j%comps(:)%transpcoeff(:)%v%alignid (vecstring_type) (9.5.1.2.11)
source (1676)	edge%fluid%j%comps(:)%source(:) (complexgrid_scalar) (9.5.1.3.76)
griduid (1590)	edge%fluid%j%comps(:)%source(:)%griduid (integer) (9.5.1.1.2)
subgrid (1590)	edge%fluid%j%comps(:)%source(:)%subgrid (integer) (9.5.1.1.2)
scalar (1590)	edge%fluid%j%comps(:)%source(:)%scalar (vecflt_type) (9.5.1.2.9)
vector (1590)	edge%fluid%j%comps(:)%source(:)%vector (matflt_type) (9.5.1.2.7)
matrix (1590)	edge%fluid%j%comps(:)%source(:)%matrix (array3dflt_type) (9.5.1.2.1)
align (1680)	edge%fluid%j%align (vecint_type) (9.5.1.2.10)
alignid (1680)	edge%fluid%j%alignid (vecstring_type) (9.5.1.2.11)
b (1675)	edge%fluid%b(:) (complexgrid_vector) (9.5.1.3.82)
griduid (1596)	edge%fluid%b(:)%griduid (integer) (9.5.1.1.2)
label (1596)	edge%fluid%b(:)%label (string) (9.5.1.1.3)
comp (1596)	edge%fluid%b(:)%comp(:) (complexgrid_scalar) (9.5.1.3.76)
griduid (1590)	edge%fluid%b(:)%comp(:)%griduid (integer) (9.5.1.1.2)
subgrid (1590)	edge%fluid%b(:)%comp(:)%subgrid (integer) (9.5.1.1.2)
scalar (1590)	edge%fluid%b(:)%comp(:)%scalar (vecflt_type) (9.5.1.2.9)
vector (1590)	edge%fluid%b(:)%comp(:)%vector (matflt_type) (9.5.1.2.7)
matrix (1590)	edge%fluid%b(:)%comp(:)%matrix (array3dflt_type) (9.5.1.2.1)
align (1596)	edge%fluid%b(:)%align (vecint_type) (9.5.1.2.10)
alignid (1596)	edge%fluid%b(:)%alignid (vecstring_type) (9.5.1.2.11)
basis (1596)	edge%fluid%b(:)%basis (integer) (9.5.1.1.2)
kinetic (1530)	edge%kinetic (edge_kinetic) (9.5.1.3.167)
f (1681)	edge%kinetic%f(:) (edge_kinetic_distribution) (9.5.1.3.168)
value (1682)	edge%kinetic%f(:)%value(:) (complexgrid_scalar) (9.5.1.3.76)
griduid (1590)	edge%kinetic%f(:)%value(:)%griduid (integer) (9.5.1.1.2)
subgrid (1590)	edge%kinetic%f(:)%value(:)%subgrid (integer) (9.5.1.1.2)
scalar (1590)	edge%kinetic%f(:)%value(:)%scalar (vecflt_type) (9.5.1.2.9)
vector (1590)	edge%kinetic%f(:)%value(:)%vector (matflt_type) (9.5.1.2.7)
matrix (1590)	edge%kinetic%f(:)%value(:)%matrix (array3dflt_type) (9.5.1.2.1)
bndvalue (1682)	edge%kinetic%f(:)%bndvalue(:) (complexgrid_scalar) (9.5.1.3.76)
griduid (1590)	edge%kinetic%f(:)%bndvalue(:)%griduid (integer) (9.5.1.1.2)
subgrid (1590)	edge%kinetic%f(:)%bndvalue(:)%subgrid (integer) (9.5.1.1.2)
scalar (1590)	edge%kinetic%f(:)%bndvalue(:)%scalar (vecflt_type) (9.5.1.2.9)
vector (1590)	edge%kinetic%f(:)%bndvalue(:)%vector (matflt_type) (9.5.1.2.7)
matrix (1590)	edge%kinetic%f(:)%bndvalue(:)%matrix (array3dflt_type) (9.5.1.2.1)
fluxes (1682)	edge%kinetic%f(:)%fluxes(:) (complexgrid_vector) (9.5.1.3.82)
griduid (1596)	edge%kinetic%f(:)%fluxes(:)%griduid (integer) (9.5.1.1.2)
label (1596)	edge%kinetic%f(:)%fluxes(:)%label (string) (9.5.1.1.3)
comp (1596)	edge%kinetic%f(:)%fluxes(:)%comp(:) (complexgrid_scalar) (9.5.1.3.76)
griduid (1590)	edge%kinetic%f(:)%fluxes(:)%comp(:)%griduid (integer) (9.5.1.1.2)
subgrid (1590)	edge%kinetic%f(:)%fluxes(:)%comp(:)%subgrid (integer) (9.5.1.1.2)
scalar (1590)	edge%kinetic%f(:)%fluxes(:)%comp(:)%scalar (vecflt_type) (9.5.1.2.9)
vector (1590)	edge%kinetic%f(:)%fluxes(:)%comp(:)%vector (matflt_type) (9.5.1.2.7)
matrix (1590)	edge%kinetic%f(:)%fluxes(:)%comp(:)%matrix (array3dflt_type) (9.5.1.2.1)
align (1596)	edge%kinetic%f(:)%fluxes(:)%align (vecint_type) (9.5.1.2.10)
alignid (1596)	edge%kinetic%f(:)%fluxes(:)%alignid (vecstring_type) (9.5.1.2.11)
basis (1596)	edge%kinetic%f(:)%fluxes(:)%basis (integer) (9.5.1.1.2)
source (1682)	edge%kinetic%f(:)%source(:) (complexgrid_scalar) (9.5.1.3.76)

griduid (1590)	edge%kinetic%f(:)%source(:)%griduid (integer) (9.5.1.1.2)
subgrid (1590)	edge%kinetic%f(:)%source(:)%subgrid (integer) (9.5.1.1.2)
scalar (1590)	edge%kinetic%f(:)%source(:)%scalar (vecflt_type) (9.5.1.2.9)
vector (1590)	edge%kinetic%f(:)%source(:)%vector (matflt_type) (9.5.1.2.7)
matrix (1590)	edge%kinetic%f(:)%source(:)%matrix (array3dflt_type) (9.5.1.2.1)
codeparam (1530)	edge%codeparam (codeparam) (9.5.1.3.66)
codename (1580)	edge%codeparam%codename (string) (9.5.1.1.3)
codeversion (1580)	edge%codeparam%codeversion (string) (9.5.1.1.3)
parameters (1580)	edge%codeparam%parameters (string) (9.5.1.1.3)
output_diag (1580)	edge%codeparam%output_diag (string) (9.5.1.1.3)
output_flag (1580)	edge%codeparam%output_flag (integer) (9.5.1.1.2)
time (1530)	edge%time (float) (9.5.1.1.1)

### 9.5.2.1.15 efcc

datainfo (1531)	efcc%datainfo (datainfo) (9.5.1.3.121)
dataprovider (1635)	efcc%datainfo%dataprovider (string) (9.5.1.1.3)
putdate (1635)	efcc%datainfo%putdate (string) (9.5.1.1.3)
source (1635)	efcc%datainfo%source (string) (9.5.1.1.3)
comment (1635)	efcc%datainfo%comment (string) (9.5.1.1.3)
cocos (1635)	efcc%datainfo%cocos (integer) (9.5.1.1.2)
id (1635)	efcc%datainfo%id (integer) (9.5.1.1.2)
isref (1635)	efcc%datainfo%isref (integer) (9.5.1.1.2)
whatref (1635)	efcc%datainfo%whatref (whatref) (9.5.1.3.437)
user (1951)	efcc%datainfo%whatref%user (string) (9.5.1.1.3)
machine (1951)	efcc%datainfo%whatref%machine (string) (9.5.1.1.3)
shot (1951)	efcc%datainfo%whatref%shot (integer) (9.5.1.1.2)
run (1951)	efcc%datainfo%whatref%run (integer) (9.5.1.1.2)
occurrence (1951)	efcc%datainfo%whatref%occurrence (integer) (9.5.1.1.2)
putinfo (1635)	efcc%datainfo%putinfo (putinfo) (9.5.1.3.290)
putmethod (1804)	efcc%datainfo%putinfo%putmethod (string) (9.5.1.1.3)
putaccess (1804)	efcc%datainfo%putinfo%putaccess (string) (9.5.1.1.3)
putlocation (1804)	efcc%datainfo%putinfo%putlocation (string) (9.5.1.1.3)
rights (1804)	efcc%datainfo%putinfo%rights (string) (9.5.1.1.3)
coil (1531)	efcc%coil(:) (coil) (9.5.1.3.69)
desc_coils (1583)	efcc%coil(:)%desc_coils (desc_coils) (9.5.1.3.123)
name (1637)	efcc%coil(:)%desc_coils%name (string) (9.5.1.1.3)
res (1637)	efcc%coil(:)%desc_coils%res (float) (9.5.1.1.1)
nturns (1637)	efcc%coil(:)%desc_coils%nturns (integer) (9.5.1.1.2)
closed (1637)	efcc%coil(:)%desc_coils%closed (string) (9.5.1.1.3)
edges (1637)	efcc%coil(:)%desc_coils%edges(:) (edges) (9.5.1.3.169)
edge_rzphi (1683)	efcc%coil(:)%desc_coils%edges(:)%edge_rzphi (rzphi1D) (9.5.1.3.331)
r (1845)	efcc%coil(:)%desc_coils%edges(:)%edge_rzphi%r (vecflt_type) (9.5.1.2.9)
z (1845)	efcc%coil(:)%desc_coils%edges(:)%edge_rzphi%z (vecflt_type) (9.5.1.2.9)
phi (1845)	efcc%coil(:)%desc_coils%edges(:)%edge_rzphi%phi (vecflt_type) (9.5.1.2.9)
coilcurrent (1583)	efcc%coil(:)%coilcurrent (exp1D) (9.5.1.3.181)
value (1695)	efcc%coil(:)%coilcurrent%value (vecflt_type) (9.5.1.2.9)
abserror (1695)	efcc%coil(:)%coilcurrent%abserror (vecflt_type) (9.5.1.2.9)
releror (1695)	efcc%coil(:)%coilcurrent%releror (vecflt_type) (9.5.1.2.9)
coilvoltage (1583)	efcc%coil(:)%coilvoltage (exp1D) (9.5.1.3.181)
value (1695)	efcc%coil(:)%coilvoltage%value (vecflt_type) (9.5.1.2.9)
abserror (1695)	efcc%coil(:)%coilvoltage%abserror (vecflt_type) (9.5.1.2.9)
releror (1695)	efcc%coil(:)%coilvoltage%releror (vecflt_type) (9.5.1.2.9)
time (1531)	efcc%time (float) (9.5.1.1.1)
codeparam (1531)	efcc%codeparam (codeparam) (9.5.1.3.66)
codename (1580)	efcc%codeparam%codename (string) (9.5.1.1.3)
codeversion (1580)	efcc%codeparam%codeversion (string) (9.5.1.1.3)
parameters (1580)	efcc%codeparam%parameters (string) (9.5.1.1.3)
output_diag (1580)	efcc%codeparam%output_diag (string) (9.5.1.1.3)
output_flag (1580)	efcc%codeparam%output_flag (integer) (9.5.1.1.2)

## 9.5.2.1.16 equilibrium

datainfo (1532)	equilibrium%datainfo (datainfo) (9.5.1.3.121)
dataproducer (1635)	equilibrium%datainfo%dataproducer (string) (9.5.1.1.3)
putdate (1635)	equilibrium%datainfo%putdate (string) (9.5.1.1.3)
source (1635)	equilibrium%datainfo%source (string) (9.5.1.1.3)
comment (1635)	equilibrium%datainfo%comment (string) (9.5.1.1.3)
cocos (1635)	equilibrium%datainfo%cocos (integer) (9.5.1.1.2)
id (1635)	equilibrium%datainfo%id (integer) (9.5.1.1.2)
isref (1635)	equilibrium%datainfo%isref (integer) (9.5.1.1.2)
whatref (1635)	equilibrium%datainfo%whatref (whatref) (9.5.1.3.437)
user (1951)	equilibrium%datainfo%whatref%user (string) (9.5.1.1.3)
machine (1951)	equilibrium%datainfo%whatref%machine (string) (9.5.1.1.3)
shot (1951)	equilibrium%datainfo%whatref%shot (integer) (9.5.1.1.2)
run (1951)	equilibrium%datainfo%whatref%run (integer) (9.5.1.1.2)
occurrence (1951)	equilibrium%datainfo%whatref%occurrence (integer) (9.5.1.1.2)
putinfo (1635)	equilibrium%datainfo%putinfo (putinfo) (9.5.1.3.290)
putmethod (1804)	equilibrium%datainfo%putinfo%putmethod (string) (9.5.1.1.3)
putaccess (1804)	equilibrium%datainfo%putinfo%putaccess (string) (9.5.1.1.3)
putlocation (1804)	equilibrium%datainfo%putinfo%putlocation (string) (9.5.1.1.3)
rights (1804)	equilibrium%datainfo%putinfo%rights (string) (9.5.1.1.3)
eqconstraint (1532)	equilibrium%eqconstraint (eqconstraint) (9.5.1.3.174)
bpol (1688)	equilibrium%eqconstraint%bpol (eqmes1D) (9.5.1.3.177)
measured (1691)	equilibrium%eqconstraint%bpol%measured (vecflt_type) (9.5.1.2.9)
source (1691)	equilibrium%eqconstraint%bpol%source (string) (9.5.1.1.3)
time (1691)	equilibrium%eqconstraint%bpol%time (float) (9.5.1.1.1)
exact (1691)	equilibrium%eqconstraint%bpol%exact (vecint_type) (9.5.1.2.10)
weight (1691)	equilibrium%eqconstraint%bpol%weight (vecflt_type) (9.5.1.2.9)
sigma (1691)	equilibrium%eqconstraint%bpol%sigma (vecflt_type) (9.5.1.2.9)
calculated (1691)	equilibrium%eqconstraint%bpol%calculated (vecflt_type) (9.5.1.2.9)
chi2 (1691)	equilibrium%eqconstraint%bpol%chi2 (vecflt_type) (9.5.1.2.9)
bvac_r (1688)	equilibrium%eqconstraint%bvac_r (eqmes0D) (9.5.1.3.176)
measured (1690)	equilibrium%eqconstraint%bvac_r%measured (float) (9.5.1.1.1)
source (1690)	equilibrium%eqconstraint%bvac_r%source (string) (9.5.1.1.3)
time (1690)	equilibrium%eqconstraint%bvac_r%time (float) (9.5.1.1.1)
exact (1690)	equilibrium%eqconstraint%bvac_r%exact (integer) (9.5.1.1.2)
weight (1690)	equilibrium%eqconstraint%bvac_r%weight (float) (9.5.1.1.1)
sigma (1690)	equilibrium%eqconstraint%bvac_r%sigma (float) (9.5.1.1.1)
calculated (1690)	equilibrium%eqconstraint%bvac_r%calculated (float) (9.5.1.1.1)
chi2 (1690)	equilibrium%eqconstraint%bvac_r%chi2 (float) (9.5.1.1.1)
diamagflux (1688)	equilibrium%eqconstraint%diamagflux (eqmes0D) (9.5.1.3.176)
measured (1690)	equilibrium%eqconstraint%diamagflux%measured (float) (9.5.1.1.1)
source (1690)	equilibrium%eqconstraint%diamagflux%source (string) (9.5.1.1.3)
time (1690)	equilibrium%eqconstraint%diamagflux%time (float) (9.5.1.1.1)
exact (1690)	equilibrium%eqconstraint%diamagflux%exact (integer) (9.5.1.1.2)
weight (1690)	equilibrium%eqconstraint%diamagflux%weight (float) (9.5.1.1.1)
sigma (1690)	equilibrium%eqconstraint%diamagflux%sigma (float) (9.5.1.1.1)
calculated (1690)	equilibrium%eqconstraint%diamagflux%calculated (float) (9.5.1.1.1)
chi2 (1690)	equilibrium%eqconstraint%diamagflux%chi2 (float) (9.5.1.1.1)
faraday (1688)	equilibrium%eqconstraint%faraday (eqmes1D) (9.5.1.3.177)
measured (1691)	equilibrium%eqconstraint%faraday%measured (vecflt_type) (9.5.1.2.9)
source (1691)	equilibrium%eqconstraint%faraday%source (string) (9.5.1.1.3)
time (1691)	equilibrium%eqconstraint%faraday%time (float) (9.5.1.1.1)
exact (1691)	equilibrium%eqconstraint%faraday%exact (vecint_type) (9.5.1.2.10)
weight (1691)	equilibrium%eqconstraint%faraday%weight (vecflt_type) (9.5.1.2.9)
sigma (1691)	equilibrium%eqconstraint%faraday%sigma (vecflt_type) (9.5.1.2.9)
calculated (1691)	equilibrium%eqconstraint%faraday%calculated (vecflt_type) (9.5.1.2.9)
chi2 (1691)	equilibrium%eqconstraint%faraday%chi2 (vecflt_type) (9.5.1.2.9)
flux (1688)	equilibrium%eqconstraint%flux (eqmes1D) (9.5.1.3.177)
measured (1691)	equilibrium%eqconstraint%flux%measured (vecflt_type) (9.5.1.2.9)
source (1691)	equilibrium%eqconstraint%flux%source (string) (9.5.1.1.3)
time (1691)	equilibrium%eqconstraint%flux%time (float) (9.5.1.1.1)

exact (1691)  
 weight (1691)  
 sigma (1691)  
 calculated (1691)  
 chi2 (1691)

**i\_plasma (1688)**  
 measured (1690)  
 source (1690)  
 time (1690)  
 exact (1690)  
 weight (1690)  
 sigma (1690)  
 calculated (1690)  
 chi2 (1690)

**isoflux (1688)**  
 position (1734)  
   r (1839)  
   z (1839)  
 source (1734)  
 weight (1734)  
 sigma (1734)  
 calculated (1734)  
 chi2 (1734)

**jsurf (1688)**  
 measured (1691)  
 source (1691)  
 time (1691)  
 exact (1691)  
 weight (1691)  
 sigma (1691)  
 calculated (1691)  
 chi2 (1691)

**magnet\_iron (1688)**  
 mr (1751)  
   measured (1691)  
   source (1691)  
   time (1691)  
   exact (1691)  
   weight (1691)  
   sigma (1691)  
   calculated (1691)  
   chi2 (1691)

**mz (1751)**  
 measured (1691)  
 source (1691)  
 time (1691)  
 exact (1691)  
 weight (1691)  
 sigma (1691)  
 calculated (1691)  
 chi2 (1691)

**mse (1688)**  
 measured (1691)  
 source (1691)  
 time (1691)  
 exact (1691)  
 weight (1691)  
 sigma (1691)  
 calculated (1691)  
 chi2 (1691)

**ne (1688)**

equilibrium%eqconstraint%flux%exact (vecint.type) (9.5.1.2.10)  
 equilibrium%eqconstraint%flux%weight (vecflt.type) (9.5.1.2.9)  
 equilibrium%eqconstraint%flux%sigma (vecflt.type) (9.5.1.2.9)  
 equilibrium%eqconstraint%flux%calculated (vecflt.type) (9.5.1.2.9)  
 equilibrium%eqconstraint%flux%chi2 (vecflt.type) (9.5.1.2.9)  
 equilibrium%eqconstraint%i\_plasma (eqmes0D) (9.5.1.3.176)  
 equilibrium%eqconstraint%i\_plasma%measured (float) (9.5.1.1.1)  
 equilibrium%eqconstraint%i\_plasma%source (string) (9.5.1.1.3)  
 equilibrium%eqconstraint%i\_plasma%time (float) (9.5.1.1.1)  
 equilibrium%eqconstraint%i\_plasma%exact (integer) (9.5.1.1.2)  
 equilibrium%eqconstraint%i\_plasma%weight (float) (9.5.1.1.1)  
 equilibrium%eqconstraint%i\_plasma%sigma (float) (9.5.1.1.1)  
 equilibrium%eqconstraint%i\_plasma%calculated (float) (9.5.1.1.1)  
 equilibrium%eqconstraint%i\_plasma%chi2 (float) (9.5.1.1.1)  
 equilibrium%eqconstraint%isoflux (isoflux) (9.5.1.3.220)  
 equilibrium%eqconstraint%isoflux%position (rz1D) (9.5.1.3.325)  
 equilibrium%eqconstraint%isoflux%position%r (vecflt.type) (9.5.1.2.9)  
 equilibrium%eqconstraint%isoflux%position%z (vecflt.type) (9.5.1.2.9)  
 equilibrium%eqconstraint%isoflux%source (string) (9.5.1.1.3)  
 equilibrium%eqconstraint%isoflux%weight (vecflt.type) (9.5.1.2.9)  
 equilibrium%eqconstraint%isoflux%sigma (vecflt.type) (9.5.1.2.9)  
 equilibrium%eqconstraint%isoflux%calculated (vecflt.type) (9.5.1.2.9)  
 equilibrium%eqconstraint%isoflux%chi2 (vecflt.type) (9.5.1.2.9)  
 equilibrium%eqconstraint%jsurf (eqmes1D) (9.5.1.3.177)  
 equilibrium%eqconstraint%jsurf%measured (vecflt.type) (9.5.1.2.9)  
 equilibrium%eqconstraint%jsurf%source (string) (9.5.1.1.3)  
 equilibrium%eqconstraint%jsurf%time (float) (9.5.1.1.1)  
 equilibrium%eqconstraint%jsurf%exact (vecint.type) (9.5.1.2.10)  
 equilibrium%eqconstraint%jsurf%weight (vecflt.type) (9.5.1.2.9)  
 equilibrium%eqconstraint%jsurf%sigma (vecflt.type) (9.5.1.2.9)  
 equilibrium%eqconstraint%jsurf%calculated (vecflt.type) (9.5.1.2.9)  
 equilibrium%eqconstraint%jsurf%chi2 (vecflt.type) (9.5.1.2.9)  
 equilibrium%eqconstraint%magnet\_iron (magnet\_iron) (9.5.1.3.237)  
 equilibrium%eqconstraint%magnet\_iron%mr (eqmes1D) (9.5.1.3.177)  
 equilibrium%eqconstraint%magnet\_iron%mr%measured (vecflt.type) (9.5.1.2.9)  
 equilibrium%eqconstraint%magnet\_iron%mr%source (string) (9.5.1.1.3)  
 equilibrium%eqconstraint%magnet\_iron%mr%time (float) (9.5.1.1.1)  
 equilibrium%eqconstraint%magnet\_iron%mr%exact (vecint.type) (9.5.1.2.10)  
 equilibrium%eqconstraint%magnet\_iron%mr%weight (vecflt.type) (9.5.1.2.9)  
 equilibrium%eqconstraint%magnet\_iron%mr%sigma (vecflt.type) (9.5.1.2.9)  
 equilibrium%eqconstraint%magnet\_iron%mr%calculated (vecflt.type) (9.5.1.2.9)  
 equilibrium%eqconstraint%magnet\_iron%mr%chi2 (vecflt.type) (9.5.1.2.9)  
 equilibrium%eqconstraint%magnet\_iron%mz (eqmes1D) (9.5.1.3.177)  
 equilibrium%eqconstraint%magnet\_iron%mz%measured (vecflt.type) (9.5.1.2.9)  
 equilibrium%eqconstraint%magnet\_iron%mz%source (string) (9.5.1.1.3)  
 equilibrium%eqconstraint%magnet\_iron%mz%time (float) (9.5.1.1.1)  
 equilibrium%eqconstraint%magnet\_iron%mz%exact (vecint.type) (9.5.1.2.10)  
 equilibrium%eqconstraint%magnet\_iron%mz%weight (vecflt.type) (9.5.1.2.9)  
 equilibrium%eqconstraint%magnet\_iron%mz%sigma (vecflt.type) (9.5.1.2.9)  
 equilibrium%eqconstraint%magnet\_iron%mz%calculated (vecflt.type) (9.5.1.2.9)  
 equilibrium%eqconstraint%magnet\_iron%mz%chi2 (vecflt.type) (9.5.1.2.9)  
 equilibrium%eqconstraint%mse (eqmes1D) (9.5.1.3.177)  
 equilibrium%eqconstraint%mse%measured (vecflt.type) (9.5.1.2.9)  
 equilibrium%eqconstraint%mse%source (string) (9.5.1.1.3)  
 equilibrium%eqconstraint%mse%time (float) (9.5.1.1.1)  
 equilibrium%eqconstraint%mse%exact (vecint.type) (9.5.1.2.10)  
 equilibrium%eqconstraint%mse%weight (vecflt.type) (9.5.1.2.9)  
 equilibrium%eqconstraint%mse%sigma (vecflt.type) (9.5.1.2.9)  
 equilibrium%eqconstraint%mse%calculated (vecflt.type) (9.5.1.2.9)  
 equilibrium%eqconstraint%mse%chi2 (vecflt.type) (9.5.1.2.9)  
 equilibrium%eqconstraint%ne (eqmes1D) (9.5.1.3.177)



measured (1691)	equilibrium%eqconstraint%ne%measured (vecflt.type) (9.5.1.2.9)
source (1691)	equilibrium%eqconstraint%ne%source (string) (9.5.1.1.3)
time (1691)	equilibrium%eqconstraint%ne%time (float) (9.5.1.1.1)
exact (1691)	equilibrium%eqconstraint%ne%exact (vecint.type) (9.5.1.2.10)
weight (1691)	equilibrium%eqconstraint%ne%weight (vecflt.type) (9.5.1.2.9)
sigma (1691)	equilibrium%eqconstraint%ne%sigma (vecflt.type) (9.5.1.2.9)
calculated (1691)	equilibrium%eqconstraint%ne%calculated (vecflt.type) (9.5.1.2.9)
chi2 (1691)	equilibrium%eqconstraint%ne%chi2 (vecflt.type) (9.5.1.2.9)
pfcurrent (1688)	equilibrium%eqconstraint%pfcurrent (eqmes1D) (9.5.1.3.177)
measured (1691)	equilibrium%eqconstraint%pfcurrent%measured (vecflt.type) (9.5.1.2.9)
source (1691)	equilibrium%eqconstraint%pfcurrent%source (string) (9.5.1.1.3)
time (1691)	equilibrium%eqconstraint%pfcurrent%time (float) (9.5.1.1.1)
exact (1691)	equilibrium%eqconstraint%pfcurrent%exact (vecint.type) (9.5.1.2.10)
weight (1691)	equilibrium%eqconstraint%pfcurrent%weight (vecflt.type) (9.5.1.2.9)
sigma (1691)	equilibrium%eqconstraint%pfcurrent%sigma (vecflt.type) (9.5.1.2.9)
calculated (1691)	equilibrium%eqconstraint%pfcurrent%calculated (vecflt.type) (9.5.1.2.9)
chi2 (1691)	equilibrium%eqconstraint%pfcurrent%chi2 (vecflt.type) (9.5.1.2.9)
pressure (1688)	equilibrium%eqconstraint%pressure (eqmes1D) (9.5.1.3.177)
measured (1691)	equilibrium%eqconstraint%pressure%measured (vecflt.type) (9.5.1.2.9)
source (1691)	equilibrium%eqconstraint%pressure%source (string) (9.5.1.1.3)
time (1691)	equilibrium%eqconstraint%pressure%time (float) (9.5.1.1.1)
exact (1691)	equilibrium%eqconstraint%pressure%exact (vecint.type) (9.5.1.2.10)
weight (1691)	equilibrium%eqconstraint%pressure%weight (vecflt.type) (9.5.1.2.9)
sigma (1691)	equilibrium%eqconstraint%pressure%sigma (vecflt.type) (9.5.1.2.9)
calculated (1691)	equilibrium%eqconstraint%pressure%calculated (vecflt.type) (9.5.1.2.9)
chi2 (1691)	equilibrium%eqconstraint%pressure%chi2 (vecflt.type) (9.5.1.2.9)
q (1688)	equilibrium%eqconstraint%q (q) (9.5.1.3.291)
qvalue (1805)	equilibrium%eqconstraint%q%qvalue (vecflt.type) (9.5.1.2.9)
position (1805)	equilibrium%eqconstraint%q%position (rz1D) (9.5.1.3.325)
r (1839)	equilibrium%eqconstraint%q%position%r (vecflt.type) (9.5.1.2.9)
z (1839)	equilibrium%eqconstraint%q%position%z (vecflt.type) (9.5.1.2.9)
source (1805)	equilibrium%eqconstraint%q%source (string) (9.5.1.1.3)
exact (1805)	equilibrium%eqconstraint%q%exact (integer) (9.5.1.1.2)
weight (1805)	equilibrium%eqconstraint%q%weight (vecflt.type) (9.5.1.2.9)
sigma (1805)	equilibrium%eqconstraint%q%sigma (vecflt.type) (9.5.1.2.9)
calculated (1805)	equilibrium%eqconstraint%q%calculated (vecflt.type) (9.5.1.2.9)
chi2 (1805)	equilibrium%eqconstraint%q%chi2 (vecflt.type) (9.5.1.2.9)
xpts (1688)	equilibrium%eqconstraint%xpts (xpts) (9.5.1.3.439)
position (1953)	equilibrium%eqconstraint%xpts%position (rz1D) (9.5.1.3.325)
r (1839)	equilibrium%eqconstraint%xpts%position%r (vecflt.type) (9.5.1.2.9)
z (1839)	equilibrium%eqconstraint%xpts%position%z (vecflt.type) (9.5.1.2.9)
source (1953)	equilibrium%eqconstraint%xpts%source (string) (9.5.1.1.3)
weight (1953)	equilibrium%eqconstraint%xpts%weight (vecflt.type) (9.5.1.2.9)
sigma (1953)	equilibrium%eqconstraint%xpts%sigma (vecflt.type) (9.5.1.2.9)
calculated (1953)	equilibrium%eqconstraint%xpts%calculated (vecflt.type) (9.5.1.2.9)
chi2 (1953)	equilibrium%eqconstraint%xpts%chi2 (vecflt.type) (9.5.1.2.9)
eqgeometry (1532)	equilibrium%eqgeometry (eqgeometry) (9.5.1.3.175)
source (1689)	equilibrium%eqgeometry%source (string) (9.5.1.1.3)
boundarytype (1689)	equilibrium%eqgeometry%boundarytype (integer) (9.5.1.1.2)
boundary (1689)	equilibrium%eqgeometry%boundary(:) (rz1Dexp) (9.5.1.3.327)
r (1841)	equilibrium%eqgeometry%boundary(:)%r (vecflt.type) (9.5.1.2.9)
z (1841)	equilibrium%eqgeometry%boundary(:)%z (vecflt.type) (9.5.1.2.9)
geom_axis (1689)	equilibrium%eqgeometry%geom_axis (rz0D) (9.5.1.3.324)
r (1838)	equilibrium%eqgeometry%geom_axis%r (float) (9.5.1.1.1)
z (1838)	equilibrium%eqgeometry%geom_axis%z (float) (9.5.1.1.1)
a_minor (1689)	equilibrium%eqgeometry%a_minor (float) (9.5.1.1.1)
elongation (1689)	equilibrium%eqgeometry%elongation (float) (9.5.1.1.1)
elong_upper (1689)	equilibrium%eqgeometry%elong_upper (float) (9.5.1.1.1)
elong_lower (1689)	equilibrium%eqgeometry%elong_lower (float) (9.5.1.1.1)
tria_upper (1689)	equilibrium%eqgeometry%tria_upper (float) (9.5.1.1.1)
tria_lower (1689)	equilibrium%eqgeometry%tria_lower (float) (9.5.1.1.1)

xpts (1689)	equilibrium%eqgeometry%xpts(:) (rz1Dexp) (9.5.1.3.327)
r (1841)	equilibrium%eqgeometry%xpts(:)%r (vecflt.type) (9.5.1.2.9)
z (1841)	equilibrium%eqgeometry%xpts(:)%z (vecflt.type) (9.5.1.2.9)
left_low_st (1689)	equilibrium%eqgeometry%left_low_st (rz0D) (9.5.1.3.324)
r (1838)	equilibrium%eqgeometry%left_low_st%r (float) (9.5.1.1.1)
z (1838)	equilibrium%eqgeometry%left_low_st%z (float) (9.5.1.1.1)
right_low_st (1689)	equilibrium%eqgeometry%right_low_st (rz0D) (9.5.1.3.324)
r (1838)	equilibrium%eqgeometry%right_low_st%r (float) (9.5.1.1.1)
z (1838)	equilibrium%eqgeometry%right_low_st%z (float) (9.5.1.1.1)
left_up_st (1689)	equilibrium%eqgeometry%left_up_st (rz0D) (9.5.1.3.324)
r (1838)	equilibrium%eqgeometry%left_up_st%r (float) (9.5.1.1.1)
z (1838)	equilibrium%eqgeometry%left_up_st%z (float) (9.5.1.1.1)
right_up_st (1689)	equilibrium%eqgeometry%right_up_st (rz0D) (9.5.1.3.324)
r (1838)	equilibrium%eqgeometry%right_up_st%r (float) (9.5.1.1.1)
z (1838)	equilibrium%eqgeometry%right_up_st%z (float) (9.5.1.1.1)
active_limit (1689)	equilibrium%eqgeometry%active_limit (rz0D) (9.5.1.3.324)
r (1838)	equilibrium%eqgeometry%active_limit%r (float) (9.5.1.1.1)
z (1838)	equilibrium%eqgeometry%active_limit%z (float) (9.5.1.1.1)
ang_lcms_upo (1689)	equilibrium%eqgeometry%ang_lcms_upo (float) (9.5.1.1.1)
ang_lcms_upi (1689)	equilibrium%eqgeometry%ang_lcms_upi (float) (9.5.1.1.1)
ang_lcms_lwo (1689)	equilibrium%eqgeometry%ang_lcms_lwo (float) (9.5.1.1.1)
ang_lcms_lwi (1689)	equilibrium%eqgeometry%ang_lcms_lwi (float) (9.5.1.1.1)
flush (1532)	equilibrium%flush (flush) (9.5.1.3.185)
datainfo (1699)	equilibrium%flush%datainfo (datainfo) (9.5.1.3.121)
dataprovider (1635)	equilibrium%flush%datainfo%dataprovider (string) (9.5.1.1.3)
putdate (1635)	equilibrium%flush%datainfo%putdate (string) (9.5.1.1.3)
source (1635)	equilibrium%flush%datainfo%source (string) (9.5.1.1.3)
comment (1635)	equilibrium%flush%datainfo%comment (string) (9.5.1.1.3)
cocos (1635)	equilibrium%flush%datainfo%cocos (integer) (9.5.1.1.2)
id (1635)	equilibrium%flush%datainfo%id (integer) (9.5.1.1.2)
isref (1635)	equilibrium%flush%datainfo%isref (integer) (9.5.1.1.2)
whatref (1635)	equilibrium%flush%datainfo%whatref (whatref) (9.5.1.3.437)
user (1951)	equilibrium%flush%datainfo%whatref%user (string) (9.5.1.1.3)
machine (1951)	equilibrium%flush%datainfo%whatref%machine (string) (9.5.1.1.3)
shot (1951)	equilibrium%flush%datainfo%whatref%shot (integer) (9.5.1.1.2)
run (1951)	equilibrium%flush%datainfo%whatref%run (integer) (9.5.1.1.2)
occurrence (1951)	equilibrium%flush%datainfo%whatref%occurrence (integer) (9.5.1.1.2)
putinfo (1635)	equilibrium%flush%datainfo%putinfo (putinfo) (9.5.1.3.290)
putmethod (1804)	equilibrium%flush%datainfo%putinfo%putmethod (string) (9.5.1.1.3)
putaccess (1804)	equilibrium%flush%datainfo%putinfo%putaccess (string) (9.5.1.1.3)
putlocation (1804)	equilibrium%flush%datainfo%putinfo%putlocation (string) (9.5.1.1.3)
rights (1804)	equilibrium%flush%datainfo%putinfo%rights (string) (9.5.1.1.3)
position (1699)	equilibrium%flush%position (rz1D) (9.5.1.3.325)
r (1839)	equilibrium%flush%position%r (vecflt.type) (9.5.1.2.9)
z (1839)	equilibrium%flush%position%z (vecflt.type) (9.5.1.2.9)
coef (1699)	equilibrium%flush%coef (matflt.type) (9.5.1.2.7)
codeparam (1699)	equilibrium%flush%codeparam (codeparam) (9.5.1.3.66)
codename (1580)	equilibrium%flush%codeparam%codename (string) (9.5.1.1.3)
codeversion (1580)	equilibrium%flush%codeparam%codeversion (string) (9.5.1.1.3)
parameters (1580)	equilibrium%flush%codeparam%parameters (string) (9.5.1.1.3)
output_diag (1580)	equilibrium%flush%codeparam%output_diag (string) (9.5.1.1.3)
output_flag (1580)	equilibrium%flush%codeparam%output_flag (integer) (9.5.1.1.2)
global_param (1532)	equilibrium%global_param (global_param) (9.5.1.3.208)
beta_pol (1722)	equilibrium%global_param%beta_pol (float) (9.5.1.1.1)
beta_tor (1722)	equilibrium%global_param%beta_tor (float) (9.5.1.1.1)
beta_normal (1722)	equilibrium%global_param%beta_normal (float) (9.5.1.1.1)
i_plasma (1722)	equilibrium%global_param%i_plasma (float) (9.5.1.1.1)
li (1722)	equilibrium%global_param%li (float) (9.5.1.1.1)
volume (1722)	equilibrium%global_param%volume (float) (9.5.1.1.1)
area (1722)	equilibrium%global_param%area (float) (9.5.1.1.1)
psi_ax (1722)	equilibrium%global_param%psi_ax (float) (9.5.1.1.1)



psi_bound (1722)	equilibrium%global_param%psi_bound (float) (9.5.1.1.1)
mag_axis (1722)	equilibrium%global_param%mag_axis (mag_axis) (9.5.1.3.236)
position (1750)	equilibrium%global_param%mag_axis%position (rz0D) (9.5.1.3.324)
r (1838)	equilibrium%global_param%mag_axis%position%r (float) (9.5.1.1.1)
z (1838)	equilibrium%global_param%mag_axis%position%z (float) (9.5.1.1.1)
bphi (1750)	equilibrium%global_param%mag_axis%bphi (float) (9.5.1.1.1)
q (1750)	equilibrium%global_param%mag_axis%q (float) (9.5.1.1.1)
q_95 (1722)	equilibrium%global_param%q_95 (float) (9.5.1.1.1)
q_min (1722)	equilibrium%global_param%q_min (float) (9.5.1.1.1)
toroid_field (1722)	equilibrium%global_param%toroid_field (b0r0) (9.5.1.3.56)
r0 (1570)	equilibrium%global_param%toroid_field%r0 (float) (9.5.1.1.1)
b0 (1570)	equilibrium%global_param%toroid_field%b0 (float) (9.5.1.1.1)
w_mhd (1722)	equilibrium%global_param%w_mhd (float) (9.5.1.1.1)
gamma (1722)	equilibrium%global_param%gamma (float) (9.5.1.1.1)
profiles_1d (1532)	equilibrium%profiles_1d (profiles_1d) (9.5.1.3.288)
psi (1802)	equilibrium%profiles_1d%psi (vecflt_type) (9.5.1.2.9)
phi (1802)	equilibrium%profiles_1d%phi (vecflt_type) (9.5.1.2.9)
pressure (1802)	equilibrium%profiles_1d%pressure (vecflt_type) (9.5.1.2.9)
F_dia (1802)	equilibrium%profiles_1d%F_dia (vecflt_type) (9.5.1.2.9)
pprime (1802)	equilibrium%profiles_1d%pprime (vecflt_type) (9.5.1.2.9)
ffprime (1802)	equilibrium%profiles_1d%ffprime (vecflt_type) (9.5.1.2.9)
jphi (1802)	equilibrium%profiles_1d%jphi (vecflt_type) (9.5.1.2.9)
jparallel (1802)	equilibrium%profiles_1d%jparallel (vecflt_type) (9.5.1.2.9)
q (1802)	equilibrium%profiles_1d%q (vecflt_type) (9.5.1.2.9)
r_inboard (1802)	equilibrium%profiles_1d%r_inboard (vecflt_type) (9.5.1.2.9)
r_outboard (1802)	equilibrium%profiles_1d%r_outboard (vecflt_type) (9.5.1.2.9)
rho_tor (1802)	equilibrium%profiles_1d%rho_tor (vecflt_type) (9.5.1.2.9)
dpsidrho_tor (1802)	equilibrium%profiles_1d%dpsidrho_tor (vecflt_type) (9.5.1.2.9)
rho_vol (1802)	equilibrium%profiles_1d%rho_vol (vecflt_type) (9.5.1.2.9)
beta_pol (1802)	equilibrium%profiles_1d%beta_pol (vecflt_type) (9.5.1.2.9)
li (1802)	equilibrium%profiles_1d%li (vecflt_type) (9.5.1.2.9)
elongation (1802)	equilibrium%profiles_1d%elongation (vecflt_type) (9.5.1.2.9)
tria_upper (1802)	equilibrium%profiles_1d%tria_upper (vecflt_type) (9.5.1.2.9)
tria_lower (1802)	equilibrium%profiles_1d%tria_lower (vecflt_type) (9.5.1.2.9)
volume (1802)	equilibrium%profiles_1d%volume (vecflt_type) (9.5.1.2.9)
vprime (1802)	equilibrium%profiles_1d%vprime (vecflt_type) (9.5.1.2.9)
dvdrho (1802)	equilibrium%profiles_1d%dvdrho (vecflt_type) (9.5.1.2.9)
area (1802)	equilibrium%profiles_1d%area (vecflt_type) (9.5.1.2.9)
aprime (1802)	equilibrium%profiles_1d%aprime (vecflt_type) (9.5.1.2.9)
surface (1802)	equilibrium%profiles_1d%surface (vecflt_type) (9.5.1.2.9)
ftrap (1802)	equilibrium%profiles_1d%ftrap (vecflt_type) (9.5.1.2.9)
gm1 (1802)	equilibrium%profiles_1d%gm1 (vecflt_type) (9.5.1.2.9)
gm2 (1802)	equilibrium%profiles_1d%gm2 (vecflt_type) (9.5.1.2.9)
gm3 (1802)	equilibrium%profiles_1d%gm3 (vecflt_type) (9.5.1.2.9)
gm4 (1802)	equilibrium%profiles_1d%gm4 (vecflt_type) (9.5.1.2.9)
gm5 (1802)	equilibrium%profiles_1d%gm5 (vecflt_type) (9.5.1.2.9)
gm6 (1802)	equilibrium%profiles_1d%gm6 (vecflt_type) (9.5.1.2.9)
gm7 (1802)	equilibrium%profiles_1d%gm7 (vecflt_type) (9.5.1.2.9)
gm8 (1802)	equilibrium%profiles_1d%gm8 (vecflt_type) (9.5.1.2.9)
gm9 (1802)	equilibrium%profiles_1d%gm9 (vecflt_type) (9.5.1.2.9)
b_av (1802)	equilibrium%profiles_1d%b_av (vecflt_type) (9.5.1.2.9)
b_min (1802)	equilibrium%profiles_1d%b_min (vecflt_type) (9.5.1.2.9)
b_max (1802)	equilibrium%profiles_1d%b_max (vecflt_type) (9.5.1.2.9)
omega (1802)	equilibrium%profiles_1d%omega (vecflt_type) (9.5.1.2.9)
omegaprime (1802)	equilibrium%profiles_1d%omegaprime (vecflt_type) (9.5.1.2.9)
mach_a (1802)	equilibrium%profiles_1d%mach_a (vecflt_type) (9.5.1.2.9)
phi_flow (1802)	equilibrium%profiles_1d%phi_flow (vecflt_type) (9.5.1.2.9)
s_flow (1802)	equilibrium%profiles_1d%s_flow (vecflt_type) (9.5.1.2.9)
h_flow (1802)	equilibrium%profiles_1d%h_flow (vecflt_type) (9.5.1.2.9)
rho_mass (1802)	equilibrium%profiles_1d%rho_mass (vecflt_type) (9.5.1.2.9)
profiles_2d (1532)	equilibrium%profiles_2d(:) (equilibrium_profiles_2d) (9.5.1.3.179)

grid_type (1693)	equilibrium%profiles_2d(:)%grid_type (vecstring_type) (9.5.1.2.11)
grid (1693)	equilibrium%profiles_2d(:)%grid (equilibrium_profiles2d_grid) (9.5.1.3.178)
dim1 (1692)	equilibrium%profiles_2d(:)%grid%dim1 (vecflt_type) (9.5.1.2.9)
dim2 (1692)	equilibrium%profiles_2d(:)%grid%dim2 (vecflt_type) (9.5.1.2.9)
connect (1692)	equilibrium%profiles_2d(:)%grid%connect (matint_type) (9.5.1.2.8)
r (1693)	equilibrium%profiles_2d(:)%r (matflt_type) (9.5.1.2.7)
z (1693)	equilibrium%profiles_2d(:)%z (matflt_type) (9.5.1.2.7)
psi (1693)	equilibrium%profiles_2d(:)%psi (matflt_type) (9.5.1.2.7)
theta (1693)	equilibrium%profiles_2d(:)%theta (matflt_type) (9.5.1.2.7)
phi (1693)	equilibrium%profiles_2d(:)%phi (matflt_type) (9.5.1.2.7)
jphi (1693)	equilibrium%profiles_2d(:)%jphi (matflt_type) (9.5.1.2.7)
jpar (1693)	equilibrium%profiles_2d(:)%jpar (matflt_type) (9.5.1.2.7)
br (1693)	equilibrium%profiles_2d(:)%br (matflt_type) (9.5.1.2.7)
bz (1693)	equilibrium%profiles_2d(:)%bz (matflt_type) (9.5.1.2.7)
bphi (1693)	equilibrium%profiles_2d(:)%bphi (matflt_type) (9.5.1.2.7)
vphi (1693)	equilibrium%profiles_2d(:)%vphi (matflt_type) (9.5.1.2.7)
vtheta (1693)	equilibrium%profiles_2d(:)%vtheta (matflt_type) (9.5.1.2.7)
rho.mass (1693)	equilibrium%profiles_2d(:)%rho.mass (matflt_type) (9.5.1.2.7)
pressure (1693)	equilibrium%profiles_2d(:)%pressure (matflt_type) (9.5.1.2.7)
temperature (1693)	equilibrium%profiles_2d(:)%temperature (matflt_type) (9.5.1.2.7)
coord_sys (1532)	equilibrium%coord_sys (coord_sys) (9.5.1.3.90)
grid_type (1604)	equilibrium%coord_sys%grid_type (string) (9.5.1.1.3)
grid (1604)	equilibrium%coord_sys%grid (reggrid) (9.5.1.3.320)
dim1 (1834)	equilibrium%coord_sys%grid%dim1 (vecflt_type) (9.5.1.2.9)
dim2 (1834)	equilibrium%coord_sys%grid%dim2 (vecflt_type) (9.5.1.2.9)
jacobian (1604)	equilibrium%coord_sys%jacobian (matflt_type) (9.5.1.2.7)
g_11 (1604)	equilibrium%coord_sys%g_11 (matflt_type) (9.5.1.2.7)
g_12 (1604)	equilibrium%coord_sys%g_12 (matflt_type) (9.5.1.2.7)
g_13 (1604)	equilibrium%coord_sys%g_13 (matflt_type) (9.5.1.2.7)
g_22 (1604)	equilibrium%coord_sys%g_22 (matflt_type) (9.5.1.2.7)
g_23 (1604)	equilibrium%coord_sys%g_23 (matflt_type) (9.5.1.2.7)
g_33 (1604)	equilibrium%coord_sys%g_33 (matflt_type) (9.5.1.2.7)
position (1604)	equilibrium%coord_sys%position (rz2D) (9.5.1.3.328)
r (1842)	equilibrium%coord_sys%position%r (matflt_type) (9.5.1.2.7)
z (1842)	equilibrium%coord_sys%position%z (matflt_type) (9.5.1.2.7)
time (1532)	equilibrium%time (float) (9.5.1.1.1)
codeparam (1532)	equilibrium%codeparam (codeparam) (9.5.1.3.66)
codename (1580)	equilibrium%codeparam%codename (string) (9.5.1.1.3)
codeversion (1580)	equilibrium%codeparam%codeversion (string) (9.5.1.1.3)
parameters (1580)	equilibrium%codeparam%parameters (string) (9.5.1.1.3)
output.diag (1580)	equilibrium%codeparam%output.diag (string) (9.5.1.1.3)
output.flag (1580)	equilibrium%codeparam%output.flag (integer) (9.5.1.1.2)

### 9.5.2.1.17 fusiondiag

datainfo (1533)	fusiondiag%datainfo (datainfo) (9.5.1.3.121)
dataprovider (1635)	fusiondiag%datainfo%dataprovider (string) (9.5.1.1.3)
putdate (1635)	fusiondiag%datainfo%putdate (string) (9.5.1.1.3)
source (1635)	fusiondiag%datainfo%source (string) (9.5.1.1.3)
comment (1635)	fusiondiag%datainfo%comment (string) (9.5.1.1.3)
cocos (1635)	fusiondiag%datainfo%cocos (integer) (9.5.1.1.2)
id (1635)	fusiondiag%datainfo%id (integer) (9.5.1.1.2)
isref (1635)	fusiondiag%datainfo%isref (integer) (9.5.1.1.2)
whatref (1635)	fusiondiag%datainfo%whatref (whatref) (9.5.1.3.437)
user (1951)	fusiondiag%datainfo%whatref%user (string) (9.5.1.1.3)
machine (1951)	fusiondiag%datainfo%whatref%machine (string) (9.5.1.1.3)
shot (1951)	fusiondiag%datainfo%whatref%shot (integer) (9.5.1.1.2)
run (1951)	fusiondiag%datainfo%whatref%run (integer) (9.5.1.1.2)
occurrence (1951)	fusiondiag%datainfo%whatref%occurrence (integer) (9.5.1.1.2)
putinfo (1635)	fusiondiag%datainfo%putinfo (putinfo) (9.5.1.3.290)
putmethod (1804)	fusiondiag%datainfo%putinfo%putmethod (string) (9.5.1.1.3)

putaccess (1804)	fusiondiag%datainfo%putinfo%putaccess (string) (9.5.1.1.3)
putlocation (1804)	fusiondiag%datainfo%putinfo%putlocation (string) (9.5.1.1.3)
rights (1804)	fusiondiag%datainfo%putinfo%rights (string) (9.5.1.1.3)
fus_product (1533)	fusiondiag%fus_product(:) (fusiondiag_fus_product) (9.5.1.3.203)
product (1717)	fusiondiag%fus_product(:)%product (string) (9.5.1.1.3)
reaction (1717)	fusiondiag%fus_product(:)%reaction (string) (9.5.1.1.3)
collimator (1717)	fusiondiag%fus_product(:)%collimator (fusiondiag_collimator) (9.5.1.3.194)
colli_circ (1708)	fusiondiag%fus_product(:)%collimator%colli_circ(:) (fusiondiag_colli_circ) (9.5.1.3.192)
name (1706)	fusiondiag%fus_product(:)%collimator%colli_circ(:)%name (string) (9.5.1.1.3)
setup_line (1706)	fusiondiag%fus_product(:)%collimator%colli_circ(:)%setup_line (setup_line) (9.5.1.3.362)
pivot_point (1876)	fusiondiag%fus_product(:)%collimator%colli_circ(:)%setup_line%pivot_point (rzphi1D) (9.5.1.3.331)
r (1845)	fusiondiag%fus_product(:)%collimator%colli_circ(:)%setup_line%pivot_point%r (vecflt.type) (9.5.1.2.9)
z (1845)	fusiondiag%fus_product(:)%collimator%colli_circ(:)%setup_line%pivot_point%z (vecflt.type) (9.5.1.2.9)
phi (1845)	fusiondiag%fus_product(:)%collimator%colli_circ(:)%setup_line%pivot_point%phi (vecflt.type) (9.5.1.2.9)
horchordang1 (1876)	fusiondiag%fus_product(:)%collimator%colli_circ(:)%setup_line%horchordang1 (vecflt.type) (9.5.1.2.9)
verchordang1 (1876)	fusiondiag%fus_product(:)%collimator%colli_circ(:)%setup_line%verchordang1 (vecflt.type) (9.5.1.2.9)
width (1876)	fusiondiag%fus_product(:)%collimator%colli_circ(:)%setup_line%width (vecflt.type) (9.5.1.2.9)
second_point (1876)	fusiondiag%fus_product(:)%collimator%colli_circ(:)%setup_line%second_point (rzphi1D) (9.5.1.3.331)
r (1845)	fusiondiag%fus_product(:)%collimator%colli_circ(:)%setup_line%second_point%r (vecflt.type) (9.5.1.2.9)
z (1845)	fusiondiag%fus_product(:)%collimator%colli_circ(:)%setup_line%second_point%z (vecflt.type) (9.5.1.2.9)
phi (1845)	fusiondiag%fus_product(:)%collimator%colli_circ(:)%setup_line%second_point%phi (vecflt.type) (9.5.1.2.9)
horchordang2 (1876)	fusiondiag%fus_product(:)%collimator%colli_circ(:)%setup_line%horchordang2 (vecflt.type) (9.5.1.2.9)
verchordang2 (1876)	fusiondiag%fus_product(:)%collimator%colli_circ(:)%setup_line%verchordang2 (vecflt.type) (9.5.1.2.9)
third_point (1876)	fusiondiag%fus_product(:)%collimator%colli_circ(:)%setup_line%third_point (rzphi1D) (9.5.1.3.331)
r (1845)	fusiondiag%fus_product(:)%collimator%colli_circ(:)%setup_line%third_point%r (vecflt.type) (9.5.1.2.9)
z (1845)	fusiondiag%fus_product(:)%collimator%colli_circ(:)%setup_line%third_point%z (vecflt.type) (9.5.1.2.9)
phi (1845)	fusiondiag%fus_product(:)%collimator%colli_circ(:)%setup_line%third_point%phi (vecflt.type) (9.5.1.2.9)
nchordpoints (1876)	fusiondiag%fus_product(:)%collimator%colli_circ(:)%setup_line%nchordpoints (integer) (9.5.1.1.2)
colliunit (1706)	fusiondiag%fus_product(:)%collimator%colli_circ(:)%colliunit(:) (fusiondiag_colliunit_circ) (9.5.1.3.195)
radius (1709)	fusiondiag%fus_product(:)%collimator%colli_circ(:)%colliunit(:)%radius (vecflt.type) (9.5.1.2.9)
centre (1709)	fusiondiag%fus_product(:)%collimator%colli_circ(:)%colliunit(:)%centre (rzphi1D) (9.5.1.3.331)
r (1845)	fusiondiag%fus_product(:)%collimator%colli_circ(:)%colliunit(:)%centre%r (vecflt.type) (9.5.1.2.9)
z (1845)	fusiondiag%fus_product(:)%collimator%colli_circ(:)%colliunit(:)%centre%z (vecflt.type) (9.5.1.2.9)
phi (1845)	fusiondiag%fus_product(:)%collimator%colli_circ(:)%colliunit(:)%centre%phi (vecflt.type) (9.5.1.2.9)
colli_poly (1708)	fusiondiag%fus_product(:)%collimator%colli_poly(:) (fusiondiag_colli_poly) (9.5.1.3.193)
name (1707)	fusiondiag%fus_product(:)%collimator%colli_poly(:)%name (string) (9.5.1.1.3)
setup_line (1707)	fusiondiag%fus_product(:)%collimator%colli_poly(:)%setup_line (setup_line) (9.5.1.3.362)
pivot_point (1876)	fusiondiag%fus_product(:)%collimator%colli_poly(:)%setup_line%pivot_point (rzphi1D) (9.5.1.3.331)
r (1845)	fusiondiag%fus_product(:)%collimator%colli_poly(:)%setup_line%pivot_point%r (vecflt.type) (9.5.1.2.9)
z (1845)	fusiondiag%fus_product(:)%collimator%colli_poly(:)%setup_line%pivot_point%z (vecflt.type) (9.5.1.2.9)
phi (1845)	fusiondiag%fus_product(:)%collimator%colli_poly(:)%setup_line%pivot_point%phi (vecflt.type) (9.5.1.2.9)
horchordang1 (1876)	fusiondiag%fus_product(:)%collimator%colli_poly(:)%setup_line%horchordang1 (vecflt.type) (9.5.1.2.9)

verchordang1 (1876)	fusiondiag%fus_product(:)%collimator%colli_poly(:)%setup_line%verchordang1 (vecflt.type) (9.5.1.2.9)
width (1876)	fusiondiag%fus_product(:)%collimator%colli_poly(:)%setup_line%width (vecflt.type) (9.5.1.2.9)
second_point (1876)	fusiondiag%fus_product(:)%collimator%colli_poly(:)%setup_line%second_point (rzphi1D) (9.5.1.3.331)
r (1845)	fusiondiag%fus_product(:)%collimator%colli_poly(:)%setup_line%second_point%r (vecflt.type) (9.5.1.2.9)
z (1845)	fusiondiag%fus_product(:)%collimator%colli_poly(:)%setup_line%second_point%z (vecflt.type) (9.5.1.2.9)
phi (1845)	fusiondiag%fus_product(:)%collimator%colli_poly(:)%setup_line%second_point%phi (vecflt.type) (9.5.1.2.9)
horchordang2 (1876)	fusiondiag%fus_product(:)%collimator%colli_poly(:)%setup_line%horchordang2 (vecflt.type) (9.5.1.2.9)
verchordang2 (1876)	fusiondiag%fus_product(:)%collimator%colli_poly(:)%setup_line%verchordang2 (vecflt.type) (9.5.1.2.9)
third_point (1876)	fusiondiag%fus_product(:)%collimator%colli_poly(:)%setup_line%third_point (rzphi1D) (9.5.1.3.331)
r (1845)	fusiondiag%fus_product(:)%collimator%colli_poly(:)%setup_line%third_point%r (vecflt.type) (9.5.1.2.9)
z (1845)	fusiondiag%fus_product(:)%collimator%colli_poly(:)%setup_line%third_point%z (vecflt.type) (9.5.1.2.9)
phi (1845)	fusiondiag%fus_product(:)%collimator%colli_poly(:)%setup_line%third_point%phi (vecflt.type) (9.5.1.2.9)
nchordpoints (1876)	fusiondiag%fus_product(:)%collimator%colli_poly(:)%setup_line%nchordpoints (integer) (9.5.1.1.2)
colliunit (1707)	fusiondiag%fus_product(:)%collimator%colli_poly(:)%colliunit(:) (fusiondiag_colliunit_poly) (9.5.1.3.196)
dimension (1710)	fusiondiag%fus_product(:)%collimator%colli_poly(:)%colliunit(:)%dimension (float) (9.5.1.1.1)
nodes (1710)	fusiondiag%fus_product(:)%collimator%colli_poly(:)%colliunit(:)%nodes (rzphi2D) (9.5.1.3.333)
r (1847)	fusiondiag%fus_product(:)%collimator%colli_poly(:)%colliunit(:)%nodes%r (matflt.type) (9.5.1.2.7)
z (1847)	fusiondiag%fus_product(:)%collimator%colli_poly(:)%colliunit(:)%nodes%z (matflt.type) (9.5.1.2.7)
phi (1847)	fusiondiag%fus_product(:)%collimator%colli_poly(:)%colliunit(:)%nodes%phi (matflt.type) (9.5.1.2.7)
colli_3d (1708)	fusiondiag%fus_product(:)%collimator%colli_3d(:) (fusiondiag_colli_3d) (9.5.1.3.191)
name (1705)	fusiondiag%fus_product(:)%collimator%colli_3d(:)%name (string) (9.5.1.1.3)
voxels (1705)	fusiondiag%fus_product(:)%collimator%colli_3d(:)%voxels(:) (fusiondiag_voxels) (9.5.1.3.206)
centre (1720)	fusiondiag%fus_product(:)%collimator%colli_3d(:)%voxels(:)%centre (rzphi0D) (9.5.1.3.330)
r (1844)	fusiondiag%fus_product(:)%collimator%colli_3d(:)%voxels(:)%centre%r (float) (9.5.1.1.1)
z (1844)	fusiondiag%fus_product(:)%collimator%colli_3d(:)%voxels(:)%centre%z (float) (9.5.1.1.1)
phi (1844)	fusiondiag%fus_product(:)%collimator%colli_3d(:)%voxels(:)%centre%phi (float) (9.5.1.1.1)
direction (1720)	fusiondiag%fus_product(:)%collimator%colli_3d(:)%voxels(:)%direction (rzphi0D) (9.5.1.3.330)
r (1844)	fusiondiag%fus_product(:)%collimator%colli_3d(:)%voxels(:)%direction%r (float) (9.5.1.1.1)
z (1844)	fusiondiag%fus_product(:)%collimator%colli_3d(:)%voxels(:)%direction%z (float) (9.5.1.1.1)
phi (1844)	fusiondiag%fus_product(:)%collimator%colli_3d(:)%voxels(:)%direction%phi (float) (9.5.1.1.1)
volume (1720)	fusiondiag%fus_product(:)%collimator%colli_3d(:)%voxels(:)%volume (float) (9.5.1.1.1)
solid_angle (1720)	fusiondiag%fus_product(:)%collimator%colli_3d(:)%voxels(:)%solid_angle (float) (9.5.1.1.1)
counts (1717)	fusiondiag%fus_product(:)%counts (fusiondiag_counts) (9.5.1.3.197)
units (1711)	fusiondiag%fus_product(:)%counts%units (string) (9.5.1.1.3)
ct_chords (1711)	fusiondiag%fus_product(:)%counts%ct_chords(:) (fusiondiag_ct_chords) (9.5.1.3.198)
name (1712)	fusiondiag%fus_product(:)%counts%ct_chords(:)%name (vecstring.type) (9.5.1.2.11)
energy (1712)	fusiondiag%fus_product(:)%counts%ct_chords(:)%energy (exp0D) (9.5.1.3.180)
value (1694)	fusiondiag%fus_product(:)%counts%ct_chords(:)%energy%value (float) (9.5.1.1.1)
abserror (1694)	fusiondiag%fus_product(:)%counts%ct_chords(:)%energy%abserror (float) (9.5.1.1.1)
relerror (1694)	fusiondiag%fus_product(:)%counts%ct_chords(:)%energy%relerror (float) (9.5.1.1.1)
measure (1712)	fusiondiag%fus_product(:)%counts%ct_chords(:)%measure (exp1D) (9.5.1.3.181)
value (1695)	fusiondiag%fus_product(:)%counts%ct_chords(:)%measure%value (vecflt.type) (9.5.1.2.9)
abserror (1695)	fusiondiag%fus_product(:)%counts%ct_chords(:)%measure%abserror (vecflt.type) (9.5.1.2.9)
relerror (1695)	fusiondiag%fus_product(:)%counts%ct_chords(:)%measure%relerror (vecflt.type) (9.5.1.2.9)
ct_energy (1711)	fusiondiag%fus_product(:)%counts%ct_energy(:) (fusiondiag_ct_energy) (9.5.1.3.199)
energy (1713)	fusiondiag%fus_product(:)%counts%ct_energy(:)%energy (exp1D) (9.5.1.3.181)
value (1695)	fusiondiag%fus_product(:)%counts%ct_energy(:)%energy%value (vecflt.type) (9.5.1.2.9)
abserror (1695)	fusiondiag%fus_product(:)%counts%ct_energy(:)%energy%abserror (vecflt.type) (9.5.1.2.9)

releror (1695)	fusiondiag%fus_product(:)%counts%ct_energy(:)%energy%releror (vecflt_type) (9.5.1.2.9)
measure (1713)	fusiondiag%fus_product(:)%counts%ct_energy(:)%measure (exp1D) (9.5.1.3.181)
value (1695)	fusiondiag%fus_product(:)%counts%ct_energy(:)%measure%value (vecflt_type) (9.5.1.2.9)
abserror (1695)	fusiondiag%fus_product(:)%counts%ct_energy(:)%measure%abserror (vecflt_type) (9.5.1.2.9)
releror (1695)	fusiondiag%fus_product(:)%counts%ct_energy(:)%measure%releror (vecflt_type) (9.5.1.2.9)
detect_ct (1711)	fusiondiag%fus_product(:)%counts%detect_ct(:) (fusiondiag_detect_ct_energy) (9.5.1.3.200)
energy (1714)	fusiondiag%fus_product(:)%counts%detect_ct(:)%energy (exp1D) (9.5.1.3.181)
value (1695)	fusiondiag%fus_product(:)%counts%detect_ct(:)%energy%value (vecflt_type) (9.5.1.2.9)
abserror (1695)	fusiondiag%fus_product(:)%counts%detect_ct(:)%energy%abserror (vecflt_type) (9.5.1.2.9)
releror (1695)	fusiondiag%fus_product(:)%counts%detect_ct(:)%energy%releror (vecflt_type) (9.5.1.2.9)
measure (1714)	fusiondiag%fus_product(:)%counts%detect_ct(:)%measure (exp1D) (9.5.1.3.181)
value (1695)	fusiondiag%fus_product(:)%counts%detect_ct(:)%measure%value (vecflt_type) (9.5.1.2.9)
abserror (1695)	fusiondiag%fus_product(:)%counts%detect_ct(:)%measure%abserror (vecflt_type) (9.5.1.2.9)
releror (1695)	fusiondiag%fus_product(:)%counts%detect_ct(:)%measure%releror (vecflt_type) (9.5.1.2.9)
diag_func (1714)	fusiondiag%fus_product(:)%counts%detect_ct(:)%diag_func (diag_func) (9.5.1.3.128)
description (1642)	fusiondiag%fus_product(:)%counts%detect_ct(:)%diag_func%description (string) (9.5.1.1.3)
transf_mat (1642)	fusiondiag%fus_product(:)%counts%detect_ct(:)%diag_func%transf_mat (matflt_type) (9.5.1.2.7)
emissivity1d (1717)	fusiondiag%fus_product(:)%emissivity1d (fusiondiag_emissivity1d) (9.5.1.3.201)
units (1715)	fusiondiag%fus_product(:)%emissivity1d%units (string) (9.5.1.1.3)
r (1715)	fusiondiag%fus_product(:)%emissivity1d%r (exp1D) (9.5.1.3.181)
value (1695)	fusiondiag%fus_product(:)%emissivity1d%r%value (vecflt_type) (9.5.1.2.9)
abserror (1695)	fusiondiag%fus_product(:)%emissivity1d%r%abserror (vecflt_type) (9.5.1.2.9)
releror (1695)	fusiondiag%fus_product(:)%emissivity1d%r%releror (vecflt_type) (9.5.1.2.9)
z (1715)	fusiondiag%fus_product(:)%emissivity1d%z (exp1D) (9.5.1.3.181)
value (1695)	fusiondiag%fus_product(:)%emissivity1d%z%value (vecflt_type) (9.5.1.2.9)
abserror (1695)	fusiondiag%fus_product(:)%emissivity1d%z%abserror (vecflt_type) (9.5.1.2.9)
releror (1695)	fusiondiag%fus_product(:)%emissivity1d%z%releror (vecflt_type) (9.5.1.2.9)
spec1d (1715)	fusiondiag%fus_product(:)%emissivity1d%spec1d(:) (fusiondiag_spec1d) (9.5.1.3.204)
energy (1718)	fusiondiag%fus_product(:)%emissivity1d%spec1d(:)%energy (exp0D) (9.5.1.3.180)
value (1694)	fusiondiag%fus_product(:)%emissivity1d%spec1d(:)%energy%value (float) (9.5.1.1.1)
abserror (1694)	fusiondiag%fus_product(:)%emissivity1d%spec1d(:)%energy%abserror (float) (9.5.1.1.1)
releror (1694)	fusiondiag%fus_product(:)%emissivity1d%spec1d(:)%energy%releror (float) (9.5.1.1.1)
measure (1718)	fusiondiag%fus_product(:)%emissivity1d%spec1d(:)%measure (exp1D) (9.5.1.3.181)
value (1695)	fusiondiag%fus_product(:)%emissivity1d%spec1d(:)%measure%value (vecflt_type) (9.5.1.2.9)
abserror (1695)	fusiondiag%fus_product(:)%emissivity1d%spec1d(:)%measure%abserror (vecflt_type) (9.5.1.2.9)
releror (1695)	fusiondiag%fus_product(:)%emissivity1d%spec1d(:)%measure%releror (vecflt_type) (9.5.1.2.9)
emissivity2d (1717)	fusiondiag%fus_product(:)%emissivity2d (fusiondiag_emissivity2d) (9.5.1.3.202)
units (1716)	fusiondiag%fus_product(:)%emissivity2d%units (string) (9.5.1.1.3)
r (1716)	fusiondiag%fus_product(:)%emissivity2d%r (exp2D) (9.5.1.3.182)
value (1696)	fusiondiag%fus_product(:)%emissivity2d%r%value (matflt_type) (9.5.1.2.7)
abserror (1696)	fusiondiag%fus_product(:)%emissivity2d%r%abserror (matflt_type) (9.5.1.2.7)
releror (1696)	fusiondiag%fus_product(:)%emissivity2d%r%releror (matflt_type) (9.5.1.2.7)
z (1716)	fusiondiag%fus_product(:)%emissivity2d%z (exp2D) (9.5.1.3.182)
value (1696)	fusiondiag%fus_product(:)%emissivity2d%z%value (matflt_type) (9.5.1.2.7)
abserror (1696)	fusiondiag%fus_product(:)%emissivity2d%z%abserror (matflt_type) (9.5.1.2.7)
releror (1696)	fusiondiag%fus_product(:)%emissivity2d%z%releror (matflt_type) (9.5.1.2.7)
spec2d (1716)	fusiondiag%fus_product(:)%emissivity2d%spec2d(:) (fusiondiag_spec2d) (9.5.1.3.205)
energy (1719)	fusiondiag%fus_product(:)%emissivity2d%spec2d(:)%energy (exp0D) (9.5.1.3.180)
value (1694)	fusiondiag%fus_product(:)%emissivity2d%spec2d(:)%energy%value (float) (9.5.1.1.1)
abserror (1694)	fusiondiag%fus_product(:)%emissivity2d%spec2d(:)%energy%abserror (float) (9.5.1.1.1)
releror (1694)	fusiondiag%fus_product(:)%emissivity2d%spec2d(:)%energy%releror (float) (9.5.1.1.1)
measure (1719)	fusiondiag%fus_product(:)%emissivity2d%spec2d(:)%measure (exp2D) (9.5.1.3.182)
value (1696)	fusiondiag%fus_product(:)%emissivity2d%spec2d(:)%measure%value (matflt_type) (9.5.1.2.7)
abserror (1696)	fusiondiag%fus_product(:)%emissivity2d%spec2d(:)%measure%abserror (matflt_type) (9.5.1.2.7)
releror (1696)	fusiondiag%fus_product(:)%emissivity2d%spec2d(:)%measure%releror (matflt_type) (9.5.1.2.7)
codeparam (1717)	fusiondiag%fus_product(:)%codeparam (codeparam) (9.5.1.3.66)
codename (1580)	fusiondiag%fus_product(:)%codeparam%codename (string) (9.5.1.1.3)
codeversion (1580)	fusiondiag%fus_product(:)%codeparam%codeversion (string) (9.5.1.1.3)

parameters (1580)	fusiondiag%fus_product(%)%codeparam%parameters (string) (9.5.1.1.3)
output_diag (1580)	fusiondiag%fus_product(%)%codeparam%output_diag (string) (9.5.1.1.3)
output_flag (1580)	fusiondiag%fus_product(%)%codeparam%output_flag (integer) (9.5.1.1.2)
codeparam (1533)	fusiondiag%codeparam (codeparam) (9.5.1.3.66)
codename (1580)	fusiondiag%codeparam%codename (string) (9.5.1.1.3)
codeversion (1580)	fusiondiag%codeparam%codeversion (string) (9.5.1.1.3)
parameters (1580)	fusiondiag%codeparam%parameters (string) (9.5.1.1.3)
output_diag (1580)	fusiondiag%codeparam%output_diag (string) (9.5.1.1.3)
output_flag (1580)	fusiondiag%codeparam%output_flag (integer) (9.5.1.1.2)
time (1533)	fusiondiag%time (float) (9.5.1.1.1)

### 9.5.2.1.18 halphadiag

datainfo (1534)	halphadiag%datainfo (datainfo) (9.5.1.3.121)
dataprovder (1635)	halphadiag%datainfo%dataprovder (string) (9.5.1.1.3)
putdate (1635)	halphadiag%datainfo%putdate (string) (9.5.1.1.3)
source (1635)	halphadiag%datainfo%source (string) (9.5.1.1.3)
comment (1635)	halphadiag%datainfo%comment (string) (9.5.1.1.3)
cocos (1635)	halphadiag%datainfo%cocos (integer) (9.5.1.1.2)
id (1635)	halphadiag%datainfo%id (integer) (9.5.1.1.2)
isref (1635)	halphadiag%datainfo%isref (integer) (9.5.1.1.2)
whatref (1635)	halphadiag%datainfo%whatref (whatref) (9.5.1.3.437)
user (1951)	halphadiag%datainfo%whatref%user (string) (9.5.1.1.3)
machine (1951)	halphadiag%datainfo%whatref%machine (string) (9.5.1.1.3)
shot (1951)	halphadiag%datainfo%whatref%shot (integer) (9.5.1.1.2)
run (1951)	halphadiag%datainfo%whatref%run (integer) (9.5.1.1.2)
occurrence (1951)	halphadiag%datainfo%whatref%occurrence (integer) (9.5.1.1.2)
putinfo (1635)	halphadiag%datainfo%putinfo (putinfo) (9.5.1.3.290)
putmethod (1804)	halphadiag%datainfo%putinfo%putmethod (string) (9.5.1.1.3)
putaccess (1804)	halphadiag%datainfo%putinfo%putaccess (string) (9.5.1.1.3)
putlocation (1804)	halphadiag%datainfo%putinfo%putlocation (string) (9.5.1.1.3)
rights (1804)	halphadiag%datainfo%putinfo%rights (string) (9.5.1.1.3)
setup (1534)	halphadiag%setup (halphadiag%setup) (9.5.1.3.212)
name (1726)	halphadiag%setup%name (vecstring_type) (9.5.1.2.11)
pivot_point (1726)	halphadiag%setup%pivot_point (rzphi1D) (9.5.1.3.331)
r (1845)	halphadiag%setup%pivot_point%r (vecflt_type) (9.5.1.2.9)
z (1845)	halphadiag%setup%pivot_point%z (vecflt_type) (9.5.1.2.9)
phi (1845)	halphadiag%setup%pivot_point%phi (vecflt_type) (9.5.1.2.9)
horchordang (1726)	halphadiag%setup%horchordang (vecflt_type) (9.5.1.2.9)
verchordang (1726)	halphadiag%setup%verchordang (vecflt_type) (9.5.1.2.9)
second_point (1726)	halphadiag%setup%second_point (rzphi1D) (9.5.1.3.331)
r (1845)	halphadiag%setup%second_point%r (vecflt_type) (9.5.1.2.9)
z (1845)	halphadiag%setup%second_point%z (vecflt_type) (9.5.1.2.9)
phi (1845)	halphadiag%setup%second_point%phi (vecflt_type) (9.5.1.2.9)
solidangle (1726)	halphadiag%setup%solidangle (exp1D) (9.5.1.3.181)
value (1695)	halphadiag%setup%solidangle%value (vecflt_type) (9.5.1.2.9)
abserror (1695)	halphadiag%setup%solidangle%abserror (vecflt_type) (9.5.1.2.9)
relerror (1695)	halphadiag%setup%solidangle%relerror (vecflt_type) (9.5.1.2.9)
intensity (1534)	halphadiag%intensity (exp1D) (9.5.1.3.181)
value (1695)	halphadiag%intensity%value (vecflt_type) (9.5.1.2.9)
abserror (1695)	halphadiag%intensity%abserror (vecflt_type) (9.5.1.2.9)
relerror (1695)	halphadiag%intensity%relerror (vecflt_type) (9.5.1.2.9)
time (1534)	halphadiag%time (float) (9.5.1.1.1)

### 9.5.2.1.19 interfdiag

datainfo (1746)	lineintegralsdiag%datainfo (datainfo) (9.5.1.3.121)
dataprovder (1635)	lineintegralsdiag%datainfo%dataprovder (string) (9.5.1.1.3)
putdate (1635)	lineintegralsdiag%datainfo%putdate (string) (9.5.1.1.3)
source (1635)	lineintegralsdiag%datainfo%source (string) (9.5.1.1.3)
comment (1635)	lineintegralsdiag%datainfo%comment (string) (9.5.1.1.3)



cocos (1635)	lineintegraldiag%datainfo%cocos (integer) (9.5.1.1.2)
id (1635)	lineintegraldiag%datainfo%id (integer) (9.5.1.1.2)
isref (1635)	lineintegraldiag%datainfo%isref (integer) (9.5.1.1.2)
whatref (1635)	lineintegraldiag%datainfo%whatref (whatref) (9.5.1.3.437)
user (1951)	lineintegraldiag%datainfo%whatref%user (string) (9.5.1.1.3)
machine (1951)	lineintegraldiag%datainfo%whatref%machine (string) (9.5.1.1.3)
shot (1951)	lineintegraldiag%datainfo%whatref%shot (integer) (9.5.1.1.2)
run (1951)	lineintegraldiag%datainfo%whatref%run (integer) (9.5.1.1.2)
occurrence (1951)	lineintegraldiag%datainfo%whatref%occurrence (integer) (9.5.1.1.2)
putinfo (1635)	lineintegraldiag%datainfo%putinfo (putinfo) (9.5.1.3.290)
putmethod (1804)	lineintegraldiag%datainfo%putinfo%putmethod (string) (9.5.1.1.3)
putaccess (1804)	lineintegraldiag%datainfo%putinfo%putaccess (string) (9.5.1.1.3)
putlocation (1804)	lineintegraldiag%datainfo%putinfo%putlocation (string) (9.5.1.1.3)
rights (1804)	lineintegraldiag%datainfo%putinfo%rights (string) (9.5.1.1.3)
expression (1746)	lineintegraldiag%expression (string) (9.5.1.1.3)
setup_line (1746)	lineintegraldiag%setup_line (setup_line) (9.5.1.3.362)
pivot_point (1876)	lineintegraldiag%setup_line%pivot_point (rzphi1D) (9.5.1.3.331)
r (1845)	lineintegraldiag%setup_line%pivot_point%r (vecflt.type) (9.5.1.2.9)
z (1845)	lineintegraldiag%setup_line%pivot_point%z (vecflt.type) (9.5.1.2.9)
phi (1845)	lineintegraldiag%setup_line%pivot_point%phi (vecflt.type) (9.5.1.2.9)
horchordang1 (1876)	lineintegraldiag%setup_line%horchordang1 (vecflt.type) (9.5.1.2.9)
verchordang1 (1876)	lineintegraldiag%setup_line%verchordang1 (vecflt.type) (9.5.1.2.9)
width (1876)	lineintegraldiag%setup_line%width (vecflt.type) (9.5.1.2.9)
second_point (1876)	lineintegraldiag%setup_line%second_point (rzphi1D) (9.5.1.3.331)
r (1845)	lineintegraldiag%setup_line%second_point%r (vecflt.type) (9.5.1.2.9)
z (1845)	lineintegraldiag%setup_line%second_point%z (vecflt.type) (9.5.1.2.9)
phi (1845)	lineintegraldiag%setup_line%second_point%phi (vecflt.type) (9.5.1.2.9)
horchordang2 (1876)	lineintegraldiag%setup_line%horchordang2 (vecflt.type) (9.5.1.2.9)
verchordang2 (1876)	lineintegraldiag%setup_line%verchordang2 (vecflt.type) (9.5.1.2.9)
third_point (1876)	lineintegraldiag%setup_line%third_point (rzphi1D) (9.5.1.3.331)
r (1845)	lineintegraldiag%setup_line%third_point%r (vecflt.type) (9.5.1.2.9)
z (1845)	lineintegraldiag%setup_line%third_point%z (vecflt.type) (9.5.1.2.9)
phi (1845)	lineintegraldiag%setup_line%third_point%phi (vecflt.type) (9.5.1.2.9)
nchordpoints (1876)	lineintegraldiag%setup_line%nchordpoints (integer) (9.5.1.1.2)
measure (1746)	lineintegraldiag%measure (exp1D) (9.5.1.3.181)
value (1695)	lineintegraldiag%measure%value (vecflt.type) (9.5.1.2.9)
abserror (1695)	lineintegraldiag%measure%abserror (vecflt.type) (9.5.1.2.9)
relerror (1695)	lineintegraldiag%measure%relerror (vecflt.type) (9.5.1.2.9)
time (1746)	lineintegraldiag%time (float) (9.5.1.1.1)

### 9.5.2.1.20 ironmodel

datainfo (1536)	ironmodel%datainfo (datainfo) (9.5.1.3.121)
dataprovider (1635)	ironmodel%datainfo%dataprovider (string) (9.5.1.1.3)
putdate (1635)	ironmodel%datainfo%putdate (string) (9.5.1.1.3)
source (1635)	ironmodel%datainfo%source (string) (9.5.1.1.3)
comment (1635)	ironmodel%datainfo%comment (string) (9.5.1.1.3)
cocos (1635)	ironmodel%datainfo%cocos (integer) (9.5.1.1.2)
id (1635)	ironmodel%datainfo%id (integer) (9.5.1.1.2)
isref (1635)	ironmodel%datainfo%isref (integer) (9.5.1.1.2)
whatref (1635)	ironmodel%datainfo%whatref (whatref) (9.5.1.3.437)
user (1951)	ironmodel%datainfo%whatref%user (string) (9.5.1.1.3)
machine (1951)	ironmodel%datainfo%whatref%machine (string) (9.5.1.1.3)
shot (1951)	ironmodel%datainfo%whatref%shot (integer) (9.5.1.1.2)
run (1951)	ironmodel%datainfo%whatref%run (integer) (9.5.1.1.2)
occurrence (1951)	ironmodel%datainfo%whatref%occurrence (integer) (9.5.1.1.2)
putinfo (1635)	ironmodel%datainfo%putinfo (putinfo) (9.5.1.3.290)
putmethod (1804)	ironmodel%datainfo%putinfo%putmethod (string) (9.5.1.1.3)
putaccess (1804)	ironmodel%datainfo%putinfo%putaccess (string) (9.5.1.1.3)
putlocation (1804)	ironmodel%datainfo%putinfo%putlocation (string) (9.5.1.1.3)
rights (1804)	ironmodel%datainfo%putinfo%rights (string) (9.5.1.1.3)

desc_iron (1536)	ironmodel%desc_iron (desc_iron) (9.5.1.3.125)
name (1639)	ironmodel%desc_iron%name (vecstring_type) (9.5.1.2.11)
id (1639)	ironmodel%desc_iron%id (vecstring_type) (9.5.1.2.11)
permeability (1639)	ironmodel%desc_iron%permeability (permeability) (9.5.1.3.271)
b (1785)	ironmodel%desc_iron%permeability%b (matflt_type) (9.5.1.2.7)
mur (1785)	ironmodel%desc_iron%permeability%mur (matflt_type) (9.5.1.2.7)
geom_iron (1639)	ironmodel%desc_iron%geom_iron (geom_iron) (9.5.1.3.207)
npoints (1721)	ironmodel%desc_iron%geom_iron%npoints (vecint_type) (9.5.1.2.10)
rzcoordinate (1721)	ironmodel%desc_iron%geom_iron%rzcoordinate (rz2D) (9.5.1.3.328)
r (1842)	ironmodel%desc_iron%geom_iron%rzcoordinate%r (matflt_type) (9.5.1.2.7)
z (1842)	ironmodel%desc_iron%geom_iron%rzcoordinate%z (matflt_type) (9.5.1.2.7)
magnetise (1536)	ironmodel%magnetise (magnetise) (9.5.1.3.238)
mr (1752)	ironmodel%magnetise%mr (exp1D) (9.5.1.3.181)
value (1695)	ironmodel%magnetise%mr%value (vecflt_type) (9.5.1.2.9)
abserror (1695)	ironmodel%magnetise%mr%abserror (vecflt_type) (9.5.1.2.9)
releror (1695)	ironmodel%magnetise%mr%releror (vecflt_type) (9.5.1.2.9)
mz (1752)	ironmodel%magnetise%mz (exp1D) (9.5.1.3.181)
value (1695)	ironmodel%magnetise%mz%value (vecflt_type) (9.5.1.2.9)
abserror (1695)	ironmodel%magnetise%mz%abserror (vecflt_type) (9.5.1.2.9)
releror (1695)	ironmodel%magnetise%mz%releror (vecflt_type) (9.5.1.2.9)
time (1536)	ironmodel%time (float) (9.5.1.1.1)

### 9.5.2.1.21 langmuirdiag

datainfo (1537)	langmuirdiag%datainfo (datainfo) (9.5.1.3.121)
dataprovider (1635)	langmuirdiag%datainfo%dataprovider (string) (9.5.1.1.3)
putdate (1635)	langmuirdiag%datainfo%putdate (string) (9.5.1.1.3)
source (1635)	langmuirdiag%datainfo%source (string) (9.5.1.1.3)
comment (1635)	langmuirdiag%datainfo%comment (string) (9.5.1.1.3)
cocos (1635)	langmuirdiag%datainfo%cocos (integer) (9.5.1.1.2)
id (1635)	langmuirdiag%datainfo%id (integer) (9.5.1.1.2)
isref (1635)	langmuirdiag%datainfo%isref (integer) (9.5.1.1.2)
whatref (1635)	langmuirdiag%datainfo%whatref (whatref) (9.5.1.3.437)
user (1951)	langmuirdiag%datainfo%whatref%user (string) (9.5.1.1.3)
machine (1951)	langmuirdiag%datainfo%whatref%machine (string) (9.5.1.1.3)
shot (1951)	langmuirdiag%datainfo%whatref%shot (integer) (9.5.1.1.2)
run (1951)	langmuirdiag%datainfo%whatref%run (integer) (9.5.1.1.2)
occurrence (1951)	langmuirdiag%datainfo%whatref%occurrence (integer) (9.5.1.1.2)
putinfo (1635)	langmuirdiag%datainfo%putinfo (putinfo) (9.5.1.3.290)
putmethod (1804)	langmuirdiag%datainfo%putinfo%putmethod (string) (9.5.1.1.3)
putaccess (1804)	langmuirdiag%datainfo%putinfo%putaccess (string) (9.5.1.1.3)
putlocation (1804)	langmuirdiag%datainfo%putinfo%putlocation (string) (9.5.1.1.3)
rights (1804)	langmuirdiag%datainfo%putinfo%rights (string) (9.5.1.1.3)
potential (1537)	langmuirdiag%potential (lang_measure) (9.5.1.3.223)
name (1737)	langmuirdiag%potential%name (vecstring_type) (9.5.1.2.11)
direction (1737)	langmuirdiag%potential%direction (vecstring_type) (9.5.1.2.11)
area (1737)	langmuirdiag%potential%area (exp1D) (9.5.1.3.181)
value (1695)	langmuirdiag%potential%area%value (vecflt_type) (9.5.1.2.9)
abserror (1695)	langmuirdiag%potential%area%abserror (vecflt_type) (9.5.1.2.9)
releror (1695)	langmuirdiag%potential%area%releror (vecflt_type) (9.5.1.2.9)
position (1737)	langmuirdiag%potential%position (rzphi1Dexp) (9.5.1.3.332)
r (1846)	langmuirdiag%potential%position%r (exp1D) (9.5.1.3.181)
value (1695)	langmuirdiag%potential%position%r%value (vecflt_type) (9.5.1.2.9)
abserror (1695)	langmuirdiag%potential%position%r%abserror (vecflt_type) (9.5.1.2.9)
releror (1695)	langmuirdiag%potential%position%r%releror (vecflt_type) (9.5.1.2.9)
z (1846)	langmuirdiag%potential%position%z (exp1D) (9.5.1.3.181)
value (1695)	langmuirdiag%potential%position%z%value (vecflt_type) (9.5.1.2.9)
abserror (1695)	langmuirdiag%potential%position%z%abserror (vecflt_type) (9.5.1.2.9)
releror (1695)	langmuirdiag%potential%position%z%releror (vecflt_type) (9.5.1.2.9)
phi (1846)	langmuirdiag%potential%position%phi (exp1D) (9.5.1.3.181)
value (1695)	langmuirdiag%potential%position%phi%value (vecflt_type) (9.5.1.2.9)



abserror (1695)	langmuirdiag%potential%position%phi%abserror (vecflt.type) (9.5.1.2.9)
releror (1695)	langmuirdiag%potential%position%phi%releror (vecflt.type) (9.5.1.2.9)
measure (1737)	langmuirdiag%potential%measure (exp1D) (9.5.1.3.181)
value (1695)	langmuirdiag%potential%measure%value (vecflt.type) (9.5.1.2.9)
abserror (1695)	langmuirdiag%potential%measure%abserror (vecflt.type) (9.5.1.2.9)
releror (1695)	langmuirdiag%potential%measure%releror (vecflt.type) (9.5.1.2.9)
bias (1537)	langmuirdiag%bias (lang_measure) (9.5.1.3.223)
name (1737)	langmuirdiag%bias%name (vecstring.type) (9.5.1.2.11)
direction (1737)	langmuirdiag%bias%direction (vecstring.type) (9.5.1.2.11)
area (1737)	langmuirdiag%bias%area (exp1D) (9.5.1.3.181)
value (1695)	langmuirdiag%bias%area%value (vecflt.type) (9.5.1.2.9)
abserror (1695)	langmuirdiag%bias%area%abserror (vecflt.type) (9.5.1.2.9)
releror (1695)	langmuirdiag%bias%area%releror (vecflt.type) (9.5.1.2.9)
position (1737)	langmuirdiag%bias%position (rzphi1Dexp) (9.5.1.3.332)
r (1846)	langmuirdiag%bias%position%r (exp1D) (9.5.1.3.181)
value (1695)	langmuirdiag%bias%position%r%value (vecflt.type) (9.5.1.2.9)
abserror (1695)	langmuirdiag%bias%position%r%abserror (vecflt.type) (9.5.1.2.9)
releror (1695)	langmuirdiag%bias%position%r%releror (vecflt.type) (9.5.1.2.9)
z (1846)	langmuirdiag%bias%position%z (exp1D) (9.5.1.3.181)
value (1695)	langmuirdiag%bias%position%z%value (vecflt.type) (9.5.1.2.9)
abserror (1695)	langmuirdiag%bias%position%z%abserror (vecflt.type) (9.5.1.2.9)
releror (1695)	langmuirdiag%bias%position%z%releror (vecflt.type) (9.5.1.2.9)
phi (1846)	langmuirdiag%bias%position%phi (exp1D) (9.5.1.3.181)
value (1695)	langmuirdiag%bias%position%phi%value (vecflt.type) (9.5.1.2.9)
abserror (1695)	langmuirdiag%bias%position%phi%abserror (vecflt.type) (9.5.1.2.9)
releror (1695)	langmuirdiag%bias%position%phi%releror (vecflt.type) (9.5.1.2.9)
measure (1737)	langmuirdiag%bias%measure (exp1D) (9.5.1.3.181)
value (1695)	langmuirdiag%bias%measure%value (vecflt.type) (9.5.1.2.9)
abserror (1695)	langmuirdiag%bias%measure%abserror (vecflt.type) (9.5.1.2.9)
releror (1695)	langmuirdiag%bias%measure%releror (vecflt.type) (9.5.1.2.9)
jsat (1537)	langmuirdiag%jsat (lang_measure) (9.5.1.3.223)
name (1737)	langmuirdiag%jsat%name (vecstring.type) (9.5.1.2.11)
direction (1737)	langmuirdiag%jsat%direction (vecstring.type) (9.5.1.2.11)
area (1737)	langmuirdiag%jsat%area (exp1D) (9.5.1.3.181)
value (1695)	langmuirdiag%jsat%area%value (vecflt.type) (9.5.1.2.9)
abserror (1695)	langmuirdiag%jsat%area%abserror (vecflt.type) (9.5.1.2.9)
releror (1695)	langmuirdiag%jsat%area%releror (vecflt.type) (9.5.1.2.9)
position (1737)	langmuirdiag%jsat%position (rzphi1Dexp) (9.5.1.3.332)
r (1846)	langmuirdiag%jsat%position%r (exp1D) (9.5.1.3.181)
value (1695)	langmuirdiag%jsat%position%r%value (vecflt.type) (9.5.1.2.9)
abserror (1695)	langmuirdiag%jsat%position%r%abserror (vecflt.type) (9.5.1.2.9)
releror (1695)	langmuirdiag%jsat%position%r%releror (vecflt.type) (9.5.1.2.9)
z (1846)	langmuirdiag%jsat%position%z (exp1D) (9.5.1.3.181)
value (1695)	langmuirdiag%jsat%position%z%value (vecflt.type) (9.5.1.2.9)
abserror (1695)	langmuirdiag%jsat%position%z%abserror (vecflt.type) (9.5.1.2.9)
releror (1695)	langmuirdiag%jsat%position%z%releror (vecflt.type) (9.5.1.2.9)
phi (1846)	langmuirdiag%jsat%position%phi (exp1D) (9.5.1.3.181)
value (1695)	langmuirdiag%jsat%position%phi%value (vecflt.type) (9.5.1.2.9)
abserror (1695)	langmuirdiag%jsat%position%phi%abserror (vecflt.type) (9.5.1.2.9)
releror (1695)	langmuirdiag%jsat%position%phi%releror (vecflt.type) (9.5.1.2.9)
measure (1737)	langmuirdiag%jsat%measure (exp1D) (9.5.1.3.181)
value (1695)	langmuirdiag%jsat%measure%value (vecflt.type) (9.5.1.2.9)
abserror (1695)	langmuirdiag%jsat%measure%abserror (vecflt.type) (9.5.1.2.9)
releror (1695)	langmuirdiag%jsat%measure%releror (vecflt.type) (9.5.1.2.9)
ne (1537)	langmuirdiag%ne (lang_derived) (9.5.1.3.222)
source (1736)	langmuirdiag%ne%source (vecstring.type) (9.5.1.2.11)
position (1736)	langmuirdiag%ne%position (rzphi1Dexp) (9.5.1.3.332)
r (1846)	langmuirdiag%ne%position%r (exp1D) (9.5.1.3.181)
value (1695)	langmuirdiag%ne%position%r%value (vecflt.type) (9.5.1.2.9)
abserror (1695)	langmuirdiag%ne%position%r%abserror (vecflt.type) (9.5.1.2.9)
releror (1695)	langmuirdiag%ne%position%r%releror (vecflt.type) (9.5.1.2.9)

z (1846)	langmuirdiag%ne%position%z (exp1D) (9.5.1.3.181)
value (1695)	langmuirdiag%ne%position%z%value (vecflt_type) (9.5.1.2.9)
abserror (1695)	langmuirdiag%ne%position%z%abserror (vecflt_type) (9.5.1.2.9)
releror (1695)	langmuirdiag%ne%position%z%releror (vecflt_type) (9.5.1.2.9)
phi (1846)	langmuirdiag%ne%position%phi (exp1D) (9.5.1.3.181)
value (1695)	langmuirdiag%ne%position%phi%value (vecflt_type) (9.5.1.2.9)
abserror (1695)	langmuirdiag%ne%position%phi%abserror (vecflt_type) (9.5.1.2.9)
releror (1695)	langmuirdiag%ne%position%phi%releror (vecflt_type) (9.5.1.2.9)
measure (1736)	langmuirdiag%ne%measure (exp1D) (9.5.1.3.181)
value (1695)	langmuirdiag%ne%measure%value (vecflt_type) (9.5.1.2.9)
abserror (1695)	langmuirdiag%ne%measure%abserror (vecflt_type) (9.5.1.2.9)
releror (1695)	langmuirdiag%ne%measure%releror (vecflt_type) (9.5.1.2.9)
te (1537)	langmuirdiag%te (lang_derived) (9.5.1.3.222)
source (1736)	langmuirdiag%te%source (vecstring_type) (9.5.1.2.11)
position (1736)	langmuirdiag%te%position (rzphi1Dexp) (9.5.1.3.332)
r (1846)	langmuirdiag%te%position%r (exp1D) (9.5.1.3.181)
value (1695)	langmuirdiag%te%position%r%value (vecflt_type) (9.5.1.2.9)
abserror (1695)	langmuirdiag%te%position%r%abserror (vecflt_type) (9.5.1.2.9)
releror (1695)	langmuirdiag%te%position%r%releror (vecflt_type) (9.5.1.2.9)
z (1846)	langmuirdiag%te%position%z (exp1D) (9.5.1.3.181)
value (1695)	langmuirdiag%te%position%z%value (vecflt_type) (9.5.1.2.9)
abserror (1695)	langmuirdiag%te%position%z%abserror (vecflt_type) (9.5.1.2.9)
releror (1695)	langmuirdiag%te%position%z%releror (vecflt_type) (9.5.1.2.9)
phi (1846)	langmuirdiag%te%position%phi (exp1D) (9.5.1.3.181)
value (1695)	langmuirdiag%te%position%phi%value (vecflt_type) (9.5.1.2.9)
abserror (1695)	langmuirdiag%te%position%phi%abserror (vecflt_type) (9.5.1.2.9)
releror (1695)	langmuirdiag%te%position%phi%releror (vecflt_type) (9.5.1.2.9)
measure (1736)	langmuirdiag%te%measure (exp1D) (9.5.1.3.181)
value (1695)	langmuirdiag%te%measure%value (vecflt_type) (9.5.1.2.9)
abserror (1695)	langmuirdiag%te%measure%abserror (vecflt_type) (9.5.1.2.9)
releror (1695)	langmuirdiag%te%measure%releror (vecflt_type) (9.5.1.2.9)
machpar (1537)	langmuirdiag%machpar (lang_derived) (9.5.1.3.222)
source (1736)	langmuirdiag%machpar%source (vecstring_type) (9.5.1.2.11)
position (1736)	langmuirdiag%machpar%position (rzphi1Dexp) (9.5.1.3.332)
r (1846)	langmuirdiag%machpar%position%r (exp1D) (9.5.1.3.181)
value (1695)	langmuirdiag%machpar%position%r%value (vecflt_type) (9.5.1.2.9)
abserror (1695)	langmuirdiag%machpar%position%r%abserror (vecflt_type) (9.5.1.2.9)
releror (1695)	langmuirdiag%machpar%position%r%releror (vecflt_type) (9.5.1.2.9)
z (1846)	langmuirdiag%machpar%position%z (exp1D) (9.5.1.3.181)
value (1695)	langmuirdiag%machpar%position%z%value (vecflt_type) (9.5.1.2.9)
abserror (1695)	langmuirdiag%machpar%position%z%abserror (vecflt_type) (9.5.1.2.9)
releror (1695)	langmuirdiag%machpar%position%z%releror (vecflt_type) (9.5.1.2.9)
phi (1846)	langmuirdiag%machpar%position%phi (exp1D) (9.5.1.3.181)
value (1695)	langmuirdiag%machpar%position%phi%value (vecflt_type) (9.5.1.2.9)
abserror (1695)	langmuirdiag%machpar%position%phi%abserror (vecflt_type) (9.5.1.2.9)
releror (1695)	langmuirdiag%machpar%position%phi%releror (vecflt_type) (9.5.1.2.9)
measure (1736)	langmuirdiag%machpar%measure (exp1D) (9.5.1.3.181)
value (1695)	langmuirdiag%machpar%measure%value (vecflt_type) (9.5.1.2.9)
abserror (1695)	langmuirdiag%machpar%measure%abserror (vecflt_type) (9.5.1.2.9)
releror (1695)	langmuirdiag%machpar%measure%releror (vecflt_type) (9.5.1.2.9)
codeparam (1537)	langmuirdiag%codeparam (codeparam) (9.5.1.3.66)
codename (1580)	langmuirdiag%codeparam%codename (string) (9.5.1.1.3)
codeversion (1580)	langmuirdiag%codeparam%codeversion (string) (9.5.1.1.3)
parameters (1580)	langmuirdiag%codeparam%parameters (string) (9.5.1.1.3)
output_diag (1580)	langmuirdiag%codeparam%output_diag (string) (9.5.1.1.3)
output_flag (1580)	langmuirdiag%codeparam%output_flag (integer) (9.5.1.1.2)
time (1537)	langmuirdiag%time (float) (9.5.1.1.1)

### 9.5.2.1.22 launches

datainfo (1538)	launchs%datainfo (datainfo) (9.5.1.3.121)
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dataprovder (1635)	launchs%datainfo%dataprovder (string) (9.5.1.1.3)
putdate (1635)	launchs%datainfo%putdate (string) (9.5.1.1.3)
source (1635)	launchs%datainfo%source (string) (9.5.1.1.3)
comment (1635)	launchs%datainfo%comment (string) (9.5.1.1.3)
cocos (1635)	launchs%datainfo%cocos (integer) (9.5.1.1.2)
id (1635)	launchs%datainfo%id (integer) (9.5.1.1.2)
isref (1635)	launchs%datainfo%isref (integer) (9.5.1.1.2)
whatref (1635)	launchs%datainfo%whatref (whatref) (9.5.1.3.437)
user (1951)	launchs%datainfo%whatref%user (string) (9.5.1.1.3)
machine (1951)	launchs%datainfo%whatref%machine (string) (9.5.1.1.3)
shot (1951)	launchs%datainfo%whatref%shot (integer) (9.5.1.1.2)
run (1951)	launchs%datainfo%whatref%run (integer) (9.5.1.1.2)
occurrence (1951)	launchs%datainfo%whatref%occurrence (integer) (9.5.1.1.2)
putinfo (1635)	launchs%datainfo%putinfo (putinfo) (9.5.1.3.290)
putmethod (1804)	launchs%datainfo%putinfo%putmethod (string) (9.5.1.1.3)
putaccess (1804)	launchs%datainfo%putinfo%putaccess (string) (9.5.1.1.3)
putlocation (1804)	launchs%datainfo%putinfo%putlocation (string) (9.5.1.1.3)
rights (1804)	launchs%datainfo%putinfo%rights (string) (9.5.1.1.3)
name (1538)	launchs%name (vecstring_type) (9.5.1.2.11)
type (1538)	launchs%type (vecstring_type) (9.5.1.2.11)
frequency (1538)	launchs%frequency (vecflt_type) (9.5.1.2.9)
mode (1538)	launchs%mode (vecint_type) (9.5.1.2.10)
position (1538)	launchs%position (rzphiID) (9.5.1.3.331)
r (1845)	launchs%position%r (vecflt_type) (9.5.1.2.9)
z (1845)	launchs%position%z (vecflt_type) (9.5.1.2.9)
phi (1845)	launchs%position%phi (vecflt_type) (9.5.1.2.9)
spectrum (1538)	launchs%spectrum (spectrum) (9.5.1.3.379)
phi.theta (1893)	launchs%spectrum%phi.theta (launchs_phi_theta) (9.5.1.3.226)
nn.phi (1740)	launchs%spectrum%phi.theta%nn.phi (vecint_type) (9.5.1.2.10)
nn.theta (1740)	launchs%spectrum%phi.theta%nn.theta (vecint_type) (9.5.1.2.10)
n.phi (1740)	launchs%spectrum%phi.theta%n.phi (matflt_type) (9.5.1.2.7)
n.theta (1740)	launchs%spectrum%phi.theta%n.theta (matflt_type) (9.5.1.2.7)
power (1740)	launchs%spectrum%phi.theta%power (array3dflt_type) (9.5.1.2.1)
parallel (1893)	launchs%spectrum%parallel (launchs_parallel) (9.5.1.3.225)
nn.par (1739)	launchs%spectrum%parallel%nn.par (vecint_type) (9.5.1.2.10)
n.par (1739)	launchs%spectrum%parallel%n.par (matflt_type) (9.5.1.2.7)
power (1739)	launchs%spectrum%parallel%power (vecflt_type) (9.5.1.2.9)
beam (1538)	launchs%beam (launchs_rfbeam) (9.5.1.3.227)
spot (1741)	launchs%beam%spot (launchs_rfbeam_spot) (9.5.1.3.229)
waist (1743)	launchs%beam%spot%waist (matflt_type) (9.5.1.2.7)
angle (1743)	launchs%beam%spot%angle (vecflt_type) (9.5.1.2.9)
phaseellipse (1741)	launchs%beam%phaseellipse (launchs_rfbeam_phaseellipse) (9.5.1.3.228)
incurvrad (1742)	launchs%beam%phaseellipse%incurvrad (matflt_type) (9.5.1.2.7)
angle (1742)	launchs%beam%phaseellipse%angle (vecflt_type) (9.5.1.2.9)
codeparam (1538)	launchs%codeparam (codeparam) (9.5.1.3.66)
codename (1580)	launchs%codeparam%codename (string) (9.5.1.1.3)
codeversion (1580)	launchs%codeparam%codeversion (string) (9.5.1.1.3)
parameters (1580)	launchs%codeparam%parameters (string) (9.5.1.1.3)
output.diag (1580)	launchs%codeparam%output.diag (string) (9.5.1.1.3)
output.flag (1580)	launchs%codeparam%output.flag (integer) (9.5.1.1.2)
time (1538)	launchs%time (float) (9.5.1.1.1)

### 9.5.2.1.23 limiter

datainfo (1539)	limiter%datainfo (datainfo) (9.5.1.3.121)
dataprovder (1635)	limiter%datainfo%dataprovder (string) (9.5.1.1.3)
putdate (1635)	limiter%datainfo%putdate (string) (9.5.1.1.3)
source (1635)	limiter%datainfo%source (string) (9.5.1.1.3)
comment (1635)	limiter%datainfo%comment (string) (9.5.1.1.3)
cocos (1635)	limiter%datainfo%cocos (integer) (9.5.1.1.2)
id (1635)	limiter%datainfo%id (integer) (9.5.1.1.2)

isref (1635)	limiter%datainfo%isref (integer) (9.5.1.1.2)
whatref (1635)	limiter%datainfo%whatref (whatref) (9.5.1.3.437)
user (1951)	limiter%datainfo%whatref%user (string) (9.5.1.1.3)
machine (1951)	limiter%datainfo%whatref%machine (string) (9.5.1.1.3)
shot (1951)	limiter%datainfo%whatref%shot (integer) (9.5.1.1.2)
run (1951)	limiter%datainfo%whatref%run (integer) (9.5.1.1.2)
occurrence (1951)	limiter%datainfo%whatref%occurrence (integer) (9.5.1.1.2)
putinfo (1635)	limiter%datainfo%putinfo (putinfo) (9.5.1.3.290)
putmethod (1804)	limiter%datainfo%putinfo%putmethod (string) (9.5.1.1.3)
putaccess (1804)	limiter%datainfo%putinfo%putaccess (string) (9.5.1.1.3)
putlocation (1804)	limiter%datainfo%putinfo%putlocation (string) (9.5.1.1.3)
rights (1804)	limiter%datainfo%putinfo%rights (string) (9.5.1.1.3)
limiter_unit (1539)	limiter%limiter_unit(:) (limiter_unit) (9.5.1.3.231)
name (1745)	limiter%limiter_unit(:)%name (string) (9.5.1.1.3)
closed (1745)	limiter%limiter_unit(:)%closed (string) (9.5.1.1.3)
position (1745)	limiter%limiter_unit(:)%position (rz1D) (9.5.1.3.325)
r (1839)	limiter%limiter_unit(:)%position%r (vecflt.type) (9.5.1.2.9)
z (1839)	limiter%limiter_unit(:)%position%z (vecflt.type) (9.5.1.2.9)
eta (1745)	limiter%limiter_unit(:)%eta (float) (9.5.1.1.1)
delta (1745)	limiter%limiter_unit(:)%delta (float) (9.5.1.1.1)
permeability (1745)	limiter%limiter_unit(:)%permeability (float) (9.5.1.1.1)

### 9.5.2.1.24 lithiumdiag

datainfo (1540)	lithiumdiag%datainfo (datainfo) (9.5.1.3.121)
dataprovider (1635)	lithiumdiag%datainfo%dataprovider (string) (9.5.1.1.3)
putdate (1635)	lithiumdiag%datainfo%putdate (string) (9.5.1.1.3)
source (1635)	lithiumdiag%datainfo%source (string) (9.5.1.1.3)
comment (1635)	lithiumdiag%datainfo%comment (string) (9.5.1.1.3)
cocos (1635)	lithiumdiag%datainfo%cocos (integer) (9.5.1.1.2)
id (1635)	lithiumdiag%datainfo%id (integer) (9.5.1.1.2)
isref (1635)	lithiumdiag%datainfo%isref (integer) (9.5.1.1.2)
whatref (1635)	lithiumdiag%datainfo%whatref (whatref) (9.5.1.3.437)
user (1951)	lithiumdiag%datainfo%whatref%user (string) (9.5.1.1.3)
machine (1951)	lithiumdiag%datainfo%whatref%machine (string) (9.5.1.1.3)
shot (1951)	lithiumdiag%datainfo%whatref%shot (integer) (9.5.1.1.2)
run (1951)	lithiumdiag%datainfo%whatref%run (integer) (9.5.1.1.2)
occurrence (1951)	lithiumdiag%datainfo%whatref%occurrence (integer) (9.5.1.1.2)
putinfo (1635)	lithiumdiag%datainfo%putinfo (putinfo) (9.5.1.3.290)
putmethod (1804)	lithiumdiag%datainfo%putinfo%putmethod (string) (9.5.1.1.3)
putaccess (1804)	lithiumdiag%datainfo%putinfo%putaccess (string) (9.5.1.1.3)
putlocation (1804)	lithiumdiag%datainfo%putinfo%putlocation (string) (9.5.1.1.3)
rights (1804)	lithiumdiag%datainfo%putinfo%rights (string) (9.5.1.1.3)
setup (1540)	lithiumdiag%setup (lithsetup) (9.5.1.3.234)
position (1748)	lithiumdiag%setup%position (rzphi1D) (9.5.1.3.331)
r (1845)	lithiumdiag%setup%position%r (vecflt.type) (9.5.1.2.9)
z (1845)	lithiumdiag%setup%position%z (vecflt.type) (9.5.1.2.9)
phi (1845)	lithiumdiag%setup%position%phi (vecflt.type) (9.5.1.2.9)
measure (1540)	lithiumdiag%measure (lithmeasure) (9.5.1.3.233)
ne (1747)	lithiumdiag%measure%ne (exp1D) (9.5.1.3.181)
value (1695)	lithiumdiag%measure%ne%value (vecflt.type) (9.5.1.2.9)
abserror (1695)	lithiumdiag%measure%ne%abserror (vecflt.type) (9.5.1.2.9)
releror (1695)	lithiumdiag%measure%ne%releror (vecflt.type) (9.5.1.2.9)
time (1540)	lithiumdiag%time (float) (9.5.1.1.1)

### 9.5.2.1.25 magdiag

datainfo (1541)	magdiag%datainfo (datainfo) (9.5.1.3.121)
dataprovider (1635)	magdiag%datainfo%dataprovider (string) (9.5.1.1.3)
putdate (1635)	magdiag%datainfo%putdate (string) (9.5.1.1.3)
source (1635)	magdiag%datainfo%source (string) (9.5.1.1.3)

comment (1635)	magdiag%datainfo%comment (string) (9.5.1.1.3)
cocos (1635)	magdiag%datainfo%cocos (integer) (9.5.1.1.2)
id (1635)	magdiag%datainfo%id (integer) (9.5.1.1.2)
isref (1635)	magdiag%datainfo%isref (integer) (9.5.1.1.2)
whatref (1635)	magdiag%datainfo%whatref (whatref) (9.5.1.3.437)
user (1951)	magdiag%datainfo%whatref%user (string) (9.5.1.1.3)
machine (1951)	magdiag%datainfo%whatref%machine (string) (9.5.1.1.3)
shot (1951)	magdiag%datainfo%whatref%shot (integer) (9.5.1.1.2)
run (1951)	magdiag%datainfo%whatref%run (integer) (9.5.1.1.2)
occurrence (1951)	magdiag%datainfo%whatref%occurrence (integer) (9.5.1.1.2)
putinfo (1635)	magdiag%datainfo%putinfo (putinfo) (9.5.1.3.290)
putmethod (1804)	magdiag%datainfo%putinfo%putmethod (string) (9.5.1.1.3)
putaccess (1804)	magdiag%datainfo%putinfo%putaccess (string) (9.5.1.1.3)
putlocation (1804)	magdiag%datainfo%putinfo%putlocation (string) (9.5.1.1.3)
rights (1804)	magdiag%datainfo%putinfo%rights (string) (9.5.1.1.3)
ip (1541)	magdiag%ip (exp0D) (9.5.1.3.180)
value (1694)	magdiag%ip%value (float) (9.5.1.1.1)
abserror (1694)	magdiag%ip%abserror (float) (9.5.1.1.1)
releror (1694)	magdiag%ip%releror (float) (9.5.1.1.1)
diamagflux (1541)	magdiag%diamagflux (exp0D) (9.5.1.3.180)
value (1694)	magdiag%diamagflux%value (float) (9.5.1.1.1)
abserror (1694)	magdiag%diamagflux%abserror (float) (9.5.1.1.1)
releror (1694)	magdiag%diamagflux%releror (float) (9.5.1.1.1)
flux_loops (1541)	magdiag%flux_loops (flux_loops) (9.5.1.3.186)
setup_floops (1700)	magdiag%flux_loops%setup_floops (setup_floops) (9.5.1.3.360)
name (1874)	magdiag%flux_loops%setup_floops%name (vecstring_type) (9.5.1.2.11)
id (1874)	magdiag%flux_loops%setup_floops%id (vecstring_type) (9.5.1.2.11)
position (1874)	magdiag%flux_loops%setup_floops%position (rzphi2D) (9.5.1.3.333)
r (1847)	magdiag%flux_loops%setup_floops%position%r (matflt_type) (9.5.1.2.7)
z (1847)	magdiag%flux_loops%setup_floops%position%z (matflt_type) (9.5.1.2.7)
phi (1847)	magdiag%flux_loops%setup_floops%position%phi (matflt_type) (9.5.1.2.7)
npoints (1874)	magdiag%flux_loops%setup_floops%npoints (vecint_type) (9.5.1.2.10)
measure (1700)	magdiag%flux_loops%measure (exp1D) (9.5.1.3.181)
value (1695)	magdiag%flux_loops%measure%value (vecflt_type) (9.5.1.2.9)
abserror (1695)	magdiag%flux_loops%measure%abserror (vecflt_type) (9.5.1.2.9)
releror (1695)	magdiag%flux_loops%measure%releror (vecflt_type) (9.5.1.2.9)
bpol_probes (1541)	magdiag%bpol_probes (bpol_probes) (9.5.1.3.64)
setup_bprobe (1578)	magdiag%bpol_probes%setup_bprobe (setup_bprobe) (9.5.1.3.359)
name (1873)	magdiag%bpol_probes%setup_bprobe%name (vecstring_type) (9.5.1.2.11)
id (1873)	magdiag%bpol_probes%setup_bprobe%id (vecstring_type) (9.5.1.2.11)
position (1873)	magdiag%bpol_probes%setup_bprobe%position (rz1D) (9.5.1.3.325)
r (1839)	magdiag%bpol_probes%setup_bprobe%position%r (vecflt_type) (9.5.1.2.9)
z (1839)	magdiag%bpol_probes%setup_bprobe%position%z (vecflt_type) (9.5.1.2.9)
polangle (1873)	magdiag%bpol_probes%setup_bprobe%polangle (vecflt_type) (9.5.1.2.9)
torangle (1873)	magdiag%bpol_probes%setup_bprobe%torangle (vecflt_type) (9.5.1.2.9)
area (1873)	magdiag%bpol_probes%setup_bprobe%area (vecflt_type) (9.5.1.2.9)
length (1873)	magdiag%bpol_probes%setup_bprobe%length (vecflt_type) (9.5.1.2.9)
turns (1873)	magdiag%bpol_probes%setup_bprobe%turns (vecint_type) (9.5.1.2.10)
measure (1578)	magdiag%bpol_probes%measure (exp1D) (9.5.1.3.181)
value (1695)	magdiag%bpol_probes%measure%value (vecflt_type) (9.5.1.2.9)
abserror (1695)	magdiag%bpol_probes%measure%abserror (vecflt_type) (9.5.1.2.9)
releror (1695)	magdiag%bpol_probes%measure%releror (vecflt_type) (9.5.1.2.9)
time (1541)	magdiag%time (float) (9.5.1.1.1)

### 9.5.2.1.26 mhd

datainfo (1542)	mhd%datainfo (datainfo) (9.5.1.3.121)
dataprovider (1635)	mhd%datainfo%dataprovider (string) (9.5.1.1.3)
putdate (1635)	mhd%datainfo%putdate (string) (9.5.1.1.3)
source (1635)	mhd%datainfo%source (string) (9.5.1.1.3)
comment (1635)	mhd%datainfo%comment (string) (9.5.1.1.3)

cocos (1635)  
id (1635)  
isref (1635)  
whatref (1635)  
  user (1951)  
  machine (1951)  
  shot (1951)  
  run (1951)  
  occurrence (1951)  
putinfo (1635)  
  putmethod (1804)  
  putaccess (1804)  
  putlocation (1804)  
  rights (1804)  
n (1542)  
frequency (1542)  
growthrate (1542)  
plasma (1542)  
  psi (1756)  
  m (1756)  
  disp\_perp (1756)  
    re (1569)  
    im (1569)  
  disp\_par (1756)  
    re (1569)  
    im (1569)  
  tau\_alfven (1756)  
  tau\_resistive (1756)  
  coord\_sys (1756)  
    grid\_type (1604)  
    grid (1604)  
      dim1 (1834)  
      dim2 (1834)  
    jacobian (1604)  
    g\_11 (1604)  
    g\_12 (1604)  
    g\_13 (1604)  
    g\_22 (1604)  
    g\_23 (1604)  
    g\_33 (1604)  
    position (1604)  
      r (1842)  
      z (1842)  
  a\_pert (1756)  
    coord1 (1759)  
      re (1569)  
      im (1569)  
    coord2 (1759)  
      re (1569)  
      im (1569)  
    coord3 (1759)  
      re (1569)  
      im (1569)  
  b\_pert (1756)  
    coord1 (1759)  
      re (1569)  
      im (1569)  
    coord2 (1759)  
      re (1569)  
      im (1569)  
    coord3 (1759)

mhd%datainfo%cocos (integer) (9.5.1.1.2)  
mhd%datainfo%id (integer) (9.5.1.1.2)  
mhd%datainfo%isref (integer) (9.5.1.1.2)  
mhd%datainfo%whatref (whatref) (9.5.1.3.437)  
mhd%datainfo%whatref%user (string) (9.5.1.1.3)  
mhd%datainfo%whatref%machine (string) (9.5.1.1.3)  
mhd%datainfo%whatref%shot (integer) (9.5.1.1.2)  
mhd%datainfo%whatref%run (integer) (9.5.1.1.2)  
mhd%datainfo%whatref%occurrence (integer) (9.5.1.1.2)  
mhd%datainfo%putinfo (putinfo) (9.5.1.3.290)  
mhd%datainfo%putinfo%putmethod (string) (9.5.1.1.3)  
mhd%datainfo%putinfo%putaccess (string) (9.5.1.1.3)  
mhd%datainfo%putinfo%putlocation (string) (9.5.1.1.3)  
mhd%datainfo%putinfo%rights (string) (9.5.1.1.3)  
mhd%n (vecint\_type) (9.5.1.2.10)  
mhd%frequency (vecflt\_type) (9.5.1.2.9)  
mhd%growthrate (vecflt\_type) (9.5.1.2.9)  
mhd%plasma (mhd\_plasma) (9.5.1.3.242)  
mhd%plasma%psi (vecflt\_type) (9.5.1.2.9)  
mhd%plasma%m (array3dflt\_type) (9.5.1.2.1)  
mhd%plasma%disp\_perp (array3dcplx\_type) (9.5.1.3.55)  
mhd%plasma%disp\_perp%re (array3dflt\_type) (9.5.1.2.1)  
mhd%plasma%disp\_perp%im (array3dflt\_type) (9.5.1.2.1)  
mhd%plasma%disp\_par (array3dcplx\_type) (9.5.1.3.55)  
mhd%plasma%disp\_par%re (array3dflt\_type) (9.5.1.2.1)  
mhd%plasma%disp\_par%im (array3dflt\_type) (9.5.1.2.1)  
mhd%plasma%tau\_alfven (vecflt\_type) (9.5.1.2.9)  
mhd%plasma%tau\_resistive (vecflt\_type) (9.5.1.2.9)  
mhd%plasma%coord\_sys (coord\_sys) (9.5.1.3.90)  
mhd%plasma%coord\_sys%grid\_type (string) (9.5.1.1.3)  
mhd%plasma%coord\_sys%grid (reggrid) (9.5.1.3.320)  
mhd%plasma%coord\_sys%grid%dim1 (vecflt\_type) (9.5.1.2.9)  
mhd%plasma%coord\_sys%grid%dim2 (vecflt\_type) (9.5.1.2.9)  
mhd%plasma%coord\_sys%jacobian (matflt\_type) (9.5.1.2.7)  
mhd%plasma%coord\_sys%g\_11 (matflt\_type) (9.5.1.2.7)  
mhd%plasma%coord\_sys%g\_12 (matflt\_type) (9.5.1.2.7)  
mhd%plasma%coord\_sys%g\_13 (matflt\_type) (9.5.1.2.7)  
mhd%plasma%coord\_sys%g\_22 (matflt\_type) (9.5.1.2.7)  
mhd%plasma%coord\_sys%g\_23 (matflt\_type) (9.5.1.2.7)  
mhd%plasma%coord\_sys%g\_33 (matflt\_type) (9.5.1.2.7)  
mhd%plasma%coord\_sys%position (rz2D) (9.5.1.3.328)  
mhd%plasma%coord\_sys%position%r (matflt\_type) (9.5.1.2.7)  
mhd%plasma%coord\_sys%position%z (matflt\_type) (9.5.1.2.7)  
mhd%plasma%a\_pert (mhd\_vector) (9.5.1.3.245)  
mhd%plasma%a\_pert%coord1 (array3dcplx\_type) (9.5.1.3.55)  
mhd%plasma%a\_pert%coord1%re (array3dflt\_type) (9.5.1.2.1)  
mhd%plasma%a\_pert%coord1%im (array3dflt\_type) (9.5.1.2.1)  
mhd%plasma%a\_pert%coord2 (array3dcplx\_type) (9.5.1.3.55)  
mhd%plasma%a\_pert%coord2%re (array3dflt\_type) (9.5.1.2.1)  
mhd%plasma%a\_pert%coord2%im (array3dflt\_type) (9.5.1.2.1)  
mhd%plasma%a\_pert%coord3 (array3dcplx\_type) (9.5.1.3.55)  
mhd%plasma%a\_pert%coord3%re (array3dflt\_type) (9.5.1.2.1)  
mhd%plasma%a\_pert%coord3%im (array3dflt\_type) (9.5.1.2.1)  
mhd%plasma%b\_pert (mhd\_vector) (9.5.1.3.245)  
mhd%plasma%b\_pert%coord1 (array3dcplx\_type) (9.5.1.3.55)  
mhd%plasma%b\_pert%coord1%re (array3dflt\_type) (9.5.1.2.1)  
mhd%plasma%b\_pert%coord1%im (array3dflt\_type) (9.5.1.2.1)  
mhd%plasma%b\_pert%coord2 (array3dcplx\_type) (9.5.1.3.55)  
mhd%plasma%b\_pert%coord2%re (array3dflt\_type) (9.5.1.2.1)  
mhd%plasma%b\_pert%coord2%im (array3dflt\_type) (9.5.1.2.1)  
mhd%plasma%b\_pert%coord3 (array3dcplx\_type) (9.5.1.3.55)



re (1569)	mhd%plasma%b_pert%coord3%re (array3dflt.type) (9.5.1.2.1)
im (1569)	mhd%plasma%b_pert%coord3%im (array3dflt.type) (9.5.1.2.1)
v_pert (1756)	mhd%plasma%v_pert (mhd_vector) (9.5.1.3.245)
coord1 (1759)	mhd%plasma%v_pert%coord1 (array3dcplx.type) (9.5.1.3.55)
re (1569)	mhd%plasma%v_pert%coord1%re (array3dflt.type) (9.5.1.2.1)
im (1569)	mhd%plasma%v_pert%coord1%im (array3dflt.type) (9.5.1.2.1)
coord2 (1759)	mhd%plasma%v_pert%coord2 (array3dcplx.type) (9.5.1.3.55)
re (1569)	mhd%plasma%v_pert%coord2%re (array3dflt.type) (9.5.1.2.1)
im (1569)	mhd%plasma%v_pert%coord2%im (array3dflt.type) (9.5.1.2.1)
coord3 (1759)	mhd%plasma%v_pert%coord3 (array3dcplx.type) (9.5.1.3.55)
re (1569)	mhd%plasma%v_pert%coord3%re (array3dflt.type) (9.5.1.2.1)
im (1569)	mhd%plasma%v_pert%coord3%im (array3dflt.type) (9.5.1.2.1)
p_pert (1756)	mhd%plasma%p_pert (array3dcplx.type) (9.5.1.3.55)
re (1569)	mhd%plasma%p_pert%re (array3dflt.type) (9.5.1.2.1)
im (1569)	mhd%plasma%p_pert%im (array3dflt.type) (9.5.1.2.1)
rho.mass_pert (1756)	mhd%plasma%rho_mass_pert (array3dcplx.type) (9.5.1.3.55)
re (1569)	mhd%plasma%rho_mass_pert%re (array3dflt.type) (9.5.1.2.1)
im (1569)	mhd%plasma%rho_mass_pert%im (array3dflt.type) (9.5.1.2.1)
temp_pert (1756)	mhd%plasma%temp_pert (array3dcplx.type) (9.5.1.3.55)
re (1569)	mhd%plasma%temp_pert%re (array3dflt.type) (9.5.1.2.1)
im (1569)	mhd%plasma%temp_pert%im (array3dflt.type) (9.5.1.2.1)
vacuum (1542)	mhd%vacuum (mhd_vacuum) (9.5.1.3.244)
m (1758)	mhd%vacuum%m (array3dflt.type) (9.5.1.2.1)
coord_sys (1758)	mhd%vacuum%coord_sys (coord_sys) (9.5.1.3.90)
grid.type (1604)	mhd%vacuum%coord_sys%grid_type (string) (9.5.1.1.3)
grid (1604)	mhd%vacuum%coord_sys%grid (reggrid) (9.5.1.3.320)
dim1 (1834)	mhd%vacuum%coord_sys%grid%dim1 (vecflt.type) (9.5.1.2.9)
dim2 (1834)	mhd%vacuum%coord_sys%grid%dim2 (vecflt.type) (9.5.1.2.9)
jacobian (1604)	mhd%vacuum%coord_sys%jacobian (matflt.type) (9.5.1.2.7)
g_11 (1604)	mhd%vacuum%coord_sys%g_11 (matflt.type) (9.5.1.2.7)
g_12 (1604)	mhd%vacuum%coord_sys%g_12 (matflt.type) (9.5.1.2.7)
g_13 (1604)	mhd%vacuum%coord_sys%g_13 (matflt.type) (9.5.1.2.7)
g_22 (1604)	mhd%vacuum%coord_sys%g_22 (matflt.type) (9.5.1.2.7)
g_23 (1604)	mhd%vacuum%coord_sys%g_23 (matflt.type) (9.5.1.2.7)
g_33 (1604)	mhd%vacuum%coord_sys%g_33 (matflt.type) (9.5.1.2.7)
position (1604)	mhd%vacuum%coord_sys%position (rz2D) (9.5.1.3.328)
r (1842)	mhd%vacuum%coord_sys%position%r (matflt.type) (9.5.1.2.7)
z (1842)	mhd%vacuum%coord_sys%position%z (matflt.type) (9.5.1.2.7)
a_pert (1758)	mhd%vacuum%a_pert (mhd_vector) (9.5.1.3.245)
coord1 (1759)	mhd%vacuum%a_pert%coord1 (array3dcplx.type) (9.5.1.3.55)
re (1569)	mhd%vacuum%a_pert%coord1%re (array3dflt.type) (9.5.1.2.1)
im (1569)	mhd%vacuum%a_pert%coord1%im (array3dflt.type) (9.5.1.2.1)
coord2 (1759)	mhd%vacuum%a_pert%coord2 (array3dcplx.type) (9.5.1.3.55)
re (1569)	mhd%vacuum%a_pert%coord2%re (array3dflt.type) (9.5.1.2.1)
im (1569)	mhd%vacuum%a_pert%coord2%im (array3dflt.type) (9.5.1.2.1)
coord3 (1759)	mhd%vacuum%a_pert%coord3 (array3dcplx.type) (9.5.1.3.55)
re (1569)	mhd%vacuum%a_pert%coord3%re (array3dflt.type) (9.5.1.2.1)
im (1569)	mhd%vacuum%a_pert%coord3%im (array3dflt.type) (9.5.1.2.1)
b_pert (1758)	mhd%vacuum%b_pert (mhd_vector) (9.5.1.3.245)
coord1 (1759)	mhd%vacuum%b_pert%coord1 (array3dcplx.type) (9.5.1.3.55)
re (1569)	mhd%vacuum%b_pert%coord1%re (array3dflt.type) (9.5.1.2.1)
im (1569)	mhd%vacuum%b_pert%coord1%im (array3dflt.type) (9.5.1.2.1)
coord2 (1759)	mhd%vacuum%b_pert%coord2 (array3dcplx.type) (9.5.1.3.55)
re (1569)	mhd%vacuum%b_pert%coord2%re (array3dflt.type) (9.5.1.2.1)
im (1569)	mhd%vacuum%b_pert%coord2%im (array3dflt.type) (9.5.1.2.1)
coord3 (1759)	mhd%vacuum%b_pert%coord3 (array3dcplx.type) (9.5.1.3.55)
re (1569)	mhd%vacuum%b_pert%coord3%re (array3dflt.type) (9.5.1.2.1)
im (1569)	mhd%vacuum%b_pert%coord3%im (array3dflt.type) (9.5.1.2.1)
time (1542)	mhd%time (float) (9.5.1.1.1)
codeparam (1542)	mhd%codeparam (codeparam) (9.5.1.3.66)
codename (1580)	mhd%codeparam%codename (string) (9.5.1.1.3)

codeversion (1580)	mhd%codeparam%codeversion (string) (9.5.1.1.3)
parameters (1580)	mhd%codeparam%parameters (string) (9.5.1.1.3)
output_diag (1580)	mhd%codeparam%output_diag (string) (9.5.1.1.3)
output_flag (1580)	mhd%codeparam%output_flag (integer) (9.5.1.1.2)

### 9.5.2.1.27 msediag

datainfo (1543)	msediag%datainfo (datainfo) (9.5.1.3.121)
dataprovider (1635)	msediag%datainfo%dataprovider (string) (9.5.1.1.3)
putdate (1635)	msediag%datainfo%putdate (string) (9.5.1.1.3)
source (1635)	msediag%datainfo%source (string) (9.5.1.1.3)
comment (1635)	msediag%datainfo%comment (string) (9.5.1.1.3)
cocos (1635)	msediag%datainfo%cocos (integer) (9.5.1.1.2)
id (1635)	msediag%datainfo%id (integer) (9.5.1.1.2)
isref (1635)	msediag%datainfo%isref (integer) (9.5.1.1.2)
whatref (1635)	msediag%datainfo%whatref (whatref) (9.5.1.3.437)
user (1951)	msediag%datainfo%whatref%user (string) (9.5.1.1.3)
machine (1951)	msediag%datainfo%whatref%machine (string) (9.5.1.1.3)
shot (1951)	msediag%datainfo%whatref%shot (integer) (9.5.1.1.2)
run (1951)	msediag%datainfo%whatref%run (integer) (9.5.1.1.2)
occurrence (1951)	msediag%datainfo%whatref%occurrence (integer) (9.5.1.1.2)
putinfo (1635)	msediag%datainfo%putinfo (putinfo) (9.5.1.3.290)
putmethod (1804)	msediag%datainfo%putinfo%putmethod (string) (9.5.1.1.3)
putaccess (1804)	msediag%datainfo%putinfo%putaccess (string) (9.5.1.1.3)
putlocation (1804)	msediag%datainfo%putinfo%putlocation (string) (9.5.1.1.3)
rights (1804)	msediag%datainfo%putinfo%rights (string) (9.5.1.1.3)
polarimetry (1543)	msediag%polarimetry (polarimetry) (9.5.1.3.284)
setup (1798)	msediag%polarimetry%setup (msediag_setup_polarimetry) (9.5.1.3.253)
rzgamma (1767)	msediag%polarimetry%setup%rzgamma (rzphidrzdphiID) (9.5.1.3.335)
r (1849)	msediag%polarimetry%setup%rzgamma%r (vecflt.type) (9.5.1.2.9)
z (1849)	msediag%polarimetry%setup%rzgamma%z (vecflt.type) (9.5.1.2.9)
phi (1849)	msediag%polarimetry%setup%rzgamma%phi (vecflt.type) (9.5.1.2.9)
dr (1849)	msediag%polarimetry%setup%rzgamma%dr (vecflt.type) (9.5.1.2.9)
dz (1849)	msediag%polarimetry%setup%rzgamma%dz (vecflt.type) (9.5.1.2.9)
dphi (1849)	msediag%polarimetry%setup%rzgamma%dphi (vecflt.type) (9.5.1.2.9)
geom_coef (1767)	msediag%polarimetry%setup%geom_coef (matflt.type) (9.5.1.2.7)
measure (1798)	msediag%polarimetry%measure (exp1D) (9.5.1.3.181)
value (1695)	msediag%polarimetry%measure%value (vecflt.type) (9.5.1.2.9)
abserror (1695)	msediag%polarimetry%measure%abserror (vecflt.type) (9.5.1.2.9)
releror (1695)	msediag%polarimetry%measure%releror (vecflt.type) (9.5.1.2.9)
spectral (1543)	msediag%spectral (spectral) (9.5.1.3.378)
emissivity (1892)	msediag%spectral%emissivity (msediag_emissivity) (9.5.1.3.248)
wavelength (1762)	msediag%spectral%emissivity%wavelength (vecflt.type) (9.5.1.2.9)
emiss_chord (1762)	msediag%spectral%emissivity%emiss_chord(:) (msediag_emiss_chord) (9.5.1.3.247)
volume (1761)	msediag%spectral%emissivity%emiss_chord(:)%volume (float) (9.5.1.1.1)
setup (1761)	msediag%spectral%emissivity%emiss_chord(:)%setup (rzphiID) (9.5.1.3.331)
r (1845)	msediag%spectral%emissivity%emiss_chord(:)%setup%r (vecflt.type) (9.5.1.2.9)
z (1845)	msediag%spectral%emissivity%emiss_chord(:)%setup%z (vecflt.type) (9.5.1.2.9)
phi (1845)	msediag%spectral%emissivity%emiss_chord(:)%setup%phi (vecflt.type) (9.5.1.2.9)
polarization (1761)	msediag%spectral%emissivity%emiss_chord(:)%polarization(:) (msediag_polarization) (9.5.1.3.249)
type (1763)	msediag%spectral%emissivity%emiss_chord(:)%polarization(:)%type (identifier) (9.5.1.3.214)
id (1728)	msediag%spectral%emissivity%emiss_chord(:)%polarization(:)%type%id (string) (9.5.1.1.3)
flag (1728)	msediag%spectral%emissivity%emiss_chord(:)%polarization(:)%type%flag (integer) (9.5.1.1.2)
description (1728)	msediag%spectral%emissivity%emiss_chord(:)%polarization(:)%type%description (string) (9.5.1.1.3)
spec_emiss (1763)	msediag%spectral%emissivity%emiss_chord(:)%polarization(:)%spec_emiss (matflt.type) (9.5.1.2.7)
quantiaxis (1761)	msediag%spectral%emissivity%emiss_chord(:)%quantiaxis (vecflt.type) (9.5.1.2.9)
radiance (1892)	msediag%spectral%radiance (msediag_radiance) (9.5.1.3.251)
wavelength (1765)	msediag%spectral%radiance%wavelength (exp1D) (9.5.1.3.181)



value (1695)	msediag%spectral%radiance%wavelength%value (vecflt.type) (9.5.1.2.9)
abserror (1695)	msediag%spectral%radiance%wavelength%abserror (vecflt.type) (9.5.1.2.9)
releror (1695)	msediag%spectral%radiance%wavelength%releror (vecflt.type) (9.5.1.2.9)
radia_chord (1765)	msediag%spectral%radiance%radia_chord(:) (msediag_radia_chord) (9.5.1.3.250)
setup (1764)	msediag%spectral%radiance%radia_chord(:)setup (msediag_setup) (9.5.1.3.252)
pivot_point (1766)	msediag%spectral%radiance%radia_chord(:)setup%pivot_point (rzphi0D) (9.5.1.3.330)
r (1844)	msediag%spectral%radiance%radia_chord(:)setup%pivot_point%r (float) (9.5.1.1.1)
z (1844)	msediag%spectral%radiance%radia_chord(:)setup%pivot_point%z (float) (9.5.1.1.1)
phi (1844)	msediag%spectral%radiance%radia_chord(:)setup%pivot_point%phi (float) (9.5.1.1.1)
horchordang (1766)	msediag%spectral%radiance%radia_chord(:)setup%horchordang (float) (9.5.1.1.1)
verchordang (1766)	msediag%spectral%radiance%radia_chord(:)setup%verchordang (float) (9.5.1.1.1)
second_point (1766)	msediag%spectral%radiance%radia_chord(:)setup%second_point (rzphi0D) (9.5.1.3.330)
r (1844)	msediag%spectral%radiance%radia_chord(:)setup%second_point%r (float) (9.5.1.1.1)
z (1844)	msediag%spectral%radiance%radia_chord(:)setup%second_point%z (float) (9.5.1.1.1)
phi (1844)	msediag%spectral%radiance%radia_chord(:)setup%second_point%phi (float) (9.5.1.1.1)
stokes (1764)	msediag%spectral%radiance%radia_chord(:)stokes(:) (msediag_stokes) (9.5.1.3.254)
type (1768)	msediag%spectral%radiance%radia_chord(:)stokes(:)%type (identifier) (9.5.1.3.214)
id (1728)	msediag%spectral%radiance%radia_chord(:)stokes(:)%type%id (string) (9.5.1.1.3)
flag (1728)	msediag%spectral%radiance%radia_chord(:)stokes(:)%type%flag (integer) (9.5.1.1.2)
description (1728)	msediag%spectral%radiance%radia_chord(:)stokes(:)%type%description (string) (9.5.1.1.3)
vector (1768)	msediag%spectral%radiance%radia_chord(:)stokes(:)%vector (matflt.type) (9.5.1.2.7)
totradiance (1764)	msediag%spectral%radiance%radia_chord(:)totradiance (exp1D) (9.5.1.3.181)
value (1695)	msediag%spectral%radiance%radia_chord(:)totradiance%value (vecflt.type) (9.5.1.2.9)
abserror (1695)	msediag%spectral%radiance%radia_chord(:)totradiance%abserror (vecflt.type) (9.5.1.2.9)
releror (1695)	msediag%spectral%radiance%radia_chord(:)totradiance%releror (vecflt.type) (9.5.1.2.9)
codeparam (1892)	msediag%spectral%codeparam (codeparam) (9.5.1.3.66)
codename (1580)	msediag%spectral%codeparam%codename (string) (9.5.1.1.3)
codeversion (1580)	msediag%spectral%codeparam%codeversion (string) (9.5.1.1.3)
parameters (1580)	msediag%spectral%codeparam%parameters (string) (9.5.1.1.3)
output_diag (1580)	msediag%spectral%codeparam%output_diag (string) (9.5.1.1.3)
output_flag (1580)	msediag%spectral%codeparam%output_flag (integer) (9.5.1.1.2)
time (1543)	msediag%time (float) (9.5.1.1.1)

### 9.5.2.1.28 nbi

datainfo (1544)	nbi%datainfo (datainfo) (9.5.1.3.121)
dataprovider (1635)	nbi%datainfo%dataprovider (string) (9.5.1.1.3)
putdate (1635)	nbi%datainfo%putdate (string) (9.5.1.1.3)
source (1635)	nbi%datainfo%source (string) (9.5.1.1.3)
comment (1635)	nbi%datainfo%comment (string) (9.5.1.1.3)
cocos (1635)	nbi%datainfo%cocos (integer) (9.5.1.1.2)
id (1635)	nbi%datainfo%id (integer) (9.5.1.1.2)
isref (1635)	nbi%datainfo%isref (integer) (9.5.1.1.2)
whatref (1635)	nbi%datainfo%whatref (whatref) (9.5.1.3.437)
user (1951)	nbi%datainfo%whatref%user (string) (9.5.1.1.3)
machine (1951)	nbi%datainfo%whatref%machine (string) (9.5.1.1.3)
shot (1951)	nbi%datainfo%whatref%shot (integer) (9.5.1.1.2)
run (1951)	nbi%datainfo%whatref%run (integer) (9.5.1.1.2)
occurrence (1951)	nbi%datainfo%whatref%occurrence (integer) (9.5.1.1.2)
putinfo (1635)	nbi%datainfo%putinfo (putinfo) (9.5.1.3.290)
putmethod (1804)	nbi%datainfo%putinfo%putmethod (string) (9.5.1.1.3)
putaccess (1804)	nbi%datainfo%putinfo%putaccess (string) (9.5.1.1.3)
putlocation (1804)	nbi%datainfo%putinfo%putlocation (string) (9.5.1.1.3)
rights (1804)	nbi%datainfo%putinfo%rights (string) (9.5.1.1.3)
nbi_unit (1544)	nbi%nbi_unit(:) (nbi_unit) (9.5.1.3.255)
name (1769)	nbi%nbi_unit(:)%name (string) (9.5.1.1.3)
inj_spec (1769)	nbi%nbi_unit(:)%inj_spec (inj_spec) (9.5.1.3.218)
amn (1732)	nbi%nbi_unit(:)%inj_spec%amn (float) (9.5.1.1.1)
zn (1732)	nbi%nbi_unit(:)%inj_spec%zn (float) (9.5.1.1.1)
pow_unit (1769)	nbi%nbi_unit(:)%pow_unit (exp0D) (9.5.1.3.180)
value (1694)	nbi%nbi_unit(:)%pow_unit%value (float) (9.5.1.1.1)

abserror (1694)	nbi%nbi_unit(:)%pow_unit%abserror (float) (9.5.1.1.1)
relerror (1694)	nbi%nbi_unit(:)%pow_unit%relerror (float) (9.5.1.1.1)
inj_eng_unit (1769)	nbi%nbi_unit(:)%inj_eng_unit (exp0D) (9.5.1.3.180)
value (1694)	nbi%nbi_unit(:)%inj_eng_unit%value (float) (9.5.1.1.1)
abserror (1694)	nbi%nbi_unit(:)%inj_eng_unit%abserror (float) (9.5.1.1.1)
relerror (1694)	nbi%nbi_unit(:)%inj_eng_unit%relerror (float) (9.5.1.1.1)
beamcurfrac (1769)	nbi%nbi_unit(:)%beamcurfrac (exp1D) (9.5.1.3.181)
value (1695)	nbi%nbi_unit(:)%beamcurfrac%value (vecflt.type) (9.5.1.2.9)
abserror (1695)	nbi%nbi_unit(:)%beamcurfrac%abserror (vecflt.type) (9.5.1.2.9)
relerror (1695)	nbi%nbi_unit(:)%beamcurfrac%relerror (vecflt.type) (9.5.1.2.9)
beampowfrac (1769)	nbi%nbi_unit(:)%beampowfrac (exp1D) (9.5.1.3.181)
value (1695)	nbi%nbi_unit(:)%beampowfrac%value (vecflt.type) (9.5.1.2.9)
abserror (1695)	nbi%nbi_unit(:)%beampowfrac%abserror (vecflt.type) (9.5.1.2.9)
relerror (1695)	nbi%nbi_unit(:)%beampowfrac%relerror (vecflt.type) (9.5.1.2.9)
setup_inject (1769)	nbi%nbi_unit(:)%setup_inject (setup_inject) (9.5.1.3.361)
position (1875)	nbi%nbi_unit(:)%setup_inject%position (rzphi0D) (9.5.1.3.330)
r (1844)	nbi%nbi_unit(:)%setup_inject%position%r (float) (9.5.1.1.1)
z (1844)	nbi%nbi_unit(:)%setup_inject%position%z (float) (9.5.1.1.1)
phi (1844)	nbi%nbi_unit(:)%setup_inject%position%phi (float) (9.5.1.1.1)
tang_rad (1875)	nbi%nbi_unit(:)%setup_inject%tang_rad (float) (9.5.1.1.1)
angle (1875)	nbi%nbi_unit(:)%setup_inject%angle (float) (9.5.1.1.1)
direction (1875)	nbi%nbi_unit(:)%setup_inject%direction (integer) (9.5.1.1.2)
focal_len_hz (1875)	nbi%nbi_unit(:)%setup_inject%focal_len_hz (float) (9.5.1.1.1)
focal_len_vc (1875)	nbi%nbi_unit(:)%setup_inject%focal_len_vc (float) (9.5.1.1.1)
divergence (1875)	nbi%nbi_unit(:)%setup_inject%divergence (divergence) (9.5.1.3.157)
frac_divcomp (1671)	nbi%nbi_unit(:)%setup_inject%divergence%frac_divcomp (vecflt.type) (9.5.1.2.9)
div_vert (1671)	nbi%nbi_unit(:)%setup_inject%divergence%div_vert (vecflt.type) (9.5.1.2.9)
div_horiz (1671)	nbi%nbi_unit(:)%setup_inject%divergence%div_horiz (vecflt.type) (9.5.1.2.9)
beamlets (1875)	nbi%nbi_unit(:)%setup_inject%beamlets (beamlets) (9.5.1.3.57)
position (1571)	nbi%nbi_unit(:)%setup_inject%beamlets%position (rzphi1D) (9.5.1.3.331)
r (1845)	nbi%nbi_unit(:)%setup_inject%beamlets%position%r (vecflt.type) (9.5.1.2.9)
z (1845)	nbi%nbi_unit(:)%setup_inject%beamlets%position%z (vecflt.type) (9.5.1.2.9)
phi (1845)	nbi%nbi_unit(:)%setup_inject%beamlets%position%phi (vecflt.type) (9.5.1.2.9)
tang_rad_blt (1571)	nbi%nbi_unit(:)%setup_inject%beamlets%tang_rad_blt (vecflt.type) (9.5.1.2.9)
angle_blt (1571)	nbi%nbi_unit(:)%setup_inject%beamlets%angle_blt (vecflt.type) (9.5.1.2.9)
pow_frc_blt (1571)	nbi%nbi_unit(:)%setup_inject%beamlets%pow_frc_blt (vecflt.type) (9.5.1.2.9)
codeparam (1769)	nbi%nbi_unit(:)%codeparam (codeparam) (9.5.1.3.66)
codename (1580)	nbi%nbi_unit(:)%codeparam%codename (string) (9.5.1.1.3)
codeversion (1580)	nbi%nbi_unit(:)%codeparam%codeversion (string) (9.5.1.1.3)
parameters (1580)	nbi%nbi_unit(:)%codeparam%parameters (string) (9.5.1.1.3)
output_diag (1580)	nbi%nbi_unit(:)%codeparam%output_diag (string) (9.5.1.1.3)
output_flag (1580)	nbi%nbi_unit(:)%codeparam%output_flag (integer) (9.5.1.1.2)
codeparam (1544)	nbi%codeparam (codeparam) (9.5.1.3.66)
codename (1580)	nbi%codeparam%codename (string) (9.5.1.1.3)
codeversion (1580)	nbi%codeparam%codeversion (string) (9.5.1.1.3)
parameters (1580)	nbi%codeparam%parameters (string) (9.5.1.1.3)
output_diag (1580)	nbi%codeparam%output_diag (string) (9.5.1.1.3)
output_flag (1580)	nbi%codeparam%output_flag (integer) (9.5.1.1.2)
time (1544)	nbi%time (float) (9.5.1.1.1)

### 9.5.2.1.29 neoclassic

datainfo (1545)	neoclassic%datainfo (datainfo) (9.5.1.3.121)
dataprovider (1635)	neoclassic%datainfo%dataprovider (string) (9.5.1.1.3)
putdate (1635)	neoclassic%datainfo%putdate (string) (9.5.1.1.3)
source (1635)	neoclassic%datainfo%source (string) (9.5.1.1.3)
comment (1635)	neoclassic%datainfo%comment (string) (9.5.1.1.3)
cocos (1635)	neoclassic%datainfo%cocos (integer) (9.5.1.1.2)
id (1635)	neoclassic%datainfo%id (integer) (9.5.1.1.2)
isref (1635)	neoclassic%datainfo%isref (integer) (9.5.1.1.2)
whatref (1635)	neoclassic%datainfo%whatref (whatref) (9.5.1.3.437)

user (1951)	neoclassic%datainfo%whatref%user (string) (9.5.1.1.3)
machine (1951)	neoclassic%datainfo%whatref%machine (string) (9.5.1.1.3)
shot (1951)	neoclassic%datainfo%whatref%shot (integer) (9.5.1.1.2)
run (1951)	neoclassic%datainfo%whatref%run (integer) (9.5.1.1.2)
occurrence (1951)	neoclassic%datainfo%whatref%occurrence (integer) (9.5.1.1.2)
putinfo (1635)	neoclassic%datainfo%putinfo (putinfo) (9.5.1.3.290)
putmethod (1804)	neoclassic%datainfo%putinfo%putmethod (string) (9.5.1.1.3)
putaccess (1804)	neoclassic%datainfo%putinfo%putaccess (string) (9.5.1.1.3)
putlocation (1804)	neoclassic%datainfo%putinfo%putlocation (string) (9.5.1.1.3)
rights (1804)	neoclassic%datainfo%putinfo%rights (string) (9.5.1.1.3)
rho_tor_norm (1545)	neoclassic%rho_tor_norm (vecflt_type) (9.5.1.2.9)
rho_tor (1545)	neoclassic%rho_tor (vecflt_type) (9.5.1.2.9)
composition (1545)	neoclassic%composition (composition) (9.5.1.3.84)
amn (1598)	neoclassic%composition%amn (vecflt_type) (9.5.1.2.9)
zn (1598)	neoclassic%composition%zn (vecflt_type) (9.5.1.2.9)
zion (1598)	neoclassic%composition%zion (vecflt_type) (9.5.1.2.9)
imp_flag (1598)	neoclassic%composition%imp_flag (vecint_type) (9.5.1.2.10)
label (1598)	neoclassic%composition%label (vecstring_type) (9.5.1.2.11)
desc_impur (1545)	neoclassic%desc_impur (desc_impur) (9.5.1.3.124)
amn (1638)	neoclassic%desc_impur%amn (vecflt_type) (9.5.1.2.9)
zn (1638)	neoclassic%desc_impur%zn (vecint_type) (9.5.1.2.10)
i_ion (1638)	neoclassic%desc_impur%i_ion (vecint_type) (9.5.1.2.10)
nzimp (1638)	neoclassic%desc_impur%nzimp (vecint_type) (9.5.1.2.10)
zmin (1638)	neoclassic%desc_impur%zmin (matint_type) (9.5.1.2.8)
zmax (1638)	neoclassic%desc_impur%zmax (matint_type) (9.5.1.2.8)
label (1638)	neoclassic%desc_impur%label (vecstring_type) (9.5.1.2.11)
compositions (1545)	neoclassic%compositions (compositions_type) (9.5.1.3.88)
nuclei (1602)	neoclassic%compositions%nuclei(:) (nuclei) (9.5.1.3.259)
zn (1773)	neoclassic%compositions%nuclei(:)%zn (float) (9.5.1.1.1)
amn (1773)	neoclassic%compositions%nuclei(:)%amn (float) (9.5.1.1.1)
label (1773)	neoclassic%compositions%nuclei(:)%label (string) (9.5.1.1.3)
ions (1602)	neoclassic%compositions%ions(:) (ions) (9.5.1.3.219)
nucindex (1733)	neoclassic%compositions%ions(:)%nucindex (integer) (9.5.1.1.2)
zion (1733)	neoclassic%compositions%ions(:)%zion (float) (9.5.1.1.1)
imp_flag (1733)	neoclassic%compositions%ions(:)%imp_flag (integer) (9.5.1.1.2)
label (1733)	neoclassic%compositions%ions(:)%label (string) (9.5.1.1.3)
impurities (1602)	neoclassic%compositions%impurities(:) (impurities) (9.5.1.3.216)
nucindex (1730)	neoclassic%compositions%impurities(:)%nucindex (integer) (9.5.1.1.2)
i_ion (1730)	neoclassic%compositions%impurities(:)%i_ion (integer) (9.5.1.1.2)
nzimp (1730)	neoclassic%compositions%impurities(:)%nzimp (integer) (9.5.1.1.2)
zmin (1730)	neoclassic%compositions%impurities(:)%zmin (vecflt_type) (9.5.1.2.9)
zmax (1730)	neoclassic%compositions%impurities(:)%zmax (vecflt_type) (9.5.1.2.9)
label (1730)	neoclassic%compositions%impurities(:)%label (vecstring_type) (9.5.1.2.11)
neutralscomp (1602)	neoclassic%compositions%neutralscomp(:) (composition_neutralscomp) (9.5.1.3.87)
neutcomp (1601)	neoclassic%compositions%neutralscomp(:)%neutcomp(:) (composition_neutrals_neutcomp) (9.5.1.3.86)
nucindex (1600)	neoclassic%compositions%neutralscomp(:)%neutcomp(:)%nucindex (integer) (9.5.1.1.2)
multiplicity (1600)	neoclassic%compositions%neutralscomp(:)%neutcomp(:)%multiplicity (integer) (9.5.1.1.2)
type (1601)	neoclassic%compositions%neutralscomp(:)%type(:) (identifier) (9.5.1.3.214)
id (1728)	neoclassic%compositions%neutralscomp(:)%type(:)%id (string) (9.5.1.1.3)
flag (1728)	neoclassic%compositions%neutralscomp(:)%type(:)%flag (integer) (9.5.1.1.2)
description (1728)	neoclassic%compositions%neutralscomp(:)%type(:)%description (string) (9.5.1.1.3)
label (1601)	neoclassic%compositions%neutralscomp(:)%label (string) (9.5.1.1.3)
edgespecies (1602)	neoclassic%compositions%edgespecies(:) (edgespecies) (9.5.1.3.170)
nucindex (1684)	neoclassic%compositions%edgespecies(:)%nucindex (integer) (9.5.1.1.2)
zmin (1684)	neoclassic%compositions%edgespecies(:)%zmin (float) (9.5.1.1.1)
zmax (1684)	neoclassic%compositions%edgespecies(:)%zmax (float) (9.5.1.1.1)
label (1684)	neoclassic%compositions%edgespecies(:)%label (string) (9.5.1.1.3)
signature (1602)	neoclassic%compositions%signature (identifier) (9.5.1.3.214)
id (1728)	neoclassic%compositions%signature%id (string) (9.5.1.1.3)
flag (1728)	neoclassic%compositions%signature%flag (integer) (9.5.1.1.2)
description (1728)	neoclassic%compositions%signature%description (string) (9.5.1.1.3)

ni_neo (1545)	neoclassic%ni_neo (transcoefion) (9.5.1.3.400)
diff_eff (1914)	neoclassic%ni_neo%diff_eff (matflt.type) (9.5.1.2.7)
vconv_eff (1914)	neoclassic%ni_neo%vconv_eff (matflt.type) (9.5.1.2.7)
exchange (1914)	neoclassic%ni_neo%exchange (matflt.type) (9.5.1.2.7)
qgi (1914)	neoclassic%ni_neo%qgi (matflt.type) (9.5.1.2.7)
flux (1914)	neoclassic%ni_neo%flux (matflt.type) (9.5.1.2.7)
off_diagonal (1914)	neoclassic%ni_neo%off_diagonal (offdiagion) (9.5.1.3.262)
d_ni (1776)	neoclassic%ni_neo%off_diagonal%d_ni (array3dflt.type) (9.5.1.2.1)
d_ti (1776)	neoclassic%ni_neo%off_diagonal%d_ti (array3dflt.type) (9.5.1.2.1)
d_ne (1776)	neoclassic%ni_neo%off_diagonal%d_ne (matflt.type) (9.5.1.2.7)
d_te (1776)	neoclassic%ni_neo%off_diagonal%d_te (matflt.type) (9.5.1.2.7)
d_epar (1776)	neoclassic%ni_neo%off_diagonal%d_epar (matflt.type) (9.5.1.2.7)
d_mtor (1776)	neoclassic%ni_neo%off_diagonal%d_mtor (matflt.type) (9.5.1.2.7)
flag (1914)	neoclassic%ni_neo%flag (integer) (9.5.1.1.2)
ne_neo (1545)	neoclassic%ne_neo (transcoefel) (9.5.1.3.398)
diff_eff (1912)	neoclassic%ne_neo%diff_eff (vecflt.type) (9.5.1.2.9)
vconv_eff (1912)	neoclassic%ne_neo%vconv_eff (vecflt.type) (9.5.1.2.9)
flux (1912)	neoclassic%ne_neo%flux (vecflt.type) (9.5.1.2.9)
off_diagonal (1912)	neoclassic%ne_neo%off_diagonal (offdiagel) (9.5.1.3.261)
d_ni (1775)	neoclassic%ne_neo%off_diagonal%d_ni (matflt.type) (9.5.1.2.7)
d_ti (1775)	neoclassic%ne_neo%off_diagonal%d_ti (matflt.type) (9.5.1.2.7)
d_ne (1775)	neoclassic%ne_neo%off_diagonal%d_ne (vecflt.type) (9.5.1.2.9)
d_te (1775)	neoclassic%ne_neo%off_diagonal%d_te (vecflt.type) (9.5.1.2.9)
d_epar (1775)	neoclassic%ne_neo%off_diagonal%d_epar (vecflt.type) (9.5.1.2.9)
d_mtor (1775)	neoclassic%ne_neo%off_diagonal%d_mtor (vecflt.type) (9.5.1.2.9)
flag (1912)	neoclassic%ne_neo%flag (integer) (9.5.1.1.2)
nz_neo (1545)	neoclassic%nz_neo(:) (transcoefimp) (9.5.1.3.399)
diff_eff (1913)	neoclassic%nz_neo(:)%diff_eff (matflt.type) (9.5.1.2.7)
vconv_eff (1913)	neoclassic%nz_neo(:)%vconv_eff (matflt.type) (9.5.1.2.7)
exchange (1913)	neoclassic%nz_neo(:)%exchange (matflt.type) (9.5.1.2.7)
flux (1913)	neoclassic%nz_neo(:)%flux (matflt.type) (9.5.1.2.7)
flag (1913)	neoclassic%nz_neo(:)%flag (integer) (9.5.1.1.2)
ti_neo (1545)	neoclassic%ti_neo (transcoefion) (9.5.1.3.400)
diff_eff (1914)	neoclassic%ti_neo%diff_eff (matflt.type) (9.5.1.2.7)
vconv_eff (1914)	neoclassic%ti_neo%vconv_eff (matflt.type) (9.5.1.2.7)
exchange (1914)	neoclassic%ti_neo%exchange (matflt.type) (9.5.1.2.7)
qgi (1914)	neoclassic%ti_neo%qgi (matflt.type) (9.5.1.2.7)
flux (1914)	neoclassic%ti_neo%flux (matflt.type) (9.5.1.2.7)
off_diagonal (1914)	neoclassic%ti_neo%off_diagonal (offdiagion) (9.5.1.3.262)
d_ni (1776)	neoclassic%ti_neo%off_diagonal%d_ni (array3dflt.type) (9.5.1.2.1)
d_ti (1776)	neoclassic%ti_neo%off_diagonal%d_ti (array3dflt.type) (9.5.1.2.1)
d_ne (1776)	neoclassic%ti_neo%off_diagonal%d_ne (matflt.type) (9.5.1.2.7)
d_te (1776)	neoclassic%ti_neo%off_diagonal%d_te (matflt.type) (9.5.1.2.7)
d_epar (1776)	neoclassic%ti_neo%off_diagonal%d_epar (matflt.type) (9.5.1.2.7)
d_mtor (1776)	neoclassic%ti_neo%off_diagonal%d_mtor (matflt.type) (9.5.1.2.7)
flag (1914)	neoclassic%ti_neo%flag (integer) (9.5.1.1.2)
te_neo (1545)	neoclassic%te_neo (transcoefel) (9.5.1.3.398)
diff_eff (1912)	neoclassic%te_neo%diff_eff (vecflt.type) (9.5.1.2.9)
vconv_eff (1912)	neoclassic%te_neo%vconv_eff (vecflt.type) (9.5.1.2.9)
flux (1912)	neoclassic%te_neo%flux (vecflt.type) (9.5.1.2.9)
off_diagonal (1912)	neoclassic%te_neo%off_diagonal (offdiagel) (9.5.1.3.261)
d_ni (1775)	neoclassic%te_neo%off_diagonal%d_ni (matflt.type) (9.5.1.2.7)
d_ti (1775)	neoclassic%te_neo%off_diagonal%d_ti (matflt.type) (9.5.1.2.7)
d_ne (1775)	neoclassic%te_neo%off_diagonal%d_ne (vecflt.type) (9.5.1.2.9)
d_te (1775)	neoclassic%te_neo%off_diagonal%d_te (vecflt.type) (9.5.1.2.9)
d_epar (1775)	neoclassic%te_neo%off_diagonal%d_epar (vecflt.type) (9.5.1.2.9)
d_mtor (1775)	neoclassic%te_neo%off_diagonal%d_mtor (vecflt.type) (9.5.1.2.9)
flag (1912)	neoclassic%te_neo%flag (integer) (9.5.1.1.2)
tz_neo (1545)	neoclassic%tz_neo(:) (transcoefimp) (9.5.1.3.399)
diff_eff (1913)	neoclassic%tz_neo(:)%diff_eff (matflt.type) (9.5.1.2.7)
vconv_eff (1913)	neoclassic%tz_neo(:)%vconv_eff (matflt.type) (9.5.1.2.7)

exchange (1913)	neoclassic%tz.neo(:)%exchange (matflt.type) (9.5.1.2.7)
flux (1913)	neoclassic%tz.neo(:)%flux (matflt.type) (9.5.1.2.7)
flag (1913)	neoclassic%tz.neo(:)%flag (integer) (9.5.1.1.2)
mtor_neo (1545)	neoclassic%mtor_neo (transcoefel) (9.5.1.3.398)
diff_eff (1912)	neoclassic%mtor_neo%diff_eff (vecflt.type) (9.5.1.2.9)
vconv_eff (1912)	neoclassic%mtor_neo%vconv_eff (vecflt.type) (9.5.1.2.9)
flux (1912)	neoclassic%mtor_neo%flux (vecflt.type) (9.5.1.2.9)
off_diagonal (1912)	neoclassic%mtor_neo%off_diagonal (offdiagel) (9.5.1.3.261)
d_ni (1775)	neoclassic%mtor_neo%off_diagonal%d_ni (matflt.type) (9.5.1.2.7)
d_ti (1775)	neoclassic%mtor_neo%off_diagonal%d_ti (matflt.type) (9.5.1.2.7)
d_ne (1775)	neoclassic%mtor_neo%off_diagonal%d_ne (vecflt.type) (9.5.1.2.9)
d_te (1775)	neoclassic%mtor_neo%off_diagonal%d_te (vecflt.type) (9.5.1.2.9)
d_epar (1775)	neoclassic%mtor_neo%off_diagonal%d_epar (vecflt.type) (9.5.1.2.9)
d_mtor (1775)	neoclassic%mtor_neo%off_diagonal%d_mtor (vecflt.type) (9.5.1.2.9)
flag (1912)	neoclassic%mtor_neo%flag (integer) (9.5.1.1.2)
sigma (1545)	neoclassic%sigma (vecflt.type) (9.5.1.2.9)
jboot (1545)	neoclassic%jboot (vecflt.type) (9.5.1.2.9)
er (1545)	neoclassic%er (vecflt.type) (9.5.1.2.9)
vpol (1545)	neoclassic%vpol (matflt.type) (9.5.1.2.7)
fext (1545)	neoclassic%fext (array3dfilt.type) (9.5.1.2.1)
jext (1545)	neoclassic%jext (vecflt.type) (9.5.1.2.9)
time (1545)	neoclassic%time (float) (9.5.1.1.1)
codeparam (1545)	neoclassic%codeparam (codeparam) (9.5.1.3.66)
codename (1580)	neoclassic%codeparam%codename (string) (9.5.1.1.3)
codeversion (1580)	neoclassic%codeparam%codeversion (string) (9.5.1.1.3)
parameters (1580)	neoclassic%codeparam%parameters (string) (9.5.1.1.3)
output_diag (1580)	neoclassic%codeparam%output_diag (string) (9.5.1.1.3)
output_flag (1580)	neoclassic%codeparam%output_flag (integer) (9.5.1.1.2)

### 9.5.2.1.30 orbit

datainfo (1546)	orbit%datainfo (datainfo) (9.5.1.3.121)
dataprovider (1635)	orbit%datainfo%dataprovider (string) (9.5.1.1.3)
putdate (1635)	orbit%datainfo%putdate (string) (9.5.1.1.3)
source (1635)	orbit%datainfo%source (string) (9.5.1.1.3)
comment (1635)	orbit%datainfo%comment (string) (9.5.1.1.3)
cocos (1635)	orbit%datainfo%cocos (integer) (9.5.1.1.2)
id (1635)	orbit%datainfo%id (integer) (9.5.1.1.2)
isref (1635)	orbit%datainfo%isref (integer) (9.5.1.1.2)
whatref (1635)	orbit%datainfo%whatref (whatref) (9.5.1.3.437)
user (1951)	orbit%datainfo%whatref%user (string) (9.5.1.1.3)
machine (1951)	orbit%datainfo%whatref%machine (string) (9.5.1.1.3)
shot (1951)	orbit%datainfo%whatref%shot (integer) (9.5.1.1.2)
run (1951)	orbit%datainfo%whatref%run (integer) (9.5.1.1.2)
occurrence (1951)	orbit%datainfo%whatref%occurrence (integer) (9.5.1.1.2)
putinfo (1635)	orbit%datainfo%putinfo (putinfo) (9.5.1.3.290)
putmethod (1804)	orbit%datainfo%putinfo%putmethod (string) (9.5.1.1.3)
putaccess (1804)	orbit%datainfo%putinfo%putaccess (string) (9.5.1.1.3)
putlocation (1804)	orbit%datainfo%putinfo%putlocation (string) (9.5.1.1.3)
rights (1804)	orbit%datainfo%putinfo%rights (string) (9.5.1.1.3)
com (1546)	orbit%com (com) (9.5.1.3.70)
amn (1584)	orbit%com%amn (float) (9.5.1.1.1)
zion (1584)	orbit%com%zion (float) (9.5.1.1.1)
energy (1584)	orbit%com%energy (vecflt.type) (9.5.1.2.9)
magn_mom (1584)	orbit%com%magn_mom (vecflt.type) (9.5.1.2.9)
p_phi (1584)	orbit%com%p_phi (vecflt.type) (9.5.1.2.9)
sigma (1584)	orbit%com%sigma (vecint.type) (9.5.1.2.10)
trace (1546)	orbit%trace (trace) (9.5.1.3.397)
time_orb (1911)	orbit%trace%time_orb (matflt.type) (9.5.1.2.7)
ntorb (1911)	orbit%trace%ntorb (vecint.type) (9.5.1.2.10)
r (1911)	orbit%trace%r (matflt.type) (9.5.1.2.7)

z (1911)	orbit%trace%z (matflt.type) (9.5.1.2.7)
phi (1911)	orbit%trace%phi (matflt.type) (9.5.1.2.7)
psi (1911)	orbit%trace%psi (matflt.type) (9.5.1.2.7)
theta_b (1911)	orbit%trace%theta_b (matflt.type) (9.5.1.2.7)
v_parallel (1911)	orbit%trace%v_parallel (matflt.type) (9.5.1.2.7)
v_perp (1911)	orbit%trace%v_perp (matflt.type) (9.5.1.2.7)
global_param (1546)	orbit%global_param (orbit_global_param) (9.5.1.3.264)
orbit_type (1778)	orbit%global_param%orbit_type (vecint.type) (9.5.1.2.10)
omega_b (1778)	orbit%global_param%omega_b (vecflt.type) (9.5.1.2.9)
omega_phi (1778)	orbit%global_param%omega_phi (vecflt.type) (9.5.1.2.9)
omega_c.av (1778)	orbit%global_param%omega_c.av (vecflt.type) (9.5.1.2.9)
special_pos (1778)	orbit%global_param%special_pos (orbit_special_pos) (9.5.1.3.267)
midplane (1781)	orbit%global_param%special_pos%midplane (orbit_midplane) (9.5.1.3.265)
outer (1779)	orbit%global_param%special_pos%midplane%outer (orbit_pos) (9.5.1.3.266)
r (1780)	orbit%global_param%special_pos%midplane%outer%r (vecflt.type) (9.5.1.2.9)
z (1780)	orbit%global_param%special_pos%midplane%outer%z (vecflt.type) (9.5.1.2.9)
phi (1780)	orbit%global_param%special_pos%midplane%outer%phi (vecflt.type) (9.5.1.2.9)
psi (1780)	orbit%global_param%special_pos%midplane%outer%psi (vecflt.type) (9.5.1.2.9)
theta_b (1780)	orbit%global_param%special_pos%midplane%outer%theta_b (vecflt.type) (9.5.1.2.9)
inner (1779)	orbit%global_param%special_pos%midplane%inner (orbit_pos) (9.5.1.3.266)
r (1780)	orbit%global_param%special_pos%midplane%inner%r (vecflt.type) (9.5.1.2.9)
z (1780)	orbit%global_param%special_pos%midplane%inner%z (vecflt.type) (9.5.1.2.9)
phi (1780)	orbit%global_param%special_pos%midplane%inner%phi (vecflt.type) (9.5.1.2.9)
psi (1780)	orbit%global_param%special_pos%midplane%inner%psi (vecflt.type) (9.5.1.2.9)
theta_b (1780)	orbit%global_param%special_pos%midplane%inner%theta_b (vecflt.type) (9.5.1.2.9)
turning_pts (1781)	orbit%global_param%special_pos%turning_pts (orbit_turning_pts) (9.5.1.3.268)
upper (1782)	orbit%global_param%special_pos%turning_pts%upper (orbit_pos) (9.5.1.3.266)
r (1780)	orbit%global_param%special_pos%turning_pts%upper%r (vecflt.type) (9.5.1.2.9)
z (1780)	orbit%global_param%special_pos%turning_pts%upper%z (vecflt.type) (9.5.1.2.9)
phi (1780)	orbit%global_param%special_pos%turning_pts%upper%phi (vecflt.type) (9.5.1.2.9)
psi (1780)	orbit%global_param%special_pos%turning_pts%upper%psi (vecflt.type) (9.5.1.2.9)
theta_b (1780)	orbit%global_param%special_pos%turning_pts%upper%theta_b (vecflt.type) (9.5.1.2.9)
lower (1782)	orbit%global_param%special_pos%turning_pts%lower (orbit_pos) (9.5.1.3.266)
r (1780)	orbit%global_param%special_pos%turning_pts%lower%r (vecflt.type) (9.5.1.2.9)
z (1780)	orbit%global_param%special_pos%turning_pts%lower%z (vecflt.type) (9.5.1.2.9)
phi (1780)	orbit%global_param%special_pos%turning_pts%lower%phi (vecflt.type) (9.5.1.2.9)
psi (1780)	orbit%global_param%special_pos%turning_pts%lower%psi (vecflt.type) (9.5.1.2.9)
theta_b (1780)	orbit%global_param%special_pos%turning_pts%lower%theta_b (vecflt.type) (9.5.1.2.9)
codeparam (1546)	orbit%codeparam (codeparam) (9.5.1.3.66)
codename (1580)	orbit%codeparam%codename (string) (9.5.1.1.3)
codeversion (1580)	orbit%codeparam%codeversion (string) (9.5.1.1.3)
parameters (1580)	orbit%codeparam%parameters (string) (9.5.1.1.3)
output_diag (1580)	orbit%codeparam%output_diag (string) (9.5.1.1.3)
output_flag (1580)	orbit%codeparam%output_flag (integer) (9.5.1.1.2)
time (1546)	orbit%time (float) (9.5.1.1.1)

### 9.5.2.1.31 pellets

datainfo (1547)	pellets%datainfo (datainfo) (9.5.1.3.121)
dataprovider (1635)	pellets%datainfo%dataprovider (string) (9.5.1.1.3)
putdate (1635)	pellets%datainfo%putdate (string) (9.5.1.1.3)
source (1635)	pellets%datainfo%source (string) (9.5.1.1.3)
comment (1635)	pellets%datainfo%comment (string) (9.5.1.1.3)
cocos (1635)	pellets%datainfo%cocos (integer) (9.5.1.1.2)
id (1635)	pellets%datainfo%id (integer) (9.5.1.1.2)
isref (1635)	pellets%datainfo%isref (integer) (9.5.1.1.2)
whatref (1635)	pellets%datainfo%whatref (whatref) (9.5.1.3.437)
user (1951)	pellets%datainfo%whatref%user (string) (9.5.1.1.3)
machine (1951)	pellets%datainfo%whatref%machine (string) (9.5.1.1.3)
shot (1951)	pellets%datainfo%whatref%shot (integer) (9.5.1.1.2)
run (1951)	pellets%datainfo%whatref%run (integer) (9.5.1.1.2)



occurrence (1951)	pellets%datainfo%whatref%occurrence (integer) (9.5.1.1.2)
putinfo (1635)	pellets%datainfo%putinfo (putinfo) (9.5.1.3.290)
putmethod (1804)	pellets%datainfo%putinfo%putmethod (string) (9.5.1.1.3)
putaccess (1804)	pellets%datainfo%putinfo%putaccess (string) (9.5.1.1.3)
putlocation (1804)	pellets%datainfo%putinfo%putlocation (string) (9.5.1.1.3)
rights (1804)	pellets%datainfo%putinfo%rights (string) (9.5.1.1.3)
toroid_field (1547)	pellets%toroid_field (b0r0) (9.5.1.3.56)
r0 (1570)	pellets%toroid_field%r0 (float) (9.5.1.1.1)
b0 (1570)	pellets%toroid_field%b0 (float) (9.5.1.1.1)
species (1547)	pellets%species (species) (9.5.1.3.376)
amn (1890)	pellets%species%amn (vecflt_type) (9.5.1.2.9)
zn (1890)	pellets%species%zn (vecflt_type) (9.5.1.2.9)
concentr (1890)	pellets%species%concentr (vecflt_type) (9.5.1.2.9)
subl.energy (1890)	pellets%species%subl.energy (vecflt_type) (9.5.1.2.9)
shape (1547)	pellets%shape (shape) (9.5.1.3.363)
shape_sph (1877)	pellets%shape%shape_sph (shape_sph) (9.5.1.3.365)
radius (1879)	pellets%shape%shape_sph%radius (float) (9.5.1.1.1)
shape_cyl (1877)	pellets%shape%shape_cyl (shape_cyl) (9.5.1.3.364)
radius (1878)	pellets%shape%shape_cyl%radius (float) (9.5.1.1.1)
height (1878)	pellets%shape%shape_cyl%height (float) (9.5.1.1.1)
pelletpath (1547)	pellets%pelletpath (pelletpath) (9.5.1.3.270)
pivot.point (1784)	pellets%pelletpath%pivot.point (rzphi0D) (9.5.1.3.330)
r (1844)	pellets%pelletpath%pivot.point%r (float) (9.5.1.1.1)
z (1844)	pellets%pelletpath%pivot.point%z (float) (9.5.1.1.1)
phi (1844)	pellets%pelletpath%pivot.point%phi (float) (9.5.1.1.1)
horchordang (1784)	pellets%pelletpath%horchordang (float) (9.5.1.1.1)
verchordang (1784)	pellets%pelletpath%verchordang (float) (9.5.1.1.1)
second_point (1784)	pellets%pelletpath%second_point (rzphi0D) (9.5.1.3.330)
r (1844)	pellets%pelletpath%second_point%r (float) (9.5.1.1.1)
z (1844)	pellets%pelletpath%second_point%z (float) (9.5.1.1.1)
phi (1844)	pellets%pelletpath%second_point%phi (float) (9.5.1.1.1)
velocity (1547)	pellets%velocity (float) (9.5.1.1.1)
ablationrate (1547)	pellets%ablationrate (ablationrate) (9.5.1.3.49)
rho.tor (1563)	pellets%ablationrate%rho.tor (vecflt_type) (9.5.1.2.9)
rate (1563)	pellets%ablationrate%rate (vecflt_type) (9.5.1.2.9)
position (1563)	pellets%ablationrate%position (rzphi1D) (9.5.1.3.331)
r (1845)	pellets%ablationrate%position%r (vecflt_type) (9.5.1.2.9)
z (1845)	pellets%ablationrate%position%z (vecflt_type) (9.5.1.2.9)
phi (1845)	pellets%ablationrate%position%phi (vecflt_type) (9.5.1.2.9)
deposprofile (1547)	pellets%deposprofile (deposprofile) (9.5.1.3.122)
rho.tor (1636)	pellets%deposprofile%rho.tor (vecflt_type) (9.5.1.2.9)
density (1636)	pellets%deposprofile%density (vecflt_type) (9.5.1.2.9)
position (1636)	pellets%deposprofile%position (rzphi1D) (9.5.1.3.331)
r (1845)	pellets%deposprofile%position%r (vecflt_type) (9.5.1.2.9)
z (1845)	pellets%deposprofile%position%z (vecflt_type) (9.5.1.2.9)
phi (1845)	pellets%deposprofile%position%phi (vecflt_type) (9.5.1.2.9)
delay (1636)	pellets%deposprofile%delay (float) (9.5.1.1.1)
codeparam (1547)	pellets%codeparam (codeparam) (9.5.1.3.66)
codename (1580)	pellets%codeparam%codename (string) (9.5.1.1.3)
codeversion (1580)	pellets%codeparam%codeversion (string) (9.5.1.1.3)
parameters (1580)	pellets%codeparam%parameters (string) (9.5.1.1.3)
output_diag (1580)	pellets%codeparam%output_diag (string) (9.5.1.1.3)
output_flag (1580)	pellets%codeparam%output_flag (integer) (9.5.1.1.2)
time (1547)	pellets%time (float) (9.5.1.1.1)

### 9.5.2.1.32 pfsystems

datainfo (1548)	pfsystems%datainfo (datainfo) (9.5.1.3.121)
dataprovider (1635)	pfsystems%datainfo%dataprovider (string) (9.5.1.1.3)
putdate (1635)	pfsystems%datainfo%putdate (string) (9.5.1.1.3)
source (1635)	pfsystems%datainfo%source (string) (9.5.1.1.3)

comment (1635)	pfsystems%datainfo%comment (string) (9.5.1.1.3)
cocos (1635)	pfsystems%datainfo%cocos (integer) (9.5.1.1.2)
id (1635)	pfsystems%datainfo%id (integer) (9.5.1.1.2)
isref (1635)	pfsystems%datainfo%isref (integer) (9.5.1.1.2)
whatref (1635)	pfsystems%datainfo%whatref (whatref) (9.5.1.3.437)
user (1951)	pfsystems%datainfo%whatref%user (string) (9.5.1.1.3)
machine (1951)	pfsystems%datainfo%whatref%machine (string) (9.5.1.1.3)
shot (1951)	pfsystems%datainfo%whatref%shot (integer) (9.5.1.1.2)
run (1951)	pfsystems%datainfo%whatref%run (integer) (9.5.1.1.2)
occurrence (1951)	pfsystems%datainfo%whatref%occurrence (integer) (9.5.1.1.2)
putinfo (1635)	pfsystems%datainfo%putinfo (putinfo) (9.5.1.3.290)
putmethod (1804)	pfsystems%datainfo%putinfo%putmethod (string) (9.5.1.1.3)
putaccess (1804)	pfsystems%datainfo%putinfo%putaccess (string) (9.5.1.1.3)
putlocation (1804)	pfsystems%datainfo%putinfo%putlocation (string) (9.5.1.1.3)
rights (1804)	pfsystems%datainfo%putinfo%rights (string) (9.5.1.1.3)
pfcoils (1548)	pfsystems%pfcoils (pfcoils) (9.5.1.3.273)
desc_pfcoils (1787)	pfsystems%pfcoils%desc_pfcoils (desc_pfcoils) (9.5.1.3.126)
name (1640)	pfsystems%pfcoils%desc_pfcoils%name (vecstring_type) (9.5.1.2.11)
id (1640)	pfsystems%pfcoils%desc_pfcoils%id (vecstring_type) (9.5.1.2.11)
res (1640)	pfsystems%pfcoils%desc_pfcoils%res (vecflt_type) (9.5.1.2.9)
emax (1640)	pfsystems%pfcoils%desc_pfcoils%emax (vecflt_type) (9.5.1.2.9)
nelement (1640)	pfsystems%pfcoils%desc_pfcoils%nelement (vecint_type) (9.5.1.2.10)
pfelement (1640)	pfsystems%pfcoils%desc_pfcoils%pfelement (pfelement) (9.5.1.3.274)
name (1788)	pfsystems%pfcoils%desc_pfcoils%pfelement%name (vecstring_type) (9.5.1.2.11)
id (1788)	pfsystems%pfcoils%desc_pfcoils%pfelement%id (vecstring_type) (9.5.1.2.11)
turnsign (1788)	pfsystems%pfcoils%desc_pfcoils%pfelement%turnsign (matflt_type) (9.5.1.2.7)
area (1788)	pfsystems%pfcoils%desc_pfcoils%pfelement%area (matflt_type) (9.5.1.2.7)
pfgometry (1788)	pfsystems%pfcoils%desc_pfcoils%pfelement%pfgometry (pfgometry) (9.5.1.3.275)
type (1789)	pfsystems%pfcoils%desc_pfcoils%pfelement%pfgometry%type (matint_type) (9.5.1.2.8)
npoints (1789)	pfsystems%pfcoils%desc_pfcoils%pfelement%pfgometry%npoints (matint_type) (9.5.1.2.8)
rzcoordinate (1789)	pfsystems%pfcoils%desc_pfcoils%pfelement%pfgometry%rzcoordinate (rz3D) (9.5.1.3.329)
r (1843)	pfsystems%pfcoils%desc_pfcoils%pfelement%pfgometry%rzcoordinate%r (array3dfilt_type) (9.5.1.2.1)
z (1843)	pfsystems%pfcoils%desc_pfcoils%pfelement%pfgometry%rzcoordinate%z (array3dfilt_type) (9.5.1.2.1)
rzdrdz (1789)	pfsystems%pfcoils%desc_pfcoils%pfelement%pfgometry%rzdrdz (array3dfilt_type) (9.5.1.2.1)
coilcurrent (1787)	pfsystems%pfcoils%coilcurrent (exp1D) (9.5.1.3.181)
value (1695)	pfsystems%pfcoils%coilcurrent%value (vecflt_type) (9.5.1.2.9)
abserror (1695)	pfsystems%pfcoils%coilcurrent%abserror (vecflt_type) (9.5.1.2.9)
releror (1695)	pfsystems%pfcoils%coilcurrent%releror (vecflt_type) (9.5.1.2.9)
coilvoltage (1787)	pfsystems%pfcoils%coilvoltage (exp1D) (9.5.1.3.181)
value (1695)	pfsystems%pfcoils%coilvoltage%value (vecflt_type) (9.5.1.2.9)
abserror (1695)	pfsystems%pfcoils%coilvoltage%abserror (vecflt_type) (9.5.1.2.9)
releror (1695)	pfsystems%pfcoils%coilvoltage%releror (vecflt_type) (9.5.1.2.9)
pfpassive (1548)	pfsystems%pfpassive (pfpassive) (9.5.1.3.277)
name (1791)	pfsystems%pfpassive%name (vecstring_type) (9.5.1.2.11)
area (1791)	pfsystems%pfpassive%area (vecflt_type) (9.5.1.2.9)
res (1791)	pfsystems%pfpassive%res (vecflt_type) (9.5.1.2.9)
eta (1791)	pfsystems%pfpassive%eta (vecflt_type) (9.5.1.2.9)
pfpgeometry (1791)	pfsystems%pfpassive%pfpgeometry (pfpgeometry) (9.5.1.3.276)
type (1790)	pfsystems%pfpassive%pfpgeometry%type (vecint_type) (9.5.1.2.10)
npoints (1790)	pfsystems%pfpassive%pfpgeometry%npoints (vecint_type) (9.5.1.2.10)
rzcoordinate (1790)	pfsystems%pfpassive%pfpgeometry%rzcoordinate (rz2D) (9.5.1.3.328)
r (1842)	pfsystems%pfpassive%pfpgeometry%rzcoordinate%r (matflt_type) (9.5.1.2.7)
z (1842)	pfsystems%pfpassive%pfpgeometry%rzcoordinate%z (matflt_type) (9.5.1.2.7)
rzdrdz (1790)	pfsystems%pfpassive%pfpgeometry%rzdrdz (matflt_type) (9.5.1.2.7)
pfcircuits (1548)	pfsystems%pfcircuits (pfcircuits) (9.5.1.3.272)
name (1786)	pfsystems%pfcircuits%name (vecstring_type) (9.5.1.2.11)
id (1786)	pfsystems%pfcircuits%id (vecstring_type) (9.5.1.2.11)
type (1786)	pfsystems%pfcircuits%type (vecstring_type) (9.5.1.2.11)
nnodes (1786)	pfsystems%pfcircuits%nnodes (vecint_type) (9.5.1.2.10)



connections (1786)	pfsystems%pfcircuits%connections (array3dint.type) (9.5.1.2.2)
pfsupplies (1548)	pfsystems%pfsupplies (pfsupplies) (9.5.1.3.278)
desc_supply (1792)	pfsystems%pfsupplies%desc_supply (desc_supply) (9.5.1.3.127)
name (1641)	pfsystems%pfsupplies%desc_supply%name (vecstring.type) (9.5.1.2.11)
id (1641)	pfsystems%pfsupplies%desc_supply%id (vecstring.type) (9.5.1.2.11)
type (1641)	pfsystems%pfsupplies%desc_supply%type (vecstring.type) (9.5.1.2.11)
delay (1641)	pfsystems%pfsupplies%desc_supply%delay (vecflt.type) (9.5.1.2.9)
filter (1641)	pfsystems%pfsupplies%desc_supply%filter (filter) (9.5.1.3.184)
num (1698)	pfsystems%pfsupplies%desc_supply%filter%num (matflt.type) (9.5.1.2.7)
den (1698)	pfsystems%pfsupplies%desc_supply%filter%den (matflt.type) (9.5.1.2.7)
imin (1641)	pfsystems%pfsupplies%desc_supply%imin (vecflt.type) (9.5.1.2.9)
imax (1641)	pfsystems%pfsupplies%desc_supply%imax (vecflt.type) (9.5.1.2.9)
res (1641)	pfsystems%pfsupplies%desc_supply%res (vecflt.type) (9.5.1.2.9)
umin (1641)	pfsystems%pfsupplies%desc_supply%umin (vecflt.type) (9.5.1.2.9)
umax (1641)	pfsystems%pfsupplies%desc_supply%umax (vecflt.type) (9.5.1.2.9)
emax (1641)	pfsystems%pfsupplies%desc_supply%emax (vecflt.type) (9.5.1.2.9)
voltage (1792)	pfsystems%pfsupplies%voltage (exp1D) (9.5.1.3.181)
value (1695)	pfsystems%pfsupplies%voltage%value (vecflt.type) (9.5.1.2.9)
abserror (1695)	pfsystems%pfsupplies%voltage%abserror (vecflt.type) (9.5.1.2.9)
releror (1695)	pfsystems%pfsupplies%voltage%releror (vecflt.type) (9.5.1.2.9)
current (1792)	pfsystems%pfsupplies%current (exp1D) (9.5.1.3.181)
value (1695)	pfsystems%pfsupplies%current%value (vecflt.type) (9.5.1.2.9)
abserror (1695)	pfsystems%pfsupplies%current%abserror (vecflt.type) (9.5.1.2.9)
releror (1695)	pfsystems%pfsupplies%current%releror (vecflt.type) (9.5.1.2.9)
time (1548)	pfsystems%time (float) (9.5.1.1.1)

### 9.5.2.1.33 polardiang

datainfo (1746)	lineintegralsdiag%datainfo (datainfo) (9.5.1.3.121)
dataprovder (1635)	lineintegralsdiag%datainfo%dataprovder (string) (9.5.1.1.3)
putdate (1635)	lineintegralsdiag%datainfo%putdate (string) (9.5.1.1.3)
source (1635)	lineintegralsdiag%datainfo%source (string) (9.5.1.1.3)
comment (1635)	lineintegralsdiag%datainfo%comment (string) (9.5.1.1.3)
cocos (1635)	lineintegralsdiag%datainfo%cocos (integer) (9.5.1.1.2)
id (1635)	lineintegralsdiag%datainfo%id (integer) (9.5.1.1.2)
isref (1635)	lineintegralsdiag%datainfo%isref (integer) (9.5.1.1.2)
whatref (1635)	lineintegralsdiag%datainfo%whatref (whatref) (9.5.1.3.437)
user (1951)	lineintegralsdiag%datainfo%whatref%user (string) (9.5.1.1.3)
machine (1951)	lineintegralsdiag%datainfo%whatref%machine (string) (9.5.1.1.3)
shot (1951)	lineintegralsdiag%datainfo%whatref%shot (integer) (9.5.1.1.2)
run (1951)	lineintegralsdiag%datainfo%whatref%run (integer) (9.5.1.1.2)
occurrence (1951)	lineintegralsdiag%datainfo%whatref%occurrence (integer) (9.5.1.1.2)
putinfo (1635)	lineintegralsdiag%datainfo%putinfo (putinfo) (9.5.1.3.290)
putmethod (1804)	lineintegralsdiag%datainfo%putinfo%putmethod (string) (9.5.1.1.3)
putaccess (1804)	lineintegralsdiag%datainfo%putinfo%putaccess (string) (9.5.1.1.3)
putlocation (1804)	lineintegralsdiag%datainfo%putinfo%putlocation (string) (9.5.1.1.3)
rights (1804)	lineintegralsdiag%datainfo%putinfo%rights (string) (9.5.1.1.3)
expression (1746)	lineintegralsdiag%expression (string) (9.5.1.1.3)
setup_line (1746)	lineintegralsdiag%setup_line (setup_line) (9.5.1.3.362)
pivot_point (1876)	lineintegralsdiag%setup_line%pivot_point (rzphi1D) (9.5.1.3.331)
r (1845)	lineintegralsdiag%setup_line%pivot_point%r (vecflt.type) (9.5.1.2.9)
z (1845)	lineintegralsdiag%setup_line%pivot_point%z (vecflt.type) (9.5.1.2.9)
phi (1845)	lineintegralsdiag%setup_line%pivot_point%phi (vecflt.type) (9.5.1.2.9)
horchordang1 (1876)	lineintegralsdiag%setup_line%horchordang1 (vecflt.type) (9.5.1.2.9)
verchordang1 (1876)	lineintegralsdiag%setup_line%verchordang1 (vecflt.type) (9.5.1.2.9)
width (1876)	lineintegralsdiag%setup_line%width (vecflt.type) (9.5.1.2.9)
second_point (1876)	lineintegralsdiag%setup_line%second_point (rzphi1D) (9.5.1.3.331)
r (1845)	lineintegralsdiag%setup_line%second_point%r (vecflt.type) (9.5.1.2.9)
z (1845)	lineintegralsdiag%setup_line%second_point%z (vecflt.type) (9.5.1.2.9)
phi (1845)	lineintegralsdiag%setup_line%second_point%phi (vecflt.type) (9.5.1.2.9)
horchordang2 (1876)	lineintegralsdiag%setup_line%horchordang2 (vecflt.type) (9.5.1.2.9)

verchordang2 (1876)	lineintegraldiag%setup_line%verchordang2 (vecflt_type) (9.5.1.2.9)
third_point (1876)	lineintegraldiag%setup_line%third_point (rzphi1D) (9.5.1.3.331)
r (1845)	lineintegraldiag%setup_line%third_point%r (vecflt_type) (9.5.1.2.9)
z (1845)	lineintegraldiag%setup_line%third_point%z (vecflt_type) (9.5.1.2.9)
phi (1845)	lineintegraldiag%setup_line%third_point%phi (vecflt_type) (9.5.1.2.9)
nchordpoints (1876)	lineintegraldiag%setup_line%nchordpoints (integer) (9.5.1.1.2)
measure (1746)	lineintegraldiag%measure (exp1D) (9.5.1.3.181)
value (1695)	lineintegraldiag%measure%value (vecflt_type) (9.5.1.2.9)
abserror (1695)	lineintegraldiag%measure%abserror (vecflt_type) (9.5.1.2.9)
relerorr (1695)	lineintegraldiag%measure%relerorr (vecflt_type) (9.5.1.2.9)
time (1746)	lineintegraldiag%time (float) (9.5.1.1.1)

### 9.5.2.1.34 reference

datainfo (1550)	reference%datainfo (datainfo) (9.5.1.3.121)
dataprovider (1635)	reference%datainfo%dataprovider (string) (9.5.1.1.3)
putdate (1635)	reference%datainfo%putdate (string) (9.5.1.1.3)
source (1635)	reference%datainfo%source (string) (9.5.1.1.3)
comment (1635)	reference%datainfo%comment (string) (9.5.1.1.3)
cocos (1635)	reference%datainfo%cocos (integer) (9.5.1.1.2)
id (1635)	reference%datainfo%id (integer) (9.5.1.1.2)
isref (1635)	reference%datainfo%isref (integer) (9.5.1.1.2)
whatref (1635)	reference%datainfo%whatref (whatref) (9.5.1.3.437)
user (1951)	reference%datainfo%whatref%user (string) (9.5.1.1.3)
machine (1951)	reference%datainfo%whatref%machine (string) (9.5.1.1.3)
shot (1951)	reference%datainfo%whatref%shot (integer) (9.5.1.1.2)
run (1951)	reference%datainfo%whatref%run (integer) (9.5.1.1.2)
occurrence (1951)	reference%datainfo%whatref%occurrence (integer) (9.5.1.1.2)
putinfo (1635)	reference%datainfo%putinfo (putinfo) (9.5.1.3.290)
putmethod (1804)	reference%datainfo%putinfo%putmethod (string) (9.5.1.1.3)
putaccess (1804)	reference%datainfo%putinfo%putaccess (string) (9.5.1.1.3)
putlocation (1804)	reference%datainfo%putinfo%putlocation (string) (9.5.1.1.3)
rights (1804)	reference%datainfo%putinfo%rights (string) (9.5.1.1.3)
non_timed (1550)	reference%non_timed (ref_nt) (9.5.1.3.294)
zerod_real (1808)	reference%non_timed%zerod_real (ref_nt_0dr) (9.5.1.3.297)
ref1 (1811)	reference%non_timed%zerod_real%ref1 (ref_nt_0dr_ref) (9.5.1.3.298)
value (1812)	reference%non_timed%zerod_real%ref1%value (float) (9.5.1.1.1)
description (1812)	reference%non_timed%zerod_real%ref1%description (string) (9.5.1.1.3)
ref2 (1811)	reference%non_timed%zerod_real%ref2 (ref_nt_0dr_ref) (9.5.1.3.298)
value (1812)	reference%non_timed%zerod_real%ref2%value (float) (9.5.1.1.1)
description (1812)	reference%non_timed%zerod_real%ref2%description (string) (9.5.1.1.3)
ref3 (1811)	reference%non_timed%zerod_real%ref3 (ref_nt_0dr_ref) (9.5.1.3.298)
value (1812)	reference%non_timed%zerod_real%ref3%value (float) (9.5.1.1.1)
description (1812)	reference%non_timed%zerod_real%ref3%description (string) (9.5.1.1.3)
ref4 (1811)	reference%non_timed%zerod_real%ref4 (ref_nt_0dr_ref) (9.5.1.3.298)
value (1812)	reference%non_timed%zerod_real%ref4%value (float) (9.5.1.1.1)
description (1812)	reference%non_timed%zerod_real%ref4%description (string) (9.5.1.1.3)
ref5 (1811)	reference%non_timed%zerod_real%ref5 (ref_nt_0dr_ref) (9.5.1.3.298)
value (1812)	reference%non_timed%zerod_real%ref5%value (float) (9.5.1.1.1)
description (1812)	reference%non_timed%zerod_real%ref5%description (string) (9.5.1.1.3)
ref6 (1811)	reference%non_timed%zerod_real%ref6 (ref_nt_0dr_ref) (9.5.1.3.298)
value (1812)	reference%non_timed%zerod_real%ref6%value (float) (9.5.1.1.1)
description (1812)	reference%non_timed%zerod_real%ref6%description (string) (9.5.1.1.3)
ref7 (1811)	reference%non_timed%zerod_real%ref7 (ref_nt_0dr_ref) (9.5.1.3.298)
value (1812)	reference%non_timed%zerod_real%ref7%value (float) (9.5.1.1.1)
description (1812)	reference%non_timed%zerod_real%ref7%description (string) (9.5.1.1.3)
zerod_int (1808)	reference%non_timed%zerod_int (ref_nt_0di) (9.5.1.3.295)
ref1 (1809)	reference%non_timed%zerod_int%ref1 (ref_nt_0di_ref) (9.5.1.3.296)
value (1810)	reference%non_timed%zerod_int%ref1%value (integer) (9.5.1.1.2)
description (1810)	reference%non_timed%zerod_int%ref1%description (string) (9.5.1.1.3)
ref2 (1809)	reference%non_timed%zerod_int%ref2 (ref_nt_0di_ref) (9.5.1.3.296)

value (1810)	reference%non_timed%zerod_int%ref2%value (integer) (9.5.1.1.2)
description (1810)	reference%non_timed%zerod_int%ref2%description (string) (9.5.1.1.3)
ref3 (1809)	reference%non_timed%zerod_int%ref3 (ref_nt_0di_ref) (9.5.1.3.296)
value (1810)	reference%non_timed%zerod_int%ref3%value (integer) (9.5.1.1.2)
description (1810)	reference%non_timed%zerod_int%ref3%description (string) (9.5.1.1.3)
ref4 (1809)	reference%non_timed%zerod_int%ref4 (ref_nt_0di_ref) (9.5.1.3.296)
value (1810)	reference%non_timed%zerod_int%ref4%value (integer) (9.5.1.1.2)
description (1810)	reference%non_timed%zerod_int%ref4%description (string) (9.5.1.1.3)
zerod_string (1808)	reference%non_timed%zerod_string (ref_nt_0ds) (9.5.1.3.299)
ref1 (1813)	reference%non_timed%zerod_string%ref1 (ref_nt_0ds_ref) (9.5.1.3.300)
value (1814)	reference%non_timed%zerod_string%ref1%value (string) (9.5.1.1.3)
description (1814)	reference%non_timed%zerod_string%ref1%description (string) (9.5.1.1.3)
ref2 (1813)	reference%non_timed%zerod_string%ref2 (ref_nt_0ds_ref) (9.5.1.3.300)
value (1814)	reference%non_timed%zerod_string%ref2%value (string) (9.5.1.1.3)
description (1814)	reference%non_timed%zerod_string%ref2%description (string) (9.5.1.1.3)
oned_real (1808)	reference%non_timed%oned_real (ref_nt_1dr) (9.5.1.3.303)
ref1 (1817)	reference%non_timed%oned_real%ref1 (ref_nt_1dr_ref) (9.5.1.3.304)
value (1818)	reference%non_timed%oned_real%ref1%value (vecflt_type) (9.5.1.2.9)
description (1818)	reference%non_timed%oned_real%ref1%description (string) (9.5.1.1.3)
ref2 (1817)	reference%non_timed%oned_real%ref2 (ref_nt_1dr_ref) (9.5.1.3.304)
value (1818)	reference%non_timed%oned_real%ref2%value (vecflt_type) (9.5.1.2.9)
description (1818)	reference%non_timed%oned_real%ref2%description (string) (9.5.1.1.3)
ref3 (1817)	reference%non_timed%oned_real%ref3 (ref_nt_1dr_ref) (9.5.1.3.304)
value (1818)	reference%non_timed%oned_real%ref3%value (vecflt_type) (9.5.1.2.9)
description (1818)	reference%non_timed%oned_real%ref3%description (string) (9.5.1.1.3)
ref4 (1817)	reference%non_timed%oned_real%ref4 (ref_nt_1dr_ref) (9.5.1.3.304)
value (1818)	reference%non_timed%oned_real%ref4%value (vecflt_type) (9.5.1.2.9)
description (1818)	reference%non_timed%oned_real%ref4%description (string) (9.5.1.1.3)
ref5 (1817)	reference%non_timed%oned_real%ref5 (ref_nt_1dr_ref) (9.5.1.3.304)
value (1818)	reference%non_timed%oned_real%ref5%value (vecflt_type) (9.5.1.2.9)
description (1818)	reference%non_timed%oned_real%ref5%description (string) (9.5.1.1.3)
oned_int (1808)	reference%non_timed%oned_int (ref_nt_1di) (9.5.1.3.301)
ref1 (1815)	reference%non_timed%oned_int%ref1 (ref_nt_1di_ref) (9.5.1.3.302)
value (1816)	reference%non_timed%oned_int%ref1%value (vecint_type) (9.5.1.2.10)
description (1816)	reference%non_timed%oned_int%ref1%description (string) (9.5.1.1.3)
ref2 (1815)	reference%non_timed%oned_int%ref2 (ref_nt_1di_ref) (9.5.1.3.302)
value (1816)	reference%non_timed%oned_int%ref2%value (vecint_type) (9.5.1.2.10)
description (1816)	reference%non_timed%oned_int%ref2%description (string) (9.5.1.1.3)
ref3 (1815)	reference%non_timed%oned_int%ref3 (ref_nt_1di_ref) (9.5.1.3.302)
value (1816)	reference%non_timed%oned_int%ref3%value (vecint_type) (9.5.1.2.10)
description (1816)	reference%non_timed%oned_int%ref3%description (string) (9.5.1.1.3)
ref4 (1815)	reference%non_timed%oned_int%ref4 (ref_nt_1di_ref) (9.5.1.3.302)
value (1816)	reference%non_timed%oned_int%ref4%value (vecint_type) (9.5.1.2.10)
description (1816)	reference%non_timed%oned_int%ref4%description (string) (9.5.1.1.3)
timed (1550)	reference%timed (ref_t) (9.5.1.3.305)
zerod_real (1819)	reference%timed%zerod_real (ref_t_0dr) (9.5.1.3.308)
ref1 (1822)	reference%timed%zerod_real%ref1 (ref_t_0dr_ref) (9.5.1.3.309)
value (1823)	reference%timed%zerod_real%ref1%value (float) (9.5.1.1.1)
description (1823)	reference%timed%zerod_real%ref1%description (string) (9.5.1.1.3)
ref2 (1822)	reference%timed%zerod_real%ref2 (ref_t_0dr_ref) (9.5.1.3.309)
value (1823)	reference%timed%zerod_real%ref2%value (float) (9.5.1.1.1)
description (1823)	reference%timed%zerod_real%ref2%description (string) (9.5.1.1.3)
ref3 (1822)	reference%timed%zerod_real%ref3 (ref_t_0dr_ref) (9.5.1.3.309)
value (1823)	reference%timed%zerod_real%ref3%value (float) (9.5.1.1.1)
description (1823)	reference%timed%zerod_real%ref3%description (string) (9.5.1.1.3)
ref4 (1822)	reference%timed%zerod_real%ref4 (ref_t_0dr_ref) (9.5.1.3.309)
value (1823)	reference%timed%zerod_real%ref4%value (float) (9.5.1.1.1)
description (1823)	reference%timed%zerod_real%ref4%description (string) (9.5.1.1.3)
ref5 (1822)	reference%timed%zerod_real%ref5 (ref_t_0dr_ref) (9.5.1.3.309)
value (1823)	reference%timed%zerod_real%ref5%value (float) (9.5.1.1.1)
description (1823)	reference%timed%zerod_real%ref5%description (string) (9.5.1.1.3)

ref6 (1822)	reference%timed%zerod_real%ref6 (ref.t.0dr_ref) (9.5.1.3.309)
value (1823)	reference%timed%zerod_real%ref6%value (float) (9.5.1.1.1)
description (1823)	reference%timed%zerod_real%ref6%description (string) (9.5.1.1.3)
ref7 (1822)	reference%timed%zerod_real%ref7 (ref.t.0dr_ref) (9.5.1.3.309)
value (1823)	reference%timed%zerod_real%ref7%value (float) (9.5.1.1.1)
description (1823)	reference%timed%zerod_real%ref7%description (string) (9.5.1.1.3)
ref8 (1822)	reference%timed%zerod_real%ref8 (ref.t.0dr_ref) (9.5.1.3.309)
value (1823)	reference%timed%zerod_real%ref8%value (float) (9.5.1.1.1)
description (1823)	reference%timed%zerod_real%ref8%description (string) (9.5.1.1.3)
ref9 (1822)	reference%timed%zerod_real%ref9 (ref.t.0dr_ref) (9.5.1.3.309)
value (1823)	reference%timed%zerod_real%ref9%value (float) (9.5.1.1.1)
description (1823)	reference%timed%zerod_real%ref9%description (string) (9.5.1.1.3)
ref10 (1822)	reference%timed%zerod_real%ref10 (ref.t.0dr_ref) (9.5.1.3.309)
value (1823)	reference%timed%zerod_real%ref10%value (float) (9.5.1.1.1)
description (1823)	reference%timed%zerod_real%ref10%description (string) (9.5.1.1.3)
zerod_int (1819)	reference%timed%zerod_int (ref.t.0di) (9.5.1.3.306)
ref1 (1820)	reference%timed%zerod_int%ref1 (ref.t.0di_ref) (9.5.1.3.307)
value (1821)	reference%timed%zerod_int%ref1%value (integer) (9.5.1.1.2)
description (1821)	reference%timed%zerod_int%ref1%description (string) (9.5.1.1.3)
ref2 (1820)	reference%timed%zerod_int%ref2 (ref.t.0di_ref) (9.5.1.3.307)
value (1821)	reference%timed%zerod_int%ref2%value (integer) (9.5.1.1.2)
description (1821)	reference%timed%zerod_int%ref2%description (string) (9.5.1.1.3)
ref3 (1820)	reference%timed%zerod_int%ref3 (ref.t.0di_ref) (9.5.1.3.307)
value (1821)	reference%timed%zerod_int%ref3%value (integer) (9.5.1.1.2)
description (1821)	reference%timed%zerod_int%ref3%description (string) (9.5.1.1.3)
ref4 (1820)	reference%timed%zerod_int%ref4 (ref.t.0di_ref) (9.5.1.3.307)
value (1821)	reference%timed%zerod_int%ref4%value (integer) (9.5.1.1.2)
description (1821)	reference%timed%zerod_int%ref4%description (string) (9.5.1.1.3)
oned_real (1819)	reference%timed%oned_real (ref.t.1dr) (9.5.1.3.312)
ref1 (1826)	reference%timed%oned_real%ref1 (ref.t.1dr_ref) (9.5.1.3.313)
value (1827)	reference%timed%oned_real%ref1%value (vecflt.type) (9.5.1.2.9)
description (1827)	reference%timed%oned_real%ref1%description (string) (9.5.1.1.3)
ref2 (1826)	reference%timed%oned_real%ref2 (ref.t.1dr_ref) (9.5.1.3.313)
value (1827)	reference%timed%oned_real%ref2%value (vecflt.type) (9.5.1.2.9)
description (1827)	reference%timed%oned_real%ref2%description (string) (9.5.1.1.3)
ref3 (1826)	reference%timed%oned_real%ref3 (ref.t.1dr_ref) (9.5.1.3.313)
value (1827)	reference%timed%oned_real%ref3%value (vecflt.type) (9.5.1.2.9)
description (1827)	reference%timed%oned_real%ref3%description (string) (9.5.1.1.3)
ref4 (1826)	reference%timed%oned_real%ref4 (ref.t.1dr_ref) (9.5.1.3.313)
value (1827)	reference%timed%oned_real%ref4%value (vecflt.type) (9.5.1.2.9)
description (1827)	reference%timed%oned_real%ref4%description (string) (9.5.1.1.3)
ref5 (1826)	reference%timed%oned_real%ref5 (ref.t.1dr_ref) (9.5.1.3.313)
value (1827)	reference%timed%oned_real%ref5%value (vecflt.type) (9.5.1.2.9)
description (1827)	reference%timed%oned_real%ref5%description (string) (9.5.1.1.3)
oned_int (1819)	reference%timed%oned_int (ref.t.1di) (9.5.1.3.310)
ref1 (1824)	reference%timed%oned_int%ref1 (ref.t.1di_ref) (9.5.1.3.311)
value (1825)	reference%timed%oned_int%ref1%value (vecint.type) (9.5.1.2.10)
description (1825)	reference%timed%oned_int%ref1%description (string) (9.5.1.1.3)
ref2 (1824)	reference%timed%oned_int%ref2 (ref.t.1di_ref) (9.5.1.3.311)
value (1825)	reference%timed%oned_int%ref2%value (vecint.type) (9.5.1.2.10)
description (1825)	reference%timed%oned_int%ref2%description (string) (9.5.1.1.3)
ref3 (1824)	reference%timed%oned_int%ref3 (ref.t.1di_ref) (9.5.1.3.311)
value (1825)	reference%timed%oned_int%ref3%value (vecint.type) (9.5.1.2.10)
description (1825)	reference%timed%oned_int%ref3%description (string) (9.5.1.1.3)
ref4 (1824)	reference%timed%oned_int%ref4 (ref.t.1di_ref) (9.5.1.3.311)
value (1825)	reference%timed%oned_int%ref4%value (vecint.type) (9.5.1.2.10)
description (1825)	reference%timed%oned_int%ref4%description (string) (9.5.1.1.3)
time (1550)	reference%time (float) (9.5.1.1.1)

### 9.5.2.1.35 reflectomet

datainfo (1551)	reflectomet%datainfo (datainfo) (9.5.1.3.121)
dataprovider (1635)	reflectomet%datainfo%dataprovider (string) (9.5.1.1.3)
putdate (1635)	reflectomet%datainfo%putdate (string) (9.5.1.1.3)
source (1635)	reflectomet%datainfo%source (string) (9.5.1.1.3)
comment (1635)	reflectomet%datainfo%comment (string) (9.5.1.1.3)
cocos (1635)	reflectomet%datainfo%cocos (integer) (9.5.1.1.2)
id (1635)	reflectomet%datainfo%id (integer) (9.5.1.1.2)
isref (1635)	reflectomet%datainfo%isref (integer) (9.5.1.1.2)
whatref (1635)	reflectomet%datainfo%whatref (whatref) (9.5.1.3.437)
user (1951)	reflectomet%datainfo%whatref%user (string) (9.5.1.1.3)
machine (1951)	reflectomet%datainfo%whatref%machine (string) (9.5.1.1.3)
shot (1951)	reflectomet%datainfo%whatref%shot (integer) (9.5.1.1.2)
run (1951)	reflectomet%datainfo%whatref%run (integer) (9.5.1.1.2)
occurrence (1951)	reflectomet%datainfo%whatref%occurrence (integer) (9.5.1.1.2)
putinfo (1635)	reflectomet%datainfo%putinfo (putinfo) (9.5.1.3.290)
putmethod (1804)	reflectomet%datainfo%putinfo%putmethod (string) (9.5.1.1.3)
putaccess (1804)	reflectomet%datainfo%putinfo%putaccess (string) (9.5.1.1.3)
putlocation (1804)	reflectomet%datainfo%putinfo%putlocation (string) (9.5.1.1.3)
rights (1804)	reflectomet%datainfo%putinfo%rights (string) (9.5.1.1.3)
refl_receive (1551)	reflectomet%refl_receive(:) (refl_receive) (9.5.1.3.315)
name (1829)	reflectomet%refl_receive(:)%name (string) (9.5.1.1.3)
raw_signal (1829)	reflectomet%refl_receive(:)%raw_signal (t.series_real) (9.5.1.3.388)
time_wind (1902)	reflectomet%refl_receive(:)%raw_signal%time_wind (vecflt_type) (9.5.1.2.9)
values (1902)	reflectomet%refl_receive(:)%raw_signal%values (vecflt_type) (9.5.1.2.9)
io_signal (1829)	reflectomet%refl_receive(:)%io_signal (t.series_real) (9.5.1.3.388)
time_wind (1902)	reflectomet%refl_receive(:)%io_signal%time_wind (vecflt_type) (9.5.1.2.9)
values (1902)	reflectomet%refl_receive(:)%io_signal%values (vecflt_type) (9.5.1.2.9)
iq_receiver (1829)	reflectomet%refl_receive(:)%iq_receiver (t.series_cplx) (9.5.1.3.387)
time_wind (1901)	reflectomet%refl_receive(:)%iq_receiver%time_wind (vecflt_type) (9.5.1.2.9)
values_re (1901)	reflectomet%refl_receive(:)%iq_receiver%values_re (vecflt_type) (9.5.1.2.9)
values_im (1901)	reflectomet%refl_receive(:)%iq_receiver%values_im (vecflt_type) (9.5.1.2.9)
antenna_ind (1829)	reflectomet%refl_receive(:)%antenna_ind (integer) (9.5.1.1.2)
codeparam (1829)	reflectomet%refl_receive(:)%codeparam (codeparam) (9.5.1.3.66)
codename (1580)	reflectomet%refl_receive(:)%codeparam%codename (string) (9.5.1.1.3)
codeversion (1580)	reflectomet%refl_receive(:)%codeparam%codeversion (string) (9.5.1.1.3)
parameters (1580)	reflectomet%refl_receive(:)%codeparam%parameters (string) (9.5.1.1.3)
output_diag (1580)	reflectomet%refl_receive(:)%codeparam%output_diag (string) (9.5.1.1.3)
output_flag (1580)	reflectomet%refl_receive(:)%codeparam%output_flag (integer) (9.5.1.1.2)
antennas (1551)	reflectomet%antennas(:) (reflectometry_antennas) (9.5.1.3.316)
name (1830)	reflectomet%antennas(:)%name (string) (9.5.1.1.3)
type (1830)	reflectomet%antennas(:)%type (identifier) (9.5.1.3.214)
id (1728)	reflectomet%antennas(:)%type%id (string) (9.5.1.1.3)
flag (1728)	reflectomet%antennas(:)%type%flag (integer) (9.5.1.1.2)
description (1728)	reflectomet%antennas(:)%type%description (string) (9.5.1.1.3)
origin (1830)	reflectomet%antennas(:)%origin (float) (9.5.1.1.1)
radfield (1830)	reflectomet%antennas(:)%radfield (reflectometry_radfield) (9.5.1.3.317)
type (1831)	reflectomet%antennas(:)%radfield%type (identifier) (9.5.1.3.214)
id (1728)	reflectomet%antennas(:)%radfield%type%id (string) (9.5.1.1.3)
flag (1728)	reflectomet%antennas(:)%radfield%type%flag (integer) (9.5.1.1.2)
description (1728)	reflectomet%antennas(:)%radfield%type%description (string) (9.5.1.1.3)
position (1831)	reflectomet%antennas(:)%radfield%position (vecflt_type) (9.5.1.2.9)
gaussian (1831)	reflectomet%antennas(:)%radfield%gaussian(:) (reflectometry_radfield_gaussian) (9.5.1.3.318)
aperture (1832)	reflectomet%antennas(:)%radfield%gaussian(:)%aperture (simp_apert) (9.5.1.3.366)
type (1880)	reflectomet%antennas(:)%radfield%gaussian(:)%aperture%type (identifier) (9.5.1.3.214)
id (1728)	reflectomet%antennas(:)%radfield%gaussian(:)%aperture%type%id (string) (9.5.1.1.3)
flag (1728)	reflectomet%antennas(:)%radfield%gaussian(:)%aperture%type%flag (integer) (9.5.1.1.2)
description (1728)	reflectomet%antennas(:)%radfield%gaussian(:)%aperture%type%description (string) (9.5.1.1.3)
sizes (1880)	reflectomet%antennas(:)%radfield%gaussian(:)%aperture%sizes (vecflt_type) (9.5.1.2.9)
angle (1880)	reflectomet%antennas(:)%radfield%gaussian(:)%aperture%angle (float) (9.5.1.1.1)
waistsize (1832)	reflectomet%antennas(:)%radfield%gaussian(:)%waistsize (vecflt_type) (9.5.1.2.9)
waistzpos (1832)	reflectomet%antennas(:)%radfield%gaussian(:)%waistzpos (vecflt_type) (9.5.1.2.9)

tiltangle (1832)	reflectomet%antennas(:)%radfield%gaussian(:)%tiltangle (vecflt.type) (9.5.1.2.9)
polar_angle (1832)	reflectomet%antennas(:)%radfield%gaussian(:)%polar_angle (vecflt.type) (9.5.1.2.9)
frequency (1832)	reflectomet%antennas(:)%radfield%gaussian(:)%frequency (float) (9.5.1.1.1)
efield (1831)	reflectomet%antennas(:)%radfield%efield(:) (reflectometry_radifield_efield) (9.5.1.3.319)
grid2d (1833)	reflectomet%antennas(:)%radfield%efield(:)%grid2d (reggrid) (9.5.1.3.320)
dim1 (1834)	reflectomet%antennas(:)%radfield%efield(:)%grid2d%dim1 (vecflt.type) (9.5.1.2.9)
dim2 (1834)	reflectomet%antennas(:)%radfield%efield(:)%grid2d%dim2 (vecflt.type) (9.5.1.2.9)
e1 (1833)	reflectomet%antennas(:)%radfield%efield(:)%e1 (matcplx.type) (9.5.1.3.239)
re (1753)	reflectomet%antennas(:)%radfield%efield(:)%e1%re (matflt.type) (9.5.1.2.7)
im (1753)	reflectomet%antennas(:)%radfield%efield(:)%e1%im (matflt.type) (9.5.1.2.7)
e2 (1833)	reflectomet%antennas(:)%radfield%efield(:)%e2 (matcplx.type) (9.5.1.3.239)
re (1753)	reflectomet%antennas(:)%radfield%efield(:)%e2%re (matflt.type) (9.5.1.2.7)
im (1753)	reflectomet%antennas(:)%radfield%efield(:)%e2%im (matflt.type) (9.5.1.2.7)
frequency (1833)	reflectomet%antennas(:)%radfield%efield(:)%frequency (float) (9.5.1.1.1)
geometry (1830)	reflectomet%antennas(:)%geometry (float) (9.5.1.1.1)
launchsignal (1830)	reflectomet%antennas(:)%launchsignal (float) (9.5.1.1.1)
time (1551)	reflectomet%time (float) (9.5.1.1.1)

### 9.5.2.1.36 rfadiag

datainfo (1552)	rfadiag%datainfo (datainfo) (9.5.1.3.121)
dataprovider (1635)	rfadiag%datainfo%dataprovider (string) (9.5.1.1.3)
putdate (1635)	rfadiag%datainfo%putdate (string) (9.5.1.1.3)
source (1635)	rfadiag%datainfo%source (string) (9.5.1.1.3)
comment (1635)	rfadiag%datainfo%comment (string) (9.5.1.1.3)
cocos (1635)	rfadiag%datainfo%cocos (integer) (9.5.1.1.2)
id (1635)	rfadiag%datainfo%id (integer) (9.5.1.1.2)
isref (1635)	rfadiag%datainfo%isref (integer) (9.5.1.1.2)
whatref (1635)	rfadiag%datainfo%whatref (whatref) (9.5.1.3.437)
user (1951)	rfadiag%datainfo%whatref%user (string) (9.5.1.1.3)
machine (1951)	rfadiag%datainfo%whatref%machine (string) (9.5.1.1.3)
shot (1951)	rfadiag%datainfo%whatref%shot (integer) (9.5.1.1.2)
run (1951)	rfadiag%datainfo%whatref%run (integer) (9.5.1.1.2)
occurrence (1951)	rfadiag%datainfo%whatref%occurrence (integer) (9.5.1.1.2)
putinfo (1635)	rfadiag%datainfo%putinfo (putinfo) (9.5.1.3.290)
putmethod (1804)	rfadiag%datainfo%putinfo%putmethod (string) (9.5.1.1.3)
putaccess (1804)	rfadiag%datainfo%putinfo%putaccess (string) (9.5.1.1.3)
putlocation (1804)	rfadiag%datainfo%putinfo%putlocation (string) (9.5.1.1.3)
rights (1804)	rfadiag%datainfo%putinfo%rights (string) (9.5.1.1.3)
setup (1552)	rfadiag%setup (rfasetup) (9.5.1.3.322)
position (1836)	rfadiag%setup%position (rzphi1Dexp) (9.5.1.3.332)
r (1846)	rfadiag%setup%position%r (exp1D) (9.5.1.3.181)
value (1695)	rfadiag%setup%position%r%value (vecflt.type) (9.5.1.2.9)
abserror (1695)	rfadiag%setup%position%r%abserror (vecflt.type) (9.5.1.2.9)
releror (1695)	rfadiag%setup%position%r%releror (vecflt.type) (9.5.1.2.9)
z (1846)	rfadiag%setup%position%z (exp1D) (9.5.1.3.181)
value (1695)	rfadiag%setup%position%z%value (vecflt.type) (9.5.1.2.9)
abserror (1695)	rfadiag%setup%position%z%abserror (vecflt.type) (9.5.1.2.9)
releror (1695)	rfadiag%setup%position%z%releror (vecflt.type) (9.5.1.2.9)
phi (1846)	rfadiag%setup%position%phi (exp1D) (9.5.1.3.181)
value (1695)	rfadiag%setup%position%phi%value (vecflt.type) (9.5.1.2.9)
abserror (1695)	rfadiag%setup%position%phi%abserror (vecflt.type) (9.5.1.2.9)
releror (1695)	rfadiag%setup%position%phi%releror (vecflt.type) (9.5.1.2.9)
measure (1552)	rfadiag%measure (rfameasure) (9.5.1.3.321)
ti (1835)	rfadiag%measure%ti (exp1D) (9.5.1.3.181)
value (1695)	rfadiag%measure%ti%value (vecflt.type) (9.5.1.2.9)
abserror (1695)	rfadiag%measure%ti%abserror (vecflt.type) (9.5.1.2.9)
releror (1695)	rfadiag%measure%ti%releror (vecflt.type) (9.5.1.2.9)
time (1552)	rfadiag%time (float) (9.5.1.1.1)



### 9.5.2.1.37 sawteeth

datainfo (1553)	sawteeth%datainfo (datainfo) (9.5.1.3.121)
dataprovder (1635)	sawteeth%datainfo%dataprovder (string) (9.5.1.1.3)
putdate (1635)	sawteeth%datainfo%putdate (string) (9.5.1.1.3)
source (1635)	sawteeth%datainfo%source (string) (9.5.1.1.3)
comment (1635)	sawteeth%datainfo%comment (string) (9.5.1.1.3)
cocos (1635)	sawteeth%datainfo%cocos (integer) (9.5.1.1.2)
id (1635)	sawteeth%datainfo%id (integer) (9.5.1.1.2)
isref (1635)	sawteeth%datainfo%isref (integer) (9.5.1.1.2)
whatref (1635)	sawteeth%datainfo%whatref (whatref) (9.5.1.3.437)
user (1951)	sawteeth%datainfo%whatref%user (string) (9.5.1.1.3)
machine (1951)	sawteeth%datainfo%whatref%machine (string) (9.5.1.1.3)
shot (1951)	sawteeth%datainfo%whatref%shot (integer) (9.5.1.1.2)
run (1951)	sawteeth%datainfo%whatref%run (integer) (9.5.1.1.2)
occurrence (1951)	sawteeth%datainfo%whatref%occurrence (integer) (9.5.1.1.2)
putinfo (1635)	sawteeth%datainfo%putinfo (putinfo) (9.5.1.3.290)
putmethod (1804)	sawteeth%datainfo%putinfo%putmethod (string) (9.5.1.1.3)
putaccess (1804)	sawteeth%datainfo%putinfo%putaccess (string) (9.5.1.1.3)
putlocation (1804)	sawteeth%datainfo%putinfo%putlocation (string) (9.5.1.1.3)
rights (1804)	sawteeth%datainfo%putinfo%rights (string) (9.5.1.1.3)
crash_trig (1553)	sawteeth%crash_trig (integer) (9.5.1.1.2)
composition (1553)	sawteeth%composition (composition) (9.5.1.3.84)
amn (1598)	sawteeth%composition%amn (vecflt_type) (9.5.1.2.9)
zn (1598)	sawteeth%composition%zn (vecflt_type) (9.5.1.2.9)
zion (1598)	sawteeth%composition%zion (vecflt_type) (9.5.1.2.9)
imp_flag (1598)	sawteeth%composition%imp_flag (vecint_type) (9.5.1.2.10)
label (1598)	sawteeth%composition%label (vecstring_type) (9.5.1.2.11)
rho_tor_norm (1553)	sawteeth%rho_tor_norm (vecflt_type) (9.5.1.2.9)
rho_tor (1553)	sawteeth%rho_tor (vecflt_type) (9.5.1.2.9)
profiles1d (1553)	sawteeth%profiles1d (sawteeth_profiles1d) (9.5.1.3.337)
ne (1851)	sawteeth%profiles1d%ne (vecflt_type) (9.5.1.2.9)
ni (1851)	sawteeth%profiles1d%ni (matflt_type) (9.5.1.2.7)
te (1851)	sawteeth%profiles1d%te (vecflt_type) (9.5.1.2.9)
ti (1851)	sawteeth%profiles1d%ti (matflt_type) (9.5.1.2.7)
psi (1851)	sawteeth%profiles1d%psi (vecflt_type) (9.5.1.2.9)
phi (1851)	sawteeth%profiles1d%phi (vecflt_type) (9.5.1.2.9)
psistar (1851)	sawteeth%profiles1d%psistar (vecflt_type) (9.5.1.2.9)
volume (1851)	sawteeth%profiles1d%volume (vecflt_type) (9.5.1.2.9)
q (1851)	sawteeth%profiles1d%q (vecflt_type) (9.5.1.2.9)
diags (1553)	sawteeth%diags (sawteeth_diags) (9.5.1.3.336)
shear1 (1850)	sawteeth%diags%shear1 (float) (9.5.1.1.1)
rhotorn_q1 (1850)	sawteeth%diags%rhotorn_q1 (float) (9.5.1.1.1)
rhotorn_inv (1850)	sawteeth%diags%rhotorn_inv (float) (9.5.1.1.1)
rhotorn_mix (1850)	sawteeth%diags%rhotorn_mix (float) (9.5.1.1.1)
codeparam (1553)	sawteeth%codeparam (codeparam) (9.5.1.3.66)
codename (1580)	sawteeth%codeparam%codename (string) (9.5.1.1.3)
codeversion (1580)	sawteeth%codeparam%codeversion (string) (9.5.1.1.3)
parameters (1580)	sawteeth%codeparam%parameters (string) (9.5.1.1.3)
output_diag (1580)	sawteeth%codeparam%output_diag (string) (9.5.1.1.3)
output_flag (1580)	sawteeth%codeparam%output_flag (integer) (9.5.1.1.2)
time (1553)	sawteeth%time (float) (9.5.1.1.1)

### 9.5.2.1.38 scenario

datainfo (1554)	scenario%datainfo (datainfo) (9.5.1.3.121)
dataprovder (1635)	scenario%datainfo%dataprovder (string) (9.5.1.1.3)
putdate (1635)	scenario%datainfo%putdate (string) (9.5.1.1.3)
source (1635)	scenario%datainfo%source (string) (9.5.1.1.3)
comment (1635)	scenario%datainfo%comment (string) (9.5.1.1.3)
cocos (1635)	scenario%datainfo%cocos (integer) (9.5.1.1.2)



id (1635)	scenario%datainfo%id (integer) (9.5.1.1.2)
isref (1635)	scenario%datainfo%isref (integer) (9.5.1.1.2)
whatref (1635)	scenario%datainfo%whatref (whatref) (9.5.1.3.437)
user (1951)	scenario%datainfo%whatref%user (string) (9.5.1.1.3)
machine (1951)	scenario%datainfo%whatref%machine (string) (9.5.1.1.3)
shot (1951)	scenario%datainfo%whatref%shot (integer) (9.5.1.1.2)
run (1951)	scenario%datainfo%whatref%run (integer) (9.5.1.1.2)
occurrence (1951)	scenario%datainfo%whatref%occurrence (integer) (9.5.1.1.2)
putinfo (1635)	scenario%datainfo%putinfo (putinfo) (9.5.1.3.290)
putmethod (1804)	scenario%datainfo%putinfo%putmethod (string) (9.5.1.1.3)
putaccess (1804)	scenario%datainfo%putinfo%putaccess (string) (9.5.1.1.3)
putlocation (1804)	scenario%datainfo%putinfo%putlocation (string) (9.5.1.1.3)
rights (1804)	scenario%datainfo%putinfo%rights (string) (9.5.1.1.3)
centre (1554)	scenario%centre (scenario_centre) (9.5.1.3.338)
te0 (1852)	scenario%centre%te0 (scenario_ref) (9.5.1.3.355)
value (1869)	scenario%centre%te0%value (float) (9.5.1.1.1)
source (1869)	scenario%centre%te0%source (string) (9.5.1.1.3)
ti0 (1852)	scenario%centre%ti0 (scenario_ref) (9.5.1.3.355)
value (1869)	scenario%centre%ti0%value (float) (9.5.1.1.1)
source (1869)	scenario%centre%ti0%source (string) (9.5.1.1.3)
ne0 (1852)	scenario%centre%ne0 (scenario_ref) (9.5.1.3.355)
value (1869)	scenario%centre%ne0%value (float) (9.5.1.1.1)
source (1869)	scenario%centre%ne0%source (string) (9.5.1.1.3)
ni0 (1852)	scenario%centre%ni0 (scenario_ref) (9.5.1.3.355)
value (1869)	scenario%centre%ni0%value (float) (9.5.1.1.1)
source (1869)	scenario%centre%ni0%source (string) (9.5.1.1.3)
shift0 (1852)	scenario%centre%shift0 (scenario_ref) (9.5.1.3.355)
value (1869)	scenario%centre%shift0%value (float) (9.5.1.1.1)
source (1869)	scenario%centre%shift0%source (string) (9.5.1.1.3)
psi0 (1852)	scenario%centre%psi0 (scenario_ref) (9.5.1.3.355)
value (1869)	scenario%centre%psi0%value (float) (9.5.1.1.1)
source (1869)	scenario%centre%psi0%source (string) (9.5.1.1.3)
phi0 (1852)	scenario%centre%phi0 (scenario_ref) (9.5.1.3.355)
value (1869)	scenario%centre%phi0%value (float) (9.5.1.1.1)
source (1869)	scenario%centre%phi0%source (string) (9.5.1.1.3)
q0 (1852)	scenario%centre%q0 (scenario_ref) (9.5.1.3.355)
value (1869)	scenario%centre%q0%value (float) (9.5.1.1.1)
source (1869)	scenario%centre%q0%source (string) (9.5.1.1.3)
Rmag (1852)	scenario%centre%Rmag (scenario_ref) (9.5.1.3.355)
value (1869)	scenario%centre%Rmag%value (float) (9.5.1.1.1)
source (1869)	scenario%centre%Rmag%source (string) (9.5.1.1.3)
Zmag (1852)	scenario%centre%Zmag (scenario_ref) (9.5.1.3.355)
value (1869)	scenario%centre%Zmag%value (float) (9.5.1.1.1)
source (1869)	scenario%centre%Zmag%source (string) (9.5.1.1.3)
vtor_0 (1852)	scenario%centre%vtor_0 (scenario_ref) (9.5.1.3.355)
value (1869)	scenario%centre%vtor_0%value (float) (9.5.1.1.1)
source (1869)	scenario%centre%vtor_0%source (string) (9.5.1.1.3)
composition (1554)	scenario%composition (scenario_composition) (9.5.1.3.339)
amn (1853)	scenario%composition%amn (vecflt_type) (9.5.1.2.9)
zn (1853)	scenario%composition%zn (vecflt_type) (9.5.1.2.9)
zion (1853)	scenario%composition%zion (vecflt_type) (9.5.1.2.9)
imp_flag (1853)	scenario%composition%imp_flag (vecint_type) (9.5.1.2.10)
rot_imp_flag (1853)	scenario%composition%rot_imp_flag (vecint_type) (9.5.1.2.10)
pellet_amn (1853)	scenario%composition%pellet_amn (vecflt_type) (9.5.1.2.9)
pellet_zn (1853)	scenario%composition%pellet_zn (vecflt_type) (9.5.1.2.9)
nbi_amn (1853)	scenario%composition%nbi_amn (vecflt_type) (9.5.1.2.9)
nbi_zn (1853)	scenario%composition%nbi_zn (vecflt_type) (9.5.1.2.9)
configs (1554)	scenario%configs (scenario_configuration) (9.5.1.3.340)
config (1854)	scenario%configs%config (scenario_int) (9.5.1.3.347)
value (1861)	scenario%configs%config%value (integer) (9.5.1.1.2)
source (1861)	scenario%configs%config%source (string) (9.5.1.1.3)

lmode_sc (1854)	scenario%configs%lmode_sc (string) (9.5.1.1.3)
hmode_sc (1854)	scenario%configs%hmode_sc (string) (9.5.1.1.3)
core_sc (1854)	scenario%configs%core_sc (string) (9.5.1.1.3)
pedestal_sc (1854)	scenario%configs%pedestal_sc (string) (9.5.1.1.3)
helium_sc (1854)	scenario%configs%helium_sc (string) (9.5.1.1.3)
impurity_sc (1854)	scenario%configs%impurity_sc (string) (9.5.1.1.3)
l2h_sc (1854)	scenario%configs%l2h_sc (string) (9.5.1.1.3)
tor_rot_sc (1854)	scenario%configs%tor_rot_sc (string) (9.5.1.1.3)
wall_mat (1854)	scenario%configs%wall_mat (string) (9.5.1.1.3)
evap_mat (1854)	scenario%configs%evap_mat (string) (9.5.1.1.3)
lim_mat (1854)	scenario%configs%lim_mat (string) (9.5.1.1.3)
div_mat (1854)	scenario%configs%div_mat (string) (9.5.1.1.3)
coordinate (1854)	scenario%configs%coordinate (string) (9.5.1.1.3)
ecrh_freq (1854)	scenario%configs%ecrh_freq (scenario_ref) (9.5.1.3.355)
value (1869)	scenario%configs%ecrh_freq%value (float) (9.5.1.1.1)
source (1869)	scenario%configs%ecrh_freq%source (string) (9.5.1.1.3)
ecrh_loc (1854)	scenario%configs%ecrh_loc (scenario_ref) (9.5.1.3.355)
value (1869)	scenario%configs%ecrh_loc%value (float) (9.5.1.1.1)
source (1869)	scenario%configs%ecrh_loc%source (string) (9.5.1.1.3)
ecrh_mode (1854)	scenario%configs%ecrh_mode (scenario_int) (9.5.1.3.347)
value (1861)	scenario%configs%ecrh_mode%value (integer) (9.5.1.1.2)
source (1861)	scenario%configs%ecrh_mode%source (string) (9.5.1.1.3)
ecrh_tor_ang (1854)	scenario%configs%ecrh_tor_ang (scenario_ref) (9.5.1.3.355)
value (1869)	scenario%configs%ecrh_tor_ang%value (float) (9.5.1.1.1)
source (1869)	scenario%configs%ecrh_tor_ang%source (string) (9.5.1.1.3)
ecrh_pol_ang (1854)	scenario%configs%ecrh_pol_ang (scenario_ref) (9.5.1.3.355)
value (1869)	scenario%configs%ecrh_pol_ang%value (float) (9.5.1.1.1)
source (1869)	scenario%configs%ecrh_pol_ang%source (string) (9.5.1.1.3)
ecrh_harm (1854)	scenario%configs%ecrh_harm (scenario_int) (9.5.1.3.347)
value (1861)	scenario%configs%ecrh_harm%value (integer) (9.5.1.1.2)
source (1861)	scenario%configs%ecrh_harm%source (string) (9.5.1.1.3)
enbi (1854)	scenario%configs%enbi (scenario_ref) (9.5.1.3.355)
value (1869)	scenario%configs%enbi%value (float) (9.5.1.1.1)
source (1869)	scenario%configs%enbi%source (string) (9.5.1.1.3)
r_nbi (1854)	scenario%configs%r_nbi (scenario_ref) (9.5.1.3.355)
value (1869)	scenario%configs%r_nbi%value (float) (9.5.1.1.1)
source (1869)	scenario%configs%r_nbi%source (string) (9.5.1.1.3)
grad_b_drift (1854)	scenario%configs%grad_b_drift (scenario_int) (9.5.1.3.347)
value (1861)	scenario%configs%grad_b_drift%value (integer) (9.5.1.1.2)
source (1861)	scenario%configs%grad_b_drift%source (string) (9.5.1.1.3)
icrh_freq (1854)	scenario%configs%icrh_freq (scenario_ref) (9.5.1.3.355)
value (1869)	scenario%configs%icrh_freq%value (float) (9.5.1.1.1)
source (1869)	scenario%configs%icrh_freq%source (string) (9.5.1.1.3)
icrh_scheme (1854)	scenario%configs%icrh_scheme (string) (9.5.1.1.3)
icrh_phase (1854)	scenario%configs%icrh_phase (scenario_ref) (9.5.1.3.355)
value (1869)	scenario%configs%icrh_phase%value (float) (9.5.1.1.1)
source (1869)	scenario%configs%icrh_phase%source (string) (9.5.1.1.3)
LH_freq (1854)	scenario%configs%LH_freq (scenario_ref) (9.5.1.3.355)
value (1869)	scenario%configs%LH_freq%value (float) (9.5.1.1.1)
source (1869)	scenario%configs%LH_freq%source (string) (9.5.1.1.3)
LH_npar (1854)	scenario%configs%LH_npar (scenario_ref) (9.5.1.3.355)
value (1869)	scenario%configs%LH_npar%value (float) (9.5.1.1.1)
source (1869)	scenario%configs%LH_npar%source (string) (9.5.1.1.3)
pellet_ang (1854)	scenario%configs%pellet_ang (scenario_ref) (9.5.1.3.355)
value (1869)	scenario%configs%pellet_ang%value (float) (9.5.1.1.1)
source (1869)	scenario%configs%pellet_ang%source (string) (9.5.1.1.3)
pellet_v (1854)	scenario%configs%pellet_v (scenario_ref) (9.5.1.3.355)
value (1869)	scenario%configs%pellet_v%value (float) (9.5.1.1.1)
source (1869)	scenario%configs%pellet_v%source (string) (9.5.1.1.3)
pellet_nba (1854)	scenario%configs%pellet_nba (scenario_ref) (9.5.1.3.355)
value (1869)	scenario%configs%pellet_nba%value (float) (9.5.1.1.1)

source (1869)	scenario%configs%pellet_nba%source (string) (9.5.1.1.3)
confinement (1554)	scenario%confinement (scenario_confinement) (9.5.1.3.341)
tau_e (1855)	scenario%confinement%tau_e (scenario_ref) (9.5.1.3.355)
value (1869)	scenario%confinement%tau_e%value (float) (9.5.1.1.1)
source (1869)	scenario%confinement%tau_e%source (string) (9.5.1.1.3)
tau_l_sc (1855)	scenario%confinement%tau_l_sc (scenario_ref) (9.5.1.3.355)
value (1869)	scenario%confinement%tau_l_sc%value (float) (9.5.1.1.1)
source (1869)	scenario%confinement%tau_l_sc%source (string) (9.5.1.1.3)
tau_h_sc (1855)	scenario%confinement%tau_h_sc (scenario_ref) (9.5.1.3.355)
value (1869)	scenario%confinement%tau_h_sc%value (float) (9.5.1.1.1)
source (1869)	scenario%confinement%tau_h_sc%source (string) (9.5.1.1.3)
tau_he (1855)	scenario%confinement%tau_he (scenario_ref) (9.5.1.3.355)
value (1869)	scenario%confinement%tau_he%value (float) (9.5.1.1.1)
source (1869)	scenario%confinement%tau_he%source (string) (9.5.1.1.3)
tau_e_ee (1855)	scenario%confinement%tau_e_ee (scenario_ref) (9.5.1.3.355)
value (1869)	scenario%confinement%tau_e_ee%value (float) (9.5.1.1.1)
source (1869)	scenario%confinement%tau_e_ee%source (string) (9.5.1.1.3)
tau_e_ii (1855)	scenario%confinement%tau_e_ii (scenario_ref) (9.5.1.3.355)
value (1869)	scenario%confinement%tau_e_ii%value (float) (9.5.1.1.1)
source (1869)	scenario%confinement%tau_e_ii%source (string) (9.5.1.1.3)
tau_e_ei (1855)	scenario%confinement%tau_e_ei (scenario_ref) (9.5.1.3.355)
value (1869)	scenario%confinement%tau_e_ei%value (float) (9.5.1.1.1)
source (1869)	scenario%confinement%tau_e_ei%source (string) (9.5.1.1.3)
tau_cur_diff (1855)	scenario%confinement%tau_cur_diff (scenario_ref) (9.5.1.3.355)
value (1869)	scenario%confinement%tau_cur_diff%value (float) (9.5.1.1.1)
source (1869)	scenario%confinement%tau_cur_diff%source (string) (9.5.1.1.3)
tau_i_rol (1855)	scenario%confinement%tau_i_rol (scenario_ref) (9.5.1.3.355)
value (1869)	scenario%confinement%tau_i_rol%value (float) (9.5.1.1.1)
source (1869)	scenario%confinement%tau_i_rol%source (string) (9.5.1.1.3)
currents (1554)	scenario%currents (scenario_currents) (9.5.1.3.342)
RR (1856)	scenario%currents%RR (scenario_ref) (9.5.1.3.355)
value (1869)	scenario%currents%RR%value (float) (9.5.1.1.1)
source (1869)	scenario%currents%RR%source (string) (9.5.1.1.3)
i_align (1856)	scenario%currents%i_align (scenario_ref) (9.5.1.3.355)
value (1869)	scenario%currents%i_align%value (float) (9.5.1.1.1)
source (1869)	scenario%currents%i_align%source (string) (9.5.1.1.3)
i_boot (1856)	scenario%currents%i_boot (scenario_ref) (9.5.1.3.355)
value (1869)	scenario%currents%i_boot%value (float) (9.5.1.1.1)
source (1869)	scenario%currents%i_boot%source (string) (9.5.1.1.3)
i_cd_tot (1856)	scenario%currents%i_cd_tot (scenario_ref) (9.5.1.3.355)
value (1869)	scenario%currents%i_cd_tot%value (float) (9.5.1.1.1)
source (1869)	scenario%currents%i_cd_tot%source (string) (9.5.1.1.3)
i_eccd (1856)	scenario%currents%i_eccd (scenario_ref) (9.5.1.3.355)
value (1869)	scenario%currents%i_eccd%value (float) (9.5.1.1.1)
source (1869)	scenario%currents%i_eccd%source (string) (9.5.1.1.3)
i_fast_ion (1856)	scenario%currents%i_fast_ion (scenario_ref) (9.5.1.3.355)
value (1869)	scenario%currents%i_fast_ion%value (float) (9.5.1.1.1)
source (1869)	scenario%currents%i_fast_ion%source (string) (9.5.1.1.3)
i_fwcd (1856)	scenario%currents%i_fwcd (scenario_ref) (9.5.1.3.355)
value (1869)	scenario%currents%i_fwcd%value (float) (9.5.1.1.1)
source (1869)	scenario%currents%i_fwcd%source (string) (9.5.1.1.3)
i_lhcd (1856)	scenario%currents%i_lhcd (scenario_ref) (9.5.1.3.355)
value (1869)	scenario%currents%i_lhcd%value (float) (9.5.1.1.1)
source (1869)	scenario%currents%i_lhcd%source (string) (9.5.1.1.3)
i_nbicd (1856)	scenario%currents%i_nbicd (scenario_ref) (9.5.1.3.355)
value (1869)	scenario%currents%i_nbicd%value (float) (9.5.1.1.1)
source (1869)	scenario%currents%i_nbicd%source (string) (9.5.1.1.3)
i_ni_tot (1856)	scenario%currents%i_ni_tot (scenario_ref) (9.5.1.3.355)
value (1869)	scenario%currents%i_ni_tot%value (float) (9.5.1.1.1)
source (1869)	scenario%currents%i_ni_tot%source (string) (9.5.1.1.3)
i_ohm (1856)	scenario%currents%i_ohm (scenario_ref) (9.5.1.3.355)

value (1869)	scenario%currents%i_ohm%value (float) (9.5.1.1.1)
source (1869)	scenario%currents%i_ohm%source (string) (9.5.1.1.3)
i_par (1856)	scenario%currents%i_par (scenario_ref) (9.5.1.3.355)
value (1869)	scenario%currents%i_par%value (float) (9.5.1.1.1)
source (1869)	scenario%currents%i_par%source (string) (9.5.1.1.3)
i_runaway (1856)	scenario%currents%i_runaway (scenario_ref) (9.5.1.3.355)
value (1869)	scenario%currents%i_runaway%value (float) (9.5.1.1.1)
source (1869)	scenario%currents%i_runaway%source (string) (9.5.1.1.3)
v_loop (1856)	scenario%currents%v_loop (scenario_ref) (9.5.1.3.355)
value (1869)	scenario%currents%v_loop%value (float) (9.5.1.1.1)
source (1869)	scenario%currents%v_loop%source (string) (9.5.1.1.3)
v_meas (1856)	scenario%currents%v_meas (scenario_ref) (9.5.1.3.355)
value (1869)	scenario%currents%v_meas%value (float) (9.5.1.1.1)
source (1869)	scenario%currents%v_meas%source (string) (9.5.1.1.3)
edge (1554)	scenario%edge (scenario_edge) (9.5.1.3.343)
te_edge (1857)	scenario%edge%te_edge (scenario_ref) (9.5.1.3.355)
value (1869)	scenario%edge%te_edge%value (float) (9.5.1.1.1)
source (1869)	scenario%edge%te_edge%source (string) (9.5.1.1.3)
ti_edge (1857)	scenario%edge%ti_edge (scenario_ref) (9.5.1.3.355)
value (1869)	scenario%edge%ti_edge%value (float) (9.5.1.1.1)
source (1869)	scenario%edge%ti_edge%source (string) (9.5.1.1.3)
ne_edge (1857)	scenario%edge%ne_edge (scenario_ref) (9.5.1.3.355)
value (1869)	scenario%edge%ne_edge%value (float) (9.5.1.1.1)
source (1869)	scenario%edge%ne_edge%source (string) (9.5.1.1.3)
ni_edge (1857)	scenario%edge%ni_edge (scenario_ref) (9.5.1.3.355)
value (1869)	scenario%edge%ni_edge%value (float) (9.5.1.1.1)
source (1869)	scenario%edge%ni_edge%source (string) (9.5.1.1.3)
psi_edge (1857)	scenario%edge%psi_edge (scenario_ref) (9.5.1.3.355)
value (1869)	scenario%edge%psi_edge%value (float) (9.5.1.1.1)
source (1869)	scenario%edge%psi_edge%source (string) (9.5.1.1.3)
phi_edge (1857)	scenario%edge%phi_edge (scenario_ref) (9.5.1.3.355)
value (1869)	scenario%edge%phi_edge%value (float) (9.5.1.1.1)
source (1869)	scenario%edge%phi_edge%source (string) (9.5.1.1.3)
rho_edge (1857)	scenario%edge%rho_edge (scenario_ref) (9.5.1.3.355)
value (1869)	scenario%edge%rho_edge%value (float) (9.5.1.1.1)
source (1869)	scenario%edge%rho_edge%source (string) (9.5.1.1.3)
drho_edge_dt (1857)	scenario%edge%drho_edge_dt (scenario_ref) (9.5.1.3.355)
value (1869)	scenario%edge%drho_edge_dt%value (float) (9.5.1.1.1)
source (1869)	scenario%edge%drho_edge_dt%source (string) (9.5.1.1.3)
q_edge (1857)	scenario%edge%q_edge (scenario_ref) (9.5.1.3.355)
value (1869)	scenario%edge%q_edge%value (float) (9.5.1.1.1)
source (1869)	scenario%edge%q_edge%source (string) (9.5.1.1.3)
neutral_flux (1857)	scenario%edge%neutral_flux (scenario_ref) (9.5.1.3.355)
value (1869)	scenario%edge%neutral_flux%value (float) (9.5.1.1.1)
source (1869)	scenario%edge%neutral_flux%source (string) (9.5.1.1.3)
phi_plasma (1857)	scenario%edge%phi_plasma (scenario_ref) (9.5.1.3.355)
value (1869)	scenario%edge%phi_plasma%value (float) (9.5.1.1.1)
source (1869)	scenario%edge%phi_plasma%source (string) (9.5.1.1.3)
vtor_edge (1857)	scenario%edge%vtor_edge (scenario_ref) (9.5.1.3.355)
value (1869)	scenario%edge%vtor_edge%value (float) (9.5.1.1.1)
source (1869)	scenario%edge%vtor_edge%source (string) (9.5.1.1.3)
energy (1554)	scenario%energy (scenario_energy) (9.5.1.3.344)
w_tot (1858)	scenario%energy%w_tot (scenario_ref) (9.5.1.3.355)
value (1869)	scenario%energy%w_tot%value (float) (9.5.1.1.1)
source (1869)	scenario%energy%w_tot%source (string) (9.5.1.1.3)
w_b_pol (1858)	scenario%energy%w_b_pol (scenario_ref) (9.5.1.3.355)
value (1869)	scenario%energy%w_b_pol%value (float) (9.5.1.1.1)
source (1869)	scenario%energy%w_b_pol%source (string) (9.5.1.1.3)
w_dia (1858)	scenario%energy%w_dia (scenario_ref) (9.5.1.3.355)
value (1869)	scenario%energy%w_dia%value (float) (9.5.1.1.1)
source (1869)	scenario%energy%w_dia%source (string) (9.5.1.1.3)

dwdia_dt (1858)	scenario%energy%dwdia_dt (scenario_ref) (9.5.1.3.355)
value (1869)	scenario%energy%dwdia_dt%value (float) (9.5.1.1.1)
source (1869)	scenario%energy%dwdia_dt%source (string) (9.5.1.1.3)
w_b_tor_pla (1858)	scenario%energy%w_b_tor_pla (scenario_ref) (9.5.1.3.355)
value (1869)	scenario%energy%w_b_tor_pla%value (float) (9.5.1.1.1)
source (1869)	scenario%energy%w_b_tor_pla%source (string) (9.5.1.1.3)
w_th (1858)	scenario%energy%w_th (scenario_ref) (9.5.1.3.355)
value (1869)	scenario%energy%w_th%value (float) (9.5.1.1.1)
source (1869)	scenario%energy%w_th%source (string) (9.5.1.1.3)
dwtot_dt (1858)	scenario%energy%dwtot_dt (scenario_ref) (9.5.1.3.355)
value (1869)	scenario%energy%dwtot_dt%value (float) (9.5.1.1.1)
source (1869)	scenario%energy%dwtot_dt%source (string) (9.5.1.1.3)
dwbpol_dt (1858)	scenario%energy%dwbpol_dt (scenario_ref) (9.5.1.3.355)
value (1869)	scenario%energy%dwbpol_dt%value (float) (9.5.1.1.1)
source (1869)	scenario%energy%dwbpol_dt%source (string) (9.5.1.1.3)
dwbtorpla_dt (1858)	scenario%energy%dwbtorpla_dt (scenario_ref) (9.5.1.3.355)
value (1869)	scenario%energy%dwbtorpla_dt%value (float) (9.5.1.1.1)
source (1869)	scenario%energy%dwbtorpla_dt%source (string) (9.5.1.1.3)
dwth_dt (1858)	scenario%energy%dwth_dt (scenario_ref) (9.5.1.3.355)
value (1869)	scenario%energy%dwth_dt%value (float) (9.5.1.1.1)
source (1869)	scenario%energy%dwth_dt%source (string) (9.5.1.1.3)
esup_icrhtot (1858)	scenario%energy%esup_icrhtot (scenario_ref) (9.5.1.3.355)
value (1869)	scenario%energy%esup_icrhtot%value (float) (9.5.1.1.1)
source (1869)	scenario%energy%esup_icrhtot%source (string) (9.5.1.1.3)
esup_ichper (1858)	scenario%energy%esup_ichper (scenario_ref) (9.5.1.3.355)
value (1869)	scenario%energy%esup_ichper%value (float) (9.5.1.1.1)
source (1869)	scenario%energy%esup_ichper%source (string) (9.5.1.1.3)
esup_nbitot (1858)	scenario%energy%esup_nbitot (scenario_ref) (9.5.1.3.355)
value (1869)	scenario%energy%esup_nbitot%value (float) (9.5.1.1.1)
source (1869)	scenario%energy%esup_nbitot%source (string) (9.5.1.1.3)
esup_nbiperp (1858)	scenario%energy%esup_nbiperp (scenario_ref) (9.5.1.3.355)
value (1869)	scenario%energy%esup_nbiperp%value (float) (9.5.1.1.1)
source (1869)	scenario%energy%esup_nbiperp%source (string) (9.5.1.1.3)
esup_lhcd (1858)	scenario%energy%esup_lhcd (scenario_ref) (9.5.1.3.355)
value (1869)	scenario%energy%esup_lhcd%value (float) (9.5.1.1.1)
source (1869)	scenario%energy%esup_lhcd%source (string) (9.5.1.1.3)
esup_alpha (1858)	scenario%energy%esup_alpha (scenario_ref) (9.5.1.3.355)
value (1869)	scenario%energy%esup_alpha%value (float) (9.5.1.1.1)
source (1869)	scenario%energy%esup_alpha%source (string) (9.5.1.1.3)
eqgeometry (1554)	scenario%eqgeometry (eqgeometry) (9.5.1.3.175)
source (1689)	scenario%eqgeometry%source (string) (9.5.1.1.3)
boundarytype (1689)	scenario%eqgeometry%boundarytype (integer) (9.5.1.1.2)
boundary (1689)	scenario%eqgeometry%boundary(:) (rz1Dexp) (9.5.1.3.327)
r (1841)	scenario%eqgeometry%boundary(:)%r (vecflt.type) (9.5.1.2.9)
z (1841)	scenario%eqgeometry%boundary(:)%z (vecflt.type) (9.5.1.2.9)
geom_axis (1689)	scenario%eqgeometry%geom_axis (rz0D) (9.5.1.3.324)
r (1838)	scenario%eqgeometry%geom_axis%r (float) (9.5.1.1.1)
z (1838)	scenario%eqgeometry%geom_axis%z (float) (9.5.1.1.1)
a_minor (1689)	scenario%eqgeometry%a_minor (float) (9.5.1.1.1)
elongation (1689)	scenario%eqgeometry%elongation (float) (9.5.1.1.1)
elong_upper (1689)	scenario%eqgeometry%elong_upper (float) (9.5.1.1.1)
elong_lower (1689)	scenario%eqgeometry%elong_lower (float) (9.5.1.1.1)
tria_upper (1689)	scenario%eqgeometry%tria_upper (float) (9.5.1.1.1)
tria_lower (1689)	scenario%eqgeometry%tria_lower (float) (9.5.1.1.1)
xpts (1689)	scenario%eqgeometry%xpts(:) (rz1Dexp) (9.5.1.3.327)
r (1841)	scenario%eqgeometry%xpts(:)%r (vecflt.type) (9.5.1.2.9)
z (1841)	scenario%eqgeometry%xpts(:)%z (vecflt.type) (9.5.1.2.9)
left_low_st (1689)	scenario%eqgeometry%left_low_st (rz0D) (9.5.1.3.324)
r (1838)	scenario%eqgeometry%left_low_st%r (float) (9.5.1.1.1)
z (1838)	scenario%eqgeometry%left_low_st%z (float) (9.5.1.1.1)
right_low_st (1689)	scenario%eqgeometry%right_low_st (rz0D) (9.5.1.3.324)

r (1838)	scenario%eqgeometry%right_low_st%r (float) (9.5.1.1.1)
z (1838)	scenario%eqgeometry%right_low_st%z (float) (9.5.1.1.1)
left_up_st (1689)	scenario%eqgeometry%left_up_st (rz0D) (9.5.1.3.324)
r (1838)	scenario%eqgeometry%left_up_st%r (float) (9.5.1.1.1)
z (1838)	scenario%eqgeometry%left_up_st%z (float) (9.5.1.1.1)
right_up_st (1689)	scenario%eqgeometry%right_up_st (rz0D) (9.5.1.3.324)
r (1838)	scenario%eqgeometry%right_up_st%r (float) (9.5.1.1.1)
z (1838)	scenario%eqgeometry%right_up_st%z (float) (9.5.1.1.1)
active_limit (1689)	scenario%eqgeometry%active_limit (rz0D) (9.5.1.3.324)
r (1838)	scenario%eqgeometry%active_limit%r (float) (9.5.1.1.1)
z (1838)	scenario%eqgeometry%active_limit%z (float) (9.5.1.1.1)
ang_lcms_upo (1689)	scenario%eqgeometry%ang_lcms_upo (float) (9.5.1.1.1)
ang_lcms_upi (1689)	scenario%eqgeometry%ang_lcms_upi (float) (9.5.1.1.1)
ang_lcms_lwo (1689)	scenario%eqgeometry%ang_lcms_lwo (float) (9.5.1.1.1)
ang_lcms_lwi (1689)	scenario%eqgeometry%ang_lcms_lwi (float) (9.5.1.1.1)
global_param (1554)	scenario%global_param (scenario_global) (9.5.1.3.345)
ip (1859)	scenario%global_param%ip (scenario_ref) (9.5.1.3.355)
value (1869)	scenario%global_param%ip%value (float) (9.5.1.1.1)
source (1869)	scenario%global_param%ip%source (string) (9.5.1.1.3)
dip_dt (1859)	scenario%global_param%dip_dt (scenario_ref) (9.5.1.3.355)
value (1869)	scenario%global_param%dip_dt%value (float) (9.5.1.1.1)
source (1869)	scenario%global_param%dip_dt%source (string) (9.5.1.1.3)
beta_pol (1859)	scenario%global_param%beta_pol (scenario_ref) (9.5.1.3.355)
value (1869)	scenario%global_param%beta_pol%value (float) (9.5.1.1.1)
source (1869)	scenario%global_param%beta_pol%source (string) (9.5.1.1.3)
beta_tor (1859)	scenario%global_param%beta_tor (scenario_ref) (9.5.1.3.355)
value (1869)	scenario%global_param%beta_tor%value (float) (9.5.1.1.1)
source (1869)	scenario%global_param%beta_tor%source (string) (9.5.1.1.3)
beta_normal (1859)	scenario%global_param%beta_normal (scenario_ref) (9.5.1.3.355)
value (1869)	scenario%global_param%beta_normal%value (float) (9.5.1.1.1)
source (1869)	scenario%global_param%beta_normal%source (string) (9.5.1.1.3)
li (1859)	scenario%global_param%li (scenario_ref) (9.5.1.3.355)
value (1869)	scenario%global_param%li%value (float) (9.5.1.1.1)
source (1869)	scenario%global_param%li%source (string) (9.5.1.1.3)
volume (1859)	scenario%global_param%volume (scenario_ref) (9.5.1.3.355)
value (1869)	scenario%global_param%volume%value (float) (9.5.1.1.1)
source (1869)	scenario%global_param%volume%source (string) (9.5.1.1.3)
area_pol (1859)	scenario%global_param%area_pol (scenario_ref) (9.5.1.3.355)
value (1869)	scenario%global_param%area_pol%value (float) (9.5.1.1.1)
source (1869)	scenario%global_param%area_pol%source (string) (9.5.1.1.3)
area_ext (1859)	scenario%global_param%area_ext (scenario_ref) (9.5.1.3.355)
value (1869)	scenario%global_param%area_ext%value (float) (9.5.1.1.1)
source (1869)	scenario%global_param%area_ext%source (string) (9.5.1.1.3)
len_sepa (1859)	scenario%global_param%len_sepa (scenario_ref) (9.5.1.3.355)
value (1869)	scenario%global_param%len_sepa%value (float) (9.5.1.1.1)
source (1869)	scenario%global_param%len_sepa%source (string) (9.5.1.1.3)
beta_pol_th (1859)	scenario%global_param%beta_pol_th (scenario_ref) (9.5.1.3.355)
value (1869)	scenario%global_param%beta_pol_th%value (float) (9.5.1.1.1)
source (1869)	scenario%global_param%beta_pol_th%source (string) (9.5.1.1.3)
beta_tor_th (1859)	scenario%global_param%beta_tor_th (scenario_ref) (9.5.1.3.355)
value (1869)	scenario%global_param%beta_tor_th%value (float) (9.5.1.1.1)
source (1869)	scenario%global_param%beta_tor_th%source (string) (9.5.1.1.3)
beta_n_th (1859)	scenario%global_param%beta_n_th (scenario_ref) (9.5.1.3.355)
value (1869)	scenario%global_param%beta_n_th%value (float) (9.5.1.1.1)
source (1869)	scenario%global_param%beta_n_th%source (string) (9.5.1.1.3)
disruption (1859)	scenario%global_param%disruption (scenario_ref) (9.5.1.3.355)
value (1869)	scenario%global_param%disruption%value (float) (9.5.1.1.1)
source (1869)	scenario%global_param%disruption%source (string) (9.5.1.1.3)
mode_h (1859)	scenario%global_param%mode_h (scenario_ref) (9.5.1.3.355)
value (1869)	scenario%global_param%mode_h%value (float) (9.5.1.1.1)
source (1869)	scenario%global_param%mode_h%source (string) (9.5.1.1.3)



s_alpha (1859)	scenario%global_param%s_alpha (scenario_ref) (9.5.1.3.355)
value (1869)	scenario%global_param%s_alpha%value (float) (9.5.1.1.1)
source (1869)	scenario%global_param%s_alpha%source (string) (9.5.1.1.3)
heat_power (1554)	scenario%heat_power (scenario_heat_power) (9.5.1.3.346)
plh (1860)	scenario%heat_power%plh (scenario_ref) (9.5.1.3.355)
value (1869)	scenario%heat_power%plh%value (float) (9.5.1.1.1)
source (1869)	scenario%heat_power%plh%source (string) (9.5.1.1.3)
pohmic (1860)	scenario%heat_power%pohmic (scenario_ref) (9.5.1.3.355)
value (1869)	scenario%heat_power%pohmic%value (float) (9.5.1.1.1)
source (1869)	scenario%heat_power%pohmic%source (string) (9.5.1.1.3)
picrh (1860)	scenario%heat_power%picrh (scenario_ref) (9.5.1.3.355)
value (1869)	scenario%heat_power%picrh%value (float) (9.5.1.1.1)
source (1869)	scenario%heat_power%picrh%source (string) (9.5.1.1.3)
pecrh (1860)	scenario%heat_power%pecrh (scenario_ref) (9.5.1.3.355)
value (1869)	scenario%heat_power%pecrh%value (float) (9.5.1.1.1)
source (1869)	scenario%heat_power%pecrh%source (string) (9.5.1.1.3)
pnbi (1860)	scenario%heat_power%pnbi (scenario_ref) (9.5.1.3.355)
value (1869)	scenario%heat_power%pnbi%value (float) (9.5.1.1.1)
source (1869)	scenario%heat_power%pnbi%source (string) (9.5.1.1.3)
pnbi_co_cur (1860)	scenario%heat_power%pnbi_co_cur (scenario_ref) (9.5.1.3.355)
value (1869)	scenario%heat_power%pnbi_co_cur%value (float) (9.5.1.1.1)
source (1869)	scenario%heat_power%pnbi_co_cur%source (string) (9.5.1.1.3)
pnbi_counter (1860)	scenario%heat_power%pnbi_counter (scenario_ref) (9.5.1.3.355)
value (1869)	scenario%heat_power%pnbi_counter%value (float) (9.5.1.1.1)
source (1869)	scenario%heat_power%pnbi_counter%source (string) (9.5.1.1.3)
plh_th (1860)	scenario%heat_power%plh_th (scenario_ref) (9.5.1.3.355)
value (1869)	scenario%heat_power%plh_th%value (float) (9.5.1.1.1)
source (1869)	scenario%heat_power%plh_th%source (string) (9.5.1.1.3)
picrh_th (1860)	scenario%heat_power%picrh_th (scenario_ref) (9.5.1.3.355)
value (1869)	scenario%heat_power%picrh_th%value (float) (9.5.1.1.1)
source (1869)	scenario%heat_power%picrh_th%source (string) (9.5.1.1.3)
pecrh_th (1860)	scenario%heat_power%pecrh_th (scenario_ref) (9.5.1.3.355)
value (1869)	scenario%heat_power%pecrh_th%value (float) (9.5.1.1.1)
source (1869)	scenario%heat_power%pecrh_th%source (string) (9.5.1.1.3)
pnbi_th (1860)	scenario%heat_power%pnbi_th (scenario_ref) (9.5.1.3.355)
value (1869)	scenario%heat_power%pnbi_th%value (float) (9.5.1.1.1)
source (1869)	scenario%heat_power%pnbi_th%source (string) (9.5.1.1.3)
ploss_icrh (1860)	scenario%heat_power%ploss_icrh (scenario_ref) (9.5.1.3.355)
value (1869)	scenario%heat_power%ploss_icrh%value (float) (9.5.1.1.1)
source (1869)	scenario%heat_power%ploss_icrh%source (string) (9.5.1.1.3)
ploss_nbi (1860)	scenario%heat_power%ploss_nbi (scenario_ref) (9.5.1.3.355)
value (1869)	scenario%heat_power%ploss_nbi%value (float) (9.5.1.1.1)
source (1869)	scenario%heat_power%ploss_nbi%source (string) (9.5.1.1.3)
pbrem (1860)	scenario%heat_power%pbrem (scenario_ref) (9.5.1.3.355)
value (1869)	scenario%heat_power%pbrem%value (float) (9.5.1.1.1)
source (1869)	scenario%heat_power%pbrem%source (string) (9.5.1.1.3)
pcyclo (1860)	scenario%heat_power%pcyclo (scenario_ref) (9.5.1.3.355)
value (1869)	scenario%heat_power%pcyclo%value (float) (9.5.1.1.1)
source (1869)	scenario%heat_power%pcyclo%source (string) (9.5.1.1.3)
prad (1860)	scenario%heat_power%prad (scenario_ref) (9.5.1.3.355)
value (1869)	scenario%heat_power%prad%value (float) (9.5.1.1.1)
source (1869)	scenario%heat_power%prad%source (string) (9.5.1.1.3)
pdd_fus (1860)	scenario%heat_power%pdd_fus (scenario_ref) (9.5.1.3.355)
value (1869)	scenario%heat_power%pdd_fus%value (float) (9.5.1.1.1)
source (1869)	scenario%heat_power%pdd_fus%source (string) (9.5.1.1.3)
pei (1860)	scenario%heat_power%pei (scenario_ref) (9.5.1.3.355)
value (1869)	scenario%heat_power%pei%value (float) (9.5.1.1.1)
source (1869)	scenario%heat_power%pei%source (string) (9.5.1.1.3)
pel_tot (1860)	scenario%heat_power%pel_tot (scenario_ref) (9.5.1.3.355)
value (1869)	scenario%heat_power%pel_tot%value (float) (9.5.1.1.1)
source (1869)	scenario%heat_power%pel_tot%source (string) (9.5.1.1.3)



pel_fus (1860)	scenario%heat_power%pel_fus (scenario_ref) (9.5.1.3.355)
value (1869)	scenario%heat_power%pel_fus%value (float) (9.5.1.1.1)
source (1869)	scenario%heat_power%pel_fus%source (string) (9.5.1.1.3)
pel_ichr (1860)	scenario%heat_power%pel_ichr (scenario_ref) (9.5.1.3.355)
value (1869)	scenario%heat_power%pel_ichr%value (float) (9.5.1.1.1)
source (1869)	scenario%heat_power%pel_ichr%source (string) (9.5.1.1.3)
pel_nbi (1860)	scenario%heat_power%pel_nbi (scenario_ref) (9.5.1.3.355)
value (1869)	scenario%heat_power%pel_nbi%value (float) (9.5.1.1.1)
source (1869)	scenario%heat_power%pel_nbi%source (string) (9.5.1.1.3)
pfus_dt (1860)	scenario%heat_power%pfus_dt (scenario_ref) (9.5.1.3.355)
value (1869)	scenario%heat_power%pfus_dt%value (float) (9.5.1.1.1)
source (1869)	scenario%heat_power%pfus_dt%source (string) (9.5.1.1.3)
ploss_fus (1860)	scenario%heat_power%ploss_fus (scenario_ref) (9.5.1.3.355)
value (1869)	scenario%heat_power%ploss_fus%value (float) (9.5.1.1.1)
source (1869)	scenario%heat_power%ploss_fus%source (string) (9.5.1.1.3)
pfus_nbi (1860)	scenario%heat_power%pfus_nbi (scenario_ref) (9.5.1.3.355)
value (1869)	scenario%heat_power%pfus_nbi%value (float) (9.5.1.1.1)
source (1869)	scenario%heat_power%pfus_nbi%source (string) (9.5.1.1.3)
pfus_th (1860)	scenario%heat_power%pfus_th (scenario_ref) (9.5.1.3.355)
value (1869)	scenario%heat_power%pfus_th%value (float) (9.5.1.1.1)
source (1869)	scenario%heat_power%pfus_th%source (string) (9.5.1.1.3)
padd_tot (1860)	scenario%heat_power%padd_tot (scenario_ref) (9.5.1.3.355)
value (1869)	scenario%heat_power%padd_tot%value (float) (9.5.1.1.1)
source (1869)	scenario%heat_power%padd_tot%source (string) (9.5.1.1.3)
pion_tot (1860)	scenario%heat_power%pion_tot (scenario_ref) (9.5.1.3.355)
value (1869)	scenario%heat_power%pion_tot%value (float) (9.5.1.1.1)
source (1869)	scenario%heat_power%pion_tot%source (string) (9.5.1.1.3)
pion_fus (1860)	scenario%heat_power%pion_fus (scenario_ref) (9.5.1.3.355)
value (1869)	scenario%heat_power%pion_fus%value (float) (9.5.1.1.1)
source (1869)	scenario%heat_power%pion_fus%source (string) (9.5.1.1.3)
pion_ichr (1860)	scenario%heat_power%pion_ichr (scenario_ref) (9.5.1.3.355)
value (1869)	scenario%heat_power%pion_ichr%value (float) (9.5.1.1.1)
source (1869)	scenario%heat_power%pion_ichr%source (string) (9.5.1.1.3)
pion_nbi (1860)	scenario%heat_power%pion_nbi (scenario_ref) (9.5.1.3.355)
value (1869)	scenario%heat_power%pion_nbi%value (float) (9.5.1.1.1)
source (1869)	scenario%heat_power%pion_nbi%source (string) (9.5.1.1.3)
pioniz (1860)	scenario%heat_power%pioniz (scenario_ref) (9.5.1.3.355)
value (1869)	scenario%heat_power%pioniz%value (float) (9.5.1.1.1)
source (1869)	scenario%heat_power%pioniz%source (string) (9.5.1.1.3)
ploss (1860)	scenario%heat_power%ploss (scenario_ref) (9.5.1.3.355)
value (1869)	scenario%heat_power%ploss%value (float) (9.5.1.1.1)
source (1869)	scenario%heat_power%ploss%source (string) (9.5.1.1.3)
p_wth (1860)	scenario%heat_power%p_wth (scenario_ref) (9.5.1.3.355)
value (1869)	scenario%heat_power%p_wth%value (float) (9.5.1.1.1)
source (1869)	scenario%heat_power%p_wth%source (string) (9.5.1.1.3)
p_w (1860)	scenario%heat_power%p_w (scenario_ref) (9.5.1.3.355)
value (1869)	scenario%heat_power%p_w%value (float) (9.5.1.1.1)
source (1869)	scenario%heat_power%p_w%source (string) (9.5.1.1.3)
p_l2h_thr (1860)	scenario%heat_power%p_l2h_thr (scenario_ref) (9.5.1.3.355)
value (1869)	scenario%heat_power%p_l2h_thr%value (float) (9.5.1.1.1)
source (1869)	scenario%heat_power%p_l2h_thr%source (string) (9.5.1.1.3)
p_l2h_sc (1860)	scenario%heat_power%p_l2h_sc (scenario_ref) (9.5.1.3.355)
value (1869)	scenario%heat_power%p_l2h_sc%value (float) (9.5.1.1.1)
source (1869)	scenario%heat_power%p_l2h_sc%source (string) (9.5.1.1.3)
p_nbi_ichr (1860)	scenario%heat_power%p_nbi_ichr (scenario_ref) (9.5.1.3.355)
value (1869)	scenario%heat_power%p_nbi_ichr%value (float) (9.5.1.1.1)
source (1869)	scenario%heat_power%p_nbi_ichr%source (string) (9.5.1.1.3)
itb (1554)	scenario%itb (scenario_itb) (9.5.1.3.348)
q_min (1862)	scenario%itb%q_min (scenario_ref) (9.5.1.3.355)
value (1869)	scenario%itb%q_min%value (float) (9.5.1.1.1)
source (1869)	scenario%itb%q_min%source (string) (9.5.1.1.3)

te_itb (1862)	scenario%itb%te_itb (scenario_ref) (9.5.1.3.355)
value (1869)	scenario%itb%te_itb%value (float) (9.5.1.1.1)
source (1869)	scenario%itb%te_itb%source (string) (9.5.1.1.3)
ti_itb (1862)	scenario%itb%ti_itb (scenario_ref) (9.5.1.3.355)
value (1869)	scenario%itb%ti_itb%value (float) (9.5.1.1.1)
source (1869)	scenario%itb%ti_itb%source (string) (9.5.1.1.3)
ne_itb (1862)	scenario%itb%ne_itb (scenario_ref) (9.5.1.3.355)
value (1869)	scenario%itb%ne_itb%value (float) (9.5.1.1.1)
source (1869)	scenario%itb%ne_itb%source (string) (9.5.1.1.3)
ni_itb (1862)	scenario%itb%ni_itb (scenario_ref) (9.5.1.3.355)
value (1869)	scenario%itb%ni_itb%value (float) (9.5.1.1.1)
source (1869)	scenario%itb%ni_itb%source (string) (9.5.1.1.3)
psi_itb (1862)	scenario%itb%psi_itb (scenario_ref) (9.5.1.3.355)
value (1869)	scenario%itb%psi_itb%value (float) (9.5.1.1.1)
source (1869)	scenario%itb%psi_itb%source (string) (9.5.1.1.3)
phi_itb (1862)	scenario%itb%phi_itb (scenario_ref) (9.5.1.3.355)
value (1869)	scenario%itb%phi_itb%value (float) (9.5.1.1.1)
source (1869)	scenario%itb%phi_itb%source (string) (9.5.1.1.3)
rho_itb (1862)	scenario%itb%rho_itb (scenario_ref) (9.5.1.3.355)
value (1869)	scenario%itb%rho_itb%value (float) (9.5.1.1.1)
source (1869)	scenario%itb%rho_itb%source (string) (9.5.1.1.3)
h_itb (1862)	scenario%itb%h_itb (scenario_ref) (9.5.1.3.355)
value (1869)	scenario%itb%h_itb%value (float) (9.5.1.1.1)
source (1869)	scenario%itb%h_itb%source (string) (9.5.1.1.3)
width_itb (1862)	scenario%itb%width_itb (scenario_ref) (9.5.1.3.355)
value (1869)	scenario%itb%width_itb%value (float) (9.5.1.1.1)
source (1869)	scenario%itb%width_itb%source (string) (9.5.1.1.3)
vtor_itb (1862)	scenario%itb%vtor_itb (scenario_ref) (9.5.1.3.355)
value (1869)	scenario%itb%vtor_itb%value (float) (9.5.1.1.1)
source (1869)	scenario%itb%vtor_itb%source (string) (9.5.1.1.3)
itb_type (1862)	scenario%itb%itb_type (scenario_int) (9.5.1.3.347)
value (1861)	scenario%itb%itb_type%value (integer) (9.5.1.1.2)
source (1861)	scenario%itb%itb_type%source (string) (9.5.1.1.3)
lim_div_wall (1554)	scenario%lim_div_wall (scenario_lim_div_wall) (9.5.1.3.349)
te_lim_div (1863)	scenario%lim_div_wall%te_lim_div (scenario_ref) (9.5.1.3.355)
value (1869)	scenario%lim_div_wall%te_lim_div%value (float) (9.5.1.1.1)
source (1869)	scenario%lim_div_wall%te_lim_div%source (string) (9.5.1.1.3)
ti_lim_div (1863)	scenario%lim_div_wall%ti_lim_div (scenario_ref) (9.5.1.3.355)
value (1869)	scenario%lim_div_wall%ti_lim_div%value (float) (9.5.1.1.1)
source (1869)	scenario%lim_div_wall%ti_lim_div%source (string) (9.5.1.1.3)
ne_lim_div (1863)	scenario%lim_div_wall%ne_lim_div (scenario_ref) (9.5.1.3.355)
value (1869)	scenario%lim_div_wall%ne_lim_div%value (float) (9.5.1.1.1)
source (1869)	scenario%lim_div_wall%ne_lim_div%source (string) (9.5.1.1.3)
ni_lim_div (1863)	scenario%lim_div_wall%ni_lim_div (scenario_ref) (9.5.1.3.355)
value (1869)	scenario%lim_div_wall%ni_lim_div%value (float) (9.5.1.1.1)
source (1869)	scenario%lim_div_wall%ni_lim_div%source (string) (9.5.1.1.3)
p_peak_div (1863)	scenario%lim_div_wall%p_peak_div (scenario_ref) (9.5.1.3.355)
value (1869)	scenario%lim_div_wall%p_peak_div%value (float) (9.5.1.1.1)
source (1869)	scenario%lim_div_wall%p_peak_div%source (string) (9.5.1.1.3)
surf_temp (1863)	scenario%lim_div_wall%surf_temp (scenario_ref) (9.5.1.3.355)
value (1869)	scenario%lim_div_wall%surf_temp%value (float) (9.5.1.1.1)
source (1869)	scenario%lim_div_wall%surf_temp%source (string) (9.5.1.1.3)
p_lim_div (1863)	scenario%lim_div_wall%p_lim_div (scenario_ref) (9.5.1.3.355)
value (1869)	scenario%lim_div_wall%p_lim_div%value (float) (9.5.1.1.1)
source (1869)	scenario%lim_div_wall%p_lim_div%source (string) (9.5.1.1.3)
p_rad_div (1863)	scenario%lim_div_wall%p_rad_div (scenario_ref) (9.5.1.3.355)
value (1869)	scenario%lim_div_wall%p_rad_div%value (float) (9.5.1.1.1)
source (1869)	scenario%lim_div_wall%p_rad_div%source (string) (9.5.1.1.3)
wall_temp (1863)	scenario%lim_div_wall%wall_temp (scenario_ref) (9.5.1.3.355)
value (1869)	scenario%lim_div_wall%wall_temp%value (float) (9.5.1.1.1)
source (1869)	scenario%lim_div_wall%wall_temp%source (string) (9.5.1.1.3)

wall_state (1863)	scenario%lim_div_wall%wall_state (scenario_ref) (9.5.1.3.355)
value (1869)	scenario%lim_div_wall%wall_state%value (float) (9.5.1.1.1)
source (1869)	scenario%lim_div_wall%wall_state%source (string) (9.5.1.1.3)
detach_state (1863)	scenario%lim_div_wall%detach_state (scenario_ref) (9.5.1.3.355)
value (1869)	scenario%lim_div_wall%detach_state%value (float) (9.5.1.1.1)
source (1869)	scenario%lim_div_wall%detach_state%source (string) (9.5.1.1.3)
pump_flux (1863)	scenario%lim_div_wall%pump_flux (scenario_ref) (9.5.1.3.355)
value (1869)	scenario%lim_div_wall%pump_flux%value (float) (9.5.1.1.1)
source (1869)	scenario%lim_div_wall%pump_flux%source (string) (9.5.1.1.3)
line_ave (1554)	scenario%line_ave (scenario_line_ave) (9.5.1.3.350)
ne_line (1864)	scenario%line_ave%ne_line (scenario_ref) (9.5.1.3.355)
value (1869)	scenario%line_ave%ne_line%value (float) (9.5.1.1.1)
source (1869)	scenario%line_ave%ne_line%source (string) (9.5.1.1.3)
zeff_line (1864)	scenario%line_ave%zeff_line (scenario_ref) (9.5.1.3.355)
value (1869)	scenario%line_ave%zeff_line%value (float) (9.5.1.1.1)
source (1869)	scenario%line_ave%zeff_line%source (string) (9.5.1.1.3)
ne_zeff_line (1864)	scenario%line_ave%ne_zeff_line (scenario_ref) (9.5.1.3.355)
value (1869)	scenario%line_ave%ne_zeff_line%value (float) (9.5.1.1.1)
source (1869)	scenario%line_ave%ne_zeff_line%source (string) (9.5.1.1.3)
dne_line_dt (1864)	scenario%line_ave%dne_line_dt (scenario_ref) (9.5.1.3.355)
value (1869)	scenario%line_ave%dne_line_dt%value (float) (9.5.1.1.1)
source (1869)	scenario%line_ave%dne_line_dt%source (string) (9.5.1.1.3)
neutron (1554)	scenario%neutron (scenario_neutron) (9.5.1.3.351)
nnd_tot (1865)	scenario%neutron%nnd_tot (scenario_ref) (9.5.1.3.355)
value (1869)	scenario%neutron%nnd_tot%value (float) (9.5.1.1.1)
source (1869)	scenario%neutron%nnd_tot%source (string) (9.5.1.1.3)
nnd_th (1865)	scenario%neutron%nnd_th (scenario_ref) (9.5.1.3.355)
value (1869)	scenario%neutron%nnd_th%value (float) (9.5.1.1.1)
source (1869)	scenario%neutron%nnd_th%source (string) (9.5.1.1.3)
nnd_nbi_th (1865)	scenario%neutron%nnd_nbi_th (scenario_ref) (9.5.1.3.355)
value (1869)	scenario%neutron%nnd_nbi_th%value (float) (9.5.1.1.1)
source (1869)	scenario%neutron%nnd_nbi_th%source (string) (9.5.1.1.3)
nnd_nbi_nbi (1865)	scenario%neutron%nnd_nbi_nbi (scenario_ref) (9.5.1.3.355)
value (1869)	scenario%neutron%nnd_nbi_nbi%value (float) (9.5.1.1.1)
source (1869)	scenario%neutron%nnd_nbi_nbi%source (string) (9.5.1.1.3)
ndt_tot (1865)	scenario%neutron%ndt_tot (scenario_ref) (9.5.1.3.355)
value (1869)	scenario%neutron%ndt_tot%value (float) (9.5.1.1.1)
source (1869)	scenario%neutron%ndt_tot%source (string) (9.5.1.1.3)
ndt_th (1865)	scenario%neutron%ndt_th (scenario_ref) (9.5.1.3.355)
value (1869)	scenario%neutron%ndt_th%value (float) (9.5.1.1.1)
source (1869)	scenario%neutron%ndt_th%source (string) (9.5.1.1.3)
ninety_five (1554)	scenario%ninety_five (scenario_ninety_five) (9.5.1.3.352)
q_95 (1866)	scenario%ninety_five%q_95 (scenario_ref) (9.5.1.3.355)
value (1869)	scenario%ninety_five%q_95%value (float) (9.5.1.1.1)
source (1869)	scenario%ninety_five%q_95%source (string) (9.5.1.1.3)
elong_95 (1866)	scenario%ninety_five%elong_95 (scenario_ref) (9.5.1.3.355)
value (1869)	scenario%ninety_five%elong_95%value (float) (9.5.1.1.1)
source (1869)	scenario%ninety_five%elong_95%source (string) (9.5.1.1.3)
tria_95 (1866)	scenario%ninety_five%tria_95 (scenario_ref) (9.5.1.3.355)
value (1869)	scenario%ninety_five%tria_95%value (float) (9.5.1.1.1)
source (1869)	scenario%ninety_five%tria_95%source (string) (9.5.1.1.3)
tria_up_95 (1866)	scenario%ninety_five%tria_up_95 (scenario_ref) (9.5.1.3.355)
value (1869)	scenario%ninety_five%tria_up_95%value (float) (9.5.1.1.1)
source (1869)	scenario%ninety_five%tria_up_95%source (string) (9.5.1.1.3)
tria_lo_95 (1866)	scenario%ninety_five%tria_lo_95 (scenario_ref) (9.5.1.3.355)
value (1869)	scenario%ninety_five%tria_lo_95%value (float) (9.5.1.1.1)
source (1869)	scenario%ninety_five%tria_lo_95%source (string) (9.5.1.1.3)
te_95 (1866)	scenario%ninety_five%te_95 (scenario_ref) (9.5.1.3.355)
value (1869)	scenario%ninety_five%te_95%value (float) (9.5.1.1.1)
source (1869)	scenario%ninety_five%te_95%source (string) (9.5.1.1.3)
ti_95 (1866)	scenario%ninety_five%ti_95 (scenario_ref) (9.5.1.3.355)

value (1869)	scenario%ninety_five%ti_95%value (float) (9.5.1.1.1)
source (1869)	scenario%ninety_five%ti_95%source (string) (9.5.1.1.3)
ne_95 (1866)	scenario%ninety_five%ne_95 (scenario_ref) (9.5.1.3.355)
value (1869)	scenario%ninety_five%ne_95%value (float) (9.5.1.1.1)
source (1869)	scenario%ninety_five%ne_95%source (string) (9.5.1.1.3)
ni_95 (1866)	scenario%ninety_five%ni_95 (scenario_ref) (9.5.1.3.355)
value (1869)	scenario%ninety_five%ni_95%value (float) (9.5.1.1.1)
source (1869)	scenario%ninety_five%ni_95%source (string) (9.5.1.1.3)
phi_95 (1866)	scenario%ninety_five%phi_95 (scenario_ref) (9.5.1.3.355)
value (1869)	scenario%ninety_five%phi_95%value (float) (9.5.1.1.1)
source (1869)	scenario%ninety_five%phi_95%source (string) (9.5.1.1.3)
rho_95 (1866)	scenario%ninety_five%rho_95 (scenario_ref) (9.5.1.3.355)
value (1869)	scenario%ninety_five%rho_95%value (float) (9.5.1.1.1)
source (1869)	scenario%ninety_five%rho_95%source (string) (9.5.1.1.3)
vtor_95 (1866)	scenario%ninety_five%vtor_95 (scenario_ref) (9.5.1.3.355)
value (1869)	scenario%ninety_five%vtor_95%value (float) (9.5.1.1.1)
source (1869)	scenario%ninety_five%vtor_95%source (string) (9.5.1.1.3)
pedestal (1554)	scenario%pedestal (scenario_pedestal) (9.5.1.3.353)
te_ped (1867)	scenario%pedestal%te_ped (scenario_ref) (9.5.1.3.355)
value (1869)	scenario%pedestal%te_ped%value (float) (9.5.1.1.1)
source (1869)	scenario%pedestal%te_ped%source (string) (9.5.1.1.3)
ti_ped (1867)	scenario%pedestal%ti_ped (scenario_ref) (9.5.1.3.355)
value (1869)	scenario%pedestal%ti_ped%value (float) (9.5.1.1.1)
source (1869)	scenario%pedestal%ti_ped%source (string) (9.5.1.1.3)
ne_ped (1867)	scenario%pedestal%ne_ped (scenario_ref) (9.5.1.3.355)
value (1869)	scenario%pedestal%ne_ped%value (float) (9.5.1.1.1)
source (1869)	scenario%pedestal%ne_ped%source (string) (9.5.1.1.3)
ni_ped (1867)	scenario%pedestal%ni_ped (scenario_ref) (9.5.1.3.355)
value (1869)	scenario%pedestal%ni_ped%value (float) (9.5.1.1.1)
source (1869)	scenario%pedestal%ni_ped%source (string) (9.5.1.1.3)
psi_ped (1867)	scenario%pedestal%psi_ped (scenario_ref) (9.5.1.3.355)
value (1869)	scenario%pedestal%psi_ped%value (float) (9.5.1.1.1)
source (1869)	scenario%pedestal%psi_ped%source (string) (9.5.1.1.3)
phi_ped (1867)	scenario%pedestal%phi_ped (scenario_ref) (9.5.1.3.355)
value (1869)	scenario%pedestal%phi_ped%value (float) (9.5.1.1.1)
source (1869)	scenario%pedestal%phi_ped%source (string) (9.5.1.1.3)
rho_ped (1867)	scenario%pedestal%rho_ped (scenario_ref) (9.5.1.3.355)
value (1869)	scenario%pedestal%rho_ped%value (float) (9.5.1.1.1)
source (1869)	scenario%pedestal%rho_ped%source (string) (9.5.1.1.3)
q_ped (1867)	scenario%pedestal%q_ped (scenario_ref) (9.5.1.3.355)
value (1869)	scenario%pedestal%q_ped%value (float) (9.5.1.1.1)
source (1869)	scenario%pedestal%q_ped%source (string) (9.5.1.1.3)
pressure_ped (1867)	scenario%pedestal%pressure_ped (scenario_ref) (9.5.1.3.355)
value (1869)	scenario%pedestal%pressure_ped%value (float) (9.5.1.1.1)
source (1869)	scenario%pedestal%pressure_ped%source (string) (9.5.1.1.3)
vtor_ped (1867)	scenario%pedestal%vtor_ped (scenario_ref) (9.5.1.3.355)
value (1869)	scenario%pedestal%vtor_ped%value (float) (9.5.1.1.1)
source (1869)	scenario%pedestal%vtor_ped%source (string) (9.5.1.1.3)
references (1554)	scenario%references (scenario_references) (9.5.1.3.356)
plh (1870)	scenario%references%plh (scenario_ref) (9.5.1.3.355)
value (1869)	scenario%references%plh%value (float) (9.5.1.1.1)
source (1869)	scenario%references%plh%source (string) (9.5.1.1.3)
picrh (1870)	scenario%references%picrh (scenario_ref) (9.5.1.3.355)
value (1869)	scenario%references%picrh%value (float) (9.5.1.1.1)
source (1869)	scenario%references%picrh%source (string) (9.5.1.1.3)
pecrh (1870)	scenario%references%pecrh (scenario_ref) (9.5.1.3.355)
value (1869)	scenario%references%pecrh%value (float) (9.5.1.1.1)
source (1869)	scenario%references%pecrh%source (string) (9.5.1.1.3)
pnbi (1870)	scenario%references%pnbi (scenario_ref) (9.5.1.3.355)
value (1869)	scenario%references%pnbi%value (float) (9.5.1.1.1)
source (1869)	scenario%references%pnbi%source (string) (9.5.1.1.3)

ip (1870)	scenario%references%ip (scenario_ref) (9.5.1.3.355)
value (1869)	scenario%references%ip%value (float) (9.5.1.1.1)
source (1869)	scenario%references%ip%source (string) (9.5.1.1.3)
bvac_r (1870)	scenario%references%bvac_r (scenario_ref) (9.5.1.3.355)
value (1869)	scenario%references%bvac_r%value (float) (9.5.1.1.1)
source (1869)	scenario%references%bvac_r%source (string) (9.5.1.1.3)
zeffl (1870)	scenario%references%zeffl (scenario_ref) (9.5.1.3.355)
value (1869)	scenario%references%zeffl%value (float) (9.5.1.1.1)
source (1869)	scenario%references%zeffl%source (string) (9.5.1.1.3)
nbar (1870)	scenario%references%nbar (scenario_ref) (9.5.1.3.355)
value (1869)	scenario%references%nbar%value (float) (9.5.1.1.1)
source (1869)	scenario%references%nbar%source (string) (9.5.1.1.3)
xecrh (1870)	scenario%references%xecrh (scenario_ref) (9.5.1.3.355)
value (1869)	scenario%references%xecrh%value (float) (9.5.1.1.1)
source (1869)	scenario%references%xecrh%source (string) (9.5.1.1.3)
pol_flux (1870)	scenario%references%pol_flux (scenario_ref) (9.5.1.3.355)
value (1869)	scenario%references%pol_flux%value (float) (9.5.1.1.1)
source (1869)	scenario%references%pol_flux%source (string) (9.5.1.1.3)
enhancement (1870)	scenario%references%enhancement (scenario_ref) (9.5.1.3.355)
value (1869)	scenario%references%enhancement%value (float) (9.5.1.1.1)
source (1869)	scenario%references%enhancement%source (string) (9.5.1.1.3)
isotopic (1870)	scenario%references%isotopic (scenario_ref) (9.5.1.3.355)
value (1869)	scenario%references%isotopic%value (float) (9.5.1.1.1)
source (1869)	scenario%references%isotopic%source (string) (9.5.1.1.3)
nbi_td_ratio (1870)	scenario%references%nbi_td_ratio (scenario_ref) (9.5.1.3.355)
value (1869)	scenario%references%nbi_td_ratio%value (float) (9.5.1.1.1)
source (1869)	scenario%references%nbi_td_ratio%source (string) (9.5.1.1.3)
gas_puff (1870)	scenario%references%gas_puff (scenario_ref) (9.5.1.3.355)
value (1869)	scenario%references%gas_puff%value (float) (9.5.1.1.1)
source (1869)	scenario%references%gas_puff%source (string) (9.5.1.1.3)
reactor (1554)	scenario%reactor (scenario_reactor) (9.5.1.3.354)
pnetwork (1868)	scenario%reactor%pnetwork (float) (9.5.1.1.1)
sol (1554)	scenario%sol (scenario_sol) (9.5.1.3.357)
l_te_sol (1871)	scenario%sol%l_te_sol (scenario_ref) (9.5.1.3.355)
value (1869)	scenario%sol%l_te_sol%value (float) (9.5.1.1.1)
source (1869)	scenario%sol%l_te_sol%source (string) (9.5.1.1.3)
l_ti_sol (1871)	scenario%sol%l_ti_sol (scenario_ref) (9.5.1.3.355)
value (1869)	scenario%sol%l_ti_sol%value (float) (9.5.1.1.1)
source (1869)	scenario%sol%l_ti_sol%source (string) (9.5.1.1.3)
l_ne_sol (1871)	scenario%sol%l_ne_sol (scenario_ref) (9.5.1.3.355)
value (1869)	scenario%sol%l_ne_sol%value (float) (9.5.1.1.1)
source (1869)	scenario%sol%l_ne_sol%source (string) (9.5.1.1.3)
l_ni_sol (1871)	scenario%sol%l_ni_sol (scenario_ref) (9.5.1.3.355)
value (1869)	scenario%sol%l_ni_sol%value (float) (9.5.1.1.1)
source (1869)	scenario%sol%l_ni_sol%source (string) (9.5.1.1.3)
l_qe_sol (1871)	scenario%sol%l_qe_sol (scenario_ref) (9.5.1.3.355)
value (1869)	scenario%sol%l_qe_sol%value (float) (9.5.1.1.1)
source (1869)	scenario%sol%l_qe_sol%source (string) (9.5.1.1.3)
l_qi_sol (1871)	scenario%sol%l_qi_sol (scenario_ref) (9.5.1.3.355)
value (1869)	scenario%sol%l_qi_sol%value (float) (9.5.1.1.1)
source (1869)	scenario%sol%l_qi_sol%source (string) (9.5.1.1.3)
p_rad_sol (1871)	scenario%sol%p_rad_sol (scenario_ref) (9.5.1.3.355)
value (1869)	scenario%sol%p_rad_sol%value (float) (9.5.1.1.1)
source (1869)	scenario%sol%p_rad_sol%source (string) (9.5.1.1.3)
gas_puff (1871)	scenario%sol%gas_puff (scenario_ref) (9.5.1.3.355)
value (1869)	scenario%sol%gas_puff%value (float) (9.5.1.1.1)
source (1869)	scenario%sol%gas_puff%source (string) (9.5.1.1.3)
vol_ave (1554)	scenario%vol_ave (scenario_vol_ave) (9.5.1.3.358)
te_ave (1872)	scenario%vol_ave%te_ave (scenario_ref) (9.5.1.3.355)
value (1869)	scenario%vol_ave%te_ave%value (float) (9.5.1.1.1)
source (1869)	scenario%vol_ave%te_ave%source (string) (9.5.1.1.3)

ti_ave (1872)	scenario%vol_ave%ti_ave (scenario_ref) (9.5.1.3.355)
value (1869)	scenario%vol_ave%ti_ave%value (float) (9.5.1.1.1)
source (1869)	scenario%vol_ave%ti_ave%source (string) (9.5.1.1.3)
ne_ave (1872)	scenario%vol_ave%ne_ave (scenario_ref) (9.5.1.3.355)
value (1869)	scenario%vol_ave%ne_ave%value (float) (9.5.1.1.1)
source (1869)	scenario%vol_ave%ne_ave%source (string) (9.5.1.1.3)
dne_ave_dt (1872)	scenario%vol_ave%dne_ave_dt (scenario_ref) (9.5.1.3.355)
value (1869)	scenario%vol_ave%dne_ave_dt%value (float) (9.5.1.1.1)
source (1869)	scenario%vol_ave%dne_ave_dt%source (string) (9.5.1.1.3)
ni_ave (1872)	scenario%vol_ave%ni_ave (scenario_ref) (9.5.1.3.355)
value (1869)	scenario%vol_ave%ni_ave%value (float) (9.5.1.1.1)
source (1869)	scenario%vol_ave%ni_ave%source (string) (9.5.1.1.3)
zeff_ave (1872)	scenario%vol_ave%zeff_ave (scenario_ref) (9.5.1.3.355)
value (1869)	scenario%vol_ave%zeff_ave%value (float) (9.5.1.1.1)
source (1869)	scenario%vol_ave%zeff_ave%source (string) (9.5.1.1.3)
ti_o_te_ave (1872)	scenario%vol_ave%ti_o_te_ave (scenario_ref) (9.5.1.3.355)
value (1869)	scenario%vol_ave%ti_o_te_ave%value (float) (9.5.1.1.1)
source (1869)	scenario%vol_ave%ti_o_te_ave%source (string) (9.5.1.1.3)
meff_ave (1872)	scenario%vol_ave%meff_ave (scenario_ref) (9.5.1.3.355)
value (1869)	scenario%vol_ave%meff_ave%value (float) (9.5.1.1.1)
source (1869)	scenario%vol_ave%meff_ave%source (string) (9.5.1.1.3)
pellet_flux (1872)	scenario%vol_ave%pellet_flux (scenario_ref) (9.5.1.3.355)
value (1869)	scenario%vol_ave%pellet_flux%value (float) (9.5.1.1.1)
source (1869)	scenario%vol_ave%pellet_flux%source (string) (9.5.1.1.3)
nions_ave (1872)	scenario%vol_ave%nions_ave (vecflt_type) (9.5.1.2.9)
omega_ave (1872)	scenario%vol_ave%omega_ave (scenario_ref) (9.5.1.3.355)
value (1869)	scenario%vol_ave%omega_ave%value (float) (9.5.1.1.1)
source (1869)	scenario%vol_ave%omega_ave%source (string) (9.5.1.1.3)
codeparam (1554)	scenario%codeparam (codeparam) (9.5.1.3.66)
codename (1580)	scenario%codeparam%codename (string) (9.5.1.1.3)
codeversion (1580)	scenario%codeparam%codeversion (string) (9.5.1.1.3)
parameters (1580)	scenario%codeparam%parameters (string) (9.5.1.1.3)
output_diag (1580)	scenario%codeparam%output_diag (string) (9.5.1.1.3)
output_flag (1580)	scenario%codeparam%output_flag (integer) (9.5.1.1.2)
time (1554)	scenario%time (float) (9.5.1.1.1)

### 9.5.2.1.39 summary

datainfo (1555)	summary%datainfo (datainfo) (9.5.1.3.121)
dataprovider (1635)	summary%datainfo%dataprovider (string) (9.5.1.1.3)
putdate (1635)	summary%datainfo%putdate (string) (9.5.1.1.3)
source (1635)	summary%datainfo%source (string) (9.5.1.1.3)
comment (1635)	summary%datainfo%comment (string) (9.5.1.1.3)
cocos (1635)	summary%datainfo%cocos (integer) (9.5.1.1.2)
id (1635)	summary%datainfo%id (integer) (9.5.1.1.2)
isref (1635)	summary%datainfo%isref (integer) (9.5.1.1.2)
whatref (1635)	summary%datainfo%whatref (whatref) (9.5.1.3.437)
user (1951)	summary%datainfo%whatref%user (string) (9.5.1.1.3)
machine (1951)	summary%datainfo%whatref%machine (string) (9.5.1.1.3)
shot (1951)	summary%datainfo%whatref%shot (integer) (9.5.1.1.2)
run (1951)	summary%datainfo%whatref%run (integer) (9.5.1.1.2)
occurrence (1951)	summary%datainfo%whatref%occurrence (integer) (9.5.1.1.2)
putinfo (1635)	summary%datainfo%putinfo (putinfo) (9.5.1.3.290)
putmethod (1804)	summary%datainfo%putinfo%putmethod (string) (9.5.1.1.3)
putaccess (1804)	summary%datainfo%putinfo%putaccess (string) (9.5.1.1.3)
putlocation (1804)	summary%datainfo%putinfo%putlocation (string) (9.5.1.1.3)
rights (1804)	summary%datainfo%putinfo%rights (string) (9.5.1.1.3)
ip (1555)	summary%ip (reduced) (9.5.1.3.293)
value (1807)	summary%ip%value (float) (9.5.1.1.1)
source (1807)	summary%ip%source (string) (9.5.1.1.3)
time (1807)	summary%ip%time (float) (9.5.1.1.1)



bvac.r (1555)	summary%bvac.r (reduced) (9.5.1.3.293)
value (1807)	summary%bvac.r%value (float) (9.5.1.1.1)
source (1807)	summary%bvac.r%source (string) (9.5.1.1.3)
time (1807)	summary%bvac.r%time (float) (9.5.1.1.1)
geom_axis.r (1555)	summary%geom_axis.r (reduced) (9.5.1.3.293)
value (1807)	summary%geom_axis.r%value (float) (9.5.1.1.1)
source (1807)	summary%geom_axis.r%source (string) (9.5.1.1.3)
time (1807)	summary%geom_axis.r%time (float) (9.5.1.1.1)
a_minor (1555)	summary%a_minor (reduced) (9.5.1.3.293)
value (1807)	summary%a_minor%value (float) (9.5.1.1.1)
source (1807)	summary%a_minor%source (string) (9.5.1.1.3)
time (1807)	summary%a_minor%time (float) (9.5.1.1.1)
elongation (1555)	summary%elongation (reduced) (9.5.1.3.293)
value (1807)	summary%elongation%value (float) (9.5.1.1.1)
source (1807)	summary%elongation%source (string) (9.5.1.1.3)
time (1807)	summary%elongation%time (float) (9.5.1.1.1)
tria_lower (1555)	summary%tria_lower (reduced) (9.5.1.3.293)
value (1807)	summary%tria_lower%value (float) (9.5.1.1.1)
source (1807)	summary%tria_lower%source (string) (9.5.1.1.3)
time (1807)	summary%tria_lower%time (float) (9.5.1.1.1)
tria_upper (1555)	summary%tria_upper (reduced) (9.5.1.3.293)
value (1807)	summary%tria_upper%value (float) (9.5.1.1.1)
source (1807)	summary%tria_upper%source (string) (9.5.1.1.3)
time (1807)	summary%tria_upper%time (float) (9.5.1.1.1)
tev (1555)	summary%tev (reduced) (9.5.1.3.293)
value (1807)	summary%tev%value (float) (9.5.1.1.1)
source (1807)	summary%tev%source (string) (9.5.1.1.3)
time (1807)	summary%tev%time (float) (9.5.1.1.1)
tiv (1555)	summary%tiv (reduced) (9.5.1.3.293)
value (1807)	summary%tiv%value (float) (9.5.1.1.1)
source (1807)	summary%tiv%source (string) (9.5.1.1.3)
time (1807)	summary%tiv%time (float) (9.5.1.1.1)
nev (1555)	summary%nev (reduced) (9.5.1.3.293)
value (1807)	summary%nev%value (float) (9.5.1.1.1)
source (1807)	summary%nev%source (string) (9.5.1.1.3)
time (1807)	summary%nev%time (float) (9.5.1.1.1)
zeffv (1555)	summary%zeffv (reduced) (9.5.1.3.293)
value (1807)	summary%zeffv%value (float) (9.5.1.1.1)
source (1807)	summary%zeffv%source (string) (9.5.1.1.3)
time (1807)	summary%zeffv%time (float) (9.5.1.1.1)
beta_pol (1555)	summary%beta_pol (reduced) (9.5.1.3.293)
value (1807)	summary%beta_pol%value (float) (9.5.1.1.1)
source (1807)	summary%beta_pol%source (string) (9.5.1.1.3)
time (1807)	summary%beta_pol%time (float) (9.5.1.1.1)
beta_tor (1555)	summary%beta_tor (reduced) (9.5.1.3.293)
value (1807)	summary%beta_tor%value (float) (9.5.1.1.1)
source (1807)	summary%beta_tor%source (string) (9.5.1.1.3)
time (1807)	summary%beta_tor%time (float) (9.5.1.1.1)
beta_normal (1555)	summary%beta_normal (reduced) (9.5.1.3.293)
value (1807)	summary%beta_normal%value (float) (9.5.1.1.1)
source (1807)	summary%beta_normal%source (string) (9.5.1.1.3)
time (1807)	summary%beta_normal%time (float) (9.5.1.1.1)
li (1555)	summary%li (reduced) (9.5.1.3.293)
value (1807)	summary%li%value (float) (9.5.1.1.1)
source (1807)	summary%li%source (string) (9.5.1.1.3)
time (1807)	summary%li%time (float) (9.5.1.1.1)
volume (1555)	summary%volume (reduced) (9.5.1.3.293)
value (1807)	summary%volume%value (float) (9.5.1.1.1)
source (1807)	summary%volume%source (string) (9.5.1.1.3)
time (1807)	summary%volume%time (float) (9.5.1.1.1)
area (1555)	summary%area (reduced) (9.5.1.3.293)



value (1807)	summary%area%value (float) (9.5.1.1.1)
source (1807)	summary%area%source (string) (9.5.1.1.3)
time (1807)	summary%area%time (float) (9.5.1.1.1)
main_ion1.z (1555)	summary%main_ion1.z (reduced) (9.5.1.3.293)
value (1807)	summary%main_ion1.z%value (float) (9.5.1.1.1)
source (1807)	summary%main_ion1.z%source (string) (9.5.1.1.3)
time (1807)	summary%main_ion1.z%time (float) (9.5.1.1.1)
main_ion1.a (1555)	summary%main_ion1.a (reduced) (9.5.1.3.293)
value (1807)	summary%main_ion1.a%value (float) (9.5.1.1.1)
source (1807)	summary%main_ion1.a%source (string) (9.5.1.1.3)
time (1807)	summary%main_ion1.a%time (float) (9.5.1.1.1)
main_ion2.z (1555)	summary%main_ion2.z (reduced) (9.5.1.3.293)
value (1807)	summary%main_ion2.z%value (float) (9.5.1.1.1)
source (1807)	summary%main_ion2.z%source (string) (9.5.1.1.3)
time (1807)	summary%main_ion2.z%time (float) (9.5.1.1.1)
main_ion2.a (1555)	summary%main_ion2.a (reduced) (9.5.1.3.293)
value (1807)	summary%main_ion2.a%value (float) (9.5.1.1.1)
source (1807)	summary%main_ion2.a%source (string) (9.5.1.1.3)
time (1807)	summary%main_ion2.a%time (float) (9.5.1.1.1)
impur1.z (1555)	summary%impur1.z (reduced) (9.5.1.3.293)
value (1807)	summary%impur1.z%value (float) (9.5.1.1.1)
source (1807)	summary%impur1.z%source (string) (9.5.1.1.3)
time (1807)	summary%impur1.z%time (float) (9.5.1.1.1)
impur1.a (1555)	summary%impur1.a (reduced) (9.5.1.3.293)
value (1807)	summary%impur1.a%value (float) (9.5.1.1.1)
source (1807)	summary%impur1.a%source (string) (9.5.1.1.3)
time (1807)	summary%impur1.a%time (float) (9.5.1.1.1)
time (1555)	summary%time (float) (9.5.1.1.1)

#### 9.5.2.1.40 topinfo

dataprovder (1556)	topinfo%dataprovder (string) (9.5.1.1.3)
description (1556)	topinfo%description (string) (9.5.1.1.3)
firstputdate (1556)	topinfo%firstputdate (string) (9.5.1.1.3)
lastupdate (1556)	topinfo%lastupdate (string) (9.5.1.1.3)
source (1556)	topinfo%source (string) (9.5.1.1.3)
comment (1556)	topinfo%comment (string) (9.5.1.1.3)
dataversion (1556)	topinfo%dataversion (string) (9.5.1.1.3)
workflow (1556)	topinfo%workflow (string) (9.5.1.1.3)
entry (1556)	topinfo%entry (entry_def) (9.5.1.3.172)
user (1686)	topinfo%entry%user (string) (9.5.1.1.3)
machine (1686)	topinfo%entry%machine (string) (9.5.1.1.3)
shot (1686)	topinfo%entry%shot (integer) (9.5.1.1.2)
run (1686)	topinfo%entry%run (integer) (9.5.1.1.2)
parent_entry (1556)	topinfo%parent_entry (entry_def) (9.5.1.3.172)
user (1686)	topinfo%parent_entry%user (string) (9.5.1.1.3)
machine (1686)	topinfo%parent_entry%machine (string) (9.5.1.1.3)
shot (1686)	topinfo%parent_entry%shot (integer) (9.5.1.1.2)
run (1686)	topinfo%parent_entry%run (integer) (9.5.1.1.2)
mdinfo (1556)	topinfo%mdinfo (mdinfo) (9.5.1.3.240)
shot_min (1754)	topinfo%mdinfo%shot_min (integer) (9.5.1.1.2)
shot_max (1754)	topinfo%mdinfo%shot_max (integer) (9.5.1.1.2)
md_entry (1754)	topinfo%mdinfo%md_entry (entry_def) (9.5.1.3.172)
user (1686)	topinfo%mdinfo%md_entry%user (string) (9.5.1.1.3)
machine (1686)	topinfo%mdinfo%md_entry%machine (string) (9.5.1.1.3)
shot (1686)	topinfo%mdinfo%md_entry%shot (integer) (9.5.1.1.2)
run (1686)	topinfo%mdinfo%md_entry%run (integer) (9.5.1.1.2)

#### 9.5.2.1.41 toroidfield

datainfo (1557)	toroidfield%datainfo (datainfo) (9.5.1.3.121)
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dataprovider (1635)	toroidfield%datainfo%dataprovider (string) (9.5.1.1.3)
putdate (1635)	toroidfield%datainfo%putdate (string) (9.5.1.1.3)
source (1635)	toroidfield%datainfo%source (string) (9.5.1.1.3)
comment (1635)	toroidfield%datainfo%comment (string) (9.5.1.1.3)
cocos (1635)	toroidfield%datainfo%cocos (integer) (9.5.1.1.2)
id (1635)	toroidfield%datainfo%id (integer) (9.5.1.1.2)
isref (1635)	toroidfield%datainfo%isref (integer) (9.5.1.1.2)
whatref (1635)	toroidfield%datainfo%whatref (whatref) (9.5.1.3.437)
user (1951)	toroidfield%datainfo%whatref%user (string) (9.5.1.1.3)
machine (1951)	toroidfield%datainfo%whatref%machine (string) (9.5.1.1.3)
shot (1951)	toroidfield%datainfo%whatref%shot (integer) (9.5.1.1.2)
run (1951)	toroidfield%datainfo%whatref%run (integer) (9.5.1.1.2)
occurrence (1951)	toroidfield%datainfo%whatref%occurrence (integer) (9.5.1.1.2)
putinfo (1635)	toroidfield%datainfo%putinfo (putinfo) (9.5.1.3.290)
putmethod (1804)	toroidfield%datainfo%putinfo%putmethod (string) (9.5.1.1.3)
putaccess (1804)	toroidfield%datainfo%putinfo%putaccess (string) (9.5.1.1.3)
putlocation (1804)	toroidfield%datainfo%putinfo%putlocation (string) (9.5.1.1.3)
rights (1804)	toroidfield%datainfo%putinfo%rights (string) (9.5.1.1.3)
desc.tfcoils (1557)	toroidfield%desc.tfcoils (tf_desc.tfcoils) (9.5.1.3.392)
type (1906)	toroidfield%desc.tfcoils%type (integer) (9.5.1.1.2)
phi (1906)	toroidfield%desc.tfcoils%phi (float) (9.5.1.1.1)
circularcoil (1906)	toroidfield%desc.tfcoils%circularcoil (circularcoil) (9.5.1.3.65)
centre (1579)	toroidfield%desc.tfcoils%circularcoil%centre (rz0D) (9.5.1.3.324)
r (1838)	toroidfield%desc.tfcoils%circularcoil%centre%r (float) (9.5.1.1.1)
z (1838)	toroidfield%desc.tfcoils%circularcoil%centre%z (float) (9.5.1.1.1)
hlength (1579)	toroidfield%desc.tfcoils%circularcoil%hlength (float) (9.5.1.1.1)
radialwidth (1579)	toroidfield%desc.tfcoils%circularcoil%radialwidth (float) (9.5.1.1.1)
planecoil (1906)	toroidfield%desc.tfcoils%planecoil (planecoil) (9.5.1.3.280)
coordinates (1794)	toroidfield%desc.tfcoils%planecoil%coordinates (rz1D) (9.5.1.3.325)
r (1839)	toroidfield%desc.tfcoils%planecoil%coordinates%r (vecflt.type) (9.5.1.2.9)
z (1839)	toroidfield%desc.tfcoils%planecoil%coordinates%z (vecflt.type) (9.5.1.2.9)
hlength (1794)	toroidfield%desc.tfcoils%planecoil%hlength (vecflt.type) (9.5.1.2.9)
radialwidth (1794)	toroidfield%desc.tfcoils%planecoil%radialwidth (vecflt.type) (9.5.1.2.9)
structure (1906)	toroidfield%desc.tfcoils%structure (tf_structure) (9.5.1.3.393)
jcable (1907)	toroidfield%desc.tfcoils%structure%jcable (float) (9.5.1.1.1)
tisoft (1907)	toroidfield%desc.tfcoils%structure%tisoft (float) (9.5.1.1.1)
efcasing (1907)	toroidfield%desc.tfcoils%structure%efcasing (float) (9.5.1.1.1)
escasing (1907)	toroidfield%desc.tfcoils%structure%escasing (float) (9.5.1.1.1)
sigjackettf (1907)	toroidfield%desc.tfcoils%structure%sigjackettf (float) (9.5.1.1.1)
sigvaulttf (1907)	toroidfield%desc.tfcoils%structure%sigvaulttf (float) (9.5.1.1.1)
ktf (1907)	toroidfield%desc.tfcoils%structure%ktf (float) (9.5.1.1.1)
ritf (1907)	toroidfield%desc.tfcoils%structure%ritf (float) (9.5.1.1.1)
riitf (1907)	toroidfield%desc.tfcoils%structure%riitf (float) (9.5.1.1.1)
retf (1907)	toroidfield%desc.tfcoils%structure%retf (float) (9.5.1.1.1)
nturns (1557)	toroidfield%nturns (integer) (9.5.1.1.2)
ncoils (1557)	toroidfield%ncoils (integer) (9.5.1.1.2)
current (1557)	toroidfield%current (exp0D) (9.5.1.3.180)
value (1694)	toroidfield%current%value (float) (9.5.1.1.1)
abserror (1694)	toroidfield%current%abserror (float) (9.5.1.1.1)
relerror (1694)	toroidfield%current%relerror (float) (9.5.1.1.1)
bvac_r (1557)	toroidfield%bvac_r (exp0D) (9.5.1.3.180)
value (1694)	toroidfield%bvac_r%value (float) (9.5.1.1.1)
abserror (1694)	toroidfield%bvac_r%abserror (float) (9.5.1.1.1)
relerror (1694)	toroidfield%bvac_r%relerror (float) (9.5.1.1.1)
r0 (1557)	toroidfield%r0 (float) (9.5.1.1.1)
time (1557)	toroidfield%time (float) (9.5.1.1.1)

### 9.5.2.1.42 tdiag

datainfo (1558)	tsdiag%datainfo (datainfo) (9.5.1.3.121)
dataprovider (1635)	tsdiag%datainfo%dataprovider (string) (9.5.1.1.3)

putdate (1635)	tsdiag%datainfo%putdate (string) (9.5.1.1.3)
source (1635)	tsdiag%datainfo%source (string) (9.5.1.1.3)
comment (1635)	tsdiag%datainfo%comment (string) (9.5.1.1.3)
cocos (1635)	tsdiag%datainfo%cocos (integer) (9.5.1.1.2)
id (1635)	tsdiag%datainfo%id (integer) (9.5.1.1.2)
isref (1635)	tsdiag%datainfo%isref (integer) (9.5.1.1.2)
whatref (1635)	tsdiag%datainfo%whatref (whatref) (9.5.1.3.437)
user (1951)	tsdiag%datainfo%whatref%user (string) (9.5.1.1.3)
machine (1951)	tsdiag%datainfo%whatref%machine (string) (9.5.1.1.3)
shot (1951)	tsdiag%datainfo%whatref%shot (integer) (9.5.1.1.2)
run (1951)	tsdiag%datainfo%whatref%run (integer) (9.5.1.1.2)
occurrence (1951)	tsdiag%datainfo%whatref%occurrence (integer) (9.5.1.1.2)
putinfo (1635)	tsdiag%datainfo%putinfo (putinfo) (9.5.1.3.290)
putmethod (1804)	tsdiag%datainfo%putinfo%putmethod (string) (9.5.1.1.3)
putaccess (1804)	tsdiag%datainfo%putinfo%putaccess (string) (9.5.1.1.3)
putlocation (1804)	tsdiag%datainfo%putinfo%putlocation (string) (9.5.1.1.3)
rights (1804)	tsdiag%datainfo%putinfo%rights (string) (9.5.1.1.3)
setup (1558)	tsdiag%setup (tsetup) (9.5.1.3.403)
position (1917)	tsdiag%setup%position (rzphiID) (9.5.1.3.331)
r (1845)	tsdiag%setup%position%r (vecflt_type) (9.5.1.2.9)
z (1845)	tsdiag%setup%position%z (vecflt_type) (9.5.1.2.9)
phi (1845)	tsdiag%setup%position%phi (vecflt_type) (9.5.1.2.9)
measure (1558)	tsdiag%measure (tsmeasure) (9.5.1.3.402)
te (1916)	tsdiag%measure%te (expID) (9.5.1.3.181)
value (1695)	tsdiag%measure%te%value (vecflt_type) (9.5.1.2.9)
abserror (1695)	tsdiag%measure%te%abserror (vecflt_type) (9.5.1.2.9)
relelror (1695)	tsdiag%measure%te%relelror (vecflt_type) (9.5.1.2.9)
ne (1916)	tsdiag%measure%ne (expID) (9.5.1.3.181)
value (1695)	tsdiag%measure%ne%value (vecflt_type) (9.5.1.2.9)
abserror (1695)	tsdiag%measure%ne%abserror (vecflt_type) (9.5.1.2.9)
relelror (1695)	tsdiag%measure%ne%relelror (vecflt_type) (9.5.1.2.9)
time (1558)	tsdiag%time (float) (9.5.1.1.1)

### 9.5.2.1.43 turbulence

datainfo (1559)	turbulence%datainfo (datainfo) (9.5.1.3.121)
dataprovider (1635)	turbulence%datainfo%dataprovider (string) (9.5.1.1.3)
putdate (1635)	turbulence%datainfo%putdate (string) (9.5.1.1.3)
source (1635)	turbulence%datainfo%source (string) (9.5.1.1.3)
comment (1635)	turbulence%datainfo%comment (string) (9.5.1.1.3)
cocos (1635)	turbulence%datainfo%cocos (integer) (9.5.1.1.2)
id (1635)	turbulence%datainfo%id (integer) (9.5.1.1.2)
isref (1635)	turbulence%datainfo%isref (integer) (9.5.1.1.2)
whatref (1635)	turbulence%datainfo%whatref (whatref) (9.5.1.3.437)
user (1951)	turbulence%datainfo%whatref%user (string) (9.5.1.1.3)
machine (1951)	turbulence%datainfo%whatref%machine (string) (9.5.1.1.3)
shot (1951)	turbulence%datainfo%whatref%shot (integer) (9.5.1.1.2)
run (1951)	turbulence%datainfo%whatref%run (integer) (9.5.1.1.2)
occurrence (1951)	turbulence%datainfo%whatref%occurrence (integer) (9.5.1.1.2)
putinfo (1635)	turbulence%datainfo%putinfo (putinfo) (9.5.1.3.290)
putmethod (1804)	turbulence%datainfo%putinfo%putmethod (string) (9.5.1.1.3)
putaccess (1804)	turbulence%datainfo%putinfo%putaccess (string) (9.5.1.1.3)
putlocation (1804)	turbulence%datainfo%putinfo%putlocation (string) (9.5.1.1.3)
rights (1804)	turbulence%datainfo%putinfo%rights (string) (9.5.1.1.3)
composition (1559)	turbulence%composition (turbcomposition) (9.5.1.3.404)
amn (1918)	turbulence%composition%amn (vecflt_type) (9.5.1.2.9)
zn (1918)	turbulence%composition%zn (vecflt_type) (9.5.1.2.9)
zion (1918)	turbulence%composition%zion (vecflt_type) (9.5.1.2.9)
ie_mass (1918)	turbulence%composition%ie_mass (vecflt_type) (9.5.1.2.9)
coordsys (1559)	turbulence%coordsys (turbcoordsys) (9.5.1.3.405)
grid.type (1919)	turbulence%coordsys%grid.type (string) (9.5.1.1.3)

turbgrid (1919)	turbulence%coordsys%turbgrid (turbgrid) (9.5.1.3.407)
dim1 (1921)	turbulence%coordsys%turbgrid%dim1 (vecflt.type) (9.5.1.2.9)
dim2 (1921)	turbulence%coordsys%turbgrid%dim2 (vecflt.type) (9.5.1.2.9)
dim3 (1921)	turbulence%coordsys%turbgrid%dim3 (vecflt.type) (9.5.1.2.9)
dim.v1 (1921)	turbulence%coordsys%turbgrid%dim.v1 (vecflt.type) (9.5.1.2.9)
dim.v2 (1921)	turbulence%coordsys%turbgrid%dim.v2 (vecflt.type) (9.5.1.2.9)
jacobian (1919)	turbulence%coordsys%jacobian (matflt.type) (9.5.1.2.7)
g_11 (1919)	turbulence%coordsys%g_11 (matflt.type) (9.5.1.2.7)
g_12 (1919)	turbulence%coordsys%g_12 (matflt.type) (9.5.1.2.7)
g_13 (1919)	turbulence%coordsys%g_13 (matflt.type) (9.5.1.2.7)
g_22 (1919)	turbulence%coordsys%g_22 (matflt.type) (9.5.1.2.7)
g_23 (1919)	turbulence%coordsys%g_23 (matflt.type) (9.5.1.2.7)
g_33 (1919)	turbulence%coordsys%g_33 (matflt.type) (9.5.1.2.7)
position (1919)	turbulence%coordsys%position (rzphi3D) (9.5.1.3.334)
r (1848)	turbulence%coordsys%position%r (array3dflt.type) (9.5.1.2.1)
z (1848)	turbulence%coordsys%position%z (array3dflt.type) (9.5.1.2.1)
phi (1848)	turbulence%coordsys%position%phi (array3dflt.type) (9.5.1.2.1)
var0d (1559)	turbulence%var0d (turbvar0d) (9.5.1.3.409)
dtime.type (1923)	turbulence%var0d%dtime.type (string) (9.5.1.1.3)
dtime (1923)	turbulence%var0d%dtime (vecflt.type) (9.5.1.2.9)
en.exb (1923)	turbulence%var0d%en.exb (vecflt.type) (9.5.1.2.9)
en.mag (1923)	turbulence%var0d%en.mag (vecflt.type) (9.5.1.2.9)
en.el.th (1923)	turbulence%var0d%en.el.th (vecflt.type) (9.5.1.2.9)
en.ion.th (1923)	turbulence%var0d%en.ion.th (matflt.type) (9.5.1.2.7)
en.el.par (1923)	turbulence%var0d%en.el.par (vecflt.type) (9.5.1.2.9)
en.ion.par (1923)	turbulence%var0d%en.ion.par (matflt.type) (9.5.1.2.7)
en.tot (1923)	turbulence%var0d%en.tot (vecflt.type) (9.5.1.2.9)
fl.el (1923)	turbulence%var0d%fl.el (vecflt.type) (9.5.1.2.9)
fl.heatel (1923)	turbulence%var0d%fl.heatel (vecflt.type) (9.5.1.2.9)
fl.ion (1923)	turbulence%var0d%fl.ion (matflt.type) (9.5.1.2.7)
fl.heation (1923)	turbulence%var0d%fl.heation (matflt.type) (9.5.1.2.7)
fl.magel (1923)	turbulence%var0d%fl.magel (vecflt.type) (9.5.1.2.9)
fl.magheatel (1923)	turbulence%var0d%fl.magheatel (vecflt.type) (9.5.1.2.9)
fl.magion (1923)	turbulence%var0d%fl.magion (matflt.type) (9.5.1.2.7)
flmagheation (1923)	turbulence%var0d%flmagheation (matflt.type) (9.5.1.2.7)
var1d (1559)	turbulence%var1d (turbvar1d) (9.5.1.3.410)
rho.tor.norm (1924)	turbulence%var1d%rho.tor.norm (vecflt.type) (9.5.1.2.9)
phi (1924)	turbulence%var1d%phi (vecflt.type) (9.5.1.2.9)
er (1924)	turbulence%var1d%er (vecflt.type) (9.5.1.2.9)
vor (1924)	turbulence%var1d%vor (vecflt.type) (9.5.1.2.9)
apl (1924)	turbulence%var1d%apl (vecflt.type) (9.5.1.2.9)
jpl (1924)	turbulence%var1d%jpl (vecflt.type) (9.5.1.2.9)
ne (1924)	turbulence%var1d%ne (vecflt.type) (9.5.1.2.9)
te (1924)	turbulence%var1d%te (vecflt.type) (9.5.1.2.9)
ni (1924)	turbulence%var1d%ni (matflt.type) (9.5.1.2.7)
ti (1924)	turbulence%var1d%ti (matflt.type) (9.5.1.2.7)
ui (1924)	turbulence%var1d%ui (matflt.type) (9.5.1.2.7)
var2d (1559)	turbulence%var2d (turbvar2d) (9.5.1.3.411)
rho.tor.norm (1925)	turbulence%var2d%rho.tor.norm (vecflt.type) (9.5.1.2.9)
theta (1925)	turbulence%var2d%theta (vecflt.type) (9.5.1.2.9)
phi (1925)	turbulence%var2d%phi (matflt.type) (9.5.1.2.7)
apl (1925)	turbulence%var2d%apl (matflt.type) (9.5.1.2.7)
jpl (1925)	turbulence%var2d%jpl (matflt.type) (9.5.1.2.7)
vor (1925)	turbulence%var2d%vor (matflt.type) (9.5.1.2.7)
ne (1925)	turbulence%var2d%ne (matflt.type) (9.5.1.2.7)
te (1925)	turbulence%var2d%te (matflt.type) (9.5.1.2.7)
ni (1925)	turbulence%var2d%ni (array3dflt.type) (9.5.1.2.1)
ti (1925)	turbulence%var2d%ti (array3dflt.type) (9.5.1.2.1)
ui (1925)	turbulence%var2d%ui (array3dflt.type) (9.5.1.2.1)
var3d (1559)	turbulence%var3d (turbvar3d) (9.5.1.3.412)
phi (1926)	turbulence%var3d%phi (array3dflt.type) (9.5.1.2.1)

vor (1926)	turbulence%var3d%vor (array3dflt.type) (9.5.1.2.1)
jpl (1926)	turbulence%var3d%jpl (array3dflt.type) (9.5.1.2.1)
ne (1926)	turbulence%var3d%ne (array3dflt.type) (9.5.1.2.1)
var4d (1559)	turbulence%var4d (turbvar4d) (9.5.1.3.413)
fe (1927)	turbulence%var4d%fe (array4dflt.type) (9.5.1.2.3)
fi (1927)	turbulence%var4d%fi (array5dflt.type) (9.5.1.2.4)
var5d (1559)	turbulence%var5d (turbvar5d) (9.5.1.3.414)
fe (1928)	turbulence%var5d%fe (array5dflt.type) (9.5.1.2.4)
fi (1928)	turbulence%var5d%fi (array6dflt.type) (9.5.1.2.5)
spec1d (1559)	turbulence%spec1d (turbspec1d) (9.5.1.3.408)
kperp (1922)	turbulence%spec1d%kperp (vecflt.type) (9.5.1.2.9)
phi (1922)	turbulence%spec1d%phi (vecflt.type) (9.5.1.2.9)
vor (1922)	turbulence%spec1d%vor (vecflt.type) (9.5.1.2.9)
b (1922)	turbulence%spec1d%b (vecflt.type) (9.5.1.2.9)
jpl (1922)	turbulence%spec1d%jpl (vecflt.type) (9.5.1.2.9)
ne (1922)	turbulence%spec1d%ne (vecflt.type) (9.5.1.2.9)
te (1922)	turbulence%spec1d%te (vecflt.type) (9.5.1.2.9)
ti (1922)	turbulence%spec1d%ti (matflt.type) (9.5.1.2.7)
fe (1922)	turbulence%spec1d%fe (vecflt.type) (9.5.1.2.9)
qe (1922)	turbulence%spec1d%qe (vecflt.type) (9.5.1.2.9)
qi (1922)	turbulence%spec1d%qi (matflt.type) (9.5.1.2.7)
me (1922)	turbulence%spec1d%me (vecflt.type) (9.5.1.2.9)
mi (1922)	turbulence%spec1d%mi (matflt.type) (9.5.1.2.7)
env1d (1559)	turbulence%env1d (turbenv1d) (9.5.1.3.406)
theta (1920)	turbulence%env1d%theta (vecflt.type) (9.5.1.2.9)
phi (1920)	turbulence%env1d%phi (vecflt.type) (9.5.1.2.9)
vor (1920)	turbulence%env1d%vor (vecflt.type) (9.5.1.2.9)
jpl (1920)	turbulence%env1d%jpl (vecflt.type) (9.5.1.2.9)
ne (1920)	turbulence%env1d%ne (vecflt.type) (9.5.1.2.9)
he (1920)	turbulence%env1d%he (vecflt.type) (9.5.1.2.9)
te (1920)	turbulence%env1d%te (vecflt.type) (9.5.1.2.9)
ni (1920)	turbulence%env1d%ni (matflt.type) (9.5.1.2.7)
ti (1920)	turbulence%env1d%ti (matflt.type) (9.5.1.2.7)
ui (1920)	turbulence%env1d%ui (matflt.type) (9.5.1.2.7)
fe (1920)	turbulence%env1d%fe (vecflt.type) (9.5.1.2.9)
qe (1920)	turbulence%env1d%qe (vecflt.type) (9.5.1.2.9)
qi (1920)	turbulence%env1d%qi (matflt.type) (9.5.1.2.7)
me (1920)	turbulence%env1d%me (vecflt.type) (9.5.1.2.9)
mi (1920)	turbulence%env1d%mi (matflt.type) (9.5.1.2.7)
codeparam (1559)	turbulence%codeparam (codeparam) (9.5.1.3.66)
codename (1580)	turbulence%codeparam%codename (string) (9.5.1.1.3)
codeversion (1580)	turbulence%codeparam%codeversion (string) (9.5.1.1.3)
parameters (1580)	turbulence%codeparam%parameters (string) (9.5.1.1.3)
output_diag (1580)	turbulence%codeparam%output_diag (string) (9.5.1.1.3)
output_flag (1580)	turbulence%codeparam%output_flag (integer) (9.5.1.1.2)
time (1559)	turbulence%time (float) (9.5.1.1.1)

#### 9.5.2.1.44 vessel

datainfo (1560)	vessel%datainfo (datainfo) (9.5.1.3.121)
dataprovider (1635)	vessel%datainfo%dataprovider (string) (9.5.1.1.3)
putdate (1635)	vessel%datainfo%putdate (string) (9.5.1.1.3)
source (1635)	vessel%datainfo%source (string) (9.5.1.1.3)
comment (1635)	vessel%datainfo%comment (string) (9.5.1.1.3)
cocos (1635)	vessel%datainfo%cocos (integer) (9.5.1.1.2)
id (1635)	vessel%datainfo%id (integer) (9.5.1.1.2)
isref (1635)	vessel%datainfo%isref (integer) (9.5.1.1.2)
whatref (1635)	vessel%datainfo%whatref (whatref) (9.5.1.3.437)
user (1951)	vessel%datainfo%whatref%user (string) (9.5.1.1.3)
machine (1951)	vessel%datainfo%whatref%machine (string) (9.5.1.1.3)
shot (1951)	vessel%datainfo%whatref%shot (integer) (9.5.1.1.2)

run (1951)	vessel%datainfo%whatref%run (integer) (9.5.1.1.2)
occurrence (1951)	vessel%datainfo%whatref%occurrence (integer) (9.5.1.1.2)
putinfo (1635)	vessel%datainfo%putinfo (putinfo) (9.5.1.3.290)
putmethod (1804)	vessel%datainfo%putinfo%putmethod (string) (9.5.1.1.3)
putaccess (1804)	vessel%datainfo%putinfo%putaccess (string) (9.5.1.1.3)
putlocation (1804)	vessel%datainfo%putinfo%putlocation (string) (9.5.1.1.3)
rights (1804)	vessel%datainfo%putinfo%rights (string) (9.5.1.1.3)
position (1560)	vessel%position (rz1D) (9.5.1.3.325)
r (1839)	vessel%position%r (vecflt_type) (9.5.1.2.9)
z (1839)	vessel%position%z (vecflt_type) (9.5.1.2.9)

### 9.5.2.1.45 wall

datainfo (1561)	wall%datainfo (datainfo) (9.5.1.3.121)
dataprovider (1635)	wall%datainfo%dataprovider (string) (9.5.1.1.3)
putdate (1635)	wall%datainfo%putdate (string) (9.5.1.1.3)
source (1635)	wall%datainfo%source (string) (9.5.1.1.3)
comment (1635)	wall%datainfo%comment (string) (9.5.1.1.3)
cocos (1635)	wall%datainfo%cocos (integer) (9.5.1.1.2)
id (1635)	wall%datainfo%id (integer) (9.5.1.1.2)
isref (1635)	wall%datainfo%isref (integer) (9.5.1.1.2)
whatref (1635)	wall%datainfo%whatref (whatref) (9.5.1.3.437)
user (1951)	wall%datainfo%whatref%user (string) (9.5.1.1.3)
machine (1951)	wall%datainfo%whatref%machine (string) (9.5.1.1.3)
shot (1951)	wall%datainfo%whatref%shot (integer) (9.5.1.1.2)
run (1951)	wall%datainfo%whatref%run (integer) (9.5.1.1.2)
occurrence (1951)	wall%datainfo%whatref%occurrence (integer) (9.5.1.1.2)
putinfo (1635)	wall%datainfo%putinfo (putinfo) (9.5.1.3.290)
putmethod (1804)	wall%datainfo%putinfo%putmethod (string) (9.5.1.1.3)
putaccess (1804)	wall%datainfo%putinfo%putaccess (string) (9.5.1.1.3)
putlocation (1804)	wall%datainfo%putinfo%putlocation (string) (9.5.1.1.3)
rights (1804)	wall%datainfo%putinfo%rights (string) (9.5.1.1.3)
wall2d_mhd (1561)	wall%wall2d_mhd (wall2d_mhd) (9.5.1.3.418)
wall_id (1932)	wall%wall2d_mhd%wall_id (identifier) (9.5.1.3.214)
id (1728)	wall%wall2d_mhd%wall_id%id (string) (9.5.1.1.3)
flag (1728)	wall%wall2d_mhd%wall_id%flag (integer) (9.5.1.1.2)
description (1728)	wall%wall2d_mhd%wall_id%description (string) (9.5.1.1.3)
res_wall (1932)	wall%wall2d_mhd%res_wall(:) (mhd_res_wall2d) (9.5.1.3.243)
walltype (1757)	wall%wall2d_mhd%res_wall(:)%walltype (identifier) (9.5.1.3.214)
id (1728)	wall%wall2d_mhd%res_wall(:)%walltype%id (string) (9.5.1.1.3)
flag (1728)	wall%wall2d_mhd%res_wall(:)%walltype%flag (integer) (9.5.1.1.2)
description (1728)	wall%wall2d_mhd%res_wall(:)%walltype%description (string) (9.5.1.1.3)
delta (1757)	wall%wall2d_mhd%res_wall(:)%delta (float) (9.5.1.1.1)
eta (1757)	wall%wall2d_mhd%res_wall(:)%eta (float) (9.5.1.1.1)
npoloidal (1757)	wall%wall2d_mhd%res_wall(:)%npoloidal (integer) (9.5.1.1.2)
position (1757)	wall%wall2d_mhd%res_wall(:)%position (rz1D) (9.5.1.3.325)
r (1839)	wall%wall2d_mhd%res_wall(:)%position%r (vecflt_type) (9.5.1.2.9)
z (1839)	wall%wall2d_mhd%res_wall(:)%position%z (vecflt_type) (9.5.1.2.9)
holes (1757)	wall%wall2d_mhd%res_wall(:)%holes (holes) (9.5.1.3.213)
n_holes (1727)	wall%wall2d_mhd%res_wall(:)%holes%n_holes (integer) (9.5.1.1.2)
coordinates (1727)	wall%wall2d_mhd%res_wall(:)%holes%coordinates (coordinates) (9.5.1.3.91)
theta (1605)	wall%wall2d_mhd%res_wall(:)%holes%coordinates%theta (vecflt_type) (9.5.1.2.9)
phi (1605)	wall%wall2d_mhd%res_wall(:)%holes%coordinates%phi (vecflt_type) (9.5.1.2.9)
width (1727)	wall%wall2d_mhd%res_wall(:)%holes%width (width) (9.5.1.3.438)
dtheta (1952)	wall%wall2d_mhd%res_wall(:)%holes%width%dtheta (vecflt_type) (9.5.1.2.9)
phi (1952)	wall%wall2d_mhd%res_wall(:)%holes%width%phi (vecflt_type) (9.5.1.2.9)
eta (1727)	wall%wall2d_mhd%res_wall(:)%holes%eta (vecflt_type) (9.5.1.2.9)
ideal_wall (1932)	wall%wall2d_mhd%ideal_wall (mhd_ideal_wall2d) (9.5.1.3.241)
walltype (1755)	wall%wall2d_mhd%ideal_wall%walltype (identifier) (9.5.1.3.214)
id (1728)	wall%wall2d_mhd%ideal_wall%walltype%id (string) (9.5.1.1.3)
flag (1728)	wall%wall2d_mhd%ideal_wall%walltype%flag (integer) (9.5.1.1.2)

description (1728)	wall%wall2d_mhd%ideal_wall%walltype%description (string) (9.5.1.1.3)
position (1755)	wall%wall2d_mhd%ideal_wall%position (rz1D) (9.5.1.3.325)
r (1839)	wall%wall2d_mhd%ideal_wall%position%r (vecflt.type) (9.5.1.2.9)
z (1839)	wall%wall2d_mhd%ideal_wall%position%z (vecflt.type) (9.5.1.2.9)
wall0d (1561)	wall%wall0d (wall_wall0d) (9.5.1.3.426)
pumping_speed (1940)	wall%wall0d%pumping_speed (vecflt.type) (9.5.1.2.9)
gas_puff (1940)	wall%wall0d%gas_puff (vecflt.type) (9.5.1.2.9)
wall_inventory (1940)	wall%wall0d%wall_inventory (vecflt.type) (9.5.1.2.9)
recycling_coefficient (1940)	wall%wall0d%recycling_coefficient (vecflt.type) (9.5.1.2.9)
wall_temperature (1940)	wall%wall0d%wall_temperature (float) (9.5.1.1.1)
power_from_plasma (1940)	wall%wall0d%power_from_plasma (float) (9.5.1.1.1)
power_to_cooling (1940)	wall%wall0d%power_to_cooling (float) (9.5.1.1.1)
plasma (1940)	wall%wall0d%plasma (wall_wall0d_plasma) (9.5.1.3.427)
species_index (1941)	wall%wall0d%plasma%species_index (matint.type) (9.5.1.2.8)
flux (1941)	wall%wall0d%plasma%flux (vecflt.type) (9.5.1.2.9)
energy (1941)	wall%wall0d%plasma%energy (vecflt.type) (9.5.1.2.9)
wall2d (1561)	wall%wall2d(:) (wall2d) (9.5.1.3.417)
wall_id (1931)	wall%wall2d(:)%wall_id (identifier) (9.5.1.3.214)
id (1728)	wall%wall2d(:)%wall_id%id (string) (9.5.1.1.3)
flag (1728)	wall%wall2d(:)%wall_id%flag (integer) (9.5.1.1.2)
description (1728)	wall%wall2d(:)%wall_id%description (string) (9.5.1.1.3)
limiter (1931)	wall%wall2d(:)%limiter (wall_limiter) (9.5.1.3.422)
limiter_unit (1936)	wall%wall2d(:)%limiter%limiter_unit(:) (limiter_unit) (9.5.1.3.231)
name (1745)	wall%wall2d(:)%limiter%limiter_unit(:)%name (string) (9.5.1.1.3)
closed (1745)	wall%wall2d(:)%limiter%limiter_unit(:)%closed (string) (9.5.1.1.3)
position (1745)	wall%wall2d(:)%limiter%limiter_unit(:)%position (rz1D) (9.5.1.3.325)
r (1839)	wall%wall2d(:)%limiter%limiter_unit(:)%position%r (vecflt.type) (9.5.1.2.9)
z (1839)	wall%wall2d(:)%limiter%limiter_unit(:)%position%z (vecflt.type) (9.5.1.2.9)
eta (1745)	wall%wall2d(:)%limiter%limiter_unit(:)%eta (float) (9.5.1.1.1)
delta (1745)	wall%wall2d(:)%limiter%limiter_unit(:)%delta (float) (9.5.1.1.1)
permeability (1745)	wall%wall2d(:)%limiter%limiter_unit(:)%permeability (float) (9.5.1.1.1)
vessel (1931)	wall%wall2d(:)%vessel (wall_vessel) (9.5.1.3.423)
vessel_unit (1937)	wall%wall2d(:)%vessel%vessel_unit(:) (wall_vessel_unit) (9.5.1.3.425)
annular (1939)	wall%wall2d(:)%vessel%vessel_unit(:)%annular (wall_vessel_annular) (9.5.1.3.424)
name (1938)	wall%wall2d(:)%vessel%vessel_unit(:)%annular%name (string) (9.5.1.1.3)
inside (1938)	wall%wall2d(:)%vessel%vessel_unit(:)%annular%inside (rz1D) (9.5.1.3.325)
r (1839)	wall%wall2d(:)%vessel%vessel_unit(:)%annular%inside%r (vecflt.type) (9.5.1.2.9)
z (1839)	wall%wall2d(:)%vessel%vessel_unit(:)%annular%inside%z (vecflt.type) (9.5.1.2.9)
outside (1938)	wall%wall2d(:)%vessel%vessel_unit(:)%annular%outside (rz1D) (9.5.1.3.325)
r (1839)	wall%wall2d(:)%vessel%vessel_unit(:)%annular%outside%r (vecflt.type) (9.5.1.2.9)
z (1839)	wall%wall2d(:)%vessel%vessel_unit(:)%annular%outside%z (vecflt.type) (9.5.1.2.9)
eta (1938)	wall%wall2d(:)%vessel%vessel_unit(:)%annular%eta (float) (9.5.1.1.1)
permeability (1938)	wall%wall2d(:)%vessel%vessel_unit(:)%annular%permeability (float) (9.5.1.1.1)
blocks (1939)	wall%wall2d(:)%vessel%vessel_unit(:)%blocks (wall_blocks) (9.5.1.3.420)
blocks_unit (1934)	wall%wall2d(:)%vessel%vessel_unit(:)%blocks%blocks_unit(:) (wall_blocks_unit) (9.5.1.3.421)
name (1935)	wall%wall2d(:)%vessel%vessel_unit(:)%blocks%blocks_unit(:)%name (string) (9.5.1.1.3)
position (1935)	wall%wall2d(:)%vessel%vessel_unit(:)%blocks%blocks_unit(:)%position (rz1D) (9.5.1.3.325)
r (1839)	wall%wall2d(:)%vessel%vessel_unit(:)%blocks%blocks_unit(:)%position%r (vecflt.type) (9.5.1.2.9)
z (1839)	wall%wall2d(:)%vessel%vessel_unit(:)%blocks%blocks_unit(:)%position%z (vecflt.type) (9.5.1.2.9)
eta (1935)	wall%wall2d(:)%vessel%vessel_unit(:)%blocks%blocks_unit(:)%eta (float) (9.5.1.1.1)
permeability (1935)	wall%wall2d(:)%vessel%vessel_unit(:)%blocks%blocks_unit(:)%permeability (float) (9.5.1.1.1)
wall3d (1561)	wall%wall3d(:) (wall3d) (9.5.1.3.419)
wall_id (1933)	wall%wall3d(:)%wall_id (identifier) (9.5.1.3.214)
id (1728)	wall%wall3d(:)%wall_id%id (string) (9.5.1.1.3)
flag (1728)	wall%wall3d(:)%wall_id%flag (integer) (9.5.1.1.2)
description (1728)	wall%wall3d(:)%wall_id%description (string) (9.5.1.1.3)
grid (1933)	wall%wall3d(:)%grid (complexgrid) (9.5.1.3.71)
uid (1585)	wall%wall3d(:)%grid%uid (integer) (9.5.1.1.2)
id (1585)	wall%wall3d(:)%grid%id (string) (9.5.1.1.3)
spaces (1585)	wall%wall3d(:)%grid%spaces(:) (complexgrid_space) (9.5.1.3.80)



geotype (1594)	wall%wall3d(:)%grid%spaces(:)%geotype (vecint.type) (9.5.1.2.10)
geotypeid (1594)	wall%wall3d(:)%grid%spaces(:)%geotypeid (vecstring.type) (9.5.1.2.11)
coordtype (1594)	wall%wall3d(:)%grid%spaces(:)%coordtype (matint.type) (9.5.1.2.8)
objects (1594)	wall%wall3d(:)%grid%spaces(:)%objects(:) (objects) (9.5.1.3.260)
boundary (1774)	wall%wall3d(:)%grid%spaces(:)%objects(:)%boundary (matint.type) (9.5.1.2.8)
neighbour (1774)	wall%wall3d(:)%grid%spaces(:)%objects(:)%neighbour (array3dint.type) (9.5.1.2.2)
geo (1774)	wall%wall3d(:)%grid%spaces(:)%objects(:)%geo (array4dflt.type) (9.5.1.2.3)
measure (1774)	wall%wall3d(:)%grid%spaces(:)%objects(:)%measure (matflt.type) (9.5.1.2.7)
xpoints (1594)	wall%wall3d(:)%grid%spaces(:)%xpoints (vecint.type) (9.5.1.2.10)
subgrids (1585)	wall%wall3d(:)%grid%subgrids(:) (complexgrid_subgrid) (9.5.1.3.81)
id (1595)	wall%wall3d(:)%grid%subgrids(:)%id (string) (9.5.1.1.3)
list (1595)	wall%wall3d(:)%grid%subgrids(:)%list(:) (complexgrid_objectlist) (9.5.1.3.75)
cls (1589)	wall%wall3d(:)%grid%subgrids(:)%list(:)%cls (vecint.type) (9.5.1.2.10)
indset (1589)	wall%wall3d(:)%grid%subgrids(:)%list(:)%indset(:) (complexgrid_indexlist) (9.5.1.3.73)
range (1587)	wall%wall3d(:)%grid%subgrids(:)%list(:)%indset(:)%range (vecint.type) (9.5.1.2.10)
ind (1587)	wall%wall3d(:)%grid%subgrids(:)%list(:)%indset(:)%ind (vecint.type) (9.5.1.2.10)
ind (1589)	wall%wall3d(:)%grid%subgrids(:)%list(:)%ind (matint.type) (9.5.1.2.8)
metric (1585)	wall%wall3d(:)%grid%metric (complexgrid_metric) (9.5.1.3.74)
measure (1588)	wall%wall3d(:)%grid%metric%measure(:) (complexgrid_scalar) (9.5.1.3.76)
griduid (1590)	wall%wall3d(:)%grid%metric%measure(:)%griduid (integer) (9.5.1.1.2)
subgrid (1590)	wall%wall3d(:)%grid%metric%measure(:)%subgrid (integer) (9.5.1.1.2)
scalar (1590)	wall%wall3d(:)%grid%metric%measure(:)%scalar (vecflt.type) (9.5.1.2.9)
vector (1590)	wall%wall3d(:)%grid%metric%measure(:)%vector (matflt.type) (9.5.1.2.7)
matrix (1590)	wall%wall3d(:)%grid%metric%measure(:)%matrix (array3dflt.type) (9.5.1.2.1)
g11 (1588)	wall%wall3d(:)%grid%metric%g11(:) (complexgrid_scalar) (9.5.1.3.76)
griduid (1590)	wall%wall3d(:)%grid%metric%g11(:)%griduid (integer) (9.5.1.1.2)
subgrid (1590)	wall%wall3d(:)%grid%metric%g11(:)%subgrid (integer) (9.5.1.1.2)
scalar (1590)	wall%wall3d(:)%grid%metric%g11(:)%scalar (vecflt.type) (9.5.1.2.9)
vector (1590)	wall%wall3d(:)%grid%metric%g11(:)%vector (matflt.type) (9.5.1.2.7)
matrix (1590)	wall%wall3d(:)%grid%metric%g11(:)%matrix (array3dflt.type) (9.5.1.2.1)
g12 (1588)	wall%wall3d(:)%grid%metric%g12(:) (complexgrid_scalar) (9.5.1.3.76)
griduid (1590)	wall%wall3d(:)%grid%metric%g12(:)%griduid (integer) (9.5.1.1.2)
subgrid (1590)	wall%wall3d(:)%grid%metric%g12(:)%subgrid (integer) (9.5.1.1.2)
scalar (1590)	wall%wall3d(:)%grid%metric%g12(:)%scalar (vecflt.type) (9.5.1.2.9)
vector (1590)	wall%wall3d(:)%grid%metric%g12(:)%vector (matflt.type) (9.5.1.2.7)
matrix (1590)	wall%wall3d(:)%grid%metric%g12(:)%matrix (array3dflt.type) (9.5.1.2.1)
g13 (1588)	wall%wall3d(:)%grid%metric%g13(:) (complexgrid_scalar) (9.5.1.3.76)
griduid (1590)	wall%wall3d(:)%grid%metric%g13(:)%griduid (integer) (9.5.1.1.2)
subgrid (1590)	wall%wall3d(:)%grid%metric%g13(:)%subgrid (integer) (9.5.1.1.2)
scalar (1590)	wall%wall3d(:)%grid%metric%g13(:)%scalar (vecflt.type) (9.5.1.2.9)
vector (1590)	wall%wall3d(:)%grid%metric%g13(:)%vector (matflt.type) (9.5.1.2.7)
matrix (1590)	wall%wall3d(:)%grid%metric%g13(:)%matrix (array3dflt.type) (9.5.1.2.1)
g22 (1588)	wall%wall3d(:)%grid%metric%g22(:) (complexgrid_scalar) (9.5.1.3.76)
griduid (1590)	wall%wall3d(:)%grid%metric%g22(:)%griduid (integer) (9.5.1.1.2)
subgrid (1590)	wall%wall3d(:)%grid%metric%g22(:)%subgrid (integer) (9.5.1.1.2)
scalar (1590)	wall%wall3d(:)%grid%metric%g22(:)%scalar (vecflt.type) (9.5.1.2.9)
vector (1590)	wall%wall3d(:)%grid%metric%g22(:)%vector (matflt.type) (9.5.1.2.7)
matrix (1590)	wall%wall3d(:)%grid%metric%g22(:)%matrix (array3dflt.type) (9.5.1.2.1)
g23 (1588)	wall%wall3d(:)%grid%metric%g23(:) (complexgrid_scalar) (9.5.1.3.76)
griduid (1590)	wall%wall3d(:)%grid%metric%g23(:)%griduid (integer) (9.5.1.1.2)
subgrid (1590)	wall%wall3d(:)%grid%metric%g23(:)%subgrid (integer) (9.5.1.1.2)
scalar (1590)	wall%wall3d(:)%grid%metric%g23(:)%scalar (vecflt.type) (9.5.1.2.9)
vector (1590)	wall%wall3d(:)%grid%metric%g23(:)%vector (matflt.type) (9.5.1.2.7)
matrix (1590)	wall%wall3d(:)%grid%metric%g23(:)%matrix (array3dflt.type) (9.5.1.2.1)
g33 (1588)	wall%wall3d(:)%grid%metric%g33(:) (complexgrid_scalar) (9.5.1.3.76)
griduid (1590)	wall%wall3d(:)%grid%metric%g33(:)%griduid (integer) (9.5.1.1.2)
subgrid (1590)	wall%wall3d(:)%grid%metric%g33(:)%subgrid (integer) (9.5.1.1.2)
scalar (1590)	wall%wall3d(:)%grid%metric%g33(:)%scalar (vecflt.type) (9.5.1.2.9)
vector (1590)	wall%wall3d(:)%grid%metric%g33(:)%vector (matflt.type) (9.5.1.2.7)
matrix (1590)	wall%wall3d(:)%grid%metric%g33(:)%matrix (array3dflt.type) (9.5.1.2.1)
jacobian (1588)	wall%wall3d(:)%grid%metric%jacobian(:) (complexgrid_scalar) (9.5.1.3.76)

griduid (1590)	wall%wall3d(:)%grid%metric%jacobian(:)%griduid (integer) (9.5.1.1.2)
subgrid (1590)	wall%wall3d(:)%grid%metric%jacobian(:)%subgrid (integer) (9.5.1.1.2)
scalar (1590)	wall%wall3d(:)%grid%metric%jacobian(:)%scalar (vecflt_type) (9.5.1.2.9)
vector (1590)	wall%wall3d(:)%grid%metric%jacobian(:)%vector (matflt_type) (9.5.1.2.7)
matrix (1590)	wall%wall3d(:)%grid%metric%jacobian(:)%matrix (array3dflt_type) (9.5.1.2.1)
geo (1585)	wall%wall3d(:)%grid%geo(:) (complexgrid_geo_global) (9.5.1.3.72)
geotype (1586)	wall%wall3d(:)%grid%geo(:)%geotype (integer) (9.5.1.1.2)
geotypeid (1586)	wall%wall3d(:)%grid%geo(:)%geotypeid (string) (9.5.1.1.3)
coordtype (1586)	wall%wall3d(:)%grid%geo(:)%coordtype (vecint_type) (9.5.1.2.10)
geo_matrix (1586)	wall%wall3d(:)%grid%geo(:)%geo_matrix(:) (complexgrid_scalar) (9.5.1.3.76)
griduid (1590)	wall%wall3d(:)%grid%geo(:)%geo_matrix(:)%griduid (integer) (9.5.1.1.2)
subgrid (1590)	wall%wall3d(:)%grid%geo(:)%geo_matrix(:)%subgrid (integer) (9.5.1.1.2)
scalar (1590)	wall%wall3d(:)%grid%geo(:)%geo_matrix(:)%scalar (vecflt_type) (9.5.1.2.9)
vector (1590)	wall%wall3d(:)%grid%geo(:)%geo_matrix(:)%vector (matflt_type) (9.5.1.2.7)
matrix (1590)	wall%wall3d(:)%grid%geo(:)%geo_matrix(:)%matrix (array3dflt_type) (9.5.1.2.1)
measure (1586)	wall%wall3d(:)%grid%geo(:)%measure(:) (complexgrid_scalar) (9.5.1.3.76)
griduid (1590)	wall%wall3d(:)%grid%geo(:)%measure(:)%griduid (integer) (9.5.1.1.2)
subgrid (1590)	wall%wall3d(:)%grid%geo(:)%measure(:)%subgrid (integer) (9.5.1.1.2)
scalar (1590)	wall%wall3d(:)%grid%geo(:)%measure(:)%scalar (vecflt_type) (9.5.1.2.9)
vector (1590)	wall%wall3d(:)%grid%geo(:)%measure(:)%vector (matflt_type) (9.5.1.2.7)
matrix (1590)	wall%wall3d(:)%grid%geo(:)%measure(:)%matrix (array3dflt_type) (9.5.1.2.1)
bases (1585)	wall%wall3d(:)%grid%bases(:) (complexgrid_vector) (9.5.1.3.82)
griduid (1596)	wall%wall3d(:)%grid%bases(:)%griduid (integer) (9.5.1.1.2)
label (1596)	wall%wall3d(:)%grid%bases(:)%label (string) (9.5.1.1.3)
comp (1596)	wall%wall3d(:)%grid%bases(:)%comp(:) (complexgrid_scalar) (9.5.1.3.76)
griduid (1590)	wall%wall3d(:)%grid%bases(:)%comp(:)%griduid (integer) (9.5.1.1.2)
subgrid (1590)	wall%wall3d(:)%grid%bases(:)%comp(:)%subgrid (integer) (9.5.1.1.2)
scalar (1590)	wall%wall3d(:)%grid%bases(:)%comp(:)%scalar (vecflt_type) (9.5.1.2.9)
vector (1590)	wall%wall3d(:)%grid%bases(:)%comp(:)%vector (matflt_type) (9.5.1.2.7)
matrix (1590)	wall%wall3d(:)%grid%bases(:)%comp(:)%matrix (array3dflt_type) (9.5.1.2.1)
align (1596)	wall%wall3d(:)%grid%bases(:)%align (vecint_type) (9.5.1.2.10)
alignid (1596)	wall%wall3d(:)%grid%bases(:)%alignid (vecstring_type) (9.5.1.2.11)
basis (1596)	wall%wall3d(:)%grid%bases(:)%basis (integer) (9.5.1.1.2)
plasma (1561)	wall%plasma (plasma) (9.5.1.3.281)
flux (1795)	wall%plasma%flux(:) (complexgrid_scalar) (9.5.1.3.76)
griduid (1590)	wall%plasma%flux(:)%griduid (integer) (9.5.1.1.2)
subgrid (1590)	wall%plasma%flux(:)%subgrid (integer) (9.5.1.1.2)
scalar (1590)	wall%plasma%flux(:)%scalar (vecflt_type) (9.5.1.2.9)
vector (1590)	wall%plasma%flux(:)%vector (matflt_type) (9.5.1.2.7)
matrix (1590)	wall%plasma%flux(:)%matrix (array3dflt_type) (9.5.1.2.1)
b (1795)	wall%plasma%b (complexgrid_vector_simplestruct) (9.5.1.3.83)
label (1597)	wall%plasma%b%label (string) (9.5.1.1.3)
comp (1597)	wall%plasma%b%comp(:) (complexgrid_scalar) (9.5.1.3.76)
griduid (1590)	wall%plasma%b%comp(:)%griduid (integer) (9.5.1.1.2)
subgrid (1590)	wall%plasma%b%comp(:)%subgrid (integer) (9.5.1.1.2)
scalar (1590)	wall%plasma%b%comp(:)%scalar (vecflt_type) (9.5.1.2.9)
vector (1590)	wall%plasma%b%comp(:)%vector (matflt_type) (9.5.1.2.7)
matrix (1590)	wall%plasma%b%comp(:)%matrix (array3dflt_type) (9.5.1.2.1)
align (1597)	wall%plasma%b%align (vecint_type) (9.5.1.2.10)
alignid (1597)	wall%plasma%b%alignid (vecstring_type) (9.5.1.2.11)
energy (1795)	wall%plasma%energy(:) (complexgrid_scalar) (9.5.1.3.76)
griduid (1590)	wall%plasma%energy(:)%griduid (integer) (9.5.1.1.2)
subgrid (1590)	wall%plasma%energy(:)%subgrid (integer) (9.5.1.1.2)
scalar (1590)	wall%plasma%energy(:)%scalar (vecflt_type) (9.5.1.2.9)
vector (1590)	wall%plasma%energy(:)%vector (matflt_type) (9.5.1.2.7)
matrix (1590)	wall%plasma%energy(:)%matrix (array3dflt_type) (9.5.1.2.1)
species (1795)	wall%plasma%species(:) (species_desc) (9.5.1.3.377)
label (1891)	wall%plasma%species(:)%label (string) (9.5.1.1.3)
amn (1891)	wall%plasma%species(:)%amn (float) (9.5.1.1.1)
zn (1891)	wall%plasma%species(:)%zn (float) (9.5.1.1.1)
zmin (1891)	wall%plasma%species(:)%zmin (float) (9.5.1.1.1)

zmax (1891)	wall%plasma%species(:)%zmax (float) (9.5.1.1.1)
surface (1561)	wall%surface (surface) (9.5.1.3.386)
ref_wall_type (1900)	wall%surface%ref_wall_type(:) (ref_wall_type) (9.5.1.3.314)
label (1828)	wall%surface%ref_wall_type(:)%label (string) (9.5.1.1.3)
thickness (1828)	wall%surface%ref_wall_type(:)%thickness (vecflt_type) (9.5.1.2.9)
stoichiometry (1828)	wall%surface%ref_wall_type(:)%stoichiometry (matflt_type) (9.5.1.2.7)
dx (1828)	wall%surface%ref_wall_type(:)%dx (matflt_type) (9.5.1.2.7)
wall_type (1900)	wall%surface%wall_type (complexgrid_scalar_int) (9.5.1.3.78)
griduid (1592)	wall%surface%wall_type%griduid (integer) (9.5.1.1.2)
subgrid (1592)	wall%surface%wall_type%subgrid (integer) (9.5.1.1.2)
scalar (1592)	wall%surface%wall_type%scalar (vecint_type) (9.5.1.2.10)
vector (1592)	wall%surface%wall_type%vector (matint_type) (9.5.1.2.8)
matrix (1592)	wall%surface%wall_type%matrix (array3dint_type) (9.5.1.2.2)
layers (1900)	wall%surface%layers (layers) (9.5.1.3.230)
density (1744)	wall%surface%layers%density (matflt_type) (9.5.1.2.7)
thickness (1744)	wall%surface%layers%thickness (matflt_type) (9.5.1.2.7)
roughness (1744)	wall%surface%layers%roughness (matflt_type) (9.5.1.2.7)
t (1744)	wall%surface%layers%t (array3dflt_type) (9.5.1.2.1)
element_frac (1744)	wall%surface%layers%element_frac (array3dflt_type) (9.5.1.2.1)
chem_comp (1744)	wall%surface%layers%chem_comp (array3dflt_type) (9.5.1.2.1)
h_inventory (1900)	wall%surface%h_inventory (h_inventory) (9.5.1.3.211)
surf_trap_de (1725)	wall%surface%h_inventory%surf_trap_de (array5dflt_type) (9.5.1.2.4)
bulk_trap_de (1725)	wall%surface%h_inventory%bulk_trap_de (array5dflt_type) (9.5.1.2.4)
bulk_D (1725)	wall%surface%h_inventory%bulk_D (array5dflt_type) (9.5.1.2.4)
surface_D (1725)	wall%surface%h_inventory%surface_D (array5dflt_type) (9.5.1.2.4)
bulk_C_s (1725)	wall%surface%h_inventory%bulk_C_s (array5dflt_type) (9.5.1.2.4)
surface_C_s (1725)	wall%surface%h_inventory%surface_C_s (array5dflt_type) (9.5.1.2.4)
bulk_C_t (1725)	wall%surface%h_inventory%bulk_C_t (array5dflt_type) (9.5.1.2.4)
surface_C_t (1725)	wall%surface%h_inventory%surface_C_t (array5dflt_type) (9.5.1.2.4)
surf_recreate (1725)	wall%surface%h_inventory%surf_recreate (array5dflt_type) (9.5.1.2.4)
elements (1900)	wall%surface%elements(:) (element_desc) (9.5.1.3.171)
label (1685)	wall%surface%elements(:)%label (string) (9.5.1.1.3)
zn (1685)	wall%surface%elements(:)%zn (integer) (9.5.1.1.2)
amn (1685)	wall%surface%elements(:)%amn (float) (9.5.1.1.1)
density (1685)	wall%surface%elements(:)%density (float) (9.5.1.1.1)
compounds (1900)	wall%surface%compounds(:) (compound_desc) (9.5.1.3.89)
label (1603)	wall%surface%compounds(:)%label (string) (9.5.1.1.3)
stoichiometry (1603)	wall%surface%compounds(:)%stoichiometry (vecflt_type) (9.5.1.2.9)
density (1603)	wall%surface%compounds(:)%density (float) (9.5.1.1.1)
time (1561)	wall%time (float) (9.5.1.1.1)

### 9.5.2.1.46 waves

datainfo (1562)	waves%datainfo (datainfo) (9.5.1.3.121)
dataprovider (1635)	waves%datainfo%dataprovider (string) (9.5.1.1.3)
putdate (1635)	waves%datainfo%putdate (string) (9.5.1.1.3)
source (1635)	waves%datainfo%source (string) (9.5.1.1.3)
comment (1635)	waves%datainfo%comment (string) (9.5.1.1.3)
cocos (1635)	waves%datainfo%cocos (integer) (9.5.1.1.2)
id (1635)	waves%datainfo%id (integer) (9.5.1.1.2)
isref (1635)	waves%datainfo%isref (integer) (9.5.1.1.2)
whatref (1635)	waves%datainfo%whatref (whatref) (9.5.1.3.437)
user (1951)	waves%datainfo%whatref%user (string) (9.5.1.1.3)
machine (1951)	waves%datainfo%whatref%machine (string) (9.5.1.1.3)
shot (1951)	waves%datainfo%whatref%shot (integer) (9.5.1.1.2)
run (1951)	waves%datainfo%whatref%run (integer) (9.5.1.1.2)
occurrence (1951)	waves%datainfo%whatref%occurrence (integer) (9.5.1.1.2)
putinfo (1635)	waves%datainfo%putinfo (putinfo) (9.5.1.3.290)
putmethod (1804)	waves%datainfo%putinfo%putmethod (string) (9.5.1.1.3)
putaccess (1804)	waves%datainfo%putinfo%putaccess (string) (9.5.1.1.3)
putlocation (1804)	waves%datainfo%putinfo%putlocation (string) (9.5.1.1.3)

rights (1804)	waves%datainfo%putinfo%rights (string) (9.5.1.1.3)
coherentwave (1562)	waves%coherentwave(:) (coherentwave) (9.5.1.3.68)
wave_id (1582)	waves%coherentwave(:)%wave_id (enum_instance) (9.5.1.3.173)
type (1687)	waves%coherentwave(:)%wave_id%type (identifier) (9.5.1.3.214)
id (1728)	waves%coherentwave(:)%wave_id%type%id (string) (9.5.1.1.3)
flag (1728)	waves%coherentwave(:)%wave_id%type%flag (integer) (9.5.1.1.2)
description (1728)	waves%coherentwave(:)%wave_id%type%description (string) (9.5.1.1.3)
name (1687)	waves%coherentwave(:)%wave_id%name (string) (9.5.1.1.3)
index (1687)	waves%coherentwave(:)%wave_id%index (integer) (9.5.1.1.2)
composition (1582)	waves%coherentwave(:)%composition (composition) (9.5.1.3.84)
amn (1598)	waves%coherentwave(:)%composition%amn (vecflt_type) (9.5.1.2.9)
zn (1598)	waves%coherentwave(:)%composition%zn (vecflt_type) (9.5.1.2.9)
zion (1598)	waves%coherentwave(:)%composition%zion (vecflt_type) (9.5.1.2.9)
imp_flag (1598)	waves%coherentwave(:)%composition%imp_flag (vecint_type) (9.5.1.2.10)
label (1598)	waves%coherentwave(:)%composition%label (vecstring_type) (9.5.1.2.11)
compositions (1582)	waves%coherentwave(:)%compositions (compositions_type) (9.5.1.3.88)
nuclei (1602)	waves%coherentwave(:)%compositions%nuclei(:) (nuclei) (9.5.1.3.259)
zn (1773)	waves%coherentwave(:)%compositions%nuclei(:)%zn (float) (9.5.1.1.1)
amn (1773)	waves%coherentwave(:)%compositions%nuclei(:)%amn (float) (9.5.1.1.1)
label (1773)	waves%coherentwave(:)%compositions%nuclei(:)%label (string) (9.5.1.1.3)
ions (1602)	waves%coherentwave(:)%compositions%ions(:) (ions) (9.5.1.3.219)
nucindex (1733)	waves%coherentwave(:)%compositions%ions(:)%nucindex (integer) (9.5.1.1.2)
zion (1733)	waves%coherentwave(:)%compositions%ions(:)%zion (float) (9.5.1.1.1)
imp_flag (1733)	waves%coherentwave(:)%compositions%ions(:)%imp_flag (integer) (9.5.1.1.2)
label (1733)	waves%coherentwave(:)%compositions%ions(:)%label (string) (9.5.1.1.3)
impurities (1602)	waves%coherentwave(:)%compositions%impurities(:) (impurities) (9.5.1.3.216)
nucindex (1730)	waves%coherentwave(:)%compositions%impurities(:)%nucindex (integer) (9.5.1.1.2)
i_ion (1730)	waves%coherentwave(:)%compositions%impurities(:)%i_ion (integer) (9.5.1.1.2)
nzimp (1730)	waves%coherentwave(:)%compositions%impurities(:)%nzimp (integer) (9.5.1.1.2)
zmin (1730)	waves%coherentwave(:)%compositions%impurities(:)%zmin (vecflt_type) (9.5.1.2.9)
zmax (1730)	waves%coherentwave(:)%compositions%impurities(:)%zmax (vecflt_type) (9.5.1.2.9)
label (1730)	waves%coherentwave(:)%compositions%impurities(:)%label (vecstring_type) (9.5.1.2.11)
neutralscomp (1602)	waves%coherentwave(:)%compositions%neutralscomp(:) (composition_neutralscomp) (9.5.1.3.87)
neutcomp (1601)	waves%coherentwave(:)%compositions%neutralscomp(:)%neutcomp(:) (composition_neutrals_neutcomp) (9.5.1.3.86)
nucindex (1600)	waves%coherentwave(:)%compositions%neutralscomp(:)%neutcomp(:)%nucindex (integer) (9.5.1.1.2)
multiplicity (1600)	waves%coherentwave(:)%compositions%neutralscomp(:)%neutcomp(:)%multiplicity (integer) (9.5.1.1.2)
type (1601)	waves%coherentwave(:)%compositions%neutralscomp(:)%type(:) (identifier) (9.5.1.3.214)
id (1728)	waves%coherentwave(:)%compositions%neutralscomp(:)%type(:)%id (string) (9.5.1.1.3)
flag (1728)	waves%coherentwave(:)%compositions%neutralscomp(:)%type(:)%flag (integer) (9.5.1.1.2)
description (1728)	waves%coherentwave(:)%compositions%neutralscomp(:)%type(:)%description (string) (9.5.1.1.3)
label (1601)	waves%coherentwave(:)%compositions%neutralscomp(:)%label (string) (9.5.1.1.3)
edgespecies (1602)	waves%coherentwave(:)%compositions%edgespecies(:) (edgespecies) (9.5.1.3.170)
nucindex (1684)	waves%coherentwave(:)%compositions%edgespecies(:)%nucindex (integer) (9.5.1.1.2)
zmin (1684)	waves%coherentwave(:)%compositions%edgespecies(:)%zmin (float) (9.5.1.1.1)
zmax (1684)	waves%coherentwave(:)%compositions%edgespecies(:)%zmax (float) (9.5.1.1.1)
label (1684)	waves%coherentwave(:)%compositions%edgespecies(:)%label (string) (9.5.1.1.3)
signature (1602)	waves%coherentwave(:)%compositions%signature (identifier) (9.5.1.3.214)
id (1728)	waves%coherentwave(:)%compositions%signature%id (string) (9.5.1.1.3)
flag (1728)	waves%coherentwave(:)%compositions%signature%flag (integer) (9.5.1.1.2)
description (1728)	waves%coherentwave(:)%compositions%signature%description (string) (9.5.1.1.3)
global_param (1582)	waves%coherentwave(:)%global_param (waves_global_param) (9.5.1.3.429)
frequency (1943)	waves%coherentwave(:)%global_param%frequency (float) (9.5.1.1.1)
name (1943)	waves%coherentwave(:)%global_param%name (string) (9.5.1.1.3)
type (1943)	waves%coherentwave(:)%global_param%type (string) (9.5.1.1.3)
ntor (1943)	waves%coherentwave(:)%global_param%ntor (vecint_type) (9.5.1.2.10)
f_assumption (1943)	waves%coherentwave(:)%global_param%f_assumption (vecint_type) (9.5.1.2.10)
power_tot (1943)	waves%coherentwave(:)%global_param%power_tot (float) (9.5.1.1.1)
p_frac_ntor (1943)	waves%coherentwave(:)%global_param%p_frac_ntor (vecflt_type) (9.5.1.2.9)

pow.i (1943)	waves%coherentwave(:)%global_param%pow.i (vecflt.type) (9.5.1.2.9)
pow.e (1943)	waves%coherentwave(:)%global_param%pow.e (float) (9.5.1.1.1)
pow.ntonor.i (1943)	waves%coherentwave(:)%global_param%pow.ntonor.i (matflt.type) (9.5.1.2.7)
pow.ntonor.e (1943)	waves%coherentwave(:)%global_param%pow.ntonor.e (vecflt.type) (9.5.1.2.9)
cur.tor (1943)	waves%coherentwave(:)%global_param%cur.tor (float) (9.5.1.1.1)
cur.tor.ntonor (1943)	waves%coherentwave(:)%global_param%cur.tor.ntonor (vecflt.type) (9.5.1.2.9)
code.type (1943)	waves%coherentwave(:)%global_param%code.type (integer) (9.5.1.1.2)
toroid.field (1943)	waves%coherentwave(:)%global_param%toroid.field (b0r0) (9.5.1.3.56)
r0 (1570)	waves%coherentwave(:)%global_param%toroid.field%r0 (float) (9.5.1.1.1)
b0 (1570)	waves%coherentwave(:)%global_param%toroid.field%b0 (float) (9.5.1.1.1)
grid.1d (1582)	waves%coherentwave(:)%grid.1d (waves_grid.1d) (9.5.1.3.430)
rho.tor.norm (1944)	waves%coherentwave(:)%grid.1d%rho.tor.norm (vecflt.type) (9.5.1.2.9)
rho.tor (1944)	waves%coherentwave(:)%grid.1d%rho.tor (vecflt.type) (9.5.1.2.9)
psi (1944)	waves%coherentwave(:)%grid.1d%psi (vecflt.type) (9.5.1.2.9)
grid.2d (1582)	waves%coherentwave(:)%grid.2d (waves_grid.2d) (9.5.1.3.431)
grid.type (1945)	waves%coherentwave(:)%grid.2d%grid.type (integer) (9.5.1.1.2)
rho.tor.norm (1945)	waves%coherentwave(:)%grid.2d%rho.tor.norm (matflt.type) (9.5.1.2.7)
rho.tor (1945)	waves%coherentwave(:)%grid.2d%rho.tor (matflt.type) (9.5.1.2.7)
psi (1945)	waves%coherentwave(:)%grid.2d%psi (matflt.type) (9.5.1.2.7)
theta (1945)	waves%coherentwave(:)%grid.2d%theta (matflt.type) (9.5.1.2.7)
r (1945)	waves%coherentwave(:)%grid.2d%r (matflt.type) (9.5.1.2.7)
z (1945)	waves%coherentwave(:)%grid.2d%z (matflt.type) (9.5.1.2.7)
theta.info (1945)	waves%coherentwave(:)%grid.2d%theta.info (theta.info) (9.5.1.3.394)
angl.type (1908)	waves%coherentwave(:)%grid.2d%theta.info%angl.type (integer) (9.5.1.1.2)
th2th.pol (1908)	waves%coherentwave(:)%grid.2d%theta.info%th2th.pol (matflt.type) (9.5.1.2.7)
profiles.1d (1582)	waves%coherentwave(:)%profiles.1d (waves_profiles.1d) (9.5.1.3.432)
powd.tot (1946)	waves%coherentwave(:)%profiles.1d%powd.tot (vecflt.type) (9.5.1.2.9)
powd.e (1946)	waves%coherentwave(:)%profiles.1d%powd.e (vecflt.type) (9.5.1.2.9)
powd.i (1946)	waves%coherentwave(:)%profiles.1d%powd.i (matflt.type) (9.5.1.2.7)
powd.ntonor (1946)	waves%coherentwave(:)%profiles.1d%powd.ntonor (matflt.type) (9.5.1.2.7)
powd.ntonor.e (1946)	waves%coherentwave(:)%profiles.1d%powd.ntonor.e (matflt.type) (9.5.1.2.7)
powd.ntonor.i (1946)	waves%coherentwave(:)%profiles.1d%powd.ntonor.i (array3dflt.type) (9.5.1.2.1)
curd.tor (1946)	waves%coherentwave(:)%profiles.1d%curd.tor (vecflt.type) (9.5.1.2.9)
curd.torntonor (1946)	waves%coherentwave(:)%profiles.1d%curd.torntonor (matflt.type) (9.5.1.2.7)
pow.tot (1946)	waves%coherentwave(:)%profiles.1d%pow.tot (vecflt.type) (9.5.1.2.9)
pow.e (1946)	waves%coherentwave(:)%profiles.1d%pow.e (vecflt.type) (9.5.1.2.9)
pow.i (1946)	waves%coherentwave(:)%profiles.1d%pow.i (matflt.type) (9.5.1.2.7)
pow.ntonor (1946)	waves%coherentwave(:)%profiles.1d%pow.ntonor (array3dflt.type) (9.5.1.2.1)
pow.ntonor.e (1946)	waves%coherentwave(:)%profiles.1d%pow.ntonor.e (matflt.type) (9.5.1.2.7)
pow.ntonor.i (1946)	waves%coherentwave(:)%profiles.1d%pow.ntonor.i (array3dflt.type) (9.5.1.2.1)
curd.par (1946)	waves%coherentwave(:)%profiles.1d%curd.par (vecflt.type) (9.5.1.2.9)
curd.parmtor (1946)	waves%coherentwave(:)%profiles.1d%curd.parmtor (matflt.type) (9.5.1.2.7)
cur.tor (1946)	waves%coherentwave(:)%profiles.1d%cur.tor (vecflt.type) (9.5.1.2.9)
cur.tor.ntonor (1946)	waves%coherentwave(:)%profiles.1d%cur.tor.ntonor (matflt.type) (9.5.1.2.7)
profiles.2d (1582)	waves%coherentwave(:)%profiles.2d (waves_profiles.2d) (9.5.1.3.433)
powd.tot (1947)	waves%coherentwave(:)%profiles.2d%powd.tot (matflt.type) (9.5.1.2.7)
powd.e (1947)	waves%coherentwave(:)%profiles.2d%powd.e (matflt.type) (9.5.1.2.7)
powd.i (1947)	waves%coherentwave(:)%profiles.2d%powd.i (array3dflt.type) (9.5.1.2.1)
powd.ntonor (1947)	waves%coherentwave(:)%profiles.2d%powd.ntonor (array3dflt.type) (9.5.1.2.1)
powd.ntonor.e (1947)	waves%coherentwave(:)%profiles.2d%powd.ntonor.e (array3dflt.type) (9.5.1.2.1)
powd.ntonor.i (1947)	waves%coherentwave(:)%profiles.2d%powd.ntonor.i (array4dflt.type) (9.5.1.2.3)
powd.iharm (1947)	waves%coherentwave(:)%profiles.2d%powd.iharm (array5dflt.type) (9.5.1.2.4)
beamtracing (1582)	waves%coherentwave(:)%beamtracing(:) (beamtracing) (9.5.1.3.58)
npoints (1572)	waves%coherentwave(:)%beamtracing(:)%npoints (integer) (9.5.1.1.2)
power (1572)	waves%coherentwave(:)%beamtracing(:)%power (float) (9.5.1.1.1)
dnpar (1572)	waves%coherentwave(:)%beamtracing(:)%dnpar (vecflt.type) (9.5.1.2.9)
length (1572)	waves%coherentwave(:)%beamtracing(:)%length (vecflt.type) (9.5.1.2.9)
position (1572)	waves%coherentwave(:)%beamtracing(:)%position (waves_rtposition) (9.5.1.3.434)
r (1948)	waves%coherentwave(:)%beamtracing(:)%position%r (vecflt.type) (9.5.1.2.9)
z (1948)	waves%coherentwave(:)%beamtracing(:)%position%z (vecflt.type) (9.5.1.2.9)
phi (1948)	waves%coherentwave(:)%beamtracing(:)%position%phi (vecflt.type) (9.5.1.2.9)



psi (1948)	waves%coherentwave(:)%beamtracing(:)%position%psi (vecflt.type) (9.5.1.2.9)
theta (1948)	waves%coherentwave(:)%beamtracing(:)%position%theta (vecflt.type) (9.5.1.2.9)
wavevector (1572)	waves%coherentwave(:)%beamtracing(:)%wavevector (waves_rtwavevector) (9.5.1.3.435)
kr (1949)	waves%coherentwave(:)%beamtracing(:)%wavevector%kr (vecflt.type) (9.5.1.2.9)
kz (1949)	waves%coherentwave(:)%beamtracing(:)%wavevector%kz (vecflt.type) (9.5.1.2.9)
kphi (1949)	waves%coherentwave(:)%beamtracing(:)%wavevector%kphi (vecflt.type) (9.5.1.2.9)
npar (1949)	waves%coherentwave(:)%beamtracing(:)%wavevector%npar (vecflt.type) (9.5.1.2.9)
nperp (1949)	waves%coherentwave(:)%beamtracing(:)%wavevector%nperp (vecflt.type) (9.5.1.2.9)
ntor (1949)	waves%coherentwave(:)%beamtracing(:)%wavevector%ntor (vecflt.type) (9.5.1.2.9)
var_ntor (1949)	waves%coherentwave(:)%beamtracing(:)%wavevector%var_ntor (integer) (9.5.1.1.2)
polarization (1572)	waves%coherentwave(:)%beamtracing(:)%polarization (polarization) (9.5.1.3.285)
epol_p_re (1799)	waves%coherentwave(:)%beamtracing(:)%polarization%epol_p_re (vecflt.type) (9.5.1.2.9)
epol_p_im (1799)	waves%coherentwave(:)%beamtracing(:)%polarization%epol_p_im (vecflt.type) (9.5.1.2.9)
epol_m_re (1799)	waves%coherentwave(:)%beamtracing(:)%polarization%epol_m_re (vecflt.type) (9.5.1.2.9)
epol_m_im (1799)	waves%coherentwave(:)%beamtracing(:)%polarization%epol_m_im (vecflt.type) (9.5.1.2.9)
epol_par_re (1799)	waves%coherentwave(:)%beamtracing(:)%polarization%epol_par_re (vecflt.type) (9.5.1.2.9)
epol_par_im (1799)	waves%coherentwave(:)%beamtracing(:)%polarization%epol_par_im (vecflt.type) (9.5.1.2.9)
powerflow (1572)	waves%coherentwave(:)%beamtracing(:)%powerflow (powerflow) (9.5.1.3.286)
phi_perp (1800)	waves%coherentwave(:)%beamtracing(:)%powerflow%phi_perp (vecflt.type) (9.5.1.2.9)
phi_par (1800)	waves%coherentwave(:)%beamtracing(:)%powerflow%phi_par (vecflt.type) (9.5.1.2.9)
power_e (1800)	waves%coherentwave(:)%beamtracing(:)%powerflow%power_e (vecflt.type) (9.5.1.2.9)
power_i (1800)	waves%coherentwave(:)%beamtracing(:)%powerflow%power_i (matflt.type) (9.5.1.2.7)
fullwave (1582)	waves%coherentwave(:)%fullwave (fullwave) (9.5.1.3.190)
grid (1704)	waves%coherentwave(:)%fullwave%grid (complexgrid) (9.5.1.3.71)
uid (1585)	waves%coherentwave(:)%fullwave%grid%uid (integer) (9.5.1.1.2)
id (1585)	waves%coherentwave(:)%fullwave%grid%id (string) (9.5.1.1.3)
spaces (1585)	waves%coherentwave(:)%fullwave%grid%spaces(:) (complexgrid_space) (9.5.1.3.80)
geotype (1594)	waves%coherentwave(:)%fullwave%grid%spaces(:)%geotype (vecint.type) (9.5.1.2.10)
geotypeid (1594)	waves%coherentwave(:)%fullwave%grid%spaces(:)%geotypeid (vecstring.type) (9.5.1.2.11)
coordtype (1594)	waves%coherentwave(:)%fullwave%grid%spaces(:)%coordtype (matint.type) (9.5.1.2.8)
objects (1594)	waves%coherentwave(:)%fullwave%grid%spaces(:)%objects(:) (objects) (9.5.1.3.260)
boundary (1774)	waves%coherentwave(:)%fullwave%grid%spaces(:)%objects(:)%boundary (matint.type) (9.5.1.2.8)
neighbour (1774)	waves%coherentwave(:)%fullwave%grid%spaces(:)%objects(:)%neighbour (array3dint.type) (9.5.1.2.2)
geo (1774)	waves%coherentwave(:)%fullwave%grid%spaces(:)%objects(:)%geo (array4dflt.type) (9.5.1.2.3)
measure (1774)	waves%coherentwave(:)%fullwave%grid%spaces(:)%objects(:)%measure (matflt.type) (9.5.1.2.7)
xpoints (1594)	waves%coherentwave(:)%fullwave%grid%spaces(:)%xpoints (vecint.type) (9.5.1.2.10)
subgrids (1585)	waves%coherentwave(:)%fullwave%grid%subgrids(:) (complexgrid_subgrid) (9.5.1.3.81)
id (1595)	waves%coherentwave(:)%fullwave%grid%subgrids(:)%id (string) (9.5.1.1.3)
list (1595)	waves%coherentwave(:)%fullwave%grid%subgrids(:)%list(:) (complexgrid_objectlist) (9.5.1.3.75)
cls (1589)	waves%coherentwave(:)%fullwave%grid%subgrids(:)%list(:)%cls (vecint.type) (9.5.1.2.10)
indset (1589)	waves%coherentwave(:)%fullwave%grid%subgrids(:)%list(:)%indset(:) (complex-grid_indexlist) (9.5.1.3.73)
range (1587)	waves%coherentwave(:)%fullwave%grid%subgrids(:)%list(:)%indset(:)%range (vecint.type) (9.5.1.2.10)
ind (1587)	waves%coherentwave(:)%fullwave%grid%subgrids(:)%list(:)%indset(:)%ind (vecint.type) (9.5.1.2.10)
ind (1589)	waves%coherentwave(:)%fullwave%grid%subgrids(:)%list(:)%ind (matint.type) (9.5.1.2.8)
metric (1585)	waves%coherentwave(:)%fullwave%grid%metric (complexgrid_metric) (9.5.1.3.74)
measure (1588)	waves%coherentwave(:)%fullwave%grid%metric%measure(:) (complexgrid_scalar) (9.5.1.3.76)
griduid (1590)	waves%coherentwave(:)%fullwave%grid%metric%measure(:)%griduid (integer) (9.5.1.1.2)
subgrid (1590)	waves%coherentwave(:)%fullwave%grid%metric%measure(:)%subgrid (integer) (9.5.1.1.2)
scalar (1590)	waves%coherentwave(:)%fullwave%grid%metric%measure(:)%scalar (vecflt.type) (9.5.1.2.9)
vector (1590)	waves%coherentwave(:)%fullwave%grid%metric%measure(:)%vector (matflt.type) (9.5.1.2.7)
matrix (1590)	waves%coherentwave(:)%fullwave%grid%metric%measure(:)%matrix (array3dflt.type) (9.5.1.2.1)
g11 (1588)	waves%coherentwave(:)%fullwave%grid%metric%g11(:) (complexgrid_scalar) (9.5.1.3.76)
griduid (1590)	waves%coherentwave(:)%fullwave%grid%metric%g11(:)%griduid (integer) (9.5.1.1.2)
subgrid (1590)	waves%coherentwave(:)%fullwave%grid%metric%g11(:)%subgrid (integer) (9.5.1.1.2)
scalar (1590)	waves%coherentwave(:)%fullwave%grid%metric%g11(:)%scalar (vecflt.type) (9.5.1.2.9)





label (1596)	waves%coherentwave(:)%fullwave%grid%bases(:)%label (string) (9.5.1.1.3)
comp (1596)	waves%coherentwave(:)%fullwave%grid%bases(:)%comp(:) (complexgrid_scalar) (9.5.1.3.76)
griduid (1590)	waves%coherentwave(:)%fullwave%grid%bases(:)%comp(:)%griduid (integer) (9.5.1.1.2)
subgrid (1590)	waves%coherentwave(:)%fullwave%grid%bases(:)%comp(:)%subgrid (integer) (9.5.1.1.2)
scalar (1590)	waves%coherentwave(:)%fullwave%grid%bases(:)%comp(:)%scalar (vecflt_type) (9.5.1.2.9)
vector (1590)	waves%coherentwave(:)%fullwave%grid%bases(:)%comp(:)%vector (matflt_type) (9.5.1.2.7)
matrix (1590)	waves%coherentwave(:)%fullwave%grid%bases(:)%comp(:)%matrix (array3dflt_type) (9.5.1.2.1)
align (1596)	waves%coherentwave(:)%fullwave%grid%bases(:)%align (vecint_type) (9.5.1.2.10)
alignid (1596)	waves%coherentwave(:)%fullwave%grid%bases(:)%alignid (vecstring_type) (9.5.1.2.11)
basis (1596)	waves%coherentwave(:)%fullwave%grid%bases(:)%basis (integer) (9.5.1.1.2)
e_components (1704)	waves%coherentwave(:)%fullwave%e_components (e_components) (9.5.1.3.158)
e_plus (1672)	waves%coherentwave(:)%fullwave%e_components%e_plus (complexgrid_scalar_cplx) (9.5.1.3.77)
griduid (1591)	waves%coherentwave(:)%fullwave%e_components%e_plus%griduid (integer) (9.5.1.1.2)
subgrid (1591)	waves%coherentwave(:)%fullwave%e_components%e_plus%subgrid (integer) (9.5.1.1.2)
scalar (1591)	waves%coherentwave(:)%fullwave%e_components%e_plus%scalar (veccplx_type) (9.5.1.3.415)
re (1929)	waves%coherentwave(:)%fullwave%e_components%e_plus%scalar%re (vecflt_type) (9.5.1.2.9)
im (1929)	waves%coherentwave(:)%fullwave%e_components%e_plus%scalar%im (vecflt_type) (9.5.1.2.9)
vector (1591)	waves%coherentwave(:)%fullwave%e_components%e_plus%vector (matcplx_type) (9.5.1.3.239)
re (1753)	waves%coherentwave(:)%fullwave%e_components%e_plus%vector%re (matflt_type) (9.5.1.2.7)
im (1753)	waves%coherentwave(:)%fullwave%e_components%e_plus%vector%im (matflt_type) (9.5.1.2.7)
matrix (1591)	waves%coherentwave(:)%fullwave%e_components%e_plus%matrix (array3dcplx_type) (9.5.1.3.55)
re (1569)	waves%coherentwave(:)%fullwave%e_components%e_plus%matrix%re (array3dflt_type) (9.5.1.2.1)
im (1569)	waves%coherentwave(:)%fullwave%e_components%e_plus%matrix%im (array3dflt_type) (9.5.1.2.1)
e_minus (1672)	waves%coherentwave(:)%fullwave%e_components%e_minus (complexgrid_scalar_cplx) (9.5.1.3.77)
griduid (1591)	waves%coherentwave(:)%fullwave%e_components%e_minus%griduid (integer) (9.5.1.1.2)
subgrid (1591)	waves%coherentwave(:)%fullwave%e_components%e_minus%subgrid (integer) (9.5.1.1.2)
scalar (1591)	waves%coherentwave(:)%fullwave%e_components%e_minus%scalar (veccplx_type) (9.5.1.3.415)
re (1929)	waves%coherentwave(:)%fullwave%e_components%e_minus%scalar%re (vecflt_type) (9.5.1.2.9)
im (1929)	waves%coherentwave(:)%fullwave%e_components%e_minus%scalar%im (vecflt_type) (9.5.1.2.9)
vector (1591)	waves%coherentwave(:)%fullwave%e_components%e_minus%vector (matcplx_type) (9.5.1.3.239)
re (1753)	waves%coherentwave(:)%fullwave%e_components%e_minus%vector%re (matflt_type) (9.5.1.2.7)
im (1753)	waves%coherentwave(:)%fullwave%e_components%e_minus%vector%im (matflt_type) (9.5.1.2.7)
matrix (1591)	waves%coherentwave(:)%fullwave%e_components%e_minus%matrix (array3dcplx_type) (9.5.1.3.55)
re (1569)	waves%coherentwave(:)%fullwave%e_components%e_minus%matrix%re (array3dflt_type) (9.5.1.2.1)
im (1569)	waves%coherentwave(:)%fullwave%e_components%e_minus%matrix%im (array3dflt_type) (9.5.1.2.1)
e_para (1672)	waves%coherentwave(:)%fullwave%e_components%e_para (complexgrid_scalar_cplx) (9.5.1.3.77)
griduid (1591)	waves%coherentwave(:)%fullwave%e_components%e_para%griduid (integer) (9.5.1.1.2)
subgrid (1591)	waves%coherentwave(:)%fullwave%e_components%e_para%subgrid (integer) (9.5.1.1.2)
scalar (1591)	waves%coherentwave(:)%fullwave%e_components%e_para%scalar (veccplx_type) (9.5.1.3.415)
re (1929)	waves%coherentwave(:)%fullwave%e_components%e_para%scalar%re (vecflt_type) (9.5.1.2.9)
im (1929)	waves%coherentwave(:)%fullwave%e_components%e_para%scalar%im (vecflt_type) (9.5.1.2.9)
vector (1591)	waves%coherentwave(:)%fullwave%e_components%e_para%vector (matcplx_type) (9.5.1.3.239)
re (1753)	waves%coherentwave(:)%fullwave%e_components%e_para%vector%re (matflt_type) (9.5.1.2.7)

im (1753)	waves%coherentwave(:)%fullwave%e_components%e_para%vector%im (9.5.1.2.7)	(matflt.type)
matrix (1591)	waves%coherentwave(:)%fullwave%e_components%e_para%matrix (9.5.1.3.55)	(array3dcplx.type)
re (1569)	waves%coherentwave(:)%fullwave%e_components%e_para%matrix%re (9.5.1.2.1)	(array3dflt.type)
im (1569)	waves%coherentwave(:)%fullwave%e_components%e_para%matrix%im (9.5.1.2.1)	(array3dflt.type)
e_norm (1672)	waves%coherentwave(:)%fullwave%e_components%e_norm (9.5.1.3.77)	(complexgrid_scalar_cplx)
griduid (1591)	waves%coherentwave(:)%fullwave%e_components%e_norm%griduid (integer) (9.5.1.1.2)	
subgrid (1591)	waves%coherentwave(:)%fullwave%e_components%e_norm%subgrid (integer) (9.5.1.1.2)	
scalar (1591)	waves%coherentwave(:)%fullwave%e_components%e_norm%scalar (9.5.1.3.415)	(veccplx.type)
re (1929)	waves%coherentwave(:)%fullwave%e_components%e_norm%scalar%re (9.5.1.2.9)	(vecflt.type)
im (1929)	waves%coherentwave(:)%fullwave%e_components%e_norm%scalar%im (9.5.1.2.9)	(vecflt.type)
vector (1591)	waves%coherentwave(:)%fullwave%e_components%e_norm%vector (9.5.1.3.239)	(matcplx.type)
re (1753)	waves%coherentwave(:)%fullwave%e_components%e_norm%vector%re (9.5.1.2.7)	(matflt.type)
im (1753)	waves%coherentwave(:)%fullwave%e_components%e_norm%vector%im (9.5.1.2.7)	(matflt.type)
matrix (1591)	waves%coherentwave(:)%fullwave%e_components%e_norm%matrix (9.5.1.3.55)	(array3dcplx.type)
re (1569)	waves%coherentwave(:)%fullwave%e_components%e_norm%matrix%re (9.5.1.2.1)	(array3dflt.type)
im (1569)	waves%coherentwave(:)%fullwave%e_components%e_norm%matrix%im (9.5.1.2.1)	(array3dflt.type)
e_binorm (1672)	waves%coherentwave(:)%fullwave%e_components%e_binorm (9.5.1.3.77)	(complexgrid_scalar_cplx)
griduid (1591)	waves%coherentwave(:)%fullwave%e_components%e_binorm%griduid (integer) (9.5.1.1.2)	
subgrid (1591)	waves%coherentwave(:)%fullwave%e_components%e_binorm%subgrid (integer) (9.5.1.1.2)	
scalar (1591)	waves%coherentwave(:)%fullwave%e_components%e_binorm%scalar (9.5.1.3.415)	(veccplx.type)
re (1929)	waves%coherentwave(:)%fullwave%e_components%e_binorm%scalar%re (9.5.1.2.9)	(vecflt.type)
im (1929)	waves%coherentwave(:)%fullwave%e_components%e_binorm%scalar%im (9.5.1.2.9)	(vecflt.type)
vector (1591)	waves%coherentwave(:)%fullwave%e_components%e_binorm%vector (9.5.1.3.239)	(matcplx.type)
re (1753)	waves%coherentwave(:)%fullwave%e_components%e_binorm%vector%re (9.5.1.2.7)	(matflt.type)
im (1753)	waves%coherentwave(:)%fullwave%e_components%e_binorm%vector%im (9.5.1.2.7)	(matflt.type)
matrix (1591)	waves%coherentwave(:)%fullwave%e_components%e_binorm%matrix (9.5.1.3.55)	(array3dcplx.type)
re (1569)	waves%coherentwave(:)%fullwave%e_components%e_binorm%matrix%re (9.5.1.2.1)	(array3dflt.type)
im (1569)	waves%coherentwave(:)%fullwave%e_components%e_binorm%matrix%im (9.5.1.2.1)	(array3dflt.type)
b_norm (1672)	waves%coherentwave(:)%fullwave%e_components%b_norm (9.5.1.3.77)	(complexgrid_scalar_cplx)
griduid (1591)	waves%coherentwave(:)%fullwave%e_components%b_norm%griduid (integer) (9.5.1.1.2)	
subgrid (1591)	waves%coherentwave(:)%fullwave%e_components%b_norm%subgrid (integer) (9.5.1.1.2)	
scalar (1591)	waves%coherentwave(:)%fullwave%e_components%b_norm%scalar (9.5.1.3.415)	(veccplx.type)
re (1929)	waves%coherentwave(:)%fullwave%e_components%b_norm%scalar%re (9.5.1.2.9)	(vecflt.type)
im (1929)	waves%coherentwave(:)%fullwave%e_components%b_norm%scalar%im (9.5.1.2.9)	(vecflt.type)
vector (1591)	waves%coherentwave(:)%fullwave%e_components%b_norm%vector (9.5.1.3.239)	(matcplx.type)
re (1753)	waves%coherentwave(:)%fullwave%e_components%b_norm%vector%re (9.5.1.2.7)	(matflt.type)
im (1753)	waves%coherentwave(:)%fullwave%e_components%b_norm%vector%im (9.5.1.2.7)	(matflt.type)
matrix (1591)	waves%coherentwave(:)%fullwave%e_components%b_norm%matrix (9.5.1.3.55)	(array3dcplx.type)
re (1569)	waves%coherentwave(:)%fullwave%e_components%b_norm%matrix%re (9.5.1.2.1)	(array3dflt.type)

im (1569)	waves%coherentwave(:)%fullwave%e_components%b_norm%matrix%im (array3dflt.type) (9.5.1.2.1)
b_binorm (1672)	waves%coherentwave(:)%fullwave%e_components%b_binorm (complexgrid_scalar_cplx) (9.5.1.3.77)
griduid (1591)	waves%coherentwave(:)%fullwave%e_components%b_binorm%griduid (integer) (9.5.1.1.2)
subgrid (1591)	waves%coherentwave(:)%fullwave%e_components%b_binorm%subgrid (integer) (9.5.1.1.2)
scalar (1591)	waves%coherentwave(:)%fullwave%e_components%b_binorm%scalar (vecplx.type) (9.5.1.3.415)
re (1929)	waves%coherentwave(:)%fullwave%e_components%b_binorm%scalar%re (vecflt.type) (9.5.1.2.9)
im (1929)	waves%coherentwave(:)%fullwave%e_components%b_binorm%scalar%im (vecflt.type) (9.5.1.2.9)
vector (1591)	waves%coherentwave(:)%fullwave%e_components%b_binorm%vector (matcplx.type) (9.5.1.3.239)
re (1753)	waves%coherentwave(:)%fullwave%e_components%b_binorm%vector%re (matflt.type) (9.5.1.2.7)
im (1753)	waves%coherentwave(:)%fullwave%e_components%b_binorm%vector%im (matflt.type) (9.5.1.2.7)
matrix (1591)	waves%coherentwave(:)%fullwave%e_components%b_binorm%matrix (array3dcplx.type) (9.5.1.3.55)
re (1569)	waves%coherentwave(:)%fullwave%e_components%b_binorm%matrix%re (array3dflt.type) (9.5.1.2.1)
im (1569)	waves%coherentwave(:)%fullwave%e_components%b_binorm%matrix%im (array3dflt.type) (9.5.1.2.1)
b_para (1672)	waves%coherentwave(:)%fullwave%e_components%b_para (complexgrid_scalar_cplx) (9.5.1.3.77)
griduid (1591)	waves%coherentwave(:)%fullwave%e_components%b_para%griduid (integer) (9.5.1.1.2)
subgrid (1591)	waves%coherentwave(:)%fullwave%e_components%b_para%subgrid (integer) (9.5.1.1.2)
scalar (1591)	waves%coherentwave(:)%fullwave%e_components%b_para%scalar (vecplx.type) (9.5.1.3.415)
re (1929)	waves%coherentwave(:)%fullwave%e_components%b_para%scalar%re (vecflt.type) (9.5.1.2.9)
im (1929)	waves%coherentwave(:)%fullwave%e_components%b_para%scalar%im (vecflt.type) (9.5.1.2.9)
vector (1591)	waves%coherentwave(:)%fullwave%e_components%b_para%vector (matcplx.type) (9.5.1.3.239)
re (1753)	waves%coherentwave(:)%fullwave%e_components%b_para%vector%re (matflt.type) (9.5.1.2.7)
im (1753)	waves%coherentwave(:)%fullwave%e_components%b_para%vector%im (matflt.type) (9.5.1.2.7)
matrix (1591)	waves%coherentwave(:)%fullwave%e_components%b_para%matrix (array3dcplx.type) (9.5.1.3.55)
re (1569)	waves%coherentwave(:)%fullwave%e_components%b_para%matrix%re (array3dflt.type) (9.5.1.2.1)
im (1569)	waves%coherentwave(:)%fullwave%e_components%b_para%matrix%im (array3dflt.type) (9.5.1.2.1)
pol_decomp (1704)	waves%coherentwave(:)%fullwave%pol_decomp (pol_decomp) (9.5.1.3.283)
mpol (1797)	waves%coherentwave(:)%fullwave%pol_decomp%mpol (vecint.type) (9.5.1.2.10)
e_plus (1797)	waves%coherentwave(:)%fullwave%pol_decomp%e_plus (array3dflt.type) (9.5.1.2.1)
e_plus_ph (1797)	waves%coherentwave(:)%fullwave%pol_decomp%e_plus_ph (array3dflt.type) (9.5.1.2.1)
e_minus (1797)	waves%coherentwave(:)%fullwave%pol_decomp%e_minus (array3dflt.type) (9.5.1.2.1)
e_minus_ph (1797)	waves%coherentwave(:)%fullwave%pol_decomp%e_minus_ph (array3dflt.type) (9.5.1.2.1)
e_norm (1797)	waves%coherentwave(:)%fullwave%pol_decomp%e_norm (array3dflt.type) (9.5.1.2.1)
e_norm_ph (1797)	waves%coherentwave(:)%fullwave%pol_decomp%e_norm_ph (array3dflt.type) (9.5.1.2.1)
e_binorm (1797)	waves%coherentwave(:)%fullwave%pol_decomp%e_binorm (array3dflt.type) (9.5.1.2.1)
e_binorm_ph (1797)	waves%coherentwave(:)%fullwave%pol_decomp%e_binorm_ph (array3dflt.type) (9.5.1.2.1)
e_para (1797)	waves%coherentwave(:)%fullwave%pol_decomp%e_para (array3dflt.type) (9.5.1.2.1)
e_para_ph (1797)	waves%coherentwave(:)%fullwave%pol_decomp%e_para_ph (array3dflt.type) (9.5.1.2.1)
b_norm (1797)	waves%coherentwave(:)%fullwave%pol_decomp%b_norm (array3dflt.type) (9.5.1.2.1)
b_norm_ph (1797)	waves%coherentwave(:)%fullwave%pol_decomp%b_norm_ph (array3dflt.type) (9.5.1.2.1)
b_binorm (1797)	waves%coherentwave(:)%fullwave%pol_decomp%b_binorm (array3dflt.type) (9.5.1.2.1)
b_binorm_ph (1797)	waves%coherentwave(:)%fullwave%pol_decomp%b_binorm_ph (array3dflt.type) (9.5.1.2.1)
b_para (1797)	waves%coherentwave(:)%fullwave%pol_decomp%b_para (array3dflt.type) (9.5.1.2.1)
b_para_ph (1797)	waves%coherentwave(:)%fullwave%pol_decomp%b_para_ph (array3dflt.type) (9.5.1.2.1)
local (1704)	waves%coherentwave(:)%fullwave%local (local) (9.5.1.3.235)
e_plus (1749)	waves%coherentwave(:)%fullwave%local%e_plus (array3dflt.type) (9.5.1.2.1)
e_plus_ph (1749)	waves%coherentwave(:)%fullwave%local%e_plus_ph (array3dflt.type) (9.5.1.2.1)
e_minus (1749)	waves%coherentwave(:)%fullwave%local%e_minus (array3dflt.type) (9.5.1.2.1)

e_minus_ph (1749)	waves%coherentwave(:)%fullwave%local%e_minus_ph (array3dflt.type) (9.5.1.2.1)
e_norm (1749)	waves%coherentwave(:)%fullwave%local%e_norm (array3dint.type) (9.5.1.2.2)
enorm_ph (1749)	waves%coherentwave(:)%fullwave%local%enorm_ph (array3dflt.type) (9.5.1.2.1)
e_binorm (1749)	waves%coherentwave(:)%fullwave%local%e_binorm (array3dflt.type) (9.5.1.2.1)
e_binorm_ph (1749)	waves%coherentwave(:)%fullwave%local%e_binorm_ph (array3dflt.type) (9.5.1.2.1)
e_para (1749)	waves%coherentwave(:)%fullwave%local%e_para (array3dflt.type) (9.5.1.2.1)
e_para_ph (1749)	waves%coherentwave(:)%fullwave%local%e_para_ph (array3dflt.type) (9.5.1.2.1)
b_norm (1749)	waves%coherentwave(:)%fullwave%local%b_norm (array3dflt.type) (9.5.1.2.1)
b_norm_ph (1749)	waves%coherentwave(:)%fullwave%local%b_norm_ph (array3dflt.type) (9.5.1.2.1)
b_binorm (1749)	waves%coherentwave(:)%fullwave%local%b_binorm (array3dflt.type) (9.5.1.2.1)
b_binorm_ph (1749)	waves%coherentwave(:)%fullwave%local%b_binorm_ph (array3dflt.type) (9.5.1.2.1)
b_para (1749)	waves%coherentwave(:)%fullwave%local%b_para (array3dflt.type) (9.5.1.2.1)
b_para_ph (1749)	waves%coherentwave(:)%fullwave%local%b_para_ph (array3dflt.type) (9.5.1.2.1)
codeparam (1582)	waves%coherentwave(:)%codeparam (codeparam) (9.5.1.3.66)
codename (1580)	waves%coherentwave(:)%codeparam%codename (string) (9.5.1.1.3)
codeversion (1580)	waves%coherentwave(:)%codeparam%codeversion (string) (9.5.1.1.3)
parameters (1580)	waves%coherentwave(:)%codeparam%parameters (string) (9.5.1.1.3)
output_diag (1580)	waves%coherentwave(:)%codeparam%output_diag (string) (9.5.1.1.3)
output_flag (1580)	waves%coherentwave(:)%codeparam%output_flag (integer) (9.5.1.1.2)
codeparam (1562)	waves%codeparam (codeparam) (9.5.1.3.66)
codename (1580)	waves%codeparam%codename (string) (9.5.1.1.3)
codeversion (1580)	waves%codeparam%codeversion (string) (9.5.1.1.3)
parameters (1580)	waves%codeparam%parameters (string) (9.5.1.1.3)
output_diag (1580)	waves%codeparam%output_diag (string) (9.5.1.1.3)
output_flag (1580)	waves%codeparam%output_flag (integer) (9.5.1.1.2)
time (1562)	waves%time (float) (9.5.1.1.1)

[cpoinstances](#) <sup>182</sup>

## 9.6 4.10b.8

### 9.6.1 ITM Types

Generated from the ITM data structure schemas. Time-dependent values are shown in green. Anonymous structure (complex) types in the schemas are given parent element names; a prefix or suffix (eg type\_, \_type, \_t) can be added if required.

#### 9.6.1.1 Primitive Types

Clear definitions required.

##### 9.6.1.1.1 float

##### 9.6.1.1.2 integer

##### 9.6.1.1.3 string

#### 9.6.1.2 Array Types

Clear definitions required.

##### 9.6.1.2.1 array3dcplx\_type

Example: Complex numbers (3D)

##### 9.6.1.2.2 array3dflt\_type

Example: [[[1.0,2.0,3.0],[5.0,6.0,7.0]],[[1.0,2.0,3.0],[5.0,6.0,7.0]]]

<sup>182</sup>[https://www.efda-itm.eu/ITM/html/cpoinstances\\_\\_4.10a.3.html](https://www.efda-itm.eu/ITM/html/cpoinstances__4.10a.3.html)

### 9.6.1.2.3 array3dint\_type

Example: [[[1,2,3],[5,6,7]],[[1,2,3],[5,6,7]]]

### 9.6.1.2.4 array4dflt\_type

Example: [[[[[1.0,2.0,3.0],[5.0,6.0,7.0]],[[1.0,2.0,3.0],[5.0,6.0,7.0]]],[[[1.0,2.0,3.0],[5.0,6.0,7.0]],[[1.0,2.0,3.0],[5.0,6.0,7.0]]]]]

### 9.6.1.2.5 array5dflt\_type

Example: [[[[[[[1.0,2.0,3.0],[5.0,6.0,7.0]],[[1.0,2.0,3.0],[5.0,6.0,7.0]]],[[[1.0,2.0,3.0],[5.0,6.0,7.0]],[[1.0,2.0,3.0],[5.0,6.0,7.0]]]]],[[[[1.0,2.0,3.0],[5.0,6.0,7.0]],[[1.0,2.0,3.0],[5.0,6.0,7.0]]]]]]]

### 9.6.1.2.6 array6dflt\_type

Example: [[[[[[[[[1.0,2.0,3.0],[5.0,6.0,7.0]],[[1.0,2.0,3.0],[5.0,6.0,7.0]]],[[[1.0,2.0,3.0],[5.0,6.0,7.0]],[[1.0,2.0,3.0],[5.0,6.0,7.0]]]]],[[[[1.0,2.0,3.0],[5.0,6.0,7.0]],[[1.0,2.0,3.0],[5.0,6.0,7.0]]]]]]]]]

### 9.6.1.2.7 array7dflt\_type

Example: [[[[[[[[[[[1.0,2.0,3.0],[5.0,6.0,7.0]],[[1.0,2.0,3.0],[5.0,6.0,7.0]]],[[[1.0,2.0,3.0],[5.0,6.0,7.0]],[[1.0,2.0,3.0],[5.0,6.0,7.0]]]]],[[[[1.0,2.0,3.0],[5.0,6.0,7.0]],[[1.0,2.0,3.0],[5.0,6.0,7.0]]]]]]]]]]]

### 9.6.1.2.8 cplx\_type

Example: Complex number (scalar)

### 9.6.1.2.9 matcplx\_type

Example: Complex numbers (matrix)

### 9.6.1.2.10 matflt\_type

Example: [[1.0,2.0,3.0],[5.0,6.0,7.0]]

### 9.6.1.2.11 matint\_type

Example: [[1,2,3],[4,5,6]]

### 9.6.1.2.12 veccplx\_type

Example: Complex numbers (vector)

### 9.6.1.2.13 vecflt\_type

Example: [1.0,-3e5,-4.0e-3]

### 9.6.1.2.14 vecint\_type

Example: [1,2,3]

### 9.6.1.2.15 vecstring\_type

Example: ["aaa","bb","cccc"]

## 9.6.1.3 Structure Types

### 9.6.1.3.1 CPO Structures

#### 9.6.1.3.2 amns

Description of AMNS processes for one species.

member	type	description
datainfo	datainfo (9.6.1.3.133)	Generic information on a data item
version	string (9.6.1.1.3)	Version of the data.
source	string (9.6.1.1.3)	Source of the data.
zn	integer (9.6.1.1.2)	Nuclear charge [units of elementary charge];
amn	float (9.6.1.1.1)	Mass of atom [amu]
process(:)	amns.processType (9.6.1.3.53)	Identifiers for processes; Vector(nprocs)
tables(:)	tables (9.6.1.3.418)	Rate tables for processes. Vector(nprocs)
tables_coord(:)	tables.coord (9.6.1.3.419)	Array of possible coordinate systems for tables. Vector(ncoordbases)
version_ind(:)	version_ind (9.6.1.3.477)	Array of available releases/versions of the AMNS data; each element contains information about the AMNS data that is included in the release. This part of the CPO is filled and stored only into shot/run=0/1, playing the role of a catalogue.
codeparam	codeparam (9.6.1.3.77)	Code parameters
time	float (9.6.1.1.1)	Time [s]; Time-dependent; Scalar

### 9.6.1.3.3 antennas

Antenna systems for heating and current drive in the electron cyclotron (EC), ion cyclotron (IC) and lower hybrid (LH) frequencies. Time-dependent CPO.

member	type	description
datainfo	datainfo (9.6.1.3.133)	Generic information on a data item
antenna_ec(:)	antenna.ec (9.6.1.3.54)	Vector of Electron Cyclotron antennas. Time-dependent
antenna_ic(:)	antenna.ic (9.6.1.3.55)	Vector of Ion Cyclotron antennas. Time-dependent
antenna_lh(:)	antenna.lh (9.6.1.3.56)	Vector of Lower Hybrid antennas. Time-dependent
codeparam	codeparam (9.6.1.3.77)	Code parameters
time	float (9.6.1.1.1)	Time [s]; Time-dependent; Scalar

### 9.6.1.3.4 bb\_shield

Breeding blanket and relevant shield. CPO. Time-dependent CPO.

member	type	description
datainfo	datainfo (9.6.1.3.133)	Generic information on a data item
type	string (9.6.1.1.3)	Type of breeding blanket (HCLL, DCLL, HCPB, ...). String
limits	limits (9.6.1.3.251)	Limits
li6_enrich	float (9.6.1.1.1)	Lithium 6 enrichment (at%).
geom	geom (9.6.1.3.224)	Geometry between components
neut_results	neut_results (9.6.1.3.286)	Neutronic results
shield	shield (9.6.1.3.395)	Shield
bb	bb (9.6.1.3.60)	Breeding blanket
hcll	hcll (9.6.1.3.229)	Data specific to HCLL blanket concept
codeparam	codeparam (9.6.1.3.77)	Code parameters
time	float (9.6.1.1.1)	Time [s]; Time-dependent; Scalar

### 9.6.1.3.5 compositionc

Species description (ions, impurities, neutrals).

member	type	description
datainfo	datainfo (9.6.1.3.133)	Generic information on a data item
compositions	compositions.type (9.6.1.3.99)	Contains all the composition information for the simulation (main ions, impurities, neutrals, edge species).
codeparam	codeparam (9.6.1.3.77)	Code parameters
time	float (9.6.1.1.1)	Time [s]; Time-dependent; Scalar

### 9.6.1.3.6 coredelta

Generic instant change of the radial core profiles due to pellet, MHD, ... Time-dependent CPO.

member	type	description
datainfo	datainfo (9.6.1.3.133)	Generic information on a data item
composition	composition (9.6.1.3.95)	Plasma composition (description of ion species). OBSOLES-CENT.
desc_impur	desc_impur (9.6.1.3.135)	Description of the impurities (list of ion species and possibly different charge states). OBSOLES-CENT.
compositions	compositions.type (9.6.1.3.99)	Contains all the composition information for the simulation (main ions, impurities, neutrals, edge species).
values(:)	coredelta.values (9.6.1.3.104)	Description of the delta term for the various origins. Array of structure (ndelta). Time-dependent
codeparam	codeparam (9.6.1.3.77)	Code parameters
time	float (9.6.1.1.1)	Time [s]; Time-dependent; Scalar

### 9.6.1.3.7 corefast

Flux surface averaged fluid measures and transport coefficients of fast particle populations. Here the concept of a fast particle population refer to the difference between the total population and the thermal population. This separation of populations may in practise be achieved differently depending on the physics model. A description of how the separation is achieved should therefore be provided in corefast/values/filter/. Time-dependent CPO.

member	type	description
datainfo	datainfo (9.6.1.3.133)	Generic information on a data item
composition	composition (9.6.1.3.95)	Plasma composition (description of ion species). OBSOLES-CENT.
desc_impur	desc_impur (9.6.1.3.135)	Description of the impurities (list of ion species and possibly different charge states). OBSOLES-CENT.
compositions	compositions.type (9.6.1.3.99)	Contains all the composition information for the simulation (main ions, impurities, neutrals, edge species).
toroid_field	b0r0 (9.6.1.3.59)	Characteristics of the vacuum toroidal field, redundant with the toroidfield CPO, to document the normalisation of rho and j in this CPO.
values(:)	corefast.values (9.6.1.3.105)	Description of the fast particle terms of various origins. Array of structure (nfast). Time-dependent.
codeparam	codeparam (9.6.1.3.77)	Code parameters
time	float (9.6.1.1.1)	Time [s]; Time-dependent; Scalar

### 9.6.1.3.8 coreimpur

Impurity species (i.e. ion species with multiple charge states), radial core profiles. For heavy impurities, some ionisation states can be grouped into "bundles". Can be the result of an impurity transport code or experimental measurements. Time-dependent CPO

member	type	description
datainfo	datainfo (9.6.1.3.133)	Generic information on a data item
rho_tor_norm	vecflt.type (9.6.1.2.13)	Normalised toroidal flux coordinate values (= rho_tor normalised to the value at the last grid point); Time-dependent; Vector (nrho)
rho_tor	vecflt.type (9.6.1.2.13)	Toroidal flux coordinate (not normalised, equivalent to rho_tor_norm) [m]; Vector (nrho). Time-dependent.
psi	vecflt.type (9.6.1.2.13)	Poloidal flux [Wb], without $1/2\pi$ and such that $B_p =  \text{grad } \psi  / R/2/\pi$ . Time-dependent; Vector (nrho)
volume	vecflt.type (9.6.1.2.13)	Volume enclosed in the flux surface [m <sup>3</sup> ]; Time-dependent; Vector (nrho)
area	vecflt.type (9.6.1.2.13)	Cross-sectional area of the flux surface [m <sup>2</sup> ]; Time-dependent; Vector (nrho)
source	vecstring.type (9.6.1.2.15)	Source of the profile (any comment describing the origin of the impurity profiles : code, path to diagnostic signals, massaging, ...); Array of strings (nimp)
flag	vecint.type (9.6.1.2.14)	Flag describing how the profile has been processed : 0-not calculated; 1-interpretative; 2-calculated by the transport solver; 3-calculated by a separate code : in that case only, description of the code provided in codeparam at the same level; 4-used value from the previous time step; Time-dependent; Vector(nimp)
desc_impur	desc_impur (9.6.1.3.135)	Description of the impurities (list of ion species and possibly different charge states). OBSOLES-CENT.
compositions	compositions.type (9.6.1.3.99)	Contains all the composition information for the simulation (main ions, impurities, neutrals, edge species).
atomic_data	vecstring.type (9.6.1.2.15)	Reference for the atomic data used for each impurity. Array of strings (nimp)
impurity(:)	impurity.type (9.6.1.3.236)	Array(nimp). Time-dependent
diagnostic	coreimpurediag.type (9.6.1.3.117)	NO DOCS
diagnosticsum	coreimpurediag_sum (9.6.1.3.115)	NO DOCS
codeparam	codeparam (9.6.1.3.77)	Code parameters



member	type	description
time	float (9.6.1.1.1)	Time [s]; Time-dependent; Scalar.

### 9.6.1.3.9 coreneutrals

Core plasma neutrals description. Time-dependent CPO.

member	type	description
datainfo	datainfo (9.6.1.3.133)	Generic information on a data item
rho_tor	vecflt_type (9.6.1.2.13)	Toroidal flux coordinate (not normalised, equivalent to rho_tor_norm) [m]; Vector (nrho). Time-dependent.
rho_tor_norm	vecflt_type (9.6.1.2.13)	Normalised toroidal flux coordinate values (= rho_tor normalised to the value at the last grid point); Time-dependent; Vector (nrho)
psi	vecflt_type (9.6.1.2.13)	Poloidal flux [Wb], without $1/2\pi$ and such that $B_p =  \text{grad } \psi  / R/2/\pi$ . Time-dependent; Vector (nrho)
volume	vecflt_type (9.6.1.2.13)	Volume enclosed in the flux surface [m <sup>3</sup> ]; Time-dependent; Vector (nrho)
area	vecflt_type (9.6.1.2.13)	Cross-sectional area of the flux surface [m <sup>2</sup> ]; Time-dependent; Vector (nrho)
neutcompo	composition_neutrals (9.6.1.3.96)	Description of neutrals species. OBSOLESCE
composition	composition (9.6.1.3.95)	Plasma composition (description of ion species). OBSOLESCE
desc_impur	desc_impur (9.6.1.3.135)	Description of the impurities (list of ion species and possibly different charge states). OBSOLESCE
compositions	compositions.type (9.6.1.3.99)	Contains all the composition information for the simulation (main ions, impurities, neutrals, edge species).
profiles(:)	neutral_complex.type (9.6.1.3.287)	Profiles derived from the fields solved in the transport equations, or from experiment. Array(nneut). Time-dependent
ioncoeff(:)	coefficients_neutrals (9.6.1.3.78)	Recycling and sputtering coefficients for each ion in composition. Array(nion). Time-dependent
impcoeff(:)	impcoeff (9.6.1.3.234)	Recycling and sputtering coefficients for each impurity ion in desc_impur. Array(nimp). Time-dependent.
codeparam	codeparam (9.6.1.3.77)	Code parameters
time	float (9.6.1.1.1)	Time [s]; Time-dependent; Scalar

### 9.6.1.3.10 coreprof

Core plasma 1D profiles as a function of the toroidal flux coordinate, obtained by solving the core transport equations (can be also fitted profiles from experimental data). The codeparam element here describes the parameters of the transport equation solver and/or those of the fitting program. Time-dependent CPO.

member	type	description
datainfo	datainfo (9.6.1.3.133)	Generic information on a data item
rho_tor_norm	vecflt_type (9.6.1.2.13)	Normalised toroidal flux coordinate values (= rho_tor normalised to the value at the last radial grid point, which is quasi at the Last Closed Flux Surface); Time-dependent; Vector (nrho)
rho_tor	vecflt_type (9.6.1.2.13)	Toroidal flux coordinate (not normalised, equivalent to rho_tor_norm) [m]; Vector (nrho). Time-dependent.
drho_dt	vecflt_type (9.6.1.2.13)	Time derivative of rho_tor [m/s]; Vector (nrho). Time-dependent.
toroid_field	toroid_field (9.6.1.3.456)	Toroidal field information entering the definition of rho_tor, for reference only. The physical value of the toroidal field should be taken from the toroidfield CPO. Time-dependent.
composition	composition (9.6.1.3.95)	Plasma composition (description of ion species). OBSOLESCE
desc_impur	desc_impur (9.6.1.3.135)	Description of the impurities (list of ion species and possibly different charge states). OBSOLESCE
compositions	compositions.type (9.6.1.3.99)	Contains all the composition information for the simulation (main ions, impurities, neutrals, edge species).
psi	psi (9.6.1.3.338)	Poloidal magnetic flux [Wb]; Time-dependent;
te	corefield (9.6.1.3.106)	Electron temperature [eV]; (source term in [W.m <sup>-3</sup> ]). Time-dependent;
ti	corefieldion (9.6.1.3.107)	Ion temperature [eV]; (source term in [W.m <sup>-3</sup> ]). Time-dependent;
ne	corefield (9.6.1.3.106)	Electron density [m <sup>-3</sup> ]; (source term in [m <sup>-3</sup> ]). Time-dependent;
ni	corefieldion (9.6.1.3.107)	Ion density [m <sup>-3</sup> ]; (source term in [m <sup>-3</sup> ]). Time-dependent;
vtor	corefieldion (9.6.1.3.107)	Toroidal velocity of the various ion species [m.s <sup>-1</sup> ]; Time-dependent;
profiles1d	profiles1d (9.6.1.3.336)	Profiles derived from the fields solved in the transport equations, or from experiment.
globalparam	globalparam (9.6.1.3.227)	Various global quantities calculated from the 1D profiles. Time-dependent
codeparam	codeparam (9.6.1.3.77)	Code parameters
time	float (9.6.1.1.1)	Time [s]; Time-dependent; Scalar

### 9.6.1.3.11 coresource

Generic source term for the core transport equations (radial profile). Time-dependent CPO.

member	type	description
datainfo	datainfo (9.6.1.3.133)	Generic information on a data item
composition	composition (9.6.1.3.95)	Plasma composition (description of ion species). OBSOLES-CENT.
desc_impur	desc_impur (9.6.1.3.135)	Description of the impurities (list of ion species and possibly different charge states). OBSOLES-CENT.
compositions	compositions.type (9.6.1.3.99)	Contains all the composition information for the simulation (main ions, impurities, neutrals, edge species).
toroid_field	b0r0 (9.6.1.3.59)	Characteristics of the vacuum toroidal field, redundant with the toroidfield CPO, to document the normalisation of rho and j in this CPO.
values(:)	coresource_values (9.6.1.3.124)	Description of the source terms of various origins. Array of structure (nsource). Time-dependent.
codeparam	codeparam (9.6.1.3.77)	Code parameters
time	float (9.6.1.1.1)	Time [s]; Time-dependent; Scalar

### 9.6.1.3.12 coretransp

Generic transport coefficients for the core transport equations (radial profile). Time-dependent CPO

member	type	description
datainfo	datainfo (9.6.1.3.133)	Generic information on a data item
composition	composition (9.6.1.3.95)	Plasma composition (description of ion species). OBSOLES-CENT.
desc_impur	desc_impur (9.6.1.3.135)	Description of the impurities (list of ion species and possibly different charge states). OBSOLES-CENT.
compositions	compositions.type (9.6.1.3.99)	Contains all the composition information for the simulation (main ions, impurities, neutrals, edge species).
values(:)	coretransp_values (9.6.1.3.128)	Description of transport term coming from various origins. Array of structure (ntransp). Time-dependent
codeparam	codeparam (9.6.1.3.77)	Code parameters
time	float (9.6.1.1.1)	Time [s]; Time-dependent; Scalar

### 9.6.1.3.13 cxdiag

Charge Exchange Diagnostic; Time-dependent CPO

member	type	description
datainfo	datainfo (9.6.1.3.133)	Generic information on a data item
setup	cxsetup (9.6.1.3.131)	diagnostic setup information
measure	cxmeasure (9.6.1.3.130)	Measured values
codeparam	codeparam (9.6.1.3.77)	Code parameters
time	float (9.6.1.1.1)	Time [s]; Time-dependent; Scalar

### 9.6.1.3.14 distribution

Datastructure for representing data associated with a distribution function one or many particle species. This structure is specifically designed to handle non-Maxwellian distribution function generated during heating and current drive, typically solved using a Fokker-Planck calculation perturbed by a heating scheme (e.g. IC, EC, LH, NBI, or alpha heating) and then relaxed by Coloumb collisions. Time-dependent CPO

member	type	description
datainfo	datainfo (9.6.1.3.133)	Generic information on a data item
composition	composition (9.6.1.3.95)	Plasma composition (description of ion species). OBSOLES-CENT.
compositions	compositions.type (9.6.1.3.99)	Contains all the composition information for the simulation (main ions, impurities, neutrals, edge species).
distri_vec(:)	distri_vec (9.6.1.3.164)	Vector over all distribution functions. Every distribution function has to be associated with only one particle species, speciefec in distri_vec/species/, but there could be multiple distribution function for each species. In this case, the fast particle populations should be superposed. Time-dependent. Structure array(ndistri_vec)
codeparam	codeparam (9.6.1.3.77)	Code parameters
time	float (9.6.1.1.1)	Time [s]; Time-dependent; Scalar

### 9.6.1.3.15 distsource

Sources of particles for input to kinetic equations, e.g. Fokker-Planck calculation. The sources could originate from e.g. NBI or fusion reactions. Time-dependent CPO

member	type	description
datainfo	datainfo (9.6.1.3.133)	Generic information on a data item
composition	composition (9.6.1.3.95)	Plasma composition (description of ion species). OBSOLESCE.
compositions	compositions.type (9.6.1.3.99)	Contains detailed information on the plasma composition (main ions, impurities, neutrals, edge species).
source(:)	distsource_source (9.6.1.3.169)	Source. Time-dependent. Structure array(nsrc_spec)
codeparam	codeparam (9.6.1.3.77)	Code parameters
time	float (9.6.1.1.1)	Time [s]; Time-dependent; scalar

### 9.6.1.3.16 ecediag

Electron Cyclotron Emission Diagnostic; Time-dependent CPO

member	type	description
datainfo	datainfo (9.6.1.3.133)	Generic information on a data item
setup	ecsetup (9.6.1.3.173)	diagnostic setup information
measure	ecmeasure (9.6.1.3.172)	Measured values
codeparam	codeparam (9.6.1.3.77)	Code parameters
time	float (9.6.1.1.1)	Time [s]; Time-dependent; Scalar

### 9.6.1.3.17 edge

CPO for edge/SOL plasma description. Time-dependent CPO

member	type	description
datainfo	datainfo (9.6.1.3.133)	Generic information on a data item
grid	complexgrid (9.6.1.3.82)	Grid description
species(:)	species_desc (9.6.1.3.407)	Description of ion species. Array of structures(nspecies)
compositions	compositions.type (9.6.1.3.99)	Contains all the composition information for the simulation (main ions, impurities, neutrals, edge species).
fluid	edge_fluid (9.6.1.3.174)	Fluid description of edge plasma. Time-dependent.
kinetic	edge_kinetic (9.6.1.3.180)	Kinetic description of edge plasma. Time-dependent.
codeparam	codeparam (9.6.1.3.77)	Code parameters
time	float (9.6.1.1.1)	Time [s]; Time-dependent; Scalar

### 9.6.1.3.18 efcc

Error field correction coils. Time-dependent CPO.

member	type	description
datainfo	datainfo (9.6.1.3.133)	Generic information on a data item
coil(:)	coil (9.6.1.3.80)	Individual coil. Time-dependent. Structure array. Replicate this coil structure for coil element in the efcc array.
time	float (9.6.1.1.1)	Time [s]; Time-dependent; Scalar
codeparam	codeparam (9.6.1.3.77)	Code parameters

### 9.6.1.3.19 equilibrium

Description of a 2D, axi-symmetric, tokamak equilibrium; result of an equilibrium code. Time-dependent CPO

member	type	description
datainfo	datainfo (9.6.1.3.133)	Generic information on a data item
eqconstraint	eqconstraint (9.6.1.3.187)	measurements to constrain the equilibrium, output values and accuracy of the fit
eqgeometry	eqgeometry (9.6.1.3.188)	Geometry of the plasma boundary
flush	flush (9.6.1.3.201)	FLUSH package coefficients for the mapping of the equilibrium. The time grid of this structure is the same as the equilibrium structure above.
global_param	global_param (9.6.1.3.226)	0d output parameters
profiles_1d	profiles_1d (9.6.1.3.337)	output profiles as a function of the poloidal flux

member	type	description
profiles_2d(:)	equilibrium_profiles_2d (9.6.1.3.193)	Output profiles in the poloidal plane. Time-dependent
coord_sys	coord_sys (9.6.1.3.101)	flux surface coordinate system on a square grid of flux and angle
time	float (9.6.1.1.1)	Time [s]; Time-dependent; Scalar
codeparam	codeparam (9.6.1.3.77)	Code parameters

### 9.6.1.3.20 fusiondiag

Fusion product diagnostics; Time-dependent CPO

member	type	description
datainfo	datainfo (9.6.1.3.133)	Generic information on a data item
fus_product(:)	fusiondiag_fus_product (9.6.1.3.220)	Source. Time-dependent. Structure array. Replicate this source structure to accommodate neutron and gammas.
codeparam	codeparam (9.6.1.3.77)	Code parameters
time	float (9.6.1.1.1)	Time [s]; Time-dependent; Scalar

### 9.6.1.3.21 halphadiag

H/D alpha line integrated diagnostic; Time-dependent CPO

member	type	description
datainfo	datainfo (9.6.1.3.133)	Generic information on a data item
setup	halpha_setup (9.6.1.3.228)	setup for the lines of sight of the line integrated measurement
intensity	exp1D (9.6.1.3.195)	Measured light intensity (a.u.). Time-dependent. Vector (nlos)
codeparam	codeparam (9.6.1.3.77)	Code parameters
time	float (9.6.1.1.1)	Time [s]; Time-dependent; Scalar

### 9.6.1.3.22 heat\_sources

Description of a set of heat sources or sinks. Time-dependent CPO.

member	type	description
datainfo	datainfo (9.6.1.3.133)	Generic information on a data item
sources(:)	calorimetry_heat_source (9.6.1.3.73)	Heat sources. Array of structure (nheat_source)
sinks(:)	calorimetry_heat_source (9.6.1.3.73)	Heat sinks. Array of structure (nheat_sink)
codeparam	codeparam (9.6.1.3.77)	Code parameters
time	float (9.6.1.1.1)	Time [s]; Time-dependent; Scalar

### 9.6.1.3.23 interfdiag

General line integral diagnostic

member	type	description
datainfo	datainfo (9.6.1.3.133)	Generic information on a data item
expression	string (9.6.1.1.3)	Formal expression for the line integral to be evaluated as a function of ne, ni, Te, Ti, Zeff, Br, Bz
setup_line	setup_line (9.6.1.3.393)	Geometric description of the lines of sight
measure	exp1D (9.6.1.3.195)	Measured value. Time-dependent; Vector (nchords)
codeparam	codeparam (9.6.1.3.77)	Code parameters
time	float (9.6.1.1.1)	Time [s]; Time-dependent; Scalar

### 9.6.1.3.24 ironmodel

Model of the iron circuit; Time-dependent CPO

member	type	description
datainfo	datainfo (9.6.1.3.133)	Generic information on a data item
desc_iron	desc_iron (9.6.1.3.136)	Description of the iron segments
magnetise	magnetise (9.6.1.3.258)	Magnetisation M of the iron segment, assumed to be constant inside a given iron segment. Reminder : $H = 1/\mu_0 * B - \text{mur} * M$ ; [A/m].

member	type	description
codeparam	codeparam (9.6.1.3.77)	Code parameters
time	float (9.6.1.1.1)	Time [s]; Time-dependent; Scalar

### 9.6.1.3.25 langmuirdiag

Langmuir probes; Time-dependent CPO

member	type	description
datainfo	datainfo (9.6.1.3.133)	Generic information on a data item
potential	lang_measure (9.6.1.3.242)	Floating potential [V]. All children are vectors(npot)
bias	lang_measure (9.6.1.3.242)	Biasing potential [V]. All children are vectors(bias)
jsat	lang_measure (9.6.1.3.242)	Ion saturation current [A/m <sup>2</sup> ]. All children are vectors(njsat)
ne	lang_derived (9.6.1.3.241)	Electron density [m <sup>-3</sup> ]. All children are vectors(ndensity).
te	lang_derived (9.6.1.3.241)	Electron Temperature [eV]. All children are vectors(nte)
machpar	lang_derived (9.6.1.3.241)	Parallel Mach number. All children are vectors(nmach)
codeparam	codeparam (9.6.1.3.77)	Code parameters
time	float (9.6.1.1.1)	Time [s]; Time-dependent; Scalar

### 9.6.1.3.26 launches

RF wave launch conditions. Time-dependent CPO

member	type	description
datainfo	datainfo (9.6.1.3.133)	Generic information on a data item
name	vecstring_type (9.6.1.2.15)	Antenna name, Vector of strings (nantenna)
type	vecstring_type (9.6.1.2.15)	Wave type (LH, EC, IC, ...), Vector of strings (nantenna)
frequency	vecflt_type (9.6.1.2.13)	Wave frequency [Hz], Vector (nantenna).
mode	vecint_type (9.6.1.2.14)	Incoming wave mode (+ 1 : slow wave only; -1 both slow and fast wave modes). Vector of integers (nantenna). Time-dependent
position	rzphiID (9.6.1.3.362)	Reference global position of the antenna. Time-dependent
spectrum	spectrum (9.6.1.3.410)	Spectral properties of the wave.
beam	launchs_rfbeam (9.6.1.3.246)	Beam characteristics
codeparam	codeparam (9.6.1.3.77)	Code parameters
time	float (9.6.1.1.1)	Time [s]; Time-dependent; Scalar

### 9.6.1.3.27 lithiumdiag

Lithium Beam Diagnostic; Time-dependent CPO

member	type	description
datainfo	datainfo (9.6.1.3.133)	Generic information on a data item
setup	lithsetup (9.6.1.3.254)	diagnostic setup information
measure	lithmeasure (9.6.1.3.253)	Measured values
codeparam	codeparam (9.6.1.3.77)	Code parameters
time	float (9.6.1.1.1)	Time [s]; Time-dependent; Scalar

### 9.6.1.3.28 magdiag

Magnetic diagnostics. Time-dependent CPO

member	type	description
datainfo	datainfo (9.6.1.3.133)	Generic information on a data item
ip	exp0D (9.6.1.3.194)	Plasma current [A]. Positive sign means anti-clockwise when viewed from above. Time-dependent. Scalar
diamagflux	exp0D (9.6.1.3.194)	Diamagnetic flux [Wb]; Time-dependent; Scalar
diamagener	exp0D (9.6.1.3.194)	Diamagnetic energy [J]; Time-dependent; Scalar
flux_loops	flux_loops (9.6.1.3.202)	Poloidal flux loops RZ coordinates have 1 component for the full loop and two if there is a negative reference loop
bpol_probes	bpol_probes (9.6.1.3.72)	Poloidal field probes
codeparam	codeparam (9.6.1.3.77)	Code parameters

member	type	description
time	float (9.6.1.1.1)	Time [s]; Time-dependent; Scalar

### 9.6.1.3.29 mhd

MHD linear stability. Time-dependent CPO

member	type	description
datainfo	datainfo (9.6.1.3.133)	Generic information on a data item
toroid_field	b0r0 (9.6.1.3.59)	Characteristics of the vacuum toroidal field, redundant with the toroidfield CPO, to document the normalisation of rho and j in this CPO.
n(:)	mhd_mode (9.6.1.3.262)	Vector of toroidal mode numbers; Structure Array (ntor); Time-dependent
time	float (9.6.1.1.1)	Time [s]; Time-dependent; Scalar.
codeparam	codeparam (9.6.1.3.77)	Code parameters

### 9.6.1.3.30 msediag

MSE Diagnostic; Time-dependent CPO

member	type	description
datainfo	datainfo (9.6.1.3.133)	Generic information on a data item
polarimetry	polarimetry (9.6.1.3.331)	This structure accomodates the polarimetry setup and measurements of a mse diagnostic, as widely used in fusion devices. The final measurement is the tan(gamma) where gamma is the polarization angle of a particular spectral mse component.
spectral	spectral (9.6.1.3.409)	This structure accommodates the types needed on a spectral MSE diagnostic namely the emmissivity and the radiance spectra. It will be subsequently upgraded with optical + photon detection elements since the structure will also be used for a synthetic spectral mse code.
codeparam	codeparam (9.6.1.3.77)	Code parameters
time	float (9.6.1.1.1)	Time [s]; Time-dependent; Scalar

### 9.6.1.3.31 nbi

Neutral Beam Injection. Input to NBI source codes; describes the neutrals that are about to be launched into the torus; Time-dependent CPO

member	type	description
datainfo	datainfo (9.6.1.3.133)	Generic information on a data item
nbi.unit(:)	nbi_unit (9.6.1.3.284)	Vector of Neutral Beam Injector units. The NBI system should be separated in to the individually power strucutres. Structure array(nunits). Time-dependent
codeparam	codeparam (9.6.1.3.77)	Code parameters
time	float (9.6.1.1.1)	Time [s]; Time-dependent; Scalar

### 9.6.1.3.32 neoclassic

Neoclassical quantities (including transport coefficients). Time-dependent CPO

member	type	description
datainfo	datainfo (9.6.1.3.133)	Generic information on a data item
rho.tor_norm	vecflt_type (9.6.1.2.13)	Normalised toroidal flux coordinate values (= rho.tor normalised to the value at the last grid point); Vector (nrho)
rho.tor	vecflt_type (9.6.1.2.13)	Toroidal flux coordinate (not normalised, equivalent to rho.tor_norm) [m]; Vector (nrho). Time-dependent.
composition	composition (9.6.1.3.95)	Plasma composition (description of ion species). OBSOLES-CENT.
desc_impur	desc_impur (9.6.1.3.135)	Description of the impurities (list of ion species and possibly different charge states). OBSOLES-CENT.
compositions	compositions.type (9.6.1.3.99)	Contains all the composition information for the simulation (main ions, impurities, neutrals, edge species).
ni_neo	transcoefion (9.6.1.3.460)	Neoclassical transport coefficients for ion density equation. Time-dependent.
ne_neo	transcoefel (9.6.1.3.458)	Neoclassical transport coefficients for electron density equation. Time-dependent.
nz_neo(:)	transcoefimp (9.6.1.3.459)	Neoclassical transport coefficients for impurity (multiple charge state) density equation. Time-dependent.
ti_neo	transcoefion (9.6.1.3.460)	Neoclassical transport coefficients for ion temperature equation. Time-dependent.
te_neo	transcoefel (9.6.1.3.458)	Neoclassical transport coefficients for electron temperature equation. Time-dependent.
tz_neo(:)	transcoefimp (9.6.1.3.459)	Neoclassical transport coefficients for impurity (multiple charge state) temperature equation. Time-dependent.

member	type	description
mtor_neo	transcoefel (9.6.1.3.458)	Neoclassical transport coefficients for total toroidal momentum equation. Time-dependent.
sigma	vecflt_type (9.6.1.2.13)	Neoclassical conductivity [ $\text{ohm}^{-1} \cdot \text{m}^{-1}$ ]. Time-dependent. Vector(nrho).
jboot	vecflt_type (9.6.1.2.13)	Bootstrap current density [ $\text{A} \cdot \text{m}^{-2}$ ]. Time-dependent. Vector(nrho).
er	vecflt_type (9.6.1.2.13)	Radial electric field [ $\text{V}/\text{m}$ ]. Time-dependent. Vector(nrho).
vpol	matflt_type (9.6.1.2.10)	Neoclassical poloidal rotation of each ion species [ $\text{m}/\text{s}$ ]. Time-dependent. Matrix(nrho,nion).
vtor	matflt_type (9.6.1.2.10)	Neoclassical toroidal rotation of each ion species [ $\text{m}/\text{s}$ ]. Time-dependent. Matrix(nrho,nion).
mach	matflt_type (9.6.1.2.10)	Mach number of each ion species. Time-dependent. Matrix(nrho,nion).
utheta_e	vecflt_type (9.6.1.2.13)	Electron poloidal flow [ $\text{m}/\text{s}$ ]. Time-dependent. Vector(nrho).
utheta_i	matflt_type (9.6.1.2.10)	Ion poloidal flow [ $\text{m}/\text{s}$ ]. Time-dependent. Matrix(nrho,nion).
fext	array3dfilt_type (9.6.1.2.2)	Moments of parallel external force on each ion species [ $\text{T} \cdot \text{J} \cdot \text{m}^{-3}$ ]. Time-dependent. Array3D(nrho,nion,nmoment).
jext	vecflt_type (9.6.1.2.13)	Current density response to fext [ $\text{A} \cdot \text{m}^{-2}$ ]. Time-dependent. Vector(nrho).
time	float (9.6.1.1.1)	Time [s]; Time-dependent; Scalar.
codeparam	codeparam (9.6.1.3.77)	Code parameters

### 9.6.1.3.33 ntm

Description of a Neoclassical Tearing Mode and its evolution. Time-dependent CPO

member	type	description
datainfo	datainfo (9.6.1.3.133)	Generic information on a data item
mode(:)	ntm_mode (9.6.1.3.290)	List of the various NTM modes appearing during the simulation. If a mode appears several times, use several indices in this array of structure with the same m,n values. All descendant nodes are marked as Time-dependent for technical reasons, to allow the size of the mode AoS to vary.
time	float (9.6.1.1.1)	Time [s]; Time-dependent; Scalar.
codeparam	codeparam (9.6.1.3.77)	Code parameters

### 9.6.1.3.34 orbit

Orbits for a set of particles. Time-dependent CPO

member	type	description
datainfo	datainfo (9.6.1.3.133)	Generic information on a data item
com	com (9.6.1.3.81)	COM (Constants Of Motion) parameters identifying an orbit
trace	trace (9.6.1.3.457)	Position of particle in 5D space (3D in real and 2D in velocity).
global_param	orbit_global_param (9.6.1.3.301)	Global quantities associated with an orbit.
codeparam	codeparam (9.6.1.3.77)	Code parameters
time	float (9.6.1.1.1)	Time [s]; Time-dependent; Scalar

### 9.6.1.3.35 pellets

Description of pellets. Time-dependent CPO.

member	type	description
datainfo	datainfo (9.6.1.3.133)	Generic information on a data item
compositions	compositions_type (9.6.1.3.99)	Pellet composition
pellet(:)	pellet (9.6.1.3.309)	Description of the pellets entering the plasma at given time. Array of structures (NPEL). Time-dependent.
codeparam	codeparam (9.6.1.3.77)	Code parameters
time	float (9.6.1.1.1)	Time [s]; Time-dependent; Scalar

### 9.6.1.3.36 pfsystems

Description of the active poloidal coils, passive conductors, currents flowing in those and mutual electromagnetic effects of the device; Time-dependent CPO

member	type	description
datainfo	datainfo (9.6.1.3.133)	Generic information on a data item
pccoils	pccoils (9.6.1.3.319)	Active poloidal field coils
pfpasive	pfpasive (9.6.1.3.323)	Passive axisymmetric conductor description



member	type	description
pfcircuits	pfcircuits (9.6.1.3.318)	Circuits, connected to multiple coils and to multiple supplies, defining the current and voltage relationships in the system
pfsupplies	pfsupplies (9.6.1.3.325)	PF power supplies
codeparam	codeparam (9.6.1.3.77)	Code parameters
time	float (9.6.1.1.1)	Time [s]; Time-dependent; Scalar

### 9.6.1.3.37 polardiag

General line integral diagnostic

member	type	description
datainfo	datainfo (9.6.1.3.133)	Generic information on a data item
expression	string (9.6.1.1.3)	Formal expression for the line integral to be evaluated as a function of ne, ni, Te, Ti, Zeff, Br, Bz
setup_line	setup_line (9.6.1.3.393)	Geometric description of the lines of sight
measure	exp1D (9.6.1.3.195)	Measured value. Time-dependent; Vector (nchords)
codeparam	codeparam (9.6.1.3.77)	Code parameters
time	float (9.6.1.1.1)	Time [s]; Time-dependent; Scalar

### 9.6.1.3.38 power.conv

Power conversion system. Time-dependent CPO.

member	type	description
datainfo	datainfo (9.6.1.3.133)	Generic information on a data item
cycle_type	string (9.6.1.1.3)	Type of cycle. String
circuits(:)	circuits (9.6.1.3.74)	Description of the circuit of the power conversion system. Array of structure. (ncircuits).
power_recirc	float (9.6.1.1.1)	Recirculated electric power (input to the power conversion actor). [W] Scalar
power_net	float (9.6.1.1.1)	Net electric power generated [W]. Scalar
power_int	float (9.6.1.1.1)	Total electric power consumption of the power conversion system.[W]. Scalar
efficiency	float (9.6.1.1.1)	Efficiency of the reactor (ratio of the alternator electrical power to the total power needed to operate the reactor)
codeparam	codeparam (9.6.1.3.77)	Code parameters
time	float (9.6.1.1.1)	Time [s]; Time-dependent; Scalar

### 9.6.1.3.39 reflectomet

Reflectometry CPO, contains antennas and received signals; Time-dependent CPO.

member	type	description
datainfo	datainfo (9.6.1.3.133)	Generic information on a data item
refl_receive(:)	refl_receive (9.6.1.3.346)	Reflectometry signal; experimental or code output. Time-dependent. Vector(nreceivers); If output from ERC3D, contains short, high-resolution (ps) time series anchored to the time of the CPO or, for a combination of runs, longer, coarse time signals. For experimental signals, time series may span much longer durations. For slowly varying signals, may contain only one point and have a separate CPO instance with different time field for every point. For code output, the signals are usually normalised to unity power.
antennas(:)	reflectometry_antennas (9.6.1.3.347)	Vector of reflectometry antenna descriptions. These include radiation fields as well as material antenna structures (feeds, horns, later mirrors); Vector(nantennas); refl_received entries refer to their antenna by index in this array. Time-dependent.
codeparam	codeparam (9.6.1.3.77)	Code parameters
time	float (9.6.1.1.1)	Time [s]; Time-dependent; Scalar

### 9.6.1.3.40 rfadiag

Retarding field analyser Diagnostic; Time-dependent CPO

member	type	description
datainfo	datainfo (9.6.1.3.133)	Generic information on a data item
setup	rfasetup (9.6.1.3.353)	diagnostic setup information
measure	rfameasure (9.6.1.3.352)	Measured values
codeparam	codeparam (9.6.1.3.77)	Code parameters
time	float (9.6.1.1.1)	Time [s]; Time-dependent; Scalar

### 9.6.1.3.41 sawteeth

Description of sawtooth events. Time-dependent CPO

member	type	description
datainfo	datainfo (9.6.1.3.133)	Generic information on a data item
crash_trig	integer (9.6.1.1.2)	Flag indicating whether a crash condition has been satisfied : 0 = no crash. $N(\zeta 0)$ = crash triggered due to condition $ii=N$ . Integer. Time-dependent.
composition	composition (9.6.1.3.95)	Plasma composition (description of ion species). OBSOLESCEMENT.
rho_tor_norm	vecflt_type (9.6.1.2.13)	Normalised toroidal flux coordinate values (= rho_tor normalised to the value at the last grid point); Vector (nrho)
rho_tor	vecflt_type (9.6.1.2.13)	Toroidal flux coordinate [m] given by $\sqrt{\phi/B_0/\pi}$ , where $B_0 = \text{toroidfield}\%bvac.r\%value / \text{toroidfield}\%r0$ . Vector (nrho). Time-dependent.
profiles1d	sawteeth_profiles1d (9.6.1.3.369)	Core profiles after sawtooth crash
diags	sawteeth_diags (9.6.1.3.368)	NO DOCS
codeparam	codeparam (9.6.1.3.77)	Code parameters
time	float (9.6.1.1.1)	Time [s]; Time-dependent; Scalar

### 9.6.1.3.42 scenario

Scenario characteristics, to be used as input or output of a whole discharge simulator. Time-dependent CPO.

member	type	description
datainfo	datainfo (9.6.1.3.133)	Generic information on a data item
centre	scenario_centre (9.6.1.3.370)	central values of the profiles (at magnetic axis)
composition	scenario_composition (9.6.1.3.371)	Plasma composition (description of ion species).
configs	scenario_configuration (9.6.1.3.372)	Strings describing the tokamak configuration
confinement	scenario_confinement (9.6.1.3.373)	characteristic confinement times
currents	scenario_currents (9.6.1.3.374)	data related to current sources and current diffusion
edge	scenario_edge (9.6.1.3.375)	edge value (@ LCMS)
energy	scenario_energy (9.6.1.3.376)	plasma energy content
edgeometry	edgeometry (9.6.1.3.188)	Geometry of the plasma boundary
global_param	scenario_global (9.6.1.3.377)	Global scalar values
heat_power	scenario_heat_power (9.6.1.3.378)	Power delivered to plasma (thermal and non thermal)
itb	scenario_itb (9.6.1.3.380)	Values characteristics of the Internal Transport Barrier
lim_div_wall	scenario_lim_div_wall (9.6.1.3.381)	values on the plate of divertor or on the limiter or on the wall (@ LCMS)
line_ave	scenario_line_ave (9.6.1.3.382)	line averaged value
neutron	scenario_neutron (9.6.1.3.383)	neutron flux for DD and DT reactions
ninety_five	scenario_ninety_five (9.6.1.3.384)	values at 95% of poloidal flux
pedestal	scenario_pedestal (9.6.1.3.385)	Values at the top of the H-mode pedestal
references	scenario_references (9.6.1.3.388)	References
reactor	scenario_reactor (9.6.1.3.386)	reactor data (such as electricity cost ...)
sol	scenario_sol (9.6.1.3.389)	SOL characteristic (@ LCMS)
vol_ave	scenario_vol_ave (9.6.1.3.390)	volume averaged value
codeparam	codeparam (9.6.1.3.77)	Code parameters
time	float (9.6.1.1.1)	Time [s]; Time-dependent; Scalar

### 9.6.1.3.43 solcurdiag

SOL current diagnostic. Time-dependent CPO

member	type	description
datainfo	datainfo (9.6.1.3.133)	Generic information on a data item

member	type	description
sol_current(:)	solcurdiag_sol_current (9.6.1.3.398)	Vector of toroidal rings of divertor tiles. Structure array(nrings). Time-dependent
clusters(:)	clusters (9.6.1.3.76)	Cluster of tile rings to define and reference superset structures using the individual tile rings. A coil ring can coexist on two top level structures. Structure array (ncluster).
time	float (9.6.1.1.1)	Time [s]; Time-dependent; Scalar
codeparam	codeparam (9.6.1.3.77)	Code parameters

### 9.6.1.3.44 temporary

Storage of undeclared data model components; Time-dependent CPO

member	type	description
datainfo	datainfo (9.6.1.3.133)	Generic information on a data item
non_timed	temporary_nt (9.6.1.3.420)	Time-independent quantities (parameters)
timed	temporary_t (9.6.1.3.436)	Time-dependent quantities
codeparam	codeparam (9.6.1.3.77)	Code parameters
time	float (9.6.1.1.1)	Time [s]; Time-dependent; Scalar

### 9.6.1.3.45 topinfo

General info about the database entry. CPO.

member	type	description
dataprovder	string (9.6.1.1.3)	Name of the main data provider (the person who filled the original data)
description	string (9.6.1.1.3)	Pulse/Entry description
firstputdate	string (9.6.1.1.3)	Date of the original data submission
lastupdate	string (9.6.1.1.3)	Date of the last data addition in the tree
source	string (9.6.1.1.3)	Exact reference of the data source (e.g. original reference in the native machine data base)
comment	string (9.6.1.1.3)	Any additional comment
dataversion	string (9.6.1.1.3)	Version of the data structure
workflow	string (9.6.1.1.3)	Workflow which has been used to produce the present entry. Exact format to be defined with the platform group. User-specific input files (if allowed) must be stored there as well.
entry	entry_def (9.6.1.3.185)	Definition of this database entry
parent_entry	entry_def (9.6.1.3.185)	Definition of the entry of the direct parent (if any)
mdinfo	mdinfo (9.6.1.3.260)	Information related to machine description for this entry

### 9.6.1.3.46 toroidfield

Toroidal field. Time-dependent CPO

member	type	description
datainfo	datainfo (9.6.1.3.133)	Generic information on a data item
desc_tfcoils	tf_desc_tfcoils (9.6.1.3.451)	Description of the toroidal field coils
nturns	integer (9.6.1.1.2)	Number of total turns in the toroidal field coil
ncoils	integer (9.6.1.1.2)	Number of packets of coils
current	exp0D (9.6.1.3.194)	Current in the toroidal field coils [A]; Time-dependent. Scalar.
bvac_r	exp0D (9.6.1.3.194)	Vacuum field times radius in the toroidal field magnet [T.m]. Positive sign means anti-clockwise when viewed from above. Time-dependent. Scalar.
r0	float (9.6.1.1.1)	Characteristic major radius of the device (used in publications, usually middle of the vessel at the equatorial midplane) [m]. Scalar.
p_cryo	float (9.6.1.1.1)	Total electric power consumed by the cryoplant system [W]; Time-dependent. Scalar.
wp_nh_max	float (9.6.1.1.1)	Peak nuclear heating in winding pack [W*m <sup>-3</sup> ]. Time-dependent. Scalar
tfc_nh	float (9.6.1.1.1)	Nuclear heating on the toroidal field coils [W]; Time-dependent. Scalar
neut_flux_inb	float (9.6.1.1.1)	Neutron flux arriving at the inboard surface of the coil (on the plasma side) [neutron.s <sup>-1</sup> .m <sup>-2</sup> ]; Time-dependent. Scalar.
neut_flux_outb	float (9.6.1.1.1)	Neutron flux arriving at the ouboard surface of the coil (on the plasma side) [neutron.s <sup>-1</sup> .m <sup>-2</sup> ]; Time-dependent. Scalar.
codeparam	codeparam (9.6.1.3.77)	Code parameters
time	float (9.6.1.1.1)	Time [s]; Time-dependent. Scalar.

### 9.6.1.3.47 tdiag

Thomson scattering Diagnostic; Time-dependent CPO

member	type	description
datainfo	datainfo (9.6.1.3.133)	Generic information on a data item
setup	tssetup (9.6.1.3.465)	diagnostic setup information
measure	tsmeasure (9.6.1.3.464)	Measured values
codeparam	codeparam (9.6.1.3.77)	Code parameters
time	float (9.6.1.1.1)	Time [s]; Time-dependent; Scalar

### 9.6.1.3.48 turbulence

Turbulence; Time-dependent CPO.

member	type	description
datainfo	datainfo (9.6.1.3.133)	Generic information on a data item
composition	turbcomposition (9.6.1.3.466)	Plasma composition (description of ion species).
coordsys	turbcoordsys (9.6.1.3.467)	Description of the coordinates and metric used by the codes.
var0d	turbvar0d (9.6.1.3.471)	Diagnostic fast time traces.
var1d	turbvar1d (9.6.1.3.472)	Dependent variable radial profile.
var2d	turbvar2d (9.6.1.3.473)	Dependent variable axisymmetric.
var3d	turbvar3d (9.6.1.3.474)	Dependent variable morphology. Grid is defined in coord_sys/turbgrid.
var4d	turbvar4d (9.6.1.3.475)	Gyrokinetic distribution function, axisymmetric component. Grid is defined in coord_sys/turbgrid.
var5d	turbvar5d (9.6.1.3.476)	Gyrokinetic distribution function. Grid is defined in coord_sys/turbgrid.
spec1d	turbpec1d (9.6.1.3.470)	Toroidal mode number spectra.
env1d	turbenv1d (9.6.1.3.468)	Parallel fluctuation envelope.
codeparam	codeparam (9.6.1.3.77)	Code parameters
time	float (9.6.1.1.1)	Time [s]; Time-dependent; Scalar.

### 9.6.1.3.49 wall

General Wall representation. Time-dependent CPO.

member	type	description
datainfo	datainfo (9.6.1.3.133)	Generic information on a data item
wall0d	wall_wall0d (9.6.1.3.491)	Simple 0D description of plasma-wall interaction
wall2d_mhd	wall2d_mhd (9.6.1.3.479)	Simplified wall that encloses necessary information for RWM codes.
wall2d(:)	wall2d (9.6.1.3.478)	2D wall descriptions; Array of structures (number of wall descriptions). Replicate this element for each type of possible physics or engineering configurations necessary (gas tight vs wall with ports and holes, coarse vs fine representation, single contour limiter, disjoint gapped plasma facing components, ...). Time-dependent
wall3d(:)	wall3d (9.6.1.3.480)	3D wall descriptions; Array of structures (number of wall descriptions). Replicate this element for each type of possible physics or engineering configurations necessary (gas tight vs wall with ports and holes, coarse vs fine representation, ...). Time-dependent
wall.types(:)	wall.types (9.6.1.3.484)	List of reference wall types (e.g. bulk tungsten, tungsten-coated CFC, ...); Array of structures (number of reference wall types)
compounds(:)	compound_desc (9.6.1.3.100)	Chemical compounds (e.g. solid tungsten, WC, CFC, ...) possibly present in the wall. Array of structure (number of compounds)
elements(:)	element_desc (9.6.1.3.184)	Chemical elements present in the wall units, including elements from the plasma (gas + impurities). Use by compounds. Array of structures (number of elements)
compositions	compositions.type (9.6.1.3.99)	NO DOCS
codeparam	codeparam (9.6.1.3.77)	Code parameters
time	float (9.6.1.1.1)	Time [s]; Time-dependent; Scalar.

### 9.6.1.3.50 waves

RF wave propagation and deposition. Time-dependent CPO

member	type	description
datainfo	datainfo (9.6.1.3.133)	Generic information on a data item
coherentwave(:)	coherentwave (9.6.1.3.79)	Wave description for each frequency. Time-dependent. Structure array(nfreq)

member	type	description
codeparam	codeparam (9.6.1.3.77)	Code parameters
time	float (9.6.1.1.1)	Time [s]; Time-dependent; Scalar

### 9.6.1.3.51 Utility Structures

#### 9.6.1.3.52 amns\_constituentType

Contains all of the information to characterize an AMNS constituent.

member	type	description
label	string (9.6.1.1.3)	String identifier for reaction constituent (e.g. "D", "C").
zn	integer (9.6.1.1.2)	Number of protons in the nucleus (nuclear charge); 0 if none (e-, gamma)
mn	integer (9.6.1.1.2)	Number of nucleons in the nucleus (nuclear mass); 0 if none (e-, gamma); Not set if not important (e.g. for an atomic process that is not isotope dependent)
multiplicity	float (9.6.1.1.1)	Multiplicity in the compound

Type of: reacprodType:constituents (2338)

#### 9.6.1.3.53 amns\_processType

Contains all of the information to characterize an AMNS process; Vector(nprocs).

member	type	description
proc_label	string (9.6.1.1.3)	Label for process (e.g. EI, RC; could also include error estimates)
reactant(:)	reacprodType (9.6.1.3.341)	Array of reactants; Vector(nreac).
product(:)	reacprodType (9.6.1.3.341)	Array of products; Vector(nprod).
sup_string	string (9.6.1.1.3)	String to be used if supplementary information is required.
sup_real	float (9.6.1.1.1)	Real to be used if supplementary information is required.
sup_int	integer (9.6.1.1.2)	Int to be used if supplementary information is required.
quality	identifier (9.6.1.3.233)	Characterize the data quality
err_proc_label	string (9.6.1.1.3)	"proc_label" of an associated error table of the same type as the primary quantity

Type of: amns:process (2000)

#### 9.6.1.3.54 antenna\_ec

Vector of Electron Cyclotron antennas. Time-dependent

member	type	description
name	string (9.6.1.1.3)	Antenna name
frequency	float (9.6.1.1.1)	Frequency [Hz]
power	exp0D (9.6.1.3.194)	Power [W]; Time-dependent
mode	integer (9.6.1.1.2)	Incoming wave mode (+ or -1 for O/X mode); Time-dependent
position	rzphi0D (9.6.1.3.361)	Launching position in the global reference system; Time-dependent
launchangles	launchangles (9.6.1.3.243)	Launching angles of the beam
beam	rfbeam (9.6.1.3.354)	Beam characteristics at the launching position
codeparam	codeparam (9.6.1.3.77)	Code parameters

Type of: antennas:antenna\_ec (2001)

#### 9.6.1.3.55 antenna\_ic

Vector of Ion Cyclotron antennas. Time-dependent

member	type	description
name	string (9.6.1.1.3)	Antenna name; String
frequency	exp0D (9.6.1.3.194)	Frequency [Hz]; Time-dependent; Exp0d
power	exp0D (9.6.1.3.194)	Power [W]; Time-dependent; Exp0d
setup	antennaic_setup (9.6.1.3.57)	Detailed description of IC antenna hardware and internal settings
codeparam	codeparam (9.6.1.3.77)	Code parameters

Type of: antennas:antenna\_ic (2001)

### 9.6.1.3.56 antenna\_lh

Vector of Lower Hybrid antennas. Time-dependent

member	type	description
name	string (9.6.1.1.3)	Antenna name, String
frequency	float (9.6.1.1.1)	Frequency [Hz]
power	exp0D (9.6.1.3.194)	Power [W]; Exp0d. Time-dependent
n_par	float (9.6.1.1.1)	Main parallel refractive index of the launched spectrum, for multi-junction antennas. Time-dependent
position	rzphi0D (9.6.1.3.361)	Reference global antenna position. Time-dependent
setup	antennalh_setup (9.6.1.3.58)	Detailed description of LH antennas.
plasmaedge	plasmaedge (9.6.1.3.329)	Plasma edge characteristics in front of the antenna.
beam	rfbeam (9.6.1.3.354)	Beam characteristics
codeparam	codeparam (9.6.1.3.77)	Code parameters

Type of: antennas:antenna\_lh (2001)

### 9.6.1.3.57 antennaic\_setup

Detailed description of an ICRH antenna; hardware and settings

member	type	description
straps(:)	straps (9.6.1.3.413)	Properties of the IC antenna strap; Time-dependent; Vector(nstraps)
current	current (9.6.1.3.129)	Description of the IC surface currents on the antenna straps and on passive components.

Type of: antenna\_ic:setup (2052)

### 9.6.1.3.58 antennalh\_setup

Detailed description of LH antennas

member	type	description
modules	modules (9.6.1.3.273)	Modules description. NB there are nmodules per antenna, distributed among nma.phi toroidal positions and nma.theta poloidal positions

Type of: antenna\_lh:setup (2053)

### 9.6.1.3.59 b0r0

Characteristics of the vacuum toroidal field, redundant with the toroidfield CPO, normalisation used by the ETS

member	type	description
r0	float (9.6.1.1.1)	Characteristic major radius of the device (used in publications, usually middle of the vessel at the equatorial midplane) [m]. Scalar.
b0	float (9.6.1.1.1)	Vacuum field at r0 [T]; Positive sign means anti-clockwise when viewed from above. Scalar. Time-dependent.

Type of: corefast:toroid\_field (2005) I coresource:toroid\_field (2009) I dist\_geometry\_0d:toroid\_field (2143) I dist-source-global\_param:toroid\_field (2162) I global\_param:toroid\_field (2223) I mhd:toroid\_field (2027) I waves\_global\_param:toroid\_field (2492)

### 9.6.1.3.60 bb

Breeding blanket

member	type	description
nb_bb	float (9.6.1.1.1)	Total (in the reactor) number of breeding blanket module; Scalar
nb_bb_polcut	float (9.6.1.1.1)	Number of bb modules on a poloidal cut; Scalar

member	type	description
teta_bb	float (9.6.1.1.1)	Angle (0 for equatorial outboard, then in anti-clokwise direction) of bb module; [deg]
tbr	float (9.6.1.1.1)	Tritium breeding ratio of the blanket [-]; Scalar
neutro_resul	neutro_resul (9.6.1.3.288)	Neutronic results
inboard	bb_specs (9.6.1.3.63)	Inboard
outboard	bb_specs (9.6.1.3.63)	Outboard

Type of: bb\_shield:bb (2002)

### 9.6.1.3.61 bb\_dimension

dimension of the various modules

member	type	description
radial	vecflt_type (9.6.1.2.13)	Radial dimension [m]. Vector(nmodules)
toroidal	vecflt_type (9.6.1.2.13)	Toroidal dimension [m]. Vector(nmodules)
poloidal	vecflt_type (9.6.1.2.13)	Poloidal dimension [m]. Vector(nmodules)

Type of: bb\_geometry:bot\_cap\_dim (2059) I bb\_geometry:top\_cap\_dim (2059) I bb\_specs:dimension (2060)

### 9.6.1.3.62 bb\_geometry

Geometrical parameters of "the" reference outboard blanket module

member	type	description
dr_fw	float (9.6.1.1.1)	Radial thickness of the FW [m]; Scalar
dr_bz	float (9.6.1.1.1)	Radial thickness of the BZ (between the FW and the 1st back plate wall) [m]; Scalar
dr_bp	float (9.6.1.1.1)	Radial thickness of the BPs integrated to the module [m]; Scalar
dr_bp_plates	vecflt_type (9.6.1.2.13)	Radial thickness of every BP integrated to the module [m]; Vector(nplates)
dr_bp_he	vecflt_type (9.6.1.2.13)	Radial thickness of Helium layers [m]; Vector(nplates)
dr_man	float (9.6.1.1.1)	Radial thickness of the banana manifold common to all modules [m]; Scalar
dt_sw	float (9.6.1.1.1)	Toroidal thickness of side walls (or covers) [m]; Scalar
dt_bz	float (9.6.1.1.1)	Toroidal dimension of the BZ (between the two side walls [m]; Scalar
dp_bz	float (9.6.1.1.1)	Poloidal dimension of the Breeder zone [m]; Scalar
top_cap_dim	bb_dimension (9.6.1.3.61)	Top cap dimension of bb modules
bot_cap_dim	bb_dimension (9.6.1.3.61)	Bottom cap dimension of bb modules
a_fw_ch	float (9.6.1.1.1)	First wall channel radial dimension [m]; Scalar
b_fw_ch	float (9.6.1.1.1)	First wall channel toroidal dimension [m]; Scalar
td_tc_ch	float (9.6.1.1.1)	Top cap channel toroidal dimension [m]; Scalar
rd_tc_ch	float (9.6.1.1.1)	Top cap channel radial dimension [m]; Scalar
td_bc_ch	float (9.6.1.1.1)	Bottom cap channel toroidal dimension [m]; Scalar
rd_bc_ch	float (9.6.1.1.1)	Bottom cap channel radial dimension [m]; Scalar
n_fw_ch	float (9.6.1.1.1)	Number of first wall channels; Scalar
n_fw_circ	float (9.6.1.1.1)	Number of circulation in channel first wall channels; Scalar
a_sg_ch	float (9.6.1.1.1)	Stiffening grid channel dimension 1 [m]; Scalar
b_sg_ch	float (9.6.1.1.1)	Stiffening grid channel dimension 2 [m]; Scalar
n_sg_ch	float (9.6.1.1.1)	Number of channels per stiffening plate [m]; Scalar
sg_thick	float (9.6.1.1.1)	Stiffening grid thickness [m]; Scalar
sg_weld	float (9.6.1.1.1)	Stiffening grid required dimension for welding [m]; Scalar
sg_in_out	float (9.6.1.1.1)	Stiffening grid input/output geometry length [m]; Scalar
r_sg_cp	float (9.6.1.1.1)	Percentage of the cooling plate length [-]; Scalar
cp_tor_gap	float (9.6.1.1.1)	Gap between cooling plates and toroidal breeder [m]; Scalar
a_cp_ch	float (9.6.1.1.1)	Cooling plates channel dimension 1 [m]; Scalar
b_cp_ch	float (9.6.1.1.1)	Cooling plates channel dimension 2 [m]; Scalar
n_cp_ch	float (9.6.1.1.1)	Number of channels per cooling plates [m]; Scalar
cp_thick	float (9.6.1.1.1)	Cooling plates thickness [m]; Scalar
n_pol_bu	float (9.6.1.1.1)	Number of poloidal breeder units; Scalar
n_tor_bu	float (9.6.1.1.1)	Number of toroidal breeder units; Scalar
n_cp_bu	float (9.6.1.1.1)	Number of cooling plates per breeder unit; Scalar
cp_in_out	float (9.6.1.1.1)	Cooling plate input/output geometry length [m]; Scalar
he_man_tck	float (9.6.1.1.1)	Helium stage manifold thickness [m]; Scalar



member	type	description
man_tck	float (9.6.1.1.1)	Manifold zone thickness [m]; Scalar
pbli_bptb_od	float (9.6.1.1.1)	Output diameter of pbli tube [m]; Scalar
pbli_bptb_id	float (9.6.1.1.1)	Input diameter of pbli tube [m]; Scalar
he_bptb_od	float (9.6.1.1.1)	Output diameter of He inlet tube [m]; Scalar
he_bptb_id	float (9.6.1.1.1)	Input diameter of He inlet tube [m]; Scalar
dr_max_fw	float (9.6.1.1.1)	First wall frontmost thickness [m]; Scalar
dr_fwpl	float (9.6.1.1.1)	Radial thickness of first protective layer [m]; Scalar

Type of: hcllbb\_specs:mod\_geom (2228)

### 9.6.1.3.63 bb\_specs

Inboard

member	type	description
nbb	float (9.6.1.1.1)	Number of inboard or outboard bb modules (in a poloidal cut), Scalar
r1	float (9.6.1.1.1)	Inner radius (nearest to the plasma), in the global tokamak coordinate system of the inboard or outboard bb located at the equatorial plane [m]; Scalar
r2	float (9.6.1.1.1)	Outer radius (farthest to the plasma), in the global tokamak coordinate system of the inboard or outboard bb located at the equatorial plane [m]; Scalar
dimension	bb_dimension (9.6.1.3.61)	dimension of the various modules

Type of: bb:inboard (2057) | bb:outboard (2057)

### 9.6.1.3.64 beamletgroup

Group of beamlets with common vertical and horizontal focal point. If there are no common focal points, then select small groups of beamlets such that a focal point description of the beamlet-group provides a fair description.

member	type	description
position	rzphi0D (9.6.1.3.361)	Position of centre of injection unit surface (or grounded grid).
tang_rad	float (9.6.1.1.1)	Tangency radius (major radius where the central line of a NBI unit is tangent to a circle around the torus) [m]
angle	float (9.6.1.1.1)	Angle of inclination between a line at the centre of the injection unit surface and the horizontal plane [rad]
direction	integer (9.6.1.1.2)	Direction of the beam seen from above the torus: -1 = clockwise; 1 = counter clockwise
width_horiz	float (9.6.1.1.1)	Horizontal width of the beam group at the injection unit surface (or grounded grid) [m]
width_vert	float (9.6.1.1.1)	Vertical width of the beam group at the injection unit surface (or grounded grid) [m]
focussing	focussing (9.6.1.3.206)	Describes how the beam is focussed.
divergence	divergence (9.6.1.3.170)	Detailed information on beamlet divergence. Divergens is described as a super position of Gaussian profiles with amplitude "frac_divcomp" and vertical/horizontal divergence "div_vert"/"div_horiz". Note that for positive ion NBI the divergence is well described by a single Gaussian.
beamlets	beamlets (9.6.1.3.65)	Detailed information on beamlets.

Type of: nbi\_unit:beamletgroup (2281)

### 9.6.1.3.65 beamlets

Detailed information on beamlets.

member	type	description
position	rzphi1D (9.6.1.3.362)	Position of beamlets. Vector rzphi1D (nbeamlets)
tang_rad.bl	vecflt_type (9.6.1.2.13)	Tangency radius (major radius where the central line of a beamlet is tangent to a circle around the torus) [m]; Vector(nbeamlets)
angle.bl	vecflt_type (9.6.1.2.13)	Angle of inclination between a line at the centre of a beamlet and the horizontal plane [rad]; Vector(nbeamlets)
pow_frc.bl	vecflt_type (9.6.1.2.13)	Fraction of power of a unit injected by a beamlet; Vector(nbeamlets)

Type of: beamletgroup:beamlets (2061)

### 9.6.1.3.66 beamtracing

Beam-tracing or ray-tracing solver. Vector(nbeams). Time-dependent

member	type	description
npoints	integer (9.6.1.1.2)	Number of points along each ray/beam. Integer
power	float (9.6.1.1.1)	Initial power in each ray/beam [W]. Float. Time-dependent
dnpar	vecflt.type (9.6.1.2.13)	Spectral width in refractive index associated with each ray/beam, Vector (npoints). Time-dependent
length	vecflt.type (9.6.1.2.13)	Ray/beam curvilinear length [m], Vector (npoints). Time-dependent
position	waves_rtposition (9.6.1.3.500)	Ray/beam position
wavevector	waves_rtwavevector (9.6.1.3.501)	Ray/beam wave vector.
polarization	polarization (9.6.1.3.332)	Wave field polarization along the ray/beam.
powerflow	powerflow (9.6.1.3.335)	Power flow along the ray/beam.

Type of: coherentwave:beamtracing (2076)

### 9.6.1.3.67 boundary

Boundary condition for the transport equation. Time-dependent.

member	type	description
value	vecflt.type (9.6.1.2.13)	Value of the boundary condition (in case flag = 2). Unit depends on type, respectively [1-Wb, 2-A, 3-V]. For type 1 to 3, only the first position in the vector is used. For type 5, all three positions are used, meaning respectively a1, a2, a3. Time-dependent. Vector(3).
source	string (9.6.1.1.3)	Source of the boundary condition (any comment describing its origin : code, path to diagnostic signals, massaging); String
type	integer (9.6.1.1.2)	Type of the boundary condition for the transport solver (in case flag = 2). 0- equation not solved; 1- edge value of poloidal flux; 2- total current inside boundary; 3- edge Vloop; 4- not defined; 5- generic boundary condition expressed as $a1*(dpsi.drho.tor)+a2*psi=a3$ . Time-dependent. Scalar
rho	float (9.6.1.1.1)	Position of the boundary condition (in terms of toroidal flux coordinate) for the transport solver [m]. Outside this boundary, the value of the data are considered to be prescribed. Scalar
codeparam	codeparam (9.6.1.3.77)	Code parameters

Type of: psi:boundary (2335)

### 9.6.1.3.68 boundary\_neutrals

Structure for the boundary condition of core transport equations (neutrals). Time-dependent;

member	type	description
value	vecflt.type (9.6.1.2.13)	Value of the boundary condition. Unit depends on type, respectively [1-field, 2-field.m <sup>-1</sup> , 3-m, 4-field.s <sup>-1</sup> ]. For type 1 to 4, only the first position in the vector is used. For type 5, all three positions are used, meaning respectively a1, a2, a3. Time-dependent. Array1D(3)
type	integer (9.6.1.1.2)	Type of the boundary condition for the transport solver. 0- equation not solved; 1- value of the field y; 2-radial derivative of the field (-dy/drho.tor); 3-scale length of the field y/(-dy/drho.tor); 4- flux; 5- generic boundary condition y expressed as $a1y'+a2y=a3$ . Time-dependent. Int
rho.tor	float (9.6.1.1.1)	Position of the boundary condition (in terms of toroidal flux coordinate) for the transport solver [m]. Outside this boundary, the value of the data are considered to be prescribed. Time-dependent. Float.

Type of: corefieldneutral:boundary (2105) I corefieldneutrals:boundary (2106) I corefieldneutralv:boundary (2107)

### 9.6.1.3.69 boundaryel

Structure for the boundary condition of core transport equations (electrons) Time-dependent;

member	type	description
value	vecflt.type (9.6.1.2.13)	Value of the boundary condition (in case flag = 2). Unit depends on type, respectively [1-field, 2-field.m <sup>-1</sup> , 3-m, 4-field.s <sup>-1</sup> ]. For type 1 to 4, only the first position in the vector is used. For type 5, all three positions are used, meaning respectively a1, a2, a3. Time-dependent. Vector(3).
source	string (9.6.1.1.3)	Source of the boundary condition (any comment describing its origin : code, path to diagnostic signals, massaging); String

member	type	description
type	integer (9.6.1.1.2)	Type of the boundary condition for the transport solver (in case flag = 2). 0- equation not solved; 1- value of the field $y$ ; 2-radial derivative of the field $(-dy/drho_{tor})$ ; 3-scale length of the field $y/(-dy/drho_{tor})$ ; 4- flux; 5- generic boundary condition $y$ expressed as $a1y'+a2y=a3$ . Time-dependent. Scalar
rho_tor	float (9.6.1.1.1)	Position of the boundary condition (in terms of toroidal flux coordinate) for the transport solver [m]. Outside this boundary, the value of the data are considered to be prescribed. Time-dependent. Scalar

Type of: corefield:boundary (2103)

### 9.6.1.3.70 boundaryimp

Structure for the boundary condition of core transport equations (impurities) Time-dependent

member	type	description
value	matflt_type (9.6.1.2.10)	Value of the boundary condition (in case flag = 2). Unit depends on type, respectively [1-field, 2-field.m <sup>-1</sup> , 3-m, 4-field.s <sup>-1</sup> ]. For type 1 to 4, only the first position in the first dimension is used. For type 5, all three positions are used, meaning respectively a1, a2, a3. Time-dependent. Array 2D (3,nzimp)
source	string (9.6.1.1.3)	Source of the boundary condition (any comment describing its origin : code, path to diagnostic signals, massaging); String
type	vecint_type (9.6.1.2.14)	Type of the boundary condition for the transport solver (in case flag = 2). 0- equation not solved; 1- value of the field $y$ ; 2-radial derivative of the field $(-dy/drho_{tor})$ ; 3-scale length of the field $y/(-dy/drho_{tor})$ ; 4- flux; 5- generic boundary condition $y$ expressed as $a1y'+a2y=a3$ . Time-dependent. Vector(nzimp)
rho	vecflt_type (9.6.1.2.13)	Position of the boundary condition (in terms of toroidal flux coordinate) for the transport solver [m]. Outside this boundary, the value of the data are considered to be prescribed. Time-dependent. Vector(nzimp)
codeparam	codeparam (9.6.1.3.77)	Code parameters

Type of: impurity\_type:boundary (2233)

### 9.6.1.3.71 boundaryion

Structure for the boundary condition of core transport equations (ions) Time-dependent

member	type	description
value	matflt_type (9.6.1.2.10)	Value of the boundary condition (in case flag = 2). Unit depends on type, respectively [1-field, 2-field.m <sup>-1</sup> , 3-m, 4-field.s <sup>-1</sup> ]. For type 1 to 4, only the first position in the first dimension is used. For type 5, all three positions are used, meaning respectively a1, a2, a3. Time-dependent. Matrix(3,nion)
source	vecstring_type (9.6.1.2.15)	Source of the boundary condition (any comment describing its origin : code, path to diagnostic signals, massaging); Array of strings (nion)
type	vecint_type (9.6.1.2.14)	Type of the boundary condition for the transport solver (in case flag = 2). 0- equation not solved; 1- value of the field $y$ ; 2-radial derivative of the field $(-dy/drho_{tor})$ ; 3-scale length of the field $y/(-dy/drho_{tor})$ ; 4- flux; 5- generic boundary condition $y$ expressed as $a1y'+a2y=a3$ . Time-dependent. Vector(nion)
rho_tor	vecflt_type (9.6.1.2.13)	Position of the boundary condition (in terms of toroidal flux coordinate) for the transport solver [m]. Outside this boundary, the value of the data are considered to be prescribed. Time-dependent. Vector(nion)

Type of: corefieldion:boundary (2104)

### 9.6.1.3.72 bpol\_probes

Poloidal field probes

member	type	description
setup_bprobe	setup_bprobe (9.6.1.3.391)	diagnostic setup information
measure	exp1D (9.6.1.3.195)	Measured value [T]; Time-dependent; Vector (nprobes)

Type of: magdiag:bpol\_probes (2026)

### 9.6.1.3.73 calorimetry\_heat\_source

Generic complex type for heat source or sink

member	type	description
name	string (9.6.1.1.3)	Name of the source. String
temp_in	float (9.6.1.1.1)	Temperature of the input flow [K]; Scalar
temp_out	float (9.6.1.1.1)	Temperature of the output flow [K]; Scalar
press_in	float (9.6.1.1.1)	Input Pressure [Pa];Scalar
press_out	float (9.6.1.1.1)	Output Pressure [Pa];Scalar
flow	float (9.6.1.1.1)	Flow of the source [kg/s]; Scalar
power	float (9.6.1.1.1)	Power of the source [W];Scalar

Type of: heat\_sources:sinks (2020) | heat\_sources:sources (2020)

#### 9.6.1.3.74 circuits

Description of the circuit of the power conversion system. Array of structure. (ncircuits).

member	type	description
component(:)	power_conv_component (9.6.1.3.333)	Description of the components of the power conversion system. Array of structure (ncomp).
power_net	float (9.6.1.1.1)	Net electric power generated [W]. Scalar
power_int	float (9.6.1.1.1)	Total electric power consumption of the power conversion system.[W]. Scalar
efficiency	float (9.6.1.1.1)	Efficiency of the reactor (ratio of the alternator electrical power to the total power needed to operate the reactor)

Type of: power\_conv:circuits (2036)

#### 9.6.1.3.75 circularcoil

Circular coil description

member	type	description
centre	rz0D (9.6.1.3.355)	Circular coil centre
hlength	float (9.6.1.1.1)	Half length along coil axis [m]
radialwidth	float (9.6.1.1.1)	Half width, (outer radius-inner radius)/2 [m]

Type of: tf\_desc\_tfcoils:circularcoil (2448)

#### 9.6.1.3.76 clusters

Cluster of tile rings to define and reference superset structures using the individual tile rings. A coil ring can coexist on two top level structures. Structure array (ncluster).

member	type	description
name	string (9.6.1.1.3)	Name of the toroidally distributed tile set. String.
start	integer (9.6.1.1.2)	ID of the tile set as a scalar where this superset starts. Integer.
finish	integer (9.6.1.1.2)	ID of the tile set as a scalar where this superset finishes. Integer.

Type of: solcurdiag:clusters (2041)

#### 9.6.1.3.77 codeparam

Code parameters

member	type	description
codename	string (9.6.1.1.3)	Name of the code
codeversion	string (9.6.1.1.3)	Version of the code (as in the ITM repository)
parameters	string (9.6.1.1.3)	List of the code specific parameters, string expected to be in XML format.
output_diag	string (9.6.1.1.3)	List of the code specific diagnostic/output, string expected to be in XML format.
output_flag	integer (9.6.1.1.2)	Output flag : 0 means the run is successful, other values meaning some difficulty has been encountered, the exact meaning is then code specific. Negative values mean the result shall not be used. Exact rules could be discussed and implemented in the module wrapper. Time-dependent.

Type of: amns:codeparam (2000) I antenna\_ec:codeparam (2051) I antenna\_ic:codeparam (2052) I antenna\_lh:codeparam (2053) I antennas:codeparam (2001) I bb\_shield:codeparam (2002) I boundary:codeparam (2064) I boundary-imp:codeparam (2067) I coherentwave:codeparam (2076) I compositionc:codeparam (2003) I coredelta:codeparam (2004) I coredelta\_values:codeparam (2101) I corefast:codeparam (2005) I corefast\_values:codeparam (2102) I corefield:codeparam (2103) I corefieldion:codeparam (2104) I coreimpur:codeparam (2006) I coreneutrals:codeparam (2007) I coreprof:codeparam (2008) I coresource:codeparam (2009) I coresource\_values:codeparam (2121) I coretransp:codeparam (2010) I coretransp\_values:codeparam (2125) I cxdia:codeparam (2011) I distri\_vec:codeparam (2161) I distribution:codeparam (2012) I distsource:codeparam (2013) I distsource\_source:codeparam (2166) I ecedia:codeparam (2014) I edge:codeparam (2015) I efcc:codeparam (2016) I equilibrium:codeparam (2017) I flush:codeparam (2198) I fusiondiag:codeparam (2018) I fusiondiag\_fus\_product:codeparam (2217) I halphadiag:codeparam (2019) I heat\_sources:codeparam (2020) I ironmodel:codeparam (2022) I langmuirdia:codeparam (2023) I launches:codeparam (2024) I lineintegraldiag:codeparam (2249) I lithiumdiag:codeparam (2025) I magdiag:codeparam (2026) I mhd:codeparam (2027) I msdiag:codeparam (2028) I nbi:codeparam (2029) I nbi\_unit:codeparam (2281) I neoclassic:codeparam (2030) I ntm:codeparam (2031) I orbit:codeparam (2032) I pellets:codeparam (2033) I pfsystems:codeparam (2034) I power\_conv:codeparam (2036) I psi:codeparam (2335) I reflectomet:codeparam (2037) I rfdiag:codeparam (2038) I sawteeth:codeparam (2039) I scenario:codeparam (2040) I solcurdiag:codeparam (2041) I spectral:codeparam (2406) I temporary:codeparam (2042) I toroidfield:codeparam (2044) I tsdiag:codeparam (2045) I turbulence:codeparam (2046) I wall:codeparam (2047) I waves:codeparam (2048)

### 9.6.1.3.78 coefficients\_neutrals

Recycling and sputtering coefficients used by the neutral solver. The particular causing ion or impurity charge state is determined by the path.

member	type	description
recycling	recycling_neutrals (9.6.1.3.344)	Recycling coefficients. Time-dependent
sputtering	sputtering_neutrals (9.6.1.3.412)	Sputtering coefficients. Time-dependent

Type of: coreneutrals:ioncoeff (2007) I impcoeff:chargestate (2231)

### 9.6.1.3.79 coherentwave

Wave description for each frequency. Time-dependent. Structure array(nfreq)

member	type	description
wave_id	enum_instance (9.6.1.3.186)	List of identifiers for the coherent-wave, in terms of the type and name of the antenna driving the wave and an index separating waves driven by the same antenna. Possible types: EC/LH/IC (see waves_types in the Documentation website under Conventions/Enumerated_datatypes); the field name should include the name of the antenna as specified in either antennas(*)%ec_antenna%name, antennas(*)%ic_antenna%name, or antennas(*)%lh_antenna%name; the field index should separate different waves generated from a single antenna.
composition	composition (9.6.1.3.95)	Plasma composition (description of ion species). OBSOLESCENT.
compositions	compositions_type (9.6.1.3.99)	Contains detailed information on the plasma composition (main ions, impurities, neutrals, edge species).
global_param	waves_global_param (9.6.1.3.495)	Global wave deposition parameters
grid_1d	waves_grid_1d (9.6.1.3.496)	Grid points for 1D profiles.
grid_2d	waves_grid_2d (9.6.1.3.497)	Grid points for 2D profiles and for full wave solutions.
profiles_1d	waves_profiles_1d (9.6.1.3.498)	1D radial profiles
profiles_2d	waves_profiles_2d (9.6.1.3.499)	2D profiles in poloidal cross-section
beamtracing(:)	beamtracing (9.6.1.3.66)	Beam-tracing or ray-tracing solver. Vector(nbeams). Time-dependent
fullwave	fullwave (9.6.1.3.207)	Solution by full wave code
codeparam	codeparam (9.6.1.3.77)	Code parameters

Type of: waves:coherentwave (2048)

### 9.6.1.3.80 coil

Individual coil. Time-dependent. Structure array. Replicate this coil structure for coil element in the efcc array.

member	type	description
desc.coils	desc.coils (9.6.1.3.134)	Description of the coils
coilcurrent	exp1D (9.6.1.3.195)	Circuit feed current in the coil, defined positive if it flows from point 1 to point 2 of the geometry description [A]; Time-dependent
coilvoltage	exp1D (9.6.1.3.195)	Voltage on the full coil [V]; Time-dependent

Type of: efcc:coil (2016)

### 9.6.1.3.81 com

COM (Constants Of Motion) parameters identifying an orbit

member	type	description
amn	float (9.6.1.1.1)	Atomic mass of the particle; Scalar
zion	float (9.6.1.1.1)	Atomic charge of the particle; Scalar
energy	vecflt.type (9.6.1.2.13)	Energy of the particle [keV]; Time-dependent; Vector (norbits).
magn_mom	vecflt.type (9.6.1.2.13)	Magnetic momentum [kg m <sup>2</sup> / s <sup>2</sup> / T]; Time-dependent, Vector(norbits).
p_phi	vecflt.type (9.6.1.2.13)	toroidal angular momentum [kg m <sup>2</sup> / s]; Time-dependent; Vector(norbits);
sigma	vecint.type (9.6.1.2.14)	Sign of parallel velocity at psi=psi.max along the orbit; Time-dependent; Vector(norbits)

Type of: orbit:com (2032)

### 9.6.1.3.82 complexgrid

Generic definition of a complex grid

member	type	description
uid	integer (9.6.1.1.2)	Unique index of this grid. Used for handling multiple grids
id	string (9.6.1.1.3)	Name / identifier string for this grid
spaces(:)	complexgrid_space (9.6.1.3.91)	Definitions of grid spaces. Array of structures (number of spaces)
subgrids(:)	complexgrid_subgrid (9.6.1.3.92)	Definitions of subgrids. Array of structures (number of subgrids)
metric	complexgrid_metric (9.6.1.3.85)	Metric coefficients
geo(:)	complexgrid_geo_global (9.6.1.3.83)	Geometry data for implicit objects
bases(:)	complexgrid_vector (9.6.1.3.93)	Vector bases. Used for aligned vector representation. Time-dependent (added systematically for the COMP child inheritance of that property). Array of structures (number of bases)

Type of: edge:grid (2015) | f.expansion:grid (2194) | fullwave:grid (2204) | source.rate:grid (2399) | wall3d:grid (2477)

### 9.6.1.3.83 complexgrid\_geo\_global

Geometry information for implicitly defined grid objects (which cannot be stored in the space definitions); Array of structures (number of alternate geometries).

member	type	description
geotype	integer (9.6.1.1.2)	Type of geometry (id flag). A flag defining how the geometry data associated with grid objects is to be interpreted. If the field is undefined (0=GRID.UNDEFINED), the standard interpretation for; the given coordinate types is assumed.
geotypeid	string (9.6.1.1.3)	Type of geometry (id string).
coordtype	vecint.type (9.6.1.2.14)	Type of coordinates describing the physical space. Vector (number of space dimensions); The size of coordtype defines the dimension of the space.; For predefined integer constants for standard coordinates see; the documentation of the grid service library.
geo_matrix(:)	complexgrid_scalar (9.6.1.3.87)	Geometry data matrix associated with implicit objects. Array of structures (number of subgrids this information is stored on); The exact definition of the stored values depends on the geometry type of the geometry complexgrid_geo_global.geotype;
measure(:)	complexgrid_scalar (9.6.1.3.87)	Measure of object, i.e. physical size (length for 1d, area for 2d, volume for 3d objects) in this geometry. [m <sup>dim</sup> ]; Use this field to store measures of implicitly defined grid objects.; Array of structures (number of subgrids this information is stored on)

Type of: complexgrid:geo (2079)

### 9.6.1.3.84 complexgrid\_indexlist

An index list describing a list of indices or a range of indices.; If the explicit index list `ind` is defined and has nonzero size, the list is assumed to be an explicit index list.; Otherwise it is assumed to be a range of indices.; A single index can either be defined by using an explicit list with a single entry or as a range with identical; start and end index.

member	type	description
range	vecint.type (9.6.1.2.14)	Defines an index range enumerating from <code>range[1]</code> to <code>range[2]</code> (with both <code>range[1]</code> and <code>range[2]</code> included). If additionally a third value <code>range(3)</code> is given, it is used as a stride. If it is omitted, a stride of 1 is assumed. Vector(3)
ind	vecint.type (9.6.1.2.14)	An explicit list of indices. If this member is defined and has nonzero size, the list is assumed to be explicit. Vector(length of explicit index list)

Type of: `complexgrid_objectlist:indset` (2083)

### 9.6.1.3.85 complexgrid\_metric

Metric information for grid objects

member	type	description
measure(:)	complexgrid_scalar (9.6.1.3.87)	Measure of object, i.e. physical size (length for 1d, area for 2d, volume for 3d objects). [ $m^{\dim}$ ]; Use this field to store measures of implicitly defined grid objects.; Array of structures (number of subgrids this information is stored on)
g11(:)	complexgrid_scalar (9.6.1.3.87)	Metric coefficients g11. Array of structures (number of subgrids this information is stored on)
g12(:)	complexgrid_scalar (9.6.1.3.87)	Metric coefficients g12. Array of structures (number of subgrids this information is stored on)
g13(:)	complexgrid_scalar (9.6.1.3.87)	Metric coefficients g13. Array of structures (number of subgrids this information is stored on)
g22(:)	complexgrid_scalar (9.6.1.3.87)	Metric coefficients g22. Array of structures (number of subgrids this information is stored on)
g23(:)	complexgrid_scalar (9.6.1.3.87)	Metric coefficients g23. Array of structures (number of subgrids this information is stored on)
g33(:)	complexgrid_scalar (9.6.1.3.87)	Metric coefficients g33. Array of structures (number of subgrids this information is stored on)
jacobian(:)	complexgrid_scalar (9.6.1.3.87)	Jacobian. Array of structures (number of subgrids this information is stored on)

Type of: `complexgrid:metric` (2079)

### 9.6.1.3.86 complexgrid\_objectlist

A list of grid objects with a common class, either in explicit or implicit form.; The list is explicit if the matrix `ind` is given and has nonzero size. In this case the index tuples are listed in `ind`.; Otherwise the list is implicit and the index tuples are defined by a list of index lists stored in `indset`.

member	type	description
cls	vecint.type (9.6.1.2.14)	Class tuple of the grid objects in this object list. Vector (number of grid spaces)
indset(:)	complexgrid_indexlist (9.6.1.3.84)	Implicit list of the object indices.; Array of structures (number of grid spaces = length of index tuple). Every index of the index tuple is described by an index set, which defines either a list of index values or a range of index values.
ind	matint.type (9.6.1.2.11)	Explicit list of index tuples. Matrix (number of objects, number of spaces in grid).; First dimension: object index, second dimension: index tuple/space index.; If this field is defined and has nonzero size, the object list is understood to be explicit.

Type of: `complexgrid_subgrid:list` (2089)

### 9.6.1.3.87 complexgrid\_scalar

A quantity stored on a grid. The data is given either as a vector of scalars, vectors or matrices.; Note that the vector and matrix storage methods are not meant for multidimensional data, but; for complex data representations with multiple degrees of freedom.; To be used as arrays of structure; FIXME: add non-timedependent element "label" of type string

member	type	description
griduid	integer (9.6.1.1.2)	Unique identifier of the grid this scalar quantity is associated with.



member	type	description
subgrid	integer (9.6.1.1.2)	Index of the subgrid (as stored in grid.subgrids) the data is stored on.
scalar	vecflt.type (9.6.1.2.13)	Scalar representation of data. One scalar entry is stored per object in the subgrid.; The order is implicitly defined by the subgrid.; Float Vector(nobjects.subgrid). First dimension: object index.
vector	matflt.type (9.6.1.2.10)	Vector representation of data. One vector is stored per object in the subgrid. The order is implicitly defined by the subgrid.; Float matrix(nobjects.subgrid, ndata).First dimension: object index, second dimension: index of data vector.
matrix	array3dflt.type (9.6.1.2.2)	Matrix representation of data. One matrix is stored per object in the subgrid. The order is implicitly defined by the subgrid.; 3d float array(nobjects.subgrid,ndata1,ndata2). First dimension: object index, second dimension: matrix row, third dimension: matrix column.

Type of: complexgrid\_geo\_global:geo\_matrix (2080) I complexgrid\_geo\_global:measure (2080) I complexgrid\_metric:g11 (2082) I complexgrid\_metric:g12 (2082) I complexgrid\_metric:g13 (2082) I complexgrid\_metric:g22 (2082) I complexgrid\_metric:g23 (2082) I complexgrid\_metric:g33 (2082) I complexgrid\_metric:jacobian (2082) I complexgrid\_metric:measure (2082) I complexgrid\_vector:comp (2090) I complexgrid\_vector\_simplestruct:comp (2091) I edge\_fluid\_scalar:bdvalue (2172) I edge\_fluid\_scalar:source (2172) I edge\_fluid\_scalar:value (2172) I edge\_fluid\_scalar\_simplestruct:source (2173) I edge\_fluid\_scalar\_simplestruct:value (2173) I edge\_kinetic\_distribution:source (2178) I edge\_kinetic\_distribution:value (2178) I f\_expansion:values (2194) I source\_rate:value (2399) I wall\_unitsComplexType:eta (2483) I wall\_unitsComplexType:permeability (2483)

### 9.6.1.3.88 complexgrid\_scalar\_cplx

A quantity stored on a grid. The data is given either as a vector of scalars, vectors or matrices.; Note that the vector and matrix storage methods are not meant for multidimensional data, but; for complex data representations with multiple degrees of freedom.; To be used as arrays of structure; FIXME: add non-timedependent element "label" of type string

member	type	description
griduid	integer (9.6.1.1.2)	Unique identifier of the grid this scalar quantity is associated with.
subgrid	integer (9.6.1.1.2)	Index of the subgrid (as stored in grid.subgrids) the data is stored on.
scalar	veccplx.type (9.6.1.2.12)	Scalar representation of data. One scalar entry is stored per object in the subgrid.; The order is implicitly defined by the subgrid.; Complex Vector(nobjects.subgrid). First dimension: object index.
vector	matcplx.type (9.6.1.2.9)	Vector representation of data. One vector is stored per object in the subgrid. The order is implicitly defined by the subgrid.; Complex matrix(nobjects.subgrid, ndata).First dimension: object index, second dimension: index of data vector.
matrix	array3dcplx.type (9.6.1.2.1)	Matrix representation of data. One matrix is stored per object in the subgrid. The order is implicitly defined by the subgrid.; 3d complex array(nobjects.subgrid,ndata1,ndata2). First dimension: object index, second dimension: matrix row, third dimension: matrix column.

Type of: e\_components:b\_binorm (2168) I e\_components:b\_norm (2168) I e\_components:b\_para (2168) I e\_components:e\_binorm (2168) I e\_components:e\_minus (2168) I e\_components:e\_norm (2168) I e\_components:e\_para (2168) I e\_components:e\_plus (2168) I e\_components:k\_perp (2168)

### 9.6.1.3.89 complexgrid\_scalar\_int

A quantity stored on a grid. The data is given either as a vector of scalars, vectors or matrices.; Note that the vector and matrix storage methods are not meant for multidimensional data, but; for complex data representations with multiple degrees of freedom.; To be used as arrays of structure; FIXME: add non-timedependent element "label" of type string

member	type	description
griduid	integer (9.6.1.1.2)	Unique identifier of the grid this scalar quantity is associated with.
subgrid	integer (9.6.1.1.2)	Index of the subgrid (as stored in grid.subgrids) the data is stored on.
scalar	vecint.type (9.6.1.2.14)	Scalar representation of data. One scalar entry is stored per object in the subgrid.; The order is implicitly defined by the subgrid.; Float Vector(nobjects.subgrid). First dimension: object index.
vector	matint.type (9.6.1.2.11)	Vector representation of data. One vector is stored per object in the subgrid. The order is implicitly defined by the subgrid.; Float matrix(nobjects.subgrid, ndata).First dimension: object index, second dimension: index of data vector.
matrix	array3dint.type (9.6.1.2.3)	Matrix representation of data. One matrix is stored per object in the subgrid. The order is implicitly defined by the subgrid.; 3d float array(nobjects.subgrid,ndata1,ndata2). First dimension: object index, second dimension: matrix row, third dimension: matrix column.

### 9.6.1.3.90 complexgrid\_scalar\_simplestruct

A quantity stored on a grid. The data is given either as a vector of scalars, vectors or matrices.; Note that the vector and matrix storage methods are not meant for multidimensional data, but; for complex data representations with multiple degrees of freedom.; To be used as a simple structure; FIXME: add non-timedependent element "label" of type string

member	type	description
subgrid	integer (9.6.1.1.2)	Index of the subgrid (as stored in grid.subgrids) the data is stored on.
scalar	vecflt.type (9.6.1.2.13)	Scalar representation of data. One scalar entry is stored per object in the subgrid.; The order is implicitly defined by the subgrid.; Float Vector(nobjects.subgrid). First dimension: object index.
vector	matflt.type (9.6.1.2.10)	Vector representation of data. One vector is stored per object in the subgrid. The order is implicitly defined by the subgrid.; Float matrix(nobjects.subgrid, ndata). First dimension: object index, second dimension: index of data vector.
matrix	array3dflt.type (9.6.1.2.2)	Matrix representation of data. One matrix is stored per object in the subgrid. The order is implicitly defined by the subgrid.; 3d float array(nobjects.subgrid, ndata1, ndata2). First dimension: object index, second dimension: matrix row, third dimension: matrix column.

### 9.6.1.3.91 complexgrid\_space

Description of a grid space

member	type	description
geotype	vecint.type (9.6.1.2.14)	Type of space geometry (id flags). Flags defining how the geometry (objects.geo) fields associated with; space objects are to be interpreted. Array (number of geometries defined for this space); first dimension: geometry index. A flag value of GRID.UNDEFINED=0 indicates the standard interpretation for; the given coordinates.
geotypeid	vecstring.type (9.6.1.2.15)	Type of space geometries (id string). See geotype.
coordtype	matint.type (9.6.1.2.11)	Type of coordinates describing the physical space. Vector (number of space dimensions); The size of coordtype defines the dimension of the space.; For predefined integer constants for standard coordinates see; the documentation of the grid service library.
objects(:)	objects (9.6.1.3.297)	Definition of the space objects.; Array of structures (dimension of highest-dimensional objects).; First dimension: dimension of the objects (1=nodes, 2=edges, 3=faces, 4=cells/ volumes, ...)
xpoints	vecint.type (9.6.1.2.14)	List of indices of all nodes which are x-points. Vector (number of x-points)

Type of: complexgrid:spaces (2079)

### 9.6.1.3.92 complexgrid\_subgrid

Subgrid definition. A subgrid is a list of grid objects, given as a list of explicit or implicit object lists.

member	type	description
id	string (9.6.1.1.3)	ID string (name) of the subgrid.
list(:)	complexgrid_objectlist (9.6.1.3.86)	List of object lists. Array of structures (number of object lists).

Type of: complexgrid:subgrids (2079)

### 9.6.1.3.93 complexgrid\_vector

A vector quantity stored on a grid, with components possibly explicitly aligned to a coordinate direction. To be used as array of structure.

member	type	description
griduid	integer (9.6.1.1.2)	Unique identifier of the grid this vector quantity is associated with.
label	string (9.6.1.1.3)	Label describing the data
comp(:)	complexgrid_scalar (9.6.1.3.87)	Components of the vector. Array of structures (number of vector components). Time-dependent; FIXME: inherit time-dependence for this element
align	vecint.type (9.6.1.2.14)	Alignment flag for vector components. Integer vector (number of vector components).
alignid	vecstring.type (9.6.1.2.15)	Alignment id for vector components. String vector (number of vector components).
basis	integer (9.6.1.1.2)	Index of basis (defined in associated grid) this vector is aligned to; If set to GRID.UNDEFINED=0, the canonical basis of the default coordinates of the grid assumed.

Type of: complexgrid:bases (2079) I edge\_fluid:b (2171) I edge\_fluid\_scalar:bndflux (2172) I edge\_fluid\_scalar:flux (2172) I edge\_fluid\_scalar\_simplestruct:bndflux (2173) I edge\_fluid\_scalar\_simplestruct:flux (2173) I edge\_kinetic\_distribution

(2178) I wall\_unitsComplexType;j (2483)

#### 9.6.1.3.94 complexgrid\_vector\_simplestruct

A vector quantity stored on a grid, with components possibly explicitly aligned to a coordinate direction. To be used as simple structure

member	type	description
label	string (9.6.1.1.3)	Label describing the data
comp(:)	complexgrid_scalar (9.6.1.3.87)	Components of the vector. Vector of griddata(ndim). Time-dependent; FIXME: inherit time-dependence for this element
align	vecint_type (9.6.1.2.14)	Alignment of vector components, numerical flag. Int vector(ndim)
alignid	vecstring_type (9.6.1.2.15)	Alignment of vector components, string description. String vector(ndim)

Type of: edge\_fluid\_scalar\_transpcoeff:d (2174) I edge\_fluid\_scalar\_transpcoeff:v (2174)

#### 9.6.1.3.95 composition

Plasma composition (description of ion species). OBSOLESCENT.

member	type	description
amn	vecflt_type (9.6.1.2.13)	Atomic mass number (lumped ions are allowed); Vector (nion)
zn	vecflt_type (9.6.1.2.13)	Nuclear charge (lumped ions are allowed); Vector (nion)
zion	vecflt_type (9.6.1.2.13)	Ion charge (of the dominant ionisation state; lumped ions are allowed); Vector (nion)
imp_flag	vecint_type (9.6.1.2.14)	Multiple charge state calculation flag : 0-Only one charge state is considered; 1-Multiple charge state are considered and are described in impurity CPO; Vector (nion)
label	vecstring_type (9.6.1.2.15)	Label for the ions - note the charge state is not included; String Vector (nion)

Type of: coherentwave:composition (2076) I coredelta:composition (2004) I corefast:composition (2005) I coreneutrals:composition (2007) I coreprof:composition (2008) I coresource:composition (2009) I coretransp:composition (2010) I distribution:composition (2012) I distsource:composition (2013) I neoclassic:composition (2030) I sawteeth:composition (2039)

#### 9.6.1.3.96 composition\_neutrals

Description of neutrals species

member	type	description
atomlist(:)	coreneutrals_atomlist (9.6.1.3.120)	List of the atoms that enter the composition of the neutral species. Vector(natm)
neutral(:)	composition_neutralscomp (9.6.1.3.98)	List of neutrals. Vector(nneut)

Type of: coreneutrals:neutcompo (2007)

#### 9.6.1.3.97 composition\_neutrals\_neutcomp

Array of components to the atom or molecule. Vector (ncomp)

member	type	description
nucindex	integer (9.6.1.1.2)	Index into list of nuclei; int
multiplicity	integer (9.6.1.1.2)	Multiplicity of the atom; int

Type of: composition\_neutralscomp:neutcomp (2095)

#### 9.6.1.3.98 composition\_neutralscomp

Array of neutrals.

member	type	description
neutcomp(:)	composition_neutrals_neutcomp (9.6.1.3.97)	Array of components to the atom or molecule. Vector (ncomp)

member	type	description
type(:)	identifier (9.6.1.3.233)	Type of neutral, in terms of energy : 0=cold, 1=thermal, 2= fast, 3=NBI. Vector (ntype) of identifiers
label	string (9.6.1.1.3)	String identifying the atom or molecule (e.g. D2, DT, CD4, ...)

Type of: composition\_neutrals:neutral (2093) I compositions\_type:neutralscomp (2096)

### 9.6.1.3.99 compositions\_type

Generic declaration of Plasma composition for a simulation

member	type	description
nuclei(:)	nuclei (9.6.1.3.296)	Array of nuclei considered.
ions(:)	ions (9.6.1.3.238)	Array of main plasma ions.
impurities(:)	impurities (9.6.1.3.235)	Array of impurities.
neutralscomp(:)	composition_neutralscomp (9.6.1.3.98)	Array of neutrals.
edgespecies(:)	edgespecies (9.6.1.3.183)	Array of edge species.
signature	identifier (9.6.1.3.233)	Identifier for species choices. The goal of this is to uniquely capture the species blocks so that if the signatures are the same then the species blocks will also be the same.

Type of: coherentwave:compositions (2076) I compositionc:compositions (2003) I coredelta:compositions (2004) I corefast:compositions (2005) I coreimpur:compositions (2006) I coreneutrals:compositions (2007) I coreprof:compositions (2008) I coresource:compositions (2009) I coretransp:compositions (2010) I distribution:compositions (2012) I distsource:compositions (2013) I edge:compositions (2015) I neoclassic:compositions (2030) I pellets:compositions (2033) I wall:compositions (2047)

### 9.6.1.3.100 compound\_desc

Chemical compounds (e.g. solid tungsten, WC, CFC, ...) possibly present in the wall. Array of structure (number of compounds)

member	type	description
label	string (9.6.1.1.3)	Compound name/label
stoichiometry	vecflt.type (9.6.1.2.13)	Fractional composition of the compound. Float vector, dimensions: 1. element number (numbering as in wall/elements array)
density	float (9.6.1.1.1)	Compound density (molecules/m <sup>3</sup> )
heat_cap	float (9.6.1.1.1)	Specific heat capacity [J/(eV kg)]
heat_cond	vecflt.type (9.6.1.2.13)	Thermal conductivity [W/(m eV)]
surf_recreate	matflt.type (9.6.1.2.10)	Recombination rate on surface (only for pure elements, not compounds) [molecules*m <sup>-2</sup> /s]; Dimensions: index 1: first recombining element, index 2: second recombining element (numbering as in wall/elements array)

Type of: wall:compounds (2047)

### 9.6.1.3.101 coord\_sys

flux surface coordinate system on a square grid of flux and angle

member	type	description
grid_type	string (9.6.1.1.3)	Type of coordinate system
grid	reggrid (9.6.1.3.351)	Regular grid definition; Time-dependent
jacobian	matflt.type (9.6.1.2.10)	Jacobian of the coordinate system; Time-dependent; Matrix (ndim1, ndim2)
g_11	matflt.type (9.6.1.2.10)	metric coefficients g_11; g_ij=g <sup>ij</sup> are contravariant metric tensor for the grid described by grid_type. Time-dependent; Matrix (ndim1, ndim2)
g_12	matflt.type (9.6.1.2.10)	metric coefficients g_12; g_ij=g <sup>ij</sup> are contravariant metric tensor for the grid described by grid_type. Time-dependent; Matrix (ndim1, ndim2)
g_13	matflt.type (9.6.1.2.10)	metric coefficients g_13; g_ij=g <sup>ij</sup> are contravariant metric tensor for the grid described by grid_type. Time-dependent; Matrix (ndim1, ndim2)
g_22	matflt.type (9.6.1.2.10)	metric coefficients g_22; g_ij=g <sup>ij</sup> are contravariant metric tensor for the grid described by grid_type. Time-dependent; Matrix (ndim1, ndim2)
g_23	matflt.type (9.6.1.2.10)	metric coefficients g_23; g_ij=g <sup>ij</sup> are contravariant metric tensor for the grid described by grid_type. Time-dependent; Matrix (ndim1, ndim2)

member	type	description
g_33	matflt.type (9.6.1.2.10)	metric coefficients $g_{33}$ ; $g_{ij}=g^{ij}$ are contravariant metric tensor for the grid described by grid_type. Time-dependent; Matrix (ndim1, ndim2)
position	rz2D (9.6.1.3.359)	R and Z position of grid points; Time-dependent; Matrix (ndim1, ndim2)

Type of: equilibrium:coord\_sys (2017) I mhd\_plasma:coord\_sys (2260) I mhd\_vacuum:coord\_sys (2262)

### 9.6.1.3.102 coordinates

Poloidal and Toroidal coordinates of the center of each hole;

member	type	description
theta	vecflt.type (9.6.1.2.13)	Theta coordinate of holes center; Vector (n_holes)
phi	vecflt.type (9.6.1.2.13)	Toroidal coordinate of holes center; Vector (n_holes)

Type of: holes:coordinates (2229)

### 9.6.1.3.103 coords

Specification of coordinates in one dimension. Can be either a range of real values or a set of discrete values (if interp\_type=0).

member	type	description
coord	vecflt.type (9.6.1.2.13)	Coordinate values. Vector(npoints).
coord_label	vecstring.type (9.6.1.2.15)	String description of discrete coordinate values (if interp_type=0). Vector(npoints). E.g., for spectroscopic lines, the spectroscopic description of the transition.
extrap_type	vecint.type (9.6.1.2.14)	Extrapolation strategy when leaving the domain. Vector(2). Entry 1: behaviour at lower bound, entry 2: behaviour at upper bound.; Possible values: 0=none, report error; 1=boundary value; 2=linear extrapolation;
interp_type	integer (9.6.1.1.2)	Interpolation strategy in this coordinate direction. Integer flag: 0=discrete (no interpolation); 1=linear; ...
label	string (9.6.1.1.3)	Description of coordinate (e.g. "Electron temperature")
unit	string (9.6.1.1.3)	Units of coordinate (e.g. [eV])
transform	integer (9.6.1.1.2)	Coordinate transformation applied to coordinate values stored in coord. Integer flag: 0=none; 1=log10; 2=ln
spacing	integer (9.6.1.1.2)	Flag for specific coordinate spacing (for optimization purposes). Integer flag: 0=undefined; 1=uniform; ...

Type of: tables\_coord:coords (2416)

### 9.6.1.3.104 coredelta\_values

Description of the delta term for a given origin

member	type	description
deltaid	identifier (9.6.1.3.233)	Identifier for the origin of the delta terms (see conventions in the ITM website)
rho_tor	vecflt.type (9.6.1.2.13)	Toroidal flux coordinate (not normalised, equivalent to rho_tor_norm) [m]; Vector (nrho). Time-dependent.
rho_tor_norm	vecflt.type (9.6.1.2.13)	Normalised toroidal flux coordinate values (= rho_tor normalised to the value at the last grid point); Time-dependent; Vector (nrho)
psi	vecflt.type (9.6.1.2.13)	Poloidal flux [Wb], without $1/2\pi$ and such that $B_p =  \text{grad } \psi  / R/2/\pi$ . Time-dependent; Vector (nrho)
volume	vecflt.type (9.6.1.2.13)	Volume enclosed in the flux surface [m <sup>3</sup> ]; Time-dependent; Vector (nrho)
area	vecflt.type (9.6.1.2.13)	Cross-sectional area of the flux surface [m <sup>2</sup> ]; Time-dependent; Vector (nrho)
delta_psi	vecflt.type (9.6.1.2.13)	Instant change of the poloidal flux [Wb]. Time-dependent. Vector(nrho).
delta_te	vecflt.type (9.6.1.2.13)	Instant change of the electron temperature [eV]. Time-dependent. Vector(nrho).
delta_ti	matflt.type (9.6.1.2.10)	Instant change of the ion temperature [eV]. Time-dependent. Matrix (nrho,nion).
delta_tz	array3dflt.type (9.6.1.2.2)	Instant change of the impurity (multiple charge states) temperature [eV]. Time-dependent. Array3d (nrho,nimp,max_nzimp).
delta_ne	vecflt.type (9.6.1.2.13)	Instant change of the electron density [m <sup>-3</sup> ]. Time-dependent. Vector(nrho).
delta_ni	matflt.type (9.6.1.2.10)	Instant change of the ion density [m <sup>-3</sup> ]. Time-dependent. Matrix (nrho,nion).
delta_nz	array3dflt.type (9.6.1.2.2)	Instant change of the impurity (multiple charge states) density [m <sup>-3</sup> ]. Time-dependent. Array3d (nrho,nimp,max_nzimp).
delta_vtor	matflt.type (9.6.1.2.10)	Instant change of the toroidal toroidal velocity [m.s <sup>-1</sup> ]. Time-dependent. Matrix (nrho,nion).
codeparam	codeparam (9.6.1.3.77)	Code parameters

Type of: coredelta:values (2004)

### 9.6.1.3.105 corefast\_values

Description of the source terms for a given origin

member	type	description
fastid	identifier (9.6.1.3.233)	Identifier for the origin of the non-thermal contributions (see fast_particle_origin_identifier in the Documentation website under Conventions/Enumerated_datatypes). Time-dependent.
filter	fast_thermal_separation_filter (9.6.1.3.198)	Description of how the fast and the thermal particle populations were separated. Time-dependent.
rho_tor	vecflt_type (9.6.1.2.13)	Toroidal flux coordinate (not normalised, equivalent to rho_tor_norm) [m]; Vector (nrho). Time-dependent.
rho_tor_norm	vecflt_type (9.6.1.2.13)	Normalised toroidal flux coordinate values (= rho_tor normalised to the value at the last grid point). Vector (nrho). Time-dependent.
psi	vecflt_type (9.6.1.2.13)	Poloidal flux at the grid points for 1D profiles [Wb], without $1/2\pi$ and such that $B_p =  grad\ psi  / R/2\pi$ . Vector (nrho). Time-dependent.
volume	vecflt_type (9.6.1.2.13)	Volume enclosed in the flux surface [ $m^3$ ]. Vector (nrho). Time-dependent.
area	vecflt_type (9.6.1.2.13)	Cross-sectional area of the flux surface [ $m^2$ ]. Vector (nrho). Time-dependent.
j	vecflt_type (9.6.1.2.13)	Non thermal current, = average( $j \cdot B$ ) / $B_0$ , where $B_0 = \text{corefast/toroid\_field}/b_0$ [ $A \cdot m^{-2}$ ]. Vector(nrho). Time-dependent.
sigma	vecflt_type (9.6.1.2.13)	Non-thermal induced parallel conductivity [ $\text{ohm}^{-1} \cdot m^{-1}$ ]. EXACT DEFINITION PENDING. Vector(nrho). Time-dependent.
ni	matflt_type (9.6.1.2.10)	Non-thermal ion density [ $m^{-3}$ ]. Matrix(nrho,nions). Time-dependent.
ne	vecflt_type (9.6.1.2.13)	Non-thermal electron density [ $m^{-3}$ ]. Vector(nrho). Time-dependent.
nz	matflt_type (9.6.1.2.10)	Non-thermal impurity density [ $m^{-3}$ ]. Matrix(nrho,nimpur). Time-dependent.
pi	matflt_type (9.6.1.2.10)	Non-thermal ion pressure; the flux surface average of the $m^*v^2/3$ moment of the fast particle distribution function [Pa]. Matrix(nrho,nions). Time-dependent.
pe	vecflt_type (9.6.1.2.13)	Non-thermal electron pressure; the flux surface average of the $m^*v^2/3$ moment of the fast particle distribution function [Pa]. Vector(nrho). Time-dependent.
pz	matflt_type (9.6.1.2.10)	Non-thermal impurity total pressure; the flux surface average of the $m^*v^2/3$ moment of the fast particle distribution function [Pa]. Matrix(nrho,nimpur). Time-dependent.
pi_para	matflt_type (9.6.1.2.10)	Non-thermal ion parallel pressure; the flux surface average of the $m^*v_{parallel}^2$ moment of the fast particle distribution function [Pa]. Matrix(nrho,nions). Time-dependent.
pe_para	vecflt_type (9.6.1.2.13)	Non-thermal electron parallel pressure; the flux surface average of the $m^*v_{parallel}^2$ moment of the fast particle distribution function [Pa]. Vector(nrho). Time-dependent.
pz_para	matflt_type (9.6.1.2.10)	Non-thermal impurity parallel pressure; the flux surface average of the $m^*v_{parallel}^2$ moment of the fast particle distribution function [Pa]. Matrix(nrho,nimpur). Time-dependent.
ui	matflt_type (9.6.1.2.10)	Non-thermal ion toroidal velocity [ $m \cdot s^{-1}$ ]. Matrix(nrho,nions). Time-dependent.
uz	matflt_type (9.6.1.2.10)	Non-thermal impurity toroidal velocity [ $m \cdot s^{-1}$ ]. Matrix(nrho,nimpur). Time-dependent.
codeparam	codeparam (9.6.1.3.77)	Code parameters

Type of: corefast:values (2005)

### 9.6.1.3.106 corefield

Structure for a main field of core transport equations; Time-dependent;

member	type	description
value	vecflt_type (9.6.1.2.13)	Signal value; Time-dependent; Vector (nrho)
ddrho	vecflt_type (9.6.1.2.13)	Radial derivative ( $dvalue/drho\_tor$ ) [ $\text{signal\_value\_unit} \cdot m^{-1}$ ]; Time-dependent; Vector (nrho)
d2drho2	vecflt_type (9.6.1.2.13)	Second order radial derivative ( $d^2value/drho\_tor^2$ ) [ $\text{signal\_value\_unit} \cdot m^{-2}$ ]; Time-dependent; Vector (nrho)
ddt	vecflt_type (9.6.1.2.13)	Time derivative ( $dvalue/dtime$ ) [ $\text{signal\_value\_unit} \cdot s^{-1}$ ]; Time-dependent; Vector (nrho)
source	string (9.6.1.1.3)	Source of the profile (any comment describing the origin of the profile : code, path to diagnostic signals, massaging, ...); String
flag	integer (9.6.1.1.2)	Flag describing how the profile has been processed : 0-not calculated 1-interpretative; 2-calculated by the transport solver; 3-calculated by a separate code : in that case only, description of the code provided in codeparam at the same level; 4-used value from the previous time step; Time-dependent; Scalar
boundary	boundaryel (9.6.1.3.69)	Boundary condition for the transport equation. Time-dependent.
source_term	sourceel (9.6.1.3.404)	Total source term for the transport equation. Time-dependent.
transp_coef	coretransel (9.6.1.3.125)	Total transport coefficients. Time-dependent.
flux	fluxel (9.6.1.3.203)	Fluxes of the quantity, two definitions. Time-dependent.
flux_dv_surf	vecflt_type (9.6.1.2.13)	Net flux through the magnetic surface, i.e. integral over the magnetic surface area of flux_dv. Time-dependent; Vector (nrho)
time_deriv	vecflt_type (9.6.1.2.13)	Integral of the time derivative term of the transport equation. Time-dependent. Vector (nrho)
codeparam	codeparam (9.6.1.3.77)	Code parameters

Type of: coreprof:ne (2008) I coreprof:te (2008)

### 9.6.1.3.107 corefieldion

Structure for an ion field of core transport equations; Time-dependent;

member	type	description
value	matflt_type (9.6.1.2.10)	Signal value; Time-dependent; Matrix (nrho,nion)
ddrho	matflt_type (9.6.1.2.10)	Radial derivative (dvalue/drho_tor) [signal.value.unit.m <sup>-1</sup> ]; Time-dependent; Matrix (nrho,nion)
d2drho2	matflt_type (9.6.1.2.10)	Second order radial derivative (d2value/drho_tor <sup>2</sup> ) [signal.value.unit.m <sup>-2</sup> ]; Time-dependent; Matrix (nrho,nion)
ddt	matflt_type (9.6.1.2.10)	Time derivative (dvalue/dtime) [signal.value.unit.s <sup>-1</sup> ]; Time-dependent; Matrix (nrho,nion)
source	vecstring_type (9.6.1.2.15)	Source of the profile (any comment describing the origin of the profile : code, path to diagnostic signals, massaging, ...); Array of strings (nion)
flag	vecint_type (9.6.1.2.14)	Flag describing how the profile has been processed : 0-not calculated 1-interpretative; 2-calculated by the transport solver; 3-calculated by a separate code : in that case only, description of the code provided in codeparam at the same level; 4-used value from the previous time step; Time-dependent; Vector(nion)
boundary	boundaryion (9.6.1.3.71)	Boundary condition for the transport equation
source_term	sourceion (9.6.1.3.406)	Total source term for the transport equation. Time-dependent.
transp_coef	coretransion (9.6.1.3.127)	Total transport coefficients. Time-dependent.
flux	fluxion (9.6.1.3.205)	Fluxes of the quantity, two definitions. Time-dependent.
flux_dv_surf	matflt_type (9.6.1.2.10)	Net flux through the magnetic surface, i.e. integral over the magnetic surface area of flux.dv. Time-dependent; Matrix(nrho,nion)
time_deriv	matflt_type (9.6.1.2.10)	Integral of the time derivative term of the transport equation. Time-dependent. Matrix (nrho,nion)
codeparam	codeparam (9.6.1.3.77)	Code parameters

Type of: coreprof:ni (2008) I coreprof:ti (2008) I coreprof:vtor (2008)

### 9.6.1.3.108 corefieldneutral

Structure for a main field of core neutral transport equations; Time-dependent;

member	type	description
value	vecflt_type (9.6.1.2.13)	Signal value; Array1D(nrho). Time-dependent
flux	vecflt_type (9.6.1.2.13)	Net neutral flux through the magnetic surface, positive values correspond to the direction from the center to the edge [s <sup>-1</sup> ]. Array1D(nrho). Time-dependent;
boundary	boundary_neutrals (9.6.1.3.68)	Boundary condition for the transport equation. Time-dependent.

Type of: coreneutrals\_neutraltype:n0 (2118)

### 9.6.1.3.109 corefieldneutrale

Structure for a main field of core neutral transport equations, (Temperature, with flux as energy); Time-dependent;

member	type	description
value	vecflt_type (9.6.1.2.13)	Signal value; Array1D(nrho). Time-dependent
flux	vecflt_type (9.6.1.2.13)	Net flux of the kinetic energy through the magnetic surface (3/2*E*n*V), positive values correspond to the direction from the center to the edge [W]. Array1D(nrho). Time-dependent;
boundary	boundary_neutrals (9.6.1.3.68)	Boundary condition for the transport equation. Time-dependent.

Type of: coreneutrals\_neutraltype:t0 (2118)

### 9.6.1.3.110 corefieldneutralv

Structure for a main field of core neutral transport equations (without flux variable); Time-dependent;

member	type	description
value	vecflt_type (9.6.1.2.13)	Signal value; Vector(nrho). Time-dependent;
boundary	boundary_neutrals (9.6.1.3.68)	Boundary condition for the transport equation. Time-dependent.



Type of: corefieldneutralv0:poloidal (2108) I corefieldneutralv0:radial (2108) I corefieldneutralv0:toroidal (2108)

### 9.6.1.3.111 corefieldneutralv0

Neutral velocity

member	type	description
toroidal	corefieldneutralv (9.6.1.3.110)	Neutral velocity in the toroidal direction [m.s <sup>-1</sup> ]. Positive is anti-clockwise when viewed from above. Time-dependent;
poloidal	corefieldneutralv (9.6.1.3.110)	Velocity of neutrals in the poloidal direction. 0 is directed towards low field side, pi is towards high field side. Positive is anti-clockwise when viewed with low field side at the right. [m.s <sup>-1</sup> ]. Array3D(nrho,nneut,max_nstype). Time-dependent;
radial	corefieldneutralv (9.6.1.3.110)	Neutral velocity in the radial direction (perpendicular to the magnetic surface), positive is from the centre to the edge [m.s <sup>-1</sup> ]. Array3D(nrho,nneut,max_nstype). Time-dependent;

Type of: coreneutrals\_neutraltype:v0 (2118)

### 9.6.1.3.112 coreimpurdiag\_sum\_radiation

member	type	description
line_rad	coreimpurediagsum.type (9.6.1.3.119)	NO DOCS
brem_radrec	coreimpurediagsum.type (9.6.1.3.119)	NO DOCS
sum	coreimpurediagsum.type (9.6.1.3.119)	NO DOCS

Type of: coreimpurediag\_sum:radiation (2112)

### 9.6.1.3.113 coreimpurediag\_energy

member	type	description
ionization	coreimpurediagprof.type (9.6.1.3.118)	NO DOCS
recombin	coreimpurediagprof.type (9.6.1.3.118)	NO DOCS
sum	coreimpurediagprof.type (9.6.1.3.118)	NO DOCS

Type of: coreimpurediag\_type:energy (2114)

### 9.6.1.3.114 coreimpurediag\_radiation

member	type	description
line_rad	coreimpurediagprof.type (9.6.1.3.118)	NO DOCS
brem_radrec	coreimpurediagprof.type (9.6.1.3.118)	NO DOCS
sum	coreimpurediagprof.type (9.6.1.3.118)	NO DOCS

Type of: coreimpurediag\_type:radiation (2114)

### 9.6.1.3.115 coreimpurediag\_sum

member	type	description
radiation	coreimpurdiag_sum_radiation (9.6.1.3.112)	NO DOCS
energy	coreimpurediag_sum.energy (9.6.1.3.116)	NO DOCS

Type of: coreimpur:diagnosticsum (2006)

### 9.6.1.3.116 coreimpurediag\_sum\_energy

member	type	description
ionization	coreimpurediagsum.type (9.6.1.3.119)	NO DOCS
recombin	coreimpurediagsum.type (9.6.1.3.119)	NO DOCS
sum	coreimpurediagsum.type (9.6.1.3.119)	NO DOCS

Type of: coreimpurediag\_sum:energy (2112)

### 9.6.1.3.117 coreimpurediag\_type

member	type	description
radiation	coreimpurediag_radiation (9.6.1.3.114)	NO DOCS
energy	coreimpurediag_energy (9.6.1.3.113)	NO DOCS

Type of: coreimpur:diagnostic (2006) I impurity\_type:diagnostic (2233)

### 9.6.1.3.118 coreimpurediagprof\_type

member	type	description
profile	matflt.type (9.6.1.2.10)	Profile of the radiation or energy sources. Time-dependent. Array2D (nrho,nzimp or nimp)
integral	matflt.type (9.6.1.2.10)	Running integral over nrho of the radiation or energy sources. Time-dependent. Array2D (nrho,nzimp or nimp)

Type of: coreimpurediag\_energy:ionization (2110) I coreimpurediag\_energy:recombin (2110) I coreimpurediag\_energy:sum (2110) I coreimpurediag\_radiation:brem\_radrec (2111) I coreimpurediag\_radiation:line\_rad (2111) I coreimpurediag\_radiation:sum (2111)

### 9.6.1.3.119 coreimpurediagsum\_type

member	type	description
profile	vecflt.type (9.6.1.2.13)	Profile of the radiation or energy sources. Time-dependent. Array1D (nrho)
integral	vecflt.type (9.6.1.2.13)	Running integral over nrho of the radiation or energy sources. Time-dependent. Array1D (nrho)

Type of: coreimpurdiag\_sum\_radiation:brem\_radrec (2109) I coreimpurdiag\_sum\_radiation:line\_rad (2109) I coreimpurdiag\_sum\_radiation:sum (2109) I coreimpurediag\_sum\_energy:ionization (2113) I coreimpurediag\_sum\_energy:recombin (2113) I coreimpurediag\_sum\_energy:sum (2113)

### 9.6.1.3.120 coreneutrals\_atomlist

List of the atoms that enter the composition of the neutral species. Vector(natm)

member	type	description
amn	float (9.6.1.1.1)	Atomic mass number; Float
zn	float (9.6.1.1.1)	Nuclear charge; Float
ionimptype	identifier (9.6.1.3.233)	Identifier whether ion in coreprof or impurity in coreimpur.
ionimpindex	integer (9.6.1.1.2)	Index in composition or desc.impur of the corresponding ion or impurity.

Type of: composition\_neutrals:atomlist (2093)

### 9.6.1.3.121 coreneutrals\_neutraltype

Array (ntype) over neutral types.

member	type	description
n0	corefieldneutral (9.6.1.3.108)	Neutral density [m <sup>-3</sup> ]. Time-dependent;
t0	corefieldneutrale (9.6.1.3.109)	Neutral temperature [eV]. Time-dependent;
v0	corefieldneutralv0 (9.6.1.3.111)	Neutral velocity [m.s <sup>-1</sup> ]. Time-dependent;

Type of: neutral\_complex\_type:neutraltype (2284)

### 9.6.1.3.122 coreprofile

Structure for core plasma profile; Time-dependent

member	type	description
value	vecflt_type (9.6.1.2.13)	Signal value; Time-dependent; Vector (nrho)
source	string (9.6.1.1.3)	Source of the profile (any comment describing the origin of the profile : code, path to diagnostic signals, massaging, ...); String

Type of: profiles1d:bpol (2333) I profiles1d:dpedt (2333) I profiles1d:dpi\_totdt (2333) I profiles1d:dvprimedt (2333) I profiles1d:e\_b (2333) I profiles1d:eparallel (2333) I profiles1d:jni (2333) I profiles1d:joh (2333) I profiles1d:jphi (2333) I profiles1d:jtot (2333) I profiles1d:pe (2333) I profiles1d:pi\_tot (2333) I profiles1d:pr\_parallel (2333) I profiles1d:pr\_perp (2333) I profiles1d:pr\_th (2333) I profiles1d:q (2333) I profiles1d:qei (2333) I profiles1d:shear (2333) I profiles1d:sigmapar (2333) I profiles1d:vloop (2333) I profiles1d:zeff (2333) I psi:sigma\_par (2335)

### 9.6.1.3.123 coreprofion

Structure for core plasma ion profile; Time-dependent

member	type	description
value	matflt_type (9.6.1.2.10)	Signal value; Time-dependent; Vector (nrho,nion)
source	vecstring_type (9.6.1.2.15)	Source of the profile (any comment describing the origin of the profile : code, path to diagnostic signals, massaging, ...); Array of strings (nion)

Type of: profiles1d:mtor (2333) I profiles1d:ns (2333) I profiles1d:pi (2333) I profiles1d:wtor (2333)

### 9.6.1.3.124 coresource\_values

Description of the source terms for a given origin

member	type	description
sourceid	identifier (9.6.1.3.233)	Identifier for the origin of the source terms (see conventions in the ITM website)
rho_tor	vecflt_type (9.6.1.2.13)	Toroidal flux coordinate (not normalised, equivalent to rho_tor_norm) [m]; Vector (nrho). Time-dependent.
rho_tor_norm	vecflt_type (9.6.1.2.13)	Normalised toroidal flux coordinate values (= rho_tor normalised to the value at the last grid point); Time-dependent; Vector (nrho)
psi	vecflt_type (9.6.1.2.13)	Poloidal flux [Wb], without 1/2pi and such that Bp= grad psi  /R/2/pi. Time-dependent; Vector (nrho)
volume	vecflt_type (9.6.1.2.13)	Volume enclosed in the flux surface [m <sup>3</sup> ]; Time-dependent; Vector (nrho)
area	vecflt_type (9.6.1.2.13)	Cross-sectional area of the flux surface [m <sup>2</sup> ]; Time-dependent; Vector (nrho)
j	vecflt_type (9.6.1.2.13)	Parallel current source for psi transport equation, = average(j.B) / B0, where B0 = core-source/toroid_field/b0 [A.m <sup>-2</sup> ]. Vector(nrho). Time-dependent.
sigma	vecflt_type (9.6.1.2.13)	Induced parallel conductivity [ohm <sup>-1</sup> .m <sup>-1</sup> ]. EXACT DEFINITION PENDING. Vector(nrho). Time-dependent.
si	source_ion (9.6.1.3.401)	Particle source for ion density transport equation [m <sup>-3</sup> .s <sup>-1</sup> ]. Time-dependent.
se	source_vec (9.6.1.3.403)	Particle source for electron density transport equation [m <sup>-3</sup> .s <sup>-1</sup> ]. Time-dependent.
sz(:)	source_imp (9.6.1.3.400)	Particle source for impurity density transport equation [m <sup>-3</sup> .s <sup>-1</sup> ]. Vector(nimpur). Time-dependent.
qi	source_ion (9.6.1.3.401)	Heat source for ion heat transport equations [W.m <sup>-3</sup> ]. Time-dependent.
qe	source_vec (9.6.1.3.403)	Heat source for electron heat transport equation [W.m <sup>-3</sup> ]. Time-dependent.
qz(:)	source_imp (9.6.1.3.400)	Heat source for impurity heat transport equations [W.m <sup>-3</sup> ]. Vector(nimpur). Time-dependent.
ui	source_ion (9.6.1.3.401)	Toroidal torque on individual ion species; for toroidal momentum transport equation [kg.m <sup>-1</sup> .s <sup>-2</sup> ]. Time-dependent.

member	type	description
ujxb	source.vec (9.6.1.3.403)	Toroidal JxB torque on bulk plasma; for toroidal momentum transport equation [kg.m <sup>-1</sup> .s <sup>-2</sup> ]. Here J is the return current from fast ion radial currents Jfast=-J. Time-dependent.
codeparam	codeparam (9.6.1.3.77)	Code parameters

Type of: coresource:values (2009)

### 9.6.1.3.125 coretranel

Structure for the transport coefficients for the transport equation (electrons). Time-dependent;

member	type	description
diff	vecflt.type (9.6.1.2.13)	Diffusion coefficient [m <sup>2</sup> .s <sup>-1</sup> ]. Time-dependent; Vector (nrho)
vconv	vecflt.type (9.6.1.2.13)	Convection coefficient [m.s <sup>-1</sup> ]. Time-dependent; Vector (nrho)
source	string (9.6.1.1.3)	Source of the profile (any comment describing the origin of the profile : code, path to diagnostic signals, massaging, ...); String

Type of: corefield:transp\_coef (2103)

### 9.6.1.3.126 coretransimp

Structure for the transport coefficients for the transport equation (impurities). Time-dependent;

member	type	description
diff	matflt.type (9.6.1.2.10)	Diffusion coefficient [m <sup>2</sup> .s <sup>-1</sup> ]. Time-dependent; Array2D(nrho,nzimp)
vconv	matflt.type (9.6.1.2.10)	Convection coefficient [m.s <sup>-1</sup> ]. Time-dependent; Array2D(nrho,nzimp)
source	vecstring.type (9.6.1.2.15)	Source of the profile (any comment describing the origin of the impurity profiles : code, path to diagnostic signals, massaging, ...); Array of strings (nimp)

Type of: impurity\_type:transp\_coef (2233)

### 9.6.1.3.127 coretransion

Structure for the transport coefficients for the transport equation (ions). Time-dependent;

member	type	description
diff	matflt.type (9.6.1.2.10)	Diffusion coefficient [m <sup>2</sup> .s <sup>-1</sup> ]. Time-dependent; Matrix (nrho,nion)
vconv	matflt.type (9.6.1.2.10)	Convection coefficient [m.s <sup>-1</sup> ]. Time-dependent; Matrix (nrho,nion)
source	vecstring.type (9.6.1.2.15)	Source of the profile (any comment describing the origin of the profile : code, path to diagnostic signals, massaging, ...); Array of strings (nion)

Type of: corefieldion:transp\_coef (2104)

### 9.6.1.3.128 coretransp\_values

Description of transport term coming from various origins. Array of structure (ntransp)

member	type	description
transportid	identifier (9.6.1.3.233)	Identifier for the origin of the transport terms (see conventions in the ITM website)
rho_tor_norm	vecflt.type (9.6.1.2.13)	Normalised toroidal flux coordinate values (= rho_tor normalised to the value at the last grid point); Time-dependent; Vector (nrho)
rho_tor	vecflt.type (9.6.1.2.13)	Toroidal flux coordinate (not normalised, equivalent to rho_tor_norm) [m]; Vector (nrho). Time-dependent.
psi	vecflt.type (9.6.1.2.13)	Poloidal flux [Wb], without 1/2pi and such that Bp= grad psi  /R/2/pi. Time-dependent; Vector (nrho)
volume	vecflt.type (9.6.1.2.13)	Volume enclosed in the flux surface [m <sup>3</sup> ]; Time-dependent; Vector (nrho)
area	vecflt.type (9.6.1.2.13)	Cross-sectional area of the flux surface [m <sup>2</sup> ]; Time-dependent; Vector (nrho)
sigma	vecflt.type (9.6.1.2.13)	Parallel conductivity [ohm <sup>-1</sup> .m <sup>-1</sup> ]. Time-dependent. Vector(nrho).
ni_transp	ni_transp (9.6.1.3.289)	Transport coefficients for ion density equation. Time-dependent.
ne_transp	ne_transp (9.6.1.3.285)	Transport coefficients for electron density equation. Time-dependent.
nz_transp(:)	transcoefimp (9.6.1.3.459)	Transport coefficients for impurity (multiple charge state) density equation. Time-dependent.
ti_transp	transcoefion (9.6.1.3.460)	Transport coefficients for ion temperature equation. Time-dependent.
te_transp	transcoefel (9.6.1.3.458)	Transport coefficients for electron temperature equation. Time-dependent.

member	type	description
tz.transp(:)	transcoefimp (9.6.1.3.459)	Transport coefficients for impurity (multiple charge state) temperature equation. Time-dependent.
vtor.transp	transcoefvtor (9.6.1.3.461)	Transport coefficients for toroidal velocity equation. Time-dependent.
codeparam	codeparam (9.6.1.3.77)	Code parameters

Type of: coretransp:values (2010)

### 9.6.1.3.129 current

Description of the IC surface currents on the antenna straps and on passive components.

member	type	description
mpol	vecint.type (9.6.1.2.14)	Poloidal modes, used to describe the spectrum of the antenna current. The poloidal angle is defined from the reference point rz_reference; the angle at a point (R,Z) is given by $\text{atan}((Z-Z_{\text{ref}})/(R-R_{\text{ref}}))$ , where $R_{\text{ref}}=r_{\text{z\_reference}}/r$ and $Z_{\text{ref}}=r_{\text{z\_reference}}/z$ . Time-Dependent; Integer(n.poloidal_modes)
ntor	vecint.type (9.6.1.2.14)	Toroidal modes, used to describe the spectrum of the antenna current. Time-Dependent; Integer(n.toroidal_modes)
spectrum	exp1D (9.6.1.3.195)	Spectrum of the total surface current on the antenna strap and passive components expressed in poloidal and toroidal mode [A]. Calculated using a geometrical poloidal angle around the point rz_reference. Time-dependent; exp1D(n.poloidal_modes , n.toroidal_modes)
rz_reference	rz0D (9.6.1.3.355)	Reference point used to define the poloidal angle, e.g. the geometrical centre of the vacuum vessel. Time-dependent; rz0d

Type of: antennaic\_setup:current (2054)

### 9.6.1.3.130 cxmeasure

Measured values

member	type	description
ti	exp1D (9.6.1.3.195)	Ion temperature [eV]. Vector (nchannels)
vtor	exp1D (9.6.1.3.195)	Toroidal velocity [m/s]. Vector (nchannels)
vpol	exp1D (9.6.1.3.195)	Poloidal velocity [m/s]. Vector (nchannels)

Type of: cxdiag:measure (2011)

### 9.6.1.3.131 cxsetup

diagnostic setup information

member	type	description
amn	vecflt.type (9.6.1.2.13)	Mass of the emitting impurity. Varies according to channels since they are spanning different lines of sight; Vector (nchannels)
zn	vecflt.type (9.6.1.2.13)	Nuclear charge of the emitting impurity. Varies according to channels since they are spanning different lines of sight; Vector (nchannels)
position	rzphi1Dexp (9.6.1.3.363)	Position of the measurement. Time-dependent. Vector (nchannels)

Type of: cxdiag:setup (2011)

### 9.6.1.3.132 data\_release

Stores information about each entry available at this version.

member	type	description
shot	integer (9.6.1.1.2)	Shot number = Mass*100+Nuclear_charge.
run	integer (9.6.1.1.2)	Which run number is the active run number for this version.
description	vecstring.type (9.6.1.2.15)	Possible description of why this version of the data is the current version.

Type of: version\_ind:data\_release (2474)

### 9.6.1.3.133 datainfo

Generic information on a data item

member	type	description
dataprovder	string (9.6.1.1.3)	Name of the actual data provider (the person who filled the data)
putdate	string (9.6.1.1.3)	Date at which the data has been put in the DB
source	string (9.6.1.1.3)	Exact reference of the data source (e.g. original reference in the native machine data base)
comment	string (9.6.1.1.3)	Any additional comment
cocos	integer (9.6.1.1.2)	COordinates COventionS followed by this CPO
id	integer (9.6.1.1.2)	CPO id for checking its provenance in the workflow
isref	integer (9.6.1.1.2)	1 if the data can be found in the present data base entry; 2 if the data can be found in a parent data base entry; 0 if no data consistent with the present entry can be found.
whatref	whatref (9.6.1.3.503)	Structure defining a database entry and the CPO occurrence
putinfo	putinfo (9.6.1.3.339)	Level 2 information describing how to retrieve the actual data for the UAL. Not to be filled/used by the ITM user !

Type of: amns:datainfo (2000) I antennas:datainfo (2001) I bb\_shield:datainfo (2002) I compositionc:datainfo (2003) I coredelta:datainfo (2004) I corefast:datainfo (2005) I coreimpur:datainfo (2006) I coreneutrals:datainfo (2007) I coreprof:datainfo (2008) I coresource:datainfo (2009) I coretransp:datainfo (2010) I cxdiag:datainfo (2011) I distribution:datainfo (2012) I distsource:datainfo (2013) I cediag:datainfo (2014) I edge:datainfo (2015) I efcc:datainfo (2016) I equilibrium:datainfo (2017) I flush:datainfo (2198) I fusiondiag:datainfo (2018) I halphadiag:datainfo (2019) I heat\_sources:datainfo (2020) I ironmodel:datainfo (2022) I langmuirdiag:datainfo (2023) I launches:datainfo (2024) I lineintegraldiag:datainfo (2249) I lithiumdiag:datainfo (2025) I magdiag:datainfo (2026) I mhd:datainfo (2027) I msediag:datainfo (2028) I nbi:datainfo (2029) I neoclassic:datainfo (2030) I ntm:datainfo (2031) I orbit:datainfo (2032) I pellets:datainfo (2033) I pfsystems:datainfo (2034) I power\_conv:datainfo (2036) I reflectomet:datainfo (2037) I rfadiag:datainfo (2038) I sawteeth:datainfo (2039) I scenario:datainfo (2040) I solcurdiag:datainfo (2041) I temporary:datainfo (2042) I toroidfield:datainfo (2044) I tsvdiag:datainfo (2045) I turbulence:datainfo (2046) I wall:datainfo (2047) I waves:datainfo (2048)

### 9.6.1.3.134 desc\_coils

Description of the coils

member	type	description
name	string (9.6.1.1.3)	Name of coil.
res	float (9.6.1.1.1)	Coil resistance [Ohm]
nturns	integer (9.6.1.1.2)	number of turns inside the coil
closed	string (9.6.1.1.3)	Identify whether the coil is closed (y) or open (n). For closed coils there is no need to replicate the first r,z,phi point as last point
edges(:)	edges (9.6.1.3.182)	Edges defining the coil volume faces. Structure array. Replicate this edge structure N-times for N-edge cross sections. Use just one for wire coil approximation.

Type of: coil:desc\_coils (2077)

### 9.6.1.3.135 desc\_impur

Description of the impurities (list of ion species and possibly different charge states). OBSOLESCE.

member	type	description
amn	vecflt.type (9.6.1.2.13)	Atomic mass number of the impurity; Vector (nimp)
zn	vecint.type (9.6.1.2.14)	Nuclear charge of the impurity; Vector (nimp)
i_ion	vecint.type (9.6.1.2.14)	Index of the impurity species in the coreprof ion species ordering. Vector (nimp)
nzimp	vecint.type (9.6.1.2.14)	Number of charge states (or bundles) considered for each impurity species. Vector (nimp)
zmin	matint.type (9.6.1.2.11)	Minimum Z of impurity ionisation state bundle. Matrix (nimp,max.nzimp)
zmax	matint.type (9.6.1.2.11)	Maximum Z of impurity ionisation state bundle. If no bundle, zmax=zmin. Matrix (nimp,max.nzimp)
label	vecstring.type (9.6.1.2.15)	Label for the impurities - note that the charge state is not included; String Vector (nimp)

Type of: coredelta:desc\_impur (2004) I corefast:desc\_impur (2005) I coreimpur:desc\_impur (2006) I coreneutrals:desc\_impur (2007) I coreprof:desc\_impur (2008) I coresource:desc\_impur (2009) I coretransp:desc\_impur (2010) I neoclassic:desc\_impur (2030)

### 9.6.1.3.136 desc\_iron

Description of the iron segments

member	type	description
name	vecstring_type (9.6.1.2.15)	Name of circuit. Array of strings (ncircuit).
id	vecstring_type (9.6.1.2.15)	ID of circuit. Array of strings (ncircuit).
permeability	permeability (9.6.1.3.317)	Permeability model (can be different for each iron segment)
geom_iron	geom_iron (9.6.1.3.225)	Geometry of the iron segments

Type of: ironmodel:desc\_iron (2022)

### 9.6.1.3.137 desc\_pfcoils

Description of the coils

member	type	description
name	vecstring_type (9.6.1.2.15)	Name of coil. Array of strings (ncoils)
id	vecstring_type (9.6.1.2.15)	ID of coil. Array of strings (ncoils)
res	vecflt_type (9.6.1.2.13)	Coil resistance [Ohm]; Vector (ncoils)
emax	vecflt_type (9.6.1.2.13)	Maximum Energy to be dissipated in coils [J]; Vector (ncoils)
structure_cs	structure_cs (9.6.1.3.414)	Detailed description of the coil structure, for coils that are part of the central solenoid.
pol_flux_cs	float (9.6.1.1.1)	Maximum poloidal flux available in the Central Solenoid for a plasma pulse [Wb].
nelement	vecint_type (9.6.1.2.14)	Number of elements used to describe a coil; Vector (ncoils)
pfelement	pfelement (9.6.1.3.320)	Axisymmetric conductor description

Type of: pfcoils:desc\_pfcoils (2316)

### 9.6.1.3.138 desc\_supply

Description of the power supplies

member	type	description
name	vecstring_type (9.6.1.2.15)	Name of the supply; Array of strings (nsupplies)
id	vecstring_type (9.6.1.2.15)	ID of the supply; Array of strings (nsupplies)
type	vecstring_type (9.6.1.2.15)	Type of supply; Array of strings (nsupplies)
delay	vecflt_type (9.6.1.2.13)	Pure delay in the supply [s]; Vector (nsupplies)
filter	filter (9.6.1.3.199)	Laplace proper filter
imin	vecflt_type (9.6.1.2.13)	Minimum current [A]; Vector (nsupplies)
imax	vecflt_type (9.6.1.2.13)	Maximum current [A]; Vector (nsupplies)
res	vecflt_type (9.6.1.2.13)	Supply internal resistance [Ohm]; Vector (nsupplies)
umin	vecflt_type (9.6.1.2.13)	Minimum voltage [V]; Vector (nsupplies)
umax	vecflt_type (9.6.1.2.13)	Maximum voltage [V]; Vector (nsupplies)
emax	vecflt_type (9.6.1.2.13)	Maximum Energy to be dissipated in supply [J]; Vector (nsupplies)

Type of: pfsupplies:desc\_supply (2322)

### 9.6.1.3.139 diag\_func

Structure to provide the description on the detector used and store the transfer matrix of the detector for that l.o.s.

member	type	description
description	string (9.6.1.1.3)	Short description of the detector with reference to the number of cells (ncells).
transf_mat	matflt_type (9.6.1.2.10)	Transfer matrix of the detector. Each l.o.s. might have a dedicated detector response function and energy resolution (and number of cells). Time-independent. Matrix (ncells,energy)

Type of: fusiondiag\_detect\_ct.energy:diag\_func (2214)

### 9.6.1.3.140 dist\_collisional\_transfer\_0d

Collisional exchange with the electrons. Time-dependent



member	type	description
power.th	float (9.6.1.1.1)	Collisional power to the thermal particle population [W]; Time-dependent; Scalar
power.fast	float (9.6.1.1.1)	Collisional power to the fast particle population [W]; Time-dependent; Scalar
torque.th	float (9.6.1.1.1)	Collisional toroidal torque to the thermal particle population [N.m]; Time-dependent; Scalar
torque.fast	float (9.6.1.1.1)	Collisional toroidal torque to the fast particle population [N.m]; Time-dependent; Scalar

Type of: [dist\\_global\\_param:collisions\\_e \(2146\)](#) [I dist\\_global\\_param:collisions\\_i \(2146\)](#) [I dist\\_global\\_param\\_collisions\\_z:charge\\_e \(2147\)](#)

#### 9.6.1.3.141 dist\_collisional\_transfer\_1d

Collisional exchange from the background electrons to the distribution function. Time-dependent

member	type	description
power.th	vecflt.type (9.6.1.2.13)	Flux surface averaged collisional power density to the thermal particle population [W.m <sup>-3</sup> ]; Time-dependent; Vector(npsi)
power.fast	vecflt.type (9.6.1.2.13)	Flux surface averaged collisional power density to the fast particle population [W.m <sup>-3</sup> ]; Time-dependent; Vector(npsi)
torque.th	vecflt.type (9.6.1.2.13)	Flux surface averaged collisional toroidal torque density to the thermal particle population [N.m <sup>-2</sup> ]; Time-dependent; Vector(npsi)
torque.fast	vecflt.type (9.6.1.2.13)	Flux surface averaged collisional toroidal torque density to the fast particle population [N.m <sup>-2</sup> ]; Time-dependent; Vector(npsi)

Type of: [dist\\_profile\\_values\\_1d:collisions\\_e \(2149\)](#) [I dist\\_profile\\_values\\_1d:collisions\\_i \(2149\)](#) [I dist\\_profiles\\_1d:collisions\\_e \(2152\)](#) [I dist\\_profiles\\_1d:collisions\\_i \(2152\)](#) [I dist\\_profiles\\_1d\\_collisions\\_z:charge\\_state \(2153\)](#)

#### 9.6.1.3.142 dist\_collisional\_transfer\_2d

Collisional exchange from the background electrons to the distribution function. Time-dependent

member	type	description
power.th	matflt.type (9.6.1.2.10)	Collisional power density to the thermal particle population [W.m <sup>-3</sup> ]; Time-dependent; Matrix(n.coord1,n.coord2)
power.fast	matflt.type (9.6.1.2.10)	Collisional power density to the fast particle population [W.m <sup>-3</sup> ]; Time-dependent; Matrix(n.coord1,n.coord2)
torque.th	matflt.type (9.6.1.2.10)	Collisional toroidal torque density to the thermal particle population [N.m <sup>-2</sup> ]; Time-dependent; Matrix(n.coord1,n.coord2)
torque.fast	matflt.type (9.6.1.2.10)	Collisional toroidal torque density to the fast particle population [N.m <sup>-2</sup> ]; Time-dependent; Matrix(n.coord1,n.coord2)

Type of: [dist\\_profile\\_values\\_2d:collisions\\_e \(2150\)](#) [I dist\\_profile\\_values\\_2d:collisions\\_i \(2150\)](#) [I dist\\_profiles2d\\_collisions\\_z:charge\\_e \(2151\)](#) [I dist\\_profiles\\_2d:collisions\\_e \(2154\)](#) [I dist\\_profiles\\_2d:collisions\\_i \(2154\)](#)

#### 9.6.1.3.143 dist\_distrivec\_distfunc\_fexp\_param

Parameters used to defined the grid coordinates. Time-dependent

member	type	description
equatorial	equatorial.plane (9.6.1.3.191)	Description of the equatorial plane or any other omnigeuous surfaces. Time-dependent
temperature	vecflt.type (9.6.1.2.13)	Reference temperature profile (eV); on the grid in /distsource/source/profiles_1d/rho_tor. Used to define the local thermal energy and the thermal velocity. Time-dependent; Vector(npsi)

Type of: [f\\_expansion:parameters \(2194\)](#)

#### 9.6.1.3.144 dist\_ff

Distribution function of e.g. ions, or electrons; the density of particles in the velocity space, the real space and spin state. The grid is split into topological regions, which could overlap in coordiante space (i.e. one coordinated can correspond to more than one orbit). The number of topological region is given by `nregion_topo`. For `nregion_topo=2` the topology should be that of a high aspect ratio tokamak with two topological regions, where the passing orbits moving counter to the plasma current are stored in `nregion_topo=2` and all other orbits are stored in `nregion_topo=1`. For `nregion_topo > 2` (e.g. for spherical tokamaks) the topology should be described in the field topology.

member	type	description
grid_info	dist_grid_info (9.6.1.3.151)	Specification of grids used in topo_regions. Grid coordinates could either be invariants of motion, or information at single point along orbit, e.g. xi and s for grid_coord=3. This point should always be on a so-called omnigenous surface (a generalised equatorial plane); $\text{grad}(\psi) \times \text{grad}(B) = 0$ . All closed orbits cross omnigenous surfaces at least two times. The omnigenous surfaces are described in omnigen_surf.
topo_regions(:)	topo_regions (9.6.1.3.455)	List with distribution function in each topological region; Time-dependent. Structure array(nregion_topo)

Type of: dist\_func:f\_expan\_topo (2142)

### 9.6.1.3.145 dist\_func

Distribution functions. The total distribution total distribution can either be given by the a set of markers/test particles (in markers), or by a gridded function (dist\_expand). Note that the gridded distribution can be written as sum of successive approximations, where each term is given by an element in the vector dist\_expand. Finally, the distribution can be written as a sum of a marker distribution and a gridded distribution, e.g. for delta-f Monte Carlo solution. Time-dependent

member	type	description
is_delta_f	integer (9.6.1.1.2)	If is_delta_f=1, then the distribution represents the deviation from a Maxwellian; is_delta_f=0, then the distribution represents all particles, i.e. the full-f solution. Time-dependent
markers	weighted_markers (9.6.1.3.502)	Distribution represented by a set of markers (test particles). Time-dependent
f_expan_topo(:)	dist_ff (9.6.1.3.144)	TO BE REMOVED. KEPT TEMPORARILY AS AN ALTERNATIVE TO f_expansion. [Distribution function, f, expanded into a vector of successive approximations (topology-based formulation, without the grid-cpo). The first element in the vector (f_expansion(1)) is the zeroth order distribution function, while the K:th element in the vector (f_expansion(K)) is the K:th correction, such that the total distribution function is a sum over all elements in the f_expansion vector. Time-dependent. Structure array(Nf_expansion)]. Time-dependent
f_expansion(:)	f_expansion (9.6.1.3.197)	Distribution function, f, expanded into a vector of successive approximations. The first element in the vector (f_expansion(1)) is the zeroth order distribution function, while the K:th element in the vector (f_expansion(K)) is the K:th correction, such that the total distribution function is a sum over all elements in the f_expansion vector. Time-dependent. Structure array(Nf_expansion)

Type of: distri\_vec:dist\_func (2161)

### 9.6.1.3.146 dist\_geometry\_0d

Geometrical constants

member	type	description
mag_axis	rz0D (9.6.1.3.355)	Position of the magnetic axis [m]. Time-dependent; Scalar
toroid_field	b0r0 (9.6.1.3.59)	Characteristics of the vacuum toroidal field. Used to define the radial coordiante rho_tor and to measure the current drive. Time-dependent; Scalar

Type of: dist\_global\_param:geometry (2146)

### 9.6.1.3.147 dist\_geometry\_1d

Grids and metric information; including rho\_tor, psi, area and volume. Time-dependent

member	type	description
rho_tor	vecflt_type (9.6.1.2.13)	Toroidal flux coordinate [m]. Defined as $\sqrt{(\psi - \psi_{\text{axis}})/\pi/B_0}$ , where $B_0 = \dots / \text{global\_param}/\text{toroid\_field}/b_0$ , $\psi$ is the toroidal flux and $\psi_{\text{axis}}$ is the toroidal flux at the magnetic axis. Time-dependent; Vector (npsi)
rho_tor_norm	vecflt_type (9.6.1.2.13)	The toroidal flux coordinate normalised to be zero at the axis and unity at the last closed flux surface, or last available fluxsurface if the last closed flux surface is not defined. Time-dependent; Vector (npsi)
psi	vecflt_type (9.6.1.2.13)	Poloidal flux at the grid points for 1D profiles [Wb], without $1/2\pi$ and such that $B_p =  \text{grad } \psi  / R / 2 / \pi$ . Time-dependent; Vector (npsi)
volume	vecflt_type (9.6.1.2.13)	Volume enclosed by the flux surface [m <sup>3</sup> ]; Time-dependent; Vector (npsi)
area	vecflt_type (9.6.1.2.13)	Cross-sectional area of the flux surface [m <sup>2</sup> ]; Time-dependent; Vector (npsi)

Type of: dist\_profiles.1d:geometry (2152)

### 9.6.1.3.148 dist\_geometry\_2d

Grids and metric information; including R, Z, rho\_tor, psi, theta\_geom and theta\_strt. The grid has to be rectangular in a pair of these coordinates; this is specified in coord\_type. Time-dependent

member	type	description
coord_type	integer (9.6.1.1.2)	0: Rectangular grid in the (R,Z) coordinates; 1: Rectangular grid in the (rho_tor,theta_geom) coordinates; 2: Rectangular grid in the (rho_tor,theta_straight) coordinates.
r	matflt.type (9.6.1.2.10)	Major radius coordinate [m]; Time-dependent; Matrix (n_coord1,n_coord2)
z	matflt.type (9.6.1.2.10)	Vertical coordinate [m]; Time-dependent; Matrix (n_coord1,n_coord2)
rho_tor	matflt.type (9.6.1.2.10)	Toroidal flux coordinate [m]. Defined as $\sqrt{(\phi-\phi_{axis})/\pi/B_0}$ , where $B_0=../global\_param/toroid\_field/b_0$ , $\phi$ is the toroidal flux and $\phi_{axis}$ is the toroidal flux at the magnetic axis. Time-dependent; Matrix (n_coord1,n_coord2)
psi	matflt.type (9.6.1.2.10)	Poloidal flux at the grid points for 1D profiles [Wb], without $1/2\pi$ and such that $B_p= \text{grad } \psi /R/2/\pi$ . Time-dependent; Matrix (n_coord1,n_coord2)
theta_geom	matflt.type (9.6.1.2.10)	Geometrical poloidal angle [rad]; Time-dependent; Matrix (n_coord1,n_coord2)
theta_strt	matflt.type (9.6.1.2.10)	Straight field line poloidal angle [rad]; Time-dependent; Matrix (n_coord1,n_coord2)

Type of: dist\_profiles\_2d:geometry (2154)

### 9.6.1.3.149 dist\_global\_param

Global parameters; spatial constants, volume integrated quantities and quantities averaged over the cross-sectional area. Here the dimensions used refer to: nion - size of distribution/compositions/ions; nimpur - size of distribution/compositions/impurities; nzimp - size of distribution/compositions/impurities/zmin.

member	type	description
geometry	dist_geometry_0d (9.6.1.3.146)	Geometrical constants
state	dist_state_0d (9.6.1.3.161)	Algebraic moments of the distribution function integrated over the plasma volume, e.g. total number of particles, energy etc. Time-dependent
collisions_e	dist_collisional_transfer_0d (9.6.1.3.140)	Collisional exchange with the electrons. Time-dependent
collisions_i(:)	dist_collisional_transfer_0d (9.6.1.3.140)	Collisional exchange with each ion species. The ion indexing should match the one in /distribution/compositions/ions. Time-dependent; Vector(nion)
collisions_z(:)	dist_global_param_collisions_z (9.6.1.3.150)	Collisional exchange with each impurity species. The ion indexing should match the one in /distribution/compositions/impurities. Time-dependent; Vector(nimpur)
sources(:)	dist_sources_0d (9.6.1.3.158)	Vector of volume integrated sources and sinks of particles, momentum and power included in the Fokker-Planck modelling. The physical meaning of each source term is specified through the identifier ./sources/type. Note that it is possible to store multiple source terms with the same value for ./source/type. Time-dependent; Scalar

Type of: distri\_vec:global\_param (2161)

### 9.6.1.3.150 dist\_global\_param\_collisions\_z

Collisional exchange with each impurity species. The ion indexing should match the one in /distribution/compositions/impurities. Time-dependent

member	type	description
charge_state(:)	dist_collisional_transfer_0d (9.6.1.3.140)	Collisional exchange with the impurities. The ion indexing should match the one in /distribution/compositions/impurities/zmin. Time-dependent; Vector(nzimp)

Type of: dist\_global\_param:collisions\_z (2146)

### 9.6.1.3.151 dist\_grid\_info

Specification of grids used in topo\_regions. Grid coordinates could either be invariants of motion, or information at single point along orbit, e.g. xi and s for grid\_coord=3. This point should always be on a so-called omnigenous surface (a generalised equatorial plane);  $\text{grad}(\psi) \times \text{grad}(B) = 0$ . All closed orbits cross omnigenous surfaces at least two times. The omnigenous surfaces are described in omnigen\_surf.

member	type	description
grid_type	integer (9.6.1.1.2)	Type of grid: 1=unstructured grid; 2=structured non-rectangular grid, here $\text{ndim1}=\text{ndim2}=\text{ndim3}$ , $\text{ndim21}=\text{ndim22}=\text{ndim23}$ , $\text{ndim31}=\text{ndim32}=\text{ndim33}$ ; 3=rectangular grid, where grid coordinates are stored in the vectors $\text{dim1}(1:\text{ndim1},1)$ , $\text{dim2}(1,1:\text{ndim2},1)$ , $\text{dim3}(1,1,1:\text{ndim3})$

member	type	description
ngriddim	integer (9.6.1.1.2)	Number of grid dimension. For ngriddim=2 the grid is specified by dim1 and dim2 only, while dim3, dim4, dim5, dim6 can be ignored (should not be allocated). For ngriddim=3 also dim3 is used to describe the grid etc. E.g. if your distribution is given by the three variables the poloidal flux, perpendicular and parallel velocities, then ngriddim=3 and grid.coord(1)=15, grid.coord(1)=16, grid.coord(3)=6.
grid.coord	vecint.type (9.6.1.2.14)	Identifies the coordinates specifies in dim1, dim2, dim3, dim4, dim5, and dim6. grid.coord(K) describes the coordinate representaed in dimK, for K=1,2..6. The possible coordinates are: 1=R, Major radius [m]; 2=Z, Vertical position [m]; 3=X, first cartesian coordinate in the horizontal plane [m]; 4=Y, second cartesian coordinate in the horizontal plane (grad(X) x grad(Y) = grad(Z)) [m]; 5=phi, toroidal angle [rad]; 6=psi, poloidal magnetic flux [T*m <sup>2</sup> ]; 7=rhotor, the square root of the toroidal flux; 8=theta, geometrical poloidal angle [rad]; 9=theta_b, Boozer poloidal angle [rad]; 10=vx, velocity in the x-direction [m/s]; 11=vy, velocity in the y-direction [m/s]; 12=vz, velocity in the z-direction [m/s]; 13=vel, total velocity [m/s]; 14=vphi, velocity in the phi-direction [m/s]; 15=vpar, velocity in the parallel direction [m/s]; 16=vperp, velocity in the perpendicular direction [m/s]; 17=E, Hamiltonian energy [J]; 18=Pphi, canonical toroidal angular momentum [kg m <sup>2</sup> /s]; 19=mu, magnetic moment [J/T]; 20=Lambda=mu/E [1/T]; 21=pitch=vpar/v [-]; 22=s, the position of the omnigenous plane (generalised equatorial plane) as described by the fields omnigen.surf%s and omnigen.surf%rz; 23=particle spin; 24=n.Legendre, the index of the Legendre polynomial of the pitch, e.g. if the k:th component of dim3(1,1,k,1,1,1)=5 then this refer to the 5:th Legendre polynomial P_5(xi). Vector (6)
thin_orbits	integer (9.6.1.1.2)	Specifies if guiding centre orbits are thin. Note: only used for orbit averaged distribution functions. For thin_orbits=1 the orbit are considered thin, i.e. each orbit is bound to follow a single flux surface; for thin_orbits=0 the orbits are asumed to follow guiding centre trajectories. E.g. thin_orbits=0 using constants of motion as given in a generalised equatorial plane, then the orbit outside the equatorial plane are described by the guiding centre equations of motion.
topology	string (9.6.1.1.3)	Description of the topology of the grid. NOTE: only used for nregion.topo>2.
omnigen_surf(?)	omnigen_surf (9.6.1.3.300)	List of omnigenous magnetic surfaces to which the s-coordinates in grid.coord refer. NOTE: only used for gridcoord=3. NOTE: all guiding centre orbits intersect at least one omnigenous (or stagnation) surfaces, i.e. the omnigenous generalised the equatorial plane (the midplane). nsurfs=Number of omnigenous surfaces. Structure array(nregion.topo)

Type of: dist\_ff:grid\_info (2141)

### 9.6.1.3.152 dist\_profile\_values\_1d

1D profiles; includes flux surface averaged quantities. Here the dimensions used refer to: npsi - size of the internal radial grid defined by rho\_tor; nion - size of distribution/compositions/ions; nimpur - size of distribution/compositions/impurities; nzimp - size of distribution/compositions/impurities/zmin. Time-dependent

member	type	description
state	dist_state_1d (9.6.1.3.162)	Fluid moments describing the state of the distribution; calculated from the distribution. Time-dependent
collisions_e	dist_collisional_transfer_1d (9.6.1.3.141)	Collisional exchange from the background electrons to the distribution function. Time-dependent
collisions_i(:)	dist_collisional_transfer_1d (9.6.1.3.141)	Collisional exchange from each background ion speices to the distribution function. Time-dependent; Vector (nions)
collisions_z(:)	dist_profiles_1d_collisions_z (9.6.1.3.156)	Collisional exchange from each background impurities species to the distribution function. Time-dependent; Vector (nimpur)
sources(:)	dist_sources_1d (9.6.1.3.159)	Vector of flux surface averaged sources and sinks of particles, momentum and power included in the Fokker-Planck modelling. The physical meaning of each source term is specified through the identifier ./sources/type. Note that it is possible to store multiple source terms with the same value for source/type. Time-dependent; Vector(n_source.terms)

Type of: dist\_profiles\_1d:cntr\_passing (2152) I dist\_profiles\_1d:co\_passing (2152) I dist\_profiles\_1d:trapped (2152)

### 9.6.1.3.153 dist\_profile\_values\_2d

2D profiles in the poloidal plane; includes velocity space integrated quantities. Time-dependent

member	type	description
state	dist_state_2d (9.6.1.3.163)	Fluid moments describing the state of the distribution; calculated from the distribution. Time-dependent
collisions_e	dist_collisional_transfer_2d (9.6.1.3.142)	Collisional exchange from the background electrons to the distribution function. Time-dependent
collisions_i(:)	dist_collisional_transfer_2d (9.6.1.3.142)	Collisional exchange from each background ion speices to the distribution function. Time-dependent; Vector (nions)
collisions_z(:)	dist_profiles2d_collisions_z (9.6.1.3.154)	Collisional exchange from each background impurities species to the distribution function. Time-dependent; Vector (nimpur)

Type of: dist\_profiles\_2d:cntr\_passing (2154) I dist\_profiles\_2d:co\_passing (2154) I dist\_profiles\_2d:trapped (2154)

### 9.6.1.3.154 `dist_profiles2d_collisions_z`

Collisional exchange from each background impurities species to the distribution function. Time-dependent;

member	type	description
charge_state(:)	dist_collisional_transfer_2d (9.6.1.3.142)	Collisional exchange from each charge state (or bundled charge state) to the distribution function. Time-dependent; Vector (nzimp)

Type of: `dist_profile_values_2d:collisions_z` (2150) I `dist_profiles_2d:collisions_z` (2154)

### 9.6.1.3.155 `dist_profiles_1d`

1D profiles; includes flux surface averaged quantities. Here the dimensions used refer to: `npsi` - size of the internal radial grid defined by `rho_tor`; `nion` - size of distribution/compositions/ions; `nimpur` - size of distribution/compositions/impurities; `nzimp` - size of distribution/compositions/impurities/`zmin`. Time-dependent

member	type	description
geometry	dist_geometry_1d (9.6.1.3.147)	Grids and metric information; including <code>rho_tor</code> , <code>psi</code> , area and volume. Time-dependent
state	dist_state_1d (9.6.1.3.162)	Fluid moments describing the state of the distribution; calculated from the distribution. Time-dependent
collisions_e	dist_collisional_transfer_1d (9.6.1.3.141)	Collisional exchange from the background electrons to the distribution function. Time-dependent
collisions_i(:)	dist_collisional_transfer_1d (9.6.1.3.141)	Collisional exchange from each background ion species to the distribution function. Time-dependent; Vector (nions)
collisions_z(:)	dist_profiles_1d_collisions_z (9.6.1.3.156)	Collisional exchange from each background impurities species to the distribution function. Time-dependent; Vector (nimpur)
sources(:)	dist_sources_1d (9.6.1.3.159)	Vector of flux surface averaged sources and sinks of particles, momentum and power included in the Fokker-Planck modelling. The physical meaning of each source term is specified through the identifier <code>./sources/type</code> . Note that it is possible to store multiple source terms with the same value for source/type. Time-dependent; Vector(n_source.terms)
trapped	dist_profile_values_1d (9.6.1.3.152)	Flux surface averaged profile evaluated using the trapped particle part of the distribution.
co_passing	dist_profile_values_1d (9.6.1.3.152)	Flux surface averaged profile evaluated using the co-current passing particle part of the distribution.
cntr_passing	dist_profile_values_1d (9.6.1.3.152)	Flux surface averaged profile evaluated using the counter-current passing particle part of the distribution.

Type of: `distri_vec:profiles_1d` (2161)

### 9.6.1.3.156 `dist_profiles_1d_collisions_z`

Collisional exchange from each background impurities species to the distribution function. Time-dependent;

member	type	description
charge_state(:)	dist_collisional_transfer_1d (9.6.1.3.141)	Collisional exchange from each charge state (or bundled charge state) to the distribution function. Time-dependent; Vector (nzimp)

Type of: `dist_profile_values_1d:collisions_z` (2149) I `dist_profiles_1d:collisions_z` (2152)

### 9.6.1.3.157 `dist_profiles_2d`

2D profiles in the poloidal plane; includes velocity space integrated quantities. Time-dependent

member	type	description
geometry	dist_geometry_2d (9.6.1.3.148)	Grids and metric information; including <code>R</code> , <code>Z</code> , <code>rho_tor</code> , <code>psi</code> , <code>theta_geom</code> and <code>theta_strt</code> . The grid has to be rectangular in a pair of these coordinates; this is specified in <code>coord.type</code> . Time-dependent
state	dist_state_2d (9.6.1.3.163)	Fluid moments describing the state of the distribution; calculated from the distribution. Time-dependent
collisions_e	dist_collisional_transfer_2d (9.6.1.3.142)	Collisional exchange from the background electrons to the distribution function. Time-dependent
collisions_i(:)	dist_collisional_transfer_2d (9.6.1.3.142)	Collisional exchange from each background ion species to the distribution function. Time-dependent; Vector (nions)
collisions_z(:)	dist_profiles2d_collisions_z (9.6.1.3.154)	Collisional exchange from each background impurities species to the distribution function. Time-dependent; Vector (nimpur)
trapped	dist_profile_values_2d (9.6.1.3.153)	2D profiles evaluated using the trapped particle part of the distribution.

member	type	description
co-passing	dist_profile_values_2d (9.6.1.3.153)	2D profiles evaluated using the co-current passing particle part of the distribution.
cntr-passing	dist_profile_values_2d (9.6.1.3.153)	2D profiles evaluated using the counter-current passing particle part of the distribution.

Type of: `distri_vec:profiles_2d` (2161)

### 9.6.1.3.158 `dist_sources_0d`

Volume integrated source included in the Fokker-Planck model.

member	type	description
source_ref	dist_sources_reference (9.6.1.3.160)	Reference identifying the origin and type of source; Time-dependendent
particle	float (9.6.1.1.1)	Source (or sink) rate of particles [1/s]; Time-dependendent; Scalar
momentum	float (9.6.1.1.1)	Source (or sink) rate of toroidal angular momentum [Nm/s]; Time-dependendent; Scalar
energy	float (9.6.1.1.1)	Source (or sink) rate of energy [J/s]; Time-dependendent; Scalar

Type of: `dist_global_param:sources` (2146)

### 9.6.1.3.159 `dist_sources_1d`

Flux surface averaged source included in the Fokker-Planck model.

member	type	description
source_ref	dist_sources_reference (9.6.1.3.160)	Reference identifying the origin and type of source; Time-dependendent
particle	vecflt_type (9.6.1.2.13)	Source (or sink) rate of particles density [1/s/m**3]; Time-dependendent; Vector (npsi)
momentum	vecflt_type (9.6.1.2.13)	Source (or sink) rate of toroidal angular momentum density [Nm/s/m**3]; Time-dependendent; Vector (npsi)
energy	vecflt_type (9.6.1.2.13)	Source (or sink) rate of energy density [J/s/m**3]; Time-dependendent; Vector (npsi)

Type of: `dist_profile_values_1d:sources` (2149) I `dist_profiles_1d:sources` (2152)

### 9.6.1.3.160 `dist_sources_reference`

Volume integrated source included in the Fokker-Planck model.

member	type	description
type	identifier (9.6.1.3.233)	Identifier for sources and sinks in Fokker-Planck solver; type.flag=1 for wave source, type.flag=2 for particle source, etc (see <code>fokker_planck_source_identifier.definition</code> in the Documentation website under Conventions/Enumerated_datatypes); Time-dependendent
index_waveid	vecint_type (9.6.1.2.14)	Index pointing to <code>/distribution/distri_vec/wave_id[index_waveid]</code> from which the source is taken. Time-dependendent; Vector (npsi)
index_srcid	vecint_type (9.6.1.2.14)	Index pointing to <code>/distribution/distri_vec/source_id[index_waveid]</code> from which the source is taken. Time-dependendent; Vector (npsi)

Type of: `dist_sources_0d:source_ref` (2155) I `dist_sources_1d:source_ref` (2156)

### 9.6.1.3.161 `dist_state_0d`

Algebraic moments of the distribution function integrated over the plasma volume, e.g. total number of particles, energy etc. Time-dependent

member	type	description
n_particles	float (9.6.1.1.1)	Number of particles in the distribution; the volume integral of the density (note: this is the number of real particles and not markers); Time-dependent
n_part_fast	float (9.6.1.1.1)	Number of fast particles in the distribution; the volume integral of the fast particle density (note: this is the number of real particles and not markers); Time-dependent
enrg	float (9.6.1.1.1)	Total energy distribution [J]; Time-dependent
enrg_fast	float (9.6.1.1.1)	Total energy of the fast particle distribution [J]; Time-dependent
enrg_fast_pa	float (9.6.1.1.1)	Parallel energy of the fast particle distribution [J]; Time-dependent
momentm_fast	vecflt_type (9.6.1.2.13)	Kinetic toroidal angular momentum of the fast ions [Nms]; Time-dependent; Vector (npsi)

member	type	description
current_dr	float (9.6.1.1.1)	Toroidal non-inductive current drive [A]; Time-dependent.
torque_jrxb	float (9.6.1.1.1)	Toroidal torque due to radial currents [N.m]; Time-dependent.

Type of: dist\_global\_param:state (2146)

### 9.6.1.3.162 dist\_state\_1d

Fluid moments describing the state of the distribution; calculated from the distribution. Time-dependent

member	type	description
dens	vecflt_type (9.6.1.2.13)	Flux surface averaged particle density (including both thermal and fast particles) [ $1/m^3$ ]; Time-dependent; Vector (npsi)
dens_fast	vecflt_type (9.6.1.2.13)	Flux surface averaged fast particle density [ $1/m^3$ ]; Time-dependent; Vector (npsi)
pres	vecflt_type (9.6.1.2.13)	Scalar pressure (including both thermal and fast particles) [ $J/m^3$ ]. Related to the energy content, $W$ , according to: $pres=2*W/3$ . Time-dependent; Vector (npsi)
pres_fast	vecflt_type (9.6.1.2.13)	Scalar pressure of the fast particles [ $J/m^3$ ]. Related to the fast particle energy content, $W_f$ , according to: $pres\_fast=2*W_f/3$ . Time-dependent; Vector (npsi)
pres_fast_pa	vecflt_type (9.6.1.2.13)	Parallel pressure of the fast particles [ $J/m^3$ ]. Related to the fast particle parallel energy content, $W_{fpar}$ , according to: $pres\_fast\_pa=2*W_{fpar}$ . Time-dependent; Vector (npsi)
momentm_fast	vecflt_type (9.6.1.2.13)	Kinetic toroidal angular momentum density of the fast ions [ $Ns/m^2$ ]; Time-dependent; Vector (npsi)
current	vecflt_type (9.6.1.2.13)	Total toroidal driven current density (including electron and thermal ion back-current, or drag-current) [ $A/m^3$ ]; Time-dependent; Vector (npsi)
current_fast	vecflt_type (9.6.1.2.13)	Flux surface averaged toroidal current density of fast (non-thermal) particles (excluding electron and thermal ion back-current, or drag-current) [ $A.m^{-2}$ ]; Time-dependent; Vector (npsi).
torque_jrxb	vecflt_type (9.6.1.2.13)	Toroidal torque density due to radial currents, excluding radial current due to neoclassical effect [ $N/m^2$ ]; Time-dependent; Vector (npsi)

Type of: dist\_profile\_values\_1d:state (2149) I dist\_profiles\_1d:state (2152)

### 9.6.1.3.163 dist\_state\_2d

Fluid moments describing the state of the distribution; calculated from the distribution. Time-dependent

member	type	description
dens	matflt_type (9.6.1.2.10)	Particle density (including both thermal and fast particles) [ $1/m^3$ ]; Time-dependent; Matrix (n_coord1, n_coord2)
dens_fast	matflt_type (9.6.1.2.10)	Fast particle density [ $1/m^3$ ]; Time-dependent; Matrix (n_coord1, n_coord2)
pres	matflt_type (9.6.1.2.10)	Scalar pressure (including both thermal and fast particles) [ $J/m^3$ ]. Related to the energy content, $W$ , according to: $pres=2*W/3$ . Time-dependent; Matrix (n_coord1, n_coord2)
pres_fast	matflt_type (9.6.1.2.10)	Scalar pressure of the fast particles [ $J/m^3$ ]. Related to the fast particle energy content, $W_f$ , according to: $pres\_fast=2*W_f/3$ . Time-dependent; Matrix (n_coord1, n_coord2)
pres_fast_pa	matflt_type (9.6.1.2.10)	Parallel pressure of the fast particles [ $J/m^3$ ]. Related to the fast particle parallel energy content, $W_{fpar}$ , according to: $pres\_fast\_pa=2*W_{fpar}$ . Time-dependent; Matrix (n_coord1, n_coord2)
momentm_fast	matflt_type (9.6.1.2.10)	Kinetic toroidal angular momentum density of the fast ions [ $Ns/m^2$ ]; Time-dependent; Matrix (n_coord1, n_coord2)
current	matflt_type (9.6.1.2.10)	Total toroidal driven current density (including electron and thermal ion back-current, or drag-current) [ $A/m^3$ ]; Time-dependent; Matrix (n_coord1, n_coord2)
current_fast	matflt_type (9.6.1.2.10)	Toroidal current density of fast (non-thermal) particles of the distribution species (excluding electron and thermal ion back-current, or drag-current) [ $A.m^{-2}$ ]; Time-dependent; Matrix (n_coord1, n_coord2).
torque_jrxb	matflt_type (9.6.1.2.10)	Toroidal torque density due to radial currents, excluding radial current due to neoclassical effect [ $N/m^2$ ]; Time-dependent; Matrix (n_coord1, n_coord2)

Type of: dist\_profile\_values\_2d:state (2150) I dist\_profiles\_2d:state (2154)

### 9.6.1.3.164 distri\_vec

Vector over all distribution functions. Every distribution function has to be associated with only one particle species, specified in `distri_vec/species/`, but there could be multiple distribution function for each species. In this case, the fast particle populations should be superposed. Time-dependent. Structure array(`ndistri_vec`)

member	type	description
wave_id(:)	enum_instance (9.6.1.3.186)	List all waves affecting the distribution, as specified in <code>waves/coherentwave/wave_id</code> (see <code>waves_types</code> in the Documentation website under <code>Conventions/Enumerated_datatypes</code> ). Vector( <code>n_antennas</code> )



member	type	description
source.id(:)	enum_instance (9.6.1.3.186)	List all neutral beam injectors and reactions contributing to the source, as specified in distsource/source/source.id (see distsource_types in the Documentation website under Conventions/Enumerated.datatypes). Vector(n_injectors_and_reactions)
species	species_reference (9.6.1.3.408)	Defines the distribution function species represented in this element of distri_vec. Time-dependent
gyro.type	integer (9.6.1.1.2)	Defines how to interpret the spatial coordinates: 1 = given at the actual particle position; 2 = given at the gyro centre of the particle position. Time-dependent
fast_filter	fast_thermal_separation_filter (9.6.1.3.198)	Description of how the fast and the thermal particle populations, used in global_param and profiles_1d, were separated.
global_param	dist_global_param (9.6.1.3.149)	Global parameters (in most cases volume integrated and surface averaged quantities). Time-dependent
profiles_1d	dist_profiles_1d (9.6.1.3.155)	Flux surface averaged profiles.
profiles_2d	dist_profiles_2d (9.6.1.3.157)	2D profiles in the poloidal plane
dist_func	dist_func (9.6.1.3.145)	Distribution functions. The total distribution total distribution can either be given by the a set of markers/test particles (in markers), or by a gridded function (dist_expand). Note that the gridded distribution can be written as sum of successive approximations, where each term is given by an element in the vector dist_expand. Finally, the distribution can be written as a sum of a marker distribution and a gridded distribution, e.g. for delta-f Monte Carlo solution. Time-dependent
codeparam	codeparam (9.6.1.3.77)	Code parameters

Type of: distribution:distri\_vec (2012)

### 9.6.1.3.165 distsource\_global\_param

Global parameters (volume integrated).

member	type	description
src_pow	exp0D (9.6.1.3.194)	Total power source [W]; Time-dependent.
src_rate	exp0D (9.6.1.3.194)	Particle source rate [1/s]; Time-dependent.
mag_axis	rz0D (9.6.1.3.355)	Position of the magnetic axis. Time-dependent; Scalar
toroid_field	b0r0 (9.6.1.3.59)	Characteristics of the vacuum toroidal field. Used to define the radial coordiante rho_tor. Time-dependent; Scalar

Type of: distsource\_source:global\_param (2166)

### 9.6.1.3.166 distsource\_line\_src\_prof

1D profiles representation of a line source. Time-dependent

member	type	description
rho_tor	vecflt_type (9.6.1.2.13)	Toroidal flux coordinate at the grid points for 1D profiles [m]. Defined as $\sqrt{\phi/\pi/B_0}$ , where $B_0 = \text{equilibrium}/\text{global\_param}/\text{toroid\_field}/b_0$ . Time-dependent; Vector (npsi)
rho_tor_norm	vecflt_type (9.6.1.2.13)	Normalised toroidal flux coordinate at the grid points for 1D profiles; Time-dependent; Vector (npsi)
psi	vecflt_type (9.6.1.2.13)	Poloidal flux at the grid points for 1D profiles [Wb], without $1/2\pi$ and such that $B_p =  \text{grad } \psi  / (R - R_0)$ . Time-dependent; Vector (npsi)
R	vecflt_type (9.6.1.2.13)	Major radius at the line source. Time-dependent; Vector (npsi)
Z	vecflt_type (9.6.1.2.13)	Vertical position of the line source. Time-dependent; Vector (npsi)
theta	vecflt_type (9.6.1.2.13)	Poloidal angle [rad]. Time-dependent; Vector (npsi)
theta_id	vecflt_type (9.6.1.2.13)	Type of poloidal angle: 1 : same as the poloidal angle in the equilibrium cpo; 2 : geometrical polar angle, $\tan(\theta) = Z/(R-R_0)$ ; 3 : other. If option 3, a transformation to the geometrical poloidal angle is provided in th2th_pol.
th2th_pol	matflt_type (9.6.1.2.10)	Geometrical poloidal angle at grid points in theta, i.e. the transformation from theta to the polar poloidal angle; used only if angl_type=3; Time-dependent; Matrix (ndim1, ndim2)
pitch	vecflt_type (9.6.1.2.13)	Pitch (i.e. $v_{\text{parallel}}/v$ ) of source particles. Time-dependent; Vector (npsi)
energy	vecflt_type (9.6.1.2.13)	Kinetic energy of source particles [eV]. Time-dependent; Vector (npsi)
ang_momentum	vecflt_type (9.6.1.2.13)	Kinetic angular momentum of a single source particles, $R \cdot m \cdot v_{\text{phi}}$ [Nms]. Time-dependent; Vector (npsi)
src_rate	vecflt_type (9.6.1.2.13)	Source density of particles [1/m <sup>3</sup> /s]. Time-dependent; Vector (npsi)

Type of: distsource\_source:line\_srcprof (2166)

### 9.6.1.3.167 distsource\_profiles\_1d

1D radial profiles

member	type	description
rho_tor	vecflt_type (9.6.1.2.13)	Toroidal flux coordinate [m]. Defined as $\sqrt{(\phi - \phi_{\text{axis}})/\pi/B_0}$ , where $B_0 = \dots / \text{global\_param}/\text{toroid\_field}/b_0$ , $\phi$ is the toroidal flux and $\phi_{\text{axis}}$ is the toroidal flux at the magnetic axis. Time-dependent; Vector (npsi)
rho_tor_norm	vecflt_type (9.6.1.2.13)	The toroidal flux coordinate normalised to be zero at the axis and unity at the last closed flux surface, or last available fluxsurface if the last closed flux surface is not defined. Time-dependent; Vector (npsi)
psi	vecflt_type (9.6.1.2.13)	Poloidal flux [Wb], evaluated without $1/2\pi$ and such that $B_p =  \text{grad } \psi  / R/2/\pi$ . Time-dependent; Vector (npsi)
volume	vecflt_type (9.6.1.2.13)	Volume enclosed by the flux surface [ $\text{m}^3$ ]. Time-dependent; Vector (npsi)
area	vecflt_type (9.6.1.2.13)	Cross-sectional area of the flux surface [ $\text{m}^2$ ]. Time-dependent; Vector (npsi)
pow_den	exp1D (9.6.1.3.195)	Flux surface averaged power density [ $\text{W}/\text{m}^3$ ]; Time-dependent; Vector (npsi)
trq_den	exp1D (9.6.1.3.195)	Flux surface averaged toroidal torque density [ $\text{N}/\text{m}^2$ ]; Time-dependent; Vector (npsi)
src_rate	exp1D (9.6.1.3.195)	Flux surface averaged total source density of particles [ $\text{m}^{-3} \text{s}^{-1}$ ]; Time-dependent; Vector (npsi)

Type of: distsource\_source:profiles\_1d (2166)

### 9.6.1.3.168 distsource\_profiles\_2d

2D source profiles in terms of two phase space coordinates

member	type	description
grid_coord	vecint_type (9.6.1.2.14)	Identifies the coordinates specified in dim1 and dim2. grid_coord(1) and grid_coord(2) describe the coordinate represented in dim1 and dim2. The possible coordinates are: 1=R, Major radius [m]; 2=Z, Vertical position [m]; 3=X, first cartesian coordinate in the horizontal plane [m]; 4=Y, second cartesian coordinate in the horizontal plane ( $\text{grad}(X) \times \text{grad}(Y) = \text{grad}(Z)$ ) [m]; 5= $\phi$ , toroidal angle [rad]; 6= $\psi$ , poloidal magnetic flux [ $\text{T} \cdot \text{m}^2$ ]; 7= $\rho_{\text{tor}}$ , the square root of the toroidal flux; 8= $\theta$ , geometrical poloidal angle [rad]; 9= $\theta_{\text{b}}$ , Boozer poloidal angle [rad]; 10= $v_x$ , velocity in the x-direction [m/s]; 11= $v_y$ , velocity in the y-direction [m/s]; 12= $v_z$ , velocity in the z-direction [m/s]; 13= $v_{\text{el}}$ , total velocity [m/s]; 14= $v_{\phi}$ , velocity in the $\phi$ -direction [m/s]; 15= $v_{\text{par}}$ , velocity in the parallel direction [m/s]; 16= $v_{\text{perp}}$ , velocity in the perpendicular direction [m/s]; 17=E, Hamiltonian energy [J]; 18=P $\phi$ , canonical toroidal angular momentum [ $\text{kg} \text{m}^2/\text{s}$ ]; 19= $\mu$ , magnetic moment [J/T]; 20= $\Lambda = \mu/E$ [1/T]. Vector (2)
dim1	matflt_type (9.6.1.2.10)	First coordinate of 2D grid. Time-dependent; Vector (ndim1,ndim2)
dim2	matflt_type (9.6.1.2.10)	Second coordinate of 2D grid. Time-dependent; Vector (ndim1,ndim2)
g11	matflt_type (9.6.1.2.10)	11 component of the covariant metric tensor in the (dim1, dim2) coordinate system. Time-dependent; Vector (ndim1,ndim2)
g12	matflt_type (9.6.1.2.10)	12 component of the covariant metric tensor in the (dim1, dim2) coordinate system. Time-dependent; Vector (ndim1,ndim2)
g21	matflt_type (9.6.1.2.10)	21 component of the covariant metric tensor in the (dim1, dim2) coordinate system. Time-dependent; Vector (ndim1,ndim2)
g22	matflt_type (9.6.1.2.10)	22 component of the covariant metric tensor in the (dim1, dim2) coordinate system. Time-dependent; Vector (ndim1,ndim2)
pow_den	exp2D (9.6.1.3.196)	Source power density. Here $\sum(M,N=1,2; \text{pow\_den} * g_{NM} * \text{dimN} * \text{dimM})$ have unit [W]. Time-dependent; Vector (ndim1,ndim2)
src_rate	exp2D (9.6.1.3.196)	Source density of particles. Here $\sum(M,N=1,2; \text{src\_rate} * g_{NM} * \text{dimN} * \text{dimM})$ have unit [1/s]. Time-dependent; Vector (ndim1,ndim2)

Type of: distsource\_source:profiles\_2d (2166)

### 9.6.1.3.169 distsource\_source

Source

member	type	description
source_id(:)	enum_instance (9.6.1.3.186)	List of identifiers for the source, in terms of the type and name of the injectors and reactions that provide the source, along with an index separating sources with the same name and type. Possible content for type: NBI or reaction names (see distsource_types in the Documentation website under Conventions/Enumerated.datatypes); the field name should either be taken from $\text{nbi}(*)\% \text{nbi\_unit}(*)\% \text{name}$ , or describe the populations involved in the reaction, e.g. fast-thermal; the field index should separate different sources generated from a single injector or reaction. Vector(n_injectors_and_reactions)
species	species_reference (9.6.1.3.408)	Defines the source species represented in this element of the vector /distsource/source. Time-dependent
gyro_type	integer (9.6.1.1.2)	Defines how to interpret the spatial coordinates: 1 = given at the actual particle birth point; 2 = given at the gyro centre of the birth point.

member	type	description
global_param	distsource_global_param (9.6.1.3.165)	Global parameters.
profiles_1d	distsource_profiles_1d (9.6.1.3.167)	1D radial profiles
profiles_2d	distsource_profiles_2d (9.6.1.3.168)	2D source profiles in terms of two phase space coordinates
line_srcprof(:)	distsource_line_src_prof (9.6.1.3.166)	1D profiles representation of a line source. Time-dependent
source_rate	source_rate (9.6.1.3.402)	Source density of particles in phase space (real space, velocity space, spin state).
markers	weighted_markers (9.6.1.3.502)	Source given as a set of markers (test particles) born per second.
codeparam	codeparam (9.6.1.3.77)	Code parameters

Type of: distsource:source (2013)

### 9.6.1.3.170 divergence

Detailed information on beamlet divergence. Divergens is described as a super position of Gaussian profiles with amplitude "frac\_divcomp" and vertical/horizontal divergence "div\_vert"/"div\_horiz". Note that for positive ion NBI the divergence is well described by a single Gaussian.

member	type	description
frac_divcomp	vecflt_type (9.6.1.2.13)	Fraction of injected particles. Vector(ndiv_comp)
div_vert	vecflt_type (9.6.1.2.13)	The vertical beamlet divergence [rad]. Here the divergence is defined for Gaussian beams as the angel where the beam density is reduced by a factor 1/e compared to the maximum density. For non-Gaussian beams the divergence is $\sqrt{2} \cdot \text{mean}((x - \text{mean}(x))^2)$ , where x is the angle and the mean should be performed over the beam density, P(x): $\text{mean}(y) = \int y \cdot P(x) \cdot dx$ . Vector(ndiv_comp)
div_horiz	vecflt_type (9.6.1.2.13)	The horizontal beamlet divergence [rad]. Here the divergence is defined for Gaussian beams as the angel where the beam density is reduced by a factor 1/e compared to the maximum density. For non-Gaussian beams the divergence is $\sqrt{2} \cdot \text{mean}((x - \text{mean}(x))^2)$ , where x is the angle and the mean should be performed over the beam density, P(x): $\text{mean}(y) = \int y \cdot P(x) \cdot dx$ . Vector(ndiv_comp)

Type of: beamletgroup:divergence (2061)

### 9.6.1.3.171 e\_components

E-field representation in terms of the parallel and circularly polarised components

member	type	description
e_plus	complexgrid_scalar_cplx (9.6.1.3.88)	Left hand circularly polarised component of the perpendicular (to the static magnetic field) electric field [V/m]. Time-dependent; Complexgrid_scalar
e_minus	complexgrid_scalar_cplx (9.6.1.3.88)	Right hand circularly polarised component of the perpendicular (to the static magnetic field) electric field [V/m]. Time-dependent; Complexgrid_scalar
e_para	complexgrid_scalar_cplx (9.6.1.3.88)	Parallel (to the static magnetic field) component of electric field [V/m]. Time-dependent; Complexgrid_scalar
e_norm	complexgrid_scalar_cplx (9.6.1.3.88)	Magnitude of wave electric field normal to a flux surface [V/m]; Time-dependent; Complexgrid_scalar
e_binorm	complexgrid_scalar_cplx (9.6.1.3.88)	Magnitude of perpendicular (to the static magnetic field) wave electric field tangent to a flux surface [V/m]; Time-dependent; Complexgrid_scalar
b_norm	complexgrid_scalar_cplx (9.6.1.3.88)	Magnitude of perpendicular (to the static magnetic field) wave magnetic field normal to a flux surface [T]; Time-dependent; Complexgrid_scalar
b_binorm	complexgrid_scalar_cplx (9.6.1.3.88)	Magnitude of wave magnetic field tangent to a flux surface [T]; Time-dependent; Complexgrid_scalar
b_para	complexgrid_scalar_cplx (9.6.1.3.88)	Magnitude of wave magnetic field parallel to the equilibrium magnetic field [T]; Time-dependent; Complexgrid_scalar
k_perp	complexgrid_scalar_cplx (9.6.1.3.88)	Perpendicular wave number [1/m]; Time-dependent; Complexgrid_scalar

Type of: fullwave:e\_components (2204)

### 9.6.1.3.172 ecemeasure

Measured values

member	type	description
member	type	description
harmonic	integer (9.6.1.1.2)	Harmonic detected by the ECE channels. Time-dependent.
position	rzphi1Dexp (9.6.1.3.363)	Position of the measurement. Time-dependent. Vector (nchannels)
te	exp1D (9.6.1.3.195)	Electron temperature [eV]. Time-dependent. Vector (nchannels)

Type of: ecediag:measure (2014)

### 9.6.1.3.173 ecesetup

diagnostic setup information

member	type	description
frequency	vecflt.type (9.6.1.2.13)	Frequency of the ECE channels. Vector (nchannels)
los	setup_line_exp (9.6.1.3.394)	Geometry of the line of sight.

Type of: ecediag:setup (2014)

### 9.6.1.3.174 edge\_fluid

Fluid quantities

member	type	description
ne	edge_fluid_scalar_simplestruct (9.6.1.3.176)	Electron density [ $1/m^3$ ]; Time-dependent;
ni(:)	edge_fluid_scalar (9.6.1.3.175)	Ion density [ $1/m^3$ ] (per species). Array of structures(nspecies); Time-dependent;
ve	edge_fluid_vector_simplestruct (9.6.1.3.179)	Electron velocity [m/s]; Time-dependent;
vi(:)	edge_fluid_vector (9.6.1.3.178)	Ion velocity [m/s] (per species).Array of structures(nspecies); Time-dependent;
te	edge_fluid_scalar_simplestruct (9.6.1.3.176)	Electron temperature [eV]; Time-dependent;
ti(:)	edge_fluid_scalar (9.6.1.3.175)	Ion temperature [eV] (per species). Array of structures(nspecies); Time-dependent;
te_aniso	edge_fluid_vector_simplestruct (9.6.1.3.179)	Anisotropic electron temperature [eV]; Time-dependent;
ti_aniso(:)	edge_fluid_vector (9.6.1.3.178)	Anisotropic ion temperature [eV] (per species). Array of structures(nspecies); Time-dependent;
po	edge_fluid_scalar_simplestruct (9.6.1.3.176)	Electric potential [V]; Time-dependent;
j	edge_fluid_vector_simplestruct (9.6.1.3.179)	Electric current [A]; Time-dependent;
b(:)	complexgrid_vector (9.6.1.3.93)	Magnetic field vector [T]; Time-dependent;

Type of: edge:fluid (2015)

### 9.6.1.3.175 edge\_fluid\_scalar

A scalar fluid quantity. To be used as array of structure

member	type	description
value(:)	complexgrid_scalar (9.6.1.3.87)	Value of the quantity. Possibly stored on multiple subgrids.; Time-dependent; Array of structures (nsubgrid.quantity)
bndvalue(:)	complexgrid_scalar (9.6.1.3.87)	Boundary values of the quantity. Possibly stored on multiple (boundary) subgrids.; Time-dependent; Array of structures (nsubgrid.quantity)
flux(:)	complexgrid_vector (9.6.1.3.93)	Flux of the quantity. Possibly stored on multiple subgrids.; Time-dependent; Array of structures (nsubgrid.quantity)
bndflux(:)	complexgrid_vector (9.6.1.3.93)	Flux of the quantity. Possibly stored on multiple (boundary) subgrids.; Time-dependent; Array of structures (nsubgrid.quantity)
transpcoeff(:)	edge_fluid_scalar_transpcoeff (9.6.1.3.177)	Transport coefficients; Time-dependent; Array of structures (nsubgrid.quantity)
source(:)	complexgrid_scalar (9.6.1.3.87)	Source; Time-dependent; Array of structures (nsubgrid.quantity)

Type of: [edge\\_fluid:ni \(2171\)](#) | [edge\\_fluid:ti \(2171\)](#) | [edge\\_fluid\\_vector:comps \(2175\)](#) | [edge\\_fluid\\_vector\\_simplestruct:comps \(2176\)](#)

### 9.6.1.3.176 `edge_fluid_scalar_simplestruct`

A scalar fluid quantity. To be used as simple structure.

member	type	description
<code>value(:)</code>	<a href="#">complexgrid_scalar (9.6.1.3.87)</a>	Value of the quantity. Possibly stored on multiple subgrids.; Time-dependent; Array of structures (nsubgrid_quantity)
<code>bndvalue(:)</code>	<a href="#">complexgrid_scalar (9.6.1.3.87)</a>	Boundary values of the quantity. Possibly stored on multiple (boundary) subgrids.; Time-dependent; Array of structures (nsubgrid_quantity)
<code>flux(:)</code>	<a href="#">complexgrid_vector (9.6.1.3.93)</a>	Flux of the quantity. Possibly stored on multiple subgrids.; Time-dependent; Array of structures (nsubgrid_quantity)
<code>bndflux(:)</code>	<a href="#">complexgrid_vector (9.6.1.3.93)</a>	Flux of the quantity. Possibly stored on multiple (boundary) subgrids.; Time-dependent; Array of structures (nsubgrid_quantity)
<code>transpcoeff(:)</code>	<a href="#">edge_fluid_scalar_transpcoeff (9.6.1.3.177)</a>	Transport coefficients; Time-dependent; Array of structures (nsubgrid_quantity)
<code>source(:)</code>	<a href="#">complexgrid_scalar (9.6.1.3.87)</a>	Source; Time-dependent; Array of structures (nsubgrid_quantity)

Type of: [edge\\_fluid:ne \(2171\)](#) | [edge\\_fluid:po \(2171\)](#) | [edge\\_fluid:te \(2171\)](#)

### 9.6.1.3.177 `edge_fluid_scalar_transpcoeff`

Transport coefficients; Time-dependent; Array of structures (nsubgrid\_quantity)

member	type	description
<code>d</code>	<a href="#">complexgrid_vector_simplestruct (9.6.1.3.94)</a>	Diffusivity [m <sup>2</sup> /s]; Time-dependent;
<code>v</code>	<a href="#">complexgrid_vector_simplestruct (9.6.1.3.94)</a>	Velocity [m/s]; Time-dependent;

Type of: [edge\\_fluid\\_scalar:transpcoeff \(2172\)](#) | [edge\\_fluid\\_scalar\\_simplestruct:transpcoeff \(2173\)](#)

### 9.6.1.3.178 `edge_fluid_vector`

A fluid vector quantity, with components possibly explicitly aligned to a coordinate direction. To be used as array of structure

member	type	description
<code>griduid</code>	<a href="#">integer (9.6.1.1.2)</a>	Unique identifier of the grid this vector quantity is associated with.
<code>basis</code>	<a href="#">integer (9.6.1.1.2)</a>	Index of basis (defined in associated grid) this vector is aligned to; If set to GRID.UNDEFINED=0, the canonical basis of the default coordinates of the grid assumed.
<code>align</code>	<a href="#">vecint_type (9.6.1.2.14)</a>	Alignment of vector components, numerical flag. Int vector (number of vector components);
<code>alignid</code>	<a href="#">vecstring_type (9.6.1.2.15)</a>	Alignment of vector components, string description. String vector (number of vector components);
<code>comps(:)</code>	<a href="#">edge_fluid_scalar (9.6.1.3.175)</a>	Components of the vector. Array of structures (number of vector components); Time-dependent;

Type of: [edge\\_fluid:ti\\_aniso \(2171\)](#) | [edge\\_fluid:vi \(2171\)](#)

### 9.6.1.3.179 `edge_fluid_vector_simplestruct`

A fluid vector quantity, with components possibly explicitly aligned to a coordinate direction. To be used as simple structure.

member	type	description
<code>griduid</code>	<a href="#">integer (9.6.1.1.2)</a>	Unique identifier of the grid this vector quantity is associated with.
<code>basis</code>	<a href="#">integer (9.6.1.1.2)</a>	Index of basis (defined in associated grid) this vector is aligned to; If set to GRID.UNDEFINED=0, the canonical basis of the default coordinates of the grid assumed.
<code>comps(:)</code>	<a href="#">edge_fluid_scalar (9.6.1.3.175)</a>	Components of the vector. Array of structures(ndim); Time-dependent;
<code>align</code>	<a href="#">vecint_type (9.6.1.2.14)</a>	Alignment of vector components, numerical flag. Int vector(ndim);

member	type	description
alignid	vecstring.type (9.6.1.2.15)	Alignment of vector components, string description. String vector(ndim);

Type of: edge\_fluid:j (2171) | edge\_fluid:te\_aniso (2171) | edge\_fluid:ve (2171)

### 9.6.1.3.180 edge\_kinetic

Kinetic quantities

member	type	description
f(:)	edge_kinetic_distribution (9.6.1.3.181)	Distribution function [ $1/m^3 (m/s)^{-3}$ ]. Array of structuresr(nspecies); Time-dependent;

Type of: edge:kinetic (2015)

### 9.6.1.3.181 edge\_kinetic\_distribution

Distribution function [ $1/m^3 (m/s)^{-3}$ ]. Array of structuresr(nspecies); Time-dependent;

member	type	description
value(:)	complexgrid_scalar (9.6.1.3.87)	Value of distribution function. Possibly stored on multiple subgrids.; Vector (nsubgrid.quantity). Time-dependent;
bndvalue(:)	complexgrid_scalar (9.6.1.3.87)	Boundary value of distribution function. Possibly stored on multiple subgrids.; Vector (nsubgrid.quantity). Time-dependent;
fluxes(:)	complexgrid_vector (9.6.1.3.93)	Fluxes in phase space. Possibly stored on multiple subgrids.; Vector (nsubgrid.quantity). Time-dependent;
source(:)	complexgrid_scalar (9.6.1.3.87)	Sources in phase space. Possibly stored on multiple subgrids.; Vector (nsubgrid.quantity). Time-dependent;

Type of: edge\_kinetic:f (2177)

### 9.6.1.3.182 edges

Edges defining the coil volume faces. Structure array. Replicate this edge structure N-times for N-edge cross sections. Use just one for wire coil approximation.

member	type	description
edge_rzphi	rzphiID (9.6.1.3.362)	Sequence of points describing a coil edge. Vector (npoints)

Type of: desc\_coils:edges (2131)

### 9.6.1.3.183 edgespecies

Array of edge species.

member	type	description
nucindex	integer (9.6.1.1.2)	Index into list of nuclei; int
zmin	float (9.6.1.1.1)	Minimum Z of species charge state bundle
zmax	float (9.6.1.1.1)	Maximum Z of species charge state bundle
label	string (9.6.1.1.3)	String identifying the species (e.g. D0, D+, C0, C+, C+2, ...)

Type of: compositions.type:edgespecies (2096)

### 9.6.1.3.184 element\_desc

Element description (equivalent to wall/compositions/nuclei, can link there using nucindex).

member	type	description
nucindex	integer (9.6.1.1.2)	Index into list of nuclei in wall/compositions/nuclei if the element is present there. Otherwise it is 0 and zn, amn and label have to be set.
label	string (9.6.1.1.3)	Element name/label
zn	float (9.6.1.1.1)	Nuclear charge [units of elementary charge];

member	type	description
amn	float (9.6.1.1.1)	Mass of atom [amu]

Type of: wall:elements (2047)

### 9.6.1.3.185 entry\_def

Structure defining a database entry

member	type	description
user	string (9.6.1.1.3)	Name of the user if private data. Value should be ITM if stored in the official common ITM tree
machine	string (9.6.1.1.3)	Name of the device
shot	integer (9.6.1.1.2)	Shot number
run	integer (9.6.1.1.2)	Run number

Type of: mdinfo:md\_entry (2257)

### 9.6.1.3.186 enum\_instance

Specifies a specific enumerated instance of an object or process in term of its type, name and an index. E.g. the input could be the wave with index=2, selected from all waves launched by the antenna with name=A2, where the antenna is of type=IC.

member	type	description
type	identifier (9.6.1.3.233)	Identify the type of the object or process.
name	string (9.6.1.1.3)	The name of the object or process. Here the object should be an instans of the type specified in the field type.
index	integer (9.6.1.1.2)	Index the separating objects or processes with the same name.

Type of: coherentwave:wave\_id (2076) I distri\_vec:source\_id (2161) I distri\_vec:wave\_id (2161) I distsource\_source:source\_id (2166)

### 9.6.1.3.187 eqconstraint

measurements to constrain the equilibrium, output values and accuracy of the fit

member	type	description
bpol	eqmes1D (9.6.1.3.190)	poloidal pickup coils [T]
bvac_r	eqmes0D (9.6.1.3.189)	Vacuum field times radius in the toroidal field magnet [T.m];
diamagflux	eqmes0D (9.6.1.3.189)	Diamagnetic flux [Wb], defined as integral (Btor - Btor,vac) dS where the integral is over the poloidal cross section of the plasma. It is measured by a single wire loop around the cross section of the torus (e.g. Wesson, Tokamaks, 1997, p.473). It gives information about the separation of the two source profiles p' and FF' of the Grad-Shafranov equation.
faraday	eqmes1D (9.6.1.3.190)	Faraday rotation angles [rad]
flux	eqmes1D (9.6.1.3.190)	Poloidal flux loops [Wb]
i_plasma	eqmes0D (9.6.1.3.189)	Plasma current [A];
isoflux	isoflux (9.6.1.3.239)	Point series at which the flux is considered the same
jsurf	eqmes1D (9.6.1.3.190)	Average of current density on the flux surface [A/m <sup>2</sup> ]
magnet_iron	magnet_iron (9.6.1.3.257)	Magnetisation in iron segments [T]
mse	eqmes1D (9.6.1.3.190)	MSE angles [rad]
ne	eqmes1D (9.6.1.3.190)	Electron density [m <sup>-3</sup> for local measurement, m <sup>-2</sup> if line integrated]
pfccurrent	eqmes1D (9.6.1.3.190)	Current in poloidal field coils [A]
pressure	eqmes1D (9.6.1.3.190)	Total pressure [Pa]
q	q (9.6.1.3.340)	Safety factor
xpts	xpts (9.6.1.3.505)	Position of the X-point(s)

Type of: equilibrium:eqconstraint (2017)

### 9.6.1.3.188 eqgeometry

Geometry of the plasma boundary



member	type	description
source	string (9.6.1.1.3)	Comment describing the origin of the eqgeometry data; String
boundarytype	integer (9.6.1.1.2)	0 (limiter) or 1 (separatrix); Integer; Time-dependent
boundary(:)	rz1Dexp (9.6.1.3.358)	RZ description of the plasma boundary; This is formally declared as an array of structure to allow for time-dependent size of the R and Z vectors in the sub-structure below. However, boundary must be allocated to size 1. Time-dependent;
geom_axis	rz0D (9.6.1.3.355)	position of the geometric axis [m]; Time-dependent; Scalar
a_minor	float (9.6.1.1.1)	Minor radius of the plasma boundary [m]; Time-dependent; Scalar
elongation	float (9.6.1.1.1)	Elongation of the plasma boundary; Time-dependent; Scalar
elong_upper	float (9.6.1.1.1)	Elongation upper of the plasma boundary; Time-dependent; Scalar
elong_lower	float (9.6.1.1.1)	Elongation lower of the plasma boundary; Time-dependent; Scalar
tria_upper	float (9.6.1.1.1)	Upper triangularity of the plasma boundary; Time-dependent; Scalar
tria_lower	float (9.6.1.1.1)	Lower triangularity of the plasma boundary; Time-dependent; Scalar
xpts(:)	rz1Dexp (9.6.1.3.358)	Position of the Xpoints, first is the active xpoint if diverted [m]; This is formally declared as an array of structure to allow for time-dependent size of the R and Z vectors in the sub-structure below. However, xpts must be allocated to size 1. Time-dependent;
left_low_st	rz0D (9.6.1.3.355)	Position of the lower left strike point [m]; Time-dependent; Scalar
right_low_st	rz0D (9.6.1.3.355)	Position of the lower right strike point [m]; Time-dependent; Scalar
left_up_st	rz0D (9.6.1.3.355)	Position of the upper left strike point [m]; Time-dependent; Scalar
right_up_st	rz0D (9.6.1.3.355)	Position of the upper right strike point [m]; Time-dependent; Scalar
active_limit	rz0D (9.6.1.3.355)	Position of the active limiter point (point of the plasma boundary in contact with the limiter) [m]; Set R = 0 for X-point plasma; Time-dependent; Scalar
ang_lcms_upo	float (9.6.1.1.1)	Angle at the LMCS X point upper outer; Time-dependent; Scalar
ang_lcms_upi	float (9.6.1.1.1)	Angle at the LMCS X point upper inner; Time-dependent; Scalar
ang_lcms_lwo	float (9.6.1.1.1)	Angle at the LMCS X point lower outer; Time-dependent; Scalar
ang_lcms_lwi	float (9.6.1.1.1)	Angle at the LMCS X point lower inner; Time-dependent; Scalar

Type of: equilibrium:eqgeometry (2017) I scenario:eqgeometry (2040)

### 9.6.1.3.189 eqmes0D

Structure for equilibrium measurement 0D signal

member	type	description
measured	float (9.6.1.1.1)	Measured value of the signal; Time-dependent; Scalar.
source	string (9.6.1.1.3)	Path to the source signal (diagnostic or genprof, from which to read all info on the signal); String
time	float (9.6.1.1.1)	Time (exact time slice used from the time array of the source signal. If the time slice does not exist in the time array of the source signal, it means linear interpolation has been used); Time-dependent; Scalar.
exact	integer (9.6.1.1.2)	1 means exact data, is not fitted; 0 means the equilibrium code does a least square fit; scalar integer
weight	float (9.6.1.1.1)	weight given to the measurement ( $\zeta = 0$ ); Time-dependent; Scalar.
sigma	float (9.6.1.1.1)	standard deviation of the measurement; Time-dependent; Scalar.
calculated	float (9.6.1.1.1)	Signal as recalculated by the equilibrium code; Time-dependent; Scalar.
chi2	float (9.6.1.1.1)	$\chi^2$ of (calculated-measured); Time-dependent; Scalar.

Type of: eqconstraint:bvac\_r (2184) I eqconstraint:diamagflux (2184) I eqconstraint:i\_plasma (2184)

### 9.6.1.3.190 eqmes1D

Structure for equilibrium measurement 1D signal

member	type	description
measured	vecflt.type (9.6.1.2.13)	Measured value of the signal; Time-dependent; Array(nmeas)
source	string (9.6.1.1.3)	Path to the source signal (diagnostic or genprof, from which to read all info on the signal), e.g. 'magdiag/bpol.probes/measure/value'. String
time	float (9.6.1.1.1)	Exact time slice used from the time array of the source signal. If the time slice does not exist in the time array of the source signal, it means linear interpolation has been used); Time-dependent; Scalar
exact	vecint.type (9.6.1.2.14)	1 means exact data, is not fitted; 0 means the equilibrium code does a least square fit; Time-dependent; Array(nmeas)
weight	vecflt.type (9.6.1.2.13)	weight given to the measurement ( $\zeta = 0$ ); Time-dependent; Array(nmeas)
sigma	vecflt.type (9.6.1.2.13)	standard deviation of the measurement; Time-dependent; Array(nmeas)

member	type	description
calculated	vecflt_type (9.6.1.2.13)	Signal as recalculated by the equilibrium code; Time-dependent; Array(nmeas)
chi2	vecflt_type (9.6.1.2.13)	chi <sup>2</sup> of (calculated-measured); Time-dependent; Array(nmeas)

Type of: eqconstraint:bpol (2184) I eqconstraint:faraday (2184) I eqconstraint:flux (2184) I eqconstraint:jsurf (2184) I eqconstraint:mse (2184) I eqconstraint:ne (2184) I eqconstraint:pfcurent (2184) I eqconstraint:pressure (2184) I magnet\_iron:mr (2254) I magnet\_iron:mz (2254)

### 9.6.1.3.191 equatorial\_plane

Description of the equatorial plane or any other omnigeuous surfaces. Time-dependent

member	type	description
r	vecflt_type (9.6.1.2.13)	Major radius coordinate of the equitorial plane (m). Time-dependent; Vector(n.equitorial_grid)
z	vecflt_type (9.6.1.2.13)	Major radius coordinate of the equitorial plane (m). Time-dependent; Vector(n.equitorial_grid)
s	vecflt_type (9.6.1.2.13)	Distance along the poloidal projection of the equitorial plane (m). Here s=0 should be at the magnetic axis, s>0 on the low field side and s<0 on the high field side. For example, in up-down symmetric fields s=R-R0, where R is the major radius and R0 the major radius at the magnetic axis. Time-dependent; Vector(n.equatorial_grid)
rho.tor	vecflt_type (9.6.1.2.13)	Toroidal flux coordinate [m]. Defined as $\sqrt{(\phi - \phi_{axis}) / \pi / B_0}$ , where B0 is the reference magnetic field, phi is the toroidal flux and phi_axis is the toroidal flux at the magnetic axis. Time-dependent; Vector (n.equitorial_grid)
psi	vecflt_type (9.6.1.2.13)	Poloidal flux [Wb], evaluated without 1/2pi and such that $B_p =  \text{grad } \psi  / R / 2 / \pi$ . Time-dependent; Vector (n.equitorial_grid)
b.mod	vecflt_type (9.6.1.2.13)	The modulus of the magnetic field along the equitorial plane, or more generally of the omnigeuous surfaces [T]. Time-dependent; Vector (n.equatorial_grid)

Type of: dist.distrivec\_distfunc\_fexp\_param:equatorial (2140) I parameters:equatorial (2305)

### 9.6.1.3.192 equilibrium\_profiles2d\_grid

definition of the 2D grid

member	type	description
dim1	vecflt_type (9.6.1.2.13)	First dimension values; Time-dependent; Vector (ndim1)
dim2	vecflt_type (9.6.1.2.13)	Second dimension values; Time-dependent; Vector (ndim2)
connect	matint.type (9.6.1.2.11)	In case of a finite elemnt representation, lists the points (3 for triangles, 4 for quadrangles) which define a finite element. In this case, ndim1=ndim2 and the value of grid.connect represents the index of the points in the list 1:ndim. E.g. : grid.connect(i,1:4) is a list of four integers [k1 k2 k3 k4] meaning that finite element #i is defined by the points (dim1(k1),dim2(k1)),(dim1(k2),dim2(k2)),(dim1(k3),dim2(k3)) and (dim1(k4),dim2(k4)); Time-dependent; Matrix of integers (nelement,4)

Type of: equilibrium\_profiles\_2d:grid (2190)

### 9.6.1.3.193 equilibrium\_profiles\_2d

output profiles in the poloidal plane

member	type	description
grid_type	vecstring_type (9.6.1.2.15)	Selection of one of a set of grid types. 1-rectangular (R,Z) grid, in this case the position arrays should not be filled since they are redundant with grid/dim1 and dim2.
grid	equilibrium_profiles2d_grid (9.6.1.3.192)	definition of the 2D grid
r	matflt_type (9.6.1.2.10)	values of the major radius on the grid [m]; Time-dependent; Matrix (ndim1, ndim2)
z	matflt_type (9.6.1.2.10)	values of the altitude on the grid [m]; Time-dependent; Matrix (ndim1, ndim2)
psi	matflt_type (9.6.1.2.10)	values of the poloidal flux at the grid in the poloidal plane [Wb]; Time-dependent; Matrix (ndim1, ndim2)
theta	matflt_type (9.6.1.2.10)	values of the poloidal angle on the grid [rad]; Time-dependent; Matrix (ndim1, ndim2)
phi	matflt_type (9.6.1.2.10)	Toroidal flux [Wb]. Time-dependent; Matrix (ndim1, ndim2)
jphi	matflt_type (9.6.1.2.10)	toroidal plasma current density [A m-2]; Time-dependent; Matrix (ndim1, ndim2)
jpar	matflt_type (9.6.1.2.10)	parallel (to magnetic field) plasma current density [A m-2]; Time-dependent; Matrix (ndim1, ndim2)
br	matflt_type (9.6.1.2.10)	R component of the poloidal magnetic field at the specified grid [T]; Time-dependent; Matrix (ndim1, ndim2)

member	type	description
bz	matflt.type (9.6.1.2.10)	Z component of the poloidal magnetic field at the specified grid [T]; Time-dependent; Matrix (ndim1, ndim2)
bphi	matflt.type (9.6.1.2.10)	toroidal component of the magnetic field at the specified grid [T]; Time-dependent; Matrix (ndim1, ndim2)
vphi	matflt.type (9.6.1.2.10)	toroidal flow velocity [m/s]; Time-dependent; Matrix (ndim1, ndim2)
vtheta	matflt.type (9.6.1.2.10)	Poloidal flow velocity [m/s]; Time-dependent; Matrix (ndim1, ndim2)
rho.mass	matflt.type (9.6.1.2.10)	Mass density [kg/m <sup>3</sup> ]; Time-dependent; Matrix (ndim1, ndim2)
pressure	matflt.type (9.6.1.2.10)	Pressure [Pa]; Time-dependent; Matrix (ndim1, ndim2)
temperature	matflt.type (9.6.1.2.10)	Temperature [eV]; Time-dependent; Matrix (ndim1, ndim2)

Type of: equilibrium:profiles.2d (2017)

### 9.6.1.3.194 exp0D

Structure for experimental time-dependent scalar signal

member	type	description
value	float (9.6.1.1.1)	Signal value; Time-dependent; Scalar
abserror	float (9.6.1.1.1)	Absolute error on signal; Time-dependent; Scalar
relerror	float (9.6.1.1.1)	Relative error on signal (normalised to signal value); Time-dependent; Scalar

Type of: antenna\_ec:power (2051) I antenna\_ic:frequency (2052) I antenna\_ic:power (2052) I antenna\_lh:power (2053) I distsource\_global\_param:src\_pow (2162) I distsource\_global\_param:src\_rate (2162) I fusiondiag\_ct\_chords:energy (2212) I fusiondiag\_spec1d:energy (2218) I fusiondiag\_spec2d:energy (2219) I magdiag:diamagener (2026) I magdiag:diamagflux (2026) I magdiag:ip (2026) I nbi\_unit:inj\_eng\_unit (2281) I nbi\_unit:pow\_unit (2281) I solcurdiag\_sol\_current:measure (2395) I straps:current (2410) I straps:phase (2410) I toroidfield:bvac.r (2044) I toroidfield:current (2044)

### 9.6.1.3.195 exp1D

Structure for experimental 1D signal

member	type	description
value	vecflt.type (9.6.1.2.13)	Signal value; Time-dependent; Vector
abserror	vecflt.type (9.6.1.2.13)	Absolute error on signal; Time-dependent; Vector
relerror	vecflt.type (9.6.1.2.13)	Relative error on signal (normalised to signal value); Time-dependent; Vector

Type of: bpol\_probes:measure (2069) I coil:coilcurrent (2077) I coil:coilvoltage (2077) I current:spectrum (2126) I cxmeasure:ti (2127) I cxmeasure:vpol (2127) I cxmeasure:vtor (2127) I distsource\_profiles\_1d:pow\_den (2164) I distsource\_profiles\_1d:src\_rate (2164) I distsource\_profiles\_1d:trq\_den (2164) I ecmeasure:te (2169) I flux\_loops:measure (2199) I fusiondiag\_ct\_chords:measure (2212) I fusiondiag\_ct\_energy:energy (2213) I fusiondiag\_ct\_energy:measure (2213) I fusiondiag\_detect\_ct\_energy:energy (2214) I fusiondiag\_detect\_ct\_energy:measure (2214) I fusiondiag\_emissivity1d:r (2215) I fusiondiag\_emissivity1d:z (2215) I fusiondiag\_spec1d:measure (2218) I halpha\_setup:solidangle (2225) I halphadiag:intensity (2019) I lang\_derived:measure (2238) I lang\_measure:area (2239) I lang\_measure:measure (2239) I lineintegraldiag:measure (2249) I lithmeasure:ne (2250) I magnetise:mr (2255) I magnetise:mz (2255) I modules:amplitude (2270) I modules:phase (2270) I msediag\_radia\_chord:totradiance (2274) I msediag\_radiance:wavelength (2275) I nbi\_unit:beamcurfrac (2281) I nbi\_unit:beampowfrac (2281) I pfcoils:coilcurrent (2316) I pfcoils:coilvoltage (2316) I pfpasive\_current:poloidal (2321) I pfpasive\_current:toroidal (2321) I pfsupplies:current (2322) I pfsupplies:voltage (2322) I polarimetry:measure (2328) I rfameasure:ti (2349) I rzphi1Dexp:phi (2360) I rzphi1Dexp:r (2360) I rzphi1Dexp:z (2360) I tsmeasure:ne (2461) I tsmeasure:te (2461)

### 9.6.1.3.196 exp2D

Structure for experimental 2D signal

member	type	description
value	matflt.type (9.6.1.2.10)	Signal value; Time-dependent; Matrix
abserror	matflt.type (9.6.1.2.10)	Absolute error on signal; Time-dependent; Matrix
relerror	matflt.type (9.6.1.2.10)	Relative error on signal (normalised to signal value); Time-dependent; Matrix

Type of: `distsource_profiles_2d:pow_den` (2165) I `distsource_profiles_2d:src_rate` (2165) I `fusiondiag_emissivity2d:r` (2216) I `fusiondiag_emissivity2d:z` (2216) I `fusiondiag_spec2d:measure` (2219)

### 9.6.1.3.197 `f_expansion`

Distribution function,  $f$ , expanded into a vector of successive approximations. The first element in the vector (`f_expansion(1)`) is the zeroth order distribution function, while the  $K$ :th element in the vector (`f_expansion(K)`) is the  $K$ :th correction, such that the total distribution function is a sum over all elements in the `f_expansion` vector. Time-dependent. Structure array(`Nf_expansion`)

member	type	description
<code>grid</code>	<code>complexgrid</code> (9.6.1.3.82)	Grid for storing the distribution function. Time-dependent; <code>Complexgrid</code>
<code>values</code>	<code>complexgrid_scalar</code> (9.6.1.3.87)	Values of the distribution function [ $\text{m}^{-3} (\text{m}/\text{s})^{-3}$ ]. Time-dependent; <code>Complexgrid_scalar</code> .
<code>parameters</code>	<code>dist_distribvec_distfunc_fexp_parameters</code> (9.6.1.3.143)	Parameters used to defined the grid coordinates. Time-dependent

Type of: `dist_func:f_expansion` (2142)

### 9.6.1.3.198 `fast_thermal_separation_filter`

Description of how the fast and the thermal particle populations were separated.

member	type	description
<code>method</code>	<code>identfier</code> (9.6.1.3.233)	Identifier describing the method used to separate the fast and thermal particle population (see <code>fast_thermal_separation_filter_identfier_definition</code> in the Documentation website under Conventions/Enumerated_datatypes)
<code>energy_sep</code>	<code>vecflt_type</code> (9.6.1.2.13)	Energy at which the fast and thermal particle populations were separated [eV]. Vector ( <code>nrho</code> ). Time-dependent.

Type of: `corefast_values:filter` (2102) I `distri_vec:fast_filter` (2161)

### 9.6.1.3.199 `filter`

Laplace proper filter

member	type	description
<code>num</code>	<code>matflt_type</code> (9.6.1.2.10)	Coefficients of the numerator, in increasing order : $a_0 + a_1*s + \dots + a_n*s^n$ ; Matrix ( <code>nsupplies,n</code> )
<code>den</code>	<code>matflt_type</code> (9.6.1.2.10)	Coefficients of the denominator, in increasing order : $b_0 + b_1*s + \dots + b_m*s^m$ ; Matrix ( <code>nsupplies,m</code> )

Type of: `desc_supply:filter` (2135)

### 9.6.1.3.200 `flat_polygon`

Polygon lying on a flat surface on a 3D cartesian space ( $x,y,z$ ). The coordinate system on the surface is defined by the origin, "origin", and two basis vectors in ( $x,y,z$ ) space, "basis1" and "basis2". The polyon is then represented as the origin, plus a linear combination of the two basis vectors using `coord1` and `coord2`, i.e. the  $j$ :th point is described by "origin+basis1\*coord1(j)+basis2\*coord2(j)". As an example, a rectangle centered at the origin, with two of the corners given by "origin+basis1" and "origin+basis2" can be described using `coord1`=[1,0,-1,0] and `coord2`=[0,1,0,-1]. The normal vector of the surface is defined to be in the direction "basis1 x basis2".

member	type	description
<code>origin</code>	<code>xyz0D</code> (9.6.1.3.506)	Origin of the surface coordinate system.
<code>basis1</code>	<code>xyz0D</code> (9.6.1.3.506)	First basis vector on the surface.
<code>basis2</code>	<code>xyz0D</code> (9.6.1.3.506)	First basis vector on the surface.
<code>coord1</code>	<code>vecflt_type</code> (9.6.1.2.13)	First coordinate of the polygon points, conjugate to basis1.
<code>coord2</code>	<code>vecflt_type</code> (9.6.1.2.13)	Second coordinate of the polygon points, conjugate to basis2.

Type of: `nbi_nbi_unit_wall:collimator` (2279)

### 9.6.1.3.201 flush

FLUSH package coefficients for the mapping of the equilibrium. The time grid of this structure is the same as the equilibrium structure above.

member	type	description
datainfo	datainfo (9.6.1.3.133)	Generic information on a data item
position	rz1D (9.6.1.3.356)	Major radius and altitude of the FLUSH grid [m]; Time-dependent; Vectors resp. (nR) and (nZ)
coef	matflt.type (9.6.1.2.10)	Coefficients of the fit; Time-dependent; Matrix 2D (nR,nZ)
codeparam	codeparam (9.6.1.3.77)	Code parameters

Type of: equilibrium:flush (2017)

### 9.6.1.3.202 flux\_loops

Poloidal flux loops RZ coordinates have 1 component for the full loop and two if there is a negative reference loop

member	type	description
setup_floops	setup_floops (9.6.1.3.392)	diagnostic setup information
measure	exp1D (9.6.1.3.195)	Measured flux [Wb]; Time-dependent; Vector (nloops)

Type of: magdiag:flux\_loops (2026)

### 9.6.1.3.203 fluxel

Structure for the fluxes of a field of the core transport equations (electrons); Time-dependent;

member	type	description
flux_dv	vecflt.type (9.6.1.2.13)	Flux of the field calculated from the transport coefficients. Time-dependent; Vector (nrho)
flux_interp	vecflt.type (9.6.1.2.13)	Interpretative flux deduced from measured data, the integral of the source term, and the time derivative of the field. Time-dependent; Vector (nrho)

Type of: corefield:flux (2103)

### 9.6.1.3.204 fluximp

Structure for the fluxes of a field of the core transport equations (impurities); Time-dependent;

member	type	description
flux_dv	matflt.type (9.6.1.2.10)	Flux of the field calculated from the transport coefficients. Time-dependent; Array2D (nrho,nzimp)
flux_interp	matflt.type (9.6.1.2.10)	Interpretative flux deduced from measured data, the integral of the source term, and the time derivative of the field. Time-dependent; Array2D (nrho,nzimp)

Type of: impurity\_type:flux (2233)

### 9.6.1.3.205 fluxion

Structure for the fluxes of a field of the core transport equations (ions); Time-dependent;

member	type	description
flux_dv	matflt.type (9.6.1.2.10)	Flux of the field calculated from the transport coefficients. Time-dependent; Matrix (nrho,nion)
flux_interp	matflt.type (9.6.1.2.10)	Interpretative flux deduced from measured data, the integral of the source term, and the time derivative of the field. Time-dependent; Matrix (nrho,nion)

Type of: corefieldion:flux (2104)

### 9.6.1.3.206 focussing

Describes how the beam is focussed.

member	type	description
focal_len_hz	float (9.6.1.1.1)	Horizontal focal length along the beam line, i.e. the point along the centre of the beamlet-group where the beamlet-group has its minimum horizontal width [m]. Scalar
focal_len_vc	float (9.6.1.1.1)	Vertical focal length along the beam line, i.e. the point along the centre of the beamlet-group where the beamlet-group has its minimum vertical width [m]. Scalar
width_min_hz	float (9.6.1.1.1)	The horizontal width of the beamlet-group at the at the horizontal focal point [m]. Scalar
width_min_vc	float (9.6.1.1.1)	The vertical width of the beamlet-group at the at the vertical focal point [m]. Scalar

Type of: beamletgroup:focussing (2061)

### 9.6.1.3.207 fullwave

Solution by full wave code

member	type	description
grid	complexgrid (9.6.1.3.82)	Grid for storing the components of the wave field; Time-dependent
e.components	e.components (9.6.1.3.171)	E-field representation in terms of the parallel and circularly polarised components
pol.decomp	pol.decomp (9.6.1.3.330)	TO BE REMOVED, being replaced by e.components and grid. Kept only to make smooth transition between data-type versions. [Poloidal decomposition of the wave fields. Uses the flux surface grid in grid_1d.]
local	local (9.6.1.3.255)	TO BE REMOVED, being replaced by e.components and grid. Kept only to make smooth transition between data-type versions. [Local description of the wave fields. Uses the grid in grid_2d].

Type of: coherentwave:fullwave (2076)

### 9.6.1.3.208 fusiondiag\_colli\_3d

Geometry of each channel of detector for arbitrary cross section. Replicate this structure for each channel.

member	type	description
name	string (9.6.1.1.3)	Name tag for the chord. String.
voxels(:)	fusiondiag_voxels (9.6.1.3.223)	Array of voxel structures defining the plasma region viewed from each collimator and scaling factor for effective solid angle for sources.

Type of: fusiondiag\_collimator:colli\_3d (2208)

### 9.6.1.3.209 fusiondiag\_colli\_circ

Geometry of each channel of detector for circular cross section. Replicate this structure for each channel.

member	type	description
name	string (9.6.1.1.3)	Name tag for the chord.
setup_line	setup_line (9.6.1.3.393)	Geometric description of the line of sight. First pivot close to detector position and second pivot at first wall hit.
colliunit(:)	fusiondiag_colliunit_circ (9.6.1.3.212)	Detail of each collimator unit of each chord. Replicate this structure for each collimator.

Type of: fusiondiag\_collimator:colli\_circ (2208)

### 9.6.1.3.210 fusiondiag\_colli\_poly

Geometry of each channel of detector for polygon cross section. Replicate this structure for each channel.

member	type	description
name	string (9.6.1.1.3)	Name tag for the chord.
setup_line	setup_line (9.6.1.3.393)	Geometric description of the line of sight. First pivot close to detector position and second pivot at first wall hit.
colliunit(:)	fusiondiag_colliunit_poly (9.6.1.3.213)	Detail of each collimator unit of each chord. Replicate this structure for each collimator.

Type of: fusiondiag\_collimator:colli\_poly (2208)

### 9.6.1.3.211 fusiondiag\_collimator

Collimator array.

member	type	description
colli_circ(:)	fusiondiag_colli_circ (9.6.1.3.209)	Geometry of each channel of detector for circular cross section. Replicate this structure for each channel.
colli_poly(:)	fusiondiag_colli_poly (9.6.1.3.210)	Geometry of each channel of detector for polygon cross section. Replicate this structure for each channel.
colli_3d(:)	fusiondiag_colli_3d (9.6.1.3.208)	Geometry of each channel of detector for arbitrary cross section. Replicate this structure for each channel.

Type of: fusiondiag\_fus\_product:collimator (2217)

### 9.6.1.3.212 fusiondiag\_colliunit\_circ

Detail of each collimator unit of each chord. Replicate this structure for each collimator.

member	type	description
radius	vecflt_type (9.6.1.2.13)	Radius of cross section; Typically dim=2 for just entry and exit of collimator; Vector (dim)
centre	rzphi1D (9.6.1.3.362)	Position of cross section centre; Typically dim=2 for just entry and exit of collimator; Vector (dim)

Type of: fusiondiag\_colli\_circ:colliunit (2206)

### 9.6.1.3.213 fusiondiag\_colliunit\_poly

Detail of each collimator unit of each chord. Replicate this structure for each collimator.

member	type	description
dimension	float (9.6.1.1.1)	Number of edges of cross section.
nodes	rzphi2D (9.6.1.3.365)	Coordinates of nodes defining each cross section; Typically dim=2 for just entry and exit of collimator; Vector (dim,nnodes)

Type of: fusiondiag\_colli\_poly:colliunit (2207)

### 9.6.1.3.214 fusiondiag\_counts

Integrated emissivity [ $s^{-1}$ ].

member	type	description
units	string (9.6.1.1.3)	Energy units (ev, tof - time of flight)
ct_chords(:)	fusiondiag_ct_chords (9.6.1.3.215)	Integrated emissivity for all spatial chords. Replicate the structure for each energy bin [ $s^{-1}$ ]. Time-dependent
ct_energy(:)	fusiondiag_ct_energy (9.6.1.3.216)	Integrated emissivity for each chord as function of energy like variable. Replicate this structure for each chord [ $s^{-1}$ ]. Time-dependent
detect_ct(:)	fusiondiag_detect_ct_energy (9.6.1.3.217)	Detected integrated emissivity for each chord as function of energy like variable. Replicate this structure for each chord. This structure contains the actual experimental data as obtained from the detector. To get from species emissivity to the detector counts a detector transfer matrix is used (should be shot independent) since a monoenergetic beam will ultimately show up with a given spread in the detector channels. Each detector type or l.o.s. might have a dedicated detector transfer matrix since the energy discrimination can vary. [ $s^{-1}$ ]. Time-dependent

Type of: fusiondiag\_fus\_product:counts (2217)

### 9.6.1.3.215 fusiondiag\_ct\_chords

Integrated emissivity for all spatial chords. Replicate the structure for each energy bin [ $s^{-1}$ ].

member	type	description
name	vecstring_type (9.6.1.2.15)	Name tag for each chord. Vector (nchords)
energy	exp0D (9.6.1.3.194)	Energy like variable span. Use minimum energy when no energy spectra is resolved.
measure	exp1D (9.6.1.3.195)	Measured counts. Vector (nchords)



Type of: fusiondiag\_counts:ct\_chords (2211)

### 9.6.1.3.216 fusiondiag\_ct\_energy

Integrated emissivity for each chord as function of energy like variable. Replicate this structure for each chord [s<sup>-1</sup>].

member	type	description
energy	exp1D (9.6.1.3.195)	Energy array of detected counts spectra. Vector (nenergy)
measure	exp1D (9.6.1.3.195)	Measured counts spectra. Vector (nenergy)

Type of: fusiondiag\_counts:ct\_energy (2211)

### 9.6.1.3.217 fusiondiag\_detect\_ct\_energy

Detected integrated emissivity for each chord as function of energy like variable. Replicate this structure for each chord. This structure contains the actual experimental data as obtained from the detector. To get from species emissivity to the detector counts a detector transfer matrix is used (should be shot independent) since a monoenergetic beam will ultimately show up with a given spread in the detector channels. Each detector type or l.o.s. might have a dedicated detector transfer matrix since the energy discrimination can vary. [s<sup>-1</sup>].

member	type	description
energy	exp1D (9.6.1.3.195)	Energy array of detected counts spectra. Vector (nenergy)
measure	exp1D (9.6.1.3.195)	Measured counts spectra. Vector (nenergy)
diag_func	diag_func (9.6.1.3.139)	Structure to provide the description on the detector used and store the transfer matrix of the detector for that l.o.s.

Type of: fusiondiag\_counts:detect\_ct (2211)

### 9.6.1.3.218 fusiondiag\_emissivity1d

Reconstructed 1D emissivity [counts.m<sup>-3</sup>.s<sup>-1</sup>].

member	type	description
units	string (9.6.1.1.3)	Energy units (ev, tof - time of flight)
r	exp1D (9.6.1.3.195)	horizontal grid. Vector (dim)
z	exp1D (9.6.1.3.195)	vertical grid. Vector (dim)
spec1d(:)	fusiondiag_spec1d (9.6.1.3.221)	Emissivity in given energy like variable range [counts.m <sup>-3</sup> .s <sup>-1</sup> ]; Time-dependent

Type of: fusiondiag\_fus\_product:emissivity1d (2217)

### 9.6.1.3.219 fusiondiag\_emissivity2d

Reconstructed 2D emissivity [counts.m<sup>-3</sup>.s<sup>-1</sup>].

member	type	description
units	string (9.6.1.1.3)	Energy units (ev, tof - time of flight)
r	exp2D (9.6.1.3.196)	radial grid. Vector (dim1,dim2)
z	exp2D (9.6.1.3.196)	vertical grid. Vector (dim1,dim2)
spec2d(:)	fusiondiag_spec2d (9.6.1.3.222)	Emissivity in given energy like variable range [counts.m <sup>-3</sup> .s <sup>-1</sup> ]; Time-dependent

Type of: fusiondiag\_fus\_product:emissivity2d (2217)

### 9.6.1.3.220 fusiondiag\_fus\_product

Source. Time-dependent. Structure array. Replicate this source structure to accommodate neutron and gammas.

member	type	description
product	string (9.6.1.1.3)	Type of fusion product (neutron,gamma)

member	type	description
reaction	string (9.6.1.1.3)	Type of reaction involved (e.g. DD neutron, Be-alpha,n,gamma-C)
collimator	fusiondiag_collimator (9.6.1.3.211)	Collimator array.
counts	fusiondiag_counts (9.6.1.3.214)	Integrated emissivity [ $s^{-1}$ ].
emissivity1d	fusiondiag_emissivity1d (9.6.1.3.218)	Reconstructed 1D emissivity [ $counts.m^{-3}.s^{-1}$ ].
emissivity2d	fusiondiag_emissivity2d (9.6.1.3.219)	Reconstructed 2D emissivity [ $counts.m^{-3}.s^{-1}$ ].
codeparam	codeparam (9.6.1.3.77)	Code parameters

Type of: fusiondiag:fus\_product (2018)

### 9.6.1.3.221 fusiondiag\_spec1d

Emissivity in given energy like variable range [ $counts.m^{-3}.s^{-1}$ ].

member	type	description
energy	exp0D (9.6.1.3.194)	Energy like variable span. Use minimum energy when no energy spectra is resolved. Scalar
measure	exp1D (9.6.1.3.195)	reconstruction. Vector (dim)

Type of: fusiondiag\_emissivity1d:spec1d (2215)

### 9.6.1.3.222 fusiondiag\_spec2d

Emissivity in given energy like variable range [ $counts.m^{-3}.s^{-1}$ ].

member	type	description
energy	exp0D (9.6.1.3.194)	Energy like variable span. Use minimum energy when no energy spectra is resolved. Scalar
measure	exp2D (9.6.1.3.196)	reconstruction. Vector (dim1,dim2)

Type of: fusiondiag\_emissivity2d:spec2d (2216)

### 9.6.1.3.223 fusiondiag\_voxels

Array of voxel structures defining the plasma region viewed from each collimator and scaling factor for effective solid angle for sources.

member	type	description
centre	rzphi0D (9.6.1.3.361)	Centre of voxel; used also as origin of direction to detector
direction	rzphi0D (9.6.1.3.361)	Second point defining the direction to detector.
volume	float (9.6.1.1.1)	Voxel Volume
solid_angle	float (9.6.1.1.1)	effective solid angle (divided by $4\pi$ ) of the voxel towards detector.

Type of: fusiondiag\_colli\_3d:voxels (2205)

### 9.6.1.3.224 geom

Geometry between components

member	type	description
dr_bb_sh_ib	float (9.6.1.1.1)	Gap between the breeding blanket module and the shield (inboard) in the equatorial section [m]; Scalar
dr_sh_vv_ib	float (9.6.1.1.1)	Gap between the shield and the vacuum vessel (inboard) in the equatorial section [m]; Scalar
dr_bb_sh_ob	float (9.6.1.1.1)	Gap between the breeding blanket module and the shield (outboard) in the equatorial section [m]; Scalar
dr_sh_vv_ob	float (9.6.1.1.1)	Gap between the shield and the vacuum vessel (outboard) in the equatorial section [m]; Scalar
dr_bb_sh_ib	float (9.6.1.1.1)	Overall radial dimension of the ensemble BB plus shield (inboard) [m]; Scalar
dr_bb_sh_ob	float (9.6.1.1.1)	Overall radial dimension of the ensemble BB plus shield (outboard) [m]; Scalar
delta_int	float (9.6.1.1.1)	Distance between the inner plasma surface and the plasma facing side of the superconducting winding of the toroidal field coil [m]; Scalar

Type of: bb\_shield:geom (2002)

### 9.6.1.3.225 geom\_iron

Geometry of the iron segments

member	type	description
npoints	vecint.type (9.6.1.2.14)	Number of points describing an element (irregular outline rzcoordinate); Vector (nsegment)
rzcoordinate	rz2D (9.6.1.3.359)	Irregular outline [m]; 2D arrays (nsegment,max.npoints)

Type of: desc\_iron:geom\_iron (2133)

### 9.6.1.3.226 global\_param

0d output parameters

member	type	description
beta_pol	float (9.6.1.1.1)	poloidal beta; Time-dependent; Scalar
beta_tor	float (9.6.1.1.1)	toroidal beta; Time-dependent; Scalar
beta_normal	float (9.6.1.1.1)	normalised beta; Time-dependent; Scalar
i_plasma	float (9.6.1.1.1)	total toroidal plasma current [A]; Positive sign means anti-clockwise when viewed from above. Time-dependent; Scalar
li	float (9.6.1.1.1)	internal inductance; Time-dependent; Scalar
volume	float (9.6.1.1.1)	total plasma volume [m <sup>3</sup> ]; Time-dependent; Scalar
area	float (9.6.1.1.1)	area poloidal cross section [m <sup>2</sup> ]; Time-dependent; Scalar
psi_ax	float (9.6.1.1.1)	poloidal flux at the magnetic axis [Wb]; Time-dependent; Scalar
psi_bound	float (9.6.1.1.1)	poloidal flux at the selected plasma boundary (separatrix for a free boundary code; fixed boundary for fixed boundary code) [Wb]; Time-dependent; Scalar
mag_axis	mag_axis (9.6.1.3.256)	Magnetic axis values
q_95	float (9.6.1.1.1)	q at the 95% poloidal flux surface; Time-dependent; Scalar
q_min	float (9.6.1.1.1)	minimum q value in the plasma; Time-dependent; Scalar
toroid_field	b0r0 (9.6.1.3.59)	Characteristics of the vacuum toroidal field, redundant with the toroidfield CPO, to be used by the ETS
w_mhd	float (9.6.1.1.1)	Plasma energy content = 3/2 * int(p,dV) with p being the total pressure (thermal + fast particles) [J]. Time-dependent; Scalar
gamma	float (9.6.1.1.1)	Adiabatic index. Time-dependent; Scalar

Type of: equilibrium:global\_param (2017)

### 9.6.1.3.227 globalparam

Various global quantities calculated from the 1D profiles. Time-dependent

member	type	description
current_tot	float (9.6.1.1.1)	Total plasma current [A]; Time-dependent; Scalar
current_bnd	float (9.6.1.1.1)	Plasma current inside transport solver boundary rho_tor_bnd [A]; Time-dependent; Scalar
current_ni	float (9.6.1.1.1)	Total non-inductive parallel current [A]; Time-dependent; Scalar
vloop	float (9.6.1.1.1)	Toroidal loop voltage [V]; Time-dependent; Scalar
li	float (9.6.1.1.1)	Internal inductance; Time-dependent; Scalar
beta_tor	float (9.6.1.1.1)	toroidal beta; Time-dependent; Scalar
beta_normal	float (9.6.1.1.1)	normalised beta; Time-dependent; Scalar
beta_pol	float (9.6.1.1.1)	poloidal beta; Time-dependent; Scalar
w_dia	float (9.6.1.1.1)	Plasma energy content = 3/2 * int(p,dV) with p being the total pressure (pr_th + pr_perp). Time-dependent; Scalar

Type of: coreprof:globalparam (2008)

### 9.6.1.3.228 halpha\_setup

setup for the lines of sight of the line integrated measurement

member	type	description
name	vecstring_type (9.6.1.2.15)	Name of the channel. Array of strings (nlos).
pivot_point	rzphiID (9.6.1.3.362)	Pivot point of I.o.s. it can be either the collimator position or entry point on the vessel. Vector (nlos)
horchordang	vecflt_type (9.6.1.2.13)	Angle [rad] of horizontal projection of I.o.s. with poloidal cross section (0 for HFS to LFS trajectory - see Convention_angles_interfdiag.pdf) [rad]. Vector (nlos)
verchordang	vecflt_type (9.6.1.2.13)	Angle of I.o.s. with vertical axis (0 for bottom-top trajectory, Pi for top-bottom trajectory - see Convention_angles_interfdiag.pdf) [rad]; Vector (npos)
second_point	rzphiID (9.6.1.3.362)	Second point defining the I.o.s. together with the pivot_point. Vector (nlos)
solidangle	expID (9.6.1.3.195)	Solid angle of the detector; [sr] Vector (nlos)

Type of: halphadiag:setup (2019)

### 9.6.1.3.229 hcll

Data specific to HCLL blanket concept

member	type	description
mat_lim	mat_lim (9.6.1.3.259)	Material limits specific to HCLL breeding blanket
hcll.bb	hcll.bb (9.6.1.3.230)	HCLL breeding blanket. Radially, the blanket is divided in 4 layers: 1: First Wall, 2 : breeder zone, 3 : back plates, 4 : manifolds

Type of: bb\_shield:hcll (2002)

### 9.6.1.3.230 hcll.bb

HCLL breeding blanket. Radially, the blanket is divided in 4 layers: 1: First Wall, 2 : breeder zone, 3 : back plates, 4 : manifolds

member	type	description
bb_lifetime	float (9.6.1.1.1)	Breeding blanket lifetime [years]; Scalar
he_inl_t	float (9.6.1.1.1)	Inlet temperature (to the bb module) [K]; Scalar
he_fr	float (9.6.1.1.1)	Coolant mass flow rate in "the" reference bb module (or in each module) [Kg/s];
he_inl_p	float (9.6.1.1.1)	Helium inlet pressure [Pa]; Scalar
loca_des_p	float (9.6.1.1.1)	Box design pressure (coincident He circuit design pressure) [Pa]; Scalar
he_dp	float (9.6.1.1.1)	Coolant pressure drops in the breeding blankets [Pa]; Scalar
lipb_dp	float (9.6.1.1.1)	Pb-15.7Li pressure drops in the bb [Pa]; Scalar
react	react (9.6.1.3.342)	In the reactor region
inboard	hcllbb_specs (9.6.1.3.231)	Inboard
outboard	hcllbb_specs (9.6.1.3.231)	Outboard

Type of: hcll:hcll.bb (2226)

### 9.6.1.3.231 hcllbb\_specs

Inboard

member	type	description
mass	vecflt_type (9.6.1.2.13)	Mass of inboard or outboard breeding blanket modules (located at equatorial midplane if only one considered) [Kg]; Vector(nmodules)
dr	vecflt_type (9.6.1.2.13)	Inboard or outboard breeding blanket radial build giving the thickness of each layer [m]; Vector(nlayers)
mat	vecflt_type (9.6.1.2.13)	Inboard or outboard breeding blanket materials; Vector(nlayers)
composition	matflt_type (9.6.1.2.10)	Inboard or outboard breeding blanket radial build giving for each layer (1: First Wall protective layer, 2: First Wall, 3 : breeder zone, 4 : back plates, 5 : manifolds), the percentage of each material respectively (Meaning of the material index 1: Eurofer, 2: Pb-15.7Li, 3: He, 4: Water, 5: Tungsten Carbide, 6: Boron, 7: Tungsten, 8: Stainless Steel 316) in %vol; Matrix(nlayers(=5), max_nmaterials)
mod_geom	bb_geometry (9.6.1.3.62)	Geometrical parameters of "the" reference region blanket module
mod_neutr	mode_neutr (9.6.1.3.269)	Neutrons "effects"
mod_therm	mode_therm (9.6.1.3.271)	Thermal parameters
mod_th_hyd	mode_th_hyd (9.6.1.3.270)	hydrodynamics parameters

member	type	description
mod_mech	mode_mech (9.6.1.3.268)	Mechanical parameters
mod_lipb	mode_lipb (9.6.1.3.267)	Pb-15.7Li "effects"
mod_tritium	mode_tritium (9.6.1.3.272)	Tritium parameters

Type of: hcll\_bb:inboard (2227) | hcll\_bb:outboard (2227)

### 9.6.1.3.232 holes

Structure to describe the placing and properties of the holes

member	type	description
n_holes	integer (9.6.1.1.2)	Number of holes on each wall;
coordinates	coordinates (9.6.1.3.102)	Poloidal and Toroidal coordinates of the center of each hole;
width	width (9.6.1.3.504)	Angular width of each in the poloidal and toroidal direction;
eta	vecflt_type (9.6.1.2.13)	Resistivity of each hole [ohm.m]; Vector (n_holes)

Type of: mhd\_res\_wall2d:holes (2261)

### 9.6.1.3.233 identifier

Standard type for identifiers. The three fields: id, flag and description are all representations of the same information. Associated with each application of this identifier-type, there should be a translation table defining the three fields for all objects to be identified.

member	type	description
id	string (9.6.1.1.3)	Short string identifier
flag	integer (9.6.1.1.2)	Integer identifier
description	string (9.6.1.1.3)	Verbose description of identifier

Type of: amns\_processType:quality (2050) | composition\_neutralscomp:type (2095) | compositions\_type:signature (2096) | coredelta\_values:deltaid (2101) | corefast\_values:fastid (2102) | coreneutrals\_atomlist:ionimptype (2117) | coresource\_values:sourceid (2121) | coretransp\_values:transportid (2125) | dist\_sources\_reference:type (2157) | enum\_instance:type (2183) | fast\_thermal\_separation\_filter:method (2195) | mhd\_ideal\_wall2d:walltype (2258) | mhd\_res\_wall2d:walltype (2261) | msediag\_polarization:type (2273) | msediag\_stokes:type (2278) | pellet\_shape:type (2313) | reacprodType:role (2338) | reflectometry\_antennas:type (2344) | reflectometry\_radfield:type (2345) | simp\_apert:type (2394) | species\_reference:type (2405) | table:quality (2414) | temporary\_nt\_0dc:identifier (2418) | temporary\_nt\_0di:identifier (2419) | temporary\_nt\_0dr:identifier (2420) | temporary\_nt\_0ds:identifier (2421) | temporary\_nt\_1dc:identifier (2422) | temporary\_nt\_1di:identifier (2423) | temporary\_nt\_1dr:identifier (2424) | temporary\_nt\_1ds:identifier (2425) | temporary\_nt\_2dc:identifier (2426) | temporary\_nt\_2di:identifier (2427) | temporary\_nt\_2dr:identifier (2428) | temporary\_nt\_3dc:identifier (2429) | temporary\_nt\_3di:identifier (2430) | temporary\_nt\_3dr:identifier (2431) | temporary\_nt\_4dr:identifier (2432) | temporary\_t\_0dc:identifier (2434) | temporary\_t\_0di:identifier (2435) | temporary\_t\_0dr:identifier (2436) | temporary\_t\_0ds:identifier (2437) | temporary\_t\_1dc:identifier (2438) | temporary\_t\_1di:identifier (2439) | temporary\_t\_1dr:identifier (2440) | temporary\_t\_2dc:identifier (2441) | temporary\_t\_2di:identifier (2442) | temporary\_t\_2dr:identifier (2443) | temporary\_t\_3dc:identifier (2444) | temporary\_t\_3di:identifier (2445) | temporary\_t\_3dr:identifier (2446) | temporary\_t\_4dr:identifier (2447) | trap\_type:trap\_id (2459) | wall2d:wall\_id (2475) | wall3d:wall\_id (2477) | wall\_limiter:limiter\_id (2480) | wall\_vessel:vessel\_id (2485) | weighted\_markers:variable\_ids (2499)

### 9.6.1.3.234 impcoeff

Array over charge states for this particular impurity.

member	type	description
chargestate(·)	coefficients_neutrals (9.6.1.3.78)	Time-dependent

Type of: coreneutrals:impcoeff (2007)

### 9.6.1.3.235 impurities

Array of impurities.

member	type	description
nucindex	integer (9.6.1.1.2)	Index into list of nuclei; int
i_ion	integer (9.6.1.1.2)	Index of the impurity species in the ions array of structures. Vector (nimp)
nzimp	integer (9.6.1.1.2)	Number of charge states (or bundles) considered for this impurity species.
zmin	vecflt.type (9.6.1.2.13)	Minimum Z of impurity ionisation state bundle. Vector (nzimp)
zmax	vecflt.type (9.6.1.2.13)	Maximum Z of impurity ionisation state bundle. If no bundle, zmax=zmin. Vector (nzimp)
label	vecstring.type (9.6.1.2.15)	String array (nzimp) identifying impurities (e.g. C+, C+2, C+3, C+4, C+5, C+6, ...)

Type of: compositions.type:impurities (2096)

### 9.6.1.3.236 impurity\_type

Array(nimp). Time-dependent

member	type	description
z	matflt.type (9.6.1.2.10)	Impurity ionisation state (averaged for bundle); Time-dependent; Array2D (nrho,nzimp)
zsqr	matflt.type (9.6.1.2.10)	Z <sup>2</sup> , Square of impurity ionisation state (averaged for bundle); Time-dependent; Array2D (nrho,nzimp)
nz	matflt.type (9.6.1.2.10)	Density of impurity in a given charge state [m <sup>-3</sup> ]. Time-dependent; Array2D (nrho,nzimp)
tz	matflt.type (9.6.1.2.10)	Temperature of impurity in a given charge state [m <sup>-3</sup> ]. Time-dependent; Array2D (nrho,nzimp)
source_term	sourceimp (9.6.1.3.405)	Source term for each charge state. Time-dependent.
boundary	boundaryimp (9.6.1.3.70)	Boundary condition for each charge state. Time-dependent
transp_coef	coretransimp (9.6.1.3.126)	Transport coefficients for each charge state
flux	fluximp (9.6.1.3.204)	Fluxes of impurity particles, two definitions [m <sup>-2</sup> .s <sup>-1</sup> ]. Time-dependent.
time_deriv	matflt.type (9.6.1.2.10)	Integral of the time derivative term of the transport equation. Time-dependent. Array2D (nrho,nzimp)
diagnostic	coreimpurediag.type (9.6.1.3.117)	NO DOCS

Type of: coreimpur:impurity (2006)

### 9.6.1.3.237 inj\_spec

Injected species

member	type	description
amn	float (9.6.1.1.1)	Atomic mass number
zn	float (9.6.1.1.1)	Nuclear charge

Type of: nbi\_unit:inj\_spec (2281)

### 9.6.1.3.238 ions

Array of main plasma ions.

member	type	description
nucindex	integer (9.6.1.1.2)	Index into list of nuclei; int
z_ion	float (9.6.1.1.1)	Ion charge (of the dominant ionisation state; lumped ions are allowed); Vector (nion)
imp_flag	integer (9.6.1.1.2)	Multiple charge state calculation flag : 0-Only one charge state is considered; 1-Multiple charge state are considered and are described in impurity CPO; Vector (nion)
label	string (9.6.1.1.3)	String identifying ion (e.g. H+, D+, T+, He+2, C+, ...)

Type of: compositions.type:ions (2096)

### 9.6.1.3.239 isoflux

Point series at which the flux is considered the same

member	type	description
position	rz1D (9.6.1.3.356)	Position of the points at which the flux is considered the same; Time-dependent; Vector (nmeas)
source	string (9.6.1.1.3)	Description or path to the source signal (diagnostic or genprof, from which to read all info on the signal), e.g. 'magdiag/bpol_probes/measure/value'. String
weight	vecflt.type (9.6.1.2.13)	weight given to the measurement ( $\zeta=0$ ); -1 if exact data; Time-dependent; Vector (nmeas)
sigma	vecflt.type (9.6.1.2.13)	standard deviation of the measurement; Time-dependent; Vector (nmeas)
calculated	vecflt.type (9.6.1.2.13)	Signal as recalculated by the equilibrium code; Time-dependent; Vector (nmeas)
chi2	vecflt.type (9.6.1.2.13)	chi <sup>2</sup> of (calculated-measured); Time-dependent; Vector (nmeas)

Type of: eqconstraint:isoflux (2184)

#### 9.6.1.3.240 jni

Non-inductive parallel current density [A/m<sup>2</sup>]; Time-dependent;

member	type	description
value	vecflt.type (9.6.1.2.13)	Value of jni; Time-dependent; Vector (nrho)
integral	vecflt.type (9.6.1.2.13)	Integral from 0 to rho of jni. Time-dependent; Vector (nrho)
source	string (9.6.1.1.3)	Source of the profile (any comment describing the origin of the profile : code, path to diagnostic signals, massaging, ...); String

Type of: psi:jni (2335)

#### 9.6.1.3.241 lang\_derived

Structure for physics quantities derived from Langmuir probe measurements

member	type	description
source	vecstring.type (9.6.1.2.15)	Probes in probe holder used to derive measure. String vector
position	rzphi1Dexp (9.6.1.3.363)	Position of the measurement. Time-dependent.
measure	exp1D (9.6.1.3.195)	Measured quantity. Time-dependent.

Type of: langmuirdiag:machpar (2023) I langmuirdiag:ne (2023) I langmuirdiag:te (2023)

#### 9.6.1.3.242 lang\_measure

Structure for elementary Langmuir probe measurement

member	type	description
name	vecstring.type (9.6.1.2.15)	Name of the probe e.g. Jsatur1,Vfloat1). String vector
direction	vecstring.type (9.6.1.2.15)	Direction of the probe w.r.t. magnetic field. For Mach arrangement use 'co' (co-field) and 'ct' (counter field) for the pair, otherwise use 'both'. String vector
area	exp1D (9.6.1.3.195)	Effective area of probe [m <sup>2</sup> ]. Time-dependent.
position	rzphi1Dexp (9.6.1.3.363)	Position of the measurement. Time-dependent.
measure	exp1D (9.6.1.3.195)	Measured quantity. Time-dependent.

Type of: langmuirdiag:bias (2023) I langmuirdiag:jsat (2023) I langmuirdiag:potential (2023)

#### 9.6.1.3.243 launchangles

Launching angles of the beam

member	type	description
alpha	float (9.6.1.1.1)	Poloidal launching angle between the horizontal plane and the poloidal component of the nominal beam centerline [rad], Tan(alpha)=k <sub>z</sub> /k <sub>R</sub> ; Time-dependent
beta	float (9.6.1.1.1)	Toroidal launching angle between the poloidal plane and the nominal beam centerline [rad], Sin(beta)=k <sub>phi</sub> ; Time-dependent

Type of: antenna.ec:launchangles (2051)



### 9.6.1.3.244 launches\_parallel

Power spectrum as a function of the parallel refractive index.

member	type	description
nn_par	vecint_type (9.6.1.2.14)	Number of points for the discretization of the spectrum in the poloidal direction, Vector of integers (nantenna).
n_par	matflt_type (9.6.1.2.10)	Refraction index in the parallel direction, Matrix (nantenna,max_nn_par).
power	vecflt_type (9.6.1.2.13)	$W/dN_{par}$ [W], Matrix(nantenna, max_nn_par). Time-dependent

Type of: spectrum:parallel (2407)

### 9.6.1.3.245 launches\_phi\_theta

Power spectrum as a function of the refractive index in the toroidal and poloidal directions.

member	type	description
nn_phi	vecint_type (9.6.1.2.14)	Number of points for the discretization of the spectrum in the toroidal direction, Vector of integers (nantenna).
nn_theta	vecint_type (9.6.1.2.14)	Number of points for the discretization of the spectrum in the poloidal direction, Vector of integers (nantenna).
n_phi	matflt_type (9.6.1.2.10)	Refraction index in the toroidal direction, Matrix (nantenna,max_nn_phi).
n_theta	matflt_type (9.6.1.2.10)	Refraction index in poloidal direction, Matrix (nantenna,max_nn_theta).
power	array3dfilt_type (9.6.1.2.2)	$W/dN_{phi}/dN_{theta}$ [W], Array (nantenna, max_nn_phi, max_nn_theta). Time-dependent

Type of: spectrum:phi\_theta (2407)

### 9.6.1.3.246 launches\_rfbeam

Beam characteristics (RF wave description)

member	type	description
spot	launchs_rfbeam_spot (9.6.1.3.248)	Spot characteristics
phaseellipse	launchs_rfbeam_phaseellipse (9.6.1.3.247)	Phase ellipse characteristics of the spot

Type of: launchs:beam (2024)

### 9.6.1.3.247 launches\_rfbeam\_phaseellipse

Phase ellipse characteristics of the spot

member	type	description
invcurvad	matflt_type (9.6.1.2.10)	Inverse curvature radii for the phase ellipse [m-1], Matrix (nantenna,2). Time-dependent
angle	vecflt_type (9.6.1.2.13)	Rotation angle for the phase ellipse [rd], Vector(nantenna). Time-dependent

Type of: launchs\_rfbeam:phaseellipse (2243)

### 9.6.1.3.248 launches\_rfbeam\_spot

Spot characteristics

member	type	description
waist	matflt_type (9.6.1.2.10)	Waist for the spot ellipse [m], Matrix (nantenna,2). Time-dependent
angle	vecflt_type (9.6.1.2.13)	Rotation angle for the spot ellipse [rd], Vector(nantenna). Time-dependent

Type of: launchs\_rfbeam:spot (2243)

### 9.6.1.3.249 launchsignal

member	type	description
time_launch	vecflt.type (9.6.1.2.13)	Time stamp for particular event e.g. ramp of frequency sweep (but it should not be needed since it should be tied to the cpo time ! ); Time-dependent
freq	vecflt.type (9.6.1.2.13)	Frequency of the injected waves (should not be needed since it is already used in the injected signal !), typical data stored experimentally; Time-dependent
amplitude	vecflt.type (9.6.1.2.13)	Amplitude of the injected waves (essential if using gaussian, already encoded in the Electric field pattern), typical data stored experimentally; Time-dependent
phase	vecflt.type (9.6.1.2.13)	Phase of the sinusoidal (e.g. voltage) signal injected in the antenna, typical data stored experimentally; Time-dependent

Type of: reflectometry\_antennas:launchsignal (2344)

### 9.6.1.3.250 limiter\_unit

Vector of limiting surfaces. Replicate this limiter\_unit element ncomponents times. Each unit contains a plasma facing component that can have dedicated number of points. Array of structures (ncomponents)

member	type	description
name	string (9.6.1.1.3)	Name or description of the limiter_unit
closed	string (9.6.1.1.3)	Identify whether the contour is closed (y) or open (n)
position	rz1D (9.6.1.3.356)	Position (R,Z coordinates) of a limiting surface. No need to repeat first point for closed contours [m]; Vector(npoints)
eta	float (9.6.1.1.1)	Wall resistivity [ohm.m]; Scalar
delta	float (9.6.1.1.1)	Wall thickness [m] (Optional if a closed facing component is given but useful for simpler closed contour limiter); Time-dependent; Scalar
permeability	float (9.6.1.1.1)	Vessel relative permeability; Scalar

Type of: wall\_limiter:limiter\_unit (2480)

### 9.6.1.3.251 limits

Limits

member	type	description
fw_dpa	float (9.6.1.1.1)	max allowable displacement per atom on FW [dpa]; Scalar.
he_appm	float (9.6.1.1.1)	He concentration limit in re-welding areas [appm]; Scalar
ins_dose	float (9.6.1.1.1)	Integral radiation dose in insulator (Epoxy) [Gy] [J*Kg <sup>-1</sup> ]; Scalar
fn_flu	float (9.6.1.1.1)	Peak fast neutron fluence (E <sub>&gt;</sub> 0.1 MeV) to the Nb3Sn superconductor [m <sup>-2</sup> ]; Scalar
dpa_cu	float (9.6.1.1.1)	Peak displacement damage to copper stabilizer [dpa]; Scalar
wp_nh	float (9.6.1.1.1)	Peak nuclear eating in winding pack [W*m <sup>-3</sup> ]; Scalar

Type of: bb\_shield:limits (2002)

### 9.6.1.3.252 lineintegraldiag

General line integral diagnostic

member	type	description
datainfo	datainfo (9.6.1.3.133)	Generic information on a data item
expression	string (9.6.1.1.3)	Formal expression for the line integral to be evaluated as a function of ne, ni, Te, Ti, Zeff, Br, Bz
setup_line	setup_line (9.6.1.3.393)	Geometric description of the lines of sight
measure	exp1D (9.6.1.3.195)	Measured value. Time-dependent; Vector (nchords)
codeparam	codeparam (9.6.1.3.77)	Code parameters
time	float (9.6.1.1.1)	Time [s]; Time-dependent; Scalar

### 9.6.1.3.253 lithmeasure

Measured values

member	type	description
ne	exp1D (9.6.1.3.195)	Electron density [m <sup>-3</sup> ]. Vector (nchannels)

Type of: lithiumdiag:measure (2025)

### 9.6.1.3.254 lithsetup

diagnostic setup information

member	type	description
position	rzphi1D (9.6.1.3.362)	Position of the measurement. Vector (nchannels)

Type of: lithiumdiag:setup (2025)

### 9.6.1.3.255 local

TO BE REMOVED, being replaced by e\_components and grid. Kept only to make smooth transition between data-type versions. [Local description of the wave fields. Uses the grid in grid\_2d].

member	type	description
e.plus	array3dflt.type (9.6.1.2.2)	Magnitude of left hand polarised component of the wave electric field [V/m]; Time-dependent; Array 3D (ntor, ndim1, ndim2)
e.plus.ph	array3dflt.type (9.6.1.2.2)	Phase of left hand polarised component of the wave electric field [rad]; Time-dependent; Array 3D (ntor, ndim1, ndim2)
e.minus	array3dflt.type (9.6.1.2.2)	Magnitude of right hand polarised component of the wave electric field [v/m]; Time-dependent; Array 3D (ntor, ndim1, ndim2)
e.minus.ph	array3dflt.type (9.6.1.2.2)	Phase of right hand polarised component of the wave electric field [rad]; Time-dependent; Array 3D (ntor, ndim1, ndim2)
e.norm	array3dint.type (9.6.1.2.3)	Magnitude of wave electric field normal to a flux surface [V/m]; Time-dependent; 3D (ntor, ndim1, ndim2)
enorm.ph	array3dflt.type (9.6.1.2.2)	Phase of wave electric field normal to a flux surface [rad]; Time-dependent; 3D (ntor, ndim1, ndim2)
e.binorm	array3dflt.type (9.6.1.2.2)	Magnitude of wave electric field tangent to a flux surface [V/m]; Time-dependent; 3D (ntor, ndim1, ndim2)
e.binorm.ph	array3dflt.type (9.6.1.2.2)	Phase of wave electric field tangent to a flux surface [rad]; Time-dependent; 3D (ntor, ndim1, ndim2)
e.para	array3dflt.type (9.6.1.2.2)	Magnitude of parallel wave electric field [V/m]; Time-dependent; Array 3D (ntor, ndim1, ndim2)
e.para.ph	array3dflt.type (9.6.1.2.2)	Phase of parallel wave electric field [rad]; Time-dependent; Array 3D (ntor, ndim1, ndim2)
b.norm	array3dflt.type (9.6.1.2.2)	Magnitude of wave magnetic field normal to a flux surface [T]; Time-dependent; Array 3D (ntor, ndim1, ndim2)
b.norm.ph	array3dflt.type (9.6.1.2.2)	Phase of wave magnetic field normal to a flux surface [rad]; Time-dependent; Array 3D (ntor, ndim1, ndim2)
b.binorm	array3dflt.type (9.6.1.2.2)	Magnitude of wave magnetic field tangent to a flux surface [T]; Time-dependent; Array 3D (ntor, ndim1, ndim2)
b.binorm.ph	array3dflt.type (9.6.1.2.2)	Phase of wave magnetic field tangent to a flux surface [rad]; Time-dependent; Array 3D (ntor, ndim1, ndim2)
b.para	array3dflt.type (9.6.1.2.2)	Magnitude of wave magnetic field parallel to the equilibrium magnetic field [T]; Time-dependent; Array 3D (ntor, ndim1, ndim2)
b.para.ph	array3dflt.type (9.6.1.2.2)	Phase of wave magnetic field parallel to the equilibrium magnetic field [rad]; Time-dependent; Array 3D (ntor, ndim1, ndim2)
k.perp	array3dflt.type (9.6.1.2.2)	Perpendicular wave number [T]; Time-dependent; Array 3D (ntor, ndim1, ndim2)

Type of: fullwave:local (2204)

### 9.6.1.3.256 mag\_axis

Magnetic axis values

member	type	description
position	rz0D (9.6.1.3.355)	Position of the magnetic axis [m]; Time-dependent; Scalar;
bphi	float (9.6.1.1.1)	Total toroidal magnetic field at the magnetic axis [T]; Time-dependent; Scalar
q	float (9.6.1.1.1)	q at the magnetic axis; Time-dependent; Scalar

Type of: global\_param:mag\_axis (2223)

### 9.6.1.3.257 magnet\_iron

Magnetisation in iron segments [T]

member	type	description
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member	type	description
mr	eqmes1D (9.6.1.3.190)	Magnetisation along the R axis [T];
mz	eqmes1D (9.6.1.3.190)	Magnetisation along the Z axis [T];

Type of: eqconstraint:magnet\_iron (2184)

### 9.6.1.3.258 magnetise

Magnetisation M of the iron segment, assumed to be constant inside a given iron segment. Reminder :  $H = 1/\mu_0 * B - \mu_r * M$ ; [A/m].

member	type	description
mr	exp1D (9.6.1.3.195)	Magnetisation along the R axis [T]; Time-dependent; Vector (nsegment)
mz	exp1D (9.6.1.3.195)	Magnetisation along the Z axis [T]; Time-dependent; Vector (nsegment)

Type of: ironmodel:magnetise (2022)

### 9.6.1.3.259 mat\_lim

Material limits specific to HCLL breeding blanket

member	type	description
cool.t_lim	float (9.6.1.1.1)	Min, max allowable He temperature [K];
steel.t_lim	float (9.6.1.1.1)	Min, max allowable steel temperature [K];
lipb.t_lim	float (9.6.1.1.1)	Min, max allowable LiPb temperature [K];

Type of: hcll:mat\_lim (2226)

### 9.6.1.3.260 mdinfo

Information related to machine description for this entry

member	type	description
shot_min	integer (9.6.1.1.2)	Minimum shot number to which the machine description applies
shot_max	integer (9.6.1.1.2)	Maximum shot number to which the machine description applies
md_entry	entry_def (9.6.1.3.185)	Entry of the machine description used. NB : just for information : for the moment, no guarantee that machine description data have not been modified with respect to the data in md_entry. Machine description data are written explicitly in each CPO.

Type of

### 9.6.1.3.261 mhd\_ideal\_wall2d

Ideal wall

member	type	description
walltype	identifier (9.6.1.3.233)	Tag the type of wall to be used, 0 (conformal) or 1 (free)
position	rz1D (9.6.1.3.356)	RZ description of the wall;

Type of: wall2d\_mhd:ideal\_wall (2476)

### 9.6.1.3.262 mhd\_mode

MHD modes in the confined plasma

member	type	description
modenum	integer (9.6.1.1.2)	Toroidal mode number of the MHD mode; Scalar; Time-dependent.
growthrate	float (9.6.1.1.1)	Linear growthrate of the mode [Hz]; Scalar; Time-dependent.
frequency	float (9.6.1.1.1)	Frequency of the mode [Hz]; Scalar; Time-dependent.
plasma	mhd_plasma (9.6.1.3.263)	MHD modes in the confined plasma

member	type	description
vacuum	mhd_vacuum (9.6.1.3.265)	External modes

Type of: mhd:n (2027)

### 9.6.1.3.263 mhd\_plasma

MHD modes in the confined plasma

member	type	description
psi	vecflt_type (9.6.1.2.13)	Position in poloidal flux [Wb] (without $1/2\pi$ and such that $B_p =  \text{grad } \psi  / R/2/\pi$ ). Time-dependent; Vector (npsi)
rho_tor_norm	vecflt_type (9.6.1.2.13)	Normalised toroidal flux coordinate values (= rho_tor normalised to the value at the last grid point); Time-dependent; Vector (nrho)
rho_tor	vecflt_type (9.6.1.2.13)	Toroidal flux coordinate (not normalised, equivalent to rho_tor_norm) [m]; Vector (nrho). Time-dependent.
m	matflt_type (9.6.1.2.10)	Poloidal mode number; Time-dependent; Array2D (npsi,nm)
disp_perp	matcplx_type (9.6.1.2.9)	Perpendicular displacement of the mode (in Fourier space) [m]; Time-dependent; Array 2D (npsi,nm)
disp_par	matcplx_type (9.6.1.2.9)	Parallel displacement of the mode (in Fourier space) [m]; Time-dependent; Array 2D (npsi,nm)
tau_alfven	vecflt_type (9.6.1.2.13)	Alven time= $R/v_A=R0 \sqrt{\mu_0 \rho_0} / B_0$ [s]; Definitions of $R_0$ , $B_0$ , $\mu_0$ , $\rho_0$ to be clarified. rho grid should be included in the MHD CPO ? Time-dependent; Vector (npsi)
tau_res	vecflt_type (9.6.1.2.13)	Resistive time = $\mu_0 \rho_0 / 1.22 / \eta_{\text{neo}}$ [s]; Source of $\eta_{\text{neo}}$ to be clarified. Time-dependent; Vector (npsi)
coord_sys	coord_sys (9.6.1.3.101)	flux surface coordinate system on a square grid of flux and angle
a_pert	mhd_vector (9.6.1.3.266)	Perturbed vector potential (in Fourier space) [T.m]
b_pert	mhd_vector (9.6.1.3.266)	Perturbed magnetic field (in Fourier space) [T]
v_pert	mhd_vector (9.6.1.3.266)	Perturbed velocity (in Fourier space) [m/s]
p_pert	matcplx_type (9.6.1.2.9)	Perturbed pressure (in Fourier space) [Pa]; Time-dependent; Array 2D (npsi,nm)
rho_mass_per	matcplx_type (9.6.1.2.9)	Perturbed mass density (in Fourier space) [ $\text{kg}/\text{m}^3$ ]; Time-dependent; Array 2D (npsi,nm)
temp_per	matcplx_type (9.6.1.2.9)	Perturbed temperature (in Fourier space) [eV]; Time-dependent; Array 2D (npsi,nm)

Type of: mhd\_mode:plasma (2259)

### 9.6.1.3.264 mhd\_res\_wall2d

Resistive wall

member	type	description
walltype	identifier (9.6.1.3.233)	Tag the type of wall to be used, 0 (conformal) or 1 (free)
delta	float (9.6.1.1.1)	Wall thickness [m]; Scalar
eta	float (9.6.1.1.1)	Wall resistivity [ohm.m]; Scalar
npoloidal	integer (9.6.1.1.2)	Number of poloidal coordinates for each wall (dimension of R and Z);
position	rz1D (9.6.1.3.356)	RZ description of the wall; wall coordinates are defined at a middle line (line passing through the middle of the real wall as defined by thickness parameter delta)
holes	holes (9.6.1.3.232)	Structure to describe the placing and properties of the holes

Type of: wall2d\_mhd:res\_wall (2476)

### 9.6.1.3.265 mhd\_vacuum

External modes

member	type	description
m	array3dflt_type (9.6.1.2.2)	Poloidal mode number; Time-dependent; Array2D (npsi,nm)
coord_sys	coord_sys (9.6.1.3.101)	flux surface coordinate system on a square grid of flux and angle
a_pert	mhd_vector (9.6.1.3.266)	Perturbed vector potential (in Fourier space) [T.m]
b_pert	mhd_vector (9.6.1.3.266)	Perturbed magnetic field (in Fourier space) [T]

Type of: mhd\_mode:vacuum (2259)

### 9.6.1.3.266 mhd\_vector

Vector structure for MHD CPO

member	type	description
coord1	matcplx_type (9.6.1.2.9)	Fourier components of first coordinate; Time-dependent; Array 2D (npsi,nm)
coord2	matcplx_type (9.6.1.2.9)	Fourier components of second coordinate; Time-dependent; Array 2D (npsi,nm)
coord3	matcplx_type (9.6.1.2.9)	Fourier components of third coordinate; Time-dependent; Array 2D (npsi,nm)

Type of: mhd\_plasma:a\_pert (2260) I mhd\_plasma:b\_pert (2260) I mhd\_plasma:v\_pert (2260) I mhd\_vacuum:a\_pert (2262) I mhd\_vacuum:b\_pert (2262)

### 9.6.1.3.267 mode\_lipb

Pb-15.7Li "effects"

member	type	description
lp_rec_day	float (9.6.1.1.1)	nb of Pb-15.7Li recirculation per day [Pa]; Scalar
bb_lp_fr	vecflt_type (9.6.1.2.13)	Pb-15.7Li mass flow rate in "the" bb module (or in each bb module) [Kg/s]; Vector(nmodules)
lp_inl_p	float (9.6.1.1.1)	Pb-15.7Li inlet pressure [Pa]; Scalar
bu_dp_lp	float (9.6.1.1.1)	Pb-15.7Li pressure drops in the breeder unit [Pa]; Scalar
man_dp_lp	float (9.6.1.1.1)	Pb-15.7Li pressure drops in the bb manifolds [Pa]; Scalar
tot_dp_lp	float (9.6.1.1.1)	Pb-15.7Li total pressure drops [Pa]; Scalar
bu_lp_ave_t	float (9.6.1.1.1)	Pb-15.7Li average temperature in a breeder unit [K]; Scalar
bu_lp_max_t	float (9.6.1.1.1)	Pb-15.7Li max temperature in a breeder unit [K]; Scalar

Type of: hcllbb\_specs:mod\_lipb (2228)

### 9.6.1.3.268 mode\_mech

Mechanical parameters

member	type	description
fw_min_ts_mg	float (9.6.1.1.1)	Min margin to tensile stress limit in the first wall; Scalar
fw_min_bd_mg	float (9.6.1.1.1)	Min margin to banding stress limit in the first wall; Scalar
sg_min_ts_mg	float (9.6.1.1.1)	Min margin to tensile stress limit in the stiffening grid; Scalar
sg_min_bd_mg	float (9.6.1.1.1)	Min margin to bending stress limit in the stiffening grid; Scalar
cp_min_ts_mg	float (9.6.1.1.1)	Min margin to tensile stress limit in the cooling plate; Scalar
cp_min_bd_mg	float (9.6.1.1.1)	Min margin to bending stress limit in the cooling plate; Scalar
min_ts_mg_ac	float (9.6.1.1.1)	Min tensile margin in accidental conditions; Scalar
min_bd_mg_ac	float (9.6.1.1.1)	Min bending margin in accidental conditions; Scalar

Type of: hcllbb\_specs:mod\_mech (2228)

### 9.6.1.3.269 mode\_neutr

Neutrons "effects"

member	type	description
r	vecflt_type (9.6.1.2.13)	Major radius position at wich power density is calculated [m]; Vector(nr)
pd_rad	vecflt_type (9.6.1.2.13)	Power density distribution in radial direction [W/m <sup>3</sup> ]; Vector(nr)
lipb_coef_pd	vecflt_type (9.6.1.2.13)	Pb-15.7Li power density distribution in radial direction: coefficients of bi-exponential law if this one is used [W/m <sup>-3</sup> ,W/m <sup>-3</sup> ,m <sup>-1</sup> ,m <sup>-1</sup> ]; Matrix
steel_coef_pd	vecflt_type (9.6.1.2.13)	Eurofer power density distribution in radial direction: coefficients of bi-exponential law if this one is used
pow_exchange	power_exchange (9.6.1.3.334)	NO DOCS

Type of: hcllbb\_specs:mod\_neutr (2228)

### 9.6.1.3.270 mode.th.hyd

hydrodynamics parameters

member	type	description
fw_dp_he	float (9.6.1.1.1)	Pressure drops in the first wall [Pa]; Scalar
sg_dp_he	float (9.6.1.1.1)	Pressure drops in the stiffening grid [Pa]; Scalar
cp_dp_he	float (9.6.1.1.1)	Pressure drops in the cooling plates [Pa]; Scalar
man_dp_he	float (9.6.1.1.1)	Pressure drops in the manifolds [Pa]; Scalar
tot_dp_he	float (9.6.1.1.1)	Total pressure drops in bb module [Pa]; Scalar
bp_dp_he	float (9.6.1.1.1)	Total pressure drops in the by pass (if any) [Pa]; ScalarScalar
circ_dp_he	float (9.6.1.1.1)	Pressure drops in one He circuit [Pa]; Scalar

Type of: hcllbb\_specs:mod.th.hyd (2228)

### 9.6.1.3.271 mode.therm

Thermal parameters

member	type	description
he_fr	float (9.6.1.1.1)	Coolant mass flow rate in "the" reference bb (inboard or outboard) module [Kg/s]; Scalar
perc_bp_he	float (9.6.1.1.1)	% of Helium going through the bypass (set to 0 if not otherwise specified)
he_out_t	float (9.6.1.1.1)	Outlet temperature (from the bb module) [K]; Scalar
fw_he_out_t	float (9.6.1.1.1)	First wall outlet temperature [K]; Scalar
sg_he_out_t	float (9.6.1.1.1)	Stiffening grid outlet temperature [K]; Scalar
cp_he_out_t	float (9.6.1.1.1)	Cooling plates outlet temperature [K]; Scalar
fw_st_max_t	float (9.6.1.1.1)	First wall eurofer maximum temperature [K]; Scalar
sg_st_max_t	float (9.6.1.1.1)	Stiffening grid eurofer maximum temperature [K]; Scalar
cp_st_max_t	float (9.6.1.1.1)	Cooling plates eurofer maximum temperature [K]; Scalar

Type of: hcllbb\_specs:mod.therm (2228)

### 9.6.1.3.272 mode.tritium

Tritium parameters

member	type	description
t.conc_lipb	float (9.6.1.1.1)	Tritium concentration in Pb-15.7Li; Scalar
t.conc_he	float (9.6.1.1.1)	Tritium concentration in He; Scalar

Type of: hcllbb\_specs:mod.tritium (2228)

### 9.6.1.3.273 modules

Modules description. NB there are nmodules per antenna, distributed among nma\_phi toroidal positions and nma\_theta poloidal positions

member	type	description
nma_theta	integer (9.6.1.1.2)	Number of modules per antenna in the poloidal direction.
nma_phi	integer (9.6.1.1.2)	Number of modules per antenna in the toroidal direction.
ima_theta	vecint.type (9.6.1.2.14)	Position index of the module in the poloidal direction (from low theta to high theta, i.e. from bottom to top if the antenna is on LFS). Vector of integers (nmodules).
ima_phi	vecint.type (9.6.1.2.14)	Position index of the module in the toroidal direction (from low phi to high phi, counter-clockwise when seen from above). Vector of integers (nmodules).
sm_theta	float (9.6.1.1.1)	Spacing between poloidally neighboring modules [m]
amplitude	exp1D (9.6.1.3.195)	Amplitude of the TE10 mode injected in the module [W], Vector exp1d (nmodules). Time-dependent
phase	exp1D (9.6.1.3.195)	Phase of the TE10 mode injected in the module [radians], Vector exp1d (nmodules). Time-dependent
waveguides	waveguides (9.6.1.3.494)	Waveguides description

Type of: antennalh\_setup:modules (2055)



### 9.6.1.3.274 msediag\_emiss\_chord

MSE Emissivity characterization. This structure is used for each line of sight of the MSE setup and contains the geometry of the line of sight, the emissivity(wavelength,pos) for each polarization state along the line of sight, the quantization axis and the emission volume. Replicate the structure for each line of sight.

member	type	description
volume	float (9.6.1.1.1)	Emitting volume ( $m^{-3}$ ). Scalar
setup	rzphi1D (9.6.1.3.362)	Description of the line of sight (for the moment a line - not a cone of sight). Vector (npos).
polarization(:)	msediag_polarization (9.6.1.3.276)	Polarized and unpolarized emissivity of the relevant MSE spectral lines. Structure Array (ncomp). Time-dependent.
quantiaxis	vecflt.type (9.6.1.2.13)	Quantization axis for the line of sight (eR,ePhi,eZ). It is a unitary vector associated to the line of sight and to the emissivity, e.g. the Lorentzian electric field direction); Vector (3). Time-dependent

Type of: msediag\_emissivity:emiss\_chord (2272)

### 9.6.1.3.275 msediag\_emissivity

Emissivity characteristics.

member	type	description
wavelength	vecflt.type (9.6.1.2.13)	Wavelength [m]. Vector (nwavelength)
emiss_chord(:)	msediag_emiss_chord (9.6.1.3.274)	MSE Emissivity characterization. This structure is used for each line of sight of the MSE setup and contains the geometry of the line of sight, the emissivity(wavelength,pos) for each polarization state along the line of sight, the quantization axis and the emission volume. Replicate the structure for each line of sight. Time-dependent

Type of: spectral:emissivity (2406)

### 9.6.1.3.276 msediag\_polarization

Polarized and unpolarized emissivity of the relevant MSE spectral lines. Structure Array (ncomp). Time-dependent.

member	type	description
type	identifier (9.6.1.3.233)	Type of the polarization. 0 for unpolarised, 1 for Pi, 2 for $\sigma^+$ and 3 for $\sigma^-$
spec.emiss	matflt.type (9.6.1.2.10)	Spectral emissivity of a particular polarization ( $Wm^{-3}sr^{-1}$ ). Matrix (npos,nwavelength). Time-dependent

Type of: msediag\_emiss\_chord:polarization (2271)

### 9.6.1.3.277 msediag\_radia\_chord

MSE radiance characterization. This structure is used for each line of sight of the MSE setup and contains the geometry of the line of sight, the radiance(wavelength) for each polarization state, the quantization axis. Replicate the structure for each line of sight.

member	type	description
setup	msediag_setup (9.6.1.3.279)	Geometry for the observation line of sight
stokes(:)	msediag_stokes (9.6.1.3.281)	Stokes vector (I,U,S,V) as a function of the wavelength for the polarized and unpolarized relevant MSE spectral lines. Replicate for each spectral component. Structure array (ncomp). Time-dependent.
totradiance	exp1D (9.6.1.3.195)	Total Radiance integrated along the lines of sight ( $Wm^{-2}sr^{-1}$ ). Vector (nwavelength)

Type of: msediag\_radiance:radia\_chord (2275)

### 9.6.1.3.278 msediag\_radiance

Emissivity characteristics.

member	type	description
wavelength	exp1D (9.6.1.3.195)	Wavelength [m]. Vector (nwavelength)

member	type	description
radia_chord(:)	msediag_radia_chord (9.6.1.3.277)	MSE radiance characterization. This structure is used for each line of sight of the MSE setup and contains the geometry of the line of sight, the radiance(wavelength) for each polarization state, the quantization axis. Replicate the structure for each line of sight. Time-dependent

Type of: spectral:radiance (2406)

### 9.6.1.3.279 msediag\_setup

Geometry for the observation line of sight

member	type	description
pivot_point	rzphi0D (9.6.1.3.361)	Pivot point of mse line of sight. Scalar
horchordang	float (9.6.1.1.1)	Angle [rad] of horizontal projection of mse line of sight with poloidal cross section (0 for HFS to LFS trajectory - see Convention_angles_interfdiag.pdf) [rad]. Scalar
verchordang	float (9.6.1.1.1)	Angle of mse line of sight with vertical axis (0 for bottom-top trajectory, Pi for top-bottom trajectory - see Convention_angles_interfdiag.pdf) [rad]; Scalar
second_point	rzphi0D (9.6.1.3.361)	Second point defining the mse line of sight together with the pivot_point. Scalar

Type of: msediag\_radia\_chord:setup (2274)

### 9.6.1.3.280 msediag\_setup\_polarimetry

diagnostic setup information

member	type	description
rzgamma	rzphidrdzdphi1D (9.6.1.3.367)	Position and width of the intersection between beam and line of sight. Vectors (nchords)
geom_coef	matflt.type (9.6.1.2.10)	Geometric coefficients (9) describing the angle between beam and line of sight; The first dimension contains successively : numerator, coefficients of BZ, BR, Bphi, ER; denominator, coefficients of BZ, BR, Bphi, ER, EZ; Matrix (9,nchords). In versions of the data structure before 4.08, there were only 6 coefficients namely : numerator, coefficients of BZ, BR, Bphi; denominator, coefficients of BZ, BR, Bphi.

Type of: polarimetry:setup (2328)

### 9.6.1.3.281 msediag\_stokes

Stokes vector (I,U,S,V) as a function of the wavelength for the polarized and unpolarized relevant MSE spectral lines. Replicate for each spectral component. Structure array (ncomp). Time-dependent.

member	type	description
type	identifier (9.6.1.3.233)	Type of the polarization. 0 for unpolarised, 1 for Pi, 2 for sigma <sup>+</sup> and 3 for sigma <sup>-</sup>
vector	matflt.type (9.6.1.2.10)	Stokes vector (I,U,S,V) as a function of the wavelength. Vector (4,nwavelength).

Type of: msediag\_radia\_chord:stokes (2274)

### 9.6.1.3.282 nbi\_nbi\_unit\_wall

Description of the wall components in the NBI system that limits the beam spatial width of the beam. The wall is here described a superposition of surface segments and collimating holes.

member	type	description
surface	nbi_nbi_unit_wall.surface (9.6.1.3.283)	A collimating solid surface described by a polygon; no particle can pass through this surface
collimator(:)	flat_polygon (9.6.1.3.200)	Vector of collimating holes (openings). Each hole has to be flat, i.e. it lies on a surface. Particles can only cross this surface by passing through the hole. To describe the hole we first construct a coordinate system on the surface by defining the original and two basis vectors in (x,y,z) space. The polyon is then represented as the origin, plus a linear combination of the two basis vectors using coord1 and coord2. As an example, a rectangle with two of the corners given by "origin+basis1" and "origin+basis2" can be described using coord1=[1,0,-1,0] and coord2=[0,1,0,-1].

Type of: nbi\_unit:wall (2281)

### 9.6.1.3.283 nbi\_nbi\_unit\_wall\_surface

A collimating solid surface described by a polygon; no particle can pass through this surface

member	type	description
triangle(:)	trianglexyz (9.6.1.3.463)	Triangular wall surface described by its three corners: point1, point2, and point3. Vector(n.triangles)
rectangle(:)	rectanglexyz (9.6.1.3.343)	Rectangular wall surface described by its four corners. These form an ordered sequence: point00, point01, point11, point10. Here the first point should be calculated from the other three as point00=point01+point10-point11. Vector(n.rectangles)

Type of: nbi\_nbi\_unit\_wall:surface (2279)

### 9.6.1.3.284 nbi\_unit

Vector of Neutral Beam Injector units. The NBI system should be separated in to the individually power strucutres. Structure array(nunits). Time-dependent

member	type	description
name	string (9.6.1.1.3)	Name of the neutral beam injector
inj_spec	inj_spec (9.6.1.3.237)	Injected species
pow_unit	exp0D (9.6.1.3.194)	Power delivered by an NBI unit [W]; Time-dependent
inj_eng_unit	exp0D (9.6.1.3.194)	Full injection energy of a unit [ev]; Time-dependent
beamcurfrac	exp1D (9.6.1.3.195)	Beam current fractions; beamcurfrac(j) is the fraction of the beam current from beam neutrals with the j:th harmonic energy, inj_eng_unit. Vector(3); Time-dependent
beampowfrac	exp1D (9.6.1.3.195)	Beam power fractions; beampowfrac(j) is the fraction of the beam power from beam neutrals with the j:th harmonic energy, inj_eng_unit;. Vector(3); Time-dependent
beamletgroup(:)	beamletgroup (9.6.1.3.64)	Group of beamlets with common vertical and horizontal focal point. If there are no common focal points, then select small groups of beamlets such that a focal point description of the beamlet-group provides a fair description.
wall	nbi_nbi_unit_wall (9.6.1.3.282)	Description of the wall components in the NBI system that limits the beam spatial width of the beam. The wall is here described a superposition of surface segments and collimating holes.
codeparam	codeparam (9.6.1.3.77)	Code parameters

Type of: nbi:nbi\_unit (2029)

### 9.6.1.3.285 ne\_transp

Transport coefficients for electron density equation. Time-dependent.

member	type	description
diff_eff	matflt_type (9.6.1.2.10)	Effective diffusivity [ $m^2.s^{-1}$ ]. The last index of the array describes which multiplier should be applied to the particule flux when adding its contribution in the expression of the heat flux : position 1 is multiplied by 0, 2 is multiplied by 3/2, 3 is multiplied by 5/2. The total particle flux (for the particle transport equation) is obtained as the sum over the three positions. Time-dependent. Matrix (nrho,3)
vconv_eff	matflt_type (9.6.1.2.10)	Effective convection [ $m.s^{-1}$ ]. The last index of the array describes which multiplier should be applied to the particule flux when adding its contribution in the expression of the heat flux : position 1 is multiplied by 0, 2 is multiplied by 3/2, 3 is multiplied by 5/2. The total particle flux (for the particle transport equation) is obtained as the sum over the three positions. Time-dependent. Matrix (nrho,3)
flux	vecflt_type (9.6.1.2.13)	Flux. Not used in transport equations [ $field.m.s^{-1}, m^{-3}$ if field is not a density itself]. Time-dependent. Vector (nrho)
off_diagonal	offdiagel (9.6.1.3.298)	Details of the transport matrix, just for diagnostic (not used in transport equations). Time-dependent.
flag	integer (9.6.1.1.2)	Flag describing the form of transport produced by the original model : 0- not calculated, 1- D and V, 2- flux, 3- full transport matrix. Scalar.

Type of: coretransp\_values:ne\_transp (2125)

### 9.6.1.3.286 neut\_results

Neutronic results

member	type	description
tbr_bk	float (9.6.1.1.1)	Resulting global breeding blanket tritium breeding ratio; Scalar
tbr_bk_inb	float (9.6.1.1.1)	Resulting inboard breeding blanket Tritium Breeding Ratio [-]; Scalar
tbr_bk_outb	float (9.6.1.1.1)	Resulting outboard breeding blanket Tritium Breeding Ratio [-]; Scalar

member	type	description
me_bk	float (9.6.1.1.1)	Energy multiplication factor in breeding blanket; Scalar
me_shield	float (9.6.1.1.1)	Energy multiplication factor in shield; Scalar
he_appm_res	float (9.6.1.1.1)	He production in areas needing to be rewelded; Scalar
ins_dose_max	float (9.6.1.1.1)	Integral radiation dose in insulator (Epoxy) [ $\text{J}^*\text{Kg}^{-1}$ ]; Scalar
fn_flu_max	float (9.6.1.1.1)	Peak fast neutron fluence ( $E \geq 0.1$ MeV) to the Nb3Sn superconductor [ $\text{m}^{-2}$ ]; Scalar
dpa_cu_max	float (9.6.1.1.1)	Peak displacement damage to copper stabilizer [dpa]; Scalar
fn_flux_bz	float (9.6.1.1.1)	Fast neutron flux in breeding zone inboard [ $\text{m}^{-2}.\text{s}^{-1}$ ]; Scalar
fn_flux_bp	float (9.6.1.1.1)	Fast neutron flux in backplate inboard [ $\text{m}^{-2}.\text{s}^{-1}$ ]; Scalar
fn_flux_man	float (9.6.1.1.1)	Fast neutron flux in manifold inboard [ $\text{m}^{-2}.\text{s}^{-1}$ ]; Scalar
fn_flux_sh	float (9.6.1.1.1)	Fast neutron flux in shield inboard [ $\text{m}^{-2}.\text{s}^{-1}$ ]; Scalar
p_nh_bk	float (9.6.1.1.1)	Total nuclear heating in blanket [W]; Scalar
p_nh_sh	float (9.6.1.1.1)	Total nuclear heating in shield [W]; Scalar

Type of: bb\_shield:neut\_results (2002)

### 9.6.1.3.287 neutral\_complex\_type

Profiles derived from the fields solved in the transport equations, or from experiment. Array(nneut). Time-dependent

member	type	description
neutraltype(:)	coreneutrals_neutraltype (9.6.1.3.121)	Array (nntype) over neutral types. Time-dependent.
prad0	vecflt_type (9.6.1.2.13)	Power radiated by neutrals [ $\text{W}.\text{m}^{-3}$ ]. Vector (nrho). Time-dependent.

Type of: coreneutrals:profiles (2007)

### 9.6.1.3.288 neutro\_resul

Neutronic results

member	type	description
nwl_max	float (9.6.1.1.1)	Maximum neutron wall load (on equatorial outboard module) [ $\text{W}^*\text{m}^{-2}$ ]; Scalar
nwl_pol_prof	vecflt_type (9.6.1.2.13)	NWL scaling factor coefficient for each bb module; Vector(nmodules)

Type of: bb:neutro\_resul (2057)

### 9.6.1.3.289 ni\_transp

Transport coefficients for ion density equation. Time-dependent.

member	type	description
diff_eff	array3dflt_type (9.6.1.2.2)	Effective diffusivity [ $\text{m}^2.\text{s}^{-1}$ ]. The last index of the array describes which multiplier should be applied to the particule flux when adding its contribution in the expression of the heat flux : position 1 is multiplied by 0, 2 is multiplied by 3/2, 3 is multiplied by 5/2. The total particle flux (for the particle transport equation) is obtained as the sum over the three positions. Time-dependent. Array3d (nrho,nion,3)
vconv_eff	array3dflt_type (9.6.1.2.2)	Effective convection [ $\text{m}.\text{s}^{-1}$ ]. The last index of the array describes which multiplier should be applied to the particule flux when adding its contribution in the expression of the heat flux : position 1 is multiplied by 0, 2 is multiplied by 3/2, 3 is multiplied by 5/2. The total particle flux (for the particle transport equation) is obtained as the sum over the three positions. Time-dependent. Array3d (nrho,nion,3)
flux	matflt_type (9.6.1.2.10)	Flux. Not used in transport equations [ $\text{field}.\text{m}.\text{s}^{-1}.\text{m}^{-3}$ if field is not a density itself]. Time-dependent. Matrix (nrho,nion)
off_diagonal	offdiagion (9.6.1.3.299)	Details of the transport matrix, just for diagnostic (not used in transport equations). Time-dependent.
flag	integer (9.6.1.1.2)	Flag describing the form of transport produced by the original model : 0- not calculated, 1- D and V, 2- flux, 3- full transport matrix. Scalar.

Type of: coretransp\_values:ni\_transp (2125)

### 9.6.1.3.290 ntm\_mode

List of the various NTM modes appearing during the simulation. If a mode appears several times, use several indices in this array of structure with the same m,n values. All descendant nodes are marked as Time-dependent for technical reasons, to allow the size of the mode AoS to vary.

member	type	description
onset	ntm_mode_onset (9.6.1.3.295)	NTM onset characteristics. Time-dependent
full_evol	ntm_mode_full_evol (9.6.1.3.293)	Detailed NTM evolution on a finer timebase than the CPO timebase. Time-dependent.
evolution	ntm_mode_evolution (9.6.1.3.291)	NTM evolution corresponding to the CPO timebase. Time-dependent.

Type of: ntm:mode (2031)

### 9.6.1.3.291 ntm\_mode\_evolution

NTM evolution corresponding to the CPO timebase. Time-dependent.

member	type	description
w	float (9.6.1.1.1)	Full width of the mode [m]. Time-dependent.
dwdt	float (9.6.1.1.1)	Time derivative of the full width of the mode [m/s]. Time-dependent.
phase	float (9.6.1.1.1)	Phase of the mode [rad]. Time-dependent.
dphasedt	float (9.6.1.1.1)	Time-derivative of the phase of the mode [rad]. Time-dependent.
frequency	float (9.6.1.1.1)	Frequency of the mode [Hz]. Time-dependent.
dfrequencydt	float (9.6.1.1.1)	Time derivative of the frequency of the mode [Hz]. Time-dependent.
island	ntm_mode_evolution_island (9.6.1.3.292)	Island description
n	integer (9.6.1.1.2)	Toroidal mode number. Time-dependent.
m	integer (9.6.1.1.2)	Poloidal mode number. Time-dependent.
deltaw_value	vecflt_type (9.6.1.2.13)	Vector(ntype). Time-dependent.
deltaw_name	vecstring_type (9.6.1.2.15)	Name of the deltaw contribution. String vector (ntype). Time-dependent.
torque_value	vecflt_type (9.6.1.2.13)	Vector(ntype_torque). Time-dependent.
torque_name	vecstring_type (9.6.1.2.15)	Name of the torque contribution. String vector (ntype). Time-dependent.
delta_diff	vecflt_type (9.6.1.2.13)	Extra diffusion coefficient for Te, ne, Ti equation. Vector(nequation). Time-dependent.
description	string (9.6.1.1.3)	How the mode evolution is calculated. Time-dependent.
rho_tor	float (9.6.1.1.1)	[m]. Time-dependent.

Type of: ntm\_mode:evolution (2287)

### 9.6.1.3.292 ntm\_mode\_evolution\_island

Island description

member	type	description
geometry	vecflt_type (9.6.1.2.13)	Description of island geometry [?]. Vector(nradial). Time-dependent.
coord_values	vecflt_type (9.6.1.2.13)	Radial coordinate values [?]. Vector(nradial). Time-dependent.
coord_desc	string (9.6.1.1.3)	Description of flux label, use the same for all islands. Time-dependent.

Type of: ntm\_mode\_evolution:island (2288)

### 9.6.1.3.293 ntm\_mode\_full\_evol

Detailed NTM evolution on a finer timebase than the CPO timebase. Time-dependent.

member	type	description
time_evol	vecflt_type (9.6.1.2.13)	Time array used to describe the detailed mode evolution which can be different from the CPO timebase [s]. Vector(ntime_evol). Time-dependent.
w	vecflt_type (9.6.1.2.13)	Full width of the mode [m]. Vector(ntime_evol). Time-dependent.
dwdt	vecflt_type (9.6.1.2.13)	Time derivative of the full width of the mode [m/s]. Vector(ntime_evol). Time-dependent.
phase	vecflt_type (9.6.1.2.13)	Phase of the mode [rad]. Vector(ntime_evol). Time-dependent.
dphasedt	vecflt_type (9.6.1.2.13)	Time-derivative of the phase of the mode [rad]. Vector(ntime_evol). Time-dependent.
frequency	vecflt_type (9.6.1.2.13)	Frequency of the mode [Hz]. Vector(ntime_evol). Time-dependent.

member	type	description
dfrequencydt	vecflt_type (9.6.1.2.13)	time derivative of the frequency of the mode [Hz]. Vector(ntime_evol). Time-dependent.
island	ntm_mode_full_evol_island (9.6.1.3.294)	Island description
n	integer (9.6.1.1.2)	Toroidal mode number. Time-dependent.
m	integer (9.6.1.1.2)	Poloidal mode number. Time-dependent.
deltaw_value	matflt_type (9.6.1.2.10)	Matrix(ntype, ntime_evol). Time-dependent.
deltaw_name	vecstring_type (9.6.1.2.15)	Name of the deltaw contribution. String vector (ntype). Time-dependent.
torque_value	matflt_type (9.6.1.2.10)	Matrix(ntype_torque, ntime_evol). Time-dependent.
torque_name	vecstring_type (9.6.1.2.15)	Name of the torque contribution. String vector (ntype_torque). Time-dependent.
delta_diff	matflt_type (9.6.1.2.10)	Extra diffusion coefficient for Te, ne, Ti equation. Matrix(nequation, ntime_evol). Time-dependent.
description	string (9.6.1.1.3)	How the mode evolution is calculated. Time-dependent.
rho_tor	vecflt_type (9.6.1.2.13)	[m]. Vector(ntime_evol) Time-dependent.

Type of: ntm\_mode:full\_evol (2287)

### 9.6.1.3.294 ntm\_mode\_full\_evol\_island

Island description

member	type	description
geometry	matflt_type (9.6.1.2.10)	Description of island geometry [?]. Matrix(nradial, ntime_evol). Time-dependent.
coord_values	matflt_type (9.6.1.2.10)	Radial coordinate values [?]. Matrix(nradial, ntime_evol). Time-dependent.
coord_desc	string (9.6.1.1.3)	Description of flux label, use the same for all islands. Time-dependent.

Type of: ntm\_mode\_full\_evol:island (2290)

### 9.6.1.3.295 ntm\_mode\_onset

NTM onset characteristics. Time-dependent

member	type	description
w	float (9.6.1.1.1)	Seed island full width [m]. Time-dependent.
time_onset	float (9.6.1.1.1)	Onset time [s]. Time-dependent.
time_offset	float (9.6.1.1.1)	Offset time [s] (when a mode disappears). If the mode reappears later in the simulation, use another index of the mode array of structure. Time-dependent.
phase	float (9.6.1.1.1)	Phase of the mode at onset [rad]. Time-dependent.
n	integer (9.6.1.1.2)	Toroidal mode number. Time-dependent.
m	integer (9.6.1.1.2)	Poloidal mode number. Time-dependent.
description	string (9.6.1.1.3)	Cause of the mode onset. Time-dependent.

Type of: ntm\_mode:onset (2287)

### 9.6.1.3.296 nuclei

Array of nuclei considered.

member	type	description
zn	float (9.6.1.1.1)	Nuclear charge [units of elementary charge];
amn	float (9.6.1.1.1)	Mass of atom [amu]
label	string (9.6.1.1.3)	String identifying element (e.g. H, D, T, He, C, ...)

Type of: compositions\_type:nuclei (2096)

### 9.6.1.3.297 objects

Definition of space objects (nodes, edges, faces, cells, ...); A space object of dimension n is defined; by enumerating the (n-1)-dimensional space objects defining its boundaries

member	type	description
boundary	matint.type (9.6.1.2.11)	Lists of (n-1)-dimensional space objects defining the boundary of an n-dimensional space object.; Matrix(number of objects of dimension n, maximum number of boundary objects).; First dimension: object index, second dimension: boundary object index
neighbour	array3dint.type (9.6.1.2.3)	Connectivity information. Array (number of objects, maximum number of boundaries per object, maximum number of neighbours per boundary).; Stores the indices of the n-dimensional objects adjacent to the given n-dimensional object.;An object can possibly have multiple neighbours on every boundary.; First dimension: object index, second dimension: boundary index, third dimension: neighbour index on the boundary.
geo	array4dflt.type (9.6.1.2.4)	Geometry data matrix associated with every object. Float array (number of objects, number of geometry coeff. 1, number of geometry coeff. 2, number of geometries).; The exact definition depends on the geometry type of the space (complexgrid.space.geotype).; First dimension: object index, second+third dimension: geometry coefficient matrix row+column, third dimension: geometry index (for definition of multiple geometries).
measure	matflt.type (9.6.1.2.10)	Measure of space objects, i.e. physical size (length for 1d, area for 2d, volume for 3d objects,...). [m <sup>dim</sup> ].; First dimension: object index, second dimension: geometry index

Type of: complexgrid\_space:objects (2088)

### 9.6.1.3.298 offdiagel

Subtree containing the full transport matrix from a transport model, for the electrons. Time-dependent.

member	type	description
d.ni	matflt.type (9.6.1.2.10)	Off-Diagonal term coupling ion density gradient to the transport equation [m. <sup>2</sup> .s <sup>-1</sup> ]. Time-dependent. Matrix (nrho,nion)
d.ti	matflt.type (9.6.1.2.10)	Off-Diagonal term coupling ion density gradient to the transport equation [m. <sup>2</sup> .s <sup>-1</sup> ]. Time-dependent. Matrix (nrho,nion)
d.ne	vecflt.type (9.6.1.2.13)	Off-Diagonal term coupling electron density gradient to the transport equation [m. <sup>2</sup> .s <sup>-1</sup> ]. Time-dependent. Vector (nrho)
d.te	vecflt.type (9.6.1.2.13)	Off-Diagonal term coupling electron temperature gradient to the transport equation [m. <sup>2</sup> .s <sup>-1</sup> ]. Time-dependent. Vector (nrho)
d.epar	vecflt.type (9.6.1.2.13)	Off-Diagonal term coupling parallel electric field to the transport equation [m. <sup>2</sup> .s <sup>-1</sup> ]. Time-dependent. Vector (nrho)
d.mtor	vecflt.type (9.6.1.2.13)	Off-Diagonal term coupling total toroidal momentum to the transport equation [m. <sup>2</sup> .s <sup>-1</sup> ]. Time-dependent. Vector (nrho)

Type of: ne\_transp:off\_diagonal (2282) I transcoefel:off\_diagonal (2455)

### 9.6.1.3.299 offdiagion

Subtree containing the full transport matrix from a transport model, for the various ion species

member	type	description
d.ni	array3dflt.type (9.6.1.2.2)	Off-Diagonal term coupling ion density gradient to the transport equation [m. <sup>2</sup> .s <sup>-1</sup> ]. Time-dependent. Array3d (nrho,nion,nion)
d.ti	array3dflt.type (9.6.1.2.2)	Off-Diagonal term coupling ion density gradient to the transport equation [m. <sup>2</sup> .s <sup>-1</sup> ]. Time-dependent. Array3d (nrho,nion,nion)
d.ne	matflt.type (9.6.1.2.10)	Off-Diagonal term coupling electron density gradient to the transport equation [m. <sup>2</sup> .s <sup>-1</sup> ]. Time-dependent. Matrix (nrho,nion)
d.te	matflt.type (9.6.1.2.10)	Off-Diagonal term coupling electron temperature gradient to the transport equation [m. <sup>2</sup> .s <sup>-1</sup> ]. Time-dependent. Matrix (nrho,nion)
d.epar	matflt.type (9.6.1.2.10)	Off-Diagonal term coupling parallel electric field to the transport equation [m. <sup>2</sup> .s <sup>-1</sup> ]. Time-dependent. Matrix (nrho,nion)
d.mtor	matflt.type (9.6.1.2.10)	Off-Diagonal term coupling total toroidal momentum to the transport equation [m. <sup>2</sup> .s <sup>-1</sup> ]. Time-dependent. Matrix (nrho,nion)

Type of: ni\_transp:off\_diagonal (2286) I transcoefion:off\_diagonal (2457) I transcoefvtor:off\_diagonal (2458)

### 9.6.1.3.300 omnigen\_surf

List of omnigenous magnetic surfaces to which the s-coordinates in grid.coord refer. NOTE: only used for gridcoord=3. NOTE: all guiding centre orbits intersect at least one omnigenous (or stagnation) surfaces, i.e. the omnigenous generalised the equatorial plane (the midplane). nsurfs=Number of omnigenous surfaces. Structure array(nregion\_topo)

member	type	description
rz	rz1D (9.6.1.3.356)	(R,z) coordinates of the omnigenous magnetic surfaces (generalised equatorial plane). NOTE: only used for gridcoord=3. Vector rz1d (nsurfs)



member	type	description
s	vecflt.type (9.6.1.2.13)	Coordinates which uniquely maps the omnigeuous magnetic surfaces (generalised equitorial plane). NOTE: only used for gridcoord=3. Vector (nsurfs)

Type of: dist\_grid\_info:omnigen\_surf (2148)

### 9.6.1.3.301 orbit\_global\_param

Global quantities associated with an orbit.

member	type	description
orbit.type	vecint.type (9.6.1.2.14)	Identifier of orbit type: 0 trapped, -1 co-passing, + 1 counter-passing ; Time-dependent; Vector (norbits)
omega.b	vecflt.type (9.6.1.2.13)	Bounce angular frequency rad/s; Time-dependent; Vector (norbits)
omega.phi	vecflt.type (9.6.1.2.13)	Toroidal angular precession frequency [rad/s]; Time-dependent; Vector (norbits).
omega.c.av	vecflt.type (9.6.1.2.13)	Orbit averaged cyclotron frequency [rad/a]; Time-dependent; Vector(norbits).
special_pos	orbit_special_pos (9.6.1.3.304)	Special positions along an orbit (like turning points).

Type of: orbit:global\_param (2032)

### 9.6.1.3.302 orbit\_midplane

Intersections with the midplane

member	type	description
outer	orbit_pos (9.6.1.3.303)	Position at outer mid-plane
inner	orbit_pos (9.6.1.3.303)	Position at inner mid-plane

Type of: orbit\_special\_pos:midplane (2301)

### 9.6.1.3.303 orbit\_pos

Complex type for orbit position (Vector)

member	type	description
r	vecflt.type (9.6.1.2.13)	Major radius [m]; Time-dependent; Vector (norbits).
z	vecflt.type (9.6.1.2.13)	Altitude [m]; Time-dependent; Vector (norbits).
phi	vecflt.type (9.6.1.2.13)	Toroidal angle [rad]; Time-dependent; Vector (norbits).
psi	vecflt.type (9.6.1.2.13)	Position in psi [normalised poloidal flux]; Time-dependent; Vector (norbits).
theta.b	vecflt.type (9.6.1.2.13)	Poloidal Boozer angle [rad]; Time-dependent; Vector (norbits).

Type of: orbit\_midplane:inner (2299) | orbit\_midplane:outer (2299) | orbit\_turning\_pts:lower (2302) | orbit\_turning\_pts:upper (2302)

### 9.6.1.3.304 orbit\_special\_pos

Special positions along an orbit (like turning points).

member	type	description
midplane	orbit_midplane (9.6.1.3.302)	Intersections with the midplane
turning_pts	orbit_turning_pts (9.6.1.3.305)	Location of turning points

Type of: orbit\_global\_param:special\_pos (2298)

### 9.6.1.3.305 orbit\_turning\_pts

Location of turning points

member	type	description
upper	orbit_pos (9.6.1.3.303)	Position at upper turning point
lower	orbit_pos (9.6.1.3.303)	Position at lower turning point

Type of: orbit\_special\_pos:turning\_pts (2301)

### 9.6.1.3.306 origin

member	type	description
refpos	rzphi0D (9.6.1.3.361)	Reference point of the local coordinate system; the position of either the last quasi-optical element, or the horn antenna. Default is facing horizontally away from the central axis. The local coordinate system is cartesian, with the local z axis defining the nominal beam direction, x parallel to the global z, and y completing the right-handed local coordinate system
alpha	float (9.6.1.1.1)	Poloidal tilt angle [rad]; angle between local z axis and horizontal plane, 0 is facing outward, pi/2 is downwards, pi inwards
beta	float (9.6.1.1.1)	Toroidal tilt angle [rad]; angle between local z axis and r-z plane
gamma	float (9.6.1.1.1)	Rotation angle about local z axis [rad]

Type of: reflectometry\_antennas:origin (2344)

### 9.6.1.3.307 param

Code parameters block passed from the wrapper to the subroutine. Does not appear as such in the data structure (in fact each string is an instance of codeparam/parameters). This is inserted in utilities.xsd for automatic declaration in the Fortran type definitions.

member	type	description
parameters	string (9.6.1.1.3)	Actual value of the code parameters (instance of coparam/parameters in XML format).
default_param	string (9.6.1.1.3)	Default value of the code parameters (instance of coparam/parameters in XML format).
schema	string (9.6.1.1.3)	Code parameters schema.

Type of

### 9.6.1.3.308 parameters

Parameters used to defined the grid coordiantes. Time-dependent

member	type	description
equatorial	equatorial_plane (9.6.1.3.191)	Description of the equatorial plane or any other omnigeuous surfaces. Time-dependent

Type of: source\_rate:parameters (2399)

### 9.6.1.3.309 pellet

Description of the pellets entering the plasma at given time. Array of structures (NPEL). Time-dependent.

member	type	description
shape	pellet_shape (9.6.1.3.316)	Structure defining the shape of the pellet. Time-dependent.
elements	pellet_elements (9.6.1.3.312)	Structure defining the composition of the pellet. Time-dependent.
geometry	pellet_geometry (9.6.1.3.313)	Structure describing the geometry of the pellet path. Time-dependent.
pathprofiles	pellet_pathprofiles (9.6.1.3.315)	Structure describing 1-D profiles of plasma and pellet along the pellet path. Time-dependent.
deposition	pellet_deposition (9.6.1.3.311)	Structure defining the pellet action on the plasma (along rho_tor). Time-dependent.

Type of: pellets:pellet (2033)

### 9.6.1.3.310 pellet\_angles

Angles of the pellet trajectory. Time-dependent.

member	type	description
horizontal	float (9.6.1.1.1)	Angle [rad] of the horizontal projection of the path with poloidal cross section (0 for HFS , then counter clockwise looking from above), scalar. Time-dependent.
vertical	float (9.6.1.1.1)	Angle [rad] of the path with vertical axis section (0 for bottom-top trajectory, then counter clockwise), scalar. Time-dependent.

Type of: pellet\_geometry:angles (2310)

### 9.6.1.3.311 pellet\_deposition

Structure defining the pellet action on the plasma (along rho\_tor). Time-dependent.

member	type	description
rho_tor	vecflt_type (9.6.1.2.13)	Toroidal flux coordinate [m], array (NRHO). Time-dependent.
rho_pol	vecflt_type (9.6.1.2.13)	Poloidal flux coordinate [m], array(NRHO). Time-dependent.
delta_ne	vecflt_type (9.6.1.2.13)	Instant change of ne profile due to pellet ablation [m <sup>-3</sup> ], array(NRHO). Time-dependent.
delta_te	vecflt_type (9.6.1.2.13)	Instant change of Te profile due to pellet ablation [eV], array(NRHO). Time-dependent.
delta_ni	matflt_type (9.6.1.2.10)	Instant change of ni profile due to pellet ablation [m <sup>-3</sup> ], array (NRHO, NION). Time-dependent.
delta_ti	matflt_type (9.6.1.2.10)	Instant change of Ti profile due to pellet ablation [eV], array (NRHO, NION). Time-dependent.
delta_vtor	matflt_type (9.6.1.2.10)	Instant change of Vtor profile due to pellet ablation [m/s], array (NRHO, NION). Time-dependent.
impurity(:)	pellet_impurity (9.6.1.3.314)	Contributions to impurity array of structures (NIMP). Time-dependent

Type of: pellet:deposition (2306)

### 9.6.1.3.312 pellet\_elements

Structure defining the composition of the pellet. Time-dependent.

member	type	description
nucindex	vecint_type (9.6.1.2.14)	Index into list of nuclei, array over elements in pellet (NATM). Time-dependent.
density	vecflt_type (9.6.1.2.13)	Material density of each element of the pellet, array over elements (NATM). Time-dependent.
fraction	vecflt_type (9.6.1.2.13)	Fraction of each element in the pellet, array over elements in pellet (NATM). Time-dependent.
subl_energy	vecflt_type (9.6.1.2.13)	Sublimation energy per atom, array over elements in pellet (NATM). Time-dependent.

Type of: pellet:elements (2306)

### 9.6.1.3.313 pellet\_geometry

Structure describing the geometry of the pellet path. Time-dependent.

member	type	description
pivot_point	rzphi0D (9.6.1.3.361)	Coordinates of the pivot point for pellet trajectory. Time-dependent.
second_point	rzphi0D (9.6.1.3.361)	Coordinates of the second point for pellet trajectory. Time-dependent.
velocity	float (9.6.1.1.1)	Starting velocity of the pellet [m/s]. Scalar. Time-dependent.
angles	pellet_angles (9.6.1.3.310)	Angles of the pellet trajectory. Time-dependent.

Type of: pellet:geometry (2306)

### 9.6.1.3.314 pellet\_impurity

Contributions to impurity array of structures (NIMP). Time-dependent

member	type	description
delta_nz	matflt_type (9.6.1.2.10)	Instant change of Nz profile (per charge state) due to pellet ablation [m <sup>-3</sup> ], array (NRHO, NZ-IMP). Time-dependent.

Type of: pellet\_deposition:impurity (2308)

### 9.6.1.3.315 pellet\_pathprofiles

Structure describing 1-D profiles of plasma and pellet along the pellet path. Time-dependent.

member	type	description
distance	vecflt.type (9.6.1.2.13)	Coordinate along the pellet trajectory [m], array (NPATH). Time-dependent.
rho_tor	vecflt.type (9.6.1.2.13)	Toroidal flux coordinate along the pellet trajectory [m], array (NPATH). Time-dependent.
rho_pol	vecflt.type (9.6.1.2.13)	Poloidal flux coordinate along the pellet trajectory [m], array (NPATH). Time-dependent.
velocity	vecflt.type (9.6.1.2.13)	Pellet velocity along the pellet trajectory [m/s], array (NPATH). Time-dependent.
ne	vecflt.type (9.6.1.2.13)	Electron density along the pellet trajectory [m <sup>-3</sup> ], array (NPATH). Time-dependent.
te	vecflt.type (9.6.1.2.13)	Electron temperature along the pellet trajectory [eV], array (NPATH). Time-dependent.
abl_rate	vecflt.type (9.6.1.2.13)	Ablation rate along the pellet trajectory [part/s], array (NPATH). Time-dependent.
abl_particles	vecflt.type (9.6.1.2.13)	Number of ablated particles along the pellet trajectory [part], array (NPATH). Time-dependent.
delta_drift	vecflt.type (9.6.1.2.13)	Radial displacement due to ExB drifts along the pellet trajectory [m], array (NPATH). Time-dependent.
position	rzphi1D (9.6.1.3.362)	Coordinates of the pellet trajectory line, array (NPATH). Time-dependent.

Type of: pellet:pathprofiles (2306)

### 9.6.1.3.316 pellet\_shape

Structure defining the shape of the pellet. Time-dependent.

member	type	description
type	identifier (9.6.1.3.233)	Identifier for the shape of the pellet: 1-spherical; 2-cylindrical; 3-rectangular; 4-generic. Time-dependent.
dimensions	vecflt.type (9.6.1.2.13)	Vector specifying the dimensions of the pellet following the order for predefined shapes. Spherical pellets: dimensions(1) is the radius [m] of the pellet; Cylindrical pellets: dimensions(1) is the radius [m] and dimensions(2) is the height [m] of the cylinder; Rectangular pellets: dimensions(1) is the height [m], dimensions(2) is the width [m] and dimensions(3) is the length [m]; Time-dependent.

Type of: pellet:shape (2306)

### 9.6.1.3.317 permeability

Permeability model (can be different for each iron segment)

member	type	description
b	matflt.type (9.6.1.2.10)	List of B values for description of the mur(B) dependence [T]; Matrix (nsegment,nB)
mur	matflt.type (9.6.1.2.10)	Relative permeability mur(B) [dimensionless]; Matrix (nsegment,nB)

Type of: desc\_iron:permeability (2133)

### 9.6.1.3.318 pfcircuits

Circuits, connected to multiple coils and to multiple supplies, defining the current and voltage relationships in the system

member	type	description
name	vecstring.type (9.6.1.2.15)	Name of circuit, array of strings (ncircuits)
id	vecstring.type (9.6.1.2.15)	ID of circuit, array of strings (ncircuits)
type	vecstring.type (9.6.1.2.15)	Type of circuit, array of strings (ncircuits)
nnodes	vecint.type (9.6.1.2.14)	Number of nodes used to describe a circuit. Vector (ncircuits)
connections	array3dint.type (9.6.1.2.3)	Description of the supplies and coils connections (nodes) across each circuit. Array 3D (ncircuits,max_nnodes,2*ncomponents), describing for each node which component are connected to it (1 if connected, 0 otherwise). There are 2 sides at each component, thus 2*ncomponents as the size of the third dimension, listing first all supplies, then all coils (in the same order as listed in PFSUPPLIES and PFCOILS). An example can be found in the data structure documentation PFconnections.pdf

Type of: pfsystems:pfcircuits (2034)

### 9.6.1.3.319 pfoils

Active poloidal field coils

member	type	description
desc_pfoils	desc_pfoils (9.6.1.3.137)	Description of the coils
coilcurrent	exp1D (9.6.1.3.195)	Circuit feed current in the coil, defined positive if it flows from point 1 to point 2 of the component in the pfcircuit description [A]; Time-dependent; Vector (ncoils)
coilvoltage	exp1D (9.6.1.3.195)	Voltage on the full coil [V]; Time-dependent; Vector (ncoils)
p_cryo	float (9.6.1.1.1)	Total electric power consumed by the cryoplant system [W]; Time-dependent. Scalar.
p_nh	vecflt_type (9.6.1.2.13)	Nuclear heating on the poloidal field coils [W]; Time-dependent. Vector(ncoils)

Type of: pfsystems:pfoils (2034)

### 9.6.1.3.320 pfelement

Axisymmetric conductor description

member	type	description
name	vecstring_type (9.6.1.2.15)	Name of this element. Should be a matrix of strings (ncoils,max_nelements), but not supported by the UAL yet.
id	vecstring_type (9.6.1.2.15)	ID of this element. Should be a matrix of strings (ncoils,max_nelements), but not supported by the UAL yet.
turnsign	matflt_type (9.6.1.2.10)	Sign of turn and fraction of a turn for calculating magnetic field of the Element; Matrix (ncoils,max_nelements)
area	matflt_type (9.6.1.2.10)	Surface area of this element [m <sup>2</sup> ]; Matrix (ncoils,max_nelements)
pfgeometry	pfgeometry (9.6.1.3.321)	Shape of a PF Coil Element

Type of: desc\_pfoils:pfelement (2134)

### 9.6.1.3.321 pfgeometry

Shape of a PF Coil Element

member	type	description
type	matint_type (9.6.1.2.11)	Type used to describe a coil shape (0 for 'rzcoordinates' or 1 for 'rzdrdz'); Matrix of integers (ncoils,max_nelements)
npoints	matint_type (9.6.1.2.11)	Number of points describing an element (irregular outline rzcoordinates); Matrix (ncoils,max_nelements)
rzcoordinate	rz3D (9.6.1.3.360)	Irregular outline [m]; 3D arrays (ncoils,max_nelements,max_npoints)
rzdrdz	array3dflt_type (9.6.1.2.2)	4-vector defining Centre R,Z and full extents dR, dZ [m]; 3D Array (ncoils,max_nelements,4)

Type of: pfelement:pfgeometry (2317)

### 9.6.1.3.322 pfpgeometry

Geometry of the passive elements

member	type	description
type	vecint_type (9.6.1.2.14)	Type used to describe the shape (0 for 'rzcoordinates' or 1 for 'rzdrdz'); Vector of integers (nelements)
npoints	vecint_type (9.6.1.2.14)	Number of points describing an element (irregular outline rzcoordinates); Vector of integers (nelements)
rzcoordinate	rz2D (9.6.1.3.359)	Irregular outline [m]; Matrix (nelements,max_npoints)
rzdrdz	matflt_type (9.6.1.2.10)	4-vector defining Centre R,Z and full extents dR, dZ [m]; Matrix (nelements,4)

Type of: pfpassive:pfpgeometry (2320)

### 9.6.1.3.323 pfpassive

Passive axisymmetric conductor description

member	type	description
name	vecstring_type (9.6.1.2.15)	Name of coil. Array of strings (nelements)
area	vecflt_type (9.6.1.2.13)	Surface area of this passive element [m <sup>2</sup> ]; Vector (nelements)
res	vecflt_type (9.6.1.2.13)	Passive element resistance [Ohm]; Vector (nelements)
eta	vecflt_type (9.6.1.2.13)	Passive element resistivity [Ohm.m]; Vector (nelements)
current	pfpasive_current (9.6.1.3.324)	Current induced in passive structures.
pfpageometry	pfpageometry (9.6.1.3.322)	Geometry of the passive elements

Type of: pfsystems:pfpasive (2034)

### 9.6.1.3.324 pfpasive\_current

Current induced in passive structures.

member	type	description
toroidal	exp1D (9.6.1.3.195)	Toroidal current induced in passive structures [A]. Vector (nelements); Time-dependent
poloidal	exp1D (9.6.1.3.195)	Poloidal current induced in passive structures [A]. Vector (nelements); Time-dependent

Type of: pfpasive:current (2320)

### 9.6.1.3.325 pfsupplies

PF power supplies

member	type	description
desc_supply	desc_supply (9.6.1.3.138)	Description of the power supplies
voltage	exp1D (9.6.1.3.195)	Voltage at the supply output [V]; Time-dependent; Vector (nsupplies)
current	exp1D (9.6.1.3.195)	Current at the supply output, defined positive if it flows from point 1 to point 2 of the component in the pfcircuit description [A]; Time-dependent; Vector (nsupplies)

Type of: pfsystems:pfsupplies (2034)

### 9.6.1.3.326 phaseellipse

Phase ellipse characteristics

member	type	description
invcurvrad	vecflt_type (9.6.1.2.13)	Inverse curvature radii for the phase ellipse [m <sup>-1</sup> ], positive/negative for divergent/convergent beams, Vector (2). Time-dependent
angle	float (9.6.1.1.1)	Rotation angle for the phase ellipse [rd], Float. Time-dependent

Type of: rfbeam:phaseellipse (2351)

### 9.6.1.3.327 planecoil

Plane coil description

member	type	description
coordinates	rz1D (9.6.1.3.356)	Coordinate points of centre of conductor; vectors(nelements)
hlength	vecflt_type (9.6.1.2.13)	Half length perpendicular to plane where coil is defined; vector(nelements) [m].
radialhwidth	vecflt_type (9.6.1.2.13)	Half width, (outer contour-inner contour)/2; vector(nelements) [m].

Type of: tf\_desc.tfcoils:planecoil (2448)

### 9.6.1.3.328 plasmaComplexType

Description of incoming plasma

member	type	description
species	vecint.type (9.6.1.2.14)	Definition of plasma species. Index into wall/compositions/edgespecies. Integer vector (number of plasma species).
flux	matflt.type (9.6.1.2.10)	Plasma particle flux density from/to plasma facing wall surfaces [ $1/(m^2 s)$ ]. Positive means incoming onto the wall, negative means sent back into the plasma. Time-dependent; Float matrix (number of plasma species, number of discretization elements in the subgrid)
b	matflt.type (9.6.1.2.10)	Magnetic field vector at the surface [T]; Time-dependent; Float matrix (number of space dimensions, number of discretization elements in the subgrid). If two-dimensional: unit vectors with first coordinate perpendicular to the wall facing towards the plasma, second coordinate parallel to the surface (in the direction of the surface discretization), third dimension is zero. If three-dimensional: vector is relative to basis vectors stored in wall/wall3d/grid/basis with basis index as given in wall/wall3d/basis.index.
energy	matflt.type (9.6.1.2.10)	Total energy flux density of incoming particles of given species [ $W/m^2$ ]; Positive means incoming onto the wall, negative means sent back into the plasma. Time-dependent; Float matrix (number of plasma species, number of discretization elements in the subgrid)

Type of: wall2d:plasma (2475) | wall3d:plasma (2477)

### 9.6.1.3.329 plasmaedge

Plasma edge characteristics in front of the antenna.

member	type	description
npoints	integer (9.6.1.1.2)	Number of points in the distance grid. Integer
distance	vecflt.type (9.6.1.2.13)	Grid for electron density, defined as the perpendicular distance to the antenna waveguide plane (the origin being described in the position sub-structure) [m]. Vector (npoints). Time-dependent.
density	vecflt.type (9.6.1.2.13)	Electron density in front of the antenna [ $m^{-3}$ ]. Vector (npoints). Time-dependent.

Type of: antenna.lh:plasmaedge (2053)

### 9.6.1.3.330 pol\_decomp

TO BE REMOVED, being replaced by e.components and grid. Kept only to make smooth transition between data-type versions. [Poloidal decomposition of the wave fields. Uses the flux surface grid in grid.1d.]

member	type	description
mpol	vecint.type (9.6.1.2.14)	Poloidal mode numbers; Vector (nmpol)
e.plus	array3dfilt.type (9.6.1.2.2)	Magnitude of poloidal Fourier decomposition of left hand polarised component of the wave electric field [V/m]; Time-dependent; Array 3D (ntor, npsi, nmpol)
e.plus.ph	array3dfilt.type (9.6.1.2.2)	Phase of poloidal Fourier decomposition of left hand polarised component of the wave electric field [rad]; Time-dependent; Array 3D (ntor, npsi, nmpol)
e.minus	array3dfilt.type (9.6.1.2.2)	Magnitude of poloidal Fourier decomposition of right hand polarised component of the wave electric field; Time-dependent (V/m); Array 3D (ntor, npsi, nmpol)
e.minus.ph	array3dfilt.type (9.6.1.2.2)	Phase of poloidal Fourier decomposition of right hand polarised component of the wave electric field [rad]; Time-dependent; Array 3D (ntor, npsi, nmpol)
e.norm	array3dfilt.type (9.6.1.2.2)	Magnitude of poloidal Fourier decomposition of wave electric field normal to a flux surface [V/m]; Time-dependent; Array 3D (ntor, npsi, nmpol)
e.norm.ph	array3dfilt.type (9.6.1.2.2)	Phase of poloidal Fourier decomposition of wave electric field normal to a flux surface [rad]; Time-dependent; Array 3D (ntor, npsi, nmpol)
e.binorm	array3dfilt.type (9.6.1.2.2)	Magnitude of poloidal Fourier decomposition of wave electric field tangent to a flux surface [V/m]; Time-dependent; Array 3D (ntor, npsi, nmpol)
e.binorm.ph	array3dfilt.type (9.6.1.2.2)	Phase of poloidal Fourier decomposition of wave electric field tangent to a flux surface [rad]; Time-dependent; Array 3D (ntor, npsi, nmpol)
e.para	array3dfilt.type (9.6.1.2.2)	Magnitude of poloidal Fourier decomposition of parallel wave electric field [V/m]; Time-dependent; Array 3D (ntor, npsi, nmpol)
e.para.ph	array3dfilt.type (9.6.1.2.2)	Phase of poloidal Fourier decomposition of parallel wave electric field [rad]; Time-dependent; Array 3D (ntor, npsi, nmpol)
b.norm	array3dfilt.type (9.6.1.2.2)	Magnitude of poloidal Fourier decomposition of wave magnetic field normal to a flux surface [T]; Time-dependent; Array 3D (ntor, npsi, nmpol)
b.norm.ph	array3dfilt.type (9.6.1.2.2)	Phase of poloidal Fourier decomposition of normal wave magnetic field [rad]; Time-dependent; Array 3D (ntor, npsi, nmpol)
b.binorm	array3dfilt.type (9.6.1.2.2)	Magnitude of poloidal Fourier decomposition of wave magnetic field tangent to a flux surface [T]; Time-dependent; Array 3D (ntor, npsi, nmpol)
b.binorm.ph	array3dfilt.type (9.6.1.2.2)	Phase of poloidal Fourier decomposition of wave magnetic field tangent to a flux surface [rad]; Time-dependent; Array 3D (ntor, npsi, nmpol)
b.para	array3dfilt.type (9.6.1.2.2)	Magnitude of Fourier decomposition of wave magnetic field parallel to the equilibrium magnetic field [T]; Time-dependent; Array 3D (ntor, npsi, nmpol)
b.para.ph	array3dfilt.type (9.6.1.2.2)	Phase of Fourier decomposition of wave magnetic field parallel to the equilibrium magnetic field [T]; Time-dependent; Array 3D (ntor, npsi, nmpol)



member	type	description
k_perp	array3dflt.type (9.6.1.2.2)	Perpendicular wave number [T]; Time-dependent; Array 3D (ntor, npsi, nmpol)

Type of: fullwave:pol\_decomp (2204)

### 9.6.1.3.331 polarimetry

This structure accomodates the polarimetry setup and measurements of a mse diagnostic, as widely used in fusion devices. The final measurement is the  $\tan(\gamma)$  where  $\gamma$  is the polarization angle of a particular spectral mse component.

member	type	description
setup	msediag_setup_polarimetry (9.6.1.3.280)	diagnostic setup information
measure	exp1D (9.6.1.3.195)	Measured value (MSE angle $\gamma$ [rad]). Time-dependent; Vector (nchords)

Type of: msediag:polarimetry (2028)

### 9.6.1.3.332 polarization

Wave field polarization along the ray/beam.

member	type	description
epol_p_re	vecflt.type (9.6.1.2.13)	Real part of the left hand polarized electric field (rotating with the ions), Vector (npoints). Time-dependent
epol_p_im	vecflt.type (9.6.1.2.13)	Imaginary part of the left hand polarized electric field (rotating with the ions), Vector (npoints). Time-dependent
epol_m_re	vecflt.type (9.6.1.2.13)	Real part of the right hand polarized electric field (rotating with the electrons), Vector (npoints). Time-dependent
epol_m_im	vecflt.type (9.6.1.2.13)	Imaginary part of the right hand polarized electric field (rotating with the electrons), Vector (npoints). Time-dependent
epol_par_re	vecflt.type (9.6.1.2.13)	Real part of the electric field polarization vector in the magnetic field direction, Vector (npoints). Time-dependent
epol_par_im	vecflt.type (9.6.1.2.13)	Imaginary part of the electric field polarization vector in the magnetic field direction, Vector (npoints). Time-dependent

Type of: beamtracing:polarization (2063)

### 9.6.1.3.333 power\_conv\_component

Description of the components of the power conversion system. Array of structure (ncomp).

member	type	description
name	string (9.6.1.1.3)	name of the component
temp_in	float (9.6.1.1.1)	temperature of the input [K];Scalar
temp_out	float (9.6.1.1.1)	temperature of the output [K];Scalar
press_in	float (9.6.1.1.1)	Pressure of the input [Pa];Scalar
press_out	float (9.6.1.1.1)	Pressure of the output [Pa];Scalar
power	float (9.6.1.1.1)	electric consumption by the component; (consumption power)[W];Scalar
flow	float (9.6.1.1.1)	Flow through the component [kg/s]; Scalar

Type of: circuits:component (2071)

### 9.6.1.3.334 power\_exchange

member	type	description
dep_pow	vecflt.type (9.6.1.2.13)	Power deposited in each bb module (the reference outboard module if only value is given) [W]; Vector(nmodules)
dep_fw	float (9.6.1.1.1)	Power deposited in the first wall (heat flux + neutrons) [W]; Scalar
dep_sg	float (9.6.1.1.1)	Power deposited in the stiffening grid (neutrons) [W]; Scalar
dep_cp	float (9.6.1.1.1)	Power deposited in the cooling plates (neutrons) [W]; Scalar
dep_lp	float (9.6.1.1.1)	Power deposited in the Pb-15.7Li (neutrons) [W]; Scalar

member	type	description
dep_man	float (9.6.1.1.1)	Power deposited in the manifolds (neutrons) [W]; Scalar
dep_pl	float (9.6.1.1.1)	Power deposited in the protect layer (made of tungsten) (neutrons) [W]; Scalar
rec_fw	float (9.6.1.1.1)	Power recovered from He in first wall channels [W]; Scalar
rec_sg	float (9.6.1.1.1)	Power recovered from He in stiffening grid channels [W]; Scalar
rec_cp	float (9.6.1.1.1)	Power recovered from He in cooling plates channels [W]; Scalar
pow_dens_fw	float (9.6.1.1.1)	Peak energy deposition in first wall [W.m <sup>-3</sup> ]; Scalar
pow_dens_bz	float (9.6.1.1.1)	Peak energy deposition in breeding zone [W.m <sup>-3</sup> ]; Scalar
pow_dens_bz10	float (9.6.1.1.1)	Peak energy deposition in breeding zone (first ten centimeters) [W.m <sup>-3</sup> ]; Scalar
pow_dens_bp	float (9.6.1.1.1)	Peak energy deposition in back plate [W.m <sup>-3</sup> ]; Scalar
pow_dens_man	float (9.6.1.1.1)	Peak energy deposition in manifold [W.m <sup>-3</sup> ]; Scalar
pow_dens_sh	float (9.6.1.1.1)	Peak energy deposition in shield [W.m <sup>-3</sup> ]; Scalar

Type of: mode\_neutr:pow\_exchange (2266)

### 9.6.1.3.335 powerflow

Power flow along the ray/beam.

member	type	description
phi_perp	vecflt.type (9.6.1.2.13)	Normalized power flow in the direction perpendicular to the magnetic field; Vector (npoints). Time-dependent
phi_par	vecflt.type (9.6.1.2.13)	Normalized power flow in the direction parallel to the magnetic field; Vector (npoints). Time-dependent
power_e	vecflt.type (9.6.1.2.13)	Power absorbed along the beam by electrons [W]; Vector (npoints). Time-dependent
power_i	matflt.type (9.6.1.2.10)	Power absorbed along the beam by an ion species [W]; Matrix (npoints, nion). Time-dependent

Type of: beamtracing:powerflow (2063)

### 9.6.1.3.336 profiles1d

Profiles derived from the fields solved in the transport equations, or from experiment.

member	type	description
pe	coreprofile (9.6.1.3.122)	Electron pressure [Pa]; Time-dependent;
dpedt	coreprofile (9.6.1.3.122)	Time derivative of the electron pressure [Pa/s]; Time-dependent;
pi	coreprofion (9.6.1.3.123)	Ion pressure [Pa]; Time-dependent;
pi_tot	coreprofile (9.6.1.3.122)	Total ion pressure (sum of the species) [Pa]; Time-dependent;
dpi_totdt	coreprofile (9.6.1.3.122)	Time derivative of the total ion pressure [Pa/s]; Time-dependent;
pr_th	coreprofile (9.6.1.3.122)	Thermal pressure (electrons+ions) [Pa]; Time-dependent;
pr_perp	coreprofile (9.6.1.3.122)	Total perpendicular pressure (electrons+ions, thermal+non-thermal) [Pa]; Time-dependent;
pr_parallel	coreprofile (9.6.1.3.122)	Total parallel pressure (electrons+ions, thermal+non-thermal) [Pa]; Time-dependent;
jtot	coreprofile (9.6.1.3.122)	total parallel current density = average(jtot.B) / B0, where B0 = coreprof/toroid.field/b0 [A/m <sup>2</sup> ]; Time-dependent;
jni	coreprofile (9.6.1.3.122)	non-inductive parallel current density = average(jni.B) / B0, where B0 = coreprof/toroid.field/b0 [A/m <sup>2</sup> ]; Time-dependent;
jphi	coreprofile (9.6.1.3.122)	total toroidal current density = average(jphi/R) / average(1/R) [A/m <sup>2</sup> ]; Time-dependent;
joh	coreprofile (9.6.1.3.122)	ohmic parallel current density = average(joh.B) / B0, where B0 = coreprof/toroid.field/b0 [A/m <sup>2</sup> ]; Time-dependent;
vloop	coreprofile (9.6.1.3.122)	Toroidal loop voltage [V]. Time-dependent.
sigmapar	coreprofile (9.6.1.3.122)	Parallel conductivity [ohm <sup>-1</sup> .m <sup>-1</sup> ]. Time-dependent.
qoh	sourcecel (9.6.1.3.404)	ohmic heating [W/m <sup>3</sup> ]; Time-dependent;
qei	coreprofile (9.6.1.3.122)	Collisional heat transfer from electrons to ions (equipartition term) [W/m <sup>3</sup> ]; Time-dependent;
eparallel	coreprofile (9.6.1.3.122)	Parallel electric field = average(E.B) / B0, where B0 = coreprof/toroid.field/b0 [V.m <sup>-1</sup> ]. Time-dependent.
e.b	coreprofile (9.6.1.3.122)	Average(E.B) [V.T.m <sup>-1</sup> ]. Time-dependent.
q	coreprofile (9.6.1.3.122)	Safety factor profile; Time-dependent;
shear	coreprofile (9.6.1.3.122)	Magnetic shear profile; Time-dependent;
ns	coreprofion (9.6.1.3.123)	Density of fast ions, for the various ion species [m <sup>-3</sup> ]; Time-dependent;
mtor	coreprofion (9.6.1.3.123)	Toroidal momentum of the various ion species [UNITS?]; Time-dependent;
wtor	coreprofion (9.6.1.3.123)	Angular toroidal rotation frequency of the various ion species [s <sup>-1</sup> ]; Time-dependent;

member	type	description
zeff	coreprofile (9.6.1.3.122)	Effective charge profile; Time-dependent;
bpol	coreprofile (9.6.1.3.122)	Average poloidal magnetic field, defined as $\sqrt{\text{ave}(\text{grad } \rho^2/R^2)}$ .dpsi/drho [T]. Time-dependent.
dvprimedt	coreprofile (9.6.1.3.122)	Time derivative of the radial derivative of the volume enclosed in the flux surface, i.e. $d/dt(dV/drho.tor)$ [ $\text{m}^2.\text{s}^{-1}$ ]; Time-dependent.

Type of: coreprof:profiles1d (2008)

### 9.6.1.3.337 profiles\_1d

output profiles as a function of the poloidal flux

member	type	description
psi	vecflt_type (9.6.1.2.13)	Poloidal flux [Wb], without $1/2\pi$ and such that $B_p =  \text{grad } \psi  / R / 2 / \pi$ . Time-dependent; Vector (npsi)
phi	vecflt_type (9.6.1.2.13)	toroidal flux [Wb]; Time-dependent; Vector (npsi)
pressure	vecflt_type (9.6.1.2.13)	pressure profile as a function of the poloidal flux [Pa]; Time-dependent; Vector (npsi)
F.dia	vecflt_type (9.6.1.2.13)	diamagnetic profile ( $R B_\phi$ ) [T m]; Time-dependent; Vector (npsi)
pprime	vecflt_type (9.6.1.2.13)	psi derivative of the pressure profile [Pa/Wb]; Time-dependent; Vector (npsi)
ffprime	vecflt_type (9.6.1.2.13)	psi derivative of F.dia multiplied with F.dia [ $\text{T}^2 \text{m}^2/\text{Wb}$ ]; Time-dependent; Vector (npsi)
jphi	vecflt_type (9.6.1.2.13)	flux surface averaged toroidal current density = $\text{average}(j_\phi/R) / \text{average}(1/R)$ [ $\text{A}/\text{m}^2$ ]; Time-dependent; Vector (npsi)
jparallel	vecflt_type (9.6.1.2.13)	flux surface averaged parallel current density = $\text{average}(j_\parallel) / B_0$ , where $B_0 = \text{equilibrium}/\text{global.param}/\text{toroid.field}/b_0$ ; [ $\text{A}/\text{m}^2$ ]; Time-dependent; Vector (npsi)
q	vecflt_type (9.6.1.2.13)	Safety factor = $d\psi/d\psi$ [-]; Time-dependent; Vector (npsi)
shear	vecflt_type (9.6.1.2.13)	Magnetic shear, defined as $\rho.tor/q*dq/drho.tor$ [-]; Time-dependent; Vector (npsi)
r.inboard	vecflt_type (9.6.1.2.13)	radial coordinate (major radius) at the height and on the left of the magnetic axis [m]; Time-dependent; Vector (npsi)
r.outboard	vecflt_type (9.6.1.2.13)	radial coordinate (major radius) at the height and on the right of the magnetic axis [m]; Time-dependent; Vector (npsi)
rho.tor	vecflt_type (9.6.1.2.13)	Toroidal flux coordinate [m], to be used by the ETS and in many CPOs (coreprof, ...). Defined as $\sqrt{(\psi/\pi)/B_0}$ , where $B_0 = \text{equilibrium}/\text{global.param}/\text{toroid.field}/b_0$ . Time-dependent; Vector (npsi)
dpsidrho.tor	vecflt_type (9.6.1.2.13)	$d\psi/drho.tor$ [Wb/m]; Time-dependent; Vector (npsi)
rho.vol	vecflt_type (9.6.1.2.13)	Normalised radial coordinate related to the plasma volume. Defined as $\sqrt{(\text{volume} / \text{volume}[\text{LCFS}])}$ . Time-dependent; Vector (npsi)
beta.pol	vecflt_type (9.6.1.2.13)	poloidal beta (inside the magnetic surface); Time-dependent; Vector (npsi)
li	vecflt_type (9.6.1.2.13)	internal inductance (inside the magnetic surface); Time-dependent; Vector (npsi)
elongation	vecflt_type (9.6.1.2.13)	Elongation; Time-dependent; Vector (npsi)
tria_upper	vecflt_type (9.6.1.2.13)	Upper triangularity profile; Time-dependent; Vector (npsi)
tria_lower	vecflt_type (9.6.1.2.13)	Lower triangularity profile; Time-dependent; Vector (npsi)
volume	vecflt_type (9.6.1.2.13)	Volume enclosed in the flux surface [ $\text{m}^3$ ]; Time-dependent; Vector (npsi)
vprime	vecflt_type (9.6.1.2.13)	Radial derivative of the volume enclosed in the flux surface with respect to psi, i.e. $dV/d\psi$ [ $\text{m}^3/\text{Wb}$ ]; Time-dependent; Vector (npsi)
dvdrho	vecflt_type (9.6.1.2.13)	Radial derivative of the volume enclosed in the flux surface with respect to rho.tor, i.e. $dV/drho.tor$ [ $\text{m}^2$ ]; Time-dependent; Vector (npsi)
area	vecflt_type (9.6.1.2.13)	Cross-sectional area of the flux surface [ $\text{m}^2$ ]; Time-dependent; Vector (npsi)
aprime	vecflt_type (9.6.1.2.13)	Radial derivative of the cross-sectional area of the flux surface with respect to psi, i.e. $darea/d\psi$ [ $\text{m}^2/\text{Wb}$ ]; Time-dependent; Vector (npsi)
surface	vecflt_type (9.6.1.2.13)	Surface area of the flux surface [ $\text{m}^2$ ]; Time-dependent; Vector (npsi)
frap	vecflt_type (9.6.1.2.13)	Trapped particle fraction; Time-dependent; Vector (npsi)
gm1	vecflt_type (9.6.1.2.13)	$\text{average}(1/R^2)$ ; Time-dependent; Vector (npsi)
gm2	vecflt_type (9.6.1.2.13)	$\text{average}(\text{grad}.\rho^2/R^2)$ ; Time-dependent; Vector (npsi)
gm3	vecflt_type (9.6.1.2.13)	$\text{average}(\text{grad}.\rho^2)$ ; Time-dependent; Vector (npsi)
gm4	vecflt_type (9.6.1.2.13)	$\text{average}(1/B^2)$ [ $\text{T}^{-2}$ ]; Time-dependent; Vector (npsi)
gm5	vecflt_type (9.6.1.2.13)	$\text{average}(B^2)$ [ $\text{T}^2$ ]; Time-dependent; Vector (npsi)
gm6	vecflt_type (9.6.1.2.13)	$\text{average}(\text{grad}.\rho^2/B^2)$ [ $\text{T}^{-2}$ ]; Time-dependent; Vector (npsi)
gm7	vecflt_type (9.6.1.2.13)	$\text{average}(\text{grad}.\rho)$ ; Time-dependent; Vector (npsi)
gm8	vecflt_type (9.6.1.2.13)	$\text{average}(R)$ ; Time-dependent; Vector (npsi)
gm9	vecflt_type (9.6.1.2.13)	$\text{average}(1/R)$ ; Time-dependent; Vector (npsi)
b.av	vecflt_type (9.6.1.2.13)	$\text{average}(B)$ ; Time-dependent; Vector (npsi)
b.min	vecflt_type (9.6.1.2.13)	minimum(B) on the flux surface; Time-dependent; Vector (npsi)
b.max	vecflt_type (9.6.1.2.13)	maximum(B) on the flux surface; Time-dependent; Vector (npsi)
omega	vecflt_type (9.6.1.2.13)	Toroidal rotation angular frequency (assumed constant on the flux surface) [rad/s]; Time-dependent; Vector (npsi)

member	type	description
omegaprime	vecflt_type (9.6.1.2.13)	Psi derivative of the toroidal rotation angular frequency (assumed constant on the flux surface) [rad/(s.Wb)]; Time-dependent; Vector (npsi)
mach_a	vecflt_type (9.6.1.2.13)	Alfvenic Mach number; Time-dependent; Vector (npsi)
phi_flow	vecflt_type (9.6.1.2.13)	Poloidal flow function $\phi_{flow} = \rho * v_{pol} / B_{pol} [kg / (V.s^2)]$ where $\rho$ is mass density; Time-dependent; Vector (npsi)
s_flow	vecflt_type (9.6.1.2.13)	Flux function in the closure equation $p = S(\psi) \rho^\gamma$ ; Entropy ( $\gamma = 5/3$ ) or Temperature ( $\gamma = 1$ ); Time-dependent; Vector (npsi)
h_flow	vecflt_type (9.6.1.2.13)	flow function $h_{flow} = \gamma / (\gamma - 1) * s_{flow} * \rho^{\gamma - 1} + 0.5 * (\phi_{flow} * B / \rho)^2 - 0.5 * (R * \omega)^2 [m^2 / s^2]$ ; Time-dependent; Vector (npsi)
rho_mass	vecflt_type (9.6.1.2.13)	Mass density [kg/m <sup>3</sup> ]; Time-dependent; Vector (npsi)

Type of: equilibrium:profiles\_1d (2017)

### 9.6.1.3.338 psi

Poloidal magnetic flux [Wb]; Time-dependent;

member	type	description
value	vecflt_type (9.6.1.2.13)	Signal value [Wb]; Time-dependent; Vector (nrho)
ddrho	vecflt_type (9.6.1.2.13)	Radial derivative (dvalue/drho_tor) [Wb.m <sup>-1</sup> ]; Time-dependent; Vector (nrho)
d2drho2	vecflt_type (9.6.1.2.13)	Second order radial derivative (d2value/drho_tor2) [Wb.m <sup>-2</sup> ]; Time-dependent; Vector (nrho)
ddt_rhotorn	vecflt_type (9.6.1.2.13)	Time derivative of the poloidal flux at constant rho_tor_norm [V]. Time-dependent.
ddt_phi	vecflt_type (9.6.1.2.13)	Time derivative of the poloidal flux at constant toroidal flux [V]. Time-dependent.
source	string (9.6.1.1.3)	Source of the profile (any comment describing the origin of the profile : code, path to diagnostic signals, massaging, ...); String
flag	integer (9.6.1.1.2)	Flag describing how the profile has been processed : 0-not calculated; 1-interpretative; 2-calculated by the transport solver; 3-calculated by a separate code : in that case only, description of the code provided in codeparam at the same level; 4-used value from the previous time step; Time-dependent; Scalar
boundary	boundary (9.6.1.3.67)	Boundary condition for the transport equation. Time-dependent.
jni	jni (9.6.1.3.240)	Non-inductive parallel current density [A/m <sup>2</sup> ]; Time-dependent;
sigma_par	coreprofile (9.6.1.3.122)	Parallel conductivity [ohm <sup>-1</sup> .m <sup>-1</sup> ]. Time-dependent
codeparam	codeparam (9.6.1.3.77)	Code parameters

Type of: coreprof:psi (2008)

### 9.6.1.3.339 putinfo

Structure which is type independent, describing the data item

member	type	description
putmethod	string (9.6.1.1.3)	Storage method for this data
putaccess	string (9.6.1.1.3)	Instructions to access the data using this method
putlocation	string (9.6.1.1.3)	Name of this data under this method
rights	string (9.6.1.1.3)	Access rights to this data

Type of: datainfo:putinfo (2130)

### 9.6.1.3.340 q

Safety factor

member	type	description
qvalue	vecflt_type (9.6.1.2.13)	Safety factor values; Time-dependent; Vector (nmeas)
position	rz1D (9.6.1.3.356)	Major radius of the given safety factor values [m]; Time-dependent; Vector (nmeas)
source	string (9.6.1.1.3)	Description or path to the source signal (diagnostic or genprof, from which to read all info on the signal), e.g. 'magdiag/bpol_probes/measure/value'. String
exact	integer (9.6.1.1.2)	1 means exact data, is not fitted; 0 means the equilibrium code does a least square fit; scalar integer
weight	vecflt_type (9.6.1.2.13)	weight given to the measurement ( $\chi = 0$ ); Time-dependent; Vector (nmeas)
sigma	vecflt_type (9.6.1.2.13)	standard deviation of the measurement; Time-dependent; Vector (nmeas)
calculated	vecflt_type (9.6.1.2.13)	Signal as recalculated by the equilibrium code; Time-dependent; Vector (nmeas)

member	type	description
chi2	vecflt.type (9.6.1.2.13)	chi <sup>2</sup> of (calculated-measured); Time-dependent; Vector (nmeas)

Type of: eqconstraint:q (2184)

### 9.6.1.3.341 reacprodType

Characterizes a reactant or product in an AMNS reaction.

member	type	description
label	string (9.6.1.1.3)	String identifier for reaction participant (e.g. "D", "e", "W", "CD4", "photon", "n").
constituents(:)	amns.constituentType (9.6.1.3.52)	Array specifying the constituents of this reactant/product; For an atom or ion the array will be of length 1, for a molecule there will be more than one element in the array; Vector (nconst)
role	identifier (9.6.1.3.233)	Identifier for the role of this participant in the reaction. For surface reactions distinguish between projectile and wall.
amn	float (9.6.1.1.1)	Mass of the participant (amu).
relative	integer (9.6.1.1.2)	This is a flag indicating that charges are absolute (if set to 0), relative (if 1) or irrelevant (-1); relative would be used to categorize the ionization reactions from i to i+1 for all charge states; in the case of bundles, the +1 relative indicates the next bundle.
za	float (9.6.1.1.1)	Charge of the participant. Not set if not important (e.g. for a nuclear reaction). For the case where we are describing a set of reactions for different charge states, then this is the relative charge.
multiplicity	float (9.6.1.1.1)	Multiplicity in the reaction
metastable	vecint.type (9.6.1.2.14)	An array identifying the metastable; if zero-length, then not a metastable; if of length 1, then the value indicates the electronic level for the metastable (mostly used for atoms/ions); if of length 2, then the 1st would indicate the electronic level and the second the vibrational level for the metastable (mostly used for molecules and molecular ions); if of length 3, then the 1st would indicate the electronic level, the second the vibrational level and the third the rotational level for the metastable (mostly used for molecules and molecular ions)
metastable_label	string (9.6.1.1.3)	Label identifying in text form the metastable

Type of: amns\_processType:product (2050) | amns\_processType:reactant (2050)

### 9.6.1.3.342 react

In the reactor region

member	type	description
he_fr	float (9.6.1.1.1)	Coolant mass flow rate in the whole reactor [Kg/s]; Scalar
lp_fr	float (9.6.1.1.1)	Pb-15.7Li mass flow rate in the whole reactor [Kg/s]; Scalar
he_dp	float (9.6.1.1.1)	Coolant pressure drops in the reactor (compressing pipelines) [Pa]; Scalar
lipb_dp	float (9.6.1.1.1)	Pb-15.7Li pressure drops in the reactor [Pa]; Scalar

Type of: hcll\_bb:react (2227)

### 9.6.1.3.343 rectanglexyz

Rectangle defined by its four corners. These form an ordered sequence: point00, point01, point11, point10. Here the first point can be calculated from the other three as point00=point01+point10-point11, thus the rectangle is defined by the triplet (point01, point11, point10). The normal vector of this rectangle is defined to be in the direction (point01-point11)x(point10-point11).

member	type	description
point01	xyz0D (9.6.1.3.506)	Point 01 on the rectangle
point11	xyz0D (9.6.1.3.506)	Point 11 on the rectangle
point10	xyz0D (9.6.1.3.506)	Point 10 on the rectangle

Type of: nbi\_nbi\_unit\_wall\_surface:rectangle (2280)

### 9.6.1.3.344 recycling neutrals

Recycling coefficients

member	type	description
particles	vecflt.type (9.6.1.2.13)	Particle recycling coefficient corresponding to the conversion to the neutral type INEUT. Vector(nneut.). Time-dependent.
energy	vecflt.type (9.6.1.2.13)	Energy recycling coefficient corresponding to the conversion to the neutral type INEUT. Vector(nneut.). Time-dependent.

Type of: coefficients\_neutrals:recycling (2075)

### 9.6.1.3.345 reduced

Structure for a reduced data signal (0D data)

member	type	description
value	float (9.6.1.1.1)	Data value; Real
source	string (9.6.1.1.3)	Path to the source signal (diagnostic or genprof, from which to read all info on the signal); String
time	float (9.6.1.1.1)	Time (exact time slice used from the time array of the source signal); Real

### 9.6.1.3.346 refl\_receive

Reflectometry signal; experimental or code output. Time-dependent. Vector(nreceivers); If output from ERC3D, contains short, high-resolution (ps) time series anchored to the time of the CPO or, for a combination of runs, longer, coarse time signals. For experimental signals, time series may span much longer durations. For slowly varying signals, may contain only one point and have a separate CPO instance with different time field for every point. For code output, the signals are usually normalised to unity power.

member	type	description
name	string (9.6.1.1.3)	Signal name
raw_signal	t.series.real (9.6.1.3.416)	Raw antenna signal, possibly code dependent, may not always be available; usually without mixing of local oscillator; Time series; Vector (ntime.raw); Time-dependent
io_signal	t.series.real (9.6.1.3.416)	Local oscillator signal, for mixing with raw signal; Time series; Vector (ntime.raw); Time-dependent
iq_receiver	t.series.cplx (9.6.1.3.415)	I and Q signals from the receiver; already processed by code (or hardware); Time series; Vector (ntime.receiver); Time-dependent
antenna_ind	integer (9.6.1.1.2)	Index of the receiving antenna in the antennas vector, starting at 0

Type of: reflectomet:refl\_receive (2037)

### 9.6.1.3.347 reflectometry\_antennas

Vector of reflectometry antenna descriptions. These include radiation fields as well as material antenna structures (feeds, horns, later mirrors); Vector(nantennas); refl\_received entries refer to their antenna by index in this array.

member	type	description
name	string (9.6.1.1.3)	Antenna name
type	identifier (9.6.1.3.233)	Antenna type: 1: sending, 2: receiving, 3: both
origin	origin (9.6.1.3.306)	NO DOCS
radfield	reflectometry_radfield (9.6.1.3.348)	Complex valued radiation field for injection into grid; Can be a Gaussian, or a waveguide mode, or an arbitrary E field. The latter method can be used with measured radiation patterns of actual antennas. Needs to be matched with any material structures in the geometry section of this CPO. Frequency dependence: in the launchsignal part, the launch frequency can be varied arbitrarily, which changes the radiation field (or Gaussian waist sizes) when radiated from a fixed size antenna; therefore, all entries here can be specified frequency-dependent; Time-dependent
geometry	float (9.6.1.1.1)	To be defined: annotation and type
launchsignal	launchsignal (9.6.1.3.249)	NO DOCS

Type of: reflectomet:antennas (2037)

### 9.6.1.3.348 reflectometry\_radfield

Complex valued radiation field for injection into grid; Can be a Gaussian, or a waveguide mode, or an arbitrary E field. The latter method can be used with measured radiation patterns of actual antennas. Needs to be matched with any material structures in the geometry section of this CPO. Frequency dependence: in the launchsignal part, the launch frequency can be varied arbitrarily, which changes the radiation field (or Gaussian

waist sizes) when radiated from a fixed size antenna; therefore, all entries here can be specified frequency-dependent

member	type	description
type	identifier (9.6.1.3.233)	Identify type of source: 0: Gaussian, 1: waveguide mode, 2: arbitrary E field; corresponding sub-structure must be filled to provide the information.
position	vecflt_type (9.6.1.2.13)	Center position in local x-y-z coordinate system [m]; Vector(3)
gaussian(:)	reflectometry_radfield_gaussian (9.6.1.3.349)	Parameters if radiation field is a pure Gaussian; major axes of the Gaussian are aligned with the x and y axis of the local coordinate system given in origin; linear polarisation only. Time-dependent
efield(:)	reflectometry_radifield_efield (9.6.1.3.350)	complex electric field at the aperture, given as a 2d grid in the local x and y directions (corresponding to dim1 and dim2); Time-dependent

Type of: reflectometry\_antennas:radfield (2344)

### 9.6.1.3.349 reflectometry\_radfield\_gaussian

Parameters if radiation field is a pure Gaussian; major axes of the Gaussian are aligned with the x and y axis of the local coordinate system given in origin; linear polarisation only; Time-dependent

member	type	description
aperture	simp_apert (9.6.1.3.397)	Physical limits of the Gaussian wave field; any rotation here is at odds with the Gaussian geometry
waistsize	vecflt_type (9.6.1.2.13)	Beam waist size [m]; Vector(2)
waistzpos	vecflt_type (9.6.1.2.13)	Beam waist position along local z axis [m]; Vector(2)
tiltangle	vecflt_type (9.6.1.2.13)	tilt angle relative to local z axis [rad]; Vector(2)
polar_angle	vecflt_type (9.6.1.2.13)	Polarisation angle around local z [rad]; 0 means along the local x axis, i.e. vertical if all angles in the origin field are 0; Scalar
frequency	float (9.6.1.1.1)	Frequency for this occurrence of the gaussian/efield/wgmode CPO [Hz]; Scalar; can be zero of no frequency dependence is desired and only one CPO is given; Time-dependent

Type of: reflectometry\_radfield:gaussian (2345)

### 9.6.1.3.350 reflectometry\_radifield\_efield

complex electric field at the aperture, given as a 2d grid in the local x and y directions (corresponding to dim1 and dim2); Time-dependent

member	type	description
grid2d	reggrid (9.6.1.3.351)	Coordinate values for the grid for the electric field arrays. Vector(ndim1) and Vector(ndim2); Time-dependent
e1	matcplx_type (9.6.1.2.9)	Electric field component along local x direction [V/m]. Matrix(ndim1,ndim2); Time-dependent
e2	matcplx_type (9.6.1.2.9)	Electric field component along local y direction [V/m]. Matrix(ndim1,ndim2); Time-dependent
frequency	float (9.6.1.1.1)	Frequency for this occurrence of the gaussian/efield/wgmode CPO [Hz]; Scalar; can be zero of no frequency dependence is desired and only one CPO is given; Time-dependent

Type of: reflectometry\_radfield:efield (2345)

### 9.6.1.3.351 reggrid

Generic structure for a regular grid

member	type	description
dim1	vecflt_type (9.6.1.2.13)	First dimension values; Vector (ndim1)
dim2	vecflt_type (9.6.1.2.13)	Second dimension values; Vector (ndim2)

Type of: coord\_sys:grid (2098) I reflectometry\_radifield\_efield:grid2d (2347)

### 9.6.1.3.352 rfmeasure

Measured values



member	type	description
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member	type	description
ti	expID (9.6.1.3.195)	Ion temperature [eV]. Vector (nchannels)

Type of: rfdiag:measure (2038)

### 9.6.1.3.353 rfsetup

diagnostic setup information

member	type	description
position	rzphiIDexp (9.6.1.3.363)	Position of the measurement. Time-dependent. Vector (nchannels)

Type of: rfdiag:setup (2038)

### 9.6.1.3.354 rfbeam

Beam characteristics

member	type	description
spot	spot (9.6.1.3.411)	Spot characteristics
phaseellipse	phaseellipse (9.6.1.3.326)	Phase ellipse characteristics

Type of: antenna\_ec:beam (2051) | antenna\_lh:beam (2053)

### 9.6.1.3.355 rz0D

Structure for one (R,Z) position (0D)

member	type	description
r	float (9.6.1.1.1)	Major radius [m]
z	float (9.6.1.1.1)	Altitude [m]

Type of: circularcoil:centre (2072) | current:rz\_reference (2126) | dist\_geometry\_0d:mag\_axis (2143) | distsource\_global\_param: (2162) | eqgeometry:active\_limit (2185) | eqgeometry:geom\_axis (2185) | eqgeometry:left\_low\_st (2185) | eqgeometry:left\_up\_st (2185) | eqgeometry:right\_low\_st (2185) | eqgeometry:right\_up\_st (2185) | mag\_axis:position (2253) | waves\_global\_param:mag\_axis (2492)

### 9.6.1.3.356 rz1D

Structure for list of R,Z positions (1D)

member	type	description
r	vecflt_type (9.6.1.2.13)	Major radius [m]
z	vecflt_type (9.6.1.2.13)	Altitude [m]

Type of: flush:position (2198) | isoflux:position (2236) | limiter\_unit:position (2247) | mhd\_ideal\_wall2d:position (2258) | mhd\_res\_wall2d:position (2261) | omnigen\_surf:rz (2297) | planecoil:coordinates (2324) | q:position (2337) | setup\_bprobe:position (2388) | solcurdiag\_sol\_current\_setup:position (2396) | straps:coord\_strap (2410) | wall\_blocks\_unit:position (2479) | wall\_vessel\_annular:inside (2486) | wall\_vessel\_annular:outside (2486) | xpts:position (2502)

### 9.6.1.3.357 rz1D\_npoints

Structure for list of R,Z positions (1D), with mention of the number of points relevant for a given time slice

member	type	description
r	vecflt_type (9.6.1.2.13)	Major radius [m]. Vector(max_npoints). Time-dependent
z	vecflt_type (9.6.1.2.13)	Altitude [m]. Vector(max_npoints). Time-dependent

member	type	description
npoints	integer (9.6.1.1.2)	Number of meaningful points in the above vectors at a given time slice. Time-dependent

### 9.6.1.3.358 rz1Dexp

Structure for list of R,Z positions (1D), with R and Z time-depent and experimental.

member	type	description
r	vecflt.type (9.6.1.2.13)	Major radius [m]. Vector(npoints). Time-dependent
z	vecflt.type (9.6.1.2.13)	Altitude [m]. Vector(npoints). Time-dependent

Type of: eqgeometry:boundary (2185) I eqgeometry:xpts (2185)

### 9.6.1.3.359 rz2D

Structure for list of R,Z positions (2D)

member	type	description
r	matflt.type (9.6.1.2.10)	Major radius [m]
z	matflt.type (9.6.1.2.10)	Altitude [m]

Type of: coord\_sys:position (2098) I geom\_iron:rzcoordinate (2222) I pfpageometry:rzcoordinate (2319)

### 9.6.1.3.360 rz3D

Structure for list of R,Z positions (3D)

member	type	description
r	array3dflt.type (9.6.1.2.2)	Major radius [m]
z	array3dflt.type (9.6.1.2.2)	Altitude [m]

Type of: pfgeometry:rzcoordinate (2318)

### 9.6.1.3.361 rzphi0D

Structure for a single R,Z,phi position (0D)

member	type	description
r	float (9.6.1.1.1)	Major radius [m]
z	float (9.6.1.1.1)	Altitude [m]
phi	float (9.6.1.1.1)	Toroidal angle [rad]

Type of: antenna\_ec:position (2051) I antenna\_lh:position (2053) I beamletgroup:position (2061) I fusiondiag\_voxels:centre (2220) I fusiondiag\_voxels:direction (2220) I msediag\_setup:pivot\_point (2276) I msediag\_setup:second\_point (2276) I origin:refpos (2303) I pellet\_geometry:pivot\_point (2310) I pellet\_geometry:second\_point (2310)

### 9.6.1.3.362 rzphi1D

Structure for list of R,Z,phi positions (1D)

member	type	description
r	vecflt.type (9.6.1.2.13)	Major radius [m]
z	vecflt.type (9.6.1.2.13)	Altitude [m]
phi	vecflt.type (9.6.1.2.13)	Toroidal angle [rad]

Type of: beamlets:position (2062) I edges:edge\_rzphi (2179) I fusiondiag\_colliunit\_circ:centre (2209) I halpha\_setup:pivot\_point (2225) I halpha\_setup:second\_point (2225) I launches:position (2024) I lithsetup:position (2251) I msediag\_emiss\_chord:setup (2271) I pellet\_pathprofiles:position (2312) I setup\_line:pivot\_point (2390) I setup\_line:second\_point (2390) I setup\_line:third\_point (2390) I tsetup:position (2462)

### 9.6.1.3.363 rzphi1Dexp

Structure for list of R,Z,phi positions (1D) with experimental structure (value, abserror, relerror)

member	type	description
r	exp1D (9.6.1.3.195)	Major radius [m]
z	exp1D (9.6.1.3.195)	Altitude [m]
phi	exp1D (9.6.1.3.195)	Toroidal angle [rad]

Type of: cxsetup:position (2128) I ecemeasure:position (2169) I lang\_derived:position (2238) I lang\_measure:position (2239) I rfasetup:position (2350)

### 9.6.1.3.364 rzphi1Dexperimental

Structure for list of R,Z,phi positions (1D) with additional appinfo tags to have some nodes both in MD and DM

member	type	description
r	vecflt.type (9.6.1.2.13)	Major radius [m]
z	vecflt.type (9.6.1.2.13)	Altitude [m]
phi	vecflt.type (9.6.1.2.13)	Toroidal angle [rad]

Type of: setup\_line\_exp:pivot\_point (2391) I setup\_line\_exp:second\_point (2391) I setup\_line\_exp:third\_point (2391)

### 9.6.1.3.365 rzphi2D

Structure for list of R,Z,phi positions (2D)

member	type	description
r	matflt.type (9.6.1.2.10)	Major radius [m]
z	matflt.type (9.6.1.2.10)	Altitude [m]
phi	matflt.type (9.6.1.2.10)	Toroidal angle [rad]

Type of: fusiondiag\_colliunit\_poly:nodes (2210) I setup\_floops:position (2389)

### 9.6.1.3.366 rzphi3D

Structure for list of R,Z,phi positions (3D)

member	type	description
r	array3dfilt.type (9.6.1.2.2)	Major radius [m]
z	array3dfilt.type (9.6.1.2.2)	Altitude [m]
phi	array3dfilt.type (9.6.1.2.2)	Toroidal angle [rad]

Type of: turbcoordsys:position (2464)

### 9.6.1.3.367 rzphidrdzdphi1D

Structure for list of R,Z,phi positions and width dR dZ dphi (1D)

member	type	description
r	vecflt.type (9.6.1.2.13)	Position : major radius [m]
z	vecflt.type (9.6.1.2.13)	Position : altitude [m]
phi	vecflt.type (9.6.1.2.13)	Position : toroidal angle [rad]
dr	vecflt.type (9.6.1.2.13)	Width : major radius [m]
dz	vecflt.type (9.6.1.2.13)	Width : altitude [m]
dphi	vecflt.type (9.6.1.2.13)	Width : toroidal angle [rad]

Type of: msediag\_setup\_polarimetry:rzgamma (2277)

### 9.6.1.3.368 sawteeth\_diags

Inversion and mixing radii

member	type	description
shear1	float (9.6.1.1.1)	Magnetic shear at $q = 1$ [-]. Time-dependent. Real scalar.
rhotorn_q1	float (9.6.1.1.1)	Rho_tor_norm at $q=1$ radius [-]. Time-dependent. Real scalar.
rhotorn_inv	float (9.6.1.1.1)	Rho_tor_norm at inversion radius [-]. Time-dependent. Real scalar.
rhotorn_mix	float (9.6.1.1.1)	Rho_tor_norm at mixing radius [-]. Time-dependent. Real scalar.

Type of: sawteeth:diags (2039)

### 9.6.1.3.369 sawteeth\_profiles1d

Core profiles after sawtooth crash

member	type	description
ne	vecflt.type (9.6.1.2.13)	Electron density [ $m^{-3}$ ]. Time-dependent. Vector (nrho).
ni	matflt.type (9.6.1.2.10)	Ion density [ $m^{-3}$ ]. Time-dependent. Matrix (nrho,nion).
te	vecflt.type (9.6.1.2.13)	Electron temperature [eV]. Time-dependent. Vector (nrho).
ti	matflt.type (9.6.1.2.10)	Ion temperature [eV]. Time-dependent. Matrix (nrho,nion).
psi	vecflt.type (9.6.1.2.13)	Poloidal flux [Wb], without $1/2\pi$ and such that $B_p =  \text{grad } \psi  / R / 2 / \pi$ . Time-dependent. Vector (nrho).
phi	vecflt.type (9.6.1.2.13)	Toroidal flux [Wb]. Time-dependent. Vector (nrho).
psistar	vecflt.type (9.6.1.2.13)	$\Psi^* = \psi - \phi$ [Wb]. Time-dependent. Vector (nrho).
volume	vecflt.type (9.6.1.2.13)	Volume enclosed in the flux surface [ $m^3$ ]. Required to ensure particle and energy conservation during reconnection process (ndV and (nT)dV are conserved). Time-dependent. Vector (nrho).
q	vecflt.type (9.6.1.2.13)	Safety factor = $d\phi/d\psi$ [-]. Time-dependent. Vector (nrho).

Type of: sawteeth:profiles1d (2039)

### 9.6.1.3.370 scenario\_centre

central values of the profiles (at magnetic axis)

member	type	description
te0	scenario.ref (9.6.1.3.387)	central electron temperature [eV]. Time-dependent.
ti0	scenario.ref (9.6.1.3.387)	central ion temperature [eV]. Time-dependent.
ne0	scenario.ref (9.6.1.3.387)	central electron density [ $m^{-3}$ ]. Time-dependent.
ni0	scenario.ref (9.6.1.3.387)	central ion density [ $m^{-3}$ ]. Time-dependent.
shift0	scenario.ref (9.6.1.3.387)	central value of Shafranov shift [m]. Time-dependent.
psi0	scenario.ref (9.6.1.3.387)	pedestal poloidal flux [Wb]. Time-dependent.
phi0	scenario.ref (9.6.1.3.387)	central toroidal flux [Wb]. Time-dependent.
q0	scenario.ref (9.6.1.3.387)	central safety factor value []. Time-dependent.
Rmag	scenario.ref (9.6.1.3.387)	radius of magnetic axis [R]. Time-dependent.
Zmag	scenario.ref (9.6.1.3.387)	Z coordinate of magnetic axis [R]. Time-dependent.
vtor_0	scenario.ref (9.6.1.3.387)	central rotation velocity of selected impurity [m/s]. Time-dependent.

Type of: scenario:centre (2040)

### 9.6.1.3.371 scenario\_composition

Plasma composition (description of ion species).

member	type	description
amn	vecflt.type (9.6.1.2.13)	Atomic mass number (lumped ions are allowed); Vector (nion)
zn	vecflt.type (9.6.1.2.13)	Nuclear charge (lumped ions are allowed); Vector (nion)
zion	vecflt.type (9.6.1.2.13)	Ion charge (of the dominant ionisation state; lumped ions are allowed); Vector (nion)
imp_flag	vecint.type (9.6.1.2.14)	Multiple charge state calculation flag : 0-Only one charge state is considered; 1-Multiple charge state are considered and are described in impurity CPO; Vector (nion)
rot_imp_flag	vecint.type (9.6.1.2.14)	set to 1 for the impurity corresponding at the given toroidal rotation, otherwise = 0
pellet_amn	vecflt.type (9.6.1.2.13)	Atomic mass number (for pellet injector); Vector (nion)

member	type	description
pellet_zn	vecflt_type (9.6.1.2.13)	Nuclear charge (pellet injector); Vector (nion)
nbi_amn	vecflt_type (9.6.1.2.13)	Atomic mass number (for neutral beam injection); Vector (nion)
nbi_zn	vecflt_type (9.6.1.2.13)	Nuclear charge (for neutral beam injection); Vector (nion)

Type of: scenario:composition (2040)

### 9.6.1.3.372 scenario\_configuration

Strings describing the tokamak configuration

member	type	description
config	scenario_int (9.6.1.3.379)	plasma configuration (limiter/divertor ...) []. Time-dependent. Possible values : 0 = undetermined; 1 = poloidal limiter (ring); 2 = poloidal limiter (LFS); 3 = poloidal limiter (HFS); 4 = toroidal limiter (ring); 5 = toroidal limiter (segment); 6 = poloidal divertor; 7 = toroidal divertor (single null, ion drift in direction of divertor); 8 = toroidal divertor (single null, ion drift in opposite direction of divertor); 9 = toroidal divertor (double null).
lmode_sc	string (9.6.1.1.3)	name of the L-mode scaling law. String.
hmode_sc	string (9.6.1.1.3)	name of the H-mode scaling law. String.
core_sc	string (9.6.1.1.3)	name of the core plasma energy scaling law. String.
pedestal_sc	string (9.6.1.1.3)	name of the pedestal energy scaling law. String.
helium_sc	string (9.6.1.1.3)	name of the helium confinement time scaling law. String.
impurity_sc	string (9.6.1.1.3)	name of the impurities confinement time scaling law
l2h_sc	string (9.6.1.1.3)	name of the L-mode to H-mode power threshold scaling law. String.
tor_rot_sc	string (9.6.1.1.3)	name of the toroidal spontaneous rotation scaling law. String.
wall_mat	string (9.6.1.1.3)	chemical composition of the wall. String.
evap_mat	string (9.6.1.1.3)	chemical composition evaporated wall conditioning material. String.
lim_mat	string (9.6.1.1.3)	chemical composition of the limiter. String.
div_mat	string (9.6.1.1.3)	chemical composition of the divertor
coordinate	string (9.6.1.1.3)	name/definition of the internal coordinate of the simulator that are given by the data named rho
ecrh_freq	scenario_ref (9.6.1.3.387)	ECRH frequency [Hz]. Time-dependent.
ecrh_loc	scenario_ref (9.6.1.3.387)	position of maximum ECRH deposition on scale of rho [rho]. Time-dependent.
ecrh_mode	scenario_int (9.6.1.3.379)	polarisation of ecrh wave (0 = O mode, 1 = X mode) []. Time-dependent.
ecrh_tor_ang	scenario_ref (9.6.1.3.387)	toroidal angle of ECRH at resonance [rad] Time-dependent.
ecrh_pol_ang	scenario_ref (9.6.1.3.387)	poloidal angle of ECRH resonance position (0= LFS, pi/2 = top, -pi/2 = down, pi = HFS) [rad]. Time-dependent.
ecrh_harm	scenario_int (9.6.1.3.379)	harmonic number of the absorbed ecrh wave []. Time-dependent.
enbi	scenario_ref (9.6.1.3.387)	energy of the neutral beam [eV]. Time-dependent.
r_nbi	scenario_ref (9.6.1.3.387)	Major radius of tangence of NBI [m]. Time-dependent.
grad_b_drift	scenario_int (9.6.1.3.379)	direction of ion grad-B drift (1= to lower divertor, -1 = from lower divertor) []. Time-dependent.
icrh_freq	scenario_ref (9.6.1.3.387)	ICRH frequency [Hz]. Time-dependent.
icrh_scheme	string (9.6.1.1.3)	icrh scheme either : H_min_1; He3_min; T_harm_2; FW; FW_CD; FW_CCD
icrh_phase	scenario_ref (9.6.1.3.387)	ICRH antenna phasing [rad]. Time-dependent.
LH_freq	scenario_ref (9.6.1.3.387)	LHCD frequency [Hz]. Time-dependent.
LH_npar	scenario_ref (9.6.1.3.387)	LHCD parallel indice []. Time-dependent.
pellet_ang	scenario_ref (9.6.1.3.387)	pellet injection position (0= LFS, pi/2 = top, -pi/2 = down, pi = HFS) [rad]. Time-dependent.
pellet_v	scenario_ref (9.6.1.3.387)	pellet injection velocity [m/s]. Time-dependent.
pellet_nba	scenario_ref (9.6.1.3.387)	initial number of atoms in pellet []. Time-dependent.

Type of: scenario:configs (2040)

### 9.6.1.3.373 scenario\_confinement

characteristic confinement times

member	type	description
tau_e	scenario_ref (9.6.1.3.387)	thermal energy confinement time [s]. Time-dependent.
tau_l_sc	scenario_ref (9.6.1.3.387)	confinement time given by the selected L-mode scaling law [s]. Time-dependent.
tau_h_sc	scenario_ref (9.6.1.3.387)	confinement time given by the selected H-mode scaling law [s]. Time-dependent.
tau_he	scenario_ref (9.6.1.3.387)	Helium ashes confinement time [s]. Time-dependent.
tau_e_ee	scenario_ref (9.6.1.3.387)	electron energy confinement time [s]. Time-dependent.
tau_e_ii	scenario_ref (9.6.1.3.387)	ion energy confinement time [s]. Time-dependent.

member	type	description
tau_e_ei	scenario_ref (9.6.1.3.387)	energy equipartition characteristic time [s]. Time-dependent.
tau_cur_diff	scenario_ref (9.6.1.3.387)	characteristic time for current diffusion [s]. Time-dependent.
tau_i_rol	scenario_ref (9.6.1.3.387)	characteristic time for current decrease in tokamak equivalent R/L circuit [s]. Time-dependent.

Type of: scenario:confinement (2040)

### 9.6.1.3.374 scenario\_currents

data related to current sources and current diffusion

member	type	description
RR	scenario_ref (9.6.1.3.387)	plasma resistivity [ohm]. Time-dependent.
i_align	scenario_ref (9.6.1.3.387)	current drive alignment quality parameter (1 = good , 0 = bad). Time-dependent.
i_boot	scenario_ref (9.6.1.3.387)	bootstrap current [A]. Time-dependent.
i_cd_tot	scenario_ref (9.6.1.3.387)	total current drive [A]. Time-dependent.
i_eccd	scenario_ref (9.6.1.3.387)	Electron Cyclotron current drive [A]. Time-dependent.
i_fast_ion	scenario_ref (9.6.1.3.387)	fast ions bootstrap like current drive (i.e. fast alpha) [A]. Time-dependent.
i_fwcd	scenario_ref (9.6.1.3.387)	Fast Wave current drive [A]. Time-dependent.
i_lhcd	scenario_ref (9.6.1.3.387)	Lower Hybrid current drive [A]. Time-dependent.
i_nbicd	scenario_ref (9.6.1.3.387)	Neutral Beam Injection current drive [A]. Time-dependent.
i_ni_tot	scenario_ref (9.6.1.3.387)	total non inductive current [A]. Time-dependent.
i_ohm	scenario_ref (9.6.1.3.387)	ohmic current [A]. Time-dependent.
i_par	scenario_ref (9.6.1.3.387)	total plasma current (projected on B : <J.B <sub>z</sub> /B <sub>0</sub> ) [A]. Time-dependent.
i_runaway	scenario_ref (9.6.1.3.387)	runaway current [A]. Time-dependent.
v_loop	scenario_ref (9.6.1.3.387)	loop voltage @ LCMS / LFS , equatorial point [V]. Time-dependent.
v_meas	scenario_ref (9.6.1.3.387)	loop voltage measured on a coil [V]. Time-dependent.

Type of: scenario:currents (2040)

### 9.6.1.3.375 scenario\_edge

edge value (@ LCMS)

member	type	description
te_edge	scenario_ref (9.6.1.3.387)	edge electron temperature [eV]. Time-dependent.
ti_edge	scenario_ref (9.6.1.3.387)	edge ion temperature [eV]. Time-dependent.
ne_edge	scenario_ref (9.6.1.3.387)	edge electron density [m <sup>-3</sup> ]. Time-dependent.
ni_edge	scenario_ref (9.6.1.3.387)	edge ion density [m <sup>-3</sup> ]. Time-dependent.
psi_edge	scenario_ref (9.6.1.3.387)	edge poloidal flux [Wb]. Time-dependent.
phi_edge	scenario_ref (9.6.1.3.387)	edge toroidal flux [Wb]. Time-dependent.
rho_edge	scenario_ref (9.6.1.3.387)	edge value of internal simulator coordinate [m]. Time-dependent.
drho_edge_dt	scenario_ref (9.6.1.3.387)	time derivative of edge value of internal simulator coordinate [m/s]. Time-dependent.
q_edge	scenario_ref (9.6.1.3.387)	edge or effective safety factor value []. Time-dependent.
neutral_flux	scenario_ref (9.6.1.3.387)	number of cold neutral (in equivalent electron for Z < 1) that input in plasma at the edge every second coming from recycling and gaz puff [s <sup>-1</sup> ]. Time-dependent.
phi_plasma	scenario_ref (9.6.1.3.387)	contribution of the plasma to the toroidal flux (used for toroidal coils heat load computation) [Wb]. Time-dependent.
vtor_edge	scenario_ref (9.6.1.3.387)	rotation velocity of selected impurity on the separatrix [m/s]. Time-dependent.

Type of: scenario:edge (2040)

### 9.6.1.3.376 scenario\_energy

plasma energy content

member	type	description
w_tot	scenario_ref (9.6.1.3.387)	total plasma energy [J]. Time-dependent.
w_b_pol	scenario_ref (9.6.1.3.387)	poloidal field energy of the plasma [J]. Time-dependent.
w_dia	scenario_ref (9.6.1.3.387)	3/2 perpendicular plasma energy [J]. Time-dependent.
dwdia_dt	scenario_ref (9.6.1.3.387)	time derivative of Wdia [W]. Time-dependent.

member	type	description
w_b_tor_pla	scenario_ref (9.6.1.3.387)	toroidal magnetic plasma energy [J]. Time-dependent.
w_th	scenario_ref (9.6.1.3.387)	thermal plasma energy [J]. Time-dependent.
dwtot_dt	scenario_ref (9.6.1.3.387)	time derivative of total plasma energy [W]. Time-dependent.
dwbpol_dt	scenario_ref (9.6.1.3.387)	time derivative of plasma poloidal field energy [W]. Time-dependent.
dwbtorpla_dt	scenario_ref (9.6.1.3.387)	time derivative of toroidal magnetic plasma energy [W]. Time-dependent.
dwth_dt	scenario_ref (9.6.1.3.387)	time derivative of thermal plasma energy [W]. Time-dependent.
esup_icrhtot	scenario_ref (9.6.1.3.387)	total suprathermal energy of fast ions accelerated by ICRH [J]. Time-dependent.
esup_icrhper	scenario_ref (9.6.1.3.387)	perpendicular part of suprathermal energy of fast ions accelerated by ICRH [J]. Time-dependent.
esup_nbitot	scenario_ref (9.6.1.3.387)	total suprathermal energy of fast ions from NBI ionisation [J]. Time-dependent.
esup_nbiperp	scenario_ref (9.6.1.3.387)	perpendicular part of suprathermal energy of fast ions from NBI ionisation [J]. Time-dependent.
esup_lhcd	scenario_ref (9.6.1.3.387)	total suprathermal energy of fast electron from LHCD [J]. Time-dependent.
esup_alpha	scenario_ref (9.6.1.3.387)	total suprathermal energy of fast alpha particules [J]. Time-dependent.

Type of: scenario:energy (2040)

### 9.6.1.3.377 scenario\_global

global scalar value

member	type	description
ip	scenario_ref (9.6.1.3.387)	Plasma current [A]. Time-dependent.
dip_dt	scenario_ref (9.6.1.3.387)	time derivative of plasma current [A/s]. Time-dependent.
beta_pol	scenario_ref (9.6.1.3.387)	poloidal beta []. Time-dependent.
beta_tor	scenario_ref (9.6.1.3.387)	toroidal beta []. Time-dependent.
beta_normal	scenario_ref (9.6.1.3.387)	normalised beta []. Time-dependent.
li	scenario_ref (9.6.1.3.387)	internal inductance (definition 3). Time-dependent.
volume	scenario_ref (9.6.1.3.387)	total plasma volume [m <sup>3</sup> ]. Time-dependent.
area_pol	scenario_ref (9.6.1.3.387)	area poloidal cross section [m <sup>2</sup> ]. Time-dependent.
area_ext	scenario_ref (9.6.1.3.387)	external plasma surface [m <sup>2</sup> ]. Time-dependent.
len_sepa	scenario_ref (9.6.1.3.387)	length of the separatrix [m]. Time-dependent.
beta_pol_th	scenario_ref (9.6.1.3.387)	poloidal beta, thermal contribution []. Time-dependent.
beta_tor_th	scenario_ref (9.6.1.3.387)	toroidal beta, thermal contribution []. Time-dependent.
beta_n_th	scenario_ref (9.6.1.3.387)	normalised beta, thermal contribution []. Time-dependent.
disruption	scenario_ref (9.6.1.3.387)	flag for disruption (set to 1 for disruption, otherwise equal 0) []. Time-dependent.
mode_h	scenario_ref (9.6.1.3.387)	confinement mode versus time: 0 = L-mode et 1 = H-mode []. Time-dependent.
s_alpha	scenario_ref (9.6.1.3.387)	total number of alpha fusion particules from D-T ractions per second [s <sup>-1</sup> ]. Time-dependent.

Type of: scenario:global\_param (2040)

### 9.6.1.3.378 scenario\_heat\_power

Power delivred to plasma (thermal an non thermal)

member	type	description
plh	scenario_ref (9.6.1.3.387)	Lower hybrid power [W]. Time-dependent.
pohmic	scenario_ref (9.6.1.3.387)	ohmic power (thermal species contribution only) [W]. Time-dependent.
picrh	scenario_ref (9.6.1.3.387)	Ion cyclotron resonance heating power [W]. Time-dependent.
pecrh	scenario_ref (9.6.1.3.387)	electron cyclotron resonance heating power [W]. Time-dependent.
pnbi	scenario_ref (9.6.1.3.387)	neutral beam injection power [W]. Time-dependent.
pnbi_co_cur	scenario_ref (9.6.1.3.387)	neutral beam injection power injeted in co-current direction [W]. Time-dependent.
pnbi_counter	scenario_ref (9.6.1.3.387)	neutral beam injection power injeted in counter-current direction [W]. Time-dependent.
plh_th	scenario_ref (9.6.1.3.387)	lower hybrid power deposited on thermal electrons [W]. Time-dependent.
picrh_th	scenario_ref (9.6.1.3.387)	ion cyclotron resonance heating power deposited on thermal species [W]. Time-dependent.
pecrh_th	scenario_ref (9.6.1.3.387)	electron cyclotron resonance heating power deposited on thermal electrons [W]. Time-dependent.
pnbi_th	scenario_ref (9.6.1.3.387)	neutral beam injection power deposited on thermal species [W]. Time-dependent.
ploss_icrh	scenario_ref (9.6.1.3.387)	Ion cyclotron resonance heating power losses [W]. Time-dependent.
ploss_nbi	scenario_ref (9.6.1.3.387)	neutral beam injection power losses (including shine-through) [W]. Time-dependent.
pbrem	scenario_ref (9.6.1.3.387)	Bremsstrahlung radition losses [W]. Time-dependent.



member	type	description
pcyclo	scenario_ref (9.6.1.3.387)	cyclotron radiation losses [W]. Time-dependent.
prad	scenario_ref (9.6.1.3.387)	impurity radiation losses in core plasma, without Bremsstrahlung [W]. Time-dependent.
pdd_fus	scenario_ref (9.6.1.3.387)	fusion power due to DD reactions [W]. Time-dependent.
pei	scenario_ref (9.6.1.3.387)	power exchange between electron and ion (equipartition) [W]. Time-dependent.
pel_tot	scenario_ref (9.6.1.3.387)	total thermal electron power deposition without equipartition [W]. Time-dependent.
pel_fus	scenario_ref (9.6.1.3.387)	fusion electron power deposition [W]. Time-dependent.
pel_icrh	scenario_ref (9.6.1.3.387)	ICRH electron power deposition [W]. Time-dependent.
pel_nbi	scenario_ref (9.6.1.3.387)	NBI electron power deposition [W]. Time-dependent.
pfus_dt	scenario_ref (9.6.1.3.387)	total D-T fusion power of alpha [W]. Time-dependent.
ploss_fus	scenario_ref (9.6.1.3.387)	D-T fusion power of alpha losses [W]. Time-dependent.
pfus_nbi	scenario_ref (9.6.1.3.387)	NBI induce D-T fusion power of alpha [W]. Time-dependent.
pfus_th	scenario_ref (9.6.1.3.387)	alpha (from DT fusion reaction) power deposited on thermal species [W]. Time-dependent.
padd_tot	scenario_ref (9.6.1.3.387)	total additional power input including ohmic power [W]. Time-dependent.
pion_tot	scenario_ref (9.6.1.3.387)	total thermal ion power deposition without equipartition [W]. Time-dependent.
pion_fus	scenario_ref (9.6.1.3.387)	fusion ion power deposition [W]. Time-dependent.
pion_icrh	scenario_ref (9.6.1.3.387)	ICRH ion power deposition [W]. Time-dependent.
pion_nbi	scenario_ref (9.6.1.3.387)	NBI ion power deposition [W]. Time-dependent.
pioniz	scenario_ref (9.6.1.3.387)	power losses due to cold neutral ionization [W]. Time-dependent.
ploss	scenario_ref (9.6.1.3.387)	plasma losses power, as define in ITER basis [W]. Time-dependent.
p_wth	scenario_ref (9.6.1.3.387)	thermal power input, define as $\tau_e \cdot P_{th} = W_{th}$ [W]. Time-dependent.
p_w	scenario_ref (9.6.1.3.387)	effective power define as $\tau_e \cdot P_w = W_{tot}$ [W]. Time-dependent.
p_l2h_thr	scenario_ref (9.6.1.3.387)	additional power crossing the LCMS; must be compare to L-zH threshold power (Ryter PPCF 2002) [W]. Time-dependent.
p_l2h_sc	scenario_ref (9.6.1.3.387)	threshold power given by the choosen scaling law for transition from L-mode to H-mode [W]. Time-dependent.
p_nbi_icrh	scenario_ref (9.6.1.3.387)	beam power increase due to ICRH effects [W]. Time-dependent.

Type of: scenario:heat\_power (2040)

### 9.6.1.3.379 scenario\_int

Structure for scenario integer flag; Time-dependent

member	type	description
value	integer (9.6.1.1.2)	Signal value; Time-dependent; Scalar Integer.
source	string (9.6.1.1.3)	Source of the signal (any comment describing the origin of the signal : code, path to diagnostic signals, massaging, ...); String

Type of: scenario\_configuration:config (2369) I scenario\_configuration:ecrh\_harm (2369) I scenario\_configuration:ecrh\_mode (2369) I scenario\_configuration:grad\_b\_drift (2369) I scenario\_itb:itb\_type (2377)

### 9.6.1.3.380 scenario\_itb

Values characteristics of the Internal Transport Barrier

member	type	description
q_min	scenario_ref (9.6.1.3.387)	minimal value of safety factor []. Time-dependent.
te_itb	scenario_ref (9.6.1.3.387)	electron temperature @ $q = q_{min}$ [eV]. Time-dependent.
ti_itb	scenario_ref (9.6.1.3.387)	ion temperature @ $q = q_{min}$ [eV]. Time-dependent.
ne_itb	scenario_ref (9.6.1.3.387)	electron density @ $q = q_{min}$ [ $m^{-3}$ ]. Time-dependent.
ni_itb	scenario_ref (9.6.1.3.387)	ion density @ $q = q_{min}$ [ $m^{-3}$ ]. Time-dependent.
psi_itb	scenario_ref (9.6.1.3.387)	poloidal flux @ $q = q_{min}$ [Wb]. Time-dependent.
phi_itb	scenario_ref (9.6.1.3.387)	toroidal flux @ $q = q_{min}$ [Wb]. Time-dependent.
rho_itb	scenario_ref (9.6.1.3.387)	value of internal simulator coordinate @ $q = q_{min}$ [m]. Time-dependent.
h_itb	scenario_ref (9.6.1.3.387)	energy enhancement ITB factor [m]. Time-dependent.
width_itb	scenario_ref (9.6.1.3.387)	width of the high pressure gradient region (on scale of rho_itb) [m]. Time-dependent.
vtor_itb	scenario_ref (9.6.1.3.387)	rotation velocity of selected impurity @ rho_itb [m/s]. Time-dependent.
itb_type	scenario_int (9.6.1.3.379)	itb type []. Time-dependent. Any combinaison of : 0 = none; 1 = on T <sub>i</sub> ; 2 = on T <sub>e</sub> ; 4 = on n <sub>e</sub> ; 8 = reverse shear triggered; 16 = toroidal rotation triggered; 32 = alpha stabilisation triggered; 64 = T <sub>i</sub> / T <sub>e</sub> triggered; 128 = radiation triggered; 256 = rationnal q triggered

Type of: scenario:itb (2040)

### 9.6.1.3.381 scenario\_lim\_div\_wall

values on the plate of divertor or on the limiter or on the wall (@ LCMS)

member	type	description
te_lim_div	scenario_ref (9.6.1.3.387)	limiter/divertor electron temperature [eV]. Time-dependent.
ti_lim_div	scenario_ref (9.6.1.3.387)	limiter/divertor ion temperature [eV]. Time-dependent.
ne_lim_div	scenario_ref (9.6.1.3.387)	limiter/divertor electron density [ $m^{-3}$ ]. Time-dependent.
ni_lim_div	scenario_ref (9.6.1.3.387)	limiter/divertor ion density [ $m^{-3}$ ]. Time-dependent.
q_peak_div	scenario_ref (9.6.1.3.387)	Peak power flux on limiter or divertor plate [ $W.m^{-2}$ ]. Time-dependent.
q_peak_wall	scenario_ref (9.6.1.3.387)	Peak power flux on the wall [ $W.m^{-2}$ ]. Time-dependent.
surf_temp	scenario_ref (9.6.1.3.387)	limiter surface or divertor plate temperature [K]. Time-dependent.
p_lim_div	scenario_ref (9.6.1.3.387)	Total power on limiter or divertor plate [W]. Time-dependent.
p_rad_div	scenario_ref (9.6.1.3.387)	radiative power in the divertor zone [W]. Time-dependent.
p_neut_div	scenario_ref (9.6.1.3.387)	Neutral pressure in the divertor zone [Pa]; Time-dependent.
p_wall	scenario_ref (9.6.1.3.387)	Total power on the wall [W]. Time-dependent.
wall_temp	scenario_ref (9.6.1.3.387)	wall temperature [K]. Time-dependent.
wall_state	scenario_ref (9.6.1.3.387)	saturation state of the wall (0 = completely pumping wall, 1 = completely saturate wall) []. Time-dependent.
detach_state	scenario_ref (9.6.1.3.387)	plasma detachment state (0= attach plasma, 1 = completely detach plasma) []. Time-dependent.
pump_flux	scenario_ref (9.6.1.3.387)	flux pump out for each ion species [ $s^{-1}$ ]. Time-dependent.
p_rad_fw	scenario_ref (9.6.1.3.387)	Radiated power on the first wall [W]; Time-dependent
p_cond_fw	scenario_ref (9.6.1.3.387)	Conducted/convected power on the first wall [W]; Time-dependent
div_wetted	scenario_ref (9.6.1.3.387)	Divertor wetted area [ $m^2$ ]; Time-dependent
gas_puff	scenario_ref (9.6.1.3.387)	Gas puff (D/T) in the divertor (PFR) [ $Pa.m^3.s^{-1}$ ]; Time-dependent
ar_concentr	scenario_ref (9.6.1.3.387)	Argon concentration in the divertor; Time-dependent
part_exhaust	scenario_ref (9.6.1.3.387)	Assuming a pumping speed [ $Pa.m^3.s^{-1}$ ]; Time-dependent
f_inner	scenario_ref (9.6.1.3.387)	Fraction of power to the inner divertor; Time-dependent
f_outer	scenario_ref (9.6.1.3.387)	Fraction of power to the outer divertor; Time-dependent
f_pfr	scenario_ref (9.6.1.3.387)	Fraction of power flowing into the private flux region; Time-dependent
f_rad_fw	scenario_ref (9.6.1.3.387)	Fraction of the divertor radiated power deposited in the main chamber; Time-dependent
q_div	vecflt.type (9.6.1.2.13)	Heat flux on divertor plate [ $W/m^2$ ]; Vector(theta). Time-dependent
p_cond_div	scenario_ref (9.6.1.3.387)	Conducted/convected power on divertor plate [W]; Time-dependent
pol_ext	float (9.6.1.1.1)	Poloidal extension of the divertor or outer major radius of the divertor region (and inner major radius) [rad]; Scalar
flux_exp	float (9.6.1.1.1)	Flux expansion at the divertor plate ( $(B_{\theta}/B)_{midplane}/(B_{\theta}/B)_{target}$ ); Scalar
tilt_angle	float (9.6.1.1.1)	Tilt angle between the field lines and the divertor plate in a poloidal plane [rad]; Scalar
n_div	float (9.6.1.1.1)	Number of divertor, assuming symmetric configuration; Scalar
div_dz	float (9.6.1.1.1)	Divertor extension in z direction from the x-point [m]; Scalar
div_dro	float (9.6.1.1.1)	Divertor extension in r outward direction from the x-point [m]; Scalar
div_dri	float (9.6.1.1.1)	Divertor extension in r inward direction from the x-point [m]; Scalar
p_nh_div	scenario_ref (9.6.1.3.387)	Total nuclear heating in divertor [W]. Time-dependent.

Type of: scenario:lim\_div\_wall (2040)

### 9.6.1.3.382 scenario\_line\_ave

line averaged value

member	type	description
ne_line	scenario_ref (9.6.1.3.387)	line averaged electron density [ $m^{-3}$ ]. Time-dependent.
zeff_line	scenario_ref (9.6.1.3.387)	line averaged effective charge. Time-dependent.
ne_zeff_line	scenario_ref (9.6.1.3.387)	line averaged electron density * Zeff . Time-dependent.
dne_line.dt	scenario_ref (9.6.1.3.387)	time derivative of line averaged electron density [ $m^{-3}/s$ ]. Time-dependent.

Type of: scenario:line\_ave (2040)

### 9.6.1.3.383 scenario\_neutron

neutron flux for DD and DT reactions

member	type	description
ndd_tot	scenario_ref (9.6.1.3.387)	total neutron flux coming from DD reactions [Hz]. Time-dependent.
ndd_th	scenario_ref (9.6.1.3.387)	neutron flux coming from thermal DD reactions [Hz]. Time-dependent.
ndd_nbi_th	scenario_ref (9.6.1.3.387)	neutron flux coming from beam/plasma DD reactions [Hz]. Time-dependent.
ndd_nbi_nbi	scenario_ref (9.6.1.3.387)	neutron flux coming from beam/beam DD reactions [Hz]. Time-dependent.
ndt_tot	scenario_ref (9.6.1.3.387)	total neutron flux coming from DT reactions [Hz]. Time-dependent.
ndt.th	scenario_ref (9.6.1.3.387)	neutron flux coming from thermal DT reactions [Hz]. Time-dependent.

Type of: scenario:neutron (2040)

### 9.6.1.3.384 scenario\_ninety\_five

values at 95% of poloidal flux

member	type	description
q_95	scenario_ref (9.6.1.3.387)	safety factor value @ 95 % of poloidal flux span []. Time-dependent.
elong_95	scenario_ref (9.6.1.3.387)	plasma elongation @ 95 % of poloidal flux span []. Time-dependent.
tria_95	scenario_ref (9.6.1.3.387)	averaged plasma triangularity @ 95 % of poloidal flux span []. Time-dependent.
tria_up_95	scenario_ref (9.6.1.3.387)	upper plasma triangularity @ 95 % of poloidal flux span []. Time-dependent.
tria_lo_95	scenario_ref (9.6.1.3.387)	lower plasma triangularity @ 95 % of poloidal flux span []. Time-dependent.
te_95	scenario_ref (9.6.1.3.387)	electron temperature @ 95 % of poloidal flux [eV]. Time-dependent.
ti_95	scenario_ref (9.6.1.3.387)	ion temperature @ 95 % of poloidal flux [eV]. Time-dependent.
ne_95	scenario_ref (9.6.1.3.387)	electron density @ 95 % of poloidal flux [m <sup>-3</sup> ]. Time-dependent.
ni_95	scenario_ref (9.6.1.3.387)	ion density @ 95 % of poloidal flux [m <sup>-3</sup> ]. Time-dependent.
phi_95	scenario_ref (9.6.1.3.387)	toroidal flux @ 95 % of poloidal flux [Wb]. Time-dependent.
rho_95	scenario_ref (9.6.1.3.387)	value of internal simulator coordinate @ 95 % of poloidal flux [m]. Time-dependent.
vtor_95	scenario_ref (9.6.1.3.387)	rotation velocity of selected impurity @ 95 % of poloidal flux [m/s]. Time-dependent.

Type of: scenario:ninety\_five (2040)

### 9.6.1.3.385 scenario\_pedestal

Values at the top of the H-mode pedestal

member	type	description
te_ped	scenario_ref (9.6.1.3.387)	pedestal electron temperature [eV]. Time-dependent.
ti_ped	scenario_ref (9.6.1.3.387)	pedestal ion temperature [eV]. Time-dependent.
ne_ped	scenario_ref (9.6.1.3.387)	pedestal electron density [m <sup>-3</sup> ]. Time-dependent.
ni_ped	scenario_ref (9.6.1.3.387)	pedestal ion density [m <sup>-3</sup> ]. Time-dependent.
psi_ped	scenario_ref (9.6.1.3.387)	pedestal poloidal flux [Wb]. Time-dependent.
phi_ped	scenario_ref (9.6.1.3.387)	pedestal toroidal flux [Wb]. Time-dependent.
rho_ped	scenario_ref (9.6.1.3.387)	top pedestal value of internal simulator coordinate [m]. Time-dependent.
q_ped	scenario_ref (9.6.1.3.387)	top pedestal safety factor value []. Time-dependent.
pressure_ped	scenario_ref (9.6.1.3.387)	top pedestal thermal pressure ( $n_e * T_e + n_i * T_i$ ) [Pa]. Time-dependent.
vtor_ped	scenario_ref (9.6.1.3.387)	top pedestal value of rotation velocity of selected impurity [m/s]. Time-dependent.

Type of: scenario:pedestal (2040)

### 9.6.1.3.386 scenario\_reactor

reactor data (such as electricity cost ...)

member	type	description
pnetwork	float (9.6.1.1.1)	reactor electric power provide to the network [W].

Type of: scenario:reactor (2040)

### 9.6.1.3.387 scenario\_ref

Structure for scenario reference; Time-dependent

member	type	description
value	float (9.6.1.1.1)	Signal value; Time-dependent; Scalar
source	string (9.6.1.1.3)	Source of the signal (any comment describing the origin of the signal : code, path to diagnostic signals, massaging, ...); String

Type of: scenario\_centre:Rmag (2367) I scenario\_centre:Zmag (2367) I scenario\_centre:ne0 (2367) I scenario\_centre:ni0 (2367) I scenario\_centre:phi0 (2367) I scenario\_centre:psi0 (2367) I scenario\_centre:q0 (2367) I scenario\_centre:shift0 (2367) I scenario\_centre:te0 (2367) I scenario\_centre:ti0 (2367) I scenario\_centre:vtor\_0 (2367) I scenario\_configuration:LH\_freq (2369) I scenario\_configuration:LH\_npar (2369) I scenario\_configuration:ecrh\_freq (2369) I scenario\_configuration:ecrh\_loc (2369) I scenario\_configuration:ecrh\_pol\_ang (2369) I scenario\_configuration:ecrh\_tor\_ang (2369) I scenario\_configuration:enb (2369) I scenario\_configuration:icrh\_freq (2369) I scenario\_configuration:icrh\_phase (2369) I scenario\_configuration:pellet\_ang (2369) I scenario\_configuration:pellet\_nba (2369) I scenario\_configuration:pellet\_v (2369) I scenario\_configuration:r\_nbi (2369) I scenario\_confinement:tau\_cur\_diff (2370) I scenario\_confinement:tau\_e (2370) I scenario\_confinement:tau\_e\_ee (2370) I scenario\_confinement:tau\_e\_ei (2370) I scenario\_confinement:tau\_e\_ii (2370) I scenario\_confinement:tau\_h\_sc (2370) I scenario\_confinement:tau\_he (2370) I scenario\_confinement:tau\_i\_rol (2370) I scenario\_confinement:tau\_l\_sc (2370) I scenario\_currents:RR (2371) I scenario\_currents:i\_align (2371) I scenario\_currents:i\_boot (2371) I scenario\_currents:i\_cd\_tot (2371) I scenario\_currents:i\_eccd (2371) I scenario\_currents:i\_fast\_ion (2371) I scenario\_currents:i\_fwcd (2371) I scenario\_currents:i\_lhcd (2371) I scenario\_currents:i\_nbicd (2371) I scenario\_currents:i\_ni\_tot (2371) I scenario\_currents:i\_ohm (2371) I scenario\_currents:i\_par (2371) I scenario\_currents:i\_runaway (2371) I scenario\_currents:v\_loop (2371) I scenario\_currents:v\_meas (2371) I scenario\_edge:drho\_edge\_dt (2372) I scenario\_edge:ne\_edge (2372) I scenario\_edge:neutral\_flux (2372) I scenario\_edge:ni\_edge (2372) I scenario\_edge:phi\_edge (2372) I scenario\_edge:phi\_plasma (2372) I scenario\_edge:psi\_edge (2372) I scenario\_edge:q\_edge (2372) I scenario\_edge:rho\_edge (2372) I scenario\_edge:te\_edge (2372) I scenario\_edge:ti\_edge (2372) I scenario\_edge:vtor\_edge (2372) I scenario\_energy:dwbpol\_dt (2373) I scenario\_energy:dwbtorpla\_dt (2373) I scenario\_energy:dwdia\_dt (2373) I scenario\_energy:dwth\_dt (2373) I scenario\_energy:dwtot\_dt (2373) I scenario\_energy:esup\_alpha (2373) I scenario\_energy:esup\_icrhper (2373) I scenario\_energy:esup\_icrhtot (2373) I scenario\_energy:esup\_lhcd (2373) I scenario\_energy:esup\_nbiperp (2373) I scenario\_energy:esup\_nbitot (2373) I scenario\_energy:w\_b\_pol (2373) I scenario\_energy:w\_b\_tor\_pla (2373) I scenario\_energy:w\_dia (2373) I scenario\_energy:w\_th (2373) I scenario\_energy:w\_tot (2373) I scenario\_global:area\_ext (2374) I scenario\_global:area\_pol (2374) I scenario\_global:beta\_n\_th (2374) I scenario\_global:beta\_normal (2374) I scenario\_global:beta\_pol (2374) I scenario\_global:beta\_pol\_th (2374) I scenario\_global:beta\_tor (2374) I scenario\_global:beta\_tor\_th (2374) I scenario\_global:dip\_dt (2374) I scenario\_global:disruption (2374) I scenario\_global:ip (2374) I scenario\_global:len\_sepa (2374) I scenario\_global:li (2374) I scenario\_global:mode\_h (2374) I scenario\_global:s\_alpha (2374) I scenario\_global:volume (2374) I scenario\_heat\_power:p\_l2h\_sc (2375) I scenario\_heat\_power:p\_l2h\_thr (2375) I scenario\_heat\_power:p\_nbi\_icrh (2375) I scenario\_heat\_power:p\_w (2375) I scenario\_heat\_power:p\_wth (2375) I scenario\_heat\_power:padd\_tot (2375) I scenario\_heat\_power:pbrem (2375) I scenario\_heat\_power:pcyclo (2375) I scenario\_heat\_power:pdd\_fus (2375) I scenario\_heat\_power:pecrh (2375) I scenario\_heat\_power:pecrh\_th (2375) I scenario\_heat\_power:pei (2375) I scenario\_heat\_power:pel\_fus (2375) I 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scenario\_itb:h\_itb (2377) I scenario\_itb:ne\_itb (2377) I scenario\_itb:ni\_itb (2377) I scenario\_itb:phi\_itb (2377) I scenario\_itb:psi\_itb (2377) I scenario\_itb:q\_min (2377) I scenario\_itb:rho\_itb (2377) I scenario\_itb:te\_itb (2377) I scenario\_itb:ti\_itb (2377) I scenario\_itb:vtor\_itb (2377) I scenario\_itb:width\_itb (2377) I scenario\_lim\_div\_wall:ar\_concer (2378) I scenario\_lim\_div\_wall:detach\_state (2378) I scenario\_lim\_div\_wall:div\_wetted (2378) I scenario\_lim\_div\_wall:f\_inner (2378) I scenario\_lim\_div\_wall:f\_outer (2378) I scenario\_lim\_div\_wall:f\_pfr (2378) I scenario\_lim\_div\_wall:f\_rad\_fw (2378) I scenario\_lim\_div\_wall:gas\_puff (2378) I scenario\_lim\_div\_wall:ne\_lim\_div (2378) I scenario\_lim\_div\_wall:ni\_lim\_div (2378) I scenario\_lim\_div\_wall:p\_cond\_div (2378) I scenario\_lim\_div\_wall:p\_cond\_fw (2378) I scenario\_lim\_div\_wall:p\_lim\_div (2378) I scenario\_lim\_div\_wall:p\_neut\_div (2378) I scenario\_lim\_div\_wall:p\_nh\_div (2378) I scenario\_lim\_div\_wall:p\_rad\_div (2378) I scenario\_lim\_div\_wall:p\_rad\_fw (2378) I scenario\_lim\_div\_wall:p\_wall (2378) I scenario\_lim\_div\_wall:part\_exhaust (2378) I scenario\_lim\_div\_wall:pump\_flux (2378) I scenario\_lim\_div\_wall:q\_peak\_div (2378) I scenario\_lim\_div\_wall:q\_peak\_wv (2378) I scenario\_lim\_div\_wall:surf\_temp (2378) I scenario\_lim\_div\_wall:te\_lim\_div (2378) I scenario\_lim\_div\_wall:ti\_lim\_div (2378) I scenario\_lim\_div\_wall:wall\_state (2378) I scenario\_lim\_div\_wall:wall\_temp (2378) I scenario\_line\_ave:dne\_line\_dt (2379) I scenario\_line\_ave:ne\_line (2379) I scenario\_line\_ave:ne\_zeff\_line (2379) I scenario\_line\_ave:zeff\_line (2379)

I scenario\_neutron:ndd\_nbi\_nbi (2380) I scenario\_neutron:ndd\_nbi\_th (2380) I scenario\_neutron:ndd\_th (2380) I scenario\_neutron:ndd\_tot (2380) I scenario\_neutron:ndt\_th (2380) I scenario\_neutron:ndt\_tot (2380) I scenario\_ninety\_five:elom (2381) I scenario\_ninety\_five:ne\_95 (2381) I scenario\_ninety\_five:ni\_95 (2381) I scenario\_ninety\_five:phi\_95 (2381) I scenario\_ninety\_five:q\_95 (2381) I scenario\_ninety\_five:rho\_95 (2381) I scenario\_ninety\_five:te\_95 (2381) I scenario\_ninety\_five:ti\_95 (2381) I scenario\_ninety\_five:tria\_95 (2381) I scenario\_ninety\_five:tria\_lo\_95 (2381) I scenario\_ninety\_five:tria\_up\_95 (2381) I scenario\_ninety\_five:vtor\_95 (2381) I scenario\_pedestal:ne\_ped (2382) I scenario\_pedestal:ni\_ped (2382) I scenario\_pedestal:phi\_ped (2382) I scenario\_pedestal:pressure\_ped (2382) I scenario\_pedestal:psi\_ped (2382) I scenario\_pedestal:q\_ped (2382) I scenario\_pedestal:rho\_ped (2382) I scenario\_pedestal:te\_ped (2382) I scenario\_pedestal:ti\_ped (2382) I scenario\_pedestal:vtor\_ped (2382) I scenario\_references:bvac\_r (2385) I scenario\_references:enhancement (2385) I scenario\_references:gas\_puff (2385) I scenario\_references:ip (2385) I scenario\_references:isotopic (2385) I scenario\_references:nbar (2385) I scenario\_references:nbi\_td\_ratio (2385) I scenario\_references:pecrh (2385) I scenario\_references:picrh (2385) I scenario\_references:plh (2385) I scenario\_references:pnbi (2385) I scenario\_references:pol\_flux (2385) I scenario\_references:xecrh (2385) I scenario\_references:zeffl (2385) I scenario\_sol:gas\_puff (2386) I scenario\_sol:l\_ne\_sol (2386) I scenario\_sol:l\_ni\_sol (2386) I scenario\_sol:l\_qe\_sol (2386) I scenario\_sol:l\_qi\_sol (2386) I scenario\_sol:l\_te\_sol (2386) I scenario\_sol:l\_ti\_sol (2386) I scenario\_sol:p\_rad\_sol (2386) I scenario\_vol\_ave:dne\_ave\_dt (2387) I scenario\_vol\_ave:meff\_ave (2387) I scenario\_vol\_ave:ne\_ave (2387) I scenario\_vol\_ave:ni\_ave (2387) I scenario\_vol\_ave:omega\_ave (2387) I scenario\_vol\_ave:pellet\_flux (2387) I scenario\_vol\_ave:te\_ave (2387) I scenario\_vol\_ave:ti\_ave (2387) I scenario\_vol\_ave:ti\_o\_te\_ave (2387) I scenario\_vol\_ave:zeff\_ave (2387)

### 9.6.1.3.388 scenario\_references

References

member	type	description
plh	scenario_ref (9.6.1.3.387)	Lower hybrid power [W]. Time-dependent.
picrh	scenario_ref (9.6.1.3.387)	Ion cyclotron resonance heating power [W]. Time-dependent.
pecrh	scenario_ref (9.6.1.3.387)	electron cyclotron resonance heating power [W]. Time-dependent.
pnbi	scenario_ref (9.6.1.3.387)	neutral beam injection power [W]. Time-dependent.
ip	scenario_ref (9.6.1.3.387)	Plasma current [A]. Time-dependent.
bvac_r	scenario_ref (9.6.1.3.387)	Vacuum field times radius in the toroidal field magnet [T.m]. Time-dependent.
zeffl	scenario_ref (9.6.1.3.387)	line averaged effective charge []. Time-dependent.
nbar	scenario_ref (9.6.1.3.387)	line averaged electron density [ $m^{-3}$ ]. Time-dependent.
xecrh	scenario_ref (9.6.1.3.387)	position of maximum (normalized rho coordinate) of electron cyclotron resonance heating power []. Time-dependent.
pol_flux	scenario_ref (9.6.1.3.387)	separatrix poloidal flux [Wb]. Time-dependent.
enhancement	scenario_ref (9.6.1.3.387)	energy enhancement factor []. Time-dependent.
isotopic	scenario_ref (9.6.1.3.387)	ratio between tritium and deuterium density (for burning plasma) []. Time-dependent.
nbi_td_ratio	scenario_ref (9.6.1.3.387)	ratio between tritium and deuterium power in neutral beam injection []. Time-dependent.
gas_puff	scenario_ref (9.6.1.3.387)	gas puff flux reference, in equivalent [electrons.s <sup>-1</sup> ]. Time-dependent.

Type of: scenario:references (2040)

### 9.6.1.3.389 scenario\_sol

SOL characteristic (@ LCMS)

member	type	description
l_te_sol	scenario_ref (9.6.1.3.387)	electron temperature radial decay length [m]. Time-dependent.
l_ti_sol	scenario_ref (9.6.1.3.387)	ion temperature radial decay length [m]. Time-dependent.
l_ne_sol	scenario_ref (9.6.1.3.387)	electron density radial decay length [m]. Time-dependent.
l_ni_sol	scenario_ref (9.6.1.3.387)	ion density radial decay length [m]. Time-dependent.
l_qe_sol	scenario_ref (9.6.1.3.387)	electron heat flux radial decay length [m]. Time-dependent.
l_qi_sol	scenario_ref (9.6.1.3.387)	ion heat flux radial decay length [m]. Time-dependent.
p_rad_sol	scenario_ref (9.6.1.3.387)	radiative power of the SOL [W]. Time-dependent.
p_neut	float (9.6.1.1.1)	Neutral pressure of the SOL [Pa]; Scalar
gas_puff	scenario_ref (9.6.1.3.387)	gas puff flux for each ion species [s <sup>-1</sup> ]. Time-dependent.
delta_r_in	float (9.6.1.1.1)	Inner gap between the plasma and the first wall [m]; Scalar
delta_r_out	float (9.6.1.1.1)	Outer gap between the plasma and the first wall [m]; Scalar
r_in	float (9.6.1.1.1)	Inner radius of the first wall [m]; Scalar
r_out	float (9.6.1.1.1)	Outer radius of the first wall [m]; Scalar

member	type	description
sol_width	float (9.6.1.1.1)	Width of the SOL (the heat flux is assumed to fall off exponentially in the SOL according to the width parameter) [m]; Scalar

Type of: scenario:sol (2040)

### 9.6.1.3.390 scenario\_vol\_ave

volume averaged values

member	type	description
te_ave	scenario_ref (9.6.1.3.387)	volume averaged electron temperature [eV]. Time-dependent.
ti_ave	scenario_ref (9.6.1.3.387)	volume averaged ion temperature [eV]. Time-dependent.
ne_ave	scenario_ref (9.6.1.3.387)	volume averaged electron density [m <sup>-3</sup> ]. Time-dependent.
dne_ave_dt	scenario_ref (9.6.1.3.387)	time derivative of volume averaged electron density [m <sup>-3</sup> /s]. Time-dependent.
ni_ave	scenario_ref (9.6.1.3.387)	volume averaged ion density ( $\langle \sum(n_k)_i \rangle$ , k in species) [m <sup>-3</sup> ]. Time-dependent.
zeff_ave	scenario_ref (9.6.1.3.387)	volume averaged effective charge. Time-dependent.
ti_o_te_ave	scenario_ref (9.6.1.3.387)	volume averaged ion temperature over electron temperature ( $\langle T_i/T_e \rangle$ ) []. Time-dependent.
meff_ave	scenario_ref (9.6.1.3.387)	volume averaged effective mass ( $\langle \sum(n_k * m_k) \rangle / \langle \sum(n_k) \rangle$ ) []. Time-dependent.
pellet_flux	scenario_ref (9.6.1.3.387)	number of electrons fuelling the plasma every second coming from pellet injection [s <sup>-1</sup> ]. Time-dependent.
nions_ave	vecflt.type (9.6.1.2.13)	volume averaged ions densities (vector, one element per ion species) [m <sup>-3</sup> ]. Time-dependent.
omega_ave	scenario_ref (9.6.1.3.387)	bulk volume average toroidal rotation velocity (whole plasma) [rad/s]. Time-dependent.

Type of: scenario:vol\_ave (2040)

### 9.6.1.3.391 setup\_bprobe

diagnostic setup information

member	type	description
name	vecstring.type (9.6.1.2.15)	Name of the probe. Array of strings (nprobes).
id	vecstring.type (9.6.1.2.15)	ID of the probe. Array of strings (nprobes).
position	rz1D (9.6.1.3.356)	RZ of coil centre [m]; Vector (nprobes)
polangle	vecflt.type (9.6.1.2.13)	Poloidal angle of coil orientation (w.r.t. horizontal ?? to be checked) [rad]; Vector (nprobes)
torangle	vecflt.type (9.6.1.2.13)	Toroidal angle of coil orientation (0 if fully in the poloidal plane) [rad]; Vector (nprobes)
area	vecflt.type (9.6.1.2.13)	Area of coil [m <sup>2</sup> ]; Vector (nprobes)
length	vecflt.type (9.6.1.2.13)	Length of coil [m]; Vector (nprobes)
turns	vecint.type (9.6.1.2.14)	Turns in the coil; Vector (nprobes)

Type of: bpol\_probes:setup\_bprobe (2069)

### 9.6.1.3.392 setup\_floops

diagnostic setup information

member	type	description
name	vecstring.type (9.6.1.2.15)	Name of loop. Array of strings (nloops).
id	vecstring.type (9.6.1.2.15)	ID of loop. Array of strings (nloops).
position	rzphi2D (9.6.1.3.365)	List of (R,Z,phi) points defining the position of the loop (see data structure documentation FLUXLOOPposition.pdf); Matrices (nloops, max_npoints)
npoints	vecint.type (9.6.1.2.14)	Number of points describing each loop in the "position" matrices. Vector (nloops)

Type of: flux\_loops:setup\_floops (2199)

### 9.6.1.3.393 setup\_line

Geometric description of the lines of sight for line integral diagnostic

member	type	description
pivot_point	rzphi1D (9.6.1.3.362)	Pivot point of each line of sight; Vector (nchords)



member	type	description
horchordang1	vecflt.type (9.6.1.2.13)	Angle [rad] of horizontal projection of l.o.s. with poloidal cross section (0 for HFS to LFS chord - see Convention.angles.interfdiag.pdf) [rad]. Vector (nchords)
verchordang1	vecflt.type (9.6.1.2.13)	Angle of chord with vertical axis (0 for bottom-top chord, Pi for top-bottom chord - see Convention.angles.interfdiag.pdf) [rad]; Vector (nchords)
width	vecflt.type (9.6.1.2.13)	Width of the laser beam (1/e) [m]; Vector (nchords)
second_point	rzphi1D (9.6.1.3.362)	Second point defining the line of sight together with the pivot.point. In case the probing wave is reflected, this should be the position of the mirror. This data is redundant with horchordang1 and verchordang1. Vector (nchords).
horchordang2	vecflt.type (9.6.1.2.13)	For reflected l.o.s. only (undefined otherwise) : Angle [rad] of horizontal projection of reflected l.o.s. with poloidal cross section (0 for HFS to LFS chord - see Convention.angles.interfdiag.pdf) [rad]. Vector (nchords)
verchordang2	vecflt.type (9.6.1.2.13)	For reflected l.o.s. only (undefined otherwise) : Angle of reflected chord with vertical axis (0 for bottom-top chord, Pi for top-bottom chord - see Convention.angles.interfdiag.pdf) [rad]; Vector (nchords)
third_point	rzphi1D (9.6.1.3.362)	Third point defining the reflected line of sight together with the second_point (undefined if the probing wave is not reflected). This data is redundant with horchordang2 and verchordang2. Vector (nchords).
nchordpoints	integer (9.6.1.1.2)	Number of points along the viewing chords (used for synthetic diagnostic signal reconstruction)

Type of: fusiondiag\_colli\_circ:setup\_line (2206) I fusiondiag\_colli\_poly:setup\_line (2207) I lineintegraldiag:setup\_line (2249)

### 9.6.1.3.394 setup\_line\_exp

Geometric description of the lines of sight for line integral diagnostic with additional appinfo tags to have some nodes both in MD and DM

member	type	description
pivot_point	rzphi1Dexperimental (9.6.1.3.364)	Pivot point of each line of sight; Vector (nchords)
horchordang1	vecflt.type (9.6.1.2.13)	Angle [rad] of horizontal projection of l.o.s. with poloidal cross section (0 for HFS to LFS chord - see Convention.angles.interfdiag.pdf) [rad]. Vector (nchords)
verchordang1	vecflt.type (9.6.1.2.13)	Angle of chord with vertical axis (0 for bottom-top chord, Pi for top-bottom chord - see Convention.angles.interfdiag.pdf) [rad]; Vector (nchords)
width	vecflt.type (9.6.1.2.13)	Width of the laser beam (1/e) [m]; Vector (nchords)
second_point	rzphi1Dexperimental (9.6.1.3.364)	Second point defining the line of sight together with the pivot.point. In case the probing wave is reflected, this should be the position of the mirror. This data is redundant with horchordang1 and verchordang1. Vector (nchords).
horchordang2	vecflt.type (9.6.1.2.13)	For reflected l.o.s. only (undefined otherwise) : Angle [rad] of horizontal projection of reflected l.o.s. with poloidal cross section (0 for HFS to LFS chord - see Convention.angles.interfdiag.pdf) [rad]. Vector (nchords)
verchordang2	vecflt.type (9.6.1.2.13)	For reflected l.o.s. only (undefined otherwise) : Angle of reflected chord with vertical axis (0 for bottom-top chord, Pi for top-bottom chord - see Convention.angles.interfdiag.pdf) [rad]; Vector (nchords)
third_point	rzphi1Dexperimental (9.6.1.3.364)	Third point defining the reflected line of sight together with the second_point (undefined if the probing wave is not reflected). This data is redundant with horchordang2 and verchordang2. Vector (nchords).
nchordpoints	integer (9.6.1.1.2)	Number of points along the viewing chords (used for synthetic diagnostic signal reconstruction)

Type of: ecesetup:los (2170)

### 9.6.1.3.395 shield

Shield

member	type	description
inboard	shield_specs (9.6.1.3.396)	Inboard
outboard	shield_specs (9.6.1.3.396)	Outboard

Type of: bb\_shield:shield (2002)

### 9.6.1.3.396 shield\_specs

Inboard



member	type	description
nmat	integer (9.6.1.1.2)	Number of materials; Scalar
composition	vecflt.type (9.6.1.2.13)	Inboard or outboard shield radial build the percentage of each material respectively (Meaning of the material index 1: Eurofer, 2: Pb-15.7Li, 3: He, 4: Water, 5: Tungsten Carbide, 6: Boron, 7: Tungsten, 8: Stainless Steel 316) in %vol; Vector(nmat).
r1	float (9.6.1.1.1)	Inner radius (nearest to the plasma), in the global tokamak coordinate system of the inboard or outboard shield located at the equatorial plane [m]; Scalar
r2	float (9.6.1.1.1)	Outer radius (farrest to the plasma), in the global tokamak coordinate system of the inboard or outboard shield located at the equatorial plane [m]; Scalar
mass	float (9.6.1.1.1)	Mass of inboard or outboard shield [Kg]; Scalar

Type of: shield:inboard (2392) I shield:outboard (2392)

### 9.6.1.3.397 simp\_apert

Simple aperture specification: rectangular or elliptical

member	type	description
type	identifier (9.6.1.3.233)	Shape identifier; 0: rectangular, 1: elliptical
sizes	vecflt.type (9.6.1.2.13)	Rectangular size a, b or diameters for elliptical shapes [m]; Time-dependent; Vector (2)
angle	float (9.6.1.1.1)	Rotation of aperture around its center [rad]

Type of: reflectometry\_radfield\_gaussian:aperture (2346)

### 9.6.1.3.398 solcurdiag\_sol\_current

Vector of toroidal rings of divertor tiles. Structure array(nrings). Time-dependent

member	type	description
setup	solcurdiag_sol_current_setup (9.6.1.3.399)	diagnostic setup information
measure	exp0D (9.6.1.3.194)	Measured value for the current through the toroidal ring of tiles [A]; Time-dependent; Scalar

Type of: solcurdiag:sol\_current (2041)

### 9.6.1.3.399 solcurdiag\_sol\_current\_setup

diagnostic setup information

member	type	description
name	string (9.6.1.1.3)	Name of the toroidally distributed tile set. String.
id	integer (9.6.1.1.2)	ID of the tile set as a scalar, to be used in connectivity. Integer.
position	rz1D (9.6.1.3.356)	RZ points defining the shape of the toroidal tile set [m]; Vector (npoints)
tiles_turn	integer (9.6.1.1.2)	Number of tiles used to get the full toroidal coverage; Scalar

Type of: solcurdiag\_sol\_current:setup (2395)

### 9.6.1.3.400 source\_imp

Subtree containing source terms for the impurity species

member	type	description
exp	matflt.type (9.6.1.2.10)	Explicit source term [same unit as root quantity]. Time-dependent. Array2d (nrho,nzimp)
imp	matflt.type (9.6.1.2.10)	Implicit source term [ $s^{-1}.m^{-3}$ ]. Time-dependent. Array2d (nrho,nzimp)

Type of: coresource\_values:qz (2121) I coresource\_values:sz (2121)

### 9.6.1.3.401 source\_ion

Subtree containing source terms for the various ion species

member	type	description
exp	matflt.type (9.6.1.2.10)	Explicit source term [same unit as root quantity]. Time-dependent. Matrix (nrho,nion)
imp	matflt.type (9.6.1.2.10)	Implicit source term [ $s^{-1}.m^{-3}$ ]. Time-dependent. Matrix (nrho,nion)

Type of: coresource\_values:qi (2121) I coresource\_values:si (2121) I coresource\_values:ui (2121)

#### 9.6.1.3.402 source\_rate

Source density of particles in phase space (real space, velocity space, spin state).

member	type	description
grid	complexgrid (9.6.1.3.82)	Grid for storing the source-rate. Time-dependent; Complexgrid
value	complexgrid_scalar (9.6.1.3.87)	The source-rate of particles in phase space; given on grid [ $(m/s)^{-3} m^{-3} s^{-1}$ ]. Time-dependent; Complexgrid_scalar
discrete	vecint.type (9.6.1.2.14)	List of indexes for the dimensions (coordinates) of grid for which the source is discretely distributed. For example consider a source of 3.5 MeV alpha particles provided on a grid with two coordinates; rho_tor and energy. To specify that the source is given at energies exactly equal to 3.5 MeV, let discret have length 1 and set discrete=(1)=2 since energy is dimension number 2. The source is then proportional to $\delta(1 - \text{energy} / 3.5\text{MeV})$ , where delta is the Direct delta distribution. Discrete dimensions can only be used when the grid is rectangular. Time-dependent; Vector(n_discrete.dimensions)
parameters	parameters (9.6.1.3.308)	Parameters used to defined the grid coordiantes. Time-dependent

Type of: distsource\_source:source\_rate (2166)

#### 9.6.1.3.403 source\_vec

Subtree containing vector source term (radial dimension only)

member	type	description
exp	vecflt.type (9.6.1.2.13)	Explicit source term [same unit as root quantity]. Time-dependent. Vector (nrho)
imp	vecflt.type (9.6.1.2.13)	Implicit source term [ $s^{-1}.m^{-3}$ ]. Time-dependent. Vector (nrho)

Type of: coresource\_values:qe (2121) I coresource\_values:se (2121) I coresource\_values:ujxb (2121)

#### 9.6.1.3.404 sourceeel

Structure for the total source term for the transport equation (electrons). Time-dependent;

member	type	description
value	vecflt.type (9.6.1.2.13)	Value of the source term; Time-dependent; Vector (nrho)
integral	vecflt.type (9.6.1.2.13)	Integral from 0 to rho of the source term. Time-dependent; Vector (nrho)
source	string (9.6.1.1.3)	Source of the profile (any comment describing the origin of the profile : code, path to diagnostic signals, massaging, ...); String

Type of: corefield:source\_term (2103) I profiles1d:qoh (2333)

#### 9.6.1.3.405 sourceimp

Structure for the total source term for the transport equation (impurities). Time-dependent;

member	type	description
value	matflt.type (9.6.1.2.10)	Value of the source term [ $m^{-3}.s^{-1}$ ]; Time-dependent; Array2D (nrho,nzimp)
integral	matflt.type (9.6.1.2.10)	Integral from 0 to rho of the source term. Time-dependent; Array2D(nrho,nzimp)
source	vecstring.type (9.6.1.2.15)	Source of the profile (any comment describing the origin of the impurity profiles : code, path to diagnostic signals, massaging, ...); Array of strings (nimp)

Type of: impurity\_type:source\_term (2233)

#### 9.6.1.3.406 sourceion

Structure for the total source term for the transport equation (ions). Time-dependent;

member	type	description
value	matflt.type (9.6.1.2.10)	Value of the source term; Time-dependent; Matrix (nrho,nion)
integral	matflt.type (9.6.1.2.10)	Integral from 0 to rho of the source term. Time-dependent; Matrix (nrho,nion)
source	vecstring.type (9.6.1.2.15)	Source of the profile (any comment describing the origin of the profile : code, path to diagnostic signals, massaging, ...); Array of strings (nion)

Type of: corefieldion:source\_term (2104)

#### 9.6.1.3.407 species\_desc

Description of a single ion species or bundled charge state.

member	type	description
label	string (9.6.1.1.3)	Name of species
amn	float (9.6.1.1.1)	Atomic mass number of the species
zn	float (9.6.1.1.1)	Nuclear charge of the impurity
zmin	float (9.6.1.1.1)	Minimum Z of species charge state bundle
zmax	float (9.6.1.1.1)	Maximum Z of species charge state bundle

Type of: edge:species (2015)

#### 9.6.1.3.408 species\_reference

Defines a reference to a single species in a CPO that includes a compositions structure.

member	type	description
type	identifier (9.6.1.3.233)	The type species: type.flag=1 for electron source; type.flag=2 for ion source taken from compositions/ions; type.flag=3 for impurity source taken from compositions/impur; 4=neutron source; 4=photon source etc (see species_reference.identifier.definition in the Documentation website under Conventions/Enumerated.datatypes).
index	integer (9.6.1.1.2)	Index of the species. This definition of index depends on the value of type; if the species is an ion (type.flag=1) or an impurity (type.flag=2) then the index refers to distribution/compositions/ions, or distribution/compositions/impur, respectively. This field has no meaning for other species, e.g. like electrons, neutrons or photons. The indexing follows the Fortran/Matlab convention where the first element in an array has index 1.

Type of: distri\_vec:species (2161) | distsource\_source:species (2166)

#### 9.6.1.3.409 spectral

This structure accommodates the types needed on a spectral MSE diagnostic namely the emissivity and the radiance spectra. It will be subsequently upgraded with optical + photon detection elements since the structure will also be used for a synthetic spectral mse code.

member	type	description
emissivity	msediag_emissivity (9.6.1.3.275)	Emissivity characteristics.
radiance	msediag_radiance (9.6.1.3.278)	Emissivity characteristics.
codeparam	codeparam (9.6.1.3.77)	Code parameters

Type of: msediag:spectral (2028)

#### 9.6.1.3.410 spectrum

Spectral properties of the wave.

member	type	description
phi.theta	launchs_phi_theta (9.6.1.3.245)	Power spectrum as a function of the refractive index in the toroidal and poloidal directions.
parallel	launchs_parallel (9.6.1.3.244)	Power spectrum as a function of the parallel refractive index.

Type of: launches:spectrum (2024)

### 9.6.1.3.411 spot

Spot characteristics

member	type	description
size	vecflt.type (9.6.1.2.13)	Size of the spot ellipse [m], Vector (2). Time-dependent
angle	float (9.6.1.1.1)	Rotation angle for the spot ellipse [rd], Float. Time-dependent

Type of: rfbeam:spot (2351)

### 9.6.1.3.412 sputtering\_neutrals

Sputtering coefficients

member	type	description
physical	vecflt.type (9.6.1.2.13)	Effective coefficient of physical sputtering of the neutral type INEUT. Vector(nneut). Time-dependent.
chemical	vecflt.type (9.6.1.2.13)	Effective coefficient of chemical sputtering of the neutral type INEUT. Vector(nneut). Time-dependent.

Type of: coefficients\_neutrals:sputtering (2075)

### 9.6.1.3.413 straps

Properties of the IC antenna strap; Time-dependent; Vector(nstraps)

member	type	description
current	exp0D (9.6.1.3.194)	Root mean square current flowing along the strap [A]; Time-Dependent; Float
phase	exp0D (9.6.1.3.194)	Phase of strap current [rad]; Time-dependent; exp0D
phi_centre	float (9.6.1.1.1)	Toroidal angle at the centre of the strap [rad]; Float
width	float (9.6.1.1.1)	Width of strap in the toroidal direction [m]; Float
dist2wall	float (9.6.1.1.1)	Distance to conducting wall or other conductor behind the antenna straps [m]; Float
coord_strap	rz1D (9.6.1.3.356)	Coordinates (R,z) of polygon describing the antenna in the poloidal plane; rz1d vector (ncoord_strap)

Type of: antennaic\_setup:straps (2054)

### 9.6.1.3.414 structure\_cs

Detailed description of the coil structure, for coils that are part of the central solenoid.

member	type	description
gaptf	float (9.6.1.1.1)	gap between CS external radius and TF internal vault radius [m]; Scalar
ri	float (9.6.1.1.1)	CS internal radius [m]; Scalar
re	float (9.6.1.1.1)	CS external radius [m]; Scalar
jcable	float (9.6.1.1.1)	Maximum allowable CS Cable In Conduit current density [A/m <sup>2</sup> ]; Scalar
current_nom	float (9.6.1.1.1)	Nominal current in the CS conductor [A]; Scalar
sigma	float (9.6.1.1.1)	Maximum allowable stress in the CS [Pa]; Scalar
tiso	float (9.6.1.1.1)	Insulation thickness of CS conductor [m]; Scalar
nlay	float (9.6.1.1.1)	Number of conductor layers in the Central Solenoid; Scalar

Type of: desc\_pfcoids:structure\_cs (2134)

### 9.6.1.3.415 t\_series\_cplx

Time series

member	type	description
time_wind	vecflt.type (9.6.1.2.13)	Time trace [s]; Time-dependent; Vector (n)
values_re	vecflt.type (9.6.1.2.13)	Real part of data; Time-dependent; Vector (n)

member	type	description
values.im	vecflt.type (9.6.1.2.13)	Imaginary part of data; Time-dependent; Vector (n)

Type of: refl\_receive:iq\_receiver (2343)

#### 9.6.1.3.416 t\_series\_real

Time series; Time-dependent

member	type	description
time.wind	vecflt.type (9.6.1.2.13)	Time trace [s]; Time-dependent; Vector (n)
values	vecflt.type (9.6.1.2.13)	Values of the signal; Time-dependent; Vector (n)

Type of: refl\_receive:io\_signal (2343) | refl\_receive:raw\_signal (2343)

#### 9.6.1.3.417 table

Stores the interpolation table (0d to 7d). Only one entry should be used.

member	type	description
filled	integer (9.6.1.1.2)	Identifier whether the tables have real data.
table_0d	float (9.6.1.1.1)	NO DOCS
table_1d	vecflt.type (9.6.1.2.13)	NO DOCS
table_2d	matflt.type (9.6.1.2.10)	NO DOCS
table_3d	array3dfilt.type (9.6.1.2.2)	NO DOCS
table_4d	array4dfilt.type (9.6.1.2.4)	NO DOCS
table_5d	array5dfilt.type (9.6.1.2.5)	NO DOCS
table_6d	array6dfilt.type (9.6.1.2.6)	NO DOCS
coord1_str	vecstring.type (9.6.1.2.15)	If needed, an array of strings describing coordinate 1
coord2_str	vecstring.type (9.6.1.2.15)	If needed, an array of strings describing coordinate 2
coord3_str	vecstring.type (9.6.1.2.15)	If needed, an array of strings describing coordinate 3
coord4_str	vecstring.type (9.6.1.2.15)	If needed, an array of strings describing coordinate 4
coord5_str	vecstring.type (9.6.1.2.15)	If needed, an array of strings describing coordinate 5
coord6_str	vecstring.type (9.6.1.2.15)	If needed, an array of strings describing coordinate 6
quality	identifier (9.6.1.3.233)	Characterize the data quality

Type of: tables:table (2415)

#### 9.6.1.3.418 tables

Definition of a process

member	type	description
ndim	integer (9.6.1.1.2)	Table dimensionality of the process. Indicates which of the tables is filled.
coord_index	integer (9.6.1.1.2)	Index in tables.coord, specifying what coordinate specification to use for this table.
result_label	string (9.6.1.1.3)	Description of the process result (rate, cross section, sputtering yield, ...)
result_unit	string (9.6.1.1.3)	Unit of the process result
result_trans	integer (9.6.1.1.2)	Transformation of the process result. Integer flag: 0=no transformation; 1=10 <sup>-7</sup> ; 2=exp()
zmin	vecint.type (9.6.1.2.14)	Minimum charge state [units of elementary charge]; if equal to zmax then no bundling; Vector(nchargestates)
zmax	vecint.type (9.6.1.2.14)	Maximum charge state [units of elementary charge]; if equal to zmin then no bundling; Vector(nchargestates)
state_label	vecstring.type (9.6.1.2.15)	Label for charge state (e.g. D0, D1+, ...); Vector(nchargestates)
table(:)	table (9.6.1.3.417)	Array of data tables, one entry per species. Vector(nchargestates)
data_source	string (9.6.1.1.3)	Filename or subroutine name used to provide this data.
data_provide	string (9.6.1.1.3)	ITM responsible person for this data.
data_citation	string (9.6.1.1.3)	Reference to publication(s).

Type of: amns:tables (2000)

### 9.6.1.3.419 tables\_coord

Definition of coordinates for one specific coordinate system used in one or more tables.

member	type	description
coords(:)	coords (9.6.1.3.103)	Vector(ndim) of coordinates. ndim is number of parameters for a process.

Type of: amns:tables\_coord (2000)

### 9.6.1.3.420 temporary\_nt

set of non-timed temporary quantities

member	type	description
float0d(:)	temporary_nt_0dr (9.6.1.3.423)	Constant 0D float
integer0d(:)	temporary_nt_0di (9.6.1.3.422)	Constant 0D integer
complex0d(:)	temporary_nt_0dc (9.6.1.3.421)	Constant 0D complex
string0d(:)	temporary_nt_0ds (9.6.1.3.424)	Constant 0D string
float1d(:)	temporary_nt_1dr (9.6.1.3.427)	Constant 1D float
integer1d(:)	temporary_nt_1di (9.6.1.3.426)	Constant 1D integer
string1d(:)	temporary_nt_1dr (9.6.1.3.427)	Constant 1D string
complex1d(:)	temporary_nt_1dc (9.6.1.3.425)	Constant 1D complex
float2d(:)	temporary_nt_2dr (9.6.1.3.431)	Constant 2D float
integer2d(:)	temporary_nt_2di (9.6.1.3.430)	Constant 2D integer
complex2d(:)	temporary_nt_2dc (9.6.1.3.429)	Constant 2D complex
float3d(:)	temporary_nt_3dr (9.6.1.3.434)	Constant 3D float
integer3d(:)	temporary_nt_3di (9.6.1.3.433)	Constant 3D integer
complex3d(:)	temporary_nt_3dc (9.6.1.3.432)	Constant 3D complex
float4d(:)	temporary_nt_4dr (9.6.1.3.435)	Constant 4D float

Type of: temporary:non\_timed (2042)

### 9.6.1.3.421 temporary\_nt\_0dc

a non-timed temporary quantity of complex type

member	type	description
identifier	identifier (9.6.1.3.233)	Identifier.
value	cplx_type (9.6.1.2.8)	Value. Complex scalar.

Type of: temporary\_nt:complex0d (2417)

### 9.6.1.3.422 temporary\_nt\_0di

a non-timed temporary quantity of integer type

member	type	description
identifier	identifier (9.6.1.3.233)	Identifier.
value	integer (9.6.1.1.2)	Value. integer scalar

Type of: temporary\_nt:integer0d (2417)

#### 9.6.1.3.423 `temporary_nt_0dr`

a non-timed temporary quantity of real type

member	type	description
identifier	identifier (9.6.1.3.233)	Identifier.
value	float (9.6.1.1.1)	Value. Real scalar.

Type of: `temporary_nt:float0d` (2417)

#### 9.6.1.3.424 `temporary_nt_0ds`

a non-timed temporary quantity of string type

member	type	description
identifier	identifier (9.6.1.3.233)	Identifier.
value	string (9.6.1.1.3)	Value. String.

Type of: `temporary_nt:string0d` (2417)

#### 9.6.1.3.425 `temporary_nt_1dc`

a non-timed temporary quantity of veccomplex type

member	type	description
identifier	identifier (9.6.1.3.233)	Identifier.
value	vecplx.type (9.6.1.2.12)	Value. Vector of complex numbers

Type of: `temporary_nt:complex1d` (2417)

#### 9.6.1.3.426 `temporary_nt_1di`

a non-timed temporary quantity of vecint type

member	type	description
identifier	identifier (9.6.1.3.233)	Identifier.
value	vecint.type (9.6.1.2.14)	Value. Vector of integers

Type of: `temporary_nt:integer1d` (2417)

#### 9.6.1.3.427 `temporary_nt_1dr`

a non-timed temporary quantity of vecflt type

member	type	description
identifier	identifier (9.6.1.3.233)	Identifier.
value	vecflt.type (9.6.1.2.13)	Value. Vector of float.

Type of: `temporary_nt:float1d` (2417) I `temporary_nt:string1d` (2417)

#### 9.6.1.3.428 `temporary_nt_1ds`

a non-timed temporary quantity of vecstring type

member	type	description
identifier	identifier (9.6.1.3.233)	Identifier.
value	vecstring.type (9.6.1.2.15)	Value. Vector of strings.



#### 9.6.1.3.429 temporary\_nt.2dc

a non-timed temporary quantity of matcomplex type

member	type	description
identifier	identifier (9.6.1.3.233)	Identifier.
value	matcplx_type (9.6.1.2.9)	Value. Matrix of complex numbers

Type of: temporary\_nt:complex2d (2417)

#### 9.6.1.3.430 temporary\_nt.2di

a non-timed temporary quantity of matint type

member	type	description
identifier	identifier (9.6.1.3.233)	Identifier.
value	matint_type (9.6.1.2.11)	Value. Matrix of integers

Type of: temporary\_nt:integer2d (2417)

#### 9.6.1.3.431 temporary\_nt.2dr

a non-timed temporary quantity of matflt type

member	type	description
identifier	identifier (9.6.1.3.233)	Identifier.
value	matflt_type (9.6.1.2.10)	Value. Matrix of float.

Type of: temporary\_nt:float2d (2417)

#### 9.6.1.3.432 temporary\_nt.3dc

a non-timed temporary quantity of array3dcomplex type

member	type	description
identifier	identifier (9.6.1.3.233)	Identifier.
value	array3dcplx_type (9.6.1.2.1)	Value. array 3D of complex numbers

Type of: temporary\_nt:complex3d (2417)

#### 9.6.1.3.433 temporary\_nt.3di

a non-timed temporary quantity of array3dint type

member	type	description
identifier	identifier (9.6.1.3.233)	Identifier.
value	array3dint_type (9.6.1.2.3)	Value. array 3D of integers

Type of: temporary\_nt:integer3d (2417)

#### 9.6.1.3.434 temporary\_nt.3dr

a non-timed temporary quantity of array3dfloat type

member	type	description
identifier	identifier (9.6.1.3.233)	Identifier.
value	array3dfilt_type (9.6.1.2.2)	Value. array 3D of floats

Type of: temporary\_nt:float3d (2417)

### 9.6.1.3.435 temporary\_nt.4dr

a non-timed temporary quantity of array4dfloat type

member	type	description
identifier	identifier (9.6.1.3.233)	Identifier.
value	array4dflt.type (9.6.1.2.4)	Value. array 4D of floats

Type of: temporary\_nt:float4d (2417)

### 9.6.1.3.436 temporary\_t

set of timed temporary quantities

member	type	description
float0d(:)	temporary_t.0dr (9.6.1.3.439)	Time-dependent 0D float
integer0d(:)	temporary_t.0di (9.6.1.3.438)	Time-dependent 0D integer.
complex0d(:)	temporary_t.0dc (9.6.1.3.437)	Time-dependent 0D complex.
string0d(:)	temporary_t.0ds (9.6.1.3.440)	Time-dependent 0D string.
float1d(:)	temporary_t.1dr (9.6.1.3.443)	Time-dependent 1D float.
integer1d(:)	temporary_t.1di (9.6.1.3.442)	Time-dependent 1D integer.
complex1d(:)	temporary_t.1dc (9.6.1.3.441)	Time-dependent 1D complex
float2d(:)	temporary_t.2dr (9.6.1.3.446)	Time-dependent 2D float
integer2d(:)	temporary_t.2di (9.6.1.3.445)	Time-dependent 2D integer
complex2d(:)	temporary_t.2dc (9.6.1.3.444)	Time-dependent 2D complex
float3d(:)	temporary_t.3dr (9.6.1.3.449)	Time-dependent 3D float
integer3d(:)	temporary_t.3di (9.6.1.3.448)	Time-dependent 3D integer
complex3d(:)	temporary_t.3dc (9.6.1.3.447)	Time-dependent 3D complex
float4d(:)	temporary_t.4dr (9.6.1.3.450)	Time-dependent 4D float

Type of: temporary\_t:timed (2042)

### 9.6.1.3.437 temporary\_t.0dc

a timed temporary quantity of complex type

member	type	description
identifier	identifier (9.6.1.3.233)	Identifier.
value	cplx_type (9.6.1.2.8)	Value. Time-dependent. Complex scalar.

Type of: temporary\_t:complex0d (2433)

### 9.6.1.3.438 temporary\_t.0di

a timed temporary quantity of integer type

member	type	description
identifier	identifier (9.6.1.3.233)	Identifier.
value	integer (9.6.1.1.2)	Value. Time-dependent. integer scalar

Type of: temporary\_t:integer0d (2433)

### 9.6.1.3.439 `temporary_t.0dr`

a timed temporary quantity of real type

member	type	description
identifier	identifier (9.6.1.3.233)	Identifier.
value	float (9.6.1.1.1)	Value. Time-dependent. Real scalar.

Type of: `temporary_t:float0d` (2433)

### 9.6.1.3.440 `temporary_t.0ds`

a timed temporary quantity of string type

member	type	description
identifier	identifier (9.6.1.3.233)	Identifier.
value	string (9.6.1.1.3)	Value. Time-dependent. String.

Type of: `temporary_t:string0d` (2433)

### 9.6.1.3.441 `temporary_t.1dc`

a timed temporary quantity of `veccomplex` type

member	type	description
identifier	identifier (9.6.1.3.233)	Identifier.
value	<code>vecplx.type</code> (9.6.1.2.12)	Value. Time-dependent. Vector of complex numbers

Type of: `temporary_t:complex1d` (2433)

### 9.6.1.3.442 `temporary_t.1di`

a timed temporary quantity of `vecint` type

member	type	description
identifier	identifier (9.6.1.3.233)	Identifier.
value	<code>vecint.type</code> (9.6.1.2.14)	Value. Time-dependent. Vector of integers

Type of: `temporary_t:integer1d` (2433)

### 9.6.1.3.443 `temporary_t.1dr`

a timed temporary quantity of `vecflt` type

member	type	description
identifier	identifier (9.6.1.3.233)	Identifier.
value	<code>vecflt.type</code> (9.6.1.2.13)	Value. Time-dependent. Vector of float.

Type of: `temporary_t:float1d` (2433)

### 9.6.1.3.444 `temporary_t.2dc`

a timed temporary quantity of `matcomplex` type

member	type	description
identifier	identifier (9.6.1.3.233)	Identifier.
value	<code>matplx.type</code> (9.6.1.2.9)	Value. Time-dependent. Matrix of complex numbers

Type of: `temporary_t:complex2d` (2433)

### 9.6.1.3.445 `temporary_t.2di`

a timed temporary quantity of `matint` type

member	type	description
identifier	identifier (9.6.1.3.233)	Identifier.
value	<code>matint.type</code> (9.6.1.2.11)	Value. Time-dependent. Matrix of integers

Type of: `temporary_t:integer2d` (2433)

### 9.6.1.3.446 `temporary_t.2dr`

a timed temporary quantity of `matflt` type

member	type	description
identifier	identifier (9.6.1.3.233)	Identifier.
value	<code>matflt.type</code> (9.6.1.2.10)	Value. Time-dependent. Matrix of float.

Type of: `temporary_t:float2d` (2433)

### 9.6.1.3.447 `temporary_t.3dc`

a timed temporary quantity of `array3dcomplex` type

member	type	description
identifier	identifier (9.6.1.3.233)	Identifier.
value	<code>array3dcplx.type</code> (9.6.1.2.1)	Value. Time-dependent. array 3D of complex numbers

Type of: `temporary_t:complex3d` (2433)

### 9.6.1.3.448 `temporary_t.3di`

a timed temporary quantity of `array3dint` type

member	type	description
identifier	identifier (9.6.1.3.233)	Identifier.
value	<code>array3dint.type</code> (9.6.1.2.3)	Value. Time-dependent. array 3D of integers

Type of: `temporary_t:integer3d` (2433)

### 9.6.1.3.449 `temporary_t.3dr`

a timed temporary quantity of `array3dfloat` type

member	type	description
identifier	identifier (9.6.1.3.233)	Identifier.
value	<code>array3dflt.type</code> (9.6.1.2.2)	Value. Time-dependent. array 3D of floats

Type of: `temporary_t:float3d` (2433)

### 9.6.1.3.450 `temporary_t.4dr`

a timed temporary quantity of `array4dfloat` type

member	type	description
identifier	identifier (9.6.1.3.233)	Identifier.
value	<code>array4dflt.type</code> (9.6.1.2.4)	Value. Time-dependent. array 4D of floats

Type of: `temporary_t:float4d` (2433)

### 9.6.1.3.451 tf\_desc\_tccoils

Description of the toroidal field coils

member	type	description
type	integer (9.6.1.1.2)	Type of coil, 0=circular coil, 1=plane coil with arbitrary shape.
phi	float (9.6.1.1.1)	Toroidal angle of centre of coil 1, assuming all coils are identical and evenly distributed around the torus [rad]. Scalar
circularcoil	circularcoil (9.6.1.3.75)	Circular coil description
planecoil	planecoil (9.6.1.3.327)	Plane coil description
inboard	tf_structure (9.6.1.3.453)	Description of TF inboard structure
outboard	tf_structure (9.6.1.3.453)	Description of TF outboard structure

Type of: toroidfield:desc\_tccoils (2044)

### 9.6.1.3.452 tf\_desc\_tccoils\_board

Description of TF inboard/outboard properties

member	type	description
structure	tf_structure (9.6.1.3.453)	TF coil structure

### 9.6.1.3.453 tf\_structure

Inner TF coil structure

member	type	description
jcable	float (9.6.1.1.1)	CICS cable in current density [A/m]; Scalar
tisotf	float (9.6.1.1.1)	Insulation thickness of TF conductor [m]; Scalar
efcasing	float (9.6.1.1.1)	Thickness front casing [m]; Scalar
escasing	float (9.6.1.1.1)	Thickness side casing [m]; Scalar
sigjackettf	float (9.6.1.1.1)	Jacket stress limit [Pa]; Scalar
sigvaulttf	float (9.6.1.1.1)	Vault stress limit [Pa]; Scalar
ktf	float (9.6.1.1.1)	Amplification factor for magnetic field
ritf	float (9.6.1.1.1)	Internal TF coil radius [m]; Scalar
riitf	float (9.6.1.1.1)	Internal vault TF coil radius [m]; Scalar
retf	float (9.6.1.1.1)	External TF coil radius [m]; Scalar
he_fraction	float (9.6.1.1.1)	Helium fraction (percentage) in TF structure in front of winding package [-]; Scalar
ss_fraction	float (9.6.1.1.1)	Stainless steel 316 fraction (percentage) in TF structure in front of winding package [-]; Scalar
pow_dens_wp	float (9.6.1.1.1)	Peak energy deposition in winding pack [W.m <sup>-3</sup> ]; Scalar

Type of: tf\_desc\_tccoils:inboard (2448) | tf\_desc\_tccoils:outboard (2448) | tf\_desc\_tccoils\_board:structure (2449)

### 9.6.1.3.454 theta\_info

Information on the poloidal angle theta.

member	type	description
angl.type	integer (9.6.1.1.2)	Type of poloidal angle: 1 : same as the poloidal angle in the equilibrium cpo; 2 : geometrical polar angle, $\tan(\theta) = Z / (R - R_0)$ ; 3 : other. If option 3, a transformation to the geometrical poloidal angle is provided in th2th_pol.
th2th_pol	matflt.type (9.6.1.2.10)	Geometrical poloidal angle at grid points in theta, i.e. the transformation from theta to the polar poloidal angle; used only if angl.type=3; Time-dependent; Matrix (ndim1, ndim2)

Type of: waves\_grid\_2d:theta\_info (2494)

### 9.6.1.3.455 topo\_regions

List with distribution function in each topological region; Time-dependent. Structure array(nregion\_topo)

member	type	description
ind_omnigen	integer (9.6.1.1.2)	Index of the omnigenous magnetic surfaces (generalised equatorial plane) to which the s-coordinates refer. NOTE: only used for gridcoord=3.

member	type	description
dim1	array6dflt.type (9.6.1.2.6)	First dimension in phase space; Time-dependent; Array6d(ndim11, ndim21, ndim31, ndim41, ndim51, ndim61).
dim2	array6dflt.type (9.6.1.2.6)	Second dimension in phase space; Time-dependent; Array6d(ndim12, ndim22, ndim32, ndim42, ndim52, ndim62).
dim3	array6dflt.type (9.6.1.2.6)	Third dimension in phase space; Time-dependent; Array6d(ndim13, ndim23, ndim33, ndim43, ndim53, ndim63).
dim4	array6dflt.type (9.6.1.2.6)	Fourth dimension in phase space; Time-dependent; Array6d(ndim14, ndim24, ndim34, ndim44, ndim54, ndim64).
dim5	array6dflt.type (9.6.1.2.6)	Fifth dimension in phase space; Time-dependent; Array6d(ndim15, ndim25, ndim35, ndim45, ndim55, ndim65).
dim6	array6dflt.type (9.6.1.2.6)	Sixth dimension in phase space; Time-dependent; Array6d(ndim16, ndim26, ndim36, ndim46, ndim56, ndim66).
jacobian	array6dflt.type (9.6.1.2.6)	Jacobian of the transformation of the phase space grid variables; Time-dependent; Array6d(ndim11, ndim22, ndim33, ndim44, ndim55, ndim66).
distfunc	array6dflt.type (9.6.1.2.6)	Orbit (or bounce) averaged distribution function given on a grid [ $1/m^3 (m/s)^{-3}$ ]; Time-dependent; Array6d(ndim11, ndim22, ndim33, ndim44, ndim55, ndim66).

### 9.6.1.3.456 toroid\_field

Toroidal field information entering the definition of rho\_tor, for reference only. The physical value of the toroidal field should be taken from the toroidfield CPO. Time-dependent.

member	type	description
b0	float (9.6.1.1.1)	Vacuum field at r0 [T]; Time-dependent. Scalar.
b0prime	float (9.6.1.1.1)	Time derivative of the vacuum field at r0 [T/s]; Time-dependent. Scalar.
r0	float (9.6.1.1.1)	Characteristic major radius of the device (used in publications, usually middle of the vessel at the equatorial midplane) [m]. Scalar.
time	float (9.6.1.1.1)	Time [s] (exact time slice used from the time array of the source signal, here the toroidfield CPO. If the time slice does not exist in the time array of the source signal, it means linear interpolation has been used); Time-dependent; Scalar.

Type of: coreprof:toroid\_field (2008)

### 9.6.1.3.457 trace

Position of particle in 5D space (3D in real and 2D in velocity).

member	type	description
time_orb	matflt.type (9.6.1.2.10)	Time along the orbit [s]; Time-dependent; Matrix (norbits, max_ntorb)
ntorb	vecint.type (9.6.1.2.14)	Number of time slices along the orbit, for each orbit. Time-dependent; Vector (norbits)
r	matflt.type (9.6.1.2.10)	Major radius of the guiding centre [m], Major radius; Time-dependent; Matrix (norbits, max_ntorb).
z	matflt.type (9.6.1.2.10)	Altitude of the guiding centre [m]; Time-dependent; Matrix (norbits, max_ntorb).
phi	matflt.type (9.6.1.2.10)	Toroidal angle of the guiding centre [rad]; Time-dependent; Matrix (norbits, max_ntorb).
psi	matflt.type (9.6.1.2.10)	Guiding centre position in psi [normalised poloidal flux]; Time-dependent; Matrix (norbits, max_ntorb).
theta_b	matflt.type (9.6.1.2.10)	Position of the guiding centre in poloidal Boozer angle [rad]; Time-dependent; Matrix (norbits, max_ntorb).
v_parallel	matflt.type (9.6.1.2.10)	Parallel velocity along the orbit [m/s]; Time-dependent; Matrix (norbits, max_ntorb).
v_perp	matflt.type (9.6.1.2.10)	Perpendicular velocity along the orbit [m/s]; Time-dependent; Matrix (norbits, max_ntorb).

Type of: orbit:trace (2032)

### 9.6.1.3.458 transcoefel

Subtree containing transport coefficients from a transport model, for the electrons

member	type	description
diff_eff	vecflt.type (9.6.1.2.13)	Effective diffusivity [ $m^2.s^{-1}$ ]. Time-dependent. Vector (nrho)
vconv_eff	vecflt.type (9.6.1.2.13)	Effective convection [ $m.s^{-1}$ ]. Time-dependent. Vector (nrho)
flux	vecflt.type (9.6.1.2.13)	Flux. Not used in transport equations [ $field.m.s^{-1}, m^{-3}$ if field is not a density itself]. Time-dependent. Vector (nrho)
off_diagonal	offdiagel (9.6.1.3.298)	Details of the transport matrix, just for diagnostic (not used in transport equations). Time-dependent.
flag	integer (9.6.1.1.2)	Flag describing the form of transport produced by the original model : 0- not calculated, 1- D and V, 2- flux, 3- full transport matrix. Scalar.

Type of: coretransp\_values:te\_transp (2125) I neoclassic:mtor\_neo (2030) I neoclassic:ne\_neo (2030) I neoclassic:te\_neo (2030)

### 9.6.1.3.459 transcoefimp

Subtree containing transport coefficients from a transport model, for the various impurity species (multiple charge states)

member	type	description
diff_eff	matflt.type (9.6.1.2.10)	Effective diffusivity [ $m^2.s^{-1}$ ]. Time-dependent. Array2d (nrho,nzimp)
vconv_eff	matflt.type (9.6.1.2.10)	Effective convection [ $m.s^{-1}$ ]. Time-dependent. Array2d (nrho,nzimp)
exchange	matflt.type (9.6.1.2.10)	Ion to electron energy exchange [ $W.m^{-3}$ ]. Time-dependent. Array2d (nrho,nzimp)
flux	matflt.type (9.6.1.2.10)	Flux. Not used in transport equations [ $field.m.s^{-1},m^{-3}$ if field is not a density itself]. Time-dependent. Array2d (nrho,nzimp)
flag	integer (9.6.1.1.2)	Flag describing the form of transport produced by the original model : 0- not calculated, 1- D and V, 2- flux, 3- full transport matrix (off-diagonal subtree not available for impurities for the moment). Scalar.

Type of: coretransp\_values:nz\_transp (2125) I coretransp\_values:tz\_transp (2125) I neoclassic:nz\_neo (2030) I neoclassic:tz\_neo (2030)

### 9.6.1.3.460 transcoefion

Subtree containing transport coefficients from a transport model, for the various ion species, including the energy exchange term qgi.

member	type	description
diff_eff	matflt.type (9.6.1.2.10)	Effective diffusivity [ $m^2.s^{-1}$ ]. Time-dependent. Matrix (nrho,nion)
vconv_eff	matflt.type (9.6.1.2.10)	Effective convection [ $m.s^{-1}$ ]. Time-dependent. Matrix (nrho,nion)
exchange	matflt.type (9.6.1.2.10)	Ion to electron energy exchange [ $W.m^{-3}$ ]. Time-dependent. Matrix(nrho,nion).
qgi	matflt.type (9.6.1.2.10)	Energy exchange term due to transport. [ $W.m^{-3}$ ]. Time-dependent. Matrix (nrho,nion)
flux	matflt.type (9.6.1.2.10)	Flux. Not used in transport equations [ $field.m.s^{-1},m^{-3}$ if field is not a density itself]. Time-dependent. Matrix (nrho,nion)
off.diagonal	offdiagion (9.6.1.3.299)	Details of the transport matrix, just for diagnostic (not used in transport equations). Time-dependent.
flag	integer (9.6.1.1.2)	Flag describing the form of transport produced by the original model : 0- not calculated, 1- D and V, 2- flux, 3- full transport matrix. Scalar.

Type of: coretransp\_values:ti\_transp (2125) I neoclassic:ni\_neo (2030) I neoclassic:ti\_neo (2030)

### 9.6.1.3.461 transcoefvtr

Subtree containing transport coefficients from a transport model, for the various ion species

member	type	description
diff_eff	matflt.type (9.6.1.2.10)	Effective diffusivity [ $m^2.s^{-1}$ ]. Time-dependent. Matrix (nrho,nion)
vconv_eff	matflt.type (9.6.1.2.10)	Effective convection [ $m.s^{-1}$ ]. Time-dependent. Matrix (nrho,nion)
flux	matflt.type (9.6.1.2.10)	Flux. Not used in transport equations [ $field.m.s^{-1},m^{-3}$ if field is not a density itself]. Time-dependent. Matrix (nrho,nion)
off.diagonal	offdiagion (9.6.1.3.299)	Details of the transport matrix, just for diagnostic (not used in transport equations). Time-dependent.
flag	integer (9.6.1.1.2)	Flag describing the form of transport produced by the original model : 0- not calculated, 1- D and V, 2- flux, 3- full transport matrix. Scalar.

Type of: coretransp\_values:vtr\_transp (2125)

### 9.6.1.3.462 trap\_type

Definition of trap types. Array of structures (number of trap types)

member	type	description
trap_id	identifier (9.6.1.3.233)	Identifier for the trap type
compound	integer (9.6.1.1.2)	Index of the compound doing the trapping. Refers to (local) ../compounds.
gas_species	integer (9.6.1.1.2)	Index of the gas species being trapped. Refers to (local) ../gases.



member	type	description
energy	float (9.6.1.1.1)	Energy depth of the trap [eV]
fill_factor	matflt.type (9.6.1.2.10)	Discretized filling fraction of traps in this layer (0..1) [-]. Dimensions: 1. index: cell index of depth discretization in this layer; 2. index: number of discretization elements in the subgrid
density	matflt.type (9.6.1.2.10)	Discretized density of traps in this layer [1/m <sup>3</sup> ]. Dimensions: 1. index: cell index of depth discretization in this layer; 2. index: number of discretization elements in the subgrid

Type of: wall\_unitsComplexType.layers:trap\_type (2484)

### 9.6.1.3.463 trianglexyz

Triangular surface described by its three corners: point1, point2, and point3. The normal vector of this triangle is defined to be in the direction (point2-point1)x(point3-point1).

member	type	description
point1	xyz0D (9.6.1.3.506)	Point 1 on the triangle
point2	xyz0D (9.6.1.3.506)	Point 2 on the triangle
point3	xyz0D (9.6.1.3.506)	Point 3 on the triangle

Type of: nbi\_nbi\_unit\_wall\_surface:triangle (2280)

### 9.6.1.3.464 tsmeasure

Measured values (Thomson scattering)

member	type	description
te	exp1D (9.6.1.3.195)	Electron temperature [eV]. Vector (nchords)
ne	exp1D (9.6.1.3.195)	Electron density [m <sup>-3</sup> ]. Vector (nchords)

Type of: tsdiag:measure (2045)

### 9.6.1.3.465 tssetup

diagnostic setup information

member	type	description
position	rzphi1D (9.6.1.3.362)	Position of intersection between laser and line of sight; Vector (nchords)

Type of: tsdiag:setup (2045)

### 9.6.1.3.466 turbcomposition

Plasma composition (description of ion species).

member	type	description
amn	vecflt.type (9.6.1.2.13)	Atomic mass number (lumped ions are allowed); Vector (nion)
zn	vecflt.type (9.6.1.2.13)	Nuclear charge (lumped ions are allowed); Vector (nion)
zion	vecflt.type (9.6.1.2.13)	Ion charge (of the dominant ionisation state; lumped ions are allowed); Vector (nion)
ie_mass	vecflt.type (9.6.1.2.13)	Ion to electron mass ratio as used in the code for each species. To be used only by models which keep electron inertia. Vector (nion)

Type of: turbulence:composition (2046)

### 9.6.1.3.467 turbcoordsys

Description of the coordinates and metric.

member	type	description
grid_type	string (9.6.1.1.3)	Type of coordinate system.
turbgrid	turbgrid (9.6.1.3.469)	Turbulence grid used by the codes; Time-dependent.
jacobian	matflt.type (9.6.1.2.10)	Jacobian of the coordinate system; Time-dependent; Matrix (ndim1, ndim2).

member	type	description
g_11	matflt.type (9.6.1.2.10)	metric coefficients g_11; Time-dependent; Matrix (ndim1, ndim2).
g_12	matflt.type (9.6.1.2.10)	metric coefficients g_12; Time-dependent; Matrix (ndim1, ndim2).
g_13	matflt.type (9.6.1.2.10)	metric coefficients g_13; Time-dependent; Matrix (ndim1, ndim2).
g_22	matflt.type (9.6.1.2.10)	metric coefficients g_22; Time-dependent; Matrix (ndim1, ndim2).
g_23	matflt.type (9.6.1.2.10)	metric coefficients g_23; Time-dependent; Matrix (ndim1, ndim2).
g_33	matflt.type (9.6.1.2.10)	metric coefficients g_33; Time-dependent; Matrix (ndim1, ndim2).
position	rzphi3D (9.6.1.3.366)	R Z phi positions of grid points; Time-dependent; Array3D (ndim1, ndim2, ndim3).

Type of: turbulence:coordsys (2046)

### 9.6.1.3.468 turbenv1d

Parallel fluctuation envelope.

member	type	description
theta	vecflt.type (9.6.1.2.13)	Straight field line poloidal angle [rad]; Vector (ntheta.env).
phi	vecflt.type (9.6.1.2.13)	Electrostatic potential [V <sup>2</sup> ]; Time-dependent; Vector (ntheta.env).
vor	vecflt.type (9.6.1.2.13)	Vorticity [coulomb <sup>2</sup> /m <sup>6</sup> ]; Time-dependent; Vector (ntheta.env).
jpl	vecflt.type (9.6.1.2.13)	Parallel current [A <sup>2</sup> /m <sup>4</sup> ]; Time-dependent; Vector (ntheta.env).
ne	vecflt.type (9.6.1.2.13)	Electron density [m <sup>-6</sup> ]; Time-dependent; Vector (ntheta.env).
he	vecflt.type (9.6.1.2.13)	Nonadiabatic electron density [m <sup>-6</sup> ]; Time-dependent; Vector (ntheta.env).
te	vecflt.type (9.6.1.2.13)	Electron temperature [eV <sup>2</sup> ]; Time-dependent; Vector (ntheta.env).
ni	matflt.type (9.6.1.2.10)	Ion density [m <sup>-6</sup> ]; Time-dependent; Matrix(ntheta.env,nion).
ti	matflt.type (9.6.1.2.10)	Ion temperature [eV <sup>2</sup> ]; Time-dependent; Matrix(ntheta.env,nion).
ui	matflt.type (9.6.1.2.10)	Ion parallel velocity [m <sup>2</sup> /s <sup>2</sup> ]; Time-dependent; Matrix (ntheta.env,nion).
fe	vecflt.type (9.6.1.2.13)	Electron particle flux [m <sup>-2</sup> /s per mode]; Time-dependent; Vector (ntheta.env).
qe	vecflt.type (9.6.1.2.13)	Electron conductive heat flux [W.m <sup>-2</sup> per mode]; Time-dependent; Vector (ntheta.env).
qi	matflt.type (9.6.1.2.10)	Ion conductive heat flux [W. m <sup>-2</sup> per mode]; Time-dependent; Matrix(ntheta.env,nion).
me	vecflt.type (9.6.1.2.13)	Magnetic electron heat flux [W.m <sup>-2</sup> per mode]; Time-dependent; Vector (ntheta.env).
mi	matflt.type (9.6.1.2.10)	Magnetic ion heat flux [W. m <sup>-2</sup> per mode]; Time-dependent; Matrix(ntheta.env,nion).

Type of: turbulence:env1d (2046)

### 9.6.1.3.469 turbgrid

Generic structure for a turbulence grid.

member	type	description
dim1	vecflt.type (9.6.1.2.13)	First dimension values; Vector (ndim1).
dim2	vecflt.type (9.6.1.2.13)	Second dimension values; Vector (ndim2).
dim3	vecflt.type (9.6.1.2.13)	Third dimension values; Vector (ndim3).
dim_v1	vecflt.type (9.6.1.2.13)	First v-space dimension values; Vector (ndim_v1).
dim_v2	vecflt.type (9.6.1.2.13)	Second v-space dimension values; Vector (ndim_v2).

Type of: turbcoordsys:turbgrid (2464)

### 9.6.1.3.470 turbspec1d

Perpendicular wavenumber spectra.

member	type	description
kperp	vecflt.type (9.6.1.2.13)	Perpendicular wavenumber [m <sup>-1</sup> ]; Vector (ndim_spec).
phi	vecflt.type (9.6.1.2.13)	Electrostatic potential [V <sup>2</sup> per mode]; Time-dependent; Vector (ndim_spec).
vor	vecflt.type (9.6.1.2.13)	Vorticity [s <sup>-2</sup> per mode]; Time-dependent; Vector (ndim_spec).
b	vecflt.type (9.6.1.2.13)	Magnetic energy [T <sup>2</sup> per mode]; Time-dependent; Vector (ndim_spec).
jpl	vecflt.type (9.6.1.2.13)	Current [A <sup>2</sup> /m <sup>4</sup> per mode]; Time-dependent; Vector (ndim_spec).
ne	vecflt.type (9.6.1.2.13)	Electron density [m <sup>-6</sup> per mode]; Time-dependent; Vector (ndim_spec).
te	vecflt.type (9.6.1.2.13)	Electron temperature [eV <sup>2</sup> per mode]; Time-dependent; Vector (ndim_spec).
ti	matflt.type (9.6.1.2.10)	Ion temperature [eV <sup>2</sup> per mode]; Time-dependent; Matrix (ndim_spec,nion).

member	type	description
fe	vecflt_type (9.6.1.2.13)	Electron particle flux [ $\text{m}^{-2}/\text{s}$ per mode]; Time-dependent; Vector (ndim_spec).
qe	vecflt_type (9.6.1.2.13)	Electron conductive heat flux [ $\text{W}\cdot\text{m}^{-2}$ per mode]; Time-dependent; Vector (ndim_spec).
qi	matflt_type (9.6.1.2.10)	Ion conductive heat flux [ $\text{W}\cdot\text{m}^{-2}$ per mode]; Time-dependent; Matrix(ndim_spec,nion).
me	vecflt_type (9.6.1.2.13)	Magnetic electron heat flux [ $\text{W}\cdot\text{m}^{-2}$ per mode]; Time-dependent; Matrix (ndim_spec).
mi	matflt_type (9.6.1.2.10)	Magnetic ion heat flux [ $\text{W}\cdot\text{m}^{-2}$ per mode]; Time-dependent; Matrix (ndim_spec,nion).

Type of: turbulence:spec1d (2046)

### 9.6.1.3.471 turbvar0d

Time traces.

member	type	description
dtime_type	string (9.6.1.1.3)	Description of time trace e.g. last ndtime points.
dtime	vecflt_type (9.6.1.2.13)	Fast diagnostic time [s]; Time-dependent; Vector (ndtime).
en_exb	vecflt_type (9.6.1.2.13)	ExB energy [ $\text{J}/\text{m}^3$ ]; Time-dependent; Vector (ndtime).
en_mag	vecflt_type (9.6.1.2.13)	Magnetic energy [ $\text{J}/\text{m}^3$ ]; Time-dependent; Vector (ndtime).
en_el_th	vecflt_type (9.6.1.2.13)	electron thermal energy or free energy [ $\text{J}/\text{m}^3$ ]; Time-dependent.
en_ion_th	matflt_type (9.6.1.2.10)	Ion thermal energy or free energy [ $\text{J}/\text{m}^3$ ]; Time-dependent; Matrix (ndtime, nion).
en_el_par	vecflt_type (9.6.1.2.13)	Electron parallel energy [ $\text{J}/\text{m}^3$ ]; Time-dependent; Vector (ndtime).
en_ion_par	matflt_type (9.6.1.2.10)	Ion parallel energy [ $\text{J}/\text{m}^3$ ]; Time-dependent; Matrix (ndtime,nion).
en_tot	vecflt_type (9.6.1.2.13)	Total energy or free energy [ $\text{J}/\text{m}^3$ ]; Time-dependent; Vector (ndtime).
fl_el	vecflt_type (9.6.1.2.13)	Electron flux [ $\text{m}^{-2}\text{ s}^{-1}$ ]; Time-dependent; Vector (ndtime).
fl_heatel	vecflt_type (9.6.1.2.13)	Conductive electron heat flux [ $\text{W}\cdot\text{m}^{-2}$ ]; Time-dependent; Vector (ndtime).
fl_ion	matflt_type (9.6.1.2.10)	Ion flux [ $\text{m}^{-2}\text{ s}^{-1}$ ]; Time-dependent; Matrix (ndtime, nion).
fl_heation	matflt_type (9.6.1.2.10)	Conductive ion heat flux [ $\text{W}\cdot\text{m}^{-2}$ ]; Time-dependent; Matrix (ndtime, nion).
fl_magel	vecflt_type (9.6.1.2.13)	Electron flux [ $\text{m}^{-2}\text{ s}^{-1}$ ]; Time-dependent; Vector (ndtime).
fl_magheatel	vecflt_type (9.6.1.2.13)	Conductive electron heat flux [ $\text{W}\cdot\text{m}^{-2}$ ]; Time-dependent; Vector (ndtime).
fl_magion	matflt_type (9.6.1.2.10)	Ion flux [ $\text{m}^{-2}\text{ s}^{-1}$ ]; Time-dependent; Matrix (ndtime, nion).
flmagheation	matflt_type (9.6.1.2.10)	Conductive ion heat flux [ $\text{W}\cdot\text{m}^{-2}$ ]; Time-dependent; Matrix (ndtime, nion).

Type of: turbulence:var0d (2046)

### 9.6.1.3.472 turbvar1d

Dependent variable zonal average radial profile.

member	type	description
rho_tor_norm	vecflt_type (9.6.1.2.13)	Normalised toroidal flux coordinate. Vector(nrho1d)
phi	vecflt_type (9.6.1.2.13)	Electrostatic potential [V]; Time-dependent; Vector (nrho1d).
er	vecflt_type (9.6.1.2.13)	Radial electric field [V/m]; Time-dependent; Vector (nrho1d).
vor	vecflt_type (9.6.1.2.13)	Vorticity [ $\text{s}^{-1}$ ]; Time-dependent; Vector (nrho1d).
apl	vecflt_type (9.6.1.2.13)	Parallel magnetic potential divided by B [m]; Time-dependent; Vector (nrho1d).
jpl	vecflt_type (9.6.1.2.13)	Parallel current divided by B [ $\text{A}/\text{m}^2$ per T]; Time-dependent; Vector (nrho1d).
ne	vecflt_type (9.6.1.2.13)	Electron density [ $\text{m}^{-3}$ ]; Time-dependent; Vector (nrho1d).
te	vecflt_type (9.6.1.2.13)	Electron temperature [eV]; Time-dependent; Vector (nrho1d).
ni	matflt_type (9.6.1.2.10)	Ion density [ $\text{m}^{-3}$ ]; Time-dependent; Matrix (nrho1d,nion).
ti	matflt_type (9.6.1.2.10)	Ion temperature [eV]; Time-dependent; Matrix (nrho1d,nion).
ui	matflt_type (9.6.1.2.10)	Ion parallel velocity divided by B [ $\text{m}/\text{s}$ per T]; Time-dependent; Matrix (nrho1d,nion).

Type of: turbulence:var1d (2046)

### 9.6.1.3.473 turbvar2d

Dependent variable axisymmetric component.

member	type	description
rho_tor_norm	vecflt_type (9.6.1.2.13)	Normalised toroidal flux coordinate. Vector(nrho2d)
theta	vecflt_type (9.6.1.2.13)	Straight field line poloidal angle angle [rad]. Vector(ntheta2d)
phi	matflt_type (9.6.1.2.10)	Electrostatic potential [V]; Time-dependent; Matrix (nrho2d,ntheta2d).

member	type	description
apl	matflt.type (9.6.1.2.10)	Parallel magnetic potential divided by B [m]; Time-dependent; Matrix(nrho2d,ntheta2d).
jpl	matflt.type (9.6.1.2.10)	Parallel current divided by B [A/m <sup>2</sup> per T]; Time-dependent; Matrix (nrho2d,ntheta2d).
vor	matflt.type (9.6.1.2.10)	Vorticity [s <sup>-1</sup> ]; Time-dependent; Matrix(nrho2d,ntheta2d).
ne	matflt.type (9.6.1.2.10)	Electron density [m <sup>-3</sup> ]; Time-dependent; Matrix (nrho2d,ntheta2d).
te	matflt.type (9.6.1.2.10)	Electron temperature [eV]; Time-dependent; Matrix (nrho2d,ntheta2d).
ni	array3dflt.type (9.6.1.2.2)	Ion density [m <sup>-3</sup> ]; Time-dependent; Array3D (nrho2d,ntheta2d,nion).
ti	array3dflt.type (9.6.1.2.2)	Ion temperature [eV]; Time-dependent; Array3D (nrho2d,ntheta2d,nion).
ui	array3dflt.type (9.6.1.2.2)	Ion parallel velocity divided by B [m/s per T]; Time-dependent; Array3D(nrho2d,ntheta2d,nion).

Type of: turbulence:var2d (2046)

#### 9.6.1.3.474 turbvar3d

Dependent variable morphology (on the internal grid code coord\_sys/turbgrid).

member	type	description
phi	array3dflt.type (9.6.1.2.2)	Electrostatic potential [V]; Time-dependent; Array3D(ndim1,ndim2,ndim3).
vor	array3dflt.type (9.6.1.2.2)	Vorticity [s <sup>-1</sup> ]; Time-dependent; Array3D(ndim1,ndim2,ndim3).
jpl	array3dflt.type (9.6.1.2.2)	Parallel current [A/m <sup>2</sup> ]; Time-dependent; Array3D(ndim1,ndim2,ndim3).
ne	array3dflt.type (9.6.1.2.2)	Electron density [m <sup>-3</sup> ]; Time-dependent; Array3D(ndim1,ndim2,ndim3).

Type of: turbulence:var3d (2046)

#### 9.6.1.3.475 turbvar4d

Gyrokinetic distribution function, axisymmetric component. Grid is defined in coord\_sys/turbgrid.

member	type	description
fe	array4dflt.type (9.6.1.2.4)	Electron distribution function times V-space volume element, axisymmetric component [m <sup>-3</sup> ]; Time-dependent; Array4D(ndim1,ndim2,ndim3,ndim.v1).
fi	array5dflt.type (9.6.1.2.5)	Ion distribution function times V-space volume element, axisymmetric component [m <sup>-3</sup> ]; Time-dependent; Array5D(ndim1,ndim2,ndim3,ndim.v1,nion).

Type of: turbulence:var4d (2046)

#### 9.6.1.3.476 turbvar5d

Gyrokinetic distribution function. Grid is defined in coord\_sys/turbgrid.

member	type	description
fe	array5dflt.type (9.6.1.2.5)	Electron distribution function times V-space volume element [m <sup>-3</sup> ]; Time-dependent; Array5D(ndim1,ndim2,ndim3,ndim.v1,ndim.v2).
fi	array6dflt.type (9.6.1.2.6)	Ion distribution function times V-space volume element [m <sup>-3</sup> ]; Time-dependent; Array6D(ndim1,ndim2,ndim3,ndim.v1,ndim.v2,nion).

Type of: turbulence:var5d (2046)

#### 9.6.1.3.477 version\_ind

Array of available releases/versions of the AMNS data; each element contains information about the AMNS data that is included in the release. This part of the CPO is filled and stored only into shot/run=0/1, playing the role of a catalogue.

member	type	description
description	vecstring.type (9.6.1.2.15)	Description of each version.
releasedate	string (9.6.1.1.3)	Release date
data_release(:)	data_release (9.6.1.3.132)	For this release, an array over each data item (i.e. shot/run pair containing the actual data) included in this release

Type of: amns:version.ind (2000)

### 9.6.1.3.478 wall2d

A 2D wall type; Structure array. Replicate this element for each type of possible physics configurations necessary (gas tight vs wall with ports and holes)

member	type	description
wall_id	identifier (9.6.1.3.233)	Use this identifier to tag the type of 2d wall you are using. Use 0 for equilibrium codes (single closed limiter and vessel); 1 for gas-tight walls (disjoint PFCs with inner vessel as last limiter_unit; no vessel structure); 2 for free boundary codes (disjoint PFCs and vessel)
limiter	wall.limiter (9.6.1.3.483)	Description of the immobile limiting surface(s) or plasma facing components for defining the Last Closed Flux Surface. Two representations are admitted : single contour or disjoint PFC. The limiter_id identifies the type of limiter set and code-specific representations derived from the official ones are also allowed if documented. Array of structures (nlimiter_type). Time-dependent
vessel	wall.vessel (9.6.1.3.488)	Mechanical structure of the vacuum vessel. Vessel assumed as set of nested layers with given physics properties; Two representations are admitted for each vessel unit : annular (two contours) or blocks. The vessel_id identifies the type of vessel_unit set one is using and code-specific representations derived from the official ones are also allowed if documented. Array of structures (nvessel_type)
plasma(:)	plasmaComplexType (9.6.1.3.328)	Description of incoming plasma for every wall component. Array of structures (number of wall components). The geometry of the wall component with index i is given by the limiter unit with index i in wall/wall2d/limiter/limiter_unit. Time-dependent
wall_state(:)	wall_unitsComplexType (9.6.1.3.486)	Dynamic wall state of every wall component. Array of structures (number of wall components). The geometry of the wall component with index i is given by the limiter unit with index i in wall/wall2d/limiter/limiter_unit. Time-dependent

Type of: wall:wall2d (2047)

### 9.6.1.3.479 wall2d\_mhd

Simplified wall that encloses necessary information for RWM codes.

member	type	description
res_wall(:)	mhd_res_wall2d (9.6.1.3.264)	Resistive Wall(s).
ideal_wall	mhd_ideal_wall2d (9.6.1.3.261)	Ideal wall

Type of: wall:wall2d\_mhd (2047)

### 9.6.1.3.480 wall3d

3D wall descriptions; Array of structures (number of wall descriptions). Replicate this element for each type of possible physics or engineering configurations necessary (gas tight vs wall with ports and holes, coarse vs fine representation, ...). Time-dependent

member	type	description
wall_id	identifier (9.6.1.3.233)	Identify the type of wall - 0 for gas tight and 1 for a wall with holes/open ports
grid	complexgrid (9.6.1.3.82)	Grid description
plasma(:)	plasmaComplexType (9.6.1.3.328)	Description of incoming plasma for every wall component. Array of structures (number of wall components). The geometry of the wall component with index i is given by the corresponding subgrid with index i in wall/wall3d/grid. Time-dependent
wall_state(:)	wall_unitsComplexType (9.6.1.3.486)	Dynamic wall state of every wall component. Array of structures (number of wall components). The geometry of the wall component with index i is given by the corresponding subgrid with index i in wall/wall3d/grid. Time-dependent
basis_index	integer (9.6.1.1.2)	Index of basis vectors in wall/wall3d/grid/basis used to define vector quantities e.g. in plasma.

Type of: wall:wall3d (2047)

### 9.6.1.3.481 wall\_blocks

Vector of vacuum vessel units. Replicate this vessel\_unit element ncomponents times. Each unit contains a mechanical structure of the vessel with distinct physics properties. Array of structures (ncomponents)

member	type	description
blocks.unit(:)	wall_blocks.unit (9.6.1.3.482)	Vector of blocks that build of the vessel layer. Replicate this element nblocks times. Each unit contains a building block of the vessel and can have dedicated number of points. Array of structures (nblocks)

Type of: wall\_vessel\_unit:blocks (2487)

### 9.6.1.3.482 wall\_blocks\_unit

Vector of blocks that build of the vessel layer. Replicate this element nblocks times. Each unit contains a building block of the vessel and can have dedicated number of points. Array of structures (nblocks)

member	type	description
name	string (9.6.1.1.3)	Name or description of the blocks_unit
position	rz1D (9.6.1.3.356)	Position (R,Z coordinates) of a vessel segment. No need to repeat first point for closed contours [m]; Vector(npoints)
eta	float (9.6.1.1.1)	Resistivity of the vessel segment [ohm.m]; Scalar
permeability	float (9.6.1.1.1)	Vessel relative permeability; Scalar
j_phi	float (9.6.1.1.1)	induced currents inside the vessel; time dependent; [A]
resistance	float (9.6.1.1.1)	resistance of block; [Ohm]

Type of: wall\_blocks:blocks\_unit (2478)

### 9.6.1.3.483 wall\_limiter

Description of the immobile limiting surface(s) or plasma facing components for defining the Last Closed Flux Surface. Two representations are admitted : single contour or disjoint PFC. The limiter\_id identifies the type of limiter set and code-specific representations derived from the official ones are also allowed if documented. Array of structures (nlimiter\_type)

member	type	description
limiter_id	identifier (9.6.1.3.233)	Use this identifier to tag the type of limiter you are using. Use flag=0 for the official single contour limiter and 1 for the official disjoint PFC structure like first wall. Additional representations needed on a code-by-code basis follow same incremental pair tagging starting on flag=2
limiter_unit(:)	limiter_unit (9.6.1.3.250)	Array of ncomponents limiting surfaces making up the limiter type (single contour or disjoint PFC). Replicate this limiter_unit element ncomponents times. Each unit contains a plasma facing component that can have dedicated number of points. Array of structures (ncomponents). Time-dependent

Type of: wall2d:limiter (2475)

### 9.6.1.3.484 wall\_types

Reference wall type

member	type	description
label	string (9.6.1.1.3)	Label for this reference wall type
layers(:)	wall_types_layers (9.6.1.3.485)	Engineering layers composing the wall element; array of structures (number of engineering layers). First layer is facing the plasma, increasing index means moving away from the plasma facing surface

Type of: wall:wall\_types (2047)

### 9.6.1.3.485 wall\_types\_layers

Engineering layers composing the wall element; array of structures (number of engineering layers). First layer is facing the plasma, increasing index means moving away from the plasma facing surface

member	type	description
thickness	float (9.6.1.1.1)	Thickness of layer [m]
chem_comp	vecflt_type (9.6.1.2.13)	Chemical composition of the layer in terms of the chemical compounds defined in wall/design_comp/compounds. Vector of fractional concentrations.

Type of: wall\_types:layers (2481)

### 9.6.1.3.486 wall\_unitsComplexType

Data for individual wall elements; Time-dependent

member	type	description
wall.type	integer (9.6.1.1.2)	Definition of reference wall composition for every subgrid of the wall discretization. Vector of integers (number of subgrids). The indices point to wall/wall.types.
n.depo.layer	integer (9.6.1.1.2)	Number of deposited layers (in addition to the engineering layers)
layers(:)	wall_unitsComplexType.layers (9.6.1.3.487)	Data on wall element layers; Array of structures (number of engineering layers + number of deposited layers); Layers can possibly be void (e.g. completely eroded), which is indicated by zero thickness. Time-dependent
eta	complexgrid_scalar (9.6.1.3.87)	Resitivity of wall element described by grid geometry [Ohm.m]
permeability	complexgrid_scalar (9.6.1.3.87)	Relative permeability of wall element described by grid geometry [-]
j	complexgrid_vector (9.6.1.3.93)	Current density vector in the element specified by the grid representation. [A/m <sup>2</sup> ]

Type of: wall2d:wall\_state (2475) | wall3d:wall\_state (2477)

### 9.6.1.3.487 wall\_unitsComplexType\_layers

Data on wall element layers; Array of structures (number of engineering layers + number of deposited layers); Layers can possibly be void (e.g. completely eroded), which is indicated by zero thickness. Time-dependent

member	type	description
elements	vecint.type (9.6.1.2.14)	List of elements present in the solid phase in this layer. Vector (number of elements). Holds indices pointing to wall/elements
gases	vecint.type (9.6.1.2.14)	List of gases present in this layer. Vector (number of gases). Holds indices pointing to wall/elements
compounds	vecint.type (9.6.1.2.14)	List of compounds present in the solid phase in this layer. Vector (number of compounds). Holds indices pointing to wall/compounds
density	matflt.type (9.6.1.2.10)	Discretized density distribution in the layer of the discrete wall elements in the subgrid [kg/m <sup>3</sup> ]; Time-dependent; Float matrix (number of vertical cells in layer, number of discretization elements in the subgrid)
dx	matflt.type (9.6.1.2.10)	Size of the vertical cells in the layer of the discrete wall elements in the subgrid [kg/m <sup>3</sup> ]; Time-dependent; Float matrix (number of vertical cells in layer, number of discretization elements in the subgrid)
thickness	vecflt.type (9.6.1.2.13)	Total size of the layer [m] (i.e. sum of dx over the number of vertical cells in the layer); Time-dependent; Vector (number of discretization elements in the subgrid)
roughness	array3dfilt.type (9.6.1.2.2)	Interface roughness description between the discrete elements and their top neighbour (i.e. towards the plasma); Time-dependent; Float 3d array (number of vertical cells in layer, number of discretization elements in the subgrid, index of roughness parameter); Roughness parameter 1: RMS height [m], parameter 2: wavelength along projection of B on the surface [m], parameter 3: wavelength perpendicular to projection of B on the surface [m]. If only two parameters are given the parameters are assumed to be isotropic
porosity	array3dfilt.type (9.6.1.2.2)	Discrete description of porosity of the layer. Time-dependent; Float 3d array (number of vertical cells in layer, number of discretization elements in the subgrid, index of porosity parameter); Porosity parameter 1: Volume fraction occupied by the pores [-], parameter 2: average size of the pores [m]
dpa	matflt.type (9.6.1.2.10)	Discretized number of displacements per atom in the layer of the discrete wall elements in the subgrid [-]; Time-dependent; Float matrix (number of vertical cells in layer, number of discretization elements in the subgrid)
temperature	matflt.type (9.6.1.2.10)	Discretized temperature distribution in the layer of the discrete wall elements in the subgrid [eV]; Time-dependent; Float matrix (number of vertical cells in layer, number of discretization elements in the subgrid)
element_frac	array3dfilt.type (9.6.1.2.2)	Fractional abundance of elements in the layer of the discrete wall elements in the subgrid [-]; Time-dependent; Float matrix (number of chemical elements as given in (local) elements, number of vertical cells in layer, number of discretization elements in the subgrid)
chem_comp	array3dfilt.type (9.6.1.2.2)	Fractional abundance of chemical compounds in the layer of the discrete wall elements in the subgrid [-]; Time-dependent; Float matrix (number of chemical compounds as given in (local) compounds, number of vertical cells in layer, number of discretization elements in the subgrid)
bulk.D	array4dfilt.type (9.6.1.2.4)	Diffusivity of gas species in bulks of different compounds [m <sup>2</sup> /s]; Time-dependent; 4d float array. Dimensions: 1. index of compound (indexing as in (local) compounds), 2. index of gas element (indexing as in (local) gases), 3. cell index of 1d layer height discretization, 4. number of discretization elements in the subgrid
surface.D	array4dfilt.type (9.6.1.2.4)	Diffusivity of hydrogen species of surface of different compounds [m <sup>2</sup> /s]; Time-dependent; Dimensions: see bulk.D
bulk.solute	array4dfilt.type (9.6.1.2.4)	Bulk mobile (solute) concentration [atoms/m <sup>3</sup> ]; Time-dependent; Dimensions: see bulk.D
surf.solute	array4dfilt.type (9.6.1.2.4)	Surface mobile (solute) concentration [atoms/m <sup>2</sup> ]; Time-dependent; Dimensions: see bulk.D
pore.content	array3dfilt.type (9.6.1.2.2)	Amount of gas species trapped in pores per cubic meter [1/m <sup>3</sup> ]; Time-dependent; 3d float array. Dimensions: 1. index of gas element (indexing as in (local) gases), 2. cell index of 1d layer height discretization, 3. number of discretization element in the subgrid
trap_type(:)	trap_type (9.6.1.3.462)	Definition of trap types. Array of structures (number of trap types)

Type of: wall\_unitsComplexType:layers (2483)



### 9.6.1.3.488 wall\_vessel

Mechanical structure of the vacuum vessel. Vessel assumed as set of nested layers with given physics properties; Two representations are admitted for each vessel unit : annular (two contours) or blocks. The vessel\_id identifies the type of vessel\_unit set one is using and code-specific representations derived from the official ones are also allowed if documented. Array of structures (nvessel.type)

member	type	description
vessel_id	identifier (9.6.1.3.233)	Use this identifier to tag the type of vessel you are using. Use flag=0 for the official single/multiple annular vessel and 1 for the official block element representation for each vessel unit. Additional representations needed on a code-by-code basis follow same incremental pair tagging starting on flag=2
vessel_unit(:)	wall_vessel_unit (9.6.1.3.490)	Array of vacuum vessel units. Replicate this vessel_unit element ncomponents times. Each unit contains a mechanical structure of the vessel with distinct physics properties. Array of structures (ncomponents)

Type of: wall2d:vessel (2475)

### 9.6.1.3.489 wall\_vessel\_annular

Vector of vacuum vessel units. Replicate this vessel\_unit element ncomponents times. Each unit contains a mechanical structure of the vessel with distinct physics properties. Array of structures (ncomponents)

member	type	description
name	string (9.6.1.1.3)	Name or description of the vessel_unit
inside	rz1D (9.6.1.3.356)	Inner Vessel wall outline (list of R,Z co-ordinates) [m]; Vector (npoints.inner)
outside	rz1D (9.6.1.3.356)	Outer Vessel wall outline (list of R,Z co-ordinates) [m]; Vector (npoints.outer)
eta	float (9.6.1.1.1)	Vessel resistivity [ohm.m]; Scalar
permeability	float (9.6.1.1.1)	Vessel relative permeability; Scalar

Type of: wall\_vessel\_unit:annular (2487)

### 9.6.1.3.490 wall\_vessel\_unit

Vector of vacuum vessel units. Replicate this vessel\_unit element ncomponents times. Each unit contains a mechanical structure of the vessel with distinct physics properties. Array of structures (ncomponents)

member	type	description
annular	wall_vessel_annular (9.6.1.3.489)	Annular representation of a vessel layer by two free-hand contours.
blocks	wall_blocks (9.6.1.3.481)	Block element representation of vessel units. Each vessel unit is decomposed in elementary small units (blocks) caracterized by a position, resistivity and relative permeability.
radial_build	wall_wall2d_vessel_radial_build (9.6.1.3.493)	Simple description of this vessel unit for the radial_build in system codes

Type of: wall\_vessel:vessel\_unit (2485)

### 9.6.1.3.491 wall\_wall0d

Simple 0D description of plasma-wall interaction

member	type	description
pumping_speed	vecflt.type (9.6.1.2.13)	pumping speed; Time-dependent. vector(nneut); [particles/s]
gas_puff	vecflt.type (9.6.1.2.13)	gas puff; vector(nneut); Time-dependent. [particles/s]
wall_inventory	vecflt.type (9.6.1.2.13)	wall inventory; vector(nneut); Time-dependent. [particles]
recycling_coefficient	vecflt.type (9.6.1.2.13)	Recycling coefficient. Vector(nneut) Time-dependent.
wall_temperature	float (9.6.1.1.1)	Wall temperature [K]. Time-dependent. Scalar
power_from_plasma	float (9.6.1.1.1)	Power flowing from the plasma to the wall [W]. Time-dependent. Scalar
power_to_cooling	float (9.6.1.1.1)	Power to cooling systems [W]. Time-dependent. Scalar
plasma	wall_wall0d_plasma (9.6.1.3.492)	NO DOCS

Type of: wall:wall0d (2047)

### 9.6.1.3.492 wall\_wall0d\_plasma

member	type	description
species_index	matint.type (9.6.1.2.11)	Index of species into wall/compositions; matrix(nspecies,3); 1st element indicates {1: main ions; 2:impurities; 3:neutrals; 4:edge species}; 2nd element indicates index into that array; 3rd index indicates charge state if 1st element points to impurities or neutral type if 1st element points to neutrals;
flux	vecflt.type (9.6.1.2.13)	flux of species indicated by species_index; array of nspecies; positive implies incoming onto wall; negative implies sent back into plasma; time-dependent; [particles/s]
energy	vecflt.type (9.6.1.2.13)	energy flux of species indicated by species_index; array of nspecies; positive implies incoming onto wall; negative implies sent back into plasma; time-dependent; [W]

Type of: wall\_wall0d:plasma (2488)

### 9.6.1.3.493 wall\_wall2d\_vessel\_radial\_build

Simple description of this vessel unit for the radial\_build in system codes

member	type	description
r1_inb	float (9.6.1.1.1)	Inner radius (nearest to the plasma), in the global tokamak coordinate system of the vv measured at the equatorial plane (inboard side) [m]; Scalar
r2_inb	float (9.6.1.1.1)	Outer radius (farrest from the plasma), in the global tokamak coordinate system of the vv measured at the equatorial plane (inboard side) [m]; Scalar
r1_outb	float (9.6.1.1.1)	Inner radius (nearest to the plasma), in the global tokamak coordinate system of the vv measured at the equatorial plane (outboard side) [m]; Scalar
r2_outb	float (9.6.1.1.1)	Outer radius (farrest from the plasma), in the global tokamak coordinate system of the vv measured at the equatorial plane (outboard side) [m]; Scalar
raddim	float (9.6.1.1.1)	Radial thickness of the vacuum vessel; Scalar
nmat	float (9.6.1.1.1)	Number of materials; Scalar
composition	vecflt.type (9.6.1.2.13)	Inboard shield radial build giving the percentage of each material respectively (Meaning of the material index 1: Eurofer, 2: Pb-15.7Li, 3: He, 4: Water, 5: Tungsten Carbide, 6: Boron, 7: Tungsten, 8: Stainless Steel 316) in %vol; Vector
pow_dens_inb	float (9.6.1.1.1)	Peak energy deposition in vaccum vessel inboard [W.m <sup>-3</sup> ]; Scalar
pow_dens_outb	float (9.6.1.1.1)	Peak energy deposition in vaccum vessel outboard [W.m <sup>-3</sup> ]; Scalar
fn_flux_inb	float (9.6.1.1.1)	Fast neutron flux in vaccum vessel inboard [m <sup>2</sup> .s <sup>-1</sup> ]; Scalar
fn_flux_outb	float (9.6.1.1.1)	Fast neutron flux in vaccum vessel outboard [m <sup>2</sup> .s <sup>-1</sup> ]; Scalar

Type of: wall\_vessel\_unit:radial\_build (2487)

### 9.6.1.3.494 waveguides

Waveguides description

member	type	description
nwm_theta	integer (9.6.1.1.2)	Number of waveguides per module in the poloidal direction.
nwm_phi	integer (9.6.1.1.2)	Number of waveguides per module in the toroidal direction.
mask	vecint.type (9.6.1.2.14)	Mask of passive and active waveguides for an internal module; Vector of integers (nwm_phi)
npwbm_phi	integer (9.6.1.1.2)	Number of passive waveguide between modules in the toroidal direction
npwe_phi	integer (9.6.1.1.2)	Number of passive waveguides on each antenna edge in the toroidal direction
sw_theta	float (9.6.1.1.1)	Spacing between poloidally neighboring waveguides [m]
hw_theta	float (9.6.1.1.1)	Height of waveguides in the poloidal direction [m]
bwa	float (9.6.1.1.1)	Width of active waveguides [m]; Float
biwp	float (9.6.1.1.1)	Width of internal passive waveguides [m]; Float
bewp	float (9.6.1.1.1)	Width of edge passive waveguides [m]; Float
e_phi	vecflt.type (9.6.1.2.13)	Thickness between waveguides in the toroidal direction [m], Vector (nthick_phi). Reminder : nthick_phi = nmp_phi*nwm_phi + (nmp_phi - 1)*npwbm_phi + 2*npwe_phi
scl	vecflt.type (9.6.1.2.13)	Short circuit length for passive waveguides [m], Vector (nshort_phi). Reminder : nshort_phi = nmp_phi* npwm_phi + (nmp_phi - 1)*npwbm_phi + 2*npwe_phi

Type of: modules:waveguides (2270)

### 9.6.1.3.495 waves\_global\_param

Global wave deposition parameters

member	type	description
name	string (9.6.1.1.3)	Antenna name, String
type	string (9.6.1.1.3)	Wave type (LH, EC, IC, ...), String
f_assumption	vecint_type (9.6.1.2.14)	Assumption on the functions distribution used by the wave solver to calculate the power deposition : 0 = Maxwellian (linear absorption); 1 = quasi-linear (F given by a distribution function CPO). Integer vector (nion+1). The first value corresponds to the electrons, then to the other ion species. Time-dependent.
code_type	integer (9.6.1.1.2)	Type of wave deposition code for a given frequency: 1=beam/ray tracing; 2=full wave; Integer
frequency	float (9.6.1.1.1)	Wave frequency [Hz]; Time-dependent, floating
ntor	vecint_type (9.6.1.2.14)	Toroidal mode numbers; Time-dependent; Vector (ntor)
power_tot	float (9.6.1.1.1)	Total absorbed wave power [W]; Time-dependent
p_frac_ntor	vecflt_type (9.6.1.2.13)	Fraction of wave power per toroidal mode number; Time-dependent; Vector (ntor)
pow_e	float (9.6.1.1.1)	Wave power absorbed by the thermal electrons [W]; Time-dependent; Float
pow_i	vecflt_type (9.6.1.2.13)	Wave power absorbed by the thermal ion species [W]; Time-dependent; Vector (nion)
pow_z	matflt_type (9.6.1.2.10)	Wave power absorbed by the thermal impurity species [W]; Time-dependent; Vector (nimpur, nzimp)
pow_fe	float (9.6.1.1.1)	Wave power absorbed by the fast electrons [W]; Time-dependent; Float
pow_fi	vecflt_type (9.6.1.2.13)	Wave power absorbed by the fast ion species [W]; Time-dependent; Vector (nion)
pow_fz	matflt_type (9.6.1.2.10)	Wave power absorbed by the fast impurity species [W]; Time-dependent; Vector (nimpur, nzimp)
pow_ntor_e	vecflt_type (9.6.1.2.13)	Wave power absorbed by the thermal electrons for each toroidal mode [W]; Time-dependent; Vector (ntor)
pow_ntor_i	matflt_type (9.6.1.2.10)	Wave power absorbed by an the thermal ion species for each toroidal mode [W]; Time-dependent; Matrix (ntor, nion)
pow_ntor_z	array3dflt_type (9.6.1.2.2)	Wave power absorbed by an the thermal impurity species for each toroidal mode [W]; Time-dependent; Matrix (ntor, nimpur, nzimp)
pow_ntor_fe	vecflt_type (9.6.1.2.13)	Wave power absorbed by the fast electrons for each toroidal mode [W]; Time-dependent; Vector (ntor)
pow_ntor_fi	matflt_type (9.6.1.2.10)	Wave power absorbed by an the fast ion species for each toroidal mode [W]; Time-dependent; Matrix (ntor, nion)
pow_ntor_fz	array3dflt_type (9.6.1.2.2)	Wave power absorbed by an the fast impurity species for each toroidal mode [W]; Time-dependent; Matrix (ntor, nimpur, nzimp)
cur_tor	float (9.6.1.1.1)	Wave driven toroidal current from a stand alone calculation (not consistent with other sources) [A]; Time-dependent, Float
cur_tor_ntor	vecflt_type (9.6.1.2.13)	Wave driven toroidal current for each toroidal mode number from a stand alone calculation (not consistent with other sources) [A]; Time-dependent; Vector (ntor)
mag_axis	rz0D (9.6.1.3.355)	Position of the magnetic axis. Time-dependent; Scalar
toroid_field	b0r0 (9.6.1.3.59)	Characteristics of the vacuum toroidal field (used to define the rho_tor coordinate and the normalisation of parallel current densities).

Type of: coherentwave:global\_param (2076)

### 9.6.1.3.496 waves\_grid\_1d

Grid points for profiles

member	type	description
rho_tor	vecflt_type (9.6.1.2.13)	Toroidal flux coordinate [m]. Defined as $\sqrt{(\phi - \phi_{axis}) / \pi / B_0}$ , where $B_0 = \dots / \text{global\_param} / \text{toroid\_field} / b_0$ , $\phi$ is the toroidal flux and $\phi_{axis}$ is the toroidal flux at the magnetic axis. Time-dependent; Vector (npsi)
rho_tor_norm	vecflt_type (9.6.1.2.13)	The toroidal flux coordinate normalised to be zero at the axis and unity at the last closed flux surface, or last available fluxsurface if the last closed flux surface is not defined. Time-dependent; Vector (npsi)
psi	vecflt_type (9.6.1.2.13)	Poloidal flux function [Wb], evaluated without $1/2\pi$ , such that $B_p =  \text{grad } \psi  / R / 2 / \pi$ . Time-dependent; Vector (npsi)
volume	vecflt_type (9.6.1.2.13)	Volume enclosed by the flux surface [m <sup>3</sup> ]. Time-dependent; Vector (npsi)
area	vecflt_type (9.6.1.2.13)	Cross-sectional area of the flux surface [m <sup>2</sup> ]. Time-dependent; Vector (npsi)

Type of: coherentwave:grid\_1d (2076)

### 9.6.1.3.497 waves\_grid\_2d

Grid points for 2D profiles

member	type	description
grid_type	integer (9.6.1.1.2)	Grid type. 1: rectangular grid in (R,Z). 2: rectangular grid in (psi, theta). 3: unstructured grid. Integer.
rho_tor_norm	matflt.type (9.6.1.2.10)	The toroidal flux coordinate normalised to be zero at the axis and unity at the last closed flux surface (or last available fluxsurface from a fix boundary equilibrium code). Time-dependent; Matrix (ndim1, ndim2)
rho_tor	matflt.type (9.6.1.2.10)	Toroidal flux coordinate [m]. Defined as $\sqrt{(\phi - \phi_{axis}) / \pi / B_0}$ , where $B_0 = \dots / \text{global\_param}/\text{toroid\_field}/b_0$ , $\phi$ is the toroidal flux and $\phi_{axis}$ is the toroidal flux at the magnetic axis. Time-dependent; Matrix (ndim1, ndim2)
psi	matflt.type (9.6.1.2.10)	Grid points in poloidal flux function [Wb], without $1/2\pi$ and such that $B_p =  \text{grad } \psi  / R / 2 / \pi$ . Time-dependent; Matrix (ndim1, ndim2)
theta	matflt.type (9.6.1.2.10)	Poloidal angle at the grid points (see theta.info for detailed definition); Time-dependent; Matrix (ndim1, ndim2)
r	matflt.type (9.6.1.2.10)	R (major radius) of grid points; Time-dependent; Matrix(ndim1, ndim2)
z	matflt.type (9.6.1.2.10)	Z (altitude) of grid points; Time-dependent; Matrix (ndim1, ndim2)
theta_info	theta_info (9.6.1.3.454)	Information on the poloidal angle theta.

Type of: coherentwave:grid\_2d (2076)

### 9.6.1.3.498 waves\_profiles\_1d

waves 1D radial profiles

member	type	description
powd_tot	vecflt.type (9.6.1.2.13)	Total flux surface averaged wave power density [ $\text{W}/\text{m}^3$ ]; Time-dependent; Vector (npsi)
powd_e	vecflt.type (9.6.1.2.13)	Flux surface averaged absorbed wave power density on the thermal electrons [ $\text{W}/\text{m}^3$ ]; Time-dependent; Vector (npsi)
powd_i	matflt.type (9.6.1.2.10)	Flux surface averaged absorbed wave power density on the thermal ion species [ $\text{W}/\text{m}^3$ ]; Time-dependent; Matrix (npsi, nion)
powd_z	array3dflt.type (9.6.1.2.2)	Flux surface averaged absorbed wave power density on the thermal impurities species [ $\text{W}/\text{m}^3$ ]; Time-dependent; Matrix (npsi, nimpur, nzimp)
powd_fe	vecflt.type (9.6.1.2.13)	Flux surface averaged absorbed wave power density on the fast electrons [ $\text{W}/\text{m}^3$ ]; Time-dependent; Vector (npsi)
powd_fi	matflt.type (9.6.1.2.10)	Flux surface averaged absorbed wave power density on the fast ion species [ $\text{W}/\text{m}^3$ ]; Time-dependent; Matrix (npsi, nion)
powd_fz	array3dflt.type (9.6.1.2.2)	Flux surface averaged absorbed wave power density on the fast impurities species [ $\text{W}/\text{m}^3$ ]; Time-dependent; Matrix (npsi, nimpur, nzimp)
powd_ntor	matflt.type (9.6.1.2.10)	Flux surface averaged power density for each toroidal mode number [ $\text{W}/\text{m}^3$ ]; Time-dependent; Matrix(npsi, ntor)
powd_ntor_e	matflt.type (9.6.1.2.10)	Flux surface averaged power density absorbed for each toroidal mode number on the thermal electrons [ $\text{W}/\text{m}^3$ ]; Time-dependent; Matrix (npsi, ntor)
powd_ntor_i	array3dflt.type (9.6.1.2.2)	Flux surface averaged power density absorbed for each toroidal mode number on each thermal ions species [ $\text{W}/\text{m}^3$ ]; Time-dependent; Array3D (npsi, ntor, nion)
powd_ntor_z	array4dflt.type (9.6.1.2.4)	Flux surface averaged power density absorbed for each toroidal mode number on each thermal impurity species [ $\text{W}/\text{m}^3$ ]; Time-dependent; Array3D (npsi, ntor, nimpur, nzimp)
powd_ntor_fe	matflt.type (9.6.1.2.10)	Flux surface averaged power density absorbed for each toroidal mode number on the fast electrons [ $\text{W}/\text{m}^3$ ]; Time-dependent; Matrix (npsi, ntor)
powd_ntor_fi	array3dflt.type (9.6.1.2.2)	Flux surface averaged power density absorbed for each toroidal mode number on each fast ions species [ $\text{W}/\text{m}^3$ ]; Time-dependent; Array3D (npsi, ntor, nion)
powd_ntor_fz	array4dflt.type (9.6.1.2.4)	Flux surface averaged power density absorbed for each toroidal mode number on each fast impurity species [ $\text{W}/\text{m}^3$ ]; Time-dependent; Array3D (npsi, ntor, nimpur, nzimp)
curd_tor	vecflt.type (9.6.1.2.13)	Flux surface averaged wave driven toroidal current density = $\text{average}(j_{\phi}/R) / \text{average}(1/R)$ [ $\text{A}/\text{m}^2$ ]; Time-dependent; Vector (npsi)
curd_torntor	matflt.type (9.6.1.2.10)	Flux surface averaged wave driven toroidal current density for each toroidal mode number = $\text{average}(j_{\phi}/R) / \text{average}(1/R)$ [ $\text{A}/\text{m}^2$ ]; Time-dependent; Matrix (npsi, ntor)
pow_tot	vecflt.type (9.6.1.2.13)	Cumulative volume integral of the absorbed wave power density [W]; Time-dependent; Vector (npsi)
pow_e	vecflt.type (9.6.1.2.13)	Cumulative volume integral of the absorbed wave power on the thermal electrons [W]; Time-dependent; Vector (npsi)
pow_i	matflt.type (9.6.1.2.10)	Cumulative volume integral of the absorbed wave power on the thermal ion species [W]; Time-dependent; Matrix (npsi, nion)
pow_z	array3dflt.type (9.6.1.2.2)	Cumulative volume integral of the absorbed wave power on the thermal impurities species [W]; Time-dependent; Matrix (npsi, nimpur, nzimp)
pow_fe	vecflt.type (9.6.1.2.13)	Cumulative volume integral of the absorbed wave power on the fast electrons [W]; Time-dependent; Vector (npsi)
pow_fi	matflt.type (9.6.1.2.10)	Cumulative volume integral of the absorbed wave power on the fast ion species [W]; Time-dependent; Matrix (npsi, nion)
pow_fz	array3dflt.type (9.6.1.2.2)	Cumulative volume integral of the absorbed wave power on the fast impurities species [W]; Time-dependent; Matrix (npsi, nimpur, nzimp)
pow_ntor	matflt.type (9.6.1.2.10)	Cumulative volume integral of the absorbed wave power for each toroidal mode number [W]; Time-dependent; Matrix (npsi, ntor)

member	type	description
pow_ntor_e	matflt.type (9.6.1.2.10)	Cumulative volume integral of the absorbed wave power for each toroidal mode number on the thermal electrons [W]; Time-dependent; Matrix (npsi, ntor)
pow_ntor_i	array3dflt.type (9.6.1.2.2)	Cumulative volume integral of the absorbed wave power for each toroidal mode number on each thermal ions species [W]; Time-dependent; Array3D (npsi, ntor, nion)
pow_ntor_z	array3dflt.type (9.6.1.2.2)	Cumulative volume integral of the absorbed wave power for each toroidal mode number on each thermal impurity species [W]; Time-dependent; Array3D (npsi, ntor, nimpur, nzimp)
pow_ntor_fe	matflt.type (9.6.1.2.10)	Cumulative volume integral of the absorbed wave power for each toroidal mode number on the fast electrons [W]; Time-dependent; Matrix (npsi, ntor)
pow_ntor_fi	array3dflt.type (9.6.1.2.2)	Cumulative volume integral of the absorbed wave power for each toroidal mode number on each fast ions species [W]; Time-dependent; Array3D (npsi, ntor, nion)
pow_ntor_fz	array3dflt.type (9.6.1.2.2)	Cumulative volume integral of the absorbed wave power for each toroidal mode number on each fast impurity species [W]; Time-dependent; Array3D (npsi, ntor, nimpur, nzimp)
curd_par	vecflt.type (9.6.1.2.13)	Flux surface averaged wave driven parallel current density = average(j.B) / B0, where B0 = global.param/toroid.field/b0; [A/m <sup>2</sup> ]; Time-dependent; Vector (npsi)
curd_parnor	matflt.type (9.6.1.2.10)	Flux surface averaged wave driven parallel current density for each toroidal mode number = average(j.B) / B0, where B0 = global.param/toroid.field/b0; [A/m <sup>2</sup> ]; Time-dependent; Matrix (npsi, ntor)
cur_tor	vecflt.type (9.6.1.2.13)	Wave driven toroidal current inside a flux surface [A]; Time-dependent; Vector (npsi)
cur_tor_ntor	matflt.type (9.6.1.2.10)	Wave driven toroidal current inside a flux surface for each toroidal mode number [A]; Time-dependent; Matrix (npsi, ntor)
e_plus_ave	matflt.type (9.6.1.2.10)	The left hand polarised electric field component, E_plus [V/m], averaged over the flux surface, where the averaged is weighted with the power depositions, P, such that e_plus_ave = ave( E_plus P ) / ave( P ), where ave(*) is the flux surface average operator; Time-dependent; Matrix (npsi, ntor)
e_minus_ave	matflt.type (9.6.1.2.10)	The right hand polarised electric field component, E_minus [V/m], averaged over the flux surface, where the averaged is weighted with the power depositions, P, such that e_minus_ave = ave( E_minus P ) / ave( P ), where (*) is the flux surface average operator; Time-dependent; Matrix (npsi, ntor)
e_para_ave	matflt.type (9.6.1.2.10)	The parallel electric field component, E_para [V/m], averaged over the flux surface, where the averaged is weighted with the power depositions, P, such that e_para_ave = ave( E_para P ) / ave( P ), where ave(*) is the flux surface average operator; Time-dependent; Matrix (npsi, ntor)
k_perp_ave	matflt.type (9.6.1.2.10)	The perpendicular wave number, k_perp [1/m], averaged over the flux surface, where the averaged is weighted with the power depositions, P, such that k_perp_ave = ave( k_perp P ) / ( P ), where ave(*) is the flux surface average operator; Time-dependent; Matrix (npsi, ntor)

Type of: coherentwave:profiles\_1d (2076)

### 9.6.1.3.499 waves\_profiles\_2d

waves 2D profiles in poloidal cross-section

member	type	description
powd_tot	matflt.type (9.6.1.2.10)	Total wave power density; Time-dependent [W/m <sup>3</sup> ]; Matrix (ndim1, ndim2)
powd_e	matflt.type (9.6.1.2.10)	Absorbed wave power density on the thermal electrons [W/m <sup>3</sup> ]; Time-dependent; Matrix (ndim1, ndim2)
powd_i	array3dflt.type (9.6.1.2.2)	Absorbed wave power density on each thermal ion species [W/m <sup>3</sup> ]; Time-dependent; Array3D (ndim1, ndim2, nion)
powd_z	array4dflt.type (9.6.1.2.4)	Absorbed wave power density on each thermal impurity species [W/m <sup>3</sup> ]; Time-dependent; Array3D (ndim1, ndim2, nimpur, nzimp)
powd_fe	matflt.type (9.6.1.2.10)	Absorbed wave power density on the fast electrons [W/m <sup>3</sup> ]; Time-dependent; Matrix (ndim1, ndim2)
powd_fi	array3dflt.type (9.6.1.2.2)	Absorbed wave power density on each fast ion species [W/m <sup>3</sup> ]; Time-dependent; Array3D (ndim1, ndim2, nion)
powd_fz	array4dflt.type (9.6.1.2.4)	Absorbed wave power density on each fast impurity species [W/m <sup>3</sup> ]; Time-dependent; Array3D (ndim1, ndim2, nimpur, nzimp)
powd_ntor	array3dflt.type (9.6.1.2.2)	Absorbed power density for each toroidal mode number [W/m <sup>3</sup> ]; Time-dependent; Array 3D (ndim1, ndim2, ntor)
powd_ntor_e	array3dflt.type (9.6.1.2.2)	Absorbed power density for each toroidal mode number on the thermal electrons [W/m <sup>3</sup> ]; Time-dependent; Array 3D (ndim1, ndim2, ntor)
powd_ntor_i	array4dflt.type (9.6.1.2.4)	Absorbed power density for each toroidal mode number on each thermal ions species [W/m <sup>3</sup> ]; Time-dependent; Array4D (ndim1, ndim2, ntor, nion)
powd_ntor_z	array5dflt.type (9.6.1.2.5)	Absorbed power density for each toroidal mode number on each thermal impurity species [W/m <sup>3</sup> ]; Time-dependent; Array4D (ndim1, ndim2, ntor, nimpur, nzimp)
powd_ntor_fe	array3dflt.type (9.6.1.2.2)	Absorbed power density for each toroidal mode number on the fast electrons [W/m <sup>3</sup> ]; Time-dependent; Array 3D (ndim1, ndim2, ntor)
powd_ntor_fi	array4dflt.type (9.6.1.2.4)	Absorbed power density for each toroidal mode number on each fast ions species [W/m <sup>3</sup> ]; Time-dependent; Array4D (ndim1, ndim2, ntor, nion)
powd_ntor_fz	array5dflt.type (9.6.1.2.5)	Absorbed power density for each toroidal mode number on each fast impurity species [W/m <sup>3</sup> ]; Time-dependent; Array4D (ndim1, ndim2, ntor, nimpur, nzimp)
powd_iharm	array5dflt.type (9.6.1.2.5)	Power density absorbed by an ion species for each toroidal mode number at a given harmonic cyclotron resonance ; Time-dependent (W/m <sup>3</sup> ); Array5D (ndim1, ndim2, ntor, nion, nharm)

Type of: coherentwave:profiles\_2d (2076)

### 9.6.1.3.500 waves\_rtposition

Ray/beam position

member	type	description
r	vecflt.type (9.6.1.2.13)	Major radius location [m]; Time-dependent; Vector (npoints)
z	vecflt.type (9.6.1.2.13)	Vertical location [m]; Time-dependent; Vector (npoints)
phi	vecflt.type (9.6.1.2.13)	Toroidal angle location [rad]; Time-dependent; Vector (npoints)
psi	vecflt.type (9.6.1.2.13)	Poloidal magnetic flux coordinate [Wb], without $1/2\pi$ and such that $B_p =  grad\ psi  / R/2/\pi$ ; Time-dependent; Vector (npoints)
theta	vecflt.type (9.6.1.2.13)	Poloidal angle location [rad]; Time-dependent; Vector (npoints). PRECISE THE DEFINITION OF THE POLOIDAL ANGLE, SEE WAVES/COHERENTWAVE(:)/GRID_2D.

Type of: beamtracing:position (2063)

### 9.6.1.3.501 waves\_rtwavevector

Ray/beam wave vector

member	type	description
kr	vecflt.type (9.6.1.2.13)	Wave vector in the major radius direction [ $m^{*-1}$ ], Vector (npoints). Time-dependent
kz	vecflt.type (9.6.1.2.13)	Wave vector in the vertical direction [ $m^{*-1}$ ], Vector (npoints). Time-dependent
kphi	vecflt.type (9.6.1.2.13)	Wave vector in the toroidal direction [ $m^{*-1}$ ], Vector (npoints). Time-dependent
npar	vecflt.type (9.6.1.2.13)	Parallel refractive index, Vector (npoints). Time-dependent
nperp	vecflt.type (9.6.1.2.13)	Perpendicular refractive index, Vector (npoints). Time-dependent
ntor	vecflt.type (9.6.1.2.13)	Toroidal wave number, Vector (npoints/1). If var_ntor=0, ntor is constant along the ray path and the last dimension is of size 1 in order to avoid useless repetition of ntor constant value. Time-dependent
var_ntor	integer (9.6.1.1.2)	Flag telling whether ntor is constant along the ray path (0) or varying (1). Integer

Type of: beamtracing:wavevector (2063)

### 9.6.1.3.502 weighted\_markers

Array of NMARK weighted markers in NDIM dimensions

member	type	description
variable_ids(:)	identifier (9.6.1.3.233)	Identifier for the variable_ids stored in the coord matrix (see coordinate_identifier_definitions in the Documentation website under Conventions/Enumerated_datatypes). Vector(NDIM)
coord	matflt.type (9.6.1.2.10)	Coordinates of the markers. The coordinates used is specified in variable_ids. Time-dependent; Float(NMARK,NDIM)
weight	vecflt.type (9.6.1.2.13)	Weight of the marker; number of real particles represented by the marker. Time-dependent; Float(NMARK)

Type of: dist\_func:markers (2142) | distsource\_source:markers (2166)

### 9.6.1.3.503 whatref

Structure defining a database entry and the CPO occurrence

member	type	description
user	string (9.6.1.1.3)	Name of the user if private data, public if public ITM database.
machine	string (9.6.1.1.3)	Name of the device
shot	integer (9.6.1.1.2)	Shot number
run	integer (9.6.1.1.2)	Run number
occurrence	integer (9.6.1.1.2)	Occurrence number of the CPO in the reference entry

Type of: datainfo:whatref (2130)

### 9.6.1.3.504 width

Angular width of each in the poloidal and toroidal direction;

member	type	description
dtheta	vecflt_type (9.6.1.2.13)	Angular poloidal width of holes; Vector (n.holes)
phi	vecflt_type (9.6.1.2.13)	Angular toroidal width of holes; Vector (n.holes)

Type of: holes:width (2229)

### 9.6.1.3.505 xpts

Position of the X-point(s)

member	type	description
position	rz1D (9.6.1.3.356)	Position of the X-point(s); Time-dependent; Vector (nmeas)
source	string (9.6.1.1.3)	Description or path to the source signal (diagnostic or genprof, from which to read all info on the signal), e.g. 'magdiag/bpol_probes/measure/value'. String
weight	vecflt_type (9.6.1.2.13)	weight given to the measurement ( $\zeta = 0$ ); -1 if exact data; Time-dependent; Vector (nmeas)
sigma	vecflt_type (9.6.1.2.13)	standard deviation of the measurement; Time-dependent; Vector (nmeas)
calculated	vecflt_type (9.6.1.2.13)	Signal as recalculated by the equilibrium code; Time-dependent; Vector (nmeas)
chi2	vecflt_type (9.6.1.2.13)	chi <sup>2</sup> of (calculated-measured); Time-dependent; Vector (nmeas)

Type of: eqconstraint:xpts (2184)

### 9.6.1.3.506 xyz0D

Structure for a single (x,y,z) position (0D)

member	type	description
x	float (9.6.1.1.1)	Spatial coordinate x [m]
y	float (9.6.1.1.1)	Spatial coordinate y [m]
z	float (9.6.1.1.1)	Spatial coordinate z [m]

Type of: flat\_polygon:basis1 (2197) I flat\_polygon:basis2 (2197) I flat\_polygon:origin (2197) I rectanglexyz:point01 (2340) I rectanglexyz:point10 (2340) I rectanglexyz:point11 (2340) I trianglexyz:point1 (2460) I trianglexyz:point2 (2460) I trianglexyz:point3 (2460) itmtypes<sup>183</sup>

## 9.6.2 CPO Instances

Generated from the ITM data structure schemas.

### 9.6.2.1 Fortran

#### 9.6.2.1.1 amns

datainfo (2000)	amns%datainfo (datainfo) (9.6.1.3.133)
dataprovider (2130)	amns%datainfo%dataprovider (string) (9.6.1.1.3)
putdate (2130)	amns%datainfo%putdate (string) (9.6.1.1.3)
source (2130)	amns%datainfo%source (string) (9.6.1.1.3)
comment (2130)	amns%datainfo%comment (string) (9.6.1.1.3)
cocos (2130)	amns%datainfo%cocos (integer) (9.6.1.1.2)
id (2130)	amns%datainfo%id (integer) (9.6.1.1.2)
isref (2130)	amns%datainfo%isref (integer) (9.6.1.1.2)
whatref (2130)	amns%datainfo%whatref (whatref) (9.6.1.3.503)
user (2500)	amns%datainfo%whatref%user (string) (9.6.1.1.3)
machine (2500)	amns%datainfo%whatref%machine (string) (9.6.1.1.3)
shot (2500)	amns%datainfo%whatref%shot (integer) (9.6.1.1.2)
run (2500)	amns%datainfo%whatref%run (integer) (9.6.1.1.2)
occurrence (2500)	amns%datainfo%whatref%occurrence (integer) (9.6.1.1.2)

<sup>183</sup>[https://www.efda-itm.eu/ITM/html/itmypes\\_\\_4.10b.8.html](https://www.efda-itm.eu/ITM/html/itmypes__4.10b.8.html)



putinfo (2130)	amns%datainfo%putinfo (putinfo) (9.6.1.3.339)
putmethod (2336)	amns%datainfo%putinfo%putmethod (string) (9.6.1.1.3)
putaccess (2336)	amns%datainfo%putinfo%putaccess (string) (9.6.1.1.3)
putlocation (2336)	amns%datainfo%putinfo%putlocation (string) (9.6.1.1.3)
rights (2336)	amns%datainfo%putinfo%rights (string) (9.6.1.1.3)
version (2000)	amns%version (string) (9.6.1.1.3)
source (2000)	amns%source (string) (9.6.1.1.3)
zn (2000)	amns%zn (integer) (9.6.1.1.2)
amn (2000)	amns%amn (float) (9.6.1.1.1)
process (2000)	amns%process(:) (amns.processType) (9.6.1.3.53)
proc_label (2050)	amns%process(:)%proc_label (string) (9.6.1.1.3)
reactant (2050)	amns%process(:)%reactant(:) (reacprodType) (9.6.1.3.341)
label (2338)	amns%process(:)%reactant(:)%label (string) (9.6.1.1.3)
constituents (2338)	amns%process(:)%reactant(:)%constituents(:) (amns.constituentType) (9.6.1.3.52)
label (2049)	amns%process(:)%reactant(:)%constituents(:)%label (string) (9.6.1.1.3)
zn (2049)	amns%process(:)%reactant(:)%constituents(:)%zn (integer) (9.6.1.1.2)
mn (2049)	amns%process(:)%reactant(:)%constituents(:)%mn (integer) (9.6.1.1.2)
multiplicity (2049)	amns%process(:)%reactant(:)%constituents(:)%multiplicity (float) (9.6.1.1.1)
role (2338)	amns%process(:)%reactant(:)%role (identifier) (9.6.1.3.233)
id (2230)	amns%process(:)%reactant(:)%role%id (string) (9.6.1.1.3)
flag (2230)	amns%process(:)%reactant(:)%role%flag (integer) (9.6.1.1.2)
description (2230)	amns%process(:)%reactant(:)%role%description (string) (9.6.1.1.3)
amn (2338)	amns%process(:)%reactant(:)%amn (float) (9.6.1.1.1)
relative (2338)	amns%process(:)%reactant(:)%relative (integer) (9.6.1.1.2)
za (2338)	amns%process(:)%reactant(:)%za (float) (9.6.1.1.1)
multiplicity (2338)	amns%process(:)%reactant(:)%multiplicity (float) (9.6.1.1.1)
metastable (2338)	amns%process(:)%reactant(:)%metastable (vecint.type) (9.6.1.2.14)
metastable_label (2338)	amns%process(:)%reactant(:)%metastable_label (string) (9.6.1.1.3)
product (2050)	amns%process(:)%product(:) (reacprodType) (9.6.1.3.341)
label (2338)	amns%process(:)%product(:)%label (string) (9.6.1.1.3)
constituents (2338)	amns%process(:)%product(:)%constituents(:) (amns.constituentType) (9.6.1.3.52)
label (2049)	amns%process(:)%product(:)%constituents(:)%label (string) (9.6.1.1.3)
zn (2049)	amns%process(:)%product(:)%constituents(:)%zn (integer) (9.6.1.1.2)
mn (2049)	amns%process(:)%product(:)%constituents(:)%mn (integer) (9.6.1.1.2)
multiplicity (2049)	amns%process(:)%product(:)%constituents(:)%multiplicity (float) (9.6.1.1.1)
role (2338)	amns%process(:)%product(:)%role (identifier) (9.6.1.3.233)
id (2230)	amns%process(:)%product(:)%role%id (string) (9.6.1.1.3)
flag (2230)	amns%process(:)%product(:)%role%flag (integer) (9.6.1.1.2)
description (2230)	amns%process(:)%product(:)%role%description (string) (9.6.1.1.3)
amn (2338)	amns%process(:)%product(:)%amn (float) (9.6.1.1.1)
relative (2338)	amns%process(:)%product(:)%relative (integer) (9.6.1.1.2)
za (2338)	amns%process(:)%product(:)%za (float) (9.6.1.1.1)
multiplicity (2338)	amns%process(:)%product(:)%multiplicity (float) (9.6.1.1.1)
metastable (2338)	amns%process(:)%product(:)%metastable (vecint.type) (9.6.1.2.14)
metastable_label (2338)	amns%process(:)%product(:)%metastable_label (string) (9.6.1.1.3)
sup_string (2050)	amns%process(:)%sup_string (string) (9.6.1.1.3)
sup_real (2050)	amns%process(:)%sup_real (float) (9.6.1.1.1)
sup_int (2050)	amns%process(:)%sup_int (integer) (9.6.1.1.2)
quality (2050)	amns%process(:)%quality (identifier) (9.6.1.3.233)
id (2230)	amns%process(:)%quality%id (string) (9.6.1.1.3)
flag (2230)	amns%process(:)%quality%flag (integer) (9.6.1.1.2)
description (2230)	amns%process(:)%quality%description (string) (9.6.1.1.3)
err_proc_label (2050)	amns%process(:)%err_proc_label (string) (9.6.1.1.3)
tables (2000)	amns%tables(:) (tables) (9.6.1.3.418)
ndim (2415)	amns%tables(:)%ndim (integer) (9.6.1.1.2)
coord_index (2415)	amns%tables(:)%coord_index (integer) (9.6.1.1.2)
result_label (2415)	amns%tables(:)%result_label (string) (9.6.1.1.3)
result_unit (2415)	amns%tables(:)%result_unit (string) (9.6.1.1.3)
result_trans (2415)	amns%tables(:)%result_trans (integer) (9.6.1.1.2)
zmin (2415)	amns%tables(:)%zmin (vecint.type) (9.6.1.2.14)
zmax (2415)	amns%tables(:)%zmax (vecint.type) (9.6.1.2.14)

state_label (2415)	amns%tables(:)%state_label (vecstring.type) (9.6.1.2.15)
table (2415)	amns%tables(:)%table(:) (table) (9.6.1.3.417)
filled (2414)	amns%tables(:)%table(:)%filled (integer) (9.6.1.1.2)
table_0d (2414)	amns%tables(:)%table(:)%table_0d (float) (9.6.1.1.1)
table_1d (2414)	amns%tables(:)%table(:)%table_1d (vecflt.type) (9.6.1.2.13)
table_2d (2414)	amns%tables(:)%table(:)%table_2d (matflt.type) (9.6.1.2.10)
table_3d (2414)	amns%tables(:)%table(:)%table_3d (array3dfit.type) (9.6.1.2.2)
table_4d (2414)	amns%tables(:)%table(:)%table_4d (array4dfit.type) (9.6.1.2.4)
table_5d (2414)	amns%tables(:)%table(:)%table_5d (array5dfit.type) (9.6.1.2.5)
table_6d (2414)	amns%tables(:)%table(:)%table_6d (array6dfit.type) (9.6.1.2.6)
coord1_str (2414)	amns%tables(:)%table(:)%coord1_str (vecstring.type) (9.6.1.2.15)
coord2_str (2414)	amns%tables(:)%table(:)%coord2_str (vecstring.type) (9.6.1.2.15)
coord3_str (2414)	amns%tables(:)%table(:)%coord3_str (vecstring.type) (9.6.1.2.15)
coord4_str (2414)	amns%tables(:)%table(:)%coord4_str (vecstring.type) (9.6.1.2.15)
coord5_str (2414)	amns%tables(:)%table(:)%coord5_str (vecstring.type) (9.6.1.2.15)
coord6_str (2414)	amns%tables(:)%table(:)%coord6_str (vecstring.type) (9.6.1.2.15)
quality (2414)	amns%tables(:)%table(:)%quality (identifier) (9.6.1.3.233)
id (2230)	amns%tables(:)%table(:)%quality%id (string) (9.6.1.1.3)
flag (2230)	amns%tables(:)%table(:)%quality%flag (integer) (9.6.1.1.2)
description (2230)	amns%tables(:)%table(:)%quality%description (string) (9.6.1.1.3)
data_source (2415)	amns%tables(:)%data_source (string) (9.6.1.1.3)
data_provide (2415)	amns%tables(:)%data_provide (string) (9.6.1.1.3)
data_citation (2415)	amns%tables(:)%data_citation (string) (9.6.1.1.3)
tables.coord (2000)	amns%tables_coord(:) (tables_coord) (9.6.1.3.419)
coords (2416)	amns%tables_coord(:)%coords(:) (coords) (9.6.1.3.103)
coord (2100)	amns%tables_coord(:)%coords(:)%coord (vecflt.type) (9.6.1.2.13)
coord_label (2100)	amns%tables_coord(:)%coords(:)%coord_label (vecstring.type) (9.6.1.2.15)
extrap_type (2100)	amns%tables_coord(:)%coords(:)%extrap_type (vecint.type) (9.6.1.2.14)
interp_type (2100)	amns%tables_coord(:)%coords(:)%interp_type (integer) (9.6.1.1.2)
label (2100)	amns%tables_coord(:)%coords(:)%label (string) (9.6.1.1.3)
unit (2100)	amns%tables_coord(:)%coords(:)%unit (string) (9.6.1.1.3)
transform (2100)	amns%tables_coord(:)%coords(:)%transform (integer) (9.6.1.1.2)
spacing (2100)	amns%tables_coord(:)%coords(:)%spacing (integer) (9.6.1.1.2)
version.ind (2000)	amns%version_ind(:) (version_ind) (9.6.1.3.477)
description (2474)	amns%version_ind(:)%description (vecstring.type) (9.6.1.2.15)
releasedate (2474)	amns%version_ind(:)%releasedate (string) (9.6.1.1.3)
data_release (2474)	amns%version_ind(:)%data_release(:) (data_release) (9.6.1.3.132)
shot (2129)	amns%version_ind(:)%data_release(:)%shot (integer) (9.6.1.1.2)
run (2129)	amns%version_ind(:)%data_release(:)%run (integer) (9.6.1.1.2)
description (2129)	amns%version_ind(:)%data_release(:)%description (vecstring.type) (9.6.1.2.15)
codeparam (2000)	amns%codeparam (codeparam) (9.6.1.3.77)
codename (2074)	amns%codeparam%codename (string) (9.6.1.1.3)
codeversion (2074)	amns%codeparam%codeversion (string) (9.6.1.1.3)
parameters (2074)	amns%codeparam%parameters (string) (9.6.1.1.3)
output_diag (2074)	amns%codeparam%output_diag (string) (9.6.1.1.3)
output_flag (2074)	amns%codeparam%output_flag (integer) (9.6.1.1.2)
time (2000)	amns%time (float) (9.6.1.1.1)

### 9.6.2.1.2 antennas

datainfo (2001)	antennas%datainfo (datainfo) (9.6.1.3.133)
dataprovider (2130)	antennas%datainfo%dataprovider (string) (9.6.1.1.3)
putdate (2130)	antennas%datainfo%putdate (string) (9.6.1.1.3)
source (2130)	antennas%datainfo%source (string) (9.6.1.1.3)
comment (2130)	antennas%datainfo%comment (string) (9.6.1.1.3)
cocos (2130)	antennas%datainfo%cocos (integer) (9.6.1.1.2)
id (2130)	antennas%datainfo%id (integer) (9.6.1.1.2)
isref (2130)	antennas%datainfo%isref (integer) (9.6.1.1.2)
whatref (2130)	antennas%datainfo%whatref (whatref) (9.6.1.3.503)
user (2500)	antennas%datainfo%whatref%user (string) (9.6.1.1.3)
machine (2500)	antennas%datainfo%whatref%machine (string) (9.6.1.1.3)

shot (2500)	antennas%datainfo%whatref%shot (integer) (9.6.1.1.2)
run (2500)	antennas%datainfo%whatref%run (integer) (9.6.1.1.2)
occurrence (2500)	antennas%datainfo%whatref%occurrence (integer) (9.6.1.1.2)
putinfo (2130)	antennas%datainfo%putinfo (putinfo) (9.6.1.3.339)
putmethod (2336)	antennas%datainfo%putinfo%putmethod (string) (9.6.1.1.3)
putaccess (2336)	antennas%datainfo%putinfo%putaccess (string) (9.6.1.1.3)
putlocation (2336)	antennas%datainfo%putinfo%putlocation (string) (9.6.1.1.3)
rights (2336)	antennas%datainfo%putinfo%rights (string) (9.6.1.1.3)
antenna_ec (2001)	antennas%antenna_ec(:) (antenna_ec) (9.6.1.3.54)
name (2051)	antennas%antenna_ec(:)%name (string) (9.6.1.1.3)
frequency (2051)	antennas%antenna_ec(:)%frequency (float) (9.6.1.1.1)
power (2051)	antennas%antenna_ec(:)%power (exp0D) (9.6.1.3.194)
value (2191)	antennas%antenna_ec(:)%power%value (float) (9.6.1.1.1)
abserror (2191)	antennas%antenna_ec(:)%power%abserror (float) (9.6.1.1.1)
relerror (2191)	antennas%antenna_ec(:)%power%relerror (float) (9.6.1.1.1)
mode (2051)	antennas%antenna_ec(:)%mode (integer) (9.6.1.1.2)
position (2051)	antennas%antenna_ec(:)%position (rzphi0D) (9.6.1.3.361)
r (2358)	antennas%antenna_ec(:)%position%r (float) (9.6.1.1.1)
z (2358)	antennas%antenna_ec(:)%position%z (float) (9.6.1.1.1)
phi (2358)	antennas%antenna_ec(:)%position%phi (float) (9.6.1.1.1)
launchangles (2051)	antennas%antenna_ec(:)%launchangles (launchangles) (9.6.1.3.243)
alpha (2240)	antennas%antenna_ec(:)%launchangles%alpha (float) (9.6.1.1.1)
beta (2240)	antennas%antenna_ec(:)%launchangles%beta (float) (9.6.1.1.1)
beam (2051)	antennas%antenna_ec(:)%beam (rbeam) (9.6.1.3.354)
spot (2351)	antennas%antenna_ec(:)%beam%spot (spot) (9.6.1.3.411)
size (2408)	antennas%antenna_ec(:)%beam%spot%size (vecflt_type) (9.6.1.2.13)
angle (2408)	antennas%antenna_ec(:)%beam%spot%angle (float) (9.6.1.1.1)
phaseellipse (2351)	antennas%antenna_ec(:)%beam%phaseellipse (phaseellipse) (9.6.1.3.326)
invcurvrad (2323)	antennas%antenna_ec(:)%beam%phaseellipse%invcurvrad (vecflt_type) (9.6.1.2.13)
angle (2323)	antennas%antenna_ec(:)%beam%phaseellipse%angle (float) (9.6.1.1.1)
codeparam (2051)	antennas%antenna_ec(:)%codeparam (codeparam) (9.6.1.3.77)
codename (2074)	antennas%antenna_ec(:)%codeparam%codename (string) (9.6.1.1.3)
codeversion (2074)	antennas%antenna_ec(:)%codeparam%codeversion (string) (9.6.1.1.3)
parameters (2074)	antennas%antenna_ec(:)%codeparam%parameters (string) (9.6.1.1.3)
output_diag (2074)	antennas%antenna_ec(:)%codeparam%output_diag (string) (9.6.1.1.3)
output_flag (2074)	antennas%antenna_ec(:)%codeparam%output_flag (integer) (9.6.1.1.2)
antenna_ic (2001)	antennas%antenna_ic(:) (antenna_ic) (9.6.1.3.55)
name (2052)	antennas%antenna_ic(:)%name (string) (9.6.1.1.3)
frequency (2052)	antennas%antenna_ic(:)%frequency (exp0D) (9.6.1.3.194)
value (2191)	antennas%antenna_ic(:)%frequency%value (float) (9.6.1.1.1)
abserror (2191)	antennas%antenna_ic(:)%frequency%abserror (float) (9.6.1.1.1)
relerror (2191)	antennas%antenna_ic(:)%frequency%relerror (float) (9.6.1.1.1)
power (2052)	antennas%antenna_ic(:)%power (exp0D) (9.6.1.3.194)
value (2191)	antennas%antenna_ic(:)%power%value (float) (9.6.1.1.1)
abserror (2191)	antennas%antenna_ic(:)%power%abserror (float) (9.6.1.1.1)
relerror (2191)	antennas%antenna_ic(:)%power%relerror (float) (9.6.1.1.1)
setup (2052)	antennas%antenna_ic(:)%setup (antennaic_setup) (9.6.1.3.57)
straps (2054)	antennas%antenna_ic(:)%setup%straps(:) (straps) (9.6.1.3.413)
current (2410)	antennas%antenna_ic(:)%setup%straps(:)%current (exp0D) (9.6.1.3.194)
value (2191)	antennas%antenna_ic(:)%setup%straps(:)%current%value (float) (9.6.1.1.1)
abserror (2191)	antennas%antenna_ic(:)%setup%straps(:)%current%abserror (float) (9.6.1.1.1)
relerror (2191)	antennas%antenna_ic(:)%setup%straps(:)%current%relerror (float) (9.6.1.1.1)
phase (2410)	antennas%antenna_ic(:)%setup%straps(:)%phase (exp0D) (9.6.1.3.194)
value (2191)	antennas%antenna_ic(:)%setup%straps(:)%phase%value (float) (9.6.1.1.1)
abserror (2191)	antennas%antenna_ic(:)%setup%straps(:)%phase%abserror (float) (9.6.1.1.1)
relerror (2191)	antennas%antenna_ic(:)%setup%straps(:)%phase%relerror (float) (9.6.1.1.1)
phi_centre (2410)	antennas%antenna_ic(:)%setup%straps(:)%phi_centre (float) (9.6.1.1.1)
width (2410)	antennas%antenna_ic(:)%setup%straps(:)%width (float) (9.6.1.1.1)
dist2wall (2410)	antennas%antenna_ic(:)%setup%straps(:)%dist2wall (float) (9.6.1.1.1)
coord_strap (2410)	antennas%antenna_ic(:)%setup%straps(:)%coord_strap (rz1D) (9.6.1.3.356)
r (2353)	antennas%antenna_ic(:)%setup%straps(:)%coord_strap%r (vecflt_type) (9.6.1.2.13)

z (2353)	antennas%antenna.ic(:)%setup%straps(:)%coord_strap%z (vecflt.type) (9.6.1.2.13)
current (2054)	antennas%antenna.ic(:)%setup%current (current) (9.6.1.3.129)
mpol (2126)	antennas%antenna.ic(:)%setup%current%mpol (vecint.type) (9.6.1.2.14)
ntor (2126)	antennas%antenna.ic(:)%setup%current%ntor (vecint.type) (9.6.1.2.14)
spectrum (2126)	antennas%antenna.ic(:)%setup%current%spectrum (exp1D) (9.6.1.3.195)
value (2192)	antennas%antenna.ic(:)%setup%current%spectrum%value (vecflt.type) (9.6.1.2.13)
abserror (2192)	antennas%antenna.ic(:)%setup%current%spectrum%abserror (vecflt.type) (9.6.1.2.13)
releror (2192)	antennas%antenna.ic(:)%setup%current%spectrum%releror (vecflt.type) (9.6.1.2.13)
rz_reference (2126)	antennas%antenna.ic(:)%setup%current%rz_reference (rz0D) (9.6.1.3.355)
r (2352)	antennas%antenna.ic(:)%setup%current%rz_reference%r (float) (9.6.1.1.1)
z (2352)	antennas%antenna.ic(:)%setup%current%rz_reference%z (float) (9.6.1.1.1)
codeparam (2052)	antennas%antenna.ic(:)%codeparam (codeparam) (9.6.1.3.77)
codename (2074)	antennas%antenna.ic(:)%codeparam%codename (string) (9.6.1.1.3)
codeversion (2074)	antennas%antenna.ic(:)%codeparam%codeversion (string) (9.6.1.1.3)
parameters (2074)	antennas%antenna.ic(:)%codeparam%parameters (string) (9.6.1.1.3)
output_diag (2074)	antennas%antenna.ic(:)%codeparam%output_diag (string) (9.6.1.1.3)
output_flag (2074)	antennas%antenna.ic(:)%codeparam%output_flag (integer) (9.6.1.1.2)
antenna.lh (2001)	antennas%antenna.lh(:) (antenna.lh) (9.6.1.3.56)
name (2053)	antennas%antenna.lh(:)%name (string) (9.6.1.1.3)
frequency (2053)	antennas%antenna.lh(:)%frequency (float) (9.6.1.1.1)
power (2053)	antennas%antenna.lh(:)%power (exp0D) (9.6.1.3.194)
value (2191)	antennas%antenna.lh(:)%power%value (float) (9.6.1.1.1)
abserror (2191)	antennas%antenna.lh(:)%power%abserror (float) (9.6.1.1.1)
releror (2191)	antennas%antenna.lh(:)%power%releror (float) (9.6.1.1.1)
n_par (2053)	antennas%antenna.lh(:)%n_par (float) (9.6.1.1.1)
position (2053)	antennas%antenna.lh(:)%position (rzphi0D) (9.6.1.3.361)
r (2358)	antennas%antenna.lh(:)%position%r (float) (9.6.1.1.1)
z (2358)	antennas%antenna.lh(:)%position%z (float) (9.6.1.1.1)
phi (2358)	antennas%antenna.lh(:)%position%phi (float) (9.6.1.1.1)
setup (2053)	antennas%antenna.lh(:)%setup (antennalh_setup) (9.6.1.3.58)
modules (2055)	antennas%antenna.lh(:)%setup%modules (modules) (9.6.1.3.273)
nma_theta (2270)	antennas%antenna.lh(:)%setup%modules%nma_theta (integer) (9.6.1.1.2)
nma_phi (2270)	antennas%antenna.lh(:)%setup%modules%nma_phi (integer) (9.6.1.1.2)
ima_theta (2270)	antennas%antenna.lh(:)%setup%modules%ima_theta (vecint.type) (9.6.1.2.14)
ima_phi (2270)	antennas%antenna.lh(:)%setup%modules%ima_phi (vecint.type) (9.6.1.2.14)
sm_theta (2270)	antennas%antenna.lh(:)%setup%modules%sm_theta (float) (9.6.1.1.1)
amplitude (2270)	antennas%antenna.lh(:)%setup%modules%amplitude (exp1D) (9.6.1.3.195)
value (2192)	antennas%antenna.lh(:)%setup%modules%amplitude%value (vecflt.type) (9.6.1.2.13)
abserror (2192)	antennas%antenna.lh(:)%setup%modules%amplitude%abserror (vecflt.type) (9.6.1.2.13)
releror (2192)	antennas%antenna.lh(:)%setup%modules%amplitude%releror (vecflt.type) (9.6.1.2.13)
phase (2270)	antennas%antenna.lh(:)%setup%modules%phase (exp1D) (9.6.1.3.195)
value (2192)	antennas%antenna.lh(:)%setup%modules%phase%value (vecflt.type) (9.6.1.2.13)
abserror (2192)	antennas%antenna.lh(:)%setup%modules%phase%abserror (vecflt.type) (9.6.1.2.13)
releror (2192)	antennas%antenna.lh(:)%setup%modules%phase%releror (vecflt.type) (9.6.1.2.13)
waveguides (2270)	antennas%antenna.lh(:)%setup%modules%waveguides (waveguides) (9.6.1.3.494)
nwm_theta (2491)	antennas%antenna.lh(:)%setup%modules%waveguides%nwm_theta (integer) (9.6.1.1.2)
nwm_phi (2491)	antennas%antenna.lh(:)%setup%modules%waveguides%nwm_phi (integer) (9.6.1.1.2)
mask (2491)	antennas%antenna.lh(:)%setup%modules%waveguides%mask (vecint.type) (9.6.1.2.14)
npwbm_phi (2491)	antennas%antenna.lh(:)%setup%modules%waveguides%npwbm_phi (integer) (9.6.1.1.2)
npwe_phi (2491)	antennas%antenna.lh(:)%setup%modules%waveguides%npwe_phi (integer) (9.6.1.1.2)
sw_theta (2491)	antennas%antenna.lh(:)%setup%modules%waveguides%sw_theta (float) (9.6.1.1.1)
hw_theta (2491)	antennas%antenna.lh(:)%setup%modules%waveguides%hw_theta (float) (9.6.1.1.1)
bwa (2491)	antennas%antenna.lh(:)%setup%modules%waveguides%bwa (float) (9.6.1.1.1)
biwp (2491)	antennas%antenna.lh(:)%setup%modules%waveguides%biwp (float) (9.6.1.1.1)
bewp (2491)	antennas%antenna.lh(:)%setup%modules%waveguides%bewp (float) (9.6.1.1.1)
e_phi (2491)	antennas%antenna.lh(:)%setup%modules%waveguides%e_phi (vecflt.type) (9.6.1.2.13)
scl (2491)	antennas%antenna.lh(:)%setup%modules%waveguides%scl (vecflt.type) (9.6.1.2.13)
plasmaedge (2053)	antennas%antenna.lh(:)%plasmaedge (plasmaedge) (9.6.1.3.329)
npoints (2326)	antennas%antenna.lh(:)%plasmaedge%npoints (integer) (9.6.1.1.2)
distance (2326)	antennas%antenna.lh(:)%plasmaedge%distance (vecflt.type) (9.6.1.2.13)
density (2326)	antennas%antenna.lh(:)%plasmaedge%density (vecflt.type) (9.6.1.2.13)

beam (2053)	antennas%antenna.lh(:)%beam (rfbeam) (9.6.1.3.354)
spot (2351)	antennas%antenna.lh(:)%beam%spot (spot) (9.6.1.3.411)
size (2408)	antennas%antenna.lh(:)%beam%spot%size (vecflt_type) (9.6.1.2.13)
angle (2408)	antennas%antenna.lh(:)%beam%spot%angle (float) (9.6.1.1.1)
phaseellipse (2351)	antennas%antenna.lh(:)%beam%phaseellipse (phaseellipse) (9.6.1.3.326)
invcurvrad (2323)	antennas%antenna.lh(:)%beam%phaseellipse%invcurvrad (vecflt_type) (9.6.1.2.13)
angle (2323)	antennas%antenna.lh(:)%beam%phaseellipse%angle (float) (9.6.1.1.1)
codeparam (2053)	antennas%antenna.lh(:)%codeparam (codeparam) (9.6.1.3.77)
codename (2074)	antennas%antenna.lh(:)%codeparam%codename (string) (9.6.1.1.3)
codeversion (2074)	antennas%antenna.lh(:)%codeparam%codeversion (string) (9.6.1.1.3)
parameters (2074)	antennas%antenna.lh(:)%codeparam%parameters (string) (9.6.1.1.3)
output_diag (2074)	antennas%antenna.lh(:)%codeparam%output_diag (string) (9.6.1.1.3)
output_flag (2074)	antennas%antenna.lh(:)%codeparam%output_flag (integer) (9.6.1.1.2)
codeparam (2001)	antennas%codeparam (codeparam) (9.6.1.3.77)
codename (2074)	antennas%codeparam%codename (string) (9.6.1.1.3)
codeversion (2074)	antennas%codeparam%codeversion (string) (9.6.1.1.3)
parameters (2074)	antennas%codeparam%parameters (string) (9.6.1.1.3)
output_diag (2074)	antennas%codeparam%output_diag (string) (9.6.1.1.3)
output_flag (2074)	antennas%codeparam%output_flag (integer) (9.6.1.1.2)
time (2001)	antennas%time (float) (9.6.1.1.1)

### 9.6.2.1.3 bb\_shield

datainfo (2002)	bb_shield%datainfo (datainfo) (9.6.1.3.133)
dataprovider (2130)	bb_shield%datainfo%dataprovider (string) (9.6.1.1.3)
putdate (2130)	bb_shield%datainfo%putdate (string) (9.6.1.1.3)
source (2130)	bb_shield%datainfo%source (string) (9.6.1.1.3)
comment (2130)	bb_shield%datainfo%comment (string) (9.6.1.1.3)
cocos (2130)	bb_shield%datainfo%cocos (integer) (9.6.1.1.2)
id (2130)	bb_shield%datainfo%id (integer) (9.6.1.1.2)
isref (2130)	bb_shield%datainfo%isref (integer) (9.6.1.1.2)
whatref (2130)	bb_shield%datainfo%whatref (whatref) (9.6.1.3.503)
user (2500)	bb_shield%datainfo%whatref%user (string) (9.6.1.1.3)
machine (2500)	bb_shield%datainfo%whatref%machine (string) (9.6.1.1.3)
shot (2500)	bb_shield%datainfo%whatref%shot (integer) (9.6.1.1.2)
run (2500)	bb_shield%datainfo%whatref%run (integer) (9.6.1.1.2)
occurrence (2500)	bb_shield%datainfo%whatref%occurrence (integer) (9.6.1.1.2)
putinfo (2130)	bb_shield%datainfo%putinfo (putinfo) (9.6.1.3.339)
putmethod (2336)	bb_shield%datainfo%putinfo%putmethod (string) (9.6.1.1.3)
putaccess (2336)	bb_shield%datainfo%putinfo%putaccess (string) (9.6.1.1.3)
putlocation (2336)	bb_shield%datainfo%putinfo%putlocation (string) (9.6.1.1.3)
rights (2336)	bb_shield%datainfo%putinfo%rights (string) (9.6.1.1.3)
type (2002)	bb_shield%type (string) (9.6.1.1.3)
limits (2002)	bb_shield%limits (limits) (9.6.1.3.251)
fw_dpa (2248)	bb_shield%limits%fw_dpa (float) (9.6.1.1.1)
he_appm (2248)	bb_shield%limits%he_appm (float) (9.6.1.1.1)
ins_dose (2248)	bb_shield%limits%ins_dose (float) (9.6.1.1.1)
fn_flu (2248)	bb_shield%limits%fn_flu (float) (9.6.1.1.1)
dpa_cu (2248)	bb_shield%limits%dpa_cu (float) (9.6.1.1.1)
wp_nh (2248)	bb_shield%limits%wp_nh (float) (9.6.1.1.1)
li6_enrich (2002)	bb_shield%li6_enrich (float) (9.6.1.1.1)
geom (2002)	bb_shield%geom (geom) (9.6.1.3.224)
dr_bb_sh_ib (2221)	bb_shield%geom%dr_bb_sh_ib (float) (9.6.1.1.1)
dr_sh_vv_ib (2221)	bb_shield%geom%dr_sh_vv_ib (float) (9.6.1.1.1)
dr_bb_sh_ob (2221)	bb_shield%geom%dr_bb_sh_ob (float) (9.6.1.1.1)
dr_sh_vv_ob (2221)	bb_shield%geom%dr_sh_vv_ob (float) (9.6.1.1.1)
dr_bb_sh_ib (2221)	bb_shield%geom%dr_bb_sh_ib (float) (9.6.1.1.1)
dr_bb_sh_ob (2221)	bb_shield%geom%dr_bb_sh_ob (float) (9.6.1.1.1)
delta_int (2221)	bb_shield%geom%delta_int (float) (9.6.1.1.1)
neut_results (2002)	bb_shield%neut_results (neut_results) (9.6.1.3.286)
tbr_bk (2283)	bb_shield%neut_results%tbr_bk (float) (9.6.1.1.1)

tbr_bk_inb (2283)	bb_shield%neut_results%tbr_bk_inb (float) (9.6.1.1.1)
tbr_bk_outb (2283)	bb_shield%neut_results%tbr_bk_outb (float) (9.6.1.1.1)
me_bk (2283)	bb_shield%neut_results%me_bk (float) (9.6.1.1.1)
me_shield (2283)	bb_shield%neut_results%me_shield (float) (9.6.1.1.1)
he_appm_res (2283)	bb_shield%neut_results%he_appm_res (float) (9.6.1.1.1)
ins_dose_max (2283)	bb_shield%neut_results%ins_dose_max (float) (9.6.1.1.1)
fn_flu_max (2283)	bb_shield%neut_results%fn_flu_max (float) (9.6.1.1.1)
dpa_cu_max (2283)	bb_shield%neut_results%dpa_cu_max (float) (9.6.1.1.1)
fn_flux_bz (2283)	bb_shield%neut_results%fn_flux_bz (float) (9.6.1.1.1)
fn_flux_bp (2283)	bb_shield%neut_results%fn_flux_bp (float) (9.6.1.1.1)
fn_flux_man (2283)	bb_shield%neut_results%fn_flux_man (float) (9.6.1.1.1)
fn_flux_sh (2283)	bb_shield%neut_results%fn_flux_sh (float) (9.6.1.1.1)
p_nh_bk (2283)	bb_shield%neut_results%p_nh_bk (float) (9.6.1.1.1)
p_nh_sh (2283)	bb_shield%neut_results%p_nh_sh (float) (9.6.1.1.1)
shield (2002)	bb_shield%shield (shield) (9.6.1.3.395)
inboard (2392)	bb_shield%shield%inboard (shield_specs) (9.6.1.3.396)
nmat (2393)	bb_shield%shield%inboard%nmat (integer) (9.6.1.1.2)
composition (2393)	bb_shield%shield%inboard%composition (vecflt_type) (9.6.1.2.13)
r1 (2393)	bb_shield%shield%inboard%r1 (float) (9.6.1.1.1)
r2 (2393)	bb_shield%shield%inboard%r2 (float) (9.6.1.1.1)
mass (2393)	bb_shield%shield%inboard%mass (float) (9.6.1.1.1)
outboard (2392)	bb_shield%shield%outboard (shield_specs) (9.6.1.3.396)
nmat (2393)	bb_shield%shield%outboard%nmat (integer) (9.6.1.1.2)
composition (2393)	bb_shield%shield%outboard%composition (vecflt_type) (9.6.1.2.13)
r1 (2393)	bb_shield%shield%outboard%r1 (float) (9.6.1.1.1)
r2 (2393)	bb_shield%shield%outboard%r2 (float) (9.6.1.1.1)
mass (2393)	bb_shield%shield%outboard%mass (float) (9.6.1.1.1)
bb (2002)	bb_shield%bb (bb) (9.6.1.3.60)
nb_bb (2057)	bb_shield%bb%nb_bb (float) (9.6.1.1.1)
nb_bb_polcut (2057)	bb_shield%bb%nb_bb_polcut (float) (9.6.1.1.1)
teta_bb (2057)	bb_shield%bb%teta_bb (float) (9.6.1.1.1)
tbr (2057)	bb_shield%bb%tbr (float) (9.6.1.1.1)
neutro_resul (2057)	bb_shield%bb%neutro_resul (neutro_resul) (9.6.1.3.288)
nwl_max (2285)	bb_shield%bb%neutro_resul%nwl_max (float) (9.6.1.1.1)
nwl_pol_prof (2285)	bb_shield%bb%neutro_resul%nwl_pol_prof (vecflt_type) (9.6.1.2.13)
inboard (2057)	bb_shield%bb%inboard (bb_specs) (9.6.1.3.63)
nbb (2060)	bb_shield%bb%inboard%nbb (float) (9.6.1.1.1)
r1 (2060)	bb_shield%bb%inboard%r1 (float) (9.6.1.1.1)
r2 (2060)	bb_shield%bb%inboard%r2 (float) (9.6.1.1.1)
dimension (2060)	bb_shield%bb%inboard%dimension (bb_dimension) (9.6.1.3.61)
radial (2058)	bb_shield%bb%inboard%dimension%radial (vecflt_type) (9.6.1.2.13)
toroidal (2058)	bb_shield%bb%inboard%dimension%toroidal (vecflt_type) (9.6.1.2.13)
poloidal (2058)	bb_shield%bb%inboard%dimension%poloidal (vecflt_type) (9.6.1.2.13)
outboard (2057)	bb_shield%bb%outboard (bb_specs) (9.6.1.3.63)
nbb (2060)	bb_shield%bb%outboard%nbb (float) (9.6.1.1.1)
r1 (2060)	bb_shield%bb%outboard%r1 (float) (9.6.1.1.1)
r2 (2060)	bb_shield%bb%outboard%r2 (float) (9.6.1.1.1)
dimension (2060)	bb_shield%bb%outboard%dimension (bb_dimension) (9.6.1.3.61)
radial (2058)	bb_shield%bb%outboard%dimension%radial (vecflt_type) (9.6.1.2.13)
toroidal (2058)	bb_shield%bb%outboard%dimension%toroidal (vecflt_type) (9.6.1.2.13)
poloidal (2058)	bb_shield%bb%outboard%dimension%poloidal (vecflt_type) (9.6.1.2.13)
hcll (2002)	bb_shield%hcll (hcll) (9.6.1.3.229)
mat_lim (2226)	bb_shield%hcll%mat_lim (mat_lim) (9.6.1.3.259)
cool_t_lim (2256)	bb_shield%hcll%mat_lim%cool_t_lim (float) (9.6.1.1.1)
steel_t_lim (2256)	bb_shield%hcll%mat_lim%steel_t_lim (float) (9.6.1.1.1)
lipb_t_lim (2256)	bb_shield%hcll%mat_lim%lipb_t_lim (float) (9.6.1.1.1)
hcll_bb (2226)	bb_shield%hcll%hcll_bb (hcll_bb) (9.6.1.3.230)
bb_lifetime (2227)	bb_shield%hcll%hcll_bb%bb_lifetime (float) (9.6.1.1.1)
he_inl_t (2227)	bb_shield%hcll%hcll_bb%he_inl_t (float) (9.6.1.1.1)
he_fr (2227)	bb_shield%hcll%hcll_bb%he_fr (float) (9.6.1.1.1)
he_inl_p (2227)	bb_shield%hcll%hcll_bb%he_inl_p (float) (9.6.1.1.1)



loca_des_p (2227)	bb_shield%hcll%hcll.bb%loca_des_p (float) (9.6.1.1.1)
he_dp (2227)	bb_shield%hcll%hcll.bb%he_dp (float) (9.6.1.1.1)
lipb_dp (2227)	bb_shield%hcll%hcll.bb%lipb_dp (float) (9.6.1.1.1)
react (2227)	bb_shield%hcll%hcll.bb%react (react) (9.6.1.3.342)
he_fr (2339)	bb_shield%hcll%hcll.bb%react%he_fr (float) (9.6.1.1.1)
lp_fr (2339)	bb_shield%hcll%hcll.bb%react%lp_fr (float) (9.6.1.1.1)
he_dp (2339)	bb_shield%hcll%hcll.bb%react%he_dp (float) (9.6.1.1.1)
lipb_dp (2339)	bb_shield%hcll%hcll.bb%react%lipb_dp (float) (9.6.1.1.1)
inboard (2227)	bb_shield%hcll%hcll.bb%inboard (hcllbb_specs) (9.6.1.3.231)
mass (2228)	bb_shield%hcll%hcll.bb%inboard%mass (vecflt_type) (9.6.1.2.13)
dr (2228)	bb_shield%hcll%hcll.bb%inboard%dr (vecflt_type) (9.6.1.2.13)
mat (2228)	bb_shield%hcll%hcll.bb%inboard%mat (vecflt_type) (9.6.1.2.13)
composition (2228)	bb_shield%hcll%hcll.bb%inboard%composition (matflt_type) (9.6.1.2.10)
mod_geom (2228)	bb_shield%hcll%hcll.bb%inboard%mod_geom (bb_geometry) (9.6.1.3.62)
dr_fw (2059)	bb_shield%hcll%hcll.bb%inboard%mod_geom%dr_fw (float) (9.6.1.1.1)
dr_bz (2059)	bb_shield%hcll%hcll.bb%inboard%mod_geom%dr_bz (float) (9.6.1.1.1)
dr_bp (2059)	bb_shield%hcll%hcll.bb%inboard%mod_geom%dr_bp (float) (9.6.1.1.1)
dr_bp_plates (2059)	bb_shield%hcll%hcll.bb%inboard%mod_geom%dr_bp_plates (vecflt_type) (9.6.1.2.13)
dr_bp_he (2059)	bb_shield%hcll%hcll.bb%inboard%mod_geom%dr_bp_he (vecflt_type) (9.6.1.2.13)
dr_man (2059)	bb_shield%hcll%hcll.bb%inboard%mod_geom%dr_man (float) (9.6.1.1.1)
dt_sw (2059)	bb_shield%hcll%hcll.bb%inboard%mod_geom%dt_sw (float) (9.6.1.1.1)
dt_bz (2059)	bb_shield%hcll%hcll.bb%inboard%mod_geom%dt_bz (float) (9.6.1.1.1)
dp_bz (2059)	bb_shield%hcll%hcll.bb%inboard%mod_geom%dp_bz (float) (9.6.1.1.1)
top_cap_dim (2059)	bb_shield%hcll%hcll.bb%inboard%mod_geom%top_cap_dim (bb_dimension) (9.6.1.3.61)
radial (2058)	bb_shield%hcll%hcll.bb%inboard%mod_geom%top_cap_dim%radial (vecflt_type) (9.6.1.2.13)
toroidal (2058)	bb_shield%hcll%hcll.bb%inboard%mod_geom%top_cap_dim%toroidal (vecflt_type) (9.6.1.2.13)
poloidal (2058)	bb_shield%hcll%hcll.bb%inboard%mod_geom%top_cap_dim%poloidal (vecflt_type) (9.6.1.2.13)
bot_cap_dim (2059)	bb_shield%hcll%hcll.bb%inboard%mod_geom%bot_cap_dim (bb_dimension) (9.6.1.3.61)
radial (2058)	bb_shield%hcll%hcll.bb%inboard%mod_geom%bot_cap_dim%radial (vecflt_type) (9.6.1.2.13)
toroidal (2058)	bb_shield%hcll%hcll.bb%inboard%mod_geom%bot_cap_dim%toroidal (vecflt_type) (9.6.1.2.13)
poloidal (2058)	bb_shield%hcll%hcll.bb%inboard%mod_geom%bot_cap_dim%poloidal (vecflt_type) (9.6.1.2.13)
a_fw_ch (2059)	bb_shield%hcll%hcll.bb%inboard%mod_geom%a_fw_ch (float) (9.6.1.1.1)
b_fw_ch (2059)	bb_shield%hcll%hcll.bb%inboard%mod_geom%b_fw_ch (float) (9.6.1.1.1)
td_tc_ch (2059)	bb_shield%hcll%hcll.bb%inboard%mod_geom%td_tc_ch (float) (9.6.1.1.1)
rd_tc_ch (2059)	bb_shield%hcll%hcll.bb%inboard%mod_geom%rd_tc_ch (float) (9.6.1.1.1)
td_bc_ch (2059)	bb_shield%hcll%hcll.bb%inboard%mod_geom%td_bc_ch (float) (9.6.1.1.1)
rd_bc_ch (2059)	bb_shield%hcll%hcll.bb%inboard%mod_geom%rd_bc_ch (float) (9.6.1.1.1)
n_fw_ch (2059)	bb_shield%hcll%hcll.bb%inboard%mod_geom%n_fw_ch (float) (9.6.1.1.1)
n_fw_circ (2059)	bb_shield%hcll%hcll.bb%inboard%mod_geom%n_fw_circ (float) (9.6.1.1.1)
a_sg_ch (2059)	bb_shield%hcll%hcll.bb%inboard%mod_geom%a_sg_ch (float) (9.6.1.1.1)
b_sg_ch (2059)	bb_shield%hcll%hcll.bb%inboard%mod_geom%b_sg_ch (float) (9.6.1.1.1)
n_sg_ch (2059)	bb_shield%hcll%hcll.bb%inboard%mod_geom%n_sg_ch (float) (9.6.1.1.1)
sg_thick (2059)	bb_shield%hcll%hcll.bb%inboard%mod_geom%sg_thick (float) (9.6.1.1.1)
sg_weld (2059)	bb_shield%hcll%hcll.bb%inboard%mod_geom%sg_weld (float) (9.6.1.1.1)
sg_in_out (2059)	bb_shield%hcll%hcll.bb%inboard%mod_geom%sg_in_out (float) (9.6.1.1.1)
r_sg_cp (2059)	bb_shield%hcll%hcll.bb%inboard%mod_geom%r_sg_cp (float) (9.6.1.1.1)
cp_tor_gap (2059)	bb_shield%hcll%hcll.bb%inboard%mod_geom%cp_tor_gap (float) (9.6.1.1.1)
a_cp_ch (2059)	bb_shield%hcll%hcll.bb%inboard%mod_geom%a_cp_ch (float) (9.6.1.1.1)
b_cp_ch (2059)	bb_shield%hcll%hcll.bb%inboard%mod_geom%b_cp_ch (float) (9.6.1.1.1)
n_cp_ch (2059)	bb_shield%hcll%hcll.bb%inboard%mod_geom%n_cp_ch (float) (9.6.1.1.1)
cp_thick (2059)	bb_shield%hcll%hcll.bb%inboard%mod_geom%cp_thick (float) (9.6.1.1.1)
n_pol_bu (2059)	bb_shield%hcll%hcll.bb%inboard%mod_geom%n_pol_bu (float) (9.6.1.1.1)
n_tor_bu (2059)	bb_shield%hcll%hcll.bb%inboard%mod_geom%n_tor_bu (float) (9.6.1.1.1)
n_cp_bu (2059)	bb_shield%hcll%hcll.bb%inboard%mod_geom%n_cp_bu (float) (9.6.1.1.1)
cp_in_out (2059)	bb_shield%hcll%hcll.bb%inboard%mod_geom%cp_in_out (float) (9.6.1.1.1)
he_man_tck (2059)	bb_shield%hcll%hcll.bb%inboard%mod_geom%he_man_tck (float) (9.6.1.1.1)
man_tck (2059)	bb_shield%hcll%hcll.bb%inboard%mod_geom%man_tck (float) (9.6.1.1.1)
pbli_bptb_od (2059)	bb_shield%hcll%hcll.bb%inboard%mod_geom%pbli_bptb_od (float) (9.6.1.1.1)
pbli_bptb_id (2059)	bb_shield%hcll%hcll.bb%inboard%mod_geom%pbli_bptb_id (float) (9.6.1.1.1)



he_bptb_od (2059)	bb_shield%hcll%hcll.bb%inboard%mod_geom%he_bptb_od (float) (9.6.1.1.1)
he_bptb_id (2059)	bb_shield%hcll%hcll.bb%inboard%mod_geom%he_bptb_id (float) (9.6.1.1.1)
dr_max_fw (2059)	bb_shield%hcll%hcll.bb%inboard%mod_geom%dr_max_fw (float) (9.6.1.1.1)
dr_fwpl (2059)	bb_shield%hcll%hcll.bb%inboard%mod_geom%dr_fwpl (float) (9.6.1.1.1)
mod_neutr (2228)	bb_shield%hcll%hcll.bb%inboard%mod_neutr (mode_neutr) (9.6.1.3.269)
r (2266)	bb_shield%hcll%hcll.bb%inboard%mod_neutr%r (vecflt_type) (9.6.1.2.13)
pd_rad (2266)	bb_shield%hcll%hcll.bb%inboard%mod_neutr%pd_rad (vecflt_type) (9.6.1.2.13)
lipb_coef_pd (2266)	bb_shield%hcll%hcll.bb%inboard%mod_neutr%lipb_coef_pd (vecflt_type) (9.6.1.2.13)
steel_coef_pd (2266)	bb_shield%hcll%hcll.bb%inboard%mod_neutr%steel_coef_pd (vecflt_type) (9.6.1.2.13)
pow_exchange (2266)	bb_shield%hcll%hcll.bb%inboard%mod_neutr%pow_exchange (power_exchange) (9.6.1.3.334)
dep_pow (2331)	bb_shield%hcll%hcll.bb%inboard%mod_neutr%pow_exchange%dep_pow (vecflt_type) (9.6.1.2.13)
dep_fw (2331)	bb_shield%hcll%hcll.bb%inboard%mod_neutr%pow_exchange%dep_fw (float) (9.6.1.1.1)
dep_sg (2331)	bb_shield%hcll%hcll.bb%inboard%mod_neutr%pow_exchange%dep_sg (float) (9.6.1.1.1)
dep_cp (2331)	bb_shield%hcll%hcll.bb%inboard%mod_neutr%pow_exchange%dep_cp (float) (9.6.1.1.1)
dep_lp (2331)	bb_shield%hcll%hcll.bb%inboard%mod_neutr%pow_exchange%dep_lp (float) (9.6.1.1.1)
dep_man (2331)	bb_shield%hcll%hcll.bb%inboard%mod_neutr%pow_exchange%dep_man (float) (9.6.1.1.1)
dep_pl (2331)	bb_shield%hcll%hcll.bb%inboard%mod_neutr%pow_exchange%dep_pl (float) (9.6.1.1.1)
rec_fw (2331)	bb_shield%hcll%hcll.bb%inboard%mod_neutr%pow_exchange%rec_fw (float) (9.6.1.1.1)
rec_sg (2331)	bb_shield%hcll%hcll.bb%inboard%mod_neutr%pow_exchange%rec_sg (float) (9.6.1.1.1)
rec_cp (2331)	bb_shield%hcll%hcll.bb%inboard%mod_neutr%pow_exchange%rec_cp (float) (9.6.1.1.1)
pow_dens_fw (2331)	bb_shield%hcll%hcll.bb%inboard%mod_neutr%pow_exchange%pow_dens_fw (float) (9.6.1.1.1)
pow_dens_bz (2331)	bb_shield%hcll%hcll.bb%inboard%mod_neutr%pow_exchange%pow_dens_bz (float) (9.6.1.1.1)
pow_dens_bz10 (2331)	bb_shield%hcll%hcll.bb%inboard%mod_neutr%pow_exchange%pow_dens_bz10 (float) (9.6.1.1.1)
pow_dens_bp (2331)	bb_shield%hcll%hcll.bb%inboard%mod_neutr%pow_exchange%pow_dens_bp (float) (9.6.1.1.1)
pow_dens_man (2331)	bb_shield%hcll%hcll.bb%inboard%mod_neutr%pow_exchange%pow_dens_man (float) (9.6.1.1.1)
pow_dens_sh (2331)	bb_shield%hcll%hcll.bb%inboard%mod_neutr%pow_exchange%pow_dens_sh (float) (9.6.1.1.1)
mod_therm (2228)	bb_shield%hcll%hcll.bb%inboard%mod_therm (mode_therm) (9.6.1.3.271)
he_fr (2268)	bb_shield%hcll%hcll.bb%inboard%mod_therm%he_fr (float) (9.6.1.1.1)
perc_bp_he (2268)	bb_shield%hcll%hcll.bb%inboard%mod_therm%perc_bp_he (float) (9.6.1.1.1)
he_out_t (2268)	bb_shield%hcll%hcll.bb%inboard%mod_therm%he_out_t (float) (9.6.1.1.1)
fw_he_out_t (2268)	bb_shield%hcll%hcll.bb%inboard%mod_therm%fw_he_out_t (float) (9.6.1.1.1)
sg_he_out_t (2268)	bb_shield%hcll%hcll.bb%inboard%mod_therm%sg_he_out_t (float) (9.6.1.1.1)
cp_he_out_t (2268)	bb_shield%hcll%hcll.bb%inboard%mod_therm%cp_he_out_t (float) (9.6.1.1.1)
fw_st_max_t (2268)	bb_shield%hcll%hcll.bb%inboard%mod_therm%fw_st_max_t (float) (9.6.1.1.1)
sg_st_max_t (2268)	bb_shield%hcll%hcll.bb%inboard%mod_therm%sg_st_max_t (float) (9.6.1.1.1)
cp_st_max_t (2268)	bb_shield%hcll%hcll.bb%inboard%mod_therm%cp_st_max_t (float) (9.6.1.1.1)
mod_th_hyd (2228)	bb_shield%hcll%hcll.bb%inboard%mod_th_hyd (mode_th_hyd) (9.6.1.3.270)
fw_dp_he (2267)	bb_shield%hcll%hcll.bb%inboard%mod_th_hyd%fw_dp_he (float) (9.6.1.1.1)
sg_dp_he (2267)	bb_shield%hcll%hcll.bb%inboard%mod_th_hyd%sg_dp_he (float) (9.6.1.1.1)
cp_dp_he (2267)	bb_shield%hcll%hcll.bb%inboard%mod_th_hyd%cp_dp_he (float) (9.6.1.1.1)
man_dp_he (2267)	bb_shield%hcll%hcll.bb%inboard%mod_th_hyd%man_dp_he (float) (9.6.1.1.1)
tot_dp_he (2267)	bb_shield%hcll%hcll.bb%inboard%mod_th_hyd%tot_dp_he (float) (9.6.1.1.1)
bp_dp_he (2267)	bb_shield%hcll%hcll.bb%inboard%mod_th_hyd%bp_dp_he (float) (9.6.1.1.1)
circ_dp_he (2267)	bb_shield%hcll%hcll.bb%inboard%mod_th_hyd%circ_dp_he (float) (9.6.1.1.1)
mod_mech (2228)	bb_shield%hcll%hcll.bb%inboard%mod_mech (mode_mech) (9.6.1.3.268)
fw_min_ts_mg (2265)	bb_shield%hcll%hcll.bb%inboard%mod_mech%fw_min_ts_mg (float) (9.6.1.1.1)
fw_min_bd_mg (2265)	bb_shield%hcll%hcll.bb%inboard%mod_mech%fw_min_bd_mg (float) (9.6.1.1.1)
sg_min_ts_mg (2265)	bb_shield%hcll%hcll.bb%inboard%mod_mech%sg_min_ts_mg (float) (9.6.1.1.1)
sg_min_bd_mg (2265)	bb_shield%hcll%hcll.bb%inboard%mod_mech%sg_min_bd_mg (float) (9.6.1.1.1)
cp_min_ts_mg (2265)	bb_shield%hcll%hcll.bb%inboard%mod_mech%cp_min_ts_mg (float) (9.6.1.1.1)
cp_min_bd_mg (2265)	bb_shield%hcll%hcll.bb%inboard%mod_mech%cp_min_bd_mg (float) (9.6.1.1.1)
min_ts_mg_ac (2265)	bb_shield%hcll%hcll.bb%inboard%mod_mech%min_ts_mg_ac (float) (9.6.1.1.1)
min_bd_mg_ac (2265)	bb_shield%hcll%hcll.bb%inboard%mod_mech%min_bd_mg_ac (float) (9.6.1.1.1)
mod_lipb (2228)	bb_shield%hcll%hcll.bb%inboard%mod_lipb (mode_lipb) (9.6.1.3.267)
lp_rec_day (2264)	bb_shield%hcll%hcll.bb%inboard%mod_lipb%lp_rec_day (float) (9.6.1.1.1)
bb_lp_fr (2264)	bb_shield%hcll%hcll.bb%inboard%mod_lipb%bb_lp_fr (vecflt_type) (9.6.1.2.13)

lp_inl_p (2264)	bb_shield%hcll%hcll.bb%inboard%mod_lipb%lp_inl_p (float) (9.6.1.1.1)
bu_dp_lp (2264)	bb_shield%hcll%hcll.bb%inboard%mod_lipb%bu_dp_lp (float) (9.6.1.1.1)
man_dp_lp (2264)	bb_shield%hcll%hcll.bb%inboard%mod_lipb%man_dp_lp (float) (9.6.1.1.1)
tot_dp_lp (2264)	bb_shield%hcll%hcll.bb%inboard%mod_lipb%tot_dp_lp (float) (9.6.1.1.1)
bu_lp_ave_t (2264)	bb_shield%hcll%hcll.bb%inboard%mod_lipb%bu_lp_ave_t (float) (9.6.1.1.1)
bu_lp_max_t (2264)	bb_shield%hcll%hcll.bb%inboard%mod_lipb%bu_lp_max_t (float) (9.6.1.1.1)
mod_tritium (2228)	bb_shield%hcll%hcll.bb%inboard%mod_tritium (mode_tritium) (9.6.1.3.272)
t_conc_lipb (2269)	bb_shield%hcll%hcll.bb%inboard%mod_tritium%t_conc_lipb (float) (9.6.1.1.1)
t_conc_he (2269)	bb_shield%hcll%hcll.bb%inboard%mod_tritium%t_conc_he (float) (9.6.1.1.1)
outboard (2227)	bb_shield%hcll%hcll.bb%outboard (hcllbb_specs) (9.6.1.3.231)
mass (2228)	bb_shield%hcll%hcll.bb%outboard%mass (vecflt_type) (9.6.1.2.13)
dr (2228)	bb_shield%hcll%hcll.bb%outboard%dr (vecflt_type) (9.6.1.2.13)
mat (2228)	bb_shield%hcll%hcll.bb%outboard%mat (vecflt_type) (9.6.1.2.13)
composition (2228)	bb_shield%hcll%hcll.bb%outboard%composition (matflt_type) (9.6.1.2.10)
mod_geom (2228)	bb_shield%hcll%hcll.bb%outboard%mod_geom (bb_geometry) (9.6.1.3.62)
dr_fw (2059)	bb_shield%hcll%hcll.bb%outboard%mod_geom%dr_fw (float) (9.6.1.1.1)
dr_bz (2059)	bb_shield%hcll%hcll.bb%outboard%mod_geom%dr_bz (float) (9.6.1.1.1)
dr_bp (2059)	bb_shield%hcll%hcll.bb%outboard%mod_geom%dr_bp (float) (9.6.1.1.1)
dr_bp_plates (2059)	bb_shield%hcll%hcll.bb%outboard%mod_geom%dr_bp_plates (vecflt_type) (9.6.1.2.13)
dr_bp_he (2059)	bb_shield%hcll%hcll.bb%outboard%mod_geom%dr_bp_he (vecflt_type) (9.6.1.2.13)
dr_man (2059)	bb_shield%hcll%hcll.bb%outboard%mod_geom%dr_man (float) (9.6.1.1.1)
dt_sw (2059)	bb_shield%hcll%hcll.bb%outboard%mod_geom%dt_sw (float) (9.6.1.1.1)
dt_bz (2059)	bb_shield%hcll%hcll.bb%outboard%mod_geom%dt_bz (float) (9.6.1.1.1)
dp_bz (2059)	bb_shield%hcll%hcll.bb%outboard%mod_geom%dp_bz (float) (9.6.1.1.1)
top_cap_dim (2059)	bb_shield%hcll%hcll.bb%outboard%mod_geom%top_cap_dim (bb_dimension) (9.6.1.3.61)
radial (2058)	bb_shield%hcll%hcll.bb%outboard%mod_geom%top_cap_dim%radial (vecflt_type) (9.6.1.2.13)
toroidal (2058)	bb_shield%hcll%hcll.bb%outboard%mod_geom%top_cap_dim%toroidal (vecflt_type) (9.6.1.2.13)
poloidal (2058)	bb_shield%hcll%hcll.bb%outboard%mod_geom%top_cap_dim%poloidal (vecflt_type) (9.6.1.2.13)
bot_cap_dim (2059)	bb_shield%hcll%hcll.bb%outboard%mod_geom%bot_cap_dim (bb_dimension) (9.6.1.3.61)
radial (2058)	bb_shield%hcll%hcll.bb%outboard%mod_geom%bot_cap_dim%radial (vecflt_type) (9.6.1.2.13)
toroidal (2058)	bb_shield%hcll%hcll.bb%outboard%mod_geom%bot_cap_dim%toroidal (vecflt_type) (9.6.1.2.13)
poloidal (2058)	bb_shield%hcll%hcll.bb%outboard%mod_geom%bot_cap_dim%poloidal (vecflt_type) (9.6.1.2.13)
a_fw_ch (2059)	bb_shield%hcll%hcll.bb%outboard%mod_geom%a_fw_ch (float) (9.6.1.1.1)
b_fw_ch (2059)	bb_shield%hcll%hcll.bb%outboard%mod_geom%b_fw_ch (float) (9.6.1.1.1)
td_tc_ch (2059)	bb_shield%hcll%hcll.bb%outboard%mod_geom%td_tc_ch (float) (9.6.1.1.1)
rd_tc_ch (2059)	bb_shield%hcll%hcll.bb%outboard%mod_geom%rd_tc_ch (float) (9.6.1.1.1)
td_bc_ch (2059)	bb_shield%hcll%hcll.bb%outboard%mod_geom%td_bc_ch (float) (9.6.1.1.1)
rd_bc_ch (2059)	bb_shield%hcll%hcll.bb%outboard%mod_geom%rd_bc_ch (float) (9.6.1.1.1)
n_fw_ch (2059)	bb_shield%hcll%hcll.bb%outboard%mod_geom%n_fw_ch (float) (9.6.1.1.1)
n_fw_circ (2059)	bb_shield%hcll%hcll.bb%outboard%mod_geom%n_fw_circ (float) (9.6.1.1.1)
a_sg_ch (2059)	bb_shield%hcll%hcll.bb%outboard%mod_geom%a_sg_ch (float) (9.6.1.1.1)
b_sg_ch (2059)	bb_shield%hcll%hcll.bb%outboard%mod_geom%b_sg_ch (float) (9.6.1.1.1)
n_sg_ch (2059)	bb_shield%hcll%hcll.bb%outboard%mod_geom%n_sg_ch (float) (9.6.1.1.1)
sg_thick (2059)	bb_shield%hcll%hcll.bb%outboard%mod_geom%sg_thick (float) (9.6.1.1.1)
sg_weld (2059)	bb_shield%hcll%hcll.bb%outboard%mod_geom%sg_weld (float) (9.6.1.1.1)
sg_in_out (2059)	bb_shield%hcll%hcll.bb%outboard%mod_geom%sg_in_out (float) (9.6.1.1.1)
r_sg_cp (2059)	bb_shield%hcll%hcll.bb%outboard%mod_geom%r_sg_cp (float) (9.6.1.1.1)
cp_tor_gap (2059)	bb_shield%hcll%hcll.bb%outboard%mod_geom%cp_tor_gap (float) (9.6.1.1.1)
a_cp_ch (2059)	bb_shield%hcll%hcll.bb%outboard%mod_geom%a_cp_ch (float) (9.6.1.1.1)
b_cp_ch (2059)	bb_shield%hcll%hcll.bb%outboard%mod_geom%b_cp_ch (float) (9.6.1.1.1)
n_cp_ch (2059)	bb_shield%hcll%hcll.bb%outboard%mod_geom%n_cp_ch (float) (9.6.1.1.1)
cp_thick (2059)	bb_shield%hcll%hcll.bb%outboard%mod_geom%cp_thick (float) (9.6.1.1.1)
n_pol_bu (2059)	bb_shield%hcll%hcll.bb%outboard%mod_geom%n_pol_bu (float) (9.6.1.1.1)
n_tor_bu (2059)	bb_shield%hcll%hcll.bb%outboard%mod_geom%n_tor_bu (float) (9.6.1.1.1)
n_cp_bu (2059)	bb_shield%hcll%hcll.bb%outboard%mod_geom%n_cp_bu (float) (9.6.1.1.1)
cp_in_out (2059)	bb_shield%hcll%hcll.bb%outboard%mod_geom%cp_in_out (float) (9.6.1.1.1)
he_man_tck (2059)	bb_shield%hcll%hcll.bb%outboard%mod_geom%he_man_tck (float) (9.6.1.1.1)

man_tck (2059)	bb_shield%hcll%hcll.bb%outboard%mod_geom%man_tck (float) (9.6.1.1.1)
pbli_bptb_od (2059)	bb_shield%hcll%hcll.bb%outboard%mod_geom%pbli_bptb_od (float) (9.6.1.1.1)
pbli_bptb_id (2059)	bb_shield%hcll%hcll.bb%outboard%mod_geom%pbli_bptb_id (float) (9.6.1.1.1)
he_bptb_od (2059)	bb_shield%hcll%hcll.bb%outboard%mod_geom%he_bptb_od (float) (9.6.1.1.1)
he_bptb_id (2059)	bb_shield%hcll%hcll.bb%outboard%mod_geom%he_bptb_id (float) (9.6.1.1.1)
dr_max_fw (2059)	bb_shield%hcll%hcll.bb%outboard%mod_geom%dr_max_fw (float) (9.6.1.1.1)
dr_fwpl (2059)	bb_shield%hcll%hcll.bb%outboard%mod_geom%dr_fwpl (float) (9.6.1.1.1)
mod_neutr (2228)	bb_shield%hcll%hcll.bb%outboard%mod_neutr (mode_neutr) (9.6.1.3.269)
r (2266)	bb_shield%hcll%hcll.bb%outboard%mod_neutr%r (vecflt.type) (9.6.1.2.13)
pd_rad (2266)	bb_shield%hcll%hcll.bb%outboard%mod_neutr%pd_rad (vecflt.type) (9.6.1.2.13)
lipb_coef_pd (2266)	bb_shield%hcll%hcll.bb%outboard%mod_neutr%lipb_coef_pd (vecflt.type) (9.6.1.2.13)
steel_coef_pd (2266)	bb_shield%hcll%hcll.bb%outboard%mod_neutr%steel_coef_pd (vecflt.type) (9.6.1.2.13)
pow_exchange (2266)	bb_shield%hcll%hcll.bb%outboard%mod_neutr%pow_exchange (power_exchange) (9.6.1.3.334)
dep_pow (2331)	bb_shield%hcll%hcll.bb%outboard%mod_neutr%pow_exchange%dep_pow (vecflt.type) (9.6.1.2.13)
dep_fw (2331)	bb_shield%hcll%hcll.bb%outboard%mod_neutr%pow_exchange%dep_fw (float) (9.6.1.1.1)
dep_sg (2331)	bb_shield%hcll%hcll.bb%outboard%mod_neutr%pow_exchange%dep_sg (float) (9.6.1.1.1)
dep_cp (2331)	bb_shield%hcll%hcll.bb%outboard%mod_neutr%pow_exchange%dep_cp (float) (9.6.1.1.1)
dep_lp (2331)	bb_shield%hcll%hcll.bb%outboard%mod_neutr%pow_exchange%dep_lp (float) (9.6.1.1.1)
dep_man (2331)	bb_shield%hcll%hcll.bb%outboard%mod_neutr%pow_exchange%dep_man (float) (9.6.1.1.1)
dep_pl (2331)	bb_shield%hcll%hcll.bb%outboard%mod_neutr%pow_exchange%dep_pl (float) (9.6.1.1.1)
rec_fw (2331)	bb_shield%hcll%hcll.bb%outboard%mod_neutr%pow_exchange%rec_fw (float) (9.6.1.1.1)
rec_sg (2331)	bb_shield%hcll%hcll.bb%outboard%mod_neutr%pow_exchange%rec_sg (float) (9.6.1.1.1)
rec_cp (2331)	bb_shield%hcll%hcll.bb%outboard%mod_neutr%pow_exchange%rec_cp (float) (9.6.1.1.1)
pow_dens_fw (2331)	bb_shield%hcll%hcll.bb%outboard%mod_neutr%pow_exchange%pow_dens_fw (float) (9.6.1.1.1)
pow_dens_bz (2331)	bb_shield%hcll%hcll.bb%outboard%mod_neutr%pow_exchange%pow_dens_bz (float) (9.6.1.1.1)
pow_dens_bz10 (2331)	bb_shield%hcll%hcll.bb%outboard%mod_neutr%pow_exchange%pow_dens_bz10 (float) (9.6.1.1.1)
pow_dens_bp (2331)	bb_shield%hcll%hcll.bb%outboard%mod_neutr%pow_exchange%pow_dens_bp (float) (9.6.1.1.1)
pow_dens_man (2331)	bb_shield%hcll%hcll.bb%outboard%mod_neutr%pow_exchange%pow_dens_man (float) (9.6.1.1.1)
pow_dens_sh (2331)	bb_shield%hcll%hcll.bb%outboard%mod_neutr%pow_exchange%pow_dens_sh (float) (9.6.1.1.1)
mod_therm (2228)	bb_shield%hcll%hcll.bb%outboard%mod_therm (mode_therm) (9.6.1.3.271)
he_fr (2268)	bb_shield%hcll%hcll.bb%outboard%mod_therm%he_fr (float) (9.6.1.1.1)
perc_bp_he (2268)	bb_shield%hcll%hcll.bb%outboard%mod_therm%perc_bp_he (float) (9.6.1.1.1)
he_out_t (2268)	bb_shield%hcll%hcll.bb%outboard%mod_therm%he_out_t (float) (9.6.1.1.1)
fw_he_out_t (2268)	bb_shield%hcll%hcll.bb%outboard%mod_therm%fw_he_out_t (float) (9.6.1.1.1)
sg_he_out_t (2268)	bb_shield%hcll%hcll.bb%outboard%mod_therm%sg_he_out_t (float) (9.6.1.1.1)
cp_he_out_t (2268)	bb_shield%hcll%hcll.bb%outboard%mod_therm%cp_he_out_t (float) (9.6.1.1.1)
fw_st_max_t (2268)	bb_shield%hcll%hcll.bb%outboard%mod_therm%fw_st_max_t (float) (9.6.1.1.1)
sg_st_max_t (2268)	bb_shield%hcll%hcll.bb%outboard%mod_therm%sg_st_max_t (float) (9.6.1.1.1)
cp_st_max_t (2268)	bb_shield%hcll%hcll.bb%outboard%mod_therm%cp_st_max_t (float) (9.6.1.1.1)
mod_th_hyd (2228)	bb_shield%hcll%hcll.bb%outboard%mod_th_hyd (mode_th_hyd) (9.6.1.3.270)
fw_dp_he (2267)	bb_shield%hcll%hcll.bb%outboard%mod_th_hyd%fw_dp_he (float) (9.6.1.1.1)
sg_dp_he (2267)	bb_shield%hcll%hcll.bb%outboard%mod_th_hyd%sg_dp_he (float) (9.6.1.1.1)
cp_dp_he (2267)	bb_shield%hcll%hcll.bb%outboard%mod_th_hyd%cp_dp_he (float) (9.6.1.1.1)
man_dp_he (2267)	bb_shield%hcll%hcll.bb%outboard%mod_th_hyd%man_dp_he (float) (9.6.1.1.1)
tot_dp_he (2267)	bb_shield%hcll%hcll.bb%outboard%mod_th_hyd%tot_dp_he (float) (9.6.1.1.1)
bp_dp_he (2267)	bb_shield%hcll%hcll.bb%outboard%mod_th_hyd%bp_dp_he (float) (9.6.1.1.1)
circ_dp_he (2267)	bb_shield%hcll%hcll.bb%outboard%mod_th_hyd%circ_dp_he (float) (9.6.1.1.1)
mod_mech (2228)	bb_shield%hcll%hcll.bb%outboard%mod_mech (mode_mech) (9.6.1.3.268)
fw_min_ts_mg (2265)	bb_shield%hcll%hcll.bb%outboard%mod_mech%fw_min_ts_mg (float) (9.6.1.1.1)
fw_min_bd_mg (2265)	bb_shield%hcll%hcll.bb%outboard%mod_mech%fw_min_bd_mg (float) (9.6.1.1.1)
sg_min_ts_mg (2265)	bb_shield%hcll%hcll.bb%outboard%mod_mech%sg_min_ts_mg (float) (9.6.1.1.1)
sg_min_bd_mg (2265)	bb_shield%hcll%hcll.bb%outboard%mod_mech%sg_min_bd_mg (float) (9.6.1.1.1)
cp_min_ts_mg (2265)	bb_shield%hcll%hcll.bb%outboard%mod_mech%cp_min_ts_mg (float) (9.6.1.1.1)
cp_min_bd_mg (2265)	bb_shield%hcll%hcll.bb%outboard%mod_mech%cp_min_bd_mg (float) (9.6.1.1.1)
min_ts_mg_ac (2265)	bb_shield%hcll%hcll.bb%outboard%mod_mech%min_ts_mg_ac (float) (9.6.1.1.1)
min_bd_mg_ac (2265)	bb_shield%hcll%hcll.bb%outboard%mod_mech%min_bd_mg_ac (float) (9.6.1.1.1)

mod_lipb (2228)	bb_shield%hcll%hcll.bb%outboard%mod_lipb (mode_lipb) (9.6.1.3.267)
lp_rec_day (2264)	bb_shield%hcll%hcll.bb%outboard%mod_lipb%lp_rec_day (float) (9.6.1.1.1)
bb_lp_fr (2264)	bb_shield%hcll%hcll.bb%outboard%mod_lipb%bb_lp_fr (vecflt_type) (9.6.1.2.13)
lp_inl_p (2264)	bb_shield%hcll%hcll.bb%outboard%mod_lipb%lp_inl_p (float) (9.6.1.1.1)
bu_dp_lp (2264)	bb_shield%hcll%hcll.bb%outboard%mod_lipb%bu_dp_lp (float) (9.6.1.1.1)
man_dp_lp (2264)	bb_shield%hcll%hcll.bb%outboard%mod_lipb%man_dp_lp (float) (9.6.1.1.1)
tot_dp_lp (2264)	bb_shield%hcll%hcll.bb%outboard%mod_lipb%tot_dp_lp (float) (9.6.1.1.1)
bu_lp_ave_t (2264)	bb_shield%hcll%hcll.bb%outboard%mod_lipb%bu_lp_ave_t (float) (9.6.1.1.1)
bu_lp_max_t (2264)	bb_shield%hcll%hcll.bb%outboard%mod_lipb%bu_lp_max_t (float) (9.6.1.1.1)
mod_tritium (2228)	bb_shield%hcll%hcll.bb%outboard%mod_tritium (mode_tritium) (9.6.1.3.272)
t_conc_lipb (2269)	bb_shield%hcll%hcll.bb%outboard%mod_tritium%t_conc_lipb (float) (9.6.1.1.1)
t_conc_he (2269)	bb_shield%hcll%hcll.bb%outboard%mod_tritium%t_conc_he (float) (9.6.1.1.1)
codeparam (2002)	bb_shield%codeparam (codeparam) (9.6.1.3.77)
codename (2074)	bb_shield%codeparam%codename (string) (9.6.1.1.3)
codeversion (2074)	bb_shield%codeparam%codeversion (string) (9.6.1.1.3)
parameters (2074)	bb_shield%codeparam%parameters (string) (9.6.1.1.3)
output_diag (2074)	bb_shield%codeparam%output_diag (string) (9.6.1.1.3)
output_flag (2074)	bb_shield%codeparam%output_flag (integer) (9.6.1.1.2)
time (2002)	bb_shield%time (float) (9.6.1.1.1)

### 9.6.2.1.4 compositionc

datainfo (2003)	compositionc%datainfo (datainfo) (9.6.1.3.133)
dataprovider (2130)	compositionc%datainfo%dataprovider (string) (9.6.1.1.3)
putdate (2130)	compositionc%datainfo%putdate (string) (9.6.1.1.3)
source (2130)	compositionc%datainfo%source (string) (9.6.1.1.3)
comment (2130)	compositionc%datainfo%comment (string) (9.6.1.1.3)
cocos (2130)	compositionc%datainfo%cocos (integer) (9.6.1.1.2)
id (2130)	compositionc%datainfo%id (integer) (9.6.1.1.2)
isref (2130)	compositionc%datainfo%isref (integer) (9.6.1.1.2)
whatref (2130)	compositionc%datainfo%whatref (whatref) (9.6.1.3.503)
user (2500)	compositionc%datainfo%whatref%user (string) (9.6.1.1.3)
machine (2500)	compositionc%datainfo%whatref%machine (string) (9.6.1.1.3)
shot (2500)	compositionc%datainfo%whatref%shot (integer) (9.6.1.1.2)
run (2500)	compositionc%datainfo%whatref%run (integer) (9.6.1.1.2)
occurrence (2500)	compositionc%datainfo%whatref%occurrence (integer) (9.6.1.1.2)
putinfo (2130)	compositionc%datainfo%putinfo (putinfo) (9.6.1.3.339)
putmethod (2336)	compositionc%datainfo%putinfo%putmethod (string) (9.6.1.1.3)
putaccess (2336)	compositionc%datainfo%putinfo%putaccess (string) (9.6.1.1.3)
putlocation (2336)	compositionc%datainfo%putinfo%putlocation (string) (9.6.1.1.3)
rights (2336)	compositionc%datainfo%putinfo%rights (string) (9.6.1.1.3)
compositions (2003)	compositionc%compositions (compositions_type) (9.6.1.3.99)
nuclei (2096)	compositionc%compositions%nuclei(:) (nuclei) (9.6.1.3.296)
zn (2293)	compositionc%compositions%nuclei(:)%zn (float) (9.6.1.1.1)
amn (2293)	compositionc%compositions%nuclei(:)%amn (float) (9.6.1.1.1)
label (2293)	compositionc%compositions%nuclei(:)%label (string) (9.6.1.1.3)
ions (2096)	compositionc%compositions%ions(:) (ions) (9.6.1.3.238)
nucindex (2235)	compositionc%compositions%ions(:)%nucindex (integer) (9.6.1.1.2)
zion (2235)	compositionc%compositions%ions(:)%zion (float) (9.6.1.1.1)
imp_flag (2235)	compositionc%compositions%ions(:)%imp_flag (integer) (9.6.1.1.2)
label (2235)	compositionc%compositions%ions(:)%label (string) (9.6.1.1.3)
impurities (2096)	compositionc%compositions%impurities(:) (impurities) (9.6.1.3.235)
nucindex (2232)	compositionc%compositions%impurities(:)%nucindex (integer) (9.6.1.1.2)
i_ion (2232)	compositionc%compositions%impurities(:)%i_ion (integer) (9.6.1.1.2)
nzimp (2232)	compositionc%compositions%impurities(:)%nzimp (integer) (9.6.1.1.2)
zmin (2232)	compositionc%compositions%impurities(:)%zmin (vecflt_type) (9.6.1.2.13)
zmax (2232)	compositionc%compositions%impurities(:)%zmax (vecflt_type) (9.6.1.2.13)
label (2232)	compositionc%compositions%impurities(:)%label (vecstring_type) (9.6.1.2.15)
neutralscomp (2096)	compositionc%compositions%neutralscomp(:) (composition_neutralscomp) (9.6.1.3.98)
neutcomp (2095)	compositionc%compositions%neutralscomp(:)%neutcomp(:) (composition_neutrals_neutcomp) (9.6.1.3.97)

nucindex (2094)	composition%compositions%neutralscomp(:)%neutcomp(:)%nucindex (integer) (9.6.1.1.2)
multiplicity (2094)	composition%compositions%neutralscomp(:)%neutcomp(:)%multiplicity (integer) (9.6.1.1.2)
type (2095)	composition%compositions%neutralscomp(:)%type(:) (identifier) (9.6.1.3.233)
id (2230)	composition%compositions%neutralscomp(:)%type(:)%id (string) (9.6.1.1.3)
flag (2230)	composition%compositions%neutralscomp(:)%type(:)%flag (integer) (9.6.1.1.2)
description (2230)	composition%compositions%neutralscomp(:)%type(:)%description (string) (9.6.1.1.3)
label (2095)	composition%compositions%neutralscomp(:)%label (string) (9.6.1.1.3)
edgespecies (2096)	composition%compositions%edgespecies(:) (edgespecies) (9.6.1.3.183)
nucindex (2180)	composition%compositions%edgespecies(:)%nucindex (integer) (9.6.1.1.2)
zmin (2180)	composition%compositions%edgespecies(:)%zmin (float) (9.6.1.1.1)
zmax (2180)	composition%compositions%edgespecies(:)%zmax (float) (9.6.1.1.1)
label (2180)	composition%compositions%edgespecies(:)%label (string) (9.6.1.1.3)
signature (2096)	composition%compositions%signature (identifier) (9.6.1.3.233)
id (2230)	composition%compositions%signature%id (string) (9.6.1.1.3)
flag (2230)	composition%compositions%signature%flag (integer) (9.6.1.1.2)
description (2230)	composition%compositions%signature%description (string) (9.6.1.1.3)
codeparam (2003)	composition%codeparam (codeparam) (9.6.1.3.77)
codename (2074)	composition%codeparam%codename (string) (9.6.1.1.3)
codeversion (2074)	composition%codeparam%codeversion (string) (9.6.1.1.3)
parameters (2074)	composition%codeparam%parameters (string) (9.6.1.1.3)
output.diag (2074)	composition%codeparam%output.diag (string) (9.6.1.1.3)
output.flag (2074)	composition%codeparam%output.flag (integer) (9.6.1.1.2)
time (2003)	composition%time (float) (9.6.1.1.1)

### 9.6.2.1.5 coredelta

datainfo (2004)	coredelta%datainfo (datainfo) (9.6.1.3.133)
dataproducer (2130)	coredelta%datainfo%dataproducer (string) (9.6.1.1.3)
putdate (2130)	coredelta%datainfo%putdate (string) (9.6.1.1.3)
source (2130)	coredelta%datainfo%source (string) (9.6.1.1.3)
comment (2130)	coredelta%datainfo%comment (string) (9.6.1.1.3)
cocos (2130)	coredelta%datainfo%cocos (integer) (9.6.1.1.2)
id (2130)	coredelta%datainfo%id (integer) (9.6.1.1.2)
isref (2130)	coredelta%datainfo%isref (integer) (9.6.1.1.2)
whatref (2130)	coredelta%datainfo%whatref (whatref) (9.6.1.3.503)
user (2500)	coredelta%datainfo%whatref%user (string) (9.6.1.1.3)
machine (2500)	coredelta%datainfo%whatref%machine (string) (9.6.1.1.3)
shot (2500)	coredelta%datainfo%whatref%shot (integer) (9.6.1.1.2)
run (2500)	coredelta%datainfo%whatref%run (integer) (9.6.1.1.2)
occurrence (2500)	coredelta%datainfo%whatref%occurrence (integer) (9.6.1.1.2)
putinfo (2130)	coredelta%datainfo%putinfo (putinfo) (9.6.1.3.339)
putmethod (2336)	coredelta%datainfo%putinfo%putmethod (string) (9.6.1.1.3)
putaccess (2336)	coredelta%datainfo%putinfo%putaccess (string) (9.6.1.1.3)
putlocation (2336)	coredelta%datainfo%putinfo%putlocation (string) (9.6.1.1.3)
rights (2336)	coredelta%datainfo%putinfo%rights (string) (9.6.1.1.3)
composition (2004)	coredelta%composition (composition) (9.6.1.3.95)
amn (2092)	coredelta%composition%amn (vecflt_type) (9.6.1.2.13)
zn (2092)	coredelta%composition%zn (vecflt_type) (9.6.1.2.13)
zion (2092)	coredelta%composition%zion (vecflt_type) (9.6.1.2.13)
imp_flag (2092)	coredelta%composition%imp_flag (vecint_type) (9.6.1.2.14)
label (2092)	coredelta%composition%label (vecstring_type) (9.6.1.2.15)
desc_impur (2004)	coredelta%desc_impur (desc_impur) (9.6.1.3.135)
amn (2132)	coredelta%desc_impur%amn (vecflt_type) (9.6.1.2.13)
zn (2132)	coredelta%desc_impur%zn (vecint_type) (9.6.1.2.14)
i_ion (2132)	coredelta%desc_impur%i_ion (vecint_type) (9.6.1.2.14)
nzimp (2132)	coredelta%desc_impur%nzimp (vecint_type) (9.6.1.2.14)
zmin (2132)	coredelta%desc_impur%zmin (matint_type) (9.6.1.2.11)
zmax (2132)	coredelta%desc_impur%zmax (matint_type) (9.6.1.2.11)
label (2132)	coredelta%desc_impur%label (vecstring_type) (9.6.1.2.15)
compositions (2004)	coredelta%compositions (compositions_type) (9.6.1.3.99)
nuclei (2096)	coredelta%compositions%nuclei(:) (nuclei) (9.6.1.3.296)

zn (2293)	coredelta%compositions%nuclei(:)%zn (float) (9.6.1.1.1)
amn (2293)	coredelta%compositions%nuclei(:)%amn (float) (9.6.1.1.1)
label (2293)	coredelta%compositions%nuclei(:)%label (string) (9.6.1.1.3)
ions (2096)	coredelta%compositions%ions(:) (ions) (9.6.1.3.238)
nucindex (2235)	coredelta%compositions%ions(:)%nucindex (integer) (9.6.1.1.2)
zion (2235)	coredelta%compositions%ions(:)%zion (float) (9.6.1.1.1)
imp_flag (2235)	coredelta%compositions%ions(:)%imp_flag (integer) (9.6.1.1.2)
label (2235)	coredelta%compositions%ions(:)%label (string) (9.6.1.1.3)
impurities (2096)	coredelta%compositions%impurities(:) (impurities) (9.6.1.3.235)
nucindex (2232)	coredelta%compositions%impurities(:)%nucindex (integer) (9.6.1.1.2)
i_ion (2232)	coredelta%compositions%impurities(:)%i_ion (integer) (9.6.1.1.2)
nzimp (2232)	coredelta%compositions%impurities(:)%nzimp (integer) (9.6.1.1.2)
zmin (2232)	coredelta%compositions%impurities(:)%zmin (vecflt_type) (9.6.1.2.13)
zmax (2232)	coredelta%compositions%impurities(:)%zmax (vecflt_type) (9.6.1.2.13)
label (2232)	coredelta%compositions%impurities(:)%label (vecstring_type) (9.6.1.2.15)
neutralscomp (2096)	coredelta%compositions%neutralscomp(:) (composition_neutralscomp) (9.6.1.3.98)
neutcomp (2095)	coredelta%compositions%neutralscomp(:)%neutcomp(:) (composition_neutrals_neutcomp) (9.6.1.3.97)
nucindex (2094)	coredelta%compositions%neutralscomp(:)%neutcomp(:)%nucindex (integer) (9.6.1.1.2)
multiplicity (2094)	coredelta%compositions%neutralscomp(:)%neutcomp(:)%multiplicity (integer) (9.6.1.1.2)
type (2095)	coredelta%compositions%neutralscomp(:)%type(:) (identifier) (9.6.1.3.233)
id (2230)	coredelta%compositions%neutralscomp(:)%type(:)%id (string) (9.6.1.1.3)
flag (2230)	coredelta%compositions%neutralscomp(:)%type(:)%flag (integer) (9.6.1.1.2)
description (2230)	coredelta%compositions%neutralscomp(:)%type(:)%description (string) (9.6.1.1.3)
label (2095)	coredelta%compositions%neutralscomp(:)%label (string) (9.6.1.1.3)
edgespecies (2096)	coredelta%compositions%edgespecies(:) (edgespecies) (9.6.1.3.183)
nucindex (2180)	coredelta%compositions%edgespecies(:)%nucindex (integer) (9.6.1.1.2)
zmin (2180)	coredelta%compositions%edgespecies(:)%zmin (float) (9.6.1.1.1)
zmax (2180)	coredelta%compositions%edgespecies(:)%zmax (float) (9.6.1.1.1)
label (2180)	coredelta%compositions%edgespecies(:)%label (string) (9.6.1.1.3)
signature (2096)	coredelta%compositions%signature (identifier) (9.6.1.3.233)
id (2230)	coredelta%compositions%signature%id (string) (9.6.1.1.3)
flag (2230)	coredelta%compositions%signature%flag (integer) (9.6.1.1.2)
description (2230)	coredelta%compositions%signature%description (string) (9.6.1.1.3)
values (2004)	coredelta%values(:) (coredelta_values) (9.6.1.3.104)
deltaid (2101)	coredelta%values(:)%deltaid (identifier) (9.6.1.3.233)
id (2230)	coredelta%values(:)%deltaid%id (string) (9.6.1.1.3)
flag (2230)	coredelta%values(:)%deltaid%flag (integer) (9.6.1.1.2)
description (2230)	coredelta%values(:)%deltaid%description (string) (9.6.1.1.3)
rho_tor (2101)	coredelta%values(:)%rho_tor (vecflt_type) (9.6.1.2.13)
rho_tor_norm (2101)	coredelta%values(:)%rho_tor_norm (vecflt_type) (9.6.1.2.13)
psi (2101)	coredelta%values(:)%psi (vecflt_type) (9.6.1.2.13)
volume (2101)	coredelta%values(:)%volume (vecflt_type) (9.6.1.2.13)
area (2101)	coredelta%values(:)%area (vecflt_type) (9.6.1.2.13)
delta_psi (2101)	coredelta%values(:)%delta_psi (vecflt_type) (9.6.1.2.13)
delta_te (2101)	coredelta%values(:)%delta_te (vecflt_type) (9.6.1.2.13)
delta_ti (2101)	coredelta%values(:)%delta_ti (matflt_type) (9.6.1.2.10)
delta_tz (2101)	coredelta%values(:)%delta_tz (array3dflt_type) (9.6.1.2.2)
delta_ne (2101)	coredelta%values(:)%delta_ne (vecflt_type) (9.6.1.2.13)
delta_ni (2101)	coredelta%values(:)%delta_ni (matflt_type) (9.6.1.2.10)
delta_nz (2101)	coredelta%values(:)%delta_nz (array3dflt_type) (9.6.1.2.2)
delta_vtor (2101)	coredelta%values(:)%delta_vtor (matflt_type) (9.6.1.2.10)
codeparam (2101)	coredelta%values(:)%codeparam (codeparam) (9.6.1.3.77)
codename (2074)	coredelta%values(:)%codeparam%codename (string) (9.6.1.1.3)
codeversion (2074)	coredelta%values(:)%codeparam%codeversion (string) (9.6.1.1.3)
parameters (2074)	coredelta%values(:)%codeparam%parameters (string) (9.6.1.1.3)
output_diag (2074)	coredelta%values(:)%codeparam%output_diag (string) (9.6.1.1.3)
output_flag (2074)	coredelta%values(:)%codeparam%output_flag (integer) (9.6.1.1.2)
codeparam (2004)	coredelta%codeparam (codeparam) (9.6.1.3.77)
codename (2074)	coredelta%codeparam%codename (string) (9.6.1.1.3)
codeversion (2074)	coredelta%codeparam%codeversion (string) (9.6.1.1.3)
parameters (2074)	coredelta%codeparam%parameters (string) (9.6.1.1.3)



output_diag (2074)	coredelta%codeparam%output_diag (string) (9.6.1.1.3)
output_flag (2074)	coredelta%codeparam%output_flag (integer) (9.6.1.1.2)
time (2004)	coredelta%time (float) (9.6.1.1.1)

### 9.6.2.1.6 corefast

datainfo (2005)	corefast%datainfo (datainfo) (9.6.1.3.133)
dataprovider (2130)	corefast%datainfo%dataprovider (string) (9.6.1.1.3)
putdate (2130)	corefast%datainfo%putdate (string) (9.6.1.1.3)
source (2130)	corefast%datainfo%source (string) (9.6.1.1.3)
comment (2130)	corefast%datainfo%comment (string) (9.6.1.1.3)
cocos (2130)	corefast%datainfo%cocos (integer) (9.6.1.1.2)
id (2130)	corefast%datainfo%id (integer) (9.6.1.1.2)
isref (2130)	corefast%datainfo%isref (integer) (9.6.1.1.2)
whatref (2130)	corefast%datainfo%whatref (whatref) (9.6.1.3.503)
user (2500)	corefast%datainfo%whatref%user (string) (9.6.1.1.3)
machine (2500)	corefast%datainfo%whatref%machine (string) (9.6.1.1.3)
shot (2500)	corefast%datainfo%whatref%shot (integer) (9.6.1.1.2)
run (2500)	corefast%datainfo%whatref%run (integer) (9.6.1.1.2)
occurrence (2500)	corefast%datainfo%whatref%occurrence (integer) (9.6.1.1.2)
putinfo (2130)	corefast%datainfo%putinfo (putinfo) (9.6.1.3.339)
putmethod (2336)	corefast%datainfo%putinfo%putmethod (string) (9.6.1.1.3)
putaccess (2336)	corefast%datainfo%putinfo%putaccess (string) (9.6.1.1.3)
putlocation (2336)	corefast%datainfo%putinfo%putlocation (string) (9.6.1.1.3)
rights (2336)	corefast%datainfo%putinfo%rights (string) (9.6.1.1.3)
composition (2005)	corefast%composition (composition) (9.6.1.3.95)
amn (2092)	corefast%composition%amn (vecflt.type) (9.6.1.2.13)
zn (2092)	corefast%composition%zn (vecflt.type) (9.6.1.2.13)
zion (2092)	corefast%composition%zion (vecflt.type) (9.6.1.2.13)
imp_flag (2092)	corefast%composition%imp_flag (vecint.type) (9.6.1.2.14)
label (2092)	corefast%composition%label (vecstring.type) (9.6.1.2.15)
desc_impur (2005)	corefast%desc_impur (desc_impur) (9.6.1.3.135)
amn (2132)	corefast%desc_impur%amn (vecflt.type) (9.6.1.2.13)
zn (2132)	corefast%desc_impur%zn (vecint.type) (9.6.1.2.14)
i_ion (2132)	corefast%desc_impur%i_ion (vecint.type) (9.6.1.2.14)
nzimp (2132)	corefast%desc_impur%nzimp (vecint.type) (9.6.1.2.14)
zmin (2132)	corefast%desc_impur%zmin (matint.type) (9.6.1.2.11)
zmax (2132)	corefast%desc_impur%zmax (matint.type) (9.6.1.2.11)
label (2132)	corefast%desc_impur%label (vecstring.type) (9.6.1.2.15)
compositions (2005)	corefast%compositions (compositions.type) (9.6.1.3.99)
nuclei (2096)	corefast%compositions%nuclei(:) (nuclei) (9.6.1.3.296)
zn (2293)	corefast%compositions%nuclei(:)%zn (float) (9.6.1.1.1)
amn (2293)	corefast%compositions%nuclei(:)%amn (float) (9.6.1.1.1)
label (2293)	corefast%compositions%nuclei(:)%label (string) (9.6.1.1.3)
ions (2096)	corefast%compositions%ions(:) (ions) (9.6.1.3.238)
nucindex (2235)	corefast%compositions%ions(:)%nucindex (integer) (9.6.1.1.2)
zion (2235)	corefast%compositions%ions(:)%zion (float) (9.6.1.1.1)
imp_flag (2235)	corefast%compositions%ions(:)%imp_flag (integer) (9.6.1.1.2)
label (2235)	corefast%compositions%ions(:)%label (string) (9.6.1.1.3)
impurities (2096)	corefast%compositions%impurities(:) (impurities) (9.6.1.3.235)
nucindex (2232)	corefast%compositions%impurities(:)%nucindex (integer) (9.6.1.1.2)
i_ion (2232)	corefast%compositions%impurities(:)%i_ion (integer) (9.6.1.1.2)
nzimp (2232)	corefast%compositions%impurities(:)%nzimp (integer) (9.6.1.1.2)
zmin (2232)	corefast%compositions%impurities(:)%zmin (vecflt.type) (9.6.1.2.13)
zmax (2232)	corefast%compositions%impurities(:)%zmax (vecflt.type) (9.6.1.2.13)
label (2232)	corefast%compositions%impurities(:)%label (vecstring.type) (9.6.1.2.15)
neutralscomp (2096)	corefast%compositions%neutralscomp(:) (composition_neutralscomp) (9.6.1.3.98)
neutcomp (2095)	corefast%compositions%neutralscomp(:)%neutcomp(:) (composition_neutrals_neutcomp) (9.6.1.3.97)
nucindex (2094)	corefast%compositions%neutralscomp(:)%neutcomp(:)%nucindex (integer) (9.6.1.1.2)
multiplicity (2094)	corefast%compositions%neutralscomp(:)%neutcomp(:)%multiplicity (integer) (9.6.1.1.2)



type (2095)	corefast%compositions%neutralscomp(:)%type(:) (identifier) (9.6.1.3.233)
id (2230)	corefast%compositions%neutralscomp(:)%type(:)%id (string) (9.6.1.1.3)
flag (2230)	corefast%compositions%neutralscomp(:)%type(:)%flag (integer) (9.6.1.1.2)
description (2230)	corefast%compositions%neutralscomp(:)%type(:)%description (string) (9.6.1.1.3)
label (2095)	corefast%compositions%neutralscomp(:)%label (string) (9.6.1.1.3)
edgespecies (2096)	corefast%compositions%edgespecies(:) (edgespecies) (9.6.1.3.183)
nucindex (2180)	corefast%compositions%edgespecies(:)%nucindex (integer) (9.6.1.1.2)
zmin (2180)	corefast%compositions%edgespecies(:)%zmin (float) (9.6.1.1.1)
zmax (2180)	corefast%compositions%edgespecies(:)%zmax (float) (9.6.1.1.1)
label (2180)	corefast%compositions%edgespecies(:)%label (string) (9.6.1.1.3)
signature (2096)	corefast%compositions%signature (identifier) (9.6.1.3.233)
id (2230)	corefast%compositions%signature%id (string) (9.6.1.1.3)
flag (2230)	corefast%compositions%signature%flag (integer) (9.6.1.1.2)
description (2230)	corefast%compositions%signature%description (string) (9.6.1.1.3)
toroid_field (2005)	corefast%toroid_field (b0r0) (9.6.1.3.59)
r0 (2056)	corefast%toroid_field%r0 (float) (9.6.1.1.1)
b0 (2056)	corefast%toroid_field%b0 (float) (9.6.1.1.1)
values (2005)	corefast%values(:) (corefast_values) (9.6.1.3.105)
fastid (2102)	corefast%values(:)%fastid (identifier) (9.6.1.3.233)
id (2230)	corefast%values(:)%fastid%id (string) (9.6.1.1.3)
flag (2230)	corefast%values(:)%fastid%flag (integer) (9.6.1.1.2)
description (2230)	corefast%values(:)%fastid%description (string) (9.6.1.1.3)
filter (2102)	corefast%values(:)%filter (fast_thermal_separation_filter) (9.6.1.3.198)
method (2195)	corefast%values(:)%filter%method (identifier) (9.6.1.3.233)
id (2230)	corefast%values(:)%filter%method%id (string) (9.6.1.1.3)
flag (2230)	corefast%values(:)%filter%method%flag (integer) (9.6.1.1.2)
description (2230)	corefast%values(:)%filter%method%description (string) (9.6.1.1.3)
energy_sep (2195)	corefast%values(:)%filter%energy_sep (vecflt_type) (9.6.1.2.13)
rho_tor (2102)	corefast%values(:)%rho_tor (vecflt_type) (9.6.1.2.13)
rho_tor_norm (2102)	corefast%values(:)%rho_tor_norm (vecflt_type) (9.6.1.2.13)
psi (2102)	corefast%values(:)%psi (vecflt_type) (9.6.1.2.13)
volume (2102)	corefast%values(:)%volume (vecflt_type) (9.6.1.2.13)
area (2102)	corefast%values(:)%area (vecflt_type) (9.6.1.2.13)
j (2102)	corefast%values(:)%j (vecflt_type) (9.6.1.2.13)
sigma (2102)	corefast%values(:)%sigma (vecflt_type) (9.6.1.2.13)
ni (2102)	corefast%values(:)%ni (matflt_type) (9.6.1.2.10)
ne (2102)	corefast%values(:)%ne (vecflt_type) (9.6.1.2.13)
nz (2102)	corefast%values(:)%nz (matflt_type) (9.6.1.2.10)
pi (2102)	corefast%values(:)%pi (matflt_type) (9.6.1.2.10)
pe (2102)	corefast%values(:)%pe (vecflt_type) (9.6.1.2.13)
pz (2102)	corefast%values(:)%pz (matflt_type) (9.6.1.2.10)
pi_para (2102)	corefast%values(:)%pi_para (matflt_type) (9.6.1.2.10)
pe_para (2102)	corefast%values(:)%pe_para (vecflt_type) (9.6.1.2.13)
pz_para (2102)	corefast%values(:)%pz_para (matflt_type) (9.6.1.2.10)
ui (2102)	corefast%values(:)%ui (matflt_type) (9.6.1.2.10)
uz (2102)	corefast%values(:)%uz (matflt_type) (9.6.1.2.10)
codeparam (2102)	corefast%values(:)%codeparam (codeparam) (9.6.1.3.77)
codename (2074)	corefast%values(:)%codeparam%codename (string) (9.6.1.1.3)
codeversion (2074)	corefast%values(:)%codeparam%codeversion (string) (9.6.1.1.3)
parameters (2074)	corefast%values(:)%codeparam%parameters (string) (9.6.1.1.3)
output_diag (2074)	corefast%values(:)%codeparam%output_diag (string) (9.6.1.1.3)
output_flag (2074)	corefast%values(:)%codeparam%output_flag (integer) (9.6.1.1.2)
codeparam (2005)	corefast%codeparam (codeparam) (9.6.1.3.77)
codename (2074)	corefast%codeparam%codename (string) (9.6.1.1.3)
codeversion (2074)	corefast%codeparam%codeversion (string) (9.6.1.1.3)
parameters (2074)	corefast%codeparam%parameters (string) (9.6.1.1.3)
output_diag (2074)	corefast%codeparam%output_diag (string) (9.6.1.1.3)
output_flag (2074)	corefast%codeparam%output_flag (integer) (9.6.1.1.2)
time (2005)	corefast%time (float) (9.6.1.1.1)

### 9.6.2.1.7 coreimpur

datainfo (2006)	coreimpur%datainfo (datainfo) (9.6.1.3.133)
dataprovider (2130)	coreimpur%datainfo%dataprovider (string) (9.6.1.1.3)
putdate (2130)	coreimpur%datainfo%putdate (string) (9.6.1.1.3)
source (2130)	coreimpur%datainfo%source (string) (9.6.1.1.3)
comment (2130)	coreimpur%datainfo%comment (string) (9.6.1.1.3)
cocos (2130)	coreimpur%datainfo%cocos (integer) (9.6.1.1.2)
id (2130)	coreimpur%datainfo%id (integer) (9.6.1.1.2)
isref (2130)	coreimpur%datainfo%isref (integer) (9.6.1.1.2)
whatref (2130)	coreimpur%datainfo%whatref (whatref) (9.6.1.3.503)
user (2500)	coreimpur%datainfo%whatref%user (string) (9.6.1.1.3)
machine (2500)	coreimpur%datainfo%whatref%machine (string) (9.6.1.1.3)
shot (2500)	coreimpur%datainfo%whatref%shot (integer) (9.6.1.1.2)
run (2500)	coreimpur%datainfo%whatref%run (integer) (9.6.1.1.2)
occurrence (2500)	coreimpur%datainfo%whatref%occurrence (integer) (9.6.1.1.2)
putinfo (2130)	coreimpur%datainfo%putinfo (putinfo) (9.6.1.3.339)
putmethod (2336)	coreimpur%datainfo%putinfo%putmethod (string) (9.6.1.1.3)
putaccess (2336)	coreimpur%datainfo%putinfo%putaccess (string) (9.6.1.1.3)
putlocation (2336)	coreimpur%datainfo%putinfo%putlocation (string) (9.6.1.1.3)
rights (2336)	coreimpur%datainfo%putinfo%rights (string) (9.6.1.1.3)
rho_tor_norm (2006)	coreimpur%rho_tor_norm (vecflt_type) (9.6.1.2.13)
rho_tor (2006)	coreimpur%rho_tor (vecflt_type) (9.6.1.2.13)
psi (2006)	coreimpur%psi (vecflt_type) (9.6.1.2.13)
volume (2006)	coreimpur%volume (vecflt_type) (9.6.1.2.13)
area (2006)	coreimpur%area (vecflt_type) (9.6.1.2.13)
source (2006)	coreimpur%source (vecstring_type) (9.6.1.2.15)
flag (2006)	coreimpur%flag (vecint_type) (9.6.1.2.14)
desc_impur (2006)	coreimpur%desc_impur (desc_impur) (9.6.1.3.135)
amn (2132)	coreimpur%desc_impur%amn (vecflt_type) (9.6.1.2.13)
zn (2132)	coreimpur%desc_impur%zn (vecint_type) (9.6.1.2.14)
i_ion (2132)	coreimpur%desc_impur%i_ion (vecint_type) (9.6.1.2.14)
nzimp (2132)	coreimpur%desc_impur%nzimp (vecint_type) (9.6.1.2.14)
zmin (2132)	coreimpur%desc_impur%zmin (matint_type) (9.6.1.2.11)
zmax (2132)	coreimpur%desc_impur%zmax (matint_type) (9.6.1.2.11)
label (2132)	coreimpur%desc_impur%label (vecstring_type) (9.6.1.2.15)
compositions (2006)	coreimpur%compositions (compositions_type) (9.6.1.3.99)
nuclei (2096)	coreimpur%compositions%nuclei(:) (nuclei) (9.6.1.3.296)
zn (2293)	coreimpur%compositions%nuclei(:)%zn (float) (9.6.1.1.1)
amn (2293)	coreimpur%compositions%nuclei(:)%amn (float) (9.6.1.1.1)
label (2293)	coreimpur%compositions%nuclei(:)%label (string) (9.6.1.1.3)
ions (2096)	coreimpur%compositions%ions(:) (ions) (9.6.1.3.238)
nucindex (2235)	coreimpur%compositions%ions(:)%nucindex (integer) (9.6.1.1.2)
zion (2235)	coreimpur%compositions%ions(:)%zion (float) (9.6.1.1.1)
imp_flag (2235)	coreimpur%compositions%ions(:)%imp_flag (integer) (9.6.1.1.2)
label (2235)	coreimpur%compositions%ions(:)%label (string) (9.6.1.1.3)
impurities (2096)	coreimpur%compositions%impurities(:) (impurities) (9.6.1.3.235)
nucindex (2232)	coreimpur%compositions%impurities(:)%nucindex (integer) (9.6.1.1.2)
i_ion (2232)	coreimpur%compositions%impurities(:)%i_ion (integer) (9.6.1.1.2)
nzimp (2232)	coreimpur%compositions%impurities(:)%nzimp (integer) (9.6.1.1.2)
zmin (2232)	coreimpur%compositions%impurities(:)%zmin (vecflt_type) (9.6.1.2.13)
zmax (2232)	coreimpur%compositions%impurities(:)%zmax (vecflt_type) (9.6.1.2.13)
label (2232)	coreimpur%compositions%impurities(:)%label (vecstring_type) (9.6.1.2.15)
neutralscomp (2096)	coreimpur%compositions%neutralscomp(:) (composition_neutralscomp) (9.6.1.3.98)
neutcomp (2095)	coreimpur%compositions%neutralscomp(:)%neutcomp(:) (composition_neutrals_neutcomp) (9.6.1.3.97)
nucindex (2094)	coreimpur%compositions%neutralscomp(:)%neutcomp(:)%nucindex (integer) (9.6.1.1.2)
multiplicity (2094)	coreimpur%compositions%neutralscomp(:)%neutcomp(:)%multiplicity (integer) (9.6.1.1.2)
type (2095)	coreimpur%compositions%neutralscomp(:)%type(:) (identifier) (9.6.1.3.233)
id (2230)	coreimpur%compositions%neutralscomp(:)%type(:)%id (string) (9.6.1.1.3)
flag (2230)	coreimpur%compositions%neutralscomp(:)%type(:)%flag (integer) (9.6.1.1.2)
description (2230)	coreimpur%compositions%neutralscomp(:)%type(:)%description (string) (9.6.1.1.3)
label (2095)	coreimpur%compositions%neutralscomp(:)%label (string) (9.6.1.1.3)
edgespecies (2096)	coreimpur%compositions%edgespecies(:) (edgespecies) (9.6.1.3.183)

nucindex (2180)	coreimpur%compositions%edgespecies(:)%nucindex (integer) (9.6.1.1.2)
zmin (2180)	coreimpur%compositions%edgespecies(:)%zmin (float) (9.6.1.1.1)
zmax (2180)	coreimpur%compositions%edgespecies(:)%zmax (float) (9.6.1.1.1)
label (2180)	coreimpur%compositions%edgespecies(:)%label (string) (9.6.1.1.3)
signature (2096)	coreimpur%compositions%signature (identifier) (9.6.1.3.233)
id (2230)	coreimpur%compositions%signature%id (string) (9.6.1.1.3)
flag (2230)	coreimpur%compositions%signature%flag (integer) (9.6.1.1.2)
description (2230)	coreimpur%compositions%signature%description (string) (9.6.1.1.3)
atomic_data (2006)	coreimpur%atomic_data (vecstring_type) (9.6.1.2.15)
impurity (2006)	coreimpur%impurity(:) (impurity_type) (9.6.1.3.236)
z (2233)	coreimpur%impurity(:)%z (matflt_type) (9.6.1.2.10)
zsq (2233)	coreimpur%impurity(:)%zsq (matflt_type) (9.6.1.2.10)
nz (2233)	coreimpur%impurity(:)%nz (matflt_type) (9.6.1.2.10)
tz (2233)	coreimpur%impurity(:)%tz (matflt_type) (9.6.1.2.10)
source_term (2233)	coreimpur%impurity(:)%source_term (sourceimp) (9.6.1.3.405)
value (2402)	coreimpur%impurity(:)%source_term%value (matflt_type) (9.6.1.2.10)
integral (2402)	coreimpur%impurity(:)%source_term%integral (matflt_type) (9.6.1.2.10)
source (2402)	coreimpur%impurity(:)%source_term%source (vecstring_type) (9.6.1.2.15)
boundary (2233)	coreimpur%impurity(:)%boundary (boundaryimp) (9.6.1.3.70)
value (2067)	coreimpur%impurity(:)%boundary%value (matflt_type) (9.6.1.2.10)
source (2067)	coreimpur%impurity(:)%boundary%source (string) (9.6.1.1.3)
type (2067)	coreimpur%impurity(:)%boundary%type (vecint_type) (9.6.1.2.14)
rho (2067)	coreimpur%impurity(:)%boundary%rho (vecflt_type) (9.6.1.2.13)
codeparam (2067)	coreimpur%impurity(:)%boundary%codeparam (codeparam) (9.6.1.3.77)
codename (2074)	coreimpur%impurity(:)%boundary%codeparam%codename (string) (9.6.1.1.3)
codeversion (2074)	coreimpur%impurity(:)%boundary%codeparam%codeversion (string) (9.6.1.1.3)
parameters (2074)	coreimpur%impurity(:)%boundary%codeparam%parameters (string) (9.6.1.1.3)
output_diag (2074)	coreimpur%impurity(:)%boundary%codeparam%output_diag (string) (9.6.1.1.3)
output_flag (2074)	coreimpur%impurity(:)%boundary%codeparam%output_flag (integer) (9.6.1.1.2)
transp_coef (2233)	coreimpur%impurity(:)%transp_coef (coretransimp) (9.6.1.3.126)
diff (2123)	coreimpur%impurity(:)%transp_coef%diff (matflt_type) (9.6.1.2.10)
vconv (2123)	coreimpur%impurity(:)%transp_coef%vconv (matflt_type) (9.6.1.2.10)
source (2123)	coreimpur%impurity(:)%transp_coef%source (vecstring_type) (9.6.1.2.15)
flux (2233)	coreimpur%impurity(:)%flux (fluximp) (9.6.1.3.204)
flux_dv (2201)	coreimpur%impurity(:)%flux%flux_dv (matflt_type) (9.6.1.2.10)
flux_interp (2201)	coreimpur%impurity(:)%flux%flux_interp (matflt_type) (9.6.1.2.10)
time_deriv (2233)	coreimpur%impurity(:)%time_deriv (matflt_type) (9.6.1.2.10)
diagnostic (2233)	coreimpur%impurity(:)%diagnostic (coreimpurediag_type) (9.6.1.3.117)
radiation (2114)	coreimpur%impurity(:)%diagnostic%radiation (coreimpurediag_radiation) (9.6.1.3.114)
line_rad (2111)	coreimpur%impurity(:)%diagnostic%radiation%line_rad (coreimpurediagprof_type) (9.6.1.3.118)
profile (2115)	coreimpur%impurity(:)%diagnostic%radiation%line_rad%profile (matflt_type) (9.6.1.2.10)
integral (2115)	coreimpur%impurity(:)%diagnostic%radiation%line_rad%integral (matflt_type) (9.6.1.2.10)
brem_radrec (2111)	coreimpur%impurity(:)%diagnostic%radiation%brem_radrec (coreimpurediagprof_type) (9.6.1.3.118)
profile (2115)	coreimpur%impurity(:)%diagnostic%radiation%brem_radrec%profile (matflt_type) (9.6.1.2.10)
integral (2115)	coreimpur%impurity(:)%diagnostic%radiation%brem_radrec%integral (matflt_type) (9.6.1.2.10)
sum (2111)	coreimpur%impurity(:)%diagnostic%radiation%sum (coreimpurediagprof_type) (9.6.1.3.118)
profile (2115)	coreimpur%impurity(:)%diagnostic%radiation%sum%profile (matflt_type) (9.6.1.2.10)
integral (2115)	coreimpur%impurity(:)%diagnostic%radiation%sum%integral (matflt_type) (9.6.1.2.10)
energy (2114)	coreimpur%impurity(:)%diagnostic%energy (coreimpurediag_energy) (9.6.1.3.113)
ionization (2110)	coreimpur%impurity(:)%diagnostic%energy%ionization (coreimpurediagprof_type) (9.6.1.3.118)
profile (2115)	coreimpur%impurity(:)%diagnostic%energy%ionization%profile (matflt_type) (9.6.1.2.10)
integral (2115)	coreimpur%impurity(:)%diagnostic%energy%ionization%integral (matflt_type) (9.6.1.2.10)
recombin (2110)	coreimpur%impurity(:)%diagnostic%energy%recombin (coreimpurediagprof_type) (9.6.1.3.118)
profile (2115)	coreimpur%impurity(:)%diagnostic%energy%recombin%profile (matflt_type) (9.6.1.2.10)
integral (2115)	coreimpur%impurity(:)%diagnostic%energy%recombin%integral (matflt_type) (9.6.1.2.10)
sum (2110)	coreimpur%impurity(:)%diagnostic%energy%sum (coreimpurediagprof_type) (9.6.1.3.118)
profile (2115)	coreimpur%impurity(:)%diagnostic%energy%sum%profile (matflt_type) (9.6.1.2.10)

integral (2115)	coreimpur%impurity(:)%diagnostic%energy%sum%integral (matflt.type) (9.6.1.2.10)
diagnostic (2006)	coreimpur%diagnostic (coreimpurediag.type) (9.6.1.3.117)
radiation (2114)	coreimpur%diagnostic%radiation (coreimpurediag_radiation) (9.6.1.3.114)
line_rad (2111)	coreimpur%diagnostic%radiation%line_rad (coreimpurediagprof.type) (9.6.1.3.118)
profile (2115)	coreimpur%diagnostic%radiation%line_rad%profile (matflt.type) (9.6.1.2.10)
integral (2115)	coreimpur%diagnostic%radiation%line_rad%integral (matflt.type) (9.6.1.2.10)
brem_radrec (2111)	coreimpur%diagnostic%radiation%brem_radrec (coreimpurediagprof.type) (9.6.1.3.118)
profile (2115)	coreimpur%diagnostic%radiation%brem_radrec%profile (matflt.type) (9.6.1.2.10)
integral (2115)	coreimpur%diagnostic%radiation%brem_radrec%integral (matflt.type) (9.6.1.2.10)
sum (2111)	coreimpur%diagnostic%radiation%sum (coreimpurediagprof.type) (9.6.1.3.118)
profile (2115)	coreimpur%diagnostic%radiation%sum%profile (matflt.type) (9.6.1.2.10)
integral (2115)	coreimpur%diagnostic%radiation%sum%integral (matflt.type) (9.6.1.2.10)
energy (2114)	coreimpur%diagnostic%energy (coreimpurediag_energy) (9.6.1.3.113)
ionization (2110)	coreimpur%diagnostic%energy%ionization (coreimpurediagprof.type) (9.6.1.3.118)
profile (2115)	coreimpur%diagnostic%energy%ionization%profile (matflt.type) (9.6.1.2.10)
integral (2115)	coreimpur%diagnostic%energy%ionization%integral (matflt.type) (9.6.1.2.10)
recombin (2110)	coreimpur%diagnostic%energy%recombin (coreimpurediagprof.type) (9.6.1.3.118)
profile (2115)	coreimpur%diagnostic%energy%recombin%profile (matflt.type) (9.6.1.2.10)
integral (2115)	coreimpur%diagnostic%energy%recombin%integral (matflt.type) (9.6.1.2.10)
sum (2110)	coreimpur%diagnostic%energy%sum (coreimpurediagprof.type) (9.6.1.3.118)
profile (2115)	coreimpur%diagnostic%energy%sum%profile (matflt.type) (9.6.1.2.10)
integral (2115)	coreimpur%diagnostic%energy%sum%integral (matflt.type) (9.6.1.2.10)
diagnosticsum (2006)	coreimpur%diagnosticsum (coreimpurediag_sum) (9.6.1.3.115)
radiation (2112)	coreimpur%diagnosticsum%radiation (coreimpurdiag_sum_radiation) (9.6.1.3.112)
line_rad (2109)	coreimpur%diagnosticsum%radiation%line_rad (coreimpurediagsum.type) (9.6.1.3.119)
profile (2116)	coreimpur%diagnosticsum%radiation%line_rad%profile (vecflt.type) (9.6.1.2.13)
integral (2116)	coreimpur%diagnosticsum%radiation%line_rad%integral (vecflt.type) (9.6.1.2.13)
brem_radrec (2109)	coreimpur%diagnosticsum%radiation%brem_radrec (coreimpurediagsum.type) (9.6.1.3.119)
profile (2116)	coreimpur%diagnosticsum%radiation%brem_radrec%profile (vecflt.type) (9.6.1.2.13)
integral (2116)	coreimpur%diagnosticsum%radiation%brem_radrec%integral (vecflt.type) (9.6.1.2.13)
sum (2109)	coreimpur%diagnosticsum%radiation%sum (coreimpurediagsum.type) (9.6.1.3.119)
profile (2116)	coreimpur%diagnosticsum%radiation%sum%profile (vecflt.type) (9.6.1.2.13)
integral (2116)	coreimpur%diagnosticsum%radiation%sum%integral (vecflt.type) (9.6.1.2.13)
energy (2112)	coreimpur%diagnosticsum%energy (coreimpurediag_sum_energy) (9.6.1.3.116)
ionization (2113)	coreimpur%diagnosticsum%energy%ionization (coreimpurediagsum.type) (9.6.1.3.119)
profile (2116)	coreimpur%diagnosticsum%energy%ionization%profile (vecflt.type) (9.6.1.2.13)
integral (2116)	coreimpur%diagnosticsum%energy%ionization%integral (vecflt.type) (9.6.1.2.13)
recombin (2113)	coreimpur%diagnosticsum%energy%recombin (coreimpurediagsum.type) (9.6.1.3.119)
profile (2116)	coreimpur%diagnosticsum%energy%recombin%profile (vecflt.type) (9.6.1.2.13)
integral (2116)	coreimpur%diagnosticsum%energy%recombin%integral (vecflt.type) (9.6.1.2.13)
sum (2113)	coreimpur%diagnosticsum%energy%sum (coreimpurediagsum.type) (9.6.1.3.119)
profile (2116)	coreimpur%diagnosticsum%energy%sum%profile (vecflt.type) (9.6.1.2.13)
integral (2116)	coreimpur%diagnosticsum%energy%sum%integral (vecflt.type) (9.6.1.2.13)
codeparam (2006)	coreimpur%codeparam (codeparam) (9.6.1.3.77)
codename (2074)	coreimpur%codeparam%codename (string) (9.6.1.1.3)
codeversion (2074)	coreimpur%codeparam%codeversion (string) (9.6.1.1.3)
parameters (2074)	coreimpur%codeparam%parameters (string) (9.6.1.1.3)
output_diag (2074)	coreimpur%codeparam%output_diag (string) (9.6.1.1.3)
output_flag (2074)	coreimpur%codeparam%output_flag (integer) (9.6.1.1.2)
time (2006)	coreimpur%time (float) (9.6.1.1.1)

### 9.6.2.1.8 coreneutrals

datainfo (2007)	coreneutrals%datainfo (datainfo) (9.6.1.3.133)
dataprovder (2130)	coreneutrals%datainfo%dataprovder (string) (9.6.1.1.3)
putdate (2130)	coreneutrals%datainfo%putdate (string) (9.6.1.1.3)
source (2130)	coreneutrals%datainfo%source (string) (9.6.1.1.3)
comment (2130)	coreneutrals%datainfo%comment (string) (9.6.1.1.3)
cocos (2130)	coreneutrals%datainfo%cocos (integer) (9.6.1.1.2)
id (2130)	coreneutrals%datainfo%id (integer) (9.6.1.1.2)
isref (2130)	coreneutrals%datainfo%isref (integer) (9.6.1.1.2)

whatref (2130)	coreneutrals%datainfo%whatref (whatref) (9.6.1.3.503)
user (2500)	coreneutrals%datainfo%whatref%user (string) (9.6.1.1.3)
machine (2500)	coreneutrals%datainfo%whatref%machine (string) (9.6.1.1.3)
shot (2500)	coreneutrals%datainfo%whatref%shot (integer) (9.6.1.1.2)
run (2500)	coreneutrals%datainfo%whatref%run (integer) (9.6.1.1.2)
occurrence (2500)	coreneutrals%datainfo%whatref%occurrence (integer) (9.6.1.1.2)
putinfo (2130)	coreneutrals%datainfo%putinfo (putinfo) (9.6.1.3.339)
putmethod (2336)	coreneutrals%datainfo%putinfo%putmethod (string) (9.6.1.1.3)
putaccess (2336)	coreneutrals%datainfo%putinfo%putaccess (string) (9.6.1.1.3)
putlocation (2336)	coreneutrals%datainfo%putinfo%putlocation (string) (9.6.1.1.3)
rights (2336)	coreneutrals%datainfo%putinfo%rights (string) (9.6.1.1.3)
rho_tor (2007)	coreneutrals%rho_tor (vecflt_type) (9.6.1.2.13)
rho_tor_norm (2007)	coreneutrals%rho_tor_norm (vecflt_type) (9.6.1.2.13)
psi (2007)	coreneutrals%psi (vecflt_type) (9.6.1.2.13)
volume (2007)	coreneutrals%volume (vecflt_type) (9.6.1.2.13)
area (2007)	coreneutrals%area (vecflt_type) (9.6.1.2.13)
neutcompo (2007)	coreneutrals%neutcompo (composition_neutrals) (9.6.1.3.96)
atomlist (2093)	coreneutrals%neutcompo%atomlist(:) (coreneutrals_atomlist) (9.6.1.3.120)
amn (2117)	coreneutrals%neutcompo%atomlist(:)%amn (float) (9.6.1.1.1)
zn (2117)	coreneutrals%neutcompo%atomlist(:)%zn (float) (9.6.1.1.1)
ionimptype (2117)	coreneutrals%neutcompo%atomlist(:)%ionimptype (identifier) (9.6.1.3.233)
id (2230)	coreneutrals%neutcompo%atomlist(:)%ionimptype%id (string) (9.6.1.1.3)
flag (2230)	coreneutrals%neutcompo%atomlist(:)%ionimptype%flag (integer) (9.6.1.1.2)
description (2230)	coreneutrals%neutcompo%atomlist(:)%ionimptype%description (string) (9.6.1.1.3)
ionimpindex (2117)	coreneutrals%neutcompo%atomlist(:)%ionimpindex (integer) (9.6.1.1.2)
neutral (2093)	coreneutrals%neutcompo%neutral(:) (composition_neutralscomp) (9.6.1.3.98)
neutcomp (2095)	coreneutrals%neutcompo%neutral(:)%neutcomp(:) (composition_neutrals_neutcomp) (9.6.1.3.97)
nucindex (2094)	coreneutrals%neutcompo%neutral(:)%neutcomp(:)%nucindex (integer) (9.6.1.1.2)
multiplicity (2094)	coreneutrals%neutcompo%neutral(:)%neutcomp(:)%multiplicity (integer) (9.6.1.1.2)
type (2095)	coreneutrals%neutcompo%neutral(:)%type(:) (identifier) (9.6.1.3.233)
id (2230)	coreneutrals%neutcompo%neutral(:)%type(:)%id (string) (9.6.1.1.3)
flag (2230)	coreneutrals%neutcompo%neutral(:)%type(:)%flag (integer) (9.6.1.1.2)
description (2230)	coreneutrals%neutcompo%neutral(:)%type(:)%description (string) (9.6.1.1.3)
label (2095)	coreneutrals%neutcompo%neutral(:)%label (string) (9.6.1.1.3)
composition (2007)	coreneutrals%composition (composition) (9.6.1.3.95)
amn (2092)	coreneutrals%composition%amn (vecflt_type) (9.6.1.2.13)
zn (2092)	coreneutrals%composition%zn (vecflt_type) (9.6.1.2.13)
zion (2092)	coreneutrals%composition%zion (vecflt_type) (9.6.1.2.13)
imp_flag (2092)	coreneutrals%composition%imp_flag (vecint_type) (9.6.1.2.14)
label (2092)	coreneutrals%composition%label (vecstring_type) (9.6.1.2.15)
desc_impur (2007)	coreneutrals%desc_impur (desc_impur) (9.6.1.3.135)
amn (2132)	coreneutrals%desc_impur%amn (vecflt_type) (9.6.1.2.13)
zn (2132)	coreneutrals%desc_impur%zn (vecint_type) (9.6.1.2.14)
i_ion (2132)	coreneutrals%desc_impur%i_ion (vecint_type) (9.6.1.2.14)
nzimp (2132)	coreneutrals%desc_impur%nzimp (vecint_type) (9.6.1.2.14)
zmin (2132)	coreneutrals%desc_impur%zmin (matint_type) (9.6.1.2.11)
zmax (2132)	coreneutrals%desc_impur%zmax (matint_type) (9.6.1.2.11)
label (2132)	coreneutrals%desc_impur%label (vecstring_type) (9.6.1.2.15)
compositions (2007)	coreneutrals%compositions (compositions_type) (9.6.1.3.99)
nuclei (2096)	coreneutrals%compositions%nuclei(:) (nuclei) (9.6.1.3.296)
zn (2293)	coreneutrals%compositions%nuclei(:)%zn (float) (9.6.1.1.1)
amn (2293)	coreneutrals%compositions%nuclei(:)%amn (float) (9.6.1.1.1)
label (2293)	coreneutrals%compositions%nuclei(:)%label (string) (9.6.1.1.3)
ions (2096)	coreneutrals%compositions%ions(:) (ions) (9.6.1.3.238)
nucindex (2235)	coreneutrals%compositions%ions(:)%nucindex (integer) (9.6.1.1.2)
zion (2235)	coreneutrals%compositions%ions(:)%zion (float) (9.6.1.1.1)
imp_flag (2235)	coreneutrals%compositions%ions(:)%imp_flag (integer) (9.6.1.1.2)
label (2235)	coreneutrals%compositions%ions(:)%label (string) (9.6.1.1.3)
impurities (2096)	coreneutrals%compositions%impurities(:) (impurities) (9.6.1.3.235)
nucindex (2232)	coreneutrals%compositions%impurities(:)%nucindex (integer) (9.6.1.1.2)
i_ion (2232)	coreneutrals%compositions%impurities(:)%i_ion (integer) (9.6.1.1.2)



nzimp (2232)	coreneutrals%compositions%impurities(:)%nzimp (integer) (9.6.1.1.2)
zmin (2232)	coreneutrals%compositions%impurities(:)%zmin (vecflt_type) (9.6.1.2.13)
zmax (2232)	coreneutrals%compositions%impurities(:)%zmax (vecflt_type) (9.6.1.2.13)
label (2232)	coreneutrals%compositions%impurities(:)%label (vecstring_type) (9.6.1.2.15)
neutralscomp (2096)	coreneutrals%compositions%neutralscomp(:) (composition_neutralscomp) (9.6.1.3.98)
neutcomp (2095)	coreneutrals%compositions%neutralscomp(:)%neutcomp(:) (composition_neutrals_neutcomp) (9.6.1.3.97)
nucindex (2094)	coreneutrals%compositions%neutralscomp(:)%neutcomp(:)%nucindex (integer) (9.6.1.1.2)
multiplicity (2094)	coreneutrals%compositions%neutralscomp(:)%neutcomp(:)%multiplicity (integer) (9.6.1.1.2)
type (2095)	coreneutrals%compositions%neutralscomp(:)%type(:) (identifier) (9.6.1.3.233)
id (2230)	coreneutrals%compositions%neutralscomp(:)%type(:)%id (string) (9.6.1.1.3)
flag (2230)	coreneutrals%compositions%neutralscomp(:)%type(:)%flag (integer) (9.6.1.1.2)
description (2230)	coreneutrals%compositions%neutralscomp(:)%type(:)%description (string) (9.6.1.1.3)
label (2095)	coreneutrals%compositions%neutralscomp(:)%label (string) (9.6.1.1.3)
edgespecies (2096)	coreneutrals%compositions%edgespecies(:) (edgespecies) (9.6.1.3.183)
nucindex (2180)	coreneutrals%compositions%edgespecies(:)%nucindex (integer) (9.6.1.1.2)
zmin (2180)	coreneutrals%compositions%edgespecies(:)%zmin (float) (9.6.1.1.1)
zmax (2180)	coreneutrals%compositions%edgespecies(:)%zmax (float) (9.6.1.1.1)
label (2180)	coreneutrals%compositions%edgespecies(:)%label (string) (9.6.1.1.3)
signature (2096)	coreneutrals%compositions%signature (identifier) (9.6.1.3.233)
id (2230)	coreneutrals%compositions%signature%id (string) (9.6.1.1.3)
flag (2230)	coreneutrals%compositions%signature%flag (integer) (9.6.1.1.2)
description (2230)	coreneutrals%compositions%signature%description (string) (9.6.1.1.3)
profiles (2007)	coreneutrals%profiles(:) (neutral_complex_type) (9.6.1.3.287)
neutraltype (2284)	coreneutrals%profiles(:)%neutraltype(:) (coreneutrals_neutraltype) (9.6.1.3.121)
n0 (2118)	coreneutrals%profiles(:)%neutraltype(:)%n0 (corefieldneutral) (9.6.1.3.108)
value (2105)	coreneutrals%profiles(:)%neutraltype(:)%n0%value (vecflt_type) (9.6.1.2.13)
flux (2105)	coreneutrals%profiles(:)%neutraltype(:)%n0%flux (vecflt_type) (9.6.1.2.13)
boundary (2105)	coreneutrals%profiles(:)%neutraltype(:)%n0%boundary (boundary_neutrals) (9.6.1.3.68)
value (2065)	coreneutrals%profiles(:)%neutraltype(:)%n0%boundary%value (vecflt_type) (9.6.1.2.13)
type (2065)	coreneutrals%profiles(:)%neutraltype(:)%n0%boundary%type (integer) (9.6.1.1.2)
rho_tor (2065)	coreneutrals%profiles(:)%neutraltype(:)%n0%boundary%rho_tor (float) (9.6.1.1.1)
t0 (2118)	coreneutrals%profiles(:)%neutraltype(:)%t0 (corefieldneutrals) (9.6.1.3.109)
value (2106)	coreneutrals%profiles(:)%neutraltype(:)%t0%value (vecflt_type) (9.6.1.2.13)
flux (2106)	coreneutrals%profiles(:)%neutraltype(:)%t0%flux (vecflt_type) (9.6.1.2.13)
boundary (2106)	coreneutrals%profiles(:)%neutraltype(:)%t0%boundary (boundary_neutrals) (9.6.1.3.68)
value (2065)	coreneutrals%profiles(:)%neutraltype(:)%t0%boundary%value (vecflt_type) (9.6.1.2.13)
type (2065)	coreneutrals%profiles(:)%neutraltype(:)%t0%boundary%type (integer) (9.6.1.1.2)
rho_tor (2065)	coreneutrals%profiles(:)%neutraltype(:)%t0%boundary%rho_tor (float) (9.6.1.1.1)
v0 (2118)	coreneutrals%profiles(:)%neutraltype(:)%v0 (corefieldneutralv0) (9.6.1.3.111)
toroidal (2108)	coreneutrals%profiles(:)%neutraltype(:)%v0%toroidal (corefieldneutralv) (9.6.1.3.110)
value (2107)	coreneutrals%profiles(:)%neutraltype(:)%v0%toroidal%value (vecflt_type) (9.6.1.2.13)
boundary (2107)	coreneutrals%profiles(:)%neutraltype(:)%v0%toroidal%boundary (boundary_neutrals) (9.6.1.3.68)
value (2065)	coreneutrals%profiles(:)%neutraltype(:)%v0%toroidal%boundary%value (vecflt_type) (9.6.1.2.13)
type (2065)	coreneutrals%profiles(:)%neutraltype(:)%v0%toroidal%boundary%type (integer) (9.6.1.1.2)
rho_tor (2065)	coreneutrals%profiles(:)%neutraltype(:)%v0%toroidal%boundary%rho_tor (float) (9.6.1.1.1)
poloidal (2108)	coreneutrals%profiles(:)%neutraltype(:)%v0%poloidal (corefieldneutralv) (9.6.1.3.110)
value (2107)	coreneutrals%profiles(:)%neutraltype(:)%v0%poloidal%value (vecflt_type) (9.6.1.2.13)
boundary (2107)	coreneutrals%profiles(:)%neutraltype(:)%v0%poloidal%boundary (boundary_neutrals) (9.6.1.3.68)
value (2065)	coreneutrals%profiles(:)%neutraltype(:)%v0%poloidal%boundary%value (vecflt_type) (9.6.1.2.13)
type (2065)	coreneutrals%profiles(:)%neutraltype(:)%v0%poloidal%boundary%type (integer) (9.6.1.1.2)
rho_tor (2065)	coreneutrals%profiles(:)%neutraltype(:)%v0%poloidal%boundary%rho_tor (float) (9.6.1.1.1)
radial (2108)	coreneutrals%profiles(:)%neutraltype(:)%v0%radial (corefieldneutralv) (9.6.1.3.110)
value (2107)	coreneutrals%profiles(:)%neutraltype(:)%v0%radial%value (vecflt_type) (9.6.1.2.13)
boundary (2107)	coreneutrals%profiles(:)%neutraltype(:)%v0%radial%boundary (boundary_neutrals) (9.6.1.3.68)
value (2065)	coreneutrals%profiles(:)%neutraltype(:)%v0%radial%boundary%value (vecflt_type) (9.6.1.2.13)
type (2065)	coreneutrals%profiles(:)%neutraltype(:)%v0%radial%boundary%type (integer) (9.6.1.1.2)
rho_tor (2065)	coreneutrals%profiles(:)%neutraltype(:)%v0%radial%boundary%rho_tor (float) (9.6.1.1.1)

prad0 (2284)	coreneutrals%profiles(:)%prad0 (vecflt_type) (9.6.1.2.13)
ioncoeff (2007)	coreneutrals%ioncoeff(:) (coefficients_neutrals) (9.6.1.3.78)
recycling (2075)	coreneutrals%ioncoeff(:)%recycling (recycling_neutrals) (9.6.1.3.344)
particles (2341)	coreneutrals%ioncoeff(:)%recycling%particles (vecflt_type) (9.6.1.2.13)
energy (2341)	coreneutrals%ioncoeff(:)%recycling%energy (vecflt_type) (9.6.1.2.13)
sputtering (2075)	coreneutrals%ioncoeff(:)%sputtering (sputtering_neutrals) (9.6.1.3.412)
physical (2409)	coreneutrals%ioncoeff(:)%sputtering%physical (vecflt_type) (9.6.1.2.13)
chemical (2409)	coreneutrals%ioncoeff(:)%sputtering%chemical (vecflt_type) (9.6.1.2.13)
impcoeff (2007)	coreneutrals%impcoeff(:) (impcoeff) (9.6.1.3.234)
chargestate (2231)	coreneutrals%impcoeff(:)%chargestate(:) (coefficients_neutrals) (9.6.1.3.78)
recycling (2075)	coreneutrals%impcoeff(:)%chargestate(:)%recycling (recycling_neutrals) (9.6.1.3.344)
particles (2341)	coreneutrals%impcoeff(:)%chargestate(:)%recycling%particles (vecflt_type) (9.6.1.2.13)
energy (2341)	coreneutrals%impcoeff(:)%chargestate(:)%recycling%energy (vecflt_type) (9.6.1.2.13)
sputtering (2075)	coreneutrals%impcoeff(:)%chargestate(:)%sputtering (sputtering_neutrals) (9.6.1.3.412)
physical (2409)	coreneutrals%impcoeff(:)%chargestate(:)%sputtering%physical (vecflt_type) (9.6.1.2.13)
chemical (2409)	coreneutrals%impcoeff(:)%chargestate(:)%sputtering%chemical (vecflt_type) (9.6.1.2.13)
codeparam (2007)	coreneutrals%codeparam (codeparam) (9.6.1.3.77)
codename (2074)	coreneutrals%codeparam%codename (string) (9.6.1.1.3)
codeversion (2074)	coreneutrals%codeparam%codeversion (string) (9.6.1.1.3)
parameters (2074)	coreneutrals%codeparam%parameters (string) (9.6.1.1.3)
output_diag (2074)	coreneutrals%codeparam%output_diag (string) (9.6.1.1.3)
output_flag (2074)	coreneutrals%codeparam%output_flag (integer) (9.6.1.1.2)
time (2007)	coreneutrals%time (float) (9.6.1.1.1)

### 9.6.2.1.9 coreprof

datainfo (2008)	coreprof%datainfo (datainfo) (9.6.1.3.133)
dataprovider (2130)	coreprof%datainfo%dataprovider (string) (9.6.1.1.3)
putdate (2130)	coreprof%datainfo%putdate (string) (9.6.1.1.3)
source (2130)	coreprof%datainfo%source (string) (9.6.1.1.3)
comment (2130)	coreprof%datainfo%comment (string) (9.6.1.1.3)
cocos (2130)	coreprof%datainfo%cocos (integer) (9.6.1.1.2)
id (2130)	coreprof%datainfo%id (integer) (9.6.1.1.2)
isref (2130)	coreprof%datainfo%isref (integer) (9.6.1.1.2)
whatref (2130)	coreprof%datainfo%whatref (whatref) (9.6.1.3.503)
user (2500)	coreprof%datainfo%whatref%user (string) (9.6.1.1.3)
machine (2500)	coreprof%datainfo%whatref%machine (string) (9.6.1.1.3)
shot (2500)	coreprof%datainfo%whatref%shot (integer) (9.6.1.1.2)
run (2500)	coreprof%datainfo%whatref%run (integer) (9.6.1.1.2)
occurrence (2500)	coreprof%datainfo%whatref%occurrence (integer) (9.6.1.1.2)
putinfo (2130)	coreprof%datainfo%putinfo (putinfo) (9.6.1.3.339)
putmethod (2336)	coreprof%datainfo%putinfo%putmethod (string) (9.6.1.1.3)
putaccess (2336)	coreprof%datainfo%putinfo%putaccess (string) (9.6.1.1.3)
putlocation (2336)	coreprof%datainfo%putinfo%putlocation (string) (9.6.1.1.3)
rights (2336)	coreprof%datainfo%putinfo%rights (string) (9.6.1.1.3)
rho_tor_norm (2008)	coreprof%rho_tor_norm (vecflt_type) (9.6.1.2.13)
rho_tor (2008)	coreprof%rho_tor (vecflt_type) (9.6.1.2.13)
drho_dt (2008)	coreprof%drho_dt (vecflt_type) (9.6.1.2.13)
toroid_field (2008)	coreprof%toroid_field (toroid_field) (9.6.1.3.456)
b0 (2453)	coreprof%toroid_field%b0 (float) (9.6.1.1.1)
b0prime (2453)	coreprof%toroid_field%b0prime (float) (9.6.1.1.1)
r0 (2453)	coreprof%toroid_field%r0 (float) (9.6.1.1.1)
time (2453)	coreprof%toroid_field%time (float) (9.6.1.1.1)
composition (2008)	coreprof%composition (composition) (9.6.1.3.95)
amn (2092)	coreprof%composition%amn (vecflt_type) (9.6.1.2.13)
zn (2092)	coreprof%composition%zn (vecflt_type) (9.6.1.2.13)
zion (2092)	coreprof%composition%zion (vecflt_type) (9.6.1.2.13)
imp_flag (2092)	coreprof%composition%imp_flag (vecint_type) (9.6.1.2.14)
label (2092)	coreprof%composition%label (vecstring_type) (9.6.1.2.15)
desc_impur (2008)	coreprof%desc_impur (desc_impur) (9.6.1.3.135)
amn (2132)	coreprof%desc_impur%amn (vecflt_type) (9.6.1.2.13)



zn (2132)	coreprof%desc_impur%zn (vecint_type) (9.6.1.2.14)
i_ion (2132)	coreprof%desc_impur%i_ion (vecint_type) (9.6.1.2.14)
nzimp (2132)	coreprof%desc_impur%nzimp (vecint_type) (9.6.1.2.14)
zmin (2132)	coreprof%desc_impur%zmin (matint_type) (9.6.1.2.11)
zmax (2132)	coreprof%desc_impur%zmax (matint_type) (9.6.1.2.11)
label (2132)	coreprof%desc_impur%label (vecstring_type) (9.6.1.2.15)
compositions (2008)	coreprof%compositions (compositions_type) (9.6.1.3.99)
nuclei (2096)	coreprof%compositions%nuclei(:) (nuclei) (9.6.1.3.296)
zn (2293)	coreprof%compositions%nuclei(:)%zn (float) (9.6.1.1.1)
amn (2293)	coreprof%compositions%nuclei(:)%amn (float) (9.6.1.1.1)
label (2293)	coreprof%compositions%nuclei(:)%label (string) (9.6.1.1.3)
ions (2096)	coreprof%compositions%ions(:) (ions) (9.6.1.3.238)
nucindex (2235)	coreprof%compositions%ions(:)%nucindex (integer) (9.6.1.1.2)
zion (2235)	coreprof%compositions%ions(:)%zion (float) (9.6.1.1.1)
imp_flag (2235)	coreprof%compositions%ions(:)%imp_flag (integer) (9.6.1.1.2)
label (2235)	coreprof%compositions%ions(:)%label (string) (9.6.1.1.3)
impurities (2096)	coreprof%compositions%impurities(:) (impurities) (9.6.1.3.235)
nucindex (2232)	coreprof%compositions%impurities(:)%nucindex (integer) (9.6.1.1.2)
i_ion (2232)	coreprof%compositions%impurities(:)%i_ion (integer) (9.6.1.1.2)
nzimp (2232)	coreprof%compositions%impurities(:)%nzimp (integer) (9.6.1.1.2)
zmin (2232)	coreprof%compositions%impurities(:)%zmin (vecflt_type) (9.6.1.2.13)
zmax (2232)	coreprof%compositions%impurities(:)%zmax (vecflt_type) (9.6.1.2.13)
label (2232)	coreprof%compositions%impurities(:)%label (vecstring_type) (9.6.1.2.15)
neutralscomp (2096)	coreprof%compositions%neutralscomp(:) (composition_neutralscomp) (9.6.1.3.98)
neutcomp (2095)	coreprof%compositions%neutralscomp(:)%neutcomp(:) (composition_neutrals_neutcomp) (9.6.1.3.97)
nucindex (2094)	coreprof%compositions%neutralscomp(:)%neutcomp(:)%nucindex (integer) (9.6.1.1.2)
multiplicity (2094)	coreprof%compositions%neutralscomp(:)%neutcomp(:)%multiplicity (integer) (9.6.1.1.2)
type (2095)	coreprof%compositions%neutralscomp(:)%type(:) (identifier) (9.6.1.3.233)
id (2230)	coreprof%compositions%neutralscomp(:)%type(:)%id (string) (9.6.1.1.3)
flag (2230)	coreprof%compositions%neutralscomp(:)%type(:)%flag (integer) (9.6.1.1.2)
description (2230)	coreprof%compositions%neutralscomp(:)%type(:)%description (string) (9.6.1.1.3)
label (2095)	coreprof%compositions%neutralscomp(:)%label (string) (9.6.1.1.3)
edgespecies (2096)	coreprof%compositions%edgespecies(:) (edgespecies) (9.6.1.3.183)
nucindex (2180)	coreprof%compositions%edgespecies(:)%nucindex (integer) (9.6.1.1.2)
zmin (2180)	coreprof%compositions%edgespecies(:)%zmin (float) (9.6.1.1.1)
zmax (2180)	coreprof%compositions%edgespecies(:)%zmax (float) (9.6.1.1.1)
label (2180)	coreprof%compositions%edgespecies(:)%label (string) (9.6.1.1.3)
signature (2096)	coreprof%compositions%signature (identifier) (9.6.1.3.233)
id (2230)	coreprof%compositions%signature%id (string) (9.6.1.1.3)
flag (2230)	coreprof%compositions%signature%flag (integer) (9.6.1.1.2)
description (2230)	coreprof%compositions%signature%description (string) (9.6.1.1.3)
psi (2008)	coreprof%psi (psi) (9.6.1.3.338)
value (2335)	coreprof%psi%value (vecflt_type) (9.6.1.2.13)
ddrho (2335)	coreprof%psi%ddrho (vecflt_type) (9.6.1.2.13)
d2drho2 (2335)	coreprof%psi%d2drho2 (vecflt_type) (9.6.1.2.13)
ddt_rhotorn (2335)	coreprof%psi%ddt_rhotorn (vecflt_type) (9.6.1.2.13)
ddt_phi (2335)	coreprof%psi%ddt_phi (vecflt_type) (9.6.1.2.13)
source (2335)	coreprof%psi%source (string) (9.6.1.1.3)
flag (2335)	coreprof%psi%flag (integer) (9.6.1.1.2)
boundary (2335)	coreprof%psi%boundary (boundary) (9.6.1.3.67)
value (2064)	coreprof%psi%boundary%value (vecflt_type) (9.6.1.2.13)
source (2064)	coreprof%psi%boundary%source (string) (9.6.1.1.3)
type (2064)	coreprof%psi%boundary%type (integer) (9.6.1.1.2)
rho (2064)	coreprof%psi%boundary%rho (float) (9.6.1.1.1)
codeparam (2064)	coreprof%psi%boundary%codeparam (codeparam) (9.6.1.3.77)
codename (2074)	coreprof%psi%boundary%codeparam%codename (string) (9.6.1.1.3)
codeversion (2074)	coreprof%psi%boundary%codeparam%codeversion (string) (9.6.1.1.3)
parameters (2074)	coreprof%psi%boundary%codeparam%parameters (string) (9.6.1.1.3)
output_diag (2074)	coreprof%psi%boundary%codeparam%output_diag (string) (9.6.1.1.3)
output_flag (2074)	coreprof%psi%boundary%codeparam%output_flag (integer) (9.6.1.1.2)
jni (2335)	coreprof%psi%jni (jni) (9.6.1.3.240)

value (2237)	coreprof%psi%jni%value (vecflt_type) (9.6.1.2.13)
integral (2237)	coreprof%psi%jni%integral (vecflt_type) (9.6.1.2.13)
source (2237)	coreprof%psi%jni%source (string) (9.6.1.1.3)
sigma_par (2335)	coreprof%psi%sigma_par (coreprofile) (9.6.1.3.122)
value (2119)	coreprof%psi%sigma_par%value (vecflt_type) (9.6.1.2.13)
source (2119)	coreprof%psi%sigma_par%source (string) (9.6.1.1.3)
codeparam (2335)	coreprof%psi%codeparam (codeparam) (9.6.1.3.77)
codename (2074)	coreprof%psi%codeparam%codename (string) (9.6.1.1.3)
codeversion (2074)	coreprof%psi%codeparam%codeversion (string) (9.6.1.1.3)
parameters (2074)	coreprof%psi%codeparam%parameters (string) (9.6.1.1.3)
output_diag (2074)	coreprof%psi%codeparam%output_diag (string) (9.6.1.1.3)
output_flag (2074)	coreprof%psi%codeparam%output_flag (integer) (9.6.1.1.2)
te (2008)	coreprof%te (corefield) (9.6.1.3.106)
value (2103)	coreprof%te%value (vecflt_type) (9.6.1.2.13)
ddrho (2103)	coreprof%te%ddrho (vecflt_type) (9.6.1.2.13)
d2drho2 (2103)	coreprof%te%d2drho2 (vecflt_type) (9.6.1.2.13)
ddt (2103)	coreprof%te%ddt (vecflt_type) (9.6.1.2.13)
source (2103)	coreprof%te%source (string) (9.6.1.1.3)
flag (2103)	coreprof%te%flag (integer) (9.6.1.1.2)
boundary (2103)	coreprof%te%boundary (boundaryel) (9.6.1.3.69)
value (2066)	coreprof%te%boundary%value (vecflt_type) (9.6.1.2.13)
source (2066)	coreprof%te%boundary%source (string) (9.6.1.1.3)
type (2066)	coreprof%te%boundary%type (integer) (9.6.1.1.2)
rho_tor (2066)	coreprof%te%boundary%rho_tor (float) (9.6.1.1.1)
source_term (2103)	coreprof%te%source_term (sourceel) (9.6.1.3.404)
value (2401)	coreprof%te%source_term%value (vecflt_type) (9.6.1.2.13)
integral (2401)	coreprof%te%source_term%integral (vecflt_type) (9.6.1.2.13)
source (2401)	coreprof%te%source_term%source (string) (9.6.1.1.3)
transp_coef (2103)	coreprof%te%transp_coef (coretransel) (9.6.1.3.125)
diff (2122)	coreprof%te%transp_coef%diff (vecflt_type) (9.6.1.2.13)
vconv (2122)	coreprof%te%transp_coef%vconv (vecflt_type) (9.6.1.2.13)
source (2122)	coreprof%te%transp_coef%source (string) (9.6.1.1.3)
flux (2103)	coreprof%te%flux (fluxel) (9.6.1.3.203)
flux_dv (2200)	coreprof%te%flux%flux_dv (vecflt_type) (9.6.1.2.13)
flux_interp (2200)	coreprof%te%flux%flux_interp (vecflt_type) (9.6.1.2.13)
flux_dv_surf (2103)	coreprof%te%flux_dv_surf (vecflt_type) (9.6.1.2.13)
time_deriv (2103)	coreprof%te%time_deriv (vecflt_type) (9.6.1.2.13)
codeparam (2103)	coreprof%te%codeparam (codeparam) (9.6.1.3.77)
codename (2074)	coreprof%te%codeparam%codename (string) (9.6.1.1.3)
codeversion (2074)	coreprof%te%codeparam%codeversion (string) (9.6.1.1.3)
parameters (2074)	coreprof%te%codeparam%parameters (string) (9.6.1.1.3)
output_diag (2074)	coreprof%te%codeparam%output_diag (string) (9.6.1.1.3)
output_flag (2074)	coreprof%te%codeparam%output_flag (integer) (9.6.1.1.2)
ti (2008)	coreprof%ti (corefieldion) (9.6.1.3.107)
value (2104)	coreprof%ti%value (matflt_type) (9.6.1.2.10)
ddrho (2104)	coreprof%ti%ddrho (matflt_type) (9.6.1.2.10)
d2drho2 (2104)	coreprof%ti%d2drho2 (matflt_type) (9.6.1.2.10)
ddt (2104)	coreprof%ti%ddt (matflt_type) (9.6.1.2.10)
source (2104)	coreprof%ti%source (vecstring_type) (9.6.1.2.15)
flag (2104)	coreprof%ti%flag (vecint_type) (9.6.1.2.14)
boundary (2104)	coreprof%ti%boundary (boundaryion) (9.6.1.3.71)
value (2068)	coreprof%ti%boundary%value (matflt_type) (9.6.1.2.10)
source (2068)	coreprof%ti%boundary%source (vecstring_type) (9.6.1.2.15)
type (2068)	coreprof%ti%boundary%type (vecint_type) (9.6.1.2.14)
rho_tor (2068)	coreprof%ti%boundary%rho_tor (vecflt_type) (9.6.1.2.13)
source_term (2104)	coreprof%ti%source_term (sourceion) (9.6.1.3.406)
value (2403)	coreprof%ti%source_term%value (matflt_type) (9.6.1.2.10)
integral (2403)	coreprof%ti%source_term%integral (matflt_type) (9.6.1.2.10)
source (2403)	coreprof%ti%source_term%source (vecstring_type) (9.6.1.2.15)
transp_coef (2104)	coreprof%ti%transp_coef (coretransion) (9.6.1.3.127)
diff (2124)	coreprof%ti%transp_coef%diff (matflt_type) (9.6.1.2.10)

vconv (2124)	coreprof%ti%transp_coef%vconv (matflt.type) (9.6.1.2.10)
source (2124)	coreprof%ti%transp_coef%source (vecstring.type) (9.6.1.2.15)
flux (2104)	coreprof%ti%flux (fluxion) (9.6.1.3.205)
flux_dv (2202)	coreprof%ti%flux%flux_dv (matflt.type) (9.6.1.2.10)
flux_interp (2202)	coreprof%ti%flux%flux_interp (matflt.type) (9.6.1.2.10)
flux_dv_surf (2104)	coreprof%ti%flux_dv_surf (matflt.type) (9.6.1.2.10)
time_deriv (2104)	coreprof%ti%time_deriv (matflt.type) (9.6.1.2.10)
codeparam (2104)	coreprof%ti%codeparam (codeparam) (9.6.1.3.77)
codename (2074)	coreprof%ti%codeparam%codename (string) (9.6.1.1.3)
codeversion (2074)	coreprof%ti%codeparam%codeversion (string) (9.6.1.1.3)
parameters (2074)	coreprof%ti%codeparam%parameters (string) (9.6.1.1.3)
output_diag (2074)	coreprof%ti%codeparam%output_diag (string) (9.6.1.1.3)
output_flag (2074)	coreprof%ti%codeparam%output_flag (integer) (9.6.1.1.2)
ne (2008)	coreprof%ne (corefield) (9.6.1.3.106)
value (2103)	coreprof%ne%value (vecflt.type) (9.6.1.2.13)
ddrho (2103)	coreprof%ne%ddrho (vecflt.type) (9.6.1.2.13)
d2drho2 (2103)	coreprof%ne%d2drho2 (vecflt.type) (9.6.1.2.13)
ddt (2103)	coreprof%ne%ddt (vecflt.type) (9.6.1.2.13)
source (2103)	coreprof%ne%source (string) (9.6.1.1.3)
flag (2103)	coreprof%ne%flag (integer) (9.6.1.1.2)
boundary (2103)	coreprof%ne%boundary (boundaryel) (9.6.1.3.69)
value (2066)	coreprof%ne%boundary%value (vecflt.type) (9.6.1.2.13)
source (2066)	coreprof%ne%boundary%source (string) (9.6.1.1.3)
type (2066)	coreprof%ne%boundary%type (integer) (9.6.1.1.2)
rho_tor (2066)	coreprof%ne%boundary%rho_tor (float) (9.6.1.1.1)
source_term (2103)	coreprof%ne%source_term (sourceel) (9.6.1.3.404)
value (2401)	coreprof%ne%source_term%value (vecflt.type) (9.6.1.2.13)
integral (2401)	coreprof%ne%source_term%integral (vecflt.type) (9.6.1.2.13)
source (2401)	coreprof%ne%source_term%source (string) (9.6.1.1.3)
transp_coef (2103)	coreprof%ne%transp_coef (coretransel) (9.6.1.3.125)
diff (2122)	coreprof%ne%transp_coef%diff (vecflt.type) (9.6.1.2.13)
vconv (2122)	coreprof%ne%transp_coef%vconv (vecflt.type) (9.6.1.2.13)
source (2122)	coreprof%ne%transp_coef%source (string) (9.6.1.1.3)
flux (2103)	coreprof%ne%flux (fluxel) (9.6.1.3.203)
flux_dv (2200)	coreprof%ne%flux%flux_dv (vecflt.type) (9.6.1.2.13)
flux_interp (2200)	coreprof%ne%flux%flux_interp (vecflt.type) (9.6.1.2.13)
flux_dv_surf (2103)	coreprof%ne%flux_dv_surf (vecflt.type) (9.6.1.2.13)
time_deriv (2103)	coreprof%ne%time_deriv (vecflt.type) (9.6.1.2.13)
codeparam (2103)	coreprof%ne%codeparam (codeparam) (9.6.1.3.77)
codename (2074)	coreprof%ne%codeparam%codename (string) (9.6.1.1.3)
codeversion (2074)	coreprof%ne%codeparam%codeversion (string) (9.6.1.1.3)
parameters (2074)	coreprof%ne%codeparam%parameters (string) (9.6.1.1.3)
output_diag (2074)	coreprof%ne%codeparam%output_diag (string) (9.6.1.1.3)
output_flag (2074)	coreprof%ne%codeparam%output_flag (integer) (9.6.1.1.2)
ni (2008)	coreprof%ni (corefieldion) (9.6.1.3.107)
value (2104)	coreprof%ni%value (matflt.type) (9.6.1.2.10)
ddrho (2104)	coreprof%ni%ddrho (matflt.type) (9.6.1.2.10)
d2drho2 (2104)	coreprof%ni%d2drho2 (matflt.type) (9.6.1.2.10)
ddt (2104)	coreprof%ni%ddt (matflt.type) (9.6.1.2.10)
source (2104)	coreprof%ni%source (vecstring.type) (9.6.1.2.15)
flag (2104)	coreprof%ni%flag (vecint.type) (9.6.1.2.14)
boundary (2104)	coreprof%ni%boundary (boundaryion) (9.6.1.3.71)
value (2068)	coreprof%ni%boundary%value (matflt.type) (9.6.1.2.10)
source (2068)	coreprof%ni%boundary%source (vecstring.type) (9.6.1.2.15)
type (2068)	coreprof%ni%boundary%type (vecint.type) (9.6.1.2.14)
rho_tor (2068)	coreprof%ni%boundary%rho_tor (vecflt.type) (9.6.1.2.13)
source_term (2104)	coreprof%ni%source_term (sourceion) (9.6.1.3.406)
value (2403)	coreprof%ni%source_term%value (matflt.type) (9.6.1.2.10)
integral (2403)	coreprof%ni%source_term%integral (matflt.type) (9.6.1.2.10)
source (2403)	coreprof%ni%source_term%source (vecstring.type) (9.6.1.2.15)
transp_coef (2104)	coreprof%ni%transp_coef (coretransion) (9.6.1.3.127)

diff (2124)  
vconv (2124)  
source (2124)  
flux (2104)  
  flux\_dv (2202)  
  flux\_interp (2202)  
flux\_dv\_surf (2104)  
time\_deriv (2104)  
codeparam (2104)  
  codename (2074)  
  codeversion (2074)  
  parameters (2074)  
  output\_diag (2074)  
  output\_flag (2074)  
vtor (2008)  
  value (2104)  
  ddrho (2104)  
  d2drho2 (2104)  
  ddt (2104)  
  source (2104)  
  flag (2104)  
  boundary (2104)  
    value (2068)  
    source (2068)  
    type (2068)  
    rho\_tor (2068)  
  source\_term (2104)  
    value (2403)  
    integral (2403)  
    source (2403)  
  transp\_coef (2104)  
    diff (2124)  
    vconv (2124)  
    source (2124)  
  flux (2104)  
    flux\_dv (2202)  
    flux\_interp (2202)  
  flux\_dv\_surf (2104)  
  time\_deriv (2104)  
  codeparam (2104)  
    codename (2074)  
    codeversion (2074)  
    parameters (2074)  
    output\_diag (2074)  
    output\_flag (2074)  
profiles1d (2008)  
  pe (2333)  
    value (2119)  
    source (2119)  
  dpedt (2333)  
    value (2119)  
    source (2119)  
  pi (2333)  
    value (2120)  
    source (2120)  
  pi\_tot (2333)  
    value (2119)  
    source (2119)  
  dpi\_totdt (2333)  
    value (2119)  
    source (2119)  
  coreprof%ni%transp\_coef%diff (matflt\_type) (9.6.1.2.10)  
  coreprof%ni%transp\_coef%vconv (matflt\_type) (9.6.1.2.10)  
  coreprof%ni%transp\_coef%source (vecstring\_type) (9.6.1.2.15)  
  coreprof%ni%flux (fluxion) (9.6.1.3.205)  
  coreprof%ni%flux%flux\_dv (matflt\_type) (9.6.1.2.10)  
  coreprof%ni%flux%flux\_interp (matflt\_type) (9.6.1.2.10)  
  coreprof%ni%flux\_dv\_surf (matflt\_type) (9.6.1.2.10)  
  coreprof%ni%time\_deriv (matflt\_type) (9.6.1.2.10)  
  coreprof%ni%codeparam (codeparam) (9.6.1.3.77)  
  coreprof%ni%codeparam%codename (string) (9.6.1.1.3)  
  coreprof%ni%codeparam%codeversion (string) (9.6.1.1.3)  
  coreprof%ni%codeparam%parameters (string) (9.6.1.1.3)  
  coreprof%ni%codeparam%output\_diag (string) (9.6.1.1.3)  
  coreprof%ni%codeparam%output\_flag (integer) (9.6.1.1.2)  
  coreprof%vtor (corefieldion) (9.6.1.3.107)  
  coreprof%vtor%value (matflt\_type) (9.6.1.2.10)  
  coreprof%vtor%ddrho (matflt\_type) (9.6.1.2.10)  
  coreprof%vtor%d2drho2 (matflt\_type) (9.6.1.2.10)  
  coreprof%vtor%ddt (matflt\_type) (9.6.1.2.10)  
  coreprof%vtor%source (vecstring\_type) (9.6.1.2.15)  
  coreprof%vtor%flag (vecint\_type) (9.6.1.2.14)  
  coreprof%vtor%boundary (boundaryion) (9.6.1.3.71)  
  coreprof%vtor%boundary%value (matflt\_type) (9.6.1.2.10)  
  coreprof%vtor%boundary%source (vecstring\_type) (9.6.1.2.15)  
  coreprof%vtor%boundary%type (vecint\_type) (9.6.1.2.14)  
  coreprof%vtor%boundary%rho\_tor (vecflt\_type) (9.6.1.2.13)  
  coreprof%vtor%source\_term (sourceion) (9.6.1.3.406)  
  coreprof%vtor%source\_term%value (matflt\_type) (9.6.1.2.10)  
  coreprof%vtor%source\_term%integral (matflt\_type) (9.6.1.2.10)  
  coreprof%vtor%source\_term%source (vecstring\_type) (9.6.1.2.15)  
  coreprof%vtor%transp\_coef (coretransion) (9.6.1.3.127)  
  coreprof%vtor%transp\_coef%diff (matflt\_type) (9.6.1.2.10)  
  coreprof%vtor%transp\_coef%vconv (matflt\_type) (9.6.1.2.10)  
  coreprof%vtor%transp\_coef%source (vecstring\_type) (9.6.1.2.15)  
  coreprof%vtor%flux (fluxion) (9.6.1.3.205)  
  coreprof%vtor%flux%flux\_dv (matflt\_type) (9.6.1.2.10)  
  coreprof%vtor%flux%flux\_interp (matflt\_type) (9.6.1.2.10)  
  coreprof%vtor%flux\_dv\_surf (matflt\_type) (9.6.1.2.10)  
  coreprof%vtor%time\_deriv (matflt\_type) (9.6.1.2.10)  
  coreprof%vtor%codeparam (codeparam) (9.6.1.3.77)  
  coreprof%vtor%codeparam%codename (string) (9.6.1.1.3)  
  coreprof%vtor%codeparam%codeversion (string) (9.6.1.1.3)  
  coreprof%vtor%codeparam%parameters (string) (9.6.1.1.3)  
  coreprof%vtor%codeparam%output\_diag (string) (9.6.1.1.3)  
  coreprof%vtor%codeparam%output\_flag (integer) (9.6.1.1.2)  
  coreprof%profiles1d (profiles1d) (9.6.1.3.336)  
  coreprof%profiles1d%pe (coreprofile) (9.6.1.3.122)  
  coreprof%profiles1d%pe%value (vecflt\_type) (9.6.1.2.13)  
  coreprof%profiles1d%pe%source (string) (9.6.1.1.3)  
  coreprof%profiles1d%dpedt (coreprofile) (9.6.1.3.122)  
  coreprof%profiles1d%dpedt%value (vecflt\_type) (9.6.1.2.13)  
  coreprof%profiles1d%dpedt%source (string) (9.6.1.1.3)  
  coreprof%profiles1d%pi (corepfion) (9.6.1.3.123)  
  coreprof%profiles1d%pi%value (matflt\_type) (9.6.1.2.10)  
  coreprof%profiles1d%pi%source (vecstring\_type) (9.6.1.2.15)  
  coreprof%profiles1d%pi\_tot (coreprofile) (9.6.1.3.122)  
  coreprof%profiles1d%pi\_tot%value (vecflt\_type) (9.6.1.2.13)  
  coreprof%profiles1d%pi\_tot%source (string) (9.6.1.1.3)  
  coreprof%profiles1d%dpi\_totdt (coreprofile) (9.6.1.3.122)  
  coreprof%profiles1d%dpi\_totdt%value (vecflt\_type) (9.6.1.2.13)  
  coreprof%profiles1d%dpi\_totdt%source (string) (9.6.1.1.3)

pr.th (2333)	coreprof%profiles1d%pr.th (coreprofile) (9.6.1.3.122)
value (2119)	coreprof%profiles1d%pr.th%value (vecflt.type) (9.6.1.2.13)
source (2119)	coreprof%profiles1d%pr.th%source (string) (9.6.1.1.3)
pr.perp (2333)	coreprof%profiles1d%pr.perp (coreprofile) (9.6.1.3.122)
value (2119)	coreprof%profiles1d%pr.perp%value (vecflt.type) (9.6.1.2.13)
source (2119)	coreprof%profiles1d%pr.perp%source (string) (9.6.1.1.3)
pr.parallel (2333)	coreprof%profiles1d%pr.parallel (coreprofile) (9.6.1.3.122)
value (2119)	coreprof%profiles1d%pr.parallel%value (vecflt.type) (9.6.1.2.13)
source (2119)	coreprof%profiles1d%pr.parallel%source (string) (9.6.1.1.3)
jtot (2333)	coreprof%profiles1d%jtot (coreprofile) (9.6.1.3.122)
value (2119)	coreprof%profiles1d%jtot%value (vecflt.type) (9.6.1.2.13)
source (2119)	coreprof%profiles1d%jtot%source (string) (9.6.1.1.3)
jni (2333)	coreprof%profiles1d%jni (coreprofile) (9.6.1.3.122)
value (2119)	coreprof%profiles1d%jni%value (vecflt.type) (9.6.1.2.13)
source (2119)	coreprof%profiles1d%jni%source (string) (9.6.1.1.3)
jphi (2333)	coreprof%profiles1d%jphi (coreprofile) (9.6.1.3.122)
value (2119)	coreprof%profiles1d%jphi%value (vecflt.type) (9.6.1.2.13)
source (2119)	coreprof%profiles1d%jphi%source (string) (9.6.1.1.3)
joh (2333)	coreprof%profiles1d%joh (coreprofile) (9.6.1.3.122)
value (2119)	coreprof%profiles1d%joh%value (vecflt.type) (9.6.1.2.13)
source (2119)	coreprof%profiles1d%joh%source (string) (9.6.1.1.3)
vloop (2333)	coreprof%profiles1d%vloop (coreprofile) (9.6.1.3.122)
value (2119)	coreprof%profiles1d%vloop%value (vecflt.type) (9.6.1.2.13)
source (2119)	coreprof%profiles1d%vloop%source (string) (9.6.1.1.3)
sigmapar (2333)	coreprof%profiles1d%sigmapar (coreprofile) (9.6.1.3.122)
value (2119)	coreprof%profiles1d%sigmapar%value (vecflt.type) (9.6.1.2.13)
source (2119)	coreprof%profiles1d%sigmapar%source (string) (9.6.1.1.3)
qoh (2333)	coreprof%profiles1d%qoh (sourcecel) (9.6.1.3.404)
value (2401)	coreprof%profiles1d%qoh%value (vecflt.type) (9.6.1.2.13)
integral (2401)	coreprof%profiles1d%qoh%integral (vecflt.type) (9.6.1.2.13)
source (2401)	coreprof%profiles1d%qoh%source (string) (9.6.1.1.3)
qei (2333)	coreprof%profiles1d%qei (coreprofile) (9.6.1.3.122)
value (2119)	coreprof%profiles1d%qei%value (vecflt.type) (9.6.1.2.13)
source (2119)	coreprof%profiles1d%qei%source (string) (9.6.1.1.3)
eparallel (2333)	coreprof%profiles1d%eparallel (coreprofile) (9.6.1.3.122)
value (2119)	coreprof%profiles1d%eparallel%value (vecflt.type) (9.6.1.2.13)
source (2119)	coreprof%profiles1d%eparallel%source (string) (9.6.1.1.3)
e.b (2333)	coreprof%profiles1d%e.b (coreprofile) (9.6.1.3.122)
value (2119)	coreprof%profiles1d%e.b%value (vecflt.type) (9.6.1.2.13)
source (2119)	coreprof%profiles1d%e.b%source (string) (9.6.1.1.3)
q (2333)	coreprof%profiles1d%q (coreprofile) (9.6.1.3.122)
value (2119)	coreprof%profiles1d%q%value (vecflt.type) (9.6.1.2.13)
source (2119)	coreprof%profiles1d%q%source (string) (9.6.1.1.3)
shear (2333)	coreprof%profiles1d%shear (coreprofile) (9.6.1.3.122)
value (2119)	coreprof%profiles1d%shear%value (vecflt.type) (9.6.1.2.13)
source (2119)	coreprof%profiles1d%shear%source (string) (9.6.1.1.3)
ns (2333)	coreprof%profiles1d%ns (coreprofion) (9.6.1.3.123)
value (2120)	coreprof%profiles1d%ns%value (matflt.type) (9.6.1.2.10)
source (2120)	coreprof%profiles1d%ns%source (vecstring.type) (9.6.1.2.15)
mtor (2333)	coreprof%profiles1d%mtor (coreprofion) (9.6.1.3.123)
value (2120)	coreprof%profiles1d%mtor%value (matflt.type) (9.6.1.2.10)
source (2120)	coreprof%profiles1d%mtor%source (vecstring.type) (9.6.1.2.15)
wtor (2333)	coreprof%profiles1d%wtor (coreprofion) (9.6.1.3.123)
value (2120)	coreprof%profiles1d%wtor%value (matflt.type) (9.6.1.2.10)
source (2120)	coreprof%profiles1d%wtor%source (vecstring.type) (9.6.1.2.15)
zeff (2333)	coreprof%profiles1d%zeff (coreprofile) (9.6.1.3.122)
value (2119)	coreprof%profiles1d%zeff%value (vecflt.type) (9.6.1.2.13)
source (2119)	coreprof%profiles1d%zeff%source (string) (9.6.1.1.3)
bpol (2333)	coreprof%profiles1d%bpol (coreprofile) (9.6.1.3.122)
value (2119)	coreprof%profiles1d%bpol%value (vecflt.type) (9.6.1.2.13)
source (2119)	coreprof%profiles1d%bpol%source (string) (9.6.1.1.3)

dvprimedt (2333)	coreprof%profiles1d%dvprimedt (coreprofile) (9.6.1.3.122)
value (2119)	coreprof%profiles1d%dvprimedt%value (vecflt.type) (9.6.1.2.13)
source (2119)	coreprof%profiles1d%dvprimedt%source (string) (9.6.1.1.3)
globalparam (2008)	coreprof%globalparam (globalparam) (9.6.1.3.227)
current_tot (2224)	coreprof%globalparam%current_tot (float) (9.6.1.1.1)
current_bnd (2224)	coreprof%globalparam%current_bnd (float) (9.6.1.1.1)
current_ni (2224)	coreprof%globalparam%current_ni (float) (9.6.1.1.1)
vloop (2224)	coreprof%globalparam%vloop (float) (9.6.1.1.1)
li (2224)	coreprof%globalparam%li (float) (9.6.1.1.1)
beta_tor (2224)	coreprof%globalparam%beta_tor (float) (9.6.1.1.1)
beta_normal (2224)	coreprof%globalparam%beta_normal (float) (9.6.1.1.1)
beta_pol (2224)	coreprof%globalparam%beta_pol (float) (9.6.1.1.1)
w_dia (2224)	coreprof%globalparam%w_dia (float) (9.6.1.1.1)
codeparam (2008)	coreprof%codeparam (codeparam) (9.6.1.3.77)
codename (2074)	coreprof%codeparam%codename (string) (9.6.1.1.3)
codeversion (2074)	coreprof%codeparam%codeversion (string) (9.6.1.1.3)
parameters (2074)	coreprof%codeparam%parameters (string) (9.6.1.1.3)
output_diag (2074)	coreprof%codeparam%output_diag (string) (9.6.1.1.3)
output_flag (2074)	coreprof%codeparam%output_flag (integer) (9.6.1.1.2)
time (2008)	coreprof%time (float) (9.6.1.1.1)

### 9.6.2.1.10 coresource

datainfo (2009)	coresource%datainfo (datainfo) (9.6.1.3.133)
dataprovider (2130)	coresource%datainfo%dataprovider (string) (9.6.1.1.3)
putdate (2130)	coresource%datainfo%putdate (string) (9.6.1.1.3)
source (2130)	coresource%datainfo%source (string) (9.6.1.1.3)
comment (2130)	coresource%datainfo%comment (string) (9.6.1.1.3)
cocos (2130)	coresource%datainfo%cocos (integer) (9.6.1.1.2)
id (2130)	coresource%datainfo%id (integer) (9.6.1.1.2)
isref (2130)	coresource%datainfo%isref (integer) (9.6.1.1.2)
whatref (2130)	coresource%datainfo%whatref (whatref) (9.6.1.3.503)
user (2500)	coresource%datainfo%whatref%user (string) (9.6.1.1.3)
machine (2500)	coresource%datainfo%whatref%machine (string) (9.6.1.1.3)
shot (2500)	coresource%datainfo%whatref%shot (integer) (9.6.1.1.2)
run (2500)	coresource%datainfo%whatref%run (integer) (9.6.1.1.2)
occurrence (2500)	coresource%datainfo%whatref%occurrence (integer) (9.6.1.1.2)
putinfo (2130)	coresource%datainfo%putinfo (putinfo) (9.6.1.3.339)
putmethod (2336)	coresource%datainfo%putinfo%putmethod (string) (9.6.1.1.3)
putaccess (2336)	coresource%datainfo%putinfo%putaccess (string) (9.6.1.1.3)
putlocation (2336)	coresource%datainfo%putinfo%putlocation (string) (9.6.1.1.3)
rights (2336)	coresource%datainfo%putinfo%rights (string) (9.6.1.1.3)
composition (2009)	coresource%composition (composition) (9.6.1.3.95)
amn (2092)	coresource%composition%amn (vecflt.type) (9.6.1.2.13)
zn (2092)	coresource%composition%zn (vecflt.type) (9.6.1.2.13)
zion (2092)	coresource%composition%zion (vecflt.type) (9.6.1.2.13)
imp_flag (2092)	coresource%composition%imp_flag (vecint.type) (9.6.1.2.14)
label (2092)	coresource%composition%label (vecstring.type) (9.6.1.2.15)
desc_impur (2009)	coresource%desc_impur (desc_impur) (9.6.1.3.135)
amn (2132)	coresource%desc_impur%amn (vecflt.type) (9.6.1.2.13)
zn (2132)	coresource%desc_impur%zn (vecint.type) (9.6.1.2.14)
i_ion (2132)	coresource%desc_impur%i_ion (vecint.type) (9.6.1.2.14)
nzimp (2132)	coresource%desc_impur%nzimp (vecint.type) (9.6.1.2.14)
zmin (2132)	coresource%desc_impur%zmin (matint.type) (9.6.1.2.11)
zmax (2132)	coresource%desc_impur%zmax (matint.type) (9.6.1.2.11)
label (2132)	coresource%desc_impur%label (vecstring.type) (9.6.1.2.15)
compositions (2009)	coresource%compositions (compositions.type) (9.6.1.3.99)
nuclei (2096)	coresource%compositions%nuclei(:) (nuclei) (9.6.1.3.296)
zn (2293)	coresource%compositions%nuclei(:)%zn (float) (9.6.1.1.1)
amn (2293)	coresource%compositions%nuclei(:)%amn (float) (9.6.1.1.1)
label (2293)	coresource%compositions%nuclei(:)%label (string) (9.6.1.1.3)



ions (2096)	coresource%compositions%ions(:) (ions) (9.6.1.3.238)
nucindex (2235)	coresource%compositions%ions(:)%nucindex (integer) (9.6.1.1.2)
zion (2235)	coresource%compositions%ions(:)%zion (float) (9.6.1.1.1)
imp_flag (2235)	coresource%compositions%ions(:)%imp_flag (integer) (9.6.1.1.2)
label (2235)	coresource%compositions%ions(:)%label (string) (9.6.1.1.3)
impurities (2096)	coresource%compositions%impurities(:) (impurities) (9.6.1.3.235)
nucindex (2232)	coresource%compositions%impurities(:)%nucindex (integer) (9.6.1.1.2)
i_ion (2232)	coresource%compositions%impurities(:)%i_ion (integer) (9.6.1.1.2)
nzimp (2232)	coresource%compositions%impurities(:)%nzimp (integer) (9.6.1.1.2)
zmin (2232)	coresource%compositions%impurities(:)%zmin (vecflt_type) (9.6.1.2.13)
zmax (2232)	coresource%compositions%impurities(:)%zmax (vecflt_type) (9.6.1.2.13)
label (2232)	coresource%compositions%impurities(:)%label (vecstring_type) (9.6.1.2.15)
neutralscomp (2096)	coresource%compositions%neutralscomp(:) (composition_neutralscomp) (9.6.1.3.98)
neutcomp (2095)	coresource%compositions%neutralscomp(:)%neutcomp(:) (composition_neutrals_neutcomp) (9.6.1.3.97)
nucindex (2094)	coresource%compositions%neutralscomp(:)%neutcomp(:)%nucindex (integer) (9.6.1.1.2)
multiplicity (2094)	coresource%compositions%neutralscomp(:)%neutcomp(:)%multiplicity (integer) (9.6.1.1.2)
type (2095)	coresource%compositions%neutralscomp(:)%type(:) (identifier) (9.6.1.3.233)
id (2230)	coresource%compositions%neutralscomp(:)%type(:)%id (string) (9.6.1.1.3)
flag (2230)	coresource%compositions%neutralscomp(:)%type(:)%flag (integer) (9.6.1.1.2)
description (2230)	coresource%compositions%neutralscomp(:)%type(:)%description (string) (9.6.1.1.3)
label (2095)	coresource%compositions%neutralscomp(:)%label (string) (9.6.1.1.3)
edgespecies (2096)	coresource%compositions%edgespecies(:) (edgespecies) (9.6.1.3.183)
nucindex (2180)	coresource%compositions%edgespecies(:)%nucindex (integer) (9.6.1.1.2)
zmin (2180)	coresource%compositions%edgespecies(:)%zmin (float) (9.6.1.1.1)
zmax (2180)	coresource%compositions%edgespecies(:)%zmax (float) (9.6.1.1.1)
label (2180)	coresource%compositions%edgespecies(:)%label (string) (9.6.1.1.3)
signature (2096)	coresource%compositions%signature (identifier) (9.6.1.3.233)
id (2230)	coresource%compositions%signature%id (string) (9.6.1.1.3)
flag (2230)	coresource%compositions%signature%flag (integer) (9.6.1.1.2)
description (2230)	coresource%compositions%signature%description (string) (9.6.1.1.3)
toroid_field (2009)	coresource%toroid_field (b0r0) (9.6.1.3.59)
r0 (2056)	coresource%toroid_field%r0 (float) (9.6.1.1.1)
b0 (2056)	coresource%toroid_field%b0 (float) (9.6.1.1.1)
values (2009)	coresource%values(:) (coresource_values) (9.6.1.3.124)
sourceid (2121)	coresource%values(:)%sourceid (identifier) (9.6.1.3.233)
id (2230)	coresource%values(:)%sourceid%id (string) (9.6.1.1.3)
flag (2230)	coresource%values(:)%sourceid%flag (integer) (9.6.1.1.2)
description (2230)	coresource%values(:)%sourceid%description (string) (9.6.1.1.3)
rho_tor (2121)	coresource%values(:)%rho_tor (vecflt_type) (9.6.1.2.13)
rho_tor_norm (2121)	coresource%values(:)%rho_tor_norm (vecflt_type) (9.6.1.2.13)
psi (2121)	coresource%values(:)%psi (vecflt_type) (9.6.1.2.13)
volume (2121)	coresource%values(:)%volume (vecflt_type) (9.6.1.2.13)
area (2121)	coresource%values(:)%area (vecflt_type) (9.6.1.2.13)
j (2121)	coresource%values(:)%j (vecflt_type) (9.6.1.2.13)
sigma (2121)	coresource%values(:)%sigma (vecflt_type) (9.6.1.2.13)
si (2121)	coresource%values(:)%si (source_ion) (9.6.1.3.401)
exp (2398)	coresource%values(:)%si%exp (matflt_type) (9.6.1.2.10)
imp (2398)	coresource%values(:)%si%imp (matflt_type) (9.6.1.2.10)
se (2121)	coresource%values(:)%se (source_vec) (9.6.1.3.403)
exp (2400)	coresource%values(:)%se%exp (vecflt_type) (9.6.1.2.13)
imp (2400)	coresource%values(:)%se%imp (vecflt_type) (9.6.1.2.13)
sz (2121)	coresource%values(:)%sz(:) (source_imp) (9.6.1.3.400)
exp (2397)	coresource%values(:)%sz(:)%exp (matflt_type) (9.6.1.2.10)
imp (2397)	coresource%values(:)%sz(:)%imp (matflt_type) (9.6.1.2.10)
qi (2121)	coresource%values(:)%qi (source_ion) (9.6.1.3.401)
exp (2398)	coresource%values(:)%qi%exp (matflt_type) (9.6.1.2.10)
imp (2398)	coresource%values(:)%qi%imp (matflt_type) (9.6.1.2.10)
qe (2121)	coresource%values(:)%qe (source_vec) (9.6.1.3.403)
exp (2400)	coresource%values(:)%qe%exp (vecflt_type) (9.6.1.2.13)
imp (2400)	coresource%values(:)%qe%imp (vecflt_type) (9.6.1.2.13)
qz (2121)	coresource%values(:)%qz(:) (source_imp) (9.6.1.3.400)



exp (2397)	coresource%values(:)%qz(:)%exp (matflt_type) (9.6.1.2.10)
imp (2397)	coresource%values(:)%qz(:)%imp (matflt_type) (9.6.1.2.10)
ui (2121)	coresource%values(:)%ui (source_ion) (9.6.1.3.401)
exp (2398)	coresource%values(:)%ui%exp (matflt_type) (9.6.1.2.10)
imp (2398)	coresource%values(:)%ui%imp (matflt_type) (9.6.1.2.10)
ujxb (2121)	coresource%values(:)%ujxb (source_vec) (9.6.1.3.403)
exp (2400)	coresource%values(:)%ujxb%exp (vecflt_type) (9.6.1.2.13)
imp (2400)	coresource%values(:)%ujxb%imp (vecflt_type) (9.6.1.2.13)
codeparam (2121)	coresource%values(:)%codeparam (codeparam) (9.6.1.3.77)
codename (2074)	coresource%values(:)%codeparam%codename (string) (9.6.1.1.3)
codeversion (2074)	coresource%values(:)%codeparam%codeversion (string) (9.6.1.1.3)
parameters (2074)	coresource%values(:)%codeparam%parameters (string) (9.6.1.1.3)
output_diag (2074)	coresource%values(:)%codeparam%output_diag (string) (9.6.1.1.3)
output_flag (2074)	coresource%values(:)%codeparam%output_flag (integer) (9.6.1.1.2)
codeparam (2009)	coresource%codeparam (codeparam) (9.6.1.3.77)
codename (2074)	coresource%codeparam%codename (string) (9.6.1.1.3)
codeversion (2074)	coresource%codeparam%codeversion (string) (9.6.1.1.3)
parameters (2074)	coresource%codeparam%parameters (string) (9.6.1.1.3)
output_diag (2074)	coresource%codeparam%output_diag (string) (9.6.1.1.3)
output_flag (2074)	coresource%codeparam%output_flag (integer) (9.6.1.1.2)
time (2009)	coresource%time (float) (9.6.1.1.1)

### 9.6.2.1.11 coretransp

datainfo (2010)	coretransp%datainfo (datainfo) (9.6.1.3.133)
dataprovider (2130)	coretransp%datainfo%dataprovider (string) (9.6.1.1.3)
putdate (2130)	coretransp%datainfo%putdate (string) (9.6.1.1.3)
source (2130)	coretransp%datainfo%source (string) (9.6.1.1.3)
comment (2130)	coretransp%datainfo%comment (string) (9.6.1.1.3)
cocos (2130)	coretransp%datainfo%cocos (integer) (9.6.1.1.2)
id (2130)	coretransp%datainfo%id (integer) (9.6.1.1.2)
isref (2130)	coretransp%datainfo%isref (integer) (9.6.1.1.2)
whatref (2130)	coretransp%datainfo%whatref (whatref) (9.6.1.3.503)
user (2500)	coretransp%datainfo%whatref%user (string) (9.6.1.1.3)
machine (2500)	coretransp%datainfo%whatref%machine (string) (9.6.1.1.3)
shot (2500)	coretransp%datainfo%whatref%shot (integer) (9.6.1.1.2)
run (2500)	coretransp%datainfo%whatref%run (integer) (9.6.1.1.2)
occurrence (2500)	coretransp%datainfo%whatref%occurrence (integer) (9.6.1.1.2)
putinfo (2130)	coretransp%datainfo%putinfo (putinfo) (9.6.1.3.339)
putmethod (2336)	coretransp%datainfo%putinfo%putmethod (string) (9.6.1.1.3)
putaccess (2336)	coretransp%datainfo%putinfo%putaccess (string) (9.6.1.1.3)
putlocation (2336)	coretransp%datainfo%putinfo%putlocation (string) (9.6.1.1.3)
rights (2336)	coretransp%datainfo%putinfo%rights (string) (9.6.1.1.3)
composition (2010)	coretransp%composition (composition) (9.6.1.3.95)
amn (2092)	coretransp%composition%amn (vecflt_type) (9.6.1.2.13)
zn (2092)	coretransp%composition%zn (vecflt_type) (9.6.1.2.13)
zion (2092)	coretransp%composition%zion (vecflt_type) (9.6.1.2.13)
imp_flag (2092)	coretransp%composition%imp_flag (vecint_type) (9.6.1.2.14)
label (2092)	coretransp%composition%label (vecstring_type) (9.6.1.2.15)
desc_impur (2010)	coretransp%desc_impur (desc_impur) (9.6.1.3.135)
amn (2132)	coretransp%desc_impur%amn (vecflt_type) (9.6.1.2.13)
zn (2132)	coretransp%desc_impur%zn (vecint_type) (9.6.1.2.14)
i_ion (2132)	coretransp%desc_impur%i_ion (vecint_type) (9.6.1.2.14)
nzimp (2132)	coretransp%desc_impur%nzimp (vecint_type) (9.6.1.2.14)
zmin (2132)	coretransp%desc_impur%zmin (matint_type) (9.6.1.2.11)
zmax (2132)	coretransp%desc_impur%zmax (matint_type) (9.6.1.2.11)
label (2132)	coretransp%desc_impur%label (vecstring_type) (9.6.1.2.15)
compositions (2010)	coretransp%compositions (compositions_type) (9.6.1.3.99)
nuclei (2096)	coretransp%compositions%nuclei(:) (nuclei) (9.6.1.3.296)
zn (2293)	coretransp%compositions%nuclei(:)%zn (float) (9.6.1.1.1)
amn (2293)	coretransp%compositions%nuclei(:)%amn (float) (9.6.1.1.1)

label (2293)	coretransp%compositions%nuclei(:)%label (string) (9.6.1.1.3)
ions (2096)	coretransp%compositions%ions(:) (ions) (9.6.1.3.238)
nucindex (2235)	coretransp%compositions%ions(:)%nucindex (integer) (9.6.1.1.2)
zion (2235)	coretransp%compositions%ions(:)%zion (float) (9.6.1.1.1)
imp_flag (2235)	coretransp%compositions%ions(:)%imp_flag (integer) (9.6.1.1.2)
label (2235)	coretransp%compositions%ions(:)%label (string) (9.6.1.1.3)
impurities (2096)	coretransp%compositions%impurities(:) (impurities) (9.6.1.3.235)
nucindex (2232)	coretransp%compositions%impurities(:)%nucindex (integer) (9.6.1.1.2)
i_ion (2232)	coretransp%compositions%impurities(:)%i_ion (integer) (9.6.1.1.2)
nzimp (2232)	coretransp%compositions%impurities(:)%nzimp (integer) (9.6.1.1.2)
zmin (2232)	coretransp%compositions%impurities(:)%zmin (vecflt_type) (9.6.1.2.13)
zmax (2232)	coretransp%compositions%impurities(:)%zmax (vecflt_type) (9.6.1.2.13)
label (2232)	coretransp%compositions%impurities(:)%label (vecstring_type) (9.6.1.2.15)
neutralscomp (2096)	coretransp%compositions%neutralscomp(:) (composition_neutralscomp) (9.6.1.3.98)
neutcomp (2095)	coretransp%compositions%neutralscomp(:)%neutcomp(:) (composition_neutrals_neutcomp) (9.6.1.3.97)
nucindex (2094)	coretransp%compositions%neutralscomp(:)%neutcomp(:)%nucindex (integer) (9.6.1.1.2)
multiplicity (2094)	coretransp%compositions%neutralscomp(:)%neutcomp(:)%multiplicity (integer) (9.6.1.1.2)
type (2095)	coretransp%compositions%neutralscomp(:)%type(:) (identifier) (9.6.1.3.233)
id (2230)	coretransp%compositions%neutralscomp(:)%type(:)%id (string) (9.6.1.1.3)
flag (2230)	coretransp%compositions%neutralscomp(:)%type(:)%flag (integer) (9.6.1.1.2)
description (2230)	coretransp%compositions%neutralscomp(:)%type(:)%description (string) (9.6.1.1.3)
label (2095)	coretransp%compositions%neutralscomp(:)%label (string) (9.6.1.1.3)
edgespecies (2096)	coretransp%compositions%edgespecies(:) (edgespecies) (9.6.1.3.183)
nucindex (2180)	coretransp%compositions%edgespecies(:)%nucindex (integer) (9.6.1.1.2)
zmin (2180)	coretransp%compositions%edgespecies(:)%zmin (float) (9.6.1.1.1)
zmax (2180)	coretransp%compositions%edgespecies(:)%zmax (float) (9.6.1.1.1)
label (2180)	coretransp%compositions%edgespecies(:)%label (string) (9.6.1.1.3)
signature (2096)	coretransp%compositions%signature (identifier) (9.6.1.3.233)
id (2230)	coretransp%compositions%signature%id (string) (9.6.1.1.3)
flag (2230)	coretransp%compositions%signature%flag (integer) (9.6.1.1.2)
description (2230)	coretransp%compositions%signature%description (string) (9.6.1.1.3)
values (2010)	coretransp%values(:) (coretransp_values) (9.6.1.3.128)
transportid (2125)	coretransp%values(:)%transportid (identifier) (9.6.1.3.233)
id (2230)	coretransp%values(:)%transportid%id (string) (9.6.1.1.3)
flag (2230)	coretransp%values(:)%transportid%flag (integer) (9.6.1.1.2)
description (2230)	coretransp%values(:)%transportid%description (string) (9.6.1.1.3)
rho_tor_norm (2125)	coretransp%values(:)%rho_tor_norm (vecflt_type) (9.6.1.2.13)
rho_tor (2125)	coretransp%values(:)%rho_tor (vecflt_type) (9.6.1.2.13)
psi (2125)	coretransp%values(:)%psi (vecflt_type) (9.6.1.2.13)
volume (2125)	coretransp%values(:)%volume (vecflt_type) (9.6.1.2.13)
area (2125)	coretransp%values(:)%area (vecflt_type) (9.6.1.2.13)
sigma (2125)	coretransp%values(:)%sigma (vecflt_type) (9.6.1.2.13)
ni_transp (2125)	coretransp%values(:)%ni_transp (ni_transp) (9.6.1.3.289)
diff_eff (2286)	coretransp%values(:)%ni_transp%diff_eff (array3dflt_type) (9.6.1.2.2)
vconv_eff (2286)	coretransp%values(:)%ni_transp%vconv_eff (array3dflt_type) (9.6.1.2.2)
flux (2286)	coretransp%values(:)%ni_transp%flux (matflt_type) (9.6.1.2.10)
off_diagonal (2286)	coretransp%values(:)%ni_transp%off_diagonal (offdiagion) (9.6.1.3.299)
d_ni (2296)	coretransp%values(:)%ni_transp%off_diagonal%d_ni (array3dflt_type) (9.6.1.2.2)
d_ti (2296)	coretransp%values(:)%ni_transp%off_diagonal%d_ti (array3dflt_type) (9.6.1.2.2)
d_ne (2296)	coretransp%values(:)%ni_transp%off_diagonal%d_ne (matflt_type) (9.6.1.2.10)
d_te (2296)	coretransp%values(:)%ni_transp%off_diagonal%d_te (matflt_type) (9.6.1.2.10)
d_epar (2296)	coretransp%values(:)%ni_transp%off_diagonal%d_epar (matflt_type) (9.6.1.2.10)
d_mtor (2296)	coretransp%values(:)%ni_transp%off_diagonal%d_mtor (matflt_type) (9.6.1.2.10)
flag (2286)	coretransp%values(:)%ni_transp%flag (integer) (9.6.1.1.2)
ne_transp (2125)	coretransp%values(:)%ne_transp (ne_transp) (9.6.1.3.285)
diff_eff (2282)	coretransp%values(:)%ne_transp%diff_eff (matflt_type) (9.6.1.2.10)
vconv_eff (2282)	coretransp%values(:)%ne_transp%vconv_eff (matflt_type) (9.6.1.2.10)
flux (2282)	coretransp%values(:)%ne_transp%flux (vecflt_type) (9.6.1.2.13)
off_diagonal (2282)	coretransp%values(:)%ne_transp%off_diagonal (offdiagel) (9.6.1.3.298)
d_ni (2295)	coretransp%values(:)%ne_transp%off_diagonal%d_ni (matflt_type) (9.6.1.2.10)
d_ti (2295)	coretransp%values(:)%ne_transp%off_diagonal%d_ti (matflt_type) (9.6.1.2.10)

d_ne (2295)	coretransp%values(:)%ne_transp%off_diagonal%d_ne (vecflt_type) (9.6.1.2.13)
d_te (2295)	coretransp%values(:)%ne_transp%off_diagonal%d_te (vecflt_type) (9.6.1.2.13)
d_epar (2295)	coretransp%values(:)%ne_transp%off_diagonal%d_epar (vecflt_type) (9.6.1.2.13)
d_mtor (2295)	coretransp%values(:)%ne_transp%off_diagonal%d_mtor (vecflt_type) (9.6.1.2.13)
flag (2282)	coretransp%values(:)%ne_transp%flag (integer) (9.6.1.1.2)
nz_transp (2125)	coretransp%values(:)%nz_transp(:) (transcoefimp) (9.6.1.3.459)
diff_eff (2456)	coretransp%values(:)%nz_transp(:)%diff_eff (matflt_type) (9.6.1.2.10)
vconv_eff (2456)	coretransp%values(:)%nz_transp(:)%vconv_eff (matflt_type) (9.6.1.2.10)
exchange (2456)	coretransp%values(:)%nz_transp(:)%exchange (matflt_type) (9.6.1.2.10)
flux (2456)	coretransp%values(:)%nz_transp(:)%flux (matflt_type) (9.6.1.2.10)
flag (2456)	coretransp%values(:)%nz_transp(:)%flag (integer) (9.6.1.1.2)
ti_transp (2125)	coretransp%values(:)%ti_transp (transcoefion) (9.6.1.3.460)
diff_eff (2457)	coretransp%values(:)%ti_transp%diff_eff (matflt_type) (9.6.1.2.10)
vconv_eff (2457)	coretransp%values(:)%ti_transp%vconv_eff (matflt_type) (9.6.1.2.10)
exchange (2457)	coretransp%values(:)%ti_transp%exchange (matflt_type) (9.6.1.2.10)
qgi (2457)	coretransp%values(:)%ti_transp%qgi (matflt_type) (9.6.1.2.10)
flux (2457)	coretransp%values(:)%ti_transp%flux (matflt_type) (9.6.1.2.10)
off_diagonal (2457)	coretransp%values(:)%ti_transp%off_diagonal (offdiagion) (9.6.1.3.299)
d_ni (2296)	coretransp%values(:)%ti_transp%off_diagonal%d_ni (array3dfilt_type) (9.6.1.2.2)
d_ti (2296)	coretransp%values(:)%ti_transp%off_diagonal%d_ti (array3dfilt_type) (9.6.1.2.2)
d_ne (2296)	coretransp%values(:)%ti_transp%off_diagonal%d_ne (matflt_type) (9.6.1.2.10)
d_te (2296)	coretransp%values(:)%ti_transp%off_diagonal%d_te (matflt_type) (9.6.1.2.10)
d_epar (2296)	coretransp%values(:)%ti_transp%off_diagonal%d_epar (matflt_type) (9.6.1.2.10)
d_mtor (2296)	coretransp%values(:)%ti_transp%off_diagonal%d_mtor (matflt_type) (9.6.1.2.10)
flag (2457)	coretransp%values(:)%ti_transp%flag (integer) (9.6.1.1.2)
te_transp (2125)	coretransp%values(:)%te_transp (transcoefel) (9.6.1.3.458)
diff_eff (2455)	coretransp%values(:)%te_transp%diff_eff (vecflt_type) (9.6.1.2.13)
vconv_eff (2455)	coretransp%values(:)%te_transp%vconv_eff (vecflt_type) (9.6.1.2.13)
flux (2455)	coretransp%values(:)%te_transp%flux (vecflt_type) (9.6.1.2.13)
off_diagonal (2455)	coretransp%values(:)%te_transp%off_diagonal (offdiagel) (9.6.1.3.298)
d_ni (2295)	coretransp%values(:)%te_transp%off_diagonal%d_ni (matflt_type) (9.6.1.2.10)
d_ti (2295)	coretransp%values(:)%te_transp%off_diagonal%d_ti (matflt_type) (9.6.1.2.10)
d_ne (2295)	coretransp%values(:)%te_transp%off_diagonal%d_ne (vecflt_type) (9.6.1.2.13)
d_te (2295)	coretransp%values(:)%te_transp%off_diagonal%d_te (vecflt_type) (9.6.1.2.13)
d_epar (2295)	coretransp%values(:)%te_transp%off_diagonal%d_epar (vecflt_type) (9.6.1.2.13)
d_mtor (2295)	coretransp%values(:)%te_transp%off_diagonal%d_mtor (vecflt_type) (9.6.1.2.13)
flag (2455)	coretransp%values(:)%te_transp%flag (integer) (9.6.1.1.2)
tz_transp (2125)	coretransp%values(:)%tz_transp(:) (transcoefimp) (9.6.1.3.459)
diff_eff (2456)	coretransp%values(:)%tz_transp(:)%diff_eff (matflt_type) (9.6.1.2.10)
vconv_eff (2456)	coretransp%values(:)%tz_transp(:)%vconv_eff (matflt_type) (9.6.1.2.10)
exchange (2456)	coretransp%values(:)%tz_transp(:)%exchange (matflt_type) (9.6.1.2.10)
flux (2456)	coretransp%values(:)%tz_transp(:)%flux (matflt_type) (9.6.1.2.10)
flag (2456)	coretransp%values(:)%tz_transp(:)%flag (integer) (9.6.1.1.2)
vtor_transp (2125)	coretransp%values(:)%vtor_transp (transcoefvtor) (9.6.1.3.461)
diff_eff (2458)	coretransp%values(:)%vtor_transp%diff_eff (matflt_type) (9.6.1.2.10)
vconv_eff (2458)	coretransp%values(:)%vtor_transp%vconv_eff (matflt_type) (9.6.1.2.10)
flux (2458)	coretransp%values(:)%vtor_transp%flux (matflt_type) (9.6.1.2.10)
off_diagonal (2458)	coretransp%values(:)%vtor_transp%off_diagonal (offdiagion) (9.6.1.3.299)
d_ni (2296)	coretransp%values(:)%vtor_transp%off_diagonal%d_ni (array3dfilt_type) (9.6.1.2.2)
d_ti (2296)	coretransp%values(:)%vtor_transp%off_diagonal%d_ti (array3dfilt_type) (9.6.1.2.2)
d_ne (2296)	coretransp%values(:)%vtor_transp%off_diagonal%d_ne (matflt_type) (9.6.1.2.10)
d_te (2296)	coretransp%values(:)%vtor_transp%off_diagonal%d_te (matflt_type) (9.6.1.2.10)
d_epar (2296)	coretransp%values(:)%vtor_transp%off_diagonal%d_epar (matflt_type) (9.6.1.2.10)
d_mtor (2296)	coretransp%values(:)%vtor_transp%off_diagonal%d_mtor (matflt_type) (9.6.1.2.10)
flag (2458)	coretransp%values(:)%vtor_transp%flag (integer) (9.6.1.1.2)
codeparam (2125)	coretransp%values(:)%codeparam (codeparam) (9.6.1.3.77)
codename (2074)	coretransp%values(:)%codeparam%codename (string) (9.6.1.1.3)
codeversion (2074)	coretransp%values(:)%codeparam%codeversion (string) (9.6.1.1.3)
parameters (2074)	coretransp%values(:)%codeparam%parameters (string) (9.6.1.1.3)
output_diag (2074)	coretransp%values(:)%codeparam%output_diag (string) (9.6.1.1.3)
output_flag (2074)	coretransp%values(:)%codeparam%output_flag (integer) (9.6.1.1.2)

codeparam (2010)	coretransp%codeparam (codeparam) (9.6.1.3.77)
codename (2074)	coretransp%codeparam%codename (string) (9.6.1.1.3)
codeversion (2074)	coretransp%codeparam%codeversion (string) (9.6.1.1.3)
parameters (2074)	coretransp%codeparam%parameters (string) (9.6.1.1.3)
output_diag (2074)	coretransp%codeparam%output_diag (string) (9.6.1.1.3)
output_flag (2074)	coretransp%codeparam%output_flag (integer) (9.6.1.1.2)
time (2010)	coretransp%time (float) (9.6.1.1.1)

### 9.6.2.1.12 cxdiag

datainfo (2011)	cxdiag%datainfo (datainfo) (9.6.1.3.133)
dataprovider (2130)	cxdiag%datainfo%dataprovider (string) (9.6.1.1.3)
putdate (2130)	cxdiag%datainfo%putdate (string) (9.6.1.1.3)
source (2130)	cxdiag%datainfo%source (string) (9.6.1.1.3)
comment (2130)	cxdiag%datainfo%comment (string) (9.6.1.1.3)
cocos (2130)	cxdiag%datainfo%cocos (integer) (9.6.1.1.2)
id (2130)	cxdiag%datainfo%id (integer) (9.6.1.1.2)
isref (2130)	cxdiag%datainfo%isref (integer) (9.6.1.1.2)
whatref (2130)	cxdiag%datainfo%whatref (whatref) (9.6.1.3.503)
user (2500)	cxdiag%datainfo%whatref%user (string) (9.6.1.1.3)
machine (2500)	cxdiag%datainfo%whatref%machine (string) (9.6.1.1.3)
shot (2500)	cxdiag%datainfo%whatref%shot (integer) (9.6.1.1.2)
run (2500)	cxdiag%datainfo%whatref%run (integer) (9.6.1.1.2)
occurrence (2500)	cxdiag%datainfo%whatref%occurrence (integer) (9.6.1.1.2)
putinfo (2130)	cxdiag%datainfo%putinfo (putinfo) (9.6.1.3.339)
putmethod (2336)	cxdiag%datainfo%putinfo%putmethod (string) (9.6.1.1.3)
putaccess (2336)	cxdiag%datainfo%putinfo%putaccess (string) (9.6.1.1.3)
putlocation (2336)	cxdiag%datainfo%putinfo%putlocation (string) (9.6.1.1.3)
rights (2336)	cxdiag%datainfo%putinfo%rights (string) (9.6.1.1.3)
setup (2011)	cxdiag%setup (cxsetup) (9.6.1.3.131)
amn (2128)	cxdiag%setup%amn (vecflt_type) (9.6.1.2.13)
zn (2128)	cxdiag%setup%zn (vecflt_type) (9.6.1.2.13)
position (2128)	cxdiag%setup%position (rzphi1Dexp) (9.6.1.3.363)
r (2360)	cxdiag%setup%position%r (exp1D) (9.6.1.3.195)
value (2192)	cxdiag%setup%position%r%value (vecflt_type) (9.6.1.2.13)
abserror (2192)	cxdiag%setup%position%r%abserror (vecflt_type) (9.6.1.2.13)
releror (2192)	cxdiag%setup%position%r%releror (vecflt_type) (9.6.1.2.13)
z (2360)	cxdiag%setup%position%z (exp1D) (9.6.1.3.195)
value (2192)	cxdiag%setup%position%z%value (vecflt_type) (9.6.1.2.13)
abserror (2192)	cxdiag%setup%position%z%abserror (vecflt_type) (9.6.1.2.13)
releror (2192)	cxdiag%setup%position%z%releror (vecflt_type) (9.6.1.2.13)
phi (2360)	cxdiag%setup%position%phi (exp1D) (9.6.1.3.195)
value (2192)	cxdiag%setup%position%phi%value (vecflt_type) (9.6.1.2.13)
abserror (2192)	cxdiag%setup%position%phi%abserror (vecflt_type) (9.6.1.2.13)
releror (2192)	cxdiag%setup%position%phi%releror (vecflt_type) (9.6.1.2.13)
measure (2011)	cxdiag%measure (cxmeasure) (9.6.1.3.130)
ti (2127)	cxdiag%measure%ti (exp1D) (9.6.1.3.195)
value (2192)	cxdiag%measure%ti%value (vecflt_type) (9.6.1.2.13)
abserror (2192)	cxdiag%measure%ti%abserror (vecflt_type) (9.6.1.2.13)
releror (2192)	cxdiag%measure%ti%releror (vecflt_type) (9.6.1.2.13)
vtr (2127)	cxdiag%measure%vtr (exp1D) (9.6.1.3.195)
value (2192)	cxdiag%measure%vtr%value (vecflt_type) (9.6.1.2.13)
abserror (2192)	cxdiag%measure%vtr%abserror (vecflt_type) (9.6.1.2.13)
releror (2192)	cxdiag%measure%vtr%releror (vecflt_type) (9.6.1.2.13)
vpol (2127)	cxdiag%measure%vpol (exp1D) (9.6.1.3.195)
value (2192)	cxdiag%measure%vpol%value (vecflt_type) (9.6.1.2.13)
abserror (2192)	cxdiag%measure%vpol%abserror (vecflt_type) (9.6.1.2.13)
releror (2192)	cxdiag%measure%vpol%releror (vecflt_type) (9.6.1.2.13)
codeparam (2011)	cxdiag%codeparam (codeparam) (9.6.1.3.77)
codename (2074)	cxdiag%codeparam%codename (string) (9.6.1.1.3)
codeversion (2074)	cxdiag%codeparam%codeversion (string) (9.6.1.1.3)

parameters (2074)	cxdiag%codeparam%parameters (string) (9.6.1.1.3)
output_diag (2074)	cxdiag%codeparam%output_diag (string) (9.6.1.1.3)
output_flag (2074)	cxdiag%codeparam%output_flag (integer) (9.6.1.1.2)
time (2011)	cxdiag%time (float) (9.6.1.1.1)

### 9.6.2.1.13 distribution

datainfo (2012)	distribution%datainfo (datainfo) (9.6.1.3.133)
dataprovider (2130)	distribution%datainfo%dataprovider (string) (9.6.1.1.3)
putdate (2130)	distribution%datainfo%putdate (string) (9.6.1.1.3)
source (2130)	distribution%datainfo%source (string) (9.6.1.1.3)
comment (2130)	distribution%datainfo%comment (string) (9.6.1.1.3)
cocos (2130)	distribution%datainfo%cocos (integer) (9.6.1.1.2)
id (2130)	distribution%datainfo%id (integer) (9.6.1.1.2)
isref (2130)	distribution%datainfo%isref (integer) (9.6.1.1.2)
whatref (2130)	distribution%datainfo%whatref (whatref) (9.6.1.3.503)
user (2500)	distribution%datainfo%whatref%user (string) (9.6.1.1.3)
machine (2500)	distribution%datainfo%whatref%machine (string) (9.6.1.1.3)
shot (2500)	distribution%datainfo%whatref%shot (integer) (9.6.1.1.2)
run (2500)	distribution%datainfo%whatref%run (integer) (9.6.1.1.2)
occurrence (2500)	distribution%datainfo%whatref%occurrence (integer) (9.6.1.1.2)
putinfo (2130)	distribution%datainfo%putinfo (putinfo) (9.6.1.3.339)
putmethod (2336)	distribution%datainfo%putinfo%putmethod (string) (9.6.1.1.3)
putaccess (2336)	distribution%datainfo%putinfo%putaccess (string) (9.6.1.1.3)
putlocation (2336)	distribution%datainfo%putinfo%putlocation (string) (9.6.1.1.3)
rights (2336)	distribution%datainfo%putinfo%rights (string) (9.6.1.1.3)
composition (2012)	distribution%composition (composition) (9.6.1.3.95)
amn (2092)	distribution%composition%amn (vecflt_type) (9.6.1.2.13)
zn (2092)	distribution%composition%zn (vecflt_type) (9.6.1.2.13)
zion (2092)	distribution%composition%zion (vecflt_type) (9.6.1.2.13)
imp_flag (2092)	distribution%composition%imp_flag (vecint_type) (9.6.1.2.14)
label (2092)	distribution%composition%label (vecstring_type) (9.6.1.2.15)
compositions (2012)	distribution%compositions (compositions_type) (9.6.1.3.99)
nuclei (2096)	distribution%compositions%nuclei(:) (nuclei) (9.6.1.3.296)
zn (2293)	distribution%compositions%nuclei(:)%zn (float) (9.6.1.1.1)
amn (2293)	distribution%compositions%nuclei(:)%amn (float) (9.6.1.1.1)
label (2293)	distribution%compositions%nuclei(:)%label (string) (9.6.1.1.3)
ions (2096)	distribution%compositions%ions(:) (ions) (9.6.1.3.238)
nucindex (2235)	distribution%compositions%ions(:)%nucindex (integer) (9.6.1.1.2)
zion (2235)	distribution%compositions%ions(:)%zion (float) (9.6.1.1.1)
imp_flag (2235)	distribution%compositions%ions(:)%imp_flag (integer) (9.6.1.1.2)
label (2235)	distribution%compositions%ions(:)%label (string) (9.6.1.1.3)
impurities (2096)	distribution%compositions%impurities(:) (impurities) (9.6.1.3.235)
nucindex (2232)	distribution%compositions%impurities(:)%nucindex (integer) (9.6.1.1.2)
i_ion (2232)	distribution%compositions%impurities(:)%i_ion (integer) (9.6.1.1.2)
nzimp (2232)	distribution%compositions%impurities(:)%nzimp (integer) (9.6.1.1.2)
zmin (2232)	distribution%compositions%impurities(:)%zmin (vecflt_type) (9.6.1.2.13)
zmax (2232)	distribution%compositions%impurities(:)%zmax (vecflt_type) (9.6.1.2.13)
label (2232)	distribution%compositions%impurities(:)%label (vecstring_type) (9.6.1.2.15)
neutralscomp (2096)	distribution%compositions%neutralscomp(:) (composition_neutralscomp) (9.6.1.3.98)
neutcomp (2095)	distribution%compositions%neutralscomp(:)%neutcomp(:) (composition_neutrals_neutcomp) (9.6.1.3.97)
nucindex (2094)	distribution%compositions%neutralscomp(:)%neutcomp(:)%nucindex (integer) (9.6.1.1.2)
multiplicity (2094)	distribution%compositions%neutralscomp(:)%neutcomp(:)%multiplicity (integer) (9.6.1.1.2)
type (2095)	distribution%compositions%neutralscomp(:)%type(:) (identifier) (9.6.1.3.233)
id (2230)	distribution%compositions%neutralscomp(:)%type(:)%id (string) (9.6.1.1.3)
flag (2230)	distribution%compositions%neutralscomp(:)%type(:)%flag (integer) (9.6.1.1.2)
description (2230)	distribution%compositions%neutralscomp(:)%type(:)%description (string) (9.6.1.1.3)
label (2095)	distribution%compositions%neutralscomp(:)%label (string) (9.6.1.1.3)
edgespecies (2096)	distribution%compositions%edgespecies(:) (edgespecies) (9.6.1.3.183)
nucindex (2180)	distribution%compositions%edgespecies(:)%nucindex (integer) (9.6.1.1.2)
zmin (2180)	distribution%compositions%edgespecies(:)%zmin (float) (9.6.1.1.1)

zmax (2180)	distribution%compositions%edgespecies(:)%zmax (float) (9.6.1.1.1)
label (2180)	distribution%compositions%edgespecies(:)%label (string) (9.6.1.1.3)
signature (2096)	distribution%compositions%signature (identifier) (9.6.1.3.233)
id (2230)	distribution%compositions%signature%id (string) (9.6.1.1.3)
flag (2230)	distribution%compositions%signature%flag (integer) (9.6.1.1.2)
description (2230)	distribution%compositions%signature%description (string) (9.6.1.1.3)
distri_vec (2012)	distribution%distri_vec(:) (distri_vec) (9.6.1.3.164)
wave_id (2161)	distribution%distri_vec(:)%wave_id(:) (enum_instance) (9.6.1.3.186)
type (2183)	distribution%distri_vec(:)%wave_id(:)%type (identifier) (9.6.1.3.233)
id (2230)	distribution%distri_vec(:)%wave_id(:)%type%id (string) (9.6.1.1.3)
flag (2230)	distribution%distri_vec(:)%wave_id(:)%type%flag (integer) (9.6.1.1.2)
description (2230)	distribution%distri_vec(:)%wave_id(:)%type%description (string) (9.6.1.1.3)
name (2183)	distribution%distri_vec(:)%wave_id(:)%name (string) (9.6.1.1.3)
index (2183)	distribution%distri_vec(:)%wave_id(:)%index (integer) (9.6.1.1.2)
source_id (2161)	distribution%distri_vec(:)%source_id(:) (enum_instance) (9.6.1.3.186)
type (2183)	distribution%distri_vec(:)%source_id(:)%type (identifier) (9.6.1.3.233)
id (2230)	distribution%distri_vec(:)%source_id(:)%type%id (string) (9.6.1.1.3)
flag (2230)	distribution%distri_vec(:)%source_id(:)%type%flag (integer) (9.6.1.1.2)
description (2230)	distribution%distri_vec(:)%source_id(:)%type%description (string) (9.6.1.1.3)
name (2183)	distribution%distri_vec(:)%source_id(:)%name (string) (9.6.1.1.3)
index (2183)	distribution%distri_vec(:)%source_id(:)%index (integer) (9.6.1.1.2)
species (2161)	distribution%distri_vec(:)%species (species_reference) (9.6.1.3.408)
type (2405)	distribution%distri_vec(:)%species%type (identifier) (9.6.1.3.233)
id (2230)	distribution%distri_vec(:)%species%type%id (string) (9.6.1.1.3)
flag (2230)	distribution%distri_vec(:)%species%type%flag (integer) (9.6.1.1.2)
description (2230)	distribution%distri_vec(:)%species%type%description (string) (9.6.1.1.3)
index (2405)	distribution%distri_vec(:)%species%index (integer) (9.6.1.1.2)
gyro_type (2161)	distribution%distri_vec(:)%gyro_type (integer) (9.6.1.1.2)
fast_filter (2161)	distribution%distri_vec(:)%fast_filter (fast_thermal_separation_filter) (9.6.1.3.198)
method (2195)	distribution%distri_vec(:)%fast_filter%method (identifier) (9.6.1.3.233)
id (2230)	distribution%distri_vec(:)%fast_filter%method%id (string) (9.6.1.1.3)
flag (2230)	distribution%distri_vec(:)%fast_filter%method%flag (integer) (9.6.1.1.2)
description (2230)	distribution%distri_vec(:)%fast_filter%method%description (string) (9.6.1.1.3)
energy_sep (2195)	distribution%distri_vec(:)%fast_filter%energy_sep (vecflt_type) (9.6.1.2.13)
global_param (2161)	distribution%distri_vec(:)%global_param (dist_global_param) (9.6.1.3.149)
geometry (2146)	distribution%distri_vec(:)%global_param%geometry (dist_geometry_0d) (9.6.1.3.146)
mag_axis (2143)	distribution%distri_vec(:)%global_param%geometry%mag_axis (rz0D) (9.6.1.3.355)
r (2352)	distribution%distri_vec(:)%global_param%geometry%mag_axis%r (float) (9.6.1.1.1)
z (2352)	distribution%distri_vec(:)%global_param%geometry%mag_axis%z (float) (9.6.1.1.1)
toroid_field (2143)	distribution%distri_vec(:)%global_param%geometry%toroid_field (b0r0) (9.6.1.3.59)
r0 (2056)	distribution%distri_vec(:)%global_param%geometry%toroid_field%r0 (float) (9.6.1.1.1)
b0 (2056)	distribution%distri_vec(:)%global_param%geometry%toroid_field%b0 (float) (9.6.1.1.1)
state (2146)	distribution%distri_vec(:)%global_param%state (dist_state_0d) (9.6.1.3.161)
n_particles (2158)	distribution%distri_vec(:)%global_param%state%n_particles (float) (9.6.1.1.1)
n_part_fast (2158)	distribution%distri_vec(:)%global_param%state%n_part_fast (float) (9.6.1.1.1)
enrg (2158)	distribution%distri_vec(:)%global_param%state%enrg (float) (9.6.1.1.1)
enrg_fast (2158)	distribution%distri_vec(:)%global_param%state%enrg_fast (float) (9.6.1.1.1)
enrg_fast_pa (2158)	distribution%distri_vec(:)%global_param%state%enrg_fast_pa (float) (9.6.1.1.1)
momentm_fast (2158)	distribution%distri_vec(:)%global_param%state%momentm_fast (vecflt_type) (9.6.1.2.13)
current_dr (2158)	distribution%distri_vec(:)%global_param%state%current_dr (float) (9.6.1.1.1)
torque_jrxb (2158)	distribution%distri_vec(:)%global_param%state%torque_jrxb (float) (9.6.1.1.1)
collisions_e (2146)	distribution%distri_vec(:)%global_param%collisions_e (dist_collisional_transfer_0d) (9.6.1.3.140)
power_th (2137)	distribution%distri_vec(:)%global_param%collisions_e%power_th (float) (9.6.1.1.1)
power_fast (2137)	distribution%distri_vec(:)%global_param%collisions_e%power_fast (float) (9.6.1.1.1)
torque_th (2137)	distribution%distri_vec(:)%global_param%collisions_e%torque_th (float) (9.6.1.1.1)
torque_fast (2137)	distribution%distri_vec(:)%global_param%collisions_e%torque_fast (float) (9.6.1.1.1)
collisions_i (2146)	distribution%distri_vec(:)%global_param%collisions_i(:) (dist_collisional_transfer_0d) (9.6.1.3.140)
power_th (2137)	distribution%distri_vec(:)%global_param%collisions_i(:)%power_th (float) (9.6.1.1.1)
power_fast (2137)	distribution%distri_vec(:)%global_param%collisions_i(:)%power_fast (float) (9.6.1.1.1)
torque_th (2137)	distribution%distri_vec(:)%global_param%collisions_i(:)%torque_th (float) (9.6.1.1.1)



torque_fast (2137)	distribution%distri_vec(:)%global_param%collisions_i(:)%torque_fast (float) (9.6.1.1.1)
collisions_z (2146)	distribution%distri_vec(:)%global_param%collisions_z(:) (dist_global_param_collisions_z) (9.6.1.3.150)
charge_state (2147)	distribution%distri_vec(:)%global_param%collisions_z(:)%charge_state(:) (dist_collisional_transfer_0d) (9.6.1.3.140)
power_th (2137)	distribution%distri_vec(:)%global_param%collisions_z(:)%charge_state(:)%power_th (float) (9.6.1.1.1)
power_fast (2137)	distribution%distri_vec(:)%global_param%collisions_z(:)%charge_state(:)%power_fast (float) (9.6.1.1.1)
torque_th (2137)	distribution%distri_vec(:)%global_param%collisions_z(:)%charge_state(:)%torque_th (float) (9.6.1.1.1)
torque_fast (2137)	distribution%distri_vec(:)%global_param%collisions_z(:)%charge_state(:)%torque_fast (float) (9.6.1.1.1)
sources (2146)	distribution%distri_vec(:)%global_param%sources(:) (dist_sources_0d) (9.6.1.3.158)
source_ref (2155)	distribution%distri_vec(:)%global_param%sources(:)%source_ref (dist_sources_reference) (9.6.1.3.160)
type (2157)	distribution%distri_vec(:)%global_param%sources(:)%source_ref%type (identifier) (9.6.1.3.233)
id (2230)	distribution%distri_vec(:)%global_param%sources(:)%source_ref%type%id (string) (9.6.1.1.3)
flag (2230)	distribution%distri_vec(:)%global_param%sources(:)%source_ref%type%flag (integer) (9.6.1.1.2)
description (2230)	distribution%distri_vec(:)%global_param%sources(:)%source_ref%type%description (string) (9.6.1.1.3)
index_waveid (2157)	distribution%distri_vec(:)%global_param%sources(:)%source_ref%index_waveid (vecint_type) (9.6.1.2.14)
index_srcid (2157)	distribution%distri_vec(:)%global_param%sources(:)%source_ref%index_srcid (vecint_type) (9.6.1.2.14)
particle (2155)	distribution%distri_vec(:)%global_param%sources(:)%particle (float) (9.6.1.1.1)
momentum (2155)	distribution%distri_vec(:)%global_param%sources(:)%momentum (float) (9.6.1.1.1)
energy (2155)	distribution%distri_vec(:)%global_param%sources(:)%energy (float) (9.6.1.1.1)
profiles_1d (2161)	distribution%distri_vec(:)%profiles_1d (dist_profiles_1d) (9.6.1.3.155)
geometry (2152)	distribution%distri_vec(:)%profiles_1d%geometry (dist_geometry_1d) (9.6.1.3.147)
rho_tor (2144)	distribution%distri_vec(:)%profiles_1d%geometry%rho_tor (vecflt_type) (9.6.1.2.13)
rho_tor_norm (2144)	distribution%distri_vec(:)%profiles_1d%geometry%rho_tor_norm (vecflt_type) (9.6.1.2.13)
psi (2144)	distribution%distri_vec(:)%profiles_1d%geometry%psi (vecflt_type) (9.6.1.2.13)
volume (2144)	distribution%distri_vec(:)%profiles_1d%geometry%volume (vecflt_type) (9.6.1.2.13)
area (2144)	distribution%distri_vec(:)%profiles_1d%geometry%area (vecflt_type) (9.6.1.2.13)
state (2152)	distribution%distri_vec(:)%profiles_1d%state (dist_state_1d) (9.6.1.3.162)
dens (2159)	distribution%distri_vec(:)%profiles_1d%state%dens (vecflt_type) (9.6.1.2.13)
dens_fast (2159)	distribution%distri_vec(:)%profiles_1d%state%dens_fast (vecflt_type) (9.6.1.2.13)
pres (2159)	distribution%distri_vec(:)%profiles_1d%state%pres (vecflt_type) (9.6.1.2.13)
pres_fast (2159)	distribution%distri_vec(:)%profiles_1d%state%pres_fast (vecflt_type) (9.6.1.2.13)
pres_fast_pa (2159)	distribution%distri_vec(:)%profiles_1d%state%pres_fast_pa (vecflt_type) (9.6.1.2.13)
momentm_fast (2159)	distribution%distri_vec(:)%profiles_1d%state%momentm_fast (vecflt_type) (9.6.1.2.13)
current (2159)	distribution%distri_vec(:)%profiles_1d%state%current (vecflt_type) (9.6.1.2.13)
current_fast (2159)	distribution%distri_vec(:)%profiles_1d%state%current_fast (vecflt_type) (9.6.1.2.13)
torque_jrxb (2159)	distribution%distri_vec(:)%profiles_1d%state%torque_jrxb (vecflt_type) (9.6.1.2.13)
collisions_e (2152)	distribution%distri_vec(:)%profiles_1d%collisions_e (dist_collisional_transfer_1d) (9.6.1.3.141)
power_th (2138)	distribution%distri_vec(:)%profiles_1d%collisions_e%power_th (vecflt_type) (9.6.1.2.13)
power_fast (2138)	distribution%distri_vec(:)%profiles_1d%collisions_e%power_fast (vecflt_type) (9.6.1.2.13)
torque_th (2138)	distribution%distri_vec(:)%profiles_1d%collisions_e%torque_th (vecflt_type) (9.6.1.2.13)
torque_fast (2138)	distribution%distri_vec(:)%profiles_1d%collisions_e%torque_fast (vecflt_type) (9.6.1.2.13)
collisions_i (2152)	distribution%distri_vec(:)%profiles_1d%collisions_i(:) (dist_collisional_transfer_1d) (9.6.1.3.141)
power_th (2138)	distribution%distri_vec(:)%profiles_1d%collisions_i(:)%power_th (vecflt_type) (9.6.1.2.13)
power_fast (2138)	distribution%distri_vec(:)%profiles_1d%collisions_i(:)%power_fast (vecflt_type) (9.6.1.2.13)
torque_th (2138)	distribution%distri_vec(:)%profiles_1d%collisions_i(:)%torque_th (vecflt_type) (9.6.1.2.13)
torque_fast (2138)	distribution%distri_vec(:)%profiles_1d%collisions_i(:)%torque_fast (vecflt_type) (9.6.1.2.13)
collisions_z (2152)	distribution%distri_vec(:)%profiles_1d%collisions_z(:) (dist_profiles_1d_collisions_z) (9.6.1.3.156)
charge_state (2153)	distribution%distri_vec(:)%profiles_1d%collisions_z(:)%charge_state(:) (dist_collisional_transfer_1d) (9.6.1.3.141)
power_th (2138)	distribution%distri_vec(:)%profiles_1d%collisions_z(:)%charge_state(:)%power_th (vecflt_type) (9.6.1.2.13)
power_fast (2138)	distribution%distri_vec(:)%profiles_1d%collisions_z(:)%charge_state(:)%power_fast (vecflt_type) (9.6.1.2.13)
torque_th (2138)	distribution%distri_vec(:)%profiles_1d%collisions_z(:)%charge_state(:)%torque_th (vecflt_type) (9.6.1.2.13)



torque_fast (2138)	distribution%distri_vec()%profiles_1d%collisions_z():%charge_state():%torque_fast (vecflt.type) (9.6.1.2.13)
sources (2152)	distribution%distri_vec()%profiles_1d%sources:( dist_sources_1d) (9.6.1.3.159)
source_ref (2156)	distribution%distri_vec()%profiles_1d%sources():%source_ref (dist_sources_reference) (9.6.1.3.160)
type (2157)	distribution%distri_vec()%profiles_1d%sources():%source_ref%type (identifier) (9.6.1.3.233)
id (2230)	distribution%distri_vec()%profiles_1d%sources():%source_ref%type%id (string) (9.6.1.1.3)
flag (2230)	distribution%distri_vec()%profiles_1d%sources():%source_ref%type%flag (integer) (9.6.1.1.2)
description (2230)	distribution%distri_vec()%profiles_1d%sources():%source_ref%type%description (string) (9.6.1.1.3)
index_waveid (2157)	distribution%distri_vec()%profiles_1d%sources():%source_ref%index_waveid (vecint.type) (9.6.1.2.14)
index_srcid (2157)	distribution%distri_vec()%profiles_1d%sources():%source_ref%index_srcid (vecint.type) (9.6.1.2.14)
particle (2156)	distribution%distri_vec()%profiles_1d%sources():%particle (vecflt.type) (9.6.1.2.13)
momentum (2156)	distribution%distri_vec()%profiles_1d%sources():%momentum (vecflt.type) (9.6.1.2.13)
energy (2156)	distribution%distri_vec()%profiles_1d%sources():%energy (vecflt.type) (9.6.1.2.13)
trapped (2152)	distribution%distri_vec()%profiles_1d%trapped (dist_profile_values_1d) (9.6.1.3.152)
state (2149)	distribution%distri_vec()%profiles_1d%trapped%state (dist_state_1d) (9.6.1.3.162)
dens (2159)	distribution%distri_vec()%profiles_1d%trapped%state%dens (vecflt.type) (9.6.1.2.13)
dens_fast (2159)	distribution%distri_vec()%profiles_1d%trapped%state%dens_fast (vecflt.type) (9.6.1.2.13)
pres (2159)	distribution%distri_vec()%profiles_1d%trapped%state%pres (vecflt.type) (9.6.1.2.13)
pres_fast (2159)	distribution%distri_vec()%profiles_1d%trapped%state%pres_fast (vecflt.type) (9.6.1.2.13)
pres_fast_pa (2159)	distribution%distri_vec()%profiles_1d%trapped%state%pres_fast_pa (vecflt.type) (9.6.1.2.13)
momentm_fast (2159)	distribution%distri_vec()%profiles_1d%trapped%state%momentm_fast (vecflt.type) (9.6.1.2.13)
current (2159)	distribution%distri_vec()%profiles_1d%trapped%state%current (vecflt.type) (9.6.1.2.13)
current_fast (2159)	distribution%distri_vec()%profiles_1d%trapped%state%current_fast (vecflt.type) (9.6.1.2.13)
torque_jrxb (2159)	distribution%distri_vec()%profiles_1d%trapped%state%torque_jrxb (vecflt.type) (9.6.1.2.13)
collisions_e (2149)	distribution%distri_vec()%profiles_1d%trapped%collisions_e (dist_collisional_transfer_1d) (9.6.1.3.141)
power_th (2138)	distribution%distri_vec()%profiles_1d%trapped%collisions_e%power_th (vecflt.type) (9.6.1.2.13)
power_fast (2138)	distribution%distri_vec()%profiles_1d%trapped%collisions_e%power_fast (vecflt.type) (9.6.1.2.13)
torque_th (2138)	distribution%distri_vec()%profiles_1d%trapped%collisions_e%torque_th (vecflt.type) (9.6.1.2.13)
torque_fast (2138)	distribution%distri_vec()%profiles_1d%trapped%collisions_e%torque_fast (vecflt.type) (9.6.1.2.13)
collisions_i (2149)	distribution%distri_vec()%profiles_1d%trapped%collisions_i:( dist_collisional_transfer_1d) (9.6.1.3.141)
power_th (2138)	distribution%distri_vec()%profiles_1d%trapped%collisions_i():%power_th (vecflt.type) (9.6.1.2.13)
power_fast (2138)	distribution%distri_vec()%profiles_1d%trapped%collisions_i():%power_fast (vecflt.type) (9.6.1.2.13)
torque_th (2138)	distribution%distri_vec()%profiles_1d%trapped%collisions_i():%torque_th (vecflt.type) (9.6.1.2.13)
torque_fast (2138)	distribution%distri_vec()%profiles_1d%trapped%collisions_i():%torque_fast (vecflt.type) (9.6.1.2.13)
collisions_z (2149)	distribution%distri_vec()%profiles_1d%trapped%collisions_z:( dist_profiles_1d_collisions_z) (9.6.1.3.156)
charge_state (2153)	distribution%distri_vec()%profiles_1d%trapped%collisions_z():%charge_state:( dist_collisional_transfer_1d) (9.6.1.3.141)
power_th (2138)	distribution%distri_vec()%profiles_1d%trapped%collisions_z():%charge_state():%power_th (vecflt.type) (9.6.1.2.13)
power_fast (2138)	distribution%distri_vec()%profiles_1d%trapped%collisions_z():%charge_state():%power_fast (vecflt.type) (9.6.1.2.13)
torque_th (2138)	distribution%distri_vec()%profiles_1d%trapped%collisions_z():%charge_state():%torque_th (vecflt.type) (9.6.1.2.13)
torque_fast (2138)	distribution%distri_vec()%profiles_1d%trapped%collisions_z():%charge_state():%torque_fast (vecflt.type) (9.6.1.2.13)
sources (2149)	distribution%distri_vec()%profiles_1d%trapped%sources:( dist_sources_1d) (9.6.1.3.159)
source_ref (2156)	distribution%distri_vec()%profiles_1d%trapped%sources():%source_ref (dist_sources_reference) (9.6.1.3.160)
type (2157)	distribution%distri_vec()%profiles_1d%trapped%sources():%source_ref%type (identifier) (9.6.1.3.233)
id (2230)	distribution%distri_vec()%profiles_1d%trapped%sources():%source_ref%type%id (string) (9.6.1.1.3)
flag (2230)	distribution%distri_vec()%profiles_1d%trapped%sources():%source_ref%type%flag (integer) (9.6.1.1.2)

description (2230)	distribution%distri_vec(:)%profiles_1d%trapped%sources(:)%source_ref%type%description (string) (9.6.1.1.3)
index_waveid (2157)	distribution%distri_vec(:)%profiles_1d%trapped%sources(:)%source_ref%index_waveid (vecint.type) (9.6.1.2.14)
index_srcid (2157)	distribution%distri_vec(:)%profiles_1d%trapped%sources(:)%source_ref%index_srcid (vecint.type) (9.6.1.2.14)
particle (2156)	distribution%distri_vec(:)%profiles_1d%trapped%sources(:)%particle (vecflt.type) (9.6.1.2.13)
momentum (2156)	distribution%distri_vec(:)%profiles_1d%trapped%sources(:)%momentum (vecflt.type) (9.6.1.2.13)
energy (2156)	distribution%distri_vec(:)%profiles_1d%trapped%sources(:)%energy (vecflt.type) (9.6.1.2.13)
co_passing (2152)	distribution%distri_vec(:)%profiles_1d%co_passing (dist_profile_values_1d) (9.6.1.3.152)
state (2149)	distribution%distri_vec(:)%profiles_1d%co_passing%state (dist_state_1d) (9.6.1.3.162)
dens (2159)	distribution%distri_vec(:)%profiles_1d%co_passing%state%dens (vecflt.type) (9.6.1.2.13)
dens_fast (2159)	distribution%distri_vec(:)%profiles_1d%co_passing%state%dens_fast (vecflt.type) (9.6.1.2.13)
pres (2159)	distribution%distri_vec(:)%profiles_1d%co_passing%state%pres (vecflt.type) (9.6.1.2.13)
pres_fast (2159)	distribution%distri_vec(:)%profiles_1d%co_passing%state%pres_fast (vecflt.type) (9.6.1.2.13)
pres_fast_pa (2159)	distribution%distri_vec(:)%profiles_1d%co_passing%state%pres_fast_pa (vecflt.type) (9.6.1.2.13)
momentm_fast (2159)	distribution%distri_vec(:)%profiles_1d%co_passing%state%momentm_fast (vecflt.type) (9.6.1.2.13)
current (2159)	distribution%distri_vec(:)%profiles_1d%co_passing%state%current (vecflt.type) (9.6.1.2.13)
current_fast (2159)	distribution%distri_vec(:)%profiles_1d%co_passing%state%current_fast (vecflt.type) (9.6.1.2.13)
torque_jrxb (2159)	distribution%distri_vec(:)%profiles_1d%co_passing%state%torque_jrxb (vecflt.type) (9.6.1.2.13)
collisions_e (2149)	distribution%distri_vec(:)%profiles_1d%co_passing%collisions_e (dist_collisional_transfer_1d) (9.6.1.3.141)
power_th (2138)	distribution%distri_vec(:)%profiles_1d%co_passing%collisions_e%power_th (vecflt.type) (9.6.1.2.13)
power_fast (2138)	distribution%distri_vec(:)%profiles_1d%co_passing%collisions_e%power_fast (vecflt.type) (9.6.1.2.13)
torque_th (2138)	distribution%distri_vec(:)%profiles_1d%co_passing%collisions_e%torque_th (vecflt.type) (9.6.1.2.13)
torque_fast (2138)	distribution%distri_vec(:)%profiles_1d%co_passing%collisions_e%torque_fast (vecflt.type) (9.6.1.2.13)
collisions_i (2149)	distribution%distri_vec(:)%profiles_1d%co_passing%collisions_i(:) (dist_collisional_transfer_1d) (9.6.1.3.141)
power_th (2138)	distribution%distri_vec(:)%profiles_1d%co_passing%collisions_i(:)%power_th (vecflt.type) (9.6.1.2.13)
power_fast (2138)	distribution%distri_vec(:)%profiles_1d%co_passing%collisions_i(:)%power_fast (vecflt.type) (9.6.1.2.13)
torque_th (2138)	distribution%distri_vec(:)%profiles_1d%co_passing%collisions_i(:)%torque_th (vecflt.type) (9.6.1.2.13)
torque_fast (2138)	distribution%distri_vec(:)%profiles_1d%co_passing%collisions_i(:)%torque_fast (vecflt.type) (9.6.1.2.13)
collisions_z (2149)	distribution%distri_vec(:)%profiles_1d%co_passing%collisions_z(:) (dist_profiles_1d_collisions_z) (9.6.1.3.156)
charge_state (2153)	distribution%distri_vec(:)%profiles_1d%co_passing%collisions_z(:)%charge_state(:) (dist_collisional_transfer_1d) (9.6.1.3.141)
power_th (2138)	distribution%distri_vec(:)%profiles_1d%co_passing%collisions_z(:)%charge_state(:)%power_th (vecflt.type) (9.6.1.2.13)
power_fast (2138)	distribution%distri_vec(:)%profiles_1d%co_passing%collisions_z(:)%charge_state(:)%power_fast (vecflt.type) (9.6.1.2.13)
torque_th (2138)	distribution%distri_vec(:)%profiles_1d%co_passing%collisions_z(:)%charge_state(:)%torque_th (vecflt.type) (9.6.1.2.13)
torque_fast (2138)	distribution%distri_vec(:)%profiles_1d%co_passing%collisions_z(:)%charge_state(:)%torque_fast (vecflt.type) (9.6.1.2.13)
sources (2149)	distribution%distri_vec(:)%profiles_1d%co_passing%sources(:) (dist_sources_1d) (9.6.1.3.159)
source_ref (2156)	distribution%distri_vec(:)%profiles_1d%co_passing%sources(:)%source_ref (dist_sources_reference) (9.6.1.3.160)
type (2157)	distribution%distri_vec(:)%profiles_1d%co_passing%sources(:)%source_ref%type (identifier) (9.6.1.3.233)
id (2230)	distribution%distri_vec(:)%profiles_1d%co_passing%sources(:)%source_ref%type%id (string) (9.6.1.1.3)
flag (2230)	distribution%distri_vec(:)%profiles_1d%co_passing%sources(:)%source_ref%type%flag (integer) (9.6.1.1.2)
description (2230)	distribution%distri_vec(:)%profiles_1d%co_passing%sources(:)%source_ref%type%description (string) (9.6.1.1.3)
index_waveid (2157)	distribution%distri_vec(:)%profiles_1d%co_passing%sources(:)%source_ref%index_waveid (vecint.type) (9.6.1.2.14)
index_srcid (2157)	distribution%distri_vec(:)%profiles_1d%co_passing%sources(:)%source_ref%index_srcid (vecint.type) (9.6.1.2.14)

particle (2156)	distribution%distri_vec(:)%profiles_1d%co_passing%sources(:)%particle (9.6.1.2.13)	(vecflt_type)
momentum (2156)	distribution%distri_vec(:)%profiles_1d%co_passing%sources(:)%momentum (9.6.1.2.13)	(vecflt_type)
energy (2156)	distribution%distri_vec(:)%profiles_1d%co_passing%sources(:)%energy (9.6.1.2.13)	(vecflt_type)
cntr_passing (2152)	distribution%distri_vec(:)%profiles_1d%cntr_passing (dist_profile_values_1d) (9.6.1.3.152)	
state (2149)	distribution%distri_vec(:)%profiles_1d%cntr_passing%state (dist_state_1d) (9.6.1.3.162)	
dens (2159)	distribution%distri_vec(:)%profiles_1d%cntr_passing%state%dens (vecflt_type) (9.6.1.2.13)	
dens_fast (2159)	distribution%distri_vec(:)%profiles_1d%cntr_passing%state%dens_fast (vecflt_type) (9.6.1.2.13)	
pres (2159)	distribution%distri_vec(:)%profiles_1d%cntr_passing%state%pres (vecflt_type) (9.6.1.2.13)	
pres_fast (2159)	distribution%distri_vec(:)%profiles_1d%cntr_passing%state%pres_fast (vecflt_type) (9.6.1.2.13)	
pres_fast_pa (2159)	distribution%distri_vec(:)%profiles_1d%cntr_passing%state%pres_fast_pa (vecflt_type) (9.6.1.2.13)	
momentm_fast (2159)	distribution%distri_vec(:)%profiles_1d%cntr_passing%state%momentm_fast (vecflt_type) (9.6.1.2.13)	
current (2159)	distribution%distri_vec(:)%profiles_1d%cntr_passing%state%current (vecflt_type) (9.6.1.2.13)	
current_fast (2159)	distribution%distri_vec(:)%profiles_1d%cntr_passing%state%current_fast (vecflt_type) (9.6.1.2.13)	
torque_jrxb (2159)	distribution%distri_vec(:)%profiles_1d%cntr_passing%state%torque_jrxb (vecflt_type) (9.6.1.2.13)	
collisions_e (2149)	distribution%distri_vec(:)%profiles_1d%cntr_passing%collisions_e (dist_collisional_transfer_1d) (9.6.1.3.141)	
power_th (2138)	distribution%distri_vec(:)%profiles_1d%cntr_passing%collisions_e%power_th (vecflt_type) (9.6.1.2.13)	
power_fast (2138)	distribution%distri_vec(:)%profiles_1d%cntr_passing%collisions_e%power_fast (vecflt_type) (9.6.1.2.13)	
torque_th (2138)	distribution%distri_vec(:)%profiles_1d%cntr_passing%collisions_e%torque_th (vecflt_type) (9.6.1.2.13)	
torque_fast (2138)	distribution%distri_vec(:)%profiles_1d%cntr_passing%collisions_e%torque_fast (vecflt_type) (9.6.1.2.13)	
collisions_i (2149)	distribution%distri_vec(:)%profiles_1d%cntr_passing%collisions_i(:) (dist_collisional_transfer_1d) (9.6.1.3.141)	
power_th (2138)	distribution%distri_vec(:)%profiles_1d%cntr_passing%collisions_i(:)%power_th (vecflt_type) (9.6.1.2.13)	
power_fast (2138)	distribution%distri_vec(:)%profiles_1d%cntr_passing%collisions_i(:)%power_fast (vecflt_type) (9.6.1.2.13)	
torque_th (2138)	distribution%distri_vec(:)%profiles_1d%cntr_passing%collisions_i(:)%torque_th (vecflt_type) (9.6.1.2.13)	
torque_fast (2138)	distribution%distri_vec(:)%profiles_1d%cntr_passing%collisions_i(:)%torque_fast (vecflt_type) (9.6.1.2.13)	
collisions_z (2149)	distribution%distri_vec(:)%profiles_1d%cntr_passing%collisions_z(:) (dist_profiles_1d_collisions_z) (9.6.1.3.156)	
charge_state (2153)	distribution%distri_vec(:)%profiles_1d%cntr_passing%collisions_z(:)%charge_state(:) (dist_collisional_transfer_1d) (9.6.1.3.141)	
power_th (2138)	distribution%distri_vec(:)%profiles_1d%cntr_passing%collisions_z(:)%charge_state(:)%power_th (vecflt_type) (9.6.1.2.13)	
power_fast (2138)	distribution%distri_vec(:)%profiles_1d%cntr_passing%collisions_z(:)%charge_state(:)%power_fast (vecflt_type) (9.6.1.2.13)	
torque_th (2138)	distribution%distri_vec(:)%profiles_1d%cntr_passing%collisions_z(:)%charge_state(:)%torque_th (vecflt_type) (9.6.1.2.13)	
torque_fast (2138)	distribution%distri_vec(:)%profiles_1d%cntr_passing%collisions_z(:)%charge_state(:)%torque_fast (vecflt_type) (9.6.1.2.13)	
sources (2149)	distribution%distri_vec(:)%profiles_1d%cntr_passing%sources(:) (dist_sources_1d) (9.6.1.3.159)	
source_ref (2156)	distribution%distri_vec(:)%profiles_1d%cntr_passing%sources(:)%source_ref (dist_sources_reference) (9.6.1.3.160)	
type (2157)	distribution%distri_vec(:)%profiles_1d%cntr_passing%sources(:)%source_ref%type (identifier) (9.6.1.3.233)	
id (2230)	distribution%distri_vec(:)%profiles_1d%cntr_passing%sources(:)%source_ref%type%id (string) (9.6.1.1.3)	
flag (2230)	distribution%distri_vec(:)%profiles_1d%cntr_passing%sources(:)%source_ref%type%flag (integer) (9.6.1.1.2)	
description (2230)	distribution%distri_vec(:)%profiles_1d%cntr_passing%sources(:)%source_ref%type%description (string) (9.6.1.1.3)	
index_waveid (2157)	distribution%distri_vec(:)%profiles_1d%cntr_passing%sources(:)%source_ref%index_waveid (vecint_type) (9.6.1.2.14)	
index_srcid (2157)	distribution%distri_vec(:)%profiles_1d%cntr_passing%sources(:)%source_ref%index_srcid (vecint_type) (9.6.1.2.14)	
particle (2156)	distribution%distri_vec(:)%profiles_1d%cntr_passing%sources(:)%particle (vecflt_type) (9.6.1.2.13)	

momentum (2156)	distribution%distri_vec(%)%profiles_1d%cntr_passing%sources(%)momentum (vecflt.type) (9.6.1.2.13)
energy (2156)	distribution%distri_vec(%)%profiles_1d%cntr_passing%sources(%)energy (vecflt.type) (9.6.1.2.13)
profiles_2d (2161)	distribution%distri_vec(%)%profiles_2d (dist_profiles_2d) (9.6.1.3.157)
geometry (2154)	distribution%distri_vec(%)%profiles_2d%geometry (dist_geometry_2d) (9.6.1.3.148)
coord_type (2145)	distribution%distri_vec(%)%profiles_2d%geometry%coord_type (integer) (9.6.1.1.2)
r (2145)	distribution%distri_vec(%)%profiles_2d%geometry%r (matflt.type) (9.6.1.2.10)
z (2145)	distribution%distri_vec(%)%profiles_2d%geometry%z (matflt.type) (9.6.1.2.10)
rho_tor (2145)	distribution%distri_vec(%)%profiles_2d%geometry%rho_tor (matflt.type) (9.6.1.2.10)
psi (2145)	distribution%distri_vec(%)%profiles_2d%geometry%psi (matflt.type) (9.6.1.2.10)
theta_geom (2145)	distribution%distri_vec(%)%profiles_2d%geometry%theta_geom (matflt.type) (9.6.1.2.10)
theta_strt (2145)	distribution%distri_vec(%)%profiles_2d%geometry%theta_strt (matflt.type) (9.6.1.2.10)
state (2154)	distribution%distri_vec(%)%profiles_2d%state (dist_state_2d) (9.6.1.3.163)
dens (2160)	distribution%distri_vec(%)%profiles_2d%state%dens (matflt.type) (9.6.1.2.10)
dens_fast (2160)	distribution%distri_vec(%)%profiles_2d%state%dens_fast (matflt.type) (9.6.1.2.10)
pres (2160)	distribution%distri_vec(%)%profiles_2d%state%pres (matflt.type) (9.6.1.2.10)
pres_fast (2160)	distribution%distri_vec(%)%profiles_2d%state%pres_fast (matflt.type) (9.6.1.2.10)
pres_fast_pa (2160)	distribution%distri_vec(%)%profiles_2d%state%pres_fast_pa (matflt.type) (9.6.1.2.10)
momentm_fast (2160)	distribution%distri_vec(%)%profiles_2d%state%momentm_fast (matflt.type) (9.6.1.2.10)
current (2160)	distribution%distri_vec(%)%profiles_2d%state%current (matflt.type) (9.6.1.2.10)
current_fast (2160)	distribution%distri_vec(%)%profiles_2d%state%current_fast (matflt.type) (9.6.1.2.10)
torque_jrxb (2160)	distribution%distri_vec(%)%profiles_2d%state%torque_jrxb (matflt.type) (9.6.1.2.10)
collisions_e (2154)	distribution%distri_vec(%)%profiles_2d%collisions_e (dist_collisional_transfer_2d) (9.6.1.3.142)
power_th (2139)	distribution%distri_vec(%)%profiles_2d%collisions_e%power_th (matflt.type) (9.6.1.2.10)
power_fast (2139)	distribution%distri_vec(%)%profiles_2d%collisions_e%power_fast (matflt.type) (9.6.1.2.10)
torque_th (2139)	distribution%distri_vec(%)%profiles_2d%collisions_e%torque_th (matflt.type) (9.6.1.2.10)
torque_fast (2139)	distribution%distri_vec(%)%profiles_2d%collisions_e%torque_fast (matflt.type) (9.6.1.2.10)
collisions_i (2154)	distribution%distri_vec(%)%profiles_2d%collisions_i(%) (dist_collisional_transfer_2d) (9.6.1.3.142)
power_th (2139)	distribution%distri_vec(%)%profiles_2d%collisions_i(%)%power_th (matflt.type) (9.6.1.2.10)
power_fast (2139)	distribution%distri_vec(%)%profiles_2d%collisions_i(%)%power_fast (matflt.type) (9.6.1.2.10)
torque_th (2139)	distribution%distri_vec(%)%profiles_2d%collisions_i(%)%torque_th (matflt.type) (9.6.1.2.10)
torque_fast (2139)	distribution%distri_vec(%)%profiles_2d%collisions_i(%)%torque_fast (matflt.type) (9.6.1.2.10)
collisions_z (2154)	distribution%distri_vec(%)%profiles_2d%collisions_z(%) (dist_profiles2d_collisions_z) (9.6.1.3.154)
charge_state (2151)	distribution%distri_vec(%)%profiles_2d%collisions_z(%)%charge_state(%) (dist_collisional_transfer_2d) (9.6.1.3.142)
power_th (2139)	distribution%distri_vec(%)%profiles_2d%collisions_z(%)%charge_state(%)%power_th (matflt.type) (9.6.1.2.10)
power_fast (2139)	distribution%distri_vec(%)%profiles_2d%collisions_z(%)%charge_state(%)%power_fast (matflt.type) (9.6.1.2.10)
torque_th (2139)	distribution%distri_vec(%)%profiles_2d%collisions_z(%)%charge_state(%)%torque_th (matflt.type) (9.6.1.2.10)
torque_fast (2139)	distribution%distri_vec(%)%profiles_2d%collisions_z(%)%charge_state(%)%torque_fast (matflt.type) (9.6.1.2.10)
trapped (2154)	distribution%distri_vec(%)%profiles_2d%trapped (dist_profile_values_2d) (9.6.1.3.153)
state (2150)	distribution%distri_vec(%)%profiles_2d%trapped%state (dist_state_2d) (9.6.1.3.163)
dens (2160)	distribution%distri_vec(%)%profiles_2d%trapped%state%dens (matflt.type) (9.6.1.2.10)
dens_fast (2160)	distribution%distri_vec(%)%profiles_2d%trapped%state%dens_fast (matflt.type) (9.6.1.2.10)
pres (2160)	distribution%distri_vec(%)%profiles_2d%trapped%state%pres (matflt.type) (9.6.1.2.10)
pres_fast (2160)	distribution%distri_vec(%)%profiles_2d%trapped%state%pres_fast (matflt.type) (9.6.1.2.10)
pres_fast_pa (2160)	distribution%distri_vec(%)%profiles_2d%trapped%state%pres_fast_pa (matflt.type) (9.6.1.2.10)
momentm_fast (2160)	distribution%distri_vec(%)%profiles_2d%trapped%state%momentm_fast (matflt.type) (9.6.1.2.10)
current (2160)	distribution%distri_vec(%)%profiles_2d%trapped%state%current (matflt.type) (9.6.1.2.10)
current_fast (2160)	distribution%distri_vec(%)%profiles_2d%trapped%state%current_fast (matflt.type) (9.6.1.2.10)
torque_jrxb (2160)	distribution%distri_vec(%)%profiles_2d%trapped%state%torque_jrxb (matflt.type) (9.6.1.2.10)
collisions_e (2150)	distribution%distri_vec(%)%profiles_2d%trapped%collisions_e (dist_collisional_transfer_2d) (9.6.1.3.142)
power_th (2139)	distribution%distri_vec(%)%profiles_2d%trapped%collisions_e%power_th (matflt.type) (9.6.1.2.10)
power_fast (2139)	distribution%distri_vec(%)%profiles_2d%trapped%collisions_e%power_fast (matflt.type) (9.6.1.2.10)
torque_th (2139)	distribution%distri_vec(%)%profiles_2d%trapped%collisions_e%torque_th (matflt.type) (9.6.1.2.10)

torque_fast (2139)	distribution%distri_vec(:)%profiles_2d%trapped%collisions_e%torque_fast (matflt.type) (9.6.1.2.10)
collisions_i (2150)	distribution%distri_vec(:)%profiles_2d%trapped%collisions_i(:) (dist_collisional_transfer_2d) (9.6.1.3.142)
power_th (2139)	distribution%distri_vec(:)%profiles_2d%trapped%collisions_i(:)%power_th (matflt.type) (9.6.1.2.10)
power_fast (2139)	distribution%distri_vec(:)%profiles_2d%trapped%collisions_i(:)%power_fast (matflt.type) (9.6.1.2.10)
torque_th (2139)	distribution%distri_vec(:)%profiles_2d%trapped%collisions_i(:)%torque_th (matflt.type) (9.6.1.2.10)
torque_fast (2139)	distribution%distri_vec(:)%profiles_2d%trapped%collisions_i(:)%torque_fast (matflt.type) (9.6.1.2.10)
collisions_z (2150)	distribution%distri_vec(:)%profiles_2d%trapped%collisions_z(:) (dist_profiles2d_collisions_z) (9.6.1.3.154)
charge_state (2151)	distribution%distri_vec(:)%profiles_2d%trapped%collisions_z(:)%charge_state(:) (dist_collisional_transfer_2d) (9.6.1.3.142)
power_th (2139)	distribution%distri_vec(:)%profiles_2d%trapped%collisions_z(:)%charge_state(:)%power_th (matflt.type) (9.6.1.2.10)
power_fast (2139)	distribution%distri_vec(:)%profiles_2d%trapped%collisions_z(:)%charge_state(:)%power_fast (matflt.type) (9.6.1.2.10)
torque_th (2139)	distribution%distri_vec(:)%profiles_2d%trapped%collisions_z(:)%charge_state(:)%torque_th (matflt.type) (9.6.1.2.10)
torque_fast (2139)	distribution%distri_vec(:)%profiles_2d%trapped%collisions_z(:)%charge_state(:)%torque_fast (matflt.type) (9.6.1.2.10)
co_passing (2154)	distribution%distri_vec(:)%profiles_2d%co_passing (dist_profile_values_2d) (9.6.1.3.153)
state (2150)	distribution%distri_vec(:)%profiles_2d%co_passing%state (dist_state_2d) (9.6.1.3.163)
dens (2160)	distribution%distri_vec(:)%profiles_2d%co_passing%state%dens (matflt.type) (9.6.1.2.10)
dens_fast (2160)	distribution%distri_vec(:)%profiles_2d%co_passing%state%dens_fast (matflt.type) (9.6.1.2.10)
pres (2160)	distribution%distri_vec(:)%profiles_2d%co_passing%state%pres (matflt.type) (9.6.1.2.10)
pres_fast (2160)	distribution%distri_vec(:)%profiles_2d%co_passing%state%pres_fast (matflt.type) (9.6.1.2.10)
pres_fast_pa (2160)	distribution%distri_vec(:)%profiles_2d%co_passing%state%pres_fast_pa (matflt.type) (9.6.1.2.10)
momentm_fast (2160)	distribution%distri_vec(:)%profiles_2d%co_passing%state%momentm_fast (matflt.type) (9.6.1.2.10)
current (2160)	distribution%distri_vec(:)%profiles_2d%co_passing%state%current (matflt.type) (9.6.1.2.10)
current_fast (2160)	distribution%distri_vec(:)%profiles_2d%co_passing%state%current_fast (matflt.type) (9.6.1.2.10)
torque_jrxb (2160)	distribution%distri_vec(:)%profiles_2d%co_passing%state%torque_jrxb (matflt.type) (9.6.1.2.10)
collisions_e (2150)	distribution%distri_vec(:)%profiles_2d%co_passing%collisions_e (dist_collisional_transfer_2d) (9.6.1.3.142)
power_th (2139)	distribution%distri_vec(:)%profiles_2d%co_passing%collisions_e%power_th (matflt.type) (9.6.1.2.10)
power_fast (2139)	distribution%distri_vec(:)%profiles_2d%co_passing%collisions_e%power_fast (matflt.type) (9.6.1.2.10)
torque_th (2139)	distribution%distri_vec(:)%profiles_2d%co_passing%collisions_e%torque_th (matflt.type) (9.6.1.2.10)
torque_fast (2139)	distribution%distri_vec(:)%profiles_2d%co_passing%collisions_e%torque_fast (matflt.type) (9.6.1.2.10)
collisions_i (2150)	distribution%distri_vec(:)%profiles_2d%co_passing%collisions_i(:) (dist_collisional_transfer_2d) (9.6.1.3.142)
power_th (2139)	distribution%distri_vec(:)%profiles_2d%co_passing%collisions_i(:)%power_th (matflt.type) (9.6.1.2.10)
power_fast (2139)	distribution%distri_vec(:)%profiles_2d%co_passing%collisions_i(:)%power_fast (matflt.type) (9.6.1.2.10)
torque_th (2139)	distribution%distri_vec(:)%profiles_2d%co_passing%collisions_i(:)%torque_th (matflt.type) (9.6.1.2.10)
torque_fast (2139)	distribution%distri_vec(:)%profiles_2d%co_passing%collisions_i(:)%torque_fast (matflt.type) (9.6.1.2.10)
collisions_z (2150)	distribution%distri_vec(:)%profiles_2d%co_passing%collisions_z(:) (dist_profiles2d_collisions_z) (9.6.1.3.154)
charge_state (2151)	distribution%distri_vec(:)%profiles_2d%co_passing%collisions_z(:)%charge_state(:) (dist_collisional_transfer_2d) (9.6.1.3.142)
power_th (2139)	distribution%distri_vec(:)%profiles_2d%co_passing%collisions_z(:)%charge_state(:)%power_th (matflt.type) (9.6.1.2.10)
power_fast (2139)	distribution%distri_vec(:)%profiles_2d%co_passing%collisions_z(:)%charge_state(:)%power_fast (matflt.type) (9.6.1.2.10)
torque_th (2139)	distribution%distri_vec(:)%profiles_2d%co_passing%collisions_z(:)%charge_state(:)%torque_th (matflt.type) (9.6.1.2.10)
torque_fast (2139)	distribution%distri_vec(:)%profiles_2d%co_passing%collisions_z(:)%charge_state(:)%torque_fast (matflt.type) (9.6.1.2.10)
cntr_passing (2154)	distribution%distri_vec(:)%profiles_2d%cntr_passing (dist_profile_values_2d) (9.6.1.3.153)

state (2150)	distribution%distri_vec(:)%profiles_2d%cntr_passing%state (dist_state_2d) (9.6.1.3.163)
dens (2160)	distribution%distri_vec(:)%profiles_2d%cntr_passing%state%dens (matflt.type) (9.6.1.2.10)
dens_fast (2160)	distribution%distri_vec(:)%profiles_2d%cntr_passing%state%dens_fast (matflt.type) (9.6.1.2.10)
pres (2160)	distribution%distri_vec(:)%profiles_2d%cntr_passing%state%pres (matflt.type) (9.6.1.2.10)
pres_fast (2160)	distribution%distri_vec(:)%profiles_2d%cntr_passing%state%pres_fast (matflt.type) (9.6.1.2.10)
pres_fast_pa (2160)	distribution%distri_vec(:)%profiles_2d%cntr_passing%state%pres_fast_pa (matflt.type) (9.6.1.2.10)
momentm_fast (2160)	distribution%distri_vec(:)%profiles_2d%cntr_passing%state%momentm_fast (matflt.type) (9.6.1.2.10)
current (2160)	distribution%distri_vec(:)%profiles_2d%cntr_passing%state%current (matflt.type) (9.6.1.2.10)
current_fast (2160)	distribution%distri_vec(:)%profiles_2d%cntr_passing%state%current_fast (matflt.type) (9.6.1.2.10)
torque_jrxb (2160)	distribution%distri_vec(:)%profiles_2d%cntr_passing%state%torque_jrxb (matflt.type) (9.6.1.2.10)
collisions_e (2150)	distribution%distri_vec(:)%profiles_2d%cntr_passing%collisions_e (dist_collisional_transfer_2d) (9.6.1.3.142)
power_th (2139)	distribution%distri_vec(:)%profiles_2d%cntr_passing%collisions_e%power_th (matflt.type) (9.6.1.2.10)
power_fast (2139)	distribution%distri_vec(:)%profiles_2d%cntr_passing%collisions_e%power_fast (matflt.type) (9.6.1.2.10)
torque_th (2139)	distribution%distri_vec(:)%profiles_2d%cntr_passing%collisions_e%torque_th (matflt.type) (9.6.1.2.10)
torque_fast (2139)	distribution%distri_vec(:)%profiles_2d%cntr_passing%collisions_e%torque_fast (matflt.type) (9.6.1.2.10)
collisions_i (2150)	distribution%distri_vec(:)%profiles_2d%cntr_passing%collisions_i(:) (dist_collisional_transfer_2d) (9.6.1.3.142)
power_th (2139)	distribution%distri_vec(:)%profiles_2d%cntr_passing%collisions_i(:)%power_th (matflt.type) (9.6.1.2.10)
power_fast (2139)	distribution%distri_vec(:)%profiles_2d%cntr_passing%collisions_i(:)%power_fast (matflt.type) (9.6.1.2.10)
torque_th (2139)	distribution%distri_vec(:)%profiles_2d%cntr_passing%collisions_i(:)%torque_th (matflt.type) (9.6.1.2.10)
torque_fast (2139)	distribution%distri_vec(:)%profiles_2d%cntr_passing%collisions_i(:)%torque_fast (matflt.type) (9.6.1.2.10)
collisions_z (2150)	distribution%distri_vec(:)%profiles_2d%cntr_passing%collisions_z(:) (dist_profiles2d_collisions_z) (9.6.1.3.154)
charge_state (2151)	distribution%distri_vec(:)%profiles_2d%cntr_passing%collisions_z(:)%charge_state(:) (dist_collisional_transfer_2d) (9.6.1.3.142)
power_th (2139)	distribution%distri_vec(:)%profiles_2d%cntr_passing%collisions_z(:)%charge_state(:)%power_th (matflt.type) (9.6.1.2.10)
power_fast (2139)	distribution%distri_vec(:)%profiles_2d%cntr_passing%collisions_z(:)%charge_state(:)%power_fast (matflt.type) (9.6.1.2.10)
torque_th (2139)	distribution%distri_vec(:)%profiles_2d%cntr_passing%collisions_z(:)%charge_state(:)%torque_th (matflt.type) (9.6.1.2.10)
torque_fast (2139)	distribution%distri_vec(:)%profiles_2d%cntr_passing%collisions_z(:)%charge_state(:)%torque_fast (matflt.type) (9.6.1.2.10)
dist_func (2161)	distribution%distri_vec(:)%dist_func (dist_func) (9.6.1.3.145)
is_delta_f (2142)	distribution%distri_vec(:)%dist_func%is_delta_f (integer) (9.6.1.1.2)
markers (2142)	distribution%distri_vec(:)%dist_func%markers (weighted_markers) (9.6.1.3.502)
variable_ids (2499)	distribution%distri_vec(:)%dist_func%markers%variable_ids(:) (identifier) (9.6.1.3.233)
id (2230)	distribution%distri_vec(:)%dist_func%markers%variable_ids(:)%id (string) (9.6.1.1.3)
flag (2230)	distribution%distri_vec(:)%dist_func%markers%variable_ids(:)%flag (integer) (9.6.1.1.2)
description (2230)	distribution%distri_vec(:)%dist_func%markers%variable_ids(:)%description (string) (9.6.1.1.3)
coord (2499)	distribution%distri_vec(:)%dist_func%markers%coord (matflt.type) (9.6.1.2.10)
weight (2499)	distribution%distri_vec(:)%dist_func%markers%weight (vecflt.type) (9.6.1.2.13)
f_expan_topo (2142)	distribution%distri_vec(:)%dist_func%f_expan_topo(:) (dist_ff) (9.6.1.3.144)
grid_info (2141)	distribution%distri_vec(:)%dist_func%f_expan_topo(:)%grid_info (dist_grid_info) (9.6.1.3.151)
grid_type (2148)	distribution%distri_vec(:)%dist_func%f_expan_topo(:)%grid_info%grid_type (integer) (9.6.1.1.2)
ngriddim (2148)	distribution%distri_vec(:)%dist_func%f_expan_topo(:)%grid_info%ngriddim (integer) (9.6.1.1.2)
grid_coord (2148)	distribution%distri_vec(:)%dist_func%f_expan_topo(:)%grid_info%grid_coord (vecint.type) (9.6.1.2.14)
thin_orbits (2148)	distribution%distri_vec(:)%dist_func%f_expan_topo(:)%grid_info%thin_orbits (integer) (9.6.1.1.2)
topology (2148)	distribution%distri_vec(:)%dist_func%f_expan_topo(:)%grid_info%topology (string) (9.6.1.1.3)
omnigen_surf (2148)	distribution%distri_vec(:)%dist_func%f_expan_topo(:)%grid_info%omnigen_surf(:) (omnigen_surf) (9.6.1.3.300)



rz (2297)	distribution%distri_vec(:)%dist_func%of_expan_topo(:)%grid_info%omnigen_surf(:)%rz (rz1D) (9.6.1.3.356)
r (2353)	distribution%distri_vec(:)%dist_func%of_expan_topo(:)%grid_info%omnigen_surf(:)%rz%r (vecflt_type) (9.6.1.2.13)
z (2353)	distribution%distri_vec(:)%dist_func%of_expan_topo(:)%grid_info%omnigen_surf(:)%rz%z (vecflt_type) (9.6.1.2.13)
s (2297)	distribution%distri_vec(:)%dist_func%of_expan_topo(:)%grid_info%omnigen_surf(:)%s (vecflt_type) (9.6.1.2.13)
topo_regions (2141)	distribution%distri_vec(:)%dist_func%of_expan_topo(:)%topo_regions(:) (topo_regions) (9.6.1.3.455)
ind.omnigen (2452)	distribution%distri_vec(:)%dist_func%of_expan_topo(:)%topo_regions(:)%ind.omnigen (integer) (9.6.1.1.2)
dim1 (2452)	distribution%distri_vec(:)%dist_func%of_expan_topo(:)%topo_regions(:)%dim1 (array6dflt_type) (9.6.1.2.6)
dim2 (2452)	distribution%distri_vec(:)%dist_func%of_expan_topo(:)%topo_regions(:)%dim2 (array6dflt_type) (9.6.1.2.6)
dim3 (2452)	distribution%distri_vec(:)%dist_func%of_expan_topo(:)%topo_regions(:)%dim3 (array6dflt_type) (9.6.1.2.6)
dim4 (2452)	distribution%distri_vec(:)%dist_func%of_expan_topo(:)%topo_regions(:)%dim4 (array6dflt_type) (9.6.1.2.6)
dim5 (2452)	distribution%distri_vec(:)%dist_func%of_expan_topo(:)%topo_regions(:)%dim5 (array6dflt_type) (9.6.1.2.6)
dim6 (2452)	distribution%distri_vec(:)%dist_func%of_expan_topo(:)%topo_regions(:)%dim6 (array6dflt_type) (9.6.1.2.6)
jacobian (2452)	distribution%distri_vec(:)%dist_func%of_expan_topo(:)%topo_regions(:)%jacobian (array6dflt_type) (9.6.1.2.6)
distfunc (2452)	distribution%distri_vec(:)%dist_func%of_expan_topo(:)%topo_regions(:)%distfunc (array6dflt_type) (9.6.1.2.6)
f_expansion (2142)	distribution%distri_vec(:)%dist_func%of_expansion(:) (f_expansion) (9.6.1.3.197)
grid (2194)	distribution%distri_vec(:)%dist_func%of_expansion(:)%grid (complexgrid) (9.6.1.3.82)
uid (2079)	distribution%distri_vec(:)%dist_func%of_expansion(:)%grid%uid (integer) (9.6.1.1.2)
id (2079)	distribution%distri_vec(:)%dist_func%of_expansion(:)%grid%id (string) (9.6.1.1.3)
spaces (2079)	distribution%distri_vec(:)%dist_func%of_expansion(:)%grid%spaces(:) (complexgrid_space) (9.6.1.3.91)
geotype (2088)	distribution%distri_vec(:)%dist_func%of_expansion(:)%grid%spaces(:)%geotype (vecint_type) (9.6.1.2.14)
geotypeid (2088)	distribution%distri_vec(:)%dist_func%of_expansion(:)%grid%spaces(:)%geotypeid (vecstring_type) (9.6.1.2.15)
coordtype (2088)	distribution%distri_vec(:)%dist_func%of_expansion(:)%grid%spaces(:)%coordtype (matint_type) (9.6.1.2.11)
objects (2088)	distribution%distri_vec(:)%dist_func%of_expansion(:)%grid%spaces(:)%objects(:) (objects) (9.6.1.3.297)
boundary (2294)	distribution%distri_vec(:)%dist_func%of_expansion(:)%grid%spaces(:)%objects(:)%boundary (matint_type) (9.6.1.2.11)
neighbour (2294)	distribution%distri_vec(:)%dist_func%of_expansion(:)%grid%spaces(:)%objects(:)%neighbour (array3dint_type) (9.6.1.2.3)
geo (2294)	distribution%distri_vec(:)%dist_func%of_expansion(:)%grid%spaces(:)%objects(:)%geo (array4dflt_type) (9.6.1.2.4)
measure (2294)	distribution%distri_vec(:)%dist_func%of_expansion(:)%grid%spaces(:)%objects(:)%measure (matflt_type) (9.6.1.2.10)
xpoints (2088)	distribution%distri_vec(:)%dist_func%of_expansion(:)%grid%spaces(:)%xpoints (vecint_type) (9.6.1.2.14)
subgrids (2079)	distribution%distri_vec(:)%dist_func%of_expansion(:)%grid%subgrids(:) (complexgrid_subgrid) (9.6.1.3.92)
id (2089)	distribution%distri_vec(:)%dist_func%of_expansion(:)%grid%subgrids(:)%id (string) (9.6.1.1.3)
list (2089)	distribution%distri_vec(:)%dist_func%of_expansion(:)%grid%subgrids(:)%list(:) (complexgrid_objectlist) (9.6.1.3.86)
cls (2083)	distribution%distri_vec(:)%dist_func%of_expansion(:)%grid%subgrids(:)%list(:)%cls (vecint_type) (9.6.1.2.14)
indset (2083)	distribution%distri_vec(:)%dist_func%of_expansion(:)%grid%subgrids(:)%list(:)%indset(:) (complexgrid_indexlist) (9.6.1.3.84)
range (2081)	distribution%distri_vec(:)%dist_func%of_expansion(:)%grid%subgrids(:)%list(:)%indset(:)%range (vecint_type) (9.6.1.2.14)
ind (2081)	distribution%distri_vec(:)%dist_func%of_expansion(:)%grid%subgrids(:)%list(:)%indset(:)%ind (vecint_type) (9.6.1.2.14)
ind (2083)	distribution%distri_vec(:)%dist_func%of_expansion(:)%grid%subgrids(:)%list(:)%ind (matint_type) (9.6.1.2.11)
metric (2079)	distribution%distri_vec(:)%dist_func%of_expansion(:)%grid%metric (complexgrid_metric) (9.6.1.3.85)
measure (2082)	distribution%distri_vec(:)%dist_func%of_expansion(:)%grid%metric%measure(:) (complexgrid_scalar) (9.6.1.3.87)
griduid (2084)	distribution%distri_vec(:)%dist_func%of_expansion(:)%grid%metric%measure(:)%griduid (integer) (9.6.1.1.2)





scalar (2084)	distribution%distri_vec(:)%dist_func%of_expansion(:)%grid%metric%g33(:)%scalar (vecflt.type) (9.6.1.2.13)
vector (2084)	distribution%distri_vec(:)%dist_func%of_expansion(:)%grid%metric%g33(:)%vector (matflt.type) (9.6.1.2.10)
matrix (2084)	distribution%distri_vec(:)%dist_func%of_expansion(:)%grid%metric%g33(:)%matrix (array3dflt.type) (9.6.1.2.2)
jacobian (2082)	distribution%distri_vec(:)%dist_func%of_expansion(:)%grid%metric%jacobian(:) (complex-grid.scalar) (9.6.1.3.87)
griduid (2084)	distribution%distri_vec(:)%dist_func%of_expansion(:)%grid%metric%jacobian(:)%griduid (integer) (9.6.1.1.2)
subgrid (2084)	distribution%distri_vec(:)%dist_func%of_expansion(:)%grid%metric%jacobian(:)%subgrid (integer) (9.6.1.1.2)
scalar (2084)	distribution%distri_vec(:)%dist_func%of_expansion(:)%grid%metric%jacobian(:)%scalar (vecflt.type) (9.6.1.2.13)
vector (2084)	distribution%distri_vec(:)%dist_func%of_expansion(:)%grid%metric%jacobian(:)%vector (matflt.type) (9.6.1.2.10)
matrix (2084)	distribution%distri_vec(:)%dist_func%of_expansion(:)%grid%metric%jacobian(:)%matrix (array3dflt.type) (9.6.1.2.2)
geo (2079)	distribution%distri_vec(:)%dist_func%of_expansion(:)%grid%geo(:) (complexgrid_geo_global) (9.6.1.3.83)
geotype (2080)	distribution%distri_vec(:)%dist_func%of_expansion(:)%grid%geo(:)%geotype (integer) (9.6.1.1.2)
geotypeid (2080)	distribution%distri_vec(:)%dist_func%of_expansion(:)%grid%geo(:)%geotypeid (string) (9.6.1.1.3)
coordtype (2080)	distribution%distri_vec(:)%dist_func%of_expansion(:)%grid%geo(:)%coordtype (vecint.type) (9.6.1.2.14)
geo_matrix (2080)	distribution%distri_vec(:)%dist_func%of_expansion(:)%grid%geo(:)%geo_matrix(:) (complex-grid.scalar) (9.6.1.3.87)
griduid (2084)	distribution%distri_vec(:)%dist_func%of_expansion(:)%grid%geo(:)%geo_matrix(:)%griduid (integer) (9.6.1.1.2)
subgrid (2084)	distribution%distri_vec(:)%dist_func%of_expansion(:)%grid%geo(:)%geo_matrix(:)%subgrid (integer) (9.6.1.1.2)
scalar (2084)	distribution%distri_vec(:)%dist_func%of_expansion(:)%grid%geo(:)%geo_matrix(:)%scalar (vecflt.type) (9.6.1.2.13)
vector (2084)	distribution%distri_vec(:)%dist_func%of_expansion(:)%grid%geo(:)%geo_matrix(:)%vector (matflt.type) (9.6.1.2.10)
matrix (2084)	distribution%distri_vec(:)%dist_func%of_expansion(:)%grid%geo(:)%geo_matrix(:)%matrix (array3dflt.type) (9.6.1.2.2)
measure (2080)	distribution%distri_vec(:)%dist_func%of_expansion(:)%grid%geo(:)%measure(:) (complex-grid.scalar) (9.6.1.3.87)
griduid (2084)	distribution%distri_vec(:)%dist_func%of_expansion(:)%grid%geo(:)%measure(:)%griduid (integer) (9.6.1.1.2)
subgrid (2084)	distribution%distri_vec(:)%dist_func%of_expansion(:)%grid%geo(:)%measure(:)%subgrid (integer) (9.6.1.1.2)
scalar (2084)	distribution%distri_vec(:)%dist_func%of_expansion(:)%grid%geo(:)%measure(:)%scalar (vecflt.type) (9.6.1.2.13)
vector (2084)	distribution%distri_vec(:)%dist_func%of_expansion(:)%grid%geo(:)%measure(:)%vector (matflt.type) (9.6.1.2.10)
matrix (2084)	distribution%distri_vec(:)%dist_func%of_expansion(:)%grid%geo(:)%measure(:)%matrix (array3dflt.type) (9.6.1.2.2)
bases (2079)	distribution%distri_vec(:)%dist_func%of_expansion(:)%grid%bases(:) (complexgrid_vector) (9.6.1.3.93)
griduid (2090)	distribution%distri_vec(:)%dist_func%of_expansion(:)%grid%bases(:)%griduid (integer) (9.6.1.1.2)
label (2090)	distribution%distri_vec(:)%dist_func%of_expansion(:)%grid%bases(:)%label (string) (9.6.1.1.3)
comp (2090)	distribution%distri_vec(:)%dist_func%of_expansion(:)%grid%bases(:)%comp(:) (complex-grid.scalar) (9.6.1.3.87)
griduid (2084)	distribution%distri_vec(:)%dist_func%of_expansion(:)%grid%bases(:)%comp(:)%griduid (integer) (9.6.1.1.2)
subgrid (2084)	distribution%distri_vec(:)%dist_func%of_expansion(:)%grid%bases(:)%comp(:)%subgrid (integer) (9.6.1.1.2)
scalar (2084)	distribution%distri_vec(:)%dist_func%of_expansion(:)%grid%bases(:)%comp(:)%scalar (vecflt.type) (9.6.1.2.13)
vector (2084)	distribution%distri_vec(:)%dist_func%of_expansion(:)%grid%bases(:)%comp(:)%vector (matflt.type) (9.6.1.2.10)
matrix (2084)	distribution%distri_vec(:)%dist_func%of_expansion(:)%grid%bases(:)%comp(:)%matrix (array3dflt.type) (9.6.1.2.2)
align (2090)	distribution%distri_vec(:)%dist_func%of_expansion(:)%grid%bases(:)%align (vecint.type) (9.6.1.2.14)
alignid (2090)	distribution%distri_vec(:)%dist_func%of_expansion(:)%grid%bases(:)%alignid (vecstring.type) (9.6.1.2.15)
basis (2090)	distribution%distri_vec(:)%dist_func%of_expansion(:)%grid%bases(:)%basis (integer) (9.6.1.1.2)

values (2194)	distribution%distri_vec(:)%dist_func%of_expansion(:)%values (complexgrid_scalar) (9.6.1.3.87)
griduid (2084)	distribution%distri_vec(:)%dist_func%of_expansion(:)%values%griduid (integer) (9.6.1.1.2)
subgrid (2084)	distribution%distri_vec(:)%dist_func%of_expansion(:)%values%subgrid (integer) (9.6.1.1.2)
scalar (2084)	distribution%distri_vec(:)%dist_func%of_expansion(:)%values%scalar (vecflt_type) (9.6.1.2.13)
vector (2084)	distribution%distri_vec(:)%dist_func%of_expansion(:)%values%vector (matflt_type) (9.6.1.2.10)
matrix (2084)	distribution%distri_vec(:)%dist_func%of_expansion(:)%values%matrix (array3dflt_type) (9.6.1.2.2)
parameters (2194)	distribution%distri_vec(:)%dist_func%of_expansion(:)%parameters (dist.distrivec.distfunc.fexp_param) (9.6.1.3.143)
equatorial (2140)	distribution%distri_vec(:)%dist_func%of_expansion(:)%parameters%equatorial (equatorial_plane) (9.6.1.3.191)
r (2188)	distribution%distri_vec(:)%dist_func%of_expansion(:)%parameters%equatorial%r (vecflt_type) (9.6.1.2.13)
z (2188)	distribution%distri_vec(:)%dist_func%of_expansion(:)%parameters%equatorial%z (vecflt_type) (9.6.1.2.13)
s (2188)	distribution%distri_vec(:)%dist_func%of_expansion(:)%parameters%equatorial%s (vecflt_type) (9.6.1.2.13)
rho_tor (2188)	distribution%distri_vec(:)%dist_func%of_expansion(:)%parameters%equatorial%rho_tor (vecflt_type) (9.6.1.2.13)
psi (2188)	distribution%distri_vec(:)%dist_func%of_expansion(:)%parameters%equatorial%psi (vecflt_type) (9.6.1.2.13)
b_mod (2188)	distribution%distri_vec(:)%dist_func%of_expansion(:)%parameters%equatorial%b_mod (vecflt_type) (9.6.1.2.13)
temperature (2140)	distribution%distri_vec(:)%dist_func%of_expansion(:)%parameters%temperature (vecflt_type) (9.6.1.2.13)
codeparam (2161)	distribution%distri_vec(:)%codeparam (codeparam) (9.6.1.3.77)
codename (2074)	distribution%distri_vec(:)%codeparam%codename (string) (9.6.1.1.3)
codeversion (2074)	distribution%distri_vec(:)%codeparam%codeversion (string) (9.6.1.1.3)
parameters (2074)	distribution%distri_vec(:)%codeparam%parameters (string) (9.6.1.1.3)
output_diag (2074)	distribution%distri_vec(:)%codeparam%output_diag (string) (9.6.1.1.3)
output_flag (2074)	distribution%distri_vec(:)%codeparam%output_flag (integer) (9.6.1.1.2)
codeparam (2012)	distribution%codeparam (codeparam) (9.6.1.3.77)
codename (2074)	distribution%codeparam%codename (string) (9.6.1.1.3)
codeversion (2074)	distribution%codeparam%codeversion (string) (9.6.1.1.3)
parameters (2074)	distribution%codeparam%parameters (string) (9.6.1.1.3)
output_diag (2074)	distribution%codeparam%output_diag (string) (9.6.1.1.3)
output_flag (2074)	distribution%codeparam%output_flag (integer) (9.6.1.1.2)
time (2012)	distribution%time (float) (9.6.1.1.1)

### 9.6.2.1.14 distsource

datainfo (2013)	distsource%datainfo (datainfo) (9.6.1.3.133)
dataprovider (2130)	distsource%datainfo%dataprovider (string) (9.6.1.1.3)
putdate (2130)	distsource%datainfo%putdate (string) (9.6.1.1.3)
source (2130)	distsource%datainfo%source (string) (9.6.1.1.3)
comment (2130)	distsource%datainfo%comment (string) (9.6.1.1.3)
cocos (2130)	distsource%datainfo%cocos (integer) (9.6.1.1.2)
id (2130)	distsource%datainfo%id (integer) (9.6.1.1.2)
isref (2130)	distsource%datainfo%isref (integer) (9.6.1.1.2)
whatref (2130)	distsource%datainfo%whatref (whatref) (9.6.1.3.503)
user (2500)	distsource%datainfo%whatref%user (string) (9.6.1.1.3)
machine (2500)	distsource%datainfo%whatref%machine (string) (9.6.1.1.3)
shot (2500)	distsource%datainfo%whatref%shot (integer) (9.6.1.1.2)
run (2500)	distsource%datainfo%whatref%run (integer) (9.6.1.1.2)
occurrence (2500)	distsource%datainfo%whatref%occurrence (integer) (9.6.1.1.2)
putinfo (2130)	distsource%datainfo%putinfo (putinfo) (9.6.1.3.339)
putmethod (2336)	distsource%datainfo%putinfo%putmethod (string) (9.6.1.1.3)
putaccess (2336)	distsource%datainfo%putinfo%putaccess (string) (9.6.1.1.3)
putlocation (2336)	distsource%datainfo%putinfo%putlocation (string) (9.6.1.1.3)
rights (2336)	distsource%datainfo%putinfo%rights (string) (9.6.1.1.3)
composition (2013)	distsource%composition (composition) (9.6.1.3.95)
amn (2092)	distsource%composition%amn (vecflt_type) (9.6.1.2.13)
zn (2092)	distsource%composition%zn (vecflt_type) (9.6.1.2.13)
zion (2092)	distsource%composition%zion (vecflt_type) (9.6.1.2.13)

imp_flag (2092)	distsource%composition%imp_flag (vecint_type) (9.6.1.2.14)
label (2092)	distsource%composition%label (vecstring_type) (9.6.1.2.15)
compositions (2013)	distsource%compositions (compositions_type) (9.6.1.3.99)
nuclei (2096)	distsource%compositions%nuclei(:) (nuclei) (9.6.1.3.296)
zn (2293)	distsource%compositions%nuclei(:)%zn (float) (9.6.1.1.1)
amn (2293)	distsource%compositions%nuclei(:)%amn (float) (9.6.1.1.1)
label (2293)	distsource%compositions%nuclei(:)%label (string) (9.6.1.1.3)
ions (2096)	distsource%compositions%ions(:) (ions) (9.6.1.3.238)
nucindex (2235)	distsource%compositions%ions(:)%nucindex (integer) (9.6.1.1.2)
zion (2235)	distsource%compositions%ions(:)%zion (float) (9.6.1.1.1)
imp_flag (2235)	distsource%compositions%ions(:)%imp_flag (integer) (9.6.1.1.2)
label (2235)	distsource%compositions%ions(:)%label (string) (9.6.1.1.3)
impurities (2096)	distsource%compositions%impurities(:) (impurities) (9.6.1.3.235)
nucindex (2232)	distsource%compositions%impurities(:)%nucindex (integer) (9.6.1.1.2)
i_ion (2232)	distsource%compositions%impurities(:)%i_ion (integer) (9.6.1.1.2)
nzimp (2232)	distsource%compositions%impurities(:)%nzimp (integer) (9.6.1.1.2)
zmin (2232)	distsource%compositions%impurities(:)%zmin (vecflt_type) (9.6.1.2.13)
zmax (2232)	distsource%compositions%impurities(:)%zmax (vecflt_type) (9.6.1.2.13)
label (2232)	distsource%compositions%impurities(:)%label (vecstring_type) (9.6.1.2.15)
neutralscomp (2096)	distsource%compositions%neutralscomp(:) (composition_neutralscomp) (9.6.1.3.98)
neutcomp (2095)	distsource%compositions%neutralscomp(:)%neutcomp(:) (composition_neutrals_neutcomp) (9.6.1.3.97)
nucindex (2094)	distsource%compositions%neutralscomp(:)%neutcomp(:)%nucindex (integer) (9.6.1.1.2)
multiplicity (2094)	distsource%compositions%neutralscomp(:)%neutcomp(:)%multiplicity (integer) (9.6.1.1.2)
type (2095)	distsource%compositions%neutralscomp(:)%type(:) (identifier) (9.6.1.3.233)
id (2230)	distsource%compositions%neutralscomp(:)%type(:)%id (string) (9.6.1.1.3)
flag (2230)	distsource%compositions%neutralscomp(:)%type(:)%flag (integer) (9.6.1.1.2)
description (2230)	distsource%compositions%neutralscomp(:)%type(:)%description (string) (9.6.1.1.3)
label (2095)	distsource%compositions%neutralscomp(:)%label (string) (9.6.1.1.3)
edgespecies (2096)	distsource%compositions%edgespecies(:) (edgespecies) (9.6.1.3.183)
nucindex (2180)	distsource%compositions%edgespecies(:)%nucindex (integer) (9.6.1.1.2)
zmin (2180)	distsource%compositions%edgespecies(:)%zmin (float) (9.6.1.1.1)
zmax (2180)	distsource%compositions%edgespecies(:)%zmax (float) (9.6.1.1.1)
label (2180)	distsource%compositions%edgespecies(:)%label (string) (9.6.1.1.3)
signature (2096)	distsource%compositions%signature (identifier) (9.6.1.3.233)
id (2230)	distsource%compositions%signature%id (string) (9.6.1.1.3)
flag (2230)	distsource%compositions%signature%flag (integer) (9.6.1.1.2)
description (2230)	distsource%compositions%signature%description (string) (9.6.1.1.3)
source (2013)	distsource%source(:) (distsource_source) (9.6.1.3.169)
source_id (2166)	distsource%source(:)%source_id(:) (enum_instance) (9.6.1.3.186)
type (2183)	distsource%source(:)%source_id(:)%type (identifier) (9.6.1.3.233)
id (2230)	distsource%source(:)%source_id(:)%type%id (string) (9.6.1.1.3)
flag (2230)	distsource%source(:)%source_id(:)%type%flag (integer) (9.6.1.1.2)
description (2230)	distsource%source(:)%source_id(:)%type%description (string) (9.6.1.1.3)
name (2183)	distsource%source(:)%source_id(:)%name (string) (9.6.1.1.3)
index (2183)	distsource%source(:)%source_id(:)%index (integer) (9.6.1.1.2)
species (2166)	distsource%source(:)%species (species_reference) (9.6.1.3.408)
type (2405)	distsource%source(:)%species%type (identifier) (9.6.1.3.233)
id (2230)	distsource%source(:)%species%type%id (string) (9.6.1.1.3)
flag (2230)	distsource%source(:)%species%type%flag (integer) (9.6.1.1.2)
description (2230)	distsource%source(:)%species%type%description (string) (9.6.1.1.3)
index (2405)	distsource%source(:)%species%index (integer) (9.6.1.1.2)
gyro_type (2166)	distsource%source(:)%gyro_type (integer) (9.6.1.1.2)
global_param (2166)	distsource%source(:)%global_param (distsource_global_param) (9.6.1.3.165)
src_pow (2162)	distsource%source(:)%global_param%src_pow (exp0D) (9.6.1.3.194)
value (2191)	distsource%source(:)%global_param%src_pow%value (float) (9.6.1.1.1)
abserror (2191)	distsource%source(:)%global_param%src_pow%abserror (float) (9.6.1.1.1)
relerror (2191)	distsource%source(:)%global_param%src_pow%relerror (float) (9.6.1.1.1)
src_rate (2162)	distsource%source(:)%global_param%src_rate (exp0D) (9.6.1.3.194)
value (2191)	distsource%source(:)%global_param%src_rate%value (float) (9.6.1.1.1)
abserror (2191)	distsource%source(:)%global_param%src_rate%abserror (float) (9.6.1.1.1)
relerror (2191)	distsource%source(:)%global_param%src_rate%relerror (float) (9.6.1.1.1)

mag_axis (2162)	distsource%source(:)%global_param%mag_axis (rz0D) (9.6.1.3.355)
r (2352)	distsource%source(:)%global_param%mag_axis%r (float) (9.6.1.1.1)
z (2352)	distsource%source(:)%global_param%mag_axis%z (float) (9.6.1.1.1)
toroid_field (2162)	distsource%source(:)%global_param%toroid_field (b0r0) (9.6.1.3.59)
r0 (2056)	distsource%source(:)%global_param%toroid_field%r0 (float) (9.6.1.1.1)
b0 (2056)	distsource%source(:)%global_param%toroid_field%b0 (float) (9.6.1.1.1)
profiles_1d (2166)	distsource%source(:)%profiles_1d (distsource_profiles_1d) (9.6.1.3.167)
rho_tor (2164)	distsource%source(:)%profiles_1d%rho_tor (vecflt_type) (9.6.1.2.13)
rho_tor_norm (2164)	distsource%source(:)%profiles_1d%rho_tor_norm (vecflt_type) (9.6.1.2.13)
psi (2164)	distsource%source(:)%profiles_1d%psi (vecflt_type) (9.6.1.2.13)
volume (2164)	distsource%source(:)%profiles_1d%volume (vecflt_type) (9.6.1.2.13)
area (2164)	distsource%source(:)%profiles_1d%area (vecflt_type) (9.6.1.2.13)
pow_den (2164)	distsource%source(:)%profiles_1d%pow_den (exp1D) (9.6.1.3.195)
value (2192)	distsource%source(:)%profiles_1d%pow_den%value (vecflt_type) (9.6.1.2.13)
abserror (2192)	distsource%source(:)%profiles_1d%pow_den%abserror (vecflt_type) (9.6.1.2.13)
relerror (2192)	distsource%source(:)%profiles_1d%pow_den%relerror (vecflt_type) (9.6.1.2.13)
trq_den (2164)	distsource%source(:)%profiles_1d%trq_den (exp1D) (9.6.1.3.195)
value (2192)	distsource%source(:)%profiles_1d%trq_den%value (vecflt_type) (9.6.1.2.13)
abserror (2192)	distsource%source(:)%profiles_1d%trq_den%abserror (vecflt_type) (9.6.1.2.13)
relerror (2192)	distsource%source(:)%profiles_1d%trq_den%relerror (vecflt_type) (9.6.1.2.13)
src_rate (2164)	distsource%source(:)%profiles_1d%src_rate (exp1D) (9.6.1.3.195)
value (2192)	distsource%source(:)%profiles_1d%src_rate%value (vecflt_type) (9.6.1.2.13)
abserror (2192)	distsource%source(:)%profiles_1d%src_rate%abserror (vecflt_type) (9.6.1.2.13)
relerror (2192)	distsource%source(:)%profiles_1d%src_rate%relerror (vecflt_type) (9.6.1.2.13)
profiles_2d (2166)	distsource%source(:)%profiles_2d (distsource_profiles_2d) (9.6.1.3.168)
grid_coord (2165)	distsource%source(:)%profiles_2d%grid_coord (vecint_type) (9.6.1.2.14)
dim1 (2165)	distsource%source(:)%profiles_2d%dim1 (matflt_type) (9.6.1.2.10)
dim2 (2165)	distsource%source(:)%profiles_2d%dim2 (matflt_type) (9.6.1.2.10)
g11 (2165)	distsource%source(:)%profiles_2d%g11 (matflt_type) (9.6.1.2.10)
g12 (2165)	distsource%source(:)%profiles_2d%g12 (matflt_type) (9.6.1.2.10)
g21 (2165)	distsource%source(:)%profiles_2d%g21 (matflt_type) (9.6.1.2.10)
g22 (2165)	distsource%source(:)%profiles_2d%g22 (matflt_type) (9.6.1.2.10)
pow_den (2165)	distsource%source(:)%profiles_2d%pow_den (exp2D) (9.6.1.3.196)
value (2193)	distsource%source(:)%profiles_2d%pow_den%value (matflt_type) (9.6.1.2.10)
abserror (2193)	distsource%source(:)%profiles_2d%pow_den%abserror (matflt_type) (9.6.1.2.10)
relerror (2193)	distsource%source(:)%profiles_2d%pow_den%relerror (matflt_type) (9.6.1.2.10)
src_rate (2165)	distsource%source(:)%profiles_2d%src_rate (exp2D) (9.6.1.3.196)
value (2193)	distsource%source(:)%profiles_2d%src_rate%value (matflt_type) (9.6.1.2.10)
abserror (2193)	distsource%source(:)%profiles_2d%src_rate%abserror (matflt_type) (9.6.1.2.10)
relerror (2193)	distsource%source(:)%profiles_2d%src_rate%relerror (matflt_type) (9.6.1.2.10)
line_srcprof (2166)	distsource%source(:)%line_srcprof() (distsource_line_src_prof) (9.6.1.3.166)
rho_tor (2163)	distsource%source(:)%line_srcprof()%rho_tor (vecflt_type) (9.6.1.2.13)
rho_tor_norm (2163)	distsource%source(:)%line_srcprof()%rho_tor_norm (vecflt_type) (9.6.1.2.13)
psi (2163)	distsource%source(:)%line_srcprof()%psi (vecflt_type) (9.6.1.2.13)
R (2163)	distsource%source(:)%line_srcprof()%R (vecflt_type) (9.6.1.2.13)
Z (2163)	distsource%source(:)%line_srcprof()%Z (vecflt_type) (9.6.1.2.13)
theta (2163)	distsource%source(:)%line_srcprof()%theta (vecflt_type) (9.6.1.2.13)
theta_id (2163)	distsource%source(:)%line_srcprof()%theta_id (vecflt_type) (9.6.1.2.13)
th2th_pol (2163)	distsource%source(:)%line_srcprof()%th2th_pol (matflt_type) (9.6.1.2.10)
pitch (2163)	distsource%source(:)%line_srcprof()%pitch (vecflt_type) (9.6.1.2.13)
energy (2163)	distsource%source(:)%line_srcprof()%energy (vecflt_type) (9.6.1.2.13)
ang_momentum (2163)	distsource%source(:)%line_srcprof()%ang_momentum (vecflt_type) (9.6.1.2.13)
src_rate (2163)	distsource%source(:)%line_srcprof()%src_rate (vecflt_type) (9.6.1.2.13)
source_rate (2166)	distsource%source(:)%source_rate (source_rate) (9.6.1.3.402)
grid (2399)	distsource%source(:)%source_rate%grid (complexgrid) (9.6.1.3.82)
uid (2079)	distsource%source(:)%source_rate%grid%uid (integer) (9.6.1.1.2)
id (2079)	distsource%source(:)%source_rate%grid%id (string) (9.6.1.1.3)
spaces (2079)	distsource%source(:)%source_rate%grid%spaces(:) (complexgrid_spaces) (9.6.1.3.91)
geotype (2088)	distsource%source(:)%source_rate%grid%spaces(:)%geotype (vecint_type) (9.6.1.2.14)
geotypeid (2088)	distsource%source(:)%source_rate%grid%spaces(:)%geotypeid (vecstring_type) (9.6.1.2.15)
coordtype (2088)	distsource%source(:)%source_rate%grid%spaces(:)%coordtype (matint_type) (9.6.1.2.11)

objects (2088)	distsource%source(:)%source_rate%grid%spaces(:)%objects(:) (objects) (9.6.1.3.297)
boundary (2294)	distsource%source(:)%source_rate%grid%spaces(:)%objects(:)%boundary (matint.type) (9.6.1.2.11)
neighbour (2294)	distsource%source(:)%source_rate%grid%spaces(:)%objects(:)%neighbour (array3dint.type) (9.6.1.2.3)
geo (2294)	distsource%source(:)%source_rate%grid%spaces(:)%objects(:)%geo (array4dflt.type) (9.6.1.2.4)
measure (2294)	distsource%source(:)%source_rate%grid%spaces(:)%objects(:)%measure (matflt.type) (9.6.1.2.10)
xpoints (2088)	distsource%source(:)%source_rate%grid%spaces(:)%xpoints (vecint.type) (9.6.1.2.14)
subgrids (2079)	distsource%source(:)%source_rate%grid%subgrids(:) (complexgrid_subgrid) (9.6.1.3.92)
id (2089)	distsource%source(:)%source_rate%grid%subgrids(:)%id (string) (9.6.1.1.3)
list (2089)	distsource%source(:)%source_rate%grid%subgrids(:)%list(:) (complexgrid_objectlist) (9.6.1.3.86)
cls (2083)	distsource%source(:)%source_rate%grid%subgrids(:)%list(:)%cls (vecint.type) (9.6.1.2.14)
indset (2083)	distsource%source(:)%source_rate%grid%subgrids(:)%list(:)%indset(:) (complex_grid_indexlist) (9.6.1.3.84)
range (2081)	distsource%source(:)%source_rate%grid%subgrids(:)%list(:)%indset(:)%range (vecint.type) (9.6.1.2.14)
ind (2081)	distsource%source(:)%source_rate%grid%subgrids(:)%list(:)%indset(:)%ind (vecint.type) (9.6.1.2.14)
ind (2083)	distsource%source(:)%source_rate%grid%subgrids(:)%list(:)%ind (matint.type) (9.6.1.2.11)
metric (2079)	distsource%source(:)%source_rate%grid%metric (complexgrid_metric) (9.6.1.3.85)
measure (2082)	distsource%source(:)%source_rate%grid%metric%measure(:) (complexgrid_scalar) (9.6.1.3.87)
griduid (2084)	distsource%source(:)%source_rate%grid%metric%measure(:)%griduid (integer) (9.6.1.1.2)
subgrid (2084)	distsource%source(:)%source_rate%grid%metric%measure(:)%subgrid (integer) (9.6.1.1.2)
scalar (2084)	distsource%source(:)%source_rate%grid%metric%measure(:)%scalar (vecflt.type) (9.6.1.2.13)
vector (2084)	distsource%source(:)%source_rate%grid%metric%measure(:)%vector (matflt.type) (9.6.1.2.10)
matrix (2084)	distsource%source(:)%source_rate%grid%metric%measure(:)%matrix (array3dflt.type) (9.6.1.2.2)
g11 (2082)	distsource%source(:)%source_rate%grid%metric%g11(:) (complexgrid_scalar) (9.6.1.3.87)
griduid (2084)	distsource%source(:)%source_rate%grid%metric%g11(:)%griduid (integer) (9.6.1.1.2)
subgrid (2084)	distsource%source(:)%source_rate%grid%metric%g11(:)%subgrid (integer) (9.6.1.1.2)
scalar (2084)	distsource%source(:)%source_rate%grid%metric%g11(:)%scalar (vecflt.type) (9.6.1.2.13)
vector (2084)	distsource%source(:)%source_rate%grid%metric%g11(:)%vector (matflt.type) (9.6.1.2.10)
matrix (2084)	distsource%source(:)%source_rate%grid%metric%g11(:)%matrix (array3dflt.type) (9.6.1.2.2)
g12 (2082)	distsource%source(:)%source_rate%grid%metric%g12(:) (complexgrid_scalar) (9.6.1.3.87)
griduid (2084)	distsource%source(:)%source_rate%grid%metric%g12(:)%griduid (integer) (9.6.1.1.2)
subgrid (2084)	distsource%source(:)%source_rate%grid%metric%g12(:)%subgrid (integer) (9.6.1.1.2)
scalar (2084)	distsource%source(:)%source_rate%grid%metric%g12(:)%scalar (vecflt.type) (9.6.1.2.13)
vector (2084)	distsource%source(:)%source_rate%grid%metric%g12(:)%vector (matflt.type) (9.6.1.2.10)
matrix (2084)	distsource%source(:)%source_rate%grid%metric%g12(:)%matrix (array3dflt.type) (9.6.1.2.2)
g13 (2082)	distsource%source(:)%source_rate%grid%metric%g13(:) (complexgrid_scalar) (9.6.1.3.87)
griduid (2084)	distsource%source(:)%source_rate%grid%metric%g13(:)%griduid (integer) (9.6.1.1.2)
subgrid (2084)	distsource%source(:)%source_rate%grid%metric%g13(:)%subgrid (integer) (9.6.1.1.2)
scalar (2084)	distsource%source(:)%source_rate%grid%metric%g13(:)%scalar (vecflt.type) (9.6.1.2.13)
vector (2084)	distsource%source(:)%source_rate%grid%metric%g13(:)%vector (matflt.type) (9.6.1.2.10)
matrix (2084)	distsource%source(:)%source_rate%grid%metric%g13(:)%matrix (array3dflt.type) (9.6.1.2.2)
g22 (2082)	distsource%source(:)%source_rate%grid%metric%g22(:) (complexgrid_scalar) (9.6.1.3.87)
griduid (2084)	distsource%source(:)%source_rate%grid%metric%g22(:)%griduid (integer) (9.6.1.1.2)
subgrid (2084)	distsource%source(:)%source_rate%grid%metric%g22(:)%subgrid (integer) (9.6.1.1.2)
scalar (2084)	distsource%source(:)%source_rate%grid%metric%g22(:)%scalar (vecflt.type) (9.6.1.2.13)
vector (2084)	distsource%source(:)%source_rate%grid%metric%g22(:)%vector (matflt.type) (9.6.1.2.10)
matrix (2084)	distsource%source(:)%source_rate%grid%metric%g22(:)%matrix (array3dflt.type) (9.6.1.2.2)
g23 (2082)	distsource%source(:)%source_rate%grid%metric%g23(:) (complexgrid_scalar) (9.6.1.3.87)
griduid (2084)	distsource%source(:)%source_rate%grid%metric%g23(:)%griduid (integer) (9.6.1.1.2)
subgrid (2084)	distsource%source(:)%source_rate%grid%metric%g23(:)%subgrid (integer) (9.6.1.1.2)
scalar (2084)	distsource%source(:)%source_rate%grid%metric%g23(:)%scalar (vecflt.type) (9.6.1.2.13)
vector (2084)	distsource%source(:)%source_rate%grid%metric%g23(:)%vector (matflt.type) (9.6.1.2.10)
matrix (2084)	distsource%source(:)%source_rate%grid%metric%g23(:)%matrix (array3dflt.type) (9.6.1.2.2)
g33 (2082)	distsource%source(:)%source_rate%grid%metric%g33(:) (complexgrid_scalar) (9.6.1.3.87)
griduid (2084)	distsource%source(:)%source_rate%grid%metric%g33(:)%griduid (integer) (9.6.1.1.2)
subgrid (2084)	distsource%source(:)%source_rate%grid%metric%g33(:)%subgrid (integer) (9.6.1.1.2)
scalar (2084)	distsource%source(:)%source_rate%grid%metric%g33(:)%scalar (vecflt.type) (9.6.1.2.13)



vector (2084)	distsource%source(:)%source_rate%grid%metric%g33(:)%vector (matflt_type) (9.6.1.2.10)
matrix (2084)	distsource%source(:)%source_rate%grid%metric%g33(:)%matrix (array3dflt_type) (9.6.1.2.2)
jacobian (2082)	distsource%source(:)%source_rate%grid%metric%jacobian(:) (complexgrid_scalar) (9.6.1.3.87)
griduid (2084)	distsource%source(:)%source_rate%grid%metric%jacobian(:)%griduid (integer) (9.6.1.1.2)
subgrid (2084)	distsource%source(:)%source_rate%grid%metric%jacobian(:)%subgrid (integer) (9.6.1.1.2)
scalar (2084)	distsource%source(:)%source_rate%grid%metric%jacobian(:)%scalar (vecflt_type) (9.6.1.2.13)
vector (2084)	distsource%source(:)%source_rate%grid%metric%jacobian(:)%vector (matflt_type) (9.6.1.2.10)
matrix (2084)	distsource%source(:)%source_rate%grid%metric%jacobian(:)%matrix (array3dflt_type) (9.6.1.2.2)
geo (2079)	distsource%source(:)%source_rate%grid%geo(:) (complexgrid_geo_global) (9.6.1.3.83)
geotype (2080)	distsource%source(:)%source_rate%grid%geo(:)%geotype (integer) (9.6.1.1.2)
geotypeid (2080)	distsource%source(:)%source_rate%grid%geo(:)%geotypeid (string) (9.6.1.1.3)
coordtype (2080)	distsource%source(:)%source_rate%grid%geo(:)%coordtype (vecint_type) (9.6.1.2.14)
geo_matrix (2080)	distsource%source(:)%source_rate%grid%geo(:)%geo_matrix(:) (complexgrid_scalar) (9.6.1.3.87)
griduid (2084)	distsource%source(:)%source_rate%grid%geo(:)%geo_matrix(:)%griduid (integer) (9.6.1.1.2)
subgrid (2084)	distsource%source(:)%source_rate%grid%geo(:)%geo_matrix(:)%subgrid (integer) (9.6.1.1.2)
scalar (2084)	distsource%source(:)%source_rate%grid%geo(:)%geo_matrix(:)%scalar (vecflt_type) (9.6.1.2.13)
vector (2084)	distsource%source(:)%source_rate%grid%geo(:)%geo_matrix(:)%vector (matflt_type) (9.6.1.2.10)
matrix (2084)	distsource%source(:)%source_rate%grid%geo(:)%geo_matrix(:)%matrix (array3dflt_type) (9.6.1.2.2)
measure (2080)	distsource%source(:)%source_rate%grid%geo(:)%measure(:) (complexgrid_scalar) (9.6.1.3.87)
griduid (2084)	distsource%source(:)%source_rate%grid%geo(:)%measure(:)%griduid (integer) (9.6.1.1.2)
subgrid (2084)	distsource%source(:)%source_rate%grid%geo(:)%measure(:)%subgrid (integer) (9.6.1.1.2)
scalar (2084)	distsource%source(:)%source_rate%grid%geo(:)%measure(:)%scalar (vecflt_type) (9.6.1.2.13)
vector (2084)	distsource%source(:)%source_rate%grid%geo(:)%measure(:)%vector (matflt_type) (9.6.1.2.10)
matrix (2084)	distsource%source(:)%source_rate%grid%geo(:)%measure(:)%matrix (array3dflt_type) (9.6.1.2.2)
bases (2079)	distsource%source(:)%source_rate%grid%bases(:) (complexgrid_vector) (9.6.1.3.93)
griduid (2090)	distsource%source(:)%source_rate%grid%bases(:)%griduid (integer) (9.6.1.1.2)
label (2090)	distsource%source(:)%source_rate%grid%bases(:)%label (string) (9.6.1.1.3)
comp (2090)	distsource%source(:)%source_rate%grid%bases(:)%comp(:) (complexgrid_scalar) (9.6.1.3.87)
griduid (2084)	distsource%source(:)%source_rate%grid%bases(:)%comp(:)%griduid (integer) (9.6.1.1.2)
subgrid (2084)	distsource%source(:)%source_rate%grid%bases(:)%comp(:)%subgrid (integer) (9.6.1.1.2)
scalar (2084)	distsource%source(:)%source_rate%grid%bases(:)%comp(:)%scalar (vecflt_type) (9.6.1.2.13)
vector (2084)	distsource%source(:)%source_rate%grid%bases(:)%comp(:)%vector (matflt_type) (9.6.1.2.10)
matrix (2084)	distsource%source(:)%source_rate%grid%bases(:)%comp(:)%matrix (array3dflt_type) (9.6.1.2.2)
align (2090)	distsource%source(:)%source_rate%grid%bases(:)%align (vecint_type) (9.6.1.2.14)
alignid (2090)	distsource%source(:)%source_rate%grid%bases(:)%alignid (vecstring_type) (9.6.1.2.15)
basis (2090)	distsource%source(:)%source_rate%grid%bases(:)%basis (integer) (9.6.1.1.2)
value (2399)	distsource%source(:)%source_rate%value (complexgrid_scalar) (9.6.1.3.87)
griduid (2084)	distsource%source(:)%source_rate%value%griduid (integer) (9.6.1.1.2)
subgrid (2084)	distsource%source(:)%source_rate%value%subgrid (integer) (9.6.1.1.2)
scalar (2084)	distsource%source(:)%source_rate%value%scalar (vecflt_type) (9.6.1.2.13)
vector (2084)	distsource%source(:)%source_rate%value%vector (matflt_type) (9.6.1.2.10)
matrix (2084)	distsource%source(:)%source_rate%value%matrix (array3dflt_type) (9.6.1.2.2)
discrete (2399)	distsource%source(:)%source_rate%discrete (vecint_type) (9.6.1.2.14)
parameters (2399)	distsource%source(:)%source_rate%parameters (parameters) (9.6.1.3.308)
equatorial (2305)	distsource%source(:)%source_rate%parameters%equatorial (equatorial_plane) (9.6.1.3.191)
r (2188)	distsource%source(:)%source_rate%parameters%equatorial%r (vecflt_type) (9.6.1.2.13)
z (2188)	distsource%source(:)%source_rate%parameters%equatorial%z (vecflt_type) (9.6.1.2.13)
s (2188)	distsource%source(:)%source_rate%parameters%equatorial%s (vecflt_type) (9.6.1.2.13)
rho.tor (2188)	distsource%source(:)%source_rate%parameters%equatorial%rho.tor (vecflt_type) (9.6.1.2.13)
psi (2188)	distsource%source(:)%source_rate%parameters%equatorial%psi (vecflt_type) (9.6.1.2.13)
b_mod (2188)	distsource%source(:)%source_rate%parameters%equatorial%b_mod (vecflt_type) (9.6.1.2.13)
markers (2166)	distsource%source(:)%markers (weighted_markers) (9.6.1.3.502)
variable_ids (2499)	distsource%source(:)%markers%variable_ids(:) (identifier) (9.6.1.3.233)
id (2230)	distsource%source(:)%markers%variable_ids(:)%id (string) (9.6.1.1.3)
flag (2230)	distsource%source(:)%markers%variable_ids(:)%flag (integer) (9.6.1.1.2)
description (2230)	distsource%source(:)%markers%variable_ids(:)%description (string) (9.6.1.1.3)
coord (2499)	distsource%source(:)%markers%coord (matflt_type) (9.6.1.2.10)



weight (2499)	distsource%source(:)%markers%weight (vecflt.type) (9.6.1.2.13)
codeparam (2166)	distsource%source(:)%codeparam (codeparam) (9.6.1.3.77)
codename (2074)	distsource%source(:)%codeparam%codename (string) (9.6.1.1.3)
codeversion (2074)	distsource%source(:)%codeparam%codeversion (string) (9.6.1.1.3)
parameters (2074)	distsource%source(:)%codeparam%parameters (string) (9.6.1.1.3)
output_diag (2074)	distsource%source(:)%codeparam%output_diag (string) (9.6.1.1.3)
output_flag (2074)	distsource%source(:)%codeparam%output_flag (integer) (9.6.1.1.2)
codeparam (2013)	distsource%codeparam (codeparam) (9.6.1.3.77)
codename (2074)	distsource%codeparam%codename (string) (9.6.1.1.3)
codeversion (2074)	distsource%codeparam%codeversion (string) (9.6.1.1.3)
parameters (2074)	distsource%codeparam%parameters (string) (9.6.1.1.3)
output_diag (2074)	distsource%codeparam%output_diag (string) (9.6.1.1.3)
output_flag (2074)	distsource%codeparam%output_flag (integer) (9.6.1.1.2)
time (2013)	distsource%time (float) (9.6.1.1.1)

### 9.6.2.1.15 ecediag

datainfo (2014)	ecediag%datainfo (datainfo) (9.6.1.3.133)
dataprovder (2130)	ecediag%datainfo%dataprovder (string) (9.6.1.1.3)
putdate (2130)	ecediag%datainfo%putdate (string) (9.6.1.1.3)
source (2130)	ecediag%datainfo%source (string) (9.6.1.1.3)
comment (2130)	ecediag%datainfo%comment (string) (9.6.1.1.3)
cocos (2130)	ecediag%datainfo%cocos (integer) (9.6.1.1.2)
id (2130)	ecediag%datainfo%id (integer) (9.6.1.1.2)
isref (2130)	ecediag%datainfo%isref (integer) (9.6.1.1.2)
whatref (2130)	ecediag%datainfo%whatref (whatref) (9.6.1.3.503)
user (2500)	ecediag%datainfo%whatref%user (string) (9.6.1.1.3)
machine (2500)	ecediag%datainfo%whatref%machine (string) (9.6.1.1.3)
shot (2500)	ecediag%datainfo%whatref%shot (integer) (9.6.1.1.2)
run (2500)	ecediag%datainfo%whatref%run (integer) (9.6.1.1.2)
occurrence (2500)	ecediag%datainfo%whatref%occurrence (integer) (9.6.1.1.2)
putinfo (2130)	ecediag%datainfo%putinfo (putinfo) (9.6.1.3.339)
putmethod (2336)	ecediag%datainfo%putinfo%putmethod (string) (9.6.1.1.3)
putaccess (2336)	ecediag%datainfo%putinfo%putaccess (string) (9.6.1.1.3)
putlocation (2336)	ecediag%datainfo%putinfo%putlocation (string) (9.6.1.1.3)
rights (2336)	ecediag%datainfo%putinfo%rights (string) (9.6.1.1.3)
setup (2014)	ecediag%setup (ecesetup) (9.6.1.3.173)
frequency (2170)	ecediag%setup%frequency (vecflt.type) (9.6.1.2.13)
los (2170)	ecediag%setup%los (setup_line_exp) (9.6.1.3.394)
pivot_point (2391)	ecediag%setup%los%pivot_point (rzphi1DExperimental) (9.6.1.3.364)
r (2361)	ecediag%setup%los%pivot_point%r (vecflt.type) (9.6.1.2.13)
z (2361)	ecediag%setup%los%pivot_point%z (vecflt.type) (9.6.1.2.13)
phi (2361)	ecediag%setup%los%pivot_point%phi (vecflt.type) (9.6.1.2.13)
horchordang1 (2391)	ecediag%setup%los%horchordang1 (vecflt.type) (9.6.1.2.13)
verchordang1 (2391)	ecediag%setup%los%verchordang1 (vecflt.type) (9.6.1.2.13)
width (2391)	ecediag%setup%los%width (vecflt.type) (9.6.1.2.13)
second_point (2391)	ecediag%setup%los%second_point (rzphi1DExperimental) (9.6.1.3.364)
r (2361)	ecediag%setup%los%second_point%r (vecflt.type) (9.6.1.2.13)
z (2361)	ecediag%setup%los%second_point%z (vecflt.type) (9.6.1.2.13)
phi (2361)	ecediag%setup%los%second_point%phi (vecflt.type) (9.6.1.2.13)
horchordang2 (2391)	ecediag%setup%los%horchordang2 (vecflt.type) (9.6.1.2.13)
verchordang2 (2391)	ecediag%setup%los%verchordang2 (vecflt.type) (9.6.1.2.13)
third_point (2391)	ecediag%setup%los%third_point (rzphi1DExperimental) (9.6.1.3.364)
r (2361)	ecediag%setup%los%third_point%r (vecflt.type) (9.6.1.2.13)
z (2361)	ecediag%setup%los%third_point%z (vecflt.type) (9.6.1.2.13)
phi (2361)	ecediag%setup%los%third_point%phi (vecflt.type) (9.6.1.2.13)
nchordpoints (2391)	ecediag%setup%los%nchordpoints (integer) (9.6.1.1.2)
measure (2014)	ecediag%measure (ecemeasure) (9.6.1.3.172)
harmonic (2169)	ecediag%measure%harmonic (integer) (9.6.1.1.2)
position (2169)	ecediag%measure%position (rzphi1Dexp) (9.6.1.3.363)
r (2360)	ecediag%measure%position%r (exp1D) (9.6.1.3.195)

value (2192)	ecediag%measure%position%r%value (vecflt.type) (9.6.1.2.13)
abserror (2192)	ecediag%measure%position%r%abserror (vecflt.type) (9.6.1.2.13)
releror (2192)	ecediag%measure%position%r%releror (vecflt.type) (9.6.1.2.13)
z (2360)	ecediag%measure%position%z (exp1D) (9.6.1.3.195)
value (2192)	ecediag%measure%position%z%value (vecflt.type) (9.6.1.2.13)
abserror (2192)	ecediag%measure%position%z%abserror (vecflt.type) (9.6.1.2.13)
releror (2192)	ecediag%measure%position%z%releror (vecflt.type) (9.6.1.2.13)
phi (2360)	ecediag%measure%position%phi (exp1D) (9.6.1.3.195)
value (2192)	ecediag%measure%position%phi%value (vecflt.type) (9.6.1.2.13)
abserror (2192)	ecediag%measure%position%phi%abserror (vecflt.type) (9.6.1.2.13)
releror (2192)	ecediag%measure%position%phi%releror (vecflt.type) (9.6.1.2.13)
te (2169)	ecediag%measure%te (exp1D) (9.6.1.3.195)
value (2192)	ecediag%measure%te%value (vecflt.type) (9.6.1.2.13)
abserror (2192)	ecediag%measure%te%abserror (vecflt.type) (9.6.1.2.13)
releror (2192)	ecediag%measure%te%releror (vecflt.type) (9.6.1.2.13)
codeparam (2014)	ecediag%codeparam (codeparam) (9.6.1.3.77)
codename (2074)	ecediag%codeparam%codename (string) (9.6.1.1.3)
codeversion (2074)	ecediag%codeparam%codeversion (string) (9.6.1.1.3)
parameters (2074)	ecediag%codeparam%parameters (string) (9.6.1.1.3)
output.diag (2074)	ecediag%codeparam%output.diag (string) (9.6.1.1.3)
output.flag (2074)	ecediag%codeparam%output.flag (integer) (9.6.1.1.2)
time (2014)	ecediag%time (float) (9.6.1.1.1)

### 9.6.2.1.16 edge

datainfo (2015)	edge%datainfo (datainfo) (9.6.1.3.133)
dataprovider (2130)	edge%datainfo%dataprovider (string) (9.6.1.1.3)
putdate (2130)	edge%datainfo%putdate (string) (9.6.1.1.3)
source (2130)	edge%datainfo%source (string) (9.6.1.1.3)
comment (2130)	edge%datainfo%comment (string) (9.6.1.1.3)
cocos (2130)	edge%datainfo%cocos (integer) (9.6.1.1.2)
id (2130)	edge%datainfo%id (integer) (9.6.1.1.2)
isref (2130)	edge%datainfo%isref (integer) (9.6.1.1.2)
whatref (2130)	edge%datainfo%whatref (whatref) (9.6.1.3.503)
user (2500)	edge%datainfo%whatref%user (string) (9.6.1.1.3)
machine (2500)	edge%datainfo%whatref%machine (string) (9.6.1.1.3)
shot (2500)	edge%datainfo%whatref%shot (integer) (9.6.1.1.2)
run (2500)	edge%datainfo%whatref%run (integer) (9.6.1.1.2)
occurrence (2500)	edge%datainfo%whatref%occurrence (integer) (9.6.1.1.2)
putinfo (2130)	edge%datainfo%putinfo (putinfo) (9.6.1.3.339)
putmethod (2336)	edge%datainfo%putinfo%putmethod (string) (9.6.1.1.3)
putaccess (2336)	edge%datainfo%putinfo%putaccess (string) (9.6.1.1.3)
putlocation (2336)	edge%datainfo%putinfo%putlocation (string) (9.6.1.1.3)
rights (2336)	edge%datainfo%putinfo%rights (string) (9.6.1.1.3)
grid (2015)	edge%grid (complexgrid) (9.6.1.3.82)
uid (2079)	edge%grid%uid (integer) (9.6.1.1.2)
id (2079)	edge%grid%id (string) (9.6.1.1.3)
spaces (2079)	edge%grid%spaces(:) (complexgrid.space) (9.6.1.3.91)
geotype (2088)	edge%grid%spaces(:)%geotype (vecint.type) (9.6.1.2.14)
geotypeid (2088)	edge%grid%spaces(:)%geotypeid (vecstring.type) (9.6.1.2.15)
coordtype (2088)	edge%grid%spaces(:)%coordtype (matint.type) (9.6.1.2.11)
objects (2088)	edge%grid%spaces(:)%objects(:) (objects) (9.6.1.3.297)
boundary (2294)	edge%grid%spaces(:)%objects(:)%boundary (matint.type) (9.6.1.2.11)
neighbour (2294)	edge%grid%spaces(:)%objects(:)%neighbour (array3dint.type) (9.6.1.2.3)
geo (2294)	edge%grid%spaces(:)%objects(:)%geo (array4dflt.type) (9.6.1.2.4)
measure (2294)	edge%grid%spaces(:)%objects(:)%measure (matflt.type) (9.6.1.2.10)
xpoints (2088)	edge%grid%spaces(:)%xpoints (vecint.type) (9.6.1.2.14)
subgrids (2079)	edge%grid%subgrids(:) (complexgrid.subgrid) (9.6.1.3.92)
id (2089)	edge%grid%subgrids(:)%id (string) (9.6.1.1.3)
list (2089)	edge%grid%subgrids(:)%list(:) (complexgrid.objectlist) (9.6.1.3.86)
cls (2083)	edge%grid%subgrids(:)%list(:)%cls (vecint.type) (9.6.1.2.14)

indset (2083)	edge%grid%subgrids(:)%list(:)%indset(:) (complexgrid_indexlist) (9.6.1.3.84)
range (2081)	edge%grid%subgrids(:)%list(:)%indset(:)%range (vecint_type) (9.6.1.2.14)
ind (2081)	edge%grid%subgrids(:)%list(:)%ind (vecint_type) (9.6.1.2.14)
ind (2083)	edge%grid%subgrids(:)%list(:)%ind (matint_type) (9.6.1.2.11)
metric (2079)	edge%grid%metric (complexgrid_metric) (9.6.1.3.85)
measure (2082)	edge%grid%metric%measure(:) (complexgrid_scalar) (9.6.1.3.87)
griduid (2084)	edge%grid%metric%measure(:)%griduid (integer) (9.6.1.1.2)
subgrid (2084)	edge%grid%metric%measure(:)%subgrid (integer) (9.6.1.1.2)
scalar (2084)	edge%grid%metric%measure(:)%scalar (vecflt_type) (9.6.1.2.13)
vector (2084)	edge%grid%metric%measure(:)%vector (matflt_type) (9.6.1.2.10)
matrix (2084)	edge%grid%metric%measure(:)%matrix (array3dflt_type) (9.6.1.2.2)
g11 (2082)	edge%grid%metric%g11(:) (complexgrid_scalar) (9.6.1.3.87)
griduid (2084)	edge%grid%metric%g11(:)%griduid (integer) (9.6.1.1.2)
subgrid (2084)	edge%grid%metric%g11(:)%subgrid (integer) (9.6.1.1.2)
scalar (2084)	edge%grid%metric%g11(:)%scalar (vecflt_type) (9.6.1.2.13)
vector (2084)	edge%grid%metric%g11(:)%vector (matflt_type) (9.6.1.2.10)
matrix (2084)	edge%grid%metric%g11(:)%matrix (array3dflt_type) (9.6.1.2.2)
g12 (2082)	edge%grid%metric%g12(:) (complexgrid_scalar) (9.6.1.3.87)
griduid (2084)	edge%grid%metric%g12(:)%griduid (integer) (9.6.1.1.2)
subgrid (2084)	edge%grid%metric%g12(:)%subgrid (integer) (9.6.1.1.2)
scalar (2084)	edge%grid%metric%g12(:)%scalar (vecflt_type) (9.6.1.2.13)
vector (2084)	edge%grid%metric%g12(:)%vector (matflt_type) (9.6.1.2.10)
matrix (2084)	edge%grid%metric%g12(:)%matrix (array3dflt_type) (9.6.1.2.2)
g13 (2082)	edge%grid%metric%g13(:) (complexgrid_scalar) (9.6.1.3.87)
griduid (2084)	edge%grid%metric%g13(:)%griduid (integer) (9.6.1.1.2)
subgrid (2084)	edge%grid%metric%g13(:)%subgrid (integer) (9.6.1.1.2)
scalar (2084)	edge%grid%metric%g13(:)%scalar (vecflt_type) (9.6.1.2.13)
vector (2084)	edge%grid%metric%g13(:)%vector (matflt_type) (9.6.1.2.10)
matrix (2084)	edge%grid%metric%g13(:)%matrix (array3dflt_type) (9.6.1.2.2)
g22 (2082)	edge%grid%metric%g22(:) (complexgrid_scalar) (9.6.1.3.87)
griduid (2084)	edge%grid%metric%g22(:)%griduid (integer) (9.6.1.1.2)
subgrid (2084)	edge%grid%metric%g22(:)%subgrid (integer) (9.6.1.1.2)
scalar (2084)	edge%grid%metric%g22(:)%scalar (vecflt_type) (9.6.1.2.13)
vector (2084)	edge%grid%metric%g22(:)%vector (matflt_type) (9.6.1.2.10)
matrix (2084)	edge%grid%metric%g22(:)%matrix (array3dflt_type) (9.6.1.2.2)
g23 (2082)	edge%grid%metric%g23(:) (complexgrid_scalar) (9.6.1.3.87)
griduid (2084)	edge%grid%metric%g23(:)%griduid (integer) (9.6.1.1.2)
subgrid (2084)	edge%grid%metric%g23(:)%subgrid (integer) (9.6.1.1.2)
scalar (2084)	edge%grid%metric%g23(:)%scalar (vecflt_type) (9.6.1.2.13)
vector (2084)	edge%grid%metric%g23(:)%vector (matflt_type) (9.6.1.2.10)
matrix (2084)	edge%grid%metric%g23(:)%matrix (array3dflt_type) (9.6.1.2.2)
g33 (2082)	edge%grid%metric%g33(:) (complexgrid_scalar) (9.6.1.3.87)
griduid (2084)	edge%grid%metric%g33(:)%griduid (integer) (9.6.1.1.2)
subgrid (2084)	edge%grid%metric%g33(:)%subgrid (integer) (9.6.1.1.2)
scalar (2084)	edge%grid%metric%g33(:)%scalar (vecflt_type) (9.6.1.2.13)
vector (2084)	edge%grid%metric%g33(:)%vector (matflt_type) (9.6.1.2.10)
matrix (2084)	edge%grid%metric%g33(:)%matrix (array3dflt_type) (9.6.1.2.2)
jacobian (2082)	edge%grid%metric%jacobian(:) (complexgrid_scalar) (9.6.1.3.87)
griduid (2084)	edge%grid%metric%jacobian(:)%griduid (integer) (9.6.1.1.2)
subgrid (2084)	edge%grid%metric%jacobian(:)%subgrid (integer) (9.6.1.1.2)
scalar (2084)	edge%grid%metric%jacobian(:)%scalar (vecflt_type) (9.6.1.2.13)
vector (2084)	edge%grid%metric%jacobian(:)%vector (matflt_type) (9.6.1.2.10)
matrix (2084)	edge%grid%metric%jacobian(:)%matrix (array3dflt_type) (9.6.1.2.2)
geo (2079)	edge%grid%geo(:) (complexgrid_geo_global) (9.6.1.3.83)
geotype (2080)	edge%grid%geo(:)%geotype (integer) (9.6.1.1.2)
geotypeid (2080)	edge%grid%geo(:)%geotypeid (string) (9.6.1.1.3)
coordtype (2080)	edge%grid%geo(:)%coordtype (vecint_type) (9.6.1.2.14)
geo_matrix (2080)	edge%grid%geo(:)%geo_matrix(:) (complexgrid_scalar) (9.6.1.3.87)
griduid (2084)	edge%grid%geo(:)%geo_matrix(:)%griduid (integer) (9.6.1.1.2)
subgrid (2084)	edge%grid%geo(:)%geo_matrix(:)%subgrid (integer) (9.6.1.1.2)
scalar (2084)	edge%grid%geo(:)%geo_matrix(:)%scalar (vecflt_type) (9.6.1.2.13)

vector (2084)	edge%grid%geo(:)%geo_matrix(:)%vector (matflt_type) (9.6.1.2.10)
matrix (2084)	edge%grid%geo(:)%geo_matrix(:)%matrix (array3dflt_type) (9.6.1.2.2)
measure (2080)	edge%grid%geo(:)%measure(:) (complexgrid_scalar) (9.6.1.3.87)
griduid (2084)	edge%grid%geo(:)%measure(:)%griduid (integer) (9.6.1.1.2)
subgrid (2084)	edge%grid%geo(:)%measure(:)%subgrid (integer) (9.6.1.1.2)
scalar (2084)	edge%grid%geo(:)%measure(:)%scalar (vecflt_type) (9.6.1.2.13)
vector (2084)	edge%grid%geo(:)%measure(:)%vector (matflt_type) (9.6.1.2.10)
matrix (2084)	edge%grid%geo(:)%measure(:)%matrix (array3dflt_type) (9.6.1.2.2)
bases (2079)	edge%grid%bases(:) (complexgrid_vector) (9.6.1.3.93)
griduid (2090)	edge%grid%bases(:)%griduid (integer) (9.6.1.1.2)
label (2090)	edge%grid%bases(:)%label (string) (9.6.1.1.3)
comp (2090)	edge%grid%bases(:)%comp(:) (complexgrid_scalar) (9.6.1.3.87)
griduid (2084)	edge%grid%bases(:)%comp(:)%griduid (integer) (9.6.1.1.2)
subgrid (2084)	edge%grid%bases(:)%comp(:)%subgrid (integer) (9.6.1.1.2)
scalar (2084)	edge%grid%bases(:)%comp(:)%scalar (vecflt_type) (9.6.1.2.13)
vector (2084)	edge%grid%bases(:)%comp(:)%vector (matflt_type) (9.6.1.2.10)
matrix (2084)	edge%grid%bases(:)%comp(:)%matrix (array3dflt_type) (9.6.1.2.2)
align (2090)	edge%grid%bases(:)%align (vecint_type) (9.6.1.2.14)
alignid (2090)	edge%grid%bases(:)%alignid (vecstring_type) (9.6.1.2.15)
basis (2090)	edge%grid%bases(:)%basis (integer) (9.6.1.1.2)
species (2015)	edge%species(:) (species_desc) (9.6.1.3.407)
label (2404)	edge%species(:)%label (string) (9.6.1.1.3)
amn (2404)	edge%species(:)%amn (float) (9.6.1.1.1)
zn (2404)	edge%species(:)%zn (float) (9.6.1.1.1)
zmin (2404)	edge%species(:)%zmin (float) (9.6.1.1.1)
zmax (2404)	edge%species(:)%zmax (float) (9.6.1.1.1)
compositions (2015)	edge%compositions (compositions_type) (9.6.1.3.99)
nuclei (2096)	edge%compositions%nuclei(:) (nuclei) (9.6.1.3.296)
zn (2293)	edge%compositions%nuclei(:)%zn (float) (9.6.1.1.1)
amn (2293)	edge%compositions%nuclei(:)%amn (float) (9.6.1.1.1)
label (2293)	edge%compositions%nuclei(:)%label (string) (9.6.1.1.3)
ions (2096)	edge%compositions%ions(:) (ions) (9.6.1.3.238)
nucindex (2235)	edge%compositions%ions(:)%nucindex (integer) (9.6.1.1.2)
zion (2235)	edge%compositions%ions(:)%zion (float) (9.6.1.1.1)
imp_flag (2235)	edge%compositions%ions(:)%imp_flag (integer) (9.6.1.1.2)
label (2235)	edge%compositions%ions(:)%label (string) (9.6.1.1.3)
impurities (2096)	edge%compositions%impurities(:) (impurities) (9.6.1.3.235)
nucindex (2232)	edge%compositions%impurities(:)%nucindex (integer) (9.6.1.1.2)
i_ion (2232)	edge%compositions%impurities(:)%i_ion (integer) (9.6.1.1.2)
nzimp (2232)	edge%compositions%impurities(:)%nzimp (integer) (9.6.1.1.2)
zmin (2232)	edge%compositions%impurities(:)%zmin (vecflt_type) (9.6.1.2.13)
zmax (2232)	edge%compositions%impurities(:)%zmax (vecflt_type) (9.6.1.2.13)
label (2232)	edge%compositions%impurities(:)%label (vecstring_type) (9.6.1.2.15)
neutralscomp (2096)	edge%compositions%neutralscomp(:) (composition_neutralscomp) (9.6.1.3.98)
neutcomp (2095)	edge%compositions%neutralscomp(:)%neutcomp(:) (composition_neutrals_neutcomp) (9.6.1.3.97)
nucindex (2094)	edge%compositions%neutralscomp(:)%neutcomp(:)%nucindex (integer) (9.6.1.1.2)
multiplicity (2094)	edge%compositions%neutralscomp(:)%neutcomp(:)%multiplicity (integer) (9.6.1.1.2)
type (2095)	edge%compositions%neutralscomp(:)%type(:) (identifier) (9.6.1.3.233)
id (2230)	edge%compositions%neutralscomp(:)%type(:)%id (string) (9.6.1.1.3)
flag (2230)	edge%compositions%neutralscomp(:)%type(:)%flag (integer) (9.6.1.1.2)
description (2230)	edge%compositions%neutralscomp(:)%type(:)%description (string) (9.6.1.1.3)
label (2095)	edge%compositions%neutralscomp(:)%label (string) (9.6.1.1.3)
edgespecies (2096)	edge%compositions%edgespecies(:) (edgespecies) (9.6.1.3.183)
nucindex (2180)	edge%compositions%edgespecies(:)%nucindex (integer) (9.6.1.1.2)
zmin (2180)	edge%compositions%edgespecies(:)%zmin (float) (9.6.1.1.1)
zmax (2180)	edge%compositions%edgespecies(:)%zmax (float) (9.6.1.1.1)
label (2180)	edge%compositions%edgespecies(:)%label (string) (9.6.1.1.3)
signature (2096)	edge%compositions%signature (identifier) (9.6.1.3.233)
id (2230)	edge%compositions%signature%id (string) (9.6.1.1.3)
flag (2230)	edge%compositions%signature%flag (integer) (9.6.1.1.2)
description (2230)	edge%compositions%signature%description (string) (9.6.1.1.3)

fluid (2015)	edge%fluid (edge_fluid) (9.6.1.3.174)
ne (2171)	edge%fluid%ne (edge_fluid_scalar_simplestruct) (9.6.1.3.176)
value (2173)	edge%fluid%ne%value(:) (complexgrid_scalar) (9.6.1.3.87)
griduid (2084)	edge%fluid%ne%value(:)%griduid (integer) (9.6.1.1.2)
subgrid (2084)	edge%fluid%ne%value(:)%subgrid (integer) (9.6.1.1.2)
scalar (2084)	edge%fluid%ne%value(:)%scalar (vecflt_type) (9.6.1.2.13)
vector (2084)	edge%fluid%ne%value(:)%vector (matflt_type) (9.6.1.2.10)
matrix (2084)	edge%fluid%ne%value(:)%matrix (array3dflt_type) (9.6.1.2.2)
bndvalue (2173)	edge%fluid%ne%bndvalue(:) (complexgrid_scalar) (9.6.1.3.87)
griduid (2084)	edge%fluid%ne%bndvalue(:)%griduid (integer) (9.6.1.1.2)
subgrid (2084)	edge%fluid%ne%bndvalue(:)%subgrid (integer) (9.6.1.1.2)
scalar (2084)	edge%fluid%ne%bndvalue(:)%scalar (vecflt_type) (9.6.1.2.13)
vector (2084)	edge%fluid%ne%bndvalue(:)%vector (matflt_type) (9.6.1.2.10)
matrix (2084)	edge%fluid%ne%bndvalue(:)%matrix (array3dflt_type) (9.6.1.2.2)
flux (2173)	edge%fluid%ne%flux(:) (complexgrid_vector) (9.6.1.3.93)
griduid (2090)	edge%fluid%ne%flux(:)%griduid (integer) (9.6.1.1.2)
label (2090)	edge%fluid%ne%flux(:)%label (string) (9.6.1.1.3)
comp (2090)	edge%fluid%ne%flux(:)%comp(:) (complexgrid_scalar) (9.6.1.3.87)
griduid (2084)	edge%fluid%ne%flux(:)%comp(:)%griduid (integer) (9.6.1.1.2)
subgrid (2084)	edge%fluid%ne%flux(:)%comp(:)%subgrid (integer) (9.6.1.1.2)
scalar (2084)	edge%fluid%ne%flux(:)%comp(:)%scalar (vecflt_type) (9.6.1.2.13)
vector (2084)	edge%fluid%ne%flux(:)%comp(:)%vector (matflt_type) (9.6.1.2.10)
matrix (2084)	edge%fluid%ne%flux(:)%comp(:)%matrix (array3dflt_type) (9.6.1.2.2)
align (2090)	edge%fluid%ne%flux(:)%align (vecint_type) (9.6.1.2.14)
alignid (2090)	edge%fluid%ne%flux(:)%alignid (vecstring_type) (9.6.1.2.15)
basis (2090)	edge%fluid%ne%flux(:)%basis (integer) (9.6.1.1.2)
bndflux (2173)	edge%fluid%ne%bndflux(:) (complexgrid_vector) (9.6.1.3.93)
griduid (2090)	edge%fluid%ne%bndflux(:)%griduid (integer) (9.6.1.1.2)
label (2090)	edge%fluid%ne%bndflux(:)%label (string) (9.6.1.1.3)
comp (2090)	edge%fluid%ne%bndflux(:)%comp(:) (complexgrid_scalar) (9.6.1.3.87)
griduid (2084)	edge%fluid%ne%bndflux(:)%comp(:)%griduid (integer) (9.6.1.1.2)
subgrid (2084)	edge%fluid%ne%bndflux(:)%comp(:)%subgrid (integer) (9.6.1.1.2)
scalar (2084)	edge%fluid%ne%bndflux(:)%comp(:)%scalar (vecflt_type) (9.6.1.2.13)
vector (2084)	edge%fluid%ne%bndflux(:)%comp(:)%vector (matflt_type) (9.6.1.2.10)
matrix (2084)	edge%fluid%ne%bndflux(:)%comp(:)%matrix (array3dflt_type) (9.6.1.2.2)
align (2090)	edge%fluid%ne%bndflux(:)%align (vecint_type) (9.6.1.2.14)
alignid (2090)	edge%fluid%ne%bndflux(:)%alignid (vecstring_type) (9.6.1.2.15)
basis (2090)	edge%fluid%ne%bndflux(:)%basis (integer) (9.6.1.1.2)
transpcoeff (2173)	edge%fluid%ne%transpcoeff(:) (edge_fluid_scalar_transpcoeff) (9.6.1.3.177)
d (2174)	edge%fluid%ne%transpcoeff(:)%d (complexgrid_vector_simplestruct) (9.6.1.3.94)
label (2091)	edge%fluid%ne%transpcoeff(:)%d%label (string) (9.6.1.1.3)
comp (2091)	edge%fluid%ne%transpcoeff(:)%d%comp(:) (complexgrid_scalar) (9.6.1.3.87)
griduid (2084)	edge%fluid%ne%transpcoeff(:)%d%comp(:)%griduid (integer) (9.6.1.1.2)
subgrid (2084)	edge%fluid%ne%transpcoeff(:)%d%comp(:)%subgrid (integer) (9.6.1.1.2)
scalar (2084)	edge%fluid%ne%transpcoeff(:)%d%comp(:)%scalar (vecflt_type) (9.6.1.2.13)
vector (2084)	edge%fluid%ne%transpcoeff(:)%d%comp(:)%vector (matflt_type) (9.6.1.2.10)
matrix (2084)	edge%fluid%ne%transpcoeff(:)%d%comp(:)%matrix (array3dflt_type) (9.6.1.2.2)
align (2091)	edge%fluid%ne%transpcoeff(:)%d%align (vecint_type) (9.6.1.2.14)
alignid (2091)	edge%fluid%ne%transpcoeff(:)%d%alignid (vecstring_type) (9.6.1.2.15)
v (2174)	edge%fluid%ne%transpcoeff(:)%v (complexgrid_vector_simplestruct) (9.6.1.3.94)
label (2091)	edge%fluid%ne%transpcoeff(:)%v%label (string) (9.6.1.1.3)
comp (2091)	edge%fluid%ne%transpcoeff(:)%v%comp(:) (complexgrid_scalar) (9.6.1.3.87)
griduid (2084)	edge%fluid%ne%transpcoeff(:)%v%comp(:)%griduid (integer) (9.6.1.1.2)
subgrid (2084)	edge%fluid%ne%transpcoeff(:)%v%comp(:)%subgrid (integer) (9.6.1.1.2)
scalar (2084)	edge%fluid%ne%transpcoeff(:)%v%comp(:)%scalar (vecflt_type) (9.6.1.2.13)
vector (2084)	edge%fluid%ne%transpcoeff(:)%v%comp(:)%vector (matflt_type) (9.6.1.2.10)
matrix (2084)	edge%fluid%ne%transpcoeff(:)%v%comp(:)%matrix (array3dflt_type) (9.6.1.2.2)
align (2091)	edge%fluid%ne%transpcoeff(:)%v%align (vecint_type) (9.6.1.2.14)
alignid (2091)	edge%fluid%ne%transpcoeff(:)%v%alignid (vecstring_type) (9.6.1.2.15)
source (2173)	edge%fluid%ne%source(:) (complexgrid_scalar) (9.6.1.3.87)
griduid (2084)	edge%fluid%ne%source(:)%griduid (integer) (9.6.1.1.2)

subgrid (2084)	edge%fluid%ne%source(:)%subgrid (integer) (9.6.1.1.2)
scalar (2084)	edge%fluid%ne%source(:)%scalar (vecflt_type) (9.6.1.2.13)
vector (2084)	edge%fluid%ne%source(:)%vector (matflt_type) (9.6.1.2.10)
matrix (2084)	edge%fluid%ne%source(:)%matrix (array3dflt_type) (9.6.1.2.2)
ni (2171)	edge%fluid%ni(:) (edge_fluid_scalar) (9.6.1.3.175)
value (2172)	edge%fluid%ni(:)%value(:) (complexgrid_scalar) (9.6.1.3.87)
griduid (2084)	edge%fluid%ni(:)%value(:)%griduid (integer) (9.6.1.1.2)
subgrid (2084)	edge%fluid%ni(:)%value(:)%subgrid (integer) (9.6.1.1.2)
scalar (2084)	edge%fluid%ni(:)%value(:)%scalar (vecflt_type) (9.6.1.2.13)
vector (2084)	edge%fluid%ni(:)%value(:)%vector (matflt_type) (9.6.1.2.10)
matrix (2084)	edge%fluid%ni(:)%value(:)%matrix (array3dflt_type) (9.6.1.2.2)
bndvalue (2172)	edge%fluid%ni(:)%bndvalue(:) (complexgrid_scalar) (9.6.1.3.87)
griduid (2084)	edge%fluid%ni(:)%bndvalue(:)%griduid (integer) (9.6.1.1.2)
subgrid (2084)	edge%fluid%ni(:)%bndvalue(:)%subgrid (integer) (9.6.1.1.2)
scalar (2084)	edge%fluid%ni(:)%bndvalue(:)%scalar (vecflt_type) (9.6.1.2.13)
vector (2084)	edge%fluid%ni(:)%bndvalue(:)%vector (matflt_type) (9.6.1.2.10)
matrix (2084)	edge%fluid%ni(:)%bndvalue(:)%matrix (array3dflt_type) (9.6.1.2.2)
flux (2172)	edge%fluid%ni(:)%flux(:) (complexgrid_vector) (9.6.1.3.93)
griduid (2090)	edge%fluid%ni(:)%flux(:)%griduid (integer) (9.6.1.1.2)
label (2090)	edge%fluid%ni(:)%flux(:)%label (string) (9.6.1.1.3)
comp (2090)	edge%fluid%ni(:)%flux(:)%comp(:) (complexgrid_scalar) (9.6.1.3.87)
griduid (2084)	edge%fluid%ni(:)%flux(:)%comp(:)%griduid (integer) (9.6.1.1.2)
subgrid (2084)	edge%fluid%ni(:)%flux(:)%comp(:)%subgrid (integer) (9.6.1.1.2)
scalar (2084)	edge%fluid%ni(:)%flux(:)%comp(:)%scalar (vecflt_type) (9.6.1.2.13)
vector (2084)	edge%fluid%ni(:)%flux(:)%comp(:)%vector (matflt_type) (9.6.1.2.10)
matrix (2084)	edge%fluid%ni(:)%flux(:)%comp(:)%matrix (array3dflt_type) (9.6.1.2.2)
align (2090)	edge%fluid%ni(:)%flux(:)%align (vecint_type) (9.6.1.2.14)
alignid (2090)	edge%fluid%ni(:)%flux(:)%alignid (vecstring_type) (9.6.1.2.15)
basis (2090)	edge%fluid%ni(:)%flux(:)%basis (integer) (9.6.1.1.2)
bndflux (2172)	edge%fluid%ni(:)%bndflux(:) (complexgrid_vector) (9.6.1.3.93)
griduid (2090)	edge%fluid%ni(:)%bndflux(:)%griduid (integer) (9.6.1.1.2)
label (2090)	edge%fluid%ni(:)%bndflux(:)%label (string) (9.6.1.1.3)
comp (2090)	edge%fluid%ni(:)%bndflux(:)%comp(:) (complexgrid_scalar) (9.6.1.3.87)
griduid (2084)	edge%fluid%ni(:)%bndflux(:)%comp(:)%griduid (integer) (9.6.1.1.2)
subgrid (2084)	edge%fluid%ni(:)%bndflux(:)%comp(:)%subgrid (integer) (9.6.1.1.2)
scalar (2084)	edge%fluid%ni(:)%bndflux(:)%comp(:)%scalar (vecflt_type) (9.6.1.2.13)
vector (2084)	edge%fluid%ni(:)%bndflux(:)%comp(:)%vector (matflt_type) (9.6.1.2.10)
matrix (2084)	edge%fluid%ni(:)%bndflux(:)%comp(:)%matrix (array3dflt_type) (9.6.1.2.2)
align (2090)	edge%fluid%ni(:)%bndflux(:)%align (vecint_type) (9.6.1.2.14)
alignid (2090)	edge%fluid%ni(:)%bndflux(:)%alignid (vecstring_type) (9.6.1.2.15)
basis (2090)	edge%fluid%ni(:)%bndflux(:)%basis (integer) (9.6.1.1.2)
transpcoeff (2172)	edge%fluid%ni(:)%transpcoeff(:) (edge_fluid_scalar_transpcoeff) (9.6.1.3.177)
d (2174)	edge%fluid%ni(:)%transpcoeff(:)%d (complexgrid_vector_simplestruct) (9.6.1.3.94)
label (2091)	edge%fluid%ni(:)%transpcoeff(:)%d%label (string) (9.6.1.1.3)
comp (2091)	edge%fluid%ni(:)%transpcoeff(:)%d%comp(:) (complexgrid_scalar) (9.6.1.3.87)
griduid (2084)	edge%fluid%ni(:)%transpcoeff(:)%d%comp(:)%griduid (integer) (9.6.1.1.2)
subgrid (2084)	edge%fluid%ni(:)%transpcoeff(:)%d%comp(:)%subgrid (integer) (9.6.1.1.2)
scalar (2084)	edge%fluid%ni(:)%transpcoeff(:)%d%comp(:)%scalar (vecflt_type) (9.6.1.2.13)
vector (2084)	edge%fluid%ni(:)%transpcoeff(:)%d%comp(:)%vector (matflt_type) (9.6.1.2.10)
matrix (2084)	edge%fluid%ni(:)%transpcoeff(:)%d%comp(:)%matrix (array3dflt_type) (9.6.1.2.2)
align (2091)	edge%fluid%ni(:)%transpcoeff(:)%d%align (vecint_type) (9.6.1.2.14)
alignid (2091)	edge%fluid%ni(:)%transpcoeff(:)%d%alignid (vecstring_type) (9.6.1.2.15)
v (2174)	edge%fluid%ni(:)%transpcoeff(:)%v (complexgrid_vector_simplestruct) (9.6.1.3.94)
label (2091)	edge%fluid%ni(:)%transpcoeff(:)%v%label (string) (9.6.1.1.3)
comp (2091)	edge%fluid%ni(:)%transpcoeff(:)%v%comp(:) (complexgrid_scalar) (9.6.1.3.87)
griduid (2084)	edge%fluid%ni(:)%transpcoeff(:)%v%comp(:)%griduid (integer) (9.6.1.1.2)
subgrid (2084)	edge%fluid%ni(:)%transpcoeff(:)%v%comp(:)%subgrid (integer) (9.6.1.1.2)
scalar (2084)	edge%fluid%ni(:)%transpcoeff(:)%v%comp(:)%scalar (vecflt_type) (9.6.1.2.13)
vector (2084)	edge%fluid%ni(:)%transpcoeff(:)%v%comp(:)%vector (matflt_type) (9.6.1.2.10)
matrix (2084)	edge%fluid%ni(:)%transpcoeff(:)%v%comp(:)%matrix (array3dflt_type) (9.6.1.2.2)
align (2091)	edge%fluid%ni(:)%transpcoeff(:)%v%align (vecint_type) (9.6.1.2.14)



alignid (2091)	edge%fluid%ni(:)%transpcoeff(:)%v%alignid (vecstring_type) (9.6.1.2.15)
source (2172)	edge%fluid%ni(:)%source(:) (complexgrid_scalar) (9.6.1.3.87)
griduid (2084)	edge%fluid%ni(:)%source(:)%griduid (integer) (9.6.1.1.2)
subgrid (2084)	edge%fluid%ni(:)%source(:)%subgrid (integer) (9.6.1.1.2)
scalar (2084)	edge%fluid%ni(:)%source(:)%scalar (vecflt_type) (9.6.1.2.13)
vector (2084)	edge%fluid%ni(:)%source(:)%vector (matflt_type) (9.6.1.2.10)
matrix (2084)	edge%fluid%ni(:)%source(:)%matrix (array3dflt_type) (9.6.1.2.2)
ve (2171)	edge%fluid%ve (edge_fluid_vector_simplestruct) (9.6.1.3.179)
griduid (2176)	edge%fluid%ve%griduid (integer) (9.6.1.1.2)
basis (2176)	edge%fluid%ve%basis (integer) (9.6.1.1.2)
comps (2176)	edge%fluid%ve%comps(:) (edge_fluid_scalar) (9.6.1.3.175)
value (2172)	edge%fluid%ve%comps(:)%value(:) (complexgrid_scalar) (9.6.1.3.87)
griduid (2084)	edge%fluid%ve%comps(:)%value(:)%griduid (integer) (9.6.1.1.2)
subgrid (2084)	edge%fluid%ve%comps(:)%value(:)%subgrid (integer) (9.6.1.1.2)
scalar (2084)	edge%fluid%ve%comps(:)%value(:)%scalar (vecflt_type) (9.6.1.2.13)
vector (2084)	edge%fluid%ve%comps(:)%value(:)%vector (matflt_type) (9.6.1.2.10)
matrix (2084)	edge%fluid%ve%comps(:)%value(:)%matrix (array3dflt_type) (9.6.1.2.2)
bndvalue (2172)	edge%fluid%ve%comps(:)%bndvalue(:) (complexgrid_scalar) (9.6.1.3.87)
griduid (2084)	edge%fluid%ve%comps(:)%bndvalue(:)%griduid (integer) (9.6.1.1.2)
subgrid (2084)	edge%fluid%ve%comps(:)%bndvalue(:)%subgrid (integer) (9.6.1.1.2)
scalar (2084)	edge%fluid%ve%comps(:)%bndvalue(:)%scalar (vecflt_type) (9.6.1.2.13)
vector (2084)	edge%fluid%ve%comps(:)%bndvalue(:)%vector (matflt_type) (9.6.1.2.10)
matrix (2084)	edge%fluid%ve%comps(:)%bndvalue(:)%matrix (array3dflt_type) (9.6.1.2.2)
flux (2172)	edge%fluid%ve%comps(:)%flux(:) (complexgrid_vector) (9.6.1.3.93)
griduid (2090)	edge%fluid%ve%comps(:)%flux(:)%griduid (integer) (9.6.1.1.2)
label (2090)	edge%fluid%ve%comps(:)%flux(:)%label (string) (9.6.1.1.3)
comp (2090)	edge%fluid%ve%comps(:)%flux(:)%comp(:) (complexgrid_scalar) (9.6.1.3.87)
griduid (2084)	edge%fluid%ve%comps(:)%flux(:)%comp(:)%griduid (integer) (9.6.1.1.2)
subgrid (2084)	edge%fluid%ve%comps(:)%flux(:)%comp(:)%subgrid (integer) (9.6.1.1.2)
scalar (2084)	edge%fluid%ve%comps(:)%flux(:)%comp(:)%scalar (vecflt_type) (9.6.1.2.13)
vector (2084)	edge%fluid%ve%comps(:)%flux(:)%comp(:)%vector (matflt_type) (9.6.1.2.10)
matrix (2084)	edge%fluid%ve%comps(:)%flux(:)%comp(:)%matrix (array3dflt_type) (9.6.1.2.2)
align (2090)	edge%fluid%ve%comps(:)%flux(:)%align (vecint_type) (9.6.1.2.14)
alignid (2090)	edge%fluid%ve%comps(:)%flux(:)%alignid (vecstring_type) (9.6.1.2.15)
basis (2090)	edge%fluid%ve%comps(:)%flux(:)%basis (integer) (9.6.1.1.2)
bndflux (2172)	edge%fluid%ve%comps(:)%bndflux(:) (complexgrid_vector) (9.6.1.3.93)
griduid (2090)	edge%fluid%ve%comps(:)%bndflux(:)%griduid (integer) (9.6.1.1.2)
label (2090)	edge%fluid%ve%comps(:)%bndflux(:)%label (string) (9.6.1.1.3)
comp (2090)	edge%fluid%ve%comps(:)%bndflux(:)%comp(:) (complexgrid_scalar) (9.6.1.3.87)
griduid (2084)	edge%fluid%ve%comps(:)%bndflux(:)%comp(:)%griduid (integer) (9.6.1.1.2)
subgrid (2084)	edge%fluid%ve%comps(:)%bndflux(:)%comp(:)%subgrid (integer) (9.6.1.1.2)
scalar (2084)	edge%fluid%ve%comps(:)%bndflux(:)%comp(:)%scalar (vecflt_type) (9.6.1.2.13)
vector (2084)	edge%fluid%ve%comps(:)%bndflux(:)%comp(:)%vector (matflt_type) (9.6.1.2.10)
matrix (2084)	edge%fluid%ve%comps(:)%bndflux(:)%comp(:)%matrix (array3dflt_type) (9.6.1.2.2)
align (2090)	edge%fluid%ve%comps(:)%bndflux(:)%align (vecint_type) (9.6.1.2.14)
alignid (2090)	edge%fluid%ve%comps(:)%bndflux(:)%alignid (vecstring_type) (9.6.1.2.15)
basis (2090)	edge%fluid%ve%comps(:)%bndflux(:)%basis (integer) (9.6.1.1.2)
transpcoeff (2172)	edge%fluid%ve%comps(:)%transpcoeff(:) (edge_fluid_scalar_transpcoeff) (9.6.1.3.177)
d (2174)	edge%fluid%ve%comps(:)%transpcoeff(:)%d (complexgrid_vector_simplestruct) (9.6.1.3.94)
label (2091)	edge%fluid%ve%comps(:)%transpcoeff(:)%d%label (string) (9.6.1.1.3)
comp (2091)	edge%fluid%ve%comps(:)%transpcoeff(:)%d%comp(:) (complexgrid_scalar) (9.6.1.3.87)
griduid (2084)	edge%fluid%ve%comps(:)%transpcoeff(:)%d%comp(:)%griduid (integer) (9.6.1.1.2)
subgrid (2084)	edge%fluid%ve%comps(:)%transpcoeff(:)%d%comp(:)%subgrid (integer) (9.6.1.1.2)
scalar (2084)	edge%fluid%ve%comps(:)%transpcoeff(:)%d%comp(:)%scalar (vecflt_type) (9.6.1.2.13)
vector (2084)	edge%fluid%ve%comps(:)%transpcoeff(:)%d%comp(:)%vector (matflt_type) (9.6.1.2.10)
matrix (2084)	edge%fluid%ve%comps(:)%transpcoeff(:)%d%comp(:)%matrix (array3dflt_type) (9.6.1.2.2)
align (2091)	edge%fluid%ve%comps(:)%transpcoeff(:)%d%align (vecint_type) (9.6.1.2.14)
alignid (2091)	edge%fluid%ve%comps(:)%transpcoeff(:)%d%alignid (vecstring_type) (9.6.1.2.15)
v (2174)	edge%fluid%ve%comps(:)%transpcoeff(:)%v (complexgrid_vector_simplestruct) (9.6.1.3.94)
label (2091)	edge%fluid%ve%comps(:)%transpcoeff(:)%v%label (string) (9.6.1.1.3)
comp (2091)	edge%fluid%ve%comps(:)%transpcoeff(:)%v%comp(:) (complexgrid_scalar) (9.6.1.3.87)



griduid (2084)	edge%fluid%ve%comps(:)%transpcoeff(:)%v%comp(:)%griduid (integer) (9.6.1.1.2)
subgrid (2084)	edge%fluid%ve%comps(:)%transpcoeff(:)%v%comp(:)%subgrid (integer) (9.6.1.1.2)
scalar (2084)	edge%fluid%ve%comps(:)%transpcoeff(:)%v%comp(:)%scalar (vecflt.type) (9.6.1.2.13)
vector (2084)	edge%fluid%ve%comps(:)%transpcoeff(:)%v%comp(:)%vector (matflt.type) (9.6.1.2.10)
matrix (2084)	edge%fluid%ve%comps(:)%transpcoeff(:)%v%comp(:)%matrix (array3dflt.type) (9.6.1.2.2)
align (2091)	edge%fluid%ve%comps(:)%transpcoeff(:)%v%align (vecint.type) (9.6.1.2.14)
alignid (2091)	edge%fluid%ve%comps(:)%transpcoeff(:)%v%alignid (vecstring.type) (9.6.1.2.15)
source (2172)	edge%fluid%ve%comps(:)%source(:) (complexgrid_scalar) (9.6.1.3.87)
griduid (2084)	edge%fluid%ve%comps(:)%source(:)%griduid (integer) (9.6.1.1.2)
subgrid (2084)	edge%fluid%ve%comps(:)%source(:)%subgrid (integer) (9.6.1.1.2)
scalar (2084)	edge%fluid%ve%comps(:)%source(:)%scalar (vecflt.type) (9.6.1.2.13)
vector (2084)	edge%fluid%ve%comps(:)%source(:)%vector (matflt.type) (9.6.1.2.10)
matrix (2084)	edge%fluid%ve%comps(:)%source(:)%matrix (array3dflt.type) (9.6.1.2.2)
align (2176)	edge%fluid%ve%align (vecint.type) (9.6.1.2.14)
alignid (2176)	edge%fluid%ve%alignid (vecstring.type) (9.6.1.2.15)
vi (2171)	edge%fluid%vi(:) (edge_fluid_vector) (9.6.1.3.178)
griduid (2175)	edge%fluid%vi(:)%griduid (integer) (9.6.1.1.2)
basis (2175)	edge%fluid%vi(:)%basis (integer) (9.6.1.1.2)
align (2175)	edge%fluid%vi(:)%align (vecint.type) (9.6.1.2.14)
alignid (2175)	edge%fluid%vi(:)%alignid (vecstring.type) (9.6.1.2.15)
comps (2175)	edge%fluid%vi(:)%comps(:) (edge_fluid_scalar) (9.6.1.3.175)
value (2172)	edge%fluid%vi(:)%comps(:)%value(:) (complexgrid_scalar) (9.6.1.3.87)
griduid (2084)	edge%fluid%vi(:)%comps(:)%value(:)%griduid (integer) (9.6.1.1.2)
subgrid (2084)	edge%fluid%vi(:)%comps(:)%value(:)%subgrid (integer) (9.6.1.1.2)
scalar (2084)	edge%fluid%vi(:)%comps(:)%value(:)%scalar (vecflt.type) (9.6.1.2.13)
vector (2084)	edge%fluid%vi(:)%comps(:)%value(:)%vector (matflt.type) (9.6.1.2.10)
matrix (2084)	edge%fluid%vi(:)%comps(:)%value(:)%matrix (array3dflt.type) (9.6.1.2.2)
bndvalue (2172)	edge%fluid%vi(:)%comps(:)%bndvalue(:) (complexgrid_scalar) (9.6.1.3.87)
griduid (2084)	edge%fluid%vi(:)%comps(:)%bndvalue(:)%griduid (integer) (9.6.1.1.2)
subgrid (2084)	edge%fluid%vi(:)%comps(:)%bndvalue(:)%subgrid (integer) (9.6.1.1.2)
scalar (2084)	edge%fluid%vi(:)%comps(:)%bndvalue(:)%scalar (vecflt.type) (9.6.1.2.13)
vector (2084)	edge%fluid%vi(:)%comps(:)%bndvalue(:)%vector (matflt.type) (9.6.1.2.10)
matrix (2084)	edge%fluid%vi(:)%comps(:)%bndvalue(:)%matrix (array3dflt.type) (9.6.1.2.2)
flux (2172)	edge%fluid%vi(:)%comps(:)%flux(:) (complexgrid_vector) (9.6.1.3.93)
griduid (2090)	edge%fluid%vi(:)%comps(:)%flux(:)%griduid (integer) (9.6.1.1.2)
label (2090)	edge%fluid%vi(:)%comps(:)%flux(:)%label (string) (9.6.1.1.3)
comp (2090)	edge%fluid%vi(:)%comps(:)%flux(:)%comp(:) (complexgrid_scalar) (9.6.1.3.87)
griduid (2084)	edge%fluid%vi(:)%comps(:)%flux(:)%comp(:)%griduid (integer) (9.6.1.1.2)
subgrid (2084)	edge%fluid%vi(:)%comps(:)%flux(:)%comp(:)%subgrid (integer) (9.6.1.1.2)
scalar (2084)	edge%fluid%vi(:)%comps(:)%flux(:)%comp(:)%scalar (vecflt.type) (9.6.1.2.13)
vector (2084)	edge%fluid%vi(:)%comps(:)%flux(:)%comp(:)%vector (matflt.type) (9.6.1.2.10)
matrix (2084)	edge%fluid%vi(:)%comps(:)%flux(:)%comp(:)%matrix (array3dflt.type) (9.6.1.2.2)
align (2090)	edge%fluid%vi(:)%comps(:)%flux(:)%align (vecint.type) (9.6.1.2.14)
alignid (2090)	edge%fluid%vi(:)%comps(:)%flux(:)%alignid (vecstring.type) (9.6.1.2.15)
basis (2090)	edge%fluid%vi(:)%comps(:)%flux(:)%basis (integer) (9.6.1.1.2)
bndflux (2172)	edge%fluid%vi(:)%comps(:)%bndflux(:) (complexgrid_vector) (9.6.1.3.93)
griduid (2090)	edge%fluid%vi(:)%comps(:)%bndflux(:)%griduid (integer) (9.6.1.1.2)
label (2090)	edge%fluid%vi(:)%comps(:)%bndflux(:)%label (string) (9.6.1.1.3)
comp (2090)	edge%fluid%vi(:)%comps(:)%bndflux(:)%comp(:) (complexgrid_scalar) (9.6.1.3.87)
griduid (2084)	edge%fluid%vi(:)%comps(:)%bndflux(:)%comp(:)%griduid (integer) (9.6.1.1.2)
subgrid (2084)	edge%fluid%vi(:)%comps(:)%bndflux(:)%comp(:)%subgrid (integer) (9.6.1.1.2)
scalar (2084)	edge%fluid%vi(:)%comps(:)%bndflux(:)%comp(:)%scalar (vecflt.type) (9.6.1.2.13)
vector (2084)	edge%fluid%vi(:)%comps(:)%bndflux(:)%comp(:)%vector (matflt.type) (9.6.1.2.10)
matrix (2084)	edge%fluid%vi(:)%comps(:)%bndflux(:)%comp(:)%matrix (array3dflt.type) (9.6.1.2.2)
align (2090)	edge%fluid%vi(:)%comps(:)%bndflux(:)%align (vecint.type) (9.6.1.2.14)
alignid (2090)	edge%fluid%vi(:)%comps(:)%bndflux(:)%alignid (vecstring.type) (9.6.1.2.15)
basis (2090)	edge%fluid%vi(:)%comps(:)%bndflux(:)%basis (integer) (9.6.1.1.2)
transpcoeff (2172)	edge%fluid%vi(:)%comps(:)%transpcoeff(:) (edge_fluid_scalar_transpcoeff) (9.6.1.3.177)
d (2174)	edge%fluid%vi(:)%comps(:)%transpcoeff(:)%d (complexgrid_vector_simplestruct) (9.6.1.3.94)
label (2091)	edge%fluid%vi(:)%comps(:)%transpcoeff(:)%d%label (string) (9.6.1.1.3)
comp (2091)	edge%fluid%vi(:)%comps(:)%transpcoeff(:)%d%comp(:) (complexgrid_scalar) (9.6.1.3.87)

griduid (2084)	edge%fluid%vi(%)%comps(%)%transpcoeff(%)%d%comp(%)%griduid (integer) (9.6.1.1.2)
subgrid (2084)	edge%fluid%vi(%)%comps(%)%transpcoeff(%)%d%comp(%)%subgrid (integer) (9.6.1.1.2)
scalar (2084)	edge%fluid%vi(%)%comps(%)%transpcoeff(%)%d%comp(%)%scalar (vecflt_type) (9.6.1.2.13)
vector (2084)	edge%fluid%vi(%)%comps(%)%transpcoeff(%)%d%comp(%)%vector (matflt_type) (9.6.1.2.10)
matrix (2084)	edge%fluid%vi(%)%comps(%)%transpcoeff(%)%d%comp(%)%matrix (array3dflt_type) (9.6.1.2.2)
align (2091)	edge%fluid%vi(%)%comps(%)%transpcoeff(%)%d%align (vecint_type) (9.6.1.2.14)
alignid (2091)	edge%fluid%vi(%)%comps(%)%transpcoeff(%)%d%alignid (vecstring_type) (9.6.1.2.15)
v (2174)	edge%fluid%vi(%)%comps(%)%transpcoeff(%)%v (complexgrid_vector_simplestruct) (9.6.1.3.94)
label (2091)	edge%fluid%vi(%)%comps(%)%transpcoeff(%)%v%label (string) (9.6.1.1.3)
comp (2091)	edge%fluid%vi(%)%comps(%)%transpcoeff(%)%v%comp(%) (complexgrid_scalar) (9.6.1.3.87)
griduid (2084)	edge%fluid%vi(%)%comps(%)%transpcoeff(%)%v%comp(%)%griduid (integer) (9.6.1.1.2)
subgrid (2084)	edge%fluid%vi(%)%comps(%)%transpcoeff(%)%v%comp(%)%subgrid (integer) (9.6.1.1.2)
scalar (2084)	edge%fluid%vi(%)%comps(%)%transpcoeff(%)%v%comp(%)%scalar (vecflt_type) (9.6.1.2.13)
vector (2084)	edge%fluid%vi(%)%comps(%)%transpcoeff(%)%v%comp(%)%vector (matflt_type) (9.6.1.2.10)
matrix (2084)	edge%fluid%vi(%)%comps(%)%transpcoeff(%)%v%comp(%)%matrix (array3dflt_type) (9.6.1.2.2)
align (2091)	edge%fluid%vi(%)%comps(%)%transpcoeff(%)%v%align (vecint_type) (9.6.1.2.14)
alignid (2091)	edge%fluid%vi(%)%comps(%)%transpcoeff(%)%v%alignid (vecstring_type) (9.6.1.2.15)
source (2172)	edge%fluid%vi(%)%comps(%)%source(%) (complexgrid_scalar) (9.6.1.3.87)
griduid (2084)	edge%fluid%vi(%)%comps(%)%source(%)%griduid (integer) (9.6.1.1.2)
subgrid (2084)	edge%fluid%vi(%)%comps(%)%source(%)%subgrid (integer) (9.6.1.1.2)
scalar (2084)	edge%fluid%vi(%)%comps(%)%source(%)%scalar (vecflt_type) (9.6.1.2.13)
vector (2084)	edge%fluid%vi(%)%comps(%)%source(%)%vector (matflt_type) (9.6.1.2.10)
matrix (2084)	edge%fluid%vi(%)%comps(%)%source(%)%matrix (array3dflt_type) (9.6.1.2.2)
te (2171)	edge%fluid%te (edge_fluid_scalar_simplestruct) (9.6.1.3.176)
value (2173)	edge%fluid%te%value(%) (complexgrid_scalar) (9.6.1.3.87)
griduid (2084)	edge%fluid%te%value(%)%griduid (integer) (9.6.1.1.2)
subgrid (2084)	edge%fluid%te%value(%)%subgrid (integer) (9.6.1.1.2)
scalar (2084)	edge%fluid%te%value(%)%scalar (vecflt_type) (9.6.1.2.13)
vector (2084)	edge%fluid%te%value(%)%vector (matflt_type) (9.6.1.2.10)
matrix (2084)	edge%fluid%te%value(%)%matrix (array3dflt_type) (9.6.1.2.2)
bndvalue (2173)	edge%fluid%te%bndvalue(%) (complexgrid_scalar) (9.6.1.3.87)
griduid (2084)	edge%fluid%te%bndvalue(%)%griduid (integer) (9.6.1.1.2)
subgrid (2084)	edge%fluid%te%bndvalue(%)%subgrid (integer) (9.6.1.1.2)
scalar (2084)	edge%fluid%te%bndvalue(%)%scalar (vecflt_type) (9.6.1.2.13)
vector (2084)	edge%fluid%te%bndvalue(%)%vector (matflt_type) (9.6.1.2.10)
matrix (2084)	edge%fluid%te%bndvalue(%)%matrix (array3dflt_type) (9.6.1.2.2)
flux (2173)	edge%fluid%te%flux(%) (complexgrid_vector) (9.6.1.3.93)
griduid (2090)	edge%fluid%te%flux(%)%griduid (integer) (9.6.1.1.2)
label (2090)	edge%fluid%te%flux(%)%label (string) (9.6.1.1.3)
comp (2090)	edge%fluid%te%flux(%)%comp(%) (complexgrid_scalar) (9.6.1.3.87)
griduid (2084)	edge%fluid%te%flux(%)%comp(%)%griduid (integer) (9.6.1.1.2)
subgrid (2084)	edge%fluid%te%flux(%)%comp(%)%subgrid (integer) (9.6.1.1.2)
scalar (2084)	edge%fluid%te%flux(%)%comp(%)%scalar (vecflt_type) (9.6.1.2.13)
vector (2084)	edge%fluid%te%flux(%)%comp(%)%vector (matflt_type) (9.6.1.2.10)
matrix (2084)	edge%fluid%te%flux(%)%comp(%)%matrix (array3dflt_type) (9.6.1.2.2)
align (2090)	edge%fluid%te%flux(%)%align (vecint_type) (9.6.1.2.14)
alignid (2090)	edge%fluid%te%flux(%)%alignid (vecstring_type) (9.6.1.2.15)
basis (2090)	edge%fluid%te%flux(%)%basis (integer) (9.6.1.1.2)
bndflux (2173)	edge%fluid%te%bndflux(%) (complexgrid_vector) (9.6.1.3.93)
griduid (2090)	edge%fluid%te%bndflux(%)%griduid (integer) (9.6.1.1.2)
label (2090)	edge%fluid%te%bndflux(%)%label (string) (9.6.1.1.3)
comp (2090)	edge%fluid%te%bndflux(%)%comp(%) (complexgrid_scalar) (9.6.1.3.87)
griduid (2084)	edge%fluid%te%bndflux(%)%comp(%)%griduid (integer) (9.6.1.1.2)
subgrid (2084)	edge%fluid%te%bndflux(%)%comp(%)%subgrid (integer) (9.6.1.1.2)
scalar (2084)	edge%fluid%te%bndflux(%)%comp(%)%scalar (vecflt_type) (9.6.1.2.13)
vector (2084)	edge%fluid%te%bndflux(%)%comp(%)%vector (matflt_type) (9.6.1.2.10)
matrix (2084)	edge%fluid%te%bndflux(%)%comp(%)%matrix (array3dflt_type) (9.6.1.2.2)
align (2090)	edge%fluid%te%bndflux(%)%align (vecint_type) (9.6.1.2.14)
alignid (2090)	edge%fluid%te%bndflux(%)%alignid (vecstring_type) (9.6.1.2.15)
basis (2090)	edge%fluid%te%bndflux(%)%basis (integer) (9.6.1.1.2)
transpcoeff (2173)	edge%fluid%te%transpcoeff(%) (edge_fluid_scalar_transpcoeff) (9.6.1.3.177)

d (2174)	edge%fluid%te%transpcoeff(:)%d (complexgrid_vector_simplestruct) (9.6.1.3.94)
label (2091)	edge%fluid%te%transpcoeff(:)%d%label (string) (9.6.1.1.3)
comp (2091)	edge%fluid%te%transpcoeff(:)%d%comp(:) (complexgrid_scalar) (9.6.1.3.87)
griduid (2084)	edge%fluid%te%transpcoeff(:)%d%comp(:)%griduid (integer) (9.6.1.1.2)
subgrid (2084)	edge%fluid%te%transpcoeff(:)%d%comp(:)%subgrid (integer) (9.6.1.1.2)
scalar (2084)	edge%fluid%te%transpcoeff(:)%d%comp(:)%scalar (vecflt_type) (9.6.1.2.13)
vector (2084)	edge%fluid%te%transpcoeff(:)%d%comp(:)%vector (matflt_type) (9.6.1.2.10)
matrix (2084)	edge%fluid%te%transpcoeff(:)%d%comp(:)%matrix (array3dflt_type) (9.6.1.2.2)
align (2091)	edge%fluid%te%transpcoeff(:)%d%align (vecint_type) (9.6.1.2.14)
alignid (2091)	edge%fluid%te%transpcoeff(:)%d%alignid (vecstring_type) (9.6.1.2.15)
v (2174)	edge%fluid%te%transpcoeff(:)%v (complexgrid_vector_simplestruct) (9.6.1.3.94)
label (2091)	edge%fluid%te%transpcoeff(:)%v%label (string) (9.6.1.1.3)
comp (2091)	edge%fluid%te%transpcoeff(:)%v%comp(:) (complexgrid_scalar) (9.6.1.3.87)
griduid (2084)	edge%fluid%te%transpcoeff(:)%v%comp(:)%griduid (integer) (9.6.1.1.2)
subgrid (2084)	edge%fluid%te%transpcoeff(:)%v%comp(:)%subgrid (integer) (9.6.1.1.2)
scalar (2084)	edge%fluid%te%transpcoeff(:)%v%comp(:)%scalar (vecflt_type) (9.6.1.2.13)
vector (2084)	edge%fluid%te%transpcoeff(:)%v%comp(:)%vector (matflt_type) (9.6.1.2.10)
matrix (2084)	edge%fluid%te%transpcoeff(:)%v%comp(:)%matrix (array3dflt_type) (9.6.1.2.2)
align (2091)	edge%fluid%te%transpcoeff(:)%v%align (vecint_type) (9.6.1.2.14)
alignid (2091)	edge%fluid%te%transpcoeff(:)%v%alignid (vecstring_type) (9.6.1.2.15)
source (2173)	edge%fluid%te%source(:) (complexgrid_scalar) (9.6.1.3.87)
griduid (2084)	edge%fluid%te%source(:)%griduid (integer) (9.6.1.1.2)
subgrid (2084)	edge%fluid%te%source(:)%subgrid (integer) (9.6.1.1.2)
scalar (2084)	edge%fluid%te%source(:)%scalar (vecflt_type) (9.6.1.2.13)
vector (2084)	edge%fluid%te%source(:)%vector (matflt_type) (9.6.1.2.10)
matrix (2084)	edge%fluid%te%source(:)%matrix (array3dflt_type) (9.6.1.2.2)
ti (2171)	edge%fluid%ti(:) (edge_fluid_scalar) (9.6.1.3.175)
value (2172)	edge%fluid%ti(:)%value(:) (complexgrid_scalar) (9.6.1.3.87)
griduid (2084)	edge%fluid%ti(:)%value(:)%griduid (integer) (9.6.1.1.2)
subgrid (2084)	edge%fluid%ti(:)%value(:)%subgrid (integer) (9.6.1.1.2)
scalar (2084)	edge%fluid%ti(:)%value(:)%scalar (vecflt_type) (9.6.1.2.13)
vector (2084)	edge%fluid%ti(:)%value(:)%vector (matflt_type) (9.6.1.2.10)
matrix (2084)	edge%fluid%ti(:)%value(:)%matrix (array3dflt_type) (9.6.1.2.2)
bndvalue (2172)	edge%fluid%ti(:)%bndvalue(:) (complexgrid_scalar) (9.6.1.3.87)
griduid (2084)	edge%fluid%ti(:)%bndvalue(:)%griduid (integer) (9.6.1.1.2)
subgrid (2084)	edge%fluid%ti(:)%bndvalue(:)%subgrid (integer) (9.6.1.1.2)
scalar (2084)	edge%fluid%ti(:)%bndvalue(:)%scalar (vecflt_type) (9.6.1.2.13)
vector (2084)	edge%fluid%ti(:)%bndvalue(:)%vector (matflt_type) (9.6.1.2.10)
matrix (2084)	edge%fluid%ti(:)%bndvalue(:)%matrix (array3dflt_type) (9.6.1.2.2)
flux (2172)	edge%fluid%ti(:)%flux(:) (complexgrid_vector) (9.6.1.3.93)
griduid (2090)	edge%fluid%ti(:)%flux(:)%griduid (integer) (9.6.1.1.2)
label (2090)	edge%fluid%ti(:)%flux(:)%label (string) (9.6.1.1.3)
comp (2090)	edge%fluid%ti(:)%flux(:)%comp(:) (complexgrid_scalar) (9.6.1.3.87)
griduid (2084)	edge%fluid%ti(:)%flux(:)%comp(:)%griduid (integer) (9.6.1.1.2)
subgrid (2084)	edge%fluid%ti(:)%flux(:)%comp(:)%subgrid (integer) (9.6.1.1.2)
scalar (2084)	edge%fluid%ti(:)%flux(:)%comp(:)%scalar (vecflt_type) (9.6.1.2.13)
vector (2084)	edge%fluid%ti(:)%flux(:)%comp(:)%vector (matflt_type) (9.6.1.2.10)
matrix (2084)	edge%fluid%ti(:)%flux(:)%comp(:)%matrix (array3dflt_type) (9.6.1.2.2)
align (2090)	edge%fluid%ti(:)%flux(:)%align (vecint_type) (9.6.1.2.14)
alignid (2090)	edge%fluid%ti(:)%flux(:)%alignid (vecstring_type) (9.6.1.2.15)
basis (2090)	edge%fluid%ti(:)%flux(:)%basis (integer) (9.6.1.1.2)
bndflux (2172)	edge%fluid%ti(:)%bndflux(:) (complexgrid_vector) (9.6.1.3.93)
griduid (2090)	edge%fluid%ti(:)%bndflux(:)%griduid (integer) (9.6.1.1.2)
label (2090)	edge%fluid%ti(:)%bndflux(:)%label (string) (9.6.1.1.3)
comp (2090)	edge%fluid%ti(:)%bndflux(:)%comp(:) (complexgrid_scalar) (9.6.1.3.87)
griduid (2084)	edge%fluid%ti(:)%bndflux(:)%comp(:)%griduid (integer) (9.6.1.1.2)
subgrid (2084)	edge%fluid%ti(:)%bndflux(:)%comp(:)%subgrid (integer) (9.6.1.1.2)
scalar (2084)	edge%fluid%ti(:)%bndflux(:)%comp(:)%scalar (vecflt_type) (9.6.1.2.13)
vector (2084)	edge%fluid%ti(:)%bndflux(:)%comp(:)%vector (matflt_type) (9.6.1.2.10)
matrix (2084)	edge%fluid%ti(:)%bndflux(:)%comp(:)%matrix (array3dflt_type) (9.6.1.2.2)
align (2090)	edge%fluid%ti(:)%bndflux(:)%align (vecint_type) (9.6.1.2.14)

alignid (2090)	edge%fluid%ti(:)%bndflux(:)%alignid (vecstring_type) (9.6.1.2.15)
basis (2090)	edge%fluid%ti(:)%bndflux(:)%basis (integer) (9.6.1.1.2)
transpcoeff (2172)	edge%fluid%ti(:)%transpcoeff(:) (edge_fluid_scalar_transpcoeff) (9.6.1.3.177)
d (2174)	edge%fluid%ti(:)%transpcoeff(:)%d (complexgrid_vector_simplestruct) (9.6.1.3.94)
label (2091)	edge%fluid%ti(:)%transpcoeff(:)%d%label (string) (9.6.1.1.3)
comp (2091)	edge%fluid%ti(:)%transpcoeff(:)%d%comp(:) (complexgrid_scalar) (9.6.1.3.87)
griduid (2084)	edge%fluid%ti(:)%transpcoeff(:)%d%comp(:)%griduid (integer) (9.6.1.1.2)
subgrid (2084)	edge%fluid%ti(:)%transpcoeff(:)%d%comp(:)%subgrid (integer) (9.6.1.1.2)
scalar (2084)	edge%fluid%ti(:)%transpcoeff(:)%d%comp(:)%scalar (vecflt_type) (9.6.1.2.13)
vector (2084)	edge%fluid%ti(:)%transpcoeff(:)%d%comp(:)%vector (matflt_type) (9.6.1.2.10)
matrix (2084)	edge%fluid%ti(:)%transpcoeff(:)%d%comp(:)%matrix (array3dflt_type) (9.6.1.2.2)
align (2091)	edge%fluid%ti(:)%transpcoeff(:)%d%align (vecint_type) (9.6.1.2.14)
alignid (2091)	edge%fluid%ti(:)%transpcoeff(:)%d%alignid (vecstring_type) (9.6.1.2.15)
v (2174)	edge%fluid%ti(:)%transpcoeff(:)%v (complexgrid_vector_simplestruct) (9.6.1.3.94)
label (2091)	edge%fluid%ti(:)%transpcoeff(:)%v%label (string) (9.6.1.1.3)
comp (2091)	edge%fluid%ti(:)%transpcoeff(:)%v%comp(:) (complexgrid_scalar) (9.6.1.3.87)
griduid (2084)	edge%fluid%ti(:)%transpcoeff(:)%v%comp(:)%griduid (integer) (9.6.1.1.2)
subgrid (2084)	edge%fluid%ti(:)%transpcoeff(:)%v%comp(:)%subgrid (integer) (9.6.1.1.2)
scalar (2084)	edge%fluid%ti(:)%transpcoeff(:)%v%comp(:)%scalar (vecflt_type) (9.6.1.2.13)
vector (2084)	edge%fluid%ti(:)%transpcoeff(:)%v%comp(:)%vector (matflt_type) (9.6.1.2.10)
matrix (2084)	edge%fluid%ti(:)%transpcoeff(:)%v%comp(:)%matrix (array3dflt_type) (9.6.1.2.2)
align (2091)	edge%fluid%ti(:)%transpcoeff(:)%v%align (vecint_type) (9.6.1.2.14)
alignid (2091)	edge%fluid%ti(:)%transpcoeff(:)%v%alignid (vecstring_type) (9.6.1.2.15)
source (2172)	edge%fluid%ti(:)%source(:) (complexgrid_scalar) (9.6.1.3.87)
griduid (2084)	edge%fluid%ti(:)%source(:)%griduid (integer) (9.6.1.1.2)
subgrid (2084)	edge%fluid%ti(:)%source(:)%subgrid (integer) (9.6.1.1.2)
scalar (2084)	edge%fluid%ti(:)%source(:)%scalar (vecflt_type) (9.6.1.2.13)
vector (2084)	edge%fluid%ti(:)%source(:)%vector (matflt_type) (9.6.1.2.10)
matrix (2084)	edge%fluid%ti(:)%source(:)%matrix (array3dflt_type) (9.6.1.2.2)
te_aniso (2171)	edge%fluid%te_aniso (edge_fluid_vector_simplestruct) (9.6.1.3.179)
griduid (2176)	edge%fluid%te_aniso%griduid (integer) (9.6.1.1.2)
basis (2176)	edge%fluid%te_aniso%basis (integer) (9.6.1.1.2)
comps (2176)	edge%fluid%te_aniso%comps(:) (edge_fluid_scalar) (9.6.1.3.175)
value (2172)	edge%fluid%te_aniso%comps(:)%value(:) (complexgrid_scalar) (9.6.1.3.87)
griduid (2084)	edge%fluid%te_aniso%comps(:)%value(:)%griduid (integer) (9.6.1.1.2)
subgrid (2084)	edge%fluid%te_aniso%comps(:)%value(:)%subgrid (integer) (9.6.1.1.2)
scalar (2084)	edge%fluid%te_aniso%comps(:)%value(:)%scalar (vecflt_type) (9.6.1.2.13)
vector (2084)	edge%fluid%te_aniso%comps(:)%value(:)%vector (matflt_type) (9.6.1.2.10)
matrix (2084)	edge%fluid%te_aniso%comps(:)%value(:)%matrix (array3dflt_type) (9.6.1.2.2)
bndvalue (2172)	edge%fluid%te_aniso%comps(:)%bndvalue(:) (complexgrid_scalar) (9.6.1.3.87)
griduid (2084)	edge%fluid%te_aniso%comps(:)%bndvalue(:)%griduid (integer) (9.6.1.1.2)
subgrid (2084)	edge%fluid%te_aniso%comps(:)%bndvalue(:)%subgrid (integer) (9.6.1.1.2)
scalar (2084)	edge%fluid%te_aniso%comps(:)%bndvalue(:)%scalar (vecflt_type) (9.6.1.2.13)
vector (2084)	edge%fluid%te_aniso%comps(:)%bndvalue(:)%vector (matflt_type) (9.6.1.2.10)
matrix (2084)	edge%fluid%te_aniso%comps(:)%bndvalue(:)%matrix (array3dflt_type) (9.6.1.2.2)
flux (2172)	edge%fluid%te_aniso%comps(:)%flux(:) (complexgrid_vector) (9.6.1.3.93)
griduid (2090)	edge%fluid%te_aniso%comps(:)%flux(:)%griduid (integer) (9.6.1.1.2)
label (2090)	edge%fluid%te_aniso%comps(:)%flux(:)%label (string) (9.6.1.1.3)
comp (2090)	edge%fluid%te_aniso%comps(:)%flux(:)%comp(:) (complexgrid_scalar) (9.6.1.3.87)
griduid (2084)	edge%fluid%te_aniso%comps(:)%flux(:)%comp(:)%griduid (integer) (9.6.1.1.2)
subgrid (2084)	edge%fluid%te_aniso%comps(:)%flux(:)%comp(:)%subgrid (integer) (9.6.1.1.2)
scalar (2084)	edge%fluid%te_aniso%comps(:)%flux(:)%comp(:)%scalar (vecflt_type) (9.6.1.2.13)
vector (2084)	edge%fluid%te_aniso%comps(:)%flux(:)%comp(:)%vector (matflt_type) (9.6.1.2.10)
matrix (2084)	edge%fluid%te_aniso%comps(:)%flux(:)%comp(:)%matrix (array3dflt_type) (9.6.1.2.2)
align (2090)	edge%fluid%te_aniso%comps(:)%flux(:)%align (vecint_type) (9.6.1.2.14)
alignid (2090)	edge%fluid%te_aniso%comps(:)%flux(:)%alignid (vecstring_type) (9.6.1.2.15)
basis (2090)	edge%fluid%te_aniso%comps(:)%flux(:)%basis (integer) (9.6.1.1.2)
bndflux (2172)	edge%fluid%te_aniso%comps(:)%bndflux(:) (complexgrid_vector) (9.6.1.3.93)
griduid (2090)	edge%fluid%te_aniso%comps(:)%bndflux(:)%griduid (integer) (9.6.1.1.2)
label (2090)	edge%fluid%te_aniso%comps(:)%bndflux(:)%label (string) (9.6.1.1.3)
comp (2090)	edge%fluid%te_aniso%comps(:)%bndflux(:)%comp(:) (complexgrid_scalar) (9.6.1.3.87)

griduid (2084)	edge%fluid%te_aniso%comps(:)%bndflux(:)%comp(:)%griduid (integer) (9.6.1.1.2)
subgrid (2084)	edge%fluid%te_aniso%comps(:)%bndflux(:)%comp(:)%subgrid (integer) (9.6.1.1.2)
scalar (2084)	edge%fluid%te_aniso%comps(:)%bndflux(:)%comp(:)%scalar (vecflt_type) (9.6.1.2.13)
vector (2084)	edge%fluid%te_aniso%comps(:)%bndflux(:)%comp(:)%vector (matflt_type) (9.6.1.2.10)
matrix (2084)	edge%fluid%te_aniso%comps(:)%bndflux(:)%comp(:)%matrix (array3dflt_type) (9.6.1.2.2)
align (2090)	edge%fluid%te_aniso%comps(:)%bndflux(:)%align (vecint_type) (9.6.1.2.14)
alignid (2090)	edge%fluid%te_aniso%comps(:)%bndflux(:)%alignid (vecstring_type) (9.6.1.2.15)
basis (2090)	edge%fluid%te_aniso%comps(:)%bndflux(:)%basis (integer) (9.6.1.1.2)
transpcoeff (2172)	edge%fluid%te_aniso%comps(:)%transpcoeff(:) (edge_fluid_scalar_transpcoeff) (9.6.1.3.177)
d (2174)	edge%fluid%te_aniso%comps(:)%transpcoeff(:)%d (complexgrid_vector_simplestruct) (9.6.1.3.94)
label (2091)	edge%fluid%te_aniso%comps(:)%transpcoeff(:)%d%label (string) (9.6.1.1.3)
comp (2091)	edge%fluid%te_aniso%comps(:)%transpcoeff(:)%d%comp(:) (complexgrid_scalar) (9.6.1.3.87)
griduid (2084)	edge%fluid%te_aniso%comps(:)%transpcoeff(:)%d%comp(:)%griduid (integer) (9.6.1.1.2)
subgrid (2084)	edge%fluid%te_aniso%comps(:)%transpcoeff(:)%d%comp(:)%subgrid (integer) (9.6.1.1.2)
scalar (2084)	edge%fluid%te_aniso%comps(:)%transpcoeff(:)%d%comp(:)%scalar (vecflt_type) (9.6.1.2.13)
vector (2084)	edge%fluid%te_aniso%comps(:)%transpcoeff(:)%d%comp(:)%vector (matflt_type) (9.6.1.2.10)
matrix (2084)	edge%fluid%te_aniso%comps(:)%transpcoeff(:)%d%comp(:)%matrix (array3dflt_type) (9.6.1.2.2)
align (2091)	edge%fluid%te_aniso%comps(:)%transpcoeff(:)%d%align (vecint_type) (9.6.1.2.14)
alignid (2091)	edge%fluid%te_aniso%comps(:)%transpcoeff(:)%d%alignid (vecstring_type) (9.6.1.2.15)
v (2174)	edge%fluid%te_aniso%comps(:)%transpcoeff(:)%v (complexgrid_vector_simplestruct) (9.6.1.3.94)
label (2091)	edge%fluid%te_aniso%comps(:)%transpcoeff(:)%v%label (string) (9.6.1.1.3)
comp (2091)	edge%fluid%te_aniso%comps(:)%transpcoeff(:)%v%comp(:) (complexgrid_scalar) (9.6.1.3.87)
griduid (2084)	edge%fluid%te_aniso%comps(:)%transpcoeff(:)%v%comp(:)%griduid (integer) (9.6.1.1.2)
subgrid (2084)	edge%fluid%te_aniso%comps(:)%transpcoeff(:)%v%comp(:)%subgrid (integer) (9.6.1.1.2)
scalar (2084)	edge%fluid%te_aniso%comps(:)%transpcoeff(:)%v%comp(:)%scalar (vecflt_type) (9.6.1.2.13)
vector (2084)	edge%fluid%te_aniso%comps(:)%transpcoeff(:)%v%comp(:)%vector (matflt_type) (9.6.1.2.10)
matrix (2084)	edge%fluid%te_aniso%comps(:)%transpcoeff(:)%v%comp(:)%matrix (array3dflt_type) (9.6.1.2.2)
align (2091)	edge%fluid%te_aniso%comps(:)%transpcoeff(:)%v%align (vecint_type) (9.6.1.2.14)
alignid (2091)	edge%fluid%te_aniso%comps(:)%transpcoeff(:)%v%alignid (vecstring_type) (9.6.1.2.15)
source (2172)	edge%fluid%te_aniso%comps(:)%source(:) (complexgrid_scalar) (9.6.1.3.87)
griduid (2084)	edge%fluid%te_aniso%comps(:)%source(:)%griduid (integer) (9.6.1.1.2)
subgrid (2084)	edge%fluid%te_aniso%comps(:)%source(:)%subgrid (integer) (9.6.1.1.2)
scalar (2084)	edge%fluid%te_aniso%comps(:)%source(:)%scalar (vecflt_type) (9.6.1.2.13)
vector (2084)	edge%fluid%te_aniso%comps(:)%source(:)%vector (matflt_type) (9.6.1.2.10)
matrix (2084)	edge%fluid%te_aniso%comps(:)%source(:)%matrix (array3dflt_type) (9.6.1.2.2)
align (2176)	edge%fluid%te_aniso%align (vecint_type) (9.6.1.2.14)
alignid (2176)	edge%fluid%te_aniso%alignid (vecstring_type) (9.6.1.2.15)
ti_aniso (2171)	edge%fluid%ti_aniso(:) (edge_fluid_vector) (9.6.1.3.178)
griduid (2175)	edge%fluid%ti_aniso(:)%griduid (integer) (9.6.1.1.2)
basis (2175)	edge%fluid%ti_aniso(:)%basis (integer) (9.6.1.1.2)
align (2175)	edge%fluid%ti_aniso(:)%align (vecint_type) (9.6.1.2.14)
alignid (2175)	edge%fluid%ti_aniso(:)%alignid (vecstring_type) (9.6.1.2.15)
comps (2175)	edge%fluid%ti_aniso(:)%comps(:) (edge_fluid_scalar) (9.6.1.3.175)
value (2172)	edge%fluid%ti_aniso(:)%comps(:)%value(:) (complexgrid_scalar) (9.6.1.3.87)
griduid (2084)	edge%fluid%ti_aniso(:)%comps(:)%value(:)%griduid (integer) (9.6.1.1.2)
subgrid (2084)	edge%fluid%ti_aniso(:)%comps(:)%value(:)%subgrid (integer) (9.6.1.1.2)
scalar (2084)	edge%fluid%ti_aniso(:)%comps(:)%value(:)%scalar (vecflt_type) (9.6.1.2.13)
vector (2084)	edge%fluid%ti_aniso(:)%comps(:)%value(:)%vector (matflt_type) (9.6.1.2.10)
matrix (2084)	edge%fluid%ti_aniso(:)%comps(:)%value(:)%matrix (array3dflt_type) (9.6.1.2.2)
bndvalue (2172)	edge%fluid%ti_aniso(:)%comps(:)%bndvalue(:) (complexgrid_scalar) (9.6.1.3.87)
griduid (2084)	edge%fluid%ti_aniso(:)%comps(:)%bndvalue(:)%griduid (integer) (9.6.1.1.2)
subgrid (2084)	edge%fluid%ti_aniso(:)%comps(:)%bndvalue(:)%subgrid (integer) (9.6.1.1.2)
scalar (2084)	edge%fluid%ti_aniso(:)%comps(:)%bndvalue(:)%scalar (vecflt_type) (9.6.1.2.13)
vector (2084)	edge%fluid%ti_aniso(:)%comps(:)%bndvalue(:)%vector (matflt_type) (9.6.1.2.10)
matrix (2084)	edge%fluid%ti_aniso(:)%comps(:)%bndvalue(:)%matrix (array3dflt_type) (9.6.1.2.2)
flux (2172)	edge%fluid%ti_aniso(:)%comps(:)%flux(:) (complexgrid_vector) (9.6.1.3.93)
griduid (2090)	edge%fluid%ti_aniso(:)%comps(:)%flux(:)%griduid (integer) (9.6.1.1.2)
label (2090)	edge%fluid%ti_aniso(:)%comps(:)%flux(:)%label (string) (9.6.1.1.3)
comp (2090)	edge%fluid%ti_aniso(:)%comps(:)%flux(:)%comp(:) (complexgrid_scalar) (9.6.1.3.87)



griduid (2084)	edge%fluid%ti_aniso(:)%comps(:)%flux(:)%comp(:)%griduid (integer) (9.6.1.1.2)
subgrid (2084)	edge%fluid%ti_aniso(:)%comps(:)%flux(:)%comp(:)%subgrid (integer) (9.6.1.1.2)
scalar (2084)	edge%fluid%ti_aniso(:)%comps(:)%flux(:)%comp(:)%scalar (vecflt_type) (9.6.1.2.13)
vector (2084)	edge%fluid%ti_aniso(:)%comps(:)%flux(:)%comp(:)%vector (matflt_type) (9.6.1.2.10)
matrix (2084)	edge%fluid%ti_aniso(:)%comps(:)%flux(:)%comp(:)%matrix (array3dflt_type) (9.6.1.2.2)
align (2090)	edge%fluid%ti_aniso(:)%comps(:)%flux(:)%align (vecint_type) (9.6.1.2.14)
alignid (2090)	edge%fluid%ti_aniso(:)%comps(:)%flux(:)%alignid (vecstring_type) (9.6.1.2.15)
basis (2090)	edge%fluid%ti_aniso(:)%comps(:)%flux(:)%basis (integer) (9.6.1.1.2)
bndflux (2172)	edge%fluid%ti_aniso(:)%comps(:)%bndflux(:) (complexgrid_vector) (9.6.1.3.93)
griduid (2090)	edge%fluid%ti_aniso(:)%comps(:)%bndflux(:)%griduid (integer) (9.6.1.1.2)
label (2090)	edge%fluid%ti_aniso(:)%comps(:)%bndflux(:)%label (string) (9.6.1.1.3)
comp (2090)	edge%fluid%ti_aniso(:)%comps(:)%bndflux(:)%comp(:) (complexgrid_scalar) (9.6.1.3.87)
griduid (2084)	edge%fluid%ti_aniso(:)%comps(:)%bndflux(:)%comp(:)%griduid (integer) (9.6.1.1.2)
subgrid (2084)	edge%fluid%ti_aniso(:)%comps(:)%bndflux(:)%comp(:)%subgrid (integer) (9.6.1.1.2)
scalar (2084)	edge%fluid%ti_aniso(:)%comps(:)%bndflux(:)%comp(:)%scalar (vecflt_type) (9.6.1.2.13)
vector (2084)	edge%fluid%ti_aniso(:)%comps(:)%bndflux(:)%comp(:)%vector (matflt_type) (9.6.1.2.10)
matrix (2084)	edge%fluid%ti_aniso(:)%comps(:)%bndflux(:)%comp(:)%matrix (array3dflt_type) (9.6.1.2.2)
align (2090)	edge%fluid%ti_aniso(:)%comps(:)%bndflux(:)%align (vecint_type) (9.6.1.2.14)
alignid (2090)	edge%fluid%ti_aniso(:)%comps(:)%bndflux(:)%alignid (vecstring_type) (9.6.1.2.15)
basis (2090)	edge%fluid%ti_aniso(:)%comps(:)%bndflux(:)%basis (integer) (9.6.1.1.2)
transpcoeff (2172)	edge%fluid%ti_aniso(:)%comps(:)%transpcoeff(:) (edge_fluid_scalar_transpcoeff) (9.6.1.3.177)
d (2174)	edge%fluid%ti_aniso(:)%comps(:)%transpcoeff(:)%d (complexgrid_vector_simplestruct) (9.6.1.3.94)
label (2091)	edge%fluid%ti_aniso(:)%comps(:)%transpcoeff(:)%d%label (string) (9.6.1.1.3)
comp (2091)	edge%fluid%ti_aniso(:)%comps(:)%transpcoeff(:)%d%comp(:) (complexgrid_scalar) (9.6.1.3.87)
griduid (2084)	edge%fluid%ti_aniso(:)%comps(:)%transpcoeff(:)%d%comp(:)%griduid (integer) (9.6.1.1.2)
subgrid (2084)	edge%fluid%ti_aniso(:)%comps(:)%transpcoeff(:)%d%comp(:)%subgrid (integer) (9.6.1.1.2)
scalar (2084)	edge%fluid%ti_aniso(:)%comps(:)%transpcoeff(:)%d%comp(:)%scalar (vecflt_type) (9.6.1.2.13)
vector (2084)	edge%fluid%ti_aniso(:)%comps(:)%transpcoeff(:)%d%comp(:)%vector (matflt_type) (9.6.1.2.10)
matrix (2084)	edge%fluid%ti_aniso(:)%comps(:)%transpcoeff(:)%d%comp(:)%matrix (array3dflt_type) (9.6.1.2.2)
align (2091)	edge%fluid%ti_aniso(:)%comps(:)%transpcoeff(:)%d%align (vecint_type) (9.6.1.2.14)
alignid (2091)	edge%fluid%ti_aniso(:)%comps(:)%transpcoeff(:)%d%alignid (vecstring_type) (9.6.1.2.15)
v (2174)	edge%fluid%ti_aniso(:)%comps(:)%transpcoeff(:)%v (complexgrid_vector_simplestruct) (9.6.1.3.94)
label (2091)	edge%fluid%ti_aniso(:)%comps(:)%transpcoeff(:)%v%label (string) (9.6.1.1.3)
comp (2091)	edge%fluid%ti_aniso(:)%comps(:)%transpcoeff(:)%v%comp(:) (complexgrid_scalar) (9.6.1.3.87)
griduid (2084)	edge%fluid%ti_aniso(:)%comps(:)%transpcoeff(:)%v%comp(:)%griduid (integer) (9.6.1.1.2)
subgrid (2084)	edge%fluid%ti_aniso(:)%comps(:)%transpcoeff(:)%v%comp(:)%subgrid (integer) (9.6.1.1.2)
scalar (2084)	edge%fluid%ti_aniso(:)%comps(:)%transpcoeff(:)%v%comp(:)%scalar (vecflt_type) (9.6.1.2.13)
vector (2084)	edge%fluid%ti_aniso(:)%comps(:)%transpcoeff(:)%v%comp(:)%vector (matflt_type) (9.6.1.2.10)
matrix (2084)	edge%fluid%ti_aniso(:)%comps(:)%transpcoeff(:)%v%comp(:)%matrix (array3dflt_type) (9.6.1.2.2)
align (2091)	edge%fluid%ti_aniso(:)%comps(:)%transpcoeff(:)%v%align (vecint_type) (9.6.1.2.14)
alignid (2091)	edge%fluid%ti_aniso(:)%comps(:)%transpcoeff(:)%v%alignid (vecstring_type) (9.6.1.2.15)
source (2172)	edge%fluid%ti_aniso(:)%comps(:)%source(:) (complexgrid_scalar) (9.6.1.3.87)
griduid (2084)	edge%fluid%ti_aniso(:)%comps(:)%source(:)%griduid (integer) (9.6.1.1.2)
subgrid (2084)	edge%fluid%ti_aniso(:)%comps(:)%source(:)%subgrid (integer) (9.6.1.1.2)
scalar (2084)	edge%fluid%ti_aniso(:)%comps(:)%source(:)%scalar (vecflt_type) (9.6.1.2.13)
vector (2084)	edge%fluid%ti_aniso(:)%comps(:)%source(:)%vector (matflt_type) (9.6.1.2.10)
matrix (2084)	edge%fluid%ti_aniso(:)%comps(:)%source(:)%matrix (array3dflt_type) (9.6.1.2.2)
po (2171)	edge%fluid%po (edge_fluid_scalar_simplestruct) (9.6.1.3.176)
value (2173)	edge%fluid%po%value(:) (complexgrid_scalar) (9.6.1.3.87)
griduid (2084)	edge%fluid%po%value(:)%griduid (integer) (9.6.1.1.2)
subgrid (2084)	edge%fluid%po%value(:)%subgrid (integer) (9.6.1.1.2)
scalar (2084)	edge%fluid%po%value(:)%scalar (vecflt_type) (9.6.1.2.13)
vector (2084)	edge%fluid%po%value(:)%vector (matflt_type) (9.6.1.2.10)
matrix (2084)	edge%fluid%po%value(:)%matrix (array3dflt_type) (9.6.1.2.2)
bndvalue (2173)	edge%fluid%po%bndvalue(:) (complexgrid_scalar) (9.6.1.3.87)
griduid (2084)	edge%fluid%po%bndvalue(:)%griduid (integer) (9.6.1.1.2)

subgrid (2084)	edge%fluid%po%bndvalue(:)%subgrid (integer) (9.6.1.1.2)
scalar (2084)	edge%fluid%po%bndvalue(:)%scalar (vecflt_type) (9.6.1.2.13)
vector (2084)	edge%fluid%po%bndvalue(:)%vector (matflt_type) (9.6.1.2.10)
matrix (2084)	edge%fluid%po%bndvalue(:)%matrix (array3dflt_type) (9.6.1.2.2)
flux (2173)	edge%fluid%po%flux(:) (complexgrid_vector) (9.6.1.3.93)
griduid (2090)	edge%fluid%po%flux(:)%griduid (integer) (9.6.1.1.2)
label (2090)	edge%fluid%po%flux(:)%label (string) (9.6.1.1.3)
comp (2090)	edge%fluid%po%flux(:)%comp(:) (complexgrid_scalar) (9.6.1.3.87)
griduid (2084)	edge%fluid%po%flux(:)%comp(:)%griduid (integer) (9.6.1.1.2)
subgrid (2084)	edge%fluid%po%flux(:)%comp(:)%subgrid (integer) (9.6.1.1.2)
scalar (2084)	edge%fluid%po%flux(:)%comp(:)%scalar (vecflt_type) (9.6.1.2.13)
vector (2084)	edge%fluid%po%flux(:)%comp(:)%vector (matflt_type) (9.6.1.2.10)
matrix (2084)	edge%fluid%po%flux(:)%comp(:)%matrix (array3dflt_type) (9.6.1.2.2)
align (2090)	edge%fluid%po%flux(:)%align (vecint_type) (9.6.1.2.14)
alignid (2090)	edge%fluid%po%flux(:)%alignid (vecstring_type) (9.6.1.2.15)
basis (2090)	edge%fluid%po%flux(:)%basis (integer) (9.6.1.1.2)
bndflux (2173)	edge%fluid%po%bndflux(:) (complexgrid_vector) (9.6.1.3.93)
griduid (2090)	edge%fluid%po%bndflux(:)%griduid (integer) (9.6.1.1.2)
label (2090)	edge%fluid%po%bndflux(:)%label (string) (9.6.1.1.3)
comp (2090)	edge%fluid%po%bndflux(:)%comp(:) (complexgrid_scalar) (9.6.1.3.87)
griduid (2084)	edge%fluid%po%bndflux(:)%comp(:)%griduid (integer) (9.6.1.1.2)
subgrid (2084)	edge%fluid%po%bndflux(:)%comp(:)%subgrid (integer) (9.6.1.1.2)
scalar (2084)	edge%fluid%po%bndflux(:)%comp(:)%scalar (vecflt_type) (9.6.1.2.13)
vector (2084)	edge%fluid%po%bndflux(:)%comp(:)%vector (matflt_type) (9.6.1.2.10)
matrix (2084)	edge%fluid%po%bndflux(:)%comp(:)%matrix (array3dflt_type) (9.6.1.2.2)
align (2090)	edge%fluid%po%bndflux(:)%align (vecint_type) (9.6.1.2.14)
alignid (2090)	edge%fluid%po%bndflux(:)%alignid (vecstring_type) (9.6.1.2.15)
basis (2090)	edge%fluid%po%bndflux(:)%basis (integer) (9.6.1.1.2)
transpcoeff (2173)	edge%fluid%po%transpcoeff(:) (edge_fluid_scalar_transpcoeff) (9.6.1.3.177)
d (2174)	edge%fluid%po%transpcoeff(:)%d (complexgrid_vector_simplestruct) (9.6.1.3.94)
label (2091)	edge%fluid%po%transpcoeff(:)%d%label (string) (9.6.1.1.3)
comp (2091)	edge%fluid%po%transpcoeff(:)%d%comp(:) (complexgrid_scalar) (9.6.1.3.87)
griduid (2084)	edge%fluid%po%transpcoeff(:)%d%comp(:)%griduid (integer) (9.6.1.1.2)
subgrid (2084)	edge%fluid%po%transpcoeff(:)%d%comp(:)%subgrid (integer) (9.6.1.1.2)
scalar (2084)	edge%fluid%po%transpcoeff(:)%d%comp(:)%scalar (vecflt_type) (9.6.1.2.13)
vector (2084)	edge%fluid%po%transpcoeff(:)%d%comp(:)%vector (matflt_type) (9.6.1.2.10)
matrix (2084)	edge%fluid%po%transpcoeff(:)%d%comp(:)%matrix (array3dflt_type) (9.6.1.2.2)
align (2091)	edge%fluid%po%transpcoeff(:)%d%align (vecint_type) (9.6.1.2.14)
alignid (2091)	edge%fluid%po%transpcoeff(:)%d%alignid (vecstring_type) (9.6.1.2.15)
v (2174)	edge%fluid%po%transpcoeff(:)%v (complexgrid_vector_simplestruct) (9.6.1.3.94)
label (2091)	edge%fluid%po%transpcoeff(:)%v%label (string) (9.6.1.1.3)
comp (2091)	edge%fluid%po%transpcoeff(:)%v%comp(:) (complexgrid_scalar) (9.6.1.3.87)
griduid (2084)	edge%fluid%po%transpcoeff(:)%v%comp(:)%griduid (integer) (9.6.1.1.2)
subgrid (2084)	edge%fluid%po%transpcoeff(:)%v%comp(:)%subgrid (integer) (9.6.1.1.2)
scalar (2084)	edge%fluid%po%transpcoeff(:)%v%comp(:)%scalar (vecflt_type) (9.6.1.2.13)
vector (2084)	edge%fluid%po%transpcoeff(:)%v%comp(:)%vector (matflt_type) (9.6.1.2.10)
matrix (2084)	edge%fluid%po%transpcoeff(:)%v%comp(:)%matrix (array3dflt_type) (9.6.1.2.2)
align (2091)	edge%fluid%po%transpcoeff(:)%v%align (vecint_type) (9.6.1.2.14)
alignid (2091)	edge%fluid%po%transpcoeff(:)%v%alignid (vecstring_type) (9.6.1.2.15)
source (2173)	edge%fluid%po%source(:) (complexgrid_scalar) (9.6.1.3.87)
griduid (2084)	edge%fluid%po%source(:)%griduid (integer) (9.6.1.1.2)
subgrid (2084)	edge%fluid%po%source(:)%subgrid (integer) (9.6.1.1.2)
scalar (2084)	edge%fluid%po%source(:)%scalar (vecflt_type) (9.6.1.2.13)
vector (2084)	edge%fluid%po%source(:)%vector (matflt_type) (9.6.1.2.10)
matrix (2084)	edge%fluid%po%source(:)%matrix (array3dflt_type) (9.6.1.2.2)
j (2171)	edge%fluid%j (edge_fluid_vector_simplestruct) (9.6.1.3.179)
griduid (2176)	edge%fluid%j%griduid (integer) (9.6.1.1.2)
basis (2176)	edge%fluid%j%basis (integer) (9.6.1.1.2)
comps (2176)	edge%fluid%j%comps(:) (edge_fluid_scalar) (9.6.1.3.175)
value (2172)	edge%fluid%j%comps(:)%value(:) (complexgrid_scalar) (9.6.1.3.87)
griduid (2084)	edge%fluid%j%comps(:)%value(:)%griduid (integer) (9.6.1.1.2)



subgrid (2084)	edge%fluid%j%comps(:)%value(:)%subgrid (integer) (9.6.1.1.2)
scalar (2084)	edge%fluid%j%comps(:)%value(:)%scalar (vecflt_type) (9.6.1.2.13)
vector (2084)	edge%fluid%j%comps(:)%value(:)%vector (matflt_type) (9.6.1.2.10)
matrix (2084)	edge%fluid%j%comps(:)%value(:)%matrix (array3dflt_type) (9.6.1.2.2)
bndvalue (2172)	edge%fluid%j%comps(:)%bndvalue(:) (complexgrid_scalar) (9.6.1.3.87)
griduid (2084)	edge%fluid%j%comps(:)%bndvalue(:)%griduid (integer) (9.6.1.1.2)
subgrid (2084)	edge%fluid%j%comps(:)%bndvalue(:)%subgrid (integer) (9.6.1.1.2)
scalar (2084)	edge%fluid%j%comps(:)%bndvalue(:)%scalar (vecflt_type) (9.6.1.2.13)
vector (2084)	edge%fluid%j%comps(:)%bndvalue(:)%vector (matflt_type) (9.6.1.2.10)
matrix (2084)	edge%fluid%j%comps(:)%bndvalue(:)%matrix (array3dflt_type) (9.6.1.2.2)
flux (2172)	edge%fluid%j%comps(:)%flux(:) (complexgrid_vector) (9.6.1.3.93)
griduid (2090)	edge%fluid%j%comps(:)%flux(:)%griduid (integer) (9.6.1.1.2)
label (2090)	edge%fluid%j%comps(:)%flux(:)%label (string) (9.6.1.1.3)
comp (2090)	edge%fluid%j%comps(:)%flux(:)%comp(:) (complexgrid_scalar) (9.6.1.3.87)
griduid (2084)	edge%fluid%j%comps(:)%flux(:)%comp(:)%griduid (integer) (9.6.1.1.2)
subgrid (2084)	edge%fluid%j%comps(:)%flux(:)%comp(:)%subgrid (integer) (9.6.1.1.2)
scalar (2084)	edge%fluid%j%comps(:)%flux(:)%comp(:)%scalar (vecflt_type) (9.6.1.2.13)
vector (2084)	edge%fluid%j%comps(:)%flux(:)%comp(:)%vector (matflt_type) (9.6.1.2.10)
matrix (2084)	edge%fluid%j%comps(:)%flux(:)%comp(:)%matrix (array3dflt_type) (9.6.1.2.2)
align (2090)	edge%fluid%j%comps(:)%flux(:)%align (vecint_type) (9.6.1.2.14)
alignid (2090)	edge%fluid%j%comps(:)%flux(:)%alignid (vecstring_type) (9.6.1.2.15)
basis (2090)	edge%fluid%j%comps(:)%flux(:)%basis (integer) (9.6.1.1.2)
bndflux (2172)	edge%fluid%j%comps(:)%bndflux(:) (complexgrid_vector) (9.6.1.3.93)
griduid (2090)	edge%fluid%j%comps(:)%bndflux(:)%griduid (integer) (9.6.1.1.2)
label (2090)	edge%fluid%j%comps(:)%bndflux(:)%label (string) (9.6.1.1.3)
comp (2090)	edge%fluid%j%comps(:)%bndflux(:)%comp(:) (complexgrid_scalar) (9.6.1.3.87)
griduid (2084)	edge%fluid%j%comps(:)%bndflux(:)%comp(:)%griduid (integer) (9.6.1.1.2)
subgrid (2084)	edge%fluid%j%comps(:)%bndflux(:)%comp(:)%subgrid (integer) (9.6.1.1.2)
scalar (2084)	edge%fluid%j%comps(:)%bndflux(:)%comp(:)%scalar (vecflt_type) (9.6.1.2.13)
vector (2084)	edge%fluid%j%comps(:)%bndflux(:)%comp(:)%vector (matflt_type) (9.6.1.2.10)
matrix (2084)	edge%fluid%j%comps(:)%bndflux(:)%comp(:)%matrix (array3dflt_type) (9.6.1.2.2)
align (2090)	edge%fluid%j%comps(:)%bndflux(:)%align (vecint_type) (9.6.1.2.14)
alignid (2090)	edge%fluid%j%comps(:)%bndflux(:)%alignid (vecstring_type) (9.6.1.2.15)
basis (2090)	edge%fluid%j%comps(:)%bndflux(:)%basis (integer) (9.6.1.1.2)
transpcoeff (2172)	edge%fluid%j%comps(:)%transpcoeff(:) (edge_fluid_scalar_transpcoeff) (9.6.1.3.177)
d (2174)	edge%fluid%j%comps(:)%transpcoeff(:)%d (complexgrid_vector_simplestruct) (9.6.1.3.94)
label (2091)	edge%fluid%j%comps(:)%transpcoeff(:)%d%label (string) (9.6.1.1.3)
comp (2091)	edge%fluid%j%comps(:)%transpcoeff(:)%d%comp(:) (complexgrid_scalar) (9.6.1.3.87)
griduid (2084)	edge%fluid%j%comps(:)%transpcoeff(:)%d%comp(:)%griduid (integer) (9.6.1.1.2)
subgrid (2084)	edge%fluid%j%comps(:)%transpcoeff(:)%d%comp(:)%subgrid (integer) (9.6.1.1.2)
scalar (2084)	edge%fluid%j%comps(:)%transpcoeff(:)%d%comp(:)%scalar (vecflt_type) (9.6.1.2.13)
vector (2084)	edge%fluid%j%comps(:)%transpcoeff(:)%d%comp(:)%vector (matflt_type) (9.6.1.2.10)
matrix (2084)	edge%fluid%j%comps(:)%transpcoeff(:)%d%comp(:)%matrix (array3dflt_type) (9.6.1.2.2)
align (2091)	edge%fluid%j%comps(:)%transpcoeff(:)%d%align (vecint_type) (9.6.1.2.14)
alignid (2091)	edge%fluid%j%comps(:)%transpcoeff(:)%d%alignid (vecstring_type) (9.6.1.2.15)
v (2174)	edge%fluid%j%comps(:)%transpcoeff(:)%v (complexgrid_vector_simplestruct) (9.6.1.3.94)
label (2091)	edge%fluid%j%comps(:)%transpcoeff(:)%v%label (string) (9.6.1.1.3)
comp (2091)	edge%fluid%j%comps(:)%transpcoeff(:)%v%comp(:) (complexgrid_scalar) (9.6.1.3.87)
griduid (2084)	edge%fluid%j%comps(:)%transpcoeff(:)%v%comp(:)%griduid (integer) (9.6.1.1.2)
subgrid (2084)	edge%fluid%j%comps(:)%transpcoeff(:)%v%comp(:)%subgrid (integer) (9.6.1.1.2)
scalar (2084)	edge%fluid%j%comps(:)%transpcoeff(:)%v%comp(:)%scalar (vecflt_type) (9.6.1.2.13)
vector (2084)	edge%fluid%j%comps(:)%transpcoeff(:)%v%comp(:)%vector (matflt_type) (9.6.1.2.10)
matrix (2084)	edge%fluid%j%comps(:)%transpcoeff(:)%v%comp(:)%matrix (array3dflt_type) (9.6.1.2.2)
align (2091)	edge%fluid%j%comps(:)%transpcoeff(:)%v%align (vecint_type) (9.6.1.2.14)
alignid (2091)	edge%fluid%j%comps(:)%transpcoeff(:)%v%alignid (vecstring_type) (9.6.1.2.15)
source (2172)	edge%fluid%j%comps(:)%source(:) (complexgrid_scalar) (9.6.1.3.87)
griduid (2084)	edge%fluid%j%comps(:)%source(:)%griduid (integer) (9.6.1.1.2)
subgrid (2084)	edge%fluid%j%comps(:)%source(:)%subgrid (integer) (9.6.1.1.2)
scalar (2084)	edge%fluid%j%comps(:)%source(:)%scalar (vecflt_type) (9.6.1.2.13)
vector (2084)	edge%fluid%j%comps(:)%source(:)%vector (matflt_type) (9.6.1.2.10)
matrix (2084)	edge%fluid%j%comps(:)%source(:)%matrix (array3dflt_type) (9.6.1.2.2)

align (2176)	edge%fluid%j%align (vecint_type) (9.6.1.2.14)
alignid (2176)	edge%fluid%j%alignid (vecstring_type) (9.6.1.2.15)
b (2171)	edge%fluid%b(:) (complexgrid_vector) (9.6.1.3.93)
griduid (2090)	edge%fluid%b(:)%griduid (integer) (9.6.1.1.2)
label (2090)	edge%fluid%b(:)%label (string) (9.6.1.1.3)
comp (2090)	edge%fluid%b(:)%comp(:) (complexgrid_scalar) (9.6.1.3.87)
griduid (2084)	edge%fluid%b(:)%comp(:)%griduid (integer) (9.6.1.1.2)
subgrid (2084)	edge%fluid%b(:)%comp(:)%subgrid (integer) (9.6.1.1.2)
scalar (2084)	edge%fluid%b(:)%comp(:)%scalar (vecflt_type) (9.6.1.2.13)
vector (2084)	edge%fluid%b(:)%comp(:)%vector (matflt_type) (9.6.1.2.10)
matrix (2084)	edge%fluid%b(:)%comp(:)%matrix (array3dflt_type) (9.6.1.2.2)
align (2090)	edge%fluid%b(:)%align (vecint_type) (9.6.1.2.14)
alignid (2090)	edge%fluid%b(:)%alignid (vecstring_type) (9.6.1.2.15)
basis (2090)	edge%fluid%b(:)%basis (integer) (9.6.1.1.2)
kinetic (2015)	edge%kinetic (edge_kinetic) (9.6.1.3.180)
f (2177)	edge%kinetic%f(:) (edge_kinetic_distribution) (9.6.1.3.181)
value (2178)	edge%kinetic%f(:)%value(:) (complexgrid_scalar) (9.6.1.3.87)
griduid (2084)	edge%kinetic%f(:)%value(:)%griduid (integer) (9.6.1.1.2)
subgrid (2084)	edge%kinetic%f(:)%value(:)%subgrid (integer) (9.6.1.1.2)
scalar (2084)	edge%kinetic%f(:)%value(:)%scalar (vecflt_type) (9.6.1.2.13)
vector (2084)	edge%kinetic%f(:)%value(:)%vector (matflt_type) (9.6.1.2.10)
matrix (2084)	edge%kinetic%f(:)%value(:)%matrix (array3dflt_type) (9.6.1.2.2)
bndvalue (2178)	edge%kinetic%f(:)%bndvalue(:) (complexgrid_scalar) (9.6.1.3.87)
griduid (2084)	edge%kinetic%f(:)%bndvalue(:)%griduid (integer) (9.6.1.1.2)
subgrid (2084)	edge%kinetic%f(:)%bndvalue(:)%subgrid (integer) (9.6.1.1.2)
scalar (2084)	edge%kinetic%f(:)%bndvalue(:)%scalar (vecflt_type) (9.6.1.2.13)
vector (2084)	edge%kinetic%f(:)%bndvalue(:)%vector (matflt_type) (9.6.1.2.10)
matrix (2084)	edge%kinetic%f(:)%bndvalue(:)%matrix (array3dflt_type) (9.6.1.2.2)
fluxes (2178)	edge%kinetic%f(:)%fluxes(:) (complexgrid_vector) (9.6.1.3.93)
griduid (2090)	edge%kinetic%f(:)%fluxes(:)%griduid (integer) (9.6.1.1.2)
label (2090)	edge%kinetic%f(:)%fluxes(:)%label (string) (9.6.1.1.3)
comp (2090)	edge%kinetic%f(:)%fluxes(:)%comp(:) (complexgrid_scalar) (9.6.1.3.87)
griduid (2084)	edge%kinetic%f(:)%fluxes(:)%comp(:)%griduid (integer) (9.6.1.1.2)
subgrid (2084)	edge%kinetic%f(:)%fluxes(:)%comp(:)%subgrid (integer) (9.6.1.1.2)
scalar (2084)	edge%kinetic%f(:)%fluxes(:)%comp(:)%scalar (vecflt_type) (9.6.1.2.13)
vector (2084)	edge%kinetic%f(:)%fluxes(:)%comp(:)%vector (matflt_type) (9.6.1.2.10)
matrix (2084)	edge%kinetic%f(:)%fluxes(:)%comp(:)%matrix (array3dflt_type) (9.6.1.2.2)
align (2090)	edge%kinetic%f(:)%fluxes(:)%align (vecint_type) (9.6.1.2.14)
alignid (2090)	edge%kinetic%f(:)%fluxes(:)%alignid (vecstring_type) (9.6.1.2.15)
basis (2090)	edge%kinetic%f(:)%fluxes(:)%basis (integer) (9.6.1.1.2)
source (2178)	edge%kinetic%f(:)%source(:) (complexgrid_scalar) (9.6.1.3.87)
griduid (2084)	edge%kinetic%f(:)%source(:)%griduid (integer) (9.6.1.1.2)
subgrid (2084)	edge%kinetic%f(:)%source(:)%subgrid (integer) (9.6.1.1.2)
scalar (2084)	edge%kinetic%f(:)%source(:)%scalar (vecflt_type) (9.6.1.2.13)
vector (2084)	edge%kinetic%f(:)%source(:)%vector (matflt_type) (9.6.1.2.10)
matrix (2084)	edge%kinetic%f(:)%source(:)%matrix (array3dflt_type) (9.6.1.2.2)
codeparam (2015)	edge%codeparam (codeparam) (9.6.1.3.77)
codename (2074)	edge%codeparam%codename (string) (9.6.1.1.3)
codeversion (2074)	edge%codeparam%codeversion (string) (9.6.1.1.3)
parameters (2074)	edge%codeparam%parameters (string) (9.6.1.1.3)
output_diag (2074)	edge%codeparam%output_diag (string) (9.6.1.1.3)
output_flag (2074)	edge%codeparam%output_flag (integer) (9.6.1.1.2)
time (2015)	edge%time (float) (9.6.1.1.1)

### 9.6.2.1.17 efcc

datainfo (2016)	efcc%datainfo (datainfo) (9.6.1.3.133)
dataprovder (2130)	efcc%datainfo%dataprovder (string) (9.6.1.1.3)
putdate (2130)	efcc%datainfo%putdate (string) (9.6.1.1.3)
source (2130)	efcc%datainfo%source (string) (9.6.1.1.3)
comment (2130)	efcc%datainfo%comment (string) (9.6.1.1.3)

cocos (2130)	efcc%datainfo%cocos (integer) (9.6.1.1.2)
id (2130)	efcc%datainfo%id (integer) (9.6.1.1.2)
isref (2130)	efcc%datainfo%isref (integer) (9.6.1.1.2)
whatref (2130)	efcc%datainfo%whatref (whatref) (9.6.1.3.503)
user (2500)	efcc%datainfo%whatref%user (string) (9.6.1.1.3)
machine (2500)	efcc%datainfo%whatref%machine (string) (9.6.1.1.3)
shot (2500)	efcc%datainfo%whatref%shot (integer) (9.6.1.1.2)
run (2500)	efcc%datainfo%whatref%run (integer) (9.6.1.1.2)
occurrence (2500)	efcc%datainfo%whatref%occurrence (integer) (9.6.1.1.2)
putinfo (2130)	efcc%datainfo%putinfo (putinfo) (9.6.1.3.339)
putmethod (2336)	efcc%datainfo%putinfo%putmethod (string) (9.6.1.1.3)
putaccess (2336)	efcc%datainfo%putinfo%putaccess (string) (9.6.1.1.3)
putlocation (2336)	efcc%datainfo%putinfo%putlocation (string) (9.6.1.1.3)
rights (2336)	efcc%datainfo%putinfo%rights (string) (9.6.1.1.3)
coil (2016)	efcc%coil(:) (coil) (9.6.1.3.80)
desc_coils (2077)	efcc%coil(:)%desc_coils (desc_coils) (9.6.1.3.134)
name (2131)	efcc%coil(:)%desc_coils%name (string) (9.6.1.1.3)
res (2131)	efcc%coil(:)%desc_coils%res (float) (9.6.1.1.1)
nturns (2131)	efcc%coil(:)%desc_coils%nturns (integer) (9.6.1.1.2)
closed (2131)	efcc%coil(:)%desc_coils%closed (string) (9.6.1.1.3)
edges (2131)	efcc%coil(:)%desc_coils%edges(:) (edges) (9.6.1.3.182)
edge_rzphi (2179)	efcc%coil(:)%desc_coils%edges(:)%edge_rzphi (rzphi1D) (9.6.1.3.362)
r (2359)	efcc%coil(:)%desc_coils%edges(:)%edge_rzphi%r (vecflt.type) (9.6.1.2.13)
z (2359)	efcc%coil(:)%desc_coils%edges(:)%edge_rzphi%z (vecflt.type) (9.6.1.2.13)
phi (2359)	efcc%coil(:)%desc_coils%edges(:)%edge_rzphi%phi (vecflt.type) (9.6.1.2.13)
coilcurrent (2077)	efcc%coil(:)%coilcurrent (exp1D) (9.6.1.3.195)
value (2192)	efcc%coil(:)%coilcurrent%value (vecflt.type) (9.6.1.2.13)
abserror (2192)	efcc%coil(:)%coilcurrent%abserror (vecflt.type) (9.6.1.2.13)
releror (2192)	efcc%coil(:)%coilcurrent%releror (vecflt.type) (9.6.1.2.13)
coilvoltage (2077)	efcc%coil(:)%coilvoltage (exp1D) (9.6.1.3.195)
value (2192)	efcc%coil(:)%coilvoltage%value (vecflt.type) (9.6.1.2.13)
abserror (2192)	efcc%coil(:)%coilvoltage%abserror (vecflt.type) (9.6.1.2.13)
releror (2192)	efcc%coil(:)%coilvoltage%releror (vecflt.type) (9.6.1.2.13)
time (2016)	efcc%time (float) (9.6.1.1.1)
codeparam (2016)	efcc%codeparam (codeparam) (9.6.1.3.77)
codename (2074)	efcc%codeparam%codename (string) (9.6.1.1.3)
codeversion (2074)	efcc%codeparam%codeversion (string) (9.6.1.1.3)
parameters (2074)	efcc%codeparam%parameters (string) (9.6.1.1.3)
output_diag (2074)	efcc%codeparam%output_diag (string) (9.6.1.1.3)
output_flag (2074)	efcc%codeparam%output_flag (integer) (9.6.1.1.2)

### 9.6.2.1.18 equilibrium

datainfo (2017)	equilibrium%datainfo (datainfo) (9.6.1.3.133)
dataprovider (2130)	equilibrium%datainfo%dataprovider (string) (9.6.1.1.3)
putdate (2130)	equilibrium%datainfo%putdate (string) (9.6.1.1.3)
source (2130)	equilibrium%datainfo%source (string) (9.6.1.1.3)
comment (2130)	equilibrium%datainfo%comment (string) (9.6.1.1.3)
cocos (2130)	equilibrium%datainfo%cocos (integer) (9.6.1.1.2)
id (2130)	equilibrium%datainfo%id (integer) (9.6.1.1.2)
isref (2130)	equilibrium%datainfo%isref (integer) (9.6.1.1.2)
whatref (2130)	equilibrium%datainfo%whatref (whatref) (9.6.1.3.503)
user (2500)	equilibrium%datainfo%whatref%user (string) (9.6.1.1.3)
machine (2500)	equilibrium%datainfo%whatref%machine (string) (9.6.1.1.3)
shot (2500)	equilibrium%datainfo%whatref%shot (integer) (9.6.1.1.2)
run (2500)	equilibrium%datainfo%whatref%run (integer) (9.6.1.1.2)
occurrence (2500)	equilibrium%datainfo%whatref%occurrence (integer) (9.6.1.1.2)
putinfo (2130)	equilibrium%datainfo%putinfo (putinfo) (9.6.1.3.339)
putmethod (2336)	equilibrium%datainfo%putinfo%putmethod (string) (9.6.1.1.3)
putaccess (2336)	equilibrium%datainfo%putinfo%putaccess (string) (9.6.1.1.3)
putlocation (2336)	equilibrium%datainfo%putinfo%putlocation (string) (9.6.1.1.3)

rights (2336)	equilibrium%datainfo%putinfo%rights (string) (9.6.1.1.3)
eqconstraint (2017)	equilibrium%eqconstraint (eqconstraint) (9.6.1.3.187)
bpol (2184)	equilibrium%eqconstraint%bpol (eqmes1D) (9.6.1.3.190)
measured (2187)	equilibrium%eqconstraint%bpol%measured (vecflt.type) (9.6.1.2.13)
source (2187)	equilibrium%eqconstraint%bpol%source (string) (9.6.1.1.3)
time (2187)	equilibrium%eqconstraint%bpol%time (float) (9.6.1.1.1)
exact (2187)	equilibrium%eqconstraint%bpol%exact (vecint.type) (9.6.1.2.14)
weight (2187)	equilibrium%eqconstraint%bpol%weight (vecflt.type) (9.6.1.2.13)
sigma (2187)	equilibrium%eqconstraint%bpol%sigma (vecflt.type) (9.6.1.2.13)
calculated (2187)	equilibrium%eqconstraint%bpol%calculated (vecflt.type) (9.6.1.2.13)
chi2 (2187)	equilibrium%eqconstraint%bpol%chi2 (vecflt.type) (9.6.1.2.13)
bvac_r (2184)	equilibrium%eqconstraint%bvac_r (eqmes0D) (9.6.1.3.189)
measured (2186)	equilibrium%eqconstraint%bvac_r%measured (float) (9.6.1.1.1)
source (2186)	equilibrium%eqconstraint%bvac_r%source (string) (9.6.1.1.3)
time (2186)	equilibrium%eqconstraint%bvac_r%time (float) (9.6.1.1.1)
exact (2186)	equilibrium%eqconstraint%bvac_r%exact (integer) (9.6.1.1.2)
weight (2186)	equilibrium%eqconstraint%bvac_r%weight (float) (9.6.1.1.1)
sigma (2186)	equilibrium%eqconstraint%bvac_r%sigma (float) (9.6.1.1.1)
calculated (2186)	equilibrium%eqconstraint%bvac_r%calculated (float) (9.6.1.1.1)
chi2 (2186)	equilibrium%eqconstraint%bvac_r%chi2 (float) (9.6.1.1.1)
diamagflux (2184)	equilibrium%eqconstraint%diamagflux (eqmes0D) (9.6.1.3.189)
measured (2186)	equilibrium%eqconstraint%diamagflux%measured (float) (9.6.1.1.1)
source (2186)	equilibrium%eqconstraint%diamagflux%source (string) (9.6.1.1.3)
time (2186)	equilibrium%eqconstraint%diamagflux%time (float) (9.6.1.1.1)
exact (2186)	equilibrium%eqconstraint%diamagflux%exact (integer) (9.6.1.1.2)
weight (2186)	equilibrium%eqconstraint%diamagflux%weight (float) (9.6.1.1.1)
sigma (2186)	equilibrium%eqconstraint%diamagflux%sigma (float) (9.6.1.1.1)
calculated (2186)	equilibrium%eqconstraint%diamagflux%calculated (float) (9.6.1.1.1)
chi2 (2186)	equilibrium%eqconstraint%diamagflux%chi2 (float) (9.6.1.1.1)
faraday (2184)	equilibrium%eqconstraint%faraday (eqmes1D) (9.6.1.3.190)
measured (2187)	equilibrium%eqconstraint%faraday%measured (vecflt.type) (9.6.1.2.13)
source (2187)	equilibrium%eqconstraint%faraday%source (string) (9.6.1.1.3)
time (2187)	equilibrium%eqconstraint%faraday%time (float) (9.6.1.1.1)
exact (2187)	equilibrium%eqconstraint%faraday%exact (vecint.type) (9.6.1.2.14)
weight (2187)	equilibrium%eqconstraint%faraday%weight (vecflt.type) (9.6.1.2.13)
sigma (2187)	equilibrium%eqconstraint%faraday%sigma (vecflt.type) (9.6.1.2.13)
calculated (2187)	equilibrium%eqconstraint%faraday%calculated (vecflt.type) (9.6.1.2.13)
chi2 (2187)	equilibrium%eqconstraint%faraday%chi2 (vecflt.type) (9.6.1.2.13)
flux (2184)	equilibrium%eqconstraint%flux (eqmes1D) (9.6.1.3.190)
measured (2187)	equilibrium%eqconstraint%flux%measured (vecflt.type) (9.6.1.2.13)
source (2187)	equilibrium%eqconstraint%flux%source (string) (9.6.1.1.3)
time (2187)	equilibrium%eqconstraint%flux%time (float) (9.6.1.1.1)
exact (2187)	equilibrium%eqconstraint%flux%exact (vecint.type) (9.6.1.2.14)
weight (2187)	equilibrium%eqconstraint%flux%weight (vecflt.type) (9.6.1.2.13)
sigma (2187)	equilibrium%eqconstraint%flux%sigma (vecflt.type) (9.6.1.2.13)
calculated (2187)	equilibrium%eqconstraint%flux%calculated (vecflt.type) (9.6.1.2.13)
chi2 (2187)	equilibrium%eqconstraint%flux%chi2 (vecflt.type) (9.6.1.2.13)
i_plasma (2184)	equilibrium%eqconstraint%i_plasma (eqmes0D) (9.6.1.3.189)
measured (2186)	equilibrium%eqconstraint%i_plasma%measured (float) (9.6.1.1.1)
source (2186)	equilibrium%eqconstraint%i_plasma%source (string) (9.6.1.1.3)
time (2186)	equilibrium%eqconstraint%i_plasma%time (float) (9.6.1.1.1)
exact (2186)	equilibrium%eqconstraint%i_plasma%exact (integer) (9.6.1.1.2)
weight (2186)	equilibrium%eqconstraint%i_plasma%weight (float) (9.6.1.1.1)
sigma (2186)	equilibrium%eqconstraint%i_plasma%sigma (float) (9.6.1.1.1)
calculated (2186)	equilibrium%eqconstraint%i_plasma%calculated (float) (9.6.1.1.1)
chi2 (2186)	equilibrium%eqconstraint%i_plasma%chi2 (float) (9.6.1.1.1)
isoflux (2184)	equilibrium%eqconstraint%isoflux (isoflux) (9.6.1.3.239)
position (2236)	equilibrium%eqconstraint%isoflux%position (rz1D) (9.6.1.3.356)
r (2353)	equilibrium%eqconstraint%isoflux%position%r (vecflt.type) (9.6.1.2.13)
z (2353)	equilibrium%eqconstraint%isoflux%position%z (vecflt.type) (9.6.1.2.13)
source (2236)	equilibrium%eqconstraint%isoflux%source (string) (9.6.1.1.3)

weight (2236)	equilibrium%eqconstraint%isoflux%weight (vecflt.type) (9.6.1.2.13)
sigma (2236)	equilibrium%eqconstraint%isoflux%sigma (vecflt.type) (9.6.1.2.13)
calculated (2236)	equilibrium%eqconstraint%isoflux%calculated (vecflt.type) (9.6.1.2.13)
chi2 (2236)	equilibrium%eqconstraint%isoflux%chi2 (vecflt.type) (9.6.1.2.13)
jsurf (2184)	equilibrium%eqconstraint%jsurf (eqmes1D) (9.6.1.3.190)
measured (2187)	equilibrium%eqconstraint%jsurf%measured (vecflt.type) (9.6.1.2.13)
source (2187)	equilibrium%eqconstraint%jsurf%source (string) (9.6.1.1.3)
time (2187)	equilibrium%eqconstraint%jsurf%time (float) (9.6.1.1.1)
exact (2187)	equilibrium%eqconstraint%jsurf%exact (vecint.type) (9.6.1.2.14)
weight (2187)	equilibrium%eqconstraint%jsurf%weight (vecflt.type) (9.6.1.2.13)
sigma (2187)	equilibrium%eqconstraint%jsurf%sigma (vecflt.type) (9.6.1.2.13)
calculated (2187)	equilibrium%eqconstraint%jsurf%calculated (vecflt.type) (9.6.1.2.13)
chi2 (2187)	equilibrium%eqconstraint%jsurf%chi2 (vecflt.type) (9.6.1.2.13)
magnet_iron (2184)	equilibrium%eqconstraint%magnet_iron (magnet_iron) (9.6.1.3.257)
mr (2254)	equilibrium%eqconstraint%magnet_iron%mr (eqmes1D) (9.6.1.3.190)
measured (2187)	equilibrium%eqconstraint%magnet_iron%mr%measured (vecflt.type) (9.6.1.2.13)
source (2187)	equilibrium%eqconstraint%magnet_iron%mr%source (string) (9.6.1.1.3)
time (2187)	equilibrium%eqconstraint%magnet_iron%mr%time (float) (9.6.1.1.1)
exact (2187)	equilibrium%eqconstraint%magnet_iron%mr%exact (vecint.type) (9.6.1.2.14)
weight (2187)	equilibrium%eqconstraint%magnet_iron%mr%weight (vecflt.type) (9.6.1.2.13)
sigma (2187)	equilibrium%eqconstraint%magnet_iron%mr%sigma (vecflt.type) (9.6.1.2.13)
calculated (2187)	equilibrium%eqconstraint%magnet_iron%mr%calculated (vecflt.type) (9.6.1.2.13)
chi2 (2187)	equilibrium%eqconstraint%magnet_iron%mr%chi2 (vecflt.type) (9.6.1.2.13)
mz (2254)	equilibrium%eqconstraint%magnet_iron%mz (eqmes1D) (9.6.1.3.190)
measured (2187)	equilibrium%eqconstraint%magnet_iron%mz%measured (vecflt.type) (9.6.1.2.13)
source (2187)	equilibrium%eqconstraint%magnet_iron%mz%source (string) (9.6.1.1.3)
time (2187)	equilibrium%eqconstraint%magnet_iron%mz%time (float) (9.6.1.1.1)
exact (2187)	equilibrium%eqconstraint%magnet_iron%mz%exact (vecint.type) (9.6.1.2.14)
weight (2187)	equilibrium%eqconstraint%magnet_iron%mz%weight (vecflt.type) (9.6.1.2.13)
sigma (2187)	equilibrium%eqconstraint%magnet_iron%mz%sigma (vecflt.type) (9.6.1.2.13)
calculated (2187)	equilibrium%eqconstraint%magnet_iron%mz%calculated (vecflt.type) (9.6.1.2.13)
chi2 (2187)	equilibrium%eqconstraint%magnet_iron%mz%chi2 (vecflt.type) (9.6.1.2.13)
mse (2184)	equilibrium%eqconstraint%mse (eqmes1D) (9.6.1.3.190)
measured (2187)	equilibrium%eqconstraint%mse%measured (vecflt.type) (9.6.1.2.13)
source (2187)	equilibrium%eqconstraint%mse%source (string) (9.6.1.1.3)
time (2187)	equilibrium%eqconstraint%mse%time (float) (9.6.1.1.1)
exact (2187)	equilibrium%eqconstraint%mse%exact (vecint.type) (9.6.1.2.14)
weight (2187)	equilibrium%eqconstraint%mse%weight (vecflt.type) (9.6.1.2.13)
sigma (2187)	equilibrium%eqconstraint%mse%sigma (vecflt.type) (9.6.1.2.13)
calculated (2187)	equilibrium%eqconstraint%mse%calculated (vecflt.type) (9.6.1.2.13)
chi2 (2187)	equilibrium%eqconstraint%mse%chi2 (vecflt.type) (9.6.1.2.13)
ne (2184)	equilibrium%eqconstraint%ne (eqmes1D) (9.6.1.3.190)
measured (2187)	equilibrium%eqconstraint%ne%measured (vecflt.type) (9.6.1.2.13)
source (2187)	equilibrium%eqconstraint%ne%source (string) (9.6.1.1.3)
time (2187)	equilibrium%eqconstraint%ne%time (float) (9.6.1.1.1)
exact (2187)	equilibrium%eqconstraint%ne%exact (vecint.type) (9.6.1.2.14)
weight (2187)	equilibrium%eqconstraint%ne%weight (vecflt.type) (9.6.1.2.13)
sigma (2187)	equilibrium%eqconstraint%ne%sigma (vecflt.type) (9.6.1.2.13)
calculated (2187)	equilibrium%eqconstraint%ne%calculated (vecflt.type) (9.6.1.2.13)
chi2 (2187)	equilibrium%eqconstraint%ne%chi2 (vecflt.type) (9.6.1.2.13)
pfcurrent (2184)	equilibrium%eqconstraint%pfcurrent (eqmes1D) (9.6.1.3.190)
measured (2187)	equilibrium%eqconstraint%pfcurrent%measured (vecflt.type) (9.6.1.2.13)
source (2187)	equilibrium%eqconstraint%pfcurrent%source (string) (9.6.1.1.3)
time (2187)	equilibrium%eqconstraint%pfcurrent%time (float) (9.6.1.1.1)
exact (2187)	equilibrium%eqconstraint%pfcurrent%exact (vecint.type) (9.6.1.2.14)
weight (2187)	equilibrium%eqconstraint%pfcurrent%weight (vecflt.type) (9.6.1.2.13)
sigma (2187)	equilibrium%eqconstraint%pfcurrent%sigma (vecflt.type) (9.6.1.2.13)
calculated (2187)	equilibrium%eqconstraint%pfcurrent%calculated (vecflt.type) (9.6.1.2.13)
chi2 (2187)	equilibrium%eqconstraint%pfcurrent%chi2 (vecflt.type) (9.6.1.2.13)
pressure (2184)	equilibrium%eqconstraint%pressure (eqmes1D) (9.6.1.3.190)
measured (2187)	equilibrium%eqconstraint%pressure%measured (vecflt.type) (9.6.1.2.13)

source (2187)	equilibrium%eqconstraint%pressure%source (string) (9.6.1.1.3)
time (2187)	equilibrium%eqconstraint%pressure%time (float) (9.6.1.1.1)
exact (2187)	equilibrium%eqconstraint%pressure%exact (vecint.type) (9.6.1.2.14)
weight (2187)	equilibrium%eqconstraint%pressure%weight (vecflt.type) (9.6.1.2.13)
sigma (2187)	equilibrium%eqconstraint%pressure%sigma (vecflt.type) (9.6.1.2.13)
calculated (2187)	equilibrium%eqconstraint%pressure%calculated (vecflt.type) (9.6.1.2.13)
chi2 (2187)	equilibrium%eqconstraint%pressure%chi2 (vecflt.type) (9.6.1.2.13)
q (2184)	equilibrium%eqconstraint%q (q) (9.6.1.3.340)
qvalue (2337)	equilibrium%eqconstraint%q%qvalue (vecflt.type) (9.6.1.2.13)
position (2337)	equilibrium%eqconstraint%q%position (rz1D) (9.6.1.3.356)
r (2353)	equilibrium%eqconstraint%q%position%r (vecflt.type) (9.6.1.2.13)
z (2353)	equilibrium%eqconstraint%q%position%z (vecflt.type) (9.6.1.2.13)
source (2337)	equilibrium%eqconstraint%q%source (string) (9.6.1.1.3)
exact (2337)	equilibrium%eqconstraint%q%exact (integer) (9.6.1.1.2)
weight (2337)	equilibrium%eqconstraint%q%weight (vecflt.type) (9.6.1.2.13)
sigma (2337)	equilibrium%eqconstraint%q%sigma (vecflt.type) (9.6.1.2.13)
calculated (2337)	equilibrium%eqconstraint%q%calculated (vecflt.type) (9.6.1.2.13)
chi2 (2337)	equilibrium%eqconstraint%q%chi2 (vecflt.type) (9.6.1.2.13)
xpts (2184)	equilibrium%eqconstraint%xpts (xpts) (9.6.1.3.505)
position (2502)	equilibrium%eqconstraint%xpts%position (rz1D) (9.6.1.3.356)
r (2353)	equilibrium%eqconstraint%xpts%position%r (vecflt.type) (9.6.1.2.13)
z (2353)	equilibrium%eqconstraint%xpts%position%z (vecflt.type) (9.6.1.2.13)
source (2502)	equilibrium%eqconstraint%xpts%source (string) (9.6.1.1.3)
weight (2502)	equilibrium%eqconstraint%xpts%weight (vecflt.type) (9.6.1.2.13)
sigma (2502)	equilibrium%eqconstraint%xpts%sigma (vecflt.type) (9.6.1.2.13)
calculated (2502)	equilibrium%eqconstraint%xpts%calculated (vecflt.type) (9.6.1.2.13)
chi2 (2502)	equilibrium%eqconstraint%xpts%chi2 (vecflt.type) (9.6.1.2.13)
eqgeometry (2017)	equilibrium%eqgeometry (eqgeometry) (9.6.1.3.188)
source (2185)	equilibrium%eqgeometry%source (string) (9.6.1.1.3)
boundarytype (2185)	equilibrium%eqgeometry%boundarytype (integer) (9.6.1.1.2)
boundary (2185)	equilibrium%eqgeometry%boundary(:) (rz1Dexp) (9.6.1.3.358)
r (2355)	equilibrium%eqgeometry%boundary(:)%r (vecflt.type) (9.6.1.2.13)
z (2355)	equilibrium%eqgeometry%boundary(:)%z (vecflt.type) (9.6.1.2.13)
geom.axis (2185)	equilibrium%eqgeometry%geom.axis (rz0D) (9.6.1.3.355)
r (2352)	equilibrium%eqgeometry%geom.axis%r (float) (9.6.1.1.1)
z (2352)	equilibrium%eqgeometry%geom.axis%z (float) (9.6.1.1.1)
a_minor (2185)	equilibrium%eqgeometry%a_minor (float) (9.6.1.1.1)
elongation (2185)	equilibrium%eqgeometry%elongation (float) (9.6.1.1.1)
elong_upper (2185)	equilibrium%eqgeometry%elong_upper (float) (9.6.1.1.1)
elong_lower (2185)	equilibrium%eqgeometry%elong_lower (float) (9.6.1.1.1)
tria_upper (2185)	equilibrium%eqgeometry%tria_upper (float) (9.6.1.1.1)
tria_lower (2185)	equilibrium%eqgeometry%tria_lower (float) (9.6.1.1.1)
xpts (2185)	equilibrium%eqgeometry%xpts(:) (rz1Dexp) (9.6.1.3.358)
r (2355)	equilibrium%eqgeometry%xpts(:)%r (vecflt.type) (9.6.1.2.13)
z (2355)	equilibrium%eqgeometry%xpts(:)%z (vecflt.type) (9.6.1.2.13)
left_low_st (2185)	equilibrium%eqgeometry%left_low_st (rz0D) (9.6.1.3.355)
r (2352)	equilibrium%eqgeometry%left_low_st%r (float) (9.6.1.1.1)
z (2352)	equilibrium%eqgeometry%left_low_st%z (float) (9.6.1.1.1)
right_low_st (2185)	equilibrium%eqgeometry%right_low_st (rz0D) (9.6.1.3.355)
r (2352)	equilibrium%eqgeometry%right_low_st%r (float) (9.6.1.1.1)
z (2352)	equilibrium%eqgeometry%right_low_st%z (float) (9.6.1.1.1)
left_up_st (2185)	equilibrium%eqgeometry%left_up_st (rz0D) (9.6.1.3.355)
r (2352)	equilibrium%eqgeometry%left_up_st%r (float) (9.6.1.1.1)
z (2352)	equilibrium%eqgeometry%left_up_st%z (float) (9.6.1.1.1)
right_up_st (2185)	equilibrium%eqgeometry%right_up_st (rz0D) (9.6.1.3.355)
r (2352)	equilibrium%eqgeometry%right_up_st%r (float) (9.6.1.1.1)
z (2352)	equilibrium%eqgeometry%right_up_st%z (float) (9.6.1.1.1)
active_limit (2185)	equilibrium%eqgeometry%active_limit (rz0D) (9.6.1.3.355)
r (2352)	equilibrium%eqgeometry%active_limit%r (float) (9.6.1.1.1)
z (2352)	equilibrium%eqgeometry%active_limit%z (float) (9.6.1.1.1)
ang_lcms_upo (2185)	equilibrium%eqgeometry%ang_lcms_upo (float) (9.6.1.1.1)



ang_lcms_upi (2185)	equilibrium%eqgeometry%ang_lcms_upi (float) (9.6.1.1.1)
ang_lcms_lwo (2185)	equilibrium%eqgeometry%ang_lcms_lwo (float) (9.6.1.1.1)
ang_lcms_lwi (2185)	equilibrium%eqgeometry%ang_lcms_lwi (float) (9.6.1.1.1)
flush (2017)	equilibrium%flush (flush) (9.6.1.3.201)
datainfo (2198)	equilibrium%flush%datainfo (datainfo) (9.6.1.3.133)
dataprovider (2130)	equilibrium%flush%datainfo%dataprovider (string) (9.6.1.1.3)
putdate (2130)	equilibrium%flush%datainfo%putdate (string) (9.6.1.1.3)
source (2130)	equilibrium%flush%datainfo%source (string) (9.6.1.1.3)
comment (2130)	equilibrium%flush%datainfo%comment (string) (9.6.1.1.3)
cocos (2130)	equilibrium%flush%datainfo%cocos (integer) (9.6.1.1.2)
id (2130)	equilibrium%flush%datainfo%id (integer) (9.6.1.1.2)
isref (2130)	equilibrium%flush%datainfo%isref (integer) (9.6.1.1.2)
whatref (2130)	equilibrium%flush%datainfo%whatref (whatref) (9.6.1.3.503)
user (2500)	equilibrium%flush%datainfo%whatref%user (string) (9.6.1.1.3)
machine (2500)	equilibrium%flush%datainfo%whatref%machine (string) (9.6.1.1.3)
shot (2500)	equilibrium%flush%datainfo%whatref%shot (integer) (9.6.1.1.2)
run (2500)	equilibrium%flush%datainfo%whatref%run (integer) (9.6.1.1.2)
occurrence (2500)	equilibrium%flush%datainfo%whatref%occurrence (integer) (9.6.1.1.2)
putinfo (2130)	equilibrium%flush%datainfo%putinfo (putinfo) (9.6.1.3.339)
putmethod (2336)	equilibrium%flush%datainfo%putinfo%putmethod (string) (9.6.1.1.3)
putaccess (2336)	equilibrium%flush%datainfo%putinfo%putaccess (string) (9.6.1.1.3)
putlocation (2336)	equilibrium%flush%datainfo%putinfo%putlocation (string) (9.6.1.1.3)
rights (2336)	equilibrium%flush%datainfo%putinfo%rights (string) (9.6.1.1.3)
position (2198)	equilibrium%flush%position (rz1D) (9.6.1.3.356)
r (2353)	equilibrium%flush%position%r (vecflt_type) (9.6.1.2.13)
z (2353)	equilibrium%flush%position%z (vecflt_type) (9.6.1.2.13)
coef (2198)	equilibrium%flush%coef (matflt_type) (9.6.1.2.10)
codeparam (2198)	equilibrium%flush%codeparam (codeparam) (9.6.1.3.77)
codename (2074)	equilibrium%flush%codeparam%codename (string) (9.6.1.1.3)
codeversion (2074)	equilibrium%flush%codeparam%codeversion (string) (9.6.1.1.3)
parameters (2074)	equilibrium%flush%codeparam%parameters (string) (9.6.1.1.3)
output_diag (2074)	equilibrium%flush%codeparam%output_diag (string) (9.6.1.1.3)
output_flag (2074)	equilibrium%flush%codeparam%output_flag (integer) (9.6.1.1.2)
global_param (2017)	equilibrium%global_param (global_param) (9.6.1.3.226)
beta_pol (2223)	equilibrium%global_param%beta_pol (float) (9.6.1.1.1)
beta_tor (2223)	equilibrium%global_param%beta_tor (float) (9.6.1.1.1)
beta_normal (2223)	equilibrium%global_param%beta_normal (float) (9.6.1.1.1)
i_plasma (2223)	equilibrium%global_param%i_plasma (float) (9.6.1.1.1)
li (2223)	equilibrium%global_param%li (float) (9.6.1.1.1)
volume (2223)	equilibrium%global_param%volume (float) (9.6.1.1.1)
area (2223)	equilibrium%global_param%area (float) (9.6.1.1.1)
psi_ax (2223)	equilibrium%global_param%psi_ax (float) (9.6.1.1.1)
psi_bound (2223)	equilibrium%global_param%psi_bound (float) (9.6.1.1.1)
mag_axis (2223)	equilibrium%global_param%mag_axis (mag_axis) (9.6.1.3.256)
position (2253)	equilibrium%global_param%mag_axis%position (rz0D) (9.6.1.3.355)
r (2352)	equilibrium%global_param%mag_axis%position%r (float) (9.6.1.1.1)
z (2352)	equilibrium%global_param%mag_axis%position%z (float) (9.6.1.1.1)
bphi (2253)	equilibrium%global_param%mag_axis%bphi (float) (9.6.1.1.1)
q (2253)	equilibrium%global_param%mag_axis%q (float) (9.6.1.1.1)
q_95 (2223)	equilibrium%global_param%q_95 (float) (9.6.1.1.1)
q_min (2223)	equilibrium%global_param%q_min (float) (9.6.1.1.1)
toroid_field (2223)	equilibrium%global_param%toroid_field (b0r0) (9.6.1.3.59)
r0 (2056)	equilibrium%global_param%toroid_field%r0 (float) (9.6.1.1.1)
b0 (2056)	equilibrium%global_param%toroid_field%b0 (float) (9.6.1.1.1)
w_mhd (2223)	equilibrium%global_param%w_mhd (float) (9.6.1.1.1)
gamma (2223)	equilibrium%global_param%gamma (float) (9.6.1.1.1)
profiles_1d (2017)	equilibrium%profiles_1d (profiles_1d) (9.6.1.3.337)
psi (2334)	equilibrium%profiles_1d%psi (vecflt_type) (9.6.1.2.13)
phi (2334)	equilibrium%profiles_1d%phi (vecflt_type) (9.6.1.2.13)
pressure (2334)	equilibrium%profiles_1d%pressure (vecflt_type) (9.6.1.2.13)
F_dia (2334)	equilibrium%profiles_1d%F_dia (vecflt_type) (9.6.1.2.13)



pprime (2334)	equilibrium%profiles_1d%pprime (vecflt.type) (9.6.1.2.13)
ffprime (2334)	equilibrium%profiles_1d%ffprime (vecflt.type) (9.6.1.2.13)
jphi (2334)	equilibrium%profiles_1d%jphi (vecflt.type) (9.6.1.2.13)
jparallel (2334)	equilibrium%profiles_1d%jparallel (vecflt.type) (9.6.1.2.13)
q (2334)	equilibrium%profiles_1d%q (vecflt.type) (9.6.1.2.13)
shear (2334)	equilibrium%profiles_1d%shear (vecflt.type) (9.6.1.2.13)
r_inboard (2334)	equilibrium%profiles_1d%r_inboard (vecflt.type) (9.6.1.2.13)
r_outboard (2334)	equilibrium%profiles_1d%r_outboard (vecflt.type) (9.6.1.2.13)
rho.tor (2334)	equilibrium%profiles_1d%rho.tor (vecflt.type) (9.6.1.2.13)
dpsidrho.tor (2334)	equilibrium%profiles_1d%dpsidrho.tor (vecflt.type) (9.6.1.2.13)
rho.vol (2334)	equilibrium%profiles_1d%rho.vol (vecflt.type) (9.6.1.2.13)
beta.pol (2334)	equilibrium%profiles_1d%beta.pol (vecflt.type) (9.6.1.2.13)
li (2334)	equilibrium%profiles_1d%li (vecflt.type) (9.6.1.2.13)
elongation (2334)	equilibrium%profiles_1d%elongation (vecflt.type) (9.6.1.2.13)
tria.upper (2334)	equilibrium%profiles_1d%tria.upper (vecflt.type) (9.6.1.2.13)
tria.lower (2334)	equilibrium%profiles_1d%tria.lower (vecflt.type) (9.6.1.2.13)
volume (2334)	equilibrium%profiles_1d%volume (vecflt.type) (9.6.1.2.13)
vprime (2334)	equilibrium%profiles_1d%vprime (vecflt.type) (9.6.1.2.13)
dvdrho (2334)	equilibrium%profiles_1d%dvdrho (vecflt.type) (9.6.1.2.13)
area (2334)	equilibrium%profiles_1d%area (vecflt.type) (9.6.1.2.13)
aprime (2334)	equilibrium%profiles_1d%aprime (vecflt.type) (9.6.1.2.13)
surface (2334)	equilibrium%profiles_1d%surface (vecflt.type) (9.6.1.2.13)
frap (2334)	equilibrium%profiles_1d%frap (vecflt.type) (9.6.1.2.13)
gm1 (2334)	equilibrium%profiles_1d%gm1 (vecflt.type) (9.6.1.2.13)
gm2 (2334)	equilibrium%profiles_1d%gm2 (vecflt.type) (9.6.1.2.13)
gm3 (2334)	equilibrium%profiles_1d%gm3 (vecflt.type) (9.6.1.2.13)
gm4 (2334)	equilibrium%profiles_1d%gm4 (vecflt.type) (9.6.1.2.13)
gm5 (2334)	equilibrium%profiles_1d%gm5 (vecflt.type) (9.6.1.2.13)
gm6 (2334)	equilibrium%profiles_1d%gm6 (vecflt.type) (9.6.1.2.13)
gm7 (2334)	equilibrium%profiles_1d%gm7 (vecflt.type) (9.6.1.2.13)
gm8 (2334)	equilibrium%profiles_1d%gm8 (vecflt.type) (9.6.1.2.13)
gm9 (2334)	equilibrium%profiles_1d%gm9 (vecflt.type) (9.6.1.2.13)
b_av (2334)	equilibrium%profiles_1d%b_av (vecflt.type) (9.6.1.2.13)
b_min (2334)	equilibrium%profiles_1d%b_min (vecflt.type) (9.6.1.2.13)
b_max (2334)	equilibrium%profiles_1d%b_max (vecflt.type) (9.6.1.2.13)
omega (2334)	equilibrium%profiles_1d%omega (vecflt.type) (9.6.1.2.13)
omegaprime (2334)	equilibrium%profiles_1d%omegaprime (vecflt.type) (9.6.1.2.13)
mach.a (2334)	equilibrium%profiles_1d%mach.a (vecflt.type) (9.6.1.2.13)
phi.flow (2334)	equilibrium%profiles_1d%phi.flow (vecflt.type) (9.6.1.2.13)
s.flow (2334)	equilibrium%profiles_1d%s.flow (vecflt.type) (9.6.1.2.13)
h.flow (2334)	equilibrium%profiles_1d%h.flow (vecflt.type) (9.6.1.2.13)
rho.mass (2334)	equilibrium%profiles_1d%rho.mass (vecflt.type) (9.6.1.2.13)
profiles_2d (2017)	equilibrium%profiles_2d(:) (equilibrium_profiles_2d) (9.6.1.3.193)
grid.type (2190)	equilibrium%profiles_2d(:)%grid.type (vecstring.type) (9.6.1.2.15)
grid (2190)	equilibrium%profiles_2d(:)%grid (equilibrium_profiles2d_grid) (9.6.1.3.192)
dim1 (2189)	equilibrium%profiles_2d(:)%grid%dim1 (vecflt.type) (9.6.1.2.13)
dim2 (2189)	equilibrium%profiles_2d(:)%grid%dim2 (vecflt.type) (9.6.1.2.13)
connect (2189)	equilibrium%profiles_2d(:)%grid%connect (matint.type) (9.6.1.2.11)
r (2190)	equilibrium%profiles_2d(:)%r (matflt.type) (9.6.1.2.10)
z (2190)	equilibrium%profiles_2d(:)%z (matflt.type) (9.6.1.2.10)
psi (2190)	equilibrium%profiles_2d(:)%psi (matflt.type) (9.6.1.2.10)
theta (2190)	equilibrium%profiles_2d(:)%theta (matflt.type) (9.6.1.2.10)
phi (2190)	equilibrium%profiles_2d(:)%phi (matflt.type) (9.6.1.2.10)
jphi (2190)	equilibrium%profiles_2d(:)%jphi (matflt.type) (9.6.1.2.10)
jpar (2190)	equilibrium%profiles_2d(:)%jpar (matflt.type) (9.6.1.2.10)
br (2190)	equilibrium%profiles_2d(:)%br (matflt.type) (9.6.1.2.10)
bz (2190)	equilibrium%profiles_2d(:)%bz (matflt.type) (9.6.1.2.10)
bphi (2190)	equilibrium%profiles_2d(:)%bphi (matflt.type) (9.6.1.2.10)
vphi (2190)	equilibrium%profiles_2d(:)%vphi (matflt.type) (9.6.1.2.10)
vtheta (2190)	equilibrium%profiles_2d(:)%vtheta (matflt.type) (9.6.1.2.10)
rho.mass (2190)	equilibrium%profiles_2d(:)%rho.mass (matflt.type) (9.6.1.2.10)

pressure (2190)	equilibrium%profiles_2d(:)%pressure (matflt.type) (9.6.1.2.10)
temperature (2190)	equilibrium%profiles_2d(:)%temperature (matflt.type) (9.6.1.2.10)
coord_sys (2017)	equilibrium%coord_sys (coord_sys) (9.6.1.3.101)
grid_type (2098)	equilibrium%coord_sys%grid_type (string) (9.6.1.1.3)
grid (2098)	equilibrium%coord_sys%grid (reggrid) (9.6.1.3.351)
dim1 (2348)	equilibrium%coord_sys%grid%dim1 (vecflt.type) (9.6.1.2.13)
dim2 (2348)	equilibrium%coord_sys%grid%dim2 (vecflt.type) (9.6.1.2.13)
jacobian (2098)	equilibrium%coord_sys%jacobian (matflt.type) (9.6.1.2.10)
g_11 (2098)	equilibrium%coord_sys%g_11 (matflt.type) (9.6.1.2.10)
g_12 (2098)	equilibrium%coord_sys%g_12 (matflt.type) (9.6.1.2.10)
g_13 (2098)	equilibrium%coord_sys%g_13 (matflt.type) (9.6.1.2.10)
g_22 (2098)	equilibrium%coord_sys%g_22 (matflt.type) (9.6.1.2.10)
g_23 (2098)	equilibrium%coord_sys%g_23 (matflt.type) (9.6.1.2.10)
g_33 (2098)	equilibrium%coord_sys%g_33 (matflt.type) (9.6.1.2.10)
position (2098)	equilibrium%coord_sys%position (rz2D) (9.6.1.3.359)
r (2356)	equilibrium%coord_sys%position%r (matflt.type) (9.6.1.2.10)
z (2356)	equilibrium%coord_sys%position%z (matflt.type) (9.6.1.2.10)
time (2017)	equilibrium%time (float) (9.6.1.1.1)
codeparam (2017)	equilibrium%codeparam (codeparam) (9.6.1.3.77)
codename (2074)	equilibrium%codeparam%codename (string) (9.6.1.1.3)
codeversion (2074)	equilibrium%codeparam%codeversion (string) (9.6.1.1.3)
parameters (2074)	equilibrium%codeparam%parameters (string) (9.6.1.1.3)
output_diag (2074)	equilibrium%codeparam%output_diag (string) (9.6.1.1.3)
output_flag (2074)	equilibrium%codeparam%output_flag (integer) (9.6.1.1.2)

### 9.6.2.1.19 fusiondiag

datainfo (2018)	fusiondiag%datainfo (datainfo) (9.6.1.3.133)
dataprovider (2130)	fusiondiag%datainfo%dataprovider (string) (9.6.1.1.3)
putdate (2130)	fusiondiag%datainfo%putdate (string) (9.6.1.1.3)
source (2130)	fusiondiag%datainfo%source (string) (9.6.1.1.3)
comment (2130)	fusiondiag%datainfo%comment (string) (9.6.1.1.3)
cocos (2130)	fusiondiag%datainfo%cocos (integer) (9.6.1.1.2)
id (2130)	fusiondiag%datainfo%id (integer) (9.6.1.1.2)
isref (2130)	fusiondiag%datainfo%isref (integer) (9.6.1.1.2)
whatref (2130)	fusiondiag%datainfo%whatref (whatref) (9.6.1.3.503)
user (2500)	fusiondiag%datainfo%whatref%user (string) (9.6.1.1.3)
machine (2500)	fusiondiag%datainfo%whatref%machine (string) (9.6.1.1.3)
shot (2500)	fusiondiag%datainfo%whatref%shot (integer) (9.6.1.1.2)
run (2500)	fusiondiag%datainfo%whatref%run (integer) (9.6.1.1.2)
occurrence (2500)	fusiondiag%datainfo%whatref%occurrence (integer) (9.6.1.1.2)
putinfo (2130)	fusiondiag%datainfo%putinfo (putinfo) (9.6.1.3.339)
putmethod (2336)	fusiondiag%datainfo%putinfo%putmethod (string) (9.6.1.1.3)
putaccess (2336)	fusiondiag%datainfo%putinfo%putaccess (string) (9.6.1.1.3)
putlocation (2336)	fusiondiag%datainfo%putinfo%putlocation (string) (9.6.1.1.3)
rights (2336)	fusiondiag%datainfo%putinfo%rights (string) (9.6.1.1.3)
fus_product (2018)	fusiondiag%fus_product(:) (fusiondiag_fus_product) (9.6.1.3.220)
product (2217)	fusiondiag%fus_product(:)%product (string) (9.6.1.1.3)
reaction (2217)	fusiondiag%fus_product(:)%reaction (string) (9.6.1.1.3)
collimator (2217)	fusiondiag%fus_product(:)%collimator (fusiondiag_collimator) (9.6.1.3.211)
colli_circ (2208)	fusiondiag%fus_product(:)%collimator%colli_circ(:) (fusiondiag_colli_circ) (9.6.1.3.209)
name (2206)	fusiondiag%fus_product(:)%collimator%colli_circ(:)%name (string) (9.6.1.1.3)
setup_line (2206)	fusiondiag%fus_product(:)%collimator%colli_circ(:)%setup_line (setup_line) (9.6.1.3.393)
pivot_point (2390)	fusiondiag%fus_product(:)%collimator%colli_circ(:)%setup_line%pivot_point (rzphi1D) (9.6.1.3.362)
r (2359)	fusiondiag%fus_product(:)%collimator%colli_circ(:)%setup_line%pivot_point%r (vecflt.type) (9.6.1.2.13)
z (2359)	fusiondiag%fus_product(:)%collimator%colli_circ(:)%setup_line%pivot_point%z (vecflt.type) (9.6.1.2.13)
phi (2359)	fusiondiag%fus_product(:)%collimator%colli_circ(:)%setup_line%pivot_point%phi (vecflt.type) (9.6.1.2.13)
horchordang1 (2390)	fusiondiag%fus_product(:)%collimator%colli_circ(:)%setup_line%horchordang1 (vecflt.type) (9.6.1.2.13)

verchordang1 (2390)	fusiondiag%fus_product(:)%collimator%colli_circ(:)%setup_line%verchordang1 (vecflt.type) (9.6.1.2.13)
width (2390)	fusiondiag%fus_product(:)%collimator%colli_circ(:)%setup_line%width (vecflt.type) (9.6.1.2.13)
second_point (2390)	fusiondiag%fus_product(:)%collimator%colli_circ(:)%setup_line%second_point (rzphi1D) (9.6.1.3.362)
r (2359)	fusiondiag%fus_product(:)%collimator%colli_circ(:)%setup_line%second_point%r (vecflt.type) (9.6.1.2.13)
z (2359)	fusiondiag%fus_product(:)%collimator%colli_circ(:)%setup_line%second_point%z (vecflt.type) (9.6.1.2.13)
phi (2359)	fusiondiag%fus_product(:)%collimator%colli_circ(:)%setup_line%second_point%phi (vecflt.type) (9.6.1.2.13)
horchordang2 (2390)	fusiondiag%fus_product(:)%collimator%colli_circ(:)%setup_line%horchordang2 (vecflt.type) (9.6.1.2.13)
verchordang2 (2390)	fusiondiag%fus_product(:)%collimator%colli_circ(:)%setup_line%verchordang2 (vecflt.type) (9.6.1.2.13)
third_point (2390)	fusiondiag%fus_product(:)%collimator%colli_circ(:)%setup_line%third_point (rzphi1D) (9.6.1.3.362)
r (2359)	fusiondiag%fus_product(:)%collimator%colli_circ(:)%setup_line%third_point%r (vecflt.type) (9.6.1.2.13)
z (2359)	fusiondiag%fus_product(:)%collimator%colli_circ(:)%setup_line%third_point%z (vecflt.type) (9.6.1.2.13)
phi (2359)	fusiondiag%fus_product(:)%collimator%colli_circ(:)%setup_line%third_point%phi (vecflt.type) (9.6.1.2.13)
nchordpoints (2390)	fusiondiag%fus_product(:)%collimator%colli_circ(:)%setup_line%nchordpoints (integer) (9.6.1.1.2)
colliunit (2206)	fusiondiag%fus_product(:)%collimator%colli_circ(:)%colliunit(:) (fusiondiag_colliunit_circ) (9.6.1.3.212)
radius (2209)	fusiondiag%fus_product(:)%collimator%colli_circ(:)%colliunit(:)%radius (vecflt.type) (9.6.1.2.13)
centre (2209)	fusiondiag%fus_product(:)%collimator%colli_circ(:)%colliunit(:)%centre (rzphi1D) (9.6.1.3.362)
r (2359)	fusiondiag%fus_product(:)%collimator%colli_circ(:)%colliunit(:)%centre%r (vecflt.type) (9.6.1.2.13)
z (2359)	fusiondiag%fus_product(:)%collimator%colli_circ(:)%colliunit(:)%centre%z (vecflt.type) (9.6.1.2.13)
phi (2359)	fusiondiag%fus_product(:)%collimator%colli_circ(:)%colliunit(:)%centre%phi (vecflt.type) (9.6.1.2.13)
colli_poly (2208)	fusiondiag%fus_product(:)%collimator%colli_poly(:) (fusiondiag_colli_poly) (9.6.1.3.210)
name (2207)	fusiondiag%fus_product(:)%collimator%colli_poly(:)%name (string) (9.6.1.1.3)
setup_line (2207)	fusiondiag%fus_product(:)%collimator%colli_poly(:)%setup_line (setup_line) (9.6.1.3.393)
pivot_point (2390)	fusiondiag%fus_product(:)%collimator%colli_poly(:)%setup_line%pivot_point (rzphi1D) (9.6.1.3.362)
r (2359)	fusiondiag%fus_product(:)%collimator%colli_poly(:)%setup_line%pivot_point%r (vecflt.type) (9.6.1.2.13)
z (2359)	fusiondiag%fus_product(:)%collimator%colli_poly(:)%setup_line%pivot_point%z (vecflt.type) (9.6.1.2.13)
phi (2359)	fusiondiag%fus_product(:)%collimator%colli_poly(:)%setup_line%pivot_point%phi (vecflt.type) (9.6.1.2.13)
horchordang1 (2390)	fusiondiag%fus_product(:)%collimator%colli_poly(:)%setup_line%horchordang1 (vecflt.type) (9.6.1.2.13)
verchordang1 (2390)	fusiondiag%fus_product(:)%collimator%colli_poly(:)%setup_line%verchordang1 (vecflt.type) (9.6.1.2.13)
width (2390)	fusiondiag%fus_product(:)%collimator%colli_poly(:)%setup_line%width (vecflt.type) (9.6.1.2.13)
second_point (2390)	fusiondiag%fus_product(:)%collimator%colli_poly(:)%setup_line%second_point (rzphi1D) (9.6.1.3.362)
r (2359)	fusiondiag%fus_product(:)%collimator%colli_poly(:)%setup_line%second_point%r (vecflt.type) (9.6.1.2.13)
z (2359)	fusiondiag%fus_product(:)%collimator%colli_poly(:)%setup_line%second_point%z (vecflt.type) (9.6.1.2.13)
phi (2359)	fusiondiag%fus_product(:)%collimator%colli_poly(:)%setup_line%second_point%phi (vecflt.type) (9.6.1.2.13)
horchordang2 (2390)	fusiondiag%fus_product(:)%collimator%colli_poly(:)%setup_line%horchordang2 (vecflt.type) (9.6.1.2.13)
verchordang2 (2390)	fusiondiag%fus_product(:)%collimator%colli_poly(:)%setup_line%verchordang2 (vecflt.type) (9.6.1.2.13)
third_point (2390)	fusiondiag%fus_product(:)%collimator%colli_poly(:)%setup_line%third_point (rzphi1D) (9.6.1.3.362)
r (2359)	fusiondiag%fus_product(:)%collimator%colli_poly(:)%setup_line%third_point%r (vecflt.type) (9.6.1.2.13)
z (2359)	fusiondiag%fus_product(:)%collimator%colli_poly(:)%setup_line%third_point%z (vecflt.type) (9.6.1.2.13)

phi (2359)	fusiondiag%fus_product(:)%collimator%colli_poly(:)%setup_line%third_point%phi (vecflt.type) (9.6.1.2.13)
nchordpoints (2390)	fusiondiag%fus_product(:)%collimator%colli_poly(:)%setup_line%nchordpoints (integer) (9.6.1.1.2)
colliunit (2207)	fusiondiag%fus_product(:)%collimator%colli_poly(:)%colliunit(:) (fusiondiag_colliunit.poly) (9.6.1.3.213)
dimension (2210)	fusiondiag%fus_product(:)%collimator%colli_poly(:)%colliunit(:)%dimension (float) (9.6.1.1.1)
nodes (2210)	fusiondiag%fus_product(:)%collimator%colli_poly(:)%colliunit(:)%nodes (rzphi2D) (9.6.1.3.365)
r (2362)	fusiondiag%fus_product(:)%collimator%colli_poly(:)%colliunit(:)%nodes%r (matflt.type) (9.6.1.2.10)
z (2362)	fusiondiag%fus_product(:)%collimator%colli_poly(:)%colliunit(:)%nodes%z (matflt.type) (9.6.1.2.10)
phi (2362)	fusiondiag%fus_product(:)%collimator%colli_poly(:)%colliunit(:)%nodes%phi (matflt.type) (9.6.1.2.10)
colli_3d (2208)	fusiondiag%fus_product(:)%collimator%colli_3d(:) (fusiondiag_colli_3d) (9.6.1.3.208)
name (2205)	fusiondiag%fus_product(:)%collimator%colli_3d(:)%name (string) (9.6.1.1.3)
voxels (2205)	fusiondiag%fus_product(:)%collimator%colli_3d(:)%voxels(:) (fusiondiag_voxels) (9.6.1.3.223)
centre (2220)	fusiondiag%fus_product(:)%collimator%colli_3d(:)%voxels(:)%centre (rzphi0D) (9.6.1.3.361)
r (2358)	fusiondiag%fus_product(:)%collimator%colli_3d(:)%voxels(:)%centre%r (float) (9.6.1.1.1)
z (2358)	fusiondiag%fus_product(:)%collimator%colli_3d(:)%voxels(:)%centre%z (float) (9.6.1.1.1)
phi (2358)	fusiondiag%fus_product(:)%collimator%colli_3d(:)%voxels(:)%centre%phi (float) (9.6.1.1.1)
direction (2220)	fusiondiag%fus_product(:)%collimator%colli_3d(:)%voxels(:)%direction (rzphi0D) (9.6.1.3.361)
r (2358)	fusiondiag%fus_product(:)%collimator%colli_3d(:)%voxels(:)%direction%r (float) (9.6.1.1.1)
z (2358)	fusiondiag%fus_product(:)%collimator%colli_3d(:)%voxels(:)%direction%z (float) (9.6.1.1.1)
phi (2358)	fusiondiag%fus_product(:)%collimator%colli_3d(:)%voxels(:)%direction%phi (float) (9.6.1.1.1)
volume (2220)	fusiondiag%fus_product(:)%collimator%colli_3d(:)%voxels(:)%volume (float) (9.6.1.1.1)
solid_angle (2220)	fusiondiag%fus_product(:)%collimator%colli_3d(:)%voxels(:)%solid_angle (float) (9.6.1.1.1)
counts (2217)	fusiondiag%fus_product(:)%counts (fusiondiag_counts) (9.6.1.3.214)
units (2211)	fusiondiag%fus_product(:)%counts%units (string) (9.6.1.1.3)
ct_chords (2211)	fusiondiag%fus_product(:)%counts%ct_chords(:) (fusiondiag_ct_chords) (9.6.1.3.215)
name (2212)	fusiondiag%fus_product(:)%counts%ct_chords(:)%name (vecstring.type) (9.6.1.2.15)
energy (2212)	fusiondiag%fus_product(:)%counts%ct_chords(:)%energy (exp0D) (9.6.1.3.194)
value (2191)	fusiondiag%fus_product(:)%counts%ct_chords(:)%energy%value (float) (9.6.1.1.1)
abserror (2191)	fusiondiag%fus_product(:)%counts%ct_chords(:)%energy%abserror (float) (9.6.1.1.1)
relerror (2191)	fusiondiag%fus_product(:)%counts%ct_chords(:)%energy%relerror (float) (9.6.1.1.1)
measure (2212)	fusiondiag%fus_product(:)%counts%ct_chords(:)%measure (exp1D) (9.6.1.3.195)
value (2192)	fusiondiag%fus_product(:)%counts%ct_chords(:)%measure%value (vecflt.type) (9.6.1.2.13)
abserror (2192)	fusiondiag%fus_product(:)%counts%ct_chords(:)%measure%abserror (vecflt.type) (9.6.1.2.13)
relerror (2192)	fusiondiag%fus_product(:)%counts%ct_chords(:)%measure%relerror (vecflt.type) (9.6.1.2.13)
ct_energy (2211)	fusiondiag%fus_product(:)%counts%ct_energy(:) (fusiondiag_ct_energy) (9.6.1.3.216)
energy (2213)	fusiondiag%fus_product(:)%counts%ct_energy(:)%energy (exp1D) (9.6.1.3.195)
value (2192)	fusiondiag%fus_product(:)%counts%ct_energy(:)%energy%value (vecflt.type) (9.6.1.2.13)
abserror (2192)	fusiondiag%fus_product(:)%counts%ct_energy(:)%energy%abserror (vecflt.type) (9.6.1.2.13)
relerror (2192)	fusiondiag%fus_product(:)%counts%ct_energy(:)%energy%relerror (vecflt.type) (9.6.1.2.13)
measure (2213)	fusiondiag%fus_product(:)%counts%ct_energy(:)%measure (exp1D) (9.6.1.3.195)
value (2192)	fusiondiag%fus_product(:)%counts%ct_energy(:)%measure%value (vecflt.type) (9.6.1.2.13)
abserror (2192)	fusiondiag%fus_product(:)%counts%ct_energy(:)%measure%abserror (vecflt.type) (9.6.1.2.13)
relerror (2192)	fusiondiag%fus_product(:)%counts%ct_energy(:)%measure%relerror (vecflt.type) (9.6.1.2.13)
detect_ct (2211)	fusiondiag%fus_product(:)%counts%detect_ct(:) (fusiondiag_detect_ct_energy) (9.6.1.3.217)
energy (2214)	fusiondiag%fus_product(:)%counts%detect_ct(:)%energy (exp1D) (9.6.1.3.195)
value (2192)	fusiondiag%fus_product(:)%counts%detect_ct(:)%energy%value (vecflt.type) (9.6.1.2.13)
abserror (2192)	fusiondiag%fus_product(:)%counts%detect_ct(:)%energy%abserror (vecflt.type) (9.6.1.2.13)
relerror (2192)	fusiondiag%fus_product(:)%counts%detect_ct(:)%energy%relerror (vecflt.type) (9.6.1.2.13)
measure (2214)	fusiondiag%fus_product(:)%counts%detect_ct(:)%measure (exp1D) (9.6.1.3.195)
value (2192)	fusiondiag%fus_product(:)%counts%detect_ct(:)%measure%value (vecflt.type) (9.6.1.2.13)
abserror (2192)	fusiondiag%fus_product(:)%counts%detect_ct(:)%measure%abserror (vecflt.type) (9.6.1.2.13)
relerror (2192)	fusiondiag%fus_product(:)%counts%detect_ct(:)%measure%relerror (vecflt.type) (9.6.1.2.13)
diag_func (2214)	fusiondiag%fus_product(:)%counts%detect_ct(:)%diag_func (diag_func) (9.6.1.3.139)
description (2136)	fusiondiag%fus_product(:)%counts%detect_ct(:)%diag_func%description (string) (9.6.1.1.3)
transf_mat (2136)	fusiondiag%fus_product(:)%counts%detect_ct(:)%diag_func%transf_mat (matflt.type) (9.6.1.2.10)
emissivity1d (2217)	fusiondiag%fus_product(:)%emissivity1d (fusiondiag_emissivity1d) (9.6.1.3.218)

units (2215)	fusiondiag%fus_product(:)%emissivity1d%units (string) (9.6.1.1.3)
r (2215)	fusiondiag%fus_product(:)%emissivity1d%r (exp1D) (9.6.1.3.195)
value (2192)	fusiondiag%fus_product(:)%emissivity1d%r%value (vecflt.type) (9.6.1.2.13)
abserror (2192)	fusiondiag%fus_product(:)%emissivity1d%r%abserror (vecflt.type) (9.6.1.2.13)
releror (2192)	fusiondiag%fus_product(:)%emissivity1d%r%releror (vecflt.type) (9.6.1.2.13)
z (2215)	fusiondiag%fus_product(:)%emissivity1d%z (exp1D) (9.6.1.3.195)
value (2192)	fusiondiag%fus_product(:)%emissivity1d%z%value (vecflt.type) (9.6.1.2.13)
abserror (2192)	fusiondiag%fus_product(:)%emissivity1d%z%abserror (vecflt.type) (9.6.1.2.13)
releror (2192)	fusiondiag%fus_product(:)%emissivity1d%z%releror (vecflt.type) (9.6.1.2.13)
spec1d (2215)	fusiondiag%fus_product(:)%emissivity1d%spec1d(:) (fusiondiag_spec1d) (9.6.1.3.221)
energy (2218)	fusiondiag%fus_product(:)%emissivity1d%spec1d(:)%energy (exp0D) (9.6.1.3.194)
value (2191)	fusiondiag%fus_product(:)%emissivity1d%spec1d(:)%energy%value (float) (9.6.1.1.1)
abserror (2191)	fusiondiag%fus_product(:)%emissivity1d%spec1d(:)%energy%abserror (float) (9.6.1.1.1)
releror (2191)	fusiondiag%fus_product(:)%emissivity1d%spec1d(:)%energy%releror (float) (9.6.1.1.1)
measure (2218)	fusiondiag%fus_product(:)%emissivity1d%spec1d(:)%measure (exp1D) (9.6.1.3.195)
value (2192)	fusiondiag%fus_product(:)%emissivity1d%spec1d(:)%measure%value (vecflt.type) (9.6.1.2.13)
abserror (2192)	fusiondiag%fus_product(:)%emissivity1d%spec1d(:)%measure%abserror (vecflt.type) (9.6.1.2.13)
releror (2192)	fusiondiag%fus_product(:)%emissivity1d%spec1d(:)%measure%releror (vecflt.type) (9.6.1.2.13)
emissivity2d (2217)	fusiondiag%fus_product(:)%emissivity2d (fusiondiag_emissivity2d) (9.6.1.3.219)
units (2216)	fusiondiag%fus_product(:)%emissivity2d%units (string) (9.6.1.1.3)
r (2216)	fusiondiag%fus_product(:)%emissivity2d%r (exp2D) (9.6.1.3.196)
value (2193)	fusiondiag%fus_product(:)%emissivity2d%r%value (matflt.type) (9.6.1.2.10)
abserror (2193)	fusiondiag%fus_product(:)%emissivity2d%r%abserror (matflt.type) (9.6.1.2.10)
releror (2193)	fusiondiag%fus_product(:)%emissivity2d%r%releror (matflt.type) (9.6.1.2.10)
z (2216)	fusiondiag%fus_product(:)%emissivity2d%z (exp2D) (9.6.1.3.196)
value (2193)	fusiondiag%fus_product(:)%emissivity2d%z%value (matflt.type) (9.6.1.2.10)
abserror (2193)	fusiondiag%fus_product(:)%emissivity2d%z%abserror (matflt.type) (9.6.1.2.10)
releror (2193)	fusiondiag%fus_product(:)%emissivity2d%z%releror (matflt.type) (9.6.1.2.10)
spec2d (2216)	fusiondiag%fus_product(:)%emissivity2d%spec2d(:) (fusiondiag_spec2d) (9.6.1.3.222)
energy (2219)	fusiondiag%fus_product(:)%emissivity2d%spec2d(:)%energy (exp0D) (9.6.1.3.194)
value (2191)	fusiondiag%fus_product(:)%emissivity2d%spec2d(:)%energy%value (float) (9.6.1.1.1)
abserror (2191)	fusiondiag%fus_product(:)%emissivity2d%spec2d(:)%energy%abserror (float) (9.6.1.1.1)
releror (2191)	fusiondiag%fus_product(:)%emissivity2d%spec2d(:)%energy%releror (float) (9.6.1.1.1)
measure (2219)	fusiondiag%fus_product(:)%emissivity2d%spec2d(:)%measure (exp2D) (9.6.1.3.196)
value (2193)	fusiondiag%fus_product(:)%emissivity2d%spec2d(:)%measure%value (matflt.type) (9.6.1.2.10)
abserror (2193)	fusiondiag%fus_product(:)%emissivity2d%spec2d(:)%measure%abserror (matflt.type) (9.6.1.2.10)
releror (2193)	fusiondiag%fus_product(:)%emissivity2d%spec2d(:)%measure%releror (matflt.type) (9.6.1.2.10)
codeparam (2217)	fusiondiag%fus_product(:)%codeparam (codeparam) (9.6.1.3.77)
codename (2074)	fusiondiag%fus_product(:)%codeparam%codename (string) (9.6.1.1.3)
codeversion (2074)	fusiondiag%fus_product(:)%codeparam%codeversion (string) (9.6.1.1.3)
parameters (2074)	fusiondiag%fus_product(:)%codeparam%parameters (string) (9.6.1.1.3)
output_diag (2074)	fusiondiag%fus_product(:)%codeparam%output_diag (string) (9.6.1.1.3)
output_flag (2074)	fusiondiag%fus_product(:)%codeparam%output_flag (integer) (9.6.1.1.2)
codeparam (2018)	fusiondiag%codeparam (codeparam) (9.6.1.3.77)
codename (2074)	fusiondiag%codeparam%codename (string) (9.6.1.1.3)
codeversion (2074)	fusiondiag%codeparam%codeversion (string) (9.6.1.1.3)
parameters (2074)	fusiondiag%codeparam%parameters (string) (9.6.1.1.3)
output_diag (2074)	fusiondiag%codeparam%output_diag (string) (9.6.1.1.3)
output_flag (2074)	fusiondiag%codeparam%output_flag (integer) (9.6.1.1.2)
time (2018)	fusiondiag%time (float) (9.6.1.1.1)

### 9.6.2.1.20 halphadiag

datainfo (2019)	halphadiag%datainfo (datainfo) (9.6.1.3.133)
dataprovider (2130)	halphadiag%datainfo%dataprovider (string) (9.6.1.1.3)
putdate (2130)	halphadiag%datainfo%putdate (string) (9.6.1.1.3)
source (2130)	halphadiag%datainfo%source (string) (9.6.1.1.3)

comment (2130)	halphadiag%datainfo%comment (string) (9.6.1.1.3)
cocos (2130)	halphadiag%datainfo%cocos (integer) (9.6.1.1.2)
id (2130)	halphadiag%datainfo%id (integer) (9.6.1.1.2)
isref (2130)	halphadiag%datainfo%isref (integer) (9.6.1.1.2)
whatref (2130)	halphadiag%datainfo%whatref (whatref) (9.6.1.3.503)
user (2500)	halphadiag%datainfo%whatref%user (string) (9.6.1.1.3)
machine (2500)	halphadiag%datainfo%whatref%machine (string) (9.6.1.1.3)
shot (2500)	halphadiag%datainfo%whatref%shot (integer) (9.6.1.1.2)
run (2500)	halphadiag%datainfo%whatref%run (integer) (9.6.1.1.2)
occurrence (2500)	halphadiag%datainfo%whatref%occurrence (integer) (9.6.1.1.2)
putinfo (2130)	halphadiag%datainfo%putinfo (putinfo) (9.6.1.3.339)
putmethod (2336)	halphadiag%datainfo%putinfo%putmethod (string) (9.6.1.1.3)
putaccess (2336)	halphadiag%datainfo%putinfo%putaccess (string) (9.6.1.1.3)
putlocation (2336)	halphadiag%datainfo%putinfo%putlocation (string) (9.6.1.1.3)
rights (2336)	halphadiag%datainfo%putinfo%rights (string) (9.6.1.1.3)
setup (2019)	halphadiag%setup (halphadiag%setup) (9.6.1.3.228)
name (2225)	halphadiag%setup%name (vecstring_type) (9.6.1.2.15)
pivot_point (2225)	halphadiag%setup%pivot_point (rzphi1D) (9.6.1.3.362)
r (2359)	halphadiag%setup%pivot_point%r (vecflt_type) (9.6.1.2.13)
z (2359)	halphadiag%setup%pivot_point%z (vecflt_type) (9.6.1.2.13)
phi (2359)	halphadiag%setup%pivot_point%phi (vecflt_type) (9.6.1.2.13)
horchordang (2225)	halphadiag%setup%horchordang (vecflt_type) (9.6.1.2.13)
verchordang (2225)	halphadiag%setup%verchordang (vecflt_type) (9.6.1.2.13)
second_point (2225)	halphadiag%setup%second_point (rzphi1D) (9.6.1.3.362)
r (2359)	halphadiag%setup%second_point%r (vecflt_type) (9.6.1.2.13)
z (2359)	halphadiag%setup%second_point%z (vecflt_type) (9.6.1.2.13)
phi (2359)	halphadiag%setup%second_point%phi (vecflt_type) (9.6.1.2.13)
solidangle (2225)	halphadiag%setup%solidangle (exp1D) (9.6.1.3.195)
value (2192)	halphadiag%setup%solidangle%value (vecflt_type) (9.6.1.2.13)
abserror (2192)	halphadiag%setup%solidangle%abserror (vecflt_type) (9.6.1.2.13)
releror (2192)	halphadiag%setup%solidangle%releror (vecflt_type) (9.6.1.2.13)
intensity (2019)	halphadiag%intensity (exp1D) (9.6.1.3.195)
value (2192)	halphadiag%intensity%value (vecflt_type) (9.6.1.2.13)
abserror (2192)	halphadiag%intensity%abserror (vecflt_type) (9.6.1.2.13)
releror (2192)	halphadiag%intensity%releror (vecflt_type) (9.6.1.2.13)
codeparam (2019)	halphadiag%codeparam (codeparam) (9.6.1.3.77)
codename (2074)	halphadiag%codeparam%codename (string) (9.6.1.1.3)
codeversion (2074)	halphadiag%codeparam%codeversion (string) (9.6.1.1.3)
parameters (2074)	halphadiag%codeparam%parameters (string) (9.6.1.1.3)
output.diag (2074)	halphadiag%codeparam%output.diag (string) (9.6.1.1.3)
output.flag (2074)	halphadiag%codeparam%output.flag (integer) (9.6.1.1.2)
time (2019)	halphadiag%time (float) (9.6.1.1.1)

### 9.6.2.1.21 heat\_sources

datainfo (2020)	heat_sources%datainfo (datainfo) (9.6.1.3.133)
dataprovider (2130)	heat_sources%datainfo%dataprovider (string) (9.6.1.1.3)
putdate (2130)	heat_sources%datainfo%putdate (string) (9.6.1.1.3)
source (2130)	heat_sources%datainfo%source (string) (9.6.1.1.3)
comment (2130)	heat_sources%datainfo%comment (string) (9.6.1.1.3)
cocos (2130)	heat_sources%datainfo%cocos (integer) (9.6.1.1.2)
id (2130)	heat_sources%datainfo%id (integer) (9.6.1.1.2)
isref (2130)	heat_sources%datainfo%isref (integer) (9.6.1.1.2)
whatref (2130)	heat_sources%datainfo%whatref (whatref) (9.6.1.3.503)
user (2500)	heat_sources%datainfo%whatref%user (string) (9.6.1.1.3)
machine (2500)	heat_sources%datainfo%whatref%machine (string) (9.6.1.1.3)
shot (2500)	heat_sources%datainfo%whatref%shot (integer) (9.6.1.1.2)
run (2500)	heat_sources%datainfo%whatref%run (integer) (9.6.1.1.2)
occurrence (2500)	heat_sources%datainfo%whatref%occurrence (integer) (9.6.1.1.2)
putinfo (2130)	heat_sources%datainfo%putinfo (putinfo) (9.6.1.3.339)
putmethod (2336)	heat_sources%datainfo%putinfo%putmethod (string) (9.6.1.1.3)



putaccess (2336)	heat_sources%datainfo%putinfo%putaccess (string) (9.6.1.1.3)
putlocation (2336)	heat_sources%datainfo%putinfo%putlocation (string) (9.6.1.1.3)
rights (2336)	heat_sources%datainfo%putinfo%rights (string) (9.6.1.1.3)
sources (2020)	heat_sources%sources(:) (calorimetry_heat_source) (9.6.1.3.73)
name (2070)	heat_sources%sources(:)%name (string) (9.6.1.1.3)
temp_in (2070)	heat_sources%sources(:)%temp_in (float) (9.6.1.1.1)
temp_out (2070)	heat_sources%sources(:)%temp_out (float) (9.6.1.1.1)
press_in (2070)	heat_sources%sources(:)%press_in (float) (9.6.1.1.1)
press_out (2070)	heat_sources%sources(:)%press_out (float) (9.6.1.1.1)
flow (2070)	heat_sources%sources(:)%flow (float) (9.6.1.1.1)
power (2070)	heat_sources%sources(:)%power (float) (9.6.1.1.1)
sinks (2020)	heat_sources%sinks(:) (calorimetry_heat_source) (9.6.1.3.73)
name (2070)	heat_sources%sinks(:)%name (string) (9.6.1.1.3)
temp_in (2070)	heat_sources%sinks(:)%temp_in (float) (9.6.1.1.1)
temp_out (2070)	heat_sources%sinks(:)%temp_out (float) (9.6.1.1.1)
press_in (2070)	heat_sources%sinks(:)%press_in (float) (9.6.1.1.1)
press_out (2070)	heat_sources%sinks(:)%press_out (float) (9.6.1.1.1)
flow (2070)	heat_sources%sinks(:)%flow (float) (9.6.1.1.1)
power (2070)	heat_sources%sinks(:)%power (float) (9.6.1.1.1)
codeparam (2020)	heat_sources%codeparam (codeparam) (9.6.1.3.77)
codename (2074)	heat_sources%codeparam%codename (string) (9.6.1.1.3)
codeversion (2074)	heat_sources%codeparam%codeversion (string) (9.6.1.1.3)
parameters (2074)	heat_sources%codeparam%parameters (string) (9.6.1.1.3)
output_diag (2074)	heat_sources%codeparam%output_diag (string) (9.6.1.1.3)
output_flag (2074)	heat_sources%codeparam%output_flag (integer) (9.6.1.1.2)
time (2020)	heat_sources%time (float) (9.6.1.1.1)

### 9.6.2.1.22 interfdiag

datainfo (2249)	lineintegralsdiag%datainfo (datainfo) (9.6.1.3.133)
dataprovider (2130)	lineintegralsdiag%datainfo%dataprovider (string) (9.6.1.1.3)
putdate (2130)	lineintegralsdiag%datainfo%putdate (string) (9.6.1.1.3)
source (2130)	lineintegralsdiag%datainfo%source (string) (9.6.1.1.3)
comment (2130)	lineintegralsdiag%datainfo%comment (string) (9.6.1.1.3)
cocos (2130)	lineintegralsdiag%datainfo%cocos (integer) (9.6.1.1.2)
id (2130)	lineintegralsdiag%datainfo%id (integer) (9.6.1.1.2)
isref (2130)	lineintegralsdiag%datainfo%isref (integer) (9.6.1.1.2)
whatref (2130)	lineintegralsdiag%datainfo%whatref (whatref) (9.6.1.3.503)
user (2500)	lineintegralsdiag%datainfo%whatref%user (string) (9.6.1.1.3)
machine (2500)	lineintegralsdiag%datainfo%whatref%machine (string) (9.6.1.1.3)
shot (2500)	lineintegralsdiag%datainfo%whatref%shot (integer) (9.6.1.1.2)
run (2500)	lineintegralsdiag%datainfo%whatref%run (integer) (9.6.1.1.2)
occurrence (2500)	lineintegralsdiag%datainfo%whatref%occurrence (integer) (9.6.1.1.2)
putinfo (2130)	lineintegralsdiag%datainfo%putinfo (putinfo) (9.6.1.3.339)
putmethod (2336)	lineintegralsdiag%datainfo%putinfo%putmethod (string) (9.6.1.1.3)
putaccess (2336)	lineintegralsdiag%datainfo%putinfo%putaccess (string) (9.6.1.1.3)
putlocation (2336)	lineintegralsdiag%datainfo%putinfo%putlocation (string) (9.6.1.1.3)
rights (2336)	lineintegralsdiag%datainfo%putinfo%rights (string) (9.6.1.1.3)
expression (2249)	lineintegralsdiag%expression (string) (9.6.1.1.3)
setup_line (2249)	lineintegralsdiag%setup_line (setup_line) (9.6.1.3.393)
pivot_point (2390)	lineintegralsdiag%setup_line%pivot_point (rzphi1D) (9.6.1.3.362)
r (2359)	lineintegralsdiag%setup_line%pivot_point%r (vecflt.type) (9.6.1.2.13)
z (2359)	lineintegralsdiag%setup_line%pivot_point%z (vecflt.type) (9.6.1.2.13)
phi (2359)	lineintegralsdiag%setup_line%pivot_point%phi (vecflt.type) (9.6.1.2.13)
horchordang1 (2390)	lineintegralsdiag%setup_line%horchordang1 (vecflt.type) (9.6.1.2.13)
verchordang1 (2390)	lineintegralsdiag%setup_line%verchordang1 (vecflt.type) (9.6.1.2.13)
width (2390)	lineintegralsdiag%setup_line%width (vecflt.type) (9.6.1.2.13)
second_point (2390)	lineintegralsdiag%setup_line%second_point (rzphi1D) (9.6.1.3.362)
r (2359)	lineintegralsdiag%setup_line%second_point%r (vecflt.type) (9.6.1.2.13)
z (2359)	lineintegralsdiag%setup_line%second_point%z (vecflt.type) (9.6.1.2.13)
phi (2359)	lineintegralsdiag%setup_line%second_point%phi (vecflt.type) (9.6.1.2.13)



horchordang2 (2390)	lineintegraldiag%setup_line%horchordang2 (vecflt_type) (9.6.1.2.13)
verchordang2 (2390)	lineintegraldiag%setup_line%verchordang2 (vecflt_type) (9.6.1.2.13)
third_point (2390)	lineintegraldiag%setup_line%third_point (rzphi1D) (9.6.1.3.362)
r (2359)	lineintegraldiag%setup_line%third_point%r (vecflt_type) (9.6.1.2.13)
z (2359)	lineintegraldiag%setup_line%third_point%z (vecflt_type) (9.6.1.2.13)
phi (2359)	lineintegraldiag%setup_line%third_point%phi (vecflt_type) (9.6.1.2.13)
nchordpoints (2390)	lineintegraldiag%setup_line%nchordpoints (integer) (9.6.1.1.2)
measure (2249)	lineintegraldiag%measure (exp1D) (9.6.1.3.195)
value (2192)	lineintegraldiag%measure%value (vecflt_type) (9.6.1.2.13)
abserror (2192)	lineintegraldiag%measure%abserror (vecflt_type) (9.6.1.2.13)
releror (2192)	lineintegraldiag%measure%releror (vecflt_type) (9.6.1.2.13)
codeparam (2249)	lineintegraldiag%codeparam (codeparam) (9.6.1.3.77)
codename (2074)	lineintegraldiag%codeparam%codename (string) (9.6.1.1.3)
codeversion (2074)	lineintegraldiag%codeparam%codeversion (string) (9.6.1.1.3)
parameters (2074)	lineintegraldiag%codeparam%parameters (string) (9.6.1.1.3)
output_diag (2074)	lineintegraldiag%codeparam%output_diag (string) (9.6.1.1.3)
output_flag (2074)	lineintegraldiag%codeparam%output_flag (integer) (9.6.1.1.2)
time (2249)	lineintegraldiag%time (float) (9.6.1.1.1)

### 9.6.2.1.23 ironmodel

datainfo (2022)	ironmodel%datainfo (datainfo) (9.6.1.3.133)
dataprovider (2130)	ironmodel%datainfo%dataprovider (string) (9.6.1.1.3)
putdate (2130)	ironmodel%datainfo%putdate (string) (9.6.1.1.3)
source (2130)	ironmodel%datainfo%source (string) (9.6.1.1.3)
comment (2130)	ironmodel%datainfo%comment (string) (9.6.1.1.3)
cocos (2130)	ironmodel%datainfo%cocos (integer) (9.6.1.1.2)
id (2130)	ironmodel%datainfo%id (integer) (9.6.1.1.2)
isref (2130)	ironmodel%datainfo%isref (integer) (9.6.1.1.2)
whatref (2130)	ironmodel%datainfo%whatref (whatref) (9.6.1.3.503)
user (2500)	ironmodel%datainfo%whatref%user (string) (9.6.1.1.3)
machine (2500)	ironmodel%datainfo%whatref%machine (string) (9.6.1.1.3)
shot (2500)	ironmodel%datainfo%whatref%shot (integer) (9.6.1.1.2)
run (2500)	ironmodel%datainfo%whatref%run (integer) (9.6.1.1.2)
occurrence (2500)	ironmodel%datainfo%whatref%occurrence (integer) (9.6.1.1.2)
putinfo (2130)	ironmodel%datainfo%putinfo (putinfo) (9.6.1.3.339)
putmethod (2336)	ironmodel%datainfo%putinfo%putmethod (string) (9.6.1.1.3)
putaccess (2336)	ironmodel%datainfo%putinfo%putaccess (string) (9.6.1.1.3)
putlocation (2336)	ironmodel%datainfo%putinfo%putlocation (string) (9.6.1.1.3)
rights (2336)	ironmodel%datainfo%putinfo%rights (string) (9.6.1.1.3)
desc_iron (2022)	ironmodel%desc_iron (desc_iron) (9.6.1.3.136)
name (2133)	ironmodel%desc_iron%name (vecstring_type) (9.6.1.2.15)
id (2133)	ironmodel%desc_iron%id (vecstring_type) (9.6.1.2.15)
permeability (2133)	ironmodel%desc_iron%permeability (permeability) (9.6.1.3.317)
b (2314)	ironmodel%desc_iron%permeability%b (matflt_type) (9.6.1.2.10)
mur (2314)	ironmodel%desc_iron%permeability%mur (matflt_type) (9.6.1.2.10)
geom_iron (2133)	ironmodel%desc_iron%geom_iron (geom_iron) (9.6.1.3.225)
npoints (2222)	ironmodel%desc_iron%geom_iron%npoints (vecint_type) (9.6.1.2.14)
rzcoordinate (2222)	ironmodel%desc_iron%geom_iron%rzcoordinate (rz2D) (9.6.1.3.359)
r (2356)	ironmodel%desc_iron%geom_iron%rzcoordinate%r (matflt_type) (9.6.1.2.10)
z (2356)	ironmodel%desc_iron%geom_iron%rzcoordinate%z (matflt_type) (9.6.1.2.10)
magnetise (2022)	ironmodel%magnetise (magnetise) (9.6.1.3.258)
mr (2255)	ironmodel%magnetise%mr (exp1D) (9.6.1.3.195)
value (2192)	ironmodel%magnetise%mr%value (vecflt_type) (9.6.1.2.13)
abserror (2192)	ironmodel%magnetise%mr%abserror (vecflt_type) (9.6.1.2.13)
releror (2192)	ironmodel%magnetise%mr%releror (vecflt_type) (9.6.1.2.13)
mz (2255)	ironmodel%magnetise%mz (exp1D) (9.6.1.3.195)
value (2192)	ironmodel%magnetise%mz%value (vecflt_type) (9.6.1.2.13)
abserror (2192)	ironmodel%magnetise%mz%abserror (vecflt_type) (9.6.1.2.13)
releror (2192)	ironmodel%magnetise%mz%releror (vecflt_type) (9.6.1.2.13)
codeparam (2022)	ironmodel%codeparam (codeparam) (9.6.1.3.77)

codename (2074)	ironmodel%codeparam%codename (string) (9.6.1.1.3)
codeversion (2074)	ironmodel%codeparam%codeversion (string) (9.6.1.1.3)
parameters (2074)	ironmodel%codeparam%parameters (string) (9.6.1.1.3)
output_diag (2074)	ironmodel%codeparam%output_diag (string) (9.6.1.1.3)
output_flag (2074)	ironmodel%codeparam%output_flag (integer) (9.6.1.1.2)
time (2022)	ironmodel%time (float) (9.6.1.1.1)

### 9.6.2.1.24 langmuirdiag

datainfo (2023)	langmuirdiag%datainfo (datainfo) (9.6.1.3.133)
dataproducer (2130)	langmuirdiag%datainfo%dataproducer (string) (9.6.1.1.3)
putdate (2130)	langmuirdiag%datainfo%putdate (string) (9.6.1.1.3)
source (2130)	langmuirdiag%datainfo%source (string) (9.6.1.1.3)
comment (2130)	langmuirdiag%datainfo%comment (string) (9.6.1.1.3)
cocos (2130)	langmuirdiag%datainfo%cocos (integer) (9.6.1.1.2)
id (2130)	langmuirdiag%datainfo%id (integer) (9.6.1.1.2)
isref (2130)	langmuirdiag%datainfo%isref (integer) (9.6.1.1.2)
whatref (2130)	langmuirdiag%datainfo%whatref (whatref) (9.6.1.3.503)
user (2500)	langmuirdiag%datainfo%whatref%user (string) (9.6.1.1.3)
machine (2500)	langmuirdiag%datainfo%whatref%machine (string) (9.6.1.1.3)
shot (2500)	langmuirdiag%datainfo%whatref%shot (integer) (9.6.1.1.2)
run (2500)	langmuirdiag%datainfo%whatref%run (integer) (9.6.1.1.2)
occurrence (2500)	langmuirdiag%datainfo%whatref%occurrence (integer) (9.6.1.1.2)
putinfo (2130)	langmuirdiag%datainfo%putinfo (putinfo) (9.6.1.3.339)
putmethod (2336)	langmuirdiag%datainfo%putinfo%putmethod (string) (9.6.1.1.3)
putaccess (2336)	langmuirdiag%datainfo%putinfo%putaccess (string) (9.6.1.1.3)
putlocation (2336)	langmuirdiag%datainfo%putinfo%putlocation (string) (9.6.1.1.3)
rights (2336)	langmuirdiag%datainfo%putinfo%rights (string) (9.6.1.1.3)
potential (2023)	langmuirdiag%potential (lang_measure) (9.6.1.3.242)
name (2239)	langmuirdiag%potential%name (vecstring_type) (9.6.1.2.15)
direction (2239)	langmuirdiag%potential%direction (vecstring_type) (9.6.1.2.15)
area (2239)	langmuirdiag%potential%area (exp1D) (9.6.1.3.195)
value (2192)	langmuirdiag%potential%area%value (vecflt_type) (9.6.1.2.13)
abserror (2192)	langmuirdiag%potential%area%abserror (vecflt_type) (9.6.1.2.13)
releror (2192)	langmuirdiag%potential%area%releror (vecflt_type) (9.6.1.2.13)
position (2239)	langmuirdiag%potential%position (rzphi1Dexp) (9.6.1.3.363)
r (2360)	langmuirdiag%potential%position%r (exp1D) (9.6.1.3.195)
value (2192)	langmuirdiag%potential%position%r%value (vecflt_type) (9.6.1.2.13)
abserror (2192)	langmuirdiag%potential%position%r%abserror (vecflt_type) (9.6.1.2.13)
releror (2192)	langmuirdiag%potential%position%r%releror (vecflt_type) (9.6.1.2.13)
z (2360)	langmuirdiag%potential%position%z (exp1D) (9.6.1.3.195)
value (2192)	langmuirdiag%potential%position%z%value (vecflt_type) (9.6.1.2.13)
abserror (2192)	langmuirdiag%potential%position%z%abserror (vecflt_type) (9.6.1.2.13)
releror (2192)	langmuirdiag%potential%position%z%releror (vecflt_type) (9.6.1.2.13)
phi (2360)	langmuirdiag%potential%position%phi (exp1D) (9.6.1.3.195)
value (2192)	langmuirdiag%potential%position%phi%value (vecflt_type) (9.6.1.2.13)
abserror (2192)	langmuirdiag%potential%position%phi%abserror (vecflt_type) (9.6.1.2.13)
releror (2192)	langmuirdiag%potential%position%phi%releror (vecflt_type) (9.6.1.2.13)
measure (2239)	langmuirdiag%potential%measure (exp1D) (9.6.1.3.195)
value (2192)	langmuirdiag%potential%measure%value (vecflt_type) (9.6.1.2.13)
abserror (2192)	langmuirdiag%potential%measure%abserror (vecflt_type) (9.6.1.2.13)
releror (2192)	langmuirdiag%potential%measure%releror (vecflt_type) (9.6.1.2.13)
bias (2023)	langmuirdiag%bias (lang_measure) (9.6.1.3.242)
name (2239)	langmuirdiag%bias%name (vecstring_type) (9.6.1.2.15)
direction (2239)	langmuirdiag%bias%direction (vecstring_type) (9.6.1.2.15)
area (2239)	langmuirdiag%bias%area (exp1D) (9.6.1.3.195)
value (2192)	langmuirdiag%bias%area%value (vecflt_type) (9.6.1.2.13)
abserror (2192)	langmuirdiag%bias%area%abserror (vecflt_type) (9.6.1.2.13)
releror (2192)	langmuirdiag%bias%area%releror (vecflt_type) (9.6.1.2.13)
position (2239)	langmuirdiag%bias%position (rzphi1Dexp) (9.6.1.3.363)
r (2360)	langmuirdiag%bias%position%r (exp1D) (9.6.1.3.195)

value (2192)	langmuirdiag%bias%position%r%value (vecflt.type) (9.6.1.2.13)
abserror (2192)	langmuirdiag%bias%position%r%abserror (vecflt.type) (9.6.1.2.13)
releror (2192)	langmuirdiag%bias%position%r%releror (vecflt.type) (9.6.1.2.13)
z (2360)	langmuirdiag%bias%position%z (exp1D) (9.6.1.3.195)
value (2192)	langmuirdiag%bias%position%z%value (vecflt.type) (9.6.1.2.13)
abserror (2192)	langmuirdiag%bias%position%z%abserror (vecflt.type) (9.6.1.2.13)
releror (2192)	langmuirdiag%bias%position%z%releror (vecflt.type) (9.6.1.2.13)
phi (2360)	langmuirdiag%bias%position%phi (exp1D) (9.6.1.3.195)
value (2192)	langmuirdiag%bias%position%phi%value (vecflt.type) (9.6.1.2.13)
abserror (2192)	langmuirdiag%bias%position%phi%abserror (vecflt.type) (9.6.1.2.13)
releror (2192)	langmuirdiag%bias%position%phi%releror (vecflt.type) (9.6.1.2.13)
measure (2239)	langmuirdiag%bias%measure (exp1D) (9.6.1.3.195)
value (2192)	langmuirdiag%bias%measure%value (vecflt.type) (9.6.1.2.13)
abserror (2192)	langmuirdiag%bias%measure%abserror (vecflt.type) (9.6.1.2.13)
releror (2192)	langmuirdiag%bias%measure%releror (vecflt.type) (9.6.1.2.13)
jsat (2023)	langmuirdiag%jsat (lang_measure) (9.6.1.3.242)
name (2239)	langmuirdiag%jsat%name (vecstring.type) (9.6.1.2.15)
direction (2239)	langmuirdiag%jsat%direction (vecstring.type) (9.6.1.2.15)
area (2239)	langmuirdiag%jsat%area (exp1D) (9.6.1.3.195)
value (2192)	langmuirdiag%jsat%area%value (vecflt.type) (9.6.1.2.13)
abserror (2192)	langmuirdiag%jsat%area%abserror (vecflt.type) (9.6.1.2.13)
releror (2192)	langmuirdiag%jsat%area%releror (vecflt.type) (9.6.1.2.13)
position (2239)	langmuirdiag%jsat%position (rzphi1Dexp) (9.6.1.3.363)
r (2360)	langmuirdiag%jsat%position%r (exp1D) (9.6.1.3.195)
value (2192)	langmuirdiag%jsat%position%r%value (vecflt.type) (9.6.1.2.13)
abserror (2192)	langmuirdiag%jsat%position%r%abserror (vecflt.type) (9.6.1.2.13)
releror (2192)	langmuirdiag%jsat%position%r%releror (vecflt.type) (9.6.1.2.13)
z (2360)	langmuirdiag%jsat%position%z (exp1D) (9.6.1.3.195)
value (2192)	langmuirdiag%jsat%position%z%value (vecflt.type) (9.6.1.2.13)
abserror (2192)	langmuirdiag%jsat%position%z%abserror (vecflt.type) (9.6.1.2.13)
releror (2192)	langmuirdiag%jsat%position%z%releror (vecflt.type) (9.6.1.2.13)
phi (2360)	langmuirdiag%jsat%position%phi (exp1D) (9.6.1.3.195)
value (2192)	langmuirdiag%jsat%position%phi%value (vecflt.type) (9.6.1.2.13)
abserror (2192)	langmuirdiag%jsat%position%phi%abserror (vecflt.type) (9.6.1.2.13)
releror (2192)	langmuirdiag%jsat%position%phi%releror (vecflt.type) (9.6.1.2.13)
measure (2239)	langmuirdiag%jsat%measure (exp1D) (9.6.1.3.195)
value (2192)	langmuirdiag%jsat%measure%value (vecflt.type) (9.6.1.2.13)
abserror (2192)	langmuirdiag%jsat%measure%abserror (vecflt.type) (9.6.1.2.13)
releror (2192)	langmuirdiag%jsat%measure%releror (vecflt.type) (9.6.1.2.13)
ne (2023)	langmuirdiag%ne (lang_derived) (9.6.1.3.241)
source (2238)	langmuirdiag%ne%source (vecstring.type) (9.6.1.2.15)
position (2238)	langmuirdiag%ne%position (rzphi1Dexp) (9.6.1.3.363)
r (2360)	langmuirdiag%ne%position%r (exp1D) (9.6.1.3.195)
value (2192)	langmuirdiag%ne%position%r%value (vecflt.type) (9.6.1.2.13)
abserror (2192)	langmuirdiag%ne%position%r%abserror (vecflt.type) (9.6.1.2.13)
releror (2192)	langmuirdiag%ne%position%r%releror (vecflt.type) (9.6.1.2.13)
z (2360)	langmuirdiag%ne%position%z (exp1D) (9.6.1.3.195)
value (2192)	langmuirdiag%ne%position%z%value (vecflt.type) (9.6.1.2.13)
abserror (2192)	langmuirdiag%ne%position%z%abserror (vecflt.type) (9.6.1.2.13)
releror (2192)	langmuirdiag%ne%position%z%releror (vecflt.type) (9.6.1.2.13)
phi (2360)	langmuirdiag%ne%position%phi (exp1D) (9.6.1.3.195)
value (2192)	langmuirdiag%ne%position%phi%value (vecflt.type) (9.6.1.2.13)
abserror (2192)	langmuirdiag%ne%position%phi%abserror (vecflt.type) (9.6.1.2.13)
releror (2192)	langmuirdiag%ne%position%phi%releror (vecflt.type) (9.6.1.2.13)
measure (2238)	langmuirdiag%ne%measure (exp1D) (9.6.1.3.195)
value (2192)	langmuirdiag%ne%measure%value (vecflt.type) (9.6.1.2.13)
abserror (2192)	langmuirdiag%ne%measure%abserror (vecflt.type) (9.6.1.2.13)
releror (2192)	langmuirdiag%ne%measure%releror (vecflt.type) (9.6.1.2.13)
te (2023)	langmuirdiag%te (lang_derived) (9.6.1.3.241)
source (2238)	langmuirdiag%te%source (vecstring.type) (9.6.1.2.15)
position (2238)	langmuirdiag%te%position (rzphi1Dexp) (9.6.1.3.363)

r (2360)	langmuirdiag%te%position%r (exp1D) (9.6.1.3.195)
value (2192)	langmuirdiag%te%position%r%value (vecflt.type) (9.6.1.2.13)
abserror (2192)	langmuirdiag%te%position%r%abserror (vecflt.type) (9.6.1.2.13)
releror (2192)	langmuirdiag%te%position%r%releror (vecflt.type) (9.6.1.2.13)
z (2360)	langmuirdiag%te%position%z (exp1D) (9.6.1.3.195)
value (2192)	langmuirdiag%te%position%z%value (vecflt.type) (9.6.1.2.13)
abserror (2192)	langmuirdiag%te%position%z%abserror (vecflt.type) (9.6.1.2.13)
releror (2192)	langmuirdiag%te%position%z%releror (vecflt.type) (9.6.1.2.13)
phi (2360)	langmuirdiag%te%position%phi (exp1D) (9.6.1.3.195)
value (2192)	langmuirdiag%te%position%phi%value (vecflt.type) (9.6.1.2.13)
abserror (2192)	langmuirdiag%te%position%phi%abserror (vecflt.type) (9.6.1.2.13)
releror (2192)	langmuirdiag%te%position%phi%releror (vecflt.type) (9.6.1.2.13)
measure (2238)	langmuirdiag%te%measure (exp1D) (9.6.1.3.195)
value (2192)	langmuirdiag%te%measure%value (vecflt.type) (9.6.1.2.13)
abserror (2192)	langmuirdiag%te%measure%abserror (vecflt.type) (9.6.1.2.13)
releror (2192)	langmuirdiag%te%measure%releror (vecflt.type) (9.6.1.2.13)
machpar (2023)	langmuirdiag%machpar (lang_derived) (9.6.1.3.241)
source (2238)	langmuirdiag%machpar%source (vecstring.type) (9.6.1.2.15)
position (2238)	langmuirdiag%machpar%position (rzphi1Dexp) (9.6.1.3.363)
r (2360)	langmuirdiag%machpar%position%r (exp1D) (9.6.1.3.195)
value (2192)	langmuirdiag%machpar%position%r%value (vecflt.type) (9.6.1.2.13)
abserror (2192)	langmuirdiag%machpar%position%r%abserror (vecflt.type) (9.6.1.2.13)
releror (2192)	langmuirdiag%machpar%position%r%releror (vecflt.type) (9.6.1.2.13)
z (2360)	langmuirdiag%machpar%position%z (exp1D) (9.6.1.3.195)
value (2192)	langmuirdiag%machpar%position%z%value (vecflt.type) (9.6.1.2.13)
abserror (2192)	langmuirdiag%machpar%position%z%abserror (vecflt.type) (9.6.1.2.13)
releror (2192)	langmuirdiag%machpar%position%z%releror (vecflt.type) (9.6.1.2.13)
phi (2360)	langmuirdiag%machpar%position%phi (exp1D) (9.6.1.3.195)
value (2192)	langmuirdiag%machpar%position%phi%value (vecflt.type) (9.6.1.2.13)
abserror (2192)	langmuirdiag%machpar%position%phi%abserror (vecflt.type) (9.6.1.2.13)
releror (2192)	langmuirdiag%machpar%position%phi%releror (vecflt.type) (9.6.1.2.13)
measure (2238)	langmuirdiag%machpar%measure (exp1D) (9.6.1.3.195)
value (2192)	langmuirdiag%machpar%measure%value (vecflt.type) (9.6.1.2.13)
abserror (2192)	langmuirdiag%machpar%measure%abserror (vecflt.type) (9.6.1.2.13)
releror (2192)	langmuirdiag%machpar%measure%releror (vecflt.type) (9.6.1.2.13)
codeparam (2023)	langmuirdiag%codeparam (codeparam) (9.6.1.3.77)
codename (2074)	langmuirdiag%codeparam%codename (string) (9.6.1.1.3)
codeversion (2074)	langmuirdiag%codeparam%codeversion (string) (9.6.1.1.3)
parameters (2074)	langmuirdiag%codeparam%parameters (string) (9.6.1.1.3)
output.diag (2074)	langmuirdiag%codeparam%output.diag (string) (9.6.1.1.3)
output.flag (2074)	langmuirdiag%codeparam%output.flag (integer) (9.6.1.1.2)
time (2023)	langmuirdiag%time (float) (9.6.1.1.1)

### 9.6.2.1.25 launches

datainfo (2024)	launchs%datainfo (datainfo) (9.6.1.3.133)
dataprovider (2130)	launchs%datainfo%dataprovider (string) (9.6.1.1.3)
putdate (2130)	launchs%datainfo%putdate (string) (9.6.1.1.3)
source (2130)	launchs%datainfo%source (string) (9.6.1.1.3)
comment (2130)	launchs%datainfo%comment (string) (9.6.1.1.3)
cocos (2130)	launchs%datainfo%cocos (integer) (9.6.1.1.2)
id (2130)	launchs%datainfo%id (integer) (9.6.1.1.2)
isref (2130)	launchs%datainfo%isref (integer) (9.6.1.1.2)
whatref (2130)	launchs%datainfo%whatref (whatref) (9.6.1.3.503)
user (2500)	launchs%datainfo%whatref%user (string) (9.6.1.1.3)
machine (2500)	launchs%datainfo%whatref%machine (string) (9.6.1.1.3)
shot (2500)	launchs%datainfo%whatref%shot (integer) (9.6.1.1.2)
run (2500)	launchs%datainfo%whatref%run (integer) (9.6.1.1.2)
occurrence (2500)	launchs%datainfo%whatref%occurrence (integer) (9.6.1.1.2)
putinfo (2130)	launchs%datainfo%putinfo (putinfo) (9.6.1.3.339)
putmethod (2336)	launchs%datainfo%putinfo%putmethod (string) (9.6.1.1.3)

putaccess (2336)	launchs%datainfo%putinfo%putaccess (string) (9.6.1.1.3)
putlocation (2336)	launchs%datainfo%putinfo%putlocation (string) (9.6.1.1.3)
rights (2336)	launchs%datainfo%putinfo%rights (string) (9.6.1.1.3)
name (2024)	launchs%name (vecstring_type) (9.6.1.2.15)
type (2024)	launchs%type (vecstring_type) (9.6.1.2.15)
frequency (2024)	launchs%frequency (vecflt_type) (9.6.1.2.13)
mode (2024)	launchs%mode (vecint_type) (9.6.1.2.14)
position (2024)	launchs%position (rzphiID) (9.6.1.3.362)
r (2359)	launchs%position%r (vecflt_type) (9.6.1.2.13)
z (2359)	launchs%position%z (vecflt_type) (9.6.1.2.13)
phi (2359)	launchs%position%phi (vecflt_type) (9.6.1.2.13)
spectrum (2024)	launchs%spectrum (spectrum) (9.6.1.3.410)
phi_theta (2407)	launchs%spectrum%phi_theta (launchs_phi_theta) (9.6.1.3.245)
nn_phi (2242)	launchs%spectrum%phi_theta%nn_phi (vecint_type) (9.6.1.2.14)
nn_theta (2242)	launchs%spectrum%phi_theta%nn_theta (vecint_type) (9.6.1.2.14)
n_phi (2242)	launchs%spectrum%phi_theta%n_phi (matflt_type) (9.6.1.2.10)
n_theta (2242)	launchs%spectrum%phi_theta%n_theta (matflt_type) (9.6.1.2.10)
power (2242)	launchs%spectrum%phi_theta%power (array3dflt_type) (9.6.1.2.2)
parallel (2407)	launchs%spectrum%parallel (launchs_parallel) (9.6.1.3.244)
nn_par (2241)	launchs%spectrum%parallel%nn_par (vecint_type) (9.6.1.2.14)
n_par (2241)	launchs%spectrum%parallel%n_par (matflt_type) (9.6.1.2.10)
power (2241)	launchs%spectrum%parallel%power (vecflt_type) (9.6.1.2.13)
beam (2024)	launchs%beam (launchs_rfbeam) (9.6.1.3.246)
spot (2243)	launchs%beam%spot (launchs_rfbeam_spot) (9.6.1.3.248)
waist (2245)	launchs%beam%spot%waist (matflt_type) (9.6.1.2.10)
angle (2245)	launchs%beam%spot%angle (vecflt_type) (9.6.1.2.13)
phaseellipse (2243)	launchs%beam%phaseellipse (launchs_rfbeam_phaseellipse) (9.6.1.3.247)
incurvrad (2244)	launchs%beam%phaseellipse%incurvrad (matflt_type) (9.6.1.2.10)
angle (2244)	launchs%beam%phaseellipse%angle (vecflt_type) (9.6.1.2.13)
codeparam (2024)	launchs%codeparam (codeparam) (9.6.1.3.77)
codename (2074)	launchs%codeparam%codename (string) (9.6.1.1.3)
codeversion (2074)	launchs%codeparam%codeversion (string) (9.6.1.1.3)
parameters (2074)	launchs%codeparam%parameters (string) (9.6.1.1.3)
output_diag (2074)	launchs%codeparam%output_diag (string) (9.6.1.1.3)
output_flag (2074)	launchs%codeparam%output_flag (integer) (9.6.1.1.2)
time (2024)	launchs%time (float) (9.6.1.1.1)

### 9.6.2.1.26 lithiumdiag

datainfo (2025)	lithiumdiag%datainfo (datainfo) (9.6.1.3.133)
dataprovider (2130)	lithiumdiag%datainfo%dataprovider (string) (9.6.1.1.3)
putdate (2130)	lithiumdiag%datainfo%putdate (string) (9.6.1.1.3)
source (2130)	lithiumdiag%datainfo%source (string) (9.6.1.1.3)
comment (2130)	lithiumdiag%datainfo%comment (string) (9.6.1.1.3)
cocos (2130)	lithiumdiag%datainfo%cocos (integer) (9.6.1.1.2)
id (2130)	lithiumdiag%datainfo%id (integer) (9.6.1.1.2)
isref (2130)	lithiumdiag%datainfo%isref (integer) (9.6.1.1.2)
whatref (2130)	lithiumdiag%datainfo%whatref (whatref) (9.6.1.3.503)
user (2500)	lithiumdiag%datainfo%whatref%user (string) (9.6.1.1.3)
machine (2500)	lithiumdiag%datainfo%whatref%machine (string) (9.6.1.1.3)
shot (2500)	lithiumdiag%datainfo%whatref%shot (integer) (9.6.1.1.2)
run (2500)	lithiumdiag%datainfo%whatref%run (integer) (9.6.1.1.2)
occurrence (2500)	lithiumdiag%datainfo%whatref%occurrence (integer) (9.6.1.1.2)
putinfo (2130)	lithiumdiag%datainfo%putinfo (putinfo) (9.6.1.3.339)
putmethod (2336)	lithiumdiag%datainfo%putinfo%putmethod (string) (9.6.1.1.3)
putaccess (2336)	lithiumdiag%datainfo%putinfo%putaccess (string) (9.6.1.1.3)
putlocation (2336)	lithiumdiag%datainfo%putinfo%putlocation (string) (9.6.1.1.3)
rights (2336)	lithiumdiag%datainfo%putinfo%rights (string) (9.6.1.1.3)
setup (2025)	lithiumdiag%setup (lithsetup) (9.6.1.3.254)
position (2251)	lithiumdiag%setup%position (rzphiID) (9.6.1.3.362)
r (2359)	lithiumdiag%setup%position%r (vecflt_type) (9.6.1.2.13)

z (2359)	lithiumdiag%setup%position%z (vecflt.type) (9.6.1.2.13)
phi (2359)	lithiumdiag%setup%position%phi (vecflt.type) (9.6.1.2.13)
measure (2025)	lithiumdiag%measure (lithmeasure) (9.6.1.3.253)
ne (2250)	lithiumdiag%measure%ne (exp1D) (9.6.1.3.195)
value (2192)	lithiumdiag%measure%ne%value (vecflt.type) (9.6.1.2.13)
abserror (2192)	lithiumdiag%measure%ne%abserror (vecflt.type) (9.6.1.2.13)
releror (2192)	lithiumdiag%measure%ne%releror (vecflt.type) (9.6.1.2.13)
codeparam (2025)	lithiumdiag%codeparam (codeparam) (9.6.1.3.77)
codename (2074)	lithiumdiag%codeparam%codename (string) (9.6.1.1.3)
codeversion (2074)	lithiumdiag%codeparam%codeversion (string) (9.6.1.1.3)
parameters (2074)	lithiumdiag%codeparam%parameters (string) (9.6.1.1.3)
output_diag (2074)	lithiumdiag%codeparam%output_diag (string) (9.6.1.1.3)
output_flag (2074)	lithiumdiag%codeparam%output_flag (integer) (9.6.1.1.2)
time (2025)	lithiumdiag%time (float) (9.6.1.1.1)

### 9.6.2.1.27 magdiag

datainfo (2026)	magdiag%datainfo (datainfo) (9.6.1.3.133)
dataprovder (2130)	magdiag%datainfo%dataprovder (string) (9.6.1.1.3)
putdate (2130)	magdiag%datainfo%putdate (string) (9.6.1.1.3)
source (2130)	magdiag%datainfo%source (string) (9.6.1.1.3)
comment (2130)	magdiag%datainfo%comment (string) (9.6.1.1.3)
cocos (2130)	magdiag%datainfo%cocos (integer) (9.6.1.1.2)
id (2130)	magdiag%datainfo%id (integer) (9.6.1.1.2)
isref (2130)	magdiag%datainfo%isref (integer) (9.6.1.1.2)
whatref (2130)	magdiag%datainfo%whatref (whatref) (9.6.1.3.503)
user (2500)	magdiag%datainfo%whatref%user (string) (9.6.1.1.3)
machine (2500)	magdiag%datainfo%whatref%machine (string) (9.6.1.1.3)
shot (2500)	magdiag%datainfo%whatref%shot (integer) (9.6.1.1.2)
run (2500)	magdiag%datainfo%whatref%run (integer) (9.6.1.1.2)
occurrence (2500)	magdiag%datainfo%whatref%occurrence (integer) (9.6.1.1.2)
putinfo (2130)	magdiag%datainfo%putinfo (putinfo) (9.6.1.3.339)
putmethod (2336)	magdiag%datainfo%putinfo%putmethod (string) (9.6.1.1.3)
putaccess (2336)	magdiag%datainfo%putinfo%putaccess (string) (9.6.1.1.3)
putlocation (2336)	magdiag%datainfo%putinfo%putlocation (string) (9.6.1.1.3)
rights (2336)	magdiag%datainfo%putinfo%rights (string) (9.6.1.1.3)
ip (2026)	magdiag%ip (exp0D) (9.6.1.3.194)
value (2191)	magdiag%ip%value (float) (9.6.1.1.1)
abserror (2191)	magdiag%ip%abserror (float) (9.6.1.1.1)
releror (2191)	magdiag%ip%releror (float) (9.6.1.1.1)
diamagflux (2026)	magdiag%diamagflux (exp0D) (9.6.1.3.194)
value (2191)	magdiag%diamagflux%value (float) (9.6.1.1.1)
abserror (2191)	magdiag%diamagflux%abserror (float) (9.6.1.1.1)
releror (2191)	magdiag%diamagflux%releror (float) (9.6.1.1.1)
diamagener (2026)	magdiag%diamagener (exp0D) (9.6.1.3.194)
value (2191)	magdiag%diamagener%value (float) (9.6.1.1.1)
abserror (2191)	magdiag%diamagener%abserror (float) (9.6.1.1.1)
releror (2191)	magdiag%diamagener%releror (float) (9.6.1.1.1)
flux_loops (2026)	magdiag%flux_loops (flux_loops) (9.6.1.3.202)
setup_floops (2199)	magdiag%flux_loops%setup_floops (setup_floops) (9.6.1.3.392)
name (2389)	magdiag%flux_loops%setup_floops%name (vecstring.type) (9.6.1.2.15)
id (2389)	magdiag%flux_loops%setup_floops%id (vecstring.type) (9.6.1.2.15)
position (2389)	magdiag%flux_loops%setup_floops%position (rzphi2D) (9.6.1.3.365)
r (2362)	magdiag%flux_loops%setup_floops%position%r (matflt.type) (9.6.1.2.10)
z (2362)	magdiag%flux_loops%setup_floops%position%z (matflt.type) (9.6.1.2.10)
phi (2362)	magdiag%flux_loops%setup_floops%position%phi (matflt.type) (9.6.1.2.10)
npoints (2389)	magdiag%flux_loops%setup_floops%npoints (vecint.type) (9.6.1.2.14)
measure (2199)	magdiag%flux_loops%measure (exp1D) (9.6.1.3.195)
value (2192)	magdiag%flux_loops%measure%value (vecflt.type) (9.6.1.2.13)
abserror (2192)	magdiag%flux_loops%measure%abserror (vecflt.type) (9.6.1.2.13)
releror (2192)	magdiag%flux_loops%measure%releror (vecflt.type) (9.6.1.2.13)



bpol_probes (2026)	magdiag%bpol_probes (bpol_probes) (9.6.1.3.72)
setup_bprobe (2069)	magdiag%bpol_probes%setup_bprobe (setup_bprobe) (9.6.1.3.391)
name (2388)	magdiag%bpol_probes%setup_bprobe%name (vecstring_type) (9.6.1.2.15)
id (2388)	magdiag%bpol_probes%setup_bprobe%id (vecstring_type) (9.6.1.2.15)
position (2388)	magdiag%bpol_probes%setup_bprobe%position (rz1D) (9.6.1.3.356)
r (2353)	magdiag%bpol_probes%setup_bprobe%position%r (vecflt_type) (9.6.1.2.13)
z (2353)	magdiag%bpol_probes%setup_bprobe%position%z (vecflt_type) (9.6.1.2.13)
polangle (2388)	magdiag%bpol_probes%setup_bprobe%polangle (vecflt_type) (9.6.1.2.13)
torangle (2388)	magdiag%bpol_probes%setup_bprobe%torangle (vecflt_type) (9.6.1.2.13)
area (2388)	magdiag%bpol_probes%setup_bprobe%area (vecflt_type) (9.6.1.2.13)
length (2388)	magdiag%bpol_probes%setup_bprobe%length (vecflt_type) (9.6.1.2.13)
turns (2388)	magdiag%bpol_probes%setup_bprobe%turns (vecint_type) (9.6.1.2.14)
measure (2069)	magdiag%bpol_probes%measure (exp1D) (9.6.1.3.195)
value (2192)	magdiag%bpol_probes%measure%value (vecflt_type) (9.6.1.2.13)
abserror (2192)	magdiag%bpol_probes%measure%abserror (vecflt_type) (9.6.1.2.13)
releror (2192)	magdiag%bpol_probes%measure%releror (vecflt_type) (9.6.1.2.13)
codeparam (2026)	magdiag%codeparam (codeparam) (9.6.1.3.77)
codename (2074)	magdiag%codeparam%codename (string) (9.6.1.1.3)
codeversion (2074)	magdiag%codeparam%codeversion (string) (9.6.1.1.3)
parameters (2074)	magdiag%codeparam%parameters (string) (9.6.1.1.3)
output_diag (2074)	magdiag%codeparam%output_diag (string) (9.6.1.1.3)
output_flag (2074)	magdiag%codeparam%output_flag (integer) (9.6.1.1.2)
time (2026)	magdiag%time (float) (9.6.1.1.1)

### 9.6.2.1.28 mhd

datainfo (2027)	mhd%datainfo (datainfo) (9.6.1.3.133)
dataprovder (2130)	mhd%datainfo%dataprovder (string) (9.6.1.1.3)
putdate (2130)	mhd%datainfo%putdate (string) (9.6.1.1.3)
source (2130)	mhd%datainfo%source (string) (9.6.1.1.3)
comment (2130)	mhd%datainfo%comment (string) (9.6.1.1.3)
cocos (2130)	mhd%datainfo%cocos (integer) (9.6.1.1.2)
id (2130)	mhd%datainfo%id (integer) (9.6.1.1.2)
isref (2130)	mhd%datainfo%isref (integer) (9.6.1.1.2)
whatref (2130)	mhd%datainfo%whatref (whatref) (9.6.1.3.503)
user (2500)	mhd%datainfo%whatref%user (string) (9.6.1.1.3)
machine (2500)	mhd%datainfo%whatref%machine (string) (9.6.1.1.3)
shot (2500)	mhd%datainfo%whatref%shot (integer) (9.6.1.1.2)
run (2500)	mhd%datainfo%whatref%run (integer) (9.6.1.1.2)
occurrence (2500)	mhd%datainfo%whatref%occurrence (integer) (9.6.1.1.2)
putinfo (2130)	mhd%datainfo%putinfo (putinfo) (9.6.1.3.339)
putmethod (2336)	mhd%datainfo%putinfo%putmethod (string) (9.6.1.1.3)
putaccess (2336)	mhd%datainfo%putinfo%putaccess (string) (9.6.1.1.3)
putlocation (2336)	mhd%datainfo%putinfo%putlocation (string) (9.6.1.1.3)
rights (2336)	mhd%datainfo%putinfo%rights (string) (9.6.1.1.3)
toroid_field (2027)	mhd%toroid_field (b0r0) (9.6.1.3.59)
r0 (2056)	mhd%toroid_field%r0 (float) (9.6.1.1.1)
b0 (2056)	mhd%toroid_field%b0 (float) (9.6.1.1.1)
n (2027)	mhd%n(:) (mhd_mode) (9.6.1.3.262)
modenum (2259)	mhd%n(:)%modenum (integer) (9.6.1.1.2)
growthrate (2259)	mhd%n(:)%growthrate (float) (9.6.1.1.1)
frequency (2259)	mhd%n(:)%frequency (float) (9.6.1.1.1)
plasma (2259)	mhd%n(:)%plasma (mhd_plasma) (9.6.1.3.263)
psi (2260)	mhd%n(:)%plasma%psi (vecflt_type) (9.6.1.2.13)
rho_tor_norm (2260)	mhd%n(:)%plasma%rho_tor_norm (vecflt_type) (9.6.1.2.13)
rho_tor (2260)	mhd%n(:)%plasma%rho_tor (vecflt_type) (9.6.1.2.13)
m (2260)	mhd%n(:)%plasma%m (matflt_type) (9.6.1.2.10)
disp_perp (2260)	mhd%n(:)%plasma%disp_perp (matcplx_type) (9.6.1.2.9)
disp_par (2260)	mhd%n(:)%plasma%disp_par (matcplx_type) (9.6.1.2.9)
tau_alfven (2260)	mhd%n(:)%plasma%tau_alfven (vecflt_type) (9.6.1.2.13)
tau_res (2260)	mhd%n(:)%plasma%tau_res (vecflt_type) (9.6.1.2.13)



coord_sys (2260)	mhd%n(:)%plasma%coord_sys (coord_sys) (9.6.1.3.101)
grid_type (2098)	mhd%n(:)%plasma%coord_sys%grid_type (string) (9.6.1.1.3)
grid (2098)	mhd%n(:)%plasma%coord_sys%grid (reggrid) (9.6.1.3.351)
dim1 (2348)	mhd%n(:)%plasma%coord_sys%grid%dim1 (vecflt_type) (9.6.1.2.13)
dim2 (2348)	mhd%n(:)%plasma%coord_sys%grid%dim2 (vecflt_type) (9.6.1.2.13)
jacobian (2098)	mhd%n(:)%plasma%coord_sys%jacobian (matflt_type) (9.6.1.2.10)
g_11 (2098)	mhd%n(:)%plasma%coord_sys%g_11 (matflt_type) (9.6.1.2.10)
g_12 (2098)	mhd%n(:)%plasma%coord_sys%g_12 (matflt_type) (9.6.1.2.10)
g_13 (2098)	mhd%n(:)%plasma%coord_sys%g_13 (matflt_type) (9.6.1.2.10)
g_22 (2098)	mhd%n(:)%plasma%coord_sys%g_22 (matflt_type) (9.6.1.2.10)
g_23 (2098)	mhd%n(:)%plasma%coord_sys%g_23 (matflt_type) (9.6.1.2.10)
g_33 (2098)	mhd%n(:)%plasma%coord_sys%g_33 (matflt_type) (9.6.1.2.10)
position (2098)	mhd%n(:)%plasma%coord_sys%position (rz2D) (9.6.1.3.359)
r (2356)	mhd%n(:)%plasma%coord_sys%position%r (matflt_type) (9.6.1.2.10)
z (2356)	mhd%n(:)%plasma%coord_sys%position%z (matflt_type) (9.6.1.2.10)
a_pert (2260)	mhd%n(:)%plasma%a_pert (mhd_vector) (9.6.1.3.266)
coord1 (2263)	mhd%n(:)%plasma%a_pert%coord1 (matcplx_type) (9.6.1.2.9)
coord2 (2263)	mhd%n(:)%plasma%a_pert%coord2 (matcplx_type) (9.6.1.2.9)
coord3 (2263)	mhd%n(:)%plasma%a_pert%coord3 (matcplx_type) (9.6.1.2.9)
b_pert (2260)	mhd%n(:)%plasma%b_pert (mhd_vector) (9.6.1.3.266)
coord1 (2263)	mhd%n(:)%plasma%b_pert%coord1 (matcplx_type) (9.6.1.2.9)
coord2 (2263)	mhd%n(:)%plasma%b_pert%coord2 (matcplx_type) (9.6.1.2.9)
coord3 (2263)	mhd%n(:)%plasma%b_pert%coord3 (matcplx_type) (9.6.1.2.9)
v_pert (2260)	mhd%n(:)%plasma%v_pert (mhd_vector) (9.6.1.3.266)
coord1 (2263)	mhd%n(:)%plasma%v_pert%coord1 (matcplx_type) (9.6.1.2.9)
coord2 (2263)	mhd%n(:)%plasma%v_pert%coord2 (matcplx_type) (9.6.1.2.9)
coord3 (2263)	mhd%n(:)%plasma%v_pert%coord3 (matcplx_type) (9.6.1.2.9)
p_pert (2260)	mhd%n(:)%plasma%p_pert (matcplx_type) (9.6.1.2.9)
rho_mass_per (2260)	mhd%n(:)%plasma%rho_mass_per (matcplx_type) (9.6.1.2.9)
temp_per (2260)	mhd%n(:)%plasma%temp_per (matcplx_type) (9.6.1.2.9)
vacuum (2259)	mhd%n(:)%vacuum (mhd_vacuum) (9.6.1.3.265)
m (2262)	mhd%n(:)%vacuum%m (array3dflt_type) (9.6.1.2.2)
coord_sys (2262)	mhd%n(:)%vacuum%coord_sys (coord_sys) (9.6.1.3.101)
grid_type (2098)	mhd%n(:)%vacuum%coord_sys%grid_type (string) (9.6.1.1.3)
grid (2098)	mhd%n(:)%vacuum%coord_sys%grid (reggrid) (9.6.1.3.351)
dim1 (2348)	mhd%n(:)%vacuum%coord_sys%grid%dim1 (vecflt_type) (9.6.1.2.13)
dim2 (2348)	mhd%n(:)%vacuum%coord_sys%grid%dim2 (vecflt_type) (9.6.1.2.13)
jacobian (2098)	mhd%n(:)%vacuum%coord_sys%jacobian (matflt_type) (9.6.1.2.10)
g_11 (2098)	mhd%n(:)%vacuum%coord_sys%g_11 (matflt_type) (9.6.1.2.10)
g_12 (2098)	mhd%n(:)%vacuum%coord_sys%g_12 (matflt_type) (9.6.1.2.10)
g_13 (2098)	mhd%n(:)%vacuum%coord_sys%g_13 (matflt_type) (9.6.1.2.10)
g_22 (2098)	mhd%n(:)%vacuum%coord_sys%g_22 (matflt_type) (9.6.1.2.10)
g_23 (2098)	mhd%n(:)%vacuum%coord_sys%g_23 (matflt_type) (9.6.1.2.10)
g_33 (2098)	mhd%n(:)%vacuum%coord_sys%g_33 (matflt_type) (9.6.1.2.10)
position (2098)	mhd%n(:)%vacuum%coord_sys%position (rz2D) (9.6.1.3.359)
r (2356)	mhd%n(:)%vacuum%coord_sys%position%r (matflt_type) (9.6.1.2.10)
z (2356)	mhd%n(:)%vacuum%coord_sys%position%z (matflt_type) (9.6.1.2.10)
a_pert (2262)	mhd%n(:)%vacuum%a_pert (mhd_vector) (9.6.1.3.266)
coord1 (2263)	mhd%n(:)%vacuum%a_pert%coord1 (matcplx_type) (9.6.1.2.9)
coord2 (2263)	mhd%n(:)%vacuum%a_pert%coord2 (matcplx_type) (9.6.1.2.9)
coord3 (2263)	mhd%n(:)%vacuum%a_pert%coord3 (matcplx_type) (9.6.1.2.9)
b_pert (2262)	mhd%n(:)%vacuum%b_pert (mhd_vector) (9.6.1.3.266)
coord1 (2263)	mhd%n(:)%vacuum%b_pert%coord1 (matcplx_type) (9.6.1.2.9)
coord2 (2263)	mhd%n(:)%vacuum%b_pert%coord2 (matcplx_type) (9.6.1.2.9)
coord3 (2263)	mhd%n(:)%vacuum%b_pert%coord3 (matcplx_type) (9.6.1.2.9)
time (2027)	mhd%time (float) (9.6.1.1.1)
codeparam (2027)	mhd%codeparam (codeparam) (9.6.1.3.77)
codename (2074)	mhd%codeparam%codename (string) (9.6.1.1.3)
codeversion (2074)	mhd%codeparam%codeversion (string) (9.6.1.1.3)
parameters (2074)	mhd%codeparam%parameters (string) (9.6.1.1.3)
output_diag (2074)	mhd%codeparam%output_diag (string) (9.6.1.1.3)

## 9.6.2.1.29 msediag

datainfo (2028)	msediag%datainfo (datainfo) (9.6.1.3.133)
dataprovider (2130)	msediag%datainfo%dataprovider (string) (9.6.1.1.3)
putdate (2130)	msediag%datainfo%putdate (string) (9.6.1.1.3)
source (2130)	msediag%datainfo%source (string) (9.6.1.1.3)
comment (2130)	msediag%datainfo%comment (string) (9.6.1.1.3)
cocos (2130)	msediag%datainfo%cocos (integer) (9.6.1.1.2)
id (2130)	msediag%datainfo%id (integer) (9.6.1.1.2)
isref (2130)	msediag%datainfo%isref (integer) (9.6.1.1.2)
whatref (2130)	msediag%datainfo%whatref (whatref) (9.6.1.3.503)
user (2500)	msediag%datainfo%whatref%user (string) (9.6.1.1.3)
machine (2500)	msediag%datainfo%whatref%machine (string) (9.6.1.1.3)
shot (2500)	msediag%datainfo%whatref%shot (integer) (9.6.1.1.2)
run (2500)	msediag%datainfo%whatref%run (integer) (9.6.1.1.2)
occurrence (2500)	msediag%datainfo%whatref%occurrence (integer) (9.6.1.1.2)
putinfo (2130)	msediag%datainfo%putinfo (putinfo) (9.6.1.3.339)
putmethod (2336)	msediag%datainfo%putinfo%putmethod (string) (9.6.1.1.3)
putaccess (2336)	msediag%datainfo%putinfo%putaccess (string) (9.6.1.1.3)
putlocation (2336)	msediag%datainfo%putinfo%putlocation (string) (9.6.1.1.3)
rights (2336)	msediag%datainfo%putinfo%rights (string) (9.6.1.1.3)
polarimetry (2028)	msediag%polarimetry (polarimetry) (9.6.1.3.331)
setup (2328)	msediag%polarimetry%setup (msediag_setup_polarimetry) (9.6.1.3.280)
rzgamma (2277)	msediag%polarimetry%setup%rzgamma (rzphidrdzdphiID) (9.6.1.3.367)
r (2364)	msediag%polarimetry%setup%rzgamma%r (vecflt.type) (9.6.1.2.13)
z (2364)	msediag%polarimetry%setup%rzgamma%z (vecflt.type) (9.6.1.2.13)
phi (2364)	msediag%polarimetry%setup%rzgamma%phi (vecflt.type) (9.6.1.2.13)
dr (2364)	msediag%polarimetry%setup%rzgamma%dr (vecflt.type) (9.6.1.2.13)
dz (2364)	msediag%polarimetry%setup%rzgamma%dz (vecflt.type) (9.6.1.2.13)
dphi (2364)	msediag%polarimetry%setup%rzgamma%dphi (vecflt.type) (9.6.1.2.13)
geom_coef (2277)	msediag%polarimetry%setup%geom_coef (matflt.type) (9.6.1.2.10)
measure (2328)	msediag%polarimetry%measure (exp1D) (9.6.1.3.195)
value (2192)	msediag%polarimetry%measure%value (vecflt.type) (9.6.1.2.13)
abserror (2192)	msediag%polarimetry%measure%abserror (vecflt.type) (9.6.1.2.13)
releror (2192)	msediag%polarimetry%measure%releror (vecflt.type) (9.6.1.2.13)
spectral (2028)	msediag%spectral (spectral) (9.6.1.3.409)
emissivity (2406)	msediag%spectral%emissivity (msediag_emissivity) (9.6.1.3.275)
wavelength (2272)	msediag%spectral%emissivity%wavelength (vecflt.type) (9.6.1.2.13)
emiss_chord (2272)	msediag%spectral%emissivity%emiss_chord(:) (msediag_emiss_chord) (9.6.1.3.274)
volume (2271)	msediag%spectral%emissivity%emiss_chord(:)%volume (float) (9.6.1.1.1)
setup (2271)	msediag%spectral%emissivity%emiss_chord(:)%setup (rzphiID) (9.6.1.3.362)
r (2359)	msediag%spectral%emissivity%emiss_chord(:)%setup%r (vecflt.type) (9.6.1.2.13)
z (2359)	msediag%spectral%emissivity%emiss_chord(:)%setup%z (vecflt.type) (9.6.1.2.13)
phi (2359)	msediag%spectral%emissivity%emiss_chord(:)%setup%phi (vecflt.type) (9.6.1.2.13)
polarization (2271)	msediag%spectral%emissivity%emiss_chord(:)%polarization(:) (msediag_polarization) (9.6.1.3.276)
type (2273)	msediag%spectral%emissivity%emiss_chord(:)%polarization(:)%type (identifier) (9.6.1.3.233)
id (2230)	msediag%spectral%emissivity%emiss_chord(:)%polarization(:)%type%id (string) (9.6.1.1.3)
flag (2230)	msediag%spectral%emissivity%emiss_chord(:)%polarization(:)%type%flag (integer) (9.6.1.1.2)
description (2230)	msediag%spectral%emissivity%emiss_chord(:)%polarization(:)%type%description (string) (9.6.1.1.3)
spec_emiss (2273)	msediag%spectral%emissivity%emiss_chord(:)%polarization(:)%spec_emiss (matflt.type) (9.6.1.2.10)
quantiaxis (2271)	msediag%spectral%emissivity%emiss_chord(:)%quantiaxis (vecflt.type) (9.6.1.2.13)
radiance (2406)	msediag%spectral%radiance (msediag_radiance) (9.6.1.3.278)
wavelength (2275)	msediag%spectral%radiance%wavelength (exp1D) (9.6.1.3.195)
value (2192)	msediag%spectral%radiance%wavelength%value (vecflt.type) (9.6.1.2.13)
abserror (2192)	msediag%spectral%radiance%wavelength%abserror (vecflt.type) (9.6.1.2.13)
releror (2192)	msediag%spectral%radiance%wavelength%releror (vecflt.type) (9.6.1.2.13)

radia_chord (2275)	msediag%spectral%radiance%radia_chord(:) (msediag_radia_chord) (9.6.1.3.277)
setup (2274)	msediag%spectral%radiance%radia_chord(:)%setup (msediag_setup) (9.6.1.3.279)
pivot_point (2276)	msediag%spectral%radiance%radia_chord(:)%setup%pivot_point (rzphi0D) (9.6.1.3.361)
r (2358)	msediag%spectral%radiance%radia_chord(:)%setup%pivot_point%r (float) (9.6.1.1.1)
z (2358)	msediag%spectral%radiance%radia_chord(:)%setup%pivot_point%z (float) (9.6.1.1.1)
phi (2358)	msediag%spectral%radiance%radia_chord(:)%setup%pivot_point%phi (float) (9.6.1.1.1)
horchordang (2276)	msediag%spectral%radiance%radia_chord(:)%setup%horchordang (float) (9.6.1.1.1)
verchordang (2276)	msediag%spectral%radiance%radia_chord(:)%setup%verchordang (float) (9.6.1.1.1)
second_point (2276)	msediag%spectral%radiance%radia_chord(:)%setup%second_point (rzphi0D) (9.6.1.3.361)
r (2358)	msediag%spectral%radiance%radia_chord(:)%setup%second_point%r (float) (9.6.1.1.1)
z (2358)	msediag%spectral%radiance%radia_chord(:)%setup%second_point%z (float) (9.6.1.1.1)
phi (2358)	msediag%spectral%radiance%radia_chord(:)%setup%second_point%phi (float) (9.6.1.1.1)
stokes (2274)	msediag%spectral%radiance%radia_chord(:)%stokes(:) (msediag_stokes) (9.6.1.3.281)
type (2278)	msediag%spectral%radiance%radia_chord(:)%stokes(:)%type (identifier) (9.6.1.3.233)
id (2230)	msediag%spectral%radiance%radia_chord(:)%stokes(:)%type%id (string) (9.6.1.1.3)
flag (2230)	msediag%spectral%radiance%radia_chord(:)%stokes(:)%type%flag (integer) (9.6.1.1.2)
description (2230)	msediag%spectral%radiance%radia_chord(:)%stokes(:)%type%description (string) (9.6.1.1.3)
vector (2278)	msediag%spectral%radiance%radia_chord(:)%stokes(:)%vector (matflt.type) (9.6.1.2.10)
totradiance (2274)	msediag%spectral%radiance%radia_chord(:)%totradiance (exp1D) (9.6.1.3.195)
value (2192)	msediag%spectral%radiance%radia_chord(:)%totradiance%value (vecflt.type) (9.6.1.2.13)
abserror (2192)	msediag%spectral%radiance%radia_chord(:)%totradiance%abserror (vecflt.type) (9.6.1.2.13)
releror (2192)	msediag%spectral%radiance%radia_chord(:)%totradiance%releror (vecflt.type) (9.6.1.2.13)
codeparam (2406)	msediag%spectral%codeparam (codeparam) (9.6.1.3.77)
codename (2074)	msediag%spectral%codeparam%codename (string) (9.6.1.1.3)
codeversion (2074)	msediag%spectral%codeparam%codeversion (string) (9.6.1.1.3)
parameters (2074)	msediag%spectral%codeparam%parameters (string) (9.6.1.1.3)
output_diag (2074)	msediag%spectral%codeparam%output_diag (string) (9.6.1.1.3)
output_flag (2074)	msediag%spectral%codeparam%output_flag (integer) (9.6.1.1.2)
codeparam (2028)	msediag%codeparam (codeparam) (9.6.1.3.77)
codename (2074)	msediag%codeparam%codename (string) (9.6.1.1.3)
codeversion (2074)	msediag%codeparam%codeversion (string) (9.6.1.1.3)
parameters (2074)	msediag%codeparam%parameters (string) (9.6.1.1.3)
output_diag (2074)	msediag%codeparam%output_diag (string) (9.6.1.1.3)
output_flag (2074)	msediag%codeparam%output_flag (integer) (9.6.1.1.2)
time (2028)	msediag%time (float) (9.6.1.1.1)

### 9.6.2.1.30 nbi

datainfo (2029)	nbi%datainfo (datainfo) (9.6.1.3.133)
dataprovider (2130)	nbi%datainfo%dataprovider (string) (9.6.1.1.3)
putdate (2130)	nbi%datainfo%putdate (string) (9.6.1.1.3)
source (2130)	nbi%datainfo%source (string) (9.6.1.1.3)
comment (2130)	nbi%datainfo%comment (string) (9.6.1.1.3)
cocos (2130)	nbi%datainfo%cocos (integer) (9.6.1.1.2)
id (2130)	nbi%datainfo%id (integer) (9.6.1.1.2)
isref (2130)	nbi%datainfo%isref (integer) (9.6.1.1.2)
whatref (2130)	nbi%datainfo%whatref (whatref) (9.6.1.3.503)
user (2500)	nbi%datainfo%whatref%user (string) (9.6.1.1.3)
machine (2500)	nbi%datainfo%whatref%machine (string) (9.6.1.1.3)
shot (2500)	nbi%datainfo%whatref%shot (integer) (9.6.1.1.2)
run (2500)	nbi%datainfo%whatref%run (integer) (9.6.1.1.2)
occurrence (2500)	nbi%datainfo%whatref%occurrence (integer) (9.6.1.1.2)
putinfo (2130)	nbi%datainfo%putinfo (putinfo) (9.6.1.3.339)
putmethod (2336)	nbi%datainfo%putinfo%putmethod (string) (9.6.1.1.3)
putaccess (2336)	nbi%datainfo%putinfo%putaccess (string) (9.6.1.1.3)
putlocation (2336)	nbi%datainfo%putinfo%putlocation (string) (9.6.1.1.3)
rights (2336)	nbi%datainfo%putinfo%rights (string) (9.6.1.1.3)
nbi_unit (2029)	nbi%nbi_unit(:) (nbi_unit) (9.6.1.3.284)
name (2281)	nbi%nbi_unit(:)%name (string) (9.6.1.1.3)
inj_spec (2281)	nbi%nbi_unit(:)%inj_spec (inj_spec) (9.6.1.3.237)
amn (2234)	nbi%nbi_unit(:)%inj_spec%amn (float) (9.6.1.1.1)

zn (2234)  
 pow\_unit (2281)  
   value (2191)  
   abserror (2191)  
   relerror (2191)  
 inj\_eng\_unit (2281)  
   value (2191)  
   abserror (2191)  
   relerror (2191)  
 beamcurfrac (2281)  
   value (2192)  
   abserror (2192)  
   relerror (2192)  
 beampowfrac (2281)  
   value (2192)  
   abserror (2192)  
   relerror (2192)  
 beamletgroup (2281)  
   position (2061)  
     r (2358)  
     z (2358)  
     phi (2358)  
   tang\_rad (2061)  
   angle (2061)  
   direction (2061)  
   width\_horiz (2061)  
   width\_vert (2061)  
   focussing (2061)  
     focal\_len\_hz (2203)  
     focal\_len\_vc (2203)  
     width\_min\_hz (2203)  
     width\_min\_vc (2203)  
   divergence (2061)  
     frac\_divcomp (2167)  
     div\_vert (2167)  
     div\_horiz (2167)  
   beamlets (2061)  
     position (2062)  
       r (2359)  
       z (2359)  
       phi (2359)  
     tang\_rad\_blt (2062)  
     angle\_blt (2062)  
     pow\_frc\_blt (2062)  
 wall (2281)  
   surface (2279)  
     triangle (2280)  
       point1 (2460)  
         x (2503)  
         y (2503)  
         z (2503)  
       point2 (2460)  
         x (2503)  
         y (2503)  
         z (2503)  
       point3 (2460)  
         x (2503)  
         y (2503)  
         z (2503)  
     rectangle (2280)  
       point01 (2340)

nbi%nbi\_unit(:)%inj\_spec%zn (float) (9.6.1.1.1)  
 nbi%nbi\_unit(:)%pow\_unit (exp0D) (9.6.1.3.194)  
 nbi%nbi\_unit(:)%pow\_unit%value (float) (9.6.1.1.1)  
 nbi%nbi\_unit(:)%pow\_unit%abserror (float) (9.6.1.1.1)  
 nbi%nbi\_unit(:)%pow\_unit%relerror (float) (9.6.1.1.1)  
 nbi%nbi\_unit(:)%inj\_eng\_unit (exp0D) (9.6.1.3.194)  
 nbi%nbi\_unit(:)%inj\_eng\_unit%value (float) (9.6.1.1.1)  
 nbi%nbi\_unit(:)%inj\_eng\_unit%abserror (float) (9.6.1.1.1)  
 nbi%nbi\_unit(:)%inj\_eng\_unit%relerror (float) (9.6.1.1.1)  
 nbi%nbi\_unit(:)%beamcurfrac (exp1D) (9.6.1.3.195)  
 nbi%nbi\_unit(:)%beamcurfrac%value (vecflt.type) (9.6.1.2.13)  
 nbi%nbi\_unit(:)%beamcurfrac%abserror (vecflt.type) (9.6.1.2.13)  
 nbi%nbi\_unit(:)%beamcurfrac%relerror (vecflt.type) (9.6.1.2.13)  
 nbi%nbi\_unit(:)%beampowfrac (exp1D) (9.6.1.3.195)  
 nbi%nbi\_unit(:)%beampowfrac%value (vecflt.type) (9.6.1.2.13)  
 nbi%nbi\_unit(:)%beampowfrac%abserror (vecflt.type) (9.6.1.2.13)  
 nbi%nbi\_unit(:)%beampowfrac%relerror (vecflt.type) (9.6.1.2.13)  
 nbi%nbi\_unit(:)%beamletgroup(:) (beamletgroup) (9.6.1.3.64)  
 nbi%nbi\_unit(:)%beamletgroup(:)%position (rzphi0D) (9.6.1.3.361)  
 nbi%nbi\_unit(:)%beamletgroup(:)%position%r (float) (9.6.1.1.1)  
 nbi%nbi\_unit(:)%beamletgroup(:)%position%z (float) (9.6.1.1.1)  
 nbi%nbi\_unit(:)%beamletgroup(:)%position%phi (float) (9.6.1.1.1)  
 nbi%nbi\_unit(:)%beamletgroup(:)%tang\_rad (float) (9.6.1.1.1)  
 nbi%nbi\_unit(:)%beamletgroup(:)%angle (float) (9.6.1.1.1)  
 nbi%nbi\_unit(:)%beamletgroup(:)%direction (integer) (9.6.1.1.2)  
 nbi%nbi\_unit(:)%beamletgroup(:)%width\_horiz (float) (9.6.1.1.1)  
 nbi%nbi\_unit(:)%beamletgroup(:)%width\_vert (float) (9.6.1.1.1)  
 nbi%nbi\_unit(:)%beamletgroup(:)%focussing (focussing) (9.6.1.3.206)  
 nbi%nbi\_unit(:)%beamletgroup(:)%focussing%focal\_len\_hz (float) (9.6.1.1.1)  
 nbi%nbi\_unit(:)%beamletgroup(:)%focussing%focal\_len\_vc (float) (9.6.1.1.1)  
 nbi%nbi\_unit(:)%beamletgroup(:)%focussing%width\_min\_hz (float) (9.6.1.1.1)  
 nbi%nbi\_unit(:)%beamletgroup(:)%focussing%width\_min\_vc (float) (9.6.1.1.1)  
 nbi%nbi\_unit(:)%beamletgroup(:)%divergence (divergence) (9.6.1.3.170)  
 nbi%nbi\_unit(:)%beamletgroup(:)%divergence%frac\_divcomp (vecflt.type) (9.6.1.2.13)  
 nbi%nbi\_unit(:)%beamletgroup(:)%divergence%div\_vert (vecflt.type) (9.6.1.2.13)  
 nbi%nbi\_unit(:)%beamletgroup(:)%divergence%div\_horiz (vecflt.type) (9.6.1.2.13)  
 nbi%nbi\_unit(:)%beamletgroup(:)%beamlets (beamlets) (9.6.1.3.65)  
 nbi%nbi\_unit(:)%beamletgroup(:)%beamlets%position (rzphi1D) (9.6.1.3.362)  
 nbi%nbi\_unit(:)%beamletgroup(:)%beamlets%position%r (vecflt.type) (9.6.1.2.13)  
 nbi%nbi\_unit(:)%beamletgroup(:)%beamlets%position%z (vecflt.type) (9.6.1.2.13)  
 nbi%nbi\_unit(:)%beamletgroup(:)%beamlets%position%phi (vecflt.type) (9.6.1.2.13)  
 nbi%nbi\_unit(:)%beamletgroup(:)%beamlets%tang\_rad\_blt (vecflt.type) (9.6.1.2.13)  
 nbi%nbi\_unit(:)%beamletgroup(:)%beamlets%angle\_blt (vecflt.type) (9.6.1.2.13)  
 nbi%nbi\_unit(:)%beamletgroup(:)%beamlets%pow\_frc\_blt (vecflt.type) (9.6.1.2.13)  
 nbi%nbi\_unit(:)%wall (nbi\_nbi\_unit\_wall) (9.6.1.3.282)  
 nbi%nbi\_unit(:)%wall%surface (nbi\_nbi\_unit\_wall\_surface) (9.6.1.3.283)  
 nbi%nbi\_unit(:)%wall%surface%triangle(:) (trianglexyz) (9.6.1.3.463)  
 nbi%nbi\_unit(:)%wall%surface%triangle(:)%point1 (xyz0D) (9.6.1.3.506)  
 nbi%nbi\_unit(:)%wall%surface%triangle(:)%point1%x (float) (9.6.1.1.1)  
 nbi%nbi\_unit(:)%wall%surface%triangle(:)%point1%y (float) (9.6.1.1.1)  
 nbi%nbi\_unit(:)%wall%surface%triangle(:)%point1%z (float) (9.6.1.1.1)  
 nbi%nbi\_unit(:)%wall%surface%triangle(:)%point2 (xyz0D) (9.6.1.3.506)  
 nbi%nbi\_unit(:)%wall%surface%triangle(:)%point2%x (float) (9.6.1.1.1)  
 nbi%nbi\_unit(:)%wall%surface%triangle(:)%point2%y (float) (9.6.1.1.1)  
 nbi%nbi\_unit(:)%wall%surface%triangle(:)%point2%z (float) (9.6.1.1.1)  
 nbi%nbi\_unit(:)%wall%surface%triangle(:)%point3 (xyz0D) (9.6.1.3.506)  
 nbi%nbi\_unit(:)%wall%surface%triangle(:)%point3%x (float) (9.6.1.1.1)  
 nbi%nbi\_unit(:)%wall%surface%triangle(:)%point3%y (float) (9.6.1.1.1)  
 nbi%nbi\_unit(:)%wall%surface%triangle(:)%point3%z (float) (9.6.1.1.1)  
 nbi%nbi\_unit(:)%wall%surface%rectangle(:) (rectanglexyz) (9.6.1.3.343)  
 nbi%nbi\_unit(:)%wall%surface%rectangle(:)%point01 (xyz0D) (9.6.1.3.506)

x (2503)	nbi%nbi_unit(:)%wall%surface%rectangle(:)%point01%x (float) (9.6.1.1.1)
y (2503)	nbi%nbi_unit(:)%wall%surface%rectangle(:)%point01%y (float) (9.6.1.1.1)
z (2503)	nbi%nbi_unit(:)%wall%surface%rectangle(:)%point01%z (float) (9.6.1.1.1)
point11 (2340)	nbi%nbi_unit(:)%wall%surface%rectangle(:)%point11 (xyz0D) (9.6.1.3.506)
x (2503)	nbi%nbi_unit(:)%wall%surface%rectangle(:)%point11%x (float) (9.6.1.1.1)
y (2503)	nbi%nbi_unit(:)%wall%surface%rectangle(:)%point11%y (float) (9.6.1.1.1)
z (2503)	nbi%nbi_unit(:)%wall%surface%rectangle(:)%point11%z (float) (9.6.1.1.1)
point10 (2340)	nbi%nbi_unit(:)%wall%surface%rectangle(:)%point10 (xyz0D) (9.6.1.3.506)
x (2503)	nbi%nbi_unit(:)%wall%surface%rectangle(:)%point10%x (float) (9.6.1.1.1)
y (2503)	nbi%nbi_unit(:)%wall%surface%rectangle(:)%point10%y (float) (9.6.1.1.1)
z (2503)	nbi%nbi_unit(:)%wall%surface%rectangle(:)%point10%z (float) (9.6.1.1.1)
collimator (2279)	nbi%nbi_unit(:)%wall%collimator(:) (flat_polygon) (9.6.1.3.200)
origin (2197)	nbi%nbi_unit(:)%wall%collimator(:)%origin (xyz0D) (9.6.1.3.506)
x (2503)	nbi%nbi_unit(:)%wall%collimator(:)%origin%x (float) (9.6.1.1.1)
y (2503)	nbi%nbi_unit(:)%wall%collimator(:)%origin%y (float) (9.6.1.1.1)
z (2503)	nbi%nbi_unit(:)%wall%collimator(:)%origin%z (float) (9.6.1.1.1)
basis1 (2197)	nbi%nbi_unit(:)%wall%collimator(:)%basis1 (xyz0D) (9.6.1.3.506)
x (2503)	nbi%nbi_unit(:)%wall%collimator(:)%basis1%x (float) (9.6.1.1.1)
y (2503)	nbi%nbi_unit(:)%wall%collimator(:)%basis1%y (float) (9.6.1.1.1)
z (2503)	nbi%nbi_unit(:)%wall%collimator(:)%basis1%z (float) (9.6.1.1.1)
basis2 (2197)	nbi%nbi_unit(:)%wall%collimator(:)%basis2 (xyz0D) (9.6.1.3.506)
x (2503)	nbi%nbi_unit(:)%wall%collimator(:)%basis2%x (float) (9.6.1.1.1)
y (2503)	nbi%nbi_unit(:)%wall%collimator(:)%basis2%y (float) (9.6.1.1.1)
z (2503)	nbi%nbi_unit(:)%wall%collimator(:)%basis2%z (float) (9.6.1.1.1)
coord1 (2197)	nbi%nbi_unit(:)%wall%collimator(:)%coord1 (vecflt.type) (9.6.1.2.13)
coord2 (2197)	nbi%nbi_unit(:)%wall%collimator(:)%coord2 (vecflt.type) (9.6.1.2.13)
codeparam (2281)	nbi%nbi_unit(:)%codeparam (codeparam) (9.6.1.3.77)
codename (2074)	nbi%nbi_unit(:)%codeparam%codename (string) (9.6.1.1.3)
codeversion (2074)	nbi%nbi_unit(:)%codeparam%codeversion (string) (9.6.1.1.3)
parameters (2074)	nbi%nbi_unit(:)%codeparam%parameters (string) (9.6.1.1.3)
output_diag (2074)	nbi%nbi_unit(:)%codeparam%output_diag (string) (9.6.1.1.3)
output_flag (2074)	nbi%nbi_unit(:)%codeparam%output_flag (integer) (9.6.1.1.2)
codeparam (2029)	nbi%codeparam (codeparam) (9.6.1.3.77)
codename (2074)	nbi%codeparam%codename (string) (9.6.1.1.3)
codeversion (2074)	nbi%codeparam%codeversion (string) (9.6.1.1.3)
parameters (2074)	nbi%codeparam%parameters (string) (9.6.1.1.3)
output_diag (2074)	nbi%codeparam%output_diag (string) (9.6.1.1.3)
output_flag (2074)	nbi%codeparam%output_flag (integer) (9.6.1.1.2)
time (2029)	nbi%time (float) (9.6.1.1.1)

### 9.6.2.1.31 neoclassic

datainfo (2030)	neoclassic%datainfo (datainfo) (9.6.1.3.133)
dataprovider (2130)	neoclassic%datainfo%dataprovider (string) (9.6.1.1.3)
putdate (2130)	neoclassic%datainfo%putdate (string) (9.6.1.1.3)
source (2130)	neoclassic%datainfo%source (string) (9.6.1.1.3)
comment (2130)	neoclassic%datainfo%comment (string) (9.6.1.1.3)
cocos (2130)	neoclassic%datainfo%cocos (integer) (9.6.1.1.2)
id (2130)	neoclassic%datainfo%id (integer) (9.6.1.1.2)
isref (2130)	neoclassic%datainfo%isref (integer) (9.6.1.1.2)
whatref (2130)	neoclassic%datainfo%whatref (whatref) (9.6.1.3.503)
user (2500)	neoclassic%datainfo%whatref%user (string) (9.6.1.1.3)
machine (2500)	neoclassic%datainfo%whatref%machine (string) (9.6.1.1.3)
shot (2500)	neoclassic%datainfo%whatref%shot (integer) (9.6.1.1.2)
run (2500)	neoclassic%datainfo%whatref%run (integer) (9.6.1.1.2)
occurrence (2500)	neoclassic%datainfo%whatref%occurrence (integer) (9.6.1.1.2)
putinfo (2130)	neoclassic%datainfo%putinfo (putinfo) (9.6.1.3.339)
putmethod (2336)	neoclassic%datainfo%putinfo%putmethod (string) (9.6.1.1.3)
putaccess (2336)	neoclassic%datainfo%putinfo%putaccess (string) (9.6.1.1.3)
putlocation (2336)	neoclassic%datainfo%putinfo%putlocation (string) (9.6.1.1.3)
rights (2336)	neoclassic%datainfo%putinfo%rights (string) (9.6.1.1.3)

rho_tor_norm (2030)	neoclassic%rho_tor_norm (vecflt_type) (9.6.1.2.13)
rho_tor (2030)	neoclassic%rho_tor (vecflt_type) (9.6.1.2.13)
composition (2030)	neoclassic%composition (composition) (9.6.1.3.95)
amn (2092)	neoclassic%composition%amn (vecflt_type) (9.6.1.2.13)
zn (2092)	neoclassic%composition%zn (vecflt_type) (9.6.1.2.13)
zion (2092)	neoclassic%composition%zion (vecflt_type) (9.6.1.2.13)
imp_flag (2092)	neoclassic%composition%imp_flag (vecint_type) (9.6.1.2.14)
label (2092)	neoclassic%composition%label (vecstring_type) (9.6.1.2.15)
desc_impur (2030)	neoclassic%desc_impur (desc_impur) (9.6.1.3.135)
amn (2132)	neoclassic%desc_impur%amn (vecflt_type) (9.6.1.2.13)
zn (2132)	neoclassic%desc_impur%zn (vecint_type) (9.6.1.2.14)
i_ion (2132)	neoclassic%desc_impur%i_ion (vecint_type) (9.6.1.2.14)
nzimp (2132)	neoclassic%desc_impur%nzimp (vecint_type) (9.6.1.2.14)
zmin (2132)	neoclassic%desc_impur%zmin (matint_type) (9.6.1.2.11)
zmax (2132)	neoclassic%desc_impur%zmax (matint_type) (9.6.1.2.11)
label (2132)	neoclassic%desc_impur%label (vecstring_type) (9.6.1.2.15)
compositions (2030)	neoclassic%compositions (compositions_type) (9.6.1.3.99)
nuclei (2096)	neoclassic%compositions%nuclei(:) (nuclei) (9.6.1.3.296)
zn (2293)	neoclassic%compositions%nuclei(:)%zn (float) (9.6.1.1.1)
amn (2293)	neoclassic%compositions%nuclei(:)%amn (float) (9.6.1.1.1)
label (2293)	neoclassic%compositions%nuclei(:)%label (string) (9.6.1.1.3)
ions (2096)	neoclassic%compositions%ions(:) (ions) (9.6.1.3.238)
nucindex (2235)	neoclassic%compositions%ions(:)%nucindex (integer) (9.6.1.1.2)
zion (2235)	neoclassic%compositions%ions(:)%zion (float) (9.6.1.1.1)
imp_flag (2235)	neoclassic%compositions%ions(:)%imp_flag (integer) (9.6.1.1.2)
label (2235)	neoclassic%compositions%ions(:)%label (string) (9.6.1.1.3)
impurities (2096)	neoclassic%compositions%impurities(:) (impurities) (9.6.1.3.235)
nucindex (2232)	neoclassic%compositions%impurities(:)%nucindex (integer) (9.6.1.1.2)
i_ion (2232)	neoclassic%compositions%impurities(:)%i_ion (integer) (9.6.1.1.2)
nzimp (2232)	neoclassic%compositions%impurities(:)%nzimp (integer) (9.6.1.1.2)
zmin (2232)	neoclassic%compositions%impurities(:)%zmin (vecflt_type) (9.6.1.2.13)
zmax (2232)	neoclassic%compositions%impurities(:)%zmax (vecflt_type) (9.6.1.2.13)
label (2232)	neoclassic%compositions%impurities(:)%label (vecstring_type) (9.6.1.2.15)
neutralscomp (2096)	neoclassic%compositions%neutralscomp(:) (composition_neutralscomp) (9.6.1.3.98)
neutcomp (2095)	neoclassic%compositions%neutralscomp(:)%neutcomp(:) (composition_neutrals_neutcomp) (9.6.1.3.97)
nucindex (2094)	neoclassic%compositions%neutralscomp(:)%neutcomp(:)%nucindex (integer) (9.6.1.1.2)
multiplicity (2094)	neoclassic%compositions%neutralscomp(:)%neutcomp(:)%multiplicity (integer) (9.6.1.1.2)
type (2095)	neoclassic%compositions%neutralscomp(:)%type(:) (identifier) (9.6.1.3.233)
id (2230)	neoclassic%compositions%neutralscomp(:)%type(:)%id (string) (9.6.1.1.3)
flag (2230)	neoclassic%compositions%neutralscomp(:)%type(:)%flag (integer) (9.6.1.1.2)
description (2230)	neoclassic%compositions%neutralscomp(:)%type(:)%description (string) (9.6.1.1.3)
label (2095)	neoclassic%compositions%neutralscomp(:)%label (string) (9.6.1.1.3)
edgespecies (2096)	neoclassic%compositions%edgespecies(:) (edgespecies) (9.6.1.3.183)
nucindex (2180)	neoclassic%compositions%edgespecies(:)%nucindex (integer) (9.6.1.1.2)
zmin (2180)	neoclassic%compositions%edgespecies(:)%zmin (float) (9.6.1.1.1)
zmax (2180)	neoclassic%compositions%edgespecies(:)%zmax (float) (9.6.1.1.1)
label (2180)	neoclassic%compositions%edgespecies(:)%label (string) (9.6.1.1.3)
signature (2096)	neoclassic%compositions%signature (identifier) (9.6.1.3.233)
id (2230)	neoclassic%compositions%signature%id (string) (9.6.1.1.3)
flag (2230)	neoclassic%compositions%signature%flag (integer) (9.6.1.1.2)
description (2230)	neoclassic%compositions%signature%description (string) (9.6.1.1.3)
ni_neo (2030)	neoclassic%ni_neo (transcoefion) (9.6.1.3.460)
diff_eff (2457)	neoclassic%ni_neo%diff_eff (matflt_type) (9.6.1.2.10)
vconv_eff (2457)	neoclassic%ni_neo%vconv_eff (matflt_type) (9.6.1.2.10)
exchange (2457)	neoclassic%ni_neo%exchange (matflt_type) (9.6.1.2.10)
qgi (2457)	neoclassic%ni_neo%qgi (matflt_type) (9.6.1.2.10)
flux (2457)	neoclassic%ni_neo%flux (matflt_type) (9.6.1.2.10)
off_diagonal (2457)	neoclassic%ni_neo%off_diagonal (offdiagion) (9.6.1.3.299)
d_ni (2296)	neoclassic%ni_neo%off_diagonal%d_ni (array3dflt_type) (9.6.1.2.2)
d_ti (2296)	neoclassic%ni_neo%off_diagonal%d_ti (array3dflt_type) (9.6.1.2.2)
d_ne (2296)	neoclassic%ni_neo%off_diagonal%d_ne (matflt_type) (9.6.1.2.10)



d.te (2296)	neoclassic%ni_neo%off_diagonal%d.te (matflt.type) (9.6.1.2.10)
d.epar (2296)	neoclassic%ni_neo%off_diagonal%d.epar (matflt.type) (9.6.1.2.10)
d.mtor (2296)	neoclassic%ni_neo%off_diagonal%d.mtor (matflt.type) (9.6.1.2.10)
flag (2457)	neoclassic%ni_neo%flag (integer) (9.6.1.1.2)
ne_neo (2030)	neoclassic%ne_neo (transcoefel) (9.6.1.3.458)
diff_eff (2455)	neoclassic%ne_neo%diff_eff (vecflt.type) (9.6.1.2.13)
vconv_eff (2455)	neoclassic%ne_neo%vconv_eff (vecflt.type) (9.6.1.2.13)
flux (2455)	neoclassic%ne_neo%flux (vecflt.type) (9.6.1.2.13)
off_diagonal (2455)	neoclassic%ne_neo%off_diagonal (offdiagel) (9.6.1.3.298)
d.ni (2295)	neoclassic%ne_neo%off_diagonal%d.ni (matflt.type) (9.6.1.2.10)
d.ti (2295)	neoclassic%ne_neo%off_diagonal%d.ti (matflt.type) (9.6.1.2.10)
d.ne (2295)	neoclassic%ne_neo%off_diagonal%d.ne (vecflt.type) (9.6.1.2.13)
d.te (2295)	neoclassic%ne_neo%off_diagonal%d.te (vecflt.type) (9.6.1.2.13)
d.epar (2295)	neoclassic%ne_neo%off_diagonal%d.epar (vecflt.type) (9.6.1.2.13)
d.mtor (2295)	neoclassic%ne_neo%off_diagonal%d.mtor (vecflt.type) (9.6.1.2.13)
flag (2455)	neoclassic%ne_neo%flag (integer) (9.6.1.1.2)
nz_neo (2030)	neoclassic%nz_neo(:) (transcoefimp) (9.6.1.3.459)
diff_eff (2456)	neoclassic%nz_neo(:)%diff_eff (matflt.type) (9.6.1.2.10)
vconv_eff (2456)	neoclassic%nz_neo(:)%vconv_eff (matflt.type) (9.6.1.2.10)
exchange (2456)	neoclassic%nz_neo(:)%exchange (matflt.type) (9.6.1.2.10)
flux (2456)	neoclassic%nz_neo(:)%flux (matflt.type) (9.6.1.2.10)
flag (2456)	neoclassic%nz_neo(:)%flag (integer) (9.6.1.1.2)
ti_neo (2030)	neoclassic%ti_neo (transcoefion) (9.6.1.3.460)
diff_eff (2457)	neoclassic%ti_neo%diff_eff (matflt.type) (9.6.1.2.10)
vconv_eff (2457)	neoclassic%ti_neo%vconv_eff (matflt.type) (9.6.1.2.10)
exchange (2457)	neoclassic%ti_neo%exchange (matflt.type) (9.6.1.2.10)
qgi (2457)	neoclassic%ti_neo%qgi (matflt.type) (9.6.1.2.10)
flux (2457)	neoclassic%ti_neo%flux (matflt.type) (9.6.1.2.10)
off_diagonal (2457)	neoclassic%ti_neo%off_diagonal (offdiagion) (9.6.1.3.299)
d.ni (2296)	neoclassic%ti_neo%off_diagonal%d.ni (array3dflt.type) (9.6.1.2.2)
d.ti (2296)	neoclassic%ti_neo%off_diagonal%d.ti (array3dflt.type) (9.6.1.2.2)
d.ne (2296)	neoclassic%ti_neo%off_diagonal%d.ne (matflt.type) (9.6.1.2.10)
d.te (2296)	neoclassic%ti_neo%off_diagonal%d.te (matflt.type) (9.6.1.2.10)
d.epar (2296)	neoclassic%ti_neo%off_diagonal%d.epar (matflt.type) (9.6.1.2.10)
d.mtor (2296)	neoclassic%ti_neo%off_diagonal%d.mtor (matflt.type) (9.6.1.2.10)
flag (2457)	neoclassic%ti_neo%flag (integer) (9.6.1.1.2)
te_neo (2030)	neoclassic%te_neo (transcoefel) (9.6.1.3.458)
diff_eff (2455)	neoclassic%te_neo%diff_eff (vecflt.type) (9.6.1.2.13)
vconv_eff (2455)	neoclassic%te_neo%vconv_eff (vecflt.type) (9.6.1.2.13)
flux (2455)	neoclassic%te_neo%flux (vecflt.type) (9.6.1.2.13)
off_diagonal (2455)	neoclassic%te_neo%off_diagonal (offdiagel) (9.6.1.3.298)
d.ni (2295)	neoclassic%te_neo%off_diagonal%d.ni (matflt.type) (9.6.1.2.10)
d.ti (2295)	neoclassic%te_neo%off_diagonal%d.ti (matflt.type) (9.6.1.2.10)
d.ne (2295)	neoclassic%te_neo%off_diagonal%d.ne (vecflt.type) (9.6.1.2.13)
d.te (2295)	neoclassic%te_neo%off_diagonal%d.te (vecflt.type) (9.6.1.2.13)
d.epar (2295)	neoclassic%te_neo%off_diagonal%d.epar (vecflt.type) (9.6.1.2.13)
d.mtor (2295)	neoclassic%te_neo%off_diagonal%d.mtor (vecflt.type) (9.6.1.2.13)
flag (2455)	neoclassic%te_neo%flag (integer) (9.6.1.1.2)
tz_neo (2030)	neoclassic%tz_neo(:) (transcoefimp) (9.6.1.3.459)
diff_eff (2456)	neoclassic%tz_neo(:)%diff_eff (matflt.type) (9.6.1.2.10)
vconv_eff (2456)	neoclassic%tz_neo(:)%vconv_eff (matflt.type) (9.6.1.2.10)
exchange (2456)	neoclassic%tz_neo(:)%exchange (matflt.type) (9.6.1.2.10)
flux (2456)	neoclassic%tz_neo(:)%flux (matflt.type) (9.6.1.2.10)
flag (2456)	neoclassic%tz_neo(:)%flag (integer) (9.6.1.1.2)
mtor_neo (2030)	neoclassic%mtor_neo (transcoefel) (9.6.1.3.458)
diff_eff (2455)	neoclassic%mtor_neo%diff_eff (vecflt.type) (9.6.1.2.13)
vconv_eff (2455)	neoclassic%mtor_neo%vconv_eff (vecflt.type) (9.6.1.2.13)
flux (2455)	neoclassic%mtor_neo%flux (vecflt.type) (9.6.1.2.13)
off_diagonal (2455)	neoclassic%mtor_neo%off_diagonal (offdiagel) (9.6.1.3.298)
d.ni (2295)	neoclassic%mtor_neo%off_diagonal%d.ni (matflt.type) (9.6.1.2.10)
d.ti (2295)	neoclassic%mtor_neo%off_diagonal%d.ti (matflt.type) (9.6.1.2.10)



d_ne (2295)	neoclassic%mtor_neo%off_diagonal%d_ne (vecflt_type) (9.6.1.2.13)
d_te (2295)	neoclassic%mtor_neo%off_diagonal%d_te (vecflt_type) (9.6.1.2.13)
d_epar (2295)	neoclassic%mtor_neo%off_diagonal%d_epar (vecflt_type) (9.6.1.2.13)
d_mtor (2295)	neoclassic%mtor_neo%off_diagonal%d_mtor (vecflt_type) (9.6.1.2.13)
flag (2455)	neoclassic%mtor_neo%flag (integer) (9.6.1.1.2)
sigma (2030)	neoclassic%sigma (vecflt_type) (9.6.1.2.13)
jboot (2030)	neoclassic%jboot (vecflt_type) (9.6.1.2.13)
er (2030)	neoclassic%er (vecflt_type) (9.6.1.2.13)
vpol (2030)	neoclassic%vpol (matflt_type) (9.6.1.2.10)
vtor (2030)	neoclassic%vtor (matflt_type) (9.6.1.2.10)
mach (2030)	neoclassic%mach (matflt_type) (9.6.1.2.10)
utheta.e (2030)	neoclassic%utheta.e (vecflt_type) (9.6.1.2.13)
utheta.i (2030)	neoclassic%utheta.i (matflt_type) (9.6.1.2.10)
fext (2030)	neoclassic%fext (array3dfilt_type) (9.6.1.2.2)
jext (2030)	neoclassic%jext (vecflt_type) (9.6.1.2.13)
time (2030)	neoclassic%time (float) (9.6.1.1.1)
codeparam (2030)	neoclassic%codeparam (codeparam) (9.6.1.3.77)
codename (2074)	neoclassic%codeparam%codename (string) (9.6.1.1.3)
codeversion (2074)	neoclassic%codeparam%codeversion (string) (9.6.1.1.3)
parameters (2074)	neoclassic%codeparam%parameters (string) (9.6.1.1.3)
output.diag (2074)	neoclassic%codeparam%output.diag (string) (9.6.1.1.3)
output.flag (2074)	neoclassic%codeparam%output.flag (integer) (9.6.1.1.2)

### 9.6.2.1.32 ntm

datainfo (2031)	ntm%datainfo (datainfo) (9.6.1.3.133)
dataprovider (2130)	ntm%datainfo%dataprovider (string) (9.6.1.1.3)
putdate (2130)	ntm%datainfo%putdate (string) (9.6.1.1.3)
source (2130)	ntm%datainfo%source (string) (9.6.1.1.3)
comment (2130)	ntm%datainfo%comment (string) (9.6.1.1.3)
cocos (2130)	ntm%datainfo%cocos (integer) (9.6.1.1.2)
id (2130)	ntm%datainfo%id (integer) (9.6.1.1.2)
isref (2130)	ntm%datainfo%isref (integer) (9.6.1.1.2)
whatref (2130)	ntm%datainfo%whatref (whatref) (9.6.1.3.503)
user (2500)	ntm%datainfo%whatref%user (string) (9.6.1.1.3)
machine (2500)	ntm%datainfo%whatref%machine (string) (9.6.1.1.3)
shot (2500)	ntm%datainfo%whatref%shot (integer) (9.6.1.1.2)
run (2500)	ntm%datainfo%whatref%run (integer) (9.6.1.1.2)
occurrence (2500)	ntm%datainfo%whatref%occurrence (integer) (9.6.1.1.2)
putinfo (2130)	ntm%datainfo%putinfo (putinfo) (9.6.1.3.339)
putmethod (2336)	ntm%datainfo%putinfo%putmethod (string) (9.6.1.1.3)
putaccess (2336)	ntm%datainfo%putinfo%putaccess (string) (9.6.1.1.3)
putlocation (2336)	ntm%datainfo%putinfo%putlocation (string) (9.6.1.1.3)
rights (2336)	ntm%datainfo%putinfo%rights (string) (9.6.1.1.3)
mode (2031)	ntm%mode(:) (ntm_mode) (9.6.1.3.290)
onset (2287)	ntm%mode(:)%onset (ntm_mode_onset) (9.6.1.3.295)
w (2292)	ntm%mode(:)%onset%w (float) (9.6.1.1.1)
time_onset (2292)	ntm%mode(:)%onset%time_onset (float) (9.6.1.1.1)
time_offset (2292)	ntm%mode(:)%onset%time_offset (float) (9.6.1.1.1)
phase (2292)	ntm%mode(:)%onset%phase (float) (9.6.1.1.1)
n (2292)	ntm%mode(:)%onset%n (integer) (9.6.1.1.2)
m (2292)	ntm%mode(:)%onset%m (integer) (9.6.1.1.2)
description (2292)	ntm%mode(:)%onset%description (string) (9.6.1.1.3)
full_evolution (2287)	ntm%mode(:)%full_evolution (ntm_mode_full_evolution) (9.6.1.3.293)
time_evolution (2290)	ntm%mode(:)%full_evolution%time_evolution (vecflt_type) (9.6.1.2.13)
w (2290)	ntm%mode(:)%full_evolution%w (vecflt_type) (9.6.1.2.13)
dwdt (2290)	ntm%mode(:)%full_evolution%dwdt (vecflt_type) (9.6.1.2.13)
phase (2290)	ntm%mode(:)%full_evolution%phase (vecflt_type) (9.6.1.2.13)
dphasedt (2290)	ntm%mode(:)%full_evolution%dphasedt (vecflt_type) (9.6.1.2.13)
frequency (2290)	ntm%mode(:)%full_evolution%frequency (vecflt_type) (9.6.1.2.13)
dfrequencydt (2290)	ntm%mode(:)%full_evolution%dfrequencydt (vecflt_type) (9.6.1.2.13)

island (2290)	ntm%mode(:)%full_evol%island (ntm_mode_full_evol_island) (9.6.1.3.294)
geometry (2291)	ntm%mode(:)%full_evol%island%geometry (matflt_type) (9.6.1.2.10)
coord_values (2291)	ntm%mode(:)%full_evol%island%coord_values (matflt_type) (9.6.1.2.10)
coord_desc (2291)	ntm%mode(:)%full_evol%island%coord_desc (string) (9.6.1.1.3)
n (2290)	ntm%mode(:)%full_evol%n (integer) (9.6.1.1.2)
m (2290)	ntm%mode(:)%full_evol%m (integer) (9.6.1.1.2)
deltaw_value (2290)	ntm%mode(:)%full_evol%deltaw_value (matflt_type) (9.6.1.2.10)
deltaw_name (2290)	ntm%mode(:)%full_evol%deltaw_name (vecstring_type) (9.6.1.2.15)
torque_value (2290)	ntm%mode(:)%full_evol%torque_value (matflt_type) (9.6.1.2.10)
torque_name (2290)	ntm%mode(:)%full_evol%torque_name (vecstring_type) (9.6.1.2.15)
delta_diff (2290)	ntm%mode(:)%full_evol%delta_diff (matflt_type) (9.6.1.2.10)
description (2290)	ntm%mode(:)%full_evol%description (string) (9.6.1.1.3)
rho_tor (2290)	ntm%mode(:)%full_evol%rho_tor (vecflt_type) (9.6.1.2.13)
evolution (2287)	ntm%mode(:)%evolution (ntm_mode_evolution) (9.6.1.3.291)
w (2288)	ntm%mode(:)%evolution%w (float) (9.6.1.1.1)
dwdt (2288)	ntm%mode(:)%evolution%dwdt (float) (9.6.1.1.1)
phase (2288)	ntm%mode(:)%evolution%phase (float) (9.6.1.1.1)
dphasedt (2288)	ntm%mode(:)%evolution%dphasedt (float) (9.6.1.1.1)
frequency (2288)	ntm%mode(:)%evolution%frequency (float) (9.6.1.1.1)
dfrequencydt (2288)	ntm%mode(:)%evolution%dfrequencydt (float) (9.6.1.1.1)
island (2288)	ntm%mode(:)%evolution%island (ntm_mode_evolution_island) (9.6.1.3.292)
geometry (2289)	ntm%mode(:)%evolution%island%geometry (vecflt_type) (9.6.1.2.13)
coord_values (2289)	ntm%mode(:)%evolution%island%coord_values (vecflt_type) (9.6.1.2.13)
coord_desc (2289)	ntm%mode(:)%evolution%island%coord_desc (string) (9.6.1.1.3)
n (2288)	ntm%mode(:)%evolution%n (integer) (9.6.1.1.2)
m (2288)	ntm%mode(:)%evolution%m (integer) (9.6.1.1.2)
deltaw_value (2288)	ntm%mode(:)%evolution%deltaw_value (vecflt_type) (9.6.1.2.13)
deltaw_name (2288)	ntm%mode(:)%evolution%deltaw_name (vecstring_type) (9.6.1.2.15)
torque_value (2288)	ntm%mode(:)%evolution%torque_value (vecflt_type) (9.6.1.2.13)
torque_name (2288)	ntm%mode(:)%evolution%torque_name (vecstring_type) (9.6.1.2.15)
delta_diff (2288)	ntm%mode(:)%evolution%delta_diff (vecflt_type) (9.6.1.2.13)
description (2288)	ntm%mode(:)%evolution%description (string) (9.6.1.1.3)
rho_tor (2288)	ntm%mode(:)%evolution%rho_tor (float) (9.6.1.1.1)
time (2031)	ntm%time (float) (9.6.1.1.1)
codeparam (2031)	ntm%codeparam (codeparam) (9.6.1.3.77)
codename (2074)	ntm%codeparam%codename (string) (9.6.1.1.3)
codeversion (2074)	ntm%codeparam%codeversion (string) (9.6.1.1.3)
parameters (2074)	ntm%codeparam%parameters (string) (9.6.1.1.3)
output_diag (2074)	ntm%codeparam%output_diag (string) (9.6.1.1.3)
output_flag (2074)	ntm%codeparam%output_flag (integer) (9.6.1.1.2)

### 9.6.2.1.33 orbit

datainfo (2032)	orbit%datainfo (datainfo) (9.6.1.3.133)
dataprovider (2130)	orbit%datainfo%dataprovider (string) (9.6.1.1.3)
putdate (2130)	orbit%datainfo%putdate (string) (9.6.1.1.3)
source (2130)	orbit%datainfo%source (string) (9.6.1.1.3)
comment (2130)	orbit%datainfo%comment (string) (9.6.1.1.3)
cocos (2130)	orbit%datainfo%cocos (integer) (9.6.1.1.2)
id (2130)	orbit%datainfo%id (integer) (9.6.1.1.2)
isref (2130)	orbit%datainfo%isref (integer) (9.6.1.1.2)
whatref (2130)	orbit%datainfo%whatref (whatref) (9.6.1.3.503)
user (2500)	orbit%datainfo%whatref%user (string) (9.6.1.1.3)
machine (2500)	orbit%datainfo%whatref%machine (string) (9.6.1.1.3)
shot (2500)	orbit%datainfo%whatref%shot (integer) (9.6.1.1.2)
run (2500)	orbit%datainfo%whatref%run (integer) (9.6.1.1.2)
occurrence (2500)	orbit%datainfo%whatref%occurrence (integer) (9.6.1.1.2)
putinfo (2130)	orbit%datainfo%putinfo (putinfo) (9.6.1.3.339)
putmethod (2336)	orbit%datainfo%putinfo%putmethod (string) (9.6.1.1.3)
putaccess (2336)	orbit%datainfo%putinfo%putaccess (string) (9.6.1.1.3)
putlocation (2336)	orbit%datainfo%putinfo%putlocation (string) (9.6.1.1.3)

rights (2336)	orbit%datainfo%putinfo%rights (string) (9.6.1.1.3)
com (2032)	orbit%com (com) (9.6.1.3.81)
amn (2078)	orbit%com%amn (float) (9.6.1.1.1)
zion (2078)	orbit%com%zion (float) (9.6.1.1.1)
energy (2078)	orbit%com%energy (vecflt.type) (9.6.1.2.13)
magn_mom (2078)	orbit%com%magn_mom (vecflt.type) (9.6.1.2.13)
p_phi (2078)	orbit%com%p_phi (vecflt.type) (9.6.1.2.13)
sigma (2078)	orbit%com%sigma (vecint.type) (9.6.1.2.14)
trace (2032)	orbit%trace (trace) (9.6.1.3.457)
time_orb (2454)	orbit%trace%time_orb (matflt.type) (9.6.1.2.10)
ntorb (2454)	orbit%trace%ntorb (vecint.type) (9.6.1.2.14)
r (2454)	orbit%trace%r (matflt.type) (9.6.1.2.10)
z (2454)	orbit%trace%z (matflt.type) (9.6.1.2.10)
phi (2454)	orbit%trace%phi (matflt.type) (9.6.1.2.10)
psi (2454)	orbit%trace%psi (matflt.type) (9.6.1.2.10)
theta_b (2454)	orbit%trace%theta_b (matflt.type) (9.6.1.2.10)
v_parallel (2454)	orbit%trace%v_parallel (matflt.type) (9.6.1.2.10)
v_perp (2454)	orbit%trace%v_perp (matflt.type) (9.6.1.2.10)
global_param (2032)	orbit%global_param (orbit_global_param) (9.6.1.3.301)
orbit_type (2298)	orbit%global_param%orbit_type (vecint.type) (9.6.1.2.14)
omega_b (2298)	orbit%global_param%omega_b (vecflt.type) (9.6.1.2.13)
omega_phi (2298)	orbit%global_param%omega_phi (vecflt.type) (9.6.1.2.13)
omega_c_av (2298)	orbit%global_param%omega_c_av (vecflt.type) (9.6.1.2.13)
special_pos (2298)	orbit%global_param%special_pos (orbit_special_pos) (9.6.1.3.304)
midplane (2301)	orbit%global_param%special_pos%midplane (orbit_midplane) (9.6.1.3.302)
outer (2299)	orbit%global_param%special_pos%midplane%outer (orbit_pos) (9.6.1.3.303)
r (2300)	orbit%global_param%special_pos%midplane%outer%r (vecflt.type) (9.6.1.2.13)
z (2300)	orbit%global_param%special_pos%midplane%outer%z (vecflt.type) (9.6.1.2.13)
phi (2300)	orbit%global_param%special_pos%midplane%outer%phi (vecflt.type) (9.6.1.2.13)
psi (2300)	orbit%global_param%special_pos%midplane%outer%psi (vecflt.type) (9.6.1.2.13)
theta_b (2300)	orbit%global_param%special_pos%midplane%outer%theta_b (vecflt.type) (9.6.1.2.13)
inner (2299)	orbit%global_param%special_pos%midplane%inner (orbit_pos) (9.6.1.3.303)
r (2300)	orbit%global_param%special_pos%midplane%inner%r (vecflt.type) (9.6.1.2.13)
z (2300)	orbit%global_param%special_pos%midplane%inner%z (vecflt.type) (9.6.1.2.13)
phi (2300)	orbit%global_param%special_pos%midplane%inner%phi (vecflt.type) (9.6.1.2.13)
psi (2300)	orbit%global_param%special_pos%midplane%inner%psi (vecflt.type) (9.6.1.2.13)
theta_b (2300)	orbit%global_param%special_pos%midplane%inner%theta_b (vecflt.type) (9.6.1.2.13)
turning_pts (2301)	orbit%global_param%special_pos%turning_pts (orbit_turning_pts) (9.6.1.3.305)
upper (2302)	orbit%global_param%special_pos%turning_pts%upper (orbit_pos) (9.6.1.3.303)
r (2300)	orbit%global_param%special_pos%turning_pts%upper%r (vecflt.type) (9.6.1.2.13)
z (2300)	orbit%global_param%special_pos%turning_pts%upper%z (vecflt.type) (9.6.1.2.13)
phi (2300)	orbit%global_param%special_pos%turning_pts%upper%phi (vecflt.type) (9.6.1.2.13)
psi (2300)	orbit%global_param%special_pos%turning_pts%upper%psi (vecflt.type) (9.6.1.2.13)
theta_b (2300)	orbit%global_param%special_pos%turning_pts%upper%theta_b (vecflt.type) (9.6.1.2.13)
lower (2302)	orbit%global_param%special_pos%turning_pts%lower (orbit_pos) (9.6.1.3.303)
r (2300)	orbit%global_param%special_pos%turning_pts%lower%r (vecflt.type) (9.6.1.2.13)
z (2300)	orbit%global_param%special_pos%turning_pts%lower%z (vecflt.type) (9.6.1.2.13)
phi (2300)	orbit%global_param%special_pos%turning_pts%lower%phi (vecflt.type) (9.6.1.2.13)
psi (2300)	orbit%global_param%special_pos%turning_pts%lower%psi (vecflt.type) (9.6.1.2.13)
theta_b (2300)	orbit%global_param%special_pos%turning_pts%lower%theta_b (vecflt.type) (9.6.1.2.13)
codeparam (2032)	orbit%codeparam (codeparam) (9.6.1.3.77)
codename (2074)	orbit%codeparam%codename (string) (9.6.1.1.3)
codeversion (2074)	orbit%codeparam%codeversion (string) (9.6.1.1.3)
parameters (2074)	orbit%codeparam%parameters (string) (9.6.1.1.3)
output_diag (2074)	orbit%codeparam%output_diag (string) (9.6.1.1.3)
output_flag (2074)	orbit%codeparam%output_flag (integer) (9.6.1.1.2)
time (2032)	orbit%time (float) (9.6.1.1.1)

### 9.6.2.1.34 pellets

datainfo (2033)	pellets%datainfo (datainfo) (9.6.1.3.133)
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dataprovder (2130)	pellets%datainfo%dataprovder (string) (9.6.1.1.3)
putdate (2130)	pellets%datainfo%putdate (string) (9.6.1.1.3)
source (2130)	pellets%datainfo%source (string) (9.6.1.1.3)
comment (2130)	pellets%datainfo%comment (string) (9.6.1.1.3)
cocos (2130)	pellets%datainfo%cocos (integer) (9.6.1.1.2)
id (2130)	pellets%datainfo%id (integer) (9.6.1.1.2)
isref (2130)	pellets%datainfo%isref (integer) (9.6.1.1.2)
whatref (2130)	pellets%datainfo%whatref (whatref) (9.6.1.3.503)
user (2500)	pellets%datainfo%whatref%user (string) (9.6.1.1.3)
machine (2500)	pellets%datainfo%whatref%machine (string) (9.6.1.1.3)
shot (2500)	pellets%datainfo%whatref%shot (integer) (9.6.1.1.2)
run (2500)	pellets%datainfo%whatref%run (integer) (9.6.1.1.2)
occurrence (2500)	pellets%datainfo%whatref%occurrence (integer) (9.6.1.1.2)
putinfo (2130)	pellets%datainfo%putinfo (putinfo) (9.6.1.3.339)
putmethod (2336)	pellets%datainfo%putinfo%putmethod (string) (9.6.1.1.3)
putaccess (2336)	pellets%datainfo%putinfo%putaccess (string) (9.6.1.1.3)
putlocation (2336)	pellets%datainfo%putinfo%putlocation (string) (9.6.1.1.3)
rights (2336)	pellets%datainfo%putinfo%rights (string) (9.6.1.1.3)
compositions (2033)	pellets%compositions (compositions_type) (9.6.1.3.99)
nuclei (2096)	pellets%compositions%nuclei(:) (nuclei) (9.6.1.3.296)
zn (2293)	pellets%compositions%nuclei(:)%zn (float) (9.6.1.1.1)
amn (2293)	pellets%compositions%nuclei(:)%amn (float) (9.6.1.1.1)
label (2293)	pellets%compositions%nuclei(:)%label (string) (9.6.1.1.3)
ions (2096)	pellets%compositions%ions(:) (ions) (9.6.1.3.238)
nucindex (2235)	pellets%compositions%ions(:)%nucindex (integer) (9.6.1.1.2)
zion (2235)	pellets%compositions%ions(:)%zion (float) (9.6.1.1.1)
imp_flag (2235)	pellets%compositions%ions(:)%imp_flag (integer) (9.6.1.1.2)
label (2235)	pellets%compositions%ions(:)%label (string) (9.6.1.1.3)
impurities (2096)	pellets%compositions%impurities(:) (impurities) (9.6.1.3.235)
nucindex (2232)	pellets%compositions%impurities(:)%nucindex (integer) (9.6.1.1.2)
i_ion (2232)	pellets%compositions%impurities(:)%i_ion (integer) (9.6.1.1.2)
nzimp (2232)	pellets%compositions%impurities(:)%nzimp (integer) (9.6.1.1.2)
zmin (2232)	pellets%compositions%impurities(:)%zmin (vecflt_type) (9.6.1.2.13)
zmax (2232)	pellets%compositions%impurities(:)%zmax (vecflt_type) (9.6.1.2.13)
label (2232)	pellets%compositions%impurities(:)%label (vecstring_type) (9.6.1.2.15)
neutralscomp (2096)	pellets%compositions%neutralscomp(:) (composition_neutralscomp) (9.6.1.3.98)
neutcomp (2095)	pellets%compositions%neutralscomp(:)%neutcomp(:) (composition_neutrals_neutcomp) (9.6.1.3.97)
nucindex (2094)	pellets%compositions%neutralscomp(:)%neutcomp(:)%nucindex (integer) (9.6.1.1.2)
multiplicity (2094)	pellets%compositions%neutralscomp(:)%neutcomp(:)%multiplicity (integer) (9.6.1.1.2)
type (2095)	pellets%compositions%neutralscomp(:)%type(:) (identifier) (9.6.1.3.233)
id (2230)	pellets%compositions%neutralscomp(:)%type(:)%id (string) (9.6.1.1.3)
flag (2230)	pellets%compositions%neutralscomp(:)%type(:)%flag (integer) (9.6.1.1.2)
description (2230)	pellets%compositions%neutralscomp(:)%type(:)%description (string) (9.6.1.1.3)
label (2095)	pellets%compositions%neutralscomp(:)%label (string) (9.6.1.1.3)
edgespecies (2096)	pellets%compositions%edgespecies(:) (edgespecies) (9.6.1.3.183)
nucindex (2180)	pellets%compositions%edgespecies(:)%nucindex (integer) (9.6.1.1.2)
zmin (2180)	pellets%compositions%edgespecies(:)%zmin (float) (9.6.1.1.1)
zmax (2180)	pellets%compositions%edgespecies(:)%zmax (float) (9.6.1.1.1)
label (2180)	pellets%compositions%edgespecies(:)%label (string) (9.6.1.1.3)
signature (2096)	pellets%compositions%signature (identifier) (9.6.1.3.233)
id (2230)	pellets%compositions%signature%id (string) (9.6.1.1.3)
flag (2230)	pellets%compositions%signature%flag (integer) (9.6.1.1.2)
description (2230)	pellets%compositions%signature%description (string) (9.6.1.1.3)
pellet (2033)	pellets%pellet(:) (pellet) (9.6.1.3.309)
shape (2306)	pellets%pellet(:)%shape (pellet_shape) (9.6.1.3.316)
type (2313)	pellets%pellet(:)%shape%type (identifier) (9.6.1.3.233)
id (2230)	pellets%pellet(:)%shape%type%id (string) (9.6.1.1.3)
flag (2230)	pellets%pellet(:)%shape%type%flag (integer) (9.6.1.1.2)
description (2230)	pellets%pellet(:)%shape%type%description (string) (9.6.1.1.3)
dimensions (2313)	pellets%pellet(:)%shape%dimensions (vecflt_type) (9.6.1.2.13)
elements (2306)	pellets%pellet(:)%elements (pellet_elements) (9.6.1.3.312)

nucindex (2309)	pellets%pellet(:)%elements%nucindex (vecint.type) (9.6.1.2.14)
density (2309)	pellets%pellet(:)%elements%density (vecflt.type) (9.6.1.2.13)
fraction (2309)	pellets%pellet(:)%elements%fraction (vecflt.type) (9.6.1.2.13)
subl.energy (2309)	pellets%pellet(:)%elements%subl.energy (vecflt.type) (9.6.1.2.13)
geometry (2306)	pellets%pellet(:)%geometry (pellet_geometry) (9.6.1.3.313)
pivot_point (2310)	pellets%pellet(:)%geometry%pivot_point (rzphi0D) (9.6.1.3.361)
r (2358)	pellets%pellet(:)%geometry%pivot_point%r (float) (9.6.1.1.1)
z (2358)	pellets%pellet(:)%geometry%pivot_point%z (float) (9.6.1.1.1)
phi (2358)	pellets%pellet(:)%geometry%pivot_point%phi (float) (9.6.1.1.1)
second_point (2310)	pellets%pellet(:)%geometry%second_point (rzphi0D) (9.6.1.3.361)
r (2358)	pellets%pellet(:)%geometry%second_point%r (float) (9.6.1.1.1)
z (2358)	pellets%pellet(:)%geometry%second_point%z (float) (9.6.1.1.1)
phi (2358)	pellets%pellet(:)%geometry%second_point%phi (float) (9.6.1.1.1)
velocity (2310)	pellets%pellet(:)%geometry%velocity (float) (9.6.1.1.1)
angles (2310)	pellets%pellet(:)%geometry%angles (pellet_angles) (9.6.1.3.310)
horizontal (2307)	pellets%pellet(:)%geometry%angles%horizontal (float) (9.6.1.1.1)
vertical (2307)	pellets%pellet(:)%geometry%angles%vertical (float) (9.6.1.1.1)
pathprofiles (2306)	pellets%pellet(:)%pathprofiles (pellet_pathprofiles) (9.6.1.3.315)
distance (2312)	pellets%pellet(:)%pathprofiles%distance (vecflt.type) (9.6.1.2.13)
rho_tor (2312)	pellets%pellet(:)%pathprofiles%rho_tor (vecflt.type) (9.6.1.2.13)
rho_pol (2312)	pellets%pellet(:)%pathprofiles%rho_pol (vecflt.type) (9.6.1.2.13)
velocity (2312)	pellets%pellet(:)%pathprofiles%velocity (vecflt.type) (9.6.1.2.13)
ne (2312)	pellets%pellet(:)%pathprofiles%ne (vecflt.type) (9.6.1.2.13)
te (2312)	pellets%pellet(:)%pathprofiles%te (vecflt.type) (9.6.1.2.13)
abl_rate (2312)	pellets%pellet(:)%pathprofiles%abl_rate (vecflt.type) (9.6.1.2.13)
abl_particles (2312)	pellets%pellet(:)%pathprofiles%abl_particles (vecflt.type) (9.6.1.2.13)
delta_drift (2312)	pellets%pellet(:)%pathprofiles%delta_drift (vecflt.type) (9.6.1.2.13)
position (2312)	pellets%pellet(:)%pathprofiles%position (rzphi1D) (9.6.1.3.362)
r (2359)	pellets%pellet(:)%pathprofiles%position%r (vecflt.type) (9.6.1.2.13)
z (2359)	pellets%pellet(:)%pathprofiles%position%z (vecflt.type) (9.6.1.2.13)
phi (2359)	pellets%pellet(:)%pathprofiles%position%phi (vecflt.type) (9.6.1.2.13)
deposition (2306)	pellets%pellet(:)%deposition (pellet_deposition) (9.6.1.3.311)
rho_tor (2308)	pellets%pellet(:)%deposition%rho_tor (vecflt.type) (9.6.1.2.13)
rho_pol (2308)	pellets%pellet(:)%deposition%rho_pol (vecflt.type) (9.6.1.2.13)
delta_ne (2308)	pellets%pellet(:)%deposition%delta_ne (vecflt.type) (9.6.1.2.13)
delta_te (2308)	pellets%pellet(:)%deposition%delta_te (vecflt.type) (9.6.1.2.13)
delta_ni (2308)	pellets%pellet(:)%deposition%delta_ni (matflt.type) (9.6.1.2.10)
delta_ti (2308)	pellets%pellet(:)%deposition%delta_ti (matflt.type) (9.6.1.2.10)
delta_vtor (2308)	pellets%pellet(:)%deposition%delta_vtor (matflt.type) (9.6.1.2.10)
impurity (2308)	pellets%pellet(:)%deposition%impurity(:) (pellet_impurity) (9.6.1.3.314)
delta_nz (2311)	pellets%pellet(:)%deposition%impurity(:)%delta_nz (matflt.type) (9.6.1.2.10)
codeparam (2033)	pellets%codeparam (codeparam) (9.6.1.3.77)
codename (2074)	pellets%codeparam%codename (string) (9.6.1.1.3)
codeversion (2074)	pellets%codeparam%codeversion (string) (9.6.1.1.3)
parameters (2074)	pellets%codeparam%parameters (string) (9.6.1.1.3)
output_diag (2074)	pellets%codeparam%output_diag (string) (9.6.1.1.3)
output_flag (2074)	pellets%codeparam%output_flag (integer) (9.6.1.1.2)
time (2033)	pellets%time (float) (9.6.1.1.1)

### 9.6.2.1.35 pfsystems

datainfo (2034)	pfsystems%datainfo (datainfo) (9.6.1.3.133)
dataprovider (2130)	pfsystems%datainfo%dataprovider (string) (9.6.1.1.3)
putdate (2130)	pfsystems%datainfo%putdate (string) (9.6.1.1.3)
source (2130)	pfsystems%datainfo%source (string) (9.6.1.1.3)
comment (2130)	pfsystems%datainfo%comment (string) (9.6.1.1.3)
cocos (2130)	pfsystems%datainfo%cocos (integer) (9.6.1.1.2)
id (2130)	pfsystems%datainfo%id (integer) (9.6.1.1.2)
isref (2130)	pfsystems%datainfo%isref (integer) (9.6.1.1.2)
whatref (2130)	pfsystems%datainfo%whatref (whatref) (9.6.1.3.503)
user (2500)	pfsystems%datainfo%whatref%user (string) (9.6.1.1.3)

machine (2500)	pfsystems%datainfo%whatref%machine (string) (9.6.1.1.3)
shot (2500)	pfsystems%datainfo%whatref%shot (integer) (9.6.1.1.2)
run (2500)	pfsystems%datainfo%whatref%run (integer) (9.6.1.1.2)
occurrence (2500)	pfsystems%datainfo%whatref%occurrence (integer) (9.6.1.1.2)
putinfo (2130)	pfsystems%datainfo%putinfo (putinfo) (9.6.1.3.339)
putmethod (2336)	pfsystems%datainfo%putinfo%putmethod (string) (9.6.1.1.3)
putaccess (2336)	pfsystems%datainfo%putinfo%putaccess (string) (9.6.1.1.3)
putlocation (2336)	pfsystems%datainfo%putinfo%putlocation (string) (9.6.1.1.3)
rights (2336)	pfsystems%datainfo%putinfo%rights (string) (9.6.1.1.3)
pfcoids (2034)	pfsystems%pfcoids (pfcoids) (9.6.1.3.319)
desc_pfcoids (2316)	pfsystems%pfcoids%desc_pfcoids (desc_pfcoids) (9.6.1.3.137)
name (2134)	pfsystems%pfcoids%desc_pfcoids%name (vecstring_type) (9.6.1.2.15)
id (2134)	pfsystems%pfcoids%desc_pfcoids%id (vecstring_type) (9.6.1.2.15)
res (2134)	pfsystems%pfcoids%desc_pfcoids%res (vecflt_type) (9.6.1.2.13)
emax (2134)	pfsystems%pfcoids%desc_pfcoids%emax (vecflt_type) (9.6.1.2.13)
structure_cs (2134)	pfsystems%pfcoids%desc_pfcoids%structure_cs (structure_cs) (9.6.1.3.414)
gaptf (2411)	pfsystems%pfcoids%desc_pfcoids%structure_cs%gaptf (float) (9.6.1.1.1)
ri (2411)	pfsystems%pfcoids%desc_pfcoids%structure_cs%ri (float) (9.6.1.1.1)
re (2411)	pfsystems%pfcoids%desc_pfcoids%structure_cs%re (float) (9.6.1.1.1)
jcable (2411)	pfsystems%pfcoids%desc_pfcoids%structure_cs%jcable (float) (9.6.1.1.1)
current_nom (2411)	pfsystems%pfcoids%desc_pfcoids%structure_cs%current_nom (float) (9.6.1.1.1)
sigma (2411)	pfsystems%pfcoids%desc_pfcoids%structure_cs%sigma (float) (9.6.1.1.1)
tiso (2411)	pfsystems%pfcoids%desc_pfcoids%structure_cs%tiso (float) (9.6.1.1.1)
nlay (2411)	pfsystems%pfcoids%desc_pfcoids%structure_cs%nlay (float) (9.6.1.1.1)
pol_flux_cs (2134)	pfsystems%pfcoids%desc_pfcoids%pol_flux_cs (float) (9.6.1.1.1)
nelement (2134)	pfsystems%pfcoids%desc_pfcoids%nelement (vecint_type) (9.6.1.2.14)
pfelement (2134)	pfsystems%pfcoids%desc_pfcoids%pfelement (pfelement) (9.6.1.3.320)
name (2317)	pfsystems%pfcoids%desc_pfcoids%pfelement%name (vecstring_type) (9.6.1.2.15)
id (2317)	pfsystems%pfcoids%desc_pfcoids%pfelement%id (vecstring_type) (9.6.1.2.15)
turnsign (2317)	pfsystems%pfcoids%desc_pfcoids%pfelement%turnsign (matflt_type) (9.6.1.2.10)
area (2317)	pfsystems%pfcoids%desc_pfcoids%pfelement%area (matflt_type) (9.6.1.2.10)
pfgeometry (2317)	pfsystems%pfcoids%desc_pfcoids%pfelement%pfgeometry (pfgeometry) (9.6.1.3.321)
type (2318)	pfsystems%pfcoids%desc_pfcoids%pfelement%pfgeometry%type (matint_type) (9.6.1.2.11)
npoints (2318)	pfsystems%pfcoids%desc_pfcoids%pfelement%pfgeometry%npoints (matint_type) (9.6.1.2.11)
rzcoordinate (2318)	pfsystems%pfcoids%desc_pfcoids%pfelement%pfgeometry%rzcoordinate (rz3D) (9.6.1.3.360)
r (2357)	pfsystems%pfcoids%desc_pfcoids%pfelement%pfgeometry%rzcoordinate%r (array3dflt_type) (9.6.1.2.2)
z (2357)	pfsystems%pfcoids%desc_pfcoids%pfelement%pfgeometry%rzcoordinate%z (array3dflt_type) (9.6.1.2.2)
rzdrdz (2318)	pfsystems%pfcoids%desc_pfcoids%pfelement%pfgeometry%rzdrdz (array3dflt_type) (9.6.1.2.2)
coilcurrent (2316)	pfsystems%pfcoids%coilcurrent (exp1D) (9.6.1.3.195)
value (2192)	pfsystems%pfcoids%coilcurrent%value (vecflt_type) (9.6.1.2.13)
abserror (2192)	pfsystems%pfcoids%coilcurrent%abserror (vecflt_type) (9.6.1.2.13)
relerror (2192)	pfsystems%pfcoids%coilcurrent%relerror (vecflt_type) (9.6.1.2.13)
coilvoltage (2316)	pfsystems%pfcoids%coilvoltage (exp1D) (9.6.1.3.195)
value (2192)	pfsystems%pfcoids%coilvoltage%value (vecflt_type) (9.6.1.2.13)
abserror (2192)	pfsystems%pfcoids%coilvoltage%abserror (vecflt_type) (9.6.1.2.13)
relerror (2192)	pfsystems%pfcoids%coilvoltage%relerror (vecflt_type) (9.6.1.2.13)
p_cryo (2316)	pfsystems%pfcoids%p_cryo (float) (9.6.1.1.1)
p_nh (2316)	pfsystems%pfcoids%p_nh (vecflt_type) (9.6.1.2.13)
pfpasive (2034)	pfsystems%pfpasive (pfpasive) (9.6.1.3.323)
name (2320)	pfsystems%pfpasive%name (vecstring_type) (9.6.1.2.15)
area (2320)	pfsystems%pfpasive%area (vecflt_type) (9.6.1.2.13)
res (2320)	pfsystems%pfpasive%res (vecflt_type) (9.6.1.2.13)
eta (2320)	pfsystems%pfpasive%eta (vecflt_type) (9.6.1.2.13)
current (2320)	pfsystems%pfpasive%current (pfpasive_current) (9.6.1.3.324)
toroidal (2321)	pfsystems%pfpasive%current%toroidal (exp1D) (9.6.1.3.195)
value (2192)	pfsystems%pfpasive%current%toroidal%value (vecflt_type) (9.6.1.2.13)
abserror (2192)	pfsystems%pfpasive%current%toroidal%abserror (vecflt_type) (9.6.1.2.13)
relerror (2192)	pfsystems%pfpasive%current%toroidal%relerror (vecflt_type) (9.6.1.2.13)
poloidal (2321)	pfsystems%pfpasive%current%poloidal (exp1D) (9.6.1.3.195)



value (2192)	pfsystems%pfpassive%current%poloidal%value (vecflt_type) (9.6.1.2.13)
abserror (2192)	pfsystems%pfpassive%current%poloidal%abserror (vecflt_type) (9.6.1.2.13)
releror (2192)	pfsystems%pfpassive%current%poloidal%releror (vecflt_type) (9.6.1.2.13)
pfpageometry (2320)	pfsystems%pfpassive%pfpageometry (pfpageometry) (9.6.1.3.322)
type (2319)	pfsystems%pfpassive%pfpageometry%type (vecint_type) (9.6.1.2.14)
npoints (2319)	pfsystems%pfpassive%pfpageometry%npoints (vecint_type) (9.6.1.2.14)
rzcoordinate (2319)	pfsystems%pfpassive%pfpageometry%rzcoordinate (rz2D) (9.6.1.3.359)
r (2356)	pfsystems%pfpassive%pfpageometry%rzcoordinate%r (matflt_type) (9.6.1.2.10)
z (2356)	pfsystems%pfpassive%pfpageometry%rzcoordinate%z (matflt_type) (9.6.1.2.10)
rzdrdz (2319)	pfsystems%pfpassive%pfpageometry%rzdrdz (matflt_type) (9.6.1.2.10)
pfcircuits (2034)	pfsystems%pfcircuits (pfcircuits) (9.6.1.3.318)
name (2315)	pfsystems%pfcircuits%name (vecstring_type) (9.6.1.2.15)
id (2315)	pfsystems%pfcircuits%id (vecstring_type) (9.6.1.2.15)
type (2315)	pfsystems%pfcircuits%type (vecstring_type) (9.6.1.2.15)
nnodes (2315)	pfsystems%pfcircuits%nnodes (vecint_type) (9.6.1.2.14)
connections (2315)	pfsystems%pfcircuits%connections (array3dint_type) (9.6.1.2.3)
pfsupplies (2034)	pfsystems%pfsupplies (pfsupplies) (9.6.1.3.325)
desc_supply (2322)	pfsystems%pfsupplies%desc_supply (desc_supply) (9.6.1.3.138)
name (2135)	pfsystems%pfsupplies%desc_supply%name (vecstring_type) (9.6.1.2.15)
id (2135)	pfsystems%pfsupplies%desc_supply%id (vecstring_type) (9.6.1.2.15)
type (2135)	pfsystems%pfsupplies%desc_supply%type (vecstring_type) (9.6.1.2.15)
delay (2135)	pfsystems%pfsupplies%desc_supply%delay (vecflt_type) (9.6.1.2.13)
filter (2135)	pfsystems%pfsupplies%desc_supply%filter (filter) (9.6.1.3.199)
num (2196)	pfsystems%pfsupplies%desc_supply%filter%num (matflt_type) (9.6.1.2.10)
den (2196)	pfsystems%pfsupplies%desc_supply%filter%den (matflt_type) (9.6.1.2.10)
imin (2135)	pfsystems%pfsupplies%desc_supply%imin (vecflt_type) (9.6.1.2.13)
imax (2135)	pfsystems%pfsupplies%desc_supply%imax (vecflt_type) (9.6.1.2.13)
res (2135)	pfsystems%pfsupplies%desc_supply%res (vecflt_type) (9.6.1.2.13)
umin (2135)	pfsystems%pfsupplies%desc_supply%umin (vecflt_type) (9.6.1.2.13)
umax (2135)	pfsystems%pfsupplies%desc_supply%umax (vecflt_type) (9.6.1.2.13)
emax (2135)	pfsystems%pfsupplies%desc_supply%emax (vecflt_type) (9.6.1.2.13)
voltage (2322)	pfsystems%pfsupplies%voltage (exp1D) (9.6.1.3.195)
value (2192)	pfsystems%pfsupplies%voltage%value (vecflt_type) (9.6.1.2.13)
abserror (2192)	pfsystems%pfsupplies%voltage%abserror (vecflt_type) (9.6.1.2.13)
releror (2192)	pfsystems%pfsupplies%voltage%releror (vecflt_type) (9.6.1.2.13)
current (2322)	pfsystems%pfsupplies%current (exp1D) (9.6.1.3.195)
value (2192)	pfsystems%pfsupplies%current%value (vecflt_type) (9.6.1.2.13)
abserror (2192)	pfsystems%pfsupplies%current%abserror (vecflt_type) (9.6.1.2.13)
releror (2192)	pfsystems%pfsupplies%current%releror (vecflt_type) (9.6.1.2.13)
codeparam (2034)	pfsystems%codeparam (codeparam) (9.6.1.3.77)
codename (2074)	pfsystems%codeparam%codename (string) (9.6.1.1.3)
codeversion (2074)	pfsystems%codeparam%codeversion (string) (9.6.1.1.3)
parameters (2074)	pfsystems%codeparam%parameters (string) (9.6.1.1.3)
output_diag (2074)	pfsystems%codeparam%output_diag (string) (9.6.1.1.3)
output_flag (2074)	pfsystems%codeparam%output_flag (integer) (9.6.1.1.2)
time (2034)	pfsystems%time (float) (9.6.1.1.1)

### 9.6.2.1.36 polardiag

datainfo (2249)	lineintegraldiag%datainfo (datainfo) (9.6.1.3.133)
dataprovider (2130)	lineintegraldiag%datainfo%dataprovider (string) (9.6.1.1.3)
putdate (2130)	lineintegraldiag%datainfo%putdate (string) (9.6.1.1.3)
source (2130)	lineintegraldiag%datainfo%source (string) (9.6.1.1.3)
comment (2130)	lineintegraldiag%datainfo%comment (string) (9.6.1.1.3)
cocos (2130)	lineintegraldiag%datainfo%cocos (integer) (9.6.1.1.2)
id (2130)	lineintegraldiag%datainfo%id (integer) (9.6.1.1.2)
isref (2130)	lineintegraldiag%datainfo%isref (integer) (9.6.1.1.2)
whatref (2130)	lineintegraldiag%datainfo%whatref (whatref) (9.6.1.3.503)
user (2500)	lineintegraldiag%datainfo%whatref%user (string) (9.6.1.1.3)
machine (2500)	lineintegraldiag%datainfo%whatref%machine (string) (9.6.1.1.3)
shot (2500)	lineintegraldiag%datainfo%whatref%shot (integer) (9.6.1.1.2)



run (2500)	lineintegraldiag%datainfo%whatref%run (integer) (9.6.1.1.2)
occurrence (2500)	lineintegraldiag%datainfo%whatref%occurrence (integer) (9.6.1.1.2)
putinfo (2130)	lineintegraldiag%datainfo%putinfo (putinfo) (9.6.1.3.339)
putmethod (2336)	lineintegraldiag%datainfo%putinfo%putmethod (string) (9.6.1.1.3)
putaccess (2336)	lineintegraldiag%datainfo%putinfo%putaccess (string) (9.6.1.1.3)
putlocation (2336)	lineintegraldiag%datainfo%putinfo%putlocation (string) (9.6.1.1.3)
rights (2336)	lineintegraldiag%datainfo%putinfo%rights (string) (9.6.1.1.3)
expression (2249)	lineintegraldiag%expression (string) (9.6.1.1.3)
setup_line (2249)	lineintegraldiag%setup_line (setup_line) (9.6.1.3.393)
pivot_point (2390)	lineintegraldiag%setup_line%pivot_point (rzphiID) (9.6.1.3.362)
r (2359)	lineintegraldiag%setup_line%pivot_point%r (vecflt.type) (9.6.1.2.13)
z (2359)	lineintegraldiag%setup_line%pivot_point%z (vecflt.type) (9.6.1.2.13)
phi (2359)	lineintegraldiag%setup_line%pivot_point%phi (vecflt.type) (9.6.1.2.13)
horchordang1 (2390)	lineintegraldiag%setup_line%horchordang1 (vecflt.type) (9.6.1.2.13)
verchordang1 (2390)	lineintegraldiag%setup_line%verchordang1 (vecflt.type) (9.6.1.2.13)
width (2390)	lineintegraldiag%setup_line%width (vecflt.type) (9.6.1.2.13)
second_point (2390)	lineintegraldiag%setup_line%second_point (rzphiID) (9.6.1.3.362)
r (2359)	lineintegraldiag%setup_line%second_point%r (vecflt.type) (9.6.1.2.13)
z (2359)	lineintegraldiag%setup_line%second_point%z (vecflt.type) (9.6.1.2.13)
phi (2359)	lineintegraldiag%setup_line%second_point%phi (vecflt.type) (9.6.1.2.13)
horchordang2 (2390)	lineintegraldiag%setup_line%horchordang2 (vecflt.type) (9.6.1.2.13)
verchordang2 (2390)	lineintegraldiag%setup_line%verchordang2 (vecflt.type) (9.6.1.2.13)
third_point (2390)	lineintegraldiag%setup_line%third_point (rzphiID) (9.6.1.3.362)
r (2359)	lineintegraldiag%setup_line%third_point%r (vecflt.type) (9.6.1.2.13)
z (2359)	lineintegraldiag%setup_line%third_point%z (vecflt.type) (9.6.1.2.13)
phi (2359)	lineintegraldiag%setup_line%third_point%phi (vecflt.type) (9.6.1.2.13)
nchordpoints (2390)	lineintegraldiag%setup_line%nchordpoints (integer) (9.6.1.1.2)
measure (2249)	lineintegraldiag%measure (expID) (9.6.1.3.195)
value (2192)	lineintegraldiag%measure%value (vecflt.type) (9.6.1.2.13)
abserror (2192)	lineintegraldiag%measure%abserror (vecflt.type) (9.6.1.2.13)
relerror (2192)	lineintegraldiag%measure%relerror (vecflt.type) (9.6.1.2.13)
codeparam (2249)	lineintegraldiag%codeparam (codeparam) (9.6.1.3.77)
codename (2074)	lineintegraldiag%codeparam%codename (string) (9.6.1.1.3)
codeversion (2074)	lineintegraldiag%codeparam%codeversion (string) (9.6.1.1.3)
parameters (2074)	lineintegraldiag%codeparam%parameters (string) (9.6.1.1.3)
output_diag (2074)	lineintegraldiag%codeparam%output_diag (string) (9.6.1.1.3)
output_flag (2074)	lineintegraldiag%codeparam%output_flag (integer) (9.6.1.1.2)
time (2249)	lineintegraldiag%time (float) (9.6.1.1.1)

### 9.6.2.1.37 power\_conv

datainfo (2036)	power_conv%datainfo (datainfo) (9.6.1.3.133)
dataprovider (2130)	power_conv%datainfo%dataprovider (string) (9.6.1.1.3)
putdate (2130)	power_conv%datainfo%putdate (string) (9.6.1.1.3)
source (2130)	power_conv%datainfo%source (string) (9.6.1.1.3)
comment (2130)	power_conv%datainfo%comment (string) (9.6.1.1.3)
cocos (2130)	power_conv%datainfo%cocos (integer) (9.6.1.1.2)
id (2130)	power_conv%datainfo%id (integer) (9.6.1.1.2)
isref (2130)	power_conv%datainfo%isref (integer) (9.6.1.1.2)
whatref (2130)	power_conv%datainfo%whatref (whatref) (9.6.1.3.503)
user (2500)	power_conv%datainfo%whatref%user (string) (9.6.1.1.3)
machine (2500)	power_conv%datainfo%whatref%machine (string) (9.6.1.1.3)
shot (2500)	power_conv%datainfo%whatref%shot (integer) (9.6.1.1.2)
run (2500)	power_conv%datainfo%whatref%run (integer) (9.6.1.1.2)
occurrence (2500)	power_conv%datainfo%whatref%occurrence (integer) (9.6.1.1.2)
putinfo (2130)	power_conv%datainfo%putinfo (putinfo) (9.6.1.3.339)
putmethod (2336)	power_conv%datainfo%putinfo%putmethod (string) (9.6.1.1.3)
putaccess (2336)	power_conv%datainfo%putinfo%putaccess (string) (9.6.1.1.3)
putlocation (2336)	power_conv%datainfo%putinfo%putlocation (string) (9.6.1.1.3)
rights (2336)	power_conv%datainfo%putinfo%rights (string) (9.6.1.1.3)
cycle_type (2036)	power_conv%cycle_type (string) (9.6.1.1.3)

circuits (2036)	power_conv%circuits(:) (circuits) (9.6.1.3.74)
component (2071)	power_conv%circuits(:)%component(:) (power_conv_component) (9.6.1.3.333)
name (2330)	power_conv%circuits(:)%component(:)%name (string) (9.6.1.1.3)
temp_in (2330)	power_conv%circuits(:)%component(:)%temp_in (float) (9.6.1.1.1)
temp_out (2330)	power_conv%circuits(:)%component(:)%temp_out (float) (9.6.1.1.1)
press_in (2330)	power_conv%circuits(:)%component(:)%press_in (float) (9.6.1.1.1)
press_out (2330)	power_conv%circuits(:)%component(:)%press_out (float) (9.6.1.1.1)
power (2330)	power_conv%circuits(:)%component(:)%power (float) (9.6.1.1.1)
flow (2330)	power_conv%circuits(:)%component(:)%flow (float) (9.6.1.1.1)
power_net (2071)	power_conv%circuits(:)%power_net (float) (9.6.1.1.1)
power_int (2071)	power_conv%circuits(:)%power_int (float) (9.6.1.1.1)
efficiency (2071)	power_conv%circuits(:)%efficiency (float) (9.6.1.1.1)
power_recirc (2036)	power_conv%power_recirc (float) (9.6.1.1.1)
power_net (2036)	power_conv%power_net (float) (9.6.1.1.1)
power_int (2036)	power_conv%power_int (float) (9.6.1.1.1)
efficiency (2036)	power_conv%efficiency (float) (9.6.1.1.1)
codeparam (2036)	power_conv%codeparam (codeparam) (9.6.1.3.77)
codename (2074)	power_conv%codeparam%codename (string) (9.6.1.1.3)
codeversion (2074)	power_conv%codeparam%codeversion (string) (9.6.1.1.3)
parameters (2074)	power_conv%codeparam%parameters (string) (9.6.1.1.3)
output_diag (2074)	power_conv%codeparam%output_diag (string) (9.6.1.1.3)
output_flag (2074)	power_conv%codeparam%output_flag (integer) (9.6.1.1.2)
time (2036)	power_conv%time (float) (9.6.1.1.1)

### 9.6.2.1.38 reflectomet

datainfo (2037)	reflectomet%datainfo (datainfo) (9.6.1.3.133)
dataprovider (2130)	reflectomet%datainfo%dataprovider (string) (9.6.1.1.3)
putdate (2130)	reflectomet%datainfo%putdate (string) (9.6.1.1.3)
source (2130)	reflectomet%datainfo%source (string) (9.6.1.1.3)
comment (2130)	reflectomet%datainfo%comment (string) (9.6.1.1.3)
cocos (2130)	reflectomet%datainfo%cocos (integer) (9.6.1.1.2)
id (2130)	reflectomet%datainfo%id (integer) (9.6.1.1.2)
isref (2130)	reflectomet%datainfo%isref (integer) (9.6.1.1.2)
whatref (2130)	reflectomet%datainfo%whatref (whatref) (9.6.1.3.503)
user (2500)	reflectomet%datainfo%whatref%user (string) (9.6.1.1.3)
machine (2500)	reflectomet%datainfo%whatref%machine (string) (9.6.1.1.3)
shot (2500)	reflectomet%datainfo%whatref%shot (integer) (9.6.1.1.2)
run (2500)	reflectomet%datainfo%whatref%run (integer) (9.6.1.1.2)
occurrence (2500)	reflectomet%datainfo%whatref%occurrence (integer) (9.6.1.1.2)
putinfo (2130)	reflectomet%datainfo%putinfo (putinfo) (9.6.1.3.339)
putmethod (2336)	reflectomet%datainfo%putinfo%putmethod (string) (9.6.1.1.3)
putaccess (2336)	reflectomet%datainfo%putinfo%putaccess (string) (9.6.1.1.3)
putlocation (2336)	reflectomet%datainfo%putinfo%putlocation (string) (9.6.1.1.3)
rights (2336)	reflectomet%datainfo%putinfo%rights (string) (9.6.1.1.3)
refl_receive (2037)	reflectomet%refl_receive(:) (refl_receive) (9.6.1.3.346)
name (2343)	reflectomet%refl_receive(:)%name (string) (9.6.1.1.3)
raw_signal (2343)	reflectomet%refl_receive(:)%raw_signal (t.series_real) (9.6.1.3.416)
time_wind (2413)	reflectomet%refl_receive(:)%raw_signal%time_wind (vecflt_type) (9.6.1.2.13)
values (2413)	reflectomet%refl_receive(:)%raw_signal%values (vecflt_type) (9.6.1.2.13)
io_signal (2343)	reflectomet%refl_receive(:)%io_signal (t.series_real) (9.6.1.3.416)
time_wind (2413)	reflectomet%refl_receive(:)%io_signal%time_wind (vecflt_type) (9.6.1.2.13)
values (2413)	reflectomet%refl_receive(:)%io_signal%values (vecflt_type) (9.6.1.2.13)
iq_receiver (2343)	reflectomet%refl_receive(:)%iq_receiver (t.series_cplx) (9.6.1.3.415)
time_wind (2412)	reflectomet%refl_receive(:)%iq_receiver%time_wind (vecflt_type) (9.6.1.2.13)
values_re (2412)	reflectomet%refl_receive(:)%iq_receiver%values_re (vecflt_type) (9.6.1.2.13)
values_im (2412)	reflectomet%refl_receive(:)%iq_receiver%values_im (vecflt_type) (9.6.1.2.13)
antenna_ind (2343)	reflectomet%refl_receive(:)%antenna_ind (integer) (9.6.1.1.2)
antennas (2037)	reflectomet%antennas(:) (reflectometry_antennas) (9.6.1.3.347)
name (2344)	reflectomet%antennas(:)%name (string) (9.6.1.1.3)
type (2344)	reflectomet%antennas(:)%type (identifier) (9.6.1.3.233)

id (2230)	reflectomet%antennas(:)%type%id (string) (9.6.1.1.3)
flag (2230)	reflectomet%antennas(:)%type%flag (integer) (9.6.1.1.2)
description (2230)	reflectomet%antennas(:)%type%description (string) (9.6.1.1.3)
origin (2344)	reflectomet%antennas(:)%origin (origin) (9.6.1.3.306)
refpos (2303)	reflectomet%antennas(:)%origin%refpos (rzphi0D) (9.6.1.3.361)
r (2358)	reflectomet%antennas(:)%origin%refpos%r (float) (9.6.1.1.1)
z (2358)	reflectomet%antennas(:)%origin%refpos%z (float) (9.6.1.1.1)
phi (2358)	reflectomet%antennas(:)%origin%refpos%phi (float) (9.6.1.1.1)
alpha (2303)	reflectomet%antennas(:)%origin%alpha (float) (9.6.1.1.1)
beta (2303)	reflectomet%antennas(:)%origin%beta (float) (9.6.1.1.1)
gamma (2303)	reflectomet%antennas(:)%origin%gamma (float) (9.6.1.1.1)
radfield (2344)	reflectomet%antennas(:)%radfield (reflectometry_radfield) (9.6.1.3.348)
type (2345)	reflectomet%antennas(:)%radfield%type (identifier) (9.6.1.3.233)
id (2230)	reflectomet%antennas(:)%radfield%type%id (string) (9.6.1.1.3)
flag (2230)	reflectomet%antennas(:)%radfield%type%flag (integer) (9.6.1.1.2)
description (2230)	reflectomet%antennas(:)%radfield%type%description (string) (9.6.1.1.3)
position (2345)	reflectomet%antennas(:)%radfield%position (vecflt_type) (9.6.1.2.13)
gaussian (2345)	reflectomet%antennas(:)%radfield%gaussian(:) (reflectometry_radfield_gaussian) (9.6.1.3.349)
aperture (2346)	reflectomet%antennas(:)%radfield%gaussian(:)%aperture (simp_apert) (9.6.1.3.397)
type (2394)	reflectomet%antennas(:)%radfield%gaussian(:)%aperture%type (identifier) (9.6.1.3.233)
id (2230)	reflectomet%antennas(:)%radfield%gaussian(:)%aperture%type%id (string) (9.6.1.1.3)
flag (2230)	reflectomet%antennas(:)%radfield%gaussian(:)%aperture%type%flag (integer) (9.6.1.1.2)
description (2230)	reflectomet%antennas(:)%radfield%gaussian(:)%aperture%type%description (string) (9.6.1.1.3)
sizes (2394)	reflectomet%antennas(:)%radfield%gaussian(:)%aperture%sizes (vecflt_type) (9.6.1.2.13)
angle (2394)	reflectomet%antennas(:)%radfield%gaussian(:)%aperture%angle (float) (9.6.1.1.1)
waistsize (2346)	reflectomet%antennas(:)%radfield%gaussian(:)%waistsize (vecflt_type) (9.6.1.2.13)
waistzpos (2346)	reflectomet%antennas(:)%radfield%gaussian(:)%waistzpos (vecflt_type) (9.6.1.2.13)
tiltangle (2346)	reflectomet%antennas(:)%radfield%gaussian(:)%tiltangle (vecflt_type) (9.6.1.2.13)
polar_angle (2346)	reflectomet%antennas(:)%radfield%gaussian(:)%polar_angle (vecflt_type) (9.6.1.2.13)
frequency (2346)	reflectomet%antennas(:)%radfield%gaussian(:)%frequency (float) (9.6.1.1.1)
efield (2345)	reflectomet%antennas(:)%radfield%efield(:) (reflectometry_radfield_efield) (9.6.1.3.350)
grid2d (2347)	reflectomet%antennas(:)%radfield%efield(:)%grid2d (reggrid) (9.6.1.3.351)
dim1 (2348)	reflectomet%antennas(:)%radfield%efield(:)%grid2d%dim1 (vecflt_type) (9.6.1.2.13)
dim2 (2348)	reflectomet%antennas(:)%radfield%efield(:)%grid2d%dim2 (vecflt_type) (9.6.1.2.13)
e1 (2347)	reflectomet%antennas(:)%radfield%efield(:)%e1 (matcplx_type) (9.6.1.2.9)
e2 (2347)	reflectomet%antennas(:)%radfield%efield(:)%e2 (matcplx_type) (9.6.1.2.9)
frequency (2347)	reflectomet%antennas(:)%radfield%efield(:)%frequency (float) (9.6.1.1.1)
geometry (2344)	reflectomet%antennas(:)%geometry (float) (9.6.1.1.1)
launchsignal (2344)	reflectomet%antennas(:)%launchsignal (launchsignal) (9.6.1.3.249)
time_launch (2246)	reflectomet%antennas(:)%launchsignal%time_launch (vecflt_type) (9.6.1.2.13)
freq (2246)	reflectomet%antennas(:)%launchsignal%freq (vecflt_type) (9.6.1.2.13)
amplitude (2246)	reflectomet%antennas(:)%launchsignal%amplitude (vecflt_type) (9.6.1.2.13)
phase (2246)	reflectomet%antennas(:)%launchsignal%phase (vecflt_type) (9.6.1.2.13)
codeparam (2037)	reflectomet%codeparam (codeparam) (9.6.1.3.77)
codename (2074)	reflectomet%codeparam%codename (string) (9.6.1.1.3)
codeversion (2074)	reflectomet%codeparam%codeversion (string) (9.6.1.1.3)
parameters (2074)	reflectomet%codeparam%parameters (string) (9.6.1.1.3)
output_diag (2074)	reflectomet%codeparam%output_diag (string) (9.6.1.1.3)
output_flag (2074)	reflectomet%codeparam%output_flag (integer) (9.6.1.1.2)
time (2037)	reflectomet%time (float) (9.6.1.1.1)

### 9.6.2.1.39 rfadiag

datainfo (2038)	rfadiag%datainfo (datainfo) (9.6.1.3.133)
dataprovider (2130)	rfadiag%datainfo%dataprovider (string) (9.6.1.1.3)
putdate (2130)	rfadiag%datainfo%putdate (string) (9.6.1.1.3)
source (2130)	rfadiag%datainfo%source (string) (9.6.1.1.3)
comment (2130)	rfadiag%datainfo%comment (string) (9.6.1.1.3)
cocos (2130)	rfadiag%datainfo%cocos (integer) (9.6.1.1.2)
id (2130)	rfadiag%datainfo%id (integer) (9.6.1.1.2)

isref (2130)	rfdiag%datainfo%isref (integer) (9.6.1.1.2)
whatref (2130)	rfdiag%datainfo%whatref (whatref) (9.6.1.3.503)
user (2500)	rfdiag%datainfo%whatref%user (string) (9.6.1.1.3)
machine (2500)	rfdiag%datainfo%whatref%machine (string) (9.6.1.1.3)
shot (2500)	rfdiag%datainfo%whatref%shot (integer) (9.6.1.1.2)
run (2500)	rfdiag%datainfo%whatref%run (integer) (9.6.1.1.2)
occurrence (2500)	rfdiag%datainfo%whatref%occurrence (integer) (9.6.1.1.2)
putinfo (2130)	rfdiag%datainfo%putinfo (putinfo) (9.6.1.3.339)
putmethod (2336)	rfdiag%datainfo%putinfo%putmethod (string) (9.6.1.1.3)
putaccess (2336)	rfdiag%datainfo%putinfo%putaccess (string) (9.6.1.1.3)
putlocation (2336)	rfdiag%datainfo%putinfo%putlocation (string) (9.6.1.1.3)
rights (2336)	rfdiag%datainfo%putinfo%rights (string) (9.6.1.1.3)
setup (2038)	rfdiag%setup (rfasetup) (9.6.1.3.353)
position (2350)	rfdiag%setup%position (rzphi1Dexp) (9.6.1.3.363)
r (2360)	rfdiag%setup%position%r (exp1D) (9.6.1.3.195)
value (2192)	rfdiag%setup%position%r%value (vecflt.type) (9.6.1.2.13)
abserror (2192)	rfdiag%setup%position%r%abserror (vecflt.type) (9.6.1.2.13)
relerror (2192)	rfdiag%setup%position%r%relerror (vecflt.type) (9.6.1.2.13)
z (2360)	rfdiag%setup%position%z (exp1D) (9.6.1.3.195)
value (2192)	rfdiag%setup%position%z%value (vecflt.type) (9.6.1.2.13)
abserror (2192)	rfdiag%setup%position%z%abserror (vecflt.type) (9.6.1.2.13)
relerror (2192)	rfdiag%setup%position%z%relerror (vecflt.type) (9.6.1.2.13)
phi (2360)	rfdiag%setup%position%phi (exp1D) (9.6.1.3.195)
value (2192)	rfdiag%setup%position%phi%value (vecflt.type) (9.6.1.2.13)
abserror (2192)	rfdiag%setup%position%phi%abserror (vecflt.type) (9.6.1.2.13)
relerror (2192)	rfdiag%setup%position%phi%relerror (vecflt.type) (9.6.1.2.13)
measure (2038)	rfdiag%measure (rfameasure) (9.6.1.3.352)
ti (2349)	rfdiag%measure%ti (exp1D) (9.6.1.3.195)
value (2192)	rfdiag%measure%ti%value (vecflt.type) (9.6.1.2.13)
abserror (2192)	rfdiag%measure%ti%abserror (vecflt.type) (9.6.1.2.13)
relerror (2192)	rfdiag%measure%ti%relerror (vecflt.type) (9.6.1.2.13)
codeparam (2038)	rfdiag%codeparam (codeparam) (9.6.1.3.77)
codename (2074)	rfdiag%codeparam%codename (string) (9.6.1.1.3)
codeversion (2074)	rfdiag%codeparam%codeversion (string) (9.6.1.1.3)
parameters (2074)	rfdiag%codeparam%parameters (string) (9.6.1.1.3)
output_diag (2074)	rfdiag%codeparam%output_diag (string) (9.6.1.1.3)
output_flag (2074)	rfdiag%codeparam%output_flag (integer) (9.6.1.1.2)
time (2038)	rfdiag%time (float) (9.6.1.1.1)

### 9.6.2.1.40 sawteeth

datainfo (2039)	sawteeth%datainfo (datainfo) (9.6.1.3.133)
dataprovider (2130)	sawteeth%datainfo%dataprovider (string) (9.6.1.1.3)
putdate (2130)	sawteeth%datainfo%putdate (string) (9.6.1.1.3)
source (2130)	sawteeth%datainfo%source (string) (9.6.1.1.3)
comment (2130)	sawteeth%datainfo%comment (string) (9.6.1.1.3)
cocos (2130)	sawteeth%datainfo%cocos (integer) (9.6.1.1.2)
id (2130)	sawteeth%datainfo%id (integer) (9.6.1.1.2)
isref (2130)	sawteeth%datainfo%isref (integer) (9.6.1.1.2)
whatref (2130)	sawteeth%datainfo%whatref (whatref) (9.6.1.3.503)
user (2500)	sawteeth%datainfo%whatref%user (string) (9.6.1.1.3)
machine (2500)	sawteeth%datainfo%whatref%machine (string) (9.6.1.1.3)
shot (2500)	sawteeth%datainfo%whatref%shot (integer) (9.6.1.1.2)
run (2500)	sawteeth%datainfo%whatref%run (integer) (9.6.1.1.2)
occurrence (2500)	sawteeth%datainfo%whatref%occurrence (integer) (9.6.1.1.2)
putinfo (2130)	sawteeth%datainfo%putinfo (putinfo) (9.6.1.3.339)
putmethod (2336)	sawteeth%datainfo%putinfo%putmethod (string) (9.6.1.1.3)
putaccess (2336)	sawteeth%datainfo%putinfo%putaccess (string) (9.6.1.1.3)
putlocation (2336)	sawteeth%datainfo%putinfo%putlocation (string) (9.6.1.1.3)
rights (2336)	sawteeth%datainfo%putinfo%rights (string) (9.6.1.1.3)
crash_trig (2039)	sawteeth%crash_trig (integer) (9.6.1.1.2)

composition (2039)	sawteeth%composition (composition) (9.6.1.3.95)
amn (2092)	sawteeth%composition%amn (vecflt_type) (9.6.1.2.13)
zn (2092)	sawteeth%composition%zn (vecflt_type) (9.6.1.2.13)
zion (2092)	sawteeth%composition%zion (vecflt_type) (9.6.1.2.13)
imp_flag (2092)	sawteeth%composition%imp_flag (vecint_type) (9.6.1.2.14)
label (2092)	sawteeth%composition%label (vecstrng_type) (9.6.1.2.15)
rho_tor_norm (2039)	sawteeth%rho_tor_norm (vecflt_type) (9.6.1.2.13)
rho_tor (2039)	sawteeth%rho_tor (vecflt_type) (9.6.1.2.13)
profiles1d (2039)	sawteeth%profiles1d (sawteeth_profiles1d) (9.6.1.3.369)
ne (2366)	sawteeth%profiles1d%ne (vecflt_type) (9.6.1.2.13)
ni (2366)	sawteeth%profiles1d%ni (matflt_type) (9.6.1.2.10)
te (2366)	sawteeth%profiles1d%te (vecflt_type) (9.6.1.2.13)
ti (2366)	sawteeth%profiles1d%ti (matflt_type) (9.6.1.2.10)
psi (2366)	sawteeth%profiles1d%psi (vecflt_type) (9.6.1.2.13)
phi (2366)	sawteeth%profiles1d%phi (vecflt_type) (9.6.1.2.13)
psistar (2366)	sawteeth%profiles1d%psistar (vecflt_type) (9.6.1.2.13)
volume (2366)	sawteeth%profiles1d%volume (vecflt_type) (9.6.1.2.13)
q (2366)	sawteeth%profiles1d%q (vecflt_type) (9.6.1.2.13)
diags (2039)	sawteeth%diags (sawteeth_diags) (9.6.1.3.368)
shear1 (2365)	sawteeth%diags%shear1 (float) (9.6.1.1.1)
rhotom_q1 (2365)	sawteeth%diags%rhotom_q1 (float) (9.6.1.1.1)
rhotom_inv (2365)	sawteeth%diags%rhotom_inv (float) (9.6.1.1.1)
rhotom_mix (2365)	sawteeth%diags%rhotom_mix (float) (9.6.1.1.1)
codeparam (2039)	sawteeth%codeparam (codeparam) (9.6.1.3.77)
codename (2074)	sawteeth%codeparam%codename (string) (9.6.1.1.3)
codeversion (2074)	sawteeth%codeparam%codeversion (string) (9.6.1.1.3)
parameters (2074)	sawteeth%codeparam%parameters (string) (9.6.1.1.3)
output_diag (2074)	sawteeth%codeparam%output_diag (string) (9.6.1.1.3)
output_flag (2074)	sawteeth%codeparam%output_flag (integer) (9.6.1.1.2)
time (2039)	sawteeth%time (float) (9.6.1.1.1)

### 9.6.2.1.41 scenario

datainfo (2040)	scenario%datainfo (datainfo) (9.6.1.3.133)
dataprovider (2130)	scenario%datainfo%dataprovider (string) (9.6.1.1.3)
putdate (2130)	scenario%datainfo%putdate (string) (9.6.1.1.3)
source (2130)	scenario%datainfo%source (string) (9.6.1.1.3)
comment (2130)	scenario%datainfo%comment (string) (9.6.1.1.3)
cocos (2130)	scenario%datainfo%cocos (integer) (9.6.1.1.2)
id (2130)	scenario%datainfo%id (integer) (9.6.1.1.2)
isref (2130)	scenario%datainfo%isref (integer) (9.6.1.1.2)
whatref (2130)	scenario%datainfo%whatref (whatref) (9.6.1.3.503)
user (2500)	scenario%datainfo%whatref%user (string) (9.6.1.1.3)
machine (2500)	scenario%datainfo%whatref%machine (string) (9.6.1.1.3)
shot (2500)	scenario%datainfo%whatref%shot (integer) (9.6.1.1.2)
run (2500)	scenario%datainfo%whatref%run (integer) (9.6.1.1.2)
occurrence (2500)	scenario%datainfo%whatref%occurrence (integer) (9.6.1.1.2)
putinfo (2130)	scenario%datainfo%putinfo (putinfo) (9.6.1.3.339)
putmethod (2336)	scenario%datainfo%putinfo%putmethod (string) (9.6.1.1.3)
putaccess (2336)	scenario%datainfo%putinfo%putaccess (string) (9.6.1.1.3)
putlocation (2336)	scenario%datainfo%putinfo%putlocation (string) (9.6.1.1.3)
rights (2336)	scenario%datainfo%putinfo%rights (string) (9.6.1.1.3)
centre (2040)	scenario%centre (scenario_centre) (9.6.1.3.370)
te0 (2367)	scenario%centre%te0 (scenario_ref) (9.6.1.3.387)
value (2384)	scenario%centre%te0%value (float) (9.6.1.1.1)
source (2384)	scenario%centre%te0%source (string) (9.6.1.1.3)
ti0 (2367)	scenario%centre%ti0 (scenario_ref) (9.6.1.3.387)
value (2384)	scenario%centre%ti0%value (float) (9.6.1.1.1)
source (2384)	scenario%centre%ti0%source (string) (9.6.1.1.3)
ne0 (2367)	scenario%centre%ne0 (scenario_ref) (9.6.1.3.387)
value (2384)	scenario%centre%ne0%value (float) (9.6.1.1.1)

source (2384)	scenario%centre%ne0%source (string) (9.6.1.1.3)
ni0 (2367)	scenario%centre%ni0 (scenario_ref) (9.6.1.3.387)
value (2384)	scenario%centre%ni0%value (float) (9.6.1.1.1)
source (2384)	scenario%centre%ni0%source (string) (9.6.1.1.3)
shift0 (2367)	scenario%centre%shift0 (scenario_ref) (9.6.1.3.387)
value (2384)	scenario%centre%shift0%value (float) (9.6.1.1.1)
source (2384)	scenario%centre%shift0%source (string) (9.6.1.1.3)
psi0 (2367)	scenario%centre%psi0 (scenario_ref) (9.6.1.3.387)
value (2384)	scenario%centre%psi0%value (float) (9.6.1.1.1)
source (2384)	scenario%centre%psi0%source (string) (9.6.1.1.3)
phi0 (2367)	scenario%centre%phi0 (scenario_ref) (9.6.1.3.387)
value (2384)	scenario%centre%phi0%value (float) (9.6.1.1.1)
source (2384)	scenario%centre%phi0%source (string) (9.6.1.1.3)
q0 (2367)	scenario%centre%q0 (scenario_ref) (9.6.1.3.387)
value (2384)	scenario%centre%q0%value (float) (9.6.1.1.1)
source (2384)	scenario%centre%q0%source (string) (9.6.1.1.3)
Rmag (2367)	scenario%centre%Rmag (scenario_ref) (9.6.1.3.387)
value (2384)	scenario%centre%Rmag%value (float) (9.6.1.1.1)
source (2384)	scenario%centre%Rmag%source (string) (9.6.1.1.3)
Zmag (2367)	scenario%centre%Zmag (scenario_ref) (9.6.1.3.387)
value (2384)	scenario%centre%Zmag%value (float) (9.6.1.1.1)
source (2384)	scenario%centre%Zmag%source (string) (9.6.1.1.3)
vtor.0 (2367)	scenario%centre%vtor.0 (scenario_ref) (9.6.1.3.387)
value (2384)	scenario%centre%vtor.0%value (float) (9.6.1.1.1)
source (2384)	scenario%centre%vtor.0%source (string) (9.6.1.1.3)
composition (2040)	scenario%composition (scenario_composition) (9.6.1.3.371)
amn (2368)	scenario%composition%amn (vecflt_type) (9.6.1.2.13)
zn (2368)	scenario%composition%zn (vecflt_type) (9.6.1.2.13)
zion (2368)	scenario%composition%zion (vecflt_type) (9.6.1.2.13)
imp_flag (2368)	scenario%composition%imp_flag (vecint_type) (9.6.1.2.14)
rot_imp_flag (2368)	scenario%composition%rot_imp_flag (vecint_type) (9.6.1.2.14)
pellet.amn (2368)	scenario%composition%pellet.amn (vecflt_type) (9.6.1.2.13)
pellet.zn (2368)	scenario%composition%pellet.zn (vecflt_type) (9.6.1.2.13)
nbi.amn (2368)	scenario%composition%nbi.amn (vecflt_type) (9.6.1.2.13)
nbi.zn (2368)	scenario%composition%nbi.zn (vecflt_type) (9.6.1.2.13)
configs (2040)	scenario%configs (scenario_configuration) (9.6.1.3.372)
config (2369)	scenario%configs%config (scenario_int) (9.6.1.3.379)
value (2376)	scenario%configs%config%value (integer) (9.6.1.1.2)
source (2376)	scenario%configs%config%source (string) (9.6.1.1.3)
lmode.sc (2369)	scenario%configs%lmode.sc (string) (9.6.1.1.3)
hmode.sc (2369)	scenario%configs%hmode.sc (string) (9.6.1.1.3)
core.sc (2369)	scenario%configs%core.sc (string) (9.6.1.1.3)
pedestal.sc (2369)	scenario%configs%pedestal.sc (string) (9.6.1.1.3)
helium.sc (2369)	scenario%configs%helium.sc (string) (9.6.1.1.3)
impurity.sc (2369)	scenario%configs%impurity.sc (string) (9.6.1.1.3)
l2h.sc (2369)	scenario%configs%l2h.sc (string) (9.6.1.1.3)
tor_rot.sc (2369)	scenario%configs%tor_rot.sc (string) (9.6.1.1.3)
wall.mat (2369)	scenario%configs%wall.mat (string) (9.6.1.1.3)
evap.mat (2369)	scenario%configs%evap.mat (string) (9.6.1.1.3)
lim.mat (2369)	scenario%configs%lim.mat (string) (9.6.1.1.3)
div.mat (2369)	scenario%configs%div.mat (string) (9.6.1.1.3)
coordinate (2369)	scenario%configs%coordinate (string) (9.6.1.1.3)
ecrh_freq (2369)	scenario%configs%ecrh_freq (scenario_ref) (9.6.1.3.387)
value (2384)	scenario%configs%ecrh_freq%value (float) (9.6.1.1.1)
source (2384)	scenario%configs%ecrh_freq%source (string) (9.6.1.1.3)
ecrh_loc (2369)	scenario%configs%ecrh_loc (scenario_ref) (9.6.1.3.387)
value (2384)	scenario%configs%ecrh_loc%value (float) (9.6.1.1.1)
source (2384)	scenario%configs%ecrh_loc%source (string) (9.6.1.1.3)
ecrh_mode (2369)	scenario%configs%ecrh_mode (scenario_int) (9.6.1.3.379)
value (2376)	scenario%configs%ecrh_mode%value (integer) (9.6.1.1.2)
source (2376)	scenario%configs%ecrh_mode%source (string) (9.6.1.1.3)



ecrh_tor_ang (2369)	value (2384)	scenario%configs%ecrh_tor_ang (scenario_ref) (9.6.1.3.387)
	source (2384)	scenario%configs%ecrh_tor_ang%value (float) (9.6.1.1.1)
ecrh_pol_ang (2369)	value (2384)	scenario%configs%ecrh_tor_ang%source (string) (9.6.1.1.3)
	source (2384)	scenario%configs%ecrh_pol_ang (scenario_ref) (9.6.1.3.387)
ecrh_harm (2369)	value (2376)	scenario%configs%ecrh_pol_ang%value (float) (9.6.1.1.1)
	source (2376)	scenario%configs%ecrh_pol_ang%source (string) (9.6.1.1.3)
enbi (2369)	value (2384)	scenario%configs%ecrh_harm (scenario_int) (9.6.1.3.379)
	source (2384)	scenario%configs%ecrh_harm%value (integer) (9.6.1.1.2)
r_nbi (2369)	value (2384)	scenario%configs%ecrh_harm%source (string) (9.6.1.1.3)
	source (2384)	scenario%configs%enbi (scenario_ref) (9.6.1.3.387)
grad_b_drift (2369)	value (2376)	scenario%configs%enbi%value (float) (9.6.1.1.1)
	source (2376)	scenario%configs%enbi%source (string) (9.6.1.1.3)
icrh_freq (2369)	value (2384)	scenario%configs%r_nbi (scenario_ref) (9.6.1.3.387)
	source (2384)	scenario%configs%r_nbi%value (float) (9.6.1.1.1)
icrh_scheme (2369)	value (2384)	scenario%configs%r_nbi%source (string) (9.6.1.1.3)
icrh_phase (2369)	value (2384)	scenario%configs%grad_b_drift (scenario_int) (9.6.1.3.379)
	source (2384)	scenario%configs%grad_b_drift%value (integer) (9.6.1.1.2)
LH_freq (2369)	value (2384)	scenario%configs%grad_b_drift%source (string) (9.6.1.1.3)
	source (2384)	scenario%configs%icrh_freq (scenario_ref) (9.6.1.3.387)
LH_npar (2369)	value (2384)	scenario%configs%icrh_freq%value (float) (9.6.1.1.1)
	source (2384)	scenario%configs%icrh_freq%source (string) (9.6.1.1.3)
pellet_ang (2369)	value (2384)	scenario%configs%icrh_scheme (string) (9.6.1.1.3)
	source (2384)	scenario%configs%icrh_phase (scenario_ref) (9.6.1.3.387)
pellet_v (2369)	value (2384)	scenario%configs%icrh_phase%value (float) (9.6.1.1.1)
	source (2384)	scenario%configs%icrh_phase%source (string) (9.6.1.1.3)
pellet_nba (2369)	value (2384)	scenario%configs%LH_freq (scenario_ref) (9.6.1.3.387)
	source (2384)	scenario%configs%LH_freq%value (float) (9.6.1.1.1)
confinement (2040)	value (2384)	scenario%configs%LH_freq%source (string) (9.6.1.1.3)
tau_e (2370)	value (2384)	scenario%configs%LH_npar (scenario_ref) (9.6.1.3.387)
	source (2384)	scenario%configs%LH_npar%value (float) (9.6.1.1.1)
tau_l_sc (2370)	value (2384)	scenario%configs%LH_npar%source (string) (9.6.1.1.3)
	source (2384)	scenario%configs%LH_npar%source (string) (9.6.1.1.3)
tau_h_sc (2370)	value (2384)	scenario%configs%pellet_ang (scenario_ref) (9.6.1.3.387)
	source (2384)	scenario%configs%pellet_ang%value (float) (9.6.1.1.1)
tau_he (2370)	value (2384)	scenario%configs%pellet_ang%source (string) (9.6.1.1.3)
	source (2384)	scenario%configs%pellet_v (scenario_ref) (9.6.1.3.387)
tau_e_ee (2370)	value (2384)	scenario%configs%pellet_v%value (float) (9.6.1.1.1)
	source (2384)	scenario%configs%pellet_v%source (string) (9.6.1.1.3)
tau_e_ii (2370)	value (2384)	scenario%configs%pellet_nba (scenario_ref) (9.6.1.3.387)
	source (2384)	scenario%configs%pellet_nba%value (float) (9.6.1.1.1)
tau_e_ei (2370)	value (2384)	scenario%configs%pellet_nba%source (string) (9.6.1.1.3)
	source (2384)	scenario%confinement (scenario_confinement) (9.6.1.3.373)
	source (2384)	scenario%confinement%tau_e (scenario_ref) (9.6.1.3.387)
	source (2384)	scenario%confinement%tau_e%value (float) (9.6.1.1.1)
	source (2384)	scenario%confinement%tau_e%source (string) (9.6.1.1.3)
	source (2384)	scenario%confinement%tau_l_sc (scenario_ref) (9.6.1.3.387)
	source (2384)	scenario%confinement%tau_l_sc%value (float) (9.6.1.1.1)
	source (2384)	scenario%confinement%tau_l_sc%source (string) (9.6.1.1.3)
	source (2384)	scenario%confinement%tau_h_sc (scenario_ref) (9.6.1.3.387)
	source (2384)	scenario%confinement%tau_h_sc%value (float) (9.6.1.1.1)
	source (2384)	scenario%confinement%tau_h_sc%source (string) (9.6.1.1.3)
	source (2384)	scenario%confinement%tau_he (scenario_ref) (9.6.1.3.387)
	source (2384)	scenario%confinement%tau_he%value (float) (9.6.1.1.1)
	source (2384)	scenario%confinement%tau_he%source (string) (9.6.1.1.3)
	source (2384)	scenario%confinement%tau_e_ee (scenario_ref) (9.6.1.3.387)
	source (2384)	scenario%confinement%tau_e_ee%value (float) (9.6.1.1.1)
	source (2384)	scenario%confinement%tau_e_ee%source (string) (9.6.1.1.3)
	source (2384)	scenario%confinement%tau_e_ii (scenario_ref) (9.6.1.3.387)
	source (2384)	scenario%confinement%tau_e_ii%value (float) (9.6.1.1.1)
	source (2384)	scenario%confinement%tau_e_ii%source (string) (9.6.1.1.3)
	source (2384)	scenario%confinement%tau_e_ei (scenario_ref) (9.6.1.3.387)
	source (2384)	scenario%confinement%tau_e_ei%value (float) (9.6.1.1.1)



source (2384)	scenario%confinement%tau.e.ei%source (string) (9.6.1.1.3)
tau_cur_diff (2370)	scenario%confinement%tau_cur_diff (scenario_ref) (9.6.1.3.387)
value (2384)	scenario%confinement%tau_cur_diff%value (float) (9.6.1.1.1)
source (2384)	scenario%confinement%tau_cur_diff%source (string) (9.6.1.1.3)
tau_i_rol (2370)	scenario%confinement%tau_i_rol (scenario_ref) (9.6.1.3.387)
value (2384)	scenario%confinement%tau_i_rol%value (float) (9.6.1.1.1)
source (2384)	scenario%confinement%tau_i_rol%source (string) (9.6.1.1.3)
currents (2040)	scenario%currents (scenario_currents) (9.6.1.3.374)
RR (2371)	scenario%currents%RR (scenario_ref) (9.6.1.3.387)
value (2384)	scenario%currents%RR%value (float) (9.6.1.1.1)
source (2384)	scenario%currents%RR%source (string) (9.6.1.1.3)
i_align (2371)	scenario%currents%i_align (scenario_ref) (9.6.1.3.387)
value (2384)	scenario%currents%i_align%value (float) (9.6.1.1.1)
source (2384)	scenario%currents%i_align%source (string) (9.6.1.1.3)
i_boot (2371)	scenario%currents%i_boot (scenario_ref) (9.6.1.3.387)
value (2384)	scenario%currents%i_boot%value (float) (9.6.1.1.1)
source (2384)	scenario%currents%i_boot%source (string) (9.6.1.1.3)
i_cd_tot (2371)	scenario%currents%i_cd_tot (scenario_ref) (9.6.1.3.387)
value (2384)	scenario%currents%i_cd_tot%value (float) (9.6.1.1.1)
source (2384)	scenario%currents%i_cd_tot%source (string) (9.6.1.1.3)
i_eccd (2371)	scenario%currents%i_eccd (scenario_ref) (9.6.1.3.387)
value (2384)	scenario%currents%i_eccd%value (float) (9.6.1.1.1)
source (2384)	scenario%currents%i_eccd%source (string) (9.6.1.1.3)
i_fast_ion (2371)	scenario%currents%i_fast_ion (scenario_ref) (9.6.1.3.387)
value (2384)	scenario%currents%i_fast_ion%value (float) (9.6.1.1.1)
source (2384)	scenario%currents%i_fast_ion%source (string) (9.6.1.1.3)
i_fwcd (2371)	scenario%currents%i_fwcd (scenario_ref) (9.6.1.3.387)
value (2384)	scenario%currents%i_fwcd%value (float) (9.6.1.1.1)
source (2384)	scenario%currents%i_fwcd%source (string) (9.6.1.1.3)
i_lhcd (2371)	scenario%currents%i_lhcd (scenario_ref) (9.6.1.3.387)
value (2384)	scenario%currents%i_lhcd%value (float) (9.6.1.1.1)
source (2384)	scenario%currents%i_lhcd%source (string) (9.6.1.1.3)
i_nbicd (2371)	scenario%currents%i_nbicd (scenario_ref) (9.6.1.3.387)
value (2384)	scenario%currents%i_nbicd%value (float) (9.6.1.1.1)
source (2384)	scenario%currents%i_nbicd%source (string) (9.6.1.1.3)
i_ni_tot (2371)	scenario%currents%i_ni_tot (scenario_ref) (9.6.1.3.387)
value (2384)	scenario%currents%i_ni_tot%value (float) (9.6.1.1.1)
source (2384)	scenario%currents%i_ni_tot%source (string) (9.6.1.1.3)
i_ohm (2371)	scenario%currents%i_ohm (scenario_ref) (9.6.1.3.387)
value (2384)	scenario%currents%i_ohm%value (float) (9.6.1.1.1)
source (2384)	scenario%currents%i_ohm%source (string) (9.6.1.1.3)
i_par (2371)	scenario%currents%i_par (scenario_ref) (9.6.1.3.387)
value (2384)	scenario%currents%i_par%value (float) (9.6.1.1.1)
source (2384)	scenario%currents%i_par%source (string) (9.6.1.1.3)
i_runaway (2371)	scenario%currents%i_runaway (scenario_ref) (9.6.1.3.387)
value (2384)	scenario%currents%i_runaway%value (float) (9.6.1.1.1)
source (2384)	scenario%currents%i_runaway%source (string) (9.6.1.1.3)
v_loop (2371)	scenario%currents%v_loop (scenario_ref) (9.6.1.3.387)
value (2384)	scenario%currents%v_loop%value (float) (9.6.1.1.1)
source (2384)	scenario%currents%v_loop%source (string) (9.6.1.1.3)
v_meas (2371)	scenario%currents%v_meas (scenario_ref) (9.6.1.3.387)
value (2384)	scenario%currents%v_meas%value (float) (9.6.1.1.1)
source (2384)	scenario%currents%v_meas%source (string) (9.6.1.1.3)
edge (2040)	scenario%edge (scenario_edge) (9.6.1.3.375)
te_edge (2372)	scenario%edge%te_edge (scenario_ref) (9.6.1.3.387)
value (2384)	scenario%edge%te_edge%value (float) (9.6.1.1.1)
source (2384)	scenario%edge%te_edge%source (string) (9.6.1.1.3)
ti_edge (2372)	scenario%edge%ti_edge (scenario_ref) (9.6.1.3.387)
value (2384)	scenario%edge%ti_edge%value (float) (9.6.1.1.1)
source (2384)	scenario%edge%ti_edge%source (string) (9.6.1.1.3)
ne_edge (2372)	scenario%edge%ne_edge (scenario_ref) (9.6.1.3.387)

value (2384)	scenario%edge%ne_edge%value (float) (9.6.1.1.1)
source (2384)	scenario%edge%ne_edge%source (string) (9.6.1.1.3)
ni_edge (2372)	scenario%edge%ni_edge (scenario_ref) (9.6.1.3.387)
value (2384)	scenario%edge%ni_edge%value (float) (9.6.1.1.1)
source (2384)	scenario%edge%ni_edge%source (string) (9.6.1.1.3)
psi_edge (2372)	scenario%edge%psi_edge (scenario_ref) (9.6.1.3.387)
value (2384)	scenario%edge%psi_edge%value (float) (9.6.1.1.1)
source (2384)	scenario%edge%psi_edge%source (string) (9.6.1.1.3)
phi_edge (2372)	scenario%edge%phi_edge (scenario_ref) (9.6.1.3.387)
value (2384)	scenario%edge%phi_edge%value (float) (9.6.1.1.1)
source (2384)	scenario%edge%phi_edge%source (string) (9.6.1.1.3)
rho_edge (2372)	scenario%edge%rho_edge (scenario_ref) (9.6.1.3.387)
value (2384)	scenario%edge%rho_edge%value (float) (9.6.1.1.1)
source (2384)	scenario%edge%rho_edge%source (string) (9.6.1.1.3)
drho_edge_dt (2372)	scenario%edge%drho_edge_dt (scenario_ref) (9.6.1.3.387)
value (2384)	scenario%edge%drho_edge_dt%value (float) (9.6.1.1.1)
source (2384)	scenario%edge%drho_edge_dt%source (string) (9.6.1.1.3)
q_edge (2372)	scenario%edge%q_edge (scenario_ref) (9.6.1.3.387)
value (2384)	scenario%edge%q_edge%value (float) (9.6.1.1.1)
source (2384)	scenario%edge%q_edge%source (string) (9.6.1.1.3)
neutral_flux (2372)	scenario%edge%neutral_flux (scenario_ref) (9.6.1.3.387)
value (2384)	scenario%edge%neutral_flux%value (float) (9.6.1.1.1)
source (2384)	scenario%edge%neutral_flux%source (string) (9.6.1.1.3)
phi_plasma (2372)	scenario%edge%phi_plasma (scenario_ref) (9.6.1.3.387)
value (2384)	scenario%edge%phi_plasma%value (float) (9.6.1.1.1)
source (2384)	scenario%edge%phi_plasma%source (string) (9.6.1.1.3)
vtor_edge (2372)	scenario%edge%vtor_edge (scenario_ref) (9.6.1.3.387)
value (2384)	scenario%edge%vtor_edge%value (float) (9.6.1.1.1)
source (2384)	scenario%edge%vtor_edge%source (string) (9.6.1.1.3)
energy (2040)	scenario%energy (scenario_energy) (9.6.1.3.376)
w_tot (2373)	scenario%energy%w_tot (scenario_ref) (9.6.1.3.387)
value (2384)	scenario%energy%w_tot%value (float) (9.6.1.1.1)
source (2384)	scenario%energy%w_tot%source (string) (9.6.1.1.3)
w_b_pol (2373)	scenario%energy%w_b_pol (scenario_ref) (9.6.1.3.387)
value (2384)	scenario%energy%w_b_pol%value (float) (9.6.1.1.1)
source (2384)	scenario%energy%w_b_pol%source (string) (9.6.1.1.3)
w_dia (2373)	scenario%energy%w_dia (scenario_ref) (9.6.1.3.387)
value (2384)	scenario%energy%w_dia%value (float) (9.6.1.1.1)
source (2384)	scenario%energy%w_dia%source (string) (9.6.1.1.3)
dwdia_dt (2373)	scenario%energy%dwdia_dt (scenario_ref) (9.6.1.3.387)
value (2384)	scenario%energy%dwdia_dt%value (float) (9.6.1.1.1)
source (2384)	scenario%energy%dwdia_dt%source (string) (9.6.1.1.3)
w_b_tor_pla (2373)	scenario%energy%w_b_tor_pla (scenario_ref) (9.6.1.3.387)
value (2384)	scenario%energy%w_b_tor_pla%value (float) (9.6.1.1.1)
source (2384)	scenario%energy%w_b_tor_pla%source (string) (9.6.1.1.3)
w_th (2373)	scenario%energy%w_th (scenario_ref) (9.6.1.3.387)
value (2384)	scenario%energy%w_th%value (float) (9.6.1.1.1)
source (2384)	scenario%energy%w_th%source (string) (9.6.1.1.3)
dwtot_dt (2373)	scenario%energy%dwtot_dt (scenario_ref) (9.6.1.3.387)
value (2384)	scenario%energy%dwtot_dt%value (float) (9.6.1.1.1)
source (2384)	scenario%energy%dwtot_dt%source (string) (9.6.1.1.3)
dwbpol_dt (2373)	scenario%energy%dwbpol_dt (scenario_ref) (9.6.1.3.387)
value (2384)	scenario%energy%dwbpol_dt%value (float) (9.6.1.1.1)
source (2384)	scenario%energy%dwbpol_dt%source (string) (9.6.1.1.3)
dwbtorpla_dt (2373)	scenario%energy%dwbtorpla_dt (scenario_ref) (9.6.1.3.387)
value (2384)	scenario%energy%dwbtorpla_dt%value (float) (9.6.1.1.1)
source (2384)	scenario%energy%dwbtorpla_dt%source (string) (9.6.1.1.3)
dwth_dt (2373)	scenario%energy%dwth_dt (scenario_ref) (9.6.1.3.387)
value (2384)	scenario%energy%dwth_dt%value (float) (9.6.1.1.1)
source (2384)	scenario%energy%dwth_dt%source (string) (9.6.1.1.3)
esup_icrhtot (2373)	scenario%energy%esup_icrhtot (scenario_ref) (9.6.1.3.387)

value (2384)	scenario%energy%esup_icrhtot%value (float) (9.6.1.1.1)
source (2384)	scenario%energy%esup_icrhtot%source (string) (9.6.1.1.3)
esup_icrhp (2373)	scenario%energy%esup_icrhp (scenario_ref) (9.6.1.3.387)
value (2384)	scenario%energy%esup_icrhp%value (float) (9.6.1.1.1)
source (2384)	scenario%energy%esup_icrhp%source (string) (9.6.1.1.3)
esup_nbitot (2373)	scenario%energy%esup_nbitot (scenario_ref) (9.6.1.3.387)
value (2384)	scenario%energy%esup_nbitot%value (float) (9.6.1.1.1)
source (2384)	scenario%energy%esup_nbitot%source (string) (9.6.1.1.3)
esup_nbiperp (2373)	scenario%energy%esup_nbiperp (scenario_ref) (9.6.1.3.387)
value (2384)	scenario%energy%esup_nbiperp%value (float) (9.6.1.1.1)
source (2384)	scenario%energy%esup_nbiperp%source (string) (9.6.1.1.3)
esup_lhcd (2373)	scenario%energy%esup_lhcd (scenario_ref) (9.6.1.3.387)
value (2384)	scenario%energy%esup_lhcd%value (float) (9.6.1.1.1)
source (2384)	scenario%energy%esup_lhcd%source (string) (9.6.1.1.3)
esup_alpha (2373)	scenario%energy%esup_alpha (scenario_ref) (9.6.1.3.387)
value (2384)	scenario%energy%esup_alpha%value (float) (9.6.1.1.1)
source (2384)	scenario%energy%esup_alpha%source (string) (9.6.1.1.3)
eqgeometry (2040)	scenario%eqgeometry (eqgeometry) (9.6.1.3.188)
source (2185)	scenario%eqgeometry%source (string) (9.6.1.1.3)
boundarytype (2185)	scenario%eqgeometry%boundarytype (integer) (9.6.1.1.2)
boundary (2185)	scenario%eqgeometry%boundary(:) (rz1Dexp) (9.6.1.3.358)
r (2355)	scenario%eqgeometry%boundary(:)%r (vecflt.type) (9.6.1.2.13)
z (2355)	scenario%eqgeometry%boundary(:)%z (vecflt.type) (9.6.1.2.13)
geom.axis (2185)	scenario%eqgeometry%geom.axis (rz0D) (9.6.1.3.355)
r (2352)	scenario%eqgeometry%geom.axis%r (float) (9.6.1.1.1)
z (2352)	scenario%eqgeometry%geom.axis%z (float) (9.6.1.1.1)
a_minor (2185)	scenario%eqgeometry%a_minor (float) (9.6.1.1.1)
elongation (2185)	scenario%eqgeometry%elongation (float) (9.6.1.1.1)
elong_upper (2185)	scenario%eqgeometry%elong_upper (float) (9.6.1.1.1)
elong_lower (2185)	scenario%eqgeometry%elong_lower (float) (9.6.1.1.1)
tria_upper (2185)	scenario%eqgeometry%tria_upper (float) (9.6.1.1.1)
tria_lower (2185)	scenario%eqgeometry%tria_lower (float) (9.6.1.1.1)
xpts (2185)	scenario%eqgeometry%xpts(:) (rz1Dexp) (9.6.1.3.358)
r (2355)	scenario%eqgeometry%xpts(:)%r (vecflt.type) (9.6.1.2.13)
z (2355)	scenario%eqgeometry%xpts(:)%z (vecflt.type) (9.6.1.2.13)
left_low_st (2185)	scenario%eqgeometry%left_low_st (rz0D) (9.6.1.3.355)
r (2352)	scenario%eqgeometry%left_low_st%r (float) (9.6.1.1.1)
z (2352)	scenario%eqgeometry%left_low_st%z (float) (9.6.1.1.1)
right_low_st (2185)	scenario%eqgeometry%right_low_st (rz0D) (9.6.1.3.355)
r (2352)	scenario%eqgeometry%right_low_st%r (float) (9.6.1.1.1)
z (2352)	scenario%eqgeometry%right_low_st%z (float) (9.6.1.1.1)
left_up_st (2185)	scenario%eqgeometry%left_up_st (rz0D) (9.6.1.3.355)
r (2352)	scenario%eqgeometry%left_up_st%r (float) (9.6.1.1.1)
z (2352)	scenario%eqgeometry%left_up_st%z (float) (9.6.1.1.1)
right_up_st (2185)	scenario%eqgeometry%right_up_st (rz0D) (9.6.1.3.355)
r (2352)	scenario%eqgeometry%right_up_st%r (float) (9.6.1.1.1)
z (2352)	scenario%eqgeometry%right_up_st%z (float) (9.6.1.1.1)
active_limit (2185)	scenario%eqgeometry%active_limit (rz0D) (9.6.1.3.355)
r (2352)	scenario%eqgeometry%active_limit%r (float) (9.6.1.1.1)
z (2352)	scenario%eqgeometry%active_limit%z (float) (9.6.1.1.1)
ang_lcms.upo (2185)	scenario%eqgeometry%ang_lcms.upo (float) (9.6.1.1.1)
ang_lcms.upi (2185)	scenario%eqgeometry%ang_lcms.upi (float) (9.6.1.1.1)
ang_lcms.lwo (2185)	scenario%eqgeometry%ang_lcms.lwo (float) (9.6.1.1.1)
ang_lcms.lwi (2185)	scenario%eqgeometry%ang_lcms.lwi (float) (9.6.1.1.1)
global_param (2040)	scenario%global_param (scenario_global) (9.6.1.3.377)
ip (2374)	scenario%global_param%ip (scenario_ref) (9.6.1.3.387)
value (2384)	scenario%global_param%ip%value (float) (9.6.1.1.1)
source (2384)	scenario%global_param%ip%source (string) (9.6.1.1.3)
dip_dt (2374)	scenario%global_param%dip_dt (scenario_ref) (9.6.1.3.387)
value (2384)	scenario%global_param%dip_dt%value (float) (9.6.1.1.1)
source (2384)	scenario%global_param%dip_dt%source (string) (9.6.1.1.3)

beta_pol (2374)	scenario%global_param%beta_pol (scenario_ref) (9.6.1.3.387)
value (2384)	scenario%global_param%beta_pol%value (float) (9.6.1.1.1)
source (2384)	scenario%global_param%beta_pol%source (string) (9.6.1.1.3)
beta_tor (2374)	scenario%global_param%beta_tor (scenario_ref) (9.6.1.3.387)
value (2384)	scenario%global_param%beta_tor%value (float) (9.6.1.1.1)
source (2384)	scenario%global_param%beta_tor%source (string) (9.6.1.1.3)
beta_normal (2374)	scenario%global_param%beta_normal (scenario_ref) (9.6.1.3.387)
value (2384)	scenario%global_param%beta_normal%value (float) (9.6.1.1.1)
source (2384)	scenario%global_param%beta_normal%source (string) (9.6.1.1.3)
li (2374)	scenario%global_param%li (scenario_ref) (9.6.1.3.387)
value (2384)	scenario%global_param%li%value (float) (9.6.1.1.1)
source (2384)	scenario%global_param%li%source (string) (9.6.1.1.3)
volume (2374)	scenario%global_param%volume (scenario_ref) (9.6.1.3.387)
value (2384)	scenario%global_param%volume%value (float) (9.6.1.1.1)
source (2384)	scenario%global_param%volume%source (string) (9.6.1.1.3)
area_pol (2374)	scenario%global_param%area_pol (scenario_ref) (9.6.1.3.387)
value (2384)	scenario%global_param%area_pol%value (float) (9.6.1.1.1)
source (2384)	scenario%global_param%area_pol%source (string) (9.6.1.1.3)
area_ext (2374)	scenario%global_param%area_ext (scenario_ref) (9.6.1.3.387)
value (2384)	scenario%global_param%area_ext%value (float) (9.6.1.1.1)
source (2384)	scenario%global_param%area_ext%source (string) (9.6.1.1.3)
len_sepa (2374)	scenario%global_param%len_sepa (scenario_ref) (9.6.1.3.387)
value (2384)	scenario%global_param%len_sepa%value (float) (9.6.1.1.1)
source (2384)	scenario%global_param%len_sepa%source (string) (9.6.1.1.3)
beta_pol.th (2374)	scenario%global_param%beta_pol.th (scenario_ref) (9.6.1.3.387)
value (2384)	scenario%global_param%beta_pol.th%value (float) (9.6.1.1.1)
source (2384)	scenario%global_param%beta_pol.th%source (string) (9.6.1.1.3)
beta_tor.th (2374)	scenario%global_param%beta_tor.th (scenario_ref) (9.6.1.3.387)
value (2384)	scenario%global_param%beta_tor.th%value (float) (9.6.1.1.1)
source (2384)	scenario%global_param%beta_tor.th%source (string) (9.6.1.1.3)
beta_n.th (2374)	scenario%global_param%beta_n.th (scenario_ref) (9.6.1.3.387)
value (2384)	scenario%global_param%beta_n.th%value (float) (9.6.1.1.1)
source (2384)	scenario%global_param%beta_n.th%source (string) (9.6.1.1.3)
disruption (2374)	scenario%global_param%disruption (scenario_ref) (9.6.1.3.387)
value (2384)	scenario%global_param%disruption%value (float) (9.6.1.1.1)
source (2384)	scenario%global_param%disruption%source (string) (9.6.1.1.3)
mode_h (2374)	scenario%global_param%mode_h (scenario_ref) (9.6.1.3.387)
value (2384)	scenario%global_param%mode_h%value (float) (9.6.1.1.1)
source (2384)	scenario%global_param%mode_h%source (string) (9.6.1.1.3)
s.alpha (2374)	scenario%global_param%s.alpha (scenario_ref) (9.6.1.3.387)
value (2384)	scenario%global_param%s.alpha%value (float) (9.6.1.1.1)
source (2384)	scenario%global_param%s.alpha%source (string) (9.6.1.1.3)
heat.power (2040)	scenario%heat_power (scenario_heat_power) (9.6.1.3.378)
plh (2375)	scenario%heat_power%plh (scenario_ref) (9.6.1.3.387)
value (2384)	scenario%heat_power%plh%value (float) (9.6.1.1.1)
source (2384)	scenario%heat_power%plh%source (string) (9.6.1.1.3)
pohmic (2375)	scenario%heat_power%pohmic (scenario_ref) (9.6.1.3.387)
value (2384)	scenario%heat_power%pohmic%value (float) (9.6.1.1.1)
source (2384)	scenario%heat_power%pohmic%source (string) (9.6.1.1.3)
picrh (2375)	scenario%heat_power%picrh (scenario_ref) (9.6.1.3.387)
value (2384)	scenario%heat_power%picrh%value (float) (9.6.1.1.1)
source (2384)	scenario%heat_power%picrh%source (string) (9.6.1.1.3)
pecrh (2375)	scenario%heat_power%pecrh (scenario_ref) (9.6.1.3.387)
value (2384)	scenario%heat_power%pecrh%value (float) (9.6.1.1.1)
source (2384)	scenario%heat_power%pecrh%source (string) (9.6.1.1.3)
pnbi (2375)	scenario%heat_power%pnbi (scenario_ref) (9.6.1.3.387)
value (2384)	scenario%heat_power%pnbi%value (float) (9.6.1.1.1)
source (2384)	scenario%heat_power%pnbi%source (string) (9.6.1.1.3)
pnbi.co.cur (2375)	scenario%heat_power%pnbi.co.cur (scenario_ref) (9.6.1.3.387)
value (2384)	scenario%heat_power%pnbi.co.cur%value (float) (9.6.1.1.1)
source (2384)	scenario%heat_power%pnbi.co.cur%source (string) (9.6.1.1.3)

pnbi_counter (2375)	scenario%heat_power%pnbi_counter (scenario_ref) (9.6.1.3.387)
value (2384)	scenario%heat_power%pnbi_counter%value (float) (9.6.1.1.1)
source (2384)	scenario%heat_power%pnbi_counter%source (string) (9.6.1.1.3)
plh_th (2375)	scenario%heat_power%plh_th (scenario_ref) (9.6.1.3.387)
value (2384)	scenario%heat_power%plh_th%value (float) (9.6.1.1.1)
source (2384)	scenario%heat_power%plh_th%source (string) (9.6.1.1.3)
picrh_th (2375)	scenario%heat_power%picrh_th (scenario_ref) (9.6.1.3.387)
value (2384)	scenario%heat_power%picrh_th%value (float) (9.6.1.1.1)
source (2384)	scenario%heat_power%picrh_th%source (string) (9.6.1.1.3)
pecrh_th (2375)	scenario%heat_power%pecrh_th (scenario_ref) (9.6.1.3.387)
value (2384)	scenario%heat_power%pecrh_th%value (float) (9.6.1.1.1)
source (2384)	scenario%heat_power%pecrh_th%source (string) (9.6.1.1.3)
pnbi_th (2375)	scenario%heat_power%pnbi_th (scenario_ref) (9.6.1.3.387)
value (2384)	scenario%heat_power%pnbi_th%value (float) (9.6.1.1.1)
source (2384)	scenario%heat_power%pnbi_th%source (string) (9.6.1.1.3)
ploss_icrh (2375)	scenario%heat_power%ploss_icrh (scenario_ref) (9.6.1.3.387)
value (2384)	scenario%heat_power%ploss_icrh%value (float) (9.6.1.1.1)
source (2384)	scenario%heat_power%ploss_icrh%source (string) (9.6.1.1.3)
ploss_nbi (2375)	scenario%heat_power%ploss_nbi (scenario_ref) (9.6.1.3.387)
value (2384)	scenario%heat_power%ploss_nbi%value (float) (9.6.1.1.1)
source (2384)	scenario%heat_power%ploss_nbi%source (string) (9.6.1.1.3)
pbrem (2375)	scenario%heat_power%pbrem (scenario_ref) (9.6.1.3.387)
value (2384)	scenario%heat_power%pbrem%value (float) (9.6.1.1.1)
source (2384)	scenario%heat_power%pbrem%source (string) (9.6.1.1.3)
pcyclo (2375)	scenario%heat_power%pcyclo (scenario_ref) (9.6.1.3.387)
value (2384)	scenario%heat_power%pcyclo%value (float) (9.6.1.1.1)
source (2384)	scenario%heat_power%pcyclo%source (string) (9.6.1.1.3)
prad (2375)	scenario%heat_power%prad (scenario_ref) (9.6.1.3.387)
value (2384)	scenario%heat_power%prad%value (float) (9.6.1.1.1)
source (2384)	scenario%heat_power%prad%source (string) (9.6.1.1.3)
pdd_fus (2375)	scenario%heat_power%pdd_fus (scenario_ref) (9.6.1.3.387)
value (2384)	scenario%heat_power%pdd_fus%value (float) (9.6.1.1.1)
source (2384)	scenario%heat_power%pdd_fus%source (string) (9.6.1.1.3)
pei (2375)	scenario%heat_power%pei (scenario_ref) (9.6.1.3.387)
value (2384)	scenario%heat_power%pei%value (float) (9.6.1.1.1)
source (2384)	scenario%heat_power%pei%source (string) (9.6.1.1.3)
pel_tot (2375)	scenario%heat_power%pel_tot (scenario_ref) (9.6.1.3.387)
value (2384)	scenario%heat_power%pel_tot%value (float) (9.6.1.1.1)
source (2384)	scenario%heat_power%pel_tot%source (string) (9.6.1.1.3)
pel_fus (2375)	scenario%heat_power%pel_fus (scenario_ref) (9.6.1.3.387)
value (2384)	scenario%heat_power%pel_fus%value (float) (9.6.1.1.1)
source (2384)	scenario%heat_power%pel_fus%source (string) (9.6.1.1.3)
pel_icrh (2375)	scenario%heat_power%pel_icrh (scenario_ref) (9.6.1.3.387)
value (2384)	scenario%heat_power%pel_icrh%value (float) (9.6.1.1.1)
source (2384)	scenario%heat_power%pel_icrh%source (string) (9.6.1.1.3)
pel_nbi (2375)	scenario%heat_power%pel_nbi (scenario_ref) (9.6.1.3.387)
value (2384)	scenario%heat_power%pel_nbi%value (float) (9.6.1.1.1)
source (2384)	scenario%heat_power%pel_nbi%source (string) (9.6.1.1.3)
pfus_dt (2375)	scenario%heat_power%pfus_dt (scenario_ref) (9.6.1.3.387)
value (2384)	scenario%heat_power%pfus_dt%value (float) (9.6.1.1.1)
source (2384)	scenario%heat_power%pfus_dt%source (string) (9.6.1.1.3)
ploss_fus (2375)	scenario%heat_power%ploss_fus (scenario_ref) (9.6.1.3.387)
value (2384)	scenario%heat_power%ploss_fus%value (float) (9.6.1.1.1)
source (2384)	scenario%heat_power%ploss_fus%source (string) (9.6.1.1.3)
pfus_nbi (2375)	scenario%heat_power%pfus_nbi (scenario_ref) (9.6.1.3.387)
value (2384)	scenario%heat_power%pfus_nbi%value (float) (9.6.1.1.1)
source (2384)	scenario%heat_power%pfus_nbi%source (string) (9.6.1.1.3)
pfus_th (2375)	scenario%heat_power%pfus_th (scenario_ref) (9.6.1.3.387)
value (2384)	scenario%heat_power%pfus_th%value (float) (9.6.1.1.1)
source (2384)	scenario%heat_power%pfus_th%source (string) (9.6.1.1.3)
padd_tot (2375)	scenario%heat_power%padd_tot (scenario_ref) (9.6.1.3.387)

value (2384)	scenario%heat_power%padd_tot%value (float) (9.6.1.1.1)
source (2384)	scenario%heat_power%padd_tot%source (string) (9.6.1.1.3)
pion_tot (2375)	scenario%heat_power%pion_tot (scenario_ref) (9.6.1.3.387)
value (2384)	scenario%heat_power%pion_tot%value (float) (9.6.1.1.1)
source (2384)	scenario%heat_power%pion_tot%source (string) (9.6.1.1.3)
pion_fus (2375)	scenario%heat_power%pion_fus (scenario_ref) (9.6.1.3.387)
value (2384)	scenario%heat_power%pion_fus%value (float) (9.6.1.1.1)
source (2384)	scenario%heat_power%pion_fus%source (string) (9.6.1.1.3)
pion_icrh (2375)	scenario%heat_power%pion_icrh (scenario_ref) (9.6.1.3.387)
value (2384)	scenario%heat_power%pion_icrh%value (float) (9.6.1.1.1)
source (2384)	scenario%heat_power%pion_icrh%source (string) (9.6.1.1.3)
pion_nbi (2375)	scenario%heat_power%pion_nbi (scenario_ref) (9.6.1.3.387)
value (2384)	scenario%heat_power%pion_nbi%value (float) (9.6.1.1.1)
source (2384)	scenario%heat_power%pion_nbi%source (string) (9.6.1.1.3)
pioniz (2375)	scenario%heat_power%pioniz (scenario_ref) (9.6.1.3.387)
value (2384)	scenario%heat_power%pioniz%value (float) (9.6.1.1.1)
source (2384)	scenario%heat_power%pioniz%source (string) (9.6.1.1.3)
ploss (2375)	scenario%heat_power%ploss (scenario_ref) (9.6.1.3.387)
value (2384)	scenario%heat_power%ploss%value (float) (9.6.1.1.1)
source (2384)	scenario%heat_power%ploss%source (string) (9.6.1.1.3)
p_wth (2375)	scenario%heat_power%p_wth (scenario_ref) (9.6.1.3.387)
value (2384)	scenario%heat_power%p_wth%value (float) (9.6.1.1.1)
source (2384)	scenario%heat_power%p_wth%source (string) (9.6.1.1.3)
p_w (2375)	scenario%heat_power%p_w (scenario_ref) (9.6.1.3.387)
value (2384)	scenario%heat_power%p_w%value (float) (9.6.1.1.1)
source (2384)	scenario%heat_power%p_w%source (string) (9.6.1.1.3)
p_l2h_thr (2375)	scenario%heat_power%p_l2h_thr (scenario_ref) (9.6.1.3.387)
value (2384)	scenario%heat_power%p_l2h_thr%value (float) (9.6.1.1.1)
source (2384)	scenario%heat_power%p_l2h_thr%source (string) (9.6.1.1.3)
p_l2h_sc (2375)	scenario%heat_power%p_l2h_sc (scenario_ref) (9.6.1.3.387)
value (2384)	scenario%heat_power%p_l2h_sc%value (float) (9.6.1.1.1)
source (2384)	scenario%heat_power%p_l2h_sc%source (string) (9.6.1.1.3)
p_nbi_icrh (2375)	scenario%heat_power%p_nbi_icrh (scenario_ref) (9.6.1.3.387)
value (2384)	scenario%heat_power%p_nbi_icrh%value (float) (9.6.1.1.1)
source (2384)	scenario%heat_power%p_nbi_icrh%source (string) (9.6.1.1.3)
itb (2040)	scenario%itb (scenario_itb) (9.6.1.3.380)
q_min (2377)	scenario%itb%q_min (scenario_ref) (9.6.1.3.387)
value (2384)	scenario%itb%q_min%value (float) (9.6.1.1.1)
source (2384)	scenario%itb%q_min%source (string) (9.6.1.1.3)
te_itb (2377)	scenario%itb%te_itb (scenario_ref) (9.6.1.3.387)
value (2384)	scenario%itb%te_itb%value (float) (9.6.1.1.1)
source (2384)	scenario%itb%te_itb%source (string) (9.6.1.1.3)
ti_itb (2377)	scenario%itb%ti_itb (scenario_ref) (9.6.1.3.387)
value (2384)	scenario%itb%ti_itb%value (float) (9.6.1.1.1)
source (2384)	scenario%itb%ti_itb%source (string) (9.6.1.1.3)
ne_itb (2377)	scenario%itb%ne_itb (scenario_ref) (9.6.1.3.387)
value (2384)	scenario%itb%ne_itb%value (float) (9.6.1.1.1)
source (2384)	scenario%itb%ne_itb%source (string) (9.6.1.1.3)
ni_itb (2377)	scenario%itb%ni_itb (scenario_ref) (9.6.1.3.387)
value (2384)	scenario%itb%ni_itb%value (float) (9.6.1.1.1)
source (2384)	scenario%itb%ni_itb%source (string) (9.6.1.1.3)
psi_itb (2377)	scenario%itb%psi_itb (scenario_ref) (9.6.1.3.387)
value (2384)	scenario%itb%psi_itb%value (float) (9.6.1.1.1)
source (2384)	scenario%itb%psi_itb%source (string) (9.6.1.1.3)
phi_itb (2377)	scenario%itb%phi_itb (scenario_ref) (9.6.1.3.387)
value (2384)	scenario%itb%phi_itb%value (float) (9.6.1.1.1)
source (2384)	scenario%itb%phi_itb%source (string) (9.6.1.1.3)
rho_itb (2377)	scenario%itb%rho_itb (scenario_ref) (9.6.1.3.387)
value (2384)	scenario%itb%rho_itb%value (float) (9.6.1.1.1)
source (2384)	scenario%itb%rho_itb%source (string) (9.6.1.1.3)
h_itb (2377)	scenario%itb%h_itb (scenario_ref) (9.6.1.3.387)



value (2384)	scenario%itb%h.itb%value (float) (9.6.1.1.1)
source (2384)	scenario%itb%h.itb%source (string) (9.6.1.1.3)
width.itb (2377)	scenario%itb%width.itb (scenario_ref) (9.6.1.3.387)
value (2384)	scenario%itb%width.itb%value (float) (9.6.1.1.1)
source (2384)	scenario%itb%width.itb%source (string) (9.6.1.1.3)
vtor.itb (2377)	scenario%itb%vtor.itb (scenario_ref) (9.6.1.3.387)
value (2384)	scenario%itb%vtor.itb%value (float) (9.6.1.1.1)
source (2384)	scenario%itb%vtor.itb%source (string) (9.6.1.1.3)
itb_type (2377)	scenario%itb%itb_type (scenario_int) (9.6.1.3.379)
value (2376)	scenario%itb%itb_type%value (integer) (9.6.1.1.2)
source (2376)	scenario%itb%itb_type%source (string) (9.6.1.1.3)
lim_div.wall (2040)	scenario%lim_div.wall (scenario_lim_div.wall) (9.6.1.3.381)
te_lim_div (2378)	scenario%lim_div.wall%te_lim_div (scenario_ref) (9.6.1.3.387)
value (2384)	scenario%lim_div.wall%te_lim_div%value (float) (9.6.1.1.1)
source (2384)	scenario%lim_div.wall%te_lim_div%source (string) (9.6.1.1.3)
ti_lim_div (2378)	scenario%lim_div.wall%ti_lim_div (scenario_ref) (9.6.1.3.387)
value (2384)	scenario%lim_div.wall%ti_lim_div%value (float) (9.6.1.1.1)
source (2384)	scenario%lim_div.wall%ti_lim_div%source (string) (9.6.1.1.3)
ne_lim_div (2378)	scenario%lim_div.wall%ne_lim_div (scenario_ref) (9.6.1.3.387)
value (2384)	scenario%lim_div.wall%ne_lim_div%value (float) (9.6.1.1.1)
source (2384)	scenario%lim_div.wall%ne_lim_div%source (string) (9.6.1.1.3)
ni_lim_div (2378)	scenario%lim_div.wall%ni_lim_div (scenario_ref) (9.6.1.3.387)
value (2384)	scenario%lim_div.wall%ni_lim_div%value (float) (9.6.1.1.1)
source (2384)	scenario%lim_div.wall%ni_lim_div%source (string) (9.6.1.1.3)
q_peak_div (2378)	scenario%lim_div.wall%q_peak_div (scenario_ref) (9.6.1.3.387)
value (2384)	scenario%lim_div.wall%q_peak_div%value (float) (9.6.1.1.1)
source (2384)	scenario%lim_div.wall%q_peak_div%source (string) (9.6.1.1.3)
q_peak.wall (2378)	scenario%lim_div.wall%q_peak.wall (scenario_ref) (9.6.1.3.387)
value (2384)	scenario%lim_div.wall%q_peak.wall%value (float) (9.6.1.1.1)
source (2384)	scenario%lim_div.wall%q_peak.wall%source (string) (9.6.1.1.3)
surf.temp (2378)	scenario%lim_div.wall%surf.temp (scenario_ref) (9.6.1.3.387)
value (2384)	scenario%lim_div.wall%surf.temp%value (float) (9.6.1.1.1)
source (2384)	scenario%lim_div.wall%surf.temp%source (string) (9.6.1.1.3)
p_lim_div (2378)	scenario%lim_div.wall%p_lim_div (scenario_ref) (9.6.1.3.387)
value (2384)	scenario%lim_div.wall%p_lim_div%value (float) (9.6.1.1.1)
source (2384)	scenario%lim_div.wall%p_lim_div%source (string) (9.6.1.1.3)
p_rad.div (2378)	scenario%lim_div.wall%p_rad.div (scenario_ref) (9.6.1.3.387)
value (2384)	scenario%lim_div.wall%p_rad.div%value (float) (9.6.1.1.1)
source (2384)	scenario%lim_div.wall%p_rad.div%source (string) (9.6.1.1.3)
p_neut.div (2378)	scenario%lim_div.wall%p_neut.div (scenario_ref) (9.6.1.3.387)
value (2384)	scenario%lim_div.wall%p_neut.div%value (float) (9.6.1.1.1)
source (2384)	scenario%lim_div.wall%p_neut.div%source (string) (9.6.1.1.3)
p_wall (2378)	scenario%lim_div.wall%p_wall (scenario_ref) (9.6.1.3.387)
value (2384)	scenario%lim_div.wall%p_wall%value (float) (9.6.1.1.1)
source (2384)	scenario%lim_div.wall%p_wall%source (string) (9.6.1.1.3)
wall.temp (2378)	scenario%lim_div.wall%wall.temp (scenario_ref) (9.6.1.3.387)
value (2384)	scenario%lim_div.wall%wall.temp%value (float) (9.6.1.1.1)
source (2384)	scenario%lim_div.wall%wall.temp%source (string) (9.6.1.1.3)
wall.state (2378)	scenario%lim_div.wall%wall.state (scenario_ref) (9.6.1.3.387)
value (2384)	scenario%lim_div.wall%wall.state%value (float) (9.6.1.1.1)
source (2384)	scenario%lim_div.wall%wall.state%source (string) (9.6.1.1.3)
detach.state (2378)	scenario%lim_div.wall%detach.state (scenario_ref) (9.6.1.3.387)
value (2384)	scenario%lim_div.wall%detach.state%value (float) (9.6.1.1.1)
source (2384)	scenario%lim_div.wall%detach.state%source (string) (9.6.1.1.3)
pump.flux (2378)	scenario%lim_div.wall%pump.flux (scenario_ref) (9.6.1.3.387)
value (2384)	scenario%lim_div.wall%pump.flux%value (float) (9.6.1.1.1)
source (2384)	scenario%lim_div.wall%pump.flux%source (string) (9.6.1.1.3)
p_rad.fw (2378)	scenario%lim_div.wall%p_rad.fw (scenario_ref) (9.6.1.3.387)
value (2384)	scenario%lim_div.wall%p_rad.fw%value (float) (9.6.1.1.1)
source (2384)	scenario%lim_div.wall%p_rad.fw%source (string) (9.6.1.1.3)
p_cond.fw (2378)	scenario%lim_div.wall%p_cond.fw (scenario_ref) (9.6.1.3.387)



value (2384)	scenario%lim_div_wall%p_cond_fw%value (float) (9.6.1.1.1)
source (2384)	scenario%lim_div_wall%p_cond_fw%source (string) (9.6.1.1.3)
div_wetted (2378)	scenario%lim_div_wall%div_wetted (scenario_ref) (9.6.1.3.387)
value (2384)	scenario%lim_div_wall%div_wetted%value (float) (9.6.1.1.1)
source (2384)	scenario%lim_div_wall%div_wetted%source (string) (9.6.1.1.3)
gas_puff (2378)	scenario%lim_div_wall%gas_puff (scenario_ref) (9.6.1.3.387)
value (2384)	scenario%lim_div_wall%gas_puff%value (float) (9.6.1.1.1)
source (2384)	scenario%lim_div_wall%gas_puff%source (string) (9.6.1.1.3)
ar_concentr (2378)	scenario%lim_div_wall%ar_concentr (scenario_ref) (9.6.1.3.387)
value (2384)	scenario%lim_div_wall%ar_concentr%value (float) (9.6.1.1.1)
source (2384)	scenario%lim_div_wall%ar_concentr%source (string) (9.6.1.1.3)
part_exhaust (2378)	scenario%lim_div_wall%part_exhaust (scenario_ref) (9.6.1.3.387)
value (2384)	scenario%lim_div_wall%part_exhaust%value (float) (9.6.1.1.1)
source (2384)	scenario%lim_div_wall%part_exhaust%source (string) (9.6.1.1.3)
f_inner (2378)	scenario%lim_div_wall%f_inner (scenario_ref) (9.6.1.3.387)
value (2384)	scenario%lim_div_wall%f_inner%value (float) (9.6.1.1.1)
source (2384)	scenario%lim_div_wall%f_inner%source (string) (9.6.1.1.3)
f_outer (2378)	scenario%lim_div_wall%f_outer (scenario_ref) (9.6.1.3.387)
value (2384)	scenario%lim_div_wall%f_outer%value (float) (9.6.1.1.1)
source (2384)	scenario%lim_div_wall%f_outer%source (string) (9.6.1.1.3)
f_pfr (2378)	scenario%lim_div_wall%f_pfr (scenario_ref) (9.6.1.3.387)
value (2384)	scenario%lim_div_wall%f_pfr%value (float) (9.6.1.1.1)
source (2384)	scenario%lim_div_wall%f_pfr%source (string) (9.6.1.1.3)
f_rad_fw (2378)	scenario%lim_div_wall%f_rad_fw (scenario_ref) (9.6.1.3.387)
value (2384)	scenario%lim_div_wall%f_rad_fw%value (float) (9.6.1.1.1)
source (2384)	scenario%lim_div_wall%f_rad_fw%source (string) (9.6.1.1.3)
q_div (2378)	scenario%lim_div_wall%q_div (vecflt_type) (9.6.1.2.13)
p_cond_div (2378)	scenario%lim_div_wall%p_cond_div (scenario_ref) (9.6.1.3.387)
value (2384)	scenario%lim_div_wall%p_cond_div%value (float) (9.6.1.1.1)
source (2384)	scenario%lim_div_wall%p_cond_div%source (string) (9.6.1.1.3)
pol_ext (2378)	scenario%lim_div_wall%pol_ext (float) (9.6.1.1.1)
flux_exp (2378)	scenario%lim_div_wall%flux_exp (float) (9.6.1.1.1)
tilt_angle (2378)	scenario%lim_div_wall%tilt_angle (float) (9.6.1.1.1)
n_div (2378)	scenario%lim_div_wall%n_div (float) (9.6.1.1.1)
div_dz (2378)	scenario%lim_div_wall%div_dz (float) (9.6.1.1.1)
div_dro (2378)	scenario%lim_div_wall%div_dro (float) (9.6.1.1.1)
div_dri (2378)	scenario%lim_div_wall%div_dri (float) (9.6.1.1.1)
p_nh_div (2378)	scenario%lim_div_wall%p_nh_div (scenario_ref) (9.6.1.3.387)
value (2384)	scenario%lim_div_wall%p_nh_div%value (float) (9.6.1.1.1)
source (2384)	scenario%lim_div_wall%p_nh_div%source (string) (9.6.1.1.3)
line_ave (2040)	scenario%line_ave (scenario_line_ave) (9.6.1.3.382)
ne_line (2379)	scenario%line_ave%ne_line (scenario_ref) (9.6.1.3.387)
value (2384)	scenario%line_ave%ne_line%value (float) (9.6.1.1.1)
source (2384)	scenario%line_ave%ne_line%source (string) (9.6.1.1.3)
zeff_line (2379)	scenario%line_ave%zeff_line (scenario_ref) (9.6.1.3.387)
value (2384)	scenario%line_ave%zeff_line%value (float) (9.6.1.1.1)
source (2384)	scenario%line_ave%zeff_line%source (string) (9.6.1.1.3)
ne_zeff_line (2379)	scenario%line_ave%ne_zeff_line (scenario_ref) (9.6.1.3.387)
value (2384)	scenario%line_ave%ne_zeff_line%value (float) (9.6.1.1.1)
source (2384)	scenario%line_ave%ne_zeff_line%source (string) (9.6.1.1.3)
dne_line_dt (2379)	scenario%line_ave%dne_line_dt (scenario_ref) (9.6.1.3.387)
value (2384)	scenario%line_ave%dne_line_dt%value (float) (9.6.1.1.1)
source (2384)	scenario%line_ave%dne_line_dt%source (string) (9.6.1.1.3)
neutron (2040)	scenario%neutron (scenario_neutron) (9.6.1.3.383)
ndd_tot (2380)	scenario%neutron%ndd_tot (scenario_ref) (9.6.1.3.387)
value (2384)	scenario%neutron%ndd_tot%value (float) (9.6.1.1.1)
source (2384)	scenario%neutron%ndd_tot%source (string) (9.6.1.1.3)
ndd_th (2380)	scenario%neutron%ndd_th (scenario_ref) (9.6.1.3.387)
value (2384)	scenario%neutron%ndd_th%value (float) (9.6.1.1.1)
source (2384)	scenario%neutron%ndd_th%source (string) (9.6.1.1.3)
ndd_nbi_th (2380)	scenario%neutron%ndd_nbi_th (scenario_ref) (9.6.1.3.387)

value (2384)	scenario%neutron%ndd_nbi.th%value (float) (9.6.1.1.1)
source (2384)	scenario%neutron%ndd_nbi.th%source (string) (9.6.1.1.3)
ndd_nbi_nbi (2380)	scenario%neutron%ndd_nbi_nbi (scenario_ref) (9.6.1.3.387)
value (2384)	scenario%neutron%ndd_nbi_nbi%value (float) (9.6.1.1.1)
source (2384)	scenario%neutron%ndd_nbi_nbi%source (string) (9.6.1.1.3)
ndt_tot (2380)	scenario%neutron%ndt_tot (scenario_ref) (9.6.1.3.387)
value (2384)	scenario%neutron%ndt_tot%value (float) (9.6.1.1.1)
source (2384)	scenario%neutron%ndt_tot%source (string) (9.6.1.1.3)
ndt_th (2380)	scenario%neutron%ndt_th (scenario_ref) (9.6.1.3.387)
value (2384)	scenario%neutron%ndt_th%value (float) (9.6.1.1.1)
source (2384)	scenario%neutron%ndt_th%source (string) (9.6.1.1.3)
ninety_five (2040)	scenario%ninety_five (scenario_ninety_five) (9.6.1.3.384)
q_95 (2381)	scenario%ninety_five%q_95 (scenario_ref) (9.6.1.3.387)
value (2384)	scenario%ninety_five%q_95%value (float) (9.6.1.1.1)
source (2384)	scenario%ninety_five%q_95%source (string) (9.6.1.1.3)
elong_95 (2381)	scenario%ninety_five%elong_95 (scenario_ref) (9.6.1.3.387)
value (2384)	scenario%ninety_five%elong_95%value (float) (9.6.1.1.1)
source (2384)	scenario%ninety_five%elong_95%source (string) (9.6.1.1.3)
tria_95 (2381)	scenario%ninety_five%tria_95 (scenario_ref) (9.6.1.3.387)
value (2384)	scenario%ninety_five%tria_95%value (float) (9.6.1.1.1)
source (2384)	scenario%ninety_five%tria_95%source (string) (9.6.1.1.3)
tria_up_95 (2381)	scenario%ninety_five%tria_up_95 (scenario_ref) (9.6.1.3.387)
value (2384)	scenario%ninety_five%tria_up_95%value (float) (9.6.1.1.1)
source (2384)	scenario%ninety_five%tria_up_95%source (string) (9.6.1.1.3)
tria_lo_95 (2381)	scenario%ninety_five%tria_lo_95 (scenario_ref) (9.6.1.3.387)
value (2384)	scenario%ninety_five%tria_lo_95%value (float) (9.6.1.1.1)
source (2384)	scenario%ninety_five%tria_lo_95%source (string) (9.6.1.1.3)
te_95 (2381)	scenario%ninety_five%te_95 (scenario_ref) (9.6.1.3.387)
value (2384)	scenario%ninety_five%te_95%value (float) (9.6.1.1.1)
source (2384)	scenario%ninety_five%te_95%source (string) (9.6.1.1.3)
ti_95 (2381)	scenario%ninety_five%ti_95 (scenario_ref) (9.6.1.3.387)
value (2384)	scenario%ninety_five%ti_95%value (float) (9.6.1.1.1)
source (2384)	scenario%ninety_five%ti_95%source (string) (9.6.1.1.3)
ne_95 (2381)	scenario%ninety_five%ne_95 (scenario_ref) (9.6.1.3.387)
value (2384)	scenario%ninety_five%ne_95%value (float) (9.6.1.1.1)
source (2384)	scenario%ninety_five%ne_95%source (string) (9.6.1.1.3)
ni_95 (2381)	scenario%ninety_five%ni_95 (scenario_ref) (9.6.1.3.387)
value (2384)	scenario%ninety_five%ni_95%value (float) (9.6.1.1.1)
source (2384)	scenario%ninety_five%ni_95%source (string) (9.6.1.1.3)
phi_95 (2381)	scenario%ninety_five%phi_95 (scenario_ref) (9.6.1.3.387)
value (2384)	scenario%ninety_five%phi_95%value (float) (9.6.1.1.1)
source (2384)	scenario%ninety_five%phi_95%source (string) (9.6.1.1.3)
rho_95 (2381)	scenario%ninety_five%rho_95 (scenario_ref) (9.6.1.3.387)
value (2384)	scenario%ninety_five%rho_95%value (float) (9.6.1.1.1)
source (2384)	scenario%ninety_five%rho_95%source (string) (9.6.1.1.3)
vtr_95 (2381)	scenario%ninety_five%vtr_95 (scenario_ref) (9.6.1.3.387)
value (2384)	scenario%ninety_five%vtr_95%value (float) (9.6.1.1.1)
source (2384)	scenario%ninety_five%vtr_95%source (string) (9.6.1.1.3)
pedestal (2040)	scenario%pedestal (scenario_pedestal) (9.6.1.3.385)
te_ped (2382)	scenario%pedestal%te_ped (scenario_ref) (9.6.1.3.387)
value (2384)	scenario%pedestal%te_ped%value (float) (9.6.1.1.1)
source (2384)	scenario%pedestal%te_ped%source (string) (9.6.1.1.3)
ti_ped (2382)	scenario%pedestal%ti_ped (scenario_ref) (9.6.1.3.387)
value (2384)	scenario%pedestal%ti_ped%value (float) (9.6.1.1.1)
source (2384)	scenario%pedestal%ti_ped%source (string) (9.6.1.1.3)
ne_ped (2382)	scenario%pedestal%ne_ped (scenario_ref) (9.6.1.3.387)
value (2384)	scenario%pedestal%ne_ped%value (float) (9.6.1.1.1)
source (2384)	scenario%pedestal%ne_ped%source (string) (9.6.1.1.3)
ni_ped (2382)	scenario%pedestal%ni_ped (scenario_ref) (9.6.1.3.387)
value (2384)	scenario%pedestal%ni_ped%value (float) (9.6.1.1.1)
source (2384)	scenario%pedestal%ni_ped%source (string) (9.6.1.1.3)

psi_ped (2382)	scenario%pedestal%psi_ped (scenario_ref) (9.6.1.3.387)
value (2384)	scenario%pedestal%psi_ped%value (float) (9.6.1.1.1)
source (2384)	scenario%pedestal%psi_ped%source (string) (9.6.1.1.3)
phi_ped (2382)	scenario%pedestal%phi_ped (scenario_ref) (9.6.1.3.387)
value (2384)	scenario%pedestal%phi_ped%value (float) (9.6.1.1.1)
source (2384)	scenario%pedestal%phi_ped%source (string) (9.6.1.1.3)
rho_ped (2382)	scenario%pedestal%rho_ped (scenario_ref) (9.6.1.3.387)
value (2384)	scenario%pedestal%rho_ped%value (float) (9.6.1.1.1)
source (2384)	scenario%pedestal%rho_ped%source (string) (9.6.1.1.3)
q_ped (2382)	scenario%pedestal%q_ped (scenario_ref) (9.6.1.3.387)
value (2384)	scenario%pedestal%q_ped%value (float) (9.6.1.1.1)
source (2384)	scenario%pedestal%q_ped%source (string) (9.6.1.1.3)
pressure_ped (2382)	scenario%pedestal%pressure_ped (scenario_ref) (9.6.1.3.387)
value (2384)	scenario%pedestal%pressure_ped%value (float) (9.6.1.1.1)
source (2384)	scenario%pedestal%pressure_ped%source (string) (9.6.1.1.3)
vtor_ped (2382)	scenario%pedestal%vtor_ped (scenario_ref) (9.6.1.3.387)
value (2384)	scenario%pedestal%vtor_ped%value (float) (9.6.1.1.1)
source (2384)	scenario%pedestal%vtor_ped%source (string) (9.6.1.1.3)
references (2040)	scenario%references (scenario_references) (9.6.1.3.388)
plh (2385)	scenario%references%plh (scenario_ref) (9.6.1.3.387)
value (2384)	scenario%references%plh%value (float) (9.6.1.1.1)
source (2384)	scenario%references%plh%source (string) (9.6.1.1.3)
picrh (2385)	scenario%references%picrh (scenario_ref) (9.6.1.3.387)
value (2384)	scenario%references%picrh%value (float) (9.6.1.1.1)
source (2384)	scenario%references%picrh%source (string) (9.6.1.1.3)
pecrh (2385)	scenario%references%pecrh (scenario_ref) (9.6.1.3.387)
value (2384)	scenario%references%pecrh%value (float) (9.6.1.1.1)
source (2384)	scenario%references%pecrh%source (string) (9.6.1.1.3)
pnbi (2385)	scenario%references%pnbi (scenario_ref) (9.6.1.3.387)
value (2384)	scenario%references%pnbi%value (float) (9.6.1.1.1)
source (2384)	scenario%references%pnbi%source (string) (9.6.1.1.3)
ip (2385)	scenario%references%ip (scenario_ref) (9.6.1.3.387)
value (2384)	scenario%references%ip%value (float) (9.6.1.1.1)
source (2384)	scenario%references%ip%source (string) (9.6.1.1.3)
bvac_r (2385)	scenario%references%bvac_r (scenario_ref) (9.6.1.3.387)
value (2384)	scenario%references%bvac_r%value (float) (9.6.1.1.1)
source (2384)	scenario%references%bvac_r%source (string) (9.6.1.1.3)
zeffl (2385)	scenario%references%zeffl (scenario_ref) (9.6.1.3.387)
value (2384)	scenario%references%zeffl%value (float) (9.6.1.1.1)
source (2384)	scenario%references%zeffl%source (string) (9.6.1.1.3)
nbar (2385)	scenario%references%nbar (scenario_ref) (9.6.1.3.387)
value (2384)	scenario%references%nbar%value (float) (9.6.1.1.1)
source (2384)	scenario%references%nbar%source (string) (9.6.1.1.3)
xecrh (2385)	scenario%references%xecrh (scenario_ref) (9.6.1.3.387)
value (2384)	scenario%references%xecrh%value (float) (9.6.1.1.1)
source (2384)	scenario%references%xecrh%source (string) (9.6.1.1.3)
pol_flux (2385)	scenario%references%pol_flux (scenario_ref) (9.6.1.3.387)
value (2384)	scenario%references%pol_flux%value (float) (9.6.1.1.1)
source (2384)	scenario%references%pol_flux%source (string) (9.6.1.1.3)
enhancement (2385)	scenario%references%enhancement (scenario_ref) (9.6.1.3.387)
value (2384)	scenario%references%enhancement%value (float) (9.6.1.1.1)
source (2384)	scenario%references%enhancement%source (string) (9.6.1.1.3)
isotopic (2385)	scenario%references%isotopic (scenario_ref) (9.6.1.3.387)
value (2384)	scenario%references%isotopic%value (float) (9.6.1.1.1)
source (2384)	scenario%references%isotopic%source (string) (9.6.1.1.3)
nbi_td_ratio (2385)	scenario%references%nbi_td_ratio (scenario_ref) (9.6.1.3.387)
value (2384)	scenario%references%nbi_td_ratio%value (float) (9.6.1.1.1)
source (2384)	scenario%references%nbi_td_ratio%source (string) (9.6.1.1.3)
gas_puff (2385)	scenario%references%gas_puff (scenario_ref) (9.6.1.3.387)
value (2384)	scenario%references%gas_puff%value (float) (9.6.1.1.1)
source (2384)	scenario%references%gas_puff%source (string) (9.6.1.1.3)

reactor (2040)	scenario%reactor (scenario_reactor) (9.6.1.3.386)
pnetwork (2383)	scenario%reactor%pnetwork (float) (9.6.1.1.1)
sol (2040)	scenario%sol (scenario_sol) (9.6.1.3.389)
l.te_sol (2386)	scenario%sol%l.te_sol (scenario_ref) (9.6.1.3.387)
value (2384)	scenario%sol%l.te_sol%value (float) (9.6.1.1.1)
source (2384)	scenario%sol%l.te_sol%source (string) (9.6.1.1.3)
l.ti_sol (2386)	scenario%sol%l.ti_sol (scenario_ref) (9.6.1.3.387)
value (2384)	scenario%sol%l.ti_sol%value (float) (9.6.1.1.1)
source (2384)	scenario%sol%l.ti_sol%source (string) (9.6.1.1.3)
l.ne_sol (2386)	scenario%sol%l.ne_sol (scenario_ref) (9.6.1.3.387)
value (2384)	scenario%sol%l.ne_sol%value (float) (9.6.1.1.1)
source (2384)	scenario%sol%l.ne_sol%source (string) (9.6.1.1.3)
l.ni_sol (2386)	scenario%sol%l.ni_sol (scenario_ref) (9.6.1.3.387)
value (2384)	scenario%sol%l.ni_sol%value (float) (9.6.1.1.1)
source (2384)	scenario%sol%l.ni_sol%source (string) (9.6.1.1.3)
l.qe_sol (2386)	scenario%sol%l.qe_sol (scenario_ref) (9.6.1.3.387)
value (2384)	scenario%sol%l.qe_sol%value (float) (9.6.1.1.1)
source (2384)	scenario%sol%l.qe_sol%source (string) (9.6.1.1.3)
l.qi_sol (2386)	scenario%sol%l.qi_sol (scenario_ref) (9.6.1.3.387)
value (2384)	scenario%sol%l.qi_sol%value (float) (9.6.1.1.1)
source (2384)	scenario%sol%l.qi_sol%source (string) (9.6.1.1.3)
p_rad_sol (2386)	scenario%sol%p_rad_sol (scenario_ref) (9.6.1.3.387)
value (2384)	scenario%sol%p_rad_sol%value (float) (9.6.1.1.1)
source (2384)	scenario%sol%p_rad_sol%source (string) (9.6.1.1.3)
p_neut (2386)	scenario%sol%p_neut (float) (9.6.1.1.1)
gas.puff (2386)	scenario%sol%gas.puff (scenario_ref) (9.6.1.3.387)
value (2384)	scenario%sol%gas.puff%value (float) (9.6.1.1.1)
source (2384)	scenario%sol%gas.puff%source (string) (9.6.1.1.3)
delta_r_in (2386)	scenario%sol%delta_r_in (float) (9.6.1.1.1)
delta_r_out (2386)	scenario%sol%delta_r_out (float) (9.6.1.1.1)
r_in (2386)	scenario%sol%r_in (float) (9.6.1.1.1)
r_out (2386)	scenario%sol%r_out (float) (9.6.1.1.1)
sol_width (2386)	scenario%sol%sol_width (float) (9.6.1.1.1)
vol.ave (2040)	scenario%vol.ave (scenario_vol.ave) (9.6.1.3.390)
te.ave (2387)	scenario%vol.ave%te.ave (scenario_ref) (9.6.1.3.387)
value (2384)	scenario%vol.ave%te.ave%value (float) (9.6.1.1.1)
source (2384)	scenario%vol.ave%te.ave%source (string) (9.6.1.1.3)
ti.ave (2387)	scenario%vol.ave%ti.ave (scenario_ref) (9.6.1.3.387)
value (2384)	scenario%vol.ave%ti.ave%value (float) (9.6.1.1.1)
source (2384)	scenario%vol.ave%ti.ave%source (string) (9.6.1.1.3)
ne.ave (2387)	scenario%vol.ave%ne.ave (scenario_ref) (9.6.1.3.387)
value (2384)	scenario%vol.ave%ne.ave%value (float) (9.6.1.1.1)
source (2384)	scenario%vol.ave%ne.ave%source (string) (9.6.1.1.3)
dne.ave.dt (2387)	scenario%vol.ave%dne.ave.dt (scenario_ref) (9.6.1.3.387)
value (2384)	scenario%vol.ave%dne.ave.dt%value (float) (9.6.1.1.1)
source (2384)	scenario%vol.ave%dne.ave.dt%source (string) (9.6.1.1.3)
ni.ave (2387)	scenario%vol.ave%ni.ave (scenario_ref) (9.6.1.3.387)
value (2384)	scenario%vol.ave%ni.ave%value (float) (9.6.1.1.1)
source (2384)	scenario%vol.ave%ni.ave%source (string) (9.6.1.1.3)
zeff.ave (2387)	scenario%vol.ave%zeff.ave (scenario_ref) (9.6.1.3.387)
value (2384)	scenario%vol.ave%zeff.ave%value (float) (9.6.1.1.1)
source (2384)	scenario%vol.ave%zeff.ave%source (string) (9.6.1.1.3)
ti.o.te.ave (2387)	scenario%vol.ave%ti.o.te.ave (scenario_ref) (9.6.1.3.387)
value (2384)	scenario%vol.ave%ti.o.te.ave%value (float) (9.6.1.1.1)
source (2384)	scenario%vol.ave%ti.o.te.ave%source (string) (9.6.1.1.3)
meff.ave (2387)	scenario%vol.ave%meff.ave (scenario_ref) (9.6.1.3.387)
value (2384)	scenario%vol.ave%meff.ave%value (float) (9.6.1.1.1)
source (2384)	scenario%vol.ave%meff.ave%source (string) (9.6.1.1.3)
pellet_flux (2387)	scenario%vol.ave%pellet_flux (scenario_ref) (9.6.1.3.387)
value (2384)	scenario%vol.ave%pellet_flux%value (float) (9.6.1.1.1)
source (2384)	scenario%vol.ave%pellet_flux%source (string) (9.6.1.1.3)

nions_ave (2387)	scenario%vol_ave%nions_ave (vecflt.type) (9.6.1.2.13)
omega_ave (2387)	scenario%vol_ave%omega_ave (scenario_ref) (9.6.1.3.387)
value (2384)	scenario%vol_ave%omega_ave%value (float) (9.6.1.1.1)
source (2384)	scenario%vol_ave%omega_ave%source (string) (9.6.1.1.3)
codeparam (2040)	scenario%codeparam (codeparam) (9.6.1.3.77)
codename (2074)	scenario%codeparam%codename (string) (9.6.1.1.3)
codeversion (2074)	scenario%codeparam%codeversion (string) (9.6.1.1.3)
parameters (2074)	scenario%codeparam%parameters (string) (9.6.1.1.3)
output_diag (2074)	scenario%codeparam%output_diag (string) (9.6.1.1.3)
output_flag (2074)	scenario%codeparam%output_flag (integer) (9.6.1.1.2)
time (2040)	scenario%time (float) (9.6.1.1.1)

### 9.6.2.1.42 solcurdiag

datainfo (2041)	solcurdiag%datainfo (datainfo) (9.6.1.3.133)
dataprovder (2130)	solcurdiag%datainfo%dataprovder (string) (9.6.1.1.3)
putdate (2130)	solcurdiag%datainfo%putdate (string) (9.6.1.1.3)
source (2130)	solcurdiag%datainfo%source (string) (9.6.1.1.3)
comment (2130)	solcurdiag%datainfo%comment (string) (9.6.1.1.3)
cocos (2130)	solcurdiag%datainfo%cocos (integer) (9.6.1.1.2)
id (2130)	solcurdiag%datainfo%id (integer) (9.6.1.1.2)
isref (2130)	solcurdiag%datainfo%isref (integer) (9.6.1.1.2)
whatref (2130)	solcurdiag%datainfo%whatref (whatref) (9.6.1.3.503)
user (2500)	solcurdiag%datainfo%whatref%user (string) (9.6.1.1.3)
machine (2500)	solcurdiag%datainfo%whatref%machine (string) (9.6.1.1.3)
shot (2500)	solcurdiag%datainfo%whatref%shot (integer) (9.6.1.1.2)
run (2500)	solcurdiag%datainfo%whatref%run (integer) (9.6.1.1.2)
occurrence (2500)	solcurdiag%datainfo%whatref%occurrence (integer) (9.6.1.1.2)
putinfo (2130)	solcurdiag%datainfo%putinfo (putinfo) (9.6.1.3.339)
putmethod (2336)	solcurdiag%datainfo%putinfo%putmethod (string) (9.6.1.1.3)
putaccess (2336)	solcurdiag%datainfo%putinfo%putaccess (string) (9.6.1.1.3)
putlocation (2336)	solcurdiag%datainfo%putinfo%putlocation (string) (9.6.1.1.3)
rights (2336)	solcurdiag%datainfo%putinfo%rights (string) (9.6.1.1.3)
sol_current (2041)	solcurdiag%sol_current(:) (solcurdiag_sol_current) (9.6.1.3.398)
setup (2395)	solcurdiag%sol_current(:)%setup (solcurdiag_sol_current_setup) (9.6.1.3.399)
name (2396)	solcurdiag%sol_current(:)%setup%name (string) (9.6.1.1.3)
id (2396)	solcurdiag%sol_current(:)%setup%id (integer) (9.6.1.1.2)
position (2396)	solcurdiag%sol_current(:)%setup%position (rz1D) (9.6.1.3.356)
r (2353)	solcurdiag%sol_current(:)%setup%position%r (vecflt.type) (9.6.1.2.13)
z (2353)	solcurdiag%sol_current(:)%setup%position%z (vecflt.type) (9.6.1.2.13)
tiles_turn (2396)	solcurdiag%sol_current(:)%setup%tiles_turn (integer) (9.6.1.1.2)
measure (2395)	solcurdiag%sol_current(:)%measure (exp0D) (9.6.1.3.194)
value (2191)	solcurdiag%sol_current(:)%measure%value (float) (9.6.1.1.1)
abserror (2191)	solcurdiag%sol_current(:)%measure%abserror (float) (9.6.1.1.1)
relerror (2191)	solcurdiag%sol_current(:)%measure%relerror (float) (9.6.1.1.1)
clusters (2041)	solcurdiag%clusters(:) (clusters) (9.6.1.3.76)
name (2073)	solcurdiag%clusters(:)%name (string) (9.6.1.1.3)
start (2073)	solcurdiag%clusters(:)%start (integer) (9.6.1.1.2)
finish (2073)	solcurdiag%clusters(:)%finish (integer) (9.6.1.1.2)
time (2041)	solcurdiag%time (float) (9.6.1.1.1)
codeparam (2041)	solcurdiag%codeparam (codeparam) (9.6.1.3.77)
codename (2074)	solcurdiag%codeparam%codename (string) (9.6.1.1.3)
codeversion (2074)	solcurdiag%codeparam%codeversion (string) (9.6.1.1.3)
parameters (2074)	solcurdiag%codeparam%parameters (string) (9.6.1.1.3)
output_diag (2074)	solcurdiag%codeparam%output_diag (string) (9.6.1.1.3)
output_flag (2074)	solcurdiag%codeparam%output_flag (integer) (9.6.1.1.2)

### 9.6.2.1.43 temporary

datainfo (2042)	temporary%datainfo (datainfo) (9.6.1.3.133)
dataprovder (2130)	temporary%datainfo%dataprovder (string) (9.6.1.1.3)

putdate (2130)	temporary%datainfo%putdate (string) (9.6.1.1.3)
source (2130)	temporary%datainfo%source (string) (9.6.1.1.3)
comment (2130)	temporary%datainfo%comment (string) (9.6.1.1.3)
cocos (2130)	temporary%datainfo%cocos (integer) (9.6.1.1.2)
id (2130)	temporary%datainfo%id (integer) (9.6.1.1.2)
isref (2130)	temporary%datainfo%isref (integer) (9.6.1.1.2)
whatref (2130)	temporary%datainfo%whatref (whatref) (9.6.1.3.503)
user (2500)	temporary%datainfo%whatref%user (string) (9.6.1.1.3)
machine (2500)	temporary%datainfo%whatref%machine (string) (9.6.1.1.3)
shot (2500)	temporary%datainfo%whatref%shot (integer) (9.6.1.1.2)
run (2500)	temporary%datainfo%whatref%run (integer) (9.6.1.1.2)
occurrence (2500)	temporary%datainfo%whatref%occurrence (integer) (9.6.1.1.2)
putinfo (2130)	temporary%datainfo%putinfo (putinfo) (9.6.1.3.339)
putmethod (2336)	temporary%datainfo%putinfo%putmethod (string) (9.6.1.1.3)
putaccess (2336)	temporary%datainfo%putinfo%putaccess (string) (9.6.1.1.3)
putlocation (2336)	temporary%datainfo%putinfo%putlocation (string) (9.6.1.1.3)
rights (2336)	temporary%datainfo%putinfo%rights (string) (9.6.1.1.3)
non_timed (2042)	temporary%non_timed (temporary_nt) (9.6.1.3.420)
float0d (2417)	temporary%non_timed%float0d(:) (temporary_nt_0dr) (9.6.1.3.423)
identifier (2420)	temporary%non_timed%float0d(:)%identifier (identifier) (9.6.1.3.233)
id (2230)	temporary%non_timed%float0d(:)%identifier%id (string) (9.6.1.1.3)
flag (2230)	temporary%non_timed%float0d(:)%identifier%flag (integer) (9.6.1.1.2)
description (2230)	temporary%non_timed%float0d(:)%identifier%description (string) (9.6.1.1.3)
value (2420)	temporary%non_timed%float0d(:)%value (float) (9.6.1.1.1)
integer0d (2417)	temporary%non_timed%integer0d(:) (temporary_nt_0di) (9.6.1.3.422)
identifier (2419)	temporary%non_timed%integer0d(:)%identifier (identifier) (9.6.1.3.233)
id (2230)	temporary%non_timed%integer0d(:)%identifier%id (string) (9.6.1.1.3)
flag (2230)	temporary%non_timed%integer0d(:)%identifier%flag (integer) (9.6.1.1.2)
description (2230)	temporary%non_timed%integer0d(:)%identifier%description (string) (9.6.1.1.3)
value (2419)	temporary%non_timed%integer0d(:)%value (integer) (9.6.1.1.2)
complex0d (2417)	temporary%non_timed%complex0d(:) (temporary_nt_0dc) (9.6.1.3.421)
identifier (2418)	temporary%non_timed%complex0d(:)%identifier (identifier) (9.6.1.3.233)
id (2230)	temporary%non_timed%complex0d(:)%identifier%id (string) (9.6.1.1.3)
flag (2230)	temporary%non_timed%complex0d(:)%identifier%flag (integer) (9.6.1.1.2)
description (2230)	temporary%non_timed%complex0d(:)%identifier%description (string) (9.6.1.1.3)
value (2418)	temporary%non_timed%complex0d(:)%value (cplx_type) (9.6.1.2.8)
string0d (2417)	temporary%non_timed%string0d(:) (temporary_nt_0ds) (9.6.1.3.424)
identifier (2421)	temporary%non_timed%string0d(:)%identifier (identifier) (9.6.1.3.233)
id (2230)	temporary%non_timed%string0d(:)%identifier%id (string) (9.6.1.1.3)
flag (2230)	temporary%non_timed%string0d(:)%identifier%flag (integer) (9.6.1.1.2)
description (2230)	temporary%non_timed%string0d(:)%identifier%description (string) (9.6.1.1.3)
value (2421)	temporary%non_timed%string0d(:)%value (string) (9.6.1.1.3)
float1d (2417)	temporary%non_timed%float1d(:) (temporary_nt_1dr) (9.6.1.3.427)
identifier (2424)	temporary%non_timed%float1d(:)%identifier (identifier) (9.6.1.3.233)
id (2230)	temporary%non_timed%float1d(:)%identifier%id (string) (9.6.1.1.3)
flag (2230)	temporary%non_timed%float1d(:)%identifier%flag (integer) (9.6.1.1.2)
description (2230)	temporary%non_timed%float1d(:)%identifier%description (string) (9.6.1.1.3)
value (2424)	temporary%non_timed%float1d(:)%value (vecflt_type) (9.6.1.2.13)
integer1d (2417)	temporary%non_timed%integer1d(:) (temporary_nt_1di) (9.6.1.3.426)
identifier (2423)	temporary%non_timed%integer1d(:)%identifier (identifier) (9.6.1.3.233)
id (2230)	temporary%non_timed%integer1d(:)%identifier%id (string) (9.6.1.1.3)
flag (2230)	temporary%non_timed%integer1d(:)%identifier%flag (integer) (9.6.1.1.2)
description (2230)	temporary%non_timed%integer1d(:)%identifier%description (string) (9.6.1.1.3)
value (2423)	temporary%non_timed%integer1d(:)%value (vecint_type) (9.6.1.2.14)
string1d (2417)	temporary%non_timed%string1d(:) (temporary_nt_1dr) (9.6.1.3.427)
identifier (2424)	temporary%non_timed%string1d(:)%identifier (identifier) (9.6.1.3.233)
id (2230)	temporary%non_timed%string1d(:)%identifier%id (string) (9.6.1.1.3)
flag (2230)	temporary%non_timed%string1d(:)%identifier%flag (integer) (9.6.1.1.2)
description (2230)	temporary%non_timed%string1d(:)%identifier%description (string) (9.6.1.1.3)
value (2424)	temporary%non_timed%string1d(:)%value (vecflt_type) (9.6.1.2.13)
complex1d (2417)	temporary%non_timed%complex1d(:) (temporary_nt_1dc) (9.6.1.3.425)



identifier (2422)	temporary%non.timed%complex1d(:)%identifier (identifier) (9.6.1.3.233)
id (2230)	temporary%non.timed%complex1d(:)%identifier%id (string) (9.6.1.1.3)
flag (2230)	temporary%non.timed%complex1d(:)%identifier%flag (integer) (9.6.1.1.2)
description (2230)	temporary%non.timed%complex1d(:)%identifier%description (string) (9.6.1.1.3)
value (2422)	temporary%non.timed%complex1d(:)%value (vecplx_type) (9.6.1.2.12)
float2d (2417)	temporary%non.timed%float2d(:) (temporary_nt_2dr) (9.6.1.3.431)
identifier (2428)	temporary%non.timed%float2d(:)%identifier (identifier) (9.6.1.3.233)
id (2230)	temporary%non.timed%float2d(:)%identifier%id (string) (9.6.1.1.3)
flag (2230)	temporary%non.timed%float2d(:)%identifier%flag (integer) (9.6.1.1.2)
description (2230)	temporary%non.timed%float2d(:)%identifier%description (string) (9.6.1.1.3)
value (2428)	temporary%non.timed%float2d(:)%value (matflt_type) (9.6.1.2.10)
integer2d (2417)	temporary%non.timed%integer2d(:) (temporary_nt_2di) (9.6.1.3.430)
identifier (2427)	temporary%non.timed%integer2d(:)%identifier (identifier) (9.6.1.3.233)
id (2230)	temporary%non.timed%integer2d(:)%identifier%id (string) (9.6.1.1.3)
flag (2230)	temporary%non.timed%integer2d(:)%identifier%flag (integer) (9.6.1.1.2)
description (2230)	temporary%non.timed%integer2d(:)%identifier%description (string) (9.6.1.1.3)
value (2427)	temporary%non.timed%integer2d(:)%value (matint_type) (9.6.1.2.11)
complex2d (2417)	temporary%non.timed%complex2d(:) (temporary_nt_2dc) (9.6.1.3.429)
identifier (2426)	temporary%non.timed%complex2d(:)%identifier (identifier) (9.6.1.3.233)
id (2230)	temporary%non.timed%complex2d(:)%identifier%id (string) (9.6.1.1.3)
flag (2230)	temporary%non.timed%complex2d(:)%identifier%flag (integer) (9.6.1.1.2)
description (2230)	temporary%non.timed%complex2d(:)%identifier%description (string) (9.6.1.1.3)
value (2426)	temporary%non.timed%complex2d(:)%value (matcplx_type) (9.6.1.2.9)
float3d (2417)	temporary%non.timed%float3d(:) (temporary_nt_3dr) (9.6.1.3.434)
identifier (2431)	temporary%non.timed%float3d(:)%identifier (identifier) (9.6.1.3.233)
id (2230)	temporary%non.timed%float3d(:)%identifier%id (string) (9.6.1.1.3)
flag (2230)	temporary%non.timed%float3d(:)%identifier%flag (integer) (9.6.1.1.2)
description (2230)	temporary%non.timed%float3d(:)%identifier%description (string) (9.6.1.1.3)
value (2431)	temporary%non.timed%float3d(:)%value (array3dfflt_type) (9.6.1.2.2)
integer3d (2417)	temporary%non.timed%integer3d(:) (temporary_nt_3di) (9.6.1.3.433)
identifier (2430)	temporary%non.timed%integer3d(:)%identifier (identifier) (9.6.1.3.233)
id (2230)	temporary%non.timed%integer3d(:)%identifier%id (string) (9.6.1.1.3)
flag (2230)	temporary%non.timed%integer3d(:)%identifier%flag (integer) (9.6.1.1.2)
description (2230)	temporary%non.timed%integer3d(:)%identifier%description (string) (9.6.1.1.3)
value (2430)	temporary%non.timed%integer3d(:)%value (array3dint_type) (9.6.1.2.3)
complex3d (2417)	temporary%non.timed%complex3d(:) (temporary_nt_3dc) (9.6.1.3.432)
identifier (2429)	temporary%non.timed%complex3d(:)%identifier (identifier) (9.6.1.3.233)
id (2230)	temporary%non.timed%complex3d(:)%identifier%id (string) (9.6.1.1.3)
flag (2230)	temporary%non.timed%complex3d(:)%identifier%flag (integer) (9.6.1.1.2)
description (2230)	temporary%non.timed%complex3d(:)%identifier%description (string) (9.6.1.1.3)
value (2429)	temporary%non.timed%complex3d(:)%value (array3dcplx_type) (9.6.1.2.1)
float4d (2417)	temporary%non.timed%float4d(:) (temporary_nt_4dr) (9.6.1.3.435)
identifier (2432)	temporary%non.timed%float4d(:)%identifier (identifier) (9.6.1.3.233)
id (2230)	temporary%non.timed%float4d(:)%identifier%id (string) (9.6.1.1.3)
flag (2230)	temporary%non.timed%float4d(:)%identifier%flag (integer) (9.6.1.1.2)
description (2230)	temporary%non.timed%float4d(:)%identifier%description (string) (9.6.1.1.3)
value (2432)	temporary%non.timed%float4d(:)%value (array4dfflt_type) (9.6.1.2.4)
timed (2042)	temporary%timed (temporary_t) (9.6.1.3.436)
float0d (2433)	temporary%timed%float0d(:) (temporary_t_0dr) (9.6.1.3.439)
identifier (2436)	temporary%timed%float0d(:)%identifier (identifier) (9.6.1.3.233)
id (2230)	temporary%timed%float0d(:)%identifier%id (string) (9.6.1.1.3)
flag (2230)	temporary%timed%float0d(:)%identifier%flag (integer) (9.6.1.1.2)
description (2230)	temporary%timed%float0d(:)%identifier%description (string) (9.6.1.1.3)
value (2436)	temporary%timed%float0d(:)%value (float) (9.6.1.1.1)
integer0d (2433)	temporary%timed%integer0d(:) (temporary_t_0di) (9.6.1.3.438)
identifier (2435)	temporary%timed%integer0d(:)%identifier (identifier) (9.6.1.3.233)
id (2230)	temporary%timed%integer0d(:)%identifier%id (string) (9.6.1.1.3)
flag (2230)	temporary%timed%integer0d(:)%identifier%flag (integer) (9.6.1.1.2)
description (2230)	temporary%timed%integer0d(:)%identifier%description (string) (9.6.1.1.3)
value (2435)	temporary%timed%integer0d(:)%value (integer) (9.6.1.1.2)
complex0d (2433)	temporary%timed%complex0d(:) (temporary_t_0dc) (9.6.1.3.437)



identifier (2434)	temporary%timed%complex0d(:)%identifier (identifier) (9.6.1.3.233)
id (2230)	temporary%timed%complex0d(:)%identifier%id (string) (9.6.1.1.3)
flag (2230)	temporary%timed%complex0d(:)%identifier%flag (integer) (9.6.1.1.2)
description (2230)	temporary%timed%complex0d(:)%identifier%description (string) (9.6.1.1.3)
value (2434)	temporary%timed%complex0d(:)%value (cplx_type) (9.6.1.2.8)
string0d (2433)	temporary%timed%string0d(:) (temporary_t_0ds) (9.6.1.3.440)
identifier (2437)	temporary%timed%string0d(:)%identifier (identifier) (9.6.1.3.233)
id (2230)	temporary%timed%string0d(:)%identifier%id (string) (9.6.1.1.3)
flag (2230)	temporary%timed%string0d(:)%identifier%flag (integer) (9.6.1.1.2)
description (2230)	temporary%timed%string0d(:)%identifier%description (string) (9.6.1.1.3)
value (2437)	temporary%timed%string0d(:)%value (string) (9.6.1.1.3)
float1d (2433)	temporary%timed%float1d(:) (temporary_t_1dr) (9.6.1.3.443)
identifier (2440)	temporary%timed%float1d(:)%identifier (identifier) (9.6.1.3.233)
id (2230)	temporary%timed%float1d(:)%identifier%id (string) (9.6.1.1.3)
flag (2230)	temporary%timed%float1d(:)%identifier%flag (integer) (9.6.1.1.2)
description (2230)	temporary%timed%float1d(:)%identifier%description (string) (9.6.1.1.3)
value (2440)	temporary%timed%float1d(:)%value (vecflt_type) (9.6.1.2.13)
integer1d (2433)	temporary%timed%integer1d(:) (temporary_t_1di) (9.6.1.3.442)
identifier (2439)	temporary%timed%integer1d(:)%identifier (identifier) (9.6.1.3.233)
id (2230)	temporary%timed%integer1d(:)%identifier%id (string) (9.6.1.1.3)
flag (2230)	temporary%timed%integer1d(:)%identifier%flag (integer) (9.6.1.1.2)
description (2230)	temporary%timed%integer1d(:)%identifier%description (string) (9.6.1.1.3)
value (2439)	temporary%timed%integer1d(:)%value (vecint_type) (9.6.1.2.14)
complex1d (2433)	temporary%timed%complex1d(:) (temporary_t_1dc) (9.6.1.3.441)
identifier (2438)	temporary%timed%complex1d(:)%identifier (identifier) (9.6.1.3.233)
id (2230)	temporary%timed%complex1d(:)%identifier%id (string) (9.6.1.1.3)
flag (2230)	temporary%timed%complex1d(:)%identifier%flag (integer) (9.6.1.1.2)
description (2230)	temporary%timed%complex1d(:)%identifier%description (string) (9.6.1.1.3)
value (2438)	temporary%timed%complex1d(:)%value (vecplx_type) (9.6.1.2.12)
float2d (2433)	temporary%timed%float2d(:) (temporary_t_2dr) (9.6.1.3.446)
identifier (2443)	temporary%timed%float2d(:)%identifier (identifier) (9.6.1.3.233)
id (2230)	temporary%timed%float2d(:)%identifier%id (string) (9.6.1.1.3)
flag (2230)	temporary%timed%float2d(:)%identifier%flag (integer) (9.6.1.1.2)
description (2230)	temporary%timed%float2d(:)%identifier%description (string) (9.6.1.1.3)
value (2443)	temporary%timed%float2d(:)%value (matflt_type) (9.6.1.2.10)
integer2d (2433)	temporary%timed%integer2d(:) (temporary_t_2di) (9.6.1.3.445)
identifier (2442)	temporary%timed%integer2d(:)%identifier (identifier) (9.6.1.3.233)
id (2230)	temporary%timed%integer2d(:)%identifier%id (string) (9.6.1.1.3)
flag (2230)	temporary%timed%integer2d(:)%identifier%flag (integer) (9.6.1.1.2)
description (2230)	temporary%timed%integer2d(:)%identifier%description (string) (9.6.1.1.3)
value (2442)	temporary%timed%integer2d(:)%value (matint_type) (9.6.1.2.11)
complex2d (2433)	temporary%timed%complex2d(:) (temporary_t_2dc) (9.6.1.3.444)
identifier (2441)	temporary%timed%complex2d(:)%identifier (identifier) (9.6.1.3.233)
id (2230)	temporary%timed%complex2d(:)%identifier%id (string) (9.6.1.1.3)
flag (2230)	temporary%timed%complex2d(:)%identifier%flag (integer) (9.6.1.1.2)
description (2230)	temporary%timed%complex2d(:)%identifier%description (string) (9.6.1.1.3)
value (2441)	temporary%timed%complex2d(:)%value (matcplx_type) (9.6.1.2.9)
float3d (2433)	temporary%timed%float3d(:) (temporary_t_3dr) (9.6.1.3.449)
identifier (2446)	temporary%timed%float3d(:)%identifier (identifier) (9.6.1.3.233)
id (2230)	temporary%timed%float3d(:)%identifier%id (string) (9.6.1.1.3)
flag (2230)	temporary%timed%float3d(:)%identifier%flag (integer) (9.6.1.1.2)
description (2230)	temporary%timed%float3d(:)%identifier%description (string) (9.6.1.1.3)
value (2446)	temporary%timed%float3d(:)%value (array3dflt_type) (9.6.1.2.2)
integer3d (2433)	temporary%timed%integer3d(:) (temporary_t_3di) (9.6.1.3.448)
identifier (2445)	temporary%timed%integer3d(:)%identifier (identifier) (9.6.1.3.233)
id (2230)	temporary%timed%integer3d(:)%identifier%id (string) (9.6.1.1.3)
flag (2230)	temporary%timed%integer3d(:)%identifier%flag (integer) (9.6.1.1.2)
description (2230)	temporary%timed%integer3d(:)%identifier%description (string) (9.6.1.1.3)
value (2445)	temporary%timed%integer3d(:)%value (array3dint_type) (9.6.1.2.3)
complex3d (2433)	temporary%timed%complex3d(:) (temporary_t_3dc) (9.6.1.3.447)
identifier (2444)	temporary%timed%complex3d(:)%identifier (identifier) (9.6.1.3.233)

id (2230)	temporary%timed%complex3d(:)%identifier%id (string) (9.6.1.1.3)
flag (2230)	temporary%timed%complex3d(:)%identifier%flag (integer) (9.6.1.1.2)
description (2230)	temporary%timed%complex3d(:)%identifier%description (string) (9.6.1.1.3)
value (2444)	temporary%timed%complex3d(:)%value (array3dcplx_type) (9.6.1.2.1)
float4d (2433)	temporary%timed%float4d(:) (temporary_t_4dr) (9.6.1.3.450)
identifier (2447)	temporary%timed%float4d(:)%identifier (identifier) (9.6.1.3.233)
id (2230)	temporary%timed%float4d(:)%identifier%id (string) (9.6.1.1.3)
flag (2230)	temporary%timed%float4d(:)%identifier%flag (integer) (9.6.1.1.2)
description (2230)	temporary%timed%float4d(:)%identifier%description (string) (9.6.1.1.3)
value (2447)	temporary%timed%float4d(:)%value (array4dflt_type) (9.6.1.2.4)
codeparam (2042)	temporary%codeparam (codeparam) (9.6.1.3.77)
codename (2074)	temporary%codeparam%codename (string) (9.6.1.1.3)
codeversion (2074)	temporary%codeparam%codeversion (string) (9.6.1.1.3)
parameters (2074)	temporary%codeparam%parameters (string) (9.6.1.1.3)
output_diag (2074)	temporary%codeparam%output_diag (string) (9.6.1.1.3)
output_flag (2074)	temporary%codeparam%output_flag (integer) (9.6.1.1.2)
time (2042)	temporary%time (float) (9.6.1.1.1)

### 9.6.2.1.44 topinfo

dataprovder (2043)	topinfo%dataprovder (string) (9.6.1.1.3)
description (2043)	topinfo%description (string) (9.6.1.1.3)
firstputdate (2043)	topinfo%firstputdate (string) (9.6.1.1.3)
lastupdate (2043)	topinfo%lastupdate (string) (9.6.1.1.3)
source (2043)	topinfo%source (string) (9.6.1.1.3)
comment (2043)	topinfo%comment (string) (9.6.1.1.3)
dataversion (2043)	topinfo%dataversion (string) (9.6.1.1.3)
workflow (2043)	topinfo%workflow (string) (9.6.1.1.3)
entry (2043)	topinfo%entry (entry_def) (9.6.1.3.185)
user (2182)	topinfo%entry%user (string) (9.6.1.1.3)
machine (2182)	topinfo%entry%machine (string) (9.6.1.1.3)
shot (2182)	topinfo%entry%shot (integer) (9.6.1.1.2)
run (2182)	topinfo%entry%run (integer) (9.6.1.1.2)
parent_entry (2043)	topinfo%parent_entry (entry_def) (9.6.1.3.185)
user (2182)	topinfo%parent_entry%user (string) (9.6.1.1.3)
machine (2182)	topinfo%parent_entry%machine (string) (9.6.1.1.3)
shot (2182)	topinfo%parent_entry%shot (integer) (9.6.1.1.2)
run (2182)	topinfo%parent_entry%run (integer) (9.6.1.1.2)
mdinfo (2043)	topinfo%mdinfo (mdinfo) (9.6.1.3.260)
shot_min (2257)	topinfo%mdinfo%shot_min (integer) (9.6.1.1.2)
shot_max (2257)	topinfo%mdinfo%shot_max (integer) (9.6.1.1.2)
md_entry (2257)	topinfo%mdinfo%md_entry (entry_def) (9.6.1.3.185)
user (2182)	topinfo%mdinfo%md_entry%user (string) (9.6.1.1.3)
machine (2182)	topinfo%mdinfo%md_entry%machine (string) (9.6.1.1.3)
shot (2182)	topinfo%mdinfo%md_entry%shot (integer) (9.6.1.1.2)
run (2182)	topinfo%mdinfo%md_entry%run (integer) (9.6.1.1.2)

### 9.6.2.1.45 toroidfield

datainfo (2044)	toroidfield%datainfo (datainfo) (9.6.1.3.133)
dataprovder (2130)	toroidfield%datainfo%dataprovder (string) (9.6.1.1.3)
putdate (2130)	toroidfield%datainfo%putdate (string) (9.6.1.1.3)
source (2130)	toroidfield%datainfo%source (string) (9.6.1.1.3)
comment (2130)	toroidfield%datainfo%comment (string) (9.6.1.1.3)
cocos (2130)	toroidfield%datainfo%cocos (integer) (9.6.1.1.2)
id (2130)	toroidfield%datainfo%id (integer) (9.6.1.1.2)
isref (2130)	toroidfield%datainfo%isref (integer) (9.6.1.1.2)
whatref (2130)	toroidfield%datainfo%whatref (whatref) (9.6.1.3.503)
user (2500)	toroidfield%datainfo%whatref%user (string) (9.6.1.1.3)
machine (2500)	toroidfield%datainfo%whatref%machine (string) (9.6.1.1.3)
shot (2500)	toroidfield%datainfo%whatref%shot (integer) (9.6.1.1.2)

run (2500)	toroidfield%datainfo%whatref%run (integer) (9.6.1.1.2)
occurrence (2500)	toroidfield%datainfo%whatref%occurrence (integer) (9.6.1.1.2)
putinfo (2130)	toroidfield%datainfo%putinfo (putinfo) (9.6.1.3.339)
putmethod (2336)	toroidfield%datainfo%putinfo%putmethod (string) (9.6.1.1.3)
putaccess (2336)	toroidfield%datainfo%putinfo%putaccess (string) (9.6.1.1.3)
putlocation (2336)	toroidfield%datainfo%putinfo%putlocation (string) (9.6.1.1.3)
rights (2336)	toroidfield%datainfo%putinfo%rights (string) (9.6.1.1.3)
desc.tfcoils (2044)	toroidfield%desc.tfcoils (tf_desc.tfcoils) (9.6.1.3.451)
type (2448)	toroidfield%desc.tfcoils%type (integer) (9.6.1.1.2)
phi (2448)	toroidfield%desc.tfcoils%phi (float) (9.6.1.1.1)
circularcoil (2448)	toroidfield%desc.tfcoils%circularcoil (circularcoil) (9.6.1.3.75)
centre (2072)	toroidfield%desc.tfcoils%circularcoil%centre (rz0D) (9.6.1.3.355)
r (2352)	toroidfield%desc.tfcoils%circularcoil%centre%r (float) (9.6.1.1.1)
z (2352)	toroidfield%desc.tfcoils%circularcoil%centre%z (float) (9.6.1.1.1)
hlength (2072)	toroidfield%desc.tfcoils%circularcoil%hlength (float) (9.6.1.1.1)
radialwidth (2072)	toroidfield%desc.tfcoils%circularcoil%radialwidth (float) (9.6.1.1.1)
planecoil (2448)	toroidfield%desc.tfcoils%planecoil (planecoil) (9.6.1.3.327)
coordinates (2324)	toroidfield%desc.tfcoils%planecoil%coordinates (rz1D) (9.6.1.3.356)
r (2353)	toroidfield%desc.tfcoils%planecoil%coordinates%r (vecflt.type) (9.6.1.2.13)
z (2353)	toroidfield%desc.tfcoils%planecoil%coordinates%z (vecflt.type) (9.6.1.2.13)
hlength (2324)	toroidfield%desc.tfcoils%planecoil%hlength (vecflt.type) (9.6.1.2.13)
radialwidth (2324)	toroidfield%desc.tfcoils%planecoil%radialwidth (vecflt.type) (9.6.1.2.13)
inboard (2448)	toroidfield%desc.tfcoils%inboard (tf_structure) (9.6.1.3.453)
jcable (2450)	toroidfield%desc.tfcoils%inboard%jcable (float) (9.6.1.1.1)
tisoft (2450)	toroidfield%desc.tfcoils%inboard%tisoft (float) (9.6.1.1.1)
efcasing (2450)	toroidfield%desc.tfcoils%inboard%efcasing (float) (9.6.1.1.1)
escasing (2450)	toroidfield%desc.tfcoils%inboard%escasing (float) (9.6.1.1.1)
sigjackettf (2450)	toroidfield%desc.tfcoils%inboard%sigjackettf (float) (9.6.1.1.1)
sigvaulttf (2450)	toroidfield%desc.tfcoils%inboard%sigvaulttf (float) (9.6.1.1.1)
ktf (2450)	toroidfield%desc.tfcoils%inboard%ktf (float) (9.6.1.1.1)
ritf (2450)	toroidfield%desc.tfcoils%inboard%ritf (float) (9.6.1.1.1)
riitf (2450)	toroidfield%desc.tfcoils%inboard%riitf (float) (9.6.1.1.1)
retf (2450)	toroidfield%desc.tfcoils%inboard%retf (float) (9.6.1.1.1)
he_fraction (2450)	toroidfield%desc.tfcoils%inboard%he_fraction (float) (9.6.1.1.1)
ss_fraction (2450)	toroidfield%desc.tfcoils%inboard%ss_fraction (float) (9.6.1.1.1)
pow_dens_wp (2450)	toroidfield%desc.tfcoils%inboard%pow_dens_wp (float) (9.6.1.1.1)
outboard (2448)	toroidfield%desc.tfcoils%outboard (tf_structure) (9.6.1.3.453)
jcable (2450)	toroidfield%desc.tfcoils%outboard%jcable (float) (9.6.1.1.1)
tisoft (2450)	toroidfield%desc.tfcoils%outboard%tisoft (float) (9.6.1.1.1)
efcasing (2450)	toroidfield%desc.tfcoils%outboard%efcasing (float) (9.6.1.1.1)
escasing (2450)	toroidfield%desc.tfcoils%outboard%escasing (float) (9.6.1.1.1)
sigjackettf (2450)	toroidfield%desc.tfcoils%outboard%sigjackettf (float) (9.6.1.1.1)
sigvaulttf (2450)	toroidfield%desc.tfcoils%outboard%sigvaulttf (float) (9.6.1.1.1)
ktf (2450)	toroidfield%desc.tfcoils%outboard%ktf (float) (9.6.1.1.1)
ritf (2450)	toroidfield%desc.tfcoils%outboard%ritf (float) (9.6.1.1.1)
riitf (2450)	toroidfield%desc.tfcoils%outboard%riitf (float) (9.6.1.1.1)
retf (2450)	toroidfield%desc.tfcoils%outboard%retf (float) (9.6.1.1.1)
he_fraction (2450)	toroidfield%desc.tfcoils%outboard%he_fraction (float) (9.6.1.1.1)
ss_fraction (2450)	toroidfield%desc.tfcoils%outboard%ss_fraction (float) (9.6.1.1.1)
pow_dens_wp (2450)	toroidfield%desc.tfcoils%outboard%pow_dens_wp (float) (9.6.1.1.1)
nturns (2044)	toroidfield%nturns (integer) (9.6.1.1.2)
ncoils (2044)	toroidfield%ncoils (integer) (9.6.1.1.2)
current (2044)	toroidfield%current (exp0D) (9.6.1.3.194)
value (2191)	toroidfield%current%value (float) (9.6.1.1.1)
abserror (2191)	toroidfield%current%abserror (float) (9.6.1.1.1)
relerror (2191)	toroidfield%current%relerror (float) (9.6.1.1.1)
bvac_r (2044)	toroidfield%bvac_r (exp0D) (9.6.1.3.194)
value (2191)	toroidfield%bvac_r%value (float) (9.6.1.1.1)
abserror (2191)	toroidfield%bvac_r%abserror (float) (9.6.1.1.1)
relerror (2191)	toroidfield%bvac_r%relerror (float) (9.6.1.1.1)
r0 (2044)	toroidfield%r0 (float) (9.6.1.1.1)

p_cryo (2044)	toroidfield%p_cryo (float) (9.6.1.1.1)
wp_nh_max (2044)	toroidfield%wp_nh_max (float) (9.6.1.1.1)
tfc_nh (2044)	toroidfield%tfc_nh (float) (9.6.1.1.1)
neut_flux_inb (2044)	toroidfield%neut_flux_inb (float) (9.6.1.1.1)
neut_flux_outb (2044)	toroidfield%neut_flux_outb (float) (9.6.1.1.1)
codeparam (2044)	toroidfield%codeparam (codeparam) (9.6.1.3.77)
codename (2074)	toroidfield%codeparam%codename (string) (9.6.1.1.3)
codeversion (2074)	toroidfield%codeparam%codeversion (string) (9.6.1.1.3)
parameters (2074)	toroidfield%codeparam%parameters (string) (9.6.1.1.3)
output_diag (2074)	toroidfield%codeparam%output_diag (string) (9.6.1.1.3)
output_flag (2074)	toroidfield%codeparam%output_flag (integer) (9.6.1.1.2)
time (2044)	toroidfield%time (float) (9.6.1.1.1)

### 9.6.2.1.46 tsdiag

datainfo (2045)	tsdiag%datainfo (datainfo) (9.6.1.3.133)
dataprovider (2130)	tsdiag%datainfo%dataprovider (string) (9.6.1.1.3)
putdate (2130)	tsdiag%datainfo%putdate (string) (9.6.1.1.3)
source (2130)	tsdiag%datainfo%source (string) (9.6.1.1.3)
comment (2130)	tsdiag%datainfo%comment (string) (9.6.1.1.3)
cocos (2130)	tsdiag%datainfo%cocos (integer) (9.6.1.1.2)
id (2130)	tsdiag%datainfo%id (integer) (9.6.1.1.2)
isref (2130)	tsdiag%datainfo%isref (integer) (9.6.1.1.2)
whatref (2130)	tsdiag%datainfo%whatref (whatref) (9.6.1.3.503)
user (2500)	tsdiag%datainfo%whatref%user (string) (9.6.1.1.3)
machine (2500)	tsdiag%datainfo%whatref%machine (string) (9.6.1.1.3)
shot (2500)	tsdiag%datainfo%whatref%shot (integer) (9.6.1.1.2)
run (2500)	tsdiag%datainfo%whatref%run (integer) (9.6.1.1.2)
occurrence (2500)	tsdiag%datainfo%whatref%occurrence (integer) (9.6.1.1.2)
putinfo (2130)	tsdiag%datainfo%putinfo (putinfo) (9.6.1.3.339)
putmethod (2336)	tsdiag%datainfo%putinfo%putmethod (string) (9.6.1.1.3)
putaccess (2336)	tsdiag%datainfo%putinfo%putaccess (string) (9.6.1.1.3)
putlocation (2336)	tsdiag%datainfo%putinfo%putlocation (string) (9.6.1.1.3)
rights (2336)	tsdiag%datainfo%putinfo%rights (string) (9.6.1.1.3)
setup (2045)	tsdiag%setup (tssetup) (9.6.1.3.465)
position (2462)	tsdiag%setup%position (rzphi1D) (9.6.1.3.362)
r (2359)	tsdiag%setup%position%r (vecflt.type) (9.6.1.2.13)
z (2359)	tsdiag%setup%position%z (vecflt.type) (9.6.1.2.13)
phi (2359)	tsdiag%setup%position%phi (vecflt.type) (9.6.1.2.13)
measure (2045)	tsdiag%measure (tsmeasure) (9.6.1.3.464)
te (2461)	tsdiag%measure%te (exp1D) (9.6.1.3.195)
value (2192)	tsdiag%measure%te%value (vecflt.type) (9.6.1.2.13)
abserror (2192)	tsdiag%measure%te%abserror (vecflt.type) (9.6.1.2.13)
releror (2192)	tsdiag%measure%te%releror (vecflt.type) (9.6.1.2.13)
ne (2461)	tsdiag%measure%ne (exp1D) (9.6.1.3.195)
value (2192)	tsdiag%measure%ne%value (vecflt.type) (9.6.1.2.13)
abserror (2192)	tsdiag%measure%ne%abserror (vecflt.type) (9.6.1.2.13)
releror (2192)	tsdiag%measure%ne%releror (vecflt.type) (9.6.1.2.13)
codeparam (2045)	tsdiag%codeparam (codeparam) (9.6.1.3.77)
codename (2074)	tsdiag%codeparam%codename (string) (9.6.1.1.3)
codeversion (2074)	tsdiag%codeparam%codeversion (string) (9.6.1.1.3)
parameters (2074)	tsdiag%codeparam%parameters (string) (9.6.1.1.3)
output_diag (2074)	tsdiag%codeparam%output_diag (string) (9.6.1.1.3)
output_flag (2074)	tsdiag%codeparam%output_flag (integer) (9.6.1.1.2)
time (2045)	tsdiag%time (float) (9.6.1.1.1)

### 9.6.2.1.47 turbulence

datainfo (2046)	turbulence%datainfo (datainfo) (9.6.1.3.133)
dataprovider (2130)	turbulence%datainfo%dataprovider (string) (9.6.1.1.3)
putdate (2130)	turbulence%datainfo%putdate (string) (9.6.1.1.3)

source (2130)	turbulence%datainfo%source (string) (9.6.1.1.3)
comment (2130)	turbulence%datainfo%comment (string) (9.6.1.1.3)
cocos (2130)	turbulence%datainfo%cocos (integer) (9.6.1.1.2)
id (2130)	turbulence%datainfo%id (integer) (9.6.1.1.2)
isref (2130)	turbulence%datainfo%isref (integer) (9.6.1.1.2)
whatref (2130)	turbulence%datainfo%whatref (whatref) (9.6.1.3.503)
user (2500)	turbulence%datainfo%whatref%user (string) (9.6.1.1.3)
machine (2500)	turbulence%datainfo%whatref%machine (string) (9.6.1.1.3)
shot (2500)	turbulence%datainfo%whatref%shot (integer) (9.6.1.1.2)
run (2500)	turbulence%datainfo%whatref%run (integer) (9.6.1.1.2)
occurrence (2500)	turbulence%datainfo%whatref%occurrence (integer) (9.6.1.1.2)
putinfo (2130)	turbulence%datainfo%putinfo (putinfo) (9.6.1.3.339)
putmethod (2336)	turbulence%datainfo%putinfo%putmethod (string) (9.6.1.1.3)
putaccess (2336)	turbulence%datainfo%putinfo%putaccess (string) (9.6.1.1.3)
putlocation (2336)	turbulence%datainfo%putinfo%putlocation (string) (9.6.1.1.3)
rights (2336)	turbulence%datainfo%putinfo%rights (string) (9.6.1.1.3)
composition (2046)	turbulence%composition (turbcomposition) (9.6.1.3.466)
amn (2463)	turbulence%composition%amn (vecflt_type) (9.6.1.2.13)
zn (2463)	turbulence%composition%zn (vecflt_type) (9.6.1.2.13)
zion (2463)	turbulence%composition%zion (vecflt_type) (9.6.1.2.13)
ie.mass (2463)	turbulence%composition%ie.mass (vecflt_type) (9.6.1.2.13)
coordsys (2046)	turbulence%coordsys (turbcoordsys) (9.6.1.3.467)
grid_type (2464)	turbulence%coordsys%grid_type (string) (9.6.1.1.3)
turbgrid (2464)	turbulence%coordsys%turbgrid (turbgrid) (9.6.1.3.469)
dim1 (2466)	turbulence%coordsys%turbgrid%dim1 (vecflt_type) (9.6.1.2.13)
dim2 (2466)	turbulence%coordsys%turbgrid%dim2 (vecflt_type) (9.6.1.2.13)
dim3 (2466)	turbulence%coordsys%turbgrid%dim3 (vecflt_type) (9.6.1.2.13)
dim.v1 (2466)	turbulence%coordsys%turbgrid%dim.v1 (vecflt_type) (9.6.1.2.13)
dim.v2 (2466)	turbulence%coordsys%turbgrid%dim.v2 (vecflt_type) (9.6.1.2.13)
jacobian (2464)	turbulence%coordsys%jacobian (matflt_type) (9.6.1.2.10)
g_11 (2464)	turbulence%coordsys%g_11 (matflt_type) (9.6.1.2.10)
g_12 (2464)	turbulence%coordsys%g_12 (matflt_type) (9.6.1.2.10)
g_13 (2464)	turbulence%coordsys%g_13 (matflt_type) (9.6.1.2.10)
g_22 (2464)	turbulence%coordsys%g_22 (matflt_type) (9.6.1.2.10)
g_23 (2464)	turbulence%coordsys%g_23 (matflt_type) (9.6.1.2.10)
g_33 (2464)	turbulence%coordsys%g_33 (matflt_type) (9.6.1.2.10)
position (2464)	turbulence%coordsys%position (rzphi3D) (9.6.1.3.366)
r (2363)	turbulence%coordsys%position%r (array3dflt_type) (9.6.1.2.2)
z (2363)	turbulence%coordsys%position%z (array3dflt_type) (9.6.1.2.2)
phi (2363)	turbulence%coordsys%position%phi (array3dflt_type) (9.6.1.2.2)
var0d (2046)	turbulence%var0d (turbvar0d) (9.6.1.3.471)
dtime_type (2468)	turbulence%var0d%dtime_type (string) (9.6.1.1.3)
dtime (2468)	turbulence%var0d%dtime (vecflt_type) (9.6.1.2.13)
en_exb (2468)	turbulence%var0d%en_exb (vecflt_type) (9.6.1.2.13)
en_mag (2468)	turbulence%var0d%en_mag (vecflt_type) (9.6.1.2.13)
en_el.th (2468)	turbulence%var0d%en_el.th (vecflt_type) (9.6.1.2.13)
en_ion.th (2468)	turbulence%var0d%en_ion.th (matflt_type) (9.6.1.2.10)
en_el.par (2468)	turbulence%var0d%en_el.par (vecflt_type) (9.6.1.2.13)
en_ion.par (2468)	turbulence%var0d%en_ion.par (matflt_type) (9.6.1.2.10)
en_tot (2468)	turbulence%var0d%en_tot (vecflt_type) (9.6.1.2.13)
fl_el (2468)	turbulence%var0d%fl_el (vecflt_type) (9.6.1.2.13)
fl_heatel (2468)	turbulence%var0d%fl_heatel (vecflt_type) (9.6.1.2.13)
fl_ion (2468)	turbulence%var0d%fl_ion (matflt_type) (9.6.1.2.10)
fl_heation (2468)	turbulence%var0d%fl_heation (matflt_type) (9.6.1.2.10)
fl_magel (2468)	turbulence%var0d%fl_magel (vecflt_type) (9.6.1.2.13)
fl_magheatel (2468)	turbulence%var0d%fl_magheatel (vecflt_type) (9.6.1.2.13)
fl_magion (2468)	turbulence%var0d%fl_magion (matflt_type) (9.6.1.2.10)
flmagheation (2468)	turbulence%var0d%flmagheation (matflt_type) (9.6.1.2.10)
var1d (2046)	turbulence%var1d (turbvar1d) (9.6.1.3.472)
rho_tor_norm (2469)	turbulence%var1d%rho_tor_norm (vecflt_type) (9.6.1.2.13)
phi (2469)	turbulence%var1d%phi (vecflt_type) (9.6.1.2.13)

er (2469)	turbulence%var1d%er (vecflt.type) (9.6.1.2.13)
vor (2469)	turbulence%var1d%vor (vecflt.type) (9.6.1.2.13)
apl (2469)	turbulence%var1d%apl (vecflt.type) (9.6.1.2.13)
jpl (2469)	turbulence%var1d%jpl (vecflt.type) (9.6.1.2.13)
ne (2469)	turbulence%var1d%ne (vecflt.type) (9.6.1.2.13)
te (2469)	turbulence%var1d%te (vecflt.type) (9.6.1.2.13)
ni (2469)	turbulence%var1d%ni (matflt.type) (9.6.1.2.10)
ti (2469)	turbulence%var1d%ti (matflt.type) (9.6.1.2.10)
ui (2469)	turbulence%var1d%ui (matflt.type) (9.6.1.2.10)
var2d (2046)	turbulence%var2d (turbvar2d) (9.6.1.3.473)
rho.tor.norm (2470)	turbulence%var2d%rho.tor.norm (vecflt.type) (9.6.1.2.13)
theta (2470)	turbulence%var2d%theta (vecflt.type) (9.6.1.2.13)
phi (2470)	turbulence%var2d%phi (matflt.type) (9.6.1.2.10)
apl (2470)	turbulence%var2d%apl (matflt.type) (9.6.1.2.10)
jpl (2470)	turbulence%var2d%jpl (matflt.type) (9.6.1.2.10)
vor (2470)	turbulence%var2d%vor (matflt.type) (9.6.1.2.10)
ne (2470)	turbulence%var2d%ne (matflt.type) (9.6.1.2.10)
te (2470)	turbulence%var2d%te (matflt.type) (9.6.1.2.10)
ni (2470)	turbulence%var2d%ni (array3dflt.type) (9.6.1.2.2)
ti (2470)	turbulence%var2d%ti (array3dflt.type) (9.6.1.2.2)
ui (2470)	turbulence%var2d%ui (array3dflt.type) (9.6.1.2.2)
var3d (2046)	turbulence%var3d (turbvar3d) (9.6.1.3.474)
phi (2471)	turbulence%var3d%phi (array3dflt.type) (9.6.1.2.2)
vor (2471)	turbulence%var3d%vor (array3dflt.type) (9.6.1.2.2)
jpl (2471)	turbulence%var3d%jpl (array3dflt.type) (9.6.1.2.2)
ne (2471)	turbulence%var3d%ne (array3dflt.type) (9.6.1.2.2)
var4d (2046)	turbulence%var4d (turbvar4d) (9.6.1.3.475)
fe (2472)	turbulence%var4d%fe (array4dflt.type) (9.6.1.2.4)
fi (2472)	turbulence%var4d%fi (array5dflt.type) (9.6.1.2.5)
var5d (2046)	turbulence%var5d (turbvar5d) (9.6.1.3.476)
fe (2473)	turbulence%var5d%fe (array5dflt.type) (9.6.1.2.5)
fi (2473)	turbulence%var5d%fi (array6dflt.type) (9.6.1.2.6)
spec1d (2046)	turbulence%spec1d (turbspec1d) (9.6.1.3.470)
kperp (2467)	turbulence%spec1d%kperp (vecflt.type) (9.6.1.2.13)
phi (2467)	turbulence%spec1d%phi (vecflt.type) (9.6.1.2.13)
vor (2467)	turbulence%spec1d%vor (vecflt.type) (9.6.1.2.13)
b (2467)	turbulence%spec1d%b (vecflt.type) (9.6.1.2.13)
jpl (2467)	turbulence%spec1d%jpl (vecflt.type) (9.6.1.2.13)
ne (2467)	turbulence%spec1d%ne (vecflt.type) (9.6.1.2.13)
te (2467)	turbulence%spec1d%te (vecflt.type) (9.6.1.2.13)
ti (2467)	turbulence%spec1d%ti (matflt.type) (9.6.1.2.10)
fe (2467)	turbulence%spec1d%fe (vecflt.type) (9.6.1.2.13)
qe (2467)	turbulence%spec1d%qe (vecflt.type) (9.6.1.2.13)
qi (2467)	turbulence%spec1d%qi (matflt.type) (9.6.1.2.10)
me (2467)	turbulence%spec1d%me (vecflt.type) (9.6.1.2.13)
mi (2467)	turbulence%spec1d%mi (matflt.type) (9.6.1.2.10)
env1d (2046)	turbulence%env1d (turbenv1d) (9.6.1.3.468)
theta (2465)	turbulence%env1d%theta (vecflt.type) (9.6.1.2.13)
phi (2465)	turbulence%env1d%phi (vecflt.type) (9.6.1.2.13)
vor (2465)	turbulence%env1d%vor (vecflt.type) (9.6.1.2.13)
jpl (2465)	turbulence%env1d%jpl (vecflt.type) (9.6.1.2.13)
ne (2465)	turbulence%env1d%ne (vecflt.type) (9.6.1.2.13)
he (2465)	turbulence%env1d%he (vecflt.type) (9.6.1.2.13)
te (2465)	turbulence%env1d%te (vecflt.type) (9.6.1.2.13)
ni (2465)	turbulence%env1d%ni (matflt.type) (9.6.1.2.10)
ti (2465)	turbulence%env1d%ti (matflt.type) (9.6.1.2.10)
ui (2465)	turbulence%env1d%ui (matflt.type) (9.6.1.2.10)
fe (2465)	turbulence%env1d%fe (vecflt.type) (9.6.1.2.13)
qe (2465)	turbulence%env1d%qe (vecflt.type) (9.6.1.2.13)
qi (2465)	turbulence%env1d%qi (matflt.type) (9.6.1.2.10)
me (2465)	turbulence%env1d%me (vecflt.type) (9.6.1.2.13)



mi (2465)	turbulence%env1d%mi (matflt_type) (9.6.1.2.10)
codeparam (2046)	turbulence%codeparam (codeparam) (9.6.1.3.77)
codename (2074)	turbulence%codeparam%codename (string) (9.6.1.1.3)
codeversion (2074)	turbulence%codeparam%codeversion (string) (9.6.1.1.3)
parameters (2074)	turbulence%codeparam%parameters (string) (9.6.1.1.3)
output_diag (2074)	turbulence%codeparam%output_diag (string) (9.6.1.1.3)
output_flag (2074)	turbulence%codeparam%output_flag (integer) (9.6.1.1.2)
time (2046)	turbulence%time (float) (9.6.1.1.1)

### 9.6.2.1.48 wall

datainfo (2047)	wall%datainfo (datainfo) (9.6.1.3.133)
dataprovider (2130)	wall%datainfo%dataprovider (string) (9.6.1.1.3)
putdate (2130)	wall%datainfo%putdate (string) (9.6.1.1.3)
source (2130)	wall%datainfo%source (string) (9.6.1.1.3)
comment (2130)	wall%datainfo%comment (string) (9.6.1.1.3)
cocos (2130)	wall%datainfo%cocos (integer) (9.6.1.1.2)
id (2130)	wall%datainfo%id (integer) (9.6.1.1.2)
isref (2130)	wall%datainfo%isref (integer) (9.6.1.1.2)
whatref (2130)	wall%datainfo%whatref (whatref) (9.6.1.3.503)
user (2500)	wall%datainfo%whatref%user (string) (9.6.1.1.3)
machine (2500)	wall%datainfo%whatref%machine (string) (9.6.1.1.3)
shot (2500)	wall%datainfo%whatref%shot (integer) (9.6.1.1.2)
run (2500)	wall%datainfo%whatref%run (integer) (9.6.1.1.2)
occurrence (2500)	wall%datainfo%whatref%occurrence (integer) (9.6.1.1.2)
putinfo (2130)	wall%datainfo%putinfo (putinfo) (9.6.1.3.339)
putmethod (2336)	wall%datainfo%putinfo%putmethod (string) (9.6.1.1.3)
putaccess (2336)	wall%datainfo%putinfo%putaccess (string) (9.6.1.1.3)
putlocation (2336)	wall%datainfo%putinfo%putlocation (string) (9.6.1.1.3)
rights (2336)	wall%datainfo%putinfo%rights (string) (9.6.1.1.3)
wall0d (2047)	wall%wall0d (wall_wall0d) (9.6.1.3.491)
pumping_speed (2488)	wall%wall0d%pumping_speed (vecflt_type) (9.6.1.2.13)
gas_puff (2488)	wall%wall0d%gas_puff (vecflt_type) (9.6.1.2.13)
wall_inventory (2488)	wall%wall0d%wall_inventory (vecflt_type) (9.6.1.2.13)
recycling_coefficient (2488)	wall%wall0d%recycling_coefficient (vecflt_type) (9.6.1.2.13)
wall_temperature (2488)	wall%wall0d%wall_temperature (float) (9.6.1.1.1)
power_from_plasma (2488)	wall%wall0d%power_from_plasma (float) (9.6.1.1.1)
power_to_cooling (2488)	wall%wall0d%power_to_cooling (float) (9.6.1.1.1)
plasma (2488)	wall%wall0d%plasma (wall_wall0d_plasma) (9.6.1.3.492)
species_index (2489)	wall%wall0d%plasma%species_index (matint_type) (9.6.1.2.11)
flux (2489)	wall%wall0d%plasma%flux (vecflt_type) (9.6.1.2.13)
energy (2489)	wall%wall0d%plasma%energy (vecflt_type) (9.6.1.2.13)
wall2d_mhd (2047)	wall%wall2d_mhd (wall2d_mhd) (9.6.1.3.479)
res_wall (2476)	wall%wall2d_mhd%res_wall(:) (mhd_res_wall2d) (9.6.1.3.264)
walltype (2261)	wall%wall2d_mhd%res_wall(:)%walltype (identifier) (9.6.1.3.233)
id (2230)	wall%wall2d_mhd%res_wall(:)%walltype%id (string) (9.6.1.1.3)
flag (2230)	wall%wall2d_mhd%res_wall(:)%walltype%flag (integer) (9.6.1.1.2)
description (2230)	wall%wall2d_mhd%res_wall(:)%walltype%description (string) (9.6.1.1.3)
delta (2261)	wall%wall2d_mhd%res_wall(:)%delta (float) (9.6.1.1.1)
eta (2261)	wall%wall2d_mhd%res_wall(:)%eta (float) (9.6.1.1.1)
npoloidal (2261)	wall%wall2d_mhd%res_wall(:)%npoloidal (integer) (9.6.1.1.2)
position (2261)	wall%wall2d_mhd%res_wall(:)%position (rz1D) (9.6.1.3.356)
r (2353)	wall%wall2d_mhd%res_wall(:)%position%r (vecflt_type) (9.6.1.2.13)
z (2353)	wall%wall2d_mhd%res_wall(:)%position%z (vecflt_type) (9.6.1.2.13)
holes (2261)	wall%wall2d_mhd%res_wall(:)%holes (holes) (9.6.1.3.232)
n_holes (2229)	wall%wall2d_mhd%res_wall(:)%holes%n_holes (integer) (9.6.1.1.2)
coordinates (2229)	wall%wall2d_mhd%res_wall(:)%holes%coordinates (coordinates) (9.6.1.3.102)
theta (2099)	wall%wall2d_mhd%res_wall(:)%holes%coordinates%theta (vecflt_type) (9.6.1.2.13)
phi (2099)	wall%wall2d_mhd%res_wall(:)%holes%coordinates%phi (vecflt_type) (9.6.1.2.13)
width (2229)	wall%wall2d_mhd%res_wall(:)%holes%width (width) (9.6.1.3.504)
dtheta (2501)	wall%wall2d_mhd%res_wall(:)%holes%width%dtheta (vecflt_type) (9.6.1.2.13)



phi (2501)	wall%wall2d_mhd%res_wall(:)%holes%width%phi (vecflt.type) (9.6.1.2.13)
eta (2229)	wall%wall2d_mhd%res_wall(:)%holes%eta (vecflt.type) (9.6.1.2.13)
ideal_wall (2476)	wall%wall2d_mhd%ideal_wall (mhd_ideal_wall2d) (9.6.1.3.261)
walltype (2258)	wall%wall2d_mhd%ideal_wall%walltype (identifier) (9.6.1.3.233)
id (2230)	wall%wall2d_mhd%ideal_wall%walltype%id (string) (9.6.1.1.3)
flag (2230)	wall%wall2d_mhd%ideal_wall%walltype%flag (integer) (9.6.1.1.2)
description (2230)	wall%wall2d_mhd%ideal_wall%walltype%description (string) (9.6.1.1.3)
position (2258)	wall%wall2d_mhd%ideal_wall%position (rz1D) (9.6.1.3.356)
r (2353)	wall%wall2d_mhd%ideal_wall%position%r (vecflt.type) (9.6.1.2.13)
z (2353)	wall%wall2d_mhd%ideal_wall%position%z (vecflt.type) (9.6.1.2.13)
wall2d (2047)	wall%wall2d(:) (wall2d) (9.6.1.3.478)
wall_id (2475)	wall%wall2d(:)%wall_id (identifier) (9.6.1.3.233)
id (2230)	wall%wall2d(:)%wall_id%id (string) (9.6.1.1.3)
flag (2230)	wall%wall2d(:)%wall_id%flag (integer) (9.6.1.1.2)
description (2230)	wall%wall2d(:)%wall_id%description (string) (9.6.1.1.3)
limiter (2475)	wall%wall2d(:)%limiter (wall_limiter) (9.6.1.3.483)
limiter_id (2480)	wall%wall2d(:)%limiter%limiter_id (identifier) (9.6.1.3.233)
id (2230)	wall%wall2d(:)%limiter%limiter_id%id (string) (9.6.1.1.3)
flag (2230)	wall%wall2d(:)%limiter%limiter_id%flag (integer) (9.6.1.1.2)
description (2230)	wall%wall2d(:)%limiter%limiter_id%description (string) (9.6.1.1.3)
limiter_unit (2480)	wall%wall2d(:)%limiter%limiter_unit(:) (limiter_unit) (9.6.1.3.250)
name (2247)	wall%wall2d(:)%limiter%limiter_unit(:)%name (string) (9.6.1.1.3)
closed (2247)	wall%wall2d(:)%limiter%limiter_unit(:)%closed (string) (9.6.1.1.3)
position (2247)	wall%wall2d(:)%limiter%limiter_unit(:)%position (rz1D) (9.6.1.3.356)
r (2353)	wall%wall2d(:)%limiter%limiter_unit(:)%position%r (vecflt.type) (9.6.1.2.13)
z (2353)	wall%wall2d(:)%limiter%limiter_unit(:)%position%z (vecflt.type) (9.6.1.2.13)
eta (2247)	wall%wall2d(:)%limiter%limiter_unit(:)%eta (float) (9.6.1.1.1)
delta (2247)	wall%wall2d(:)%limiter%limiter_unit(:)%delta (float) (9.6.1.1.1)
permeability (2247)	wall%wall2d(:)%limiter%limiter_unit(:)%permeability (float) (9.6.1.1.1)
vessel (2475)	wall%wall2d(:)%vessel (wall_vessel) (9.6.1.3.488)
vessel_id (2485)	wall%wall2d(:)%vessel%vessel_id (identifier) (9.6.1.3.233)
id (2230)	wall%wall2d(:)%vessel%vessel_id%id (string) (9.6.1.1.3)
flag (2230)	wall%wall2d(:)%vessel%vessel_id%flag (integer) (9.6.1.1.2)
description (2230)	wall%wall2d(:)%vessel%vessel_id%description (string) (9.6.1.1.3)
vessel_unit (2485)	wall%wall2d(:)%vessel%vessel_unit(:) (wall_vessel_unit) (9.6.1.3.490)
annular (2487)	wall%wall2d(:)%vessel%vessel_unit(:)%annular (wall_vessel_annular) (9.6.1.3.489)
name (2486)	wall%wall2d(:)%vessel%vessel_unit(:)%annular%name (string) (9.6.1.1.3)
inside (2486)	wall%wall2d(:)%vessel%vessel_unit(:)%annular%inside (rz1D) (9.6.1.3.356)
r (2353)	wall%wall2d(:)%vessel%vessel_unit(:)%annular%inside%r (vecflt.type) (9.6.1.2.13)
z (2353)	wall%wall2d(:)%vessel%vessel_unit(:)%annular%inside%z (vecflt.type) (9.6.1.2.13)
outside (2486)	wall%wall2d(:)%vessel%vessel_unit(:)%annular%outside (rz1D) (9.6.1.3.356)
r (2353)	wall%wall2d(:)%vessel%vessel_unit(:)%annular%outside%r (vecflt.type) (9.6.1.2.13)
z (2353)	wall%wall2d(:)%vessel%vessel_unit(:)%annular%outside%z (vecflt.type) (9.6.1.2.13)
eta (2486)	wall%wall2d(:)%vessel%vessel_unit(:)%annular%eta (float) (9.6.1.1.1)
permeability (2486)	wall%wall2d(:)%vessel%vessel_unit(:)%annular%permeability (float) (9.6.1.1.1)
blocks (2487)	wall%wall2d(:)%vessel%vessel_unit(:)%blocks (wall_blocks) (9.6.1.3.481)
blocks_unit (2478)	wall%wall2d(:)%vessel%vessel_unit(:)%blocks%blocks_unit(:) (wall_blocks_unit) (9.6.1.3.482)
name (2479)	wall%wall2d(:)%vessel%vessel_unit(:)%blocks%blocks_unit(:)%name (string) (9.6.1.1.3)
position (2479)	wall%wall2d(:)%vessel%vessel_unit(:)%blocks%blocks_unit(:)%position (rz1D) (9.6.1.3.356)
r (2353)	wall%wall2d(:)%vessel%vessel_unit(:)%blocks%blocks_unit(:)%position%r (vecflt.type) (9.6.1.2.13)
z (2353)	wall%wall2d(:)%vessel%vessel_unit(:)%blocks%blocks_unit(:)%position%z (vecflt.type) (9.6.1.2.13)
eta (2479)	wall%wall2d(:)%vessel%vessel_unit(:)%blocks%blocks_unit(:)%eta (float) (9.6.1.1.1)
permeability (2479)	wall%wall2d(:)%vessel%vessel_unit(:)%blocks%blocks_unit(:)%permeability (float) (9.6.1.1.1)
j_phi (2479)	wall%wall2d(:)%vessel%vessel_unit(:)%blocks%blocks_unit(:)%j_phi (float) (9.6.1.1.1)
resistance (2479)	wall%wall2d(:)%vessel%vessel_unit(:)%blocks%blocks_unit(:)%resistance (float) (9.6.1.1.1)
radial_build (2487)	wall%wall2d(:)%vessel%vessel_unit(:)%radial_build (wall_wall2d_vessel_radial_build) (9.6.1.3.493)
r1_inb (2490)	wall%wall2d(:)%vessel%vessel_unit(:)%radial_build%r1_inb (float) (9.6.1.1.1)
r2_inb (2490)	wall%wall2d(:)%vessel%vessel_unit(:)%radial_build%r2_inb (float) (9.6.1.1.1)
r1_outb (2490)	wall%wall2d(:)%vessel%vessel_unit(:)%radial_build%r1_outb (float) (9.6.1.1.1)

r2_outb (2490)	wall%wall2d(:)%vessel%vessel_unit(:)%radial_build%r2_outb (float) (9.6.1.1.1)
raddim (2490)	wall%wall2d(:)%vessel%vessel_unit(:)%radial_build%raddim (float) (9.6.1.1.1)
nmat (2490)	wall%wall2d(:)%vessel%vessel_unit(:)%radial_build%nmat (float) (9.6.1.1.1)
composition (2490)	wall%wall2d(:)%vessel%vessel_unit(:)%radial_build%composition (vecflt_type) (9.6.1.2.13)
pow_dens_inb (2490)	wall%wall2d(:)%vessel%vessel_unit(:)%radial_build%pow_dens_inb (float) (9.6.1.1.1)
pow_dens_outb (2490)	wall%wall2d(:)%vessel%vessel_unit(:)%radial_build%pow_dens_outb (float) (9.6.1.1.1)
fn_flux_inb (2490)	wall%wall2d(:)%vessel%vessel_unit(:)%radial_build%fn_flux_inb (float) (9.6.1.1.1)
fn_flux_outb (2490)	wall%wall2d(:)%vessel%vessel_unit(:)%radial_build%fn_flux_outb (float) (9.6.1.1.1)
plasma (2475)	wall%wall2d(:)%plasma(:) (plasmaComplexType) (9.6.1.3.328)
species (2325)	wall%wall2d(:)%plasma(:)%species (vecint_type) (9.6.1.2.14)
flux (2325)	wall%wall2d(:)%plasma(:)%flux (matflt_type) (9.6.1.2.10)
b (2325)	wall%wall2d(:)%plasma(:)%b (matflt_type) (9.6.1.2.10)
energy (2325)	wall%wall2d(:)%plasma(:)%energy (matflt_type) (9.6.1.2.10)
wall_state (2475)	wall%wall2d(:)%wall_state(:) (wall_unitsComplexType) (9.6.1.3.486)
wall_type (2483)	wall%wall2d(:)%wall_state(:)%wall_type (integer) (9.6.1.1.2)
n_depo_layer (2483)	wall%wall2d(:)%wall_state(:)%n_depo_layer (integer) (9.6.1.1.2)
layers (2483)	wall%wall2d(:)%wall_state(:)%layers(:) (wall_unitsComplexType.layers) (9.6.1.3.487)
elements (2484)	wall%wall2d(:)%wall_state(:)%layers(:)%elements (vecint_type) (9.6.1.2.14)
gases (2484)	wall%wall2d(:)%wall_state(:)%layers(:)%gases (vecint_type) (9.6.1.2.14)
compounds (2484)	wall%wall2d(:)%wall_state(:)%layers(:)%compounds (vecint_type) (9.6.1.2.14)
density (2484)	wall%wall2d(:)%wall_state(:)%layers(:)%density (matflt_type) (9.6.1.2.10)
dx (2484)	wall%wall2d(:)%wall_state(:)%layers(:)%dx (matflt_type) (9.6.1.2.10)
thickness (2484)	wall%wall2d(:)%wall_state(:)%layers(:)%thickness (vecflt_type) (9.6.1.2.13)
roughness (2484)	wall%wall2d(:)%wall_state(:)%layers(:)%roughness (array3dflt_type) (9.6.1.2.2)
porosity (2484)	wall%wall2d(:)%wall_state(:)%layers(:)%porosity (array3dflt_type) (9.6.1.2.2)
dpa (2484)	wall%wall2d(:)%wall_state(:)%layers(:)%dpa (matflt_type) (9.6.1.2.10)
temperature (2484)	wall%wall2d(:)%wall_state(:)%layers(:)%temperature (matflt_type) (9.6.1.2.10)
element_frac (2484)	wall%wall2d(:)%wall_state(:)%layers(:)%element_frac (array3dflt_type) (9.6.1.2.2)
chem_comp (2484)	wall%wall2d(:)%wall_state(:)%layers(:)%chem_comp (array3dflt_type) (9.6.1.2.2)
bulk_D (2484)	wall%wall2d(:)%wall_state(:)%layers(:)%bulk_D (array4dflt_type) (9.6.1.2.4)
surface_D (2484)	wall%wall2d(:)%wall_state(:)%layers(:)%surface_D (array4dflt_type) (9.6.1.2.4)
bulk_solute (2484)	wall%wall2d(:)%wall_state(:)%layers(:)%bulk_solute (array4dflt_type) (9.6.1.2.4)
surf_solute (2484)	wall%wall2d(:)%wall_state(:)%layers(:)%surf_solute (array4dflt_type) (9.6.1.2.4)
pore_content (2484)	wall%wall2d(:)%wall_state(:)%layers(:)%pore_content (array3dflt_type) (9.6.1.2.2)
trap_type (2484)	wall%wall2d(:)%wall_state(:)%layers(:)%trap_type(:) (trap_type) (9.6.1.3.462)
trap_id (2459)	wall%wall2d(:)%wall_state(:)%layers(:)%trap_type(:)%trap_id (identifier) (9.6.1.3.233)
id (2230)	wall%wall2d(:)%wall_state(:)%layers(:)%trap_type(:)%trap_id%id (string) (9.6.1.1.3)
flag (2230)	wall%wall2d(:)%wall_state(:)%layers(:)%trap_type(:)%trap_id%flag (integer) (9.6.1.1.2)
description (2230)	wall%wall2d(:)%wall_state(:)%layers(:)%trap_type(:)%trap_id%description (string) (9.6.1.1.3)
compound (2459)	wall%wall2d(:)%wall_state(:)%layers(:)%trap_type(:)%compound (integer) (9.6.1.1.2)
gas_species (2459)	wall%wall2d(:)%wall_state(:)%layers(:)%trap_type(:)%gas_species (integer) (9.6.1.1.2)
energy (2459)	wall%wall2d(:)%wall_state(:)%layers(:)%trap_type(:)%energy (float) (9.6.1.1.1)
fill_factor (2459)	wall%wall2d(:)%wall_state(:)%layers(:)%trap_type(:)%fill_factor (matflt_type) (9.6.1.2.10)
density (2459)	wall%wall2d(:)%wall_state(:)%layers(:)%trap_type(:)%density (matflt_type) (9.6.1.2.10)
eta (2483)	wall%wall2d(:)%wall_state(:)%eta (complexgrid_scalar) (9.6.1.3.87)
griduid (2084)	wall%wall2d(:)%wall_state(:)%eta%griduid (integer) (9.6.1.1.2)
subgrid (2084)	wall%wall2d(:)%wall_state(:)%eta%subgrid (integer) (9.6.1.1.2)
scalar (2084)	wall%wall2d(:)%wall_state(:)%eta%scalar (vecflt_type) (9.6.1.2.13)
vector (2084)	wall%wall2d(:)%wall_state(:)%eta%vector (matflt_type) (9.6.1.2.10)
matrix (2084)	wall%wall2d(:)%wall_state(:)%eta%matrix (array3dflt_type) (9.6.1.2.2)
permeability (2483)	wall%wall2d(:)%wall_state(:)%permeability (complexgrid_scalar) (9.6.1.3.87)
griduid (2084)	wall%wall2d(:)%wall_state(:)%permeability%griduid (integer) (9.6.1.1.2)
subgrid (2084)	wall%wall2d(:)%wall_state(:)%permeability%subgrid (integer) (9.6.1.1.2)
scalar (2084)	wall%wall2d(:)%wall_state(:)%permeability%scalar (vecflt_type) (9.6.1.2.13)
vector (2084)	wall%wall2d(:)%wall_state(:)%permeability%vector (matflt_type) (9.6.1.2.10)
matrix (2084)	wall%wall2d(:)%wall_state(:)%permeability%matrix (array3dflt_type) (9.6.1.2.2)
j (2483)	wall%wall2d(:)%wall_state(:)%j (complexgrid_vector) (9.6.1.3.93)
griduid (2090)	wall%wall2d(:)%wall_state(:)%j%griduid (integer) (9.6.1.1.2)
label (2090)	wall%wall2d(:)%wall_state(:)%j%label (string) (9.6.1.1.3)
comp (2090)	wall%wall2d(:)%wall_state(:)%j%comp(:) (complexgrid_scalar) (9.6.1.3.87)
griduid (2084)	wall%wall2d(:)%wall_state(:)%j%comp(:)%griduid (integer) (9.6.1.1.2)

subgrid (2084)	wall%wall2d(:)%wall_state(:)%j%comp(:)%subgrid (integer) (9.6.1.1.2)
scalar (2084)	wall%wall2d(:)%wall_state(:)%j%comp(:)%scalar (vecflt.type) (9.6.1.2.13)
vector (2084)	wall%wall2d(:)%wall_state(:)%j%comp(:)%vector (matflt.type) (9.6.1.2.10)
matrix (2084)	wall%wall2d(:)%wall_state(:)%j%comp(:)%matrix (array3dflt.type) (9.6.1.2.2)
align (2090)	wall%wall2d(:)%wall_state(:)%j%align (vecint.type) (9.6.1.2.14)
alignid (2090)	wall%wall2d(:)%wall_state(:)%j%alignid (vecstring.type) (9.6.1.2.15)
basis (2090)	wall%wall2d(:)%wall_state(:)%j%basis (integer) (9.6.1.1.2)
wall3d (2047)	wall%wall3d(:) (wall3d) (9.6.1.3.480)
wall_id (2477)	wall%wall3d(:)%wall_id (identifier) (9.6.1.3.233)
id (2230)	wall%wall3d(:)%wall_id%id (string) (9.6.1.1.3)
flag (2230)	wall%wall3d(:)%wall_id%flag (integer) (9.6.1.1.2)
description (2230)	wall%wall3d(:)%wall_id%description (string) (9.6.1.1.3)
grid (2477)	wall%wall3d(:)%grid (complexgrid) (9.6.1.3.82)
uid (2079)	wall%wall3d(:)%grid%uid (integer) (9.6.1.1.2)
id (2079)	wall%wall3d(:)%grid%id (string) (9.6.1.1.3)
spaces (2079)	wall%wall3d(:)%grid%spaces(:) (complexgrid_space) (9.6.1.3.91)
geotype (2088)	wall%wall3d(:)%grid%spaces(:)%geotype (vecint.type) (9.6.1.2.14)
geotypeid (2088)	wall%wall3d(:)%grid%spaces(:)%geotypeid (vecstring.type) (9.6.1.2.15)
coordtype (2088)	wall%wall3d(:)%grid%spaces(:)%coordtype (matint.type) (9.6.1.2.11)
objects (2088)	wall%wall3d(:)%grid%spaces(:)%objects(:) (objects) (9.6.1.3.297)
boundary (2294)	wall%wall3d(:)%grid%spaces(:)%objects(:)%boundary (matint.type) (9.6.1.2.11)
neighbour (2294)	wall%wall3d(:)%grid%spaces(:)%objects(:)%neighbour (array3dint.type) (9.6.1.2.3)
geo (2294)	wall%wall3d(:)%grid%spaces(:)%objects(:)%geo (array4dflt.type) (9.6.1.2.4)
measure (2294)	wall%wall3d(:)%grid%spaces(:)%objects(:)%measure (matflt.type) (9.6.1.2.10)
xpoints (2284)	wall%wall3d(:)%grid%spaces(:)%xpoints (vecint.type) (9.6.1.2.14)
subgrids (2079)	wall%wall3d(:)%grid%subgrids(:) (complexgrid_subgrid) (9.6.1.3.92)
id (2089)	wall%wall3d(:)%grid%subgrids(:)%id (string) (9.6.1.1.3)
list (2089)	wall%wall3d(:)%grid%subgrids(:)%list(:) (complexgrid_objectlist) (9.6.1.3.86)
cls (2083)	wall%wall3d(:)%grid%subgrids(:)%list(:)%cls (vecint.type) (9.6.1.2.14)
indset (2083)	wall%wall3d(:)%grid%subgrids(:)%list(:)%indset(:) (complexgrid_indexlist) (9.6.1.3.84)
range (2081)	wall%wall3d(:)%grid%subgrids(:)%list(:)%indset(:)%range (vecint.type) (9.6.1.2.14)
ind (2081)	wall%wall3d(:)%grid%subgrids(:)%list(:)%indset(:)%ind (vecint.type) (9.6.1.2.14)
ind (2083)	wall%wall3d(:)%grid%subgrids(:)%list(:)%ind (matint.type) (9.6.1.2.11)
metric (2079)	wall%wall3d(:)%grid%metric (complexgrid_metric) (9.6.1.3.85)
measure (2082)	wall%wall3d(:)%grid%metric%measure(:) (complexgrid_scalar) (9.6.1.3.87)
griduid (2084)	wall%wall3d(:)%grid%metric%measure(:)%griduid (integer) (9.6.1.1.2)
subgrid (2084)	wall%wall3d(:)%grid%metric%measure(:)%subgrid (integer) (9.6.1.1.2)
scalar (2084)	wall%wall3d(:)%grid%metric%measure(:)%scalar (vecflt.type) (9.6.1.2.13)
vector (2084)	wall%wall3d(:)%grid%metric%measure(:)%vector (matflt.type) (9.6.1.2.10)
matrix (2084)	wall%wall3d(:)%grid%metric%measure(:)%matrix (array3dflt.type) (9.6.1.2.2)
g11 (2082)	wall%wall3d(:)%grid%metric%g11(:) (complexgrid_scalar) (9.6.1.3.87)
griduid (2084)	wall%wall3d(:)%grid%metric%g11(:)%griduid (integer) (9.6.1.1.2)
subgrid (2084)	wall%wall3d(:)%grid%metric%g11(:)%subgrid (integer) (9.6.1.1.2)
scalar (2084)	wall%wall3d(:)%grid%metric%g11(:)%scalar (vecflt.type) (9.6.1.2.13)
vector (2084)	wall%wall3d(:)%grid%metric%g11(:)%vector (matflt.type) (9.6.1.2.10)
matrix (2084)	wall%wall3d(:)%grid%metric%g11(:)%matrix (array3dflt.type) (9.6.1.2.2)
g12 (2082)	wall%wall3d(:)%grid%metric%g12(:) (complexgrid_scalar) (9.6.1.3.87)
griduid (2084)	wall%wall3d(:)%grid%metric%g12(:)%griduid (integer) (9.6.1.1.2)
subgrid (2084)	wall%wall3d(:)%grid%metric%g12(:)%subgrid (integer) (9.6.1.1.2)
scalar (2084)	wall%wall3d(:)%grid%metric%g12(:)%scalar (vecflt.type) (9.6.1.2.13)
vector (2084)	wall%wall3d(:)%grid%metric%g12(:)%vector (matflt.type) (9.6.1.2.10)
matrix (2084)	wall%wall3d(:)%grid%metric%g12(:)%matrix (array3dflt.type) (9.6.1.2.2)
g13 (2082)	wall%wall3d(:)%grid%metric%g13(:) (complexgrid_scalar) (9.6.1.3.87)
griduid (2084)	wall%wall3d(:)%grid%metric%g13(:)%griduid (integer) (9.6.1.1.2)
subgrid (2084)	wall%wall3d(:)%grid%metric%g13(:)%subgrid (integer) (9.6.1.1.2)
scalar (2084)	wall%wall3d(:)%grid%metric%g13(:)%scalar (vecflt.type) (9.6.1.2.13)
vector (2084)	wall%wall3d(:)%grid%metric%g13(:)%vector (matflt.type) (9.6.1.2.10)
matrix (2084)	wall%wall3d(:)%grid%metric%g13(:)%matrix (array3dflt.type) (9.6.1.2.2)
g22 (2082)	wall%wall3d(:)%grid%metric%g22(:) (complexgrid_scalar) (9.6.1.3.87)
griduid (2084)	wall%wall3d(:)%grid%metric%g22(:)%griduid (integer) (9.6.1.1.2)
subgrid (2084)	wall%wall3d(:)%grid%metric%g22(:)%subgrid (integer) (9.6.1.1.2)

scalar (2084)	wall%wall3d(:)%grid%metric%g22(:)%scalar (vecflt.type) (9.6.1.2.13)
vector (2084)	wall%wall3d(:)%grid%metric%g22(:)%vector (matflt.type) (9.6.1.2.10)
matrix (2084)	wall%wall3d(:)%grid%metric%g22(:)%matrix (array3dflt.type) (9.6.1.2.2)
g23 (2082)	wall%wall3d(:)%grid%metric%g23(:) (complexgrid_scalar) (9.6.1.3.87)
griduid (2084)	wall%wall3d(:)%grid%metric%g23(:)%griduid (integer) (9.6.1.1.2)
subgrid (2084)	wall%wall3d(:)%grid%metric%g23(:)%subgrid (integer) (9.6.1.1.2)
scalar (2084)	wall%wall3d(:)%grid%metric%g23(:)%scalar (vecflt.type) (9.6.1.2.13)
vector (2084)	wall%wall3d(:)%grid%metric%g23(:)%vector (matflt.type) (9.6.1.2.10)
matrix (2084)	wall%wall3d(:)%grid%metric%g23(:)%matrix (array3dflt.type) (9.6.1.2.2)
g33 (2082)	wall%wall3d(:)%grid%metric%g33(:) (complexgrid_scalar) (9.6.1.3.87)
griduid (2084)	wall%wall3d(:)%grid%metric%g33(:)%griduid (integer) (9.6.1.1.2)
subgrid (2084)	wall%wall3d(:)%grid%metric%g33(:)%subgrid (integer) (9.6.1.1.2)
scalar (2084)	wall%wall3d(:)%grid%metric%g33(:)%scalar (vecflt.type) (9.6.1.2.13)
vector (2084)	wall%wall3d(:)%grid%metric%g33(:)%vector (matflt.type) (9.6.1.2.10)
matrix (2084)	wall%wall3d(:)%grid%metric%g33(:)%matrix (array3dflt.type) (9.6.1.2.2)
jacobian (2082)	wall%wall3d(:)%grid%metric%jacobian(:) (complexgrid_scalar) (9.6.1.3.87)
griduid (2084)	wall%wall3d(:)%grid%metric%jacobian(:)%griduid (integer) (9.6.1.1.2)
subgrid (2084)	wall%wall3d(:)%grid%metric%jacobian(:)%subgrid (integer) (9.6.1.1.2)
scalar (2084)	wall%wall3d(:)%grid%metric%jacobian(:)%scalar (vecflt.type) (9.6.1.2.13)
vector (2084)	wall%wall3d(:)%grid%metric%jacobian(:)%vector (matflt.type) (9.6.1.2.10)
matrix (2084)	wall%wall3d(:)%grid%metric%jacobian(:)%matrix (array3dflt.type) (9.6.1.2.2)
geo (2079)	wall%wall3d(:)%grid%geo(:) (complexgrid_geo_global) (9.6.1.3.83)
geotype (2080)	wall%wall3d(:)%grid%geo(:)%geotype (integer) (9.6.1.1.2)
geotypeid (2080)	wall%wall3d(:)%grid%geo(:)%geotypeid (string) (9.6.1.1.3)
coordtype (2080)	wall%wall3d(:)%grid%geo(:)%coordtype (vecint.type) (9.6.1.2.14)
geo_matrix (2080)	wall%wall3d(:)%grid%geo(:)%geo_matrix(:) (complexgrid_scalar) (9.6.1.3.87)
griduid (2084)	wall%wall3d(:)%grid%geo(:)%geo_matrix(:)%griduid (integer) (9.6.1.1.2)
subgrid (2084)	wall%wall3d(:)%grid%geo(:)%geo_matrix(:)%subgrid (integer) (9.6.1.1.2)
scalar (2084)	wall%wall3d(:)%grid%geo(:)%geo_matrix(:)%scalar (vecflt.type) (9.6.1.2.13)
vector (2084)	wall%wall3d(:)%grid%geo(:)%geo_matrix(:)%vector (matflt.type) (9.6.1.2.10)
matrix (2084)	wall%wall3d(:)%grid%geo(:)%geo_matrix(:)%matrix (array3dflt.type) (9.6.1.2.2)
measure (2080)	wall%wall3d(:)%grid%geo(:)%measure(:) (complexgrid_scalar) (9.6.1.3.87)
griduid (2084)	wall%wall3d(:)%grid%geo(:)%measure(:)%griduid (integer) (9.6.1.1.2)
subgrid (2084)	wall%wall3d(:)%grid%geo(:)%measure(:)%subgrid (integer) (9.6.1.1.2)
scalar (2084)	wall%wall3d(:)%grid%geo(:)%measure(:)%scalar (vecflt.type) (9.6.1.2.13)
vector (2084)	wall%wall3d(:)%grid%geo(:)%measure(:)%vector (matflt.type) (9.6.1.2.10)
matrix (2084)	wall%wall3d(:)%grid%geo(:)%measure(:)%matrix (array3dflt.type) (9.6.1.2.2)
bases (2079)	wall%wall3d(:)%grid%bases(:) (complexgrid_vector) (9.6.1.3.93)
griduid (2090)	wall%wall3d(:)%grid%bases(:)%griduid (integer) (9.6.1.1.2)
label (2090)	wall%wall3d(:)%grid%bases(:)%label (string) (9.6.1.1.3)
comp (2090)	wall%wall3d(:)%grid%bases(:)%comp(:) (complexgrid_scalar) (9.6.1.3.87)
griduid (2084)	wall%wall3d(:)%grid%bases(:)%comp(:)%griduid (integer) (9.6.1.1.2)
subgrid (2084)	wall%wall3d(:)%grid%bases(:)%comp(:)%subgrid (integer) (9.6.1.1.2)
scalar (2084)	wall%wall3d(:)%grid%bases(:)%comp(:)%scalar (vecflt.type) (9.6.1.2.13)
vector (2084)	wall%wall3d(:)%grid%bases(:)%comp(:)%vector (matflt.type) (9.6.1.2.10)
matrix (2084)	wall%wall3d(:)%grid%bases(:)%comp(:)%matrix (array3dflt.type) (9.6.1.2.2)
align (2090)	wall%wall3d(:)%grid%bases(:)%align (vecint.type) (9.6.1.2.14)
alignid (2090)	wall%wall3d(:)%grid%bases(:)%alignid (vecstring.type) (9.6.1.2.15)
basis (2090)	wall%wall3d(:)%grid%bases(:)%basis (integer) (9.6.1.1.2)
plasma (2477)	wall%wall3d(:)%plasma(:) (plasmaComplexType) (9.6.1.3.328)
species (2325)	wall%wall3d(:)%plasma(:)%species (vecint.type) (9.6.1.2.14)
flux (2325)	wall%wall3d(:)%plasma(:)%flux (matflt.type) (9.6.1.2.10)
b (2325)	wall%wall3d(:)%plasma(:)%b (matflt.type) (9.6.1.2.10)
energy (2325)	wall%wall3d(:)%plasma(:)%energy (matflt.type) (9.6.1.2.10)
wall_state (2477)	wall%wall3d(:)%wall_state(:) (wall_unitsComplexType) (9.6.1.3.486)
wall_type (2483)	wall%wall3d(:)%wall_state(:)%wall_type (integer) (9.6.1.1.2)
n_depo_layer (2483)	wall%wall3d(:)%wall_state(:)%n_depo_layer (integer) (9.6.1.1.2)
layers (2483)	wall%wall3d(:)%wall_state(:)%layers(:) (wall_unitsComplexType_layers) (9.6.1.3.487)
elements (2484)	wall%wall3d(:)%wall_state(:)%layers(:)%elements (vecint.type) (9.6.1.2.14)
gases (2484)	wall%wall3d(:)%wall_state(:)%layers(:)%gases (vecint.type) (9.6.1.2.14)
compounds (2484)	wall%wall3d(:)%wall_state(:)%layers(:)%compounds (vecint.type) (9.6.1.2.14)

density (2484)	wall%wall3d(:)%wall_state(:)%layers(:)%density (matflt.type) (9.6.1.2.10)
dx (2484)	wall%wall3d(:)%wall_state(:)%layers(:)%dx (matflt.type) (9.6.1.2.10)
thickness (2484)	wall%wall3d(:)%wall_state(:)%layers(:)%thickness (vecflt.type) (9.6.1.2.13)
roughness (2484)	wall%wall3d(:)%wall_state(:)%layers(:)%roughness (array3dflt.type) (9.6.1.2.2)
porosity (2484)	wall%wall3d(:)%wall_state(:)%layers(:)%porosity (array3dflt.type) (9.6.1.2.2)
dpa (2484)	wall%wall3d(:)%wall_state(:)%layers(:)%dpa (matflt.type) (9.6.1.2.10)
temperature (2484)	wall%wall3d(:)%wall_state(:)%layers(:)%temperature (matflt.type) (9.6.1.2.10)
element_frac (2484)	wall%wall3d(:)%wall_state(:)%layers(:)%element_frac (array3dflt.type) (9.6.1.2.2)
chem_comp (2484)	wall%wall3d(:)%wall_state(:)%layers(:)%chem_comp (array3dflt.type) (9.6.1.2.2)
bulk_D (2484)	wall%wall3d(:)%wall_state(:)%layers(:)%bulk_D (array4dflt.type) (9.6.1.2.4)
surface_D (2484)	wall%wall3d(:)%wall_state(:)%layers(:)%surface_D (array4dflt.type) (9.6.1.2.4)
bulk_solute (2484)	wall%wall3d(:)%wall_state(:)%layers(:)%bulk_solute (array4dflt.type) (9.6.1.2.4)
surf_solute (2484)	wall%wall3d(:)%wall_state(:)%layers(:)%surf_solute (array4dflt.type) (9.6.1.2.4)
pore_content (2484)	wall%wall3d(:)%wall_state(:)%layers(:)%pore_content (array3dflt.type) (9.6.1.2.2)
trap_type (2484)	wall%wall3d(:)%wall_state(:)%layers(:)%trap_type(:) (trap_type) (9.6.1.3.462)
trap_id (2459)	wall%wall3d(:)%wall_state(:)%layers(:)%trap_type(:)%trap_id (identifier) (9.6.1.3.233)
id (2230)	wall%wall3d(:)%wall_state(:)%layers(:)%trap_type(:)%trap_id%id (string) (9.6.1.1.3)
flag (2230)	wall%wall3d(:)%wall_state(:)%layers(:)%trap_type(:)%trap_id%flag (integer) (9.6.1.1.2)
description (2230)	wall%wall3d(:)%wall_state(:)%layers(:)%trap_type(:)%trap_id%description (string) (9.6.1.1.3)
compound (2459)	wall%wall3d(:)%wall_state(:)%layers(:)%trap_type(:)%compound (integer) (9.6.1.1.2)
gas_species (2459)	wall%wall3d(:)%wall_state(:)%layers(:)%trap_type(:)%gas_species (integer) (9.6.1.1.2)
energy (2459)	wall%wall3d(:)%wall_state(:)%layers(:)%trap_type(:)%energy (float) (9.6.1.1.1)
fill_factor (2459)	wall%wall3d(:)%wall_state(:)%layers(:)%trap_type(:)%fill_factor (matflt.type) (9.6.1.2.10)
density (2459)	wall%wall3d(:)%wall_state(:)%layers(:)%trap_type(:)%density (matflt.type) (9.6.1.2.10)
eta (2483)	wall%wall3d(:)%wall_state(:)%eta (complexgrid.scalar) (9.6.1.3.87)
griduid (2084)	wall%wall3d(:)%wall_state(:)%eta%griduid (integer) (9.6.1.1.2)
subgrid (2084)	wall%wall3d(:)%wall_state(:)%eta%subgrid (integer) (9.6.1.1.2)
scalar (2084)	wall%wall3d(:)%wall_state(:)%eta%scalar (vecflt.type) (9.6.1.2.13)
vector (2084)	wall%wall3d(:)%wall_state(:)%eta%vector (matflt.type) (9.6.1.2.10)
matrix (2084)	wall%wall3d(:)%wall_state(:)%eta%matrix (array3dflt.type) (9.6.1.2.2)
permeability (2483)	wall%wall3d(:)%wall_state(:)%permeability (complexgrid.scalar) (9.6.1.3.87)
griduid (2084)	wall%wall3d(:)%wall_state(:)%permeability%griduid (integer) (9.6.1.1.2)
subgrid (2084)	wall%wall3d(:)%wall_state(:)%permeability%subgrid (integer) (9.6.1.1.2)
scalar (2084)	wall%wall3d(:)%wall_state(:)%permeability%scalar (vecflt.type) (9.6.1.2.13)
vector (2084)	wall%wall3d(:)%wall_state(:)%permeability%vector (matflt.type) (9.6.1.2.10)
matrix (2084)	wall%wall3d(:)%wall_state(:)%permeability%matrix (array3dflt.type) (9.6.1.2.2)
j (2483)	wall%wall3d(:)%wall_state(:)%j (complexgrid.vector) (9.6.1.3.93)
griduid (2090)	wall%wall3d(:)%wall_state(:)%j%griduid (integer) (9.6.1.1.2)
label (2090)	wall%wall3d(:)%wall_state(:)%j%label (string) (9.6.1.1.3)
comp (2090)	wall%wall3d(:)%wall_state(:)%j%comp(:) (complexgrid.scalar) (9.6.1.3.87)
griduid (2084)	wall%wall3d(:)%wall_state(:)%j%comp(:)%griduid (integer) (9.6.1.1.2)
subgrid (2084)	wall%wall3d(:)%wall_state(:)%j%comp(:)%subgrid (integer) (9.6.1.1.2)
scalar (2084)	wall%wall3d(:)%wall_state(:)%j%comp(:)%scalar (vecflt.type) (9.6.1.2.13)
vector (2084)	wall%wall3d(:)%wall_state(:)%j%comp(:)%vector (matflt.type) (9.6.1.2.10)
matrix (2084)	wall%wall3d(:)%wall_state(:)%j%comp(:)%matrix (array3dflt.type) (9.6.1.2.2)
align (2090)	wall%wall3d(:)%wall_state(:)%j%align (vecint.type) (9.6.1.2.14)
alignid (2090)	wall%wall3d(:)%wall_state(:)%j%alignid (vecstring.type) (9.6.1.2.15)
basis (2090)	wall%wall3d(:)%wall_state(:)%j%basis (integer) (9.6.1.1.2)
basis_index (2477)	wall%wall3d(:)%basis_index (integer) (9.6.1.1.2)
wall_types (2047)	wall%wall_types(:) (wall_types) (9.6.1.3.484)
label (2481)	wall%wall_types(:)%label (string) (9.6.1.1.3)
layers (2481)	wall%wall_types(:)%layers(:) (wall_types.layers) (9.6.1.3.485)
thickness (2482)	wall%wall_types(:)%layers(:)%thickness (float) (9.6.1.1.1)
chem_comp (2482)	wall%wall_types(:)%layers(:)%chem_comp (vecflt.type) (9.6.1.2.13)
compounds (2047)	wall%compounds(:) (compound_desc) (9.6.1.3.100)
label (2097)	wall%compounds(:)%label (string) (9.6.1.1.3)
stoichiometry (2097)	wall%compounds(:)%stoichiometry (vecflt.type) (9.6.1.2.13)
density (2097)	wall%compounds(:)%density (float) (9.6.1.1.1)
heat_cap (2097)	wall%compounds(:)%heat_cap (float) (9.6.1.1.1)
heat_cond (2097)	wall%compounds(:)%heat_cond (vecflt.type) (9.6.1.2.13)
surf_recrate (2097)	wall%compounds(:)%surf_recrate (matflt.type) (9.6.1.2.10)



elements (2047)	wall%elements(:) (element_desc) (9.6.1.3.184)
nucindex (2181)	wall%elements(:)%nucindex (integer) (9.6.1.1.2)
label (2181)	wall%elements(:)%label (string) (9.6.1.1.3)
zn (2181)	wall%elements(:)%zn (float) (9.6.1.1.1)
amn (2181)	wall%elements(:)%amn (float) (9.6.1.1.1)
compositions (2047)	wall%compositions (compositions_type) (9.6.1.3.99)
nuclei (2096)	wall%compositions%nuclei(:) (nuclei) (9.6.1.3.296)
zn (2293)	wall%compositions%nuclei(:)%zn (float) (9.6.1.1.1)
amn (2293)	wall%compositions%nuclei(:)%amn (float) (9.6.1.1.1)
label (2293)	wall%compositions%nuclei(:)%label (string) (9.6.1.1.3)
ions (2096)	wall%compositions%ions(:) (ions) (9.6.1.3.238)
nucindex (2235)	wall%compositions%ions(:)%nucindex (integer) (9.6.1.1.2)
zion (2235)	wall%compositions%ions(:)%zion (float) (9.6.1.1.1)
imp_flag (2235)	wall%compositions%ions(:)%imp_flag (integer) (9.6.1.1.2)
label (2235)	wall%compositions%ions(:)%label (string) (9.6.1.1.3)
impurities (2096)	wall%compositions%impurities(:) (impurities) (9.6.1.3.235)
nucindex (2232)	wall%compositions%impurities(:)%nucindex (integer) (9.6.1.1.2)
i_ion (2232)	wall%compositions%impurities(:)%i_ion (integer) (9.6.1.1.2)
nzimp (2232)	wall%compositions%impurities(:)%nzimp (integer) (9.6.1.1.2)
zmin (2232)	wall%compositions%impurities(:)%zmin (vecflt_type) (9.6.1.2.13)
zmax (2232)	wall%compositions%impurities(:)%zmax (vecflt_type) (9.6.1.2.13)
label (2232)	wall%compositions%impurities(:)%label (vecstring_type) (9.6.1.2.15)
neutralscomp (2096)	wall%compositions%neutralscomp(:) (composition_neutralscomp) (9.6.1.3.98)
neutcomp (2095)	wall%compositions%neutralscomp(:)%neutcomp(:) (composition_neutrals_neutcomp) (9.6.1.3.97)
nucindex (2094)	wall%compositions%neutralscomp(:)%neutcomp(:)%nucindex (integer) (9.6.1.1.2)
multiplicity (2094)	wall%compositions%neutralscomp(:)%neutcomp(:)%multiplicity (integer) (9.6.1.1.2)
type (2095)	wall%compositions%neutralscomp(:)%type(:) (identifier) (9.6.1.3.233)
id (2230)	wall%compositions%neutralscomp(:)%type(:)%id (string) (9.6.1.1.3)
flag (2230)	wall%compositions%neutralscomp(:)%type(:)%flag (integer) (9.6.1.1.2)
description (2230)	wall%compositions%neutralscomp(:)%type(:)%description (string) (9.6.1.1.3)
label (2095)	wall%compositions%neutralscomp(:)%label (string) (9.6.1.1.3)
edgespecies (2096)	wall%compositions%edgespecies(:) (edgespecies) (9.6.1.3.183)
nucindex (2180)	wall%compositions%edgespecies(:)%nucindex (integer) (9.6.1.1.2)
zmin (2180)	wall%compositions%edgespecies(:)%zmin (float) (9.6.1.1.1)
zmax (2180)	wall%compositions%edgespecies(:)%zmax (float) (9.6.1.1.1)
label (2180)	wall%compositions%edgespecies(:)%label (string) (9.6.1.1.3)
signature (2096)	wall%compositions%signature (identifier) (9.6.1.3.233)
id (2230)	wall%compositions%signature%id (string) (9.6.1.1.3)
flag (2230)	wall%compositions%signature%flag (integer) (9.6.1.1.2)
description (2230)	wall%compositions%signature%description (string) (9.6.1.1.3)
codeparam (2047)	wall%codeparam (codeparam) (9.6.1.3.77)
codename (2074)	wall%codeparam%codename (string) (9.6.1.1.3)
codeversion (2074)	wall%codeparam%codeversion (string) (9.6.1.1.3)
parameters (2074)	wall%codeparam%parameters (string) (9.6.1.1.3)
output_diag (2074)	wall%codeparam%output_diag (string) (9.6.1.1.3)
output_flag (2074)	wall%codeparam%output_flag (integer) (9.6.1.1.2)
time (2047)	wall%time (float) (9.6.1.1.1)

### 9.6.2.1.49 waves

datainfo (2048)	waves%datainfo (datainfo) (9.6.1.3.133)
dataprovider (2130)	waves%datainfo%dataprovider (string) (9.6.1.1.3)
putdate (2130)	waves%datainfo%putdate (string) (9.6.1.1.3)
source (2130)	waves%datainfo%source (string) (9.6.1.1.3)
comment (2130)	waves%datainfo%comment (string) (9.6.1.1.3)
cocos (2130)	waves%datainfo%cocos (integer) (9.6.1.1.2)
id (2130)	waves%datainfo%id (integer) (9.6.1.1.2)
isref (2130)	waves%datainfo%isref (integer) (9.6.1.1.2)
whatref (2130)	waves%datainfo%whatref (whatref) (9.6.1.3.503)
user (2500)	waves%datainfo%whatref%user (string) (9.6.1.1.3)

machine (2500)	waves%datainfo%whatref%machine (string) (9.6.1.1.3)
shot (2500)	waves%datainfo%whatref%shot (integer) (9.6.1.1.2)
run (2500)	waves%datainfo%whatref%run (integer) (9.6.1.1.2)
occurrence (2500)	waves%datainfo%whatref%occurrence (integer) (9.6.1.1.2)
putinfo (2130)	waves%datainfo%putinfo (putinfo) (9.6.1.3.339)
putmethod (2336)	waves%datainfo%putinfo%putmethod (string) (9.6.1.1.3)
putaccess (2336)	waves%datainfo%putinfo%putaccess (string) (9.6.1.1.3)
putlocation (2336)	waves%datainfo%putinfo%putlocation (string) (9.6.1.1.3)
rights (2336)	waves%datainfo%putinfo%rights (string) (9.6.1.1.3)
coherentwave (2048)	waves%coherentwave(:) (coherentwave) (9.6.1.3.79)
wave_id (2076)	waves%coherentwave(:)%wave_id (enum_instance) (9.6.1.3.186)
type (2183)	waves%coherentwave(:)%wave_id%type (identifier) (9.6.1.3.233)
id (2230)	waves%coherentwave(:)%wave_id%type%id (string) (9.6.1.1.3)
flag (2230)	waves%coherentwave(:)%wave_id%type%flag (integer) (9.6.1.1.2)
description (2230)	waves%coherentwave(:)%wave_id%type%description (string) (9.6.1.1.3)
name (2183)	waves%coherentwave(:)%wave_id%name (string) (9.6.1.1.3)
index (2183)	waves%coherentwave(:)%wave_id%index (integer) (9.6.1.1.2)
composition (2076)	waves%coherentwave(:)%composition (composition) (9.6.1.3.95)
amn (2092)	waves%coherentwave(:)%composition%amn (vecflt_type) (9.6.1.2.13)
zn (2092)	waves%coherentwave(:)%composition%zn (vecflt_type) (9.6.1.2.13)
zion (2092)	waves%coherentwave(:)%composition%zion (vecflt_type) (9.6.1.2.13)
imp_flag (2092)	waves%coherentwave(:)%composition%imp_flag (vecint_type) (9.6.1.2.14)
label (2092)	waves%coherentwave(:)%composition%label (vecstring_type) (9.6.1.2.15)
compositions (2076)	waves%coherentwave(:)%compositions (compositions_type) (9.6.1.3.99)
nuclei (2096)	waves%coherentwave(:)%compositions%nuclei(:) (nuclei) (9.6.1.3.296)
zn (2293)	waves%coherentwave(:)%compositions%nuclei(:)%zn (float) (9.6.1.1.1)
amn (2293)	waves%coherentwave(:)%compositions%nuclei(:)%amn (float) (9.6.1.1.1)
label (2293)	waves%coherentwave(:)%compositions%nuclei(:)%label (string) (9.6.1.1.3)
ions (2096)	waves%coherentwave(:)%compositions%ions(:) (ions) (9.6.1.3.238)
nucindex (2235)	waves%coherentwave(:)%compositions%ions(:)%nucindex (integer) (9.6.1.1.2)
zion (2235)	waves%coherentwave(:)%compositions%ions(:)%zion (float) (9.6.1.1.1)
imp_flag (2235)	waves%coherentwave(:)%compositions%ions(:)%imp_flag (integer) (9.6.1.1.2)
label (2235)	waves%coherentwave(:)%compositions%ions(:)%label (string) (9.6.1.1.3)
impurities (2096)	waves%coherentwave(:)%compositions%impurities(:) (impurities) (9.6.1.3.235)
nucindex (2232)	waves%coherentwave(:)%compositions%impurities(:)%nucindex (integer) (9.6.1.1.2)
i_ion (2232)	waves%coherentwave(:)%compositions%impurities(:)%i_ion (integer) (9.6.1.1.2)
nzimp (2232)	waves%coherentwave(:)%compositions%impurities(:)%nzimp (integer) (9.6.1.1.2)
zmin (2232)	waves%coherentwave(:)%compositions%impurities(:)%zmin (vecflt_type) (9.6.1.2.13)
zmax (2232)	waves%coherentwave(:)%compositions%impurities(:)%zmax (vecflt_type) (9.6.1.2.13)
label (2232)	waves%coherentwave(:)%compositions%impurities(:)%label (vecstring_type) (9.6.1.2.15)
neutralscomp (2096)	waves%coherentwave(:)%compositions%neutralscomp(:) (composition_neutralscomp) (9.6.1.3.98)
neutcomp (2095)	waves%coherentwave(:)%compositions%neutralscomp(:)%neutcomp(:) (composition_neutrals_neutcomp) (9.6.1.3.97)
nucindex (2094)	waves%coherentwave(:)%compositions%neutralscomp(:)%neutcomp(:)%nucindex (integer) (9.6.1.1.2)
multiplicity (2094)	waves%coherentwave(:)%compositions%neutralscomp(:)%neutcomp(:)%multiplicity (integer) (9.6.1.1.2)
type (2095)	waves%coherentwave(:)%compositions%neutralscomp(:)%type(:) (identifier) (9.6.1.3.233)
id (2230)	waves%coherentwave(:)%compositions%neutralscomp(:)%type(:)%id (string) (9.6.1.1.3)
flag (2230)	waves%coherentwave(:)%compositions%neutralscomp(:)%type(:)%flag (integer) (9.6.1.1.2)
description (2230)	waves%coherentwave(:)%compositions%neutralscomp(:)%type(:)%description (string) (9.6.1.1.3)
label (2095)	waves%coherentwave(:)%compositions%neutralscomp(:)%label (string) (9.6.1.1.3)
edgespecies (2096)	waves%coherentwave(:)%compositions%edgespecies(:) (edgespecies) (9.6.1.3.183)
nucindex (2180)	waves%coherentwave(:)%compositions%edgespecies(:)%nucindex (integer) (9.6.1.1.2)
zmin (2180)	waves%coherentwave(:)%compositions%edgespecies(:)%zmin (float) (9.6.1.1.1)
zmax (2180)	waves%coherentwave(:)%compositions%edgespecies(:)%zmax (float) (9.6.1.1.1)
label (2180)	waves%coherentwave(:)%compositions%edgespecies(:)%label (string) (9.6.1.1.3)
signature (2096)	waves%coherentwave(:)%compositions%signature (identifier) (9.6.1.3.233)
id (2230)	waves%coherentwave(:)%compositions%signature%id (string) (9.6.1.1.3)
flag (2230)	waves%coherentwave(:)%compositions%signature%flag (integer) (9.6.1.1.2)
description (2230)	waves%coherentwave(:)%compositions%signature%description (string) (9.6.1.1.3)



global_param (2076)	waves%coherentwave(:)%global_param (waves_global_param) (9.6.1.3.495)
name (2492)	waves%coherentwave(:)%global_param%name (string) (9.6.1.1.3)
type (2492)	waves%coherentwave(:)%global_param%type (string) (9.6.1.1.3)
f_assumption (2492)	waves%coherentwave(:)%global_param%f_assumption (vecint.type) (9.6.1.2.14)
code_type (2492)	waves%coherentwave(:)%global_param%code_type (integer) (9.6.1.1.2)
frequency (2492)	waves%coherentwave(:)%global_param%frequency (float) (9.6.1.1.1)
ntor (2492)	waves%coherentwave(:)%global_param%ntor (vecint.type) (9.6.1.2.14)
power_tot (2492)	waves%coherentwave(:)%global_param%power_tot (float) (9.6.1.1.1)
p_frac_ntor (2492)	waves%coherentwave(:)%global_param%p_frac_ntor (vecflt.type) (9.6.1.2.13)
pow_e (2492)	waves%coherentwave(:)%global_param%pow_e (float) (9.6.1.1.1)
pow_i (2492)	waves%coherentwave(:)%global_param%pow_i (vecflt.type) (9.6.1.2.13)
pow_z (2492)	waves%coherentwave(:)%global_param%pow_z (matflt.type) (9.6.1.2.10)
pow_fe (2492)	waves%coherentwave(:)%global_param%pow_fe (float) (9.6.1.1.1)
pow_fi (2492)	waves%coherentwave(:)%global_param%pow_fi (vecflt.type) (9.6.1.2.13)
pow_fz (2492)	waves%coherentwave(:)%global_param%pow_fz (matflt.type) (9.6.1.2.10)
pow_ntor_e (2492)	waves%coherentwave(:)%global_param%pow_ntor_e (vecflt.type) (9.6.1.2.13)
pow_ntor_i (2492)	waves%coherentwave(:)%global_param%pow_ntor_i (matflt.type) (9.6.1.2.10)
pow_ntor_z (2492)	waves%coherentwave(:)%global_param%pow_ntor_z (array3dflt.type) (9.6.1.2.2)
pow_ntor_fe (2492)	waves%coherentwave(:)%global_param%pow_ntor_fe (vecflt.type) (9.6.1.2.13)
pow_ntor_fi (2492)	waves%coherentwave(:)%global_param%pow_ntor_fi (matflt.type) (9.6.1.2.10)
pow_ntor_fz (2492)	waves%coherentwave(:)%global_param%pow_ntor_fz (array3dflt.type) (9.6.1.2.2)
cur_tor (2492)	waves%coherentwave(:)%global_param%cur_tor (float) (9.6.1.1.1)
cur_tor_ntor (2492)	waves%coherentwave(:)%global_param%cur_tor_ntor (vecflt.type) (9.6.1.2.13)
mag_axis (2492)	waves%coherentwave(:)%global_param%mag_axis (rz0D) (9.6.1.3.355)
r (2352)	waves%coherentwave(:)%global_param%mag_axis%r (float) (9.6.1.1.1)
z (2352)	waves%coherentwave(:)%global_param%mag_axis%z (float) (9.6.1.1.1)
toroid_field (2492)	waves%coherentwave(:)%global_param%toroid_field (b0r0) (9.6.1.3.59)
r0 (2056)	waves%coherentwave(:)%global_param%toroid_field%r0 (float) (9.6.1.1.1)
b0 (2056)	waves%coherentwave(:)%global_param%toroid_field%b0 (float) (9.6.1.1.1)
grid_1d (2076)	waves%coherentwave(:)%grid_1d (waves_grid_1d) (9.6.1.3.496)
rho_tor (2493)	waves%coherentwave(:)%grid_1d%rho_tor (vecflt.type) (9.6.1.2.13)
rho_tor_norm (2493)	waves%coherentwave(:)%grid_1d%rho_tor_norm (vecflt.type) (9.6.1.2.13)
psi (2493)	waves%coherentwave(:)%grid_1d%psi (vecflt.type) (9.6.1.2.13)
volume (2493)	waves%coherentwave(:)%grid_1d%volume (vecflt.type) (9.6.1.2.13)
area (2493)	waves%coherentwave(:)%grid_1d%area (vecflt.type) (9.6.1.2.13)
grid_2d (2076)	waves%coherentwave(:)%grid_2d (waves_grid_2d) (9.6.1.3.497)
grid_type (2494)	waves%coherentwave(:)%grid_2d%grid_type (integer) (9.6.1.1.2)
rho_tor_norm (2494)	waves%coherentwave(:)%grid_2d%rho_tor_norm (matflt.type) (9.6.1.2.10)
rho_tor (2494)	waves%coherentwave(:)%grid_2d%rho_tor (matflt.type) (9.6.1.2.10)
psi (2494)	waves%coherentwave(:)%grid_2d%psi (matflt.type) (9.6.1.2.10)
theta (2494)	waves%coherentwave(:)%grid_2d%theta (matflt.type) (9.6.1.2.10)
r (2494)	waves%coherentwave(:)%grid_2d%r (matflt.type) (9.6.1.2.10)
z (2494)	waves%coherentwave(:)%grid_2d%z (matflt.type) (9.6.1.2.10)
theta_info (2494)	waves%coherentwave(:)%grid_2d%theta_info (theta_info) (9.6.1.3.454)
angl_type (2451)	waves%coherentwave(:)%grid_2d%theta_info%angl_type (integer) (9.6.1.1.2)
th2th_pol (2451)	waves%coherentwave(:)%grid_2d%theta_info%th2th_pol (matflt.type) (9.6.1.2.10)
profiles_1d (2076)	waves%coherentwave(:)%profiles_1d (waves_profiles_1d) (9.6.1.3.498)
powd_tot (2495)	waves%coherentwave(:)%profiles_1d%powd_tot (vecflt.type) (9.6.1.2.13)
powd_e (2495)	waves%coherentwave(:)%profiles_1d%powd_e (vecflt.type) (9.6.1.2.13)
powd_i (2495)	waves%coherentwave(:)%profiles_1d%powd_i (matflt.type) (9.6.1.2.10)
powd_z (2495)	waves%coherentwave(:)%profiles_1d%powd_z (array3dflt.type) (9.6.1.2.2)
powd_fe (2495)	waves%coherentwave(:)%profiles_1d%powd_fe (vecflt.type) (9.6.1.2.13)
powd_fi (2495)	waves%coherentwave(:)%profiles_1d%powd_fi (matflt.type) (9.6.1.2.10)
powd_fz (2495)	waves%coherentwave(:)%profiles_1d%powd_fz (array3dflt.type) (9.6.1.2.2)
powd_ntor (2495)	waves%coherentwave(:)%profiles_1d%powd_ntor (matflt.type) (9.6.1.2.10)
powd_ntor_e (2495)	waves%coherentwave(:)%profiles_1d%powd_ntor_e (matflt.type) (9.6.1.2.10)
powd_ntor_i (2495)	waves%coherentwave(:)%profiles_1d%powd_ntor_i (array3dflt.type) (9.6.1.2.2)
powd_ntor_z (2495)	waves%coherentwave(:)%profiles_1d%powd_ntor_z (array4dflt.type) (9.6.1.2.4)
powd_ntor_fe (2495)	waves%coherentwave(:)%profiles_1d%powd_ntor_fe (matflt.type) (9.6.1.2.10)
powd_ntor_fi (2495)	waves%coherentwave(:)%profiles_1d%powd_ntor_fi (array3dflt.type) (9.6.1.2.2)
powd_ntor_fz (2495)	waves%coherentwave(:)%profiles_1d%powd_ntor_fz (array4dflt.type) (9.6.1.2.4)

curd_tor (2495)	waves%coherentwave(:)%profiles.1d%curd_tor (vecflt_type) (9.6.1.2.13)
curd_torntor (2495)	waves%coherentwave(:)%profiles.1d%curd_torntor (matflt_type) (9.6.1.2.10)
pow_tot (2495)	waves%coherentwave(:)%profiles.1d%pow_tot (vecflt_type) (9.6.1.2.13)
pow_e (2495)	waves%coherentwave(:)%profiles.1d%pow_e (vecflt_type) (9.6.1.2.13)
pow_i (2495)	waves%coherentwave(:)%profiles.1d%pow_i (matflt_type) (9.6.1.2.10)
pow_z (2495)	waves%coherentwave(:)%profiles.1d%pow_z (array3dflt_type) (9.6.1.2.2)
pow_fe (2495)	waves%coherentwave(:)%profiles.1d%pow_fe (vecflt_type) (9.6.1.2.13)
pow_fi (2495)	waves%coherentwave(:)%profiles.1d%pow_fi (matflt_type) (9.6.1.2.10)
pow_fz (2495)	waves%coherentwave(:)%profiles.1d%pow_fz (array3dflt_type) (9.6.1.2.2)
pow_ntor (2495)	waves%coherentwave(:)%profiles.1d%pow_ntor (matflt_type) (9.6.1.2.10)
pow_ntor_e (2495)	waves%coherentwave(:)%profiles.1d%pow_ntor_e (matflt_type) (9.6.1.2.10)
pow_ntor_i (2495)	waves%coherentwave(:)%profiles.1d%pow_ntor_i (array3dflt_type) (9.6.1.2.2)
pow_ntor_z (2495)	waves%coherentwave(:)%profiles.1d%pow_ntor_z (array3dflt_type) (9.6.1.2.2)
pow_ntor_fe (2495)	waves%coherentwave(:)%profiles.1d%pow_ntor_fe (matflt_type) (9.6.1.2.10)
pow_ntor_fi (2495)	waves%coherentwave(:)%profiles.1d%pow_ntor_fi (array3dflt_type) (9.6.1.2.2)
pow_ntor_fz (2495)	waves%coherentwave(:)%profiles.1d%pow_ntor_fz (array3dflt_type) (9.6.1.2.2)
curd_par (2495)	waves%coherentwave(:)%profiles.1d%curd_par (vecflt_type) (9.6.1.2.13)
curd_parntor (2495)	waves%coherentwave(:)%profiles.1d%curd_parntor (matflt_type) (9.6.1.2.10)
cur_tor (2495)	waves%coherentwave(:)%profiles.1d%cur_tor (vecflt_type) (9.6.1.2.13)
cur_tor_ntor (2495)	waves%coherentwave(:)%profiles.1d%cur_tor_ntor (matflt_type) (9.6.1.2.10)
e_plus_ave (2495)	waves%coherentwave(:)%profiles.1d%e_plus_ave (matflt_type) (9.6.1.2.10)
e_minus_ave (2495)	waves%coherentwave(:)%profiles.1d%e_minus_ave (matflt_type) (9.6.1.2.10)
e_para_ave (2495)	waves%coherentwave(:)%profiles.1d%e_para_ave (matflt_type) (9.6.1.2.10)
k_perp_ave (2495)	waves%coherentwave(:)%profiles.1d%k_perp_ave (matflt_type) (9.6.1.2.10)
profiles_2d (2076)	waves%coherentwave(:)%profiles.2d (waves_profiles_2d) (9.6.1.3.499)
powd_tot (2496)	waves%coherentwave(:)%profiles.2d%powd_tot (matflt_type) (9.6.1.2.10)
powd_e (2496)	waves%coherentwave(:)%profiles.2d%powd_e (matflt_type) (9.6.1.2.10)
powd_i (2496)	waves%coherentwave(:)%profiles.2d%powd_i (array3dflt_type) (9.6.1.2.2)
powd_z (2496)	waves%coherentwave(:)%profiles.2d%powd_z (array4dflt_type) (9.6.1.2.4)
powd_fe (2496)	waves%coherentwave(:)%profiles.2d%powd_fe (matflt_type) (9.6.1.2.10)
powd_fi (2496)	waves%coherentwave(:)%profiles.2d%powd_fi (array3dflt_type) (9.6.1.2.2)
powd_fz (2496)	waves%coherentwave(:)%profiles.2d%powd_fz (array4dflt_type) (9.6.1.2.4)
powd_ntor (2496)	waves%coherentwave(:)%profiles.2d%powd_ntor (array3dflt_type) (9.6.1.2.2)
powd_ntor_e (2496)	waves%coherentwave(:)%profiles.2d%powd_ntor_e (array3dflt_type) (9.6.1.2.2)
powd_ntor_i (2496)	waves%coherentwave(:)%profiles.2d%powd_ntor_i (array4dflt_type) (9.6.1.2.4)
powd_ntor_z (2496)	waves%coherentwave(:)%profiles.2d%powd_ntor_z (array5dflt_type) (9.6.1.2.5)
powd_ntor_fe (2496)	waves%coherentwave(:)%profiles.2d%powd_ntor_fe (array3dflt_type) (9.6.1.2.2)
powd_ntor_fi (2496)	waves%coherentwave(:)%profiles.2d%powd_ntor_fi (array4dflt_type) (9.6.1.2.4)
powd_ntor_fz (2496)	waves%coherentwave(:)%profiles.2d%powd_ntor_fz (array5dflt_type) (9.6.1.2.5)
powd_iharm (2496)	waves%coherentwave(:)%profiles.2d%powd_iharm (array5dflt_type) (9.6.1.2.5)
beamtracing (2076)	waves%coherentwave(:)%beamtracing(:) (beamtracing) (9.6.1.3.66)
npoints (2063)	waves%coherentwave(:)%beamtracing(:)%npoints (integer) (9.6.1.1.2)
power (2063)	waves%coherentwave(:)%beamtracing(:)%power (float) (9.6.1.1.1)
dnpar (2063)	waves%coherentwave(:)%beamtracing(:)%dnpar (vecflt_type) (9.6.1.2.13)
length (2063)	waves%coherentwave(:)%beamtracing(:)%length (vecflt_type) (9.6.1.2.13)
position (2063)	waves%coherentwave(:)%beamtracing(:)%position (waves_rtposition) (9.6.1.3.500)
r (2497)	waves%coherentwave(:)%beamtracing(:)%position%r (vecflt_type) (9.6.1.2.13)
z (2497)	waves%coherentwave(:)%beamtracing(:)%position%z (vecflt_type) (9.6.1.2.13)
phi (2497)	waves%coherentwave(:)%beamtracing(:)%position%phi (vecflt_type) (9.6.1.2.13)
psi (2497)	waves%coherentwave(:)%beamtracing(:)%position%psi (vecflt_type) (9.6.1.2.13)
theta (2497)	waves%coherentwave(:)%beamtracing(:)%position%theta (vecflt_type) (9.6.1.2.13)
wavevector (2063)	waves%coherentwave(:)%beamtracing(:)%wavevector (waves_rtwavevector) (9.6.1.3.501)
kr (2498)	waves%coherentwave(:)%beamtracing(:)%wavevector%kr (vecflt_type) (9.6.1.2.13)
kz (2498)	waves%coherentwave(:)%beamtracing(:)%wavevector%kz (vecflt_type) (9.6.1.2.13)
kphi (2498)	waves%coherentwave(:)%beamtracing(:)%wavevector%kphi (vecflt_type) (9.6.1.2.13)
npar (2498)	waves%coherentwave(:)%beamtracing(:)%wavevector%npar (vecflt_type) (9.6.1.2.13)
nperp (2498)	waves%coherentwave(:)%beamtracing(:)%wavevector%nperp (vecflt_type) (9.6.1.2.13)
ntor (2498)	waves%coherentwave(:)%beamtracing(:)%wavevector%ntor (vecflt_type) (9.6.1.2.13)
var_ntor (2498)	waves%coherentwave(:)%beamtracing(:)%wavevector%var_ntor (integer) (9.6.1.1.2)
polarization (2063)	waves%coherentwave(:)%beamtracing(:)%polarization (polarization) (9.6.1.3.332)
epol_p_re (2329)	waves%coherentwave(:)%beamtracing(:)%polarization%epol_p_re (vecflt_type) (9.6.1.2.13)

epol_p_im (2329)	waves%coherentwave(:)%beamtracing(:)%polarization%epol_p_im (vecflt_type) (9.6.1.2.13)
epol_m_re (2329)	waves%coherentwave(:)%beamtracing(:)%polarization%epol_m_re (vecflt_type) (9.6.1.2.13)
epol_m_im (2329)	waves%coherentwave(:)%beamtracing(:)%polarization%epol_m_im (vecflt_type) (9.6.1.2.13)
epol_par_re (2329)	waves%coherentwave(:)%beamtracing(:)%polarization%epol_par_re (vecflt_type) (9.6.1.2.13)
epol_par_im (2329)	waves%coherentwave(:)%beamtracing(:)%polarization%epol_par_im (vecflt_type) (9.6.1.2.13)
powerflow (2063)	waves%coherentwave(:)%beamtracing(:)%powerflow (powerflow) (9.6.1.3.335)
phi_perp (2332)	waves%coherentwave(:)%beamtracing(:)%powerflow%phi_perp (vecflt_type) (9.6.1.2.13)
phi_par (2332)	waves%coherentwave(:)%beamtracing(:)%powerflow%phi_par (vecflt_type) (9.6.1.2.13)
power_e (2332)	waves%coherentwave(:)%beamtracing(:)%powerflow%power_e (vecflt_type) (9.6.1.2.13)
power_i (2332)	waves%coherentwave(:)%beamtracing(:)%powerflow%power_i (matflt_type) (9.6.1.2.10)
fullwave (2076)	waves%coherentwave(:)%fullwave (fullwave) (9.6.1.3.207)
grid (2204)	waves%coherentwave(:)%fullwave%grid (complexgrid) (9.6.1.3.82)
uid (2079)	waves%coherentwave(:)%fullwave%grid%uid (integer) (9.6.1.1.2)
id (2079)	waves%coherentwave(:)%fullwave%grid%id (string) (9.6.1.1.3)
spaces (2079)	waves%coherentwave(:)%fullwave%grid%spaces(:) (complexgrid_space) (9.6.1.3.91)
geotype (2088)	waves%coherentwave(:)%fullwave%grid%spaces(:)%geotype (vecint_type) (9.6.1.2.14)
geotypeid (2088)	waves%coherentwave(:)%fullwave%grid%spaces(:)%geotypeid (vecstring_type) (9.6.1.2.15)
coordtype (2088)	waves%coherentwave(:)%fullwave%grid%spaces(:)%coordtype (matint_type) (9.6.1.2.11)
objects (2088)	waves%coherentwave(:)%fullwave%grid%spaces(:)%objects(:) (objects) (9.6.1.3.297)
boundary (2294)	waves%coherentwave(:)%fullwave%grid%spaces(:)%objects(:)%boundary (matint_type) (9.6.1.2.11)
neighbour (2294)	waves%coherentwave(:)%fullwave%grid%spaces(:)%objects(:)%neighbour (array3dint_type) (9.6.1.2.3)
geo (2294)	waves%coherentwave(:)%fullwave%grid%spaces(:)%objects(:)%geo (array4dflt_type) (9.6.1.2.4)
measure (2294)	waves%coherentwave(:)%fullwave%grid%spaces(:)%objects(:)%measure (matflt_type) (9.6.1.2.10)
xpoints (2088)	waves%coherentwave(:)%fullwave%grid%spaces(:)%xpoints (vecint_type) (9.6.1.2.14)
subgrids (2079)	waves%coherentwave(:)%fullwave%grid%subgrids(:) (complexgrid_subgrid) (9.6.1.3.92)
id (2089)	waves%coherentwave(:)%fullwave%grid%subgrids(:)%id (string) (9.6.1.1.3)
list (2089)	waves%coherentwave(:)%fullwave%grid%subgrids(:)%list(:) (complexgrid_objectlist) (9.6.1.3.86)
cls (2083)	waves%coherentwave(:)%fullwave%grid%subgrids(:)%list(:)%cls (vecint_type) (9.6.1.2.14)
indset (2083)	waves%coherentwave(:)%fullwave%grid%subgrids(:)%list(:)%indset(:) (complex_grid_indexlist) (9.6.1.3.84)
range (2081)	waves%coherentwave(:)%fullwave%grid%subgrids(:)%list(:)%indset(:)%range (vecint_type) (9.6.1.2.14)
ind (2081)	waves%coherentwave(:)%fullwave%grid%subgrids(:)%list(:)%indset(:)%ind (vecint_type) (9.6.1.2.14)
ind (2083)	waves%coherentwave(:)%fullwave%grid%subgrids(:)%list(:)%ind (matint_type) (9.6.1.2.11)
metric (2079)	waves%coherentwave(:)%fullwave%grid%metric (complexgrid_metric) (9.6.1.3.85)
measure (2082)	waves%coherentwave(:)%fullwave%grid%metric%measure(:) (complexgrid_scalar) (9.6.1.3.87)
griduid (2084)	waves%coherentwave(:)%fullwave%grid%metric%measure(:)%griduid (integer) (9.6.1.1.2)
subgrid (2084)	waves%coherentwave(:)%fullwave%grid%metric%measure(:)%subgrid (integer) (9.6.1.1.2)
scalar (2084)	waves%coherentwave(:)%fullwave%grid%metric%measure(:)%scalar (vecflt_type) (9.6.1.2.13)
vector (2084)	waves%coherentwave(:)%fullwave%grid%metric%measure(:)%vector (matflt_type) (9.6.1.2.10)
matrix (2084)	waves%coherentwave(:)%fullwave%grid%metric%measure(:)%matrix (array3dflt_type) (9.6.1.2.2)
g11 (2082)	waves%coherentwave(:)%fullwave%grid%metric%g11(:) (complexgrid_scalar) (9.6.1.3.87)
griduid (2084)	waves%coherentwave(:)%fullwave%grid%metric%g11(:)%griduid (integer) (9.6.1.1.2)
subgrid (2084)	waves%coherentwave(:)%fullwave%grid%metric%g11(:)%subgrid (integer) (9.6.1.1.2)
scalar (2084)	waves%coherentwave(:)%fullwave%grid%metric%g11(:)%scalar (vecflt_type) (9.6.1.2.13)
vector (2084)	waves%coherentwave(:)%fullwave%grid%metric%g11(:)%vector (matflt_type) (9.6.1.2.10)
matrix (2084)	waves%coherentwave(:)%fullwave%grid%metric%g11(:)%matrix (array3dflt_type) (9.6.1.2.2)
g12 (2082)	waves%coherentwave(:)%fullwave%grid%metric%g12(:) (complexgrid_scalar) (9.6.1.3.87)
griduid (2084)	waves%coherentwave(:)%fullwave%grid%metric%g12(:)%griduid (integer) (9.6.1.1.2)
subgrid (2084)	waves%coherentwave(:)%fullwave%grid%metric%g12(:)%subgrid (integer) (9.6.1.1.2)
scalar (2084)	waves%coherentwave(:)%fullwave%grid%metric%g12(:)%scalar (vecflt_type) (9.6.1.2.13)
vector (2084)	waves%coherentwave(:)%fullwave%grid%metric%g12(:)%vector (matflt_type) (9.6.1.2.10)
matrix (2084)	waves%coherentwave(:)%fullwave%grid%metric%g12(:)%matrix (array3dflt_type) (9.6.1.2.2)
g13 (2082)	waves%coherentwave(:)%fullwave%grid%metric%g13(:) (complexgrid_scalar) (9.6.1.3.87)
griduid (2084)	waves%coherentwave(:)%fullwave%grid%metric%g13(:)%griduid (integer) (9.6.1.1.2)

subgrid (2084)	waves%coherentwave(:)%fullwave%grid%metric%g13(:)%subgrid (integer) (9.6.1.1.2)
scalar (2084)	waves%coherentwave(:)%fullwave%grid%metric%g13(:)%scalar (vecflt_type) (9.6.1.2.13)
vector (2084)	waves%coherentwave(:)%fullwave%grid%metric%g13(:)%vector (matflt_type) (9.6.1.2.10)
matrix (2084)	waves%coherentwave(:)%fullwave%grid%metric%g13(:)%matrix (array3dflt_type) (9.6.1.2.2)
g22 (2082)	waves%coherentwave(:)%fullwave%grid%metric%g22(:) (complexgrid_scalar) (9.6.1.3.87)
griduid (2084)	waves%coherentwave(:)%fullwave%grid%metric%g22(:)%griduid (integer) (9.6.1.1.2)
subgrid (2084)	waves%coherentwave(:)%fullwave%grid%metric%g22(:)%subgrid (integer) (9.6.1.1.2)
scalar (2084)	waves%coherentwave(:)%fullwave%grid%metric%g22(:)%scalar (vecflt_type) (9.6.1.2.13)
vector (2084)	waves%coherentwave(:)%fullwave%grid%metric%g22(:)%vector (matflt_type) (9.6.1.2.10)
matrix (2084)	waves%coherentwave(:)%fullwave%grid%metric%g22(:)%matrix (array3dflt_type) (9.6.1.2.2)
g23 (2082)	waves%coherentwave(:)%fullwave%grid%metric%g23(:) (complexgrid_scalar) (9.6.1.3.87)
griduid (2084)	waves%coherentwave(:)%fullwave%grid%metric%g23(:)%griduid (integer) (9.6.1.1.2)
subgrid (2084)	waves%coherentwave(:)%fullwave%grid%metric%g23(:)%subgrid (integer) (9.6.1.1.2)
scalar (2084)	waves%coherentwave(:)%fullwave%grid%metric%g23(:)%scalar (vecflt_type) (9.6.1.2.13)
vector (2084)	waves%coherentwave(:)%fullwave%grid%metric%g23(:)%vector (matflt_type) (9.6.1.2.10)
matrix (2084)	waves%coherentwave(:)%fullwave%grid%metric%g23(:)%matrix (array3dflt_type) (9.6.1.2.2)
g33 (2082)	waves%coherentwave(:)%fullwave%grid%metric%g33(:) (complexgrid_scalar) (9.6.1.3.87)
griduid (2084)	waves%coherentwave(:)%fullwave%grid%metric%g33(:)%griduid (integer) (9.6.1.1.2)
subgrid (2084)	waves%coherentwave(:)%fullwave%grid%metric%g33(:)%subgrid (integer) (9.6.1.1.2)
scalar (2084)	waves%coherentwave(:)%fullwave%grid%metric%g33(:)%scalar (vecflt_type) (9.6.1.2.13)
vector (2084)	waves%coherentwave(:)%fullwave%grid%metric%g33(:)%vector (matflt_type) (9.6.1.2.10)
matrix (2084)	waves%coherentwave(:)%fullwave%grid%metric%g33(:)%matrix (array3dflt_type) (9.6.1.2.2)
jacobian (2082)	waves%coherentwave(:)%fullwave%grid%metric%jacobian(:) (complexgrid_scalar) (9.6.1.3.87)
griduid (2084)	waves%coherentwave(:)%fullwave%grid%metric%jacobian(:)%griduid (integer) (9.6.1.1.2)
subgrid (2084)	waves%coherentwave(:)%fullwave%grid%metric%jacobian(:)%subgrid (integer) (9.6.1.1.2)
scalar (2084)	waves%coherentwave(:)%fullwave%grid%metric%jacobian(:)%scalar (vecflt_type) (9.6.1.2.13)
vector (2084)	waves%coherentwave(:)%fullwave%grid%metric%jacobian(:)%vector (matflt_type) (9.6.1.2.10)
matrix (2084)	waves%coherentwave(:)%fullwave%grid%metric%jacobian(:)%matrix (array3dflt_type) (9.6.1.2.2)
geo (2079)	waves%coherentwave(:)%fullwave%grid%geo(:) (complexgrid_geo_global) (9.6.1.3.83)
geotype (2080)	waves%coherentwave(:)%fullwave%grid%geo(:)%geotype (integer) (9.6.1.1.2)
geotypeid (2080)	waves%coherentwave(:)%fullwave%grid%geo(:)%geotypeid (string) (9.6.1.1.3)
coordtype (2080)	waves%coherentwave(:)%fullwave%grid%geo(:)%coordtype (vecint_type) (9.6.1.2.14)
geo_matrix (2080)	waves%coherentwave(:)%fullwave%grid%geo(:)%geo_matrix(:) (complexgrid_scalar) (9.6.1.3.87)
griduid (2084)	waves%coherentwave(:)%fullwave%grid%geo(:)%geo_matrix(:)%griduid (integer) (9.6.1.1.2)
subgrid (2084)	waves%coherentwave(:)%fullwave%grid%geo(:)%geo_matrix(:)%subgrid (integer) (9.6.1.1.2)
scalar (2084)	waves%coherentwave(:)%fullwave%grid%geo(:)%geo_matrix(:)%scalar (vecflt_type) (9.6.1.2.13)
vector (2084)	waves%coherentwave(:)%fullwave%grid%geo(:)%geo_matrix(:)%vector (matflt_type) (9.6.1.2.10)
matrix (2084)	waves%coherentwave(:)%fullwave%grid%geo(:)%geo_matrix(:)%matrix (array3dflt_type) (9.6.1.2.2)
measure (2080)	waves%coherentwave(:)%fullwave%grid%geo(:)%measure(:) (complexgrid_scalar) (9.6.1.3.87)
griduid (2084)	waves%coherentwave(:)%fullwave%grid%geo(:)%measure(:)%griduid (integer) (9.6.1.1.2)
subgrid (2084)	waves%coherentwave(:)%fullwave%grid%geo(:)%measure(:)%subgrid (integer) (9.6.1.1.2)
scalar (2084)	waves%coherentwave(:)%fullwave%grid%geo(:)%measure(:)%scalar (vecflt_type) (9.6.1.2.13)
vector (2084)	waves%coherentwave(:)%fullwave%grid%geo(:)%measure(:)%vector (matflt_type) (9.6.1.2.10)
matrix (2084)	waves%coherentwave(:)%fullwave%grid%geo(:)%measure(:)%matrix (array3dflt_type) (9.6.1.2.2)
bases (2079)	waves%coherentwave(:)%fullwave%grid%bases(:) (complexgrid_vector) (9.6.1.3.93)
griduid (2090)	waves%coherentwave(:)%fullwave%grid%bases(:)%griduid (integer) (9.6.1.1.2)
label (2090)	waves%coherentwave(:)%fullwave%grid%bases(:)%label (string) (9.6.1.1.3)
comp (2090)	waves%coherentwave(:)%fullwave%grid%bases(:)%comp(:) (complexgrid_scalar) (9.6.1.3.87)
griduid (2084)	waves%coherentwave(:)%fullwave%grid%bases(:)%comp(:)%griduid (integer) (9.6.1.1.2)
subgrid (2084)	waves%coherentwave(:)%fullwave%grid%bases(:)%comp(:)%subgrid (integer) (9.6.1.1.2)
scalar (2084)	waves%coherentwave(:)%fullwave%grid%bases(:)%comp(:)%scalar (vecflt_type) (9.6.1.2.13)
vector (2084)	waves%coherentwave(:)%fullwave%grid%bases(:)%comp(:)%vector (matflt_type) (9.6.1.2.10)
matrix (2084)	waves%coherentwave(:)%fullwave%grid%bases(:)%comp(:)%matrix (array3dflt_type) (9.6.1.2.2)
align (2090)	waves%coherentwave(:)%fullwave%grid%bases(:)%align (vecint_type) (9.6.1.2.14)

alignid (2090)	waves%coherentwave(:)%fullwave%grid%bases(:)%alignid (vecstring_type) (9.6.1.2.15)
basis (2090)	waves%coherentwave(:)%fullwave%grid%bases(:)%basis (integer) (9.6.1.1.2)
e_components (2204)	waves%coherentwave(:)%fullwave%e_components (e_components) (9.6.1.3.171)
e_plus (2168)	waves%coherentwave(:)%fullwave%e_components%e_plus (complexgrid_scalar_cplx) (9.6.1.3.88)
griduid (2085)	waves%coherentwave(:)%fullwave%e_components%e_plus%griduid (integer) (9.6.1.1.2)
subgrid (2085)	waves%coherentwave(:)%fullwave%e_components%e_plus%subgrid (integer) (9.6.1.1.2)
scalar (2085)	waves%coherentwave(:)%fullwave%e_components%e_plus%scalar (vecplx_type) (9.6.1.2.12)
vector (2085)	waves%coherentwave(:)%fullwave%e_components%e_plus%vector (matcplx_type) (9.6.1.2.9)
matrix (2085)	waves%coherentwave(:)%fullwave%e_components%e_plus%matrix (array3dcplx_type) (9.6.1.2.1)
e_minus (2168)	waves%coherentwave(:)%fullwave%e_components%e_minus (complexgrid_scalar_cplx) (9.6.1.3.88)
griduid (2085)	waves%coherentwave(:)%fullwave%e_components%e_minus%griduid (integer) (9.6.1.1.2)
subgrid (2085)	waves%coherentwave(:)%fullwave%e_components%e_minus%subgrid (integer) (9.6.1.1.2)
scalar (2085)	waves%coherentwave(:)%fullwave%e_components%e_minus%scalar (vecplx_type) (9.6.1.2.12)
vector (2085)	waves%coherentwave(:)%fullwave%e_components%e_minus%vector (matcplx_type) (9.6.1.2.9)
matrix (2085)	waves%coherentwave(:)%fullwave%e_components%e_minus%matrix (array3dcplx_type) (9.6.1.2.1)
e_para (2168)	waves%coherentwave(:)%fullwave%e_components%e_para (complexgrid_scalar_cplx) (9.6.1.3.88)
griduid (2085)	waves%coherentwave(:)%fullwave%e_components%e_para%griduid (integer) (9.6.1.1.2)
subgrid (2085)	waves%coherentwave(:)%fullwave%e_components%e_para%subgrid (integer) (9.6.1.1.2)
scalar (2085)	waves%coherentwave(:)%fullwave%e_components%e_para%scalar (vecplx_type) (9.6.1.2.12)
vector (2085)	waves%coherentwave(:)%fullwave%e_components%e_para%vector (matcplx_type) (9.6.1.2.9)
matrix (2085)	waves%coherentwave(:)%fullwave%e_components%e_para%matrix (array3dcplx_type) (9.6.1.2.1)
e_norm (2168)	waves%coherentwave(:)%fullwave%e_components%e_norm (complexgrid_scalar_cplx) (9.6.1.3.88)
griduid (2085)	waves%coherentwave(:)%fullwave%e_components%e_norm%griduid (integer) (9.6.1.1.2)
subgrid (2085)	waves%coherentwave(:)%fullwave%e_components%e_norm%subgrid (integer) (9.6.1.1.2)
scalar (2085)	waves%coherentwave(:)%fullwave%e_components%e_norm%scalar (vecplx_type) (9.6.1.2.12)
vector (2085)	waves%coherentwave(:)%fullwave%e_components%e_norm%vector (matcplx_type) (9.6.1.2.9)
matrix (2085)	waves%coherentwave(:)%fullwave%e_components%e_norm%matrix (array3dcplx_type) (9.6.1.2.1)
e_binorm (2168)	waves%coherentwave(:)%fullwave%e_components%e_binorm (complexgrid_scalar_cplx) (9.6.1.3.88)
griduid (2085)	waves%coherentwave(:)%fullwave%e_components%e_binorm%griduid (integer) (9.6.1.1.2)
subgrid (2085)	waves%coherentwave(:)%fullwave%e_components%e_binorm%subgrid (integer) (9.6.1.1.2)
scalar (2085)	waves%coherentwave(:)%fullwave%e_components%e_binorm%scalar (vecplx_type) (9.6.1.2.12)
vector (2085)	waves%coherentwave(:)%fullwave%e_components%e_binorm%vector (matcplx_type) (9.6.1.2.9)
matrix (2085)	waves%coherentwave(:)%fullwave%e_components%e_binorm%matrix (array3dcplx_type) (9.6.1.2.1)
b_norm (2168)	waves%coherentwave(:)%fullwave%e_components%b_norm (complexgrid_scalar_cplx) (9.6.1.3.88)
griduid (2085)	waves%coherentwave(:)%fullwave%e_components%b_norm%griduid (integer) (9.6.1.1.2)
subgrid (2085)	waves%coherentwave(:)%fullwave%e_components%b_norm%subgrid (integer) (9.6.1.1.2)
scalar (2085)	waves%coherentwave(:)%fullwave%e_components%b_norm%scalar (vecplx_type) (9.6.1.2.12)
vector (2085)	waves%coherentwave(:)%fullwave%e_components%b_norm%vector (matcplx_type) (9.6.1.2.9)
matrix (2085)	waves%coherentwave(:)%fullwave%e_components%b_norm%matrix (array3dcplx_type) (9.6.1.2.1)
b_binorm (2168)	waves%coherentwave(:)%fullwave%e_components%b_binorm (complexgrid_scalar_cplx) (9.6.1.3.88)
griduid (2085)	waves%coherentwave(:)%fullwave%e_components%b_binorm%griduid (integer) (9.6.1.1.2)
subgrid (2085)	waves%coherentwave(:)%fullwave%e_components%b_binorm%subgrid (integer) (9.6.1.1.2)
scalar (2085)	waves%coherentwave(:)%fullwave%e_components%b_binorm%scalar (vecplx_type) (9.6.1.2.12)
vector (2085)	waves%coherentwave(:)%fullwave%e_components%b_binorm%vector (matcplx_type) (9.6.1.2.9)
matrix (2085)	waves%coherentwave(:)%fullwave%e_components%b_binorm%matrix (array3dcplx_type) (9.6.1.2.1)



b_para (2168)	waves%coherentwave(:)%fullwave%e_components%b_para (complexgrid_scalar_cplx) (9.6.1.3.88)
griduid (2085)	waves%coherentwave(:)%fullwave%e_components%b_para%griduid (integer) (9.6.1.1.2)
subgrid (2085)	waves%coherentwave(:)%fullwave%e_components%b_para%subgrid (integer) (9.6.1.1.2)
scalar (2085)	waves%coherentwave(:)%fullwave%e_components%b_para%scalar (vecplx_type) (9.6.1.2.12)
vector (2085)	waves%coherentwave(:)%fullwave%e_components%b_para%vector (matcplx_type) (9.6.1.2.9)
matrix (2085)	waves%coherentwave(:)%fullwave%e_components%b_para%matrix (array3dcplx_type) (9.6.1.2.1)
k_perp (2168)	waves%coherentwave(:)%fullwave%e_components%k_perp (complexgrid_scalar_cplx) (9.6.1.3.88)
griduid (2085)	waves%coherentwave(:)%fullwave%e_components%k_perp%griduid (integer) (9.6.1.1.2)
subgrid (2085)	waves%coherentwave(:)%fullwave%e_components%k_perp%subgrid (integer) (9.6.1.1.2)
scalar (2085)	waves%coherentwave(:)%fullwave%e_components%k_perp%scalar (vecplx_type) (9.6.1.2.12)
vector (2085)	waves%coherentwave(:)%fullwave%e_components%k_perp%vector (matcplx_type) (9.6.1.2.9)
matrix (2085)	waves%coherentwave(:)%fullwave%e_components%k_perp%matrix (array3dcplx_type) (9.6.1.2.1)
pol_decomp (2204)	waves%coherentwave(:)%fullwave%pol_decomp (pol_decomp) (9.6.1.3.330)
mpol (2327)	waves%coherentwave(:)%fullwave%pol_decomp%mpol (vecint_type) (9.6.1.2.14)
e_plus (2327)	waves%coherentwave(:)%fullwave%pol_decomp%e_plus (array3dfft_type) (9.6.1.2.2)
e_plus_ph (2327)	waves%coherentwave(:)%fullwave%pol_decomp%e_plus_ph (array3dfft_type) (9.6.1.2.2)
e_minus (2327)	waves%coherentwave(:)%fullwave%pol_decomp%e_minus (array3dfft_type) (9.6.1.2.2)
e_minus_ph (2327)	waves%coherentwave(:)%fullwave%pol_decomp%e_minus_ph (array3dfft_type) (9.6.1.2.2)
e_norm (2327)	waves%coherentwave(:)%fullwave%pol_decomp%e_norm (array3dfft_type) (9.6.1.2.2)
e_norm_ph (2327)	waves%coherentwave(:)%fullwave%pol_decomp%e_norm_ph (array3dfft_type) (9.6.1.2.2)
e_binorm (2327)	waves%coherentwave(:)%fullwave%pol_decomp%e_binorm (array3dfft_type) (9.6.1.2.2)
e_binorm_ph (2327)	waves%coherentwave(:)%fullwave%pol_decomp%e_binorm_ph (array3dfft_type) (9.6.1.2.2)
e_para (2327)	waves%coherentwave(:)%fullwave%pol_decomp%e_para (array3dfft_type) (9.6.1.2.2)
e_para_ph (2327)	waves%coherentwave(:)%fullwave%pol_decomp%e_para_ph (array3dfft_type) (9.6.1.2.2)
b_norm (2327)	waves%coherentwave(:)%fullwave%pol_decomp%b_norm (array3dfft_type) (9.6.1.2.2)
b_norm_ph (2327)	waves%coherentwave(:)%fullwave%pol_decomp%b_norm_ph (array3dfft_type) (9.6.1.2.2)
b_binorm (2327)	waves%coherentwave(:)%fullwave%pol_decomp%b_binorm (array3dfft_type) (9.6.1.2.2)
b_binorm_ph (2327)	waves%coherentwave(:)%fullwave%pol_decomp%b_binorm_ph (array3dfft_type) (9.6.1.2.2)
b_para (2327)	waves%coherentwave(:)%fullwave%pol_decomp%b_para (array3dfft_type) (9.6.1.2.2)
b_para_ph (2327)	waves%coherentwave(:)%fullwave%pol_decomp%b_para_ph (array3dfft_type) (9.6.1.2.2)
k_perp (2327)	waves%coherentwave(:)%fullwave%pol_decomp%k_perp (array3dfft_type) (9.6.1.2.2)
local (2204)	waves%coherentwave(:)%fullwave%local (local) (9.6.1.3.255)
e_plus (2252)	waves%coherentwave(:)%fullwave%local%e_plus (array3dfft_type) (9.6.1.2.2)
e_plus_ph (2252)	waves%coherentwave(:)%fullwave%local%e_plus_ph (array3dfft_type) (9.6.1.2.2)
e_minus (2252)	waves%coherentwave(:)%fullwave%local%e_minus (array3dfft_type) (9.6.1.2.2)
e_minus_ph (2252)	waves%coherentwave(:)%fullwave%local%e_minus_ph (array3dfft_type) (9.6.1.2.2)
e_norm (2252)	waves%coherentwave(:)%fullwave%local%e_norm (array3dint_type) (9.6.1.2.3)
enorm_ph (2252)	waves%coherentwave(:)%fullwave%local%enorm_ph (array3dfft_type) (9.6.1.2.2)
e_binorm (2252)	waves%coherentwave(:)%fullwave%local%e_binorm (array3dfft_type) (9.6.1.2.2)
e_binorm_ph (2252)	waves%coherentwave(:)%fullwave%local%e_binorm_ph (array3dfft_type) (9.6.1.2.2)
e_para (2252)	waves%coherentwave(:)%fullwave%local%e_para (array3dfft_type) (9.6.1.2.2)
e_para_ph (2252)	waves%coherentwave(:)%fullwave%local%e_para_ph (array3dfft_type) (9.6.1.2.2)
b_norm (2252)	waves%coherentwave(:)%fullwave%local%b_norm (array3dfft_type) (9.6.1.2.2)
b_norm_ph (2252)	waves%coherentwave(:)%fullwave%local%b_norm_ph (array3dfft_type) (9.6.1.2.2)
b_binorm (2252)	waves%coherentwave(:)%fullwave%local%b_binorm (array3dfft_type) (9.6.1.2.2)
b_binorm_ph (2252)	waves%coherentwave(:)%fullwave%local%b_binorm_ph (array3dfft_type) (9.6.1.2.2)
b_para (2252)	waves%coherentwave(:)%fullwave%local%b_para (array3dfft_type) (9.6.1.2.2)
b_para_ph (2252)	waves%coherentwave(:)%fullwave%local%b_para_ph (array3dfft_type) (9.6.1.2.2)
k_perp (2252)	waves%coherentwave(:)%fullwave%local%k_perp (array3dfft_type) (9.6.1.2.2)
codeparam (2076)	waves%coherentwave(:)%codeparam (codeparam) (9.6.1.3.77)
codename (2074)	waves%coherentwave(:)%codeparam%codename (string) (9.6.1.1.3)
codeversion (2074)	waves%coherentwave(:)%codeparam%codeversion (string) (9.6.1.1.3)
parameters (2074)	waves%coherentwave(:)%codeparam%parameters (string) (9.6.1.1.3)
output_diag (2074)	waves%coherentwave(:)%codeparam%output_diag (string) (9.6.1.1.3)
output_flag (2074)	waves%coherentwave(:)%codeparam%output_flag (integer) (9.6.1.1.2)
codeparam (2048)	waves%codeparam (codeparam) (9.6.1.3.77)
codename (2074)	waves%codeparam%codename (string) (9.6.1.1.3)
codeversion (2074)	waves%codeparam%codeversion (string) (9.6.1.1.3)

parameters (2074)	waves%codeparam%parameters (string) (9.6.1.1.3)
output.diag (2074)	waves%codeparam%output.diag (string) (9.6.1.1.3)
output.flag (2074)	waves%codeparam%output.flag (integer) (9.6.1.1.2)
time (2048)	waves%time (float) (9.6.1.1.1)

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## 9.7 4.10b.10

### 9.7.1 ITM Types

Generated from the ITM data structure schemas. Time-dependent values are shown in green. Anonymous structure (complex) types in the schemas are given parent element names; a prefix or suffix (eg type\_, .type, .t) can be added if required.

#### 9.7.1.1 Primitive Types

Clear definitions required.

##### 9.7.1.1.1 float

##### 9.7.1.1.2 integer

##### 9.7.1.1.3 string

#### 9.7.1.2 Array Types

Clear definitions required.

##### 9.7.1.2.1 array3dcplx\_type

Example: Complex numbers (3D)

##### 9.7.1.2.2 array3dfft\_type

Example: [[[1.0,2.0,3.0],[5.0,6.0,7.0]],[[1.0,2.0,3.0],[5.0,6.0,7.0]]]

##### 9.7.1.2.3 array3dint\_type

Example: [[[1,2,3],[5,6,7]],[[1,2,3],[5,6,7]]]

##### 9.7.1.2.4 array4dfft\_type

Example: [[[[[1.0,2.0,3.0],[5.0,6.0,7.0]],[[1.0,2.0,3.0],[5.0,6.0,7.0]]],[[[[1.0,2.0,3.0],[5.0,6.0,7.0]],[[1.0,2.0,3.0],[5.0,6.0,7.0]]]]]

##### 9.7.1.2.5 array5dfft\_type

Example: [[[[[[[1.0,2.0,3.0],[5.0,6.0,7.0]],[[1.0,2.0,3.0],[5.0,6.0,7.0]]],[[[[1.0,2.0,3.0],[5.0,6.0,7.0]],[[1.0,2.0,3.0],[5.0,6.0,7.0]]]]]]]

##### 9.7.1.2.6 array6dfft\_type

Example: [[[[[[[[[1.0,2.0,3.0],[5.0,6.0,7.0]],[[1.0,2.0,3.0],[5.0,6.0,7.0]]],[[[[1.0,2.0,3.0],[5.0,6.0,7.0]],[[1.0,2.0,3.0],[5.0,6.0,7.0]]]]]]]]]

##### 9.7.1.2.7 array7dfft\_type

Example: [[[[[[[[[[[1.0,2.0,3.0],[5.0,6.0,7.0]],[[1.0,2.0,3.0],[5.0,6.0,7.0]]],[[[[1.0,2.0,3.0],[5.0,6.0,7.0]],[[1.0,2.0,3.0],[5.0,6.0,7.0]]]]]]]]]]]

##### 9.7.1.2.8 cplx\_type

Example: Complex number (scalar)

<sup>184</sup>[https://www.efda-itm.eu/ITM/html/cpoinstances\\_\\_4.10b.8.html](https://www.efda-itm.eu/ITM/html/cpoinstances__4.10b.8.html)



### 9.7.1.2.9 matcplx\_type

Example: Complex numbers (matrix)

### 9.7.1.2.10 matflt\_type

Example: [[1.0,2.0,3.0],[5.0,6.0,7.0]]

### 9.7.1.2.11 matint\_type

Example: [[1,2,3],[4,5,6]]

### 9.7.1.2.12 veccplx\_type

Example: Complex numbers (vector)

### 9.7.1.2.13 vecflt\_type

Example: [1.0,-3e5,-4.0e-3]

### 9.7.1.2.14 vecint\_type

Example: [1,2,3]

### 9.7.1.2.15 vecstring\_type

Example: ["aaa","bb","cccc"]

## 9.7.1.3 Structure Types

### 9.7.1.3.1 CPO Structures

#### 9.7.1.3.2 amns

Description of AMNS processes for one species.

member	type	description
datainfo	datainfo (9.7.1.3.134)	Generic information on a data item
version	string (9.7.1.1.3)	Version of the data.
source	string (9.7.1.1.3)	Source of the data.
zn	integer (9.7.1.1.2)	Nuclear charge [units of elementary charge];
amn	float (9.7.1.1.1)	Mass of atom [amu]
process(:)	amns_processType (9.7.1.3.53)	Identifiers for processes; Vector(nprocs)
tables(:)	tables (9.7.1.3.421)	Rate tables for processes. Vector(nprocs)
tables_coord(:)	tables.coord (9.7.1.3.422)	Array of possible coordinate systems for tables. Vector(ncoordbases)
version_ind(:)	version_ind (9.7.1.3.480)	Array of available releases/versions of the AMNS data; each element contains information about the AMNS data that is included in the release. This part of the CPO is filled and stored only into shot/run=0/1, playing the role of a catalogue.
codeparam	codeparam (9.7.1.3.77)	Code parameters
time	float (9.7.1.1.1)	Time [s]; Time-dependent; Scalar

### 9.7.1.3.3 antennas

Antenna systems for heating and current drive in the electron cyclotron (EC), ion cyclotron (IC) and lower hybrid (LH) frequencies. Time-dependent CPO.

member	type	description
datainfo	datainfo (9.7.1.3.134)	Generic information on a data item
antenna_ec(:)	antenna_ec (9.7.1.3.54)	Vector of Electron Cyclotron antennas. Time-dependent
antenna_ic(:)	antenna_ic (9.7.1.3.55)	Vector of Ion Cyclotron antennas. Time-dependent
antenna_lh(:)	antenna_lh (9.7.1.3.56)	Vector of Lower Hybrid antennas. Time-dependent
codeparam	codeparam (9.7.1.3.77)	Code parameters

member	type	description
time	float (9.7.1.1.1)	Time [s]; Time-dependent; Scalar

#### 9.7.1.3.4 bb\_shield

Breeding blanket and relevant shield. CPO. Time-dependent CPO.

member	type	description
datainfo	datainfo (9.7.1.3.134)	Generic information on a data item
type	string (9.7.1.1.3)	Type of breeding blanket (HCLL, DCLL, HCPB, ...). String
limits	limits (9.7.1.3.253)	Limits
li6_enrich	float (9.7.1.1.1)	Lithium 6 enrichment (at%).
geom	geom (9.7.1.3.226)	Geometry between components
neut_results	neut_results (9.7.1.3.289)	Neutronic results
shield	shield (9.7.1.3.398)	Shield
bb	bb (9.7.1.3.60)	Breeding blanket
hcll	hcll (9.7.1.3.231)	Data specific to HCLL blanket concept
codeparam	codeparam (9.7.1.3.77)	Code parameters
time	float (9.7.1.1.1)	Time [s]; Time-dependent; Scalar

#### 9.7.1.3.5 compositionc

Species description (ions, impurities, neutrals).

member	type	description
datainfo	datainfo (9.7.1.3.134)	Generic information on a data item
compositions	compositions.type (9.7.1.3.99)	Contains all the composition information for the simulation (main ions, impurities, neutrals, edge species).
codeparam	codeparam (9.7.1.3.77)	Code parameters
time	float (9.7.1.1.1)	Time [s]; Time-dependent; Scalar

#### 9.7.1.3.6 coredelta

Generic instant change of the radial core profiles due to pellet, MHD, ... Time-dependent CPO.

member	type	description
datainfo	datainfo (9.7.1.3.134)	Generic information on a data item
composition	composition (9.7.1.3.95)	Plasma composition (description of ion species). OBSOLES-CENT.
desc_impur	desc_impur (9.7.1.3.136)	Description of the impurities (list of ion species and possibly different charge states). OBSOLES-CENT.
compositions	compositions.type (9.7.1.3.99)	Contains all the composition information for the simulation (main ions, impurities, neutrals, edge species).
values(:)	coredelta.values (9.7.1.3.104)	Description of the delta term for the various origins. Array of structure (ndelta). Time-dependent
codeparam	codeparam (9.7.1.3.77)	Code parameters
time	float (9.7.1.1.1)	Time [s]; Time-dependent; Scalar

#### 9.7.1.3.7 corefast

Flux surface averaged fluid measures and transport coefficients of fast particle populations. Here the concept of a fast particle population refer to the difference between the total population and the thermal population. This separation of populations may in practise be achieved differently depending on the physics model. A description of how the separation is achieved should therefore be provided in corefast/values/filter/. Time-dependent CPO.

member	type	description
datainfo	datainfo (9.7.1.3.134)	Generic information on a data item
composition	composition (9.7.1.3.95)	Plasma composition (description of ion species). OBSOLES-CENT.
desc_impur	desc_impur (9.7.1.3.136)	Description of the impurities (list of ion species and possibly different charge states). OBSOLES-CENT.
compositions	compositions.type (9.7.1.3.99)	Contains all the composition information for the simulation (main ions, impurities, neutrals, edge species).
toroid_field	b0r0 (9.7.1.3.59)	Characteristics of the vacuum toroidal field, redundant with the toroidfield CPO, to document the normalisation of rho and j in this CPO.

member	type	description
values(:)	corefast_values (9.7.1.3.106)	Description of the fast particle terms of various origins. Array of structure (nfast). Time-dependent.
codeparam	codeparam (9.7.1.3.77)	Code parameters
time	float (9.7.1.1.1)	Time [s]; Time-dependent; Scalar

### 9.7.1.3.8 coreimpur

Impurity species (i.e. ion species with multiple charge states), radial core profiles. For heavy impurities, some ionisation states can be grouped into "bundles". Can be the result of an impurity transport code or experimental measurements. Time-dependent CPO

member	type	description
datainfo	datainfo (9.7.1.3.134)	Generic information on a data item
rho_tor_norm	vecflt_type (9.7.1.2.13)	Normalised toroidal flux coordinate values (= rho_tor normalised to the value at the last grid point); Time-dependent; Vector (nrho)
rho_tor	vecflt_type (9.7.1.2.13)	Toroidal flux coordinate (not normalised, equivalent to rho_tor_norm) [m]; Vector (nrho). Time-dependent.
psi	vecflt_type (9.7.1.2.13)	Poloidal flux [Wb], without $1/2\pi$ and such that $B_p =  \text{grad } \psi  / R/2/\pi$ . Time-dependent; Vector (nrho)
volume	vecflt_type (9.7.1.2.13)	Volume enclosed in the flux surface [m <sup>3</sup> ]; Time-dependent; Vector (nrho)
area	vecflt_type (9.7.1.2.13)	Cross-sectional area of the flux surface [m <sup>2</sup> ]; Time-dependent; Vector (nrho)
source	vecstring_type (9.7.1.2.15)	Source of the profile (any comment describing the origin of the impurity profiles : code, path to diagnostic signals, massaging, ...); Array of strings (nimp)
flag	vecint_type (9.7.1.2.14)	Flag describing how the profile has been processed : 0-not calculated; 1-interpretative; 2-calculated by the transport solver; 3-calculated by a separate code : in that case only, description of the code provided in codeparam at the same level; 4-used value from the previous time step; Time-dependent; Vector(nimp)
desc_impur	desc_impur (9.7.1.3.136)	Description of the impurities (list of ion species and possibly different charge states). OBSOLETE.
compositions	compositions_type (9.7.1.3.99)	Contains all the composition information for the simulation (main ions, impurities, neutrals, edge species).
atomic_data	vecstring_type (9.7.1.2.15)	Reference for the atomic data used for each impurity. Array of strings (nimp)
impurity(:)	impurity_type (9.7.1.3.238)	Array(nimp). Time-dependent
diagnostic	coreimpurediag_type (9.7.1.3.118)	NO DOCS
diagnosticsum	coreimpurediag_sum (9.7.1.3.116)	NO DOCS
codeparam	codeparam (9.7.1.3.77)	Code parameters
time	float (9.7.1.1.1)	Time [s]; Time-dependent; Scalar.

### 9.7.1.3.9 coreneutrals

Core plasma neutrals description. Time-dependent CPO.

member	type	description
datainfo	datainfo (9.7.1.3.134)	Generic information on a data item
rho_tor	vecflt_type (9.7.1.2.13)	Toroidal flux coordinate (not normalised, equivalent to rho_tor_norm) [m]; Vector (nrho). Time-dependent.
rho_tor_norm	vecflt_type (9.7.1.2.13)	Normalised toroidal flux coordinate values (= rho_tor normalised to the value at the last grid point); Time-dependent; Vector (nrho)
psi	vecflt_type (9.7.1.2.13)	Poloidal flux [Wb], without $1/2\pi$ and such that $B_p =  \text{grad } \psi  / R/2/\pi$ . Time-dependent; Vector (nrho)
volume	vecflt_type (9.7.1.2.13)	Volume enclosed in the flux surface [m <sup>3</sup> ]; Time-dependent; Vector (nrho)
area	vecflt_type (9.7.1.2.13)	Cross-sectional area of the flux surface [m <sup>2</sup> ]; Time-dependent; Vector (nrho)
neutcompo	composition_neutrals (9.7.1.3.96)	Description of neutrals species. OBSOLETE
composition	composition (9.7.1.3.95)	Plasma composition (description of ion species). OBSOLETE.
desc_impur	desc_impur (9.7.1.3.136)	Description of the impurities (list of ion species and possibly different charge states). OBSOLETE.
compositions	compositions_type (9.7.1.3.99)	Contains all the composition information for the simulation (main ions, impurities, neutrals, edge species).
profiles(:)	neutral_complex_type (9.7.1.3.290)	Profiles derived from the fields solved in the transport equations, or from experiment. Array(nneut). Time-dependent
ioncoeff(:)	coefficients_neutrals (9.7.1.3.78)	Recycling and sputtering coefficients for each ion in composition. Array(nion). Time-dependent
impcoeff(:)	impcoeff (9.7.1.3.236)	Recycling and sputtering coefficients for each impurity ion in desc_impur. Array(nimp). Time-dependent.

member	type	description
codeparam	codeparam (9.7.1.3.77)	Code parameters
time	float (9.7.1.1.1)	Time [s]; Time-dependent; Scalar

### 9.7.1.3.10 coreprof

Core plasma 1D profiles as a function of the toroidal flux coordinate, obtained by solving the core transport equations (can be also fitted profiles from experimental data). The codeparam element here describes the parameters of the transport equation solver and/or those of the fitting program. Time-dependent CPO.

member	type	description
datainfo	datainfo (9.7.1.3.134)	Generic information on a data item
rho_tor_norm	vecflt.type (9.7.1.2.13)	Normalised toroidal flux coordinate values (= rho_tor normalised to the value at the last radial grid point, which is quasi at the Last Closed Flux Surface); Time-dependent; Vector (nrho)
rho_tor	vecflt.type (9.7.1.2.13)	Toroidal flux coordinate (not normalised, equivalent to rho_tor_norm) [m]; Vector (nrho). Time-dependent.
drho_dt	vecflt.type (9.7.1.2.13)	Time derivative of rho_tor [m/s]; Vector (nrho). Time-dependent.
toroid_field	toroid_field (9.7.1.3.459)	Toroidal field information entering the definition of rho_tor, for reference only. The physical value of the toroidal field should be taken from the toroidfield CPO. Time-dependent.
composition	composition (9.7.1.3.95)	Plasma composition (description of ion species). OBSOLES-CENT.
desc_impur	desc_impur (9.7.1.3.136)	Description of the impurities (list of ion species and possibly different charge states). OBSOLES-CENT.
compositions	compositions.type (9.7.1.3.99)	Contains all the composition information for the simulation (main ions, impurities, neutrals, edge species).
psi	psi (9.7.1.3.341)	Poloidal magnetic flux [Wb]; Time-dependent;
te	corefield (9.7.1.3.107)	Electron temperature [eV]; (source term in [W.m <sup>-3</sup> ]). Time-dependent;
ti	corefieldion (9.7.1.3.108)	Ion temperature [eV]; (source term in [W.m <sup>-3</sup> ]). Time-dependent;
ne	corefield (9.7.1.3.107)	Electron density [m <sup>-3</sup> ]; (source term in [m <sup>-3</sup> ]). Time-dependent;
ni	corefieldion (9.7.1.3.108)	Ion density [m <sup>-3</sup> ]; (source term in [m <sup>-3</sup> ]). Time-dependent;
vtor	corefieldion (9.7.1.3.108)	Toroidal velocity of the various ion species [m.s <sup>-1</sup> ]; Time-dependent;
profiles1d	profiles1d (9.7.1.3.339)	Profiles derived from the fields solved in the transport equations, or from experiment.
globalparam	globalparam (9.7.1.3.229)	Various global quantities calculated from the 1D profiles. Time-dependent
codeparam	codeparam (9.7.1.3.77)	Code parameters
time	float (9.7.1.1.1)	Time [s]; Time-dependent; Scalar

### 9.7.1.3.11 coresource

Generic source term for the core transport equations (radial profile). Time-dependent CPO.

member	type	description
datainfo	datainfo (9.7.1.3.134)	Generic information on a data item
composition	composition (9.7.1.3.95)	Plasma composition (description of ion species). OBSOLES-CENT.
desc_impur	desc_impur (9.7.1.3.136)	Description of the impurities (list of ion species and possibly different charge states). OBSOLES-CENT.
compositions	compositions.type (9.7.1.3.99)	Contains all the composition information for the simulation (main ions, impurities, neutrals, edge species).
toroid_field	b0r0 (9.7.1.3.59)	Characteristics of the vacuum toroidal field, redundant with the toroidfield CPO, to document the normalisation of rho and j in this CPO.
values(:)	coresource_values (9.7.1.3.125)	Description of the source terms of various origins. Array of structure (nsource). Time-dependent.
codeparam	codeparam (9.7.1.3.77)	Code parameters
time	float (9.7.1.1.1)	Time [s]; Time-dependent; Scalar

### 9.7.1.3.12 coretransp

Generic transport coefficients for the core transport equations (radial profile). Time-dependent CPO

member	type	description
datainfo	datainfo (9.7.1.3.134)	Generic information on a data item
composition	composition (9.7.1.3.95)	Plasma composition (description of ion species). OBSOLES-CENT.
desc_impur	desc_impur (9.7.1.3.136)	Description of the impurities (list of ion species and possibly different charge states). OBSOLES-CENT.
compositions	compositions.type (9.7.1.3.99)	Contains all the composition information for the simulation (main ions, impurities, neutrals, edge species).

member	type	description
values(:)	coretransp_values (9.7.1.3.129)	Description of transport term coming from various origins. Array of structure (ntransp). Time-dependent
codeparam	codeparam (9.7.1.3.77)	Code parameters
time	float (9.7.1.1.1)	Time [s]; Time-dependent; Scalar

### 9.7.1.3.13 cxdiag

Charge Exchange Diagnostic; Time-dependent CPO

member	type	description
datainfo	datainfo (9.7.1.3.134)	Generic information on a data item
setup	cxsetup (9.7.1.3.132)	diagnostic setup information
measure	cxmeasure (9.7.1.3.131)	Measured values
codeparam	codeparam (9.7.1.3.77)	Code parameters
time	float (9.7.1.1.1)	Time [s]; Time-dependent; Scalar

### 9.7.1.3.14 distribution

Datastructure for representing data associated with a distribution function one or many particle species. This structure is specifically designed to handle non-Maxwellian distribution function generated during heating and current drive, typically solved using a Fokker-Planck calculation perturbed by a heating scheme (e.g. IC, EC, LH, NBI, or alpha heating) and then relaxed by Coloumb collisions. Time-dependent CPO

member	type	description
datainfo	datainfo (9.7.1.3.134)	Generic information on a data item
composition	composition (9.7.1.3.95)	Plasma composition (description of ion species). OBSOLESCECENT.
compositions	compositions.type (9.7.1.3.99)	Contains all the composition information for the simulation (main ions, impurities, neutrals, edge species).
distri.vec(:)	distri.vec (9.7.1.3.166)	Vector over all distribution functions. Every distribution function has to be associated with only one particle species, speciefc in <code>distri.vec/species/</code> , but there could be multiple distribution function for each species. In this case, the fast particle populations should be superposed. Time-dependent. Structure array( <code>ndistri.vec</code> )
codeparam	codeparam (9.7.1.3.77)	Code parameters
time	float (9.7.1.1.1)	Time [s]; Time-dependent; Scalar

### 9.7.1.3.15 distsource

Sources of particles for input to kinetic equations, e.g. Fokker-Planck calculation. The sources could originate from e.g. NBI or fusion reactions. Time-dependent CPO

member	type	description
datainfo	datainfo (9.7.1.3.134)	Generic information on a data item
composition	composition (9.7.1.3.95)	Plasma composition (description of ion species). OBSOLESCECENT.
compositions	compositions.type (9.7.1.3.99)	Contains detailed information on the plasma composition (main ions, impurities, neutrals, edge species).
source(:)	distsource_source (9.7.1.3.171)	Source. Time-dependent. Structure array( <code>nsrc.spec</code> )
codeparam	codeparam (9.7.1.3.77)	Code parameters
time	float (9.7.1.1.1)	Time [s]; Time-dependent; scalar

### 9.7.1.3.16 ecediag

Electron Cyclotron Emission Diagnostic; Time-dependent CPO

member	type	description
datainfo	datainfo (9.7.1.3.134)	Generic information on a data item
setup	ecsetup (9.7.1.3.175)	diagnostic setup information
measure	ecemeasure (9.7.1.3.174)	Measured values
codeparam	codeparam (9.7.1.3.77)	Code parameters
time	float (9.7.1.1.1)	Time [s]; Time-dependent; Scalar

### 9.7.1.3.17 edge

CPO for edge/SOL plasma description. Time-dependent CPO

member	type	description
datainfo	datainfo (9.7.1.3.134)	Generic information on a data item
grid	complexgrid (9.7.1.3.82)	Grid description
species(:)	species_desc (9.7.1.3.410)	Description of ion species. Array of structures(nspecies)
compositions	compositions.type (9.7.1.3.99)	Contains all the composition information for the simulation (main ions, impurities, neutrals, edge species).
fluid	edge_fluid (9.7.1.3.176)	Fluid description of edge plasma. Time-dependent.
kinetic	edge_kinetic (9.7.1.3.182)	Kinetic description of edge plasma. Time-dependent.
codeparam	codeparam (9.7.1.3.77)	Code parameters
time	float (9.7.1.1.1)	Time [s]; Time-dependent; Scalar

### 9.7.1.3.18 efcc

Error field correction coils. Time-dependent CPO.

member	type	description
datainfo	datainfo (9.7.1.3.134)	Generic information on a data item
coil(:)	coil (9.7.1.3.80)	Individual coil. Time-dependent. Structure array. Replicate this coil structure for coil element in the efcc array.
time	float (9.7.1.1.1)	Time [s]; Time-dependent; Scalar
codeparam	codeparam (9.7.1.3.77)	Code parameters

### 9.7.1.3.19 equilibrium

Description of a 2D, axi-symmetric, tokamak equilibrium; result of an equilibrium code. Time-dependent CPO

member	type	description
datainfo	datainfo (9.7.1.3.134)	Generic information on a data item
eqconstraint	eqconstraint (9.7.1.3.189)	measurements to constrain the equilibrium, output values and accuracy of the fit
eqgeometry	eqgeometry (9.7.1.3.190)	Geometry of the plasma boundary
flush	flush (9.7.1.3.203)	FLUSH package coefficients for the mapping of the equilibrium. The time grid of this structure is the same as the equilibrium structure above.
global_param	global_param (9.7.1.3.228)	0d output parameters
profiles_1d	profiles_1d (9.7.1.3.340)	output profiles as a function of the poloidal flux
profiles_2d(:)	equilibrium_profiles_2d (9.7.1.3.195)	Output profiles in the poloidal plane. Time-dependent
coord_sys	coord_sys (9.7.1.3.101)	flux surface coordinate system on a square grid of flux and angle
time	float (9.7.1.1.1)	Time [s]; Time-dependent; Scalar
codeparam	codeparam (9.7.1.3.77)	Code parameters

### 9.7.1.3.20 fusiondiag

Fusion product diagnostics; Time-dependent CPO

member	type	description
datainfo	datainfo (9.7.1.3.134)	Generic information on a data item
fus_product(:)	fusiondiag_fus_product (9.7.1.3.222)	Source. Time-dependent. Structure array. Replicate this source structure to accommodate neutron and gammas.
codeparam	codeparam (9.7.1.3.77)	Code parameters
time	float (9.7.1.1.1)	Time [s]; Time-dependent; Scalar

### 9.7.1.3.21 halphadiag

H/D alpha line integrated diagnostic; Time-dependent CPO

member	type	description
datainfo	datainfo (9.7.1.3.134)	Generic information on a data item
setup	halphadiag_setup (9.7.1.3.230)	setup for the lines of sight of the line integrated measurement
intensity	exp1D (9.7.1.3.197)	Measured light intensity (a.u.). Time-dependent. Vector (nlos)

member	type	description
codeparam	codeparam (9.7.1.3.77)	Code parameters
time	float (9.7.1.1.1)	Time [s]; Time-dependent; Scalar

### 9.7.1.3.22 heat\_sources

Description of a set of heat sources or sinks. Time-dependent CPO.

member	type	description
datainfo	datainfo (9.7.1.3.134)	Generic information on a data item
sources(:)	calorimetry_heat_source (9.7.1.3.73)	Heat sources. Array of structure (nheat_source)
sinks(:)	calorimetry_heat_source (9.7.1.3.73)	Heat sinks. Array of structure (nheat_sink)
codeparam	codeparam (9.7.1.3.77)	Code parameters
time	float (9.7.1.1.1)	Time [s]; Time-dependent; Scalar

### 9.7.1.3.23 interfdiag

General line integral diagnostic

member	type	description
datainfo	datainfo (9.7.1.3.134)	Generic information on a data item
expression	string (9.7.1.1.3)	Formal expression for the line integral to be evaluated as a function of ne, ni, Te, Ti, Zeff, Br, Bz
setup_line	setup_line (9.7.1.3.396)	Geometric description of the lines of sight
measure	exp1D (9.7.1.3.197)	Measured value. Time-dependent; Vector (nchords)
codeparam	codeparam (9.7.1.3.77)	Code parameters
time	float (9.7.1.1.1)	Time [s]; Time-dependent; Scalar

### 9.7.1.3.24 ironmodel

Model of the iron circuit; Time-dependent CPO

member	type	description
datainfo	datainfo (9.7.1.3.134)	Generic information on a data item
desc_iron	desc_iron (9.7.1.3.137)	Description of the iron segments
magnetise	magnetise (9.7.1.3.260)	Magnetisation M of the iron segment, assumed to be constant inside a given iron segment. Reminder : $H = 1/\mu_0 * B - \mu_r * M$ ; [A/m].
codeparam	codeparam (9.7.1.3.77)	Code parameters
time	float (9.7.1.1.1)	Time [s]; Time-dependent; Scalar

### 9.7.1.3.25 langmuirdiag

Langmuir probes; Time-dependent CPO

member	type	description
datainfo	datainfo (9.7.1.3.134)	Generic information on a data item
potential	lang_measure (9.7.1.3.244)	Floating potential [V]. All children are vectors(npot)
bias	lang_measure (9.7.1.3.244)	Biasing potential [V]. All children are vectors(bias)
jsat	lang_measure (9.7.1.3.244)	Ion saturation current [A/m <sup>2</sup> ]. All children are vectors(njsat)
ne	lang_derived (9.7.1.3.243)	Electron density [m <sup>-3</sup> ]. All children are vectors(ndensity).
te	lang_derived (9.7.1.3.243)	Electron Temperature [eV]. All children are vectors(nte)
machpar	lang_derived (9.7.1.3.243)	Parallel Mach number. All children are vectors(nmach)
codeparam	codeparam (9.7.1.3.77)	Code parameters
time	float (9.7.1.1.1)	Time [s]; Time-dependent; Scalar

### 9.7.1.3.26 launches

RF wave launch conditions. Time-dependent CPO

member	type	description
datainfo	datainfo (9.7.1.3.134)	Generic information on a data item



member	type	description
name	vecstring_type (9.7.1.2.15)	Antenna name, Vector of strings (nantenna)
type	vecstring_type (9.7.1.2.15)	Wave type (LH, EC, IC, ...), Vector of strings (nantenna)
frequency	vecflt_type (9.7.1.2.13)	Wave frequency [Hz], Vector (nantenna).
mode	vecint_type (9.7.1.2.14)	Incoming wave mode (+ 1 : slow wave only; -1 both slow and fast wave modes). Vector of integers (nantenna). Time-dependent
position	rzphi1D (9.7.1.3.365)	Reference global position of the antenna. Time-dependent
spectrum	spectrum (9.7.1.3.413)	Spectral properties of the wave.
beam	launchs_rfbeam (9.7.1.3.248)	Beam characteristics
codeparam	codeparam (9.7.1.3.77)	Code parameters
time	float (9.7.1.1.1)	Time [s]; Time-dependent; Scalar

### 9.7.1.3.27 lithiumdiag

Lithium Beam Diagnostic; Time-dependent CPO

member	type	description
datainfo	datainfo (9.7.1.3.134)	Generic information on a data item
setup	lithsetup (9.7.1.3.256)	diagnostic setup information
measure	lithmeasure (9.7.1.3.255)	Measured values
codeparam	codeparam (9.7.1.3.77)	Code parameters
time	float (9.7.1.1.1)	Time [s]; Time-dependent; Scalar

### 9.7.1.3.28 magdiag

Magnetic diagnostics. Time-dependent CPO

member	type	description
datainfo	datainfo (9.7.1.3.134)	Generic information on a data item
ip	exp0D (9.7.1.3.196)	Plasma current [A]. Positive sign means anti-clockwise when viewed from above. Time-dependent. Scalar
diamagflux	exp0D (9.7.1.3.196)	Diamagnetic flux [Wb]; Time-dependent; Scalar
diamagener	exp0D (9.7.1.3.196)	Diamagnetic energy [J]; Time-dependent; Scalar
flux_loops	flux_loops (9.7.1.3.204)	Poloidal flux loops RZ coordinates have 1 component for the full loop and two if there is a negative reference loop
bpol_probes	bpol_probes (9.7.1.3.72)	Poloidal field probes
codeparam	codeparam (9.7.1.3.77)	Code parameters
time	float (9.7.1.1.1)	Time [s]; Time-dependent; Scalar

### 9.7.1.3.29 mhd

MHD linear stability. Time-dependent CPO

member	type	description
datainfo	datainfo (9.7.1.3.134)	Generic information on a data item
toroid_field	b0r0 (9.7.1.3.59)	Characteristics of the vacuum toroidal field, redundant with the toroidfield CPO, to document the normalisation of rho and j in this CPO.
n(:)	mhd_mode (9.7.1.3.264)	Vector of toroidal mode numbers; Structure Array (ntor); Time-dependent
time	float (9.7.1.1.1)	Time [s]; Time-dependent; Scalar.
codeparam	codeparam (9.7.1.3.77)	Code parameters

### 9.7.1.3.30 msediag

MSE Diagnostic; Time-dependent CPO

member	type	description
datainfo	datainfo (9.7.1.3.134)	Generic information on a data item
polarimetry	polarimetry (9.7.1.3.334)	This structure accomodates the polarimetry setup and measurements of a mse diagnostic, as widely used in fusion devices. The final measurement is the tan(gamma) where gamma is the polarization angle of a particular spectral mse component.
spectral	spectral (9.7.1.3.412)	This structure accommodates the types needed on a spectral MSE diagnostic namely the emmissivity and the radiance spectra. It will be subsequently upgraded with optical + photon detection elements since the structure will also be used for a synthetic spectral mse code.
codeparam	codeparam (9.7.1.3.77)	Code parameters

member	type	description
time	float (9.7.1.1.1)	Time [s]; Time-dependent; Scalar

### 9.7.1.3.31 nbi

Neutral Beam Injection. Input to NBI source codes; describes the neutrals that are about to be launched into the torus; Time-dependent CPO

member	type	description
datainfo	datainfo (9.7.1.3.134)	Generic information on a data item
nbi.unit(:)	nbi_unit (9.7.1.3.286)	Vector of Neutral Beam Injector units. The NBI system should be separated in to the individually power strucutres. Structure array(nunits). Time-dependent
codeparam	codeparam (9.7.1.3.77)	Code parameters
time	float (9.7.1.1.1)	Time [s]; Time-dependent; Scalar

### 9.7.1.3.32 neoclassic

Neoclassical quantities (including transport coefficients). Time-dependent CPO

member	type	description
datainfo	datainfo (9.7.1.3.134)	Generic information on a data item
rho_tor_norm	vecflt_type (9.7.1.2.13)	Normalised toroidal flux coordinate values (= rho_tor normalised to the value at the last grid point); Vector (nrho)
rho_tor	vecflt_type (9.7.1.2.13)	Toroidal flux coordinate (not normalised, equivalent to rho_tor_norm) [m]; Vector (nrho). Time-dependent.
composition	composition (9.7.1.3.95)	Plasma composition (description of ion species). OBSOLES-CENT.
desc_impur	desc_impur (9.7.1.3.136)	Description of the impurities (list of ion species and possibly different charge states). OBSOLES-CENT.
compositions	compositions_type (9.7.1.3.99)	Contains all the composition information for the simulation (main ions, impurities, neutrals, edge species).
ni_neo	transcoefion (9.7.1.3.463)	Neoclassical transport coefficients for ion density equation. Time-dependent.
ne_neo	transcoefel (9.7.1.3.461)	Neoclassical transport coefficients for electron density equation. Time-dependent.
nz_neo(:)	transcoefimp (9.7.1.3.462)	Neoclassical transport coefficients for impurity (multiple charge state) density equation. Time-dependent.
ti_neo	transcoefion (9.7.1.3.463)	Neoclassical transport coefficients for ion temperature equation. Time-dependent.
te_neo	transcoefel (9.7.1.3.461)	Neoclassical transport coefficients for electron temperature equation. Time-dependent.
tz_neo(:)	transcoefimp (9.7.1.3.462)	Neoclassical transport coefficients for impurity (multiple charge state) temperature equation. Time-dependent.
mtor_neo	transcoefel (9.7.1.3.461)	Neoclassical transport coefficients for total toroidal momentum equation. Time-dependent.
sigma	vecflt_type (9.7.1.2.13)	Neoclassical conductivity [ $\text{ohm}^{-1}\text{m}^{-1}$ ]. Time-dependent. Vector(nrho).
jboot	vecflt_type (9.7.1.2.13)	Bootstrap current density [ $\text{A}\cdot\text{m}^{-2}$ ]. Time-dependent. Vector(nrho).
er	vecflt_type (9.7.1.2.13)	Radial electric field [V/m]. Time-dependent. Vector(nrho).
vpol	matflt_type (9.7.1.2.10)	Neoclassical poloidal rotation of each ion species [m/s]. Time-dependent. Matrix(nrho,nion).
vtor	matflt_type (9.7.1.2.10)	Neoclassical toroidal rotation of each ion species [m/s]. Time-dependent. Matrix(nrho,nion).
mach	matflt_type (9.7.1.2.10)	Mach number of each ion species. Time-dependent. Matrix(nrho,nion).
utheta_e	vecflt_type (9.7.1.2.13)	Electron poloidal flow [m/s]. Time-dependent. Vector(nrho).
utheta_i	matflt_type (9.7.1.2.10)	Ion poloidal flow [m/s]. Time-dependent. Matrix(nrho,nion).
viscosity_par	matflt_type (9.7.1.2.10)	Ion parallel viscosity [?]. Time-dependent. Matrix(nrho,nion).
impurity(:)	neoclassic_impurity (9.7.1.3.288)	Array(nimp). Time-dependent
fext	array3dflt_type (9.7.1.2.2)	Moments of parallel external force on each ion species [ $\text{T}\cdot\text{J}\cdot\text{m}^{-3}$ ]. Time-dependent. Array3D(nrho,nion,nmoment).
jext	vecflt_type (9.7.1.2.13)	Current density response to fext [ $\text{A}\cdot\text{m}^{-2}$ ]. Time-dependent. Vector(nrho).
time	float (9.7.1.1.1)	Time [s]; Time-dependent; Scalar.
codeparam	codeparam (9.7.1.3.77)	Code parameters

### 9.7.1.3.33 ntm

Description of a Neoclassical Tearing Mode and its evolution. Time-dependent CPO

member	type	description
datainfo	datainfo (9.7.1.3.134)	Generic information on a data item
mode(:)	ntm_mode (9.7.1.3.293)	List of the various NTM modes appearing during the simulation. If a mode appears several times, use several indices in this arra of structure with the same m,n values. All descendant nodes are marked as Time-dependent for technical reasons, to allow the size of the mode AoS to vary.

member	type	description
time	float (9.7.1.1.1)	Time [s]; Time-dependent; Scalar.
codeparam	codeparam (9.7.1.3.77)	Code parameters

#### 9.7.1.3.34 orbit

Orbits for a set of particles. Time-dependent CPO

member	type	description
datainfo	datainfo (9.7.1.3.134)	Generic information on a data item
com	com (9.7.1.3.81)	COM (Constants Of Motion) parameters identifying an orbit
trace	trace (9.7.1.3.460)	Position of particle in 5D space (3D in real and 2D in velocity).
global_param	orbit_global_param (9.7.1.3.304)	Global quantities associated with an orbit.
codeparam	codeparam (9.7.1.3.77)	Code parameters
time	float (9.7.1.1.1)	Time [s]; Time-dependent; Scalar

#### 9.7.1.3.35 pellets

Description of pellets. Time-dependent CPO.

member	type	description
datainfo	datainfo (9.7.1.3.134)	Generic information on a data item
compositions	compositions_type (9.7.1.3.99)	Pellet composition
pellet(:)	pellet (9.7.1.3.312)	Description of the pellets entering the plasma at given time. Array of structures (NPEL). Time-dependent.
codeparam	codeparam (9.7.1.3.77)	Code parameters
time	float (9.7.1.1.1)	Time [s]; Time-dependent; Scalar

#### 9.7.1.3.36 pfsystems

Description of the active poloidal coils, passive conductors, currents flowing in those and mutual electromagnetic effects of the device; Time-dependent CPO

member	type	description
datainfo	datainfo (9.7.1.3.134)	Generic information on a data item
pccoils	pccoils (9.7.1.3.322)	Active poloidal field coils
pfpassive	pfpassive (9.7.1.3.326)	Passive axisymmetric conductor description
pfcircuits	pfcircuits (9.7.1.3.321)	Circuits, connected to multiple coils and to multiple supplies, defining the current and voltage relationships in the system
pfsupplies	pfsupplies (9.7.1.3.328)	PF power supplies
codeparam	codeparam (9.7.1.3.77)	Code parameters
time	float (9.7.1.1.1)	Time [s]; Time-dependent; Scalar

#### 9.7.1.3.37 polardiag

General line integral diagnostic

member	type	description
datainfo	datainfo (9.7.1.3.134)	Generic information on a data item
expression	string (9.7.1.1.3)	Formal expression for the line integral to be evaluated as a function of $n_e$ , $n_i$ , $T_e$ , $T_i$ , $Z_{eff}$ , $B_r$ , $B_z$
setup_line	setup_line (9.7.1.3.396)	Geometric description of the lines of sight
measure	exp1D (9.7.1.3.197)	Measured value. Time-dependent; Vector (nchords)
codeparam	codeparam (9.7.1.3.77)	Code parameters
time	float (9.7.1.1.1)	Time [s]; Time-dependent; Scalar

#### 9.7.1.3.38 power.conv

Power conversion system. Time-dependent CPO.

member	type	description
datainfo	datainfo (9.7.1.3.134)	Generic information on a data item
cycle_type	string (9.7.1.1.3)	Type of cycle. String
circuits(:)	circuits (9.7.1.3.74)	Description of the circuit of the power conversion system. Array of structure. (ncircuits).
power_recirc	float (9.7.1.1.1)	Recirculated electric power (input to the power conversion actor). [W] Scalar
power_net	float (9.7.1.1.1)	Net electric power generated [W]. Scalar
power_int	float (9.7.1.1.1)	Total electric power consumption of the power conversion system.[W]. Scalar
efficiency	float (9.7.1.1.1)	Efficiency of the reactor (ratio of the alternator electrical power to the total power needed to operate the reactor)
codeparam	codeparam (9.7.1.3.77)	Code parameters
time	float (9.7.1.1.1)	Time [s]; Time-dependent; Scalar

### 9.7.1.3.39 reflectomet

Reflectometry CPO, contains antennas and received signals; Time-dependent CPO.

member	type	description
datainfo	datainfo (9.7.1.3.134)	Generic information on a data item
refl_receive(:)	refl_receive (9.7.1.3.349)	Reflectometry signal; experimental or code output. Time-dependent. Vector(nreceivers); If output from ERC3D, contains short, high-resolution (ps) time series anchored to the time of the CPO or, for a combination of runs, longer, coarse time signals. For experimental signals, time series may span much longer durations. For slowly varying signals, may contain only one point and have a separate CPO instance with different time field for every point. For code output, the signals are usually normalised to unity power.
antennas(:)	reflectometry_antennas (9.7.1.3.350)	Vector of reflectometry antenna descriptions. These include radiation fields as well as material antenna structures (feeds, horns, later mirrors); Vector(nantennas); refl.receive entries refer to their antenna by index in this array. Time-dependent.
codeparam	codeparam (9.7.1.3.77)	Code parameters
time	float (9.7.1.1.1)	Time [s]; Time-dependent; Scalar

### 9.7.1.3.40 rfadiag

Retarding field analyser Diagnostic; Time-dependent CPO

member	type	description
datainfo	datainfo (9.7.1.3.134)	Generic information on a data item
setup	rfasetup (9.7.1.3.356)	diagnostic setup information
measure	rfameasure (9.7.1.3.355)	Measured values
codeparam	codeparam (9.7.1.3.77)	Code parameters
time	float (9.7.1.1.1)	Time [s]; Time-dependent; Scalar

### 9.7.1.3.41 sawteeth

Description of sawtooth events. Time-dependent CPO

member	type	description
datainfo	datainfo (9.7.1.3.134)	Generic information on a data item
crash_trig	integer (9.7.1.1.2)	Flag indicating whether a crash condition has been satisfied : 0 = no crash. N( $\zeta$ 0) = crash triggered due to condition ii=N. Integer. Time-dependent.
composition	composition (9.7.1.3.95)	Plasma composition (description of ion species). OBSOLESCECENT.
rho_tor_norm	vecflt_type (9.7.1.2.13)	Normalised toroidal flux coordinate values (= rho_tor normalised to the value at the last grid point); Vector (nrho)
rho_tor	vecflt_type (9.7.1.2.13)	Toroidal flux coordinate [m] given by $\sqrt{\phi/B_0/\pi}$ , where $B_0 = \text{toroidfield}\%bvac.r\%value / \text{toroidfield}\%r0$ . Vector (nrho). Time-dependent.
profiles1d	sawteeth_profiles1d (9.7.1.3.372)	Core profiles after sawtooth crash
diags	sawteeth_diags (9.7.1.3.371)	NO DOCS
codeparam	codeparam (9.7.1.3.77)	Code parameters
time	float (9.7.1.1.1)	Time [s]; Time-dependent; Scalar

### 9.7.1.3.42 scenario

Scenario characteristics, to be used as input or output of a whole discharge simulator. Time-dependent CPO.

member	type	description
datainfo	datainfo (9.7.1.3.134)	Generic information on a data item
centre	scenario_centre (9.7.1.3.373)	central values of the profiles (at magnetic axis)
composition	scenario_composition (9.7.1.3.374)	Plasma composition (description of ion species).
configs	scenario_configuration (9.7.1.3.375)	Strings describing the tokamak configuration
confinement	scenario_confinement (9.7.1.3.376)	characteristic confinement times
currents	scenario_currents (9.7.1.3.377)	data related to current sources and current diffusion
edge	scenario_edge (9.7.1.3.378)	edge value (@ LCMS)
energy	scenario_energy (9.7.1.3.379)	plasma energy content
eqgeometry	eqgeometry (9.7.1.3.190)	Geometry of the plasma boundary
global_param	scenario_global (9.7.1.3.380)	Global scalar values
heat_power	scenario_heat_power (9.7.1.3.381)	Power delivered to plasma (thermal and non thermal)
itb	scenario_itb (9.7.1.3.383)	Values characteristics of the Internal Transport Barrier
lim_div_wall	scenario_lim_div_wall (9.7.1.3.384)	values on the plate of divertor or on the limiter or on the wall (@ LCMS)
line_ave	scenario_line_ave (9.7.1.3.385)	line averaged value
neutron	scenario_neutron (9.7.1.3.386)	neutron flux for DD and DT reactions
ninety_five	scenario_ninety_five (9.7.1.3.387)	values at 95% of poloidal flux
pedestal	scenario_pedestal (9.7.1.3.388)	Values at the top of the H-mode pedestal
references	scenario_references (9.7.1.3.391)	References
reactor	scenario_reactor (9.7.1.3.389)	reactor data (such as electricity cost ...)
sol	scenario_sol (9.7.1.3.392)	SOL characteristic (@ LCMS)
vol_ave	scenario_vol_ave (9.7.1.3.393)	volume averaged value
codeparam	codeparam (9.7.1.3.77)	Code parameters
time	float (9.7.1.1.1)	Time [s]; Time-dependent; Scalar

### 9.7.1.3.43 solcurdiag

SOL current diagnostic. Time-dependent CPO

member	type	description
datainfo	datainfo (9.7.1.3.134)	Generic information on a data item
sol.current(:)	solcurdiag_sol.current (9.7.1.3.401)	Vector of toroidal rings of divertor tiles. Structure array(nrings). Time-dependent
clusters(:)	clusters (9.7.1.3.76)	Cluster of tile rings to define and reference superset structures using the individual tile rings. A coil ring can coexist on two top level structures. Structure array (ncluster).
time	float (9.7.1.1.1)	Time [s]; Time-dependent; Scalar
codeparam	codeparam (9.7.1.3.77)	Code parameters

### 9.7.1.3.44 temporary

Storage of undeclared data model components; Time-dependent CPO

member	type	description
datainfo	datainfo (9.7.1.3.134)	Generic information on a data item
non_timed	temporary_nt (9.7.1.3.423)	Time-independent quantities (parameters)
timed	temporary_t (9.7.1.3.439)	Time-dependent quantities
codeparam	codeparam (9.7.1.3.77)	Code parameters
time	float (9.7.1.1.1)	Time [s]; Time-dependent; Scalar

### 9.7.1.3.45 topinfo

General info about the database entry. CPO.

member	type	description
dataprovider	string (9.7.1.1.3)	Name of the main data provider (the person who filled the original data)
description	string (9.7.1.1.3)	Pulse/Entry description
firstputdate	string (9.7.1.1.3)	Date of the original data submission
lastupdate	string (9.7.1.1.3)	Date of the last data addition in the tree
source	string (9.7.1.1.3)	Exact reference of the data source (e.g. original reference in the native machine data base)
comment	string (9.7.1.1.3)	Any additional comment
dataversion	string (9.7.1.1.3)	Version of the data structure
workflow	string (9.7.1.1.3)	Workflow which has been used to produce the present entry. Exact format to be defined with the platform group. User-specific input files (if allowed) must be stored there as well.
entry	entry_def (9.7.1.3.187)	Definition of this database entry
parent_entry	entry_def (9.7.1.3.187)	Definition of the entry of the direct parent (if any)
mdinfo	mdinfo (9.7.1.3.262)	Information related to machine description for this entry

### 9.7.1.3.46 toroidfield

Toroidal field. Time-dependent CPO

member	type	description
datainfo	datainfo (9.7.1.3.134)	Generic information on a data item
desc_tfcoils	tf_desc_tfcoils (9.7.1.3.454)	Description of the toroidal field coils
nturns	integer (9.7.1.1.2)	Number of total turns in the toroidal field coil
ncoils	integer (9.7.1.1.2)	Number of packets of coils
current	expOD (9.7.1.3.196)	Current in the toroidal field coils [A]; Time-dependent. Scalar.
bvac_r	expOD (9.7.1.3.196)	Vacuum field times radius in the toroidal field magnet [T.m]. Positive sign means anti-clockwise when viewed from above. Time-dependent. Scalar.
r0	float (9.7.1.1.1)	Characteristic major radius of the device (used in publications, usually middle of the vessel at the equatorial midplane) [m]. Scalar.
p_cryo	float (9.7.1.1.1)	Total electric power consumed by the cryoplant system [W]; Time-dependent. Scalar.
wp_nh_max	float (9.7.1.1.1)	Peak nuclear heating in winding pack [ $W \cdot m^{-3}$ ]. Time-dependent. Scalar
tfc_nh	float (9.7.1.1.1)	Nuclear heating on the toroidal field coils [W]; Time-dependent. Scalar
neut_flux_inb	float (9.7.1.1.1)	Neutron flux arriving at the inboard surface of the coil (on the plasma side) [ $neutron \cdot s^{-1} \cdot m^{-2}$ ]; Time-dependent. Scalar.
neut_flux_outb	float (9.7.1.1.1)	Neutron flux arriving at the ouboard surface of the coil (on the plasma side) [ $neutron \cdot s^{-1} \cdot m^{-2}$ ]; Time-dependent. Scalar.
codeparam	codeparam (9.7.1.3.77)	Code parameters
time	float (9.7.1.1.1)	Time [s]; Time-dependent. Scalar.

### 9.7.1.3.47 tsdiag

Thomson scattering Diagnostic; Time-dependent CPO

member	type	description
datainfo	datainfo (9.7.1.3.134)	Generic information on a data item
setup	tssetup (9.7.1.3.468)	diagnostic setup information
measure	tsmeasure (9.7.1.3.467)	Measured values
codeparam	codeparam (9.7.1.3.77)	Code parameters
time	float (9.7.1.1.1)	Time [s]; Time-dependent; Scalar

### 9.7.1.3.48 turbulence

Turbulence; Time-dependent CPO.

member	type	description
datainfo	datainfo (9.7.1.3.134)	Generic information on a data item
composition	turbcomposition (9.7.1.3.469)	Plasma composition (description of ion species).
coordsys	turbcoordsys (9.7.1.3.470)	Decription of the coordinates and metric used by the codes.
var0d	turbvar0d (9.7.1.3.474)	Diagnostic fast time traces.
var1d	turbvar1d (9.7.1.3.475)	Dependent variable radial profile.
var2d	turbvar2d (9.7.1.3.476)	Dependent variable axisymmetric.
var3d	turbvar3d (9.7.1.3.477)	Dependent variable morphology. Grid is defined in coord_sys/turbgrid.
var4d	turbvar4d (9.7.1.3.478)	Gyrokinetic distribution function, axisymmetric component. Grid is defined in coord_sys/turbgrid.

member	type	description
var5d	turbvar5d (9.7.1.3.479)	Gyrokinetic distribution function. Grid is defined in coord_sys/turbgrid.
spec1d	turbpec1d (9.7.1.3.473)	Toroidal mode number spectra.
env1d	turbenv1d (9.7.1.3.471)	Parallel fluctuation envelope.
codeparam	codeparam (9.7.1.3.77)	Code parameters
time	float (9.7.1.1.1)	Time [s]; Time-dependent; Scalar.

### 9.7.1.3.49 wall

General Wall representation. Time-dependent CPO.

member	type	description
datainfo	datainfo (9.7.1.3.134)	Generic information on a data item
wall0d	wall_wall0d (9.7.1.3.494)	Simple 0D description of plasma-wall interaction
wall2d_mhd	wall2d_mhd (9.7.1.3.482)	Simplified wall that encloses necessary information for RWM codes.
wall2d(:)	wall2d (9.7.1.3.481)	2D wall descriptions; Array of structures (number of wall descriptions). Replicate this element for each type of possible physics or engineering configurations necessary (gas tight vs wall with ports and holes, coarse vs fine representation, single contour limiter, disjoint gapped plasma facing components, ...). Time-dependent
wall3d(:)	wall3d (9.7.1.3.483)	3D wall descriptions; Array of structures (number of wall descriptions). Replicate this element for each type of possible physics or engineering configurations necessary (gas tight vs wall with ports and holes, coarse vs fine representation, ...). Time-dependent
wall_types(:)	wall_types (9.7.1.3.487)	List of reference wall types (e.g. bulk tungsten, tungsten-coated CFC, ...); Array of structures (number of reference wall types)
compounds(:)	compound_desc (9.7.1.3.100)	Chemical compounds (e.g. solid tungsten, WC, CFC, ...) possibly present in the wall. Array of structure (number of compounds)
elements(:)	element_desc (9.7.1.3.186)	Chemical elements present in the wall units, including elements from the plasma (gas + impurities). Use by compounds. Array of structures (number of elements)
compositions	compositions.type (9.7.1.3.99)	NO DOCS
codeparam	codeparam (9.7.1.3.77)	Code parameters
time	float (9.7.1.1.1)	Time [s]; Time-dependent; Scalar.

### 9.7.1.3.50 waves

RF wave propagation and deposition. Time-dependent CPO

member	type	description
datainfo	datainfo (9.7.1.3.134)	Generic information on a data item
coherentwave(:)	coherentwave (9.7.1.3.79)	Wave description for each frequency. Time-dependent. Structure array(nfreq)
codeparam	codeparam (9.7.1.3.77)	Code parameters
time	float (9.7.1.1.1)	Time [s]; Time-dependent; Scalar

### 9.7.1.3.51 Utility Structures

#### 9.7.1.3.52 amns\_constituentType

Contains all of the information to characterize an AMNS constituent.

member	type	description
label	string (9.7.1.1.3)	String identifier for reaction constituent (e.g. "D", "C").
zn	integer (9.7.1.1.2)	Number of protons in the nucleus (nuclear charge); 0 if none (e-, gamma)
mn	integer (9.7.1.1.2)	Number of nucleons in the nucleus (nuclear mass); 0 if none (e-, gamma); Not set if not important (e.g. for an atomic process that is not isotope dependent)
multiplicity	float (9.7.1.1.1)	Multiplicity in the compound

Type of: reacprodType:constituents (2894)

#### 9.7.1.3.53 amns\_processType

Contains all of the information to characterize an AMNS process; Vector(nprocs).

member	type	description
proc_label	string (9.7.1.1.3)	Label for process (e.g. EI, RC; could also include error estimates)



member	type	description
reactant(:)	reacprodType (9.7.1.3.344)	Array of reactants; Vector(nreac).
product(:)	reacprodType (9.7.1.3.344)	Array of products; Vector(nprod).
sup_string	vecstring_type (9.7.1.2.15)	String array to be used if supplementary information is required.
sup_real	vecflt_type (9.7.1.2.13)	Real array to be used if supplementary information is required.
sup_int	vecint_type (9.7.1.2.14)	Int array to be used if supplementary information is required.
quality	identifier (9.7.1.3.235)	Characterize the data quality
err_proc_label	string (9.7.1.1.3)	"proc_label" of an associated error table of the same type as the primary quantity

Type of: amns:process (2553)

#### 9.7.1.3.54 antenna\_ec

Vector of Electron Cyclotron antennas. Time-dependent

member	type	description
name	string (9.7.1.1.3)	Antenna name
frequency	float (9.7.1.1.1)	Frequency [Hz]
power	exp0D (9.7.1.3.196)	Power [W]; Time-dependent
mode	integer (9.7.1.1.2)	Incoming wave mode (+ or -1 for O/X mode); Time-dependent
position	rzphi0D (9.7.1.3.364)	Launching position in the global reference system; Time-dependent
launchangles	launchangles (9.7.1.3.245)	Launching angles of the beam
beam	rfbeam (9.7.1.3.357)	Beam characteristics at the launching position
codeparam	codeparam (9.7.1.3.77)	Code parameters

Type of: antennas:antenna\_ec (2554)

#### 9.7.1.3.55 antenna\_ic

Vector of Ion Cyclotron antennas. Time-dependent

member	type	description
name	string (9.7.1.1.3)	Antenna name; String
frequency	exp0D (9.7.1.3.196)	Frequency [Hz]; Time-dependent; Exp0d
power	exp0D (9.7.1.3.196)	Power [W]; Time-dependent; Exp0d
ntor	vecint_type (9.7.1.2.14)	Toroidal mode numbers [-]; Time-dependent; Vector(n_ntor)
power_ntor	vecflt_type (9.7.1.2.13)	Power coupled in each toroidal mode [W]; Time-dependent; Vector(n_ntor)
setup	antennaic_setup (9.7.1.3.57)	Detailed description of IC antenna hardware and internal settings
codeparam	codeparam (9.7.1.3.77)	Code parameters

Type of: antennas:antenna\_ic (2554)

#### 9.7.1.3.56 antenna\_lh

Vector of Lower Hybrid antennas. Time-dependent

member	type	description
name	string (9.7.1.1.3)	Antenna name, String
frequency	float (9.7.1.1.1)	Frequency [Hz]
power	exp0D (9.7.1.3.196)	Power [W]; Exp0d. Time-dependent
n_par	float (9.7.1.1.1)	Main parallel refractive index of the launched spectrum, for multi-junction antennas. Time-dependent
position	rzphi0D (9.7.1.3.364)	Reference global antenna position. Time-dependent
setup	antennalh_setup (9.7.1.3.58)	Detailed description of LH antennas.
plasmaedge	plasmaedge (9.7.1.3.332)	Plasma edge characteristics in front of the antenna.
beam	rfbeam (9.7.1.3.357)	Beam characteristics
codeparam	codeparam (9.7.1.3.77)	Code parameters

Type of: antennas:antenna\_lh (2554)

### 9.7.1.3.57 antennaic\_setup

Detailed description of an ICRH antenna; hardware and settings

member	type	description
straps(:)	straps (9.7.1.3.416)	Properties of the IC antenna strap; Time-dependent; Vector(nstraps)
current	current (9.7.1.3.130)	Description of the IC surface currents on the antenna straps and on passive components.

Type of: antenna\_ic:setup (2605)

### 9.7.1.3.58 antennalh\_setup

Detailed description of LH antennas

member	type	description
modules	modules (9.7.1.3.275)	Modules description. NB there are nmodules per antenna, distributed among nma_phi toroidal positions and nma_theta poloidal positions

Type of: antenna\_lh:setup (2606)

### 9.7.1.3.59 b0r0

Characteristics of the vacuum toroidal field, redundant with the toroidfield CPO, normalisation used by the ETS

member	type	description
r0	float (9.7.1.1.1)	Characteristic major radius of the device (used in publications, usually middle of the vessel at the equatorial midplane) [m]. Scalar.
b0	float (9.7.1.1.1)	Vacuum field at r0 [T]; Positive sign means anti-clockwise when viewed from above. Scalar. Time-dependent.

Type of: corefast:toroid\_field (2558) I coresource:toroid\_field (2562) I dist\_geometry\_0d:toroid\_field (2697) I dist-source-global\_param:toroid\_field (2717) I global\_param:toroid\_field (2778) I mhd:toroid\_field (2580) I waves\_global\_param:toroid\_field (3048)

### 9.7.1.3.60 bb

Breeding blanket

member	type	description
nb_bb	float (9.7.1.1.1)	Total (in the reactor) number of breeding blanket module; Scalar
nb_bb_polcut	float (9.7.1.1.1)	Number of bb modules on a poloidal cut; Scalar
teta_bb	float (9.7.1.1.1)	Angle (0 for equatorial outboard, then in anti-clockwise direction) of bb module; [deg]
tbr	float (9.7.1.1.1)	Tritium breeding ratio of the blanket [-]; Scalar
neutro_resul	neutro_resul (9.7.1.3.291)	Neutronic results
inboard	bb_specs (9.7.1.3.63)	Inboard
outboard	bb_specs (9.7.1.3.63)	Outboard

Type of: bb\_shield:bb (2555)

### 9.7.1.3.61 bb\_dimension

dimension of the various modules

member	type	description
radial	vecflt_type (9.7.1.2.13)	Radial dimension [m]. Vector(nmodules)
toroidal	vecflt_type (9.7.1.2.13)	Toroidal dimension [m]. Vector(nmodules)
poloidal	vecflt_type (9.7.1.2.13)	Poloidal dimension [m]. Vector(nmodules)

Type of: bb\_geometry:bot\_cap\_dim (2612) I bb\_geometry:top\_cap\_dim (2612) I bb\_specs:dimension (2613)

### 9.7.1.3.62 bb\_geometry

Geometrical parameters of "the" reference outboard blanket module

member	type	description
dr_fw	float (9.7.1.1.1)	Radial thickness of the FW [m]; Scalar
dr_bz	float (9.7.1.1.1)	Radial thickness of the BZ (between the FW and the 1st back plate wall) [m]; Scalar
dr_bp	float (9.7.1.1.1)	Radial thickness of the BPs integrated to the module [m]; Scalar
dr_bp_plates	vecflt_type (9.7.1.2.13)	Radial thickness of every BP integrated to the module [m]; Vector(nplates)
dr_bp_he	vecflt_type (9.7.1.2.13)	Radial thickness of Helium layers [m]; Vector(nplates)
dr_man	float (9.7.1.1.1)	Radial thickness of the banana manifold common to all modules [m]; Scalar
dt_sw	float (9.7.1.1.1)	Toroidal thickness of side walls (or covers) [m]; Scalar
dt_bz	float (9.7.1.1.1)	Toroidal dimension of the BZ (between the two side walls [m]; Scalar
dp_bz	float (9.7.1.1.1)	Poloidal dimension of the Breeder zone [m]; Scalar
top_cap_dim	bb_dimension (9.7.1.3.61)	Top cap dimension of bb modules
bot_cap_dim	bb_dimension (9.7.1.3.61)	Bottom cap dimension of bb modules
a_fw_ch	float (9.7.1.1.1)	First wall channel radial dimension [m]; Scalar
b_fw_ch	float (9.7.1.1.1)	First wall channel toroidal dimension [m]; Scalar
td_tc_ch	float (9.7.1.1.1)	Top cap channel toroidal dimension [m]; Scalar
rd_tc_ch	float (9.7.1.1.1)	Top cap channel radial dimension [m]; Scalar
td_bc_ch	float (9.7.1.1.1)	Bottom cap channel toroidal dimension [m]; Scalar
rd_bc_ch	float (9.7.1.1.1)	Bottom cap channel radial dimension [m]; Scalar
n_fw_ch	float (9.7.1.1.1)	Number of first wall channels; Scalar
n_fw_circ	float (9.7.1.1.1)	Number of circulation in channel first wall channels; Scalar
a_sg_ch	float (9.7.1.1.1)	Stiffening grid channel dimension 1 [m]; Scalar
b_sg_ch	float (9.7.1.1.1)	Stiffening grid channel dimension 2 [m]; Scalar
n_sg_ch	float (9.7.1.1.1)	Number of channels per stiffening plate [m]; Scalar
sg_thick	float (9.7.1.1.1)	Stiffening grid thickness [m]; Scalar
sg_weld	float (9.7.1.1.1)	Stiffening grid required dimension for welding [m]; Scalar
sg_in_out	float (9.7.1.1.1)	Stiffening grid input/output geometry length [m]; Scalar
r_sg_cp	float (9.7.1.1.1)	Percentage of the cooling plate length [-]; Scalar
cp_tor_gap	float (9.7.1.1.1)	Gap between cooling plates and toroidal breeder [m]; Scalar
a_cp_ch	float (9.7.1.1.1)	Cooling plates channel dimension 1 [m]; Scalar
b_cp_ch	float (9.7.1.1.1)	Cooling plates channel dimension 2 [m]; Scalar
n_cp_ch	float (9.7.1.1.1)	Number of channels per cooling plates [m]; Scalar
cp_thick	float (9.7.1.1.1)	Cooling plates thickness [m]; Scalar
n_pol_bu	float (9.7.1.1.1)	Number of poloidal breeder units; Scalar
n_tor_bu	float (9.7.1.1.1)	Number of toroidal breeder units; Scalar
n_cp_bu	float (9.7.1.1.1)	Number of cooling plates per breeder unit; Scalar
cp_in_out	float (9.7.1.1.1)	Cooling plate input/output geometry length [m]; Scalar
he_man_tck	float (9.7.1.1.1)	Helium stage manifold thickness [m]; Scalar
man_tck	float (9.7.1.1.1)	Manifold zone thickness [m]; Scalar
pbli_bptb_od	float (9.7.1.1.1)	Output diameter of pbli tube [m]; Scalar
pbli_bptb_id	float (9.7.1.1.1)	Input diameter of pbli tube [m]; Scalar
he_bptb_od	float (9.7.1.1.1)	Output diameter of He inlet tube [m]; Scalar
he_bptb_id	float (9.7.1.1.1)	Input diameter of He inlet tube [m]; Scalar
dr_max_fw	float (9.7.1.1.1)	First wall frontmost thickness [m]; Scalar
dr_fwpl	float (9.7.1.1.1)	Radial thickness of first protective layer [m]; Scalar

Type of: hcllbb\_specs:mod\_geom (2783)

### 9.7.1.3.63 bb\_specs

Inboard

member	type	description
nbb	float (9.7.1.1.1)	Number of inboard or outboard bb modules (in a poloidal cut), Scalar
r1	float (9.7.1.1.1)	Inner radius (nearest to the plasma), in the global tokamak coordinate system of the inboard or outboard bb located at the equatorial plane [m]; Scalar
r2	float (9.7.1.1.1)	Outer radius (farrest to the plasma), in the global tokamak coordinate system of the inboard or outboard bb located at the equatorial plane [m]; Scalar
dimension	bb_dimension (9.7.1.3.61)	dimension of the various modules

Type of: bb:inboard (2610) | bb:outboard (2610)

### 9.7.1.3.64 beamletgroup

Group of beamlets with common vertical and horizontal focal point. If there are no common focal points, then select small groups of beamlets such that a focal point description of the beamlet-group provides a fair description.

member	type	description
position	rzphi0D (9.7.1.3.364)	Position of centre of injection unit surface (or grounded grid).
tang_rad	float (9.7.1.1.1)	Tangency radius (major radius where the central line of a NBI unit is tangent to a circle around the torus) [m]
angle	float (9.7.1.1.1)	Angle of inclination between a line at the centre of the injection unit surface and the horizontal plane [rad]
direction	integer (9.7.1.1.2)	Direction of the beam seen from above the torus: -1 = clockwise; 1 = counter clockwise
width_horiz	float (9.7.1.1.1)	Horizontal width of the beam group at the injection unit surface (or grounded grid) [m]
width_vert	float (9.7.1.1.1)	Vertical width of the beam group at the injection unit surface (or grounded grid) [m]
focussing	focussing (9.7.1.3.208)	Describes how the beam is focussed.
divergence	divergence (9.7.1.3.172)	Detailed information on beamlet divergence. Divergens is described as a super position of Gaussian profiles with amplitude "frac_divcomp" and vertical/horizontal divergence "div_vert"/"div_horiz". Note that for positive ion NBI the divergence is well described by a single Gaussian.
beamlets	beamlets (9.7.1.3.65)	Detailed information on beamlets.

Type of: nbi\_unit:beamletgroup (2836)

### 9.7.1.3.65 beamlets

Detailed information on beamlets.

member	type	description
position	rzphi1D (9.7.1.3.365)	Position of beamlets. Vector rzphi1D (nbeamlets)
tang_rad.blk	vecflt.type (9.7.1.2.13)	Tangency radius (major radius where the central line of a beamlet is tangent to a circle around the torus) [m]; Vector(nbeamlets)
angle.blk	vecflt.type (9.7.1.2.13)	Angle of inclination between a line at the centre of a beamlet and the horizontal plane [rad]; Vector(nbeamlets)
pow_frc.blk	vecflt.type (9.7.1.2.13)	Fraction of power of a unit injected by a beamlet; Vector(nbeamlets)

Type of: beamletgroup:beamlets (2614)

### 9.7.1.3.66 beamtracing

Beam-tracing or ray-tracing solver. Vector(nbeams). Time-dependent

member	type	description
npoints	integer (9.7.1.1.2)	Number of points along each ray/beam. Integer
power	float (9.7.1.1.1)	Initial power in each ray/beam [W]. Float. Time-dependent
dnpar	vecflt.type (9.7.1.2.13)	Spectral width in refractive index associated with each ray/beam, Vector (npoints). Time-dependent
length	vecflt.type (9.7.1.2.13)	Ray/beam curvilinear length [m], Vector (npoints). Time-dependent
position	waves_rtposition (9.7.1.3.503)	Ray/beam position
wavevector	waves_rtwavevector (9.7.1.3.504)	Ray/beam wave vector.
polarization	polarization (9.7.1.3.335)	Wave field polarization along the ray/beam.
powerflow	powerflow (9.7.1.3.338)	Power flow along the ray/beam.

Type of: coherentwave:beamtracing (2629)

### 9.7.1.3.67 boundary

Boundary condition for the transport equation. Time-dependent.

member	type	description
value	vecflt.type (9.7.1.2.13)	Value of the boundary condition (in case flag = 2). Unit depends on type, respectively [1-Wb, 2-A, 3-V]. For type 1 to 3, only the first position in the vector is used. For type 5, all three positions are used, meaning respectively a1, a2, a3. Time-dependent. Vector(3).
source	string (9.7.1.1.3)	Source of the boundary condition (any comment describing its origin : code, path to diagnostic signals, massaging); String
type	integer (9.7.1.1.2)	Type of the boundary condition for the transport solver (in case flag = 2). 0- equation not solved; 1- edge value of poloidal flux; 2- total current inside boundary; 3- edge Vloop; 4- not defined; 5- generic boundary condition expressed as $a1*(dpsi.drho.tor)+a2*psi=a3$ . Time-dependent. Scalar
rho	float (9.7.1.1.1)	Position of the boundary condition (in terms of toroidal flux coordinate) for the transport solver [m]. Outside this boundary, the value of the data are considered to be prescribed. Scalar
codeparam	codeparam (9.7.1.3.77)	Code parameters

Type of: psi:boundary (2891)

### 9.7.1.3.68 boundary\_neutrals

Structure for the boundary condition of core transport equations (neutrals). Time-dependent;

member	type	description
value	vecflt.type (9.7.1.2.13)	Value of the boundary condition. Unit depends on type, respectively [1-field, 2-field.m <sup>-1</sup> , 3-m, 4-field.s <sup>-1</sup> ]. For type 1 to 4, only the first position in the vector is used. For type 5, all three positions are used, meaning respectively a1, a2, a3. Time-dependent. Array1D(3)
type	integer (9.7.1.1.2)	Type of the boundary condition for the transport solver. 0- equation not solved; 1- value of the field y; 2-radial derivative of the field (-dy/drho.tor); 3-scale length of the field y/(-dy/drho.tor); 4- flux; 5- generic boundary condition y expressed as $a1y'+a2y=a3$ . Time-dependent. Int
rho_tor	float (9.7.1.1.1)	Position of the boundary condition (in terms of toroidal flux coordinate) for the transport solver [m]. Outside this boundary, the value of the data are considered to be prescribed. Time-dependent. Float.

Type of: corefieldneutral:boundary (2659) | corefieldneutrale:boundary (2660) | corefieldneutralv:boundary (2661)

### 9.7.1.3.69 boundaryel

Structure for the boundary condition of core transport equations (electrons) Time-dependent;

member	type	description
value	vecflt.type (9.7.1.2.13)	Value of the boundary condition (in case flag = 2). Unit depends on type, respectively [1-field, 2-field.m <sup>-1</sup> , 3-m, 4-field.s <sup>-1</sup> ]. For type 1 to 4, only the first position in the vector is used. For type 5, all three positions are used, meaning respectively a1, a2, a3. Time-dependent. Vector(3).
source	string (9.7.1.1.3)	Source of the boundary condition (any comment describing its origin : code, path to diagnostic signals, massaging); String
type	integer (9.7.1.1.2)	Type of the boundary condition for the transport solver (in case flag = 2). 0- equation not solved; 1- value of the field y; 2-radial derivative of the field (-dy/drho.tor); 3-scale length of the field y/(-dy/drho.tor); 4- flux; 5- generic boundary condition y expressed as $a1y'+a2y=a3$ . Time-dependent. Scalar
rho.tor	float (9.7.1.1.1)	Position of the boundary condition (in terms of toroidal flux coordinate) for the transport solver [m]. Outside this boundary, the value of the data are considered to be prescribed. Time-dependent. Scalar

Type of: corefield:boundary (2657)

### 9.7.1.3.70 boundaryimp

Structure for the boundary condition of core transport equations (impurities) Time-dependent

member	type	description
value	matflt.type (9.7.1.2.10)	Value of the boundary condition (in case flag = 2). Unit depends on type, respectively [1-field, 2-field.m <sup>-1</sup> , 3-m, 4-field.s <sup>-1</sup> ]. For type 1 to 4, only the first position in the first dimension is used. For type 5, all three positions are used, meaning respectively a1, a2, a3. Time-dependent. Array 2D (3,nzimp)
source	string (9.7.1.1.3)	Source of the boundary condition (any comment describing its origin : code, path to diagnostic signals, massaging); String
type	vecint.type (9.7.1.2.14)	Type of the boundary condition for the transport solver (in case flag = 2). 0- equation not solved; 1- value of the field y; 2-radial derivative of the field (-dy/drho.tor); 3-scale length of the field y/(-dy/drho.tor); 4- flux; 5- generic boundary condition y expressed as $a1y'+a2y=a3$ . Time-dependent. Vector(nzimp)

member	type	description
rho	vecflt.type (9.7.1.2.13)	Position of the boundary condition (in terms of toroidal flux coordinate) for the transport solver [m]. Outside this boundary, the value of the data are considered to be prescribed. Time-dependent. Vector(nzimp)
codeparam	codeparam (9.7.1.3.77)	Code parameters

Type of: impurity\_type:boundary (2788)

### 9.7.1.3.71 boundaryion

Structure for the boundary condition of core transport equations (ions) Time-dependent

member	type	description
value	matflt.type (9.7.1.2.10)	Value of the boundary condition (in case flag = 2). Unit depends on type, respectively [1-field, 2-field.m <sup>-1</sup> , 3-m, 4-field.s <sup>-1</sup> ]. For type 1 to 4, only the first position in the first dimension is used. For type 5, all three positions are used, meaning respectively a1, a2, a3. Time-dependent. Matrix(3,nion)
source	vecstring.type (9.7.1.2.15)	Source of the boundary condition (any comment describing its origin : code, path to diagnostic signals, massaging); Array of strings (nion)
type	vecint.type (9.7.1.2.14)	Type of the boundary condition for the transport solver (in case flag = 2). 0- equation not solved; 1- value of the field y; 2-radial derivative of the field (-dy/drho_tor); 3-scale length of the field y/(-dy/drho_tor); 4- flux; 5- generic boundary condition y expressed as aly'+a2y=a3. Time-dependent. Vector(nion)
rho.tor	vecflt.type (9.7.1.2.13)	Position of the boundary condition (in terms of toroidal flux coordinate) for the transport solver [m]. Outside this boundary, the value of the data are considered to be prescribed. Time-dependent. Vector(nion)

Type of: corefieldion:boundary (2658)

### 9.7.1.3.72 bpol\_probes

Poloidal field probes

member	type	description
setup_bprobe	setup_bprobe (9.7.1.3.394)	diagnostic setup information
measure	exp1D (9.7.1.3.197)	Measured value [T]; Time-dependent; Vector (nprobes)

Type of: magdiag:bpol\_probes (2579)

### 9.7.1.3.73 calorimetry\_heat\_source

Generic complex type for heat source or sink

member	type	description
name	string (9.7.1.1.3)	Name of the source. String
temp_in	float (9.7.1.1.1)	Temperature of the input flow [K]; Scalar
temp_out	float (9.7.1.1.1)	Temperature of the output flow [K]; Scalar
press_in	float (9.7.1.1.1)	Input Pressure [Pa];Scalar
press_out	float (9.7.1.1.1)	Output Pressure [Pa];Scalar
flow	float (9.7.1.1.1)	Flow of the source [kg/s]; Scalar
power	float (9.7.1.1.1)	Power of the source [W];Scalar

Type of: heat\_sources:sinks (2573) | heat\_sources:sources (2573)

### 9.7.1.3.74 circuits

Description of the circuit of the power conversion system. Array of structure. (ncircuits).

member	type	description
component(:)	power_conv_component (9.7.1.3.336)	Description of the components of the power conversion system. Array of structure (ncomp).
power_net	float (9.7.1.1.1)	Net electric power generated [W]. Scalar
power_int	float (9.7.1.1.1)	Total electric power consumption of the power conversion system.[W]. Scalar

member	type	description
efficiency	float (9.7.1.1.1)	Efficiency of the reactor (ratio of the alternator electrical power to the total power needed to operate the reactor)

Type of: power\_conv:circuits (2589)

### 9.7.1.3.75 circularcoil

Circular coil description

member	type	description
centre	rz0D (9.7.1.3.358)	Circular coil centre
hlength	float (9.7.1.1.1)	Half length along coil axis [m]
radialwidth	float (9.7.1.1.1)	Half width, (outer radius-inner radius)/2 [m]

Type of: tf\_desc\_tfcoils:circularcoil (3004)

### 9.7.1.3.76 clusters

Cluster of tile rings to define and reference superset structures using the individual tile rings. A coil ring can coexist on two top level structures. Structure array (ncluster).

member	type	description
name	string (9.7.1.1.3)	Name of the toroidally distributed tile set. String.
start	integer (9.7.1.1.2)	ID of the tile set as a scalar where this superset starts. Integer.
finish	integer (9.7.1.1.2)	ID of the tile set as a scalar where this superset finishes. Integer.

Type of: solcurdiag:clusters (2594)

### 9.7.1.3.77 codeparam

Code parameters

member	type	description
codename	string (9.7.1.1.3)	Name of the code
codeversion	string (9.7.1.1.3)	Version of the code (as in the ITM repository)
parameters	string (9.7.1.1.3)	List of the code specific parameters, string expected to be in XML format.
output_diag	string (9.7.1.1.3)	List of the code specific diagnostic/output, string expected to be in XML format.
output_flag	integer (9.7.1.1.2)	Output flag : 0 means the run is successful, other values meaning some difficulty has been encountered, the exact meaning is then code specific. Negative values mean the result shall not be used. Exact rules could discussed and implemented in the module wrapper. Time-dependent.

Type of: amns:codeparam (2553) I antenna\_ec:codeparam (2604) I antenna\_ic:codeparam (2605) I antenna\_lh:codeparam (2606) I antennas:codeparam (2554) I bb\_shield:codeparam (2555) I boundary:codeparam (2617) I boundary\_imp:codeparam (2620) I coherentwave:codeparam (2629) I compositionc:codeparam (2556) I coredelta:codeparam (2557) I coredelta\_values:codeparam (2654) I corefast:codeparam (2558) I corefast\_values:codeparam (2656) I corefield:codeparam (2657) I corefieldion:codeparam (2658) I coreimpur:codeparam (2559) I coreneutrals:codeparam (2560) I coreprof:codeparam (2561) I coresource:codeparam (2562) I coresource\_values:codeparam (2675) I coretransp:codeparam (2563) I coretransp\_values:codeparam (2679) I cxdiag:codeparam (2564) I distri\_vec:codeparam (2716) I distribution:codeparam (2565) I distsource:codeparam (2566) I distsource\_source:codeparam (2721) I ecediag:codeparam (2567) I edge:codeparam (2568) I effc:codeparam (2569) I equilibrium:codeparam (2570) I flush:codeparam (2753) I fusiondiag:codeparam (2571) I fusiondiag\_fus\_product:codeparam (2772) I halphadiag:codeparam (2572) I heat\_sources:codeparam (2573) I ironmodel:codeparam (2575) I langmuirdiag:codeparam (2576) I launches:codeparam (2577) I lineintegraldiag:codeparam (2804) I lithiumdiag:codeparam (2578) I magdiag:codeparam (2579) I mhd:codeparam (2580) I msdiag:codeparam (2581) I nbi:codeparam (2582) I nbi\_unit:codeparam (2836) I neoclassic:codeparam (2583) I ntm:codeparam (2584) I orbit:codeparam (2585) I pellets:codeparam (2586) I pfsystems:codeparam (2587) I power\_conv:codeparam (2589) I psi:codeparam (2891) I reflectomet:codeparam (2590) I rfdiag:codeparam (2591) I sawteeth:codeparam (2592) I scenario:codeparam (2593) I solcurdiag:codeparam (2594) I spectral:codeparam (2962) I temporary:codeparam (2595) I toroidfield:codeparam (2597) I tsdiag:codeparam (2598) I turbulence:codeparam (2599) I wall:codeparam (2600) I waves:codeparam (2601)



### 9.7.1.3.78 coefficients\_neutrals

Recycling and sputtering coefficients used by the neutral solver. The particular causing ion or impurity charge state is determined by the path.

member	type	description
recycling	recycling_neutrals (9.7.1.3.347)	Recycling coefficients. Time-dependent
sputtering	sputtering_neutrals (9.7.1.3.415)	Sputtering coefficients. Time-dependent

Type of: coreneutrals:ioncoeff (2560) I impcoeff:chargestate (2786)

### 9.7.1.3.79 coherentwave

Wave description for each frequency. Time-dependent. Structure array(nfreq)

member	type	description
wave_id	enum_instance (9.7.1.3.188)	List of identifiers for the coherent-wave, in terms of the type and name of the antenna driving the wave and an index separating waves driven by the same antenna. Possible types: EC/LH/IC (see waves_types in the Documentation website under Conventions/Enumerated_datatypes); the field name should include the name of the antenna as specified in either antennas(*)%ec.antenna%name, antennas(*)%ic.antenna%name, or antennas(*)%lh.antenna%name; the field index should separate different waves generated from a single antenna.
composition	composition (9.7.1.3.95)	Plasma composition (description of ion species). OBSOLESCEMENT.
compositions	compositions.type (9.7.1.3.99)	Contains detailed information on the plasma composition (main ions, impurities, neutrals, edge species).
global_param	waves_global_param (9.7.1.3.498)	Global wave deposition parameters
grid_1d	waves_grid_1d (9.7.1.3.499)	Grid points for 1D profiles.
grid_2d	waves_grid_2d (9.7.1.3.500)	Grid points for 2D profiles and for full wave solutions.
profiles_1d	waves_profiles_1d (9.7.1.3.501)	1D radial profiles
profiles_2d	waves_profiles_2d (9.7.1.3.502)	2D profiles in poloidal cross-section
beamtracing(:)	beamtracing (9.7.1.3.66)	Beam-tracing or ray-tracing solver. Vector(nbeams). Time-dependent
fullwave	fullwave (9.7.1.3.209)	Solution by full wave code
codeparam	codeparam (9.7.1.3.77)	Code parameters

Type of: waves:coherentwave (2601)

### 9.7.1.3.80 coil

Individual coil. Time-dependent. Structure array. Replicate this coil structure for coil element in the efcc array.

member	type	description
desc_coils	desc_coils (9.7.1.3.135)	Description of the coils
coilcurrent	exp1D (9.7.1.3.197)	Circuit feed current in the coil, defined positive if it flows from point 1 to point 2 of the geometry description [A]; Time-dependent
coilvoltage	exp1D (9.7.1.3.197)	Voltage on the full coil [V]; Time-dependent

Type of: efcc:coil (2569)

### 9.7.1.3.81 com

COM (Constants Of Motion) parameters identifying an orbit

member	type	description
amn	float (9.7.1.1.1)	Atomic mass of the particle; Scalar
zion	float (9.7.1.1.1)	Atomic charge of the particle; Scalar
energy	vecflt.type (9.7.1.2.13)	Energy of the particle [keV]; Time-dependent; Vector (norbits).
magn_mom	vecflt.type (9.7.1.2.13)	Magnetic momentum [kg m <sup>2</sup> / s <sup>2</sup> / T]; Time-dependent, Vector(norbits).
p_phi	vecflt.type (9.7.1.2.13)	toroidal angular momentum [kg m <sup>2</sup> / s]; Time-dependent; Vector(norbits);
sigma	vecint.type (9.7.1.2.14)	Sign of parallel velocity at psi=psi_max along the orbit; Time-dependent; Vector(norbits)

Type of: orbit:com (2585)

### 9.7.1.3.82 complexgrid

Generic definition of a complex grid

member	type	description
uid	integer (9.7.1.1.2)	Unique index of this grid. Used for handling multiple grids
id	string (9.7.1.1.3)	Name / identifier string for this grid
spaces(:)	complexgrid_space (9.7.1.3.91)	Definitions of grid spaces. Array of structures (number of spaces)
subgrids(:)	complexgrid_subgrid (9.7.1.3.92)	Definitions of subgrids. Array of structures (number of subgrids)
metric	complexgrid_metric (9.7.1.3.85)	Metric coefficients
geo(:)	complexgrid_geo_global (9.7.1.3.83)	Geometry data for implicit objects
bases(:)	complexgrid_vector (9.7.1.3.93)	Vector bases. Used for aligned vector representation. Time-dependent (added systematically for the COMP child inheritance of that property). Array of structures (number of bases)

Type of: edge:grid (2568) I f\_expansion:grid (2749) I fullwave:grid (2759) I source\_rate:grid (2955) I wall3d:grid (3033)

### 9.7.1.3.83 complexgrid\_geo\_global

Geometry information for implicitly defined grid objects (which cannot be stored in the space definitions); Array of structures (number of alternate geometries).

member	type	description
geotype	integer (9.7.1.1.2)	Type of geometry (id flag). A flag defining how the geometry data associated with grid objects is to be interpreted. If the field is undefined (0=GRID.UNDEFINED), the standard interpretation for; the given coordinate types is assumed.
geotypeid	string (9.7.1.1.3)	Type of geometry (id string).
coordtype	vecint_type (9.7.1.2.14)	Type of coordinates describing the physical space. Vector (number of space dimensions); The size of coordtype defines the dimension of the space.; For predefined integer constants for standard coordinates see; the documentation of the grid service library.
geo_matrix(:)	complexgrid_scalar (9.7.1.3.87)	Geometry data matrix associated with implicit objects. Array of structures (number of subgrids this information is stored on); The exact definition of the stored values depends on the geometry type of the geometry complexgrid_geo_global.geotype;
measure(:)	complexgrid_scalar (9.7.1.3.87)	Measure of object, i.e. physical size (length for 1d, area for 2d, volume for 3d objects) in this geometry. [m <sup>dim</sup> ]; Use this field to store measures of implicitly defined grid objects.; Array of structures (number of subgrids this information is stored on)

Type of: complexgrid:geo (2632)

### 9.7.1.3.84 complexgrid\_indexlist

An index list describing a list of indices or a range of indices.; If the explicit index list ind is defined and has nonzero size, the list is assumed to be an explicit index list.; Otherwise it is assumed to be a range of indices.; A single index can either be defined by using an explicit list with a single entry or as a range with identical; start and end index.

member	type	description
range	vecint_type (9.7.1.2.14)	Defines an index range enumerating from range[1] to range[2] (with both range[1] and range[2] included). If additionally a third value range(3) is given, it is used as a stride. If it is omitted, a stride of 1 is assumed. Vector(3)
ind	vecint_type (9.7.1.2.14)	An explicit list of indices. If this member is defined and has nonzero size, the list is assumed to be explicit. Vector(length of explicit index list)

Type of: complexgrid\_objectlist:indset (2636)

### 9.7.1.3.85 complexgrid\_metric

Metric information for grid objects

member	type	description
measure(:)	complexgrid_scalar (9.7.1.3.87)	Measure of object, i.e. physical size (length for 1d, area for 2d, volume for 3d objects). [m <sup>dim</sup> ].; Use this field to store measures of implicitly defined grid objects.; Array of structures (number of subgrids this information is stored on)
g11(:)	complexgrid_scalar (9.7.1.3.87)	Metric coefficients g11. Array of structures (number of subgrids this information is stored on)
g12(:)	complexgrid_scalar (9.7.1.3.87)	Metric coefficients g12. Array of structures (number of subgrids this information is stored on)
g13(:)	complexgrid_scalar (9.7.1.3.87)	Metric coefficients g13. Array of structures (number of subgrids this information is stored on)
g22(:)	complexgrid_scalar (9.7.1.3.87)	Metric coefficients g22. Array of structures (number of subgrids this information is stored on)
g23(:)	complexgrid_scalar (9.7.1.3.87)	Metric coefficients g23. Array of structures (number of subgrids this information is stored on)
g33(:)	complexgrid_scalar (9.7.1.3.87)	Metric coefficients g33. Array of structures (number of subgrids this information is stored on)
jacobian(:)	complexgrid_scalar (9.7.1.3.87)	Jacobian. Array of structures (number of subgrids this information is stored on)

Type of: complexgrid:metric (2632)

### 9.7.1.3.86 complexgrid\_objectlist

A list of grid objects with a common class, either in explicit or implicit form.; The list is explicit if the matrix ind is given and has nonzero size. In this case the index tuples are listed in ind.; Otherwise the list is implicit and the index tuples are defined by a list of index lists stored in indset.

member	type	description
cls	vecint.type (9.7.1.2.14)	Class tuple of the grid objects in this object list. Vector (number of grid spaces)
indset(:)	complexgrid_indexlist (9.7.1.3.84)	Implicit list of the object indices.; Array of structures (number of grid spaces = length of index tuple). Every index of the index tuple is described by an index set, which defines either a list of index values or a range of index values.
ind	matint.type (9.7.1.2.11)	Explicit list of index tuples. Matrix (number of objects, number of spaces in grid).; First dimension: object index, second dimension: index tuple/space index.; If this field is defined and has nonzero size, the object list is understood to be explicit.

Type of: complexgrid\_subgrid:list (2642)

### 9.7.1.3.87 complexgrid\_scalar

A quantity stored on a grid. The data is given either as a vector of scalars, vectors or matrices.; Note that the vector and matrix storage methods are not meant for multidimensional data, but; for complex data representations with multiple degrees of freedom.; To be used as arrays of structure; FIXME: add non-timedependent element "label" of type string

member	type	description
griduid	integer (9.7.1.1.2)	Unique identifier of the grid this scalar quantity is associated with.
subgrid	integer (9.7.1.1.2)	Index of the subgrid (as stored in grid.subgrids) the data is stored on.
scalar	vecflt.type (9.7.1.2.13)	Scalar representation of data. One scalar entry is stored per object in the subgrid.; The order is implicitly defined by the subgrid.; Float Vector(nobjects_subgrid). First dimension: object index.
vector	matflt.type (9.7.1.2.10)	Vector representation of data. One vector is stored per object in the subgrid. The order is implicitly defined by the subgrid.; Float matrix(nobjects_subgrid,ndata). First dimension: object index, second dimension: index of data vector.
matrix	array3dflt.type (9.7.1.2.2)	Matrix representation of data. One matrix is stored per object in the subgrid. The order is implicitly defined by the subgrid.; 3d float array(nobjects_subgrid,ndata1,ndata2). First dimension: object index, second dimension: matrix row, third dimension: matrix column.

Type of: complexgrid\_geo\_global:geo\_matrix (2633) I complexgrid\_geo\_global:measure (2633) I complexgrid\_metric:g11 (2635) I complexgrid\_metric:g12 (2635) I complexgrid\_metric:g13 (2635) I complexgrid\_metric:g22 (2635) I complexgrid\_metric:g23 (2635) I complexgrid\_metric:g33 (2635) I complexgrid\_metric:jacobian (2635) I complexgrid\_metric:measure (2635) I complexgrid\_vector:comp (2643) I complexgrid\_vector\_simplestruct:comp (2644) I edge\_fluid\_scalar:bnvalue (2727) I edge\_fluid\_scalar:source (2727) I edge\_fluid\_scalar:value (2727) I edge\_fluid\_scalar\_simplestruct:source (2728) I edge\_fluid\_scalar\_simplestruct:value (2728) I edge\_kinetic\_distribution (2733) I edge\_kinetic\_distribution:source (2733) I edge\_kinetic\_distribution:value (2733) I f\_expansion:values (2749) I source\_rate:value (2955) I wall\_unitsComplexType:eta (3039) I wall\_unitsComplexType:permeability (3039)

### 9.7.1.3.88 complexgrid\_scalar\_cplx

A quantity stored on a grid. The data is given either as a vector of scalars, vectors or matrices.; Note that the vector and matrix storage methods are not meant for multidimensional data, but; for complex data representations with multiple degrees of freedom.; To be used as arrays of structure; FIXME: add non-timedependent element "label" of type string

member	type	description
griduid	integer (9.7.1.1.2)	Unique identifier of the grid this scalar quantity is associated with.
subgrid	integer (9.7.1.1.2)	Index of the subgrid (as stored in grid.subgrids) the data is stored on.
scalar	vecplx.type (9.7.1.2.12)	Scalar representation of data. One scalar entry is stored per object in the subgrid.; The order is implicitly defined by the subgrid.; Complex Vector(nobjects_subgrid). First dimension: object index.
vector	matcplx.type (9.7.1.2.9)	Vector representation of data. One vector is stored per object in the subgrid. The order is implicitly defined by the subgrid.; Complex matrix(nobjects_subgrid, ndata).First dimension: object index, second dimension: index of data vector.
matrix	array3dcplx.type (9.7.1.2.1)	Matrix representation of data. One matrix is stored per object in the subgrid. The order is implicitly defined by the subgrid.; 3d complex array(nobjects_subgrid,ndata1,ndata2). First dimension: object index, second dimension: matrix row, third dimension: matrix column.

Type of: e\_components:b\_binorm (2723) I e\_components:b\_norm (2723) I e\_components:b\_para (2723) I e\_components:e\_binorm (2723) I e\_components:e\_minus (2723) I e\_components:e\_norm (2723) I e\_components:e\_para (2723) I e\_components:e\_plus (2723) I e\_components:k\_perp (2723)

### 9.7.1.3.89 complexgrid\_scalar\_int

A quantity stored on a grid. The data is given either as a vector of scalars, vectors or matrices.; Note that the vector and matrix storage methods are not meant for multidimensional data, but; for complex data representations with multiple degrees of freedom.; To be used as arrays of structure; FIXME: add non-timedependent element "label" of type string

member	type	description
griduid	integer (9.7.1.1.2)	Unique identifier of the grid this scalar quantity is associated with.
subgrid	integer (9.7.1.1.2)	Index of the subgrid (as stored in grid.subgrids) the data is stored on.
scalar	vecint.type (9.7.1.2.14)	Scalar representation of data. One scalar entry is stored per object in the subgrid.; The order is implicitly defined by the subgrid.; Float Vector(nobjects_subgrid). First dimension: object index.
vector	matint.type (9.7.1.2.11)	Vector representation of data. One vector is stored per object in the subgrid. The order is implicitly defined by the subgrid.; Float matrix(nobjects_subgrid, ndata).First dimension: object index, second dimension: index of data vector.
matrix	array3dint.type (9.7.1.2.3)	Matrix representation of data. One matrix is stored per object in the subgrid. The order is implicitly defined by the subgrid.; 3d float array(nobjects_subgrid,ndata1,ndata2). First dimension: object index, second dimension: matrix row, third dimension: matrix column.

### 9.7.1.3.90 complexgrid\_scalar\_simplestruct

A quantity stored on a grid. The data is given either as a vector of scalars, vectors or matrices.; Note that the vector and matrix storage methods are not meant for multidimensional data, but; for complex data representations with multiple degrees of freedom.; To be used as a simple structure; FIXME: add non-timedependent element "label" of type string

member	type	description
subgrid	integer (9.7.1.1.2)	Index of the subgrid (as stored in grid.subgrids) the data is stored on.
scalar	vecflt.type (9.7.1.2.13)	Scalar representation of data. One scalar entry is stored per object in the subgrid.; The order is implicitly defined by the subgrid.; Float Vector(nobjects_subgrid). First dimension: object index.
vector	matflt.type (9.7.1.2.10)	Vector representation of data. One vector is stored per object in the subgrid. The order is implicitly defined by the subgrid.; Float matrix(nobjects_subgrid, ndata).First dimension: object index, second dimension: index of data vector.
matrix	array3dflt.type (9.7.1.2.2)	Matrix representation of data. One matrix is stored per object in the subgrid. The order is implicitly defined by the subgrid.; 3d float array(nobjects_subgrid,ndata1,ndata2). First dimension: object index, second dimension: matrix row, third dimension: matrix column.

### 9.7.1.3.91 complexgrid\_space

Description of a grid space

member	type	description
geotype	vecint.type (9.7.1.2.14)	Type of space geometry (id flags). Flags defining how the geometry (objects.geo) fields associated with; space objects are to be interpreted. Array (number of geometries defined for this space); first dimension: geometry index. A flag value of GRID.UNDEFINED=0 indicates the standard interpretation for; the given coordinates.
geotypeid	vecstring.type (9.7.1.2.15)	Type of space geometries (id string). See geotype.
coordtype	matint.type (9.7.1.2.11)	Type of coordinates describing the physical space. Vector (number of space dimensions); The size of coordtype defines the dimension of the space.; For predefined integer constants for standard coordinates see; the documentation of the grid service library.
objects(:)	objects (9.7.1.3.300)	Definition of the space objects.; Array of structures (dimension of highest-dimensional objects); First dimension: dimension of the objects (1=nodes, 2=edges, 3=faces, 4=cells/volumes, ...)
xpoints	vecint.type (9.7.1.2.14)	List of indices of all nodes which are x-points. Vector (number of x-points)

Type of: complexgrid:spaces (2632)

### 9.7.1.3.92 complexgrid\_subgrid

Subgrid definition. A subgrid is a list of grid objects, given as a list of explicit or implicit object lists.

member	type	description
id	string (9.7.1.1.3)	ID string (name) of the subgrid.
list(:)	complexgrid.objectlist (9.7.1.3.86)	List of object lists. Array of structures (number of object lists).

Type of: complexgrid:subgrids (2632)

### 9.7.1.3.93 complexgrid\_vector

A vector quantity stored on a grid, with components possibly explicitly aligned to a coordinate direction. To be used as array of structure.

member	type	description
griduid	integer (9.7.1.1.2)	Unique identifier of the grid this vector quantity is associated with.
label	string (9.7.1.1.3)	Label describing the data
comp(:)	complexgrid_scalar (9.7.1.3.87)	Components of the vector. Array of structures (number of vector components). Time-dependent; FIXME: inherit time-dependence for this element
align	vecint.type (9.7.1.2.14)	Alignment flag for vector components. Integer vector (number of vector components).
alignid	vecstring.type (9.7.1.2.15)	Alignment id for vector components. String vector (number of vector components).
basis	integer (9.7.1.1.2)	Index of basis (defined in associated grid) this vector is aligned to; If set to GRID.UNDEFINED=0, the canonical basis of the default coordinates of the grid assumed.

Type of: complexgrid:bases (2632) I edge\_fluid:b (2726) I edge\_fluid\_scalar:bndflux (2727) I edge\_fluid\_scalar:flux (2727) I edge\_fluid\_scalar\_simplestruct:bndflux (2728) I edge\_fluid\_scalar\_simplestruct:flux (2728) I edge\_kinetic\_distribution (2733) I wall\_unitsComplexType;j (3039)

### 9.7.1.3.94 complexgrid\_vector\_simplestruct

A vector quantity stored on a grid, with components possibly explicitly aligned to a coordinate direction. To be used as simple structure

member	type	description
label	string (9.7.1.1.3)	Label describing the data
comp(:)	complexgrid_scalar (9.7.1.3.87)	Components of the vector. Vector of griddata(ndim). Time-dependent; FIXME: inherit time-dependence for this element
align	vecint.type (9.7.1.2.14)	Alignment of vector components, numerical flag. Int vector(ndim)
alignid	vecstring.type (9.7.1.2.15)	Alignment of vector components, string description. String vector(ndim)

Type of: edge\_fluid\_scalar\_transpcoeff:d (2729) I edge\_fluid\_scalar\_transpcoeff:v (2729)

### 9.7.1.3.95 composition

Plasma composition (description of ion species). OBSOLESCE.

member	type	description
amn	vecflt.type (9.7.1.2.13)	Atomic mass number (lumped ions are allowed); Vector (nion)
zn	vecflt.type (9.7.1.2.13)	Nuclear charge (lumped ions are allowed); Vector (nion)
zion	vecflt.type (9.7.1.2.13)	Ion charge (of the dominant ionisation state; lumped ions are allowed); Vector (nion)
imp_flag	vecint.type (9.7.1.2.14)	Multiple charge state calculation flag : 0-Only one charge state is considered; 1-Multiple charge state are considered and are described in impurity CPO; Vector (nion)
label	vecstring.type (9.7.1.2.15)	Label for the ions - note the charge state is not included; String Vector (nion)

Type of: coherentwave:composition (2629) I coredelta:composition (2557) I corefast:composition (2558) I coreneutrals:composition (2560) I coreprof:composition (2561) I coresource:composition (2562) I coretransp:composition (2563) I distribution:composition (2565) I distsource:composition (2566) I neoclassic:composition (2583) I sawteeth:composition (2592)

### 9.7.1.3.96 composition\_neutrals

Description of neutrals species

member	type	description
atomlist(:)	coreneutrals_atomlist (9.7.1.3.121)	List of the atoms that enter the composition of the neutral species. Vector(natm)
neutral(:)	composition_neutralscomp (9.7.1.3.98)	List of neutrals. Vector(nneut)

Type of: coreneutrals:neutcompo (2560)

### 9.7.1.3.97 composition\_neutrals\_neutcomp

Array of components to the atom or molecule. Vector (ncomp)

member	type	description
nucindex	integer (9.7.1.1.2)	Index into list of nuclei; int
multiplicity	integer (9.7.1.1.2)	Multiplicity of the atom; int

Type of: composition\_neutralscomp:neutcomp (2648)

### 9.7.1.3.98 composition\_neutralscomp

Array of neutrals.

member	type	description
neutcomp(:)	composition_neutrals_neutcomp (9.7.1.3.97)	Array of components to the atom or molecule. Vector (ncomp)
type(:)	identifier (9.7.1.3.235)	Type of neutral, in terms of energy : 0=cold, 1=thermal, 2= fast, 3=NBI. Vector (ntype) of identifiers
label	string (9.7.1.1.3)	String identifying the atom or molecule (e.g. D2, DT, CD4, ...)

Type of: composition\_neutrals:neutral (2646) I compositions\_type:neutralscomp (2649)

### 9.7.1.3.99 compositions\_type

Generic declaration of Plasma composition for a simulation

member	type	description
nuclei(:)	nuclei (9.7.1.3.299)	Array of nuclei considered.
ions(:)	ions (9.7.1.3.240)	Array of main plasma ions.
impurities(:)	impurities (9.7.1.3.237)	Array of impurities.
neutralscomp(:)	composition_neutralscomp (9.7.1.3.98)	Array of neutrals.
edgespecies(:)	edgespecies (9.7.1.3.185)	Array of edge species.
signature	identifier (9.7.1.3.235)	Identifier for species choices. The goal of this is to uniquely capture the species blocks so that if the signatures are the same then the species blocks will also be the same.

Type of: coherentwave:compositions (2629) I compositionc:compositions (2556) I coredelta:compositions (2557) I corefast:compositions (2558) I coreimpur:compositions (2559) I coreneutrals:compositions (2560) I coreprof:compositions (2561) I coresource:compositions (2562) I coretransp:compositions (2563) I distribution:compositions (2565) I distsource:compositions (2566) I edge:compositions (2568) I neoclassic:compositions (2583) I pellets:compositions (2586) I wall:compositions (2600)

### 9.7.1.3.100 compound\_desc

Chemical compounds (e.g. solid tungsten, WC, CFC, ...) possibly present in the wall. Array of structure (number of compounds)

member	type	description
label	string (9.7.1.1.3)	Compound name/label
stoichiometry	vecflt_type (9.7.1.2.13)	Fractional composition of the compound. Float vector, dimensions: 1. element number (numbering as in wall/elements array)
density	float (9.7.1.1.1)	Compound density (molecules/m <sup>3</sup> )
heat_cap	float (9.7.1.1.1)	Specific heat capacity [J/(eV kg)]
heat_cond	vecflt_type (9.7.1.2.13)	Thermal conductivity [W/(m eV)]
surf_recrate	matflt_type (9.7.1.2.10)	Recombination rate on surface (only for pure elements, not compounds) [molecules*m <sup>-2</sup> /s]; Dimensions: index 1: first recombining element, index 2: second recombining element (numbering as in wall/elements array)

Type of: wall:compounds (2600)

### 9.7.1.3.101 coord\_sys

flux surface coordinate system on a square grid of flux and angle

member	type	description
grid_type	string (9.7.1.1.3)	Type of coordinate system
grid	reggrid (9.7.1.3.354)	Regular grid definition; Time-dependent
jacobian	matflt_type (9.7.1.2.10)	Jacobian of the coordinate system; Time-dependent; Matrix (ndim1, ndim2)
g_11	matflt_type (9.7.1.2.10)	metric coefficients g_11; g_ij=g <sup>-ij</sup> are contravariant metric tensor for the grid described by grid_type. Time-dependent; Matrix (ndim1, ndim2)
g_12	matflt_type (9.7.1.2.10)	metric coefficients g_12; g_ij=g <sup>-ij</sup> are contravariant metric tensor for the grid described by grid_type. Time-dependent; Matrix (ndim1, ndim2)
g_13	matflt_type (9.7.1.2.10)	metric coefficients g_13; g_ij=g <sup>-ij</sup> are contravariant metric tensor for the grid described by grid_type. Time-dependent; Matrix (ndim1, ndim2)
g_22	matflt_type (9.7.1.2.10)	metric coefficients g_22; g_ij=g <sup>-ij</sup> are contravariant metric tensor for the grid described by grid_type. Time-dependent; Matrix (ndim1, ndim2)
g_23	matflt_type (9.7.1.2.10)	metric coefficients g_23; g_ij=g <sup>-ij</sup> are contravariant metric tensor for the grid described by grid_type. Time-dependent; Matrix (ndim1, ndim2)
g_33	matflt_type (9.7.1.2.10)	metric coefficients g_33; g_ij=g <sup>-ij</sup> are contravariant metric tensor for the grid described by grid_type. Time-dependent; Matrix (ndim1, ndim2)
position	rz2D (9.7.1.3.362)	R and Z position of grid points; Time-dependent; Matrix (ndim1, ndim2)

Type of: equilibrium:coord\_sys (2570) I mhd\_plasma:coord\_sys (2815) I mhd\_vacuum:coord\_sys (2817)

### 9.7.1.3.102 coordinates

Poloidal and Toroidal coordinates of the center of each hole;

member	type	description
theta	vecflt_type (9.7.1.2.13)	Theta coordinate of holes center; Vector (n_holes)
phi	vecflt_type (9.7.1.2.13)	Toroidal coordinate of holes center; Vector (n_holes)

Type of: holes:coordinates (2784)

### 9.7.1.3.103 coords

Specification of coordinates in one dimension. Can be either a range of real values or a set of discrete values (if interp\_type=0).



member	type	description
coord	vecflt_type (9.7.1.2.13)	Coordinate values. Vector(npoints).
coord_label	vecstring_type (9.7.1.2.15)	String description of discrete coordinate values (if interp_type=0). Vector(npoints). E.g., for spectroscopic lines, the spectroscopic description of the transition.
extrap_type	vecint_type (9.7.1.2.14)	Extrapolation strategy when leaving the domain. Vector(2). Entry 1: behaviour at lower bound, entry 2: behaviour at upper bound.; Possible values: 0=none, report error; 1=boundary value; 2=linear extrapolation;
interp_type	integer (9.7.1.1.2)	Interpolation strategy in this coordinate direction. Integer flag: 0=discrete (no interpolation); 1=linear; ...
label	string (9.7.1.1.3)	Description of coordinate (e.g. "Electron temperature")
unit	string (9.7.1.1.3)	Units of coordinate (e.g. [eV])
transform	integer (9.7.1.1.2)	Coordinate transformation applied to coordinate values stored in coord. Integer flag: 0=none; 1=log10; 2=ln
spacing	integer (9.7.1.1.2)	Flag for specific coordinate spacing (for optimization purposes). Integer flag: 0=undefined; 1=uniform; ...

Type of: tables.coord:coords (2972)

### 9.7.1.3.104 coredelta\_values

Description of the delta term for a given origin

member	type	description
deltaid	identifier (9.7.1.3.235)	Identifier for the origin of the delta terms (see conventions in the ITM website)
rho_tor	vecflt_type (9.7.1.2.13)	Toroidal flux coordinate (not normalised, equivalent to rho_tor_norm) [m]; Vector (nrho). Time-dependent.
rho_tor_norm	vecflt_type (9.7.1.2.13)	Normalised toroidal flux coordinate values (= rho_tor normalised to the value at the last grid point); Time-dependent; Vector (nrho)
psi	vecflt_type (9.7.1.2.13)	Poloidal flux [Wb], without $1/2\pi$ and such that $B_p =  \text{grad } \psi  / R / 2 / \pi$ . Time-dependent; Vector (nrho)
volume	vecflt_type (9.7.1.2.13)	Volume enclosed in the flux surface [ $\text{m}^3$ ]; Time-dependent; Vector (nrho)
area	vecflt_type (9.7.1.2.13)	Cross-sectional area of the flux surface [ $\text{m}^2$ ]; Time-dependent; Vector (nrho)
delta_psi	vecflt_type (9.7.1.2.13)	Instant change of the poloidal flux [Wb]. Time-dependent. Vector (nrho).
delta_te	vecflt_type (9.7.1.2.13)	Instant change of the electron temperature [eV]. Time-dependent. Vector (nrho).
delta_ti	matflt_type (9.7.1.2.10)	Instant change of the ion temperature [eV]. Time-dependent. Matrix (nrho, nion).
delta_ne	vecflt_type (9.7.1.2.13)	Instant change of the electron density [ $\text{m}^{-3}$ ]. Time-dependent. Vector (nrho).
delta_ni	matflt_type (9.7.1.2.10)	Instant change of the ion density [ $\text{m}^{-3}$ ]. Time-dependent. Matrix (nrho, nion).
impurity(:)	coredelta_values_impurity (9.7.1.3.105)	Array(nimp). Time-dependent
delta_vtor	matflt_type (9.7.1.2.10)	Instant change of the toroidal toroidal velocity [ $\text{m}\cdot\text{s}^{-1}$ ]. Time-dependent. Matrix (nrho, nion).
codeparam	codeparam (9.7.1.3.77)	Code parameters

Type of: coredelta:values (2557)

### 9.7.1.3.105 coredelta\_values\_impurity

Description of the delta term for an impurity

member	type	description
delta_tz	matflt_type (9.7.1.2.10)	Instant change of the impurity (multiple charge states) temperature [eV]. Time-dependent. Matrix (nrho, nzimp).
delta_nz	matflt_type (9.7.1.2.10)	Instant change of the impurity (multiple charge states) density [ $\text{m}^{-3}$ ]. Time-dependent. Matrix (nrho, nzimp).

Type of: coredelta\_values:impurity (2654)

### 9.7.1.3.106 corefast\_values

Description of the source terms for a given origin

member	type	description
fastid	identifier (9.7.1.3.235)	Identifier for the origin of the non-thermal contributions (see fast_particle_origin_identifier in the Documentation website under Conventions/Enumerated_datatypes). Time-dependent.

member	type	description
filter	fast_thermal_separation_filter (9.7.1.3.200)	Description of how the fast and the thermal particle populations were separated. Time-dependent.
rho_tor	vecflt_type (9.7.1.2.13)	Toroidal flux coordinate (not normalised, equivalent to rho_tor_norm) [m]; Vector (nrho). Time-dependent.
rho_tor_norm	vecflt_type (9.7.1.2.13)	Normalised toroidal flux coordinate values (= rho_tor normalised to the value at the last grid point). Vector (nrho). Time-dependent.
psi	vecflt_type (9.7.1.2.13)	Poloidal flux at the grid points for 1D profiles [Wb], without $1/2\pi$ and such that $B_p =  \text{grad } \psi  / R/2/\pi$ . Vector (nrho). Time-dependent.
volume	vecflt_type (9.7.1.2.13)	Volume enclosed in the flux surface [ $\text{m}^3$ ]. Vector (nrho). Time-dependent.
area	vecflt_type (9.7.1.2.13)	Cross-sectional area of the flux surface [ $\text{m}^2$ ]. Vector (nrho). Time-dependent.
j	vecflt_type (9.7.1.2.13)	Non thermal current, = average( $j \cdot B$ ) / $B_0$ , where $B_0 = \text{corefast}/\text{toroid\_field}/b_0$ [ $\text{A} \cdot \text{m}^{-2}$ ]. Vector (nrho). Time-dependent.
sigma	vecflt_type (9.7.1.2.13)	Non-thermal induced parallel conductivity [ $\text{ohm}^{-1} \cdot \text{m}^{-1}$ ]. EXACT DEFINITION PENDING. Vector (nrho). Time-dependent.
ni	matflt_type (9.7.1.2.10)	Non-thermal ion density [ $\text{m}^{-3}$ ]. Matrix (nrho, nions). Time-dependent.
ne	vecflt_type (9.7.1.2.13)	Non-thermal electron density [ $\text{m}^{-3}$ ]. Vector (nrho). Time-dependent.
nz	matflt_type (9.7.1.2.10)	Non-thermal impurity density [ $\text{m}^{-3}$ ]. Matrix (nrho, nimpur). Time-dependent.
pi	matflt_type (9.7.1.2.10)	Non-thermal ion pressure; the flux surface average of the $m^*v^2/3$ moment of the fast particle distribution function [Pa]. Matrix (nrho, nions). Time-dependent.
pe	vecflt_type (9.7.1.2.13)	Non-thermal electron pressure; the flux surface average of the $m^*v^2/3$ moment of the fast particle distribution function [Pa]. Vector (nrho). Time-dependent.
pz	matflt_type (9.7.1.2.10)	Non-thermal impurity total pressure; the flux surface average of the $m^*v^2/3$ moment of the fast particle distribution function [Pa]. Matrix (nrho, nimpur). Time-dependent.
pi_para	matflt_type (9.7.1.2.10)	Non-thermal ion parallel pressure; the flux surface average of the $m^*v_{\text{parallel}}^2$ moment of the fast particle distribution function [Pa]. Matrix (nrho, nions). Time-dependent.
pe_para	vecflt_type (9.7.1.2.13)	Non-thermal electron parallel pressure; the flux surface average of the $m^*v_{\text{parallel}}^2$ moment of the fast particle distribution function [Pa]. Vector (nrho). Time-dependent.
pz_para	matflt_type (9.7.1.2.10)	Non-thermal impurity parallel pressure; the flux surface average of the $m^*v_{\text{parallel}}^2$ moment of the fast particle distribution function [Pa]. Matrix (nrho, nimpur). Time-dependent.
ui	matflt_type (9.7.1.2.10)	Non-thermal ion toroidal velocity [ $\text{m} \cdot \text{s}^{-1}$ ]. Matrix (nrho, nions). Time-dependent.
uz	matflt_type (9.7.1.2.10)	Non-thermal impurity toroidal velocity [ $\text{m} \cdot \text{s}^{-1}$ ]. Matrix (nrho, nimpur). Time-dependent.
codeparam	codeparam (9.7.1.3.77)	Code parameters

Type of: corefast:values (2558)

### 9.7.1.3.107 corefield

Structure for a main field of core transport equations; Time-dependent;

member	type	description
value	vecflt_type (9.7.1.2.13)	Signal value; Time-dependent; Vector (nrho)
ddrho	vecflt_type (9.7.1.2.13)	Radial derivative ( $d\text{value}/d\text{rho\_tor}$ ) [ $\text{signal\_value\_unit} \cdot \text{m}^{-1}$ ]; Time-dependent; Vector (nrho)
d2drho2	vecflt_type (9.7.1.2.13)	Second order radial derivative ( $d^2\text{value}/d\text{rho\_tor}^2$ ) [ $\text{signal\_value\_unit} \cdot \text{m}^{-2}$ ]; Time-dependent; Vector (nrho)
ddt	vecflt_type (9.7.1.2.13)	Time derivative ( $d\text{value}/d\text{time}$ ) [ $\text{signal\_value\_unit} \cdot \text{s}^{-1}$ ]; Time-dependent; Vector (nrho)
source	string (9.7.1.1.3)	Source of the profile (any comment describing the origin of the profile : code, path to diagnostic signals, massaging, ...); String
flag	integer (9.7.1.1.2)	Flag describing how the profile has been processed : 0-not calculated 1-interpretative; 2-calculated by the transport solver; 3-calculated by a separate code : in that case only, description of the code provided in codeparam at the same level; 4-used value from the previous time step; Time-dependent; Scalar
boundary	boundaryel (9.7.1.3.69)	Boundary condition for the transport equation. Time-dependent.
source_term	sourceel (9.7.1.3.407)	Total source term for the transport equation. Time-dependent.
transp_coef	coretransel (9.7.1.3.126)	Total transport coefficients. Time-dependent.
flux	fluxel (9.7.1.3.205)	Fluxes of the quantity, two definitions. Time-dependent.
flux_dv_surf	vecflt_type (9.7.1.2.13)	Net flux through the magnetic surface, i.e. integral over the magnetic surface area of flux_dv. Time-dependent; Vector (nrho)
time_deriv	vecflt_type (9.7.1.2.13)	Integral of the time derivative term of the transport equation. Time-dependent. Vector (nrho)
codeparam	codeparam (9.7.1.3.77)	Code parameters

Type of: coreprof:ne (2561) I coreprof:te (2561)

### 9.7.1.3.108 corefieldion

Structure for an ion field of core transport equations; Time-dependent;

member	type	description
value	matflt.type (9.7.1.2.10)	Signal value; Time-dependent; Matrix (nrho,nion)
ddrho	matflt.type (9.7.1.2.10)	Radial derivative (dvalue/drho_tor) [signal.value.unit.m <sup>-1</sup> ]; Time-dependent; Matrix (nrho,nion)
d2drho2	matflt.type (9.7.1.2.10)	Second order radial derivative (d2value/drho_tor <sup>2</sup> ) [signal.value.unit.m <sup>-2</sup> ]; Time-dependent; Matrix (nrho,nion)
ddt	matflt.type (9.7.1.2.10)	Time derivative (dvalue/dtime) [signal.value.unit.s <sup>-1</sup> ]; Time-dependent; Matrix (nrho,nion)
source	vecstring.type (9.7.1.2.15)	Source of the profile (any comment describing the origin of the profile : code, path to diagnostic signals, massaging, ...); Array of strings (nion)
flag	vecint.type (9.7.1.2.14)	Flag describing how the profile has been processed : 0-not calculated 1-interpretative; 2-calculated by the transport solver; 3-calculated by a separate code : in that case only, description of the code provided in codeparam at the same level; 4-used value from the previous time step; Time-dependent; Vector(nion)
boundary	boundaryion (9.7.1.3.71)	Boundary condition for the transport equation
source_term	sourceion (9.7.1.3.409)	Total source term for the transport equation. Time-dependent.
transp_coef	coretransion (9.7.1.3.128)	Total transport coefficients. Time-dependent.
flux	fluxion (9.7.1.3.207)	Fluxes of the quantity, two definitions. Time-dependent.
flux_dv_surf	matflt.type (9.7.1.2.10)	Net flux through the magnetic surface, i.e. integral over the magnetic surface area of flux.dv. Time-dependent; Matrix(nrho,nion)
time_deriv	matflt.type (9.7.1.2.10)	Integral of the time derivative term of the transport equation. Time-dependent. Matrix (nrho,nion)
codeparam	codeparam (9.7.1.3.77)	Code parameters

Type of: coreprof:ni (2561) I coreprof:ti (2561) I coreprof:vtor (2561)

### 9.7.1.3.109 corefieldneutral

Structure for a main field of core neutral transport equations; Time-dependent;

member	type	description
value	vecflt.type (9.7.1.2.13)	Signal value; Array1D(nrho). Time-dependent
flux	vecflt.type (9.7.1.2.13)	Net neutral flux through the magnetic surface, positive values correspond to the direction from the center to the edge [s <sup>-1</sup> ]. Array1D(nrho). Time-dependent;
boundary	boundary_neutrals (9.7.1.3.68)	Boundary condition for the transport equation. Time-dependent.

Type of: coreneutrals\_neutraltype:n0 (2672)

### 9.7.1.3.110 corefieldneutrals

Structure for a main field of core neutral transport equations, (Temperature, with flux as energy); Time-dependent;

member	type	description
value	vecflt.type (9.7.1.2.13)	Signal value; Array1D(nrho). Time-dependent
flux	vecflt.type (9.7.1.2.13)	Net flux of the kinetic energy through the magnetic surface (3/2*E*n*V), positive values correspond to the direction from the center to the edge [W]. Array1D(nrho). Time-dependent;
boundary	boundary_neutrals (9.7.1.3.68)	Boundary condition for the transport equation. Time-dependent.

Type of: coreneutrals\_neutraltype:t0 (2672)

### 9.7.1.3.111 corefieldneutralv

Structure for a main field of core neutral transport equations (without flux variable); Time-dependent;

member	type	description
value	vecflt.type (9.7.1.2.13)	Signal value; Vector(nrho). Time-dependent;
boundary	boundary_neutrals (9.7.1.3.68)	Boundary condition for the transport equation. Time-dependent.

Type of: corefieldneutralv0:poloidal (2662) I corefieldneutralv0:radial (2662) I corefieldneutralv0:toroidal (2662)

### 9.7.1.3.112 corefieldneutralv0

Neutral velocity

member	type	description
toroidal	corefieldneutralv (9.7.1.3.111)	Neutral velocity in the toroidal direction [m.s <sup>-1</sup> ]. Positive is anti-clockwise when viewed from above. Time-dependent;
poloidal	corefieldneutralv (9.7.1.3.111)	Velocity of neutrals in the poloidal direction. 0 is directed towards low field side, pi is towards high field side. Positive is anti-clockwise when viewed with low field side at the right. [m.s <sup>-1</sup> ]. Array3D(nrho,nneut,max_nstype). Time-dependent;
radial	corefieldneutralv (9.7.1.3.111)	Neutral velocity in the radial direction (perpendicular to the magnetic surface), positive is from the centre to the edge [m.s <sup>-1</sup> ]. Array3D(nrho,nneut,max_nstype). Time-dependent;

Type of: coreneutrals\_neutraltype:v0 (2672)

#### 9.7.1.3.113 coreimpurdiag\_sum\_radiation

member	type	description
line_rad	coreimpurediagsum.type (9.7.1.3.120)	NO DOCS
brem_radrec	coreimpurediagsum.type (9.7.1.3.120)	NO DOCS
sum	coreimpurediagsum.type (9.7.1.3.120)	NO DOCS

Type of: coreimpurediag\_sum:radiation (2666)

#### 9.7.1.3.114 coreimpurediag\_energy

member	type	description
ionization	coreimpurediagprof.type (9.7.1.3.119)	NO DOCS
recombin	coreimpurediagprof.type (9.7.1.3.119)	NO DOCS
sum	coreimpurediagprof.type (9.7.1.3.119)	NO DOCS

Type of: coreimpurediag\_type:energy (2668)

#### 9.7.1.3.115 coreimpurediag\_radiation

member	type	description
line_rad	coreimpurediagprof.type (9.7.1.3.119)	NO DOCS
brem_radrec	coreimpurediagprof.type (9.7.1.3.119)	NO DOCS
sum	coreimpurediagprof.type (9.7.1.3.119)	NO DOCS

Type of: coreimpurediag\_type:radiation (2668)

#### 9.7.1.3.116 coreimpurediag\_sum

member	type	description
radiation	coreimpurdiag_sum_radiation (9.7.1.3.113)	NO DOCS
energy	coreimpurediag_sum.energy (9.7.1.3.117)	NO DOCS

Type of: coreimpur:diagnosticsum (2559)

#### 9.7.1.3.117 coreimpurediag\_sum\_energy

member	type	description
ionization	coreimpurediagsum.type (9.7.1.3.120)	NO DOCS
recombin	coreimpurediagsum.type (9.7.1.3.120)	NO DOCS
sum	coreimpurediagsum.type (9.7.1.3.120)	NO DOCS

Type of: coreimpurediag\_sum:energy (2666)

### 9.7.1.3.118 coreimpurediag\_type

member	type	description
radiation	coreimpurediag_radiation (9.7.1.3.115)	NO DOCS
energy	coreimpurediag_energy (9.7.1.3.114)	NO DOCS

Type of: coreimpur:diagnostic (2559) I impurity\_type:diagnostic (2788)

### 9.7.1.3.119 coreimpurediagprof\_type

member	type	description
profile	matflt.type (9.7.1.2.10)	Profile of the radiation or energy sources. Time-dependent. Array2D (nrho,nzimp or nimp)
integral	matflt.type (9.7.1.2.10)	Running integral over nrho of the radiation or energy sources. Time-dependent. Array2D (nrho,nzimp or nimp)

Type of: coreimpurediag\_energy:ionization (2664) I coreimpurediag\_energy:recombin (2664) I coreimpurediag\_energy:sum (2664) I coreimpurediag\_radiation:brem\_radrec (2665) I coreimpurediag\_radiation:line\_rad (2665) I coreimpurediag\_radiation:sum (2665)

### 9.7.1.3.120 coreimpurediagsum\_type

member	type	description
profile	vecflt.type (9.7.1.2.13)	Profile of the radiation or energy sources. Time-dependent. Array1D (nrho)
integral	vecflt.type (9.7.1.2.13)	Running integral over nrho of the radiation or energy sources. Time-dependent. Array1D (nrho)

Type of: coreimpurdiag\_sum\_radiation:brem\_radrec (2663) I coreimpurdiag\_sum\_radiation:line\_rad (2663) I coreimpurdiag\_sum\_radiation:sum (2663) I coreimpurediag\_sum\_energy:ionization (2667) I coreimpurediag\_sum\_energy:recombin (2667) I coreimpurediag\_sum\_energy:sum (2667)

### 9.7.1.3.121 coreneutrals\_atomlist

List of the atoms that enter the composition of the neutral species. Vector(natm)

member	type	description
amn	float (9.7.1.1.1)	Atomic mass number; Float
zn	float (9.7.1.1.1)	Nuclear charge; Float
ionimptype	identifier (9.7.1.3.235)	Identifier whether ion in coreprof or impurity in coreimpur.
ionimpindex	integer (9.7.1.1.2)	Index in composition or desc_impur of the corresponding ion or impurity.

Type of: composition\_neutrals:atomlist (2646)

### 9.7.1.3.122 coreneutrals\_neutraltype

Array (ntype) over neutral types.

member	type	description
n0	corefieldneutral (9.7.1.3.109)	Neutral density [ $m^{-3}$ ]. Time-dependent;
t0	corefieldneutrale (9.7.1.3.110)	Neutral temperature [eV]. Time-dependent;
v0	corefieldneutralv0 (9.7.1.3.112)	Neutral velocity [ $m.s^{-1}$ ]. Time-dependent;

Type of: neutral\_complex\_type:neutraltype (2840)

### 9.7.1.3.123 coreprofile

Structure for core plasma profile; Time-dependent

member	type	description
value	vecflt_type (9.7.1.2.13)	Signal value; Time-dependent; Vector (nrho)
source	string (9.7.1.1.3)	Source of the profile (any comment describing the origin of the profile : code, path to diagnostic signals, massaging, ...); String

Type of: profiles1d:bpol (2889) I profiles1d:dpedt (2889) I profiles1d:dpi\_totdt (2889) I profiles1d:dvprimedt (2889) I profiles1d:e\_b (2889) I profiles1d:eparallel (2889) I profiles1d:jni (2889) I profiles1d:joh (2889) I profiles1d:jphi (2889) I profiles1d:jtot (2889) I profiles1d:pe (2889) I profiles1d:pi\_tot (2889) I profiles1d:pr\_parallel (2889) I profiles1d:pr\_perp (2889) I profiles1d:pr\_th (2889) I profiles1d:q (2889) I profiles1d:qei (2889) I profiles1d:shear (2889) I profiles1d:sigmapar (2889) I profiles1d:vloop (2889) I profiles1d:zeff (2889) I psi:sigma\_par (2891)

### 9.7.1.3.124 coreprofion

Structure for core plasma ion profile; Time-dependent

member	type	description
value	matflt_type (9.7.1.2.10)	Signal value; Time-dependent; Matrix (nrho,nion)
source	vecstring_type (9.7.1.2.15)	Source of the profile (any comment describing the origin of the profile : code, path to diagnostic signals, massaging, ...); Array of strings (nion)

Type of: profiles1d:mtor (2889) I profiles1d:ns (2889) I profiles1d:pi (2889) I profiles1d:vpol (2889) I profiles1d:wtor (2889)

### 9.7.1.3.125 coresource\_values

Description of the source terms for a given origin

member	type	description
sourceid	identifier (9.7.1.3.235)	Identifier for the origin of the source terms (see conventions in the ITM website)
rho_tor	vecflt_type (9.7.1.2.13)	Toroidal flux coordinate (not normalised, equivalent to rho_tor_norm) [m]; Vector (nrho). Time-dependent.
rho_tor_norm	vecflt_type (9.7.1.2.13)	Normalised toroidal flux coordinate values (= rho_tor normalised to the value at the last grid point); Time-dependent; Vector (nrho)
psi	vecflt_type (9.7.1.2.13)	Poloidal flux [Wb], without $1/2\pi$ and such that $B_p =  \text{grad } \psi  / R/2/\pi$ . Time-dependent; Vector (nrho)
volume	vecflt_type (9.7.1.2.13)	Volume enclosed in the flux surface [ $m^3$ ]; Time-dependent; Vector (nrho)
area	vecflt_type (9.7.1.2.13)	Cross-sectional area of the flux surface [ $m^2$ ]; Time-dependent; Vector (nrho)
j	vecflt_type (9.7.1.2.13)	Parallel current source for psi transport equation, = average(j.B) / B0, where B0 = core-source/toroid_field/b0 [ $A.m^{-2}$ ]. Vector(nrho). Time-dependent.
sigma	vecflt_type (9.7.1.2.13)	Induced parallel conductivity [ $ohm^{-1}.m^{-1}$ ]. EXACT DEFINITION PENDING. Vector(nrho). Time-dependent.
si	source_ion (9.7.1.3.404)	Particle source for ion density transport equation [ $m^{-3}.s^{-1}$ ]. Time-dependent.
se	source_vec (9.7.1.3.406)	Particle source for electron density transport equation [ $m^{-3}.s^{-1}$ ]. Time-dependent.
sz(:)	source_imp (9.7.1.3.403)	Particle source for impurity density transport equation [ $m^{-3}.s^{-1}$ ]. Vector(nimpur). Time-dependent.
qi	source_ion (9.7.1.3.404)	Heat source for ion heat transport equations [ $W.m^{-3}$ ]. Time-dependent.
qe	source_vec (9.7.1.3.406)	Heat source for electron heat transport equation [ $W.m^{-3}$ ]. Time-dependent.
qz(:)	source_imp (9.7.1.3.403)	Heat source for impurity heat transport equations [ $W.m^{-3}$ ]. Vector(nimpur). Time-dependent.
ui	source_ion (9.7.1.3.404)	Toroidal torque on individual ion species; for toroidal momentum transport equation [ $kg.m^{-1}.s^{-2}$ ]. Time-dependent.

member	type	description
ujxb	source_vec (9.7.1.3.406)	Toroidal JxB torque on bulk plasma; for toroidal momentum transport equation [kg.m <sup>-1</sup> .s <sup>-2</sup> ]. Here J is the return current from fast ion radial currents Jfast=-J. Time-dependent.
codeparam	codeparam (9.7.1.3.77)	Code parameters

Type of: coresource:values (2562)

### 9.7.1.3.126 coretransel

Structure for the transport coefficients for the transport equation (electrons). Time-dependent;

member	type	description
diff	vecflt_type (9.7.1.2.13)	Diffusion coefficient [m <sup>2</sup> .s <sup>-1</sup> ]. Time-dependent; Vector (nrho)
vconv	vecflt_type (9.7.1.2.13)	Convection coefficient [m.s <sup>-1</sup> ]. Time-dependent; Vector (nrho)
source	string (9.7.1.1.3)	Source of the profile (any comment describing the origin of the profile : code, path to diagnostic signals, massaging, ...); String

Type of: corefield:transp\_coef (2657)

### 9.7.1.3.127 coretransimp

Structure for the transport coefficients for the transport equation (impurities). Time-dependent;

member	type	description
diff	matflt_type (9.7.1.2.10)	Diffusion coefficient [m <sup>2</sup> .s <sup>-1</sup> ]. Time-dependent; Array2D(nrho,nzimp)
vconv	matflt_type (9.7.1.2.10)	Convection coefficient [m.s <sup>-1</sup> ]. Time-dependent; Array2D (nrho,nzimp)
source	vecstring_type (9.7.1.2.15)	Source of the profile (any comment describing the origin of the impurity profiles : code, path to diagnostic signals, massaging, ...); Array of strings (nimp)

Type of: impurity\_type:transp\_coef (2788)

### 9.7.1.3.128 coretransion

Structure for the transport coefficients for the transport equation (ions). Time-dependent;

member	type	description
diff	matflt_type (9.7.1.2.10)	Diffusion coefficient [m <sup>2</sup> .s <sup>-1</sup> ]. Time-dependent; Matrix (nrho,nion)
vconv	matflt_type (9.7.1.2.10)	Convection coefficient [m.s <sup>-1</sup> ]. Time-dependent; Matrix (nrho,nion)
source	vecstring_type (9.7.1.2.15)	Source of the profile (any comment describing the origin of the profile : code, path to diagnostic signals, massaging, ...); Array of strings (nion)

Type of: corefieldion:transp\_coef (2658)

### 9.7.1.3.129 coretransp\_values

Description of transport term coming from various origins. Array of structure (ntransp)

member	type	description
transportid	identifier (9.7.1.3.235)	Identifier for the origin of the transport terms (see conventions in the ITM website)
rho_tor_norm	vecflt_type (9.7.1.2.13)	Normalised toroidal flux coordinate values (= rho_tor normalised to the value at the last grid point); Time-dependent; Vector (nrho)
rho_tor	vecflt_type (9.7.1.2.13)	Toroidal flux coordinate (not normalised, equivalent to rho_tor_norm) [m]; Vector (nrho). Time-dependent.
psi	vecflt_type (9.7.1.2.13)	Poloidal flux [Wb], without 1/2pi and such that Bp= grad psi  /R/2/pi. Time-dependent; Vector (nrho)
volume	vecflt_type (9.7.1.2.13)	Volume enclosed in the flux surface [m <sup>3</sup> ]; Time-dependent; Vector (nrho)
area	vecflt_type (9.7.1.2.13)	Cross-sectional area of the flux surface [m <sup>2</sup> ]; Time-dependent; Vector (nrho)
sigma	vecflt_type (9.7.1.2.13)	Parallel conductivity [ohm <sup>-1</sup> .m <sup>-1</sup> ]. Time-dependent. Vector(nrho).
ni_transp	ni_transp (9.7.1.3.292)	Transport coefficients for ion density equation. Time-dependent.
ne_transp	ne_transp (9.7.1.3.287)	Transport coefficients for electron density equation. Time-dependent.
nz_transp(:)	transcoefimp (9.7.1.3.462)	Transport coefficients for impurity (multiple charge state) density equation. Time-dependent.
ti_transp	transcoefion (9.7.1.3.463)	Transport coefficients for ion temperature equation. Time-dependent.
te_transp	transcoefel (9.7.1.3.461)	Transport coefficients for electron temperature equation. Time-dependent.



member	type	description
tz.transp(:)	transcoefimp (9.7.1.3.462)	Transport coefficients for impurity (multiple charge state) temperature equation. Time-dependent.
vtor.transp	transcoefvtor (9.7.1.3.464)	Transport coefficients for toroidal velocity equation. Time-dependent.
codeparam	codeparam (9.7.1.3.77)	Code parameters

Type of: coretransp:values (2563)

### 9.7.1.3.130 current

Description of the IC surface currents on the antenna straps and on passive components.

member	type	description
mpol	vecint.type (9.7.1.2.14)	Poloidal modes, used to describe the spectrum of the antenna current. The poloidal angle is defined from the reference point rz_reference; the angle at a point (R,Z) is given by $\text{atan}((Z-Z_{\text{ref}})/(R-R_{\text{ref}}))$ , where $R_{\text{ref}}=r_{\text{z\_reference}}/r$ and $Z_{\text{ref}}=r_{\text{z\_reference}}/z$ . Time-Dependent; Integer(n.poloidal_modes)
ntor	vecint.type (9.7.1.2.14)	Toroidal modes, used to describe the spectrum of the antenna current. Time-Dependent; Integer(n.toroidal_modes)
spectrum	exp1D (9.7.1.3.197)	Spectrum of the total surface current on the antenna strap and passive components expressed in poloidal and toroidal mode [A]. Calculated using a geometrical poloidal angle around the point rz_reference. Time-dependent; exp1D(n.poloidal_modes , n.toroidal_modes)
rz_reference	rz0D (9.7.1.3.358)	Reference point used to define the poloidal angle, e.g. the geometrical centre of the vacuum vessel. Time-dependent; rz0d

Type of: antennaic\_setup:current (2607)

### 9.7.1.3.131 cxmeasure

Measured values

member	type	description
ti	exp1D (9.7.1.3.197)	Ion temperature [eV]. Vector (nchannels)
vtor	exp1D (9.7.1.3.197)	Toroidal velocity [m/s]. Vector (nchannels)
vpol	exp1D (9.7.1.3.197)	Poloidal velocity [m/s]. Vector (nchannels)

Type of: cxdiag:measure (2564)

### 9.7.1.3.132 cxsetup

diagnostic setup information

member	type	description
amn	vecflt.type (9.7.1.2.13)	Mass of the emitting impurity. Varies according to channels since they are spanning different lines of sight; Vector (nchannels)
zn	vecflt.type (9.7.1.2.13)	Nuclear charge of the emitting impurity. Varies according to channels since they are spanning different lines of sight; Vector (nchannels)
position	rzphi1Dexp (9.7.1.3.366)	Position of the measurement. Time-dependent. Vector (nchannels)

Type of: cxdiag:setup (2564)

### 9.7.1.3.133 data\_release

Stores information about each entry available at this version.

member	type	description
shot	integer (9.7.1.1.2)	Shot number = Mass*100+Nuclear_charge.
run	integer (9.7.1.1.2)	Which run number is the active run number for this version.
description	vecstring.type (9.7.1.2.15)	Possible description of why this version of the data is the current version.

Type of: version\_ind:data\_release (3030)

### 9.7.1.3.134 datainfo

Generic information on a data item

member	type	description
dataprovder	string (9.7.1.1.3)	Name of the actual data provider (the person who filled the data)
putdate	string (9.7.1.1.3)	Date at which the data has been put in the DB
source	string (9.7.1.1.3)	Exact reference of the data source (e.g. original reference in the native machine data base)
comment	string (9.7.1.1.3)	Any additional comment
cocos	integer (9.7.1.1.2)	COordinates COventionS followed by this CPO
id	integer (9.7.1.1.2)	CPO id for checking its provenance in the workflow
isref	integer (9.7.1.1.2)	1 if the data can be found in the present data base entry; 2 if the data can be found in a parent data base entry; 0 if no data consistent with the present entry can be found.
whatref	whatref (9.7.1.3.506)	Structure defining a database entry and the CPO occurrence
putinfo	putinfo (9.7.1.3.342)	Level 2 information describing how to retrieve the actual data for the UAL. Not to be filled/used by the ITM user !

Type of: amns:datainfo (2553) I antennas:datainfo (2554) I bb\_shield:datainfo (2555) I compositionc:datainfo (2556) I coredelta:datainfo (2557) I corefast:datainfo (2558) I coreimpur:datainfo (2559) I coreneutrals:datainfo (2560) I coreprof:datainfo (2561) I coresource:datainfo (2562) I coretransp:datainfo (2563) I cxdiag:datainfo (2564) I distribution:datainfo (2565) I distsource:datainfo (2566) I cediag:datainfo (2567) I edge:datainfo (2568) I efcc:datainfo (2569) I equilibrium:datainfo (2570) I flush:datainfo (2753) I fusiondiag:datainfo (2571) I halphadiag:datainfo (2572) I heat\_sources:datainfo (2573) I ironmodel:datainfo (2575) I langmuirdiag:datainfo (2576) I launches:datainfo (2577) I lineintegraldiag:datainfo (2804) I lithiumdiag:datainfo (2578) I magdiag:datainfo (2579) I mhd:datainfo (2580) I msediag:datainfo (2581) I nbi:datainfo (2582) I neoclassic:datainfo (2583) I ntm:datainfo (2584) I orbit:datainfo (2585) I pellets:datainfo (2586) I pfsystems:datainfo (2587) I power\_conv:datainfo (2589) I reflectomet:datainfo (2590) I rfadiag:datainfo (2591) I sawteeth:datainfo (2592) I scenario:datainfo (2593) I solcurdiag:datainfo (2594) I temporary:datainfo (2595) I toroidfield:datainfo (2597) I tdiag:datainfo (2598) I turbulence:datainfo (2599) I wall:datainfo (2600) I waves:datainfo (2601)

### 9.7.1.3.135 desc\_coils

Description of the coils

member	type	description
name	string (9.7.1.1.3)	Name of coil.
res	float (9.7.1.1.1)	Coil resistance [Ohm]
nturns	integer (9.7.1.1.2)	number of turns inside the coil
closed	string (9.7.1.1.3)	Identify whether the coil is closed (y) or open (n). For closed coils there is no need to replicate the first r,z,phi point as last point
edges(:)	edges (9.7.1.3.184)	Edges defining the coil volume faces. Structure array. Replicate this edge structure N-times for N-edge cross sections. Use just one for wire coil approximation.

Type of: coil:desc\_coils (2630)

### 9.7.1.3.136 desc\_impur

Description of the impurities (list of ion species and possibly different charge states). OBSOLESCEANT.

member	type	description
amn	vecflt.type (9.7.1.2.13)	Atomic mass number of the impurity; Vector (nimp)
zn	vecint.type (9.7.1.2.14)	Nuclear charge of the impurity; Vector (nimp)
i_ion	vecint.type (9.7.1.2.14)	Index of the impurity species in the coreprof ion species ordering. Vector (nimp)
nzimp	vecint.type (9.7.1.2.14)	Number of charge states (or bundles) considered for each impurity species. Vector (nimp)
zmin	matint.type (9.7.1.2.11)	Minimum Z of impurity ionisation state bundle. Matrix (nimp,max.nzimp)
zmax	matint.type (9.7.1.2.11)	Maximum Z of impurity ionisation state bundle. If no bundle, zmax=zmin. Matrix (nimp,max.nzimp)
label	vecstring.type (9.7.1.2.15)	Label for the impurities - note that the charge state is not included; String Vector (nimp)

Type of: coredelta:desc\_impur (2557) I corefast:desc\_impur (2558) I coreimpur:desc\_impur (2559) I coreneutrals:desc\_impur (2560) I coreprof:desc\_impur (2561) I coresource:desc\_impur (2562) I coretransp:desc\_impur (2563) I neoclassic:desc\_impur (2583)

### 9.7.1.3.137 desc\_iron

Description of the iron segments

member	type	description
name	vecstring_type (9.7.1.2.15)	Name of circuit. Array of strings (ncircuit).
id	vecstring_type (9.7.1.2.15)	ID of circuit. Array of strings (ncircuit).
permeability	permeability (9.7.1.3.320)	Permeability model (can be different for each iron segment)
geom_iron	geom_iron (9.7.1.3.227)	Geometry of the iron segments

Type of: ironmodel:desc\_iron (2575)

### 9.7.1.3.138 desc\_pfoils

Description of the coils

member	type	description
name	vecstring_type (9.7.1.2.15)	Name of coil. Array of strings (ncoils)
id	vecstring_type (9.7.1.2.15)	ID of coil. Array of strings (ncoils)
res	vecflt_type (9.7.1.2.13)	Coil resistance [Ohm]; Vector (ncoils)
emax	vecflt_type (9.7.1.2.13)	Maximum Energy to be dissipated in coils [J]; Vector (ncoils)
structure_cs	structure_cs (9.7.1.3.417)	Detailed description of the coil structure, for coils that are part of the central solenoid.
pol_flux_cs	float (9.7.1.1.1)	Maximum poloidal flux available in the Central Solenoid for a plasma pulse [Wb].
nelement	vecint_type (9.7.1.2.14)	Number of elements used to describe a coil; Vector (ncoils)
pfelement	pfelement (9.7.1.3.323)	Axisymmetric conductor description

Type of: pfoils:desc\_pfoils (2872)

### 9.7.1.3.139 desc\_supply

Description of the power supplies

member	type	description
name	vecstring_type (9.7.1.2.15)	Name of the supply; Array of strings (nsupplies)
id	vecstring_type (9.7.1.2.15)	ID of the supply; Array of strings (nsupplies)
type	vecstring_type (9.7.1.2.15)	Type of supply; Array of strings (nsupplies)
delay	vecflt_type (9.7.1.2.13)	Pure delay in the supply [s]; Vector (nsupplies)
filter	filter (9.7.1.3.201)	Laplace proper filter
imin	vecflt_type (9.7.1.2.13)	Minimum current [A]; Vector (nsupplies)
imax	vecflt_type (9.7.1.2.13)	Maximum current [A]; Vector (nsupplies)
res	vecflt_type (9.7.1.2.13)	Supply internal resistance [Ohm]; Vector (nsupplies)
umin	vecflt_type (9.7.1.2.13)	Minimum voltage [V]; Vector (nsupplies)
umax	vecflt_type (9.7.1.2.13)	Maximum voltage [V]; Vector (nsupplies)
emax	vecflt_type (9.7.1.2.13)	Maximum Energy to be dissipated in supply [J]; Vector (nsupplies)

Type of: pfsupplies:desc\_supply (2878)

### 9.7.1.3.140 diag\_func

Structure to provide the description on the detector used and store the transfer matrix of the detector for that l.o.s.

member	type	description
description	string (9.7.1.1.3)	Short description of the detector with reference to the number of cells (ncells).
transf_mat	matflt_type (9.7.1.2.10)	Transfer matrix of the detector. Each l.o.s. might have a dedicated detector response function and energy resolution (and number of cells). Time-independent. Matrix (ncells,energy)

Type of: fusiondiag\_detect.ct.energy:diag\_func (2769)

### 9.7.1.3.141 dist\_collisional\_transfer\_0d

Collisional exchange with the electrons. Time-dependent

member	type	description
power.th	float (9.7.1.1.1)	Collisional power to the thermal particle population [W]; Time-dependent; Scalar
power.fast	float (9.7.1.1.1)	Collisional power to the fast particle population [W]; Time-dependent; Scalar
torque.th	float (9.7.1.1.1)	Collisional toroidal torque to the thermal particle population [N.m]; Time-dependent; Scalar
torque.fast	float (9.7.1.1.1)	Collisional toroidal torque to the fast particle population [N.m]; Time-dependent; Scalar

Type of: [dist\\_global\\_param:collisions\\_e \(2700\)](#) [I dist\\_global\\_param:collisions\\_i \(2700\)](#) [I dist\\_global\\_param\\_collisions\\_z:charge\\_e \(2701\)](#)

#### 9.7.1.3.142 dist\_collisional\_transfer\_1d

Collisional exchange from the background electrons to the distribution function. Time-dependent

member	type	description
power.th	vecflt.type (9.7.1.2.13)	Flux surface averaged collisional power density to the thermal particle population [W.m <sup>-3</sup> ]; Time-dependent; Vector(npsi)
power.fast	vecflt.type (9.7.1.2.13)	Flux surface averaged collisional power density to the fast particle population [W.m <sup>-3</sup> ]; Time-dependent; Vector(npsi)
torque.th	vecflt.type (9.7.1.2.13)	Flux surface averaged collisional toroidal torque density to the thermal particle population [N.m <sup>-2</sup> ]; Time-dependent; Vector(npsi)
torque.fast	vecflt.type (9.7.1.2.13)	Flux surface averaged collisional toroidal torque density to the fast particle population [N.m <sup>-2</sup> ]; Time-dependent; Vector(npsi)

Type of: [dist\\_profile\\_values\\_1d:collisions\\_e \(2703\)](#) [I dist\\_profile\\_values\\_1d:collisions\\_i \(2703\)](#) [I dist\\_profiles\\_1d:collisions\\_e \(2706\)](#) [I dist\\_profiles\\_1d:collisions\\_i \(2706\)](#) [I dist\\_profiles\\_1d\\_collisions\\_z:charge\\_state \(2707\)](#)

#### 9.7.1.3.143 dist\_collisional\_transfer\_2d

Collisional exchange from the background electrons to the distribution function. Time-dependent

member	type	description
power.th	matflt.type (9.7.1.2.10)	Collisional power density to the thermal particle population [W.m <sup>-3</sup> ]; Time-dependent; Matrix(n.coord1,n.coord2)
power.fast	matflt.type (9.7.1.2.10)	Collisional power density to the fast particle population [W.m <sup>-3</sup> ]; Time-dependent; Matrix(n.coord1,n.coord2)
torque.th	matflt.type (9.7.1.2.10)	Collisional toroidal torque density to the thermal particle population [N.m <sup>-2</sup> ]; Time-dependent; Matrix(n.coord1,n.coord2)
torque.fast	matflt.type (9.7.1.2.10)	Collisional toroidal torque density to the fast particle population [N.m <sup>-2</sup> ]; Time-dependent; Matrix(n.coord1,n.coord2)

Type of: [dist\\_profile\\_values\\_2d:collisions\\_e \(2704\)](#) [I dist\\_profile\\_values\\_2d:collisions\\_i \(2704\)](#) [I dist\\_profiles2d\\_collisions\\_z:charge\\_e \(2705\)](#) [I dist\\_profiles\\_2d:collisions\\_e \(2708\)](#) [I dist\\_profiles\\_2d:collisions\\_i \(2708\)](#)

#### 9.7.1.3.144 dist\_distrivec\_distfunc\_fexp\_param

Parameters used to defined the grid coordinates. Time-dependent

member	type	description
equatorial	equatorial.plane (9.7.1.3.193)	Description of the equatorial plane or any other omnigeuous surfaces. Time-dependent
temperature	vecflt.type (9.7.1.2.13)	Reference temperature profile (eV); on the grid in /distsource/source/profiles_1d/rho_tor. Used to define the local thermal energy and the thermal velocity. Time-dependent; Vector(npsi)

Type of: [f\\_expansion:parameters \(2749\)](#)

#### 9.7.1.3.145 dist\_ff

Distribution function of e.g. ions, or electrons; the density of particles in the velocity space, the real space and spin state. The grid is split into topological regions, which could overlap in coordiante space (i.e. one coordinated can correspond to more than one orbit). The number of topological region is given by `nregion_topo`. For `nregion_topo=2` the topology should be that of a high aspect ratio tokamak with two topological regions, where the passing orbits moving counter to the plasma current are stored in `nregion_topo=2` and all other orbits are stored in `nregion_topo=1`. For `nregion_topo > 2` (e.g. for spherical tokamaks) the topology should be described in the field topology.

member	type	description
grid_info	dist_grid_info (9.7.1.3.152)	Specification of grids used in topo_regions. Grid coordinates could either be invariants of motion, or information at single point along orbit, e.g. xi and s for grid_coord=3. This point should always be on a so-called omnigenous surface (a generalised equatorial plane); grad(psi) x grad(B) = 0. All closed orbits cross omnigenous surfaces at least two times. The omnigenous surfaces are described in omnigen_surf.
topo_regions(:)	topo_regions (9.7.1.3.458)	List with distribution function in each topological region; Time-dependent. Structure array(nregion,topo)

Type of: dist\_func:f\_expan\_topo (2696)

### 9.7.1.3.146 dist\_func

Distribution functions. The total distribution total distribution can either be given by the a set of markers/test particles (in markers), or by a gridded function (dist\_expand). Note that the gridded distribution can be written as sum of successive approximations, where each term is given by an element in the vector dist\_expand. Finally, the distribution can be written as a sum of a marker distribution and a gridded distribution, e.g. for delta-f Monte Carlo solution. Time-dependent

member	type	description
is_delta_f	integer (9.7.1.1.2)	If is_delta_f=1, then the distribution represents the deviation from a Maxwellian; is_delta_f=0, then the distribution represents all particles, i.e. the full-f solution. Time-dependent
markers	weighted_markers (9.7.1.3.505)	Distribution represented by a set of markers (test particles). Time-dependent
f_expan_topo(:)	dist_ff (9.7.1.3.145)	TO BE REMOVED. KEPT TEMPORARILY AS AN ALTERNATIVE TO f_expansion. [Distribution function, f, expanded into a vector of successive approximations (topology-based formulation, without the grid-cpo). The first element in the vector (f_expansion(1)) is the zeroth order distribution function, while the K:th element in the vector (f_expansion(K)) is the K:th correction, such that the total distribution function is a sum over all elements in the f_expansion vector. Time-dependent. Structure array(Nf_expansion)]. Time-dependent
f_expansion(:)	f_expansion (9.7.1.3.199)	Distribution function, f, expanded into a vector of successive approximations. The first element in the vector (f_expansion(1)) is the zeroth order distribution function, while the K:th element in the vector (f_expansion(K)) is the K:th correction, such that the total distribution function is a sum over all elements in the f_expansion vector. Time-dependent. Structure array(Nf_expansion)

Type of: distri\_vec:dist\_func (2716)

### 9.7.1.3.147 dist\_geometry\_0d

Geometrical constants

member	type	description
mag_axis	rz0D (9.7.1.3.358)	Position of the magnetic axis [m]. Time-dependent; Scalar
toroid_field	b0r0 (9.7.1.3.59)	Characteristics of the vacuum toroidal field. Used to define the radial coordiante rho_tor and to measure the current drive. Time-dependent; Scalar

Type of: dist\_global\_param:geometry (2700)

### 9.7.1.3.148 dist\_geometry\_1d

Grids and metric information; including rho\_tor, psi, area and volume. Time-dependent

member	type	description
rho_tor	vecflt_type (9.7.1.2.13)	Toroidal flux coordinate [m]. Defined as sqrt((phi-phi_axis)/pi/B0), where B0=../global_param/toroid_field/b0, phi is the toroidal flux and phi_axis is the toroidal flux at the magnetic axis. Time-dependent; Vector (npsi)
rho_tor_norm	vecflt_type (9.7.1.2.13)	The toroidal flux coordinate normalised to be zero at the axis and unity at the last closed flux surface, or last available fluxsurface if the last closed flux surface is not defined. Time-dependent; Vector (npsi)
psi	vecflt_type (9.7.1.2.13)	Poloidal flux at the grid points for 1D profiles [Wb], without 1/2pi and such that Bp= grad psi  /R/2/pi. Time-dependent; Vector (npsi)
volume	vecflt_type (9.7.1.2.13)	Volume enclosed by the flux surface [m^3]; Time-dependent; Vector (npsi)
area	vecflt_type (9.7.1.2.13)	Cross-sectional area of the flux surface [m^2]; Time-dependent; Vector (npsi)

Type of: dist\_profiles.1d:geometry (2706)

### 9.7.1.3.149 dist\_geometry\_2d

Grids and metric information; including R, Z, rho\_tor, psi, theta\_geom and theta\_strt. The grid has to be rectangular in a pair of these coordinates; this is specified in coord\_type. Time-dependent

member	type	description
coord_type	integer (9.7.1.1.2)	0: Rectangular grid in the (R,Z) coordinates; 1: Rectangular grid in the (rho_tor,theta_geom) coordinates; 2: Rectangular grid in the (rho_tor,theta_straight) coordinates.
r	matflt.type (9.7.1.2.10)	Major radius coordinate [m]; Time-dependent; Matrix (n_coord1,n_coord2)
z	matflt.type (9.7.1.2.10)	Vertical coordinate [m]; Time-dependent; Matrix (n_coord1,n_coord2)
rho_tor	matflt.type (9.7.1.2.10)	Toroidal flux coordinate [m]. Defined as $\sqrt{(\phi-\phi_{axis})/\pi/B_0}$ , where $B_0=../global\_param/toroid\_field/b_0$ , $\phi$ is the toroidal flux and $\phi_{axis}$ is the toroidal flux at the magnetic axis. Time-dependent; Matrix (n_coord1,n_coord2)
psi	matflt.type (9.7.1.2.10)	Poloidal flux at the grid points for 1D profiles [Wb], without $1/2\pi$ and such that $B_p= \text{grad } \psi /R/2/\pi$ . Time-dependent; Matrix (n_coord1,n_coord2)
theta_geom	matflt.type (9.7.1.2.10)	Geometrical poloidal angle [rad]; Time-dependent; Matrix (n_coord1,n_coord2)
theta_strt	matflt.type (9.7.1.2.10)	Straight field line poloidal angle [rad]; Time-dependent; Matrix (n_coord1,n_coord2)

Type of: dist\_profiles\_2d:geometry (2708)

### 9.7.1.3.150 dist\_global\_param

Global parameters; spatial constants, volume integrated quantities and quantities averaged over the cross-sectional area. Here the dimensions used refer to: nion - size of distribution/compositions/ions; nimpur - size of distribution/compositions/impurities; nzimp - size of distribution/compositions/impurities/zmin.

member	type	description
geometry	dist_geometry_0d (9.7.1.3.147)	Geometrical constants
state	dist_state_0d (9.7.1.3.162)	Algebraic moments of the distribution function integrated over the plasma volume, e.g. total number of particles, energy etc. Time-dependent
collisions_e	dist_collisional_transfer_0d (9.7.1.3.141)	Collisional exchange with the electrons. Time-dependent
collisions_i(:)	dist_collisional_transfer_0d (9.7.1.3.141)	Collisional exchange with each ion species. The ion indexing should match the one in /distribution/compositions/ions. Time-dependent; Vector(nion)
collisions_z(:)	dist_global_param_collisions_z (9.7.1.3.151)	Collisional exchange with each impurity species. The ion indexing should match the one in /distribution/compositions/impurities. Time-dependent; Vector(nimpur)
sources(:)	dist_sources_0d (9.7.1.3.159)	Vector of volume integrated sources and sinks of particles, momentum and power included in the Fokker-Planck modelling. The physical meaning of each source term is specified through the identifier ./sources/type. Note that it is possible to store multiple source terms with the same value for ./source/type. Time-dependent; Scalar

Type of: distri\_vec:global\_param (2716)

### 9.7.1.3.151 dist\_global\_param\_collisions\_z

Collisional exchange with each impurity species. The ion indexing should match the one in /distribution/compositions/impurities. Time-dependent

member	type	description
charge_state(:)	dist_collisional_transfer_0d (9.7.1.3.141)	Collisional exchange with the impurities. The ion indexing should match the one in /distribution/compositions/impurities/zmin. Time-dependent; Vector(nzimp)

Type of: dist\_global\_param:collisions\_z (2700)

### 9.7.1.3.152 dist\_grid\_info

Specification of grids used in topo\_regions. Grid coordinates could either be invariants of motion, or information at single point along orbit, e.g. xi and s for grid\_coord=3. This point should always be on a so-called omnigenous surface (a generalised equatorial plane);  $\text{grad}(\psi) \times \text{grad}(B) = 0$ . All closed orbits cross omnigenous surfaces at least two times. The omnigenous surfaces are described in omnigen\_surf.

member	type	description
grid_type	integer (9.7.1.1.2)	Type of grid: 1=unstructured grid; 2=structured non-rectangular grid, here $\text{ndim11}=\text{ndim12}=\text{ndim13}$ , $\text{ndim21}=\text{ndim22}=\text{ndim23}$ , $\text{ndim31}=\text{ndim32}=\text{ndim33}$ ; 3=rectangular grid, where grid coordinates are stored in the vectors $\text{dim1}(1:\text{ndim1},1,1)$ , $\text{dim2}(1,1:\text{ndim2},1)$ , $\text{dim3}(1,1,1:\text{ndim3})$

member	type	description
ngriddim	integer (9.7.1.1.2)	Number of grid dimension. For ngriddim=2 the grid is specified by dim1 and dim2 only, while dim3, dim4, dim5, dim6 can be ignored (should not be allocated). For ngriddim=3 also dim3 is used to describe the grid etc. E.g. if your distribution is given by the three variables the poloidal flux, perpendicular and parallel velocities, then ngriddim=3 and grid.coord(1)=15, grid.coord(1)=16, grid.coord(3)=6.
grid.coord	vecint.type (9.7.1.2.14)	Identifies the coordinates specifies in dim1, dim2, dim3, dim4, dim5, and dim6. grid.coord(K) describes the coordinate representaed in dimK, for K=1,2..6. The possible coordinates are: 1=R, Major radius [m]; 2=Z, Vertical position [m]; 3=X, first cartesian coordinate in the horizontal plane [m]; 4=Y, second cartesian coordinate in the horizontal plane (grad(X) x grad(Y) = grad(Z)) [m]; 5=phi, toroidal angle [rad]; 6=psi, poloidal magnetic flux [T*m <sup>2</sup> ]; 7=rhotor, the square root of the toroidal flux; 8=theta, geometrical poloidal angle [rad]; 9=theta_b, Boozer poloidal angle [rad]; 10=vx, velocity in the x-direction [m/s]; 11=vy, velocity in the y-direction [m/s]; 12=vz, velocity in the z-direction [m/s]; 13=vel, total velocity [m/s]; 14=vphi, velocity in the phi-direction [m/s]; 15=vpar, velocity in the parallel direction [m/s]; 16=vperp, velocity in the perpendicular direction [m/s]; 17=E, Hamiltonian energy [J]; 18=Pphi, canonical toroidal angular momentum [kg m <sup>2</sup> /s]; 19=mu, magnetic moment [J/T]; 20=Lambda=mu/E [1/T]; 21=pitch=vpar/v [-]; 22=s, the position of the omnigenous plane (generalised equatorial plane) as described by the fields omnigen.surf% <i>s</i> and omnigen.surf% <i>rz</i> ; 23=particle spin; 24=n.Legendre, the index of the Legendre polynomial of the pitch, e.g. if the k:th component of dim3(1,1,k,1,1,1)=5 then this refer to the 5:th Legendre polynomial P_5(xi). Vector (6)
thin_orbits	integer (9.7.1.1.2)	Specifies if guiding centre orbits are thin. Note: only used for orbit averaged distribution functions. For thin_orbits=1 the orbit are considered thin, i.e. each orbit is bound to follow a single flux surface; for thin_orbits=0 the orbits are asumed to follow guiding centre trajectories. E.g. thin_orbits=0 using constants of motion as given in a generalised equatorial plane, then the orbit outside the equatorial plane are described by the guiding centre equations of motion.
topology	string (9.7.1.1.3)	Description of the topology of the grid. NOTE: only used for nregion.topo>2.
omnigen_surf(?)	omnigen_surf (9.7.1.3.303)	List of omnigenous magnetic surfaces to which the s-coordinates in grid.coord refer. NOTE: only used for gridcoord=3. NOTE: all guiding centre orbits intersect at least one omnigenous (or stagnation) surfaces, i.e. the omnigenous generalised the equatorial plane (the midplane). nsurfs=Number of omnigenous surfaces. Structure array(nregion.topo)

Type of: dist\_ff:grid\_info (2695)

### 9.7.1.3.153 dist\_profile\_values\_1d

1D profiles; includes flux surface averaged quantities. Here the dimensions used refer to: npsi - size of the internal radial grid defined by rho\_tor; nion - size of distribution/compositions/ions; nimpur - size of distribution/compositions/impurities; nzimp - size of distribution/compositions/impurities/zmin. Time-dependent

member	type	description
state	dist_state_1d (9.7.1.3.163)	Fluid moments describing the state of the distribution; calculated from the distribution. Time-dependent
collisions_e	dist_collisional_transfer_1d (9.7.1.3.142)	Collisional exchange from the background electrons to the distribution function. Time-dependent
collisions_i(:)	dist_collisional_transfer_1d (9.7.1.3.142)	Collisional exchange from each background ion speices to the distribution function. Time-dependent; Vector (nions)
collisions_z(:)	dist_profiles_1d_collisions_z (9.7.1.3.157)	Collisional exchange from each background impurities species to the distribution function. Time-dependent; Vector (nimpur)
sources(:)	dist_sources_1d (9.7.1.3.160)	Vector of flux surface averaged sources and sinks of particles, momentum and power included in the Fokker-Planck modelling. The physical meaning of each source term is specified through the identifier ./sources/type. Note that it is possible to store multiple source terms with the same value for source/type. Time-dependent; Vector(n_source.terms)

Type of: dist\_profiles\_1d:cntr\_passing (2706) I dist\_profiles\_1d:co\_passing (2706) I dist\_profiles\_1d:trapped (2706)

### 9.7.1.3.154 dist\_profile\_values\_2d

2D profiles in the poloidal plane; includes velocity space integrated quantities. Time-dependent

member	type	description
state	dist_state_2d (9.7.1.3.164)	Fluid moments describing the state of the distribution; calculated from the distribution. Time-dependent
collisions_e	dist_collisional_transfer_2d (9.7.1.3.143)	Collisional exchange from the background electrons to the distribution function. Time-dependent
collisions_i(:)	dist_collisional_transfer_2d (9.7.1.3.143)	Collisional exchange from each background ion speices to the distribution function. Time-dependent; Vector (nions)
collisions_z(:)	dist_profiles2d_collisions_z (9.7.1.3.155)	Collisional exchange from each background impurities species to the distribution function. Time-dependent; Vector (nimpur)

Type of: dist\_profiles\_2d:cntr\_passing (2708) I dist\_profiles\_2d:co\_passing (2708) I dist\_profiles\_2d:trapped (2708)



### 9.7.1.3.155 `dist_profiles2d_collisions_z`

Collisional exchange from each background impurities species to the distribution function. Time-dependent;

member	type	description
charge_state(:)	dist_collisional_transfer_2d (9.7.1.3.143)	Collisional exchange from each charge state (or bundled charge state) to the distribution function. Time-dependent; Vector (nzimp)

Type of: `dist_profile_values_2d:collisions_z` (2704) | `dist_profiles_2d:collisions_z` (2708)

### 9.7.1.3.156 `dist_profiles_1d`

1D profiles; includes flux surface averaged quantities. Here the dimensions used refer to: `npsi` - size of the internal radial grid defined by `rho_tor`; `nion` - size of distribution/compositions/ions; `nimpur` - size of distribution/compositions/impurities; `nzimp` - size of distribution/compositions/impurities/zmin. Time-dependent

member	type	description
geometry	dist_geometry_1d (9.7.1.3.148)	Grids and metric information; including <code>rho_tor</code> , <code>psi</code> , area and volume. Time-dependent
state	dist_state_1d (9.7.1.3.163)	Fluid moments describing the state of the distribution; calculated from the distribution. Time-dependent
collisions_e	dist_collisional_transfer_1d (9.7.1.3.142)	Collisional exchange from the background electrons to the distribution function. Time-dependent
collisions_i(:)	dist_collisional_transfer_1d (9.7.1.3.142)	Collisional exchange from each background ion species to the distribution function. Time-dependent; Vector (nions)
collisions_z(:)	dist_profiles_1d_collisions_z (9.7.1.3.157)	Collisional exchange from each background impurities species to the distribution function. Time-dependent; Vector (nimpur)
thermalised	dist_thermalised_1d (9.7.1.3.165)	Representation of the flux surface averaged source of thermal particles, momentum and energy due to thermalisation. Here thermalisation refers to non-thermal particles, sufficiently assimilated to the thermal background to be re-categorised as thermal particles. Note that this source may also be negative if thermal particles are being accelerated such that they form a distinct non-thermal contribution, e.g. due run-away of RF interactions.
sources(:)	dist_sources_1d (9.7.1.3.160)	Vector of flux surface averaged sources and sinks of particles, momentum and power included in the Fokker-Planck modelling. The physical meaning of each source term is specified through the identifier <code>./sources/type</code> . Note that it is possible to store multiple source terms with the same value for <code>source/type</code> . Time-dependent; Vector(n_source_terms)
trapped	dist_profile_values_1d (9.7.1.3.153)	Flux surface averaged profile evaluated using the trapped particle part of the distribution.
co_passing	dist_profile_values_1d (9.7.1.3.153)	Flux surface averaged profile evaluated using the co-current passing particle part of the distribution.
cntr_passing	dist_profile_values_1d (9.7.1.3.153)	Flux surface averaged profile evaluated using the counter-current passing particle part of the distribution.

Type of: `distri_vec:profiles_1d` (2716)

### 9.7.1.3.157 `dist_profiles_1d_collisions_z`

Collisional exchange from each background impurities species to the distribution function. Time-dependent;

member	type	description
charge_state(:)	dist_collisional_transfer_1d (9.7.1.3.142)	Collisional exchange from each charge state (or bundled charge state) to the distribution function. Time-dependent; Vector (nzimp)

Type of: `dist_profile_values_1d:collisions_z` (2703) | `dist_profiles_1d:collisions_z` (2706)

### 9.7.1.3.158 `dist_profiles_2d`

2D profiles in the poloidal plane; includes velocity space integrated quantities. Time-dependent

member	type	description
geometry	dist_geometry_2d (9.7.1.3.149)	Grids and metric information; including <code>R</code> , <code>Z</code> , <code>rho_tor</code> , <code>psi</code> , <code>theta_geom</code> and <code>theta_strt</code> . The grid has to be rectangular in a pair of these coordinates; this is specified in <code>coord.type</code> . Time-dependent
state	dist_state_2d (9.7.1.3.164)	Fluid moments describing the state of the distribution; calculated from the distribution. Time-dependent
collisions_e	dist_collisional_transfer_2d (9.7.1.3.143)	Collisional exchange from the background electrons to the distribution function. Time-dependent
collisions_i(:)	dist_collisional_transfer_2d (9.7.1.3.143)	Collisional exchange from each background ion species to the distribution function. Time-dependent; Vector (nions)

member	type	description
collisions.z(:)	dist_profiles2d_collisions.z (9.7.1.3.155)	Collisional exchange from each background impurities species to the distribution function. Time-dependent; Vector (nimpur)
trapped	dist_profile_values_2d (9.7.1.3.154)	2D profiles evaluated using the trapped particle part of the distribution.
co-passing	dist_profile_values_2d (9.7.1.3.154)	2D profiles evaluated using the co-current passing particle part of the distribution.
cntr_passing	dist_profile_values_2d (9.7.1.3.154)	2D profiles evaluated using the counter-current passing particle part of the distribution.

Type of: `distri_vec:profiles_2d` (2716)

### 9.7.1.3.159 `dist_sources_0d`

Volume integrated source included in the Fokker-Planck model.

member	type	description
source_ref	dist_sources_reference (9.7.1.3.161)	Reference identifying the origin and type of source; Time-dependendent
particle	float (9.7.1.1.1)	Source (or sink) rate of particles [1/s]; Time-dependendent; Scalar
momentum	float (9.7.1.1.1)	Source (or sink) rate of toroidal angular momentum [Nm/s]; Time-dependendent; Scalar
energy	float (9.7.1.1.1)	Source (or sink) rate of energy [J/s]; Time-dependendent; Scalar

Type of: `dist_global_param:sources` (2700)

### 9.7.1.3.160 `dist_sources_1d`

Flux surface averaged source included in the Fokker-Planck model.

member	type	description
source_ref	dist_sources_reference (9.7.1.3.161)	Reference identifying the origin and type of source; Time-dependendent
particle	vecflt_type (9.7.1.2.13)	Source (or sink) rate of particles density [1/s/m**3]; Time-dependendent; Vector (npsi)
momentum	vecflt_type (9.7.1.2.13)	Source (or sink) rate of toroidal angular momentum density [Nm/s/m**3]; Time-dependendent; Vector (npsi)
energy	vecflt_type (9.7.1.2.13)	Source (or sink) rate of energy density [J/s/m**3]; Time-dependendent; Vector (npsi)

Type of: `dist_profile_values_1d:sources` (2703) I `dist_profiles_1d:sources` (2706)

### 9.7.1.3.161 `dist_sources_reference`

Volume integrated source included in the Fokker-Planck model.

member	type	description
type	identifier (9.7.1.3.235)	Identifier for sources and sinks in Fokker-Planck solver; type.flag=1 for wave source, type.flag=2 for particle source, etc (see <code>fokker_planck_source_identifier_definition</code> in the Documentation website under Conventions/Enumerated_datatypes); Time-dependendent
index_waveid	vecint_type (9.7.1.2.14)	Index pointing to <code>/distribution/distri_vec/wave_id[index_waveid]</code> from which the source is taken. Time-dependendent; Vector (npsi)
index_srcid	vecint_type (9.7.1.2.14)	Index pointing to <code>/distribution/distri_vec/source_id[index_waveid]</code> from which the source is taken. Time-dependendent; Vector (npsi)

Type of: `dist_sources_0d:source_ref` (2709) I `dist_sources_1d:source_ref` (2710)

### 9.7.1.3.162 `dist_state_0d`

Algebraic moments of the distribution function integrated over the plasma volume, e.g. total number of particles, energy etc. Time-dependent

member	type	description
n_particles	float (9.7.1.1.1)	Number of particles in the distribution; the volume integral of the density (note: this is the number of real particles and not markers); Time-dependent
n_part_fast	float (9.7.1.1.1)	Number of fast particles in the distribution; the volume integral of the fast particle density (note: this is the number of real particles and not markers); Time-dependent
enrg	float (9.7.1.1.1)	Total energy distribution [J]; Time-dependent

member	type	description
enrg_fast	float (9.7.1.1.1)	Total energy of the fast particle distribution [J]; Time-dependent
enrg_fast_pa	float (9.7.1.1.1)	Parallel energy of the fast particle distribution [J]; Time-dependent
momentm_fast	float (9.7.1.1.1)	Kinetic toroidal angular momentum of the fast ions [Nms]; Time-dependent; Vector (npsi)
current_dr	float (9.7.1.1.1)	Toroidal non-inductive current drive [A]; Time-dependent.
torque_jrxb	float (9.7.1.1.1)	Toroidal torque due to radial currents [N.m]; Time-dependent.

Type of: dist\_global\_param:state (2700)

### 9.7.1.3.163 dist\_state\_1d

Fluid moments describing the state of the distribution; calculated from the distribution. Time-dependent

member	type	description
dens	vecflt_type (9.7.1.2.13)	Flux surface averaged particle density (including both thermal and fast particles) [ $1/m^3$ ]; Time-dependent; Vector (npsi)
dens_fast	vecflt_type (9.7.1.2.13)	Flux surface averaged fast particle density [ $1/m^3$ ]; Time-dependent; Vector (npsi)
pres	vecflt_type (9.7.1.2.13)	Scalar pressure (including both thermal and fast particles) [ $J/m^3$ ]. Related to the energy content, $W$ , according to: $pres=2*W/3$ . Time-dependent; Vector (npsi)
pres_fast	vecflt_type (9.7.1.2.13)	Scalar pressure of the fast particles [ $J/m^3$ ]. Related to the fast particle energy content, $W_f$ , according to: $pres\_fast=2*W_f/3$ . Time-dependent; Vector (npsi)
pres_fast_pa	vecflt_type (9.7.1.2.13)	Parallel pressure of the fast particles [ $J/m^3$ ]. Related to the fast particle parallel energy content, $W_{fpar}$ , according to: $pres\_fast\_pa=2*W_{fpar}$ . Time-dependent; Vector (npsi)
momentm_fast	vecflt_type (9.7.1.2.13)	Kinetic toroidal angular momentum density of the fast ions [ $Ns/m^2$ ]; Time-dependent; Vector (npsi)
current	vecflt_type (9.7.1.2.13)	Total toroidal driven current density (including electron and thermal ion back-current, or drag-current) [ $A/m^3$ ]; Time-dependent; Vector (npsi)
current_fast	vecflt_type (9.7.1.2.13)	Flux surface averaged toroidal current density of fast (non-thermal) particles (excluding electron and thermal ion back-current, or drag-current) [ $A.m^{-2}$ ]; Time-dependent; Vector (npsi).
torque_jrxb	vecflt_type (9.7.1.2.13)	Toroidal torque density due to radial currents, excluding radial current due to neoclassical effect [ $N/m^2$ ]; Time-dependent; Vector (npsi)

Type of: dist\_profile\_values\_1d:state (2703) I dist\_profiles\_1d:state (2706)

### 9.7.1.3.164 dist\_state\_2d

Fluid moments describing the state of the distribution; calculated from the distribution. Time-dependent

member	type	description
dens	matflt_type (9.7.1.2.10)	Particle density (including both thermal and fast particles) [ $1/m^3$ ]; Time-dependent; Matrix (n.coord1, n.coord2)
dens_fast	matflt_type (9.7.1.2.10)	Fast particle density [ $1/m^3$ ]; Time-dependent; Matrix (n.coord1, n.coord2)
pres	matflt_type (9.7.1.2.10)	Scalar pressure (including both thermal and fast particles) [ $J/m^3$ ]. Related to the energy content, $W$ , according to: $pres=2*W/3$ . Time-dependent; Matrix (n.coord1, n.coord2)
pres_fast	matflt_type (9.7.1.2.10)	Scalar pressure of the fast particles [ $J/m^3$ ]. Related to the fast particle energy content, $W_f$ , according to: $pres\_fast=2*W_f/3$ . Time-dependent; Matrix (n.coord1, n.coord2)
pres_fast_pa	matflt_type (9.7.1.2.10)	Parallel pressure of the fast particles [ $J/m^3$ ]. Related to the fast particle parallel energy content, $W_{fpar}$ , according to: $pres\_fast\_pa=2*W_{fpar}$ . Time-dependent; Matrix (n.coord1, n.coord2)
momentm_fast	matflt_type (9.7.1.2.10)	Kinetic toroidal angular momentum density of the fast ions [ $Ns/m^2$ ]; Time-dependent; Matrix (n.coord1, n.coord2)
current	matflt_type (9.7.1.2.10)	Total toroidal driven current density (including electron and thermal ion back-current, or drag-current) [ $A/m^3$ ]; Time-dependent; Matrix (n.coord1, n.coord2)
current_fast	matflt_type (9.7.1.2.10)	Toroidal current density of fast (non-thermal) particles of the distribution species (excluding electron and thermal ion back-current, or drag-current) [ $A.m^{-2}$ ]; Time-dependent; Matrix (n.coord1, n.coord2).
torque_jrxb	matflt_type (9.7.1.2.10)	Toroidal torque density due to radial currents, excluding radial current due to neoclassical effect [ $N/m^2$ ]; Time-dependent; Matrix (n.coord1, n.coord2)

Type of: dist\_profile\_values\_2d:state (2704) I dist\_profiles\_2d:state (2708)

### 9.7.1.3.165 dist\_thermalised\_1d

Representation of the flux surface averaged source of thermal particles, momentum and energy due to thermalisation. Here thermalisation refers to non-thermal particles, sufficiently assimilated to the thermal background to be re-categorised as thermal particles. Note that this source may also be negative if thermal particles are being accelerated such that they form a distinct non-thermal contribution, e.g. due run-away of RF interactions.

member	type	description
particle	vecflt.type (9.7.1.2.13)	Source rate for the thermal particle density due to the thermalisation of fast (non-thermal) particles [1/s/m**3]; Time-dependendent; Vector (npsi)
momentum	vecflt.type (9.7.1.2.13)	Source rate for the toroidal angular momentum density within the thermal particle population due to the thermalisation of fast (non-thermal) particles [N/m**2]; Time-dependendent; Vector (npsi)
energy	vecflt.type (9.7.1.2.13)	Source rate for the energy density within the thermal particle population due to the thermalisation of fast (non-thermal) particles [W/m**3]; Time-dependendent; Vector (npsi)

Type of: dist\_profiles\_1d:thermalised (2706)

### 9.7.1.3.166 distri\_vec

Vector over all distribution functions. Every distribution function has to be associated with only one particle species, specific in distri\_vec/species/, but there could be multiple distribution function for each species. In this case, the fast particle populations should be superposed. Time-dependent. Structure array(ndistri\_vec)

member	type	description
wave_id(:)	enum_instance (9.7.1.3.188)	List all waves affecting the distribution, as specified in waves/coherentwave/wave_id (see waves_types in the Documentation website under Conventions/Enumerated.datatypes). Vector(n_antennas)
source_id(:)	enum_instance (9.7.1.3.188)	List all neutral beam injectors and reactions contributing to the source, as specified in distsource/source/source_id (see distsource_types in the Documentation website under Conventions/Enumerated.datatypes). Vector(n_injectors_and_reactions)
species	species_reference (9.7.1.3.411)	Defines the distribution function species represented in this element of distri_vec. Time-dependent
gyro_type	integer (9.7.1.1.2)	Defines how to interpret the spatial coordinates: 1 = given at the actual particle position; 2 = given at the gyro centre of the particle position. Time-dependent
fast_filter	fast_thermal_separation_filter (9.7.1.3.200)	Description of how the fast and the thermal particle populations, used in global_param and profiles_1d, were separated.
global_param	dist_global_param (9.7.1.3.150)	Global parameters (in most cases volume integrated and surface averaged quantities). Time-dependent
profiles_1d	dist_profiles_1d (9.7.1.3.156)	Flux surface averaged profiles.
profiles_2d	dist_profiles_2d (9.7.1.3.158)	2D profiles in the poloidal plane
dist_func	dist_func (9.7.1.3.146)	Distribution functions. The total distribution total distribution can either be given by the a set of markers/test particles (in markers), or by a gridded function (dist_expand). Note that the gridded distribution can be written as sum of successive approximations, where each term is given by an element in the vector dist_expand. Finally, the distribution can be written as a sum of a marker distribution and a gridded distribution, e.g. for delta-f Monte Carlo solution. Time-dependent
codeparam	codeparam (9.7.1.3.77)	Code parameters

Type of: distribution:distri\_vec (2565)

### 9.7.1.3.167 distsource\_global\_param

Global parameters (volume integrated).

member	type	description
src_pow	exp0D (9.7.1.3.196)	Total power source [W]; Time-dependent.
src_rate	exp0D (9.7.1.3.196)	Particle source rate [1/s]; Time-dependent.
mag_axis	rz0D (9.7.1.3.358)	Position of the magnetic axis. Time-dependent; Scalar
toroid_field	b0r0 (9.7.1.3.59)	Characteristics of the vacuum toroidal field. Used to define the radial coordiante rho_tor. Time-dependent; Scalar

Type of: distsource\_source:global\_param (2721)

### 9.7.1.3.168 distsource\_line\_src\_prof

1D profiles representation of a line source. Time-dependent

member	type	description
rho_tor	vecflt.type (9.7.1.2.13)	Toroidal flux coordinate at the grid points for 1D profiles [m]. Defined as sqrt(phi/pi/B0), where B0 = equilibrium/global_param/toroid_field/b0. Time-dependent; Vector (npsi)
rho_tor_norm	vecflt.type (9.7.1.2.13)	Normalised toroidal flux coordinate at the grid points for 1D profiles; Time-dependent; Vector (npsi)
psi	vecflt.type (9.7.1.2.13)	Poloidal flux at the grid points for 1D profiles [Wb], without 1/2pi and such that Bp =  grad psi  / (R 2 pi). Time-dependent; Vector (npsi)

member	type	description
R	vecflt.type (9.7.1.2.13)	Major radius at the line source. Time-dependent; Vector (npsi)
Z	vecflt.type (9.7.1.2.13)	Vertical position of the line source. Time-dependent; Vector (npsi)
theta	vecflt.type (9.7.1.2.13)	Poloidal angle [rad]. Time-dependent; Vector (npsi)
theta_id	vecflt.type (9.7.1.2.13)	Type of poloidal angle: 1 : same as the poloidal angle in the equilibrium cpo; 2 : geometrical polar angle, $\tan(\theta) = Z/(R-R_0)$ ; 3 : other. If option 3, a transformation to the geometrical poloidal angle is provided in th2th.pol.
th2th.pol	matflt.type (9.7.1.2.10)	Geometrical poloidal angle at grid points in theta, i.e. the transformation from theta to the polar poloidal angle; used only if angl.type=3; Time-dependent; Matrix (ndim1, ndim2)
pitch	vecflt.type (9.7.1.2.13)	Pitch (i.e. $v_{\text{parallel}}/v$ ) of source particles. Time-dependent; Vector (npsi)
energy	vecflt.type (9.7.1.2.13)	Kinetic energy of source particles [eV]. Time-dependent; Vector (npsi)
ang_momentum	vecflt.type (9.7.1.2.13)	Kinetic angular momentum of a single source particles, $R m v_{\text{phi}}$ [Nms]. Time-dependent; Vector (npsi)
src_rate	vecflt.type (9.7.1.2.13)	Source density of particles [ $1/m^3/s$ ]. Time-dependent; Vector (npsi)

Type of: `distsource_source:line_srcprof` (2721)

### 9.7.1.3.169 `distsource_profiles_1d`

1D radial profiles

member	type	description
rho_tor	vecflt.type (9.7.1.2.13)	Toroidal flux coordinate [m]. Defined as $\sqrt{(\phi - \phi_{\text{axis}})/\pi/B_0}$ , where $B_0 = \dots / \text{global\_param}/\text{toroid\_field}/b_0$ , $\phi$ is the toroidal flux and $\phi_{\text{axis}}$ is the toroidal flux at the magnetic axis. Time-dependent; Vector (npsi)
rho_tor_norm	vecflt.type (9.7.1.2.13)	The toroidal flux coordinate normalised to be zero at the axis and unity at the last closed flux surface, or last available fluxsurface if the last closed flux surface is not defined. Time-dependent; Vector (npsi)
psi	vecflt.type (9.7.1.2.13)	Poloidal flux [Wb], evaluated without $1/2\pi$ and such that $B_p =  \text{grad } \psi  / R/2/\pi$ . Time-dependent; Vector (npsi)
volume	vecflt.type (9.7.1.2.13)	Volume enclosed by the flux surface [ $m^3$ ]. Time-dependent; Vector (npsi)
area	vecflt.type (9.7.1.2.13)	Cross-sectional area of the flux surface [ $m^2$ ]. Time-dependent; Vector (npsi)
pow_den	exp1D (9.7.1.3.197)	Flux surface averaged power density [ $W/m^3$ ]; Time-dependent; Vector (npsi)
trq_den	exp1D (9.7.1.3.197)	Flux surface averaged toroidal torque density [ $N/m^2$ ]; Time-dependent; Vector (npsi)
src_rate	exp1D (9.7.1.3.197)	Flux surface averaged total source density of particles [ $m^{-3} s^{-1}$ ]; Time-dependent; Vector (npsi)

Type of: `distsource_source:profiles_1d` (2721)

### 9.7.1.3.170 `distsource_profiles_2d`

2D source profiles in terms of two phase space coordinates

member	type	description
grid_coord	vecint.type (9.7.1.2.14)	Identifies the coordinates specifies in dim1 and dim2. <code>grid_coord(1)</code> and <code>grid_coord(2)</code> describe the coordinate represented in dim1 and dim2. The possible coordinates are: 1=R, Major radius [m]; 2=Z, Vertical position [m]; 3=X, first cartesian coordinate in the horizontal plane [m]; 4=Y, second cartesian coordinate in the horizontal plane ( $\text{grad}(X) \times \text{grad}(Y) = \text{grad}(Z)$ ) [m]; 5= $\phi$ , toroidal angle [rad]; 6= $\psi$ , poloidal magnetic flux [ $T \cdot m^2$ ]; 7= $r_{\text{thor}}$ , the square root of the toroidal flux; 8= $\theta$ , geometrical poloidal angle [rad]; 9= $\theta_{\text{b}}$ , Boozer poloidal angle [rad]; 10= $v_x$ , velocity in the x-direction [m/s]; 11= $v_y$ , velocity in the y-direction [m/s]; 12= $v_z$ , velocity in the z-direction [m/s]; 13= $v$ , total velocity [m/s]; 14= $v_{\phi}$ , velocity in the phi-direction [m/s]; 15= $v_{\text{par}}$ , velocity in the parallel direction [m/s]; 16= $v_{\text{perp}}$ , velocity in the perpendicular direction [m/s]; 17=E, Hamiltonian energy [J]; 18=Pphi, canonical toroidal angular momentum [ $kg \cdot m^2/s$ ]; 19= $\mu$ , magnetic moment [J/T]; 20= $\Lambda = \mu/E$ [1/T]. Vector (2)
dim1	matflt.type (9.7.1.2.10)	First coordinate of 2D grid. Time-dependent; Vector (ndim1, ndim2)
dim2	matflt.type (9.7.1.2.10)	Second coordinate of 2D grid. Time-dependent; Vector (ndim1, ndim2)
g11	matflt.type (9.7.1.2.10)	11 component of the covariant metric tensor in the (dim1, dim2) coordiante system. Time-dependent; Vector (ndim1, ndim2)
g12	matflt.type (9.7.1.2.10)	12 component of the covariant metric tensor in the (dim1, dim2) coordiante system. Time-dependent; Vector (ndim1, ndim2)
g21	matflt.type (9.7.1.2.10)	21 component of the covariant metric tensor in the (dim1, dim2) coordiante system. Time-dependent; Vector (ndim1, ndim2)
g22	matflt.type (9.7.1.2.10)	22 component of the covariant metric tensor in the (dim1, dim2) coordiante system. Time-dependent; Vector (ndim1, ndim2)
pow_den	exp2D (9.7.1.3.198)	Source power density. Here $\sum(M, N=1, 2; \text{pow\_den} * g_{NM} * \text{dim}_N * \text{dim}_M)$ have unit [W]. Time-dependent; Vector (ndim1, ndim2)
src_rate	exp2D (9.7.1.3.198)	Source density of particles. Here $\sum(M, N=1, 2; \text{src\_rate} * g_{NM} * \text{dim}_N * \text{dim}_M)$ have unit [1/s]. Time-dependent; Vector (ndim1, ndim2)

Type of: `distsource_source:profiles_2d` (2721)

### 9.7.1.3.171 `distsource_source`

Source

member	type	description
<code>source_id(:)</code>	<code>enum_instance</code> (9.7.1.3.188)	List of identifiers for the source, in term the type and name of the injectors and reactions that provide the source, along with an index separating sources with the same name and type. Possible content for type: NBI or reaction names (see <code>distsource_types</code> in the Documentation website under Conventions/Enumerated_datatypes); the field name should either be taken from <code>nbi(*)%nbi_unit(*)%name</code> , or describe the populations involved in the reaction, e.g. fast-thermal; the field index should separate different sources generated from a single injector or reaction. <code>Vector(n_injectors_and_reactions)</code>
<code>species</code>	<code>species_reference</code> (9.7.1.3.411)	Defines the source species represented in this element of the vector <code>/distsource/source</code> . Time-dependent
<code>gyro_type</code>	<code>integer</code> (9.7.1.1.2)	Defines how to interpret the spatial coordinates: 1 = given at the actual particle birth point; 2 =given at the gyro centre of the birth point.
<code>global_param</code>	<code>distsource_global_param</code> (9.7.1.3.167)	Global parameters.
<code>profiles_1d</code>	<code>distsource_profiles_1d</code> (9.7.1.3.169)	1D radial profiles
<code>profiles_2d</code>	<code>distsource_profiles_2d</code> (9.7.1.3.170)	2D source profiles in terms of two phase space coordinates
<code>line_srcprof(:)</code>	<code>distsource_line_src_prof</code> (9.7.1.3.168)	1D profiles representation of a line source. Time-dependent
<code>source_rate</code>	<code>source_rate</code> (9.7.1.3.405)	Source density of particles in phase space (real space, velocity space, spin state).
<code>markers</code>	<code>weighted_markers</code> (9.7.1.3.505)	Source given as a set of markers (test particles) born per second.
<code>codeparam</code>	<code>codeparam</code> (9.7.1.3.77)	Code parameters

Type of: `distsource:source` (2566)

### 9.7.1.3.172 `divergence`

Detailed information on beamlet divergence. Divergens is described as a super position of Gaussian profiles with amplitude `"frac_divcomp"` and vertical/horizontal divergence `"div_vert"/"div_horiz"`. Note that for positive ion NBI the divergence is well described by a single Gaussian.

member	type	description
<code>frac_divcomp</code>	<code>vecflt_type</code> (9.7.1.2.13)	Fraction of injected particles. <code>Vector(ndiv_comp)</code>
<code>div_vert</code>	<code>vecflt_type</code> (9.7.1.2.13)	The vertical beamlet divergence [rad]. Here the divergence is defined for Gaussian beams as the angel where the beam density is reduced by a factor 1/e compared to the maximum density. For non-Gaussian beams the divergence is $\sqrt{2} * \text{mean}((x - \text{mean}(x))^2)$ , where x is the angle and the mean should be performed over the beam density, $P(x): \text{mean}(y) = \int y * P(x) * dx$ . <code>Vector(ndiv_comp)</code>
<code>div_horiz</code>	<code>vecflt_type</code> (9.7.1.2.13)	The horizontal beamlet divergence [rad]. Here the divergence is defined for Gaussian beams as the angel where the beam density is reduced by a factor 1/e compared to the maximum density. For non-Gaussian beams the divergence is $\sqrt{2} * \text{mean}((x - \text{mean}(x))^2)$ , where x is the angle and the mean should be performed over the beam density, $P(x): \text{mean}(y) = \int y * P(x) * dx$ . <code>Vector(ndiv_comp)</code>

Type of: `beamletgroup:divergence` (2614)

### 9.7.1.3.173 `e_components`

E-field representation in terms of the parallel and circularly polarised components

member	type	description
<code>e_plus</code>	<code>complexgrid_scalar_cplx</code> (9.7.1.3.88)	Left hand circularly polarised component of the perpendicular (to the static magnetic field) electric field [V/m]. Time-dependent; <code>Complexgrid_scalar</code>
<code>e_minus</code>	<code>complexgrid_scalar_cplx</code> (9.7.1.3.88)	Right hand circularly polarised component of the perpendicular (to the static magnetic field) electric field [V/m]. Time-dependent; <code>Complexgrid_scalar</code>
<code>e_para</code>	<code>complexgrid_scalar_cplx</code> (9.7.1.3.88)	Parallel (to the static magnetic field) component of electric field [V/m]. Time-dependent; <code>Complexgrid_scalar</code>
<code>e_norm</code>	<code>complexgrid_scalar_cplx</code> (9.7.1.3.88)	Magnitude of wave electric field normal to a flux surface [V/m]; Time-dependent; <code>Complexgrid_scalar</code>
<code>e_binorm</code>	<code>complexgrid_scalar_cplx</code> (9.7.1.3.88)	Magnitude of perpendicular (to the static magnetic field) wave electric field tangent to a flux surface [V/m]; Time-dependent; <code>Complexgrid_scalar</code>
<code>b_norm</code>	<code>complexgrid_scalar_cplx</code> (9.7.1.3.88)	Magnitude of perpendicular (to the static magnetic field) wave magnetic field normal to a flux surface [T]; Time-dependent; <code>Complexgrid_scalar</code>

member	type	description
b.binorm	complexgrid_scalar_cplx (9.7.1.3.88)	Magnitude of wave magnetic field tangent to a flux surface [T]; Time-dependent; Complexgrid_scalar
b.para	complexgrid_scalar_cplx (9.7.1.3.88)	Magnitude of wave magnetic field parallel to the equilibrium magnetic field [T]; Time-dependent; Complexgrid_scalar
k.perp	complexgrid_scalar_cplx (9.7.1.3.88)	Perpendicular wave number [1/m]; Time-dependent; Complexgrid_scalar

Type of: fullwave:e.components (2759)

#### 9.7.1.3.174 ecemeasure

Measured values

member	type	description
harmonic	integer (9.7.1.1.2)	Harmonic detected by the ECE channels. Time-dependent.
position	rzphi1Dexp (9.7.1.3.366)	Position of the measurement. Time-dependent. Vector (nchannels)
te	exp1D (9.7.1.3.197)	Electron temperature [eV]. Time-dependent. Vector (nchannels)

Type of: ecediag:measure (2567)

#### 9.7.1.3.175 ecsetup

diagnostic setup information

member	type	description
frequency	vecflt.type (9.7.1.2.13)	Frequency of the ECE channels. Vector (nchannels)
los	setup_line_exp (9.7.1.3.397)	Geometry of the line of sight.

Type of: ecediag:setup (2567)

#### 9.7.1.3.176 edge\_fluid

Fluid quantities

member	type	description
ne	edge_fluid_scalar_simplestruct (9.7.1.3.178)	Electron density [1/m <sup>3</sup> ]; Time-dependent;
ni(:)	edge_fluid_scalar (9.7.1.3.177)	Ion density [1/m <sup>3</sup> ] (per species). Array of structures(nspecies); Time-dependent;
ve	edge_fluid_vector_simplestruct (9.7.1.3.181)	Electron velocity [m/s]; Time-dependent;
vi(:)	edge_fluid_vector (9.7.1.3.180)	Ion velocity [m/s] (per species). Array of structures(nspecies); Time-dependent;
te	edge_fluid_scalar_simplestruct (9.7.1.3.178)	Electron temperature [eV]; Time-dependent;
ti(:)	edge_fluid_scalar (9.7.1.3.177)	Ion temperature [eV] (per species). Array of structures(nspecies); Time-dependent;
te_aniso	edge_fluid_vector_simplestruct (9.7.1.3.181)	Anisotropic electron temperature [eV]; Time-dependent;
ti_aniso(:)	edge_fluid_vector (9.7.1.3.180)	Anisotropic ion temperature [eV] (per species). Array of structures(nspecies); Time-dependent;
po	edge_fluid_scalar_simplestruct (9.7.1.3.178)	Electric potential [V]; Time-dependent;
j	edge_fluid_vector_simplestruct (9.7.1.3.181)	Electric current [A]; Time-dependent;
b(:)	complexgrid_vector (9.7.1.3.93)	Magnetic field vector [T]; Time-dependent;

Type of: edge:fluid (2568)

#### 9.7.1.3.177 edge\_fluid\_scalar

A scalar fluid quantity. To be used as array of structure



member	type	description
value(:)	complexgrid_scalar (9.7.1.3.87)	Value of the quantity. Possibly stored on multiple subgrids.; Time-dependent; Array of structures (nsubgrid_quantity)
bndvalue(:)	complexgrid_scalar (9.7.1.3.87)	Boundary values of the quantity. Possibly stored on multiple (boundary) subgrids.; Time-dependent; Array of structures (nsubgrid_quantity)
flux(:)	complexgrid_vector (9.7.1.3.93)	Flux of the quantity. Possibly stored on multiple subgrids.; Time-dependent; Array of structures (nsubgrid_quantity)
bndflux(:)	complexgrid_vector (9.7.1.3.93)	Flux of the quantity. Possibly stored on multiple (boundary) subgrids.; Time-dependent; Array of structures (nsubgrid_quantity)
transpcoeff(:)	edge_fluid_scalar_transpcoeff (9.7.1.3.179)	Transport coefficients; Time-dependent; Array of structures (nsubgrid_quantity)
source(:)	complexgrid_scalar (9.7.1.3.87)	Source; Time-dependent; Array of structures (nsubgrid_quantity)

Type of: [edge\\_fluid:ni \(2726\)](#) | [edge\\_fluid:ti \(2726\)](#) | [edge\\_fluid\\_vector:comps \(2730\)](#) | [edge\\_fluid\\_vector\\_simplestruct:comps \(2731\)](#)

### 9.7.1.3.178 edge\_fluid\_scalar\_simplestruct

A scalar fluid quantity. To be used as simple structure.

member	type	description
value(:)	complexgrid_scalar (9.7.1.3.87)	Value of the quantity. Possibly stored on multiple subgrids.; Time-dependent; Array of structures (nsubgrid_quantity)
bndvalue(:)	complexgrid_scalar (9.7.1.3.87)	Boundary values of the quantity. Possibly stored on multiple (boundary) subgrids.; Time-dependent; Array of structures (nsubgrid_quantity)
flux(:)	complexgrid_vector (9.7.1.3.93)	Flux of the quantity. Possibly stored on multiple subgrids.; Time-dependent; Array of structures (nsubgrid_quantity)
bndflux(:)	complexgrid_vector (9.7.1.3.93)	Flux of the quantity. Possibly stored on multiple (boundary) subgrids.; Time-dependent; Array of structures (nsubgrid_quantity)
transpcoeff(:)	edge_fluid_scalar_transpcoeff (9.7.1.3.179)	Transport coefficients; Time-dependent; Array of structures (nsubgrid_quantity)
source(:)	complexgrid_scalar (9.7.1.3.87)	Source; Time-dependent; Array of structures (nsubgrid_quantity)

Type of: [edge\\_fluid:ne \(2726\)](#) | [edge\\_fluid:po \(2726\)](#) | [edge\\_fluid:te \(2726\)](#)

### 9.7.1.3.179 edge\_fluid\_scalar\_transpcoeff

Transport coefficients; Time-dependent; Array of structures (nsubgrid\_quantity)

member	type	description
d	complexgrid_vector_simplestruct (9.7.1.3.94)	Diffusivity [ $m^2/s$ ]; Time-dependent;
v	complexgrid_vector_simplestruct (9.7.1.3.94)	Velocity [ $m/s$ ]; Time-dependent;

Type of: [edge\\_fluid\\_scalar:transpcoeff \(2727\)](#) | [edge\\_fluid\\_scalar\\_simplestruct:transpcoeff \(2728\)](#)

### 9.7.1.3.180 edge\_fluid\_vector

A fluid vector quantity, with components possibly explicitly aligned to a coordinate direction. To be used as array of structure

member	type	description
griduid	integer (9.7.1.1.2)	Unique identifier of the grid this vector quantity is associated with.
basis	integer (9.7.1.1.2)	Index of basis (defined in associated grid) this vector is aligned to; If set to GRID.UNDEFINED=0, the canonical basis of the default coordinates of the grid assumed.
align	vecint_type (9.7.1.2.14)	Alignment of vector components, numerical flag. Int vector (number of vector components);
alignid	vecstring_type (9.7.1.2.15)	Alignment of vector components, string description. String vector (number of vector components);
comps(:)	edge_fluid_scalar (9.7.1.3.177)	Components of the vector. Array of structures (number of vector components); Time-dependent;

Type of: [edge\\_fluid:ti\\_aniso \(2726\)](#) | [edge\\_fluid:vi \(2726\)](#)

### 9.7.1.3.181 edge\_fluid\_vector\_simplestruct

A fluid vector quantity, with components possibly explicitly aligned to a coordinate direction. To be used as simple structure.

member	type	description
griduid	integer (9.7.1.1.2)	Unique identifier of the grid this vector quantity is associated with.
basis	integer (9.7.1.1.2)	Index of basis (defined in associated grid) this vector is aligned to; If set to GRID.UNDEFINED=0, the canonical basis of the default coordinates of the grid assumed.
comps(:)	edge_fluid_scalar (9.7.1.3.177)	Components of the vector. Array of structures(ndim); Time-dependent;
align	vecint_type (9.7.1.2.14)	Alignment of vector components, numerical flag. Int vector(ndim);
alignid	vecstring_type (9.7.1.2.15)	Alignment of vector components, string description. String vector(ndim);

Type of: edge\_fluid:j (2726) | edge\_fluid:te\_aniso (2726) | edge\_fluid:ve (2726)

### 9.7.1.3.182 edge\_kinetic

Kinetic quantities

member	type	description
f(:)	edge_kinetic_distribution (9.7.1.3.183)	Distribution function [ $1/m^3 (m/s)^{-3}$ ]. Array of structures(nspecies); Time-dependent;

Type of: edge:kinetic (2568)

### 9.7.1.3.183 edge\_kinetic\_distribution

Distribution function [ $1/m^3 (m/s)^{-3}$ ]. Array of structuresr(nspecies); Time-dependent;

member	type	description
value(:)	complexgrid_scalar (9.7.1.3.87)	Value of distribution function. Possibly stored on multiple subgrids.; Vector (nsubgrid_quantity). Time-dependent;
bndvalue(:)	complexgrid_scalar (9.7.1.3.87)	Boundary value of distribution function. Possibly stored on multiple subgrids.; Vector (nsubgrid_quantity). Time-dependent;
fluxes(:)	complexgrid_vector (9.7.1.3.93)	Fluxes in phase space. Possibly stored on multiple subgrids.; Vector (nsubgrid_quantity). Time-dependent;
source(:)	complexgrid_scalar (9.7.1.3.87)	Sources in phase space. Possibly stored on multiple subgrids.; Vector (nsubgrid_quantity). Time-dependent;

Type of: edge\_kinetic:f (2732)

### 9.7.1.3.184 edges

Edges defining the coil volume faces. Structure array. Replicate this edge structure N-times for N-edge cross sections. Use just one for wire coil approximation.

member	type	description
edge_rzphi	rzphiID (9.7.1.3.365)	Sequence of points describing a coil edge. Vector (npoints)

Type of: desc\_coils:edges (2685)

### 9.7.1.3.185 edgespecies

Array of edge species.

member	type	description
nucindex	integer (9.7.1.1.2)	Index into list of nuclei; int
zmin	float (9.7.1.1.1)	Minimum Z of species charge state bundle
zmax	float (9.7.1.1.1)	Maximum Z of species charge state bundle
label	string (9.7.1.1.3)	String identifying the species (e.g. D0, D+, C0, C+, C+2, ...)

Type of: `compositions.type:edgespecies` (2649)

### 9.7.1.3.186 `element_desc`

Element description (equivalent to `wall/compositions/nuclei`, can link there using `nucindex`).

member	type	description
<code>nucindex</code>	integer (9.7.1.1.2)	Index into list of nuclei in <code>wall/compositions/nuclei</code> if the element is present there. Otherwise it is 0 and <code>zn</code> , <code>amn</code> and <code>label</code> have to be set.
<code>label</code>	string (9.7.1.1.3)	Element name/label
<code>zn</code>	float (9.7.1.1.1)	Nuclear charge [units of elementary charge];
<code>amn</code>	float (9.7.1.1.1)	Mass of atom [amu]

Type of: `wall:elements` (2600)

### 9.7.1.3.187 `entry_def`

Structure defining a database entry

member	type	description
<code>user</code>	string (9.7.1.1.3)	Name of the user if private data. Value should be ITM if stored in the official common ITM tree
<code>machine</code>	string (9.7.1.1.3)	Name of the device
<code>shot</code>	integer (9.7.1.1.2)	Shot number
<code>run</code>	integer (9.7.1.1.2)	Run number

Type of: `mdinfo.md_entry` (2812)

### 9.7.1.3.188 `enum_instance`

Specifies a specific enumerated instance of an object or process in term of its type, name and an index. E.g. the input could be the wave with `index=2`, selected from all waves launched by the antenna with `name=A2`, where the antenna is of `type=IC`.

member	type	description
<code>type</code>	identifier (9.7.1.3.235)	Identify the type of the object or process.
<code>name</code>	string (9.7.1.1.3)	The name of the object or process. Here the object should be an instans of the type specified in the field type.
<code>index</code>	integer (9.7.1.1.2)	Index the separating objects or processes with the same name.

Type of: `coherentwave:wave_id` (2629) `I distri_vec:source_id` (2716) `I distri_vec:wave_id` (2716) `I distsource_source:source_id` (2721)

### 9.7.1.3.189 `eqconstraint`

measurements to constrain the equilibrium, output values and accuracy of the fit

member	type	description
<code>bpol</code>	<code>eqmes1D</code> (9.7.1.3.192)	poloidal pickup coils [T]
<code>bvac_r</code>	<code>eqmes0D</code> (9.7.1.3.191)	Vacuum field times radius in the toroidal field magnet [T.m];
<code>diamagflux</code>	<code>eqmes0D</code> (9.7.1.3.191)	Diamagnetic flux [Wb], defined as integral ( $B_{tor} - B_{tor,vac}$ ) $dS$ where the integral is over the poloidal cross section of the plasma. It is measured by a single wire loop around the cross section of the torus (e.g. Wesson, Tokamaks, 1997, p.473). It gives information about the separation of the two source profiles $p'$ and $FF'$ of the Grad-Shafranov equation.
<code>faraday</code>	<code>eqmes1D</code> (9.7.1.3.192)	Faraday rotation angles [rad]
<code>flux</code>	<code>eqmes1D</code> (9.7.1.3.192)	Poloidal flux loops [Wb]
<code>i_plasma</code>	<code>eqmes0D</code> (9.7.1.3.191)	Plasma current [A];
<code>isoflux</code>	<code>isoflux</code> (9.7.1.3.241)	Point series at which the flux is considered the same
<code>jsurf</code>	<code>eqmes1D</code> (9.7.1.3.192)	Average of current density on the flux surface [ $A/m^2$ ]
<code>magnet_iron</code>	<code>magnet_iron</code> (9.7.1.3.259)	Magnetisation in iron segments [T]
<code>mse</code>	<code>eqmes1D</code> (9.7.1.3.192)	MSE angles [rad]
<code>ne</code>	<code>eqmes1D</code> (9.7.1.3.192)	Electron density [ $m^{-3}$ for local measurement, $m^{-2}$ if line integrated]
<code>pfccurrent</code>	<code>eqmes1D</code> (9.7.1.3.192)	Current in poloidal field coils [A]
<code>pressure</code>	<code>eqmes1D</code> (9.7.1.3.192)	Total pressure [Pa]

member	type	description
q	q (9.7.1.3.343)	Safety factor
xpts	xpts (9.7.1.3.508)	Position of the X-point(s)

Type of: equilibrium:eqconstraint (2570)

### 9.7.1.3.190 eqgeometry

Geometry of the plasma boundary

member	type	description
source	string (9.7.1.1.3)	Comment describing the origin of the eqgeometry data; String
boundarytype	integer (9.7.1.1.2)	0 (limiter) or 1 (separatrix); Integer; Time-dependent
boundary(:)	rz1Dexp (9.7.1.3.361)	RZ description of the plasma boundary; This is formally declared as an array of structure to allow for time-dependent size of the R and Z vectors in the sub-structure below. However, boundary must be allocated to size 1. Time-dependent;
geom.axis	rz0D (9.7.1.3.358)	RZ position of the geometric axis (defined as (Rmin+Rmax) / 2 and (Zmin+Zmax) / 2 of the boundary) [m]; Time-dependent; Scalar
a_minor	float (9.7.1.1.1)	Minor radius of the plasma boundary [m]; Time-dependent; Scalar
elongation	float (9.7.1.1.1)	Elongation of the plasma boundary; Time-dependent; Scalar
elong_upper	float (9.7.1.1.1)	Elongation upper of the plasma boundary; Time-dependent; Scalar
elong_lower	float (9.7.1.1.1)	Elongation lower of the plasma boundary; Time-dependent; Scalar
tria_upper	float (9.7.1.1.1)	Upper triangularity of the plasma boundary; Time-dependent; Scalar
tria_lower	float (9.7.1.1.1)	Lower triangularity of the plasma boundary; Time-dependent; Scalar
xpts(:)	rz1Dexp (9.7.1.3.361)	Position of the Xpoints, first is the active xpoint if diverted [m]; This is formally declared as an array of structure to allow for time-dependent size of the R and Z vectors in the sub-structure below. However, xpts must be allocated to size 1. Time-dependent;
left.low_st	rz0D (9.7.1.3.358)	Position of the lower left strike point [m]; Time-dependent; Scalar
right.low_st	rz0D (9.7.1.3.358)	Position of the lower right strike point [m]; Time-dependent; Scalar
left.up_st	rz0D (9.7.1.3.358)	Position of the upper left strike point [m]; Time-dependent; Scalar
right.up_st	rz0D (9.7.1.3.358)	Position of the upper right strike point [m]; Time-dependent; Scalar
active_limit	rz0D (9.7.1.3.358)	Position of the active limiter point (point of the plasma boundary in contact with the limiter) [m]; Set R = 0 for X-point plasma; Time-dependent; Scalar
ang_lcms_upo	float (9.7.1.1.1)	Angle at the LMCS X point upper outer; Time-dependent; Scalar
ang_lcms_upi	float (9.7.1.1.1)	Angle at the LMCS X point upper inner; Time-dependent; Scalar
ang_lcms_lwo	float (9.7.1.1.1)	Angle at the LMCS X point lower outer; Time-dependent; Scalar
ang_lcms_lwi	float (9.7.1.1.1)	Angle at the LMCS X point lower inner; Time-dependent; Scalar

Type of: equilibrium:eqgeometry (2570) I scenario:eqgeometry (2593)

### 9.7.1.3.191 eqmes0D

Structure for equilibrium measurement 0D signal

member	type	description
measured	float (9.7.1.1.1)	Measured value of the signal; Time-dependent; Scalar.
source	string (9.7.1.1.3)	Path to the source signal (diagnostic or genprof, from which to read all info on the signal); String
time	float (9.7.1.1.1)	Time (exact time slice used from the time array of the source signal. If the time slice does not exist in the time array of the source signal, it means linear interpolation has been used); Time-dependent; Scalar.
exact	integer (9.7.1.1.2)	1 means exact data, is not fitted; 0 means the equilibrium code does a least square fit; scalar integer
weight	float (9.7.1.1.1)	weight given to the measurement ( $\zeta=0$ ); Time-dependent; Scalar.
sigma	float (9.7.1.1.1)	standard deviation of the measurement; Time-dependent; Scalar.
calculated	float (9.7.1.1.1)	Signal as recalculated by the equilibrium code; Time-dependent; Scalar.
chi2	float (9.7.1.1.1)	chi <sup>2</sup> of (calculated-measured); Time-dependent; Scalar.

Type of: eqconstraint:bvac.r (2739) I eqconstraint:diamagflux (2739) I eqconstraint:i\_plasma (2739)

### 9.7.1.3.192 eqmes1D

Structure for equilibrium measurement 1D signal

member	type	description
measured	vecflt.type (9.7.1.2.13)	Measured value of the signal; Time-dependent; Array(nmeas)
source	string (9.7.1.1.3)	Path to the source signal (diagnostic or genprof, from which to read all info on the signal), e.g. 'magdiag/bpol.probes/measure/value'. String
time	float (9.7.1.1.1)	Exact time slice used from the time array of the source signal. If the time slice does not exist in the time array of the source signal, it means linear interpolation has been used); Time-dependent; Scalar
exact	vecint.type (9.7.1.2.14)	1 means exact data, is not fitted; 0 means the equilibrium code does a least square fit; Time-dependent; Array(nmeas)
weight	vecflt.type (9.7.1.2.13)	weight given to the measurement ( $\chi=0$ ); Time-dependent; Array(nmeas)
sigma	vecflt.type (9.7.1.2.13)	standard deviation of the measurement; Time-dependent; Array(nmeas)
calculated	vecflt.type (9.7.1.2.13)	Signal as recalculated by the equilibrium code; Time-dependent; Array(nmeas)
chi2	vecflt.type (9.7.1.2.13)	chi <sup>2</sup> of (calculated-measured); Time-dependent; Array(nmeas)

Type of: eqconstraint:bpol (2739) I eqconstraint:faraday (2739) I eqconstraint:flux (2739) I eqconstraint:jsurf (2739) I eqconstraint:mse (2739) I eqconstraint:ne (2739) I eqconstraint:pfcurent (2739) I eqconstraint:pressure (2739) I magnet\_iron:mr (2809) I magnet\_iron:mz (2809)

### 9.7.1.3.193 equatorial\_plane

Description of the equitorial plane or any other omnigeuous surfaces. Time-dependent

member	type	description
r	vecflt.type (9.7.1.2.13)	Major radius coordinate of the equitorial plane (m). Time-dependent; Vector(n_equitorial_grid)
z	vecflt.type (9.7.1.2.13)	Major radius coordinate of the equitorial plane (m). Time-dependent; Vector(n_equitorial_grid)
s	vecflt.type (9.7.1.2.13)	Distance along the poloidal projection of the equitorial plane (m). Here s=0 should be at the magnetic axis, s>0 on the low field side and s<0 on the high field side. For example, in up-down symmetric fields s=R-R0, where R is the major radius and R0 the major radius at the magnetic axis. Time-dependent; Vector(n_equitorial_grid)
rho.tor	vecflt.type (9.7.1.2.13)	Toroidal flux coordinate [m]. Defined as $\sqrt{(\phi-\phi_{axis})/\pi/B_0}$ , where B0 is the reference magnetic field, phi is the toroidal flux and phi.axis is the toroidal flux at the magnetic axis. Time-dependent; Vector (n_equitorial_grid)
psi	vecflt.type (9.7.1.2.13)	Poloidal flux [Wb], evaluated without 1/2pi and such that Bp= grad psi  /R/2/pi. Time-dependent; Vector (n_equitorial_grid)
b.mod	vecflt.type (9.7.1.2.13)	The modulus of the magnetic field along the equitorial plane, or more generally of the omnigeuous surfaces [T]. Time-dependent; Vector (n_equitorial_grid)

Type of: dist\_distrivec\_distfunc\_fexp\_param:equatorial (2694) I parameters:equatorial (2861)

### 9.7.1.3.194 equilibrium\_profiles2d\_grid

definition of the 2D grid

member	type	description
dim1	vecflt.type (9.7.1.2.13)	First dimension values; Time-dependent; Vector (ndim1)
dim2	vecflt.type (9.7.1.2.13)	Second dimension values; Time-dependent; Vector (ndim2)
connect	matint.type (9.7.1.2.11)	In case of a finite elemnt representation, lists the points (3 for triangles, 4 for quadrangles) which define a finite element. In this case, ndim1=ndim2 and the value of grid_connect represents the index of the points in the list 1:ndim. E.g. : grid_connect(i,1:4) is a list of four integers [k1 k2 k3 k4] meaning that finite element #i is defined by the points (dim1(k1),dim2(k1)),(dim1(k2),dim2(k2)),(dim1(k3),dim2(k3)) and (dim1(k4),dim2(k4)); Time-dependent; Matrix of integers (nelement,4)

Type of: equilibrium\_profiles\_2d:grid (2745)

### 9.7.1.3.195 equilibrium\_profiles\_2d

output profiles in the poloidal plane

member	type	description
grid.type	vecstring.type (9.7.1.2.15)	Selection of one of a set of grid types. 1-rectangular (R,Z) grid, in this case the position arrays should not be filled since they are redundant with grid/dim1 and dim2.
grid	equilibrium_profiles2d.grid (9.7.1.3.194)	definition of the 2D grid
r	matflt.type (9.7.1.2.10)	values of the major radius on the grid [m]; Time-dependent; Matrix (ndim1, ndim2)
z	matflt.type (9.7.1.2.10)	values of the altitude on the grid [m]; Time-dependent; Matrix (ndim1, ndim2)

member	type	description
psi	matflt.type (9.7.1.2.10)	values of the poloidal flux at the grid in the poloidal plane [Wb]; Time-dependent; Matrix (ndim1, ndim2)
theta	matflt.type (9.7.1.2.10)	values of the poloidal angle on the grid [rad]; Time-dependent; Matrix (ndim1, ndim2)
phi	matflt.type (9.7.1.2.10)	Toroidal flux [Wb]. Time-dependent; Matrix (ndim1, ndim2)
jphi	matflt.type (9.7.1.2.10)	toroidal plasma current density [A m <sup>-2</sup> ]; Time-dependent; Matrix (ndim1, ndim2)
jpar	matflt.type (9.7.1.2.10)	parallel (to magnetic field) plasma current density [A m <sup>-2</sup> ]; Time-dependent; Matrix (ndim1, ndim2)
br	matflt.type (9.7.1.2.10)	R component of the poloidal magnetic field at the specified grid [T]; Time-dependent; Matrix (ndim1, ndim2)
bz	matflt.type (9.7.1.2.10)	Z component of the poloidal magnetic field at the specified grid [T]; Time-dependent; Matrix (ndim1, ndim2)
bphi	matflt.type (9.7.1.2.10)	toroidal component of the magnetic field at the specified grid [T]; Time-dependent; Matrix (ndim1, ndim2)
vphi	matflt.type (9.7.1.2.10)	toroidal flow velocity [m/s]; Time-dependent; Matrix (ndim1, ndim2)
vtheta	matflt.type (9.7.1.2.10)	Poloidal flow velocity [m/s]; Time-dependent; Matrix (ndim1, ndim2)
rho.mass	matflt.type (9.7.1.2.10)	Mass density [kg/m <sup>3</sup> ]; Time-dependent; Matrix (ndim1, ndim2)
pressure	matflt.type (9.7.1.2.10)	Pressure [Pa]; Time-dependent; Matrix (ndim1, ndim2)
temperature	matflt.type (9.7.1.2.10)	Temperature [eV]; Time-dependent; Matrix (ndim1, ndim2)

Type of: equilibrium:profiles\_2d (2570)

### 9.7.1.3.196 exp0D

Structure for experimental time-dependent scalar signal

member	type	description
value	float (9.7.1.1.1)	Signal value; Time-dependent; Scalar
abserror	float (9.7.1.1.1)	Absolute error on signal; Time-dependent; Scalar
relerror	float (9.7.1.1.1)	Relative error on signal (normalised to signal value); Time-dependent; Scalar

Type of: antenna\_ec:power (2604) I antenna\_ic:frequency (2605) I antenna\_ic:power (2605) I antenna\_lh:power (2606) I distsource\_global\_param:src\_pow (2717) I distsource\_global\_param:src\_rate (2717) I fusiondiag\_ct\_chords:energy (2767) I fusiondiag\_spec1d:energy (2773) I fusiondiag\_spec2d:energy (2774) I magdiag:diamagener (2579) I magdiag:diamagflux (2579) I magdiag:ip (2579) I nbi\_unit:inj\_eng\_unit (2836) I nbi\_unit:pow\_unit (2836) I solcurdiag\_sol\_current:measure (2951) I straps:current (2966) I straps:phase (2966) I toroidfield:bvac\_r (2597) I toroidfield:current (2597)

### 9.7.1.3.197 exp1D

Structure for experimental 1D signal

member	type	description
value	vecflt.type (9.7.1.2.13)	Signal value; Time-dependent; Vector
abserror	vecflt.type (9.7.1.2.13)	Absolute error on signal; Time-dependent; Vector
relerror	vecflt.type (9.7.1.2.13)	Relative error on signal (normalised to signal value); Time-dependent; Vector

Type of: bpol\_probes:measure (2622) I coil:coilcurrent (2630) I coil:coilvoltage (2630) I current:spectrum (2680) I cxmeasure:ti (2681) I cxmeasure:vpol (2681) I cxmeasure:vtor (2681) I distsource\_profiles\_1d:pow\_den (2719) I distsource\_profiles\_1d:src\_rate (2719) I distsource\_profiles\_1d:trq\_den (2719) I ecmeasure:te (2724) I flux\_loops:measure (2754) I fusiondiag\_ct\_chords:measure (2767) I fusiondiag\_ct\_energy:energy (2768) I fusiondiag\_ct\_energy:measure (2768) I fusiondiag\_detect\_ct\_energy:energy (2769) I fusiondiag\_detect\_ct\_energy:measure (2769) I fusiondiag\_emissivity1d:r (2770) I fusiondiag\_emissivity1d:z (2770) I fusiondiag\_spec1d:measure (2773) I halpha\_setup:solidangle (2780) I halphadiag:intensity (2572) I lang\_derived:measure (2793) I lang\_measure:area (2794) I lang\_measure:measure (2794) I lineintegraldiag:measure (2804) I lithmeasure:ne (2805) I magnetise:mr (2810) I magnetise:mz (2810) I modules:amplitude (2825) I modules:phase (2825) I msediag\_radia\_chord:totradiance (2829) I msediag\_radiance:wavelength (2830) I nbi\_unit:beamcurfrac (2836) I nbi\_unit:beampowfrac (2836) I pccoils:coilcurrent (2872) I pccoils:coilvoltage (2872) I pfpactive\_current:poloidal (2877) I pfpactive\_current:toroidal (2877) I pfsupplies:current (2878) I pfsupplies:voltage (2878) I polarimetry:measure (2884) I rfmeasure:ti (2905) I rzphi1Dexp:phi (2916) I rzphi1Dexp:r (2916) I rzphi1Dexp:z (2916) I tsmeasure:ne (3017) I tsmeasure:te (3017)

### 9.7.1.3.198 exp2D

Structure for experimental 2D signal

member	type	description
value	matflt.type (9.7.1.2.10)	Signal value; Time-dependent; Matrix
abserror	matflt.type (9.7.1.2.10)	Absolute error on signal; Time-dependent; Matrix
relerror	matflt.type (9.7.1.2.10)	Relative error on signal (normalised to signal value); Time-dependent; Matrix

Type of: distsource\_profiles\_2d:pow\_den (2720) I distsource\_profiles\_2d:src\_rate (2720) I fusiondiag\_emissivity2d:r (2771) I fusiondiag\_emissivity2d:z (2771) I fusiondiag\_spec2d:measure (2774)

### 9.7.1.3.199 f\_expansion

Distribution function,  $f$ , expanded into a vector of successive approximations. The first element in the vector (`f_expansion(1)`) is the zeroth order distribution function, while the  $K$ :th element in the vector (`f_expansion(K)`) is the  $K$ :th correction, such that the total distribution function is a sum over all elements in the `f_expansion` vector. Time-dependent. Structure array(`Nf_expansion`)

member	type	description
grid	complexgrid (9.7.1.3.82)	Grid for storing the distribution function. Time-dependent; Complexgrid
values	complexgrid_scalar (9.7.1.3.87)	Values of the distribution function [ $m^{-3} (m/s)^{-3}$ ]. Time-dependent; Complexgrid_scalar.
parameters	dist_distribvec_distfunc_fexp_parameters (9.7.1.3.144)	Parameters used to defined the grid coordinates. Time-dependent

Type of: dist\_func:f\_expansion (2696)

### 9.7.1.3.200 fast\_thermal\_separation\_filter

Description of how the fast and the thermal particle populations were separated.

member	type	description
method	identifier (9.7.1.3.235)	Identifier describing the method used to separate the fast and thermal particle population (see <code>fast_thermal_separation_filter_identifier_definition</code> in the Documentation website under Conventions/Enumerated.datatypes)
energy_sep	vecflt.type (9.7.1.2.13)	Energy at which the fast and thermal particle populations were separated [eV]. Vector (nrho). Time-dependent.

Type of: corefast\_values:filter (2656) I distri\_vec:fast\_filter (2716)

### 9.7.1.3.201 filter

Laplace proper filter

member	type	description
num	matflt.type (9.7.1.2.10)	Coefficients of the numerator, in increasing order : $a_0 + a_1*s + \dots + a_n*s^n$ ; Matrix (nsupplies,n)
den	matflt.type (9.7.1.2.10)	Coefficients of the denominator, in increasing order : $b_0 + b_1*s + \dots + b_m*s^m$ ; Matrix (nsupplies,m)

Type of: desc\_supply:filter (2689)

### 9.7.1.3.202 flat\_polygon

Polygon lying on a flat surface on a 3D cartesian space ( $x,y,z$ ). The coordinate system on the surface is defined by the origin, "origin", and two basis vectors in ( $x,y,z$ ) space, "basis1" and "basis2". The polyon is then represented as the origin, plus a linear combination of the two basis vectors using `coord1` and `coord2`, i.e. the  $j$ :th point is described by "origin+basis1\*coord1(j)+basis2\*coord2(j)". As an example, a rectangle centered at the origin, with two of the corners given by "origin+basis1" and "origin+basis2" can be described using `coord1=[1,0,-1,0]` and `coord2=[0,1,0,-1]`. The normal vector of the surface is defined to be in the direction "basis1 x basis2".

member	type	description
origin	xyz0D (9.7.1.3.509)	Origin of the surface coordinate system.



member	type	description
basis1	xyz0D (9.7.1.3.509)	First basis vector on the surface.
basis2	xyz0D (9.7.1.3.509)	First basis vector on the surface.
coord1	vecflt.type (9.7.1.2.13)	First coordinate of the polygon points, conjugate to basis1.
coord2	vecflt.type (9.7.1.2.13)	Second coordinate of the polygon points, conjugate to basis2.

Type of: nbi\_nbi\_unit\_wall:collimator (2834)

### 9.7.1.3.203 flush

FLUSH package coefficients for the mapping of the equilibrium. The time grid of this structure is the same as the equilibrium structure above.

member	type	description
datainfo	datainfo (9.7.1.3.134)	Generic information on a data item
position	rz1D (9.7.1.3.359)	Major radius and altitude of the FLUSH grid [m]; Time-dependent; Vectors resp. (nR) and (nZ)
coef	matflt.type (9.7.1.2.10)	Coefficients of the fit; Time-dependent; Matrix 2D (nR,nZ)
codeparam	codeparam (9.7.1.3.77)	Code parameters

Type of: equilibrium:flush (2570)

### 9.7.1.3.204 flux\_loops

Poloidal flux loops RZ coordinates have 1 component for the full loop and two if there is a negative reference loop

member	type	description
setup_loops	setup_loops (9.7.1.3.395)	diagnostic setup information
measure	exp1D (9.7.1.3.197)	Measured flux [Wb]; Time-dependent; Vector (nloops)

Type of: magdiag:flux\_loops (2579)

### 9.7.1.3.205 fluxel

Structure for the fluxes of a field of the core transport equations (electrons); Time-dependent;

member	type	description
flux_dv	vecflt.type (9.7.1.2.13)	Flux of the field calculated from the transport coefficients. Time-dependent; Vector (nrho)
flux_interp	vecflt.type (9.7.1.2.13)	Interpretative flux deduced from measured data, the integral of the source term, and the time derivative of the field. Time-dependent; Vector (nrho)

Type of: corefield:flux (2657)

### 9.7.1.3.206 fluximp

Structure for the fluxes of a field of the core transport equations (impurities); Time-dependent;

member	type	description
flux_dv	matflt.type (9.7.1.2.10)	Flux of the field calculated from the transport coefficients. Time-dependent; Array2D (nrho,nzimp)
flux_interp	matflt.type (9.7.1.2.10)	Interpretative flux deduced from measured data, the integral of the source term, and the time derivative of the field. Time-dependent; Array2D (nrho,nzimp)

Type of: impurity\_type:flux (2788)

### 9.7.1.3.207 fluxion

Structure for the fluxes of a field of the core transport equations (ions); Time-dependent;

member	type	description
flux_dv	matflt.type (9.7.1.2.10)	Flux of the field calculated from the transport coefficients. Time-dependent; Matrix (nrho,nion)

member	type	description
flux_interp	matflt.type (9.7.1.2.10)	Interpretative flux deduced from measured data, the integral of the source term, and the time derivative of the field. Time-dependent; Matrix (nrho,nion)

Type of: corefieldion:flux (2658)

### 9.7.1.3.208 focussing

Describes how the beam is focussed.

member	type	description
focal_len_hz	float (9.7.1.1.1)	Horizontal focal length along the beam line, i.e. the point along the centre of the beamlet-group where the beamlet-group has its minimum horizontal width [m]. Scalar
focal_len_vc	float (9.7.1.1.1)	Vertical focal length along the beam line, i.e. the point along the centre of the beamlet-group where the beamlet-group has its minimum vertical width [m]. Scalar
width_min_hz	float (9.7.1.1.1)	The horizontal width of the beamlet-group at the at the horizontal focal point [m]. Scalar
width_min_vc	float (9.7.1.1.1)	The vertical width of the beamlet-group at the at the vertical focal point [m]. Scalar

Type of: beamletgroup:focussing (2614)

### 9.7.1.3.209 fullwave

Solution by full wave code

member	type	description
grid	complexgrid (9.7.1.3.82)	Grid for storing the components of the wave field; Time-dependent
e_components	e_components (9.7.1.3.173)	E-field representation in terms of the parallel and circularly polarised components
pol_decomp	pol_decomp (9.7.1.3.333)	TO BE REMOVED, being replaced by e_components and grid. Kept only to make smooth transition between data-type versions. [Poloidal decomposition of the wave fields. Uses the flux surface grid in grid_1d.]
local	local (9.7.1.3.257)	TO BE REMOVED, being replaced by e_components and grid. Kept only to make smooth transition between data-type versions. [Local description of the wave fields. Uses the grid in grid_2d].

Type of: coherentwave:fullwave (2629)

### 9.7.1.3.210 fusiondiag\_colli\_3d

Geometry of each channel of detector for arbitrary cross section. Replicate this structure for each channel.

member	type	description
name	string (9.7.1.1.3)	Name tag for the chord. String.
voxels(:)	fusiondiag_voxels (9.7.1.3.225)	Array of voxel structures defining the plasma region viewed from each collimator and scaling factor for effective solid angle for sources.

Type of: fusiondiag\_collimator:colli\_3d (2763)

### 9.7.1.3.211 fusiondiag\_colli\_circ

Geometry of each channel of detector for circular cross section. Replicate this structure for each channel.

member	type	description
name	string (9.7.1.1.3)	Name tag for the chord.
setup_line	setup_line (9.7.1.3.396)	Geometric description of the line of sight. First pivot close to detector position and second pivot at first wall hit.
collunit(:)	fusiondiag_collunit_circ (9.7.1.3.214)	Detail of each collimator unit of each chord. Replicate this structure for each collimator.

Type of: fusiondiag\_collimator:colli\_circ (2763)

### 9.7.1.3.212 fusiondiag\_colli\_poly

Geometry of each channel of detector for polygon cross section. Replicate this structure for each channel.

member	type	description
name	string (9.7.1.1.3)	Name tag for the chord.
setup_line	setup_line (9.7.1.3.396)	Geometric description of the line of sight. First pivot close to detector position and second pivot at first wall hit.
colliunit(:)	fusiondiag_colliunit_poly (9.7.1.3.215)	Detail of each collimator unit of each chord. Replicate this structure for each collimator.

Type of: fusiondiag\_collimator:colli\_poly (2763)

### 9.7.1.3.213 fusiondiag\_collimator

Collimator array.

member	type	description
colli_circ(:)	fusiondiag_colli_circ (9.7.1.3.211)	Geometry of each channel of detector for circular cross section. Replicate this structure for each channel.
colli_poly(:)	fusiondiag_colli_poly (9.7.1.3.212)	Geometry of each channel of detector for polygon cross section. Replicate this structure for each channel.
colli_3d(:)	fusiondiag_colli_3d (9.7.1.3.210)	Geometry of each channel of detector for arbitrary cross section. Replicate this structure for each channel.

Type of: fusiondiag\_fus\_product:collimator (2772)

### 9.7.1.3.214 fusiondiag\_colliunit\_circ

Detail of each collimator unit of each chord. Replicate this structure for each collimator.

member	type	description
radius	vecflt_type (9.7.1.2.13)	Radius of cross section; Typically dim=2 for just entry and exit of collimator; Vector (dim)
centre	rzphi1D (9.7.1.3.365)	Position of cross section centre; Typically dim=2 for just entry and exit of collimator; Vector (dim)

Type of: fusiondiag\_colli\_circ:colliunit (2761)

### 9.7.1.3.215 fusiondiag\_colliunit\_poly

Detail of each collimator unit of each chord. Replicate this structure for each collimator.

member	type	description
dimension	float (9.7.1.1.1)	Number of edges of cross section.
nodes	rzphi2D (9.7.1.3.368)	Coordinates of nodes defining each cross section; Typically dim=2 for just entry and exit of collimator; Vector (dim,nnodes)

Type of: fusiondiag\_colli\_poly:colliunit (2762)

### 9.7.1.3.216 fusiondiag\_counts

Integrated emissivity [ $s^{-1}$ ].

member	type	description
units	string (9.7.1.1.3)	Energy units (ev, tof - time of flight)
ct_chords(:)	fusiondiag_ct_chords (9.7.1.3.217)	Integrated emissivity for all spatial chords. Replicate the structure for each energy bin [ $s^{-1}$ ]. Time-dependent
ct_energy(:)	fusiondiag_ct_energy (9.7.1.3.218)	Integrated emissivity for each chord as function of energy like variable. Replicate this structure for each chord [ $s^{-1}$ ]. Time-dependent
detect_ct(:)	fusiondiag_detect_ct_energy (9.7.1.3.219)	Detected integrated emissivity for each chord as function of energy like variable. Replicate this structure for each chord. This structure contains the actual experimental data as obtained from the detector. To get from species emissivity to the detector counts a detector transfer matrix is used (should be shot independent) since a monoenergetic beam will ultimately show up with a given spread in the detector channels. Each detector type or l.o.s. might have a dedicated detector transfer matrix since the energy discrimination can vary. [ $s^{-1}$ ]. Time-dependent

Type of: fusiondiag\_fus\_product:counts (2772)

### 9.7.1.3.217 fusiondiag\_ct\_chords

Integrated emissivity for all spatial chords. Replicate the structure for each energy bin [s<sup>-1</sup>].

member	type	description
name	vecstring_type (9.7.1.2.15)	Name tag for each chord. Vector (nchords)
energy	exp0D (9.7.1.3.196)	Energy like variable span. Use minimum energy when no energy spectra is resolved.
measure	exp1D (9.7.1.3.197)	Measured counts. Vector (nchords)

Type of: fusiondiag\_counts:ct\_chords (2766)

### 9.7.1.3.218 fusiondiag\_ct\_energy

Integrated emissivity for each chord as function of energy like variable. Replicate this structure for each chord [s<sup>-1</sup>].

member	type	description
energy	exp1D (9.7.1.3.197)	Energy array of detected counts spectra. Vector (nenergy)
measure	exp1D (9.7.1.3.197)	Measured counts spectra. Vector (nenergy)

Type of: fusiondiag\_counts:ct\_energy (2766)

### 9.7.1.3.219 fusiondiag\_detect\_ct\_energy

Detected integrated emissivity for each chord as function of energy like variable. Replicate this structure for each chord. This structure contains the actual experimental data as obtained from the detector. To get from species emissivity to the detector counts a detector transfer matrix is used (should be shot independent) since a monoenergetic beam will ultimately show up with a given spread in the detector channels. Each detector type or l.o.s. might have a dedicated detector transfer matrix since the energy discrimination can vary. [s<sup>-1</sup>].

member	type	description
energy	exp1D (9.7.1.3.197)	Energy array of detected counts spectra. Vector (nenergy)
measure	exp1D (9.7.1.3.197)	Measured counts spectra. Vector (nenergy)
diag_func	diag_func (9.7.1.3.140)	Structure to provide the description on the detector used and store the transfer matrix of the detector for that l.o.s.

Type of: fusiondiag\_counts:detect\_ct (2766)

### 9.7.1.3.220 fusiondiag\_emissivity1d

Reconstructed 1D emissivity [counts.m<sup>-3</sup>.s<sup>-1</sup>].

member	type	description
units	string (9.7.1.1.3)	Energy units (ev, tof - time of flight)
r	exp1D (9.7.1.3.197)	horizontal grid. Vector (dim)
z	exp1D (9.7.1.3.197)	vertical grid. Vector (dim)
spec1d(:)	fusiondiag_spec1d (9.7.1.3.223)	Emissivity in given energy like variable range [counts.m <sup>-3</sup> .s <sup>-1</sup> ]; Time-dependent

Type of: fusiondiag\_fus\_product:emissivity1d (2772)

### 9.7.1.3.221 fusiondiag\_emissivity2d

Reconstructed 2D emissivity [counts.m<sup>-3</sup>.s<sup>-1</sup>].

member	type	description
units	string (9.7.1.1.3)	Energy units (ev, tof - time of flight)
r	exp2D (9.7.1.3.198)	radial grid. Vector (dim1,dim2)
z	exp2D (9.7.1.3.198)	vertical grid. Vector (dim1,dim2)

member	type	description
spec2d(-)	fusiondiag_spec2d (9.7.1.3.224)	Emissivity in given energy like variable range [counts.m <sup>-3</sup> .s <sup>-1</sup> ]; Time-dependent

Type of: fusiondiag\_fus\_product:emissivity2d (2772)

### 9.7.1.3.222 fusiondiag\_fus\_product

Source. Time-dependent. Structure array. Replicate this source structure to accommodate neutron and gammas.

member	type	description
product	string (9.7.1.1.3)	Type of fusion product (neutron,gamma)
reaction	string (9.7.1.1.3)	Type of reaction involved (e.g. DD neutron, Be-alpha,n,gamma-C)
collimator	fusiondiag_collimator (9.7.1.3.213)	Collimator array.
counts	fusiondiag_counts (9.7.1.3.216)	Integrated emissivity [s <sup>-1</sup> ].
emissivity1d	fusiondiag_emissivity1d (9.7.1.3.220)	Reconstructed 1D emissivity [counts.m <sup>-3</sup> .s <sup>-1</sup> ].
emissivity2d	fusiondiag_emissivity2d (9.7.1.3.221)	Reconstructed 2D emissivity [counts.m <sup>-3</sup> .s <sup>-1</sup> ].
codeparam	codeparam (9.7.1.3.77)	Code parameters

Type of: fusiondiag\_fus\_product (2571)

### 9.7.1.3.223 fusiondiag\_spec1d

Emissivity in given energy like variable range [counts.m<sup>-3</sup>.s<sup>-1</sup>].

member	type	description
energy	exp0D (9.7.1.3.196)	Energy like variable span. Use minimum energy when no energy spectra is resolved. Scalar
measure	exp1D (9.7.1.3.197)	reconstruction. Vector (dim)

Type of: fusiondiag\_emissivity1d:spec1d (2770)

### 9.7.1.3.224 fusiondiag\_spec2d

Emissivity in given energy like variable range [counts.m<sup>-3</sup>.s<sup>-1</sup>].

member	type	description
energy	exp0D (9.7.1.3.196)	Energy like variable span. Use minimum energy when no energy spectra is resolved. Scalar
measure	exp2D (9.7.1.3.198)	reconstruction. Vector (dim1,dim2)

Type of: fusiondiag\_emissivity2d:spec2d (2771)

### 9.7.1.3.225 fusiondiag\_voxels

Array of voxel structures defining the plasma region viewed from each collimator and scaling factor for effective solid angle for sources.

member	type	description
centre	rzphi0D (9.7.1.3.364)	Centre of voxel; used also as origin of direction to detector
direction	rzphi0D (9.7.1.3.364)	Second point defining the direction to detector.
volume	float (9.7.1.1.1)	Voxel Volume
solid_angle	float (9.7.1.1.1)	effective solid angle (divided by 4pi) of the voxel towards detector.

Type of: fusiondiag\_colli\_3d:voxels (2760)

### 9.7.1.3.226 geom

Geometry between components

member	type	description
dr_bb_sh_ib	float (9.7.1.1.1)	Gap between the breeding blanket module and the shield (inboard) in the equatorial section [m]; Scalar
dr_sh_vv_ib	float (9.7.1.1.1)	Gap between the shield and the vacuum vessel (inboard) in the equatorial section [m]; Scalar
dr_bb_sh_ob	float (9.7.1.1.1)	Gap between the breeding blanket module and the shield (outboard) in the equatorial section [m]; Scalar
dr_sh_vv_ob	float (9.7.1.1.1)	Gap between the shield and the vacuum vessel (outboard) in the equatorial section [m]; Scalar
dr_bb_sh_ib	float (9.7.1.1.1)	Overall radial dimension of the ensemble BB plus shield (inboard) [m]; Scalar
dr_bb_sh_ob	float (9.7.1.1.1)	Overall radial dimension of the ensemble BB plus shield (outboard) [m]; Scalar
delta_int	float (9.7.1.1.1)	Distance between the inner plasma surface and the plasma facing side of the superconducting winding of the toroidal field coil [m]; Scalar

Type of: bb\_shield:geom (2555)

### 9.7.1.3.227 geom\_iron

Geometry of the iron segments

member	type	description
npoints	vecint.type (9.7.1.2.14)	Number of points describing an element (irregular outline rzcoordinate); Vector (nsegment)
rzcoordinate	rz2D (9.7.1.3.362)	Irregular outline [m]; 2D arrays (nsegment,max_npoints)

Type of: desc\_iron:geom\_iron (2687)

### 9.7.1.3.228 global\_param

0d output parameters

member	type	description
beta_pol	float (9.7.1.1.1)	poloidal beta; Time-dependent; Scalar
beta_tor	float (9.7.1.1.1)	toroidal beta; Time-dependent; Scalar
beta_normal	float (9.7.1.1.1)	normalised beta; Time-dependent; Scalar
i_plasma	float (9.7.1.1.1)	total toroidal plasma current [A]; Positive sign means anti-clockwise when viewed from above. Time-dependent; Scalar
li	float (9.7.1.1.1)	internal inductance; Time-dependent; Scalar
volume	float (9.7.1.1.1)	total plasma volume [m <sup>3</sup> ]; Time-dependent; Scalar
area	float (9.7.1.1.1)	area poloidal cross section [m <sup>2</sup> ]; Time-dependent; Scalar
psi_ax	float (9.7.1.1.1)	poloidal flux at the magnetic axis [Wb]; Time-dependent; Scalar
psi_bound	float (9.7.1.1.1)	poloidal flux at the selected plasma boundary (separatrix for a free boundary code; fixed boundary for fixed boundary code) [Wb]; Time-dependent; Scalar
mag_axis	mag_axis (9.7.1.3.258)	Magnetic axis values
q_95	float (9.7.1.1.1)	q at the 95% poloidal flux surface; Time-dependent; Scalar
q_min	float (9.7.1.1.1)	minimum q value in the plasma; Time-dependent; Scalar
toroid_field	b0r0 (9.7.1.3.59)	Characteristics of the vacuum toroidal field, redundant with the toroidfield CPO, to be used by the ETS
w_mhd	float (9.7.1.1.1)	Plasma energy content = 3/2 * int(p,dV) with p being the total pressure (thermal + fast particles) [J]. Time-dependent; Scalar
gamma	float (9.7.1.1.1)	Adiabatic index. Time-dependent; Scalar

Type of: equilibrium:global\_param (2570)

### 9.7.1.3.229 globalparam

Various global quantities calculated from the 1D profiles. Time-dependent

member	type	description
current_tot	float (9.7.1.1.1)	Total plasma current [A]; Time-dependent; Scalar
current_bnd	float (9.7.1.1.1)	Plasma current inside transport solver boundary rho_tor_bnd [A]; Time-dependent; Scalar
current_ni	float (9.7.1.1.1)	Total non-inductive parallel current [A]; Time-dependent; Scalar
vloop	float (9.7.1.1.1)	Toroidal loop voltage [V]; Time-dependent; Scalar
li	float (9.7.1.1.1)	Internal inductance; Time-dependent; Scalar
beta_tor	float (9.7.1.1.1)	toroidal beta; Time-dependent; Scalar
beta_normal	float (9.7.1.1.1)	normalised beta; Time-dependent; Scalar

member	type	description
beta_pol	float (9.7.1.1.1)	poloidal beta; Time-dependent; Scalar
w_dia	float (9.7.1.1.1)	Plasma energy content = $3/2 * \int(p,dV)$ with p being the total pressure (pr.th + pr.perp). Time-dependent; Scalar
geom.axis	rz0D (9.7.1.3.358)	RZ position of the geometric axis (defined as (Rmin+Rmax) / 2 and (Zmin+Zmax) / 2 of the boundary) [m]; Time-dependent; Scalar

Type of: coreprof:globalparam (2561)

### 9.7.1.3.230 halpha\_setup

setup for the lines of sight of the line integrated measurement

member	type	description
name	vecstring.type (9.7.1.2.15)	Name of the channel. Array of strings (nlos).
pivot.point	rzphi1D (9.7.1.3.365)	Pivot point of l.o.s. it can be either the collimator position or entry point on the vessel. Vector (nlos)
horchordang	vecflt.type (9.7.1.2.13)	Angle [rad] of horizontal projection of l.o.s. with poloidal cross section (0 for HFS to LFS trajectory - see Convention_angles.interfdiag.pdf) [rad]. Vector (nlos)
verchordang	vecflt.type (9.7.1.2.13)	Angle of l.o.s. with vertical axis (0 for bottom-top trajectory, Pi for top-bottom trajectory - see Convention_angles.interfdiag.pdf) [rad]; Vector (npos)
second.point	rzphi1D (9.7.1.3.365)	Second point defining the l.o.s. together with the pivot.point. Vector (nlos)
solidangle	exp1D (9.7.1.3.197)	Solid angle of the detector; [sr] Vector (nlos)

Type of: halphadiag:setup (2572)

### 9.7.1.3.231 hcll

Data specific to HCLL blanket concept

member	type	description
mat_lim	mat_lim (9.7.1.3.261)	Material limits specific to HCLL breeding blanket
hcll.bb	hcll.bb (9.7.1.3.232)	HCLL breeding blanket. Radially, the blanket is divided in 4 layers: 1: First Wall, 2: breeder zone, 3: back plates, 4: manifolds

Type of: bb\_shield:hcll (2555)

### 9.7.1.3.232 hcll\_bb

HCLL breeding blanket. Radially, the blanket is divided in 4 layers: 1: First Wall, 2: breeder zone, 3: back plates, 4: manifolds

member	type	description
bb_lifetime	float (9.7.1.1.1)	Breeding blanket lifetime [years]; Scalar
he_inl.t	float (9.7.1.1.1)	Inlet temperature (to the bb module) [K]; Scalar
he_fr	float (9.7.1.1.1)	Coolant mass flow rate in "the" reference bb module (or in each module) [Kg/s];
he_inl.p	float (9.7.1.1.1)	Helium inlet pressure [Pa]; Scalar
loca_des.p	float (9.7.1.1.1)	Box design pressure (coincident He circuit design pressure) [Pa]; Scalar
he_dp	float (9.7.1.1.1)	Coolant pressure drops in the breeding blankets [Pa]; Scalar
lipb_dp	float (9.7.1.1.1)	Pb-15.7Li pressure drops in the bb [Pa]; Scalar
react	react (9.7.1.3.345)	In the reactor region
inboard	hcllbb_specs (9.7.1.3.233)	Inboard
outboard	hcllbb_specs (9.7.1.3.233)	Outboard

Type of: hcll:hcll\_bb (2781)

### 9.7.1.3.233 hcllbb\_specs

Inboard

member	type	description
mass	vecflt.type (9.7.1.2.13)	Mass of inboard or outboard breeding blanket modules (located at equatorial midplane if only one considered) [Kg]; Vector(nmodules)



member	type	description
dr	vecflt.type (9.7.1.2.13)	Inboard or outboard breeding blanket radial build giving the thickness of each layer [m]; Vector(nlayers)
mat	vecflt.type (9.7.1.2.13)	Inboard or outboard breeding blanket materials; Vector(nlayers)
composition	matflt.type (9.7.1.2.10)	Inboard or outboard breeding blanket radial build giving for each layer (1: First Wall protective layer, 2: First Wall, 3 : breeder zone, 4 : back plates, 5 : manifolds), the percentage of each material respectively (Meaning of the material index 1: Eurofer, 2: Pb-15.7Li, 3: He, 4: Water, 5: Tungsten Carbide, 6: Boron, 7: Tungsten, 8: Stainless Steel 316) in %vol; Matrix(nlayers(=5), max_nmaterials)
mod_geom	bb_geometry (9.7.1.3.62)	Geometrical parameters of "the" reference region blanket module
mod_neutr	mode_neutr (9.7.1.3.271)	Neutrons "effects"
mod_therm	mode_therm (9.7.1.3.273)	Thermal parameters
mod_th_hyd	mode_th_hyd (9.7.1.3.272)	hydrodynamics parameters
mod_mech	mode_mech (9.7.1.3.270)	Mechanical parameters
mod_lipb	mode_lipb (9.7.1.3.269)	Pb-15.7Li "effects"
mod_tritium	mode_tritium (9.7.1.3.274)	Tritium parameters

Type of: hcll\_bb:inboard (2782) | hcll\_bb:outboard (2782)

### 9.7.1.3.234 holes

Structure to describe the placing and properties of the holes

member	type	description
n_holes	integer (9.7.1.1.2)	Number of holes on each wall;
coordinates	coordinates (9.7.1.3.102)	Poloidal and Toroidal coordinates of the center of each hole;
width	width (9.7.1.3.507)	Angular width of each in the poloidal and toroidal direction;
eta	vecflt.type (9.7.1.2.13)	Resistivity of each hole [ohm.m]; Vector (n_holes)

Type of: mhd\_res\_wall2d:holes (2816)

### 9.7.1.3.235 identifier

Standard type for identifiers. The three fields: id, flag and description are all representations of the same information. Associated with each application of this identifier-type, there should be a translation table defining the three fields for all objects to be identified.

member	type	description
id	string (9.7.1.1.3)	Short string identifier
flag	integer (9.7.1.1.2)	Integer identifier
description	string (9.7.1.1.3)	Verbose description of identifier

Type of: amns\_processType:quality (2603) | composition\_neutralscomp:type (2648) | compositions\_type:signature (2649) | coredelta\_values:deltaid (2654) | corefast\_values:fastid (2656) | coreneutrals\_atomlist:ionimptype (2671) | coresource\_values:sourceid (2675) | coretransp\_values:transportid (2679) | dist\_sources\_reference:type (2711) | enum\_instance:type (2738) | fast\_thermal\_separation\_filter:method (2750) | mhd\_ideal\_wall2d:walltype (2813) | mhd\_res\_wall2d:walltype (2816) | msediag\_polarization:type (2828) | msediag\_stokes:type (2833) | pellet\_shape:type (2869) | reacprodType:role (2894) | reflectometry\_antennas:type (2900) | reflectometry\_radfield:type (2901) | simp\_apert:type (2950) | species\_reference:type (2961) | table:quality (2970) | temporary\_nt\_0dc:identifier (2974) | temporary\_nt\_0di:identifier (2975) | temporary\_nt\_0dr:identifier (2976) | temporary\_nt\_0ds:identifier (2977) | temporary\_nt\_1dc:identifier (2978) | temporary\_nt\_1di:identifier (2979) | temporary\_nt\_1dr:identifier (2980) | temporary\_nt\_1ds:identifier (2981) | temporary\_nt\_2dc:identifier (2982) | temporary\_nt\_2di:identifier (2983) | temporary\_nt\_2dr:identifier (2984) | temporary\_nt\_3dc:identifier (2985) | temporary\_nt\_3di:identifier (2986) | temporary\_nt\_3dr:identifier (2987) | temporary\_nt\_4dr:identifier (2988) | temporary\_t\_0dc:identifier (2990) | temporary\_t\_0di:identifier (2991) | temporary\_t\_0dr:identifier (2992) | temporary\_t\_0ds:identifier (2993) | temporary\_t\_1dc:identifier (2994) | temporary\_t\_1di:identifier (2995) | temporary\_t\_1dr:identifier (2996) | temporary\_t\_2dc:identifier (2997) | temporary\_t\_2di:identifier (2998) | temporary\_t\_2dr:identifier (2999) | temporary\_t\_3dc:identifier (3000) | temporary\_t\_3di:identifier (3001) | temporary\_t\_3dr:identifier (3002) | temporary\_t\_4dr:identifier (3003) | trap\_type:trap\_id (3015) | wall2d:wall\_id (3031) | wall3d:wall\_id (3033) | wall\_limiter:limiter\_id (3036) | wall\_vessel:vessel\_id (3041) | weighted\_markers:variable\_ids (3055)

### 9.7.1.3.236 impcoeff

Array over charge states for this particular impurity.

member	type	description
chargestate(:)	coefficients_neutrals (9.7.1.3.78)	Time-dependent

Type of: coreneutrals:impcoeff (2560)

### 9.7.1.3.237 impurities

Array of impurities.

member	type	description
nucindex	integer (9.7.1.1.2)	Index into list of nuclei; int
i_ion	integer (9.7.1.1.2)	Index of the impurity species in the ions array of structures. Vector (nimp)
nzimp	integer (9.7.1.1.2)	Number of charge states (or bundles) considered for this impurity species.
zmin	vecflt.type (9.7.1.2.13)	Minimum Z of impurity ionisation state bundle. Vector (nzimp)
zmax	vecflt.type (9.7.1.2.13)	Maximum Z of impurity ionisation state bundle. If no bundle, zmax=zmin. Vector (nzimp)
label	vecstring.type (9.7.1.2.15)	String array (nzimp) identifying impurities (e.g. C+, C+2, C+3, C+4, C+5, C+6, ...)

Type of: compositions.type:impurities (2649)

### 9.7.1.3.238 impurity\_type

Array(nimp). Time-dependent

member	type	description
z	matflt.type (9.7.1.2.10)	Impurity ionisation state (averaged for bundle); Time-dependent; Array2D (nrho,nzimp)
zsq	matflt.type (9.7.1.2.10)	Z <sup>2</sup> , Square of impurity ionisation state (averaged for bundle); Time-dependent; Array2D (nrho,nzimp)
nz	matflt.type (9.7.1.2.10)	Density of impurity in a given charge state [m <sup>-3</sup> ]. Time-dependent; Array2D (nrho,nzimp)
tz	matflt.type (9.7.1.2.10)	Temperature of impurity in a given charge state [m <sup>-3</sup> ]. Time-dependent; Array2D (nrho,nzimp)
source_term	sourceimp (9.7.1.3.408)	Source term for each charge state. Time-dependent.
boundary	boundaryimp (9.7.1.3.70)	Boundary condition for each charge state. Time-dependent
transp_coef	coretransimp (9.7.1.3.127)	Transport coefficients for each charge state
flux	fluximp (9.7.1.3.206)	Fluxes of impurity particles, two definitions [m <sup>-2</sup> .s <sup>-1</sup> ]. Time-dependent.
time_deriv	matflt.type (9.7.1.2.10)	Integral of the time derivative term of the transport equation. Time-dependent. Array2D (nrho,nzimp)
diagnostic	coreimpurediag.type (9.7.1.3.118)	NO DOCS

Type of: coreimpur:impurity (2559)

### 9.7.1.3.239 inj\_spec

Injected species

member	type	description
amn	float (9.7.1.1.1)	Atomic mass number
zn	float (9.7.1.1.1)	Nuclear charge

Type of: nbi\_unit:inj\_spec (2836)

### 9.7.1.3.240 ions

Array of main plasma ions.

member	type	description
nucindex	integer (9.7.1.1.2)	Index into list of nuclei; int
zion	float (9.7.1.1.1)	Ion charge (of the dominant ionisation state; lumped ions are allowed); Vector (nion)

member	type	description
imp_flag	integer (9.7.1.1.2)	Multiple charge state calculation flag : 0-Only one charge state is considered; 1-Multiple charge state are considered and are described in impurity CPO; Vector (nion)
label	string (9.7.1.1.3)	String identifying ion (e.g. H+, D+, T+, He+2, C+, ...)

Type of: compositions\_type:ions (2649)

### 9.7.1.3.241 isoflux

Point series at which the flux is considered the same

member	type	description
position	rz1D (9.7.1.3.359)	Position of the points at which the flux is considered the same; Time-dependent; Vector (nmeas)
source	string (9.7.1.1.3)	Description or path to the source signal (diagnostic or genprof, from which to read all info on the signal), e.g. 'magdiag/bpol_probes/measure/value'. String
weight	vecflt_type (9.7.1.2.13)	weight given to the measurement ( $\zeta=0$ ); -1 if exact data; Time-dependent; Vector (nmeas)
sigma	vecflt_type (9.7.1.2.13)	standard deviation of the measurement; Time-dependent; Vector (nmeas)
calculated	vecflt_type (9.7.1.2.13)	Signal as recalculated by the equilibrium code; Time-dependent; Vector (nmeas)
chi2	vecflt_type (9.7.1.2.13)	chi <sup>2</sup> of (calculated-measured); Time-dependent; Vector (nmeas)

Type of: eqconstraint:isoflux (2739)

### 9.7.1.3.242 jni

Non-inductive parallel current density [A/m<sup>2</sup>]; Time-dependent;

member	type	description
value	vecflt_type (9.7.1.2.13)	Value of jni; Time-dependent; Vector (nrho)
integral	vecflt_type (9.7.1.2.13)	Integral from 0 to rho of jni. Time-dependent; Vector (nrho)
source	string (9.7.1.1.3)	Source of the profile (any comment describing the origin of the profile : code, path to diagnostic signals, massaging, ...); String

Type of: psi:jni (2891)

### 9.7.1.3.243 lang\_derived

Structure for physics quantities derived from Langmuir probe measurements

member	type	description
source	vecstring_type (9.7.1.2.15)	Probes in probe holder used to derive measure. String vector
position	rzphi1Dexp (9.7.1.3.366)	Position of the measurement. Time-dependent.
measure	expID (9.7.1.3.197)	Measured quantity. Time-dependent.

Type of: langmuirdiag:machpar (2576) I langmuirdiag:ne (2576) I langmuirdiag:te (2576)

### 9.7.1.3.244 lang\_measure

Structure for elementary Langmuir probe measurement

member	type	description
name	vecstring_type (9.7.1.2.15)	Name of the probe e.g. Jsatur1,Vfloat1). String vector
direction	vecstring_type (9.7.1.2.15)	Direction of the probe w.r.t. magnetic field. For Mach arrangement use 'co' (co-field) and 'ct' (counter field) for the pair, otherwise use 'both'. String vector
area	expID (9.7.1.3.197)	Effective area of probe [m <sup>2</sup> ]. Time-dependent.
position	rzphi1Dexp (9.7.1.3.366)	Position of the measurement. Time-dependent.
measure	expID (9.7.1.3.197)	Measured quantity. Time-dependent.

Type of: langmuirdiag:bias (2576) I langmuirdiag:jsat (2576) I langmuirdiag:potential (2576)

### 9.7.1.3.245 launchangles

Launching angles of the beam

member	type	description
alpha	float (9.7.1.1.1)	Poloidal launching angle between the horizontal plane and the poloidal component of the nominal beam centerline [rad], $\tan(\alpha)=-k_z/k_R$ ; Time-dependent
beta	float (9.7.1.1.1)	Toroidal launching angle between the poloidal plane and the nominal beam centerline [rad], $\sin(\beta)=k_\phi$ ; Time-dependent

Type of: antenna\_ec:launchangles (2604)

### 9.7.1.3.246 launches\_parallel

Power spectrum as a function of the parallel refractive index.

member	type	description
nn.par	vecint.type (9.7.1.2.14)	Number of points for the discretization of the spectrum in the poloidal direction, Vector of integers (nantenna).
n.par	matflt.type (9.7.1.2.10)	Refraction index in the parallel direction, Matrix (nantenna,max_nn_par).
power	vecflt.type (9.7.1.2.13)	$W/dN_{par}$ [W], Matrix(nantenna, max_nn_par). Time-dependent

Type of: spectrum:parallel (2963)

### 9.7.1.3.247 launches\_phi\_theta

Power spectrum as a function of the refractive index in the toroidal and poloidal directions.

member	type	description
nn.phi	vecint.type (9.7.1.2.14)	Number of points for the discretization of the spectrum in the toroidal direction, Vector of integers (nantenna).
nn.theta	vecint.type (9.7.1.2.14)	Number of points for the discretization of the spectrum in the poloidal direction, Vector of integers (nantenna).
n.phi	matflt.type (9.7.1.2.10)	Refraction index in the toroidal direction, Matrix (nantenna,max_nn_phi).
n.theta	matflt.type (9.7.1.2.10)	Refraction index in poloidal direction, Matrix (nantenna,max_nn_theta).
power	array3dfilt.type (9.7.1.2.2)	$W/dN_\phi/dN_\theta$ [W], Array (nantenna, max_nn_phi, max_nn_theta). Time-dependent

Type of: spectrum:phi\_theta (2963)

### 9.7.1.3.248 launches\_rfbeam

Beam characteristics (RF wave description)

member	type	description
spot	launchs_rfbeam.spot (9.7.1.3.250)	Spot characteristics
phaseellipse	launchs_rfbeam.phaseellipse (9.7.1.3.249)	Phase ellipse characteristics of the spot

Type of: launchs:beam (2577)

### 9.7.1.3.249 launches\_rfbeam\_phaseellipse

Phase ellipse characteristics of the spot

member	type	description
invcurvrad	matflt.type (9.7.1.2.10)	Inverse curvature radii for the phase ellipse [m-1], Matrix (nantenna,2). Time-dependent
angle	vecflt.type (9.7.1.2.13)	Rotation angle for the phase ellipse [rd], Vector(nantenna). Time-dependent

Type of: launchs\_rfbeam:phaseellipse (2798)

### 9.7.1.3.250 launches\_rfbeam\_spot

Spot characteristics

member	type	description
waist	matflt.type (9.7.1.2.10)	Waist for the spot ellipse [m], Matrix (nantenna,2). Time-dependent
angle	vecflt.type (9.7.1.2.13)	Rotation angle for the spot ellipse [rd], Vector(nantenna). Time-dependent

Type of: launches\_rfbeam:spot (2798)

### 9.7.1.3.251 launchsignal

member	type	description
time_launch	vecflt.type (9.7.1.2.13)	Time stamp for particular event e.g. ramp of frequency sweep (but it should not be needed since it should be tied to the cpo time !); Time-dependent
freq	vecflt.type (9.7.1.2.13)	Frequency of the injected waves (should not be needed since it is already used in the injected signal !), typical data stored experimentally; Time-dependent
amplitude	vecflt.type (9.7.1.2.13)	Amplitude of the injected waves (essential if using gaussian, already encoded in the Electric field pattern), typical data stored experimentally; Time-dependent
phase	vecflt.type (9.7.1.2.13)	Phase of the sinusoidal (e.g. voltage) signal injected in the antenna, typical data stored experimentally; Time-dependent

Type of: reflectometry\_antennas:launchsignal (2900)

### 9.7.1.3.252 limiter\_unit

Vector of limiting surfaces. Replicate this limiter\_unit element ncomponents times. Each unit contains a plasma facing component that can have dedicated number of points. Array of structures (ncomponents)

member	type	description
name	string (9.7.1.1.3)	Name or description of the limiter_unit
closed	string (9.7.1.1.3)	Identify whether the contour is closed (y) or open (n)
position	rz1D (9.7.1.3.359)	Position (R,Z coordinates) of a limiting surface. No need to repeat first point for closed contours [m]; Vector(npoints)
eta	float (9.7.1.1.1)	Wall resistivity [ohm.m]; Scalar
delta	float (9.7.1.1.1)	Wall thickness [m] (Optional if a closed facing component is given but useful for simpler closed contour limiter); Time-dependent; Scalar
permeability	float (9.7.1.1.1)	Vessel relative permeability; Scalar

Type of: wall\_limiter:limiter\_unit (3036)

### 9.7.1.3.253 limits

Limits

member	type	description
fw_dpa	float (9.7.1.1.1)	max allowable displacement per atom on FW [dpa]; Scalar
he_appm	float (9.7.1.1.1)	He concentration limit in re-welding areas [appm]; Scalar
ins_dose	float (9.7.1.1.1)	Integral radiation dose in insulator (Epoxy) [Gy] [J*Kg <sup>-1</sup> ]; Scalar
fn_flu	float (9.7.1.1.1)	Peak fast neutron fluence (E <sub>z</sub> 0.1 MeV) to the Nb3Sn superconductor [m <sup>-2</sup> ]; Scalar
dpa_cu	float (9.7.1.1.1)	Peak displacement damage to copper stabilizer [dpa]; Scalar
wp_nh	float (9.7.1.1.1)	Peak nuclear eating in winding pack [W*m <sup>-3</sup> ]; Scalar

Type of: bb\_shield:limits (2555)

### 9.7.1.3.254 lineintegraldiag

General line integral diagnostic

member	type	description
datainfo	datainfo (9.7.1.3.134)	Generic information on a data item
expression	string (9.7.1.1.3)	Formal expression for the line integral to be evaluated as a function of ne, ni, Te, Ti, Zeff, Br, Bz
setup_line	setup_line (9.7.1.3.396)	Geometric description of the lines of sight

member	type	description
measure	exp1D (9.7.1.3.197)	Measured value. Time-dependent; Vector (nchords)
codeparam	codeparam (9.7.1.3.77)	Code parameters
time	float (9.7.1.1.1)	Time [s]; Time-dependent; Scalar

### 9.7.1.3.255 lithmeasure

Measured values

member	type	description
ne	exp1D (9.7.1.3.197)	Electron density [m <sup>-3</sup> ]. Vector (nchannels)

Type of: lithiumdiag:measure (2578)

### 9.7.1.3.256 lithsetup

diagnostic setup information

member	type	description
position	rzphi1D (9.7.1.3.365)	Position of the measurement. Vector (nchannels)

Type of: lithiumdiag:setup (2578)

### 9.7.1.3.257 local

TO BE REMOVED, being replaced by e.components and grid. Kept only to make smooth transition between data-type versions. [Local description of the wave fields. Uses the grid in grid\_2d].

member	type	description
e.plus	array3dflt.type (9.7.1.2.2)	Magnitude of left hand polarised component of the wave electric field [V/m]; Time-dependent; Array 3D (ntor, ndim1, ndim2)
e.plus.ph	array3dflt.type (9.7.1.2.2)	Phase of left hand polarised component of the wave electric field [rad]; Time-dependent; Array 3D (ntor, ndim1, ndim2)
e.minus	array3dflt.type (9.7.1.2.2)	Magnitude of right hand polarised component of the wave electric field [v/m]; Time-dependent; Array 3D (ntor, ndim1, ndim2)
e.minus.ph	array3dflt.type (9.7.1.2.2)	Phase of right hand polarised component of the wave electric field [rad]; Time-dependent; Array 3D (ntor, ndim1, ndim2)
e.norm	array3dint.type (9.7.1.2.3)	Magnitude of wave electric field normal to a flux surface [V/m]; Time-dependent; 3D (ntor, ndim1, ndim2)
enorm.ph	array3dflt.type (9.7.1.2.2)	Phase of wave electric field normal to a flux surface [rad]; Time-dependent; 3D (ntor, ndim1, ndim2)
e.binorm	array3dflt.type (9.7.1.2.2)	Magnitude of wave electric field tangent to a flux surface [V/m]; Time-dependent; 3D (ntor, ndim1, ndim2)
e.binorm.ph	array3dflt.type (9.7.1.2.2)	Phase of wave electric field tangent to a flux surface [rad]; Time-dependent; 3D (ntor, ndim1, ndim2)
e.para	array3dflt.type (9.7.1.2.2)	Magnitude of parallel wave electric field [V/m]; Time-dependent; Array 3D (ntor, ndim1, ndim2)
e.para.ph	array3dflt.type (9.7.1.2.2)	Phase of parallel wave electric field [rad]; Time-dependent; Array 3D (ntor, ndim1, ndim2)
b.norm	array3dflt.type (9.7.1.2.2)	Magnitude of wave magnetic field normal to a flux surface [T]; Time-dependent; Array 3D (ntor, ndim1, ndim2)
b.norm.ph	array3dflt.type (9.7.1.2.2)	Phase of wave magnetic field normal to a flux surface [rad]; Time-dependent; Array 3D (ntor, ndim1, ndim2)
b.binorm	array3dflt.type (9.7.1.2.2)	Magnitude of wave magnetic field tangent to a flux surface [T]; Time-dependent; Array 3D (ntor, ndim1, ndim2)
b.binorm.ph	array3dflt.type (9.7.1.2.2)	Phase of wave magnetic field tangent to a flux surface [rad]; Time-dependent; Array 3D (ntor, ndim1, ndim2)
b.para	array3dflt.type (9.7.1.2.2)	Magnitude of wave magnetic field parallel to the equilibrium magnetic field [T]; Time-dependent; Array 3D (ntor, ndim1, ndim2)
b.para.ph	array3dflt.type (9.7.1.2.2)	Phase of wave magnetic field parallel to the equilibrium magnetic field [rad]; Time-dependent; Array 3D (ntor, ndim1, ndim2)
k.perp	array3dflt.type (9.7.1.2.2)	Perpendicular wave number [T]; Time-dependent; Array 3D (ntor, ndim1, ndim2)

Type of: fullwave:local (2759)

### 9.7.1.3.258 mag\_axis

Magnetic axis values

member	type	description
position	rz0D (9.7.1.3.358)	Position of the magnetic axis [m]; Time-dependent; Scalar;
bphi	float (9.7.1.1.1)	Total toroidal magnetic field at the magnetic axis [T]; Time-dependent; Scalar
q	float (9.7.1.1.1)	q at the magnetic axis; Time-dependent; Scalar

Type of: global\_param:mag\_axis (2778)

### 9.7.1.3.259 magnet\_iron

Magnetisation in iron segments [T]

member	type	description
mr	eqmes1D (9.7.1.3.192)	Magnetisation along the R axis [T];
mz	eqmes1D (9.7.1.3.192)	Magnetisation along the Z axis [T];

Type of: eqconstraint:magnet\_iron (2739)

### 9.7.1.3.260 magnetise

Magnetisation M of the iron segment, assumed to be constant inside a given iron segment. Reminder :  $H = 1/\mu_0 * B - \text{mur} * M$ ; [A/m].

member	type	description
mr	exp1D (9.7.1.3.197)	Magnetisation along the R axis [T]; Time-dependent; Vector (nsegment)
mz	exp1D (9.7.1.3.197)	Magnetisation along the Z axis [T]; Time-dependent; Vector (nsegment)

Type of: ironmodel:magnetise (2575)

### 9.7.1.3.261 mat\_lim

Material limits specific to HCLL breeding blanket

member	type	description
cool.t_lim	float (9.7.1.1.1)	Min, max allowable He temperature [K];
steel.t_lim	float (9.7.1.1.1)	Min, max allowable steel temperature [K];
lipb.t_lim	float (9.7.1.1.1)	Min, max allowable LiPb temperature [K];

Type of: hcll:mat\_lim (2781)

### 9.7.1.3.262 mdinfo

Information related to machine description for this entry

member	type	description
shot_min	integer (9.7.1.1.2)	Minimum shot number to which the machine description applies
shot_max	integer (9.7.1.1.2)	Maximum shot number to which the machine description applies
md_entry	entry_def (9.7.1.3.187)	Entry of the machine description used. NB : just for information : for the moment, no guarantee that machine description data have not been modified with respect to the data in md_entry. Machine description data are written explicetly in each CPO.

Type of

### 9.7.1.3.263 mhd\_ideal\_wall2d

Ideal wall

member	type	description
walltype	identifier (9.7.1.3.235)	Tag the type of wall to be used, 0 (conformal) or 1 (free)



member	type	description
position	rz1D (9.7.1.3.359)	RZ description of the wall;

Type of: wall2d\_mhd:ideal\_wall (3032)

### 9.7.1.3.264 mhd\_mode

MHD modes in the confined plasma

member	type	description
modenum	integer (9.7.1.1.2)	Toroidal mode number of the MHD mode; Scalar; Time-dependent.
growthrate	float (9.7.1.1.1)	Linear growthrate of the mode [Hz]; Scalar; Time-dependent.
frequency	float (9.7.1.1.1)	Frequency of the mode [Hz]; Scalar; Time-dependent.
plasma	mhd_plasma (9.7.1.3.265)	MHD modes in the confined plasma
vacuum	mhd_vacuum (9.7.1.3.267)	External modes

Type of: mhd:n (2580)

### 9.7.1.3.265 mhd\_plasma

MHD modes in the confined plasma

member	type	description
psi	vecflt_type (9.7.1.2.13)	Position in poloidal flux [Wb] (without $1/2\pi$ and such that $B_p =  \text{grad } \psi  / R/2/\pi$ ). Time-dependent; Vector (npsi)
rho_tor_norm	vecflt_type (9.7.1.2.13)	Normalised toroidal flux coordinate values (= rho_tor normalised to the value at the last grid point); Time-dependent; Vector (nrho)
rho_tor	vecflt_type (9.7.1.2.13)	Toroidal flux coordinate (not normalised, equivalent to rho_tor_norm) [m]; Vector (nrho). Time-dependent.
m	matflt_type (9.7.1.2.10)	Poloidal mode number; Time-dependent; Array2D (npsi,nm)
disp_perp	matcplx_type (9.7.1.2.9)	Perpendicular displacement of the mode (in Fourier space) [m]; Time-dependent; Array 2D (npsi,nm)
disp_par	matcplx_type (9.7.1.2.9)	Parallel displacement of the mode (in Fourier space) [m]; Time-dependent; Array 2D (npsi,nm)
tau_alfven	vecflt_type (9.7.1.2.13)	Alven time= $R/v_A=R_0 \sqrt{\mu_0 \rho_0} / B_0$ [s]; Definitions of $R_0$ , $B_0$ , $\mu_0$ , $\rho_0$ to be clarified. rho grid should be included in the MHD CPO ? Time-dependent; Vector (npsi)
tau_res	vecflt_type (9.7.1.2.13)	Resistive time = $\mu_0 \rho_0 / 1.22 / \eta_{\text{neo}}$ [s]; Source of $\eta_{\text{neo}}$ to be clarified. Time-dependent; Vector (npsi)
coord_sys	coord_sys (9.7.1.3.101)	flux surface coordinate system on a square grid of flux and angle
a_pert	mhd_vector (9.7.1.3.268)	Perturbed vector potential (in Fourier space) [T.m]
b_pert	mhd_vector (9.7.1.3.268)	Perturbed magnetic field (in Fourier space) [T]
v_pert	mhd_vector (9.7.1.3.268)	Perturbed velocity (in Fourier space) [m/s]
p_pert	matcplx_type (9.7.1.2.9)	Perturbed pressure (in Fourier space) [Pa]; Time-dependent; Array 2D (npsi,nm)
rho_mass_per	matcplx_type (9.7.1.2.9)	Perturbed mass density (in Fourier space) [kg/m <sup>3</sup> ]; Time-dependent; Array 2D (npsi,nm)
temp_per	matcplx_type (9.7.1.2.9)	Perturbed temperature (in Fourier space) [eV]; Time-dependent; Array 2D (npsi,nm)

Type of: mhd\_mode:plasma (2814)

### 9.7.1.3.266 mhd\_res\_wall2d

Resistive wall

member	type	description
walltype	identifier (9.7.1.3.235)	Tag the type of wall to be used, 0 (conformal) or 1 (free)
delta	float (9.7.1.1.1)	Wall thickness [m]; Scalar
eta	float (9.7.1.1.1)	Wall resistivity [ohm.m]; Scalar
npoloidal	integer (9.7.1.1.2)	Number of poloidal coordinates for each wall (dimension of R and Z);
position	rz1D (9.7.1.3.359)	RZ description of the wall; wall coordinates are defined at a middle line (line passing through the middle of the real wall as defined by thickness parameter delta)
holes	holes (9.7.1.3.234)	Structure to describe the placing and properties of the holes

Type of: wall2d\_mhd:res\_wall (3032)

### 9.7.1.3.267 mhd\_vacuum

External modes

member	type	description
m	array3dflt.type (9.7.1.2.2)	Poloidal mode number; Time-dependent; Array2D (npsi,nm)
coord_sys	coord_sys (9.7.1.3.101)	flux surface coordinate system on a square grid of flux and angle
a_pert	mhd_vector (9.7.1.3.268)	Perturbed vector potential (in Fourier space) [T.m]
b_pert	mhd_vector (9.7.1.3.268)	Perturbed magnetic field (in Fourier space) [T]

Type of: mhd\_mode:vacuum (2814)

### 9.7.1.3.268 mhd\_vector

Vector structure for MHD CPO

member	type	description
coord1	matcplx_type (9.7.1.2.9)	Fourier components of first coordinate; Time-dependent; Array 2D (npsi,nm)
coord2	matcplx_type (9.7.1.2.9)	Fourier components of second coordinate; Time-dependent; Array 2D (npsi,nm)
coord3	matcplx_type (9.7.1.2.9)	Fourier components of third coordinate; Time-dependent; Array 2D (npsi,nm)

Type of: mhd\_plasma:a\_pert (2815) I mhd\_plasma:b\_pert (2815) I mhd\_plasma:v\_pert (2815) I mhd\_vacuum:a\_pert (2817) I mhd\_vacuum:b\_pert (2817)

### 9.7.1.3.269 mode\_lipb

Pb-15.7Li "effects"

member	type	description
lp_rec_day	float (9.7.1.1.1)	nb of Pb-15.7Li recirculation per day [Pa]; Scalar
bb_lp_fr	vecflt_type (9.7.1.2.13)	Pb-15.7Li mass flow rate in "the" bb module (or in each bb module) [Kg/s]; Vector(nmodules)
lp_inl_p	float (9.7.1.1.1)	Pb-15.7Li inlet pressure [Pa]; Scalar
bu_dp_lp	float (9.7.1.1.1)	Pb-15.7Li pressure drops in the breeder unit [Pa]; Scalar
man_dp_lp	float (9.7.1.1.1)	Pb-15.7Li pressure drops in the bb manifolds [Pa]; Scalar
tot_dp_lp	float (9.7.1.1.1)	Pb-15.7Li total pressure drops [Pa]; Scalar
bu_lp_ave_t	float (9.7.1.1.1)	Pb-15.7Li average temperature in a breeder unit [K]; Scalar
bu_lp_max_t	float (9.7.1.1.1)	Pb-15.7Li max temperature in a breeder unit [K]; Scalar

Type of: hcllbb\_specs:mod\_lipb (2783)

### 9.7.1.3.270 mode\_mech

Mechanical parameters

member	type	description
fw_min_ts_mg	float (9.7.1.1.1)	Min margin to tensile stress limit in the first wall; Scalar
fw_min_bd_mg	float (9.7.1.1.1)	Min margin to banding stress limit in the first wall; Scalar
sg_min_ts_mg	float (9.7.1.1.1)	Min margin to tensile stress limit in the stiffening grid; Scalar
sg_min_bd_mg	float (9.7.1.1.1)	Min margin to bending stress limit in the stiffening grid; Scalar
cp_min_ts_mg	float (9.7.1.1.1)	Min margin to tensile stress limit in the cooling plate; Scalar
cp_min_bd_mg	float (9.7.1.1.1)	Min margin to bending stress limit in the cooling plate; Scalar
min_ts_mg_ac	float (9.7.1.1.1)	Min tensile margin in accidental conditions; Scalar
min_bd_mg_ac	float (9.7.1.1.1)	Min bending margin in accidental conditions; Scalar

Type of: hcllbb\_specs:mod\_mech (2783)

### 9.7.1.3.271 mode\_neutr

Neutrons "effects"

member	type	description
r	vecflt.type (9.7.1.2.13)	Major radius position at which power density is calculated [m]; Vector(nr)
pd_rad	vecflt.type (9.7.1.2.13)	Power density distribution in radial direction [W/m <sup>3</sup> ]; Vector(nr)
lipb_coef_pd	vecflt.type (9.7.1.2.13)	Pb-15.7Li power density distribution in radial direction: coefficients of bi-exponential law if this one is used [W/m <sup>-3</sup> ,W/m <sup>-3</sup> ,m <sup>-1</sup> ,m <sup>-1</sup> ]; Matrix
steel_coef_pd	vecflt.type (9.7.1.2.13)	Eurofer power density distribution in radial direction: coefficients of bi-exponential law if this one is used
pow_exchange	power_exchange (9.7.1.3.337)	NO DOCS

Type of: hcllbb\_specs:mod\_neutr (2783)

### 9.7.1.3.272 mode.th\_hyd

hydrodynamics parameters

member	type	description
fw_dp_he	float (9.7.1.1.1)	Pressure drops in the first wall [Pa]; Scalar
sg_dp_he	float (9.7.1.1.1)	Pressure drops in the stiffening grid [Pa]; Scalar
cp_dp_he	float (9.7.1.1.1)	Pressure drops in the cooling plates [Pa]; Scalar
man_dp_he	float (9.7.1.1.1)	Pressure drops in the manifolds [Pa]; Scalar
tot_dp_he	float (9.7.1.1.1)	Total pressure drops in bb module [Pa]; Scalar
bp_dp_he	float (9.7.1.1.1)	Total pressure drops in the by pass (if any) [Pa]; ScalarScalar
circ_dp_he	float (9.7.1.1.1)	Pressure drops in one He circuit [Pa]; Scalar

Type of: hcllbb\_specs:mod.th\_hyd (2783)

### 9.7.1.3.273 mode.therm

Thermal parameters

member	type	description
he_fr	float (9.7.1.1.1)	Coolant mass flow rate in "the" reference bb (inboard or outboard) module [Kg/s]; Scalar
perc_bp_he	float (9.7.1.1.1)	% of Helium going through the bypass (set to 0 if not otherwise specified)
he_out_t	float (9.7.1.1.1)	Outlet temperature (from the bb module) [K]; Scalar
fw_he_out_t	float (9.7.1.1.1)	First wall outlet temperature [K]; Scalar
sg_he_out_t	float (9.7.1.1.1)	Stiffening grid outlet temperature [K]; Scalar
cp_he_out_t	float (9.7.1.1.1)	Cooling plates outlet temperature [K]; Scalar
fw_st_max_t	float (9.7.1.1.1)	First wall eurofer maximum temperature [K]; Scalar
sg_st_max_t	float (9.7.1.1.1)	Stiffening grid eurofer maximum temperature [K]; Scalar
cp_st_max_t	float (9.7.1.1.1)	Cooling plates eurofer maximum temperature [K]; Scalar

Type of: hcllbb\_specs:mod.therm (2783)

### 9.7.1.3.274 mode.tritium

Tritium parameters

member	type	description
t_conc_lipb	float (9.7.1.1.1)	Tritium concentration in Pb-15.7Li; Scalar
t_conc_he	float (9.7.1.1.1)	Tritium concentration in He; Scalar

Type of: hcllbb\_specs:mod.tritium (2783)

### 9.7.1.3.275 modules

Modules description. NB there are nmodules per antenna, distributed among nma\_phi toroidal positions and nma.theta poloidal positions

member	type	description
nma_theta	integer (9.7.1.1.2)	Number of modules per antenna in the poloidal direction.
nma_phi	integer (9.7.1.1.2)	Number of modules per antenna in the toroidal direction.

member	type	description
ima_theta	vecint.type (9.7.1.2.14)	Position index of the module in the poloidal direction (from low theta to high theta, i.e. from bottom to top if the antenna is on LFS). Vector of integers (nmodules).
ima_phi	vecint.type (9.7.1.2.14)	Position index of the module in the toroidal direction (from low phi to high phi, counter-clockwise when seen from above). Vector of integers (nmodules).
sm_theta	float (9.7.1.1.1)	Spacing between poloidally neighboring modules [m]
amplitude	exp1D (9.7.1.3.197)	Amplitude of the TE10 mode injected in the module [W], Vector exp1d (nmodules). Time-dependent
phase	exp1D (9.7.1.3.197)	Phase of the TE10 mode injected in the module [radians], Vector exp1d (nmodules). Time-dependent
waveguides	waveguides (9.7.1.3.497)	Waveguides description

Type of: antennalh\_setup:modules (2608)

### 9.7.1.3.276 msediag\_emiss\_chord

MSE Emissivity characterization. This structure is used for each line of sight of the MSE setup and contains the geometry of the line of sight, the emissivity(wavelength,pos) for each polarization state along the line of sight, the quantization axis and the emission volume. Replicate the structure for each line of sight.

member	type	description
volume	float (9.7.1.1.1)	Emitting volume ( $m^{-3}$ ). Scalar
setup	rzphi1D (9.7.1.3.365)	Description of the line of sight (for the moment a line - not a cone of sight). Vector (npos).
polarization(:)	msediag_polarization (9.7.1.3.278)	Polarized and unpolarized emissivity of the relevant MSE spectral lines. Structure Array (ncomp). Time-dependent.
quantiaxis	vecflt.type (9.7.1.2.13)	Quantization axis for the line of sight (eR,ePhi,eZ). It is a unitary vector associated to the line of sight and to the emissivity, e.g. the Lorentzian electric field direction); Vector (3). Time-dependent

Type of: msediag\_emissivity:emiss\_chord (2827)

### 9.7.1.3.277 msediag\_emissivity

Emissivity characteristics.

member	type	description
wavelength	vecflt.type (9.7.1.2.13)	Wavelength [m]. Vector (nwavelength)
emiss_chord(:)	msediag_emiss_chord (9.7.1.3.276)	MSE Emissivity characterization. This structure is used for each line of sight of the MSE setup and contains the geometry of the line of sight, the emissivity(wavelength,pos) for each polarization state along the line of sight, the quantization axis and the emission volume. Replicate the structure for each line of sight. Time-dependent

Type of: spectral:emissivity (2962)

### 9.7.1.3.278 msediag\_polarization

Polarized and unpolarized emissivity of the relevant MSE spectral lines. Structure Array (ncomp). Time-dependent.

member	type	description
type	identifier (9.7.1.3.235)	Type of the polarization. 0 for unpolarised, 1 for Pi, 2 for sigma <sup>+</sup> and 3 for sigma <sup>-</sup>
spec_emiss	matflt.type (9.7.1.2.10)	Spectral emissivity of a particular polarization ( $Wm^{-3}sr^{-1}$ ). Matrix (npos,nwavelength). Time-dependent

Type of: msediag\_emiss\_chord:polarization (2826)

### 9.7.1.3.279 msediag\_radia\_chord

MSE radiance characterization. This structure is used for each line of sight of the MSE setup and contains the geometry of the line of sight, the radiance(wavelength) for each polarization state, the quantization axis. Replicate the structure for each line of sight.

member	type	description
setup	msediag_setup (9.7.1.3.281)	Geometry for the observation line of sight

member	type	description
stokes(:)	msediag_stokes (9.7.1.3.283)	Stokes vector (I,U,S,V) as a function of the wavelength for the polarized and unpolarized relevant MSE spectral lines. Replicate for each spectral component. Structure array (ncomp). Time-dependent.
totradiance	exp1D (9.7.1.3.197)	Total Radiance integrated along the lines of sight ( $Wm^{-2}sr^{-1}$ ). Vector (nwavelength)

Type of: msediag\_radiance:radia\_chord (2830)

### 9.7.1.3.280 msediag\_radiance

Emissivity characteristics.

member	type	description
wavelength	exp1D (9.7.1.3.197)	Wavelength [m]. Vector (nwavelength)
radia_chord(:)	msediag_radia_chord (9.7.1.3.279)	MSE radiance characterization. This structure is used for each line of sight of the MSE setup and contains the geometry of the line of sight, the radiance(wavelength) for each polarization state, the quantization axis. Replicate the structure for each line of sight. Time-dependent

Type of: spectral:radiance (2962)

### 9.7.1.3.281 msediag\_setup

Geometry for the observation line of sight

member	type	description
pivot_point	rzphi0D (9.7.1.3.364)	Pivot point of mse line of sight. Scalar
horchordang	float (9.7.1.1.1)	Angle [rad] of horizontal projection of mse line of sight with poloidal cross section (0 for HFS to LFS trajectory - see Convention_angles_interfdiag.pdf) [rad]. Scalar
verchordang	float (9.7.1.1.1)	Angle of mse line of sight with vertical axis (0 for bottom-top trajectory, Pi for top-bottom trajectory - see Convention_angles_interfdiag.pdf) [rad]; Scalar
second_point	rzphi0D (9.7.1.3.364)	Second point defining the mse line of sight together with the pivot_point. Scalar

Type of: msediag\_radia\_chord:setup (2829)

### 9.7.1.3.282 msediag\_setup\_polarimetry

diagnostic setup information

member	type	description
rzgamma	rzphidrzdphi1D (9.7.1.3.370)	Position and width of the intersection between beam and line of sight. Vectors (nchords)
geom_coef	matflt.type (9.7.1.2.10)	Geometric coefficients (9) describing the angle between beam and line of sight; The first dimension contains successively : numerator, coefficients of BZ, BR, Bphi, ER; denominator, coefficients of BZ, BR, Bphi, ER, EZ; Matrix (9,nchords). In versions of the data structure before 4.08, there were only 6 coefficients namely : numerator, coefficients of BZ, BR, Bphi; denominator, coefficients of BZ, BR, Bphi.

Type of: polarimetry:setup (2884)

### 9.7.1.3.283 msediag\_stokes

Stokes vector (I,U,S,V) as a function of the wavelength for the polarized and unpolarized relevant MSE spectral lines. Replicate for each spectral component. Structure array (ncomp). Time-dependent.

member	type	description
type	identifier (9.7.1.3.235)	Type of the polarization. 0 for unpolarised, 1 for Pi, 2 for sigma <sup>+</sup> and 3 for sigma <sup>-</sup>
vector	matflt.type (9.7.1.2.10)	Stokes vector (I,U,S,V) as a function of the wavelength. Vector (4,nwavelength).

Type of: msediag\_radia\_chord:stokes (2829)

### 9.7.1.3.284 nbi\_nbi\_unit\_wall

Description of the wall components in the NBI system that limits the beam spatial width of the beam. The wall is here described a superposition of surface segments and collimating holes.

member	type	description
surface	nbi_nbi_unit_wall_surface (9.7.1.3.285)	A collimating solid surface described by a polygon; no particle can pass through this surface
collimator(:)	flat_polygon (9.7.1.3.202)	Vector of collimating holes (openings). Each hole has to be flat, i.e. it lies on a surface. Particles can only cross this surface by passing through the hole. To describe the hole we first construct a coordinate system on the surface by defining the original and two basis vectors in (x,y,z) space. The polyon is then represented as the origin, plus a linear combination of the two basis vectors using coord1 and coord2. As an example, a rectangle with two of the corners given by "origin+basis1" and "origin+basis2" can be described using coord1=[1,0,-1,0] and coord2=[0,1,0,-1].

Type of: nbi\_unit:wall (2836)

### 9.7.1.3.285 nbi\_nbi\_unit\_wall\_surface

A collimating solid surface described by a polygon; no particle can pass through this surface

member	type	description
triangle(:)	trianglexyz (9.7.1.3.466)	Triangular wall surface described by its three corners: point1, point2, and point3. Vector(n.triangles)
rectangle(:)	rectanglexyz (9.7.1.3.346)	Rectangular wall surface described by its four corners. These form an ordered sequence: point00, point01, point11, point10. Here the first point should be calculated from the other three as point00=point01+point10-point11. Vector(n.rectangles)

Type of: nbi\_nbi\_unit\_wall:surface (2834)

### 9.7.1.3.286 nbi\_unit

Vector of Neutral Beam Injector units. The NBI system should be separated in to the individually power strutctres. Structure array(nunits). Time-dependent

member	type	description
name	string (9.7.1.1.3)	Name of the neutral beam injector
inj_spec	inj_spec (9.7.1.3.239)	Injected species
pow_unit	exp0D (9.7.1.3.196)	Power delivered by an NBI unit [W]; Time-dependent
inj_eng_unit	exp0D (9.7.1.3.196)	Full injection energy of a unit [ev]; Time-dependent
beamcurfrac	exp1D (9.7.1.3.197)	Beam current fractions; beamcurfrac(j) is the fraction of the beam current from beam neutrals with the j:th harmonic energy, inj_eng_unit. Vector(3); Time-dependent
beampowfrac	exp1D (9.7.1.3.197)	Beam power fractions; beampowfrac(j) is the fraction of the beam power from beam neutrals with the j:th harmonic energy, inj_eng_unit. Vector(3); Time-dependent
beamletgroup(:)	beamletgroup (9.7.1.3.64)	Group of beamlets with common vertical and horizontal focal point. If there are no common focal points, then select small groups of beamlets such that a focal point description of the beamlet-group provides a fair description.
wall	nbi_nbi_unit_wall (9.7.1.3.284)	Description of the wall components in the NBI system that limits the beam spatial width of the beam. The wall is here described a superposition of surface segments and collimating holes.
codeparam	codeparam (9.7.1.3.77)	Code parameters

Type of: nbi:nbi\_unit (2582)

### 9.7.1.3.287 ne\_transp

Transport coefficients for electron density equation. Time-dependent.

member	type	description
diff_eff	matflt.type (9.7.1.2.10)	Effective diffusivity [m <sup>2</sup> .s <sup>-1</sup> ]. The last index of the array describes which multiplier should be applied to the particule flux when adding its contribution in the expression of the heat flux : position 1 is multiplied by 0, 2 is multiplied by 3/2, 3 is multiplied by 5/2. The total particle flux (for the particle transport equation) is obtained as the sum over the three positions. Time-dependent. Matrix (nrho,3)
vconv_eff	matflt.type (9.7.1.2.10)	Effective convection [m.s <sup>-1</sup> ]. The last index of the array describes which multiplier should be applied to the particule flux when adding its contribution in the expression of the heat flux : position 1 is multiplied by 0, 2 is multiplied by 3/2, 3 is multiplied by 5/2. The total particle flux (for the particle transport equation) is obtained as the sum over the three positions. Time-dependent. Matrix (nrho,3)

member	type	description
flux	vecflt.type (9.7.1.2.13)	Flux. Not used in transport equations [field.m.s <sup>-1</sup> ,m <sup>-3</sup> if field is not a density itself]. Time-dependent. Vector (nrho)
off_diagonal	offdiagel (9.7.1.3.301)	Details of the transport matrix, just for diagnostic (not used in transport equations). Time-dependent.
flag	integer (9.7.1.1.2)	Flag describing the form of transport produced by the original model : 0- not calculated, 1- D and V, 2- flux, 3- full transport matrix. Scalar.

Type of: coretransp\_values:ne\_transp (2679)

### 9.7.1.3.288 neoclassic\_impurity

Array(nimp). Time-dependent

member	type	description
utheta.z	matflt.type (9.7.1.2.10)	Ion poloidal flow for various charge states [m/s]. Time-dependent. Matrix(nrho,nzimp).

Type of: neoclassic:impurity (2583)

### 9.7.1.3.289 neut\_results

Neutronic results

member	type	description
tbr_bk	float (9.7.1.1.1)	Resulting global breeding blanket tritium breeding ratio; Scalar
tbr_bk_inb	float (9.7.1.1.1)	Resulting inboard breeding blanket Tritium Breeding Ratio [-]; Scalar
tbr_bk_outb	float (9.7.1.1.1)	Resulting outboard breeding blanket Tritium Breeding Ratio [-]; Scalar
me_bk	float (9.7.1.1.1)	Energy multiplication factor in breeding blanket; Scalar
me_shield	float (9.7.1.1.1)	Energy multiplication factor in shield; Scalar
he_appm_res	float (9.7.1.1.1)	He production in areas needing to be rewelded; Scalar
ins_dose_max	float (9.7.1.1.1)	Integral radiation dose in insulator (Epoxy) [J*Kg <sup>-1</sup> ]; Scalar
fn_flu_max	float (9.7.1.1.1)	Peak fast neutron fluence (E <sub>z</sub> 0.1 MeV) to the Nb3Sn superconductor [m <sup>-2</sup> ]; Scalar
dpa_cu_max	float (9.7.1.1.1)	Peak displacement damage to copper stabilizer [dpa]; Scalar
fn_flux_bz	float (9.7.1.1.1)	Fast neutron flux in breeding zone inboard [m <sup>-2</sup> .s <sup>-1</sup> ]; Scalar
fn_flux_bp	float (9.7.1.1.1)	Fast neutron flux in backplate inboard [m <sup>-2</sup> .s <sup>-1</sup> ]; Scalar
fn_flux_man	float (9.7.1.1.1)	Fast neutron flux in manifold inboard [m <sup>-2</sup> .s <sup>-1</sup> ]; Scalar
fn_flux_sh	float (9.7.1.1.1)	Fast neutron flux in shield inboard [m <sup>-2</sup> .s <sup>-1</sup> ]; Scalar
p_nh_bk	float (9.7.1.1.1)	Total nuclear heating in blanket [W]; Scalar
p_nh_sh	float (9.7.1.1.1)	Total nuclear heating in shield [W]; Scalar

Type of: bb\_shield:neut\_results (2555)

### 9.7.1.3.290 neutral\_complex\_type

Profiles derived from the fields solved in the transport equations, or from experiment. Array(nneut). Time-dependent

member	type	description
neutraltype(:)	coreneutrals_neutraltype (9.7.1.3.122)	Array (nntype) over neutral types. Time-dependent.
prad0	vecflt.type (9.7.1.2.13)	Power radiated by neutrals [W.m <sup>-3</sup> ]. Vector (nrho). Time-dependent.

Type of: coreneutrals:profiles (2560)

### 9.7.1.3.291 neutro\_resul

Neutronic results

member	type	description
nwl_max	float (9.7.1.1.1)	Maximum neutron wall load (on equatorial outboard module) [W*m <sup>-2</sup> ]; Scalar
nwl_pol_prof	vecflt.type (9.7.1.2.13)	NWL scaling factor coefficient for each bb module; Vector(nmodules)



Type of: `bb:neutro_resul` (2610)

### 9.7.1.3.292 `ni_transp`

Transport coefficients for ion density equation. Time-dependent.

member	type	description
<code>diff_eff</code>	<code>array3dflt.type</code> (9.7.1.2.2)	Effective diffusivity [ $m^2.s^{-1}$ ]. The last index of the array describes which multiplier should be applied to the particule flux when adding its contribution in the expression of the heat flux : position 1 is multiplied by 0, 2 is multiplied by 3/2, 3 is multiplied by 5/2. The total particle flux (for the particle transport equation) is obtained as the sum over the three positions. Time-dependent. Array3d (nrho,nion,3)
<code>vconv_eff</code>	<code>array3dflt.type</code> (9.7.1.2.2)	Effective convection [ $m.s^{-1}$ ]. The last index of the array describes which multiplier should be applied to the particule flux when adding its contribution in the expression of the heat flux : position 1 is multiplied by 0, 2 is multiplied by 3/2, 3 is multiplied by 5/2. The total particle flux (for the particle transport equation) is obtained as the sum over the three positions. Time-dependent. Array3d (nrho,nion,3)
<code>flux</code>	<code>matflt.type</code> (9.7.1.2.10)	Flux. Not used in transport equations [ $field.m.s^{-1},m^{-3}$ if field is not a density itself]. Time-dependent. Matrix (nrho,nion)
<code>off.diagonal</code>	<code>offdiagion</code> (9.7.1.3.302)	Details of the transport matrix, just for diagnostic (not used in transport equations). Time-dependent.
<code>flag</code>	<code>integer</code> (9.7.1.1.2)	Flag describing the form of transport produced by the original model : 0- not calculated, 1- D and V, 2- flux, 3- full transport matrix. Scalar.

Type of: `coretransp_values:ni_transp` (2679)

### 9.7.1.3.293 `ntm_mode`

List of the various NTM modes appearing during the simulation. If a mode appears several times, use several indices in this array of structure with the same m,n values. All descendant nodes are marked as Time-dependent for technical reasons, to allow the size of the mode AoS to vary.

member	type	description
<code>onset</code>	<code>ntm_mode_onset</code> (9.7.1.3.298)	NTM onset characteristics. Time-dependent
<code>full_evol</code>	<code>ntm_mode_full_evol</code> (9.7.1.3.296)	Detailed NTM evolution on a finer timebase than the CPO timebase. Time-dependent.
<code>evolution</code>	<code>ntm_mode_evolution</code> (9.7.1.3.294)	NTM evolution corresponding to the CPO timebase. Time-dependent.

Type of: `ntm:mode` (2584)

### 9.7.1.3.294 `ntm_mode_evolution`

NTM evolution corresponding to the CPO timebase. Time-dependent.

member	type	description
<code>w</code>	<code>float</code> (9.7.1.1.1)	Full width of the mode [m]. Time-dependent.
<code>dwdt</code>	<code>float</code> (9.7.1.1.1)	Time derivative of the full width of the mode [m/s]. Time-dependent.
<code>phase</code>	<code>float</code> (9.7.1.1.1)	Phase of the mode [rad]. Time-dependent.
<code>dphasedt</code>	<code>float</code> (9.7.1.1.1)	Time-derivative of the phase of the mode [rad]. Time-dependent.
<code>frequency</code>	<code>float</code> (9.7.1.1.1)	Frequency of the mode [Hz]. Time-dependent.
<code>dfrequencydt</code>	<code>float</code> (9.7.1.1.1)	Time derivative of the frequency of the mode [Hz]. Time-dependent.
<code>island</code>	<code>ntm_mode_evolution_island</code> (9.7.1.3.295)	Island description
<code>n</code>	<code>integer</code> (9.7.1.1.2)	Toroidal mode number. Time-dependent.
<code>m</code>	<code>integer</code> (9.7.1.1.2)	Poloidal mode number. Time-dependent.
<code>deltaw_value</code>	<code>vecflt.type</code> (9.7.1.2.13)	Vector(ntype). Time-dependent.
<code>deltaw_name</code>	<code>vecstring.type</code> (9.7.1.2.15)	Name of the deltaw contribution. String vector (ntype). Time-dependent.
<code>torque_value</code>	<code>vecflt.type</code> (9.7.1.2.13)	Vector(ntype_torque). Time-dependent.
<code>torque_name</code>	<code>vecstring.type</code> (9.7.1.2.15)	Name of the torque contribution. String vector (ntype). Time-dependent.
<code>delta_diff</code>	<code>vecflt.type</code> (9.7.1.2.13)	Extra diffusion coefficient for Te, ne, Ti equation. Vector(nequation). Time-dependent.
<code>description</code>	<code>string</code> (9.7.1.1.3)	How the mode evolution is calculated. Time-dependent.
<code>rho_tor</code>	<code>float</code> (9.7.1.1.1)	[m]. Time-dependent.

Type of: `ntm_mode:evolution` (2843)

### 9.7.1.3.295 ntm\_mode\_evolution\_island

Island description

member	type	description
geometry	vecflt_type (9.7.1.2.13)	Description of island geometry [?]. Vector(nradial). Time-dependent.
coord_values	vecflt_type (9.7.1.2.13)	Radial coordinate values [?]. Vector(nradial). Time-dependent.
coord_desc	string (9.7.1.1.3)	Description of flux label, use the same for all islands. Time-dependent.

Type of: ntm\_mode\_evolution:island (2844)

### 9.7.1.3.296 ntm\_mode\_full\_evolution

Detailed NTM evolution on a finer timebase than the CPO timebase. Time-dependent.

member	type	description
time_evolution	vecflt_type (9.7.1.2.13)	Time array used to describe the detailed mode evolution which can be different from the CPO timebase [s]. Vector(ntime_evolution). Time-dependent.
w	vecflt_type (9.7.1.2.13)	Full width of the mode [m]. Vector(ntime_evolution). Time-dependent.
dwdt	vecflt_type (9.7.1.2.13)	Time derivative of the full width of the mode [m/s]. Vector(ntime_evolution). Time-dependent.
phase	vecflt_type (9.7.1.2.13)	Phase of the mode [rad]. Vector(ntime_evolution). Time-dependent.
dphasedt	vecflt_type (9.7.1.2.13)	Time-derivative of the phase of the mode [rad]. Vector(ntime_evolution). Time-dependent.
frequency	vecflt_type (9.7.1.2.13)	Frequency of the mode [Hz]. Vector(ntime_evolution). Time-dependent.
dfrequencydt	vecflt_type (9.7.1.2.13)	time derivative of the frequency of the mode [Hz]. Vector(ntime_evolution). Time-dependent.
island	ntm_mode_full_evolution_island (9.7.1.3.297)	Island description
n	integer (9.7.1.1.2)	Toroidal mode number. Time-dependent.
m	integer (9.7.1.1.2)	Poloidal mode number. Time-dependent.
deltaw_value	matflt_type (9.7.1.2.10)	Matrix(ntype, ntime_evolution). Time-dependent.
deltaw_name	vecstring_type (9.7.1.2.15)	Name of the deltaw contribution. String vector (ntype). Time-dependent.
torque_value	matflt_type (9.7.1.2.10)	Matrix(ntype_torque, ntime_evolution). Time-dependent.
torque_name	vecstring_type (9.7.1.2.15)	Name of the torque contribution. String vector (ntype_torque). Time-dependent.
delta_diff	matflt_type (9.7.1.2.10)	Extra diffusion coefficient for Te, ne, Ti equation. Matrix(nequation, ntime_evolution). Time-dependent.
description	string (9.7.1.1.3)	How the mode evolution is calculated. Time-dependent.
rho_tor	vecflt_type (9.7.1.2.13)	[m]. Vector(ntime_evolution) Time-dependent.

Type of: ntm\_mode:full\_evolution (2843)

### 9.7.1.3.297 ntm\_mode\_full\_evolution\_island

Island description

member	type	description
geometry	matflt_type (9.7.1.2.10)	Description of island geometry [?]. Matrix(nradial, ntime_evolution). Time-dependent.
coord_values	matflt_type (9.7.1.2.10)	Radial coordinate values [?]. Matrix(nradial, ntime_evolution). Time-dependent.
coord_desc	string (9.7.1.1.3)	Description of flux label, use the same for all islands. Time-dependent.

Type of: ntm\_mode\_full\_evolution:island (2846)

### 9.7.1.3.298 ntm\_mode\_onset

NTM onset characteristics. Time-dependent

member	type	description
w	float (9.7.1.1.1)	Seed island full width [m]. Time-dependent.
time_onset	float (9.7.1.1.1)	Onset time [s]. Time-dependent.
time_offset	float (9.7.1.1.1)	Offset time [s] (when a mode disappears). If the mode reappears later in the simulation, use another index of the mode array of structure. Time-dependent.
phase	float (9.7.1.1.1)	Phase of the mode at onset [rad]. Time-dependent.
n	integer (9.7.1.1.2)	Toroidal mode number. Time-dependent.
m	integer (9.7.1.1.2)	Poloidal mode number. Time-dependent.
description	string (9.7.1.1.3)	Cause of the mode onset. Time-dependent.

Type of: ntm\_mode:onset (2843)

### 9.7.1.3.299 nuclei

Array of nuclei considered.

member	type	description
zn	float (9.7.1.1.1)	Nuclear charge [units of elementary charge];
amn	float (9.7.1.1.1)	Mass of atom [amu]
label	string (9.7.1.1.3)	String identifying element (e.g. H, D, T, He, C, ...)

Type of: compositions\_type:nuclei (2649)

### 9.7.1.3.300 objects

Definition of space objects (nodes, edges, faces, cells, ...): A space object of dimension n is defined; by enumerating the (n-1)-dimensional space objects defining its boundaries

member	type	description
boundary	matint.type (9.7.1.2.11)	Lists of (n-1)-dimensional space objects defining the boundary of an n-dimensional space object.; Matrix(number of objects of dimension n, maximum number of boundary objects).; First dimension: object index, second dimension: boundary object index
neighbour	array3dint.type (9.7.1.2.3)	Connectivity information. Array (number of objects, maximum number of boundaries per object, maximum number of neighbours per boundary).; Stores the indices of the n-dimensional objects adjacent to the given n-dimensional object.;An object can possibly have multiple neighbours on every boundary.; First dimension: object index, second dimension: boundary index, third dimension: neighbour index on the boundary.
geo	array4dflt.type (9.7.1.2.4)	Geometry data matrix associated with every object. Float array (number of objects, number of geometry coeff. 1, number of geometry coeff. 2, number of geometries).; The exact definition depends on the geometry type of the space (complexgrid_space.geotype).; First dimension: object index, second+third dimension: geometry coefficient matrix row+column, third dimension: geometry index (for definition of multiple geometries).
measure	matflt.type (9.7.1.2.10)	Measure of space objects, i.e. physical size (length for 1d, area for 2d, volume for 3d objects,...). [m <sup>dim</sup> ].; First dimension: object index, second dimension: geometry index

Type of: complexgrid\_space:objects (2641)

### 9.7.1.3.301 offdiagel

Subtree containing the full transport matrix from a transport model, for the electrons. Time-dependent.

member	type	description
d.ni	matflt.type (9.7.1.2.10)	Off-Diagonal term coupling ion density gradient to the transport equation [m. <sup>2</sup> .s <sup>-1</sup> ]. Time-dependent. Matrix (nrho,nion)
d.ti	matflt.type (9.7.1.2.10)	Off-Diagonal term coupling ion density gradient to the transport equation [m. <sup>2</sup> .s <sup>-1</sup> ]. Time-dependent. Matrix (nrho,nion)
d.ne	vecflt.type (9.7.1.2.13)	Off-Diagonal term coupling electron density gradient to the transport equation [m. <sup>2</sup> .s <sup>-1</sup> ]. Time-dependent. Vector (nrho)
d.te	vecflt.type (9.7.1.2.13)	Off-Diagonal term coupling electron temperature gradient to the transport equation [m. <sup>2</sup> .s <sup>-1</sup> ]. Time-dependent. Vector (nrho)
d.epar	vecflt.type (9.7.1.2.13)	Off-Diagonal term coupling parallel electric field to the transport equation [m. <sup>2</sup> .s <sup>-1</sup> ]. Time-dependent. Vector (nrho)
d.mtor	vecflt.type (9.7.1.2.13)	Off-Diagonal term coupling total toroidal momentum to the transport equation [m. <sup>2</sup> .s <sup>-1</sup> ]. Time-dependent. Vector (nrho)

Type of: ne\_transp:off\_diagonal (2837) I transcoefel:off\_diagonal (3011)

### 9.7.1.3.302 offdiagion

Subtree containing the full transport matrix from a transport model, for the various ion species

member	type	description
d.ni	array3dflt.type (9.7.1.2.2)	Off-Diagonal term coupling ion density gradient to the transport equation [m. <sup>2</sup> .s <sup>-1</sup> ]. Time-dependent. Array3d (nrho,nion,nion)
d.ti	array3dflt.type (9.7.1.2.2)	Off-Diagonal term coupling ion density gradient to the transport equation [m. <sup>2</sup> .s <sup>-1</sup> ]. Time-dependent. Array3d (nrho,nion,nion)
d.ne	matflt.type (9.7.1.2.10)	Off-Diagonal term coupling electron density gradient to the transport equation [m. <sup>2</sup> .s <sup>-1</sup> ]. Time-dependent. Matrix (nrho,nion)

member	type	description
d.te	matflt.type (9.7.1.2.10)	Off-Diagonal term coupling electron temperature gradient to the transport equation [ $m^{-2}s^{-1}$ ]. Time-dependent. Matrix (nrho,nion)
d.epar	matflt.type (9.7.1.2.10)	Off-Diagonal term coupling parallel electric field to the transport equation [ $m^{-2}s^{-1}$ ]. Time-dependent. Matrix (nrho,nion)
d.mtor	matflt.type (9.7.1.2.10)	Off-Diagonal term coupling total toroidal momentum to the transport equation [ $m^{-2}s^{-1}$ ]. Time-dependent. Matrix (nrho,nion)

Type of: ni\_transp:off\_diagonal (2842) I transcoefion:off\_diagonal (3013) I transcoefvtor:off\_diagonal (3014)

### 9.7.1.3.303 omnigen\_surf

List of omnigenous magnetic surfaces to which the s-coordinates in grid\_coord refer. NOTE: only used for gridcoord=3. NOTE: all guiding centre orbits intersect at least one omnigenous (or stagnation) surfaces, i.e. the omnigenous generalised the equatorial plane (the midplane). nsurfs=Number of omnigenous surfaces. Structure array(nregion.topo)

member	type	description
rz	rz1D (9.7.1.3.359)	(R,z) coordinates of the omnigenous magnetic surfaces (generalised equatorial plane). NOTE: only used for gridcoord=3. Vector rz1d (nsurfs)
s	vecflt.type (9.7.1.2.13)	Coordinates which uniquely maps the omnigenous magnetic surfaces (generalised equatorial plane). NOTE: only used for gridcoord=3. Vector (nsurfs)

Type of: dist\_grid\_info:omnigen\_surf (2702)

### 9.7.1.3.304 orbit\_global\_param

Global quantities associated with an orbit.

member	type	description
orbit.type	vecint.type (9.7.1.2.14)	Identifier of orbit type: 0 trapped, -1 co-passing, + 1 counter-passing ; Time-dependent; Vector (norbits)
omega.b	vecflt.type (9.7.1.2.13)	Bounce angular frequency rad/s; Time-dependent; Vector (norbits)
omega.phi	vecflt.type (9.7.1.2.13)	Toroidal angular precession frequency [rad/s]; Time-dependent; Vector (norbits).
omega.c.av	vecflt.type (9.7.1.2.13)	Orbit averaged cyclotron frequency [rad/a]; Time-dependent; Vector(norbits).
special_pos	orbit_special_pos (9.7.1.3.307)	Special positions along an orbit (like turning points).

Type of: orbit:global\_param (2585)

### 9.7.1.3.305 orbit\_midplane

Intersections with the midplane

member	type	description
outer	orbit_pos (9.7.1.3.306)	Position at outer mid-plane
inner	orbit_pos (9.7.1.3.306)	Position at inner mid-plane

Type of: orbit\_special\_pos:midplane (2857)

### 9.7.1.3.306 orbit\_pos

Complex type for orbit position (Vector)

member	type	description
r	vecflt.type (9.7.1.2.13)	Major radius [m]; Time-dependent; Vector (norbits).
z	vecflt.type (9.7.1.2.13)	Altitude [m]; Time-dependent; Vector (norbits).
phi	vecflt.type (9.7.1.2.13)	Toroidal angle [rad]; Time-dependent; Vector (norbits).
psi	vecflt.type (9.7.1.2.13)	Position in psi [normalised poloidal flux]; Time-dependent; Vector (norbits).
theta.b	vecflt.type (9.7.1.2.13)	Poloidal Boozer angle [rad]; Time-dependent; Vector (norbits).

Type of: orbit\_midplane:inner (2855) I orbit\_midplane:outer (2855) I orbit\_turning\_pts:lower (2858) I orbit\_turning\_pts:upper

(2858)

### 9.7.1.3.307 orbit\_special\_pos

Special positions along an orbit (like turning points).

member	type	description
midplane	orbit_midplane (9.7.1.3.305)	Intersections with the midplane
turning_pts	orbit_turning_pts (9.7.1.3.308)	Location of turning points

Type of: orbit\_global\_param:special\_pos (2854)

### 9.7.1.3.308 orbit\_turning\_pts

Location of turning points

member	type	description
upper	orbit_pos (9.7.1.3.306)	Position at upper turning point
lower	orbit_pos (9.7.1.3.306)	Position at lower turning point

Type of: orbit\_special\_pos:turning\_pts (2857)

### 9.7.1.3.309 origin

member	type	description
refpos	rzphi0D (9.7.1.3.364)	Reference point of the local coordinate system; the position of either the last quasi-optical element, or the horn antenna. Default is facing horizontally away from the central axis. The local coordinate system is cartesian, with the local z axis defining the nominal beam direction, x parallel to the global z, and y completing the right-handed local coordinate system
alpha	float (9.7.1.1.1)	Poloidal tilt angle [rad]; angle between local z axis and horizontal plane, 0 is facing outward, pi/2 is downwards, pi inwards
beta	float (9.7.1.1.1)	Toroidal tilt angle [rad]; angle between local z axis and r-z plane
gamma	float (9.7.1.1.1)	Rotation angle about local z axis [rad]

Type of: reflectometry\_antennas:origin (2900)

### 9.7.1.3.310 param

Code parameters block passed from the wrapper to the subroutine. Does not appear as such in the data structure (in fact each string is an instance of coparam/parameters). This is inserted in utilities.xsd for automatic declaration in the Fortran type definitions.

member	type	description
parameters	string (9.7.1.1.3)	Actual value of the code parameters (instance of coparam/parameters in XML format).
default_param	string (9.7.1.1.3)	Default value of the code parameters (instance of coparam/parameters in XML format).
schema	string (9.7.1.1.3)	Code parameters schema.

Type of

### 9.7.1.3.311 parameters

Parameters used to defined the grid coordiantes. Time-dependent

member	type	description
equatorial	equatorial_plane (9.7.1.3.193)	Description of the equatorial plane or any other omnigeuous surfaces. Time-dependent

Type of: source\_rate:parameters (2955)

### 9.7.1.3.312 pellet

Description of the pellets entering the plasma at given time. Array of structures (NPEL). Time-dependent.

member	type	description
shape	pellet_shape (9.7.1.3.319)	Structure defining the shape of the pellet. Time-dependent.
elements	pellet_elements (9.7.1.3.315)	Structure defining the composition of the pellet. Time-dependent.
geometry	pellet_geometry (9.7.1.3.316)	Structure describing the geometry of the pellet path. Time-dependent.
pathprofiles	pellet_pathprofiles (9.7.1.3.318)	Structure describing 1-D profiles of plasma and pellet along the pellet path. Time-dependent.
deposition	pellet_deposition (9.7.1.3.314)	Structure defining the pellet action on the plasma (along rho.tor). Time-dependent.

Type of: pellets:pellet (2586)

### 9.7.1.3.313 pellet\_angles

Angles of the pellet trajectory. Time-dependent.

member	type	description
horizontal	float (9.7.1.1.1)	Angle [rad] of the horizontal projection of the path with poloidal cross section (0 for HFS , then counter clockwise looking from above), scalar. Time-dependent.
vertical	float (9.7.1.1.1)	Angle [rad] of the path with vertical axis section (0 for bottom-top trajectory, then counter clockwise), scalar. Time-dependent.

Type of: pellet\_geometry:angles (2866)

### 9.7.1.3.314 pellet\_deposition

Structure defining the pellet action on the plasma (along rho.tor). Time-dependent.

member	type	description
rho.tor	vecflt.type (9.7.1.2.13)	Toroidal flux coordinate [m], array (NRHO). Time-dependent.
rho.pol	vecflt.type (9.7.1.2.13)	Poloidal flux coordinate [m], array(NRHO). Time-dependent.
delta.ne	vecflt.type (9.7.1.2.13)	Instant change of ne profile due to pellet ablation [m <sup>-3</sup> ], array(NRHO). Time-dependent.
delta.te	vecflt.type (9.7.1.2.13)	Instant change of Te profile due to pellet ablation [eV], array(NRHO). Time-dependent.
delta.ni	matflt.type (9.7.1.2.10)	Instant change of ni profile due to pellet ablation [m <sup>-3</sup> ], array (NRHO, NION). Time-dependent.
delta.ti	matflt.type (9.7.1.2.10)	Instant change of Ti profile due to pellet ablation [eV], array (NRHO, NION). Time-dependent.
delta.vtor	matflt.type (9.7.1.2.10)	Instant change of Vtor profile due to pellet ablation [m/s], array (NRHO, NION). Time-dependent.
impurity(:)	pellet_impurity (9.7.1.3.317)	Contributions to impurity array of structures (NIMP). Time-dependent

Type of: pellet:deposition (2862)

### 9.7.1.3.315 pellet\_elements

Structure defining the composition of the pellet. Time-dependent.

member	type	description
nucindex	vecint.type (9.7.1.2.14)	Index into list of nuclei, array over elements in pellet (NATM). Time-dependent.
density	vecflt.type (9.7.1.2.13)	Material density of each element of the pellet, array over elements (NATM). Time-dependent.
fraction	vecflt.type (9.7.1.2.13)	Fraction of each element in the pellet, array over elements in pellet (NATM). Time-dependent.
subl.energy	vecflt.type (9.7.1.2.13)	Sublimation energy per atom, array over elements in pellet (NATM). Time-dependent.

Type of: pellet:elements (2862)

### 9.7.1.3.316 pellet\_geometry

Structure describing the geometry of the pellet path. Time-dependent.

member	type	description
pivot_point	rzphi0D (9.7.1.3.364)	Coordinates of the pivot point for pellet trajectory. Time-dependent.
second_point	rzphi0D (9.7.1.3.364)	Coordinates of the second point for pellet trajectory. Time-dependent.
velocity	float (9.7.1.1.1)	Starting velocity of the pellet [m/s]. Scalar. Time-dependent.
angles	pellet_angles (9.7.1.3.313)	Angles of the pellet trajectory. Time-dependent.

Type of: pellet:geometry (2862)

### 9.7.1.3.317 pellet\_impurity

Contributions to impurity array of structures (NIMP). Time-dependent

member	type	description
delta_nz	matflt.type (9.7.1.2.10)	Instant change of Nz profile (per charge state) due to pellet ablation [m <sup>-3</sup> ], array (NRHO, NZ-IMP). Time-dependent.

Type of: pellet\_deposition:impurity (2864)

### 9.7.1.3.318 pellet\_pathprofiles

Structure describing 1-D profiles of plasma and pellet along the pellet path. Time-dependent.

member	type	description
distance	vecflt.type (9.7.1.2.13)	Coordinate along the pellet trajectory [m], array (NPATH). Time-dependent.
rho_tor	vecflt.type (9.7.1.2.13)	Toroidal flux coordinate along the pellet trajectory [m], array (NPATH). Time-dependent.
rho_pol	vecflt.type (9.7.1.2.13)	Poloidal flux coordinate along the pellet trajectory [m], array (NPATH). Time-dependent.
velocity	vecflt.type (9.7.1.2.13)	Pellet velocity along the pellet trajectory [m/s], array (NPATH). Time-dependent.
ne	vecflt.type (9.7.1.2.13)	Electron density along the pellet trajectory [m <sup>-3</sup> ], array (NPATH). Time-dependent.
te	vecflt.type (9.7.1.2.13)	Electron temperature along the pellet trajectory [eV], array (NPATH). Time-dependent.
abl_rate	vecflt.type (9.7.1.2.13)	Ablation rate along the pellet trajectory [part/s], array (NPATH). Time-dependent.
abl_particles	vecflt.type (9.7.1.2.13)	Number of ablated particles along the pellet trajectory [part], array (NPATH). Time-dependent.
delta_drift	vecflt.type (9.7.1.2.13)	Radial displacement due to ExB drifts along the pellet trajectory [m], array (NPATH). Time-dependent.
position	rzphi1D (9.7.1.3.365)	Coordinates of the pellet trajectory line, array (NPATH). Time-dependent.

Type of: pellet:pathprofiles (2862)

### 9.7.1.3.319 pellet\_shape

Structure defining the shape of the pellet. Time-dependent.

member	type	description
type	identifier (9.7.1.3.235)	Identifier for the shape of the pellet: 1-spherical; 2-cylindrical; 3-rectangular; 4-generic. Time-dependent.
dimensions	vecflt.type (9.7.1.2.13)	Vector specifying the dimensions of the pellet following the order for predefined shapes. Spherical pellets: dimensions(1) is the radius [m] of the pellet; Cylindrical pellets: dimensions(1) is the radius [m] and dimensions(2) is the height [m] of the cylinder; Rectangular pellets: dimensions(1) is the height [m], dimensions(2) is the width [m] and dimensions(3) is the length [m]; Time-dependent.

Type of: pellet:shape (2862)

### 9.7.1.3.320 permeability

Permeability model (can be different for each iron segment)

member	type	description
b	matflt.type (9.7.1.2.10)	List of B values for description of the mur(B) dependence [T]; Matrix (nsegment,nB)
mur	matflt.type (9.7.1.2.10)	Relative permeability mur(B) [dimensionless]; Matrix (nsegment,nB)



Type of: desc\_iron:permeability (2687)

### 9.7.1.3.321 pfcircuits

Circuits, connected to multiple coils and to multiple supplies, defining the current and voltage relationships in the system

member	type	description
name	vecstring.type (9.7.1.2.15)	Name of circuit, array of strings (ncircuits)
id	vecstring.type (9.7.1.2.15)	ID of circuit, array of strings (ncircuits)
type	vecstring.type (9.7.1.2.15)	Type of circuit, array of strings (ncircuits)
nnodes	vecint.type (9.7.1.2.14)	Number of nodes used to describe a circuit. Vector (ncircuits)
connections	array3dint.type (9.7.1.2.3)	Description of the supplies and coils connections (nodes) across each circuit. Array 3D (ncircuits,max_nnodes,2*ncomponents), describing for each node which component are connected to it (1 if connected, 0 otherwise). There are 2 sides at each component, thus 2*ncomponents as the size of the third dimension, listing first all supplies, then all coils (in the same order as listed in PFSUPPLIES and PFCOILS). An example can be found in the data structure documentation PFconnections.pdf

Type of: pfsystems:pfcircuits (2587)

### 9.7.1.3.322 pfcoids

Active poloidal field coils

member	type	description
desc_pfcoids	desc_pfcoids (9.7.1.3.138)	Description of the coils
coilcurrent	exp1D (9.7.1.3.197)	Circuit feed current in the coil, defined positive if it flows from point 1 to point 2 of the component in the pfcircuit description [A]; Time-dependent; Vector (ncoils)
coilvoltage	exp1D (9.7.1.3.197)	Voltage on the full coil [V]; Time-dependent; Vector (ncoils)
p_cryo	float (9.7.1.1.1)	Total electric power consumed by the cryoplant system [W]; Time-dependent. Scalar.
p_nh	vecflt.type (9.7.1.2.13)	Nuclear heating on the poloidal field coils [W]; Time-dependent. Vector(ncoils)

Type of: pfsystems:pfcoids (2587)

### 9.7.1.3.323 pfelement

Axisymmetric conductor description

member	type	description
name	vecstring.type (9.7.1.2.15)	Name of this element. Should be a matrix of strings (ncoils,max_nelements), but not supported by the UAL yet.
id	vecstring.type (9.7.1.2.15)	ID of this element. Should be a matrix of strings (ncoils,max_nelements), but not supported by the UAL yet.
turnsign	matflt.type (9.7.1.2.10)	Sign of turn and fraction of a turn for calculating magnetic field of the Element; Matrix (ncoils,max_nelements)
area	matflt.type (9.7.1.2.10)	Surface area of this element [m <sup>2</sup> ]; Matrix (ncoils,max_nelements)
pfgeometry	pfgeometry (9.7.1.3.324)	Shape of a PF Coil Element

Type of: desc\_pfcoids:pfelement (2688)

### 9.7.1.3.324 pfgeometry

Shape of a PF Coil Element

member	type	description
type	matint.type (9.7.1.2.11)	Type used to describe a coil shape (0 for 'rzcoordinates' or 1 for 'rzdrdz'); Matrix of integers (ncoils,max_nelements)
npoints	matint.type (9.7.1.2.11)	Number of points describing an element (irregular outline rzcoordinates); Matrix (ncoils,max_nelements)
rzcoordinate	rz3D (9.7.1.3.363)	Irregular outline [m]; 3D arrays (ncoils,max_nelements,max_npoints)
rzdrdz	array3dflt.type (9.7.1.2.2)	4-vector defining Centre R,Z and full extents dR, dZ [m]; 3D Array (ncoils,max_nelements,4)

Type of: pfelement:pfgeometry (2873)

### 9.7.1.3.325 pfpgeometry

Geometry of the passive elements

member	type	description
type	vecint_type (9.7.1.2.14)	Type used to describe the shape (0 for 'rzcoordinates' or 1 for 'rzdrdz'); Vector of integers (nelements)
npoints	vecint_type (9.7.1.2.14)	Number of points describing an element (irregular outline rzcoordinates); Vector of integers (nelements)
rzcoordinate	rz2D (9.7.1.3.362)	Irregular outline [m]; Matrix (nelements,max_npoints)
rzdrdz	matflt_type (9.7.1.2.10)	4-vector defining Centre R,Z and full extents dR, dZ [m]; Matrix (nelements,4)

Type of: pfpassive:pfpgeometry (2876)

### 9.7.1.3.326 pfpassive

Passive axisymmetric conductor description

member	type	description
name	vecstring_type (9.7.1.2.15)	Name of coil. Array of strings (nelements)
area	vecflt_type (9.7.1.2.13)	Surface area of this passive element [m <sup>2</sup> ]; Vector (nelements)
res	vecflt_type (9.7.1.2.13)	Passive element resistance [Ohm]; Vector (nelements)
eta	vecflt_type (9.7.1.2.13)	Passive element resistivity [Ohm.m]; Vector (nelements)
current	pfpassive_current (9.7.1.3.327)	Current induced in passive structures.
pfpgeometry	pfpgeometry (9.7.1.3.325)	Geometry of the passive elements

Type of: pfsystems:pfpassive (2587)

### 9.7.1.3.327 pfpassive\_current

Current induced in passive structures.

member	type	description
toroidal	exp1D (9.7.1.3.197)	Toroidal current induced in passive structures [A]. Vector (nelements); Time-dependent
poloidal	exp1D (9.7.1.3.197)	Poloidal current induced in passive structures [A]. Vector (nelements); Time-dependent

Type of: pfpassive:current (2876)

### 9.7.1.3.328 pfsupplies

PF power supplies

member	type	description
desc_supply	desc_supply (9.7.1.3.139)	Description of the power supplies
voltage	exp1D (9.7.1.3.197)	Voltage at the supply output [V]; Time-dependent; Vector (nsupplies)
current	exp1D (9.7.1.3.197)	Current at the supply output, defined positive if it flows from point 1 to point 2 of the component in the pfcircuit description [A]; Time-dependent; Vector (nsupplies)

Type of: pfsystems:pfsupplies (2587)

### 9.7.1.3.329 phaseellipse

Phase ellipse characteristics

member	type	description
invcurvrad	vecflt_type (9.7.1.2.13)	Inverse curvature radii for the phase ellipse [m <sup>-1</sup> ], positive/negative for divergent/convergent beams, Vector (2). Time-dependent
angle	float (9.7.1.1.1)	Rotation angle for the phase ellipse [rd], Float. Time-dependent

Type of: rfbeam:phaseellipse (2907)

### 9.7.1.3.330 planecoil

Plane coil description

member	type	description
coordinates	rz1D (9.7.1.3.359)	Coordinate points of centre of conductor; vectors(nelements)
hlength	vecflt.type (9.7.1.2.13)	Half length perpendicular to plane where coil is defined; vector(nelements) [m].
radialwidth	vecflt.type (9.7.1.2.13)	Half width, (outer contour-inner contour)/2; vector(nelements) [m].

Type of: tf\_desc\_tfcoils:planecoil (3004)

### 9.7.1.3.331 plasmaComplexType

Description of incoming plasma

member	type	description
species	vecint.type (9.7.1.2.14)	Definition of plasma species. Index into wall/compositions/edgespecies. Integer vector (number of plasma species).
flux	matflt.type (9.7.1.2.10)	Plasma particle flux density from/to plasma facing wall surfaces [ $1/(m^2 s)$ ]. Positive means incoming onto the wall, negative means sent back into the plasma. Time-dependent; Float matrix (number of plasma species, number of discretization elements in the subgrid)
b	matflt.type (9.7.1.2.10)	Magnetic field vector at the surface [T]; Time-dependent; Float matrix (number of space dimensions, number of discretization elements in the subgrid). If two-dimensional: unit vectors with first coordinate perpendicular to the wall facing towards the plasma, second coordinate parallel to the surface (in the direction of the surface discretization), third dimension is zero. If three-dimensional: vector is relative to basis vectors stored in wall/wall3d/grid/basis with basis index as given in wall/wall3d/basis.index.
energy	matflt.type (9.7.1.2.10)	Total energy flux density of incoming particles of given species [ $W/m^2$ ]; Positive means incoming onto the wall, negative means sent back into the plasma. Time-dependent; Float matrix (number of plasma species, number of discretization elements in the subgrid)

Type of: wall2d:plasma (3031) | wall3d:plasma (3033)

### 9.7.1.3.332 plasmaedge

Plasma edge characteristics in front of the antenna.

member	type	description
npoints	integer (9.7.1.1.2)	Number of points in the distance grid. Integer
distance	vecflt.type (9.7.1.2.13)	Grid for electron density, defined as the perpendicular distance to the antenna waveguide plane (the origin being described in the position sub-structure) [m]. Vector (npoints). Time-dependent.
density	vecflt.type (9.7.1.2.13)	Electron density in front of the antenna [ $m^{-3}$ ]. Vector (npoints). Time-dependent.

Type of: antenna\_lh:plasmaedge (2606)

### 9.7.1.3.333 pol\_decomp

TO BE REMOVED, being replaced by e.components and grid. Kept only to make smooth transition between data-type versions. [Poloidal decomposition of the wave fields. Uses the flux surface grid in grid\_1d.]

member	type	description
mpol	vecint.type (9.7.1.2.14)	Poloidal mode numbers; Vector (nmpol)
e.plus	array3dflt.type (9.7.1.2.2)	Magnitude of poloidal Fourier decomposition of left hand polarised component of the wave electric field [V/m]; Time-dependent; Array 3D (ntor, npsi, nmpol)
e.plus.ph	array3dflt.type (9.7.1.2.2)	Phase of poloidal Fourier decomposition of left hand polarised component of the wave electric field [rad]; Time-dependent; Array 3D (ntor, npsi, nmpol)
e.minus	array3dflt.type (9.7.1.2.2)	Magnitude of poloidal Fourier decomposition of right hand polarised component of the wave electric field; Time-dependent (V/m); Array 3D (ntor, npsi, nmpol)
e.minus.ph	array3dflt.type (9.7.1.2.2)	Phase of poloidal Fourier decomposition of right hand polarised component of the wave electric field [rad]; Time-dependent; Array 3D (ntor, npsi, nmpol)
e.norm	array3dflt.type (9.7.1.2.2)	Magnitude of poloidal Fourier decomposition of wave electric field normal to a flux surface [V/m]; Time-dependent; Array 3D (ntor, npsi, nmpol)
e.norm.ph	array3dflt.type (9.7.1.2.2)	Phase of poloidal Fourier decomposition of wave electric field normal to a flux surface [rad]; Time-dependent; Array 3D (ntor, npsi, nmpol)
e.binorm	array3dflt.type (9.7.1.2.2)	Magnitude of poloidal Fourier decomposition of wave electric field tangent to a flux surface [V/m]; Time-dependent; Array 3D (ntor, npsi, nmpol)

member	type	description
e.binorm_ph	array3dflt.type (9.7.1.2.2)	Phase of poloidal Fourier decomposition of wave electric field tangent to a flux surface [rad]; Time-dependent; Array 3D (ntor, npsi, nmpol)
e_para	array3dflt.type (9.7.1.2.2)	Magnitude of poloidal Fourier decomposition of parallel wave electric field [V/m]; Time-dependent; Array 3D (ntor, npsi, nmpol)
e_para_ph	array3dflt.type (9.7.1.2.2)	Phase of poloidal Fourier decomposition of parallel wave electric field [rad]; Time-dependent; Array 3D (ntor, npsi, nmpol)
b.norm	array3dflt.type (9.7.1.2.2)	Magnitude of poloidal Fourier decomposition of wave magnetic field normal to a flux surface [T]; Time-dependent; Array 3D (ntor, npsi, nmpol)
b.norm_ph	array3dflt.type (9.7.1.2.2)	Phase of poloidal Fourier decomposition of normal wave magnetic field [rad]; Time-dependent; Array 3D (ntor, npsi, nmpol)
b.binorm	array3dflt.type (9.7.1.2.2)	Magnitude of poloidal Fourier decomposition of wave magnetic field tangent to a flux surface [T]; Time-dependent; Array 3D (ntor, npsi, nmpol)
b.binorm_ph	array3dflt.type (9.7.1.2.2)	Phase of poloidal Fourier decomposition of wave magnetic field tangent to a flux surface [rad]; Time-dependent; Array 3D (ntor, npsi, nmpol)
b_para	array3dflt.type (9.7.1.2.2)	Magnitude of Fourier decomposition of wave magnetic field parallel to the equilibrium magnetic field [T]; Time-dependent; Array 3D (ntor, npsi, nmpol)
b_para_ph	array3dflt.type (9.7.1.2.2)	Phase of Fourier decomposition of wave magnetic field parallel to the equilibrium magnetic field [T]; Time-dependent; Array 3D (ntor, npsi, nmpol)
k.perp	array3dflt.type (9.7.1.2.2)	Perpendicular wave number [T]; Time-dependent; Array 3D (ntor, npsi, nmpol)

Type of: fullwave:pol\_decomp (2759)

### 9.7.1.3.334 polarimetry

This structure accomodates the polarimetry setup and measurements of a mse diagnostic, as widely used in fusion devices. The final measurement is the  $\tan(\gamma)$  where  $\gamma$  is the polarization angle of a particular spectral mse component.

member	type	description
setup	msediag_setup_polarimetry (9.7.1.3.282)	diagnostic setup information
measure	exp1D (9.7.1.3.197)	Measured value (MSE angle $\gamma$ [rad]). Time-dependent; Vector (nchords)

Type of: msediag:polarimetry (2581)

### 9.7.1.3.335 polarization

Wave field polarization along the ray/beam.

member	type	description
epol.p_re	vecflt.type (9.7.1.2.13)	Real part of the left hand polarized electric field (rotating with the ions), Vector (npoints). Time-dependent
epol.p_im	vecflt.type (9.7.1.2.13)	Imaginary part of the left hand polarized electric field (rotating with the ions), Vector (npoints). Time-dependent
epol.m_re	vecflt.type (9.7.1.2.13)	Real part of the right hand polarized electric field (rotating with the electrons), Vector (npoints). Time-dependent
epol.m_im	vecflt.type (9.7.1.2.13)	Imaginary part of the right hand polarized electric field (rotating with the electrons), Vector (npoints). Time-dependent
epol.par_re	vecflt.type (9.7.1.2.13)	Real part of the electric field polarization vector in the magnetic field direction, Vector (npoints). Time-dependent
epol.par_im	vecflt.type (9.7.1.2.13)	Imaginary part of the electric field polarization vector in the magnetic field direction, Vector (npoints). Time-dependent

Type of: beamtracing:polarization (2616)

### 9.7.1.3.336 power\_conv\_component

Description of the components of the power conversion system. Array of structure (ncomp).

member	type	description
name	string (9.7.1.1.3)	name of the component
temp_in	float (9.7.1.1.1)	temperature of the input [K];Scalar
temp_out	float (9.7.1.1.1)	temperature of the output [K];Scalar
press_in	float (9.7.1.1.1)	Pressure of the input[Pa];Scalar
press_out	float (9.7.1.1.1)	Pressure of the output [Pa];Scalar

member	type	description
power	float (9.7.1.1.1)	electric consumption by the component; (consumption power)[W];Scalar
flow	float (9.7.1.1.1)	Flow through the component [kg/s]; Scalar

Type of: circuits:component (2624)

### 9.7.1.3.337 power\_exchange

member	type	description
dep_pow	vecflt.type (9.7.1.2.13)	Power deposited in each bb module (the reference outboard module if only value is given) [W]; Vector(nmodules)
dep_fw	float (9.7.1.1.1)	Power deposited in the first wall (heat flux + neutrons) [W]; Scalar
dep_sg	float (9.7.1.1.1)	Power deposited in the stiffening grid (neutrons) [W]; Scalar
dep_cp	float (9.7.1.1.1)	Power deposited in the cooling plates (neutrons) [W]; Scalar
dep_lp	float (9.7.1.1.1)	Power deposited in the Pb-15.7Li (neutrons) [W]; Scalar
dep_man	float (9.7.1.1.1)	Power deposited in the manifolds (neutrons) [W]; Scalar
dep_pl	float (9.7.1.1.1)	Power deposited in the protect layer (made of tungsten) (neutrons) [W]; Scalar
rec_fw	float (9.7.1.1.1)	Power recovered from He in first wall channels [W]; Scalar
rec_sg	float (9.7.1.1.1)	Power recovered from He in stiffening grid channels [W]; Scalar
rec_cp	float (9.7.1.1.1)	Power recovered from He in cooling plates channels [W]; Scalar
pow_dens_fw	float (9.7.1.1.1)	Peak energy depostion in first wall [W.m <sup>-3</sup> ]; Scalar
pow_dens_bz	float (9.7.1.1.1)	Peak energy depostion in breeding zone [W.m <sup>-3</sup> ]; Scalar
pow_dens_bz10	float (9.7.1.1.1)	Peak energy depostion in breeding zone (first ten centimeters) [W.m <sup>-3</sup> ]; Scalar
pow_dens_bp	float (9.7.1.1.1)	Peak energy depostion in back plate [W.m <sup>-3</sup> ]; Scalar
pow_dens_man	float (9.7.1.1.1)	Peak energy depostion in manifold [W.m <sup>-3</sup> ]; Scalar
pow_dens_sh	float (9.7.1.1.1)	Peak energy depostion in shield [W.m <sup>-3</sup> ]; Scalar

Type of: mode\_neutr:pow\_exchange (2821)

### 9.7.1.3.338 powerflow

Power flow along the ray/beam.

member	type	description
phi_perp	vecflt.type (9.7.1.2.13)	Normalized power flow in the direction perpendicular to the magnetic field; Vector (npoints). Time-dependent
phi_par	vecflt.type (9.7.1.2.13)	Normalized power flow in the direction parallel to the magnetic field; Vector (npoints). Time-dependent
power_e	vecflt.type (9.7.1.2.13)	Power absorbed along the beam by electrons [W]; Vector (npoints). Time-dependent
power_i	matflt.type (9.7.1.2.10)	Power absorbed along the beam by an ion species [W]; Matrix (npoints, nion). Time-dependent

Type of: beamtracing:powerflow (2616)

### 9.7.1.3.339 profiles1d

Profiles derived from the fields solved in the transport equations, or from experiment.

member	type	description
pe	coreprofile (9.7.1.3.123)	Electron pressure [Pa]; Time-dependent;
dpedt	coreprofile (9.7.1.3.123)	Time derivative of the electron pressure [Pa/s]; Time-dependent;
pi	coreprofion (9.7.1.3.124)	Ion pressure [Pa]; Time-dependent;
pi_tot	coreprofile (9.7.1.3.123)	Total ion pressure (sum of the species) [Pa]; Time-dependent;
dpi_totdt	coreprofile (9.7.1.3.123)	Time derivative of the total ion pressure [Pa/s]; Time-dependent;
pr_th	coreprofile (9.7.1.3.123)	Thermal pressure (electrons+ions) [Pa]; Time-dependent;
pr_perp	coreprofile (9.7.1.3.123)	Total perpendicular pressure (electrons+ions, thermal+non-thermal) [Pa]; Time-dependent;
pr_parallel	coreprofile (9.7.1.3.123)	Total parallel pressure (electrons+ions, thermal+non-thermal) [Pa]; Time-dependent;
jtot	coreprofile (9.7.1.3.123)	total parallel current density = average(jtot.B) / B0, where B0 = coreprof/toroid.field/b0 [A/m <sup>2</sup> ]; Time-dependent;
jni	coreprofile (9.7.1.3.123)	non-inductive parallel current density = average(jni.B) / B0, where B0 = coreprof/toroid.field/b0 [A/m <sup>2</sup> ]; Time-dependent;

member	type	description
jphi	coreprofile (9.7.1.3.123)	total toroidal current density = average(jphi/R) / average(1/R) [A/m <sup>2</sup> ]; Time-dependent;
joh	coreprofile (9.7.1.3.123)	ohmic parallel current density = average(joh.B) / B0, where B0 = coreprof/toroid.field/b0 [A/m <sup>2</sup> ]; Time-dependent;
vloop	coreprofile (9.7.1.3.123)	Toroidal loop voltage [V]. Time-dependent.
sigmapar	coreprofile (9.7.1.3.123)	Parallel conductivity [ohm <sup>-1</sup> .m <sup>-1</sup> ]. Time-dependent.
qoh	sourcecel (9.7.1.3.407)	ohmic heating [W/m <sup>3</sup> ]; Time-dependent;
qei	coreprofile (9.7.1.3.123)	Collisional heat transfer from electrons to ions (equipartition term) [W/m <sup>3</sup> ]; Time-dependent;
eparallel	coreprofile (9.7.1.3.123)	Parallel electric field = average(E.B) / B0, where B0 = coreprof/toroid.field/b0 [V.m <sup>-1</sup> ]. Time-dependent.
e.b	coreprofile (9.7.1.3.123)	Average(E.B) [V.T.m <sup>-1</sup> ]. Time-dependent.
q	coreprofile (9.7.1.3.123)	Safety factor profile; Time-dependent;
shear	coreprofile (9.7.1.3.123)	Magnetic shear profile; Time-dependent;
ns	corepfion (9.7.1.3.124)	Density of fast ions, for the various ion species [m <sup>-3</sup> ]; Time-dependent;
mtor	corepfion (9.7.1.3.124)	Toroidal momentum of the various ion species [UNITS?]; Time-dependent;
wtor	corepfion (9.7.1.3.124)	Angular toroidal rotation frequency of the various ion species [s <sup>-1</sup> ]; Time-dependent;
vpol	corepfion (9.7.1.3.124)	Neoclassical poloidal rotation of each ion species [m/s]. Time-dependent.
zeff	coreprofile (9.7.1.3.123)	Effective charge profile; Time-dependent;
bpol	coreprofile (9.7.1.3.123)	Average poloidal magnetic field, defined as sqrt(ave(grad rho <sup>2</sup> /R <sup>2</sup> )).dpsi/drho [T]. Time-dependent.
dvprimedt	coreprofile (9.7.1.3.123)	Time derivative of the radial derivative of the volume enclosed in the flux surface, i.e. d/dt(dV/drho.tor) [m <sup>2</sup> .s <sup>-1</sup> ]; Time-dependent.

Type of: coreprof:profiles1d (2561)

### 9.7.1.3.340 profiles\_1d

output profiles as a function of the poloidal flux

member	type	description
psi	vecflt_type (9.7.1.2.13)	Poloidal flux [Wb], without 1/2pi and such that Bp= grad psi  /R/2/pi. Time-dependent; Vector (npsi)
phi	vecflt_type (9.7.1.2.13)	toroidal flux [Wb]; Time-dependent; Vector (npsi)
pressure	vecflt_type (9.7.1.2.13)	pressure profile as a function of the poloidal flux [Pa]; Time-dependent; Vector (npsi)
F.dia	vecflt_type (9.7.1.2.13)	diamagnetic profile (R B_phi) [T m]; Time-dependent; Vector (npsi)
pprime	vecflt_type (9.7.1.2.13)	psi derivative of the pressure profile [Pa/Wb]; Time-dependent; Vector (npsi)
ffprime	vecflt_type (9.7.1.2.13)	psi derivative of F.dia multiplied with F.dia [T <sup>2</sup> m <sup>2</sup> /Wb]; Time-dependent; Vector (npsi)
jphi	vecflt_type (9.7.1.2.13)	flux surface averaged toroidal current density = average(jphi/R) / average(1/R) [A/m <sup>2</sup> ]; Time-dependent; Vector (npsi)
jparallel	vecflt_type (9.7.1.2.13)	flux surface averaged parallel current density = average(j.B) / B0, where B0 = equilibrium/global.param/toroid.field/b0 ; [A/m <sup>2</sup> ]; Time-dependent; Vector (npsi)
q	vecflt_type (9.7.1.2.13)	Safety factor = dphi/dpsi [-]; Time-dependent; Vector (npsi)
shear	vecflt_type (9.7.1.2.13)	Magnetic shear, defined as rho.tor/q*dq/drho.tor [-]; Time-dependent; Vector (npsi)
r_inboard	vecflt_type (9.7.1.2.13)	radial coordinate (major radius) at the height and on the left of the magnetic axis [m]; Time-dependent; Vector (npsi)
r_outboard	vecflt_type (9.7.1.2.13)	radial coordinate (major radius) at the height and on the right of the magnetic axis [m]; Time-dependent; Vector (npsi)
rho_tor	vecflt_type (9.7.1.2.13)	Toroidal flux coordinate [m], to be used by the ETS and in many CPOs (coreprof, ...). Defined as sqrt(phi/pi/B0), where B0 = equilibrium/global.param/toroid.field/b0. Time-dependent; Vector (npsi)
dpsidrho_tor	vecflt_type (9.7.1.2.13)	dpsi/drho_tor [Wb/m]; Time-dependent; Vector (npsi)
rho_vol	vecflt_type (9.7.1.2.13)	Normalised radial coordinate related to the plasma volume. Defined as sqrt(volume / volume[LCFS]). Time-dependent; Vector (npsi)
beta_pol	vecflt_type (9.7.1.2.13)	poloidal beta (inside the magnetic surface); Time-dependent; Vector (npsi)
li	vecflt_type (9.7.1.2.13)	internal inductance (inside the magnetic surface); Time-dependent; Vector (npsi)
elongation	vecflt_type (9.7.1.2.13)	Elongation; Time-dependent; Vector (npsi)
tria_upper	vecflt_type (9.7.1.2.13)	Upper triangularity profile; Time-dependent; Vector (npsi)
tria_lower	vecflt_type (9.7.1.2.13)	Lower triangularity profile; Time-dependent; Vector (npsi)
volume	vecflt_type (9.7.1.2.13)	Volume enclosed in the flux surface [m <sup>3</sup> ]; Time-dependent; Vector (npsi)
vprime	vecflt_type (9.7.1.2.13)	Radial derivative of the volume enclosed in the flux surface with respect to psi, i.e. dV/dpsi [m <sup>3</sup> /Wb]; Time-dependent; Vector (npsi)
dvdrho	vecflt_type (9.7.1.2.13)	Radial derivative of the volume enclosed in the flux surface with respect to rho.tor, i.e. dV/drho.tor [m <sup>2</sup> ]; Time-dependent; Vector (npsi)
area	vecflt_type (9.7.1.2.13)	Cross-sectional area of the flux surface [m <sup>2</sup> ]; Time-dependent; Vector (npsi)
aprime	vecflt_type (9.7.1.2.13)	Radial derivative of the cross-sectional area of the flux surface with respect to psi, i.e. darea/dpsi [m <sup>2</sup> /Wb]; Time-dependent; Vector (npsi)

member	type	description
surface	vecflt_type (9.7.1.2.13)	Surface area of the flux surface [m <sup>2</sup> ]; Time-dependent; Vector (npsi)
fttrap	vecflt_type (9.7.1.2.13)	Trapped particle fraction; Time-dependent; Vector (npsi)
gm1	vecflt_type (9.7.1.2.13)	average(1/R <sup>2</sup> ); Time-dependent; Vector (npsi)
gm2	vecflt_type (9.7.1.2.13)	average(grad_rho <sup>2</sup> /R <sup>2</sup> ); Time-dependent; Vector (npsi)
gm3	vecflt_type (9.7.1.2.13)	average(grad_rho <sup>2</sup> ); Time-dependent; Vector (npsi)
gm4	vecflt_type (9.7.1.2.13)	average(1/B <sup>2</sup> ) [T <sup>-2</sup> ]; Time-dependent; Vector (npsi)
gm5	vecflt_type (9.7.1.2.13)	average(B <sup>2</sup> ) [T <sup>2</sup> ]; Time-dependent; Vector (npsi)
gm6	vecflt_type (9.7.1.2.13)	average(grad_rho <sup>2</sup> /B <sup>2</sup> ) [T <sup>-2</sup> ]; Time-dependent; Vector (npsi)
gm7	vecflt_type (9.7.1.2.13)	average(grad_rho); Time-dependent; Vector (npsi)
gm8	vecflt_type (9.7.1.2.13)	average(R); Time-dependent; Vector (npsi)
gm9	vecflt_type (9.7.1.2.13)	average(1/R); Time-dependent; Vector (npsi)
b_av	vecflt_type (9.7.1.2.13)	average(B); Time-dependent; Vector (npsi)
b_min	vecflt_type (9.7.1.2.13)	minimum(B) on the flux surface; Time-dependent; Vector (npsi)
b_max	vecflt_type (9.7.1.2.13)	maximum(B) on the flux surface; Time-dependent; Vector (npsi)
omega	vecflt_type (9.7.1.2.13)	Toroidal rotation angular frequency (assumed constant on the flux surface) [rad/s]; Time-dependent; Vector (npsi)
omegaprime	vecflt_type (9.7.1.2.13)	Psi derivative of the toroidal rotation angular frequency (assumed constant on the flux surface) [rad/(s.Wb)]; Time-dependent; Vector (npsi)
mach_a	vecflt_type (9.7.1.2.13)	Alfvenic Mach number; Time-dependent; Vector (npsi)
phi_flow	vecflt_type (9.7.1.2.13)	Poloidal flow function phi_flow = rho*v_pol/B_pol[kg/(V.s <sup>2</sup> )] where rho is mass density; Time-dependent; Vector (npsi)
s_flow	vecflt_type (9.7.1.2.13)	Flux function in the closure equation p=S(psi).rho^(gamma); Entropy (gamma=5/3) or Temperature (gamma=1); Time-dependent; Vector (npsi)
h_flow	vecflt_type (9.7.1.2.13)	flow function h_flow = gamma/(gamma-1)*s_flow*rho^(gamma-1) + 0.5*(phi_flow*B/rho)^2 - 0.5*(R*omega)^2 [m <sup>2</sup> /s <sup>2</sup> ]; Time-dependent; Vector (npsi)
rho_mass	vecflt_type (9.7.1.2.13)	Mass density [kg/m <sup>3</sup> ]; Time-dependent; Vector (npsi)

Type of: equilibrium:profiles\_1d (2570)

### 9.7.1.3.341 psi

Poloidal magnetic flux [Wb]; Time-dependent;

member	type	description
value	vecflt_type (9.7.1.2.13)	Signal value [Wb]; Time-dependent; Vector (nrho)
ddrho	vecflt_type (9.7.1.2.13)	Radial derivative (dvalue/drho_tor) [Wb.m <sup>-1</sup> ]; Time-dependent; Vector (nrho)
d2drho2	vecflt_type (9.7.1.2.13)	Second order radial derivative (d2value/drho_tor2) [Wb.m <sup>-2</sup> ]; Time-dependent; Vector (nrho)
ddt_rhotorn	vecflt_type (9.7.1.2.13)	Time derivative of the poloidal flux at constant rho_tor_norm [V]. Time-dependent.
ddt_phi	vecflt_type (9.7.1.2.13)	Time derivative of the poloidal flux at constant toroidal flux [V]. Time-dependent.
source	string (9.7.1.1.3)	Source of the profile (any comment describing the origin of the profile : code, path to diagnostic signals, massaging, ...); String
flag	integer (9.7.1.1.2)	Flag describing how the profile has been processed : 0-not calculated; 1-interpretative; 2-calculated by the transport solver; 3-calculated by a separate code : in that case only, description of the code provided in codeparam at the same level; 4-used value from the previous time step; Time-dependent; Scalar
boundary	boundary (9.7.1.3.67)	Boundary condition for the transport equation. Time-dependent.
jni	jni (9.7.1.3.242)	Non-inductive parallel current density [A/m <sup>2</sup> ]; Time-dependent;
sigma_par	coreprofile (9.7.1.3.123)	Parallel conductivity [ohm <sup>-1</sup> .m <sup>-1</sup> ]. Time-dependent
codeparam	codeparam (9.7.1.3.77)	Code parameters

Type of: coreprof:psi (2561)

### 9.7.1.3.342 putinfo

Structure which is type independent, describing the data item

member	type	description
putmethod	string (9.7.1.1.3)	Storage method for this data
putaccess	string (9.7.1.1.3)	Instructions to access the data using this method
putlocation	string (9.7.1.1.3)	Name of this data under this method
rights	string (9.7.1.1.3)	Access rights to this data



Type of: datainfo:putinfo (2684)

### 9.7.1.3.343 q

Safety factor

member	type	description
qvalue	vecflt.type (9.7.1.2.13)	Safety factor values; Time-dependent; Vector (nmeas)
position	rz1D (9.7.1.3.359)	Major radius of the given safety factor values [m]; Time-dependent; Vector (nmeas)
source	string (9.7.1.1.3)	Description or path to the source signal (diagnostic or genprof, from which to read all info on the signal), e.g. 'magdiag/bpol_probes/measure/value'. String
exact	integer (9.7.1.1.2)	1 means exact data, is not fitted; 0 means the equilibrium code does a least square fit; scalar integer
weight	vecflt.type (9.7.1.2.13)	weight given to the measurement ( $\zeta=0$ ); Time-dependent; Vector (nmeas)
sigma	vecflt.type (9.7.1.2.13)	standard deviation of the measurement; Time-dependent; Vector (nmeas)
calculated	vecflt.type (9.7.1.2.13)	Signal as recalculated by the equilibrium code; Time-dependent; Vector (nmeas)
chi2	vecflt.type (9.7.1.2.13)	chi <sup>2</sup> of (calculated-measured); Time-dependent; Vector (nmeas)

Type of: eqconstraint:q (2739)

### 9.7.1.3.344 reacprodType

Characterizes a reactant or product in an AMNS reaction.

member	type	description
label	string (9.7.1.1.3)	String identifier for reaction participant (e.g. "D", "e", "W", "CD4", "photon", "n").
constituents(:)	amns.constituentType (9.7.1.3.52)	Array specifying the constituents of this reactant/product; For an atom or ion the array will be of length 1, for a molecule there will be more than one element in the array; Vector (nconst)
role	identifier (9.7.1.3.235)	Identifier for the role of this participant in the reaction. For surface reactions distinguish between projectile and wall.
amn	float (9.7.1.1.1)	Mass of the participant (amu).
relative	integer (9.7.1.1.2)	This is a flag indicating that charges are absolute (if set to 0), relative (if 1) or irrelevant (-1); relative would be used to categorize the ionization reactions from i to i+1 for all charge states; in the case of bundles, the +1 relative indicates the next bundle.
za	float (9.7.1.1.1)	Charge of the participant. Not set if not important (e.g. for a nuclear reaction). For the case where we are describing a set of reactions for different charge states, then this is the relative charge.
multiplicity	float (9.7.1.1.1)	Multiplicity in the reaction
metastable	vecint.type (9.7.1.2.14)	An array identifying the metastable; if zero-length, then not a metastable; if of length 1, then the value indicates the electronic level for the metastable (mostly used for atoms/ions); if of length 2, then the 1st would indicate the electronic level and the second the vibrational level for the metastable (mostly used for molecules and molecular ions); if of length 3, then the 1st would indicate the electronic level, the second the vibrational level and the third the rotational level for the metastable (mostly used for molecules and molecular ions)
metastable_label	string (9.7.1.1.3)	Label identifying in text form the metastable

Type of: amns\_processType:product (2603) | amns\_processType:reactant (2603)

### 9.7.1.3.345 react

In the reactor region

member	type	description
he_fr	float (9.7.1.1.1)	Coolant mass flow rate in the whole reactor [Kg/s]; Scalar
lp_fr	float (9.7.1.1.1)	Pb-15.7Li mass flow rate in the whole reactor [Kg/s]; Scalar
he_dp	float (9.7.1.1.1)	Coolant pressure drops in the reactor (compressing pipelines) [Pa]; Scalar
lipb_dp	float (9.7.1.1.1)	Pb-15.7Li pressure drops in the reactor [Pa]; Scalar

Type of: hcll\_bb:react (2782)

### 9.7.1.3.346 rectanglexyz

Rectangle defined by its four corners. These form an ordered sequence: point00, point01, point11, point10. Here the first point can be calculated from the other three as point00=point01+point10-point11, thus the rectangle is defined by the triplet (point01, point11, point10). The normal vector of this rectangle is defined to be in the

direction (point01-point11)x(point10-point11).

member	type	description
point01	xyz0D (9.7.1.3.509)	Point 01 on the rectangle
point11	xyz0D (9.7.1.3.509)	Point 11 on the rectangle
point10	xyz0D (9.7.1.3.509)	Point 10 on the rectangle

Type of: nbi\_nbi\_unit\_wall\_surface:rectangle (2835)

### 9.7.1.3.347 recycling\_neutrals

Recycling coefficients

member	type	description
particles	vecflt_type (9.7.1.2.13)	Particle recycling coefficient corresponding to the conversion to the neutral type INEUT. Vector(nneut). Time-dependent.
energy	vecflt_type (9.7.1.2.13)	Energy recycling coefficient corresponding to the conversion to the neutral type INEUT. Vector(nneut). Time-dependent.

Type of: coefficients\_neutrals:recycling (2628)

### 9.7.1.3.348 reduced

Structure for a reduced data signal (0D data)

member	type	description
value	float (9.7.1.1.1)	Data value; Real
source	string (9.7.1.1.3)	Path to the source signal (diagnostic or genprof, from which to read all info on the signal); String
time	float (9.7.1.1.1)	Time (exact time slice used from the time array of the source signal); Real

### 9.7.1.3.349 refl\_receive

Reflectometry signal; experimental or code output. Time-dependent. Vector(nreceivers); If output from ERC3D, contains short, high-resolution (ps) time series anchored to the time of the CPO or, for a combination of runs, longer, coarse time signals. For experimental signals, time series may span much longer durations. For slowly varying signals, may contain only one point and have a separate CPO instance with different time field for every point. For code output, the signals are usually normalised to unity power.

member	type	description
name	string (9.7.1.1.3)	Signal name
raw_signal	t_series_real (9.7.1.3.419)	Raw antenna signal, possibly code dependent, may not always be available; usually without mixing of local oscillator; Time series; Vector (ntime_raw); Time-dependent
io_signal	t_series_real (9.7.1.3.419)	Local oscillator signal, for mixing with raw signal; Time series; Vector (ntime_raw); Time-dependent
iq_receiver	t_series_cplx (9.7.1.3.418)	I and Q signals from the receiver; already processed by code (or hardware); Time series; Vector (ntime_receiver); Time-dependent
antenna_ind	integer (9.7.1.1.2)	Index of the receiving antenna in the antennas vector, starting at 0

Type of: reflectomet:refl\_receive (2590)

### 9.7.1.3.350 reflectometry\_antennas

Vector of reflectometry antenna descriptions. These include radiation fields as well as material antenna structures (feeds, horns, later mirrors); Vector(nantennas); refl\_received entries refer to their antenna by index in this array.

member	type	description
name	string (9.7.1.1.3)	Antenna name
type	identifier (9.7.1.3.235)	Antenna type: 1: sending, 2: receiving, 3: both
origin	origin (9.7.1.3.309)	NO DOCS

member	type	description
radfield	reflectometry_radfield (9.7.1.3.351)	Complex valued radiation field for injection into grid; Can be a Gaussian, or a waveguide mode, or an arbitrary E field. The latter method can be used with measured radiation patterns of actual antennas. Needs to be matched with any material structures in the geometry section of this CPO. Frequency dependence: in the launchsignal part, the launch frequency can be varied arbitrarily, which changes the radiation field (or Gaussian waist sizes) when radiated from a fixed size antenna; therefore, all entries here can be specified frequency-dependent; Time-dependent
geometry	float (9.7.1.1.1)	To be defined: annotation and type
launchsignal	launchsignal (9.7.1.3.251)	NO DOCS

Type of: reflectomet:antennas (2590)

### 9.7.1.3.351 reflectometry\_radfield

Complex valued radiation field for injection into grid; Can be a Gaussian, or a waveguide mode, or an arbitrary E field. The latter method can be used with measured radiation patterns of actual antennas. Needs to be matched with any material structures in the geometry section of this CPO. Frequency dependence: in the launchsignal part, the launch frequency can be varied arbitrarily, which changes the radiation field (or Gaussian waist sizes) when radiated from a fixed size antenna; therefore, all entries here can be specified frequency-dependent

member	type	description
type	identifier (9.7.1.3.235)	Identify type of source: 0: Gaussian, 1: waveguide mode, 2: arbitrary E field; corresponding sub-structure must be filled to provide the information.
position	vecflt_type (9.7.1.2.13)	Center position in local x-y-z coordinate system [m]; Vector(3)
gaussian(:)	reflectometry_radfield_gaussian (9.7.1.3.352)	Parameters if radiation field is a pure Gaussian; major axes of the Gaussian are aligned with the x and y axis of the local coordinate system given in origin; linear polarisation only. Time-dependent
efield(:)	reflectometry_radfield_efield (9.7.1.3.353)	complex electric field at the aperture, given as a 2d grid in the local x and y directions (corresponding to dim1 and dim2); Time-dependent

Type of: reflectometry\_antennas:radfield (2900)

### 9.7.1.3.352 reflectometry\_radfield\_gaussian

Parameters if radiation field is a pure Gaussian; major axes of the Gaussian are aligned with the x and y axis of the local coordinate system given in origin; linear polarisation only; Time-dependent

member	type	description
aperture	simp_apert (9.7.1.3.400)	Physical limits of the Gaussian wave field; any rotation here is at odds with the Gaussian geometry
waistsize	vecflt_type (9.7.1.2.13)	Beam waist size [m]; Vector(2)
waistzpos	vecflt_type (9.7.1.2.13)	Beam waist position along local z axis [m]; Vector(2)
tiltangle	vecflt_type (9.7.1.2.13)	tilt angle relative to local z axis [rad]; Vector(2)
polar_angle	vecflt_type (9.7.1.2.13)	Polarisation angle around local z [rad]; 0 means along the local x axis, i.e. vertical if all angles in the origin field are 0; Scalar
frequency	float (9.7.1.1.1)	Frequency for this occurrence of the gaussian/efield/wgmode CPO [Hz]; Scalar; can be zero of no frequency dependence is desired and only one CPO is given; Time-dependent

Type of: reflectometry\_radfield:gaussian (2901)

### 9.7.1.3.353 reflectometry\_radfield\_efield

complex electric field at the aperture, given as a 2d grid in the local x and y directions (corresponding to dim1 and dim2); Time-dependent

member	type	description
grid2d	reggrid (9.7.1.3.354)	Coordinate values for the grid for the electric field arrays. Vector(ndim1) and Vector(ndim2); Time-dependent
e1	matcplx_type (9.7.1.2.9)	Electric field component along local x direction [V/m]. Matrix(ndim1,ndim2); Time-dependent
e2	matcplx_type (9.7.1.2.9)	Electric field component along local y direction [V/m]. Matrix(ndim1,ndim2); Time-dependent
frequency	float (9.7.1.1.1)	Frequency for this occurrence of the gaussian/efield/wgmode CPO [Hz]; Scalar; can be zero of no frequency dependence is desired and only one CPO is given; Time-dependent

Type of: reflectometry\_radfield:efield (2901)

### 9.7.1.3.354 reggrid

Generic structure for a regular grid

member	type	description
dim1	vecflt.type (9.7.1.2.13)	First dimension values; Vector (ndim1)
dim2	vecflt.type (9.7.1.2.13)	Second dimension values; Vector (ndim2)

Type of: coord\_sys:grid (2651) I reflectometry\_radifield\_efield:grid2d (2903)

### 9.7.1.3.355 rfmeasure

Measured values

member	type	description
ti	exp1D (9.7.1.3.197)	Ion temperature [eV]. Vector (nchannels)

Type of: rfdiag:measure (2591)

### 9.7.1.3.356 rfsetup

diagnostic setup information

member	type	description
position	rzphi1Dexp (9.7.1.3.366)	Position of the measurement. Time-dependent. Vector (nchannels)

Type of: rfdiag:setup (2591)

### 9.7.1.3.357 rfbeam

Beam characteristics

member	type	description
spot	spot (9.7.1.3.414)	Spot characteristics
phaseellipse	phaseellipse (9.7.1.3.329)	Phase ellipse characteristics

Type of: antenna\_ec:beam (2604) I antenna\_lh:beam (2606)

### 9.7.1.3.358 rz0D

Structure for one (R,Z) position (0D)

member	type	description
r	float (9.7.1.1.1)	Major radius [m]
z	float (9.7.1.1.1)	Altitude [m]

Type of: circularcoil:centre (2625) I current:rz\_reference (2680) I dist\_geometry\_0d:mag\_axis (2697) I distsource\_global\_param: (2717) I eqgeometry:active\_limit (2740) I eqgeometry:geom\_axis (2740) I eqgeometry:left\_low\_st (2740) I eqgeometry:left\_up\_st (2740) I eqgeometry:right\_low\_st (2740) I eqgeometry:right\_up\_st (2740) I globalparam:geom\_axis (2779) I mag\_axis:position (2808) I waves\_global\_param:mag\_axis (3048)

### 9.7.1.3.359 rz1D

Structure for list of R,Z positions (1D)

member	type	description
r	vecflt.type (9.7.1.2.13)	Major radius [m]
z	vecflt.type (9.7.1.2.13)	Altitude [m]

Type of: flush:position (2753) I isoflux:position (2791) I limiter\_unit:position (2802) I mhd\_ideal\_wall2d:position (2813) I mhd\_res\_wall2d:position (2816) I omnigen\_surf:rz (2853) I planecoil:coordinates (2880) I q:position

(2893) I setup\_bprobe:position (2944) I solcurdiag\_sol\_current\_setup:position (2952) I straps:coord\_strap (2966) I wall\_blocks\_unit:position (3035) I wall\_vessel\_annular:inside (3042) I wall\_vessel\_annular:outside (3042) I xpts:position (3058)

### 9.7.1.3.360 rz1D\_npoints

Structure for list of R,Z positions (1D), with mention of the number of points relevant for a given time slice

member	type	description
r	vecflt.type (9.7.1.2.13)	Major radius [m]. Vector(max_npoints). Time-dependent
z	vecflt.type (9.7.1.2.13)	Altitude [m]. Vector(max_npoints). Time-dependent
npoints	integer (9.7.1.1.2)	Number of meaningful points in the above vectors at a given time slice. Time-dependent

### 9.7.1.3.361 rz1Dexp

Structure for list of R,Z positions (1D), with R and Z time-depent and experimental.

member	type	description
r	vecflt.type (9.7.1.2.13)	Major radius [m]. Vector(npoints). Time-dependent
z	vecflt.type (9.7.1.2.13)	Altitude [m]. Vector(npoints). Time-dependent

Type of: eqgeometry:boundary (2740) I eqgeometry:xpts (2740)

### 9.7.1.3.362 rz2D

Structure for list of R,Z positions (2D)

member	type	description
r	matflt.type (9.7.1.2.10)	Major radius [m]
z	matflt.type (9.7.1.2.10)	Altitude [m]

Type of: coord\_sys:position (2651) I geom\_iron:rzcoordinate (2777) I pfpageometry:rzcoordinate (2875)

### 9.7.1.3.363 rz3D

Structure for list of R,Z positions (3D)

member	type	description
r	array3dfilt.type (9.7.1.2.2)	Major radius [m]
z	array3dfilt.type (9.7.1.2.2)	Altitude [m]

Type of: pfgeometry:rzcoordinate (2874)

### 9.7.1.3.364 rzphi0D

Structure for a single R,Z,phi position (0D)

member	type	description
r	float (9.7.1.1.1)	Major radius [m]
z	float (9.7.1.1.1)	Altitude [m]
phi	float (9.7.1.1.1)	Toroidal angle [rad]

Type of: antenna\_ec:position (2604) I antenna\_lh:position (2606) I beamletgroup:position (2614) I fusiondiag\_voxels:centre (2775) I fusiondiag\_voxels:direction (2775) I msdiag\_setup:pivot\_point (2831) I msdiag\_setup:second\_point (2831) I origin:refpos (2859) I pellet\_geometry:pivot\_point (2866) I pellet\_geometry:second\_point (2866)

### 9.7.1.3.365 rzphi1D

Structure for list of R,Z,phi positions (1D)

member	type	description
r	vecflt.type (9.7.1.2.13)	Major radius [m]
z	vecflt.type (9.7.1.2.13)	Altitude [m]
phi	vecflt.type (9.7.1.2.13)	Toroidal angle [rad]

Type of: beamlets:position (2615) I edges:edge\_rzphi (2734) I fusiondiag\_colliunit\_circ:centre (2764) I halpha\_setup:pivot\_point (2780) I halpha\_setup:second\_point (2780) I launches:position (2577) I lithsetup:position (2806) I msediag\_emiss\_chord:setup (2826) I pellet\_pathprofiles:position (2868) I setup\_line:pivot\_point (2946) I setup\_line:second\_point (2946) I setup\_line:third\_point (2946) I tsetup:position (3018)

### 9.7.1.3.366 rzphi1Dexp

Structure for list of R,Z,phi positions (1D) with experimental structure (value, abserror, relerror)

member	type	description
r	exp1D (9.7.1.3.197)	Major radius [m]
z	exp1D (9.7.1.3.197)	Altitude [m]
phi	exp1D (9.7.1.3.197)	Toroidal angle [rad]

Type of: cxsetup:position (2682) I ecemeasure:position (2724) I lang\_derived:position (2793) I lang\_measure:position (2794) I rfasetup:position (2906)

### 9.7.1.3.367 rzphi1Dexperimental

Structure for list of R,Z,phi positions (1D) with additional appinfo tags to have some nodes both in MD and DM

member	type	description
r	vecflt.type (9.7.1.2.13)	Major radius [m]
z	vecflt.type (9.7.1.2.13)	Altitude [m]
phi	vecflt.type (9.7.1.2.13)	Toroidal angle [rad]

Type of: setup\_line\_exp:pivot\_point (2947) I setup\_line\_exp:second\_point (2947) I setup\_line\_exp:third\_point (2947)

### 9.7.1.3.368 rzphi2D

Structure for list of R,Z,phi positions (2D)

member	type	description
r	matflt.type (9.7.1.2.10)	Major radius [m]
z	matflt.type (9.7.1.2.10)	Altitude [m]
phi	matflt.type (9.7.1.2.10)	Toroidal angle [rad]

Type of: fusiondiag\_colliunit\_poly:nodes (2765) I setup\_floops:position (2945)

### 9.7.1.3.369 rzphi3D

Structure for list of R,Z,phi positions (3D)

member	type	description
r	array3dflt.type (9.7.1.2.2)	Major radius [m]
z	array3dflt.type (9.7.1.2.2)	Altitude [m]
phi	array3dflt.type (9.7.1.2.2)	Toroidal angle [rad]

Type of: turbcoordsys:position (3020)

### 9.7.1.3.370 rzphidrdzdphi1D

Structure for list of R,Z,phi positions and width dR dZ dphi (1D)

member	type	description
r	vecflt_type (9.7.1.2.13)	Position : major radius [m]
z	vecflt_type (9.7.1.2.13)	Position : altitude [m]
phi	vecflt_type (9.7.1.2.13)	Position : toroidal angle [rad]
dr	vecflt_type (9.7.1.2.13)	Width : major radius [m]
dz	vecflt_type (9.7.1.2.13)	Width : altitude [m]
dphi	vecflt_type (9.7.1.2.13)	Width : toroidal angle [rad]

Type of: msediag\_setup\_polarimetry:rzgamma (2832)

### 9.7.1.3.371 sawteeth\_diags

Inversion and mixing radii

member	type	description
shear1	float (9.7.1.1.1)	Magnetic shear at $q = 1$ [-]. Time-dependent. Real scalar.
rhotorm_q1	float (9.7.1.1.1)	Rho.tor.norm at $q=1$ radius [-]. Time-dependent. Real scalar.
rhotorm_inv	float (9.7.1.1.1)	Rho.tor.norm at inversion radius [-]. Time-dependent. Real scalar.
rhotorm_mix	float (9.7.1.1.1)	Rho.tor.norm at mixing radius [-]. Time-dependent. Real scalar.

Type of: sawteeth:diags (2592)

### 9.7.1.3.372 sawteeth\_profiles1d

Core profiles after sawtooth crash

member	type	description
ne	vecflt_type (9.7.1.2.13)	Electron density [ $m^{-3}$ ]. Time-dependent. Vector (nrho).
ni	matflt_type (9.7.1.2.10)	Ion density [ $m^{-3}$ ]. Time-dependent. Matrix (nrho,nion).
te	vecflt_type (9.7.1.2.13)	Electron temperature [eV]. Time-dependent. Vector (nrho).
ti	matflt_type (9.7.1.2.10)	Ion temperature [eV]. Time-dependent. Matrix (nrho,nion).
psi	vecflt_type (9.7.1.2.13)	Poloidal flux [Wb], without $1/2\pi$ and such that $B_p =  \text{grad } \psi  / R/2/\pi$ . Time-dependent. Vector (nrho).
phi	vecflt_type (9.7.1.2.13)	Toroidal flux [Wb]. Time-dependent. Vector (nrho).
psistar	vecflt_type (9.7.1.2.13)	$\Psi^* = \psi - \phi$ [Wb]. Time-dependent. Vector (nrho).
volume	vecflt_type (9.7.1.2.13)	Volume enclosed in the flux surface [ $m^3$ ]. Required to ensure particle and energy conservation during reconnection process (ndV and (nT)dV are conserved). Time-dependent. Vector (nrho).
q	vecflt_type (9.7.1.2.13)	Safety factor = $d\phi/d\psi$ [-]. Time-dependent. Vector (nrho).

Type of: sawteeth:profiles1d (2592)

### 9.7.1.3.373 scenario\_centre

central values of the profiles (at magnetic axis)

member	type	description
te0	scenario_ref (9.7.1.3.390)	central electron temperature [eV]. Time-dependent.
ti0	scenario_ref (9.7.1.3.390)	central ion temperature [eV]. Time-dependent.
ne0	scenario_ref (9.7.1.3.390)	central electron density [ $m^{-3}$ ]. Time-dependent.
ni0	scenario_ref (9.7.1.3.390)	central ion density [ $m^{-3}$ ]. Time-dependent.
shift0	scenario_ref (9.7.1.3.390)	central value of Shafranov shift [m]. Time-dependent.
psi0	scenario_ref (9.7.1.3.390)	pedestal poloidal flux [Wb]. Time-dependent.
phi0	scenario_ref (9.7.1.3.390)	central toroidal flux [Wb]. Time-dependent.
q0	scenario_ref (9.7.1.3.390)	central safety factor value []. Time-dependent.
Rmag	scenario_ref (9.7.1.3.390)	radius of magnetic axis [R]. Time-dependent.
Zmag	scenario_ref (9.7.1.3.390)	Z coordinate of magnetic axis [R]. Time-dependent.
vtor_0	scenario_ref (9.7.1.3.390)	central rotation velocity of selected impurity [m/s]. Time-dependent.

Type of: scenario:centre (2593)



### 9.7.1.3.374 scenario\_composition

Plasma composition (description of ion species).

member	type	description
amn	vecflt.type (9.7.1.2.13)	Atomic mass number (lumped ions are allowed); Vector (nion)
zn	vecflt.type (9.7.1.2.13)	Nuclear charge (lumped ions are allowed); Vector (nion)
zion	vecflt.type (9.7.1.2.13)	Ion charge (of the dominant ionisation state; lumped ions are allowed); Vector (nion)
imp_flag	vecint.type (9.7.1.2.14)	Multiple charge state calculation flag : 0-Only one charge state is considered; 1-Multiple charge state are considered and are described in impurity CPO; Vector (nion)
rot_imp_flag	vecint.type (9.7.1.2.14)	set to 1 for the impurity corresponding at the given toroidal rotation, otherwise = 0
pellet.amn	vecflt.type (9.7.1.2.13)	Atomic mass number (for pellet injector); Vector (nion)
pellet.zn	vecflt.type (9.7.1.2.13)	Nuclear charge (pellet injector); Vector (nion)
nbi.amn	vecflt.type (9.7.1.2.13)	Atomic mass number (for neutral beam injection); Vector (nion)
nbi.zn	vecflt.type (9.7.1.2.13)	Nuclear charge (for neutral beam injection); Vector (nion)

Type of: scenario:composition (2593)

### 9.7.1.3.375 scenario\_configuration

Strings describing the tokamak configuration

member	type	description
config	scenario.int (9.7.1.3.382)	plasma configuration (limiter/divertor ...) []. Time-dependent. Possible values : 0 = undetermined; 1 = poloidal limiter (ring); 2 = poloidal limiter (LFS); 3 = poloidal limiter (HFS); 4 = toroidal limiter (ring); 5 = toroidal limiter (segment); 6 = poloidal divertor; 7 = toroidal divertor (single null, ion drift in direction of divertor); 8 = toroidal divertor (single null, ion drift in opposite direction of divertor); 9 = toroidal divertor (double null).
lmode.sc	string (9.7.1.1.3)	name of the L-mode scaling law. String.
hmode.sc	string (9.7.1.1.3)	name of the H-mode scaling law. String.
core.sc	string (9.7.1.1.3)	name of the core plasma energy scaling law. String.
pedestal.sc	string (9.7.1.1.3)	name of the pedestal energy scaling law. String.
helium.sc	string (9.7.1.1.3)	name of the helium confinement time scaling law. String.
impurity.sc	string (9.7.1.1.3)	name of the impurities confinement time scaling law
l2h.sc	string (9.7.1.1.3)	name of the L-mode to H-mode power threshold scaling law. String.
tor_rot.sc	string (9.7.1.1.3)	name of the toroidal spontaneous rotation scaling law. String.
wall.mat	string (9.7.1.1.3)	chemical composition of the wall. String.
evap.mat	string (9.7.1.1.3)	chemical composition evaporated wall conditioning material. String.
lim.mat	string (9.7.1.1.3)	chemical composition of the limiter. String.
div.mat	string (9.7.1.1.3)	chemical composition of the divertor
coordinate	string (9.7.1.1.3)	name/definition of the internal coordinate of the simulator that are given by the data named rho
ecrh.freq	scenario.ref (9.7.1.3.390)	ECRH frequency [Hz]. Time-dependent.
ecrh.loc	scenario.ref (9.7.1.3.390)	position of maximum ECRH deposition on scale of rho [rho]. Time-dependent.
ecrh.mode	scenario.int (9.7.1.3.382)	polarisation of ecrh wave (0 = O mode, 1 = X mode) []. Time-dependent.
ecrh.tor_ang	scenario.ref (9.7.1.3.390)	toroidal angle of ECRH at resonance [rad] Time-dependent.
ecrh.pol_ang	scenario.ref (9.7.1.3.390)	poloidal angle of ECRH resonance position (0= LFS, pi/2 = top, -pi/2 = down, pi = HFS) [rad]. Time-dependent.
ecrh.harm	scenario.int (9.7.1.3.382)	harmonic number of the absorbed ecrh wave []. Time-dependent.
enbi	scenario.ref (9.7.1.3.390)	energy of the neutral beam [eV]. Time-dependent.
r.nbi	scenario.ref (9.7.1.3.390)	Major radius of tencance of NBI [m]. Time-dependent.
grad.b.drift	scenario.int (9.7.1.3.382)	direction of ion grad-B drift (1= to lower divertor, -1 = from lower divertor) []. Time-dependent.
icrh.freq	scenario.ref (9.7.1.3.390)	ICRH frequency [Hz]. Time-dependent.
icrh.scheme	string (9.7.1.1.3)	icrh scheme either : H_min.1; He3_min; T_harm.2; FW; FW_CD; FW_CCD
icrh.phase	scenario.ref (9.7.1.3.390)	ICRH antenna phasing [rad]. Time-dependent.
LH.freq	scenario.ref (9.7.1.3.390)	LHCD frequency [Hz]. Time-dependent.
LH.npar	scenario.ref (9.7.1.3.390)	LHCD parallel indice []. Time-dependent.
pellet_ang	scenario.ref (9.7.1.3.390)	pellet injection positon (0= LFS, pi/2 = top, -pi/2 = down, pi = HFS) [rad]. Time-dependent.
pellet.v	scenario.ref (9.7.1.3.390)	pellet injection velocity [m/s]. Time-dependent.
pellet.nba	scenario.ref (9.7.1.3.390)	initial number of atoms in pellet []. Time-dependent.

Type of: scenario:configs (2593)

### 9.7.1.3.376 scenario\_confinement

characteristic confinement times

member	type	description
tau_e	scenario_ref (9.7.1.3.390)	thermal energy confinement time [s]. Time-dependent.
tau_l_sc	scenario_ref (9.7.1.3.390)	confinement time given by the selected L-mode scaling law [s]. Time-dependent.
tau_h_sc	scenario_ref (9.7.1.3.390)	confinement time given by the selected H-mode scaling law [s]. Time-dependent.
tau_he	scenario_ref (9.7.1.3.390)	Helium ashes confinement time [s]. Time-dependent.
tau_e_ee	scenario_ref (9.7.1.3.390)	electron energy confinement time [s]. Time-dependent.
tau_e_ii	scenario_ref (9.7.1.3.390)	ion energy confinement time [s]. Time-dependent.
tau_e_ei	scenario_ref (9.7.1.3.390)	energy equipartition characteristic time [s]. Time-dependent.
tau_cur_diff	scenario_ref (9.7.1.3.390)	characteristic time for current diffusion [s]. Time-dependent.
tau_i_rol	scenario_ref (9.7.1.3.390)	characteristic time for current decrease in tokamak equivalent R/L circuit [s]. Time-dependent.

Type of: scenario:confinement (2593)

### 9.7.1.3.377 scenario\_currents

data related to current sources and current diffusion

member	type	description
RR	scenario_ref (9.7.1.3.390)	plasma resistivity [ohm]. Time-dependent.
i_align	scenario_ref (9.7.1.3.390)	current drive alignment quality parameter (1 = good , 0 = bad). Time-dependent.
i_boot	scenario_ref (9.7.1.3.390)	bootstrap current [A]. Time-dependent.
i_cd_tot	scenario_ref (9.7.1.3.390)	total current drive [A]. Time-dependent.
i_eccd	scenario_ref (9.7.1.3.390)	Electron Cyclotron current drive [A]. Time-dependent.
i_fast_ion	scenario_ref (9.7.1.3.390)	fast ions bootstrap like current drive (i.e. fast alpha) [A]. Time-dependent.
i_fwcd	scenario_ref (9.7.1.3.390)	Fast Wave current drive [A]. Time-dependent.
i_lhcd	scenario_ref (9.7.1.3.390)	Lower Hybrid current drive [A]. Time-dependent.
i_nbicd	scenario_ref (9.7.1.3.390)	Neutral Beam Injection current drive [A]. Time-dependent.
i_ni_tot	scenario_ref (9.7.1.3.390)	total non inductive current [A]. Time-dependent.
i_ohm	scenario_ref (9.7.1.3.390)	ohmic current [A]. Time-dependent.
i_par	scenario_ref (9.7.1.3.390)	total plasma current (projected on B : $\langle J_z/B_0 \rangle$ ) [A]. Time-dependent.
i_runaway	scenario_ref (9.7.1.3.390)	runaway current [A]. Time-dependent.
v_loop	scenario_ref (9.7.1.3.390)	loop voltage @ LCMS / LFS , equatorial point [V]. Time-dependent.
v_meas	scenario_ref (9.7.1.3.390)	loop voltage measured on a coil [V]. Time-dependent.

Type of: scenario:currents (2593)

### 9.7.1.3.378 scenario\_edge

edge value (@ LCMS)

member	type	description
te_edge	scenario_ref (9.7.1.3.390)	edge electron temperature [eV]. Time-dependent.
ti_edge	scenario_ref (9.7.1.3.390)	edge ion temperature [eV]. Time-dependent.
ne_edge	scenario_ref (9.7.1.3.390)	edge electron density [m <sup>-3</sup> ]. Time-dependent.
ni_edge	scenario_ref (9.7.1.3.390)	edge ion density [m <sup>-3</sup> ]. Time-dependent.
psi_edge	scenario_ref (9.7.1.3.390)	edge poloidal flux [Wb]. Time-dependent.
phi_edge	scenario_ref (9.7.1.3.390)	edge toroidal flux [Wb]. Time-dependent.
rho_edge	scenario_ref (9.7.1.3.390)	edge value of internal simulator coordinate [m]. Time-dependent.
drho_edge_dt	scenario_ref (9.7.1.3.390)	time derivative of edge value of internal simulator coordinate [m/s]. Time-dependent.
q_edge	scenario_ref (9.7.1.3.390)	edge or effective safety factor value []. Time-dependent.
neutral_flux	scenario_ref (9.7.1.3.390)	number of cold neutral (in equivalent electron for Z > 1) that input in plasma at the edge every second coming from recycling and gaz puff [s <sup>-1</sup> ]. Time-dependent.
phi_plasma	scenario_ref (9.7.1.3.390)	contribution of the plasma to the toroidal flux (used for toroidal coils heat load computation) [Wb]. Time-dependent.
vtor_edge	scenario_ref (9.7.1.3.390)	rotation velocity of selected impurity on the separatrix [m/s]. Time-dependent.

Type of: scenario:edge (2593)

### 9.7.1.3.379 scenario\_energy

plasma energy content

member	type	description
w_tot	scenario_ref (9.7.1.3.390)	total plasma energy [J]. Time-dependent.
w_b_pol	scenario_ref (9.7.1.3.390)	poloidal field energy of the plasma [J]. Time-dependent.
w_dia	scenario_ref (9.7.1.3.390)	3/2 perpendicular plasma energy [J]. Time-dependent.
dwdia_dt	scenario_ref (9.7.1.3.390)	time derivative of Wdia [W]. Time-dependent.
w_b_tor_pla	scenario_ref (9.7.1.3.390)	toroidal magnetic plasma energy [J]. Time-dependent.
w_th	scenario_ref (9.7.1.3.390)	thermal plasma energy [J]. Time-dependent.
dwtot_dt	scenario_ref (9.7.1.3.390)	time derivative of total plasma energy [W]. Time-dependent.
dwbpol_dt	scenario_ref (9.7.1.3.390)	time derivative of plasma poloidal field energy [W]. Time-dependent.
dwbtorpla_dt	scenario_ref (9.7.1.3.390)	time derivative of toroidal magnetic plasma energy [W]. Time-dependent.
dwth_dt	scenario_ref (9.7.1.3.390)	time derivative of thermal plasma energy [W]. Time-dependent.
esup_ichrtot	scenario_ref (9.7.1.3.390)	total suprathermal energy of fast ions accelerated by ICRH [J]. Time-dependent.
esup_ichper	scenario_ref (9.7.1.3.390)	perpendicular part of suprathermal energy of fast ions accelerated by ICRH [J]. Time-dependent.
esup_nbitot	scenario_ref (9.7.1.3.390)	total suprathermal energy of fast ions from NBI ionisation [J]. Time-dependent.
esup_nbiperp	scenario_ref (9.7.1.3.390)	perpendicular part of suprathermal energy of fast ions from NBI ionisation [J]. Time-dependent.
esup_lhcd	scenario_ref (9.7.1.3.390)	total suprathermal energy of fast electron from LHCD [J]. Time-dependent.
esup_alpha	scenario_ref (9.7.1.3.390)	total suprathermal energy of fast alpha particules [J]. Time-dependent.

Type of: scenario:energy (2593)

### 9.7.1.3.380 scenario\_global

global scalar value

member	type	description
ip	scenario_ref (9.7.1.3.390)	Plasma current [A]. Time-dependent.
dip_dt	scenario_ref (9.7.1.3.390)	time derivative of plasma current [A/s]. Time-dependent.
beta_pol	scenario_ref (9.7.1.3.390)	poloidal beta []. Time-dependent.
beta_tor	scenario_ref (9.7.1.3.390)	toroidal beta []. Time-dependent.
beta_normal	scenario_ref (9.7.1.3.390)	normalised beta []. Time-dependent.
li	scenario_ref (9.7.1.3.390)	internal inductance (definition 3). Time-dependent.
volume	scenario_ref (9.7.1.3.390)	total plasma volume [m <sup>3</sup> ]. Time-dependent.
area_pol	scenario_ref (9.7.1.3.390)	area poloidal cross section [m <sup>2</sup> ]. Time-dependent.
area_ext	scenario_ref (9.7.1.3.390)	external plasma surface [m <sup>2</sup> ]. Time-dependent.
len_sepa	scenario_ref (9.7.1.3.390)	length of the separatrix [m]. Time-dependent.
beta_pol_th	scenario_ref (9.7.1.3.390)	poloidal beta, thermal contribution []. Time-dependent.
beta_tor_th	scenario_ref (9.7.1.3.390)	toroidal beta, thermal contribution []. Time-dependent.
beta_n_th	scenario_ref (9.7.1.3.390)	normalised beta, thermal contribution []. Time-dependent.
disruption	scenario_ref (9.7.1.3.390)	flag for disruption (set to 1 for disruption, oterwise equal 0) []. Time-dependent.
mode_h	scenario_ref (9.7.1.3.390)	confinement mode verus time: 0 = L-mode et 1 = H-mode []. Time-dependent.
s_alpha	scenario_ref (9.7.1.3.390)	total number of alpha fusion particules from D-T ractions per second [s <sup>-1</sup> ]. Time-dependent.

Type of: scenario:global\_param (2593)

### 9.7.1.3.381 scenario\_heat\_power

Power delivred to plasma (thermal an non thermal)

member	type	description
plh	scenario_ref (9.7.1.3.390)	Lower hybrid power [W]. Time-dependent.
pohmic	scenario_ref (9.7.1.3.390)	ohmic power (thermal species contribution only) [W]. Time-dependent.
picrh	scenario_ref (9.7.1.3.390)	Ion cyclotron resonance heating power [W]. Time-dependent.
pecrh	scenario_ref (9.7.1.3.390)	electron cyclotron resonance heating power [W]. Time-dependent.
pnbi	scenario_ref (9.7.1.3.390)	neutral beam injection power [W]. Time-dependent.
pnbi_co_cur	scenario_ref (9.7.1.3.390)	neutral beam injection power injeted in co-current direction [W]. Time-dependent.
pnbi_counter	scenario_ref (9.7.1.3.390)	neutral beam injection power injeted in counter-current direction [W]. Time-dependent.

member	type	description
plh.th	scenario_ref (9.7.1.3.390)	lower hybrid power deposited on thermal electrons [W]. Time-dependent.
picrh.th	scenario_ref (9.7.1.3.390)	ion cyclotron resonance heating power deposited on thermal species [W]. Time-dependent.
pecrh.th	scenario_ref (9.7.1.3.390)	electron cyclotron resonance heating power deposited on thermal electrons [W]. Time-dependent.
pnbi.th	scenario_ref (9.7.1.3.390)	neutral beam injection power deposited on thermal species [W]. Time-dependent.
ploss_icrh	scenario_ref (9.7.1.3.390)	Ion cyclotron resonance heating power losses [W]. Time-dependent.
ploss_nbi	scenario_ref (9.7.1.3.390)	neutral beam injection power losses (including shine-through) [W]. Time-dependent.
pbrem	scenario_ref (9.7.1.3.390)	Bremsstrahlung radiation losses [W]. Time-dependent.
pcyclo	scenario_ref (9.7.1.3.390)	cyclotron radiation losses [W]. Time-dependent.
prad	scenario_ref (9.7.1.3.390)	impurity radiation losses in core plasma, without Bremsstrahlung [W]. Time-dependent.
pdd_fus	scenario_ref (9.7.1.3.390)	fusion power due to DD reactions [W]. Time-dependent.
pei	scenario_ref (9.7.1.3.390)	power exchange between electron and ion (equipartition) [W]. Time-dependent.
pel_tot	scenario_ref (9.7.1.3.390)	total thermal electron power deposition without equipartition [W]. Time-dependent.
pel_fus	scenario_ref (9.7.1.3.390)	fusion electron power deposition [W]. Time-dependent.
pel_icrh	scenario_ref (9.7.1.3.390)	ICRH electron power deposition [W]. Time-dependent.
pel_nbi	scenario_ref (9.7.1.3.390)	NBI electron power deposition [W]. Time-dependent.
pfus_dt	scenario_ref (9.7.1.3.390)	total D-T fusion power of alpha [W]. Time-dependent.
ploss_fus	scenario_ref (9.7.1.3.390)	D-T fusion power of alpha losses [W]. Time-dependent.
pfus_nbi	scenario_ref (9.7.1.3.390)	NBI induce D-T fusion power of alpha [W]. Time-dependent.
pfus.th	scenario_ref (9.7.1.3.390)	alpha (from DT fusion reaction) power deposited on thermal species [W]. Time-dependent.
padd_tot	scenario_ref (9.7.1.3.390)	total additional power input including ohmic power [W]. Time-dependent.
pion_tot	scenario_ref (9.7.1.3.390)	total thermal ion power deposition without equipartition [W]. Time-dependent.
pion_fus	scenario_ref (9.7.1.3.390)	fusion ion power deposition [W]. Time-dependent.
pion_icrh	scenario_ref (9.7.1.3.390)	ICRH ion power deposition [W]. Time-dependent.
pion_nbi	scenario_ref (9.7.1.3.390)	NBI ion power deposition [W]. Time-dependent.
pioniz	scenario_ref (9.7.1.3.390)	power losses due to cold neutral ionization [W]. Time-dependent.
ploss	scenario_ref (9.7.1.3.390)	plasma losses power, as define in ITER basis [W]. Time-dependent.
p_wth	scenario_ref (9.7.1.3.390)	thermal power input, define as $\tau_e \cdot P_{th} = W_{th}$ [W]. Time-dependent.
p_w	scenario_ref (9.7.1.3.390)	effective power define as $\tau_e \cdot P_w = W_{tot}$ [W]. Time-dependent.
p_l2h_thr	scenario_ref (9.7.1.3.390)	additional power crossing the LCMS; must be compare to $L_{zH}$ threshold power (Ryter PPCF 2002) [W]. Time-dependent.
p_l2h_sc	scenario_ref (9.7.1.3.390)	threshold power given by the choosen scaling law for transition from L-mode to H-mode [W]. Time-dependent.
p_nbi_icrh	scenario_ref (9.7.1.3.390)	beam power increase due to ICRH effects [W]. Time-dependent.

Type of: scenario:heat\_power (2593)

### 9.7.1.3.382 scenario\_int

Structure for scenario integer flag; Time-dependent

member	type	description
value	integer (9.7.1.1.2)	Signal value; Time-dependent; Scalar Integer.
source	string (9.7.1.1.3)	Source of the signal (any comment describing the origin of the signal : code, path to diagnostic signals, massaging, ...); String

Type of: scenario\_configuration:config (2925) I scenario\_configuration:ecrh\_harm (2925) I scenario\_configuration:ecrh\_mode (2925) I scenario\_configuration:grad\_b\_drift (2925) I scenario\_itb:itb\_type (2933)

### 9.7.1.3.383 scenario\_itb

Values characteristics of the Internal Transport Barrier

member	type	description
q_min	scenario_ref (9.7.1.3.390)	minimal value of safety factor []. Time-dependent.
te_itb	scenario_ref (9.7.1.3.390)	electron temperature @ $q = q_{min}$ [eV]. Time-dependent.
ti_itb	scenario_ref (9.7.1.3.390)	ion temperature @ $q = q_{min}$ [eV]. Time-dependent.
ne_itb	scenario_ref (9.7.1.3.390)	electron density @ $q = q_{min}$ [ $m^{-3}$ ]. Time-dependent.
ni_itb	scenario_ref (9.7.1.3.390)	ion density @ $q = q_{min}$ [ $m^{-3}$ ]. Time-dependent.
psi_itb	scenario_ref (9.7.1.3.390)	poloidal flux @ $q = q_{min}$ [Wb]. Time-dependent.
phi_itb	scenario_ref (9.7.1.3.390)	toroidal flux @ $q = q_{min}$ [Wb]. Time-dependent.
rho_itb	scenario_ref (9.7.1.3.390)	value of internal simulator coordinate @ $q = q_{min}$ [m]. Time-dependent.

member	type	description
h_itb	scenario_ref (9.7.1.3.390)	energy enhancement ITB factor [m]. Time-dependent.
width_itb	scenario_ref (9.7.1.3.390)	width of the high pressure gradient region (on scale of rho_itb) [m]. Time-dependent.
vtor_itb	scenario_ref (9.7.1.3.390)	rotation velocity of selected impurity @ rho_itb [m/s]. Time-dependent.
itb_type	scenario_int (9.7.1.3.382)	itb type []. Time-dependent. Any combination of :0 = none; 1 = on T <sub>i</sub> ; 2 = on T <sub>e</sub> ; 4 = on n <sub>e</sub> ; 8 = reverse shear triggered; 16 = toroidal rotation triggered; 32 = alpha stabilisation triggered; 64 = T <sub>i</sub> / T <sub>e</sub> triggered; 128 = radiation triggered; 256 = rationnal q triggered

Type of: scenario:itb (2593)

### 9.7.1.3.384 scenario\_lim\_div\_wall

values on the plate of divertor or on the limiter or on the wall (@ LCMS)

member	type	description
te_lim_div	scenario_ref (9.7.1.3.390)	limiter/divertor electron temperature [eV]. Time-dependent.
ti_lim_div	scenario_ref (9.7.1.3.390)	limiter/divertor ion temperature [eV]. Time-dependent.
ne_lim_div	scenario_ref (9.7.1.3.390)	limiter/divertor electron density [m <sup>-3</sup> ]. Time-dependent.
ni_lim_div	scenario_ref (9.7.1.3.390)	limiter/divertor ion density [m <sup>-3</sup> ]. Time-dependent.
q_peak_div	scenario_ref (9.7.1.3.390)	Peak power flux on limiter or divertor plate [W.m <sup>-2</sup> ]. Time-dependent.
q_peak_wall	scenario_ref (9.7.1.3.390)	Peak power flux on the wall [W.m <sup>-2</sup> ]. Time-dependent.
surf_temp	scenario_ref (9.7.1.3.390)	limiter surface or divertor plate temperature [K]. Time-dependent.
p_lim_div	scenario_ref (9.7.1.3.390)	Total power on limiter or divertor plate [W]. Time-dependent.
p_rad_div	scenario_ref (9.7.1.3.390)	radiative power in the divertor zone [W]. Time-dependent.
p_neut_div	scenario_ref (9.7.1.3.390)	Neutral pressure in the divertor zone [Pa]; Time-dependent.
p_wall	scenario_ref (9.7.1.3.390)	Total power on the wall [W]. Time-dependent.
wall_temp	scenario_ref (9.7.1.3.390)	wall temperature [K]. Time-dependent.
wall_state	scenario_ref (9.7.1.3.390)	saturation state of the wall (0 = completely pumping wall, 1 = completely saturate wall) []. Time-dependent.
detach_state	scenario_ref (9.7.1.3.390)	plasma detachment state (0= attach plasma, 1 = completely detach plasma) []. Time-dependent.
pump_flux	scenario_ref (9.7.1.3.390)	flux pump out for each ion species [s <sup>-1</sup> ]. Time-dependent.
p_rad_fw	scenario_ref (9.7.1.3.390)	Radiated power on the first wall [W]; Time-dependent
p_cond_fw	scenario_ref (9.7.1.3.390)	Conducted/convected power on the first wall [W]; Time-dependent
div_wetted	scenario_ref (9.7.1.3.390)	Divertor wetted area [m <sup>2</sup> ]; Time-dependent
gas_puff	scenario_ref (9.7.1.3.390)	Gas puff (D/T) in the divertor (PFR) [Pa.m <sup>3</sup> .s <sup>-1</sup> ]; Time-dependent
ar_concentr	scenario_ref (9.7.1.3.390)	Argon concentration in the divertor; Time-dependent
part_exhaust	scenario_ref (9.7.1.3.390)	Assuming a pumping speed [Pa.m <sup>3</sup> .s <sup>-1</sup> ]; Time-dependent
f_inner	scenario_ref (9.7.1.3.390)	Fraction of power to the inner divertor; Time-dependent
f_outer	scenario_ref (9.7.1.3.390)	Fraction of power to the outer divertor; Time-dependent
f_pfr	scenario_ref (9.7.1.3.390)	Fraction of power flowing into the private flux region; Time-dependent
f_rad_fw	scenario_ref (9.7.1.3.390)	Fraction of the divertor radiated power deposited in the main chamber; Time-dependent
q_div	vecflt_type (9.7.1.2.13)	Heat flux on divertor plate [W/m <sup>2</sup> ]; Vector(theta). Time-dependent
p_cond_div	scenario_ref (9.7.1.3.390)	Conducted/convected power on divertor plate [W]; Time-dependent
pol_ext	float (9.7.1.1.1)	Poloidal extension of the divertor or outer major radius of the divertor region (and inner major radius) [rad]; Scalar
flux_exp	float (9.7.1.1.1)	Flux expansion at the divertor plate ((B <sub>theta</sub> /B) <sub>midplane</sub> )/((B <sub>theta</sub> /B) <sub>target</sub> ); Scalar
tilt_angle	float (9.7.1.1.1)	Tilt angle between the field lines and the divertor plate in a poloidal plane [rad]; Scalar
n_div	float (9.7.1.1.1)	Number of divertor, assuming symmetric configuration; Scalar
div_dz	float (9.7.1.1.1)	Divertor extension in z direction from the x-point [m]; Scalar
div_dro	float (9.7.1.1.1)	Divertor extension in r outward direction from the x-point [m]; Scalar
div_dri	float (9.7.1.1.1)	Divertor extension in r inward direction from the x-point [m]; Scalar
p_nh_div	scenario_ref (9.7.1.3.390)	Total nuclear heating in divertor [W]. Time-dependent.

Type of: scenario:lim\_div\_wall (2593)

### 9.7.1.3.385 scenario\_line\_ave

line averaged value

member	type	description
ne_line	scenario_ref (9.7.1.3.390)	line averaged electron density [m <sup>-3</sup> ]. Time-dependent.
z_eff_line	scenario_ref (9.7.1.3.390)	line averaged effective charge. Time-dependent.

member	type	description
ne_zeff_line	scenario_ref (9.7.1.3.390)	line averaged electron density * Z <sub>eff</sub> . Time-dependent.
dne_line_dt	scenario_ref (9.7.1.3.390)	time derivative of line averaged electron density [m <sup>-3</sup> /s]. Time-dependent.

Type of: scenario:line\_ave (2593)

### 9.7.1.3.386 scenario\_neutron

neutron flux for DD and DT reactions

member	type	description
ndd_tot	scenario_ref (9.7.1.3.390)	total neutron flux coming from DD reactions [Hz]. Time-dependent.
ndd_th	scenario_ref (9.7.1.3.390)	neutron flux coming from thermal DD reactions [Hz]. Time-dependent.
ndd_nbi_th	scenario_ref (9.7.1.3.390)	neutron flux coming from beam/plasma DD reactions [Hz]. Time-dependent.
ndd_nbi_nbi	scenario_ref (9.7.1.3.390)	neutron flux coming from beam/beam DD reactions [Hz]. Time-dependent.
ndt_tot	scenario_ref (9.7.1.3.390)	total neutron flux coming from DT reactions [Hz]. Time-dependent.
ndt_th	scenario_ref (9.7.1.3.390)	neutron flux coming from thermal DT reactions [Hz]. Time-dependent.

Type of: scenario:neutron (2593)

### 9.7.1.3.387 scenario\_ninety\_five

values at 95% of poloidal flux

member	type	description
q_95	scenario_ref (9.7.1.3.390)	safety factor value @ 95 % of poloidal flux span []. Time-dependent.
elong_95	scenario_ref (9.7.1.3.390)	plasma elongation @ 95 % of poloidal flux span []. Time-dependent.
tria_95	scenario_ref (9.7.1.3.390)	averaged plasma triangularity @ 95 % of poloidal flux span []. Time-dependent.
tria_up_95	scenario_ref (9.7.1.3.390)	upper plasma triangularity @ 95 % of poloidal flux span []. Time-dependent.
tria_lo_95	scenario_ref (9.7.1.3.390)	lower plasma triangularity @ 95 % of poloidal flux span []. Time-dependent.
te_95	scenario_ref (9.7.1.3.390)	electron temperature @ 95 % of poloidal flux [eV]. Time-dependent.
ti_95	scenario_ref (9.7.1.3.390)	ion temperature @ 95 % of poloidal flux [eV]. Time-dependent.
ne_95	scenario_ref (9.7.1.3.390)	electron density @ 95 % of poloidal flux [m <sup>-3</sup> ]. Time-dependent.
ni_95	scenario_ref (9.7.1.3.390)	ion density @ 95 % of poloidal flux [m <sup>-3</sup> ]. Time-dependent.
phi_95	scenario_ref (9.7.1.3.390)	toroidal flux @ 95 % of poloidal flux [Wb]. Time-dependent.
rho_95	scenario_ref (9.7.1.3.390)	value of internal simulator coordinate @ 95 % of poloidal flux [m]. Time-dependent.
vtor_95	scenario_ref (9.7.1.3.390)	rotation velocity of selected impurity @ 95 % of poloidal flux [m/s]. Time-dependent.

Type of: scenario:ninety\_five (2593)

### 9.7.1.3.388 scenario\_pedestal

Values at the top of the H-mode pedestal

member	type	description
te_ped	scenario_ref (9.7.1.3.390)	pedestal electron temperature [eV]. Time-dependent.
ti_ped	scenario_ref (9.7.1.3.390)	pedestal ion temperature [eV]. Time-dependent.
ne_ped	scenario_ref (9.7.1.3.390)	pedestal electron density [m <sup>-3</sup> ]. Time-dependent.
ni_ped	scenario_ref (9.7.1.3.390)	pedestal ion density [m <sup>-3</sup> ]. Time-dependent.
psi_ped	scenario_ref (9.7.1.3.390)	pedestal poloidal flux [Wb]. Time-dependent.
phi_ped	scenario_ref (9.7.1.3.390)	pedestal toroidal flux [Wb]. Time-dependent.
rho_ped	scenario_ref (9.7.1.3.390)	top pedestal value of internal simulator coordinate [m]. Time-dependent.
q_ped	scenario_ref (9.7.1.3.390)	top pedestal safety factor value []. Time-dependent.
pressure_ped	scenario_ref (9.7.1.3.390)	top pedestal thermal pressure (n <sub>e</sub> * T <sub>e</sub> + n <sub>i</sub> * T <sub>i</sub> ) [Pa]. Time-dependent.
vtor_ped	scenario_ref (9.7.1.3.390)	top pedestal value of rotation velocity of selected impurity [m/s]. Time-dependent.

Type of: scenario:pedestal (2593)



### 9.7.1.3.389 scenario\_reactor

reactor data (such as electricity cost ...)

member	type	description
pnetwork	float (9.7.1.1.1)	reactor electric power provide to the network [W].

Type of: scenario:reactor (2593)

### 9.7.1.3.390 scenario\_ref

Structure for scenario reference; Time-dependent

member	type	description
value	float (9.7.1.1.1)	Signal value; Time-dependent; Scalar
source	string (9.7.1.1.3)	Source of the signal (any comment describing the origin of the signal : code, path to diagnostic signals, massaging, ...); String

Type of: scenario\_centre:Rmag (2923) I scenario\_centre:Zmag (2923) I scenario\_centre:ne0 (2923) I scenario\_centre:ni0 (2923) I scenario\_centre:phi0 (2923) I scenario\_centre:psi0 (2923) I scenario\_centre:q0 (2923) I scenario\_centre:shift0 (2923) I scenario\_centre:te0 (2923) I scenario\_centre:ti0 (2923) I scenario\_centre:vtor\_0 (2923) I scenario\_configuration:LH\_freq (2925) I scenario\_configuration:LH\_npar (2925) I scenario\_configuration:ecrh\_freq (2925) I scenario\_configuration:ecrh\_loc (2925) I scenario\_configuration:ecrh\_pol\_ang (2925) I scenario\_configuration:ecrh\_tor\_ang (2925) I scenario\_configuration:enb (2925) I scenario\_configuration:icrh\_freq (2925) I scenario\_configuration:icrh\_phase (2925) I scenario\_configuration:pellet\_ang (2925) I scenario\_configuration:pellet\_nba (2925) I scenario\_configuration:pellet\_v (2925) I scenario\_configuration:r\_nbi (2925) I scenario\_confinement:tau\_cur\_diff (2926) I scenario\_confinement:tau\_e (2926) I scenario\_confinement:tau\_e\_ee (2926) I scenario\_confinement:tau\_e\_ei (2926) I scenario\_confinement:tau\_e\_ii (2926) I scenario\_confinement:tau\_h\_sc (2926) I scenario\_confinement:tau\_he (2926) I scenario\_confinement:tau\_i\_rol (2926) I scenario\_confinement:tau\_l\_sc (2926) I scenario\_currents:RR (2927) I scenario\_currents:i\_align (2927) I scenario\_currents:i\_boot (2927) I scenario\_currents:i\_cd\_tot (2927) I scenario\_currents:i\_eccd (2927) I scenario\_currents:i\_fast\_ion (2927) I scenario\_currents:i\_fwcd (2927) I scenario\_currents:i\_lhcd (2927) I scenario\_currents:i\_nbicd (2927) I scenario\_currents:i\_ni\_tot (2927) I scenario\_currents:i\_ohm (2927) I scenario\_currents:i\_par (2927) I scenario\_currents:i\_runaway (2927) I scenario\_currents:v\_loop (2927) I scenario\_currents:v\_meas (2927) I scenario\_edge:drho\_edge\_dt (2928) I scenario\_edge:ne\_edge (2928) I scenario\_edge:neutral\_flux (2928) I scenario\_edge:ni\_edge (2928) I scenario\_edge:phi\_edge (2928) I scenario\_edge:phi\_plasma (2928) I scenario\_edge:psi\_edge (2928) I scenario\_edge:q\_edge (2928) I scenario\_edge:rho\_edge (2928) I scenario\_edge:te\_edge (2928) I scenario\_edge:ti\_edge (2928) I scenario\_edge:vtor\_edge (2928) I scenario\_energy:dwbpol\_dt (2929) I scenario\_energy:dwbtorpla\_dt (2929) I scenario\_energy:dwdia\_dt (2929) I scenario\_energy:dwth\_dt (2929) I scenario\_energy:dwtot\_dt (2929) I scenario\_energy:esup\_alpha (2929) I scenario\_energy:esup\_icrhper (2929) I scenario\_energy:esup\_icrhtot (2929) I scenario\_energy:esup\_lhcd (2929) I scenario\_energy:esup\_nbiperp (2929) I scenario\_energy:esup\_nbitot (2929) I scenario\_energy:w\_b\_pol (2929) I scenario\_energy:w\_b\_tor\_pla (2929) I scenario\_energy:w\_dia (2929) I scenario\_energy:w\_th (2929) I scenario\_energy:w\_tot (2929) I scenario\_global:area\_ext (2930) I scenario\_global:area\_pol (2930) I scenario\_global:beta\_n\_th (2930) I scenario\_global:beta\_normal (2930) I scenario\_global:beta\_pol (2930) I scenario\_global:beta\_pol.th (2930) I scenario\_global:beta\_tor (2930) I scenario\_global:beta\_tor.th (2930) I scenario\_global:dip\_dt (2930) I scenario\_global:disruption (2930) I scenario\_global:ip (2930) I scenario\_global:len\_sepa (2930) I scenario\_global:li (2930) I scenario\_global:mode\_h (2930) I scenario\_global:s\_alpha (2930) I scenario\_global:volume (2930) I scenario\_heat\_power:p\_l2h\_sc (2931) I scenario\_heat\_power:p\_l2h\_thr (2931) I scenario\_heat\_power:p\_nbi\_icrh (2931) I scenario\_heat\_power:p\_w (2931) I scenario\_heat\_power:p\_wth (2931) I scenario\_heat\_power:padd\_tot (2931) I scenario\_heat\_power:pbrem (2931) I scenario\_heat\_power:pcyclo (2931) I scenario\_heat\_power:pdd\_fus (2931) I scenario\_heat\_power:pecrh (2931) I scenario\_heat\_power:pecrh.th (2931) I scenario\_heat\_power:pei (2931) I scenario\_heat\_power:pel\_fus (2931) I scenario\_heat\_power:pel\_icrh (2931) I scenario\_heat\_power:pel\_nbi (2931) I scenario\_heat\_power:pel\_tot (2931) I scenario\_heat\_power:pfus\_dt (2931) I scenario\_heat\_power:pfus\_nbi (2931) I scenario\_heat\_power:pfus.th (2931) I scenario\_heat\_power:picrh (2931) I scenario\_heat\_power:picrh.th (2931) I scenario\_heat\_power:pion\_fus (2931) I scenario\_heat\_power:pion\_icrh (2931) I scenario\_heat\_power:pion\_nbi (2931) I scenario\_heat\_power:pion\_tot (2931) I scenario\_heat\_power:pioniz (2931) I scenario\_heat\_power:plh (2931) I scenario\_heat\_power:plh.th (2931) I scenario\_heat\_power:ploss (2931) I scenario\_heat\_power:ploss\_fus (2931) I scenario\_heat\_power:ploss\_icrh (2931) I scenario\_heat\_power:ploss\_nbi (2931) I scenario\_heat\_power:pnbi (2931) I scenario\_heat\_power:pnbi\_co\_cur (2931) I scenario\_heat\_power:pnbi\_counter (2931) I scenario\_heat\_power:pnbi.th (2931) I scenario\_heat\_power:pohmic (2931) I scenario\_heat\_power:prad (2931) I scenario\_itb:h\_itb (2933) I scenario\_itb:ne\_itb (2933) I scenario\_itb:ni\_itb (2933) I scenario\_itb:phi\_itb (2933) I scenario\_itb:psi\_itb (2933) I scenario\_itb:q\_min (2933) I scenario\_itb:rho\_itb (2933) I scenario\_itb:te\_itb (2933) I scenario\_itb:ti\_itb (2933) I scenario\_itb:vtor\_itb (2933) I scenario\_itb:width\_itb (2933) I scenario\_lim\_div\_wall:ar\_concer (2934) I scenario\_lim\_div\_wall:detach\_state (2934) I scenario\_lim\_div\_wall:div\_wetted (2934) I scenario\_lim\_div\_wall:f\_inner



(2934) I scenario\_lim\_div\_wall:f\_outer (2934) I scenario\_lim\_div\_wall:f\_pfr (2934) I scenario\_lim\_div\_wall:f\_rad\_fw (2934) I scenario\_lim\_div\_wall:gas\_puff (2934) I scenario\_lim\_div\_wall:ne\_lim\_div (2934) I scenario\_lim\_div\_wall:ni\_lim\_div (2934) I scenario\_lim\_div\_wall:p\_cond\_div (2934) I scenario\_lim\_div\_wall:p\_cond\_fw (2934) I scenario\_lim\_div\_wall:p\_lim\_div (2934) I scenario\_lim\_div\_wall:p\_neut\_div (2934) I scenario\_lim\_div\_wall:p\_nh\_div (2934) I scenario\_lim\_div\_wall:p\_rad\_div (2934) I scenario\_lim\_div\_wall:p\_rad\_fw (2934) I scenario\_lim\_div\_wall:p\_wall (2934) I scenario\_lim\_div\_wall:part\_exhaust (2934) I scenario\_lim\_div\_wall:pump\_flux (2934) I scenario\_lim\_div\_wall:q\_peak\_div (2934) I scenario\_lim\_div\_wall:q\_peak.wv (2934) I scenario\_lim\_div\_wall:surf\_temp (2934) I scenario\_lim\_div\_wall:te\_lim\_div (2934) I scenario\_lim\_div\_wall:ti\_lim\_div (2934) I scenario\_lim\_div\_wall:wall\_state (2934) I scenario\_lim\_div\_wall:wall\_temp (2934) I scenario\_line\_ave:dne\_line\_dt (2935) I scenario\_line\_ave:ne\_line (2935) I scenario\_line\_ave:ne\_zeff\_line (2935) I scenario\_line\_ave:zeff\_line (2935) I scenario\_neutron:ndd\_nbi\_nbi (2936) I scenario\_neutron:ndd\_nbi.th (2936) I scenario\_neutron:ndd.th (2936) I scenario\_neutron:ndd\_tot (2936) I scenario\_neutron:ndt.th (2936) I scenario\_neutron:ndt\_tot (2936) I scenario\_ninety\_five:elom (2937) I scenario\_ninety\_five:ne\_95 (2937) I scenario\_ninety\_five:ni\_95 (2937) I scenario\_ninety\_five:phi\_95 (2937) I scenario\_ninety\_five:q\_95 (2937) I scenario\_ninety\_five:rho\_95 (2937) I scenario\_ninety\_five:te\_95 (2937) I scenario\_ninety\_five:ti\_95 (2937) I scenario\_ninety\_five:tria\_95 (2937) I scenario\_ninety\_five:tria\_lo\_95 (2937) I scenario\_ninety\_five:tria\_up\_95 (2937) I scenario\_ninety\_five:vtor\_95 (2937) I scenario\_pedestal:ne\_ped (2938) I scenario\_pedestal:ni\_ped (2938) I scenario\_pedestal:phi\_ped (2938) I scenario\_pedestal:pressure\_ped (2938) I scenario\_pedestal:psi\_ped (2938) I scenario\_pedestal:q\_ped (2938) I scenario\_pedestal:rho\_ped (2938) I scenario\_pedestal:te\_ped (2938) I scenario\_pedestal:ti\_ped (2938) I scenario\_pedestal:vtor\_ped (2938) I scenario\_references:bvac\_r (2941) I scenario\_references:enhancement (2941) I scenario\_references:gas\_puff (2941) I scenario\_references:ip (2941) I scenario\_references:isotopic (2941) I scenario\_references:nbar (2941) I scenario\_references:nbi\_td\_ratio (2941) I scenario\_references:pecrh (2941) I scenario\_references:picrh (2941) I scenario\_references:plh (2941) I scenario\_references:pnbi (2941) I scenario\_references:pol\_flux (2941) I scenario\_references:xecrh (2941) I scenario\_references:zeffl (2941) I scenario\_sol:gas\_puff (2942) I scenario\_sol:l\_ne\_sol (2942) I scenario\_sol:l\_ni\_sol (2942) I scenario\_sol:l\_qe\_sol (2942) I scenario\_sol:l\_qi\_sol (2942) I scenario\_sol:l\_te\_sol (2942) I scenario\_sol:l\_ti\_sol (2942) I scenario\_sol:p\_rad\_sol (2942) I scenario\_vol\_ave:dne\_ave\_dt (2943) I scenario\_vol\_ave:meff\_ave (2943) I scenario\_vol\_ave:ne\_ave (2943) I scenario\_vol\_ave:ni\_ave (2943) I scenario\_vol\_ave:omega\_ave (2943) I scenario\_vol\_ave:pellet\_flux (2943) I scenario\_vol\_ave:te\_ave (2943) I scenario\_vol\_ave:ti\_ave (2943) I scenario\_vol\_ave:ti\_o\_te\_ave (2943) I scenario\_vol\_ave:zeff\_ave (2943)

### 9.7.1.3.391 scenario\_references

#### References

member	type	description
plh	scenario_ref (9.7.1.3.390)	Lower hybrid power [W]. Time-dependent.
picrh	scenario_ref (9.7.1.3.390)	Ion cyclotron resonance heating power [W]. Time-dependent.
pecrh	scenario_ref (9.7.1.3.390)	electron cyclotron resonance heating power [W]. Time-dependent.
pnbi	scenario_ref (9.7.1.3.390)	neutral beam injection power [W]. Time-dependent.
ip	scenario_ref (9.7.1.3.390)	Plasma current [A]. Time-dependent.
bvac_r	scenario_ref (9.7.1.3.390)	Vacuum field times radius in the toroidal field magnet [T.m]. Time-dependent.
zeffl	scenario_ref (9.7.1.3.390)	line averaged effective charge []. Time-dependent.
nbar	scenario_ref (9.7.1.3.390)	line averaged electron density [ $m^{-3}$ ]. Time-dependent.
xecrh	scenario_ref (9.7.1.3.390)	position of maximum (normalized rho coordinate) of electron cyclotron resonance heating power []. Time-dependent.
pol_flux	scenario_ref (9.7.1.3.390)	separatrix poloidal flux [Wb]. Time-dependent.
enhancement	scenario_ref (9.7.1.3.390)	energy enhancement factor []. Time-dependent.
isotopic	scenario_ref (9.7.1.3.390)	ratio between tritium and deuterium density (for burning plasma) []. Time-dependent.
nbi_td_ratio	scenario_ref (9.7.1.3.390)	ratio between tritium and deuterium power in neutral beam injection []. Time-dependent.
gas_puff	scenario_ref (9.7.1.3.390)	gas puff flux reference, in equivalent [electrons.s <sup>-1</sup> ]. Time-dependent.

Type of: scenario:references (2593)

### 9.7.1.3.392 scenario\_sol

#### SOL characteristic (@ LCMS)

member	type	description
l_te_sol	scenario_ref (9.7.1.3.390)	electron temperature radial decay length [m]. Time-dependent.
l_ti_sol	scenario_ref (9.7.1.3.390)	ion temperature radial decay length [m]. Time-dependent.
l_ne_sol	scenario_ref (9.7.1.3.390)	electron density radial decay length [m]. Time-dependent.
l_ni_sol	scenario_ref (9.7.1.3.390)	ion density radial decay length [m]. Time-dependent.
l_qe_sol	scenario_ref (9.7.1.3.390)	electron heat flux radial decay length [m]. Time-dependent.

member	type	description
l_qi_sol	scenario_ref (9.7.1.3.390)	ion heat flux radial decay length [m]. Time-dependent.
p_rad_sol	scenario_ref (9.7.1.3.390)	radiative power of the SOL [W]. Time-dependent.
p_neut	float (9.7.1.1.1)	Neutral pressure of the SOL [Pa]; Scalar
gas_puff	scenario_ref (9.7.1.3.390)	gas puff flux for each ion species [s <sup>-1</sup> ]. Time-dependent.
delta_r_in	float (9.7.1.1.1)	Inner gap between the plasma and the first wall [m]; Scalar
delta_r_out	float (9.7.1.1.1)	Outer gap between the plasma and the first wall [m]; Scalar
r_in	float (9.7.1.1.1)	Inner radius of the first wall [m]; Scalar
r_out	float (9.7.1.1.1)	Outer radius of the first wall [m]; Scalar
sol_width	float (9.7.1.1.1)	Width of the SOL (the heat flux is assumed to fall off exponentially in the SOL according to the width parameter) [m]; Scalar

Type of: scenario:sol (2593)

### 9.7.1.3.393 scenario\_vol\_ave

volume averaged values

member	type	description
te_ave	scenario_ref (9.7.1.3.390)	volume averaged electron temperature [eV]. Time-dependent.
ti_ave	scenario_ref (9.7.1.3.390)	volume averaged ion temperature [eV]. Time-dependent.
ne_ave	scenario_ref (9.7.1.3.390)	volume averaged electron density [m <sup>-3</sup> ]. Time-dependent.
dne_ave_dt	scenario_ref (9.7.1.3.390)	time derivative of volume averaged electron density [m <sup>-3</sup> /s]. Time-dependent.
ni_ave	scenario_ref (9.7.1.3.390)	volume averaged ion density ( $\langle \sum(n_k)_z \rangle$ , k in species) [m <sup>-3</sup> ]. Time-dependent.
zeff_ave	scenario_ref (9.7.1.3.390)	volume averaged effective charge. Time-dependent.
ti_o_te_ave	scenario_ref (9.7.1.3.390)	volume averaged ion temperature over electron temperature ( $\langle T_i/T_e \rangle$ ) []. Time-dependent.
meff_ave	scenario_ref (9.7.1.3.390)	volume averaged effective mass ( $\langle \sum(n_k * m_k)_z \rangle / \langle \sum(n_k)_z \rangle$ ) []. Time-dependent.
pellet_flux	scenario_ref (9.7.1.3.390)	number of electrons fuelling the plasma every second coming from pellet injection [s <sup>-1</sup> ]. Time-dependent.
nions_ave	vecflt_type (9.7.1.2.13)	volume averaged ions densities (vector, one element per ion species) [m <sup>-3</sup> ]. Time-dependent.
omega_ave	scenario_ref (9.7.1.3.390)	bulk volume average toroidal rotation velocity (whole plasma) [rad/s]. Time-dependent.

Type of: scenario:vol\_ave (2593)

### 9.7.1.3.394 setup\_bprobe

diagnostic setup information

member	type	description
name	vecstring_type (9.7.1.2.15)	Name of the probe. Array of strings (nprobes).
id	vecstring_type (9.7.1.2.15)	ID of the probe. Array of strings (nprobes).
position	rz1D (9.7.1.3.359)	RZ of coil centre [m]; Vector (nprobes)
polangle	vecflt_type (9.7.1.2.13)	Poloidal angle of coil orientation (w.r.t. horizontal ?? to be checked) [rad]; Vector (nprobes)
torangle	vecflt_type (9.7.1.2.13)	Toroidal angle of coil orientation (0 if fully in the poloidal plane) [rad]; Vector (nprobes)
area	vecflt_type (9.7.1.2.13)	Area of coil [m <sup>2</sup> ]; Vector (nprobes)
length	vecflt_type (9.7.1.2.13)	Length of coil [m]; Vector (nprobes)
turns	vecint_type (9.7.1.2.14)	Turns in the coil; Vector (nprobes)

Type of: bpol\_probes:setup\_bprobe (2622)

### 9.7.1.3.395 setup\_floops

diagnostic setup information

member	type	description
name	vecstring_type (9.7.1.2.15)	Name of loop. Array of strings (nloops).
id	vecstring_type (9.7.1.2.15)	ID of loop. Array of strings (nloops).
position	rzphi2D (9.7.1.3.368)	List of (R,Z,phi) points defining the position of the loop (see data structure documentation FLUXLOOPposition.pdf); Matrices (nloops, max_npoints)
npoints	vecint_type (9.7.1.2.14)	Number of points describing each loop in the "position" matrices. Vector (nloops)

Type of: flux\_loops:setup\_floops (2754)

### 9.7.1.3.396 setup\_line

Geometric description of the lines of sight for line integral diagnostic

member	type	description
pivot_point	rzphi1D (9.7.1.3.365)	Pivot point of each line of sight; Vector (nchords)
horchordang1	vecflt_type (9.7.1.2.13)	Angle [rad] of horizontal projection of l.o.s. with poloidal cross section (0 for HFS to LFS chord - see Convention_angles_interfdiag.pdf) [rad]. Vector (nchords)
verchordang1	vecflt_type (9.7.1.2.13)	Angle of chord with vertical axis (0 for bottom-top chord, Pi for top-bottom chord - see Convention_angles_interfdiag.pdf) [rad]; Vector (nchords)
width	vecflt_type (9.7.1.2.13)	Width of the laser beam (1/e) [m]; Vector (nchords)
second_point	rzphi1D (9.7.1.3.365)	Second point defining the line of sight together with the pivot_point. In case the probing wave is reflected, this should be the position of the mirror. This data is redundant with horchordang1 and verchordang1. Vector (nchords).
horchordang2	vecflt_type (9.7.1.2.13)	For reflected l.o.s. only (undefined otherwise) : Angle [rad] of horizontal projection of reflected l.o.s. with poloidal cross section (0 for HFS to LFS chord - see Convention_angles_interfdiag.pdf) [rad]. Vector (nchords)
verchordang2	vecflt_type (9.7.1.2.13)	For reflected l.o.s. only (undefined otherwise) : Angle of reflected chord with vertical axis (0 for bottom-top chord, Pi for top-bottom chord - see Convention_angles_interfdiag.pdf) [rad]; Vector (nchords)
third_point	rzphi1D (9.7.1.3.365)	Third point defining the reflected line of sight together with the second_point (undefined if the probing wave is not reflected). This data is redundant with horchordang2 and verchordang2. Vector (nchords).
nchordpoints	integer (9.7.1.1.2)	Number of points along the viewing chords (used for synthetic diagnostic signal reconstruction)

Type of: fusiondiag\_colli\_circ:setup\_line (2761) I fusiondiag\_colli\_poly:setup\_line (2762) I lineintegraldiag:setup\_line (2804)

### 9.7.1.3.397 setup\_line\_exp

Geometric description of the lines of sight for line integral diagnostic with additional appinfo tags to have some nodes both in MD and DM

member	type	description
pivot_point	rzphi1DExperimental (9.7.1.3.367)	Pivot point of each line of sight; Vector (nchords)
horchordang1	vecflt_type (9.7.1.2.13)	Angle [rad] of horizontal projection of l.o.s. with poloidal cross section (0 for HFS to LFS chord - see Convention_angles_interfdiag.pdf) [rad]. Vector (nchords)
verchordang1	vecflt_type (9.7.1.2.13)	Angle of chord with vertical axis (0 for bottom-top chord, Pi for top-bottom chord - see Convention_angles_interfdiag.pdf) [rad]; Vector (nchords)
width	vecflt_type (9.7.1.2.13)	Width of the laser beam (1/e) [m]; Vector (nchords)
second_point	rzphi1DExperimental (9.7.1.3.367)	Second point defining the line of sight together with the pivot_point. In case the probing wave is reflected, this should be the position of the mirror. This data is redundant with horchordang1 and verchordang1. Vector (nchords).
horchordang2	vecflt_type (9.7.1.2.13)	For reflected l.o.s. only (undefined otherwise) : Angle [rad] of horizontal projection of reflected l.o.s. with poloidal cross section (0 for HFS to LFS chord - see Convention_angles_interfdiag.pdf) [rad]. Vector (nchords)
verchordang2	vecflt_type (9.7.1.2.13)	For reflected l.o.s. only (undefined otherwise) : Angle of reflected chord with vertical axis (0 for bottom-top chord, Pi for top-bottom chord - see Convention_angles_interfdiag.pdf) [rad]; Vector (nchords)
third_point	rzphi1DExperimental (9.7.1.3.367)	Third point defining the reflected line of sight together with the second_point (undefined if the probing wave is not reflected). This data is redundant with horchordang2 and verchordang2. Vector (nchords).
nchordpoints	integer (9.7.1.1.2)	Number of points along the viewing chords (used for synthetic diagnostic signal reconstruction)

Type of: ecesetup:los (2725)

### 9.7.1.3.398 shield

Shield

member	type	description
inboard	shield_specs (9.7.1.3.399)	Inboard
outboard	shield_specs (9.7.1.3.399)	Outboard

Type of: bb\_shield:shield (2555)

### 9.7.1.3.399 shield\_specs

Inboard

member	type	description
nmat	integer (9.7.1.1.2)	Number of materials; Scalar
composition	vecflt_type (9.7.1.2.13)	Inboard or outboard shield radial build the percentage of each material respectively (Meaning of the material index 1: Eurofer, 2: Pb-15.7Li, 3: He, 4: Water, 5: Tungsten Carbide, 6: Boron, 7: Tungsten, 8: Stainless Steel 316) in %vol; Vector(nmat).
r1	float (9.7.1.1.1)	Inner radius (nearest to the plasma), in the global tokamak coordinate system of the inboard or outboard shield located at the equatorial plane [m]; Scalar
r2	float (9.7.1.1.1)	Outer radius (farrest to the plasma), in the global tokamak coordinate system of the inboard or outboard shield located at the equatorial plane [m]; Scalar
mass	float (9.7.1.1.1)	Mass of inboard or outboard shield [Kg]; Scalar

Type of: shield:inboard (2948) | shield:outboard (2948)

### 9.7.1.3.400 simp\_apert

Simple aperture specification: rectangular or elliptical

member	type	description
type	identifier (9.7.1.3.235)	Shape identifier; 0: rectangular, 1: elliptical
sizes	vecflt_type (9.7.1.2.13)	Rectangular size a, b or diameters for elliptical shapes [m]; Time-dependent; Vector (2)
angle	float (9.7.1.1.1)	Rotation of aperture around its center [rad]

Type of: reflectometry\_radfield\_gaussian:aperture (2902)

### 9.7.1.3.401 solcurdiag\_sol\_current

Vector of toroidal rings of divertor tiles. Structure array(nrings). Time-dependent

member	type	description
setup	solcurdiag_sol_current_setup (9.7.1.3.402)	diagnostic setup information
measure	exp0D (9.7.1.3.196)	Measured value for the current through the toroidal ring of tiles [A]; Time-dependent; Scalar

Type of: solcurdiag:sol\_current (2594)

### 9.7.1.3.402 solcurdiag\_sol\_current\_setup

diagnostic setup information

member	type	description
name	string (9.7.1.1.3)	Name of the toroidally distributed tile set. String.
id	integer (9.7.1.1.2)	ID of the tile set as a scalar, to be used in connectivity. Integer.
position	rz1D (9.7.1.3.359)	RZ points defining the shape of the toroidal tile set [m]; Vector (npoints)
tiles_turn	integer (9.7.1.1.2)	Number of tiles used to get the full toroidal coverage; Scalar

Type of: solcurdiag\_sol\_current:setup (2951)

### 9.7.1.3.403 source\_imp

Subtree containing source terms for the impurity species

member	type	description
exp	matflt_type (9.7.1.2.10)	Explicit source term [same unit as root quantity]. Time-dependent. Array2d (nrho,nzimp)
imp	matflt_type (9.7.1.2.10)	Implicit source term [s <sup>-1</sup> .m <sup>-3</sup> ]. Time-dependent. Array2d (nrho,nzimp)

Type of: coresource\_values:qz (2675) I coresource\_values:sz (2675)

#### 9.7.1.3.404 source\_ion

Subtree containing source terms for the various ion species

member	type	description
exp	matflt.type (9.7.1.2.10)	Explicit source term [same unit as root quantity]. Time-dependent. Matrix (nrho,nion)
imp	matflt.type (9.7.1.2.10)	Implicit source term [ $s^{-1}.m^{-3}$ ]. Time-dependent. Matrix (nrho,nion)

Type of: coresource\_values:qi (2675) I coresource\_values:si (2675) I coresource\_values:ui (2675)

#### 9.7.1.3.405 source\_rate

Source density of particles in phase space (real space, velocity space, spin state).

member	type	description
grid	complexgrid (9.7.1.3.82)	Grid for storing the source-rate. Time-dependent; Complexgrid
value	complexgrid_scalar (9.7.1.3.87)	The source-rate of particles in phase space; given on grid [ $(m/s)^{-3} m^{-3} s^{-1}$ ]. Time-dependent; Complexgrid_scalar
discrete	vecint.type (9.7.1.2.14)	List of indexes for the dimensions (coordinates) of grid for which the source is discretely distributed. For example consider a source of 3.5 MeV alpha particles provided on a grid with two coordinates; rho_tor and energy. To specify that the source is given at energies exactly equal to 3.5 MeV, let discret have length 1 and set discrete=(1)=2 since energy is dimension number 2. The source is then proportional to $\delta(1 - energy / 3.5MeV)$ , where delta is the Direct delta distribution. Discrete dimensions can only be used when the grid is rectangular. Time-dependent; Vector(n.discrete.dimensions)
parameters	parameters (9.7.1.3.311)	Parameters used to defined the grid coordiantes. Time-dependent

Type of: distsource\_source:source\_rate (2721)

#### 9.7.1.3.406 source\_vec

Subtree containing vector source term (radial dimension only)

member	type	description
exp	vecflt.type (9.7.1.2.13)	Explicit source term [same unit as root quantity]. Time-dependent. Vector (nrho)
imp	vecflt.type (9.7.1.2.13)	Implicit source term [ $s^{-1}.m^{-3}$ ]. Time-dependent. Vector (nrho)

Type of: coresource\_values:qe (2675) I coresource\_values:se (2675) I coresource\_values:ujxb (2675)

#### 9.7.1.3.407 sourceeel

Structure for the total source term for the transport equation (electrons). Time-dependent;

member	type	description
value	vecflt.type (9.7.1.2.13)	Value of the source term; Time-dependent; Vector (nrho)
integral	vecflt.type (9.7.1.2.13)	Integral from 0 to rho of the source term. Time-dependent; Vector (nrho)
source	string (9.7.1.1.3)	Source of the profile (any comment describing the origin of the profile : code, path to diagnostic signals, massaging, ...); String

Type of: corefield:source\_term (2657) I profiles1d:qoh (2889)

#### 9.7.1.3.408 sourceimp

Structure for the total source term for the transport equation (impurities). Time-dependent;

member	type	description
value	matflt.type (9.7.1.2.10)	Value of the source term [ $m^{-3}.s^{-1}$ ]; Time-dependent; Array2D (nrho,nzimp)
integral	matflt.type (9.7.1.2.10)	Integral from 0 to rho of the source term. Time-dependent; Array2D(nrho,nzimp)
source	vecstring.type (9.7.1.2.15)	Source of the profile (any comment describing the origin of the impurity profiles : code, path to diagnostic signals, massaging, ...); Array of strings (nimp)

Type of: `impurity_type:source_term` (2788)

#### 9.7.1.3.409 sourceion

Structure for the total source term for the transport equation (ions). Time-dependent;

member	type	description
value	<code>matflt.type</code> (9.7.1.2.10)	Value of the source term; Time-dependent; Matrix (nrho,nion)
integral	<code>matflt.type</code> (9.7.1.2.10)	Integral from 0 to rho of the source term. Time-dependent; Matrix (nrho,nion)
source	<code>vecstring.type</code> (9.7.1.2.15)	Source of the profile (any comment describing the origin of the profile : code, path to diagnostic signals, massaging, ...); Array of strings (nion)

Type of: `corefieldion:source_term` (2658)

#### 9.7.1.3.410 species\_desc

Description of a single ion species or bundled charge state.

member	type	description
label	<code>string</code> (9.7.1.1.3)	Name of species
amn	<code>float</code> (9.7.1.1.1)	Atomic mass number of the species
zn	<code>float</code> (9.7.1.1.1)	Nuclear charge of the impurity
zmin	<code>float</code> (9.7.1.1.1)	Minimum Z of species charge state bundle
zmax	<code>float</code> (9.7.1.1.1)	Maximum Z of species charge state bundle

Type of: `edge:species` (2568)

#### 9.7.1.3.411 species\_reference

Defines a reference to a single species in a CPO that includes a compositions structure.

member	type	description
type	<code>identifier</code> (9.7.1.3.235)	The type species: <code>type.flag=1</code> for electron source; <code>type.flag=2</code> for ion source taken from compositions/ions; <code>type.flag=3</code> for impurity source taken from compositions/impur; 4=neutron source; 4=photon source etc (see <code>species_reference.identifier.definition</code> in the Documentation website under Conventions/Enumerated_datatypes).
index	<code>integer</code> (9.7.1.1.2)	Index of the species. This definition of index depends on the value of type; if the species is an ion ( <code>type.flag=1</code> ) or an impurity ( <code>type.flag=2</code> ) then the index refers to distribution/compositions/ions, or distribution/compositions/impur, respectively. This field has no meaning for other species, e.g. like electrons, neutrons or photons. The indexing follows the Fortran/Matlab convention where the first element in an array has index 1.

Type of: `distri_vec:species` (2716) | `distsource_source:species` (2721)

#### 9.7.1.3.412 spectral

This structure accommodates the types needed on a spectral MSE diagnostic namely the emissivity and the radiance spectra. It will be subsequently upgraded with optical + photon detection elements since the structure will also be used for a synthetic spectral mse code.

member	type	description
emissivity	<code>msediag_emissivity</code> (9.7.1.3.277)	Emissivity characteristics.
radiance	<code>msediag_radiance</code> (9.7.1.3.280)	Emissivity characteristics.
codeparam	<code>codeparam</code> (9.7.1.3.77)	Code parameters

Type of: `msediag:spectral` (2581)

#### 9.7.1.3.413 spectrum

Spectral properties of the wave.

member	type	description
phi.theta	launchs_phi.theta (9.7.1.3.247)	Power spectrum as a function of the refractive index in the toroidal and poloidal directions.
parallel	launchs_parallel (9.7.1.3.246)	Power spectrum as a function of the parallel refractive index.

Type of: launchs:spectrum (2577)

### 9.7.1.3.414 spot

Spot characteristics

member	type	description
size	vecflt.type (9.7.1.2.13)	Size of the spot ellipse [m], Vector (2). Time-dependent
angle	float (9.7.1.1.1)	Rotation angle for the spot ellipse [rd], Float. Time-dependent

Type of: rfbeam:spot (2907)

### 9.7.1.3.415 sputtering\_neutrals

Sputtering coefficients

member	type	description
physical	vecflt.type (9.7.1.2.13)	Effective coefficient of physical sputtering of the neutral type INEUT. Vector(nneut). Time-dependent.
chemical	vecflt.type (9.7.1.2.13)	Effective coefficient of chemical sputtering of the neutral type INEUT. Vector(nneut). Time-dependent.

Type of: coefficients\_neutrals:sputtering (2628)

### 9.7.1.3.416 straps

Properties of the IC antenna strap; Time-dependent; Vector(nstraps)

member	type	description
current	exp0D (9.7.1.3.196)	Root mean square current flowing along the strap [A]; Time-Dependent; Float
phase	exp0D (9.7.1.3.196)	Phase of strap current [rad]; Time-dependent; exp0D
phi_centre	float (9.7.1.1.1)	Toroidal angle at the centre of the strap [rad]; Float
width	float (9.7.1.1.1)	Width of strap in the toroidal direction [m]; Float
dist2wall	float (9.7.1.1.1)	Distance to conducting wall or other conductor behind the antenna straps [m]; Float
coord_strap	rz1D (9.7.1.3.359)	Coordinates (R,z) of polygon describing the antenna in the poloidal plane; rz1d vector (ncoord_strap)

Type of: antennaic\_setup:straps (2607)

### 9.7.1.3.417 structure\_cs

Detailed description of the coil structure, for coils that are part of the central solenoid.

member	type	description
gaptf	float (9.7.1.1.1)	gap between CS external radius and TF internal vault radius [m]; Scalar
ri	float (9.7.1.1.1)	CS internal radius [m]; Scalar
re	float (9.7.1.1.1)	CS external radius [m]; Scalar
jcable	float (9.7.1.1.1)	Maximum allowable CS Cable In Conduit current density [A/m <sup>2</sup> ]; Scalar
current_nom	float (9.7.1.1.1)	Nominal current in the CS conductor [A]; Scalar
sigma	float (9.7.1.1.1)	Maximum allowable stress in the CS [Pa]; Scalar
tiso	float (9.7.1.1.1)	Insulation thickness of CS conductor [m]; Scalar
nlay	float (9.7.1.1.1)	Number of conductor layers in the Central Solenoid; Scalar

Type of: desc\_pfcoids:structure\_cs (2688)



### 9.7.1.3.418 t\_series\_cplx

Time series

member	type	description
time.wind	vecflt_type (9.7.1.2.13)	Time trace [s]; Time-dependent; Vector (n)
values.re	vecflt_type (9.7.1.2.13)	Real part of data; Time-dependent; Vector (n)
values.im	vecflt_type (9.7.1.2.13)	Imaginary part of data; Time-dependent; Vector (n)

Type of: refl\_receive:iq\_receiver (2899)

### 9.7.1.3.419 t\_series\_real

Time series; Time-dependent

member	type	description
time.wind	vecflt_type (9.7.1.2.13)	Time trace [s]; Time-dependent; Vector (n)
values	vecflt_type (9.7.1.2.13)	Values of the sigal; Time-dependent; Vector (n)

Type of: refl\_receive:io\_signal (2899) | refl\_receive:raw\_signal (2899)

### 9.7.1.3.420 table

Stores the interpolation table (0d to 7d). Only one entry should be used.

member	type	description
filled	integer (9.7.1.1.2)	Identifier whether the tables have real data.
table_0d	float (9.7.1.1.1)	NO DOCS
table_1d	vecflt_type (9.7.1.2.13)	NO DOCS
table_2d	matflt_type (9.7.1.2.10)	NO DOCS
table_3d	array3dfilt_type (9.7.1.2.2)	NO DOCS
table_4d	array4dfilt_type (9.7.1.2.4)	NO DOCS
table_5d	array5dfilt_type (9.7.1.2.5)	NO DOCS
table_6d	array6dfilt_type (9.7.1.2.6)	NO DOCS
coord1_str	vecstring_type (9.7.1.2.15)	If needed, an array of strings describing coordinate 1
coord2_str	vecstring_type (9.7.1.2.15)	If needed, an array of strings describing coordinate 2
coord3_str	vecstring_type (9.7.1.2.15)	If needed, an array of strings describing coordinate 3
coord4_str	vecstring_type (9.7.1.2.15)	If needed, an array of strings describing coordinate 4
coord5_str	vecstring_type (9.7.1.2.15)	If needed, an array of strings describing coordinate 5
coord6_str	vecstring_type (9.7.1.2.15)	If needed, an array of strings describing coordinate 6
quality	identifier (9.7.1.3.235)	Characterize the data quality

Type of: tables:table (2971)

### 9.7.1.3.421 tables

Definition of a process

member	type	description
ndim	integer (9.7.1.1.2)	Table dimensionality of the process. Indicates which of the tables is filled.
coord_index	integer (9.7.1.1.2)	Index in tables.coord, specifying what coordinate specification to use for this table.
result_label	string (9.7.1.1.3)	Description of the process result (rate, cross section, sputtering yield, ...)
result_unit	string (9.7.1.1.3)	Unit of the process result
result_trans	integer (9.7.1.1.2)	Transformation of the process result. Integer flag: 0=no transformation; 1=10 <sup>-</sup> ; 2=exp()
zmin	vecint_type (9.7.1.2.14)	Minimum charge state [units of elementary charge]; if equal to zmax then no bundling; Vector(nchargestates)
zmax	vecint_type (9.7.1.2.14)	Maximum charge state [units of elementary charge]; if equal to zmin then no bundling; Vector(nchargestates)
state_label	vecstring_type (9.7.1.2.15)	Label for charge state (e.g. D0, D1+, ...); Vector(nchargestates)
table(:)	table (9.7.1.3.420)	Array of data tables, one entry per species. Vector(nchargestates)
data_source	string (9.7.1.1.3)	Filename or subroutine name used to provide this data.
data_provide	string (9.7.1.1.3)	ITM responsible person for this data.

member	type	description
data.citation	string (9.7.1.1.3)	Reference to publication(s).

Type of: amns:tables (2553)

#### 9.7.1.3.422 tables\_coord

Definition of coordinates for one specific coordinate system used in one or more tables.

member	type	description
coords(:)	coords (9.7.1.3.103)	Vector(ndim) of coordinates. ndim is number of parameters for a process.

Type of: amns:tables\_coord (2553)

#### 9.7.1.3.423 temporary\_nt

set of non-timed temporary quantities

member	type	description
float0d(:)	temporary_nt_0dr (9.7.1.3.426)	Constant 0D float
integer0d(:)	temporary_nt_0di (9.7.1.3.425)	Constant 0D integer
complex0d(:)	temporary_nt_0dc (9.7.1.3.424)	Constant 0D complex
string0d(:)	temporary_nt_0ds (9.7.1.3.427)	Constant 0D string
float1d(:)	temporary_nt_1dr (9.7.1.3.430)	Constant 1D float
integer1d(:)	temporary_nt_1di (9.7.1.3.429)	Constant 1D integer
string1d(:)	temporary_nt_1dr (9.7.1.3.430)	Constant 1D string
complex1d(:)	temporary_nt_1dc (9.7.1.3.428)	Constant 1D complex
float2d(:)	temporary_nt_2dr (9.7.1.3.434)	Constant 2D float
integer2d(:)	temporary_nt_2di (9.7.1.3.433)	Constant 2D integer
complex2d(:)	temporary_nt_2dc (9.7.1.3.432)	Constant 2D complex
float3d(:)	temporary_nt_3dr (9.7.1.3.437)	Constant 3D float
integer3d(:)	temporary_nt_3di (9.7.1.3.436)	Constant 3D integer
complex3d(:)	temporary_nt_3dc (9.7.1.3.435)	Constant 3D complex
float4d(:)	temporary_nt_4dr (9.7.1.3.438)	Constant 4D float

Type of: temporary:non.timed (2595)

#### 9.7.1.3.424 temporary\_nt\_0dc

a non-timed temporary quantity of complex type

member	type	description
identifier	identifier (9.7.1.3.235)	Identifier.
value	cplx_type (9.7.1.2.8)	Value. Complex scalar.

Type of: temporary\_nt:complex0d (2973)

#### 9.7.1.3.425 temporary\_nt\_0di

a non-timed temporary quantity of integer type

member	type	description
identifier	identifier (9.7.1.3.235)	Identifier.
value	integer (9.7.1.1.2)	Value. integer scalar

Type of: temporary\_nt:integer0d (2973)

#### 9.7.1.3.426 temporary\_nt.0dr

a non-timed temporary quantity of real type

member	type	description
identifier	identifier (9.7.1.3.235)	Identifier.
value	float (9.7.1.1.1)	Value. Real scalar.

Type of: temporary\_nt:float0d (2973)

#### 9.7.1.3.427 temporary\_nt.0ds

a non-timed temporary quantity of string type

member	type	description
identifier	identifier (9.7.1.3.235)	Identifier.
value	string (9.7.1.1.3)	Value. String.

Type of: temporary\_nt:string0d (2973)

#### 9.7.1.3.428 temporary\_nt.1dc

a non-timed temporary quantity of veccomplex type

member	type	description
identifier	identifier (9.7.1.3.235)	Identifier.
value	vecplx.type (9.7.1.2.12)	Value. Vector of complex numbers

Type of: temporary\_nt:complex1d (2973)

#### 9.7.1.3.429 temporary\_nt.1di

a non-timed temporary quantity of vecint type

member	type	description
identifier	identifier (9.7.1.3.235)	Identifier.
value	vecint.type (9.7.1.2.14)	Value. Vector of integers

Type of: temporary\_nt:integer1d (2973)

#### 9.7.1.3.430 temporary\_nt.1dr

a non-timed temporary quantity of vecflt type

member	type	description
identifier	identifier (9.7.1.3.235)	Identifier.
value	vecflt.type (9.7.1.2.13)	Value. Vector of float.

Type of: temporary\_nt:float1d (2973) I temporary\_nt:string1d (2973)

#### 9.7.1.3.431 temporary\_nt.1ds

a non-timed temporary quantity of vecstring type

member	type	description
identifier	identifier (9.7.1.3.235)	Identifier.
value	vecstring_type (9.7.1.2.15)	Value. Vector of strings.

#### 9.7.1.3.432 temporary\_nt\_2dc

a non-timed temporary quantity of matcomplex type

member	type	description
identifier	identifier (9.7.1.3.235)	Identifier.
value	matcplx_type (9.7.1.2.9)	Value. Matrix of complex numbers

Type of: temporary\_nt:complex2d (2973)

#### 9.7.1.3.433 temporary\_nt\_2di

a non-timed temporary quantity of matint type

member	type	description
identifier	identifier (9.7.1.3.235)	Identifier.
value	matint_type (9.7.1.2.11)	Value. Matrix of integers

Type of: temporary\_nt:integer2d (2973)

#### 9.7.1.3.434 temporary\_nt\_2dr

a non-timed temporary quantity of matflt type

member	type	description
identifier	identifier (9.7.1.3.235)	Identifier.
value	matflt_type (9.7.1.2.10)	Value. Matrix of float.

Type of: temporary\_nt:float2d (2973)

#### 9.7.1.3.435 temporary\_nt\_3dc

a non-timed temporary quantity of array3dcomplex type

member	type	description
identifier	identifier (9.7.1.3.235)	Identifier.
value	array3dcplx_type (9.7.1.2.1)	Value. array 3D of complex numbers

Type of: temporary\_nt:complex3d (2973)

#### 9.7.1.3.436 temporary\_nt\_3di

a non-timed temporary quantity of array3dint type

member	type	description
identifier	identifier (9.7.1.3.235)	Identifier.
value	array3dint_type (9.7.1.2.3)	Value. array 3D of integers

Type of: temporary\_nt:integer3d (2973)

#### 9.7.1.3.437 temporary\_nt\_3dr

a non-timed temporary quantity of array3dfloat type

member	type	description
identifier	identifier (9.7.1.3.235)	Identifier.
value	array3dflt.type (9.7.1.2.2)	Value. array 3D of floats

Type of: temporary\_nt:float3d (2973)

#### 9.7.1.3.438 temporary\_nt.4dr

a non-timed temporary quantity of array4dfloat type

member	type	description
identifier	identifier (9.7.1.3.235)	Identifier.
value	array4dflt.type (9.7.1.2.4)	Value. array 4D of floats

Type of: temporary\_nt:float4d (2973)

#### 9.7.1.3.439 temporary\_t

set of timed temporary quantities

member	type	description
float0d(:)	temporary_t.0dr (9.7.1.3.442)	Time-dependent 0D float
integer0d(:)	temporary_t.0di (9.7.1.3.441)	Time-dependent 0D integer.
complex0d(:)	temporary_t.0dc (9.7.1.3.440)	Time-dependent 0D complex.
string0d(:)	temporary_t.0ds (9.7.1.3.443)	Time-dependent 0D string.
float1d(:)	temporary_t.1dr (9.7.1.3.446)	Time-dependent 1D float.
integer1d(:)	temporary_t.1di (9.7.1.3.445)	Time-dependent 1D integer.
complex1d(:)	temporary_t.1dc (9.7.1.3.444)	Time-dependent 1D complex
float2d(:)	temporary_t.2dr (9.7.1.3.449)	Time-dependent 2D float
integer2d(:)	temporary_t.2di (9.7.1.3.448)	Time-dependent 2D integer
complex2d(:)	temporary_t.2dc (9.7.1.3.447)	Time-dependent 2D complex
float3d(:)	temporary_t.3dr (9.7.1.3.452)	Time-dependent 3D float
integer3d(:)	temporary_t.3di (9.7.1.3.451)	Time-dependent 3D integer
complex3d(:)	temporary_t.3dc (9.7.1.3.450)	Time-dependent 3D complex
float4d(:)	temporary_t.4dr (9.7.1.3.453)	Time-dependent 4D float

Type of: temporary\_timed (2595)

#### 9.7.1.3.440 temporary\_t.0dc

a timed temporary quantity of complex type

member	type	description
identifier	identifier (9.7.1.3.235)	Identifier.
value	cplx.type (9.7.1.2.8)	Value. Time-dependent. Complex scalar.

Type of: temporary\_t:complex0d (2989)

### 9.7.1.3.441 `temporary_t.Odi`

a timed temporary quantity of integer type

member	type	description
identifier	identifier (9.7.1.3.235)	Identifier.
value	integer (9.7.1.1.2)	Value. Time-dependent. Integer scalar

Type of: `temporary_t:integer0d` (2989)

### 9.7.1.3.442 `temporary_t.Odr`

a timed temporary quantity of real type

member	type	description
identifier	identifier (9.7.1.3.235)	Identifier.
value	float (9.7.1.1.1)	Value. Time-dependent. Real scalar.

Type of: `temporary_t:float0d` (2989)

### 9.7.1.3.443 `temporary_t.Ods`

a timed temporary quantity of string type

member	type	description
identifier	identifier (9.7.1.3.235)	Identifier.
value	string (9.7.1.1.3)	Value. Time-dependent. String.

Type of: `temporary_t:string0d` (2989)

### 9.7.1.3.444 `temporary_t.1dc`

a timed temporary quantity of `veccomplex` type

member	type	description
identifier	identifier (9.7.1.3.235)	Identifier.
value	<code>vecplx.type</code> (9.7.1.2.12)	Value. Time-dependent. Vector of complex numbers

Type of: `temporary_t:complex1d` (2989)

### 9.7.1.3.445 `temporary_t.1di`

a timed temporary quantity of `vecint` type

member	type	description
identifier	identifier (9.7.1.3.235)	Identifier.
value	<code>vecint.type</code> (9.7.1.2.14)	Value. Time-dependent. Vector of integers

Type of: `temporary_t:integer1d` (2989)

### 9.7.1.3.446 `temporary_t.1dr`

a timed temporary quantity of `vecflt` type

member	type	description
identifier	identifier (9.7.1.3.235)	Identifier.
value	<code>vecflt.type</code> (9.7.1.2.13)	Value. Time-dependent. Vector of float.

Type of: `temporary_t:float1d` (2989)

### 9.7.1.3.447 `temporary_t.2dc`

a timed temporary quantity of `matcomplex` type

member	type	description
identifier	identifier (9.7.1.3.235)	Identifier.
value	<code>matcplx_type</code> (9.7.1.2.9)	Value. Time-dependent. Matrix of complex numbers

Type of: `temporary_t:complex2d` (2989)

### 9.7.1.3.448 `temporary_t.2di`

a timed temporary quantity of `matint` type

member	type	description
identifier	identifier (9.7.1.3.235)	Identifier.
value	<code>matint_type</code> (9.7.1.2.11)	Value. Time-dependent. Matrix of integers

Type of: `temporary_t:integer2d` (2989)

### 9.7.1.3.449 `temporary_t.2dr`

a timed temporary quantity of `matflt` type

member	type	description
identifier	identifier (9.7.1.3.235)	Identifier.
value	<code>matflt_type</code> (9.7.1.2.10)	Value. Time-dependent. Matrix of float.

Type of: `temporary_t:float2d` (2989)

### 9.7.1.3.450 `temporary_t.3dc`

a timed temporary quantity of `array3dcomplex` type

member	type	description
identifier	identifier (9.7.1.3.235)	Identifier.
value	<code>array3dcplx_type</code> (9.7.1.2.1)	Value. Time-dependent. array 3D of complex numbers

Type of: `temporary_t:complex3d` (2989)

### 9.7.1.3.451 `temporary_t.3di`

a timed temporary quantity of `array3dint` type

member	type	description
identifier	identifier (9.7.1.3.235)	Identifier.
value	<code>array3dint_type</code> (9.7.1.2.3)	Value. Time-dependent. array 3D of integers

Type of: `temporary_t:integer3d` (2989)

### 9.7.1.3.452 `temporary_t.3dr`

a timed temporary quantity of `array3dfloat` type

member	type	description
identifier	identifier (9.7.1.3.235)	Identifier.
value	<code>array3dfilt_type</code> (9.7.1.2.2)	Value. Time-dependent. array 3D of floats

Type of: `temporary_t:float3d` (2989)



### 9.7.1.3.453 temporary\_t.4dr

a timed temporary quantity of array4dfloat type

member	type	description
identifier	identifier (9.7.1.3.235)	Identifier.
value	array4dflt.type (9.7.1.2.4)	Value. Time-dependent. array 4D of floats

Type of: temporary\_t:float4d (2989)

### 9.7.1.3.454 tf\_desc\_tfcoils

Description of the toroidal field coils

member	type	description
type	integer (9.7.1.1.2)	Type of coil, 0=circular coil, 1=plane coil with arbitrary shape.
phi	float (9.7.1.1.1)	Toroidal angle of centre of coil 1, assuming all coils are identical and evenly distributed around the torus [rad]. Scalar
circularcoil	circularcoil (9.7.1.3.75)	Circular coil description
planecoil	planecoil (9.7.1.3.330)	Plane coil description
inboard	tf_structure (9.7.1.3.456)	Description of TF inboard structure
outboard	tf_structure (9.7.1.3.456)	Description of TF outboard structure

Type of: toroidfield:desc\_tfcoils (2597)

### 9.7.1.3.455 tf\_desc\_tfcoils\_board

Description of TF inboard/outboard properties

member	type	description
structure	tf_structure (9.7.1.3.456)	TF coil structure

### 9.7.1.3.456 tf\_structure

Inner TF coil structure

member	type	description
jcable	float (9.7.1.1.1)	CICS cable in current density [A/m]; Scalar
tisoff	float (9.7.1.1.1)	Insulation thickness of TF conductor [m]; Scalar
efcasing	float (9.7.1.1.1)	Thickness front casing [m]; Scalar
escasing	float (9.7.1.1.1)	Thickness side casing [m]; Scalar
sigjackettf	float (9.7.1.1.1)	Jacket stress limit [Pa]; Scalar
sigvaulttf	float (9.7.1.1.1)	Vault stress limit [Pa]; Scalar
ktf	float (9.7.1.1.1)	Amplification factor for magnetic field
ritf	float (9.7.1.1.1)	Internal TF coil radius [m]; Scalar
riitf	float (9.7.1.1.1)	Internal vault TF coil radius [m]; Scalar
retf	float (9.7.1.1.1)	External TF coil radius [m]; Scalar
he_fraction	float (9.7.1.1.1)	Helium fraction (percentage) in TF structure in front of winding package [-]; Scalar
ss_fraction	float (9.7.1.1.1)	Stainless steel 316 fraction (percentage) in TF structure in front of winding package [-]; Scalar
pow_dens_wp	float (9.7.1.1.1)	Peak energy deposition in winding pack [W.m <sup>-3</sup> ]; Scalar

Type of: tf\_desc\_tfcoils:inboard (3004) I tf\_desc\_tfcoils:outboard (3004) I tf\_desc\_tfcoils\_board:structure (3005)

### 9.7.1.3.457 theta\_info

Information on the poloidal angle theta.

member	type	description
angl.type	integer (9.7.1.1.2)	Type of poloidal angle: 1 : same as the poloidal angle in the equilibrium cpo; 2 : geometrical polar angle, $\tan(\theta) = Z/(R-R_0)$ ; 3 : other. If option 3, a transformation to the geometrical poloidal angle is provided in th2th.pol.

member	type	description
th2th_pol	matflt.type (9.7.1.2.10)	Geometrical poloidal angle at grid points in theta, i.e. the transformation from theta to the polar poloidal angle; used only if angl.type=3; Time-dependent; Matrix (ndim1, ndim2)

Type of: waves\_grid\_2d:theta\_info (3050)

### 9.7.1.3.458 topo\_regions

List with distribution function in each topological region; Time-dependent. Structure array(nregion\_topo)

member	type	description
ind_omnigen	integer (9.7.1.1.2)	Index of the omnigenous magnetic surfaces (generalised equatorial plane) to which the s-coordinates refer. NOTE: only used for gridcoord=3.
dim1	array6dflt.type (9.7.1.2.6)	First dimension in phase space; Time-dependent; Array6d(ndim11, ndim21, ndim31, ndim41, ndim51, ndim61).
dim2	array6dflt.type (9.7.1.2.6)	Second dimension in phase space; Time-dependent; Array6d(ndim12, ndim22, ndim32, ndim42, ndim52, ndim62).
dim3	array6dflt.type (9.7.1.2.6)	Third dimension in phase space; Time-dependent; Array6d(ndim13, ndim23, ndim33, ndim43, ndim53, ndim63).
dim4	array6dflt.type (9.7.1.2.6)	Fourth dimension in phase space; Time-dependent; Array6d(ndim14, ndim24, ndim34, ndim44, ndim54, ndim64).
dim5	array6dflt.type (9.7.1.2.6)	Fifth dimension in phase space; Time-dependent; Array6d(ndim15, ndim25, ndim35, ndim45, ndim55, ndim65).
dim6	array6dflt.type (9.7.1.2.6)	Sixth dimension in phase space; Time-dependent; Array6d(ndim16, ndim26, ndim36, ndim46, ndim56, ndim66).
jacobian	array6dflt.type (9.7.1.2.6)	Jacobian of the transformation of the phase space grid variables; Time-dependent; Array6d(ndim11, ndim22, ndim33, ndim44, ndim55, ndim66).
distfunc	array6dflt.type (9.7.1.2.6)	Orbit (or bounce) averaged distribution function given on a grid [1/m <sup>3</sup> (m/s) <sup>-3</sup> ]; Time-dependent; Array6d(ndim11, ndim22, ndim33, ndim44, ndim55, ndim66).

### 9.7.1.3.459 toroid\_field

Toroidal field information entering the definition of rho\_tor, for reference only. The physical value of the toroidal field should be taken from the toroidfield CPO. Time-dependent.

member	type	description
b0	float (9.7.1.1.1)	Vacuum field at r0 [T]; Time-dependent. Scalar.
b0prime	float (9.7.1.1.1)	Time derivative of the vacuum field at r0 [T/s]; Time-dependent. Scalar.
r0	float (9.7.1.1.1)	Characteristic major radius of the device (used in publications, usually middle of the vessel at the equatorial midplane) [m]. Scalar.
time	float (9.7.1.1.1)	Time [s] (exact time slice used from the time array of the source signal, here the toroidfield CPO. If the time slice does not exist in the time array of the source signal, it means linear interpolation has been used); Time-dependent; Scalar.

Type of: coreprof:toroid\_field (2561)

### 9.7.1.3.460 trace

Position of particle in 5D space (3D in real and 2D in velocity).

member	type	description
time_orb	matflt.type (9.7.1.2.10)	Time along the orbit [s]; Time-dependent; Matrix (norbits, max_ntorb)
ntorb	vecint.type (9.7.1.2.14)	Number of time slices along the orbit, for each orbit. Time-dependent; Vector (norbits)
r	matflt.type (9.7.1.2.10)	Major radius of the guiding centre [m], Major radius; Time-dependent; Matrix (norbits, max_ntorb).
z	matflt.type (9.7.1.2.10)	Altitude of the guiding centre [m]; Time-dependent; Matrix (norbits, max_ntorb).
phi	matflt.type (9.7.1.2.10)	Toroidal angle of the guiding centre [rad]; Time-dependent; Matrix (norbits, max_ntorb).
psi	matflt.type (9.7.1.2.10)	Guiding centre position in psi [normalised poloidal flux]; Time-dependent; Matrix (norbits, max_ntorb).
theta_b	matflt.type (9.7.1.2.10)	Position of the guiding centre in poloidal Boozer angle [rad]; Time-dependent; Matrix (norbits, max_ntorb).
v_parallel	matflt.type (9.7.1.2.10)	Parallel velocity along the orbit [m/s]; Time-dependent; Matrix (norbits, max_ntorb).
v_perp	matflt.type (9.7.1.2.10)	Perpendicular velocity along the orbit [m/s]; Time-dependent; Matrix (norbits, max_ntorb).

Type of: orbit:trace (2585)

### 9.7.1.3.461 transcoefel

Subtree containing transport coefficients from a transport model, for the electrons

member	type	description
diff_eff	vecflt.type (9.7.1.2.13)	Effective diffusivity [ $m^2.s^{-1}$ ]. Time-dependent. Vector (nrho)
vconv_eff	vecflt.type (9.7.1.2.13)	Effective convection [ $m.s^{-1}$ ]. Time-dependent. Vector (nrho)
flux	vecflt.type (9.7.1.2.13)	Flux. Not used in transport equations [ $field.m.s^{-1}, m^{-3}$ if field is not a density itself]. Time-dependent. Vector (nrho)
off_diagonal	offdiagel (9.7.1.3.301)	Details of the transport matrix, just for diagnostic (not used in transport equations). Time-dependent.
flag	integer (9.7.1.1.2)	Flag describing the form of transport produced by the original model : 0- not calculated, 1- D and V, 2- flux, 3- full transport matrix. Scalar.

Type of: coretransp\_values:te\_transp (2679) I neoclassic:mtor\_neo (2583) I neoclassic:ne\_neo (2583) I neoclassic:te\_neo (2583)

### 9.7.1.3.462 transcoefimp

Subtree containing transport coefficients from a transport model, for the various impurity species (multiple charge states)

member	type	description
diff_eff	matflt.type (9.7.1.2.10)	Effective diffusivity [ $m^2.s^{-1}$ ]. Time-dependent. Array2d (nrho,nzimp)
vconv_eff	matflt.type (9.7.1.2.10)	Effective convection [ $m.s^{-1}$ ]. Time-dependent. Array2d (nrho,nzimp)
exchange	matflt.type (9.7.1.2.10)	Ion to electron energy exchange [ $W.m^{-3}$ ]. Time-dependent. Array2d (nrho,nzimp)
flux	matflt.type (9.7.1.2.10)	Flux. Not used in transport equations [ $field.m.s^{-1}, m^{-3}$ if field is not a density itself]. Time-dependent. Array2d (nrho,nzimp)
flag	integer (9.7.1.1.2)	Flag describing the form of transport produced by the original model : 0- not calculated, 1- D and V, 2- flux, 3- full transport matrix (off-diagonal subtree not available for impurities for the moment). Scalar.

Type of: coretransp\_values:nz\_transp (2679) I coretransp\_values:tz\_transp (2679) I neoclassic:nz\_neo (2583) I neoclassic:tz\_neo (2583)

### 9.7.1.3.463 transcoefion

Subtree containing transport coefficients from a transport model, for the various ion species, including the energy exchange term qgi.

member	type	description
diff_eff	matflt.type (9.7.1.2.10)	Effective diffusivity [ $m^2.s^{-1}$ ]. Time-dependent. Matrix (nrho,nion)
vconv_eff	matflt.type (9.7.1.2.10)	Effective convection [ $m.s^{-1}$ ]. Time-dependent. Matrix (nrho,nion)
exchange	matflt.type (9.7.1.2.10)	Ion to electron energy exchange [ $W.m^{-3}$ ]. Time-dependent. Matrix(nrho,nion).
qgi	matflt.type (9.7.1.2.10)	Energy exchange term due to transport. [ $W.m^{-3}$ ]. Time-dependent. Matrix (nrho,nion)
flux	matflt.type (9.7.1.2.10)	Flux. Not used in transport equations [ $field.m.s^{-1}, m^{-3}$ if field is not a density itself]. Time-dependent. Matrix (nrho,nion)
off_diagonal	offdiagion (9.7.1.3.302)	Details of the transport matrix, just for diagnostic (not used in transport equations). Time-dependent.
flag	integer (9.7.1.1.2)	Flag describing the form of transport produced by the original model : 0- not calculated, 1- D and V, 2- flux, 3- full transport matrix. Scalar.

Type of: coretransp\_values:ti\_transp (2679) I neoclassic:ni\_neo (2583) I neoclassic:ti\_neo (2583)

### 9.7.1.3.464 transcoefvtor

Subtree containing transport coefficients from a transport model, for the various ion species

member	type	description
diff_eff	matflt.type (9.7.1.2.10)	Effective diffusivity [ $m^2.s^{-1}$ ]. Time-dependent. Matrix (nrho,nion)
vconv_eff	matflt.type (9.7.1.2.10)	Effective convection [ $m.s^{-1}$ ]. Time-dependent. Matrix (nrho,nion)
flux	matflt.type (9.7.1.2.10)	Flux. Not used in transport equations [ $field.m.s^{-1}, m^{-3}$ if field is not a density itself]. Time-dependent. Matrix (nrho,nion)
off_diagonal	offdiagion (9.7.1.3.302)	Details of the transport matrix, just for diagnostic (not used in transport equations). Time-dependent.

member	type	description
flag	integer (9.7.1.1.2)	Flag describing the form of transport produced by the original model : 0- not calculated, 1- D and V, 2- flux, 3- full transport matrix. Scalar.

Type of: coretransp\_values:vtor\_transp (2679)

### 9.7.1.3.465 trap\_type

Definition of trap types. Array of structures (number of trap types)

member	type	description
trap_id	identifier (9.7.1.3.235)	Identifier for the trap type
compound	integer (9.7.1.1.2)	Index of the compound doing the trapping. Refers to (local) ../compounds.
gas_species	integer (9.7.1.1.2)	Index of the gas species being trapped. Refers to (local) ../gases.
energy	float (9.7.1.1.1)	Energy depth of the trap [eV]
fill_factor	matflt.type (9.7.1.2.10)	Discretized filling fraction of traps in this layer (0..1) [-]. Dimensions: 1. index: cell index of depth discretization in this layer; 2. index: number of discretization elements in the subgrid
density	matflt.type (9.7.1.2.10)	Discretized density of traps in this layer [1/m <sup>3</sup> ]. Dimensions: 1. index: cell index of depth discretization in this layer; 2. index: number of discretization elements in the subgrid

Type of: wall\_unitsComplexType.layers:trap\_type (3040)

### 9.7.1.3.466 trianglexyz

Triangular surface described by its three corners: point1, point2, and point3. The normal vector of this triangle is defined to be in the direction (point2-point1)x(point3-point1).

member	type	description
point1	xyz0D (9.7.1.3.509)	Point 1 on the triangle
point2	xyz0D (9.7.1.3.509)	Point 2 on the triangle
point3	xyz0D (9.7.1.3.509)	Point 3 on the triangle

Type of: nbi\_nbi\_unit\_wall\_surface:triangle (2835)

### 9.7.1.3.467 tsmeasure

Measured values (Thomson scattering)

member	type	description
te	exp1D (9.7.1.3.197)	Electron temperature [eV]. Vector (nchords)
ne	exp1D (9.7.1.3.197)	Electron density [m <sup>-3</sup> ]. Vector (nchords)

Type of: tsdiag:measure (2598)

### 9.7.1.3.468 tssetup

diagnostic setup information

member	type	description
position	rzphi1D (9.7.1.3.365)	Position of intersection between laser and line of sight; Vector (nchords)

Type of: tsdiag:setup (2598)

### 9.7.1.3.469 turbcomposition

Plasma composition (description of ion species).

member	type	description
amn	vecflt.type (9.7.1.2.13)	Atomic mass number (lumped ions are allowed); Vector (nion)
zn	vecflt.type (9.7.1.2.13)	Nuclear charge (lumped ions are allowed); Vector (nion)
zion	vecflt.type (9.7.1.2.13)	Ion charge (of the dominant ionisation state; lumped ions are allowed); Vector (nion)

member	type	description
ie.mass	vecflt_type (9.7.1.2.13)	Ion to electron mass ratio as used in the code for each species. To be used only by models which keep electron inertia. Vector (nion)

Type of: turbulence:composition (2599)

### 9.7.1.3.470 turbcoordsys

Description of the coordinates and metric.

member	type	description
grid.type	string (9.7.1.1.3)	Type of coordinate system.
turbgrid	turbgrid (9.7.1.3.472)	Turbulence grid used by the codes; Time-dependent.
jacobian	matflt_type (9.7.1.2.10)	Jacobian of the coordinate system; Time-dependent; Matrix (ndim1, ndim2).
g_11	matflt_type (9.7.1.2.10)	metric coefficients g_11; Time-dependent; Matrix (ndim1, ndim2).
g_12	matflt_type (9.7.1.2.10)	metric coefficients g_12; Time-dependent; Matrix (ndim1, ndim2).
g_13	matflt_type (9.7.1.2.10)	metric coefficients g_13; Time-dependent; Matrix (ndim1, ndim2).
g_22	matflt_type (9.7.1.2.10)	metric coefficients g_22; Time-dependent; Matrix (ndim1, ndim2).
g_23	matflt_type (9.7.1.2.10)	metric coefficients g_23; Time-dependent; Matrix (ndim1, ndim2).
g_33	matflt_type (9.7.1.2.10)	metric coefficients g_33; Time-dependent; Matrix (ndim1, ndim2).
position	rzphi3D (9.7.1.3.369)	R Z phi positions of grid points; Time-dependent; Array3D (ndim1, ndim2, ndim3).

Type of: turbulence:coordsys (2599)

### 9.7.1.3.471 turbenv1d

Parallel fluctuation envelope.

member	type	description
theta	vecflt_type (9.7.1.2.13)	Straight field line poloidal angle [rad]; Vector (ntheta_env).
phi	vecflt_type (9.7.1.2.13)	Electrostatic potential [V <sup>2</sup> ]; Time-dependent; Vector (ntheta_env).
vor	vecflt_type (9.7.1.2.13)	Vorticity [coulomb <sup>2</sup> /m <sup>6</sup> ]; Time-dependent; Vector (ntheta_env).
jpl	vecflt_type (9.7.1.2.13)	Parallel current [A <sup>2</sup> /m <sup>4</sup> ]; Time-dependent; Vector (ntheta_env).
ne	vecflt_type (9.7.1.2.13)	Electron density [m <sup>-6</sup> ]; Time-dependent; Vector (ntheta_env).
he	vecflt_type (9.7.1.2.13)	Nonadiabatic electron density [m <sup>-6</sup> ]; Time-dependent; Vector (ntheta_env).
te	vecflt_type (9.7.1.2.13)	Electron temperature [eV <sup>2</sup> ]; Time-dependent; Vector (ntheta_env).
ni	matflt_type (9.7.1.2.10)	Ion density [m <sup>-6</sup> ]; Time-dependent; Matrix(ntheta_env,nion).
ti	matflt_type (9.7.1.2.10)	Ion temperature [eV <sup>2</sup> ]; Time-dependent; Matrix(ntheta_env,nion).
ui	matflt_type (9.7.1.2.10)	Ion parallel velocity [m <sup>2</sup> /s <sup>2</sup> ]; Time-dependent; Matrix (ntheta_env,nion).
fe	vecflt_type (9.7.1.2.13)	Electron particle flux [m <sup>-2</sup> /s per mode]; Time-dependent; Vector (ntheta_env).
qe	vecflt_type (9.7.1.2.13)	Electron conductive heat flux [W.m <sup>-2</sup> per mode]; Time-dependent; Vector (ntheta_env).
qi	matflt_type (9.7.1.2.10)	Ion conductive heat flux [W. m <sup>-2</sup> per mode]; Time-dependent; Matrix(ntheta_env,nion).
me	vecflt_type (9.7.1.2.13)	Magnetic electron heat flux [W.m <sup>-2</sup> per mode]; Time-dependent; Vector (ntheta_env).
mi	matflt_type (9.7.1.2.10)	Magnetic ion heat flux [W. m <sup>-2</sup> per mode]; Time-dependent; Matrix(ntheta_env,nion).

Type of: turbulence:env1d (2599)

### 9.7.1.3.472 turbgrid

Generic structure for a turbulence grid.

member	type	description
dim1	vecflt_type (9.7.1.2.13)	First dimension values; Vector (ndim1).
dim2	vecflt_type (9.7.1.2.13)	Second dimension values; Vector (ndim2).
dim3	vecflt_type (9.7.1.2.13)	Third dimension values; Vector (ndim3).
dim.v1	vecflt_type (9.7.1.2.13)	First v-space dimension values; Vector (ndim.v1).
dim.v2	vecflt_type (9.7.1.2.13)	Second v-space dimension values; Vector (ndim.v2).

Type of: turbcoordsys:turbgrid (3020)

### 9.7.1.3.473 turbspec1d

Perpendicular wavenumber spectra.

member	type	description
kperp	vecflt_type (9.7.1.2.13)	Perpendicular wavenumber [ $\text{m}^{-1}$ ]; Vector (ndim_spec).
phi	vecflt_type (9.7.1.2.13)	Electrostatic potential [ $\text{V}^2$ per mode]; Time-dependent; Vector (ndim_spec).
vor	vecflt_type (9.7.1.2.13)	Vorticity [ $\text{s}^{-2}$ per mode]; Time-dependent; Vector (ndim_spec).
b	vecflt_type (9.7.1.2.13)	Magnetic energy [ $\text{T}^2$ per mode]; Time-dependent; Vector (ndim_spec).
jpl	vecflt_type (9.7.1.2.13)	Current [ $\text{A}^2/\text{m}^4$ per mode]; Time-dependent; Vector (ndim_spec).
ne	vecflt_type (9.7.1.2.13)	Electron density [ $\text{m}^{-6}$ per mode]; Time-dependent; Vector (ndim_spec).
te	vecflt_type (9.7.1.2.13)	Electron temperature [ $\text{eV}^2$ per mode]; Time-dependent; Vector (ndim_spec).
ti	matflt_type (9.7.1.2.10)	Ion temperature [ $\text{eV}^2$ per mode]; Time-dependent; Matrix (ndim_spec,nion).
fe	vecflt_type (9.7.1.2.13)	Electron particle flux [ $\text{m}^{-2}/\text{s}$ per mode]; Time-dependent; Vector (ndim_spec).
qe	vecflt_type (9.7.1.2.13)	Electron conductive heat flux [ $\text{W}\cdot\text{m}^{-2}$ per mode]; Time-dependent; Vector (ndim_spec).
qi	matflt_type (9.7.1.2.10)	Ion conductive heat flux [ $\text{W}\cdot\text{m}^{-2}$ per mode]; Time-dependent; Matrix(ndim_spec,nion).
me	vecflt_type (9.7.1.2.13)	Magnetic electron heat flux [ $\text{W}\cdot\text{m}^{-2}$ per mode]; Time-dependent; Matrix (ndim_spec).
mi	matflt_type (9.7.1.2.10)	Magnetic ion heat flux [ $\text{W}\cdot\text{m}^{-2}$ per mode]; Time-dependent; Matrix (ndim_spec,nion).

Type of: turbulence:spec1d (2599)

### 9.7.1.3.474 turbvar0d

Time traces.

member	type	description
dtime_type	string (9.7.1.1.3)	Description of time trace e.g. last ndtime points.
dtime	vecflt_type (9.7.1.2.13)	Fast diagnostic time [s]; Time-dependent; Vector (ndtime).
en_exb	vecflt_type (9.7.1.2.13)	ExB energy [ $\text{J}/\text{m}^3$ ]; Time-dependent; Vector (ndtime).
en_mag	vecflt_type (9.7.1.2.13)	Magnetic energy [ $\text{J}/\text{m}^3$ ]; Time-dependent; Vector (ndtime).
en_el_th	vecflt_type (9.7.1.2.13)	electron thermal energy or free energy [ $\text{J}/\text{m}^3$ ]; Time-dependent.
en_ion_th	matflt_type (9.7.1.2.10)	Ion thermal energy or free energy [ $\text{J}/\text{m}^3$ ]; Time-dependent; Matrix (ndtime, nion).
en_el_par	vecflt_type (9.7.1.2.13)	Electron parallel energy [ $\text{J}/\text{m}^3$ ]; Time-dependent; Vector (ndtime).
en_ion_par	matflt_type (9.7.1.2.10)	Ion parallel energy [ $\text{J}/\text{m}^3$ ]; Time-dependent; Matrix (ndtime,nion).
en_tot	vecflt_type (9.7.1.2.13)	Total energy or free energy [ $\text{J}/\text{m}^3$ ]; Time-dependent; Vector (ndtime).
fl_el	vecflt_type (9.7.1.2.13)	Electron flux [ $\text{m}^{-2}\text{s}^{-1}$ ]; Time-dependent; Vector (ndtime).
fl_heatel	vecflt_type (9.7.1.2.13)	Conductive electron heat flux [ $\text{W}\cdot\text{m}^{-2}$ ]; Time-dependent; Vector (ndtime).
fl_ion	matflt_type (9.7.1.2.10)	Ion flux [ $\text{m}^{-2}\text{s}^{-1}$ ]; Time-dependent; Matrix (ndtime, nion).
fl_heation	matflt_type (9.7.1.2.10)	Conductive ion heat flux [ $\text{W}\cdot\text{m}^{-2}$ ]; Time-dependent; Matrix (ndtime, nion).
fl_magel	vecflt_type (9.7.1.2.13)	Electron flux [ $\text{m}^{-2}\text{s}^{-1}$ ]; Time-dependent; Vector (ndtime).
fl_magheatel	vecflt_type (9.7.1.2.13)	Conductive electron heat flux [ $\text{W}\cdot\text{m}^{-2}$ ]; Time-dependent; Vector (ndtime).
fl_magion	matflt_type (9.7.1.2.10)	Ion flux [ $\text{m}^{-2}\text{s}^{-1}$ ]; Time-dependent; Matrix (ndtime, nion).
flmagheation	matflt_type (9.7.1.2.10)	Conductive ion heat flux [ $\text{W}\cdot\text{m}^{-2}$ ]; Time-dependent; Matrix (ndtime, nion).

Type of: turbulence:var0d (2599)

### 9.7.1.3.475 turbvar1d

Dependent variable zonal average radial profile.

member	type	description
rho_tor_norm	vecflt_type (9.7.1.2.13)	Normalised toroidal flux coordinate. Vector(nrho1d)
phi	vecflt_type (9.7.1.2.13)	Electrostatic potential [V]; Time-dependent; Vector (nrho1d).
er	vecflt_type (9.7.1.2.13)	Radial electric field [V/m]; Time-dependent; Vector (nrho1d).
vor	vecflt_type (9.7.1.2.13)	Vorticity [ $\text{s}^{-1}$ ]; Time-dependent; Vector (nrho1d).
apl	vecflt_type (9.7.1.2.13)	Parallel magnetic potential divided by B [m]; Time-dependent; Vector (nrho1d).
jpl	vecflt_type (9.7.1.2.13)	Parallel current divided by B [ $\text{A}/\text{m}^2$ per T]; Time-dependent; Vector (nrho1d).
ne	vecflt_type (9.7.1.2.13)	Electron density [ $\text{m}^{-3}$ ]; Time-dependent; Vector (nrho1d).
te	vecflt_type (9.7.1.2.13)	Electron temperature [eV]; Time-dependent; Vector (nrho1d).
ni	matflt_type (9.7.1.2.10)	Ion density [ $\text{m}^{-3}$ ]; Time-dependent; Matrix (nrho1d,nion).
ti	matflt_type (9.7.1.2.10)	Ion temperature [eV]; Time-dependent; Matrix (nrho1d,nion).
ui	matflt_type (9.7.1.2.10)	Ion parallel velocity divided by B [ $\text{m}/\text{s}$ per T]; Time-dependent; Matrix (nrho1d,nion).

Type of: turbulence:var1d (2599)

### 9.7.1.3.476 turbvar2d

Dependent variable axisymmetric component.

member	type	description
rho_tor_norm	vecflt.type (9.7.1.2.13)	Normalised toroidal flux coordinate. Vector(nrho2d)
theta	vecflt.type (9.7.1.2.13)	Straight field line poloidal angle [rad]. Vector(ntheta2d)
phi	matflt.type (9.7.1.2.10)	Electrostatic potential [V]; Time-dependent; Matrix (nrho2d,ntheta2d).
apl	matflt.type (9.7.1.2.10)	Parallel magnetic potential divided by B [m]; Time-dependent; Matrix(nrho2d,ntheta2d).
jpl	matflt.type (9.7.1.2.10)	Parallel current divided by B [A/m <sup>2</sup> per T]; Time-dependent; Matrix (nrho2d,ntheta2d).
vor	matflt.type (9.7.1.2.10)	Vorticity [s <sup>-1</sup> ]; Time-dependent; Matrix(nrho2d,ntheta2d).
ne	matflt.type (9.7.1.2.10)	Electron density [m <sup>-3</sup> ]; Time-dependent; Matrix (nrho2d,ntheta2d).
te	matflt.type (9.7.1.2.10)	Electron temperature [eV]; Time-dependent; Matrix (nrho2d,ntheta2d).
ni	array3dfilt.type (9.7.1.2.2)	Ion density [m <sup>-3</sup> ]; Time-dependent; Array3D (nrho2d,ntheta2d,nion).
ti	array3dfilt.type (9.7.1.2.2)	Ion temperature [eV]; Time-dependent; Array3D (nrho2d,ntheta2d,nion).
ui	array3dfilt.type (9.7.1.2.2)	Ion parallel velocity divided by B [m/s per T]; Time-dependent; Array3D(nrho2d,ntheta2d,nion).

Type of: turbulence:var2d (2599)

### 9.7.1.3.477 turbvar3d

Dependent variable morphology (on the internal grid code coord\_sys/turbgrid).

member	type	description
phi	array3dfilt.type (9.7.1.2.2)	Electrostatic potential [V]; Time-dependent; Array3D(ndim1,ndim2,ndim3).
vor	array3dfilt.type (9.7.1.2.2)	Vorticity [s <sup>-1</sup> ]; Time-dependent; Array3D(ndim1,ndim2,ndim3).
jpl	array3dfilt.type (9.7.1.2.2)	Parallel current [A/m <sup>2</sup> ]; Time-dependent; Array3D(ndim1,ndim2,ndim3).
ne	array3dfilt.type (9.7.1.2.2)	Electron density [m <sup>-3</sup> ]; Time-dependent; Array3D(ndim1,ndim2,ndim3).

Type of: turbulence:var3d (2599)

### 9.7.1.3.478 turbvar4d

Gyrokinetic distribution function, axisymmetric component. Grid is defined in coord\_sys/turbgrid.

member	type	description
fe	array4dfilt.type (9.7.1.2.4)	Electron distribution function times V-space volume element, axisymmetric component [m <sup>-3</sup> ]; Time-dependent; Array4D(ndim1,ndim2,ndim3,ndim.v1).
fi	array5dfilt.type (9.7.1.2.5)	Ion distribution function times V-space volume element, axisymmetric component [m <sup>-3</sup> ]; Time-dependent; Array5D(ndim1,ndim2,ndim3,ndim.v1,nion).

Type of: turbulence:var4d (2599)

### 9.7.1.3.479 turbvar5d

Gyrokinetic distribution function. Grid is defined in coord\_sys/turbgrid.

member	type	description
fe	array5dfilt.type (9.7.1.2.5)	Electron distribution function times V-space volume element [m <sup>-3</sup> ]; Time-dependent; Array5D(ndim1,ndim2,ndim3,ndim.v1,ndim.v2).
fi	array6dfilt.type (9.7.1.2.6)	Ion distribution function times V-space volume element [m <sup>-3</sup> ]; Time-dependent; Array6D(ndim1,ndim2,ndim3,ndim.v1,ndim.v2,nion).

Type of: turbulence:var5d (2599)

### 9.7.1.3.480 version\_ind

Array of available releases/versions of the AMNS data; each element contains information about the AMNS data that is included in the release. This part of the CPO is filled and stored only into shot/run=0/1, playing the role of a catalogue.



member	type	description
description	vecstring_type (9.7.1.2.15)	Description of each version.
releasedate	string (9.7.1.1.3)	Release date
data_release(:)	data_release (9.7.1.3.133)	For this release, an array over each data item (i.e. shot/run pair containing the actual data) included in this release

Type of: amns:version\_ind (2553)

### 9.7.1.3.481 wall2d

A 2D wall type; Structure array. Replicate this element for each type of possible physics configurations necessary (gas tight vs wall with ports and holes)

member	type	description
wall_id	identifier (9.7.1.3.235)	Use this identifier to tag the type of 2d wall you are using. Use 0 for equilibrium codes (single closed limiter and vessel); 1 for gas-tight walls (disjoint PFCs with inner vessel as last limiter_unit; no vessel structure); 2 for free boundary codes (disjoint PFCs and vessel)
limiter	wall_limiter (9.7.1.3.486)	Description of the immobile limiting surface(s) or plasma facing components for defining the Last Closed Flux Surface. Two representations are admitted : single contour or disjoint PFC. The limiter_id identifies the type of limiter set and code-specific representations derived from the official ones are also allowed if documented. Array of structures (nlimiter_type). Time-dependent
vessel	wall_vessel (9.7.1.3.491)	Mechanical structure of the vacuum vessel. Vessel assumed as set of nested layers with given physics properties; Two representations are admitted for each vessel unit : annular (two contours) or blocks. The vessel_id identifies the type of vessel_unit set one is using and code-specific representations derived from the official ones are also allowed if documented. Array of structures (nvessel_type)
plasma(:)	plasmaComplexType (9.7.1.3.331)	Description of incoming plasma for every wall component. Array of structures (number of wall components). The geometry of the wall component with index i is given by the limiter unit with index i in wall/wall2d/limiter/limiter_unit. Time-dependent
wall_state(:)	wall_unitsComplexType (9.7.1.3.489)	Dynamic wall state of every wall component. Array of structures (number of wall components). The geometry of the wall component with index i is given by the limiter unit with index i in wall/wall2d/limiter/limiter_unit. Time-dependent

Type of: wall:wall2d (2600)

### 9.7.1.3.482 wall2d\_mhd

Simplified wall that encloses necessary information for RWM codes.

member	type	description
res_wall(:)	mhd_res_wall2d (9.7.1.3.266)	Resistive Wall(s).
ideal_wall	mhd_ideal_wall2d (9.7.1.3.263)	Ideal wall

Type of: wall:wall2d\_mhd (2600)

### 9.7.1.3.483 wall3d

3D wall descriptions; Array of structures (number of wall descriptions). Replicate this element for each type of possible physics or engineering configurations necessary (gas tight vs wall with ports and holes, coarse vs fine representation, ...). Time-dependent

member	type	description
wall_id	identifier (9.7.1.3.235)	Identify the type of wall - 0 for gas tight and 1 for a wall with holes/open ports
grid	complexgrid (9.7.1.3.82)	Grid description
plasma(:)	plasmaComplexType (9.7.1.3.331)	Description of incoming plasma for every wall component. Array of structures (number of wall components). The geometry of the wall component with index i is given by the corresponding subgrid with index i in wall/wall3d/grid. Time-dependent
wall_state(:)	wall_unitsComplexType (9.7.1.3.489)	Dynamic wall state of every wall component. Array of structures (number of wall components). The geometry of the wall component with index i is given by the corresponding subgrid with index i in wall/wall3d/grid. Time-dependent
basis_index	integer (9.7.1.1.2)	Index of basis vectors in wall/wall3d/grid/basis used to define vector quantities e.g. in plasma.

Type of: wall:wall3d (2600)

### 9.7.1.3.484 wall\_blocks

Vector of vacuum vessel units. Replicate this vessel\_unit element ncomponents times. Each unit contains a mechanical structure of the vessel with distinct physics properties. Array of structures (ncomponents)

member	type	description
blocks_unit(:)	wall_blocks_unit (9.7.1.3.485)	Vector of blocks that build of the vessel layer. Replicate this element nblocks times. Each unit contains a building block of the vessel and can have dedicated number of points. Array of structures (nblocks)

Type of: wall\_vessel\_unit:blocks (3043)

### 9.7.1.3.485 wall\_blocks\_unit

Vector of blocks that build of the vessel layer. Replicate this element nblocks times. Each unit contains a building block of the vessel and can have dedicated number of points. Array of structures (nblocks)

member	type	description
name	string (9.7.1.1.3)	Name or description of the blocks_unit
position	rz1D (9.7.1.3.359)	Position (R,Z coordinates) of a vessel segment. No need to repeat first point for closed contours [m]; Vector(npoints)
eta	float (9.7.1.1.1)	Resistivity of the vessel segment [ohm.m]; Scalar
permeability	float (9.7.1.1.1)	Vessel relative permeability; Scalar
j_phi	float (9.7.1.1.1)	induced currents inside the vessel; time dependent; [A]
resistance	float (9.7.1.1.1)	resistance of block; [Ohm]

Type of: wall\_blocks:blocks\_unit (3034)

### 9.7.1.3.486 wall\_limiter

Description of the immobile limiting surface(s) or plasma facing components for defining the Last Closed Flux Surface. Two representations are admitted : single contour or disjoint PFC. The limiter\_id identifies the type of limiter set and code-specific representations derived from the official ones are also allowed if documented. Array of structures (nlimiter\_type)

member	type	description
limiter_id	identifier (9.7.1.3.235)	Use this identifier to tag the type of limiter you are using. Use flag=0 for the official single contour limiter and 1 for the official disjoint PFC structure like first wall. Additional representations needed on a code-by-code basis follow same incremental pair tagging starting on flag=2
limiter_unit(:)	limiter_unit (9.7.1.3.252)	Array of ncomponents limiting surfaces making up the limiter type (single contour or disjoint PFC). Replicate this limiter_unit element ncomponents times. Each unit contains a plasma facing component that can have dedicated number of points. Array of structures (ncomponents). Time-dependent

Type of: wall2d:limiter (3031)

### 9.7.1.3.487 wall\_types

Reference wall type

member	type	description
label	string (9.7.1.1.3)	Label for this reference wall type
layers(:)	wall_types.layers (9.7.1.3.488)	Engineering layers composing the wall element; array of structures (number of engineering layers). First layer is facing the plasma, increasing index means moving away from the plasma facing surface

Type of: wall:wall\_types (2600)

### 9.7.1.3.488 wall\_types.layers

Engineering layers composing the wall element; array of structures (number of engineering layers). First layer is facing the plasma, increasing index means moving away from the plasma facing surface

member	type	description
thickness	float (9.7.1.1.1)	Thickness of layer [m]

member	type	description
chem_comp	vecflt.type (9.7.1.2.13)	Chemical composition of the layer in terms of the chemical compounds defined in wall/design_comp/compounds. Vector of fractional concentrations.

Type of: wall\_types:layers (3037)

### 9.7.1.3.489 wall\_unitsComplexType

Data for individual wall elements; Time-dependent

member	type	description
wall_type	integer (9.7.1.1.2)	Definition of reference wall composition for every subgrid of the wall discretization. Vector of integers (number of subgrids). The indices point to wall/wall_types.
n_depo_layer	integer (9.7.1.1.2)	Number of deposited layers (in addition to the engineering layers)
layers(:)	wall_unitsComplexType.layers (9.7.1.3.490)	Data on wall element layers; Array of structures (number of engineering layers + number of deposited layers); Layers can possibly be void (e.g. completely eroded), which is indicated by zero thickness. Time-dependent
eta	complexgrid_scalar (9.7.1.3.87)	Resitivity of wall element described by grid geometry [Ohm.m]
permeability	complexgrid_scalar (9.7.1.3.87)	Relative permeability of wall element described by grid geometry [-]
j	complexgrid_vector (9.7.1.3.93)	Current density vector in the element specified by the grid representation. [A/m <sup>2</sup> ]

Type of: wall2d:wall\_state (3031) | wall3d:wall\_state (3033)

### 9.7.1.3.490 wall\_unitsComplexType\_layers

Data on wall element layers; Array of structures (number of engineering layers + number of deposited layers); Layers can possibly be void (e.g. completely eroded), which is indicated by zero thickness. Time-dependent

member	type	description
elements	vecint.type (9.7.1.2.14)	List of elements present in the solid phase in this layer. Vector (number of elements). Holds indices pointing to wall/elements
gases	vecint.type (9.7.1.2.14)	List of gases present in this layer. Vector (number of gases). Holds indices pointing to wall/elements
compounds	vecint.type (9.7.1.2.14)	List of compounds present in the solid phase in this layer. Vector (number of compounds). Holds indices pointing to wall/compounds
density	matflt.type (9.7.1.2.10)	Discretized density distribution in the layer of the discrete wall elements in the subgrid [kg/m <sup>3</sup> ]; Time-dependent; Float matrix (number of vertical cells in layer, number of discretization elements in the subgrid)
dx	matflt.type (9.7.1.2.10)	Size of the vertical cells in the layer of the discrete wall elements in the subgrid [kg/m <sup>3</sup> ]; Time-dependent; Float matrix (number of vertical cells in layer, number of discretization elements in the subgrid)
thickness	vecflt.type (9.7.1.2.13)	Total size of the layer [m] (i.e. sum of dx over the number of vertical cells in the layer); Time-dependent; Vector (number of discretization elements in the subgrid)
roughness	array3dfilt.type (9.7.1.2.2)	Interface roughness description between the discrete elements and their top neighbour (i.e. towards the plasma); Time-dependent; Float 3d array (number of vertical cells in layer, number of discretization elements in the subgrid, index of roughness parameter); Roughness parameter 1: RMS height [m], parameter 2: wavelength along projection of B on the surface [m], parameter 3: wavelength perpendicular to projection of B on the surface [m]. If only two parameters are given the parameters are assumed to be isotropic
porosity	array3dfilt.type (9.7.1.2.2)	Discrete description of porosity of the layer. Time-dependent; Float 3d array (number of vertical cells in layer, number of discretization elements in the subgrid, index of porosity parameter); Porosity parameter 1: Volume fraction occupied by the pores [-], parameter 2: average size of the pores [m]
dpa	matflt.type (9.7.1.2.10)	Discretized number of displacements per atom in the layer of the discrete wall elements in the subgrid [-]; Time-dependent; Float matrix (number of vertical cells in layer, number of discretization elements in the subgrid)
temperature	matflt.type (9.7.1.2.10)	Discretized temperature distribution in the layer of the discrete wall elements in the subgrid [eV]; Time-dependent; Float matrix (number of vertical cells in layer, number of discretization elements in the subgrid)
element_frac	array3dfilt.type (9.7.1.2.2)	Fractional abundance of elements in the layer of the discrete wall elements in the subgrid [-]; Time-dependent; Float matrix (number of chemical elements as given in (local) elements, number of vertical cells in layer, number of discretization elements in the subgrid)
chem_comp	array3dfilt.type (9.7.1.2.2)	Fractional abundance of chemical compounds in the layer of the discrete wall elements in the subgrid [-]; Time-dependent; Float matrix (number of chemical compounds as given in (local) compounds, number of vertical cells in layer, number of discretization elements in the subgrid)
bulk_D	array4dfilt.type (9.7.1.2.4)	Diffusivity of gas species in bulks of different compounds [m <sup>2</sup> /s]; Time-dependent; 4d float array. Dimensions: 1. index of compound (indexing as in (local) compounds), 2. index of gas element (indexing as in (local) gases), 3. cell index of 1d layer height discretization, 4. number of discretization elements in the subgrid

member	type	description
surface.D	array4dflt.type (9.7.1.2.4)	Diffusivity of hydrogen species of surface of different compounds [ $m^2/s$ ]; Time-dependent; Dimensions: see bulk.D
bulk.solute	array4dflt.type (9.7.1.2.4)	Bulk mobile (solute) concentration [ $atoms/m^3$ ]; Time-dependent; Dimensions: see bulk.D
surf.solute	array4dflt.type (9.7.1.2.4)	Surface mobile (solute) concentration [ $atoms/m^2$ ]; Time-dependent; Dimensions: see bulk.D
pore.content	array3dflt.type (9.7.1.2.2)	Amount of gas species trapped in pores per cubic meter [ $1/m^3$ ]; Time-dependent; 3d float array. Dimensions: 1. index of gas element (indexing as in (local) gases), 2. cell index of 1d layer height discretization, 3. number of discretization element in the subgrid
trap_type(:)	trap_type (9.7.1.3.465)	Definition of trap types. Array of structures (number of trap types)

Type of: wall\_unitsComplexType:layers (3039)

#### 9.7.1.3.491 wall\_vessel

Mechanical structure of the vacuum vessel. Vessel assumed as set of nested layers with given physics properties; Two representations are admitted for each vessel unit : annular (two contours) or blocks. The vessel\_id identifies the type of vessel\_unit set one is using and code-specific representations derived from the official ones are also allowed if documented. Array of structures (nvessel\_type)

member	type	description
vessel_id	identifier (9.7.1.3.235)	Use this identifier to tag the type of vessel you are using. Use flag=0 for the official single/multiple annular vessel and 1 for the official block element representation for each vessel unit. Additional representations needed on a code-by-code basis follow same incremental pair tagging starting on flag=2
vessel_unit(:)	wall_vessel_unit (9.7.1.3.493)	Array of vacuum vessel units. Replicate this vessel_unit element ncomponents times. Each unit contains a mechanical structure of the vessel with distinct physics properties. Array of structures (ncomponents)

Type of: wall2d:vessel (3031)

#### 9.7.1.3.492 wall\_vessel\_annular

Vector of vacuum vessel units. Replicate this vessel\_unit element ncomponents times. Each unit contains a mechanical structure of the vessel with distinct physics properties. Array of structures (ncomponents)

member	type	description
name	string (9.7.1.1.3)	Name or description of the vessel_unit
inside	rz1D (9.7.1.3.359)	Inner Vessel wall outline (list of R,Z co-ordinates) [m]; Vector (npoints_inner)
outside	rz1D (9.7.1.3.359)	Outer Vessel wall outline (list of R,Z co-ordinates) [m]; Vector (npoints_outer)
eta	float (9.7.1.1.1)	Vessel resistivity [ohm.m]; Scalar
permeability	float (9.7.1.1.1)	Vessel relative permeability; Scalar

Type of: wall\_vessel\_unit:annular (3043)

#### 9.7.1.3.493 wall\_vessel\_unit

Vector of vacuum vessel units. Replicate this vessel\_unit element ncomponents times. Each unit contains a mechanical structure of the vessel with distinct physics properties. Array of structures (ncomponents)

member	type	description
annular	wall_vessel_annular (9.7.1.3.492)	Annular representation of a vessel layer by two free-hand contours.
blocks	wall_blocks (9.7.1.3.484)	Block element representation of vessel units. Each vessel unit is decomposed in elementary small units (blocks) characterized by a position, resistivity and relative permeability.
radial.build	wall_wall2d_vessel_radial.build (9.7.1.3.496)	Simple description of this vessel unit for the radial.build in system codes

Type of: wall\_vessel:vessel\_unit (3041)

#### 9.7.1.3.494 wall\_wall0d

Simple 0D description of plasma-wall interaction

member	type	description
pumping_speed	vecflt_type (9.7.1.2.13)	pumping speed; Time-dependent. vector(nneut); [particles/s]
gas_puff	vecflt_type (9.7.1.2.13)	gas puff; vector(nneut); Time-dependent. [particles/s]
wall_inventory	vecflt_type (9.7.1.2.13)	wall inventory; vector(nneut); Time-dependent. [particles]
recycling_coefficient	vecflt_type (9.7.1.2.13)	Recycling coefficient. Vector(nneut) Time-dependent.
wall_temperature	float (9.7.1.1.1)	Wall temperature [K]. Time-dependent. Scalar
power_from_plasma	float (9.7.1.1.1)	Power flowing from the plasma to the wall [W]. Time-dependent. Scalar
power_to_cooling	float (9.7.1.1.1)	Power to cooling systems [W]. Time-dependent. Scalar
plasma	wall_wall0d_plasma (9.7.1.3.495)	NO DOCS

Type of: wall:wall0d (2600)

### 9.7.1.3.495 wall\_wall0d\_plasma

member	type	description
species_index	matint_type (9.7.1.2.11)	Index of species into wall/compositions; matrix(nspecies,3); 1st element indicates {1: main ions; 2:impurities; 3:neutrals; 4:edge species}; 2nd element indicates index into that array; 3rd index indicates charge state if 1st element points to impurities or neutral type if 1st element points to neutrals;
flux	vecflt_type (9.7.1.2.13)	flux of species indicated by species_index; array of nspecies; positive implies incoming onto wall; negative implies sent back into plasma; time-dependent; [particles/s]
energy	vecflt_type (9.7.1.2.13)	energy flux of species indicated by species_index; array of nspecies; positive implies incoming onto wall; negative implies sent back into plasma; time-dependent; [W]

Type of: wall\_wall0d:plasma (3044)

### 9.7.1.3.496 wall\_wall2d\_vessel\_radial\_build

Simple description of this vessel unit for the radial.build in system codes

member	type	description
r1_inb	float (9.7.1.1.1)	Inner radius (nearest to the plasma), in the global tokamak coordinate system of the vv measured at the equatorial plane (inboard side) [m]; Scalar
r2_inb	float (9.7.1.1.1)	Outer radius (farest from the plasma), in the global tokamak coordinate system of the vv measured at the equatorial plane (inboard side) [m]; Scalar
r1_outb	float (9.7.1.1.1)	Inner radius (nearest to the plasma), in the global tokamak coordinate system of the vv measured at the equatorial plane (outboard side) [m]; Scalar
r2_outb	float (9.7.1.1.1)	Outer radius (farest from the plasma), in the global tokamak coordinate system of the vv measured at the equatorial plane (outboard side) [m]; Scalar
raddim	float (9.7.1.1.1)	Radial thickness of the vacuum vessel; Scalar
nmat	float (9.7.1.1.1)	Number of materials; Scalar
composition	vecflt_type (9.7.1.2.13)	Inboard shield radial build giving the percentage of each material respectively (Meaning of the material index 1: Eurofer, 2: Pb-15.7Li, 3: He, 4: Water, 5: Tungsten Carbide, 6: Boron, 7: Tungsten, 8: Stainless Steel 316) in %vol; Vector
pow_dens_inb	float (9.7.1.1.1)	Peak energy deposition in vaccum vessel inboard [W.m <sup>-3</sup> ]; Scalar
pow_dens_outb	float (9.7.1.1.1)	Peak energy deposition in vaccum vessel outboard [W.m <sup>-3</sup> ]; Scalar
fn_flux_inb	float (9.7.1.1.1)	Fast neutron flux in vaccum vessel inboard [m <sup>2</sup> .s <sup>-1</sup> ]; Scalar
fn_flux_outb	float (9.7.1.1.1)	Fast neutron flux in vaccum vessel outboard [m <sup>2</sup> .s <sup>-1</sup> ]; Scalar

Type of: wall\_vessel\_unit:radial\_build (3043)

### 9.7.1.3.497 waveguides

Waveguides description

member	type	description
nwm_theta	integer (9.7.1.1.2)	Number of waveguides per module in the poloidal direction.
nwm_phi	integer (9.7.1.1.2)	Number of waveguides per module in the toroidal direction.
mask	vecint.type (9.7.1.2.14)	Mask of passive and active waveguides for an internal module; Vector of integers (nwm_phi)
npwbm_phi	integer (9.7.1.1.2)	Number of passive waveguide between modules in the toroidal direction
npwe_phi	integer (9.7.1.1.2)	Number of passive waveguides on each antenna edge in the toroidal direction
sw_theta	float (9.7.1.1.1)	Spacing between poloidally neighboring waveguides [m]
hw_theta	float (9.7.1.1.1)	Height of waveguides in the poloidal direction [m]
bwa	float (9.7.1.1.1)	Width of active waveguides [m]; Float
biwp	float (9.7.1.1.1)	Width of internal passive waveguides [m]; Float
bewp	float (9.7.1.1.1)	Width of edge passive waveguides [m]; Float
e_phi	vecflt.type (9.7.1.2.13)	Thickness between waveguides in the toroidal direction [m], Vector (nthick_phi). Reminder : nthick_phi = nmp_phi*nwm_phi + (nmp_phi - 1)*npwbm_phi + 2*npwe_phi
scl	vecflt.type (9.7.1.2.13)	Short circuit length for passive waveguides [m], Vector (nshort_phi). Reminder : nshort_phi = nmp_phi* npwm_phi + (nmp_phi - 1)*npwbm_phi + 2*npwe_phi

Type of: modules:waveguides (2825)

### 9.7.1.3.498 waves\_global\_param

Global wave deposition parameters

member	type	description
name	string (9.7.1.1.3)	Antenna name, String
type	string (9.7.1.1.3)	Wave type (LH, EC, IC, ...), String
f_assumption	vecint.type (9.7.1.2.14)	Assumption on the functions distribution used by the wave solver to calculate the power deposition : 0 = Maxwellian (linear absorption); 1 = quasi-linear (F given by a distribution function CPO). Integer vector (nion+1). The first value corresponds to the electrons, then to the other ion species. Time-dependent.
code_type	integer (9.7.1.1.2)	Type of wave deposition code for a given frequency: 1=beam/ray tracing; 2=full wave; Integer
frequency	float (9.7.1.1.1)	Wave frequency [Hz]; Time-dependent, floating
ntor	vecint.type (9.7.1.2.14)	Toroidal mode numbers; Time-dependent; Vector (ntor)
power_tot	float (9.7.1.1.1)	Total absorbed wave power [W]; Time-dependent
p_frac_ntor	vecflt.type (9.7.1.2.13)	Fraction of wave power per toroidal mode number; Time-dependent; Vector (ntor)
pow_e	float (9.7.1.1.1)	Wave power absorbed by the thermal electrons [W]; Time-dependent; Float
pow_i	vecflt.type (9.7.1.2.13)	Wave power absorbed by the thermal ion species [W]; Time-dependent; Vector (nion)
pow_z	matflt.type (9.7.1.2.10)	Wave power absorbed by the thermal impurity species [W]; Time-dependent; Vector (nimpur, nzimp)
pow_fe	float (9.7.1.1.1)	Wave power absorbed by the fast electrons [W]; Time-dependent; Float
pow_fi	vecflt.type (9.7.1.2.13)	Wave power absorbed by the fast ion species [W]; Time-dependent; Vector (nion)
pow_fz	matflt.type (9.7.1.2.10)	Wave power absorbed by the fast impurity species [W]; Time-dependent; Vector (nimpur, nzimp)
pow_ntor_e	vecflt.type (9.7.1.2.13)	Wave power absorbed by the thermal electrons for each toroidal mode [W]; Time-dependent; Vector (ntor)
pow_ntor_i	matflt.type (9.7.1.2.10)	Wave power absorbed by an the thermal ion species for each toroidal mode [W]; Time-dependent; Matrix (ntor, nion)
pow_ntor_z	array3dflt.type (9.7.1.2.2)	Wave power absorbed by an the thermal impurity species for each toroidal mode [W]; Time-dependent; Matrix (ntor, nimpur, nzimp)
pow_ntor_fe	vecflt.type (9.7.1.2.13)	Wave power absorbed by the fast electrons for each toroidal mode [W]; Time-dependent; Vector (ntor)
pow_ntor_fi	matflt.type (9.7.1.2.10)	Wave power absorbed by an the fast ion species for each toroidal mode [W]; Time-dependent; Matrix (ntor, nion)
pow_ntor_fz	array3dflt.type (9.7.1.2.2)	Wave power absorbed by an the fast impurity species for each toroidal mode [W]; Time-dependent; Matrix (ntor, nimpur, nzimp)
cur_tor	float (9.7.1.1.1)	Wave driven toroidal current from a stand alone calculation (not consistent with other sources) [A]; Time-dependent, Float
cur_tor_ntor	vecflt.type (9.7.1.2.13)	Wave driven toroidal current for each toroidal mode number from a stand alone calculation (not consistent with other sources) [A]; Time-dependent; Vector (ntor)
mag_axis	rz0D (9.7.1.3.358)	Position of the magnetic axis. Time-dependent; Scalar
toroid_field	b0r0 (9.7.1.3.59)	Characteristics of the vacuum toroidal field (used to define the rho_tor coordinate and the normalisation of parallel current densities).

Type of: coherentwave:global\_param (2629)

### 9.7.1.3.499 waves\_grid\_1d

Grid points for profiles

member	type	description
rho_tor	vecflt_type (9.7.1.2.13)	Toroidal flux coordinate [m]. Defined as $\sqrt{(\phi - \phi_{axis})/\pi/B_0}$ , where $B_0 = \dots/global\_param/toroid\_field/b_0$ , $\phi$ is the toroidal flux and $\phi_{axis}$ is the toroidal flux at the magnetic axis. Time-dependent; Vector (npsi)
rho_tor_norm	vecflt_type (9.7.1.2.13)	The toroidal flux coordinate normalised to be zero at the axis and unity at the last closed flux surface, or last available fluxsurface if the last closed flux surface is not defined. Time-dependent; Vector (npsi)
psi	vecflt_type (9.7.1.2.13)	Poloidal flux function [Wb], evaluated without $1/2\pi$ , such that $B_p =  \text{grad } \psi  / R/2/\pi$ . Time-dependent; Vector (npsi)
volume	vecflt_type (9.7.1.2.13)	Volume enclosed by the flux surface [ $m^3$ ]. Time-dependent; Vector (npsi)
area	vecflt_type (9.7.1.2.13)	Cross-sectional area of the flux surface [ $m^2$ ]. Time-dependent; Vector (npsi)

Type of: coherentwave:grid\_1d (2629)

### 9.7.1.3.500 waves\_grid\_2d

Grid points for 2D profiles

member	type	description
grid_type	integer (9.7.1.1.2)	Grid type. 1: rectangular grid in (R,Z). 2: rectangular grid in (psi, theta). 3: unstructured grid. Integer.
rho_tor_norm	matflt_type (9.7.1.2.10)	The toroidal flux coordinate normalised to be zero at the axis and unity at the last closed flux surface (or last available fluxsurface from a fix boundary equilibrium code). Time-dependent; Matrix (ndim1, ndim2)
rho_tor	matflt_type (9.7.1.2.10)	Toroidal flux coordinate [m]. Defined as $\sqrt{(\phi - \phi_{axis})/\pi/B_0}$ , where $B_0 = \dots/global\_param/toroid\_field/b_0$ , $\phi$ is the toroidal flux and $\phi_{axis}$ is the toroidal flux at the magnetic axis. Time-dependent; Matrix (ndim1, ndim2)
psi	matflt_type (9.7.1.2.10)	Grid points in poloidal flux function [Wb], without $1/2\pi$ and such that $B_p =  \text{grad } \psi  / R/2/\pi$ . Time-dependent; Matrix (ndim1, ndim2)
theta	matflt_type (9.7.1.2.10)	Poloidal angle at the grid points (see theta.info for detailed definition); Time-dependent; Matrix (ndim1, ndim2)
r	matflt_type (9.7.1.2.10)	R (major radius) of grid points; Time-dependent; Matrix(ndim1, ndim2)
z	matflt_type (9.7.1.2.10)	Z (altitude) of grid points; Time-dependent; Matrix (ndim1, ndim2)
theta_info	theta_info (9.7.1.3.457)	Information on the poloidal angle theta.

Type of: coherentwave:grid\_2d (2629)

### 9.7.1.3.501 waves\_profiles\_1d

waves 1D radial profiles

member	type	description
powd_tot	vecflt_type (9.7.1.2.13)	Total flux surface averaged wave power density [ $W/m^3$ ]; Time-dependent; Vector (npsi)
powd_e	vecflt_type (9.7.1.2.13)	Flux surface averaged absorbed wave power density on the thermal electrons [ $W/m^3$ ]; Time-dependent; Vector (npsi)
powd_i	matflt_type (9.7.1.2.10)	Flux surface averaged absorbed wave power density on the thermal ion species [ $W/m^3$ ]; Time-dependent; Matrix (npsi, nion)
powd_z	array3dflt_type (9.7.1.2.2)	Flux surface averaged absorbed wave power density on the thermal impurities species [ $W/m^3$ ]; Time-dependent; Matrix (npsi, nimpur, nzimp)
powd_fe	vecflt_type (9.7.1.2.13)	Flux surface averaged absorbed wave power density on the fast electrons [ $W/m^3$ ]; Time-dependent; Vector (npsi)
powd_fi	matflt_type (9.7.1.2.10)	Flux surface averaged absorbed wave power density on the fast ion species [ $W/m^3$ ]; Time-dependent; Matrix (npsi, nion)
powd_fz	array3dflt_type (9.7.1.2.2)	Flux surface averaged absorbed wave power density on the fast impurities species [ $W/m^3$ ]; Time-dependent; Matrix (npsi, nimpur, nzimp)
powd_ntor	matflt_type (9.7.1.2.10)	Flux surface averaged power density for each toroidal mode number [ $W/m^3$ ]; Time-dependent; Matrix(npsi, ntor)
powd_ntor_e	matflt_type (9.7.1.2.10)	Flux surface averaged power density absorbed for each toroidal mode number on the thermal electrons [ $W/m^3$ ]; Time-dependent; Matrix (npsi, ntor)
powd_ntor_i	array3dflt_type (9.7.1.2.2)	Flux surface averaged power density absorbed for each toroidal mode number on each thermal ions species [ $W/m^3$ ]; Time-dependent; Array3D (npsi, ntor, nion)
powd_ntor_z	array4dflt_type (9.7.1.2.4)	Flux surface averaged power density absorbed for each toroidal mode number on each thermal impurity species [ $W/m^3$ ]; Time-dependent; Array3D (npsi, ntor, nimpur, nzimp)
powd_ntor_fe	matflt_type (9.7.1.2.10)	Flux surface averaged power density absorbed for each toroidal mode number on the fast electrons [ $W/m^3$ ]; Time-dependent; Matrix (npsi, ntor)



member	type	description
powd_ntor.fi	array3dflt.type (9.7.1.2.2)	Flux surface averaged power density absorbed for each toroidal mode number on each fast ions species [W/m <sup>3</sup> ]; Time-dependent; Array3D (npsi, ntor, nion)
powd_ntor.fz	array4dflt.type (9.7.1.2.4)	Flux surface averaged power density absorbed for each toroidal mode number on each fast impurity species [W/m <sup>3</sup> ]; Time-dependent; Array3D (npsi, ntor, nimpur, nzimp)
curd_tor	vecflt.type (9.7.1.2.13)	Flux surface averaged wave driven toroidal current density = average(jphi/R) / average(1/R) [A/m <sup>2</sup> ]; Time-dependent; Vector (npsi)
curd_torntor	matflt.type (9.7.1.2.10)	Flux surface averaged wave driven toroidal current density for each toroidal mode number = average(jphi/R) / average(1/R) [A/m <sup>2</sup> ]; Time-dependent; Matrix (npsi, ntor)
pow_tot	vecflt.type (9.7.1.2.13)	Cumulative volume integral of the absorbed wave power density [W]; Time-dependent; Vector (npsi)
pow_e	vecflt.type (9.7.1.2.13)	Cumulative volume integral of the absorbed wave power on the thermal electrons [W]; Time-dependent; Vector (npsi)
pow_i	matflt.type (9.7.1.2.10)	Cumulative volume integral of the absorbed wave power on the thermal ion species [W]; Time-dependent; Matrix (npsi, nion)
pow_z	array3dflt.type (9.7.1.2.2)	Cumulative volume integral of the absorbed wave power on the thermal impurities species [W]; Time-dependent; Matrix (npsi, nimpur, nzimp)
pow_fe	vecflt.type (9.7.1.2.13)	Cumulative volume integral of the absorbed wave power on the fast electrons [W]; Time-dependent; Vector (npsi)
pow_fi	matflt.type (9.7.1.2.10)	Cumulative volume integral of the absorbed wave power on the fast ion species [W]; Time-dependent; Matrix (npsi, nion)
pow_fz	array3dflt.type (9.7.1.2.2)	Cumulative volume integral of the absorbed wave power on the fast impurities species [W]; Time-dependent; Matrix (npsi, nimpur, nzimp)
pow_ntor	matflt.type (9.7.1.2.10)	Cumulative volume integral of the absorbed wave power for each toroidal mode number [W]; Time-dependent; Matrix (npsi, ntor)
pow_ntor.e	matflt.type (9.7.1.2.10)	Cumulative volume integral of the absorbed wave power for each toroidal mode number on the thermal electrons [W]; Time-dependent; Matrix (npsi, ntor)
pow_ntor.i	array3dflt.type (9.7.1.2.2)	Cumulative volume integral of the absorbed wave power for each toroidal mode number on each thermal ions species [W]; Time-dependent; Array3D (npsi, ntor, nion)
pow_ntor.z	array3dflt.type (9.7.1.2.2)	Cumulative volume integral of the absorbed wave power for each toroidal mode number on each thermal impurity species [W]; Time-dependent; Array3D (npsi, ntor, nimpur, nzimp)
pow_ntor.fe	matflt.type (9.7.1.2.10)	Cumulative volume integral of the absorbed wave power for each toroidal mode number on the fast electrons [W]; Time-dependent; Matrix (npsi, ntor)
pow_ntor.fi	array3dflt.type (9.7.1.2.2)	Cumulative volume integral of the absorbed wave power for each toroidal mode number on each fast ions species [W]; Time-dependent; Array3D (npsi, ntor, nion)
pow_ntor.fz	array3dflt.type (9.7.1.2.2)	Cumulative volume integral of the absorbed wave power for each toroidal mode number on each fast impurity species [W]; Time-dependent; Array3D (npsi, ntor, nimpur, nzimp)
curd_par	vecflt.type (9.7.1.2.13)	Flux surface averaged wave driven parallel current density = average(j.B) / B0, where B0 = global.param/toroid.field/b0; [A/m <sup>2</sup> ]; Time-dependent; Vector (npsi)
curd_parntor	matflt.type (9.7.1.2.10)	Flux surface averaged wave driven parallel current density for each toroidal mode number = average(j.B) / B0, where B0 = global.param/toroid.field/b0; [A/m <sup>2</sup> ]; Time-dependent; Matrix (npsi, ntor)
cur_tor	vecflt.type (9.7.1.2.13)	Wave driven toroidal current inside a flux surface [A]; Time-dependent; Vector (npsi)
cur_tor.ntor	matflt.type (9.7.1.2.10)	Wave driven toroidal current inside a flux surface for each toroidal mode number [A]; Time-dependent; Matrix (npsi, ntor)
e_plus.ave	matflt.type (9.7.1.2.10)	The left hand polarised electric field component, E_plus [V/m], averaged over the flux surface, where the averaged is weighted with the power deposition, P, such that e_plus.ave = ave( E_plus P ) / ave( P ), where ave(*) is the flux surface average operator; Time-dependent; Matrix (npsi, ntor)
e_minus.ave	matflt.type (9.7.1.2.10)	The right hand polarised electric field component, E_minus [V/m], averaged over the flux surface, where the averaged is weighted with the power deposition, P, such that e_minus.ave = ave( E_minus P ) / ave( P ), where (*) is the flux surface average operator; Time-dependent; Matrix (npsi, ntor)
e_para.ave	matflt.type (9.7.1.2.10)	The parallel electric field component, E_para [V/m], averaged over the flux surface, where the averaged is weighted with the power deposition, P, such that e_para.ave = ave( E_para P ) / ave( P ), where ave(*) is the flux surface average operator; Time-dependent; Matrix (npsi, ntor)
k_perp.ave	matflt.type (9.7.1.2.10)	The perpendicular wave number, k_perp [1/m], averaged over the flux surface, where the averaged is weighted with the power deposition, P, such that k_perp.ave = ave( k_perp P ) / ( P ), where ave(*) is the flux surface average operator; Time-dependent; Matrix (npsi, ntor)

Type of: coherentwave:profiles\_1d (2629)

### 9.7.1.3.502 waves\_profiles\_2d

waves 2D profiles in poloidal cross-section

member	type	description
powd_tot	matflt.type (9.7.1.2.10)	Total wave power density; Time-dependent [W/m <sup>3</sup> ]; Matrix (ndim1, ndim2)
powd.e	matflt.type (9.7.1.2.10)	Absorbed wave power density on the thermal electrons [W/m <sup>3</sup> ]; Time-dependent; Matrix (ndim1, ndim2)
powd.i	array3dflt.type (9.7.1.2.2)	Absorbed wave power density on each thermal ion species [W/m <sup>3</sup> ]; Time-dependent; Array3D (ndim1, ndim2, nion)

member	type	description
powd.z	array4dflt.type (9.7.1.2.4)	Absorbed wave power density on each thermal impurity species [W/m <sup>3</sup> ]; Time-dependent; Array3D (ndim1, ndim2, nimpur, nzimp)
powd.fe	matflt.type (9.7.1.2.10)	Absorbed wave power density on the fast electrons [W/m <sup>3</sup> ]; Time-dependent; Matrix (ndim1, ndim2)
powd.fi	array3dflt.type (9.7.1.2.2)	Absorbed wave power density on each fast ion species [W/m <sup>3</sup> ]; Time-dependent; Array3D (ndim1, ndim2, nion)
powd.fz	array4dflt.type (9.7.1.2.4)	Absorbed wave power density on each fast impurity species [W/m <sup>3</sup> ]; Time-dependent; Array3D (ndim1, ndim2, nimpur, nzimp)
powd.ntor	array3dflt.type (9.7.1.2.2)	Absorbed power density for each toroidal mode number [W/m <sup>3</sup> ]; Time-dependent; Array 3D (ndim1, ndim2, ntor)
powd.ntor.e	array3dflt.type (9.7.1.2.2)	Absorbed power density for each toroidal mode number on the thermal electrons [W/m <sup>3</sup> ]; Time-dependent; Array 3D (ndim1, ndim2, ntor)
powd.ntor.i	array4dflt.type (9.7.1.2.4)	Absorbed power density for each toroidal mode number on each thermal ions species [W/m <sup>3</sup> ]; Time-dependent; Array4D (ndim1, ndim2, ntor, nion)
powd.ntor.z	array5dflt.type (9.7.1.2.5)	Absorbed power density for each toroidal mode number on each thermal impurity species [W/m <sup>3</sup> ]; Time-dependent; Array4D (ndim1, ndim2, ntor, nimpur, nzimp)
powd.ntor.fe	array3dflt.type (9.7.1.2.2)	Absorbed power density for each toroidal mode number on the fast electrons [W/m <sup>3</sup> ]; Time-dependent; Array 3D (ndim1, ndim2, ntor)
powd.ntor.fi	array4dflt.type (9.7.1.2.4)	Absorbed power density for each toroidal mode number on each fast ions species [W/m <sup>3</sup> ]; Time-dependent; Array4D (ndim1, ndim2, ntor, nion)
powd.ntor.fz	array5dflt.type (9.7.1.2.5)	Absorbed power density for each toroidal mode number on each fast impurity species [W/m <sup>3</sup> ]; Time-dependent; Array4D (ndim1, ndim2, ntor, nimpur, nzimp)
powd.iharm	array5dflt.type (9.7.1.2.5)	Power density absorbed by an ion species for each toroidal mode number at a given harmonic cyclotron resonance ; Time-dependent (W/m <sup>3</sup> ); Array5D (ndim1, ndim2, ntor, nion, nharm)

Type of: coherentwave:profiles\_2d (2629)

### 9.7.1.3.503 waves\_rtposition

Ray/beam position

member	type	description
r	vecflt.type (9.7.1.2.13)	Major radius location [m]; Time-dependent; Vector (npoints)
z	vecflt.type (9.7.1.2.13)	Vertical location [m]; Time-dependent; Vector (npoints)
phi	vecflt.type (9.7.1.2.13)	Toroidal angle location [rad]; Time-dependent; Vector (npoints)
psi	vecflt.type (9.7.1.2.13)	Poloidal magnetic flux coordinate [Wb], without 1/2pi and such that Bp= grad psi  /R/2/pi; Time-dependent; Vector (npoints)
theta	vecflt.type (9.7.1.2.13)	Poloidal angle location [rad]; Time-dependent; Vector (npoints). PRECISE THE DEFINITION OF THE POLOIDAL ANGLE, SEE WAVES/COHERENTWAVE(:)/GRID_2D.

Type of: beamtracing:position (2616)

### 9.7.1.3.504 waves\_rtwavevector

Ray/beam wave vector

member	type	description
kr	vecflt.type (9.7.1.2.13)	Wave vector in the major radius direction [m <sup>**</sup> -1], Vector (npoints). Time-dependent
kz	vecflt.type (9.7.1.2.13)	Wave vector in the vertical direction [m <sup>**</sup> -1], Vector (npoints). Time-dependent
kphi	vecflt.type (9.7.1.2.13)	Wave vector in the toroidal direction [m <sup>**</sup> -1], Vector (npoints). Time-dependent
npar	vecflt.type (9.7.1.2.13)	Parallel refractive index, Vector (npoints). Time-dependent
nperp	vecflt.type (9.7.1.2.13)	Perpendicular refractive index, Vector (npoints). Time-dependent
ntor	vecflt.type (9.7.1.2.13)	Toroidal wave number, Vector (npoints/1). If var_ntor=0, ntor is constant along the ray path and the last dimension is of size 1 in order to avoid useless repetition of ntor constant value. Time-dependent
var_ntor	integer (9.7.1.1.2)	Flag telling whether ntor is constant along the ray path (0) or varying (1). Integer

Type of: beamtracing:wavevector (2616)

### 9.7.1.3.505 weighted\_markers

Array of NMARK weighted markers in NDIM dimensions

member	type	description
variable_ids(:)	identifier (9.7.1.3.235)	Identifier for the variable_ids stored in the coord matrix (see coordinate_identifier_definitions in the Documentation website under Conventions/Enumerated_datatypes). Vector(NDIM)
coord	matflt.type (9.7.1.2.10)	Coordinates of the markers. The coordinates used is specified in variable_ids. Time-dependent; Float(NMARK,NDIM)
weight	vecflt.type (9.7.1.2.13)	Weight of the marker; number of real particles represented by the marker. Time-dependent; Float(NMARK)

Type of: dist\_func:markers (2696) I distsource\_source:markers (2721)

### 9.7.1.3.506 whatref

Structure defining a database entry and the CPO occurrence

member	type	description
user	string (9.7.1.1.3)	Name of the user if private data, public if public ITM database.
machine	string (9.7.1.1.3)	Name of the device
shot	integer (9.7.1.1.2)	Shot number
run	integer (9.7.1.1.2)	Run number
occurrence	integer (9.7.1.1.2)	Occurrence number of the CPO in the reference entry

Type of: datainfo:whatref (2684)

### 9.7.1.3.507 width

Angular width of each in the poloidal and toroidal direction;

member	type	description
dtheta	vecflt.type (9.7.1.2.13)	Angular poloidal width of holes; Vector (n.holes)
phi	vecflt.type (9.7.1.2.13)	Angular toroidal width of holes; Vector (n.holes)

Type of: holes:width (2784)

### 9.7.1.3.508 xpts

Position of the X-point(s)

member	type	description
position	rz1D (9.7.1.3.359)	Position of the X-point(s); Time-dependent; Vector (nmeas)
source	string (9.7.1.1.3)	Description or path to the source signal (diagnostic or genprof, from which to read all info on the signal), e.g. 'magdiag/bpol_probes/measure/value'. String
weight	vecflt.type (9.7.1.2.13)	weight given to the measurement ( $\zeta=0$ ); -1 if exact data; Time-dependent; Vector (nmeas)
sigma	vecflt.type (9.7.1.2.13)	standard deviation of the measurement; Time-dependent; Vector (nmeas)
calculated	vecflt.type (9.7.1.2.13)	Signal as recalculated by the equilibrium code; Time-dependent; Vector (nmeas)
chi2	vecflt.type (9.7.1.2.13)	chi <sup>2</sup> of (calculated-measured); Time-dependent; Vector (nmeas)

Type of: eqconstraint:xpts (2739)

### 9.7.1.3.509 xyz0D

Structure for a single (x,y,z) position (0D)

member	type	description
x	float (9.7.1.1.1)	Spatial coordinate x [m]
y	float (9.7.1.1.1)	Spatial coordinate y [m]
z	float (9.7.1.1.1)	Spatial coordinate z [m]

Type of: flat\_polygon:basis1 (2752) I flat\_polygon:basis2 (2752) I flat\_polygon:origin (2752) I rectanglexyz:point01 (2896) I rectanglexyz:point10 (2896) I rectanglexyz:point11 (2896) I trianglexyz:point1 (3016) I trianglexyz:point2

## 9.7.2 CPO Instances

Generated from the ITM data structure schemas.

### 9.7.2.1 Fortran

#### 9.7.2.1.1 amns

datainfo (2553)	amns%datainfo (datainfo) (9.7.1.3.134)
dataprovider (2684)	amns%datainfo%dataprovider (string) (9.7.1.1.3)
putdate (2684)	amns%datainfo%putdate (string) (9.7.1.1.3)
source (2684)	amns%datainfo%source (string) (9.7.1.1.3)
comment (2684)	amns%datainfo%comment (string) (9.7.1.1.3)
cocos (2684)	amns%datainfo%cocos (integer) (9.7.1.1.2)
id (2684)	amns%datainfo%id (integer) (9.7.1.1.2)
isref (2684)	amns%datainfo%isref (integer) (9.7.1.1.2)
whatref (2684)	amns%datainfo%whatref (whatref) (9.7.1.3.506)
user (3056)	amns%datainfo%whatref%user (string) (9.7.1.1.3)
machine (3056)	amns%datainfo%whatref%machine (string) (9.7.1.1.3)
shot (3056)	amns%datainfo%whatref%shot (integer) (9.7.1.1.2)
run (3056)	amns%datainfo%whatref%run (integer) (9.7.1.1.2)
occurrence (3056)	amns%datainfo%whatref%occurrence (integer) (9.7.1.1.2)
putinfo (2684)	amns%datainfo%putinfo (putinfo) (9.7.1.3.342)
putmethod (2892)	amns%datainfo%putinfo%putmethod (string) (9.7.1.1.3)
putaccess (2892)	amns%datainfo%putinfo%putaccess (string) (9.7.1.1.3)
putlocation (2892)	amns%datainfo%putinfo%putlocation (string) (9.7.1.1.3)
rights (2892)	amns%datainfo%putinfo%rights (string) (9.7.1.1.3)
version (2553)	amns%version (string) (9.7.1.1.3)
source (2553)	amns%source (string) (9.7.1.1.3)
zn (2553)	amns%zn (integer) (9.7.1.1.2)
amn (2553)	amns%amn (float) (9.7.1.1.1)
process (2553)	amns%process(:) (amns_processType) (9.7.1.3.53)
proc_label (2603)	amns%process(:)%proc_label (string) (9.7.1.1.3)
reactant (2603)	amns%process(:)%reactant(:) (reacprodType) (9.7.1.3.344)
label (2894)	amns%process(:)%reactant(:)%label (string) (9.7.1.1.3)
constituents (2894)	amns%process(:)%reactant(:)%constituents(:) (amns_constituentType) (9.7.1.3.52)
label (2602)	amns%process(:)%reactant(:)%constituents(:)%label (string) (9.7.1.1.3)
zn (2602)	amns%process(:)%reactant(:)%constituents(:)%zn (integer) (9.7.1.1.2)
mn (2602)	amns%process(:)%reactant(:)%constituents(:)%mn (integer) (9.7.1.1.2)
multiplicity (2602)	amns%process(:)%reactant(:)%constituents(:)%multiplicity (float) (9.7.1.1.1)
role (2894)	amns%process(:)%reactant(:)%role (identifier) (9.7.1.3.235)
id (2785)	amns%process(:)%reactant(:)%role%id (string) (9.7.1.1.3)
flag (2785)	amns%process(:)%reactant(:)%role%flag (integer) (9.7.1.1.2)
description (2785)	amns%process(:)%reactant(:)%role%description (string) (9.7.1.1.3)
amn (2894)	amns%process(:)%reactant(:)%amn (float) (9.7.1.1.1)
relative (2894)	amns%process(:)%reactant(:)%relative (integer) (9.7.1.1.2)
za (2894)	amns%process(:)%reactant(:)%za (float) (9.7.1.1.1)
multiplicity (2894)	amns%process(:)%reactant(:)%multiplicity (float) (9.7.1.1.1)
metastable (2894)	amns%process(:)%reactant(:)%metastable (vecint_type) (9.7.1.2.14)
metastable_label (2894)	amns%process(:)%reactant(:)%metastable_label (string) (9.7.1.1.3)
product (2603)	amns%process(:)%product(:) (reacprodType) (9.7.1.3.344)
label (2894)	amns%process(:)%product(:)%label (string) (9.7.1.1.3)
constituents (2894)	amns%process(:)%product(:)%constituents(:) (amns_constituentType) (9.7.1.3.52)
label (2602)	amns%process(:)%product(:)%constituents(:)%label (string) (9.7.1.1.3)
zn (2602)	amns%process(:)%product(:)%constituents(:)%zn (integer) (9.7.1.1.2)
mn (2602)	amns%process(:)%product(:)%constituents(:)%mn (integer) (9.7.1.1.2)
multiplicity (2602)	amns%process(:)%product(:)%constituents(:)%multiplicity (float) (9.7.1.1.1)
role (2894)	amns%process(:)%product(:)%role (identifier) (9.7.1.3.235)

id (2785)	amns%process(:)%product(:)%role%id (string) (9.7.1.1.3)
flag (2785)	amns%process(:)%product(:)%role%flag (integer) (9.7.1.1.2)
description (2785)	amns%process(:)%product(:)%role%description (string) (9.7.1.1.3)
amn (2894)	amns%process(:)%product(:)%amn (float) (9.7.1.1.1)
relative (2894)	amns%process(:)%product(:)%relative (integer) (9.7.1.1.2)
za (2894)	amns%process(:)%product(:)%za (float) (9.7.1.1.1)
multiplicity (2894)	amns%process(:)%product(:)%multiplicity (float) (9.7.1.1.1)
metastable (2894)	amns%process(:)%product(:)%metastable (vecint.type) (9.7.1.2.14)
metastable_label (2894)	amns%process(:)%product(:)%metastable_label (string) (9.7.1.1.3)
sup_string (2603)	amns%process(:)%sup_string (vecstring.type) (9.7.1.2.15)
sup_real (2603)	amns%process(:)%sup_real (vecflt.type) (9.7.1.2.13)
sup_int (2603)	amns%process(:)%sup_int (vecint.type) (9.7.1.2.14)
quality (2603)	amns%process(:)%quality (identifier) (9.7.1.3.235)
id (2785)	amns%process(:)%quality%id (string) (9.7.1.1.3)
flag (2785)	amns%process(:)%quality%flag (integer) (9.7.1.1.2)
description (2785)	amns%process(:)%quality%description (string) (9.7.1.1.3)
err_proc_label (2603)	amns%process(:)%err_proc_label (string) (9.7.1.1.3)
tables (2553)	amns%tables(:) (tables) (9.7.1.3.421)
ndim (2971)	amns%tables(:)%ndim (integer) (9.7.1.1.2)
coord_index (2971)	amns%tables(:)%coord_index (integer) (9.7.1.1.2)
result_label (2971)	amns%tables(:)%result_label (string) (9.7.1.1.3)
result_unit (2971)	amns%tables(:)%result_unit (string) (9.7.1.1.3)
result_trans (2971)	amns%tables(:)%result_trans (integer) (9.7.1.1.2)
zmin (2971)	amns%tables(:)%zmin (vecint.type) (9.7.1.2.14)
zmax (2971)	amns%tables(:)%zmax (vecint.type) (9.7.1.2.14)
state_label (2971)	amns%tables(:)%state_label (vecstring.type) (9.7.1.2.15)
table (2971)	amns%tables(:)%table(:) (table) (9.7.1.3.420)
filled (2970)	amns%tables(:)%table(:)%filled (integer) (9.7.1.1.2)
table_0d (2970)	amns%tables(:)%table(:)%table_0d (float) (9.7.1.1.1)
table_1d (2970)	amns%tables(:)%table(:)%table_1d (vecflt.type) (9.7.1.2.13)
table_2d (2970)	amns%tables(:)%table(:)%table_2d (matflt.type) (9.7.1.2.10)
table_3d (2970)	amns%tables(:)%table(:)%table_3d (array3dflt.type) (9.7.1.2.2)
table_4d (2970)	amns%tables(:)%table(:)%table_4d (array4dflt.type) (9.7.1.2.4)
table_5d (2970)	amns%tables(:)%table(:)%table_5d (array5dflt.type) (9.7.1.2.5)
table_6d (2970)	amns%tables(:)%table(:)%table_6d (array6dflt.type) (9.7.1.2.6)
coord1_str (2970)	amns%tables(:)%table(:)%coord1_str (vecstring.type) (9.7.1.2.15)
coord2_str (2970)	amns%tables(:)%table(:)%coord2_str (vecstring.type) (9.7.1.2.15)
coord3_str (2970)	amns%tables(:)%table(:)%coord3_str (vecstring.type) (9.7.1.2.15)
coord4_str (2970)	amns%tables(:)%table(:)%coord4_str (vecstring.type) (9.7.1.2.15)
coord5_str (2970)	amns%tables(:)%table(:)%coord5_str (vecstring.type) (9.7.1.2.15)
coord6_str (2970)	amns%tables(:)%table(:)%coord6_str (vecstring.type) (9.7.1.2.15)
quality (2970)	amns%tables(:)%table(:)%quality (identifier) (9.7.1.3.235)
id (2785)	amns%tables(:)%table(:)%quality%id (string) (9.7.1.1.3)
flag (2785)	amns%tables(:)%table(:)%quality%flag (integer) (9.7.1.1.2)
description (2785)	amns%tables(:)%table(:)%quality%description (string) (9.7.1.1.3)
data_source (2971)	amns%tables(:)%data_source (string) (9.7.1.1.3)
data_provide (2971)	amns%tables(:)%data_provide (string) (9.7.1.1.3)
data_citation (2971)	amns%tables(:)%data_citation (string) (9.7.1.1.3)
tables_coord (2553)	amns%tables_coord(:) (tables_coord) (9.7.1.3.422)
coords (2972)	amns%tables_coord(:)%coords(:) (coords) (9.7.1.3.103)
coord (2653)	amns%tables_coord(:)%coords(:)%coord (vecflt.type) (9.7.1.2.13)
coord_label (2653)	amns%tables_coord(:)%coords(:)%coord_label (vecstring.type) (9.7.1.2.15)
extrap_type (2653)	amns%tables_coord(:)%coords(:)%extrap_type (vecint.type) (9.7.1.2.14)
interp_type (2653)	amns%tables_coord(:)%coords(:)%interp_type (integer) (9.7.1.1.2)
label (2653)	amns%tables_coord(:)%coords(:)%label (string) (9.7.1.1.3)
unit (2653)	amns%tables_coord(:)%coords(:)%unit (string) (9.7.1.1.3)
transform (2653)	amns%tables_coord(:)%coords(:)%transform (integer) (9.7.1.1.2)
spacing (2653)	amns%tables_coord(:)%coords(:)%spacing (integer) (9.7.1.1.2)
version_ind (2553)	amns%version_ind(:) (version_ind) (9.7.1.3.480)
description (3030)	amns%version_ind(:)%description (vecstring.type) (9.7.1.2.15)
releasedate (3030)	amns%version_ind(:)%releasedate (string) (9.7.1.1.3)

data_release (3030)	amns%version.ind(:)%data_release(:) (data_release) (9.7.1.3.133)
shot (2683)	amns%version.ind(:)%data_release(:)%shot (integer) (9.7.1.1.2)
run (2683)	amns%version.ind(:)%data_release(:)%run (integer) (9.7.1.1.2)
description (2683)	amns%version.ind(:)%data_release(:)%description (vecstring_type) (9.7.1.2.15)
codeparam (2553)	amns%codeparam (codeparam) (9.7.1.3.77)
codename (2627)	amns%codeparam%codename (string) (9.7.1.1.3)
codeversion (2627)	amns%codeparam%codeversion (string) (9.7.1.1.3)
parameters (2627)	amns%codeparam%parameters (string) (9.7.1.1.3)
output_diag (2627)	amns%codeparam%output_diag (string) (9.7.1.1.3)
output_flag (2627)	amns%codeparam%output_flag (integer) (9.7.1.1.2)
time (2553)	amns%time (float) (9.7.1.1.1)

### 9.7.2.1.2 antennas

datainfo (2554)	antennas%datainfo (datainfo) (9.7.1.3.134)
dataprovider (2684)	antennas%datainfo%dataprovider (string) (9.7.1.1.3)
putdate (2684)	antennas%datainfo%putdate (string) (9.7.1.1.3)
source (2684)	antennas%datainfo%source (string) (9.7.1.1.3)
comment (2684)	antennas%datainfo%comment (string) (9.7.1.1.3)
cocos (2684)	antennas%datainfo%cocos (integer) (9.7.1.1.2)
id (2684)	antennas%datainfo%id (integer) (9.7.1.1.2)
isref (2684)	antennas%datainfo%isref (integer) (9.7.1.1.2)
whatref (2684)	antennas%datainfo%whatref (whatref) (9.7.1.3.506)
user (3056)	antennas%datainfo%whatref%user (string) (9.7.1.1.3)
machine (3056)	antennas%datainfo%whatref%machine (string) (9.7.1.1.3)
shot (3056)	antennas%datainfo%whatref%shot (integer) (9.7.1.1.2)
run (3056)	antennas%datainfo%whatref%run (integer) (9.7.1.1.2)
occurrence (3056)	antennas%datainfo%whatref%occurrence (integer) (9.7.1.1.2)
putinfo (2684)	antennas%datainfo%putinfo (putinfo) (9.7.1.3.342)
putmethod (2892)	antennas%datainfo%putinfo%putmethod (string) (9.7.1.1.3)
putaccess (2892)	antennas%datainfo%putinfo%putaccess (string) (9.7.1.1.3)
putlocation (2892)	antennas%datainfo%putinfo%putlocation (string) (9.7.1.1.3)
rights (2892)	antennas%datainfo%putinfo%rights (string) (9.7.1.1.3)
antenna_ec (2554)	antennas%antenna_ec(:) (antenna_ec) (9.7.1.3.54)
name (2604)	antennas%antenna_ec(:)%name (string) (9.7.1.1.3)
frequency (2604)	antennas%antenna_ec(:)%frequency (float) (9.7.1.1.1)
power (2604)	antennas%antenna_ec(:)%power (exp0D) (9.7.1.3.196)
value (2746)	antennas%antenna_ec(:)%power%value (float) (9.7.1.1.1)
abserror (2746)	antennas%antenna_ec(:)%power%abserror (float) (9.7.1.1.1)
releror (2746)	antennas%antenna_ec(:)%power%releror (float) (9.7.1.1.1)
mode (2604)	antennas%antenna_ec(:)%mode (integer) (9.7.1.1.2)
position (2604)	antennas%antenna_ec(:)%position (rzphi0D) (9.7.1.3.364)
r (2914)	antennas%antenna_ec(:)%position%r (float) (9.7.1.1.1)
z (2914)	antennas%antenna_ec(:)%position%z (float) (9.7.1.1.1)
phi (2914)	antennas%antenna_ec(:)%position%phi (float) (9.7.1.1.1)
launchangles (2604)	antennas%antenna_ec(:)%launchangles (launchangles) (9.7.1.3.245)
alpha (2795)	antennas%antenna_ec(:)%launchangles%alpha (float) (9.7.1.1.1)
beta (2795)	antennas%antenna_ec(:)%launchangles%beta (float) (9.7.1.1.1)
beam (2604)	antennas%antenna_ec(:)%beam (rfbeam) (9.7.1.3.357)
spot (2907)	antennas%antenna_ec(:)%beam%spot (spot) (9.7.1.3.414)
size (2964)	antennas%antenna_ec(:)%beam%spot%size (vecflt_type) (9.7.1.2.13)
angle (2964)	antennas%antenna_ec(:)%beam%spot%angle (float) (9.7.1.1.1)
phaseellipse (2907)	antennas%antenna_ec(:)%beam%phaseellipse (phaseellipse) (9.7.1.3.329)
invcurvrad (2879)	antennas%antenna_ec(:)%beam%phaseellipse%invcurvrad (vecflt_type) (9.7.1.2.13)
angle (2879)	antennas%antenna_ec(:)%beam%phaseellipse%angle (float) (9.7.1.1.1)
codeparam (2604)	antennas%antenna_ec(:)%codeparam (codeparam) (9.7.1.3.77)
codename (2627)	antennas%antenna_ec(:)%codeparam%codename (string) (9.7.1.1.3)
codeversion (2627)	antennas%antenna_ec(:)%codeparam%codeversion (string) (9.7.1.1.3)
parameters (2627)	antennas%antenna_ec(:)%codeparam%parameters (string) (9.7.1.1.3)
output_diag (2627)	antennas%antenna_ec(:)%codeparam%output_diag (string) (9.7.1.1.3)
output_flag (2627)	antennas%antenna_ec(:)%codeparam%output_flag (integer) (9.7.1.1.2)



antenna.ic (2554)	antennas%antenna.ic(:) (antenna_ic) (9.7.1.3.55)
name (2605)	antennas%antenna.ic(:)%name (string) (9.7.1.1.3)
frequency (2605)	antennas%antenna.ic(:)%frequency (exp0D) (9.7.1.3.196)
value (2746)	antennas%antenna.ic(:)%frequency%value (float) (9.7.1.1.1)
abserror (2746)	antennas%antenna.ic(:)%frequency%abserror (float) (9.7.1.1.1)
relellor (2746)	antennas%antenna.ic(:)%frequency%relellor (float) (9.7.1.1.1)
power (2605)	antennas%antenna.ic(:)%power (exp0D) (9.7.1.3.196)
value (2746)	antennas%antenna.ic(:)%power%value (float) (9.7.1.1.1)
abserror (2746)	antennas%antenna.ic(:)%power%abserror (float) (9.7.1.1.1)
relellor (2746)	antennas%antenna.ic(:)%power%relellor (float) (9.7.1.1.1)
ntor (2605)	antennas%antenna.ic(:)%ntor (vecint.type) (9.7.1.2.14)
power_ntor (2605)	antennas%antenna.ic(:)%power_ntor (vecflt.type) (9.7.1.2.13)
setup (2605)	antennas%antenna.ic(:)%setup (antennaic_setup) (9.7.1.3.57)
straps (2607)	antennas%antenna.ic(:)%setup%straps(:) (straps) (9.7.1.3.416)
current (2966)	antennas%antenna.ic(:)%setup%straps(:)%current (exp0D) (9.7.1.3.196)
value (2746)	antennas%antenna.ic(:)%setup%straps(:)%current%value (float) (9.7.1.1.1)
abserror (2746)	antennas%antenna.ic(:)%setup%straps(:)%current%abserror (float) (9.7.1.1.1)
relellor (2746)	antennas%antenna.ic(:)%setup%straps(:)%current%relellor (float) (9.7.1.1.1)
phase (2966)	antennas%antenna.ic(:)%setup%straps(:)%phase (exp0D) (9.7.1.3.196)
value (2746)	antennas%antenna.ic(:)%setup%straps(:)%phase%value (float) (9.7.1.1.1)
abserror (2746)	antennas%antenna.ic(:)%setup%straps(:)%phase%abserror (float) (9.7.1.1.1)
relellor (2746)	antennas%antenna.ic(:)%setup%straps(:)%phase%relellor (float) (9.7.1.1.1)
phi_centre (2966)	antennas%antenna.ic(:)%setup%straps(:)%phi_centre (float) (9.7.1.1.1)
width (2966)	antennas%antenna.ic(:)%setup%straps(:)%width (float) (9.7.1.1.1)
dist2wall (2966)	antennas%antenna.ic(:)%setup%straps(:)%dist2wall (float) (9.7.1.1.1)
coord_strap (2966)	antennas%antenna.ic(:)%setup%straps(:)%coord_strap (rz1D) (9.7.1.3.359)
r (2909)	antennas%antenna.ic(:)%setup%straps(:)%coord_strap%r (vecflt.type) (9.7.1.2.13)
z (2909)	antennas%antenna.ic(:)%setup%straps(:)%coord_strap%z (vecflt.type) (9.7.1.2.13)
current (2607)	antennas%antenna.ic(:)%setup%current (current) (9.7.1.3.130)
mpol (2680)	antennas%antenna.ic(:)%setup%current%mpol (vecint.type) (9.7.1.2.14)
ntor (2680)	antennas%antenna.ic(:)%setup%current%ntor (vecint.type) (9.7.1.2.14)
spectrum (2680)	antennas%antenna.ic(:)%setup%current%spectrum (exp1D) (9.7.1.3.197)
value (2747)	antennas%antenna.ic(:)%setup%current%spectrum%value (vecflt.type) (9.7.1.2.13)
abserror (2747)	antennas%antenna.ic(:)%setup%current%spectrum%abserror (vecflt.type) (9.7.1.2.13)
relellor (2747)	antennas%antenna.ic(:)%setup%current%spectrum%relellor (vecflt.type) (9.7.1.2.13)
rz_reference (2680)	antennas%antenna.ic(:)%setup%current%rz_reference (rz0D) (9.7.1.3.358)
r (2908)	antennas%antenna.ic(:)%setup%current%rz_reference%r (float) (9.7.1.1.1)
z (2908)	antennas%antenna.ic(:)%setup%current%rz_reference%z (float) (9.7.1.1.1)
codeparam (2605)	antennas%antenna.ic(:)%codeparam (codeparam) (9.7.1.3.77)
codename (2627)	antennas%antenna.ic(:)%codeparam%codename (string) (9.7.1.1.3)
codeversion (2627)	antennas%antenna.ic(:)%codeparam%codeversion (string) (9.7.1.1.3)
parameters (2627)	antennas%antenna.ic(:)%codeparam%parameters (string) (9.7.1.1.3)
output_diag (2627)	antennas%antenna.ic(:)%codeparam%output_diag (string) (9.7.1.1.3)
output_flag (2627)	antennas%antenna.ic(:)%codeparam%output_flag (integer) (9.7.1.1.2)
antenna.lh (2554)	antennas%antenna.lh(:) (antenna_lh) (9.7.1.3.56)
name (2606)	antennas%antenna.lh(:)%name (string) (9.7.1.1.3)
frequency (2606)	antennas%antenna.lh(:)%frequency (float) (9.7.1.1.1)
power (2606)	antennas%antenna.lh(:)%power (exp0D) (9.7.1.3.196)
value (2746)	antennas%antenna.lh(:)%power%value (float) (9.7.1.1.1)
abserror (2746)	antennas%antenna.lh(:)%power%abserror (float) (9.7.1.1.1)
relellor (2746)	antennas%antenna.lh(:)%power%relellor (float) (9.7.1.1.1)
n_par (2606)	antennas%antenna.lh(:)%n_par (float) (9.7.1.1.1)
position (2606)	antennas%antenna.lh(:)%position (rzphi0D) (9.7.1.3.364)
r (2914)	antennas%antenna.lh(:)%position%r (float) (9.7.1.1.1)
z (2914)	antennas%antenna.lh(:)%position%z (float) (9.7.1.1.1)
phi (2914)	antennas%antenna.lh(:)%position%phi (float) (9.7.1.1.1)
setup (2606)	antennas%antenna.lh(:)%setup (antennalh_setup) (9.7.1.3.58)
modules (2608)	antennas%antenna.lh(:)%setup%modules (modules) (9.7.1.3.275)
nma_theta (2825)	antennas%antenna.lh(:)%setup%modules%nma_theta (integer) (9.7.1.1.2)
nma_phi (2825)	antennas%antenna.lh(:)%setup%modules%nma_phi (integer) (9.7.1.1.2)
ima_theta (2825)	antennas%antenna.lh(:)%setup%modules%ima_theta (vecint.type) (9.7.1.2.14)



ima_phi (2825)	antennas%antenna_lh(:)%setup%modules%ima_phi (vecint.type) (9.7.1.2.14)
sm_theta (2825)	antennas%antenna_lh(:)%setup%modules%sm_theta (float) (9.7.1.1.1)
amplitude (2825)	antennas%antenna_lh(:)%setup%modules%amplitude (exp1D) (9.7.1.3.197)
value (2747)	antennas%antenna_lh(:)%setup%modules%amplitude%value (vecflt.type) (9.7.1.2.13)
abserror (2747)	antennas%antenna_lh(:)%setup%modules%amplitude%abserror (vecflt.type) (9.7.1.2.13)
relelor (2747)	antennas%antenna_lh(:)%setup%modules%amplitude%relelor (vecflt.type) (9.7.1.2.13)
phase (2825)	antennas%antenna_lh(:)%setup%modules%phase (exp1D) (9.7.1.3.197)
value (2747)	antennas%antenna_lh(:)%setup%modules%phase%value (vecflt.type) (9.7.1.2.13)
abserror (2747)	antennas%antenna_lh(:)%setup%modules%phase%abserror (vecflt.type) (9.7.1.2.13)
relelor (2747)	antennas%antenna_lh(:)%setup%modules%phase%relelor (vecflt.type) (9.7.1.2.13)
waveguides (2825)	antennas%antenna_lh(:)%setup%modules%waveguides (waveguides) (9.7.1.3.497)
nwm_theta (3047)	antennas%antenna_lh(:)%setup%modules%waveguides%nwm_theta (integer) (9.7.1.1.2)
nwm_phi (3047)	antennas%antenna_lh(:)%setup%modules%waveguides%nwm_phi (integer) (9.7.1.1.2)
mask (3047)	antennas%antenna_lh(:)%setup%modules%waveguides%mask (vecint.type) (9.7.1.2.14)
npwbm_phi (3047)	antennas%antenna_lh(:)%setup%modules%waveguides%npwbm_phi (integer) (9.7.1.1.2)
npwe_phi (3047)	antennas%antenna_lh(:)%setup%modules%waveguides%npwe_phi (integer) (9.7.1.1.2)
sw_theta (3047)	antennas%antenna_lh(:)%setup%modules%waveguides%sw_theta (float) (9.7.1.1.1)
hw_theta (3047)	antennas%antenna_lh(:)%setup%modules%waveguides%hw_theta (float) (9.7.1.1.1)
bwa (3047)	antennas%antenna_lh(:)%setup%modules%waveguides%bwa (float) (9.7.1.1.1)
biwp (3047)	antennas%antenna_lh(:)%setup%modules%waveguides%biwp (float) (9.7.1.1.1)
bewp (3047)	antennas%antenna_lh(:)%setup%modules%waveguides%bewp (float) (9.7.1.1.1)
e_phi (3047)	antennas%antenna_lh(:)%setup%modules%waveguides%e_phi (vecflt.type) (9.7.1.2.13)
scl (3047)	antennas%antenna_lh(:)%setup%modules%waveguides%scl (vecflt.type) (9.7.1.2.13)
plasmaedge (2606)	antennas%antenna_lh(:)%plasmaedge (plasmaedge) (9.7.1.3.332)
npoints (2882)	antennas%antenna_lh(:)%plasmaedge%npoints (integer) (9.7.1.1.2)
distance (2882)	antennas%antenna_lh(:)%plasmaedge%distance (vecflt.type) (9.7.1.2.13)
density (2882)	antennas%antenna_lh(:)%plasmaedge%density (vecflt.type) (9.7.1.2.13)
beam (2606)	antennas%antenna_lh(:)%beam (rfbeam) (9.7.1.3.357)
spot (2907)	antennas%antenna_lh(:)%beam%spot (spot) (9.7.1.3.414)
size (2964)	antennas%antenna_lh(:)%beam%spot%size (vecflt.type) (9.7.1.2.13)
angle (2964)	antennas%antenna_lh(:)%beam%spot%angle (float) (9.7.1.1.1)
phaseellipse (2907)	antennas%antenna_lh(:)%beam%phaseellipse (phaseellipse) (9.7.1.3.329)
invcuvrad (2879)	antennas%antenna_lh(:)%beam%phaseellipse%invcuvrad (vecflt.type) (9.7.1.2.13)
angle (2879)	antennas%antenna_lh(:)%beam%phaseellipse%angle (float) (9.7.1.1.1)
codeparam (2606)	antennas%antenna_lh(:)%codeparam (codeparam) (9.7.1.3.77)
codename (2627)	antennas%antenna_lh(:)%codeparam%codename (string) (9.7.1.1.3)
codeversion (2627)	antennas%antenna_lh(:)%codeparam%codeversion (string) (9.7.1.1.3)
parameters (2627)	antennas%antenna_lh(:)%codeparam%parameters (string) (9.7.1.1.3)
output_diag (2627)	antennas%antenna_lh(:)%codeparam%output_diag (string) (9.7.1.1.3)
output_flag (2627)	antennas%antenna_lh(:)%codeparam%output_flag (integer) (9.7.1.1.2)
codeparam (2554)	antennas%codeparam (codeparam) (9.7.1.3.77)
codename (2627)	antennas%codeparam%codename (string) (9.7.1.1.3)
codeversion (2627)	antennas%codeparam%codeversion (string) (9.7.1.1.3)
parameters (2627)	antennas%codeparam%parameters (string) (9.7.1.1.3)
output_diag (2627)	antennas%codeparam%output_diag (string) (9.7.1.1.3)
output_flag (2627)	antennas%codeparam%output_flag (integer) (9.7.1.1.2)
time (2554)	antennas%time (float) (9.7.1.1.1)

### 9.7.2.1.3 bb\_shield

datainfo (2555)	bb_shield%datainfo (datainfo) (9.7.1.3.134)
dataprovider (2684)	bb_shield%datainfo%dataprovider (string) (9.7.1.1.3)
putdate (2684)	bb_shield%datainfo%putdate (string) (9.7.1.1.3)
source (2684)	bb_shield%datainfo%source (string) (9.7.1.1.3)
comment (2684)	bb_shield%datainfo%comment (string) (9.7.1.1.3)
cocos (2684)	bb_shield%datainfo%cocos (integer) (9.7.1.1.2)
id (2684)	bb_shield%datainfo%id (integer) (9.7.1.1.2)
isref (2684)	bb_shield%datainfo%isref (integer) (9.7.1.1.2)
whatref (2684)	bb_shield%datainfo%whatref (whatref) (9.7.1.3.506)
user (3056)	bb_shield%datainfo%whatref%user (string) (9.7.1.1.3)
machine (3056)	bb_shield%datainfo%whatref%machine (string) (9.7.1.1.3)

shot (3056)	bb_shield%datainfo%whatref%shot (integer) (9.7.1.1.2)
run (3056)	bb_shield%datainfo%whatref%run (integer) (9.7.1.1.2)
occurrence (3056)	bb_shield%datainfo%whatref%occurrence (integer) (9.7.1.1.2)
putinfo (2684)	bb_shield%datainfo%putinfo (putinfo) (9.7.1.3.342)
putmethod (2892)	bb_shield%datainfo%putinfo%putmethod (string) (9.7.1.1.3)
putaccess (2892)	bb_shield%datainfo%putinfo%putaccess (string) (9.7.1.1.3)
putlocation (2892)	bb_shield%datainfo%putinfo%putlocation (string) (9.7.1.1.3)
rights (2892)	bb_shield%datainfo%putinfo%rights (string) (9.7.1.1.3)
type (2555)	bb_shield%type (string) (9.7.1.1.3)
limits (2555)	bb_shield%limits (limits) (9.7.1.3.253)
fw_dpa (2803)	bb_shield%limits%fw_dpa (float) (9.7.1.1.1)
he_appm (2803)	bb_shield%limits%he_appm (float) (9.7.1.1.1)
ins_dose (2803)	bb_shield%limits%ins_dose (float) (9.7.1.1.1)
fn_flu (2803)	bb_shield%limits%fn_flu (float) (9.7.1.1.1)
dpa_cu (2803)	bb_shield%limits%dpa_cu (float) (9.7.1.1.1)
wp_nh (2803)	bb_shield%limits%wp_nh (float) (9.7.1.1.1)
li6_enrich (2555)	bb_shield%li6_enrich (float) (9.7.1.1.1)
geom (2555)	bb_shield%geom (geom) (9.7.1.3.226)
dr_bb_sh_ib (2776)	bb_shield%geom%dr_bb_sh_ib (float) (9.7.1.1.1)
dr_sh_vv_ib (2776)	bb_shield%geom%dr_sh_vv_ib (float) (9.7.1.1.1)
dr_bb_sh_ob (2776)	bb_shield%geom%dr_bb_sh_ob (float) (9.7.1.1.1)
dr_sh_vv_ob (2776)	bb_shield%geom%dr_sh_vv_ob (float) (9.7.1.1.1)
dr_bb_sh_ib (2776)	bb_shield%geom%dr_bb_sh_ib (float) (9.7.1.1.1)
dr_bb_sh_ob (2776)	bb_shield%geom%dr_bb_sh_ob (float) (9.7.1.1.1)
delta_int (2776)	bb_shield%geom%delta_int (float) (9.7.1.1.1)
neut_results (2555)	bb_shield%neut_results (neut_results) (9.7.1.3.289)
tbr_bk (2839)	bb_shield%neut_results%tbr_bk (float) (9.7.1.1.1)
tbr_bk_inb (2839)	bb_shield%neut_results%tbr_bk_inb (float) (9.7.1.1.1)
tbr_bk_outb (2839)	bb_shield%neut_results%tbr_bk_outb (float) (9.7.1.1.1)
me_bk (2839)	bb_shield%neut_results%me_bk (float) (9.7.1.1.1)
me_shield (2839)	bb_shield%neut_results%me_shield (float) (9.7.1.1.1)
he_appm_res (2839)	bb_shield%neut_results%he_appm_res (float) (9.7.1.1.1)
ins_dose_max (2839)	bb_shield%neut_results%ins_dose_max (float) (9.7.1.1.1)
fn_flu_max (2839)	bb_shield%neut_results%fn_flu_max (float) (9.7.1.1.1)
dpa_cu_max (2839)	bb_shield%neut_results%dpa_cu_max (float) (9.7.1.1.1)
fn_flux_bz (2839)	bb_shield%neut_results%fn_flux_bz (float) (9.7.1.1.1)
fn_flux_bp (2839)	bb_shield%neut_results%fn_flux_bp (float) (9.7.1.1.1)
fn_flux_man (2839)	bb_shield%neut_results%fn_flux_man (float) (9.7.1.1.1)
fn_flux_sh (2839)	bb_shield%neut_results%fn_flux_sh (float) (9.7.1.1.1)
p_nh_bk (2839)	bb_shield%neut_results%p_nh_bk (float) (9.7.1.1.1)
p_nh_sh (2839)	bb_shield%neut_results%p_nh_sh (float) (9.7.1.1.1)
shield (2555)	bb_shield%shield (shield) (9.7.1.3.398)
inboard (2948)	bb_shield%shield%inboard (shield_specs) (9.7.1.3.399)
nmat (2949)	bb_shield%shield%inboard%nmat (integer) (9.7.1.1.2)
composition (2949)	bb_shield%shield%inboard%composition (vecflt.type) (9.7.1.2.13)
r1 (2949)	bb_shield%shield%inboard%r1 (float) (9.7.1.1.1)
r2 (2949)	bb_shield%shield%inboard%r2 (float) (9.7.1.1.1)
mass (2949)	bb_shield%shield%inboard%mass (float) (9.7.1.1.1)
outboard (2948)	bb_shield%shield%outboard (shield_specs) (9.7.1.3.399)
nmat (2949)	bb_shield%shield%outboard%nmat (integer) (9.7.1.1.2)
composition (2949)	bb_shield%shield%outboard%composition (vecflt.type) (9.7.1.2.13)
r1 (2949)	bb_shield%shield%outboard%r1 (float) (9.7.1.1.1)
r2 (2949)	bb_shield%shield%outboard%r2 (float) (9.7.1.1.1)
mass (2949)	bb_shield%shield%outboard%mass (float) (9.7.1.1.1)
bb (2555)	bb_shield%bb (bb) (9.7.1.3.60)
nb_bb (2610)	bb_shield%bb%nb_bb (float) (9.7.1.1.1)
nb_bb_polcut (2610)	bb_shield%bb%nb_bb_polcut (float) (9.7.1.1.1)
teta_bb (2610)	bb_shield%bb%teta_bb (float) (9.7.1.1.1)
tbr (2610)	bb_shield%bb%tbr (float) (9.7.1.1.1)
neutro_resul (2610)	bb_shield%bb%neutro_resul (neutro_resul) (9.7.1.3.291)
nw1_max (2841)	bb_shield%bb%neutro_resul%nw1_max (float) (9.7.1.1.1)

nwl_pol_prof (2841)	bb_shield%bb%neutro_resul%nwl_pol_prof (vecflt.type) (9.7.1.2.13)
inboard (2610)	bb_shield%bb%inboard (bb_specs) (9.7.1.3.63)
nbb (2613)	bb_shield%bb%inboard%nbb (float) (9.7.1.1.1)
r1 (2613)	bb_shield%bb%inboard%r1 (float) (9.7.1.1.1)
r2 (2613)	bb_shield%bb%inboard%r2 (float) (9.7.1.1.1)
dimension (2613)	bb_shield%bb%inboard%dimension (bb_dimension) (9.7.1.3.61)
radial (2611)	bb_shield%bb%inboard%dimension%radial (vecflt.type) (9.7.1.2.13)
toroidal (2611)	bb_shield%bb%inboard%dimension%toroidal (vecflt.type) (9.7.1.2.13)
poloidal (2611)	bb_shield%bb%inboard%dimension%poloidal (vecflt.type) (9.7.1.2.13)
outboard (2610)	bb_shield%bb%outboard (bb_specs) (9.7.1.3.63)
nbb (2613)	bb_shield%bb%outboard%nbb (float) (9.7.1.1.1)
r1 (2613)	bb_shield%bb%outboard%r1 (float) (9.7.1.1.1)
r2 (2613)	bb_shield%bb%outboard%r2 (float) (9.7.1.1.1)
dimension (2613)	bb_shield%bb%outboard%dimension (bb_dimension) (9.7.1.3.61)
radial (2611)	bb_shield%bb%outboard%dimension%radial (vecflt.type) (9.7.1.2.13)
toroidal (2611)	bb_shield%bb%outboard%dimension%toroidal (vecflt.type) (9.7.1.2.13)
poloidal (2611)	bb_shield%bb%outboard%dimension%poloidal (vecflt.type) (9.7.1.2.13)
hcll (2555)	bb_shield%hcll (hcll) (9.7.1.3.231)
mat_lim (2781)	bb_shield%hcll%mat_lim (mat_lim) (9.7.1.3.261)
cool_t_lim (2811)	bb_shield%hcll%mat_lim%cool_t_lim (float) (9.7.1.1.1)
steel_t_lim (2811)	bb_shield%hcll%mat_lim%steel_t_lim (float) (9.7.1.1.1)
lipb_t_lim (2811)	bb_shield%hcll%mat_lim%lipb_t_lim (float) (9.7.1.1.1)
hcll_bb (2781)	bb_shield%hcll%hcll_bb (hcll_bb) (9.7.1.3.232)
bb_lifetime (2782)	bb_shield%hcll%hcll_bb%bb_lifetime (float) (9.7.1.1.1)
he_inl_t (2782)	bb_shield%hcll%hcll_bb%he_inl_t (float) (9.7.1.1.1)
he_fr (2782)	bb_shield%hcll%hcll_bb%he_fr (float) (9.7.1.1.1)
he_inl_p (2782)	bb_shield%hcll%hcll_bb%he_inl_p (float) (9.7.1.1.1)
loca_des_p (2782)	bb_shield%hcll%hcll_bb%loca_des_p (float) (9.7.1.1.1)
he_dp (2782)	bb_shield%hcll%hcll_bb%he_dp (float) (9.7.1.1.1)
lipb_dp (2782)	bb_shield%hcll%hcll_bb%lipb_dp (float) (9.7.1.1.1)
react (2782)	bb_shield%hcll%hcll_bb%react (react) (9.7.1.3.345)
he_fr (2895)	bb_shield%hcll%hcll_bb%react%he_fr (float) (9.7.1.1.1)
lp_fr (2895)	bb_shield%hcll%hcll_bb%react%lp_fr (float) (9.7.1.1.1)
he_dp (2895)	bb_shield%hcll%hcll_bb%react%he_dp (float) (9.7.1.1.1)
lipb_dp (2895)	bb_shield%hcll%hcll_bb%react%lipb_dp (float) (9.7.1.1.1)
inboard (2782)	bb_shield%hcll%hcll_bb%inboard (hcllbb_specs) (9.7.1.3.233)
mass (2783)	bb_shield%hcll%hcll_bb%inboard%mass (vecflt.type) (9.7.1.2.13)
dr (2783)	bb_shield%hcll%hcll_bb%inboard%dr (vecflt.type) (9.7.1.2.13)
mat (2783)	bb_shield%hcll%hcll_bb%inboard%mat (vecflt.type) (9.7.1.2.13)
composition (2783)	bb_shield%hcll%hcll_bb%inboard%composition (matflt.type) (9.7.1.2.10)
mod_geom (2783)	bb_shield%hcll%hcll_bb%inboard%mod_geom (bb_geometry) (9.7.1.3.62)
dr_fw (2612)	bb_shield%hcll%hcll_bb%inboard%mod_geom%dr_fw (float) (9.7.1.1.1)
dr_bz (2612)	bb_shield%hcll%hcll_bb%inboard%mod_geom%dr_bz (float) (9.7.1.1.1)
dr_bp (2612)	bb_shield%hcll%hcll_bb%inboard%mod_geom%dr_bp (float) (9.7.1.1.1)
dr_bp_plates (2612)	bb_shield%hcll%hcll_bb%inboard%mod_geom%dr_bp_plates (vecflt.type) (9.7.1.2.13)
dr_bp_he (2612)	bb_shield%hcll%hcll_bb%inboard%mod_geom%dr_bp_he (vecflt.type) (9.7.1.2.13)
dr_man (2612)	bb_shield%hcll%hcll_bb%inboard%mod_geom%dr_man (float) (9.7.1.1.1)
dt_sw (2612)	bb_shield%hcll%hcll_bb%inboard%mod_geom%dt_sw (float) (9.7.1.1.1)
dt_bz (2612)	bb_shield%hcll%hcll_bb%inboard%mod_geom%dt_bz (float) (9.7.1.1.1)
dp_bz (2612)	bb_shield%hcll%hcll_bb%inboard%mod_geom%dp_bz (float) (9.7.1.1.1)
top_cap_dim (2612)	bb_shield%hcll%hcll_bb%inboard%mod_geom%top_cap_dim (bb_dimension) (9.7.1.3.61)
radial (2611)	bb_shield%hcll%hcll_bb%inboard%mod_geom%top_cap_dim%radial (vecflt.type) (9.7.1.2.13)
toroidal (2611)	bb_shield%hcll%hcll_bb%inboard%mod_geom%top_cap_dim%toroidal (vecflt.type) (9.7.1.2.13)
poloidal (2611)	bb_shield%hcll%hcll_bb%inboard%mod_geom%top_cap_dim%poloidal (vecflt.type) (9.7.1.2.13)
bot_cap_dim (2612)	bb_shield%hcll%hcll_bb%inboard%mod_geom%bot_cap_dim (bb_dimension) (9.7.1.3.61)
radial (2611)	bb_shield%hcll%hcll_bb%inboard%mod_geom%bot_cap_dim%radial (vecflt.type) (9.7.1.2.13)
toroidal (2611)	bb_shield%hcll%hcll_bb%inboard%mod_geom%bot_cap_dim%toroidal (vecflt.type) (9.7.1.2.13)
poloidal (2611)	bb_shield%hcll%hcll_bb%inboard%mod_geom%bot_cap_dim%poloidal (vecflt.type) (9.7.1.2.13)
a_fw_ch (2612)	bb_shield%hcll%hcll_bb%inboard%mod_geom%a_fw_ch (float) (9.7.1.1.1)

b_fw_ch (2612)	bb_shield%hcll%hcll.bb%inboard%mod_geom%b_fw_ch (float) (9.7.1.1.1)
td_tc_ch (2612)	bb_shield%hcll%hcll.bb%inboard%mod_geom%td_tc_ch (float) (9.7.1.1.1)
rd_tc_ch (2612)	bb_shield%hcll%hcll.bb%inboard%mod_geom%rd_tc_ch (float) (9.7.1.1.1)
td_bc_ch (2612)	bb_shield%hcll%hcll.bb%inboard%mod_geom%td_bc_ch (float) (9.7.1.1.1)
rd_bc_ch (2612)	bb_shield%hcll%hcll.bb%inboard%mod_geom%rd_bc_ch (float) (9.7.1.1.1)
n_fw_ch (2612)	bb_shield%hcll%hcll.bb%inboard%mod_geom%n_fw_ch (float) (9.7.1.1.1)
n_fw_circ (2612)	bb_shield%hcll%hcll.bb%inboard%mod_geom%n_fw_circ (float) (9.7.1.1.1)
a_sg_ch (2612)	bb_shield%hcll%hcll.bb%inboard%mod_geom%a_sg_ch (float) (9.7.1.1.1)
b_sg_ch (2612)	bb_shield%hcll%hcll.bb%inboard%mod_geom%b_sg_ch (float) (9.7.1.1.1)
n_sg_ch (2612)	bb_shield%hcll%hcll.bb%inboard%mod_geom%n_sg_ch (float) (9.7.1.1.1)
sg_thick (2612)	bb_shield%hcll%hcll.bb%inboard%mod_geom%sg_thick (float) (9.7.1.1.1)
sg_weld (2612)	bb_shield%hcll%hcll.bb%inboard%mod_geom%sg_weld (float) (9.7.1.1.1)
sg_in_out (2612)	bb_shield%hcll%hcll.bb%inboard%mod_geom%sg_in_out (float) (9.7.1.1.1)
r_sg_cp (2612)	bb_shield%hcll%hcll.bb%inboard%mod_geom%r_sg_cp (float) (9.7.1.1.1)
cp_tor_gap (2612)	bb_shield%hcll%hcll.bb%inboard%mod_geom%cp_tor_gap (float) (9.7.1.1.1)
a_cp_ch (2612)	bb_shield%hcll%hcll.bb%inboard%mod_geom%a_cp_ch (float) (9.7.1.1.1)
b_cp_ch (2612)	bb_shield%hcll%hcll.bb%inboard%mod_geom%b_cp_ch (float) (9.7.1.1.1)
n_cp_ch (2612)	bb_shield%hcll%hcll.bb%inboard%mod_geom%n_cp_ch (float) (9.7.1.1.1)
cp_thick (2612)	bb_shield%hcll%hcll.bb%inboard%mod_geom%cp_thick (float) (9.7.1.1.1)
n_pol_bu (2612)	bb_shield%hcll%hcll.bb%inboard%mod_geom%n_pol_bu (float) (9.7.1.1.1)
n_tor_bu (2612)	bb_shield%hcll%hcll.bb%inboard%mod_geom%n_tor_bu (float) (9.7.1.1.1)
n_cp_bu (2612)	bb_shield%hcll%hcll.bb%inboard%mod_geom%n_cp_bu (float) (9.7.1.1.1)
cp_in_out (2612)	bb_shield%hcll%hcll.bb%inboard%mod_geom%cp_in_out (float) (9.7.1.1.1)
he_man_tck (2612)	bb_shield%hcll%hcll.bb%inboard%mod_geom%he_man_tck (float) (9.7.1.1.1)
man_tck (2612)	bb_shield%hcll%hcll.bb%inboard%mod_geom%man_tck (float) (9.7.1.1.1)
pbli_bptb_od (2612)	bb_shield%hcll%hcll.bb%inboard%mod_geom%pbli_bptb_od (float) (9.7.1.1.1)
pbli_bptb_id (2612)	bb_shield%hcll%hcll.bb%inboard%mod_geom%pbli_bptb_id (float) (9.7.1.1.1)
he_bptb_od (2612)	bb_shield%hcll%hcll.bb%inboard%mod_geom%he_bptb_od (float) (9.7.1.1.1)
he_bptb_id (2612)	bb_shield%hcll%hcll.bb%inboard%mod_geom%he_bptb_id (float) (9.7.1.1.1)
dr_max_fw (2612)	bb_shield%hcll%hcll.bb%inboard%mod_geom%dr_max_fw (float) (9.7.1.1.1)
dr_fwpl (2612)	bb_shield%hcll%hcll.bb%inboard%mod_geom%dr_fwpl (float) (9.7.1.1.1)
mod_neutr (2783)	bb_shield%hcll%hcll.bb%inboard%mod_neutr (mode_neutr) (9.7.1.3.271)
r (2821)	bb_shield%hcll%hcll.bb%inboard%mod_neutr%r (vecflt_type) (9.7.1.2.13)
pd_rad (2821)	bb_shield%hcll%hcll.bb%inboard%mod_neutr%pd_rad (vecflt_type) (9.7.1.2.13)
lipb_coef_pd (2821)	bb_shield%hcll%hcll.bb%inboard%mod_neutr%lipb_coef_pd (vecflt_type) (9.7.1.2.13)
steel_coef_pd (2821)	bb_shield%hcll%hcll.bb%inboard%mod_neutr%steel_coef_pd (vecflt_type) (9.7.1.2.13)
pow_exchange (2821)	bb_shield%hcll%hcll.bb%inboard%mod_neutr%pow_exchange (power_exchange) (9.7.1.3.337)
dep_pow (2887)	bb_shield%hcll%hcll.bb%inboard%mod_neutr%pow_exchange%dep_pow (vecflt_type) (9.7.1.2.13)
dep_fw (2887)	bb_shield%hcll%hcll.bb%inboard%mod_neutr%pow_exchange%dep_fw (float) (9.7.1.1.1)
dep_sg (2887)	bb_shield%hcll%hcll.bb%inboard%mod_neutr%pow_exchange%dep_sg (float) (9.7.1.1.1)
dep_cp (2887)	bb_shield%hcll%hcll.bb%inboard%mod_neutr%pow_exchange%dep_cp (float) (9.7.1.1.1)
dep_lp (2887)	bb_shield%hcll%hcll.bb%inboard%mod_neutr%pow_exchange%dep_lp (float) (9.7.1.1.1)
dep_man (2887)	bb_shield%hcll%hcll.bb%inboard%mod_neutr%pow_exchange%dep_man (float) (9.7.1.1.1)
dep_pl (2887)	bb_shield%hcll%hcll.bb%inboard%mod_neutr%pow_exchange%dep_pl (float) (9.7.1.1.1)
rec_fw (2887)	bb_shield%hcll%hcll.bb%inboard%mod_neutr%pow_exchange%rec_fw (float) (9.7.1.1.1)
rec_sg (2887)	bb_shield%hcll%hcll.bb%inboard%mod_neutr%pow_exchange%rec_sg (float) (9.7.1.1.1)
rec_cp (2887)	bb_shield%hcll%hcll.bb%inboard%mod_neutr%pow_exchange%rec_cp (float) (9.7.1.1.1)
pow_dens_fw (2887)	bb_shield%hcll%hcll.bb%inboard%mod_neutr%pow_exchange%pow_dens_fw (float) (9.7.1.1.1)
pow_dens_bz (2887)	bb_shield%hcll%hcll.bb%inboard%mod_neutr%pow_exchange%pow_dens_bz (float) (9.7.1.1.1)
pow_dens_bz10 (2887)	bb_shield%hcll%hcll.bb%inboard%mod_neutr%pow_exchange%pow_dens_bz10 (float) (9.7.1.1.1)
pow_dens_bp (2887)	bb_shield%hcll%hcll.bb%inboard%mod_neutr%pow_exchange%pow_dens_bp (float) (9.7.1.1.1)
pow_dens_man (2887)	bb_shield%hcll%hcll.bb%inboard%mod_neutr%pow_exchange%pow_dens_man (float) (9.7.1.1.1)
pow_dens_sh (2887)	bb_shield%hcll%hcll.bb%inboard%mod_neutr%pow_exchange%pow_dens_sh (float) (9.7.1.1.1)
mod_therm (2783)	bb_shield%hcll%hcll.bb%inboard%mod_therm (mode_therm) (9.7.1.3.273)
he_fr (2823)	bb_shield%hcll%hcll.bb%inboard%mod_therm%he_fr (float) (9.7.1.1.1)
perc_bp_he (2823)	bb_shield%hcll%hcll.bb%inboard%mod_therm%perc_bp_he (float) (9.7.1.1.1)

he_out.t (2823)	bb_shield%hcll%hcll.bb%inboard%mod_therm%he_out.t (float) (9.7.1.1.1)
fw_he_out.t (2823)	bb_shield%hcll%hcll.bb%inboard%mod_therm%fw_he_out.t (float) (9.7.1.1.1)
sg_he_out.t (2823)	bb_shield%hcll%hcll.bb%inboard%mod_therm%sg_he_out.t (float) (9.7.1.1.1)
cp_he_out.t (2823)	bb_shield%hcll%hcll.bb%inboard%mod_therm%cp_he_out.t (float) (9.7.1.1.1)
fw_st_max.t (2823)	bb_shield%hcll%hcll.bb%inboard%mod_therm%fw_st_max.t (float) (9.7.1.1.1)
sg_st_max.t (2823)	bb_shield%hcll%hcll.bb%inboard%mod_therm%sg_st_max.t (float) (9.7.1.1.1)
cp_st_max.t (2823)	bb_shield%hcll%hcll.bb%inboard%mod_therm%cp_st_max.t (float) (9.7.1.1.1)
mod_th_hyd (2783)	bb_shield%hcll%hcll.bb%inboard%mod_th_hyd (mode_th_hyd) (9.7.1.3.272)
fw_dp_he (2822)	bb_shield%hcll%hcll.bb%inboard%mod_th_hyd%fw_dp_he (float) (9.7.1.1.1)
sg_dp_he (2822)	bb_shield%hcll%hcll.bb%inboard%mod_th_hyd%sg_dp_he (float) (9.7.1.1.1)
cp_dp_he (2822)	bb_shield%hcll%hcll.bb%inboard%mod_th_hyd%cp_dp_he (float) (9.7.1.1.1)
man_dp_he (2822)	bb_shield%hcll%hcll.bb%inboard%mod_th_hyd%man_dp_he (float) (9.7.1.1.1)
tot_dp_he (2822)	bb_shield%hcll%hcll.bb%inboard%mod_th_hyd%tot_dp_he (float) (9.7.1.1.1)
bp_dp_he (2822)	bb_shield%hcll%hcll.bb%inboard%mod_th_hyd%bp_dp_he (float) (9.7.1.1.1)
circ_dp_he (2822)	bb_shield%hcll%hcll.bb%inboard%mod_th_hyd%circ_dp_he (float) (9.7.1.1.1)
mod_mech (2783)	bb_shield%hcll%hcll.bb%inboard%mod_mech (mode_mech) (9.7.1.3.270)
fw_min_ts_mg (2820)	bb_shield%hcll%hcll.bb%inboard%mod_mech%fw_min_ts_mg (float) (9.7.1.1.1)
fw_min_bd_mg (2820)	bb_shield%hcll%hcll.bb%inboard%mod_mech%fw_min_bd_mg (float) (9.7.1.1.1)
sg_min_ts_mg (2820)	bb_shield%hcll%hcll.bb%inboard%mod_mech%sg_min_ts_mg (float) (9.7.1.1.1)
sg_min_bd_mg (2820)	bb_shield%hcll%hcll.bb%inboard%mod_mech%sg_min_bd_mg (float) (9.7.1.1.1)
cp_min_ts_mg (2820)	bb_shield%hcll%hcll.bb%inboard%mod_mech%cp_min_ts_mg (float) (9.7.1.1.1)
cp_min_bd_mg (2820)	bb_shield%hcll%hcll.bb%inboard%mod_mech%cp_min_bd_mg (float) (9.7.1.1.1)
min_ts_mg_ac (2820)	bb_shield%hcll%hcll.bb%inboard%mod_mech%min_ts_mg_ac (float) (9.7.1.1.1)
min_bd_mg_ac (2820)	bb_shield%hcll%hcll.bb%inboard%mod_mech%min_bd_mg_ac (float) (9.7.1.1.1)
mod_lipb (2783)	bb_shield%hcll%hcll.bb%inboard%mod_lipb (mode_lipb) (9.7.1.3.269)
lp_rec_day (2819)	bb_shield%hcll%hcll.bb%inboard%mod_lipb%lp_rec_day (float) (9.7.1.1.1)
bb_lp_fr (2819)	bb_shield%hcll%hcll.bb%inboard%mod_lipb%bb_lp_fr (vecflt.type) (9.7.1.2.13)
lp_inl_p (2819)	bb_shield%hcll%hcll.bb%inboard%mod_lipb%lp_inl_p (float) (9.7.1.1.1)
bu_dp_lp (2819)	bb_shield%hcll%hcll.bb%inboard%mod_lipb%bu_dp_lp (float) (9.7.1.1.1)
man_dp_lp (2819)	bb_shield%hcll%hcll.bb%inboard%mod_lipb%man_dp_lp (float) (9.7.1.1.1)
tot_dp_lp (2819)	bb_shield%hcll%hcll.bb%inboard%mod_lipb%tot_dp_lp (float) (9.7.1.1.1)
bu_lp_ave.t (2819)	bb_shield%hcll%hcll.bb%inboard%mod_lipb%bu_lp_ave.t (float) (9.7.1.1.1)
bu_lp_max.t (2819)	bb_shield%hcll%hcll.bb%inboard%mod_lipb%bu_lp_max.t (float) (9.7.1.1.1)
mod_tritium (2783)	bb_shield%hcll%hcll.bb%inboard%mod_tritium (mode_tritium) (9.7.1.3.274)
t_conc_lipb (2824)	bb_shield%hcll%hcll.bb%inboard%mod_tritium%t_conc_lipb (float) (9.7.1.1.1)
t_conc_he (2824)	bb_shield%hcll%hcll.bb%inboard%mod_tritium%t_conc_he (float) (9.7.1.1.1)
outboard (2782)	bb_shield%hcll%hcll.bb%outboard (hcllbb_specs) (9.7.1.3.233)
mass (2783)	bb_shield%hcll%hcll.bb%outboard%mass (vecflt.type) (9.7.1.2.13)
dr (2783)	bb_shield%hcll%hcll.bb%outboard%dr (vecflt.type) (9.7.1.2.13)
mat (2783)	bb_shield%hcll%hcll.bb%outboard%mat (vecflt.type) (9.7.1.2.13)
composition (2783)	bb_shield%hcll%hcll.bb%outboard%composition (matflt.type) (9.7.1.2.10)
mod_geom (2783)	bb_shield%hcll%hcll.bb%outboard%mod_geom (bb_geometry) (9.7.1.3.62)
dr_fw (2612)	bb_shield%hcll%hcll.bb%outboard%mod_geom%dr_fw (float) (9.7.1.1.1)
dr_bz (2612)	bb_shield%hcll%hcll.bb%outboard%mod_geom%dr_bz (float) (9.7.1.1.1)
dr_bp (2612)	bb_shield%hcll%hcll.bb%outboard%mod_geom%dr_bp (float) (9.7.1.1.1)
dr_bp_plates (2612)	bb_shield%hcll%hcll.bb%outboard%mod_geom%dr_bp_plates (vecflt.type) (9.7.1.2.13)
dr_bp_he (2612)	bb_shield%hcll%hcll.bb%outboard%mod_geom%dr_bp_he (vecflt.type) (9.7.1.2.13)
dr_man (2612)	bb_shield%hcll%hcll.bb%outboard%mod_geom%dr_man (float) (9.7.1.1.1)
dt_sw (2612)	bb_shield%hcll%hcll.bb%outboard%mod_geom%dt_sw (float) (9.7.1.1.1)
dt_bz (2612)	bb_shield%hcll%hcll.bb%outboard%mod_geom%dt_bz (float) (9.7.1.1.1)
dp_bz (2612)	bb_shield%hcll%hcll.bb%outboard%mod_geom%dp_bz (float) (9.7.1.1.1)
top_cap_dim (2612)	bb_shield%hcll%hcll.bb%outboard%mod_geom%top_cap_dim (bb.dimension) (9.7.1.3.61)
radial (2611)	bb_shield%hcll%hcll.bb%outboard%mod_geom%top_cap_dim%radial (vecflt.type) (9.7.1.2.13)
toroidal (2611)	bb_shield%hcll%hcll.bb%outboard%mod_geom%top_cap_dim%toroidal (vecflt.type) (9.7.1.2.13)
poloidal (2611)	bb_shield%hcll%hcll.bb%outboard%mod_geom%top_cap_dim%poloidal (vecflt.type) (9.7.1.2.13)
bot_cap_dim (2612)	bb_shield%hcll%hcll.bb%outboard%mod_geom%bot_cap_dim (bb.dimension) (9.7.1.3.61)
radial (2611)	bb_shield%hcll%hcll.bb%outboard%mod_geom%bot_cap_dim%radial (vecflt.type) (9.7.1.2.13)
toroidal (2611)	bb_shield%hcll%hcll.bb%outboard%mod_geom%bot_cap_dim%toroidal (vecflt.type) (9.7.1.2.13)

poloidal (2611)	bb_shield%hcll%hcll.bb%outboard%mod_geom%bot_cap_dim%poloidal (9.7.1.2.13)	(vecflt.type)
a_fw_ch (2612)	bb_shield%hcll%hcll.bb%outboard%mod_geom%a_fw_ch (float) (9.7.1.1.1)	
b_fw_ch (2612)	bb_shield%hcll%hcll.bb%outboard%mod_geom%b_fw_ch (float) (9.7.1.1.1)	
td_tc_ch (2612)	bb_shield%hcll%hcll.bb%outboard%mod_geom%td_tc_ch (float) (9.7.1.1.1)	
rd_tc_ch (2612)	bb_shield%hcll%hcll.bb%outboard%mod_geom%rd_tc_ch (float) (9.7.1.1.1)	
td_bc_ch (2612)	bb_shield%hcll%hcll.bb%outboard%mod_geom%td_bc_ch (float) (9.7.1.1.1)	
rd_bc_ch (2612)	bb_shield%hcll%hcll.bb%outboard%mod_geom%rd_bc_ch (float) (9.7.1.1.1)	
n_fw_ch (2612)	bb_shield%hcll%hcll.bb%outboard%mod_geom%n_fw_ch (float) (9.7.1.1.1)	
n_fw_circ (2612)	bb_shield%hcll%hcll.bb%outboard%mod_geom%n_fw_circ (float) (9.7.1.1.1)	
a_sg_ch (2612)	bb_shield%hcll%hcll.bb%outboard%mod_geom%a_sg_ch (float) (9.7.1.1.1)	
b_sg_ch (2612)	bb_shield%hcll%hcll.bb%outboard%mod_geom%b_sg_ch (float) (9.7.1.1.1)	
n_sg_ch (2612)	bb_shield%hcll%hcll.bb%outboard%mod_geom%n_sg_ch (float) (9.7.1.1.1)	
sg_thick (2612)	bb_shield%hcll%hcll.bb%outboard%mod_geom%sg_thick (float) (9.7.1.1.1)	
sg_weld (2612)	bb_shield%hcll%hcll.bb%outboard%mod_geom%sg_weld (float) (9.7.1.1.1)	
sg_in_out (2612)	bb_shield%hcll%hcll.bb%outboard%mod_geom%sg_in_out (float) (9.7.1.1.1)	
r_sg_cp (2612)	bb_shield%hcll%hcll.bb%outboard%mod_geom%r_sg_cp (float) (9.7.1.1.1)	
cp_tor_gap (2612)	bb_shield%hcll%hcll.bb%outboard%mod_geom%cp_tor_gap (float) (9.7.1.1.1)	
a_cp_ch (2612)	bb_shield%hcll%hcll.bb%outboard%mod_geom%a_cp_ch (float) (9.7.1.1.1)	
b_cp_ch (2612)	bb_shield%hcll%hcll.bb%outboard%mod_geom%b_cp_ch (float) (9.7.1.1.1)	
n_cp_ch (2612)	bb_shield%hcll%hcll.bb%outboard%mod_geom%n_cp_ch (float) (9.7.1.1.1)	
cp_thick (2612)	bb_shield%hcll%hcll.bb%outboard%mod_geom%cp_thick (float) (9.7.1.1.1)	
n_pol_bu (2612)	bb_shield%hcll%hcll.bb%outboard%mod_geom%n_pol_bu (float) (9.7.1.1.1)	
n_tor_bu (2612)	bb_shield%hcll%hcll.bb%outboard%mod_geom%n_tor_bu (float) (9.7.1.1.1)	
n_cp_bu (2612)	bb_shield%hcll%hcll.bb%outboard%mod_geom%n_cp_bu (float) (9.7.1.1.1)	
cp_in_out (2612)	bb_shield%hcll%hcll.bb%outboard%mod_geom%cp_in_out (float) (9.7.1.1.1)	
he_man_tck (2612)	bb_shield%hcll%hcll.bb%outboard%mod_geom%he_man_tck (float) (9.7.1.1.1)	
man_tck (2612)	bb_shield%hcll%hcll.bb%outboard%mod_geom%man_tck (float) (9.7.1.1.1)	
pbli_bptb_od (2612)	bb_shield%hcll%hcll.bb%outboard%mod_geom%pbli_bptb_od (float) (9.7.1.1.1)	
pbli_bptb_id (2612)	bb_shield%hcll%hcll.bb%outboard%mod_geom%pbli_bptb_id (float) (9.7.1.1.1)	
he_bptb_od (2612)	bb_shield%hcll%hcll.bb%outboard%mod_geom%he_bptb_od (float) (9.7.1.1.1)	
he_bptb_id (2612)	bb_shield%hcll%hcll.bb%outboard%mod_geom%he_bptb_id (float) (9.7.1.1.1)	
dr_max_fw (2612)	bb_shield%hcll%hcll.bb%outboard%mod_geom%dr_max_fw (float) (9.7.1.1.1)	
dr_fwpl (2612)	bb_shield%hcll%hcll.bb%outboard%mod_geom%dr_fwpl (float) (9.7.1.1.1)	
mod_neutr (2783)	bb_shield%hcll%hcll.bb%outboard%mod_neutr (mode_neutr) (9.7.1.3.271)	
r (2821)	bb_shield%hcll%hcll.bb%outboard%mod_neutr%r (vecflt.type) (9.7.1.2.13)	
pd_rad (2821)	bb_shield%hcll%hcll.bb%outboard%mod_neutr%pd_rad (vecflt.type) (9.7.1.2.13)	
lipb_coef_pd (2821)	bb_shield%hcll%hcll.bb%outboard%mod_neutr%lipb_coef_pd (vecflt.type) (9.7.1.2.13)	
steel_coef_pd (2821)	bb_shield%hcll%hcll.bb%outboard%mod_neutr%steel_coef_pd (vecflt.type) (9.7.1.2.13)	
pow_exchange (2821)	bb_shield%hcll%hcll.bb%outboard%mod_neutr%pow_exchange (power_exchange) (9.7.1.3.337)	
dep_pow (2887)	bb_shield%hcll%hcll.bb%outboard%mod_neutr%pow_exchange%dep_pow (vecflt.type) (9.7.1.2.13)	
dep_fw (2887)	bb_shield%hcll%hcll.bb%outboard%mod_neutr%pow_exchange%dep_fw (float) (9.7.1.1.1)	
dep_sg (2887)	bb_shield%hcll%hcll.bb%outboard%mod_neutr%pow_exchange%dep_sg (float) (9.7.1.1.1)	
dep_cp (2887)	bb_shield%hcll%hcll.bb%outboard%mod_neutr%pow_exchange%dep_cp (float) (9.7.1.1.1)	
dep_lp (2887)	bb_shield%hcll%hcll.bb%outboard%mod_neutr%pow_exchange%dep_lp (float) (9.7.1.1.1)	
dep_man (2887)	bb_shield%hcll%hcll.bb%outboard%mod_neutr%pow_exchange%dep_man (float) (9.7.1.1.1)	
dep_pl (2887)	bb_shield%hcll%hcll.bb%outboard%mod_neutr%pow_exchange%dep_pl (float) (9.7.1.1.1)	
rec_fw (2887)	bb_shield%hcll%hcll.bb%outboard%mod_neutr%pow_exchange%rec_fw (float) (9.7.1.1.1)	
rec_sg (2887)	bb_shield%hcll%hcll.bb%outboard%mod_neutr%pow_exchange%rec_sg (float) (9.7.1.1.1)	
rec_cp (2887)	bb_shield%hcll%hcll.bb%outboard%mod_neutr%pow_exchange%rec_cp (float) (9.7.1.1.1)	
pow_dens_fw (2887)	bb_shield%hcll%hcll.bb%outboard%mod_neutr%pow_exchange%pow_dens_fw (float) (9.7.1.1.1)	
pow_dens_bz (2887)	bb_shield%hcll%hcll.bb%outboard%mod_neutr%pow_exchange%pow_dens_bz (float) (9.7.1.1.1)	
pow_dens_bz10 (2887)	bb_shield%hcll%hcll.bb%outboard%mod_neutr%pow_exchange%pow_dens_bz10 (float) (9.7.1.1.1)	
pow_dens_bp (2887)	bb_shield%hcll%hcll.bb%outboard%mod_neutr%pow_exchange%pow_dens_bp (float) (9.7.1.1.1)	
pow_dens_man (2887)	bb_shield%hcll%hcll.bb%outboard%mod_neutr%pow_exchange%pow_dens_man (float) (9.7.1.1.1)	
pow_dens_sh (2887)	bb_shield%hcll%hcll.bb%outboard%mod_neutr%pow_exchange%pow_dens_sh (float) (9.7.1.1.1)	



mod_therm (2783)	bb_shield%hcll%hcll.bb%outboard%mod_therm (mode_therm) (9.7.1.3.273)
he_fr (2823)	bb_shield%hcll%hcll.bb%outboard%mod_therm%he_fr (float) (9.7.1.1.1)
perc_bp_he (2823)	bb_shield%hcll%hcll.bb%outboard%mod_therm%perc_bp_he (float) (9.7.1.1.1)
he_out_t (2823)	bb_shield%hcll%hcll.bb%outboard%mod_therm%he_out_t (float) (9.7.1.1.1)
fw_he_out_t (2823)	bb_shield%hcll%hcll.bb%outboard%mod_therm%fw_he_out_t (float) (9.7.1.1.1)
sg_he_out_t (2823)	bb_shield%hcll%hcll.bb%outboard%mod_therm%sg_he_out_t (float) (9.7.1.1.1)
cp_he_out_t (2823)	bb_shield%hcll%hcll.bb%outboard%mod_therm%cp_he_out_t (float) (9.7.1.1.1)
fw_st_max_t (2823)	bb_shield%hcll%hcll.bb%outboard%mod_therm%fw_st_max_t (float) (9.7.1.1.1)
sg_st_max_t (2823)	bb_shield%hcll%hcll.bb%outboard%mod_therm%sg_st_max_t (float) (9.7.1.1.1)
cp_st_max_t (2823)	bb_shield%hcll%hcll.bb%outboard%mod_therm%cp_st_max_t (float) (9.7.1.1.1)
mod_th_hyd (2783)	bb_shield%hcll%hcll.bb%outboard%mod_th_hyd (mode_th_hyd) (9.7.1.3.272)
fw_dp_he (2822)	bb_shield%hcll%hcll.bb%outboard%mod_th_hyd%fw_dp_he (float) (9.7.1.1.1)
sg_dp_he (2822)	bb_shield%hcll%hcll.bb%outboard%mod_th_hyd%sg_dp_he (float) (9.7.1.1.1)
cp_dp_he (2822)	bb_shield%hcll%hcll.bb%outboard%mod_th_hyd%cp_dp_he (float) (9.7.1.1.1)
man_dp_he (2822)	bb_shield%hcll%hcll.bb%outboard%mod_th_hyd%man_dp_he (float) (9.7.1.1.1)
tot_dp_he (2822)	bb_shield%hcll%hcll.bb%outboard%mod_th_hyd%tot_dp_he (float) (9.7.1.1.1)
bp_dp_he (2822)	bb_shield%hcll%hcll.bb%outboard%mod_th_hyd%bp_dp_he (float) (9.7.1.1.1)
circ_dp_he (2822)	bb_shield%hcll%hcll.bb%outboard%mod_th_hyd%circ_dp_he (float) (9.7.1.1.1)
mod_mech (2783)	bb_shield%hcll%hcll.bb%outboard%mod_mech (mode_mech) (9.7.1.3.270)
fw_min_ts_mg (2820)	bb_shield%hcll%hcll.bb%outboard%mod_mech%fw_min_ts_mg (float) (9.7.1.1.1)
fw_min_bd_mg (2820)	bb_shield%hcll%hcll.bb%outboard%mod_mech%fw_min_bd_mg (float) (9.7.1.1.1)
sg_min_ts_mg (2820)	bb_shield%hcll%hcll.bb%outboard%mod_mech%sg_min_ts_mg (float) (9.7.1.1.1)
sg_min_bd_mg (2820)	bb_shield%hcll%hcll.bb%outboard%mod_mech%sg_min_bd_mg (float) (9.7.1.1.1)
cp_min_ts_mg (2820)	bb_shield%hcll%hcll.bb%outboard%mod_mech%cp_min_ts_mg (float) (9.7.1.1.1)
cp_min_bd_mg (2820)	bb_shield%hcll%hcll.bb%outboard%mod_mech%cp_min_bd_mg (float) (9.7.1.1.1)
min_ts_mg_ac (2820)	bb_shield%hcll%hcll.bb%outboard%mod_mech%min_ts_mg_ac (float) (9.7.1.1.1)
min_bd_mg_ac (2820)	bb_shield%hcll%hcll.bb%outboard%mod_mech%min_bd_mg_ac (float) (9.7.1.1.1)
mod_lipb (2783)	bb_shield%hcll%hcll.bb%outboard%mod_lipb (mode_lipb) (9.7.1.3.269)
lp_rec_day (2819)	bb_shield%hcll%hcll.bb%outboard%mod_lipb%lp_rec_day (float) (9.7.1.1.1)
bb_lp_fr (2819)	bb_shield%hcll%hcll.bb%outboard%mod_lipb%bb_lp_fr (vecflt.type) (9.7.1.2.13)
lp_inl_p (2819)	bb_shield%hcll%hcll.bb%outboard%mod_lipb%lp_inl_p (float) (9.7.1.1.1)
bu_dp_lp (2819)	bb_shield%hcll%hcll.bb%outboard%mod_lipb%bu_dp_lp (float) (9.7.1.1.1)
man_dp_lp (2819)	bb_shield%hcll%hcll.bb%outboard%mod_lipb%man_dp_lp (float) (9.7.1.1.1)
tot_dp_lp (2819)	bb_shield%hcll%hcll.bb%outboard%mod_lipb%tot_dp_lp (float) (9.7.1.1.1)
bu_lp_ave_t (2819)	bb_shield%hcll%hcll.bb%outboard%mod_lipb%bu_lp_ave_t (float) (9.7.1.1.1)
bu_lp_max_t (2819)	bb_shield%hcll%hcll.bb%outboard%mod_lipb%bu_lp_max_t (float) (9.7.1.1.1)
mod_tritium (2783)	bb_shield%hcll%hcll.bb%outboard%mod_tritium (mode_tritium) (9.7.1.3.274)
t_conc_lipb (2824)	bb_shield%hcll%hcll.bb%outboard%mod_tritium%t_conc_lipb (float) (9.7.1.1.1)
t_conc_he (2824)	bb_shield%hcll%hcll.bb%outboard%mod_tritium%t_conc_he (float) (9.7.1.1.1)
codeparam (2555)	bb_shield%codeparam (codeparam) (9.7.1.3.77)
codename (2627)	bb_shield%codeparam%codename (string) (9.7.1.1.3)
codeversion (2627)	bb_shield%codeparam%codeversion (string) (9.7.1.1.3)
parameters (2627)	bb_shield%codeparam%parameters (string) (9.7.1.1.3)
output_diag (2627)	bb_shield%codeparam%output_diag (string) (9.7.1.1.3)
output_flag (2627)	bb_shield%codeparam%output_flag (integer) (9.7.1.1.2)
time (2555)	bb_shield%time (float) (9.7.1.1.1)

### 9.7.2.1.4 compositionc

datainfo (2556)	compositionc%datainfo (datainfo) (9.7.1.3.134)
dataprovider (2684)	compositionc%datainfo%dataprovider (string) (9.7.1.1.3)
putdate (2684)	compositionc%datainfo%putdate (string) (9.7.1.1.3)
source (2684)	compositionc%datainfo%source (string) (9.7.1.1.3)
comment (2684)	compositionc%datainfo%comment (string) (9.7.1.1.3)
cocos (2684)	compositionc%datainfo%cocos (integer) (9.7.1.1.2)
id (2684)	compositionc%datainfo%id (integer) (9.7.1.1.2)
isref (2684)	compositionc%datainfo%isref (integer) (9.7.1.1.2)
whatref (2684)	compositionc%datainfo%whatref (whatref) (9.7.1.3.506)
user (3056)	compositionc%datainfo%whatref%user (string) (9.7.1.1.3)
machine (3056)	compositionc%datainfo%whatref%machine (string) (9.7.1.1.3)
shot (3056)	compositionc%datainfo%whatref%shot (integer) (9.7.1.1.2)



run (3056)	composition%datainfo%whatref%run (integer) (9.7.1.1.2)
occurrence (3056)	composition%datainfo%whatref%occurrence (integer) (9.7.1.1.2)
putinfo (2684)	composition%datainfo%putinfo (putinfo) (9.7.1.3.342)
putmethod (2892)	composition%datainfo%putinfo%putmethod (string) (9.7.1.1.3)
putaccess (2892)	composition%datainfo%putinfo%putaccess (string) (9.7.1.1.3)
putlocation (2892)	composition%datainfo%putinfo%putlocation (string) (9.7.1.1.3)
rights (2892)	composition%datainfo%putinfo%rights (string) (9.7.1.1.3)
compositions (2556)	composition%compositions (compositions.type) (9.7.1.3.99)
nuclei (2649)	composition%compositions%nuclei(:) (nuclei) (9.7.1.3.299)
zn (2849)	composition%compositions%nuclei(:)%zn (float) (9.7.1.1.1)
amn (2849)	composition%compositions%nuclei(:)%amn (float) (9.7.1.1.1)
label (2849)	composition%compositions%nuclei(:)%label (string) (9.7.1.1.3)
ions (2649)	composition%compositions%ions(:) (ions) (9.7.1.3.240)
nucindex (2790)	composition%compositions%ions(:)%nucindex (integer) (9.7.1.1.2)
zion (2790)	composition%compositions%ions(:)%zion (float) (9.7.1.1.1)
imp_flag (2790)	composition%compositions%ions(:)%imp_flag (integer) (9.7.1.1.2)
label (2790)	composition%compositions%ions(:)%label (string) (9.7.1.1.3)
impurities (2649)	composition%compositions%impurities(:) (impurities) (9.7.1.3.237)
nucindex (2787)	composition%compositions%impurities(:)%nucindex (integer) (9.7.1.1.2)
i_ion (2787)	composition%compositions%impurities(:)%i_ion (integer) (9.7.1.1.2)
nzimp (2787)	composition%compositions%impurities(:)%nzimp (integer) (9.7.1.1.2)
zmin (2787)	composition%compositions%impurities(:)%zmin (vecflt.type) (9.7.1.2.13)
zmax (2787)	composition%compositions%impurities(:)%zmax (vecflt.type) (9.7.1.2.13)
label (2787)	composition%compositions%impurities(:)%label (vecstring.type) (9.7.1.2.15)
neutralscomp (2649)	composition%compositions%neutralscomp(:) (composition_neutralscomp) (9.7.1.3.98)
neutcomp (2648)	composition%compositions%neutralscomp(:)%neutcomp(:) (composition_neutrals_neutcomp) (9.7.1.3.97)
nucindex (2647)	composition%compositions%neutralscomp(:)%neutcomp(:)%nucindex (integer) (9.7.1.1.2)
multiplicity (2647)	composition%compositions%neutralscomp(:)%neutcomp(:)%multiplicity (integer) (9.7.1.1.2)
type (2648)	composition%compositions%neutralscomp(:)%type(:) (identifier) (9.7.1.3.235)
id (2785)	composition%compositions%neutralscomp(:)%type(:)%id (string) (9.7.1.1.3)
flag (2785)	composition%compositions%neutralscomp(:)%type(:)%flag (integer) (9.7.1.1.2)
description (2785)	composition%compositions%neutralscomp(:)%type(:)%description (string) (9.7.1.1.3)
label (2648)	composition%compositions%neutralscomp(:)%label (string) (9.7.1.1.3)
edgespecies (2649)	composition%compositions%edgespecies(:) (edgespecies) (9.7.1.3.185)
nucindex (2735)	composition%compositions%edgespecies(:)%nucindex (integer) (9.7.1.1.2)
zmin (2735)	composition%compositions%edgespecies(:)%zmin (float) (9.7.1.1.1)
zmax (2735)	composition%compositions%edgespecies(:)%zmax (float) (9.7.1.1.1)
label (2735)	composition%compositions%edgespecies(:)%label (string) (9.7.1.1.3)
signature (2649)	composition%compositions%signature (identifier) (9.7.1.3.235)
id (2785)	composition%compositions%signature%id (string) (9.7.1.1.3)
flag (2785)	composition%compositions%signature%flag (integer) (9.7.1.1.2)
description (2785)	composition%compositions%signature%description (string) (9.7.1.1.3)
codeparam (2556)	composition%codeparam (codeparam) (9.7.1.3.77)
codename (2627)	composition%codeparam%codename (string) (9.7.1.1.3)
codeversion (2627)	composition%codeparam%codeversion (string) (9.7.1.1.3)
parameters (2627)	composition%codeparam%parameters (string) (9.7.1.1.3)
output_diag (2627)	composition%codeparam%output_diag (string) (9.7.1.1.3)
output_flag (2627)	composition%codeparam%output_flag (integer) (9.7.1.1.2)
time (2556)	composition%time (float) (9.7.1.1.1)

### 9.7.2.1.5 coredelta

datainfo (2557)	coredelta%datainfo (datainfo) (9.7.1.3.134)
dataprovider (2684)	coredelta%datainfo%dataprovider (string) (9.7.1.1.3)
putdate (2684)	coredelta%datainfo%putdate (string) (9.7.1.1.3)
source (2684)	coredelta%datainfo%source (string) (9.7.1.1.3)
comment (2684)	coredelta%datainfo%comment (string) (9.7.1.1.3)
cocos (2684)	coredelta%datainfo%cocos (integer) (9.7.1.1.2)
id (2684)	coredelta%datainfo%id (integer) (9.7.1.1.2)
isref (2684)	coredelta%datainfo%isref (integer) (9.7.1.1.2)
whatref (2684)	coredelta%datainfo%whatref (whatref) (9.7.1.3.506)

user (3056)	coredelta%datainfo%whatref%user (string) (9.7.1.1.3)
machine (3056)	coredelta%datainfo%whatref%machine (string) (9.7.1.1.3)
shot (3056)	coredelta%datainfo%whatref%shot (integer) (9.7.1.1.2)
run (3056)	coredelta%datainfo%whatref%run (integer) (9.7.1.1.2)
occurrence (3056)	coredelta%datainfo%whatref%occurrence (integer) (9.7.1.1.2)
putinfo (2684)	coredelta%datainfo%putinfo (putinfo) (9.7.1.3.342)
putmethod (2892)	coredelta%datainfo%putinfo%putmethod (string) (9.7.1.1.3)
putaccess (2892)	coredelta%datainfo%putinfo%putaccess (string) (9.7.1.1.3)
putlocation (2892)	coredelta%datainfo%putinfo%putlocation (string) (9.7.1.1.3)
rights (2892)	coredelta%datainfo%putinfo%rights (string) (9.7.1.1.3)
composition (2557)	coredelta%composition (composition) (9.7.1.3.95)
amn (2645)	coredelta%composition%amn (vecflt_type) (9.7.1.2.13)
zn (2645)	coredelta%composition%zn (vecflt_type) (9.7.1.2.13)
zion (2645)	coredelta%composition%zion (vecflt_type) (9.7.1.2.13)
imp_flag (2645)	coredelta%composition%imp_flag (vecint_type) (9.7.1.2.14)
label (2645)	coredelta%composition%label (vecstring_type) (9.7.1.2.15)
desc_impur (2557)	coredelta%desc_impur (desc_impur) (9.7.1.3.136)
amn (2686)	coredelta%desc_impur%amn (vecflt_type) (9.7.1.2.13)
zn (2686)	coredelta%desc_impur%zn (vecint_type) (9.7.1.2.14)
i_ion (2686)	coredelta%desc_impur%i_ion (vecint_type) (9.7.1.2.14)
nzimp (2686)	coredelta%desc_impur%nzimp (vecint_type) (9.7.1.2.14)
zmin (2686)	coredelta%desc_impur%zmin (matint_type) (9.7.1.2.11)
zmax (2686)	coredelta%desc_impur%zmax (matint_type) (9.7.1.2.11)
label (2686)	coredelta%desc_impur%label (vecstring_type) (9.7.1.2.15)
compositions (2557)	coredelta%compositions (compositions_type) (9.7.1.3.99)
nuclei (2649)	coredelta%compositions%nuclei(:) (nuclei) (9.7.1.3.299)
zn (2849)	coredelta%compositions%nuclei(:)%zn (float) (9.7.1.1.1)
amn (2849)	coredelta%compositions%nuclei(:)%amn (float) (9.7.1.1.1)
label (2849)	coredelta%compositions%nuclei(:)%label (string) (9.7.1.1.3)
ions (2649)	coredelta%compositions%ions(:) (ions) (9.7.1.3.240)
nucindex (2790)	coredelta%compositions%ions(:)%nucindex (integer) (9.7.1.1.2)
zion (2790)	coredelta%compositions%ions(:)%zion (float) (9.7.1.1.1)
imp_flag (2790)	coredelta%compositions%ions(:)%imp_flag (integer) (9.7.1.1.2)
label (2790)	coredelta%compositions%ions(:)%label (string) (9.7.1.1.3)
impurities (2649)	coredelta%compositions%impurities(:) (impurities) (9.7.1.3.237)
nucindex (2787)	coredelta%compositions%impurities(:)%nucindex (integer) (9.7.1.1.2)
i_ion (2787)	coredelta%compositions%impurities(:)%i_ion (integer) (9.7.1.1.2)
nzimp (2787)	coredelta%compositions%impurities(:)%nzimp (integer) (9.7.1.1.2)
zmin (2787)	coredelta%compositions%impurities(:)%zmin (vecflt_type) (9.7.1.2.13)
zmax (2787)	coredelta%compositions%impurities(:)%zmax (vecflt_type) (9.7.1.2.13)
label (2787)	coredelta%compositions%impurities(:)%label (vecstring_type) (9.7.1.2.15)
neutralscomp (2649)	coredelta%compositions%neutralscomp(:) (composition_neutralscomp) (9.7.1.3.98)
neutcomp (2648)	coredelta%compositions%neutralscomp(:)%neutcomp(:) (composition_neutrals_neutcomp) (9.7.1.3.97)
nucindex (2647)	coredelta%compositions%neutralscomp(:)%neutcomp(:)%nucindex (integer) (9.7.1.1.2)
multiplicity (2647)	coredelta%compositions%neutralscomp(:)%neutcomp(:)%multiplicity (integer) (9.7.1.1.2)
type (2648)	coredelta%compositions%neutralscomp(:)%type(:) (identifier) (9.7.1.3.235)
id (2785)	coredelta%compositions%neutralscomp(:)%type(:)%id (string) (9.7.1.1.3)
flag (2785)	coredelta%compositions%neutralscomp(:)%type(:)%flag (integer) (9.7.1.1.2)
description (2785)	coredelta%compositions%neutralscomp(:)%type(:)%description (string) (9.7.1.1.3)
label (2648)	coredelta%compositions%neutralscomp(:)%label (string) (9.7.1.1.3)
edgespecies (2649)	coredelta%compositions%edgespecies(:) (edgespecies) (9.7.1.3.185)
nucindex (2735)	coredelta%compositions%edgespecies(:)%nucindex (integer) (9.7.1.1.2)
zmin (2735)	coredelta%compositions%edgespecies(:)%zmin (float) (9.7.1.1.1)
zmax (2735)	coredelta%compositions%edgespecies(:)%zmax (float) (9.7.1.1.1)
label (2735)	coredelta%compositions%edgespecies(:)%label (string) (9.7.1.1.3)
signature (2649)	coredelta%compositions%signature (identifier) (9.7.1.3.235)
id (2785)	coredelta%compositions%signature%id (string) (9.7.1.1.3)
flag (2785)	coredelta%compositions%signature%flag (integer) (9.7.1.1.2)
description (2785)	coredelta%compositions%signature%description (string) (9.7.1.1.3)
values (2557)	coredelta%values(:) (coredelta_values) (9.7.1.3.104)
deltaid (2654)	coredelta%values(:)%deltaid (identifier) (9.7.1.3.235)

id (2785)	coredelta%values(:)%deltaid%id (string) (9.7.1.1.3)
flag (2785)	coredelta%values(:)%deltaid%flag (integer) (9.7.1.1.2)
description (2785)	coredelta%values(:)%deltaid%description (string) (9.7.1.1.3)
rho_tor (2654)	coredelta%values(:)%rho_tor (vecflt_type) (9.7.1.2.13)
rho_tor_norm (2654)	coredelta%values(:)%rho_tor_norm (vecflt_type) (9.7.1.2.13)
psi (2654)	coredelta%values(:)%psi (vecflt_type) (9.7.1.2.13)
volume (2654)	coredelta%values(:)%volume (vecflt_type) (9.7.1.2.13)
area (2654)	coredelta%values(:)%area (vecflt_type) (9.7.1.2.13)
delta_psi (2654)	coredelta%values(:)%delta_psi (vecflt_type) (9.7.1.2.13)
delta_te (2654)	coredelta%values(:)%delta_te (vecflt_type) (9.7.1.2.13)
delta_ti (2654)	coredelta%values(:)%delta_ti (matflt_type) (9.7.1.2.10)
delta_ne (2654)	coredelta%values(:)%delta_ne (vecflt_type) (9.7.1.2.13)
delta_ni (2654)	coredelta%values(:)%delta_ni (matflt_type) (9.7.1.2.10)
impurity (2654)	coredelta%values(:)%impurity(:) (coredelta.values_impurity) (9.7.1.3.105)
delta_tz (2655)	coredelta%values(:)%impurity(:)%delta_tz (matflt_type) (9.7.1.2.10)
delta_nz (2655)	coredelta%values(:)%impurity(:)%delta_nz (matflt_type) (9.7.1.2.10)
delta_vtor (2654)	coredelta%values(:)%delta_vtor (matflt_type) (9.7.1.2.10)
codeparam (2654)	coredelta%values(:)%codeparam (codeparam) (9.7.1.3.77)
codename (2627)	coredelta%values(:)%codeparam%codename (string) (9.7.1.1.3)
codeversion (2627)	coredelta%values(:)%codeparam%codeversion (string) (9.7.1.1.3)
parameters (2627)	coredelta%values(:)%codeparam%parameters (string) (9.7.1.1.3)
output_diag (2627)	coredelta%values(:)%codeparam%output_diag (string) (9.7.1.1.3)
output_flag (2627)	coredelta%values(:)%codeparam%output_flag (integer) (9.7.1.1.2)
codeparam (2557)	coredelta%codeparam (codeparam) (9.7.1.3.77)
codename (2627)	coredelta%codeparam%codename (string) (9.7.1.1.3)
codeversion (2627)	coredelta%codeparam%codeversion (string) (9.7.1.1.3)
parameters (2627)	coredelta%codeparam%parameters (string) (9.7.1.1.3)
output_diag (2627)	coredelta%codeparam%output_diag (string) (9.7.1.1.3)
output_flag (2627)	coredelta%codeparam%output_flag (integer) (9.7.1.1.2)
time (2557)	coredelta%time (float) (9.7.1.1.1)

### 9.7.2.1.6 corefast

datainfo (2558)	corefast%datainfo (datainfo) (9.7.1.3.134)
dataprovider (2684)	corefast%datainfo%dataprovider (string) (9.7.1.1.3)
putdate (2684)	corefast%datainfo%putdate (string) (9.7.1.1.3)
source (2684)	corefast%datainfo%source (string) (9.7.1.1.3)
comment (2684)	corefast%datainfo%comment (string) (9.7.1.1.3)
cocos (2684)	corefast%datainfo%cocos (integer) (9.7.1.1.2)
id (2684)	corefast%datainfo%id (integer) (9.7.1.1.2)
isref (2684)	corefast%datainfo%isref (integer) (9.7.1.1.2)
whatref (2684)	corefast%datainfo%whatref (whatref) (9.7.1.3.506)
user (3056)	corefast%datainfo%whatref%user (string) (9.7.1.1.3)
machine (3056)	corefast%datainfo%whatref%machine (string) (9.7.1.1.3)
shot (3056)	corefast%datainfo%whatref%shot (integer) (9.7.1.1.2)
run (3056)	corefast%datainfo%whatref%run (integer) (9.7.1.1.2)
occurrence (3056)	corefast%datainfo%whatref%occurrence (integer) (9.7.1.1.2)
putinfo (2684)	corefast%datainfo%putinfo (putinfo) (9.7.1.3.342)
putmethod (2892)	corefast%datainfo%putinfo%putmethod (string) (9.7.1.1.3)
putaccess (2892)	corefast%datainfo%putinfo%putaccess (string) (9.7.1.1.3)
putlocation (2892)	corefast%datainfo%putinfo%putlocation (string) (9.7.1.1.3)
rights (2892)	corefast%datainfo%putinfo%rights (string) (9.7.1.1.3)
composition (2558)	corefast%composition (composition) (9.7.1.3.95)
amn (2645)	corefast%composition%amn (vecflt_type) (9.7.1.2.13)
zn (2645)	corefast%composition%zn (vecflt_type) (9.7.1.2.13)
zion (2645)	corefast%composition%zion (vecflt_type) (9.7.1.2.13)
imp_flag (2645)	corefast%composition%imp_flag (vecint_type) (9.7.1.2.14)
label (2645)	corefast%composition%label (vecstring_type) (9.7.1.2.15)
desc_impur (2558)	corefast%desc_impur (desc_impur) (9.7.1.3.136)
amn (2686)	corefast%desc_impur%amn (vecflt_type) (9.7.1.2.13)
zn (2686)	corefast%desc_impur%zn (vecint_type) (9.7.1.2.14)

i_ion (2686)	corefast%desc_impur%i_ion (vecint_type) (9.7.1.2.14)
nzimp (2686)	corefast%desc_impur%nzimp (vecint_type) (9.7.1.2.14)
zmin (2686)	corefast%desc_impur%zmin (matint_type) (9.7.1.2.11)
zmax (2686)	corefast%desc_impur%zmax (matint_type) (9.7.1.2.11)
label (2686)	corefast%desc_impur%label (vecstring_type) (9.7.1.2.15)
compositions (2558)	corefast%compositions (compositions_type) (9.7.1.3.99)
nuclei (2649)	corefast%compositions%nuclei(:) (nuclei) (9.7.1.3.299)
zn (2849)	corefast%compositions%nuclei(:)%zn (float) (9.7.1.1.1)
amn (2849)	corefast%compositions%nuclei(:)%amn (float) (9.7.1.1.1)
label (2849)	corefast%compositions%nuclei(:)%label (string) (9.7.1.1.3)
ions (2649)	corefast%compositions%ions(:) (ions) (9.7.1.3.240)
nucindex (2790)	corefast%compositions%ions(:)%nucindex (integer) (9.7.1.1.2)
zion (2790)	corefast%compositions%ions(:)%zion (float) (9.7.1.1.1)
imp_flag (2790)	corefast%compositions%ions(:)%imp_flag (integer) (9.7.1.1.2)
label (2790)	corefast%compositions%ions(:)%label (string) (9.7.1.1.3)
impurities (2649)	corefast%compositions%impurities(:) (impurities) (9.7.1.3.237)
nucindex (2787)	corefast%compositions%impurities(:)%nucindex (integer) (9.7.1.1.2)
i_ion (2787)	corefast%compositions%impurities(:)%i_ion (integer) (9.7.1.1.2)
nzimp (2787)	corefast%compositions%impurities(:)%nzimp (integer) (9.7.1.1.2)
zmin (2787)	corefast%compositions%impurities(:)%zmin (vecflt_type) (9.7.1.2.13)
zmax (2787)	corefast%compositions%impurities(:)%zmax (vecflt_type) (9.7.1.2.13)
label (2787)	corefast%compositions%impurities(:)%label (vecstring_type) (9.7.1.2.15)
neutralscomp (2649)	corefast%compositions%neutralscomp(:) (composition_neutralscomp) (9.7.1.3.98)
neutcomp (2648)	corefast%compositions%neutralscomp(:)%neutcomp(:) (composition_neutrals_neutcomp) (9.7.1.3.97)
nucindex (2647)	corefast%compositions%neutralscomp(:)%neutcomp(:)%nucindex (integer) (9.7.1.1.2)
multiplicity (2647)	corefast%compositions%neutralscomp(:)%neutcomp(:)%multiplicity (integer) (9.7.1.1.2)
type (2648)	corefast%compositions%neutralscomp(:)%type(:) (identifier) (9.7.1.3.235)
id (2785)	corefast%compositions%neutralscomp(:)%type(:)%id (string) (9.7.1.1.3)
flag (2785)	corefast%compositions%neutralscomp(:)%type(:)%flag (integer) (9.7.1.1.2)
description (2785)	corefast%compositions%neutralscomp(:)%type(:)%description (string) (9.7.1.1.3)
label (2648)	corefast%compositions%neutralscomp(:)%label (string) (9.7.1.1.3)
edgespecies (2649)	corefast%compositions%edgespecies(:) (edgespecies) (9.7.1.3.185)
nucindex (2735)	corefast%compositions%edgespecies(:)%nucindex (integer) (9.7.1.1.2)
zmin (2735)	corefast%compositions%edgespecies(:)%zmin (float) (9.7.1.1.1)
zmax (2735)	corefast%compositions%edgespecies(:)%zmax (float) (9.7.1.1.1)
label (2735)	corefast%compositions%edgespecies(:)%label (string) (9.7.1.1.3)
signature (2649)	corefast%compositions%signature (identifier) (9.7.1.3.235)
id (2785)	corefast%compositions%signature%id (string) (9.7.1.1.3)
flag (2785)	corefast%compositions%signature%flag (integer) (9.7.1.1.2)
description (2785)	corefast%compositions%signature%description (string) (9.7.1.1.3)
toroid_field (2558)	corefast%toroid_field (b0r0) (9.7.1.3.59)
r0 (2609)	corefast%toroid_field%r0 (float) (9.7.1.1.1)
b0 (2609)	corefast%toroid_field%b0 (float) (9.7.1.1.1)
values (2558)	corefast%values(:) (corefast_values) (9.7.1.3.106)
fastid (2656)	corefast%values(:)%fastid (identifier) (9.7.1.3.235)
id (2785)	corefast%values(:)%fastid%id (string) (9.7.1.1.3)
flag (2785)	corefast%values(:)%fastid%flag (integer) (9.7.1.1.2)
description (2785)	corefast%values(:)%fastid%description (string) (9.7.1.1.3)
filter (2656)	corefast%values(:)%filter (fast_thermal_separation_filter) (9.7.1.3.200)
method (2750)	corefast%values(:)%filter%method (identifier) (9.7.1.3.235)
id (2785)	corefast%values(:)%filter%method%id (string) (9.7.1.1.3)
flag (2785)	corefast%values(:)%filter%method%flag (integer) (9.7.1.1.2)
description (2785)	corefast%values(:)%filter%method%description (string) (9.7.1.1.3)
energy_sep (2750)	corefast%values(:)%filter%energy_sep (vecflt_type) (9.7.1.2.13)
rho_tor (2656)	corefast%values(:)%rho_tor (vecflt_type) (9.7.1.2.13)
rho_tor_norm (2656)	corefast%values(:)%rho_tor_norm (vecflt_type) (9.7.1.2.13)
psi (2656)	corefast%values(:)%psi (vecflt_type) (9.7.1.2.13)
volume (2656)	corefast%values(:)%volume (vecflt_type) (9.7.1.2.13)
area (2656)	corefast%values(:)%area (vecflt_type) (9.7.1.2.13)
j (2656)	corefast%values(:)%j (vecflt_type) (9.7.1.2.13)
sigma (2656)	corefast%values(:)%sigma (vecflt_type) (9.7.1.2.13)

ni (2656)	corefast%values(:)%ni (matflt_type) (9.7.1.2.10)
ne (2656)	corefast%values(:)%ne (vecflt_type) (9.7.1.2.13)
nz (2656)	corefast%values(:)%nz (matflt_type) (9.7.1.2.10)
pi (2656)	corefast%values(:)%pi (matflt_type) (9.7.1.2.10)
pe (2656)	corefast%values(:)%pe (vecflt_type) (9.7.1.2.13)
pz (2656)	corefast%values(:)%pz (matflt_type) (9.7.1.2.10)
pi_para (2656)	corefast%values(:)%pi_para (matflt_type) (9.7.1.2.10)
pe_para (2656)	corefast%values(:)%pe_para (vecflt_type) (9.7.1.2.13)
pz_para (2656)	corefast%values(:)%pz_para (matflt_type) (9.7.1.2.10)
ui (2656)	corefast%values(:)%ui (matflt_type) (9.7.1.2.10)
uz (2656)	corefast%values(:)%uz (matflt_type) (9.7.1.2.10)
codeparam (2656)	corefast%values(:)%codeparam (codeparam) (9.7.1.3.77)
codename (2627)	corefast%values(:)%codeparam%codename (string) (9.7.1.1.3)
codeversion (2627)	corefast%values(:)%codeparam%codeversion (string) (9.7.1.1.3)
parameters (2627)	corefast%values(:)%codeparam%parameters (string) (9.7.1.1.3)
output_diag (2627)	corefast%values(:)%codeparam%output_diag (string) (9.7.1.1.3)
output_flag (2627)	corefast%values(:)%codeparam%output_flag (integer) (9.7.1.1.2)
codeparam (2558)	corefast%codeparam (codeparam) (9.7.1.3.77)
codename (2627)	corefast%codeparam%codename (string) (9.7.1.1.3)
codeversion (2627)	corefast%codeparam%codeversion (string) (9.7.1.1.3)
parameters (2627)	corefast%codeparam%parameters (string) (9.7.1.1.3)
output_diag (2627)	corefast%codeparam%output_diag (string) (9.7.1.1.3)
output_flag (2627)	corefast%codeparam%output_flag (integer) (9.7.1.1.2)
time (2558)	corefast%time (float) (9.7.1.1.1)

### 9.7.2.1.7 coreimpur

datainfo (2559)	coreimpur%datainfo (datainfo) (9.7.1.3.134)
dataprovider (2684)	coreimpur%datainfo%dataprovider (string) (9.7.1.1.3)
putdate (2684)	coreimpur%datainfo%putdate (string) (9.7.1.1.3)
source (2684)	coreimpur%datainfo%source (string) (9.7.1.1.3)
comment (2684)	coreimpur%datainfo%comment (string) (9.7.1.1.3)
cocos (2684)	coreimpur%datainfo%cocos (integer) (9.7.1.1.2)
id (2684)	coreimpur%datainfo%id (integer) (9.7.1.1.2)
isref (2684)	coreimpur%datainfo%isref (integer) (9.7.1.1.2)
whatref (2684)	coreimpur%datainfo%whatref (whatref) (9.7.1.3.506)
user (3056)	coreimpur%datainfo%whatref%user (string) (9.7.1.1.3)
machine (3056)	coreimpur%datainfo%whatref%machine (string) (9.7.1.1.3)
shot (3056)	coreimpur%datainfo%whatref%shot (integer) (9.7.1.1.2)
run (3056)	coreimpur%datainfo%whatref%run (integer) (9.7.1.1.2)
occurrence (3056)	coreimpur%datainfo%whatref%occurrence (integer) (9.7.1.1.2)
putinfo (2684)	coreimpur%datainfo%putinfo (putinfo) (9.7.1.3.342)
putmethod (2892)	coreimpur%datainfo%putinfo%putmethod (string) (9.7.1.1.3)
putaccess (2892)	coreimpur%datainfo%putinfo%putaccess (string) (9.7.1.1.3)
putlocation (2892)	coreimpur%datainfo%putinfo%putlocation (string) (9.7.1.1.3)
rights (2892)	coreimpur%datainfo%putinfo%rights (string) (9.7.1.1.3)
rho_tor_norm (2559)	coreimpur%rho_tor_norm (vecflt_type) (9.7.1.2.13)
rho_tor (2559)	coreimpur%rho_tor (vecflt_type) (9.7.1.2.13)
psi (2559)	coreimpur%psi (vecflt_type) (9.7.1.2.13)
volume (2559)	coreimpur%volume (vecflt_type) (9.7.1.2.13)
area (2559)	coreimpur%area (vecflt_type) (9.7.1.2.13)
source (2559)	coreimpur%source (vecstring_type) (9.7.1.2.15)
flag (2559)	coreimpur%flag (vecint_type) (9.7.1.2.14)
desc_impur (2559)	coreimpur%desc_impur (desc_impur) (9.7.1.3.136)
amn (2686)	coreimpur%desc_impur%amn (vecflt_type) (9.7.1.2.13)
zn (2686)	coreimpur%desc_impur%zn (vecint_type) (9.7.1.2.14)
i_ion (2686)	coreimpur%desc_impur%i_ion (vecint_type) (9.7.1.2.14)
nzimp (2686)	coreimpur%desc_impur%nzimp (vecint_type) (9.7.1.2.14)
zmin (2686)	coreimpur%desc_impur%zmin (matint_type) (9.7.1.2.11)
zmax (2686)	coreimpur%desc_impur%zmax (matint_type) (9.7.1.2.11)
label (2686)	coreimpur%desc_impur%label (vecstring_type) (9.7.1.2.15)

compositions (2559)	coreimpur%compositions (compositions_type) (9.7.1.3.99)
nuclei (2649)	coreimpur%compositions%nuclei(:) (nuclei) (9.7.1.3.299)
zn (2849)	coreimpur%compositions%nuclei(:)%zn (float) (9.7.1.1.1)
amn (2849)	coreimpur%compositions%nuclei(:)%amn (float) (9.7.1.1.1)
label (2849)	coreimpur%compositions%nuclei(:)%label (string) (9.7.1.1.3)
ions (2649)	coreimpur%compositions%ions(:) (ions) (9.7.1.3.240)
nucindex (2790)	coreimpur%compositions%ions(:)%nucindex (integer) (9.7.1.1.2)
zion (2790)	coreimpur%compositions%ions(:)%zion (float) (9.7.1.1.1)
imp_flag (2790)	coreimpur%compositions%ions(:)%imp_flag (integer) (9.7.1.1.2)
label (2790)	coreimpur%compositions%ions(:)%label (string) (9.7.1.1.3)
impurities (2649)	coreimpur%compositions%impurities(:) (impurities) (9.7.1.3.237)
nucindex (2787)	coreimpur%compositions%impurities(:)%nucindex (integer) (9.7.1.1.2)
i_ion (2787)	coreimpur%compositions%impurities(:)%i_ion (integer) (9.7.1.1.2)
nzimp (2787)	coreimpur%compositions%impurities(:)%nzimp (integer) (9.7.1.1.2)
zmin (2787)	coreimpur%compositions%impurities(:)%zmin (vecflt_type) (9.7.1.2.13)
zmax (2787)	coreimpur%compositions%impurities(:)%zmax (vecflt_type) (9.7.1.2.13)
label (2787)	coreimpur%compositions%impurities(:)%label (vecstring_type) (9.7.1.2.15)
neutralscomp (2649)	coreimpur%compositions%neutralscomp(:) (composition_neutralscomp) (9.7.1.3.98)
neutcomp (2648)	coreimpur%compositions%neutralscomp(:)%neutcomp(:) (composition_neutrals_neutcomp) (9.7.1.3.97)
nucindex (2647)	coreimpur%compositions%neutralscomp(:)%neutcomp(:)%nucindex (integer) (9.7.1.1.2)
multiplicity (2647)	coreimpur%compositions%neutralscomp(:)%neutcomp(:)%multiplicity (integer) (9.7.1.1.2)
type (2648)	coreimpur%compositions%neutralscomp(:)%type(:) (identifier) (9.7.1.3.235)
id (2785)	coreimpur%compositions%neutralscomp(:)%type(:)%id (string) (9.7.1.1.3)
flag (2785)	coreimpur%compositions%neutralscomp(:)%type(:)%flag (integer) (9.7.1.1.2)
description (2785)	coreimpur%compositions%neutralscomp(:)%type(:)%description (string) (9.7.1.1.3)
label (2648)	coreimpur%compositions%neutralscomp(:)%label (string) (9.7.1.1.3)
edgespecies (2649)	coreimpur%compositions%edgespecies(:) (edgespecies) (9.7.1.3.185)
nucindex (2735)	coreimpur%compositions%edgespecies(:)%nucindex (integer) (9.7.1.1.2)
zmin (2735)	coreimpur%compositions%edgespecies(:)%zmin (float) (9.7.1.1.1)
zmax (2735)	coreimpur%compositions%edgespecies(:)%zmax (float) (9.7.1.1.1)
label (2735)	coreimpur%compositions%edgespecies(:)%label (string) (9.7.1.1.3)
signature (2649)	coreimpur%compositions%signature (identifier) (9.7.1.3.235)
id (2785)	coreimpur%compositions%signature%id (string) (9.7.1.1.3)
flag (2785)	coreimpur%compositions%signature%flag (integer) (9.7.1.1.2)
description (2785)	coreimpur%compositions%signature%description (string) (9.7.1.1.3)
atomic_data (2559)	coreimpur%atomic_data (vecstring_type) (9.7.1.2.15)
impurity (2559)	coreimpur%impurity(:) (impurity_type) (9.7.1.3.238)
z (2788)	coreimpur%impurity(:)%z (matflt_type) (9.7.1.2.10)
zsq (2788)	coreimpur%impurity(:)%zsq (matflt_type) (9.7.1.2.10)
nz (2788)	coreimpur%impurity(:)%nz (matflt_type) (9.7.1.2.10)
tz (2788)	coreimpur%impurity(:)%tz (matflt_type) (9.7.1.2.10)
source_term (2788)	coreimpur%impurity(:)%source_term (sourceimp) (9.7.1.3.408)
value (2958)	coreimpur%impurity(:)%source_term%value (matflt_type) (9.7.1.2.10)
integral (2958)	coreimpur%impurity(:)%source_term%integral (matflt_type) (9.7.1.2.10)
source (2958)	coreimpur%impurity(:)%source_term%source (vecstring_type) (9.7.1.2.15)
boundary (2788)	coreimpur%impurity(:)%boundary (boundaryimp) (9.7.1.3.70)
value (2620)	coreimpur%impurity(:)%boundary%value (matflt_type) (9.7.1.2.10)
source (2620)	coreimpur%impurity(:)%boundary%source (string) (9.7.1.1.3)
type (2620)	coreimpur%impurity(:)%boundary%type (vecint_type) (9.7.1.2.14)
rho (2620)	coreimpur%impurity(:)%boundary%rho (vecflt_type) (9.7.1.2.13)
codeparam (2620)	coreimpur%impurity(:)%boundary%codeparam (codeparam) (9.7.1.3.77)
codename (2627)	coreimpur%impurity(:)%boundary%codeparam%codename (string) (9.7.1.1.3)
codeversion (2627)	coreimpur%impurity(:)%boundary%codeparam%codeversion (string) (9.7.1.1.3)
parameters (2627)	coreimpur%impurity(:)%boundary%codeparam%parameters (string) (9.7.1.1.3)
output_diag (2627)	coreimpur%impurity(:)%boundary%codeparam%output_diag (string) (9.7.1.1.3)
output_flag (2627)	coreimpur%impurity(:)%boundary%codeparam%output_flag (integer) (9.7.1.1.2)
transp_coef (2788)	coreimpur%impurity(:)%transp_coef (coretransimp) (9.7.1.3.127)
diff (2677)	coreimpur%impurity(:)%transp_coef%diff (matflt_type) (9.7.1.2.10)
vconv (2677)	coreimpur%impurity(:)%transp_coef%vconv (matflt_type) (9.7.1.2.10)
source (2677)	coreimpur%impurity(:)%transp_coef%source (vecstring_type) (9.7.1.2.15)
flux (2788)	coreimpur%impurity(:)%flux (fluximp) (9.7.1.3.206)



flux_dv (2756)	coreimpur%impurity(:)%flux%flux_dv (matflt.type) (9.7.1.2.10)
flux_interp (2756)	coreimpur%impurity(:)%flux%flux_interp (matflt.type) (9.7.1.2.10)
time_deriv (2788)	coreimpur%impurity(:)%time_deriv (matflt.type) (9.7.1.2.10)
diagnostic (2788)	coreimpur%impurity(:)%diagnostic (coreimpurediag.type) (9.7.1.3.118)
radiation (2668)	coreimpur%impurity(:)%diagnostic%radiation (coreimpurediag_radiation) (9.7.1.3.115)
line_rad (2665)	coreimpur%impurity(:)%diagnostic%radiation%line_rad (coreimpurediagprof.type) (9.7.1.3.119)
profile (2669)	coreimpur%impurity(:)%diagnostic%radiation%line_rad%profile (matflt.type) (9.7.1.2.10)
integral (2669)	coreimpur%impurity(:)%diagnostic%radiation%line_rad%integral (matflt.type) (9.7.1.2.10)
brem_radrec (2665)	coreimpur%impurity(:)%diagnostic%radiation%brem_radrec (coreimpurediagprof.type) (9.7.1.3.119)
profile (2669)	coreimpur%impurity(:)%diagnostic%radiation%brem_radrec%profile (matflt.type) (9.7.1.2.10)
integral (2669)	coreimpur%impurity(:)%diagnostic%radiation%brem_radrec%integral (matflt.type) (9.7.1.2.10)
sum (2665)	coreimpur%impurity(:)%diagnostic%radiation%sum (coreimpurediagprof.type) (9.7.1.3.119)
profile (2669)	coreimpur%impurity(:)%diagnostic%radiation%sum%profile (matflt.type) (9.7.1.2.10)
integral (2669)	coreimpur%impurity(:)%diagnostic%radiation%sum%integral (matflt.type) (9.7.1.2.10)
energy (2668)	coreimpur%impurity(:)%diagnostic%energy (coreimpurediag_energy) (9.7.1.3.114)
ionization (2664)	coreimpur%impurity(:)%diagnostic%energy%ionization (coreimpurediagprof.type) (9.7.1.3.119)
profile (2669)	coreimpur%impurity(:)%diagnostic%energy%ionization%profile (matflt.type) (9.7.1.2.10)
integral (2669)	coreimpur%impurity(:)%diagnostic%energy%ionization%integral (matflt.type) (9.7.1.2.10)
recombin (2664)	coreimpur%impurity(:)%diagnostic%energy%recombin (coreimpurediagprof.type) (9.7.1.3.119)
profile (2669)	coreimpur%impurity(:)%diagnostic%energy%recombin%profile (matflt.type) (9.7.1.2.10)
integral (2669)	coreimpur%impurity(:)%diagnostic%energy%recombin%integral (matflt.type) (9.7.1.2.10)
sum (2664)	coreimpur%impurity(:)%diagnostic%energy%sum (coreimpurediagprof.type) (9.7.1.3.119)
profile (2669)	coreimpur%impurity(:)%diagnostic%energy%sum%profile (matflt.type) (9.7.1.2.10)
integral (2669)	coreimpur%impurity(:)%diagnostic%energy%sum%integral (matflt.type) (9.7.1.2.10)
diagnostic (2559)	coreimpur%diagnostic (coreimpurediag.type) (9.7.1.3.118)
radiation (2668)	coreimpur%diagnostic%radiation (coreimpurediag_radiation) (9.7.1.3.115)
line_rad (2665)	coreimpur%diagnostic%radiation%line_rad (coreimpurediagprof.type) (9.7.1.3.119)
profile (2669)	coreimpur%diagnostic%radiation%line_rad%profile (matflt.type) (9.7.1.2.10)
integral (2669)	coreimpur%diagnostic%radiation%line_rad%integral (matflt.type) (9.7.1.2.10)
brem_radrec (2665)	coreimpur%diagnostic%radiation%brem_radrec (coreimpurediagprof.type) (9.7.1.3.119)
profile (2669)	coreimpur%diagnostic%radiation%brem_radrec%profile (matflt.type) (9.7.1.2.10)
integral (2669)	coreimpur%diagnostic%radiation%brem_radrec%integral (matflt.type) (9.7.1.2.10)
sum (2665)	coreimpur%diagnostic%radiation%sum (coreimpurediagprof.type) (9.7.1.3.119)
profile (2669)	coreimpur%diagnostic%radiation%sum%profile (matflt.type) (9.7.1.2.10)
integral (2669)	coreimpur%diagnostic%radiation%sum%integral (matflt.type) (9.7.1.2.10)
energy (2668)	coreimpur%diagnostic%energy (coreimpurediag_energy) (9.7.1.3.114)
ionization (2664)	coreimpur%diagnostic%energy%ionization (coreimpurediagprof.type) (9.7.1.3.119)
profile (2669)	coreimpur%diagnostic%energy%ionization%profile (matflt.type) (9.7.1.2.10)
integral (2669)	coreimpur%diagnostic%energy%ionization%integral (matflt.type) (9.7.1.2.10)
recombin (2664)	coreimpur%diagnostic%energy%recombin (coreimpurediagprof.type) (9.7.1.3.119)
profile (2669)	coreimpur%diagnostic%energy%recombin%profile (matflt.type) (9.7.1.2.10)
integral (2669)	coreimpur%diagnostic%energy%recombin%integral (matflt.type) (9.7.1.2.10)
sum (2664)	coreimpur%diagnostic%energy%sum (coreimpurediagprof.type) (9.7.1.3.119)
profile (2669)	coreimpur%diagnostic%energy%sum%profile (matflt.type) (9.7.1.2.10)
integral (2669)	coreimpur%diagnostic%energy%sum%integral (matflt.type) (9.7.1.2.10)
diagnosticsum (2559)	coreimpur%diagnosticsum (coreimpurediag_sum) (9.7.1.3.116)
radiation (2666)	coreimpur%diagnosticsum%radiation (coreimpurdiag_sum_radiation) (9.7.1.3.113)
line_rad (2663)	coreimpur%diagnosticsum%radiation%line_rad (coreimpurediagsum.type) (9.7.1.3.120)
profile (2670)	coreimpur%diagnosticsum%radiation%line_rad%profile (vecflt.type) (9.7.1.2.13)
integral (2670)	coreimpur%diagnosticsum%radiation%line_rad%integral (vecflt.type) (9.7.1.2.13)
brem_radrec (2663)	coreimpur%diagnosticsum%radiation%brem_radrec (coreimpurediagsum.type) (9.7.1.3.120)
profile (2670)	coreimpur%diagnosticsum%radiation%brem_radrec%profile (vecflt.type) (9.7.1.2.13)
integral (2670)	coreimpur%diagnosticsum%radiation%brem_radrec%integral (vecflt.type) (9.7.1.2.13)
sum (2663)	coreimpur%diagnosticsum%radiation%sum (coreimpurediagsum.type) (9.7.1.3.120)
profile (2670)	coreimpur%diagnosticsum%radiation%sum%profile (vecflt.type) (9.7.1.2.13)
integral (2670)	coreimpur%diagnosticsum%radiation%sum%integral (vecflt.type) (9.7.1.2.13)
energy (2666)	coreimpur%diagnosticsum%energy (coreimpurediag_sum_energy) (9.7.1.3.117)



ionization (2667)	coreimpur%diagnosticsum%energy%ionization (coreimpurediagsum_type) (9.7.1.3.120)
profile (2670)	coreimpur%diagnosticsum%energy%ionization%profile (vecflt_type) (9.7.1.2.13)
integral (2670)	coreimpur%diagnosticsum%energy%ionization%integral (vecflt_type) (9.7.1.2.13)
recombin (2667)	coreimpur%diagnosticsum%energy%recombin (coreimpurediagsum_type) (9.7.1.3.120)
profile (2670)	coreimpur%diagnosticsum%energy%recombin%profile (vecflt_type) (9.7.1.2.13)
integral (2670)	coreimpur%diagnosticsum%energy%recombin%integral (vecflt_type) (9.7.1.2.13)
sum (2667)	coreimpur%diagnosticsum%energy%sum (coreimpurediagsum_type) (9.7.1.3.120)
profile (2670)	coreimpur%diagnosticsum%energy%sum%profile (vecflt_type) (9.7.1.2.13)
integral (2670)	coreimpur%diagnosticsum%energy%sum%integral (vecflt_type) (9.7.1.2.13)
codeparam (2559)	coreimpur%codeparam (codeparam) (9.7.1.3.77)
codename (2627)	coreimpur%codeparam%codename (string) (9.7.1.1.3)
codeversion (2627)	coreimpur%codeparam%codeversion (string) (9.7.1.1.3)
parameters (2627)	coreimpur%codeparam%parameters (string) (9.7.1.1.3)
output_diag (2627)	coreimpur%codeparam%output_diag (string) (9.7.1.1.3)
output_flag (2627)	coreimpur%codeparam%output_flag (integer) (9.7.1.1.2)
time (2559)	coreimpur%time (float) (9.7.1.1.1)

### 9.7.2.1.8 coreneutrals

datainfo (2560)	coreneutrals%datainfo (datainfo) (9.7.1.3.134)
dataprovider (2684)	coreneutrals%datainfo%dataprovider (string) (9.7.1.1.3)
putdate (2684)	coreneutrals%datainfo%putdate (string) (9.7.1.1.3)
source (2684)	coreneutrals%datainfo%source (string) (9.7.1.1.3)
comment (2684)	coreneutrals%datainfo%comment (string) (9.7.1.1.3)
cocos (2684)	coreneutrals%datainfo%cocos (integer) (9.7.1.1.2)
id (2684)	coreneutrals%datainfo%id (integer) (9.7.1.1.2)
isref (2684)	coreneutrals%datainfo%isref (integer) (9.7.1.1.2)
whatref (2684)	coreneutrals%datainfo%whatref (whatref) (9.7.1.3.506)
user (3056)	coreneutrals%datainfo%whatref%user (string) (9.7.1.1.3)
machine (3056)	coreneutrals%datainfo%whatref%machine (string) (9.7.1.1.3)
shot (3056)	coreneutrals%datainfo%whatref%shot (integer) (9.7.1.1.2)
run (3056)	coreneutrals%datainfo%whatref%run (integer) (9.7.1.1.2)
occurrence (3056)	coreneutrals%datainfo%whatref%occurrence (integer) (9.7.1.1.2)
putinfo (2684)	coreneutrals%datainfo%putinfo (putinfo) (9.7.1.3.342)
putmethod (2892)	coreneutrals%datainfo%putinfo%putmethod (string) (9.7.1.1.3)
putaccess (2892)	coreneutrals%datainfo%putinfo%putaccess (string) (9.7.1.1.3)
putlocation (2892)	coreneutrals%datainfo%putinfo%putlocation (string) (9.7.1.1.3)
rights (2892)	coreneutrals%datainfo%putinfo%rights (string) (9.7.1.1.3)
rho_tor (2560)	coreneutrals%rho_tor (vecflt_type) (9.7.1.2.13)
rho_tor_norm (2560)	coreneutrals%rho_tor_norm (vecflt_type) (9.7.1.2.13)
psi (2560)	coreneutrals%psi (vecflt_type) (9.7.1.2.13)
volume (2560)	coreneutrals%volume (vecflt_type) (9.7.1.2.13)
area (2560)	coreneutrals%area (vecflt_type) (9.7.1.2.13)
neutcompo (2560)	coreneutrals%neutcompo (composition_neutrals) (9.7.1.3.96)
atomlist (2646)	coreneutrals%neutcompo%atomlist() (coreneutrals_atomlist) (9.7.1.3.121)
amn (2671)	coreneutrals%neutcompo%atomlist()%amn (float) (9.7.1.1.1)
zn (2671)	coreneutrals%neutcompo%atomlist()%zn (float) (9.7.1.1.1)
ionimptype (2671)	coreneutrals%neutcompo%atomlist()%ionimptype (identifier) (9.7.1.3.235)
id (2785)	coreneutrals%neutcompo%atomlist()%ionimptype%id (string) (9.7.1.1.3)
flag (2785)	coreneutrals%neutcompo%atomlist()%ionimptype%flag (integer) (9.7.1.1.2)
description (2785)	coreneutrals%neutcompo%atomlist()%ionimptype%description (string) (9.7.1.1.3)
ionimpindex (2671)	coreneutrals%neutcompo%atomlist()%ionimpindex (integer) (9.7.1.1.2)
neutral (2646)	coreneutrals%neutcompo%neutral() (composition_neutralscomp) (9.7.1.3.98)
neutcomp (2648)	coreneutrals%neutcompo%neutral()%neutcomp() (composition_neutrals_neutcomp) (9.7.1.3.97)
nucindex (2647)	coreneutrals%neutcompo%neutral()%neutcomp()%nucindex (integer) (9.7.1.1.2)
multiplicity (2647)	coreneutrals%neutcompo%neutral()%neutcomp()%multiplicity (integer) (9.7.1.1.2)
type (2648)	coreneutrals%neutcompo%neutral()%type() (identifier) (9.7.1.3.235)
id (2785)	coreneutrals%neutcompo%neutral()%type()%id (string) (9.7.1.1.3)
flag (2785)	coreneutrals%neutcompo%neutral()%type()%flag (integer) (9.7.1.1.2)
description (2785)	coreneutrals%neutcompo%neutral()%type()%description (string) (9.7.1.1.3)
label (2648)	coreneutrals%neutcompo%neutral()%label (string) (9.7.1.1.3)

composition (2560)	coreneutrals%composition (composition) (9.7.1.3.95)
amn (2645)	coreneutrals%composition%amn (vecflt.type) (9.7.1.2.13)
zn (2645)	coreneutrals%composition%zn (vecflt.type) (9.7.1.2.13)
zion (2645)	coreneutrals%composition%zion (vecflt.type) (9.7.1.2.13)
imp_flag (2645)	coreneutrals%composition%imp_flag (vecint.type) (9.7.1.2.14)
label (2645)	coreneutrals%composition%label (vecstring.type) (9.7.1.2.15)
desc_impur (2560)	coreneutrals%desc_impur (desc_impur) (9.7.1.3.136)
amn (2686)	coreneutrals%desc_impur%amn (vecflt.type) (9.7.1.2.13)
zn (2686)	coreneutrals%desc_impur%zn (vecint.type) (9.7.1.2.14)
i_ion (2686)	coreneutrals%desc_impur%i_ion (vecint.type) (9.7.1.2.14)
nzimp (2686)	coreneutrals%desc_impur%nzimp (vecint.type) (9.7.1.2.14)
zmin (2686)	coreneutrals%desc_impur%zmin (matint.type) (9.7.1.2.11)
zmax (2686)	coreneutrals%desc_impur%zmax (matint.type) (9.7.1.2.11)
label (2686)	coreneutrals%desc_impur%label (vecstring.type) (9.7.1.2.15)
compositions (2560)	coreneutrals%compositions (compositions.type) (9.7.1.3.99)
nuclei (2649)	coreneutrals%compositions%nuclei(:) (nuclei) (9.7.1.3.299)
zn (2849)	coreneutrals%compositions%nuclei(:)%zn (float) (9.7.1.1.1)
amn (2849)	coreneutrals%compositions%nuclei(:)%amn (float) (9.7.1.1.1)
label (2849)	coreneutrals%compositions%nuclei(:)%label (string) (9.7.1.1.3)
ions (2649)	coreneutrals%compositions%ions(:) (ions) (9.7.1.3.240)
nucindex (2790)	coreneutrals%compositions%ions(:)%nucindex (integer) (9.7.1.1.2)
zion (2790)	coreneutrals%compositions%ions(:)%zion (float) (9.7.1.1.1)
imp_flag (2790)	coreneutrals%compositions%ions(:)%imp_flag (integer) (9.7.1.1.2)
label (2790)	coreneutrals%compositions%ions(:)%label (string) (9.7.1.1.3)
impurities (2649)	coreneutrals%compositions%impurities(:) (impurities) (9.7.1.3.237)
nucindex (2787)	coreneutrals%compositions%impurities(:)%nucindex (integer) (9.7.1.1.2)
i_ion (2787)	coreneutrals%compositions%impurities(:)%i_ion (integer) (9.7.1.1.2)
nzimp (2787)	coreneutrals%compositions%impurities(:)%nzimp (integer) (9.7.1.1.2)
zmin (2787)	coreneutrals%compositions%impurities(:)%zmin (vecflt.type) (9.7.1.2.13)
zmax (2787)	coreneutrals%compositions%impurities(:)%zmax (vecflt.type) (9.7.1.2.13)
label (2787)	coreneutrals%compositions%impurities(:)%label (vecstring.type) (9.7.1.2.15)
neutralscomp (2649)	coreneutrals%compositions%neutralscomp(:) (composition_neutralscomp) (9.7.1.3.98)
neutcomp (2648)	coreneutrals%compositions%neutralscomp(:)%neutcomp(:) (composition_neutrals_neutcomp) (9.7.1.3.97)
nucindex (2647)	coreneutrals%compositions%neutralscomp(:)%neutcomp(:)%nucindex (integer) (9.7.1.1.2)
multiplicity (2647)	coreneutrals%compositions%neutralscomp(:)%neutcomp(:)%multiplicity (integer) (9.7.1.1.2)
type (2648)	coreneutrals%compositions%neutralscomp(:)%type(:) (identifier) (9.7.1.3.235)
id (2785)	coreneutrals%compositions%neutralscomp(:)%type(:)%id (string) (9.7.1.1.3)
flag (2785)	coreneutrals%compositions%neutralscomp(:)%type(:)%flag (integer) (9.7.1.1.2)
description (2785)	coreneutrals%compositions%neutralscomp(:)%type(:)%description (string) (9.7.1.1.3)
label (2648)	coreneutrals%compositions%neutralscomp(:)%label (string) (9.7.1.1.3)
edgespecies (2649)	coreneutrals%compositions%edgespecies(:) (edgespecies) (9.7.1.3.185)
nucindex (2735)	coreneutrals%compositions%edgespecies(:)%nucindex (integer) (9.7.1.1.2)
zmin (2735)	coreneutrals%compositions%edgespecies(:)%zmin (float) (9.7.1.1.1)
zmax (2735)	coreneutrals%compositions%edgespecies(:)%zmax (float) (9.7.1.1.1)
label (2735)	coreneutrals%compositions%edgespecies(:)%label (string) (9.7.1.1.3)
signature (2649)	coreneutrals%compositions%signature (identifier) (9.7.1.3.235)
id (2785)	coreneutrals%compositions%signature%id (string) (9.7.1.1.3)
flag (2785)	coreneutrals%compositions%signature%flag (integer) (9.7.1.1.2)
description (2785)	coreneutrals%compositions%signature%description (string) (9.7.1.1.3)
profiles (2560)	coreneutrals%profiles(:) (neutral_complex.type) (9.7.1.3.290)
neutraltype (2840)	coreneutrals%profiles(:)%neutraltype(:) (coreneutrals_neutraltype) (9.7.1.3.122)
n0 (2672)	coreneutrals%profiles(:)%neutraltype(:)%n0 (corefieldneutral) (9.7.1.3.109)
value (2659)	coreneutrals%profiles(:)%neutraltype(:)%n0%value (vecflt.type) (9.7.1.2.13)
flux (2659)	coreneutrals%profiles(:)%neutraltype(:)%n0%flux (vecflt.type) (9.7.1.2.13)
boundary (2659)	coreneutrals%profiles(:)%neutraltype(:)%n0%boundary (boundary_neutrals) (9.7.1.3.68)
value (2618)	coreneutrals%profiles(:)%neutraltype(:)%n0%boundary%value (vecflt.type) (9.7.1.2.13)
type (2618)	coreneutrals%profiles(:)%neutraltype(:)%n0%boundary%type (integer) (9.7.1.1.2)
rho_tor (2618)	coreneutrals%profiles(:)%neutraltype(:)%n0%boundary%rho_tor (float) (9.7.1.1.1)
t0 (2672)	coreneutrals%profiles(:)%neutraltype(:)%t0 (corefieldneutrale) (9.7.1.3.110)
value (2660)	coreneutrals%profiles(:)%neutraltype(:)%t0%value (vecflt.type) (9.7.1.2.13)
flux (2660)	coreneutrals%profiles(:)%neutraltype(:)%t0%flux (vecflt.type) (9.7.1.2.13)

boundary (2660)	coreneutrals%profiles(:)%neutraltype(:)%t0%boundary (boundary_neutrals) (9.7.1.3.68)
value (2618)	coreneutrals%profiles(:)%neutraltype(:)%t0%boundary%value (vecflt_type) (9.7.1.2.13)
type (2618)	coreneutrals%profiles(:)%neutraltype(:)%t0%boundary%type (integer) (9.7.1.1.2)
rho_tor (2618)	coreneutrals%profiles(:)%neutraltype(:)%t0%boundary%rho_tor (float) (9.7.1.1.1)
v0 (2672)	coreneutrals%profiles(:)%neutraltype(:)%v0 (corefieldneutralv0) (9.7.1.3.112)
toroidal (2662)	coreneutrals%profiles(:)%neutraltype(:)%v0%toroidal (corefieldneutralv) (9.7.1.3.111)
value (2661)	coreneutrals%profiles(:)%neutraltype(:)%v0%toroidal%value (vecflt_type) (9.7.1.2.13)
boundary (2661)	coreneutrals%profiles(:)%neutraltype(:)%v0%toroidal%boundary (boundary_neutrals) (9.7.1.3.68)
value (2618)	coreneutrals%profiles(:)%neutraltype(:)%v0%toroidal%boundary%value (vecflt_type) (9.7.1.2.13)
type (2618)	coreneutrals%profiles(:)%neutraltype(:)%v0%toroidal%boundary%type (integer) (9.7.1.1.2)
rho_tor (2618)	coreneutrals%profiles(:)%neutraltype(:)%v0%toroidal%boundary%rho_tor (float) (9.7.1.1.1)
poloidal (2662)	coreneutrals%profiles(:)%neutraltype(:)%v0%poloidal (corefieldneutralv) (9.7.1.3.111)
value (2661)	coreneutrals%profiles(:)%neutraltype(:)%v0%poloidal%value (vecflt_type) (9.7.1.2.13)
boundary (2661)	coreneutrals%profiles(:)%neutraltype(:)%v0%poloidal%boundary (boundary_neutrals) (9.7.1.3.68)
value (2618)	coreneutrals%profiles(:)%neutraltype(:)%v0%poloidal%boundary%value (vecflt_type) (9.7.1.2.13)
type (2618)	coreneutrals%profiles(:)%neutraltype(:)%v0%poloidal%boundary%type (integer) (9.7.1.1.2)
rho_tor (2618)	coreneutrals%profiles(:)%neutraltype(:)%v0%poloidal%boundary%rho_tor (float) (9.7.1.1.1)
radial (2662)	coreneutrals%profiles(:)%neutraltype(:)%v0%radial (corefieldneutralv) (9.7.1.3.111)
value (2661)	coreneutrals%profiles(:)%neutraltype(:)%v0%radial%value (vecflt_type) (9.7.1.2.13)
boundary (2661)	coreneutrals%profiles(:)%neutraltype(:)%v0%radial%boundary (boundary_neutrals) (9.7.1.3.68)
value (2618)	coreneutrals%profiles(:)%neutraltype(:)%v0%radial%boundary%value (vecflt_type) (9.7.1.2.13)
type (2618)	coreneutrals%profiles(:)%neutraltype(:)%v0%radial%boundary%type (integer) (9.7.1.1.2)
rho_tor (2618)	coreneutrals%profiles(:)%neutraltype(:)%v0%radial%boundary%rho_tor (float) (9.7.1.1.1)
prad0 (2840)	coreneutrals%profiles(:)%prad0 (vecflt_type) (9.7.1.2.13)
ioncoeff (2560)	coreneutrals%ioncoeff(:) (coefficients_neutrals) (9.7.1.3.78)
recycling (2628)	coreneutrals%ioncoeff(:)%recycling (recycling_neutrals) (9.7.1.3.347)
particles (2897)	coreneutrals%ioncoeff(:)%recycling%particles (vecflt_type) (9.7.1.2.13)
energy (2897)	coreneutrals%ioncoeff(:)%recycling%energy (vecflt_type) (9.7.1.2.13)
sputtering (2628)	coreneutrals%ioncoeff(:)%sputtering (sputtering_neutrals) (9.7.1.3.415)
physical (2965)	coreneutrals%ioncoeff(:)%sputtering%physical (vecflt_type) (9.7.1.2.13)
chemical (2965)	coreneutrals%ioncoeff(:)%sputtering%chemical (vecflt_type) (9.7.1.2.13)
impcoeff (2560)	coreneutrals%impcoeff(:) (impcoeff) (9.7.1.3.236)
chargestate (2786)	coreneutrals%impcoeff(:)%chargestate(:) (coefficients_neutrals) (9.7.1.3.78)
recycling (2628)	coreneutrals%impcoeff(:)%chargestate(:)%recycling (recycling_neutrals) (9.7.1.3.347)
particles (2897)	coreneutrals%impcoeff(:)%chargestate(:)%recycling%particles (vecflt_type) (9.7.1.2.13)
energy (2897)	coreneutrals%impcoeff(:)%chargestate(:)%recycling%energy (vecflt_type) (9.7.1.2.13)
sputtering (2628)	coreneutrals%impcoeff(:)%chargestate(:)%sputtering (sputtering_neutrals) (9.7.1.3.415)
physical (2965)	coreneutrals%impcoeff(:)%chargestate(:)%sputtering%physical (vecflt_type) (9.7.1.2.13)
chemical (2965)	coreneutrals%impcoeff(:)%chargestate(:)%sputtering%chemical (vecflt_type) (9.7.1.2.13)
codeparam (2560)	coreneutrals%codeparam (codeparam) (9.7.1.3.77)
codename (2627)	coreneutrals%codeparam%codename (string) (9.7.1.1.3)
codeversion (2627)	coreneutrals%codeparam%codeversion (string) (9.7.1.1.3)
parameters (2627)	coreneutrals%codeparam%parameters (string) (9.7.1.1.3)
output_diag (2627)	coreneutrals%codeparam%output_diag (string) (9.7.1.1.3)
output_flag (2627)	coreneutrals%codeparam%output_flag (integer) (9.7.1.1.2)
time (2560)	coreneutrals%time (float) (9.7.1.1.1)

### 9.7.2.1.9 coreprof

datainfo (2561)	coreprof%datainfo (datainfo) (9.7.1.3.134)
dataprovider (2684)	coreprof%datainfo%dataprovider (string) (9.7.1.1.3)
putdate (2684)	coreprof%datainfo%putdate (string) (9.7.1.1.3)
source (2684)	coreprof%datainfo%source (string) (9.7.1.1.3)
comment (2684)	coreprof%datainfo%comment (string) (9.7.1.1.3)
cocos (2684)	coreprof%datainfo%cocos (integer) (9.7.1.1.2)
id (2684)	coreprof%datainfo%id (integer) (9.7.1.1.2)
isref (2684)	coreprof%datainfo%isref (integer) (9.7.1.1.2)

whatref (2684)	coreprof%datainfo%whatref (whatref) (9.7.1.3.506)
user (3056)	coreprof%datainfo%whatref%user (string) (9.7.1.1.3)
machine (3056)	coreprof%datainfo%whatref%machine (string) (9.7.1.1.3)
shot (3056)	coreprof%datainfo%whatref%shot (integer) (9.7.1.1.2)
run (3056)	coreprof%datainfo%whatref%run (integer) (9.7.1.1.2)
occurrence (3056)	coreprof%datainfo%whatref%occurrence (integer) (9.7.1.1.2)
putinfo (2684)	coreprof%datainfo%putinfo (putinfo) (9.7.1.3.342)
putmethod (2892)	coreprof%datainfo%putinfo%putmethod (string) (9.7.1.1.3)
putaccess (2892)	coreprof%datainfo%putinfo%putaccess (string) (9.7.1.1.3)
putlocation (2892)	coreprof%datainfo%putinfo%putlocation (string) (9.7.1.1.3)
rights (2892)	coreprof%datainfo%putinfo%rights (string) (9.7.1.1.3)
rho_tor_norm (2561)	coreprof%rho_tor_norm (vecflt_type) (9.7.1.2.13)
rho_tor (2561)	coreprof%rho_tor (vecflt_type) (9.7.1.2.13)
drho_dt (2561)	coreprof%drho_dt (vecflt_type) (9.7.1.2.13)
toroid_field (2561)	coreprof%toroid_field (toroid_field) (9.7.1.3.459)
b0 (3009)	coreprof%toroid_field%b0 (float) (9.7.1.1.1)
b0prime (3009)	coreprof%toroid_field%b0prime (float) (9.7.1.1.1)
r0 (3009)	coreprof%toroid_field%r0 (float) (9.7.1.1.1)
time (3009)	coreprof%toroid_field%time (float) (9.7.1.1.1)
composition (2561)	coreprof%composition (composition) (9.7.1.3.95)
amn (2645)	coreprof%composition%amn (vecflt_type) (9.7.1.2.13)
zn (2645)	coreprof%composition%zn (vecflt_type) (9.7.1.2.13)
zion (2645)	coreprof%composition%zion (vecflt_type) (9.7.1.2.13)
imp_flag (2645)	coreprof%composition%imp_flag (vecint_type) (9.7.1.2.14)
label (2645)	coreprof%composition%label (vecstring_type) (9.7.1.2.15)
desc_impur (2561)	coreprof%desc_impur (desc_impur) (9.7.1.3.136)
amn (2686)	coreprof%desc_impur%amn (vecflt_type) (9.7.1.2.13)
zn (2686)	coreprof%desc_impur%zn (vecint_type) (9.7.1.2.14)
i_ion (2686)	coreprof%desc_impur%i_ion (vecint_type) (9.7.1.2.14)
nzimp (2686)	coreprof%desc_impur%nzimp (vecint_type) (9.7.1.2.14)
zmin (2686)	coreprof%desc_impur%zmin (matint_type) (9.7.1.2.11)
zmax (2686)	coreprof%desc_impur%zmax (matint_type) (9.7.1.2.11)
label (2686)	coreprof%desc_impur%label (vecstring_type) (9.7.1.2.15)
compositions (2561)	coreprof%compositions (compositions_type) (9.7.1.3.99)
nuclei (2649)	coreprof%compositions%nuclei(:) (nuclei) (9.7.1.3.299)
zn (2849)	coreprof%compositions%nuclei(:)%zn (float) (9.7.1.1.1)
amn (2849)	coreprof%compositions%nuclei(:)%amn (float) (9.7.1.1.1)
label (2849)	coreprof%compositions%nuclei(:)%label (string) (9.7.1.1.3)
ions (2649)	coreprof%compositions%ions(:) (ions) (9.7.1.3.240)
nucindex (2790)	coreprof%compositions%ions(:)%nucindex (integer) (9.7.1.1.2)
zion (2790)	coreprof%compositions%ions(:)%zion (float) (9.7.1.1.1)
imp_flag (2790)	coreprof%compositions%ions(:)%imp_flag (integer) (9.7.1.1.2)
label (2790)	coreprof%compositions%ions(:)%label (string) (9.7.1.1.3)
impurities (2649)	coreprof%compositions%impurities(:) (impurities) (9.7.1.3.237)
nucindex (2787)	coreprof%compositions%impurities(:)%nucindex (integer) (9.7.1.1.2)
i_ion (2787)	coreprof%compositions%impurities(:)%i_ion (integer) (9.7.1.1.2)
nzimp (2787)	coreprof%compositions%impurities(:)%nzimp (integer) (9.7.1.1.2)
zmin (2787)	coreprof%compositions%impurities(:)%zmin (vecflt_type) (9.7.1.2.13)
zmax (2787)	coreprof%compositions%impurities(:)%zmax (vecflt_type) (9.7.1.2.13)
label (2787)	coreprof%compositions%impurities(:)%label (vecstring_type) (9.7.1.2.15)
neutralscomp (2649)	coreprof%compositions%neutralscomp(:) (composition_neutralscomp) (9.7.1.3.98)
neutcomp (2648)	coreprof%compositions%neutralscomp(:)%neutcomp(:) (composition_neutrals_neutcomp) (9.7.1.3.97)
nucindex (2647)	coreprof%compositions%neutralscomp(:)%neutcomp(:)%nucindex (integer) (9.7.1.1.2)
multiplicity (2647)	coreprof%compositions%neutralscomp(:)%neutcomp(:)%multiplicity (integer) (9.7.1.1.2)
type (2648)	coreprof%compositions%neutralscomp(:)%type(:) (identifier) (9.7.1.3.235)
id (2785)	coreprof%compositions%neutralscomp(:)%type(:)%id (string) (9.7.1.1.3)
flag (2785)	coreprof%compositions%neutralscomp(:)%type(:)%flag (integer) (9.7.1.1.2)
description (2785)	coreprof%compositions%neutralscomp(:)%type(:)%description (string) (9.7.1.1.3)
label (2648)	coreprof%compositions%neutralscomp(:)%label (string) (9.7.1.1.3)
edgespecies (2649)	coreprof%compositions%edgespecies(:) (edgespecies) (9.7.1.3.185)
nucindex (2735)	coreprof%compositions%edgespecies(:)%nucindex (integer) (9.7.1.1.2)

zmin (2735)	coreprof%compositions%edgespecies(:)%zmin (float) (9.7.1.1.1)
zmax (2735)	coreprof%compositions%edgespecies(:)%zmax (float) (9.7.1.1.1)
label (2735)	coreprof%compositions%edgespecies(:)%label (string) (9.7.1.1.3)
signature (2649)	coreprof%compositions%signature (identifier) (9.7.1.3.235)
id (2785)	coreprof%compositions%signature%id (string) (9.7.1.1.3)
flag (2785)	coreprof%compositions%signature%flag (integer) (9.7.1.1.2)
description (2785)	coreprof%compositions%signature%description (string) (9.7.1.1.3)
psi (2561)	coreprof%psi (psi) (9.7.1.3.341)
value (2891)	coreprof%psi%value (vecflt.type) (9.7.1.2.13)
ddrho (2891)	coreprof%psi%ddrho (vecflt.type) (9.7.1.2.13)
d2drho2 (2891)	coreprof%psi%d2drho2 (vecflt.type) (9.7.1.2.13)
ddt_rhotorn (2891)	coreprof%psi%ddt_rhotorn (vecflt.type) (9.7.1.2.13)
ddt_phi (2891)	coreprof%psi%ddt_phi (vecflt.type) (9.7.1.2.13)
source (2891)	coreprof%psi%source (string) (9.7.1.1.3)
flag (2891)	coreprof%psi%flag (integer) (9.7.1.1.2)
boundary (2891)	coreprof%psi%boundary (boundary) (9.7.1.3.67)
value (2617)	coreprof%psi%boundary%value (vecflt.type) (9.7.1.2.13)
source (2617)	coreprof%psi%boundary%source (string) (9.7.1.1.3)
type (2617)	coreprof%psi%boundary%type (integer) (9.7.1.1.2)
rho (2617)	coreprof%psi%boundary%rho (float) (9.7.1.1.1)
codeparam (2617)	coreprof%psi%boundary%codeparam (codeparam) (9.7.1.3.77)
codename (2627)	coreprof%psi%boundary%codeparam%codename (string) (9.7.1.1.3)
codeversion (2627)	coreprof%psi%boundary%codeparam%codeversion (string) (9.7.1.1.3)
parameters (2627)	coreprof%psi%boundary%codeparam%parameters (string) (9.7.1.1.3)
output_diag (2627)	coreprof%psi%boundary%codeparam%output_diag (string) (9.7.1.1.3)
output_flag (2627)	coreprof%psi%boundary%codeparam%output_flag (integer) (9.7.1.1.2)
jni (2891)	coreprof%psi%jni (jni) (9.7.1.3.242)
value (2792)	coreprof%psi%jni%value (vecflt.type) (9.7.1.2.13)
integral (2792)	coreprof%psi%jni%integral (vecflt.type) (9.7.1.2.13)
source (2792)	coreprof%psi%jni%source (string) (9.7.1.1.3)
sigma_par (2891)	coreprof%psi%sigma_par (coreprofile) (9.7.1.3.123)
value (2673)	coreprof%psi%sigma_par%value (vecflt.type) (9.7.1.2.13)
source (2673)	coreprof%psi%sigma_par%source (string) (9.7.1.1.3)
codeparam (2891)	coreprof%psi%codeparam (codeparam) (9.7.1.3.77)
codename (2627)	coreprof%psi%codeparam%codename (string) (9.7.1.1.3)
codeversion (2627)	coreprof%psi%codeparam%codeversion (string) (9.7.1.1.3)
parameters (2627)	coreprof%psi%codeparam%parameters (string) (9.7.1.1.3)
output_diag (2627)	coreprof%psi%codeparam%output_diag (string) (9.7.1.1.3)
output_flag (2627)	coreprof%psi%codeparam%output_flag (integer) (9.7.1.1.2)
te (2561)	coreprof%te (corefield) (9.7.1.3.107)
value (2657)	coreprof%te%value (vecflt.type) (9.7.1.2.13)
ddrho (2657)	coreprof%te%ddrho (vecflt.type) (9.7.1.2.13)
d2drho2 (2657)	coreprof%te%d2drho2 (vecflt.type) (9.7.1.2.13)
ddt (2657)	coreprof%te%ddt (vecflt.type) (9.7.1.2.13)
source (2657)	coreprof%te%source (string) (9.7.1.1.3)
flag (2657)	coreprof%te%flag (integer) (9.7.1.1.2)
boundary (2657)	coreprof%te%boundary (boundaryel) (9.7.1.3.69)
value (2619)	coreprof%te%boundary%value (vecflt.type) (9.7.1.2.13)
source (2619)	coreprof%te%boundary%source (string) (9.7.1.1.3)
type (2619)	coreprof%te%boundary%type (integer) (9.7.1.1.2)
rho_tor (2619)	coreprof%te%boundary%rho_tor (float) (9.7.1.1.1)
source_term (2657)	coreprof%te%source_term (sourceel) (9.7.1.3.407)
value (2957)	coreprof%te%source_term%value (vecflt.type) (9.7.1.2.13)
integral (2957)	coreprof%te%source_term%integral (vecflt.type) (9.7.1.2.13)
source (2957)	coreprof%te%source_term%source (string) (9.7.1.1.3)
transp_coef (2657)	coreprof%te%transp_coef (coretransel) (9.7.1.3.126)
diff (2676)	coreprof%te%transp_coef%diff (vecflt.type) (9.7.1.2.13)
vconv (2676)	coreprof%te%transp_coef%vconv (vecflt.type) (9.7.1.2.13)
source (2676)	coreprof%te%transp_coef%source (string) (9.7.1.1.3)
flux (2657)	coreprof%te%flux (fluxel) (9.7.1.3.205)
flux_dv (2755)	coreprof%te%flux%flux_dv (vecflt.type) (9.7.1.2.13)

flux_interp (2755)	coreprof%te%flux%flux_interp (vecflt.type) (9.7.1.2.13)
flux_dv_surf (2657)	coreprof%te%flux_dv_surf (vecflt.type) (9.7.1.2.13)
time_deriv (2657)	coreprof%te%time_deriv (vecflt.type) (9.7.1.2.13)
codeparam (2657)	coreprof%te%codeparam (codeparam) (9.7.1.3.77)
codename (2627)	coreprof%te%codeparam%codename (string) (9.7.1.1.3)
codeversion (2627)	coreprof%te%codeparam%codeversion (string) (9.7.1.1.3)
parameters (2627)	coreprof%te%codeparam%parameters (string) (9.7.1.1.3)
output_diag (2627)	coreprof%te%codeparam%output_diag (string) (9.7.1.1.3)
output_flag (2627)	coreprof%te%codeparam%output_flag (integer) (9.7.1.1.2)
ti (2561)	coreprof%ti (corefieldion) (9.7.1.3.108)
value (2658)	coreprof%ti%value (matflt.type) (9.7.1.2.10)
ddrho (2658)	coreprof%ti%ddrho (matflt.type) (9.7.1.2.10)
d2drho2 (2658)	coreprof%ti%d2drho2 (matflt.type) (9.7.1.2.10)
ddt (2658)	coreprof%ti%ddt (matflt.type) (9.7.1.2.10)
source (2658)	coreprof%ti%source (vecstring.type) (9.7.1.2.15)
flag (2658)	coreprof%ti%flag (vecint.type) (9.7.1.2.14)
boundary (2658)	coreprof%ti%boundary (boundaryion) (9.7.1.3.71)
value (2621)	coreprof%ti%boundary%value (matflt.type) (9.7.1.2.10)
source (2621)	coreprof%ti%boundary%source (vecstring.type) (9.7.1.2.15)
type (2621)	coreprof%ti%boundary%type (vecint.type) (9.7.1.2.14)
rho_tor (2621)	coreprof%ti%boundary%rho_tor (vecflt.type) (9.7.1.2.13)
source_term (2658)	coreprof%ti%source_term (sourceion) (9.7.1.3.409)
value (2959)	coreprof%ti%source_term%value (matflt.type) (9.7.1.2.10)
integral (2959)	coreprof%ti%source_term%integral (matflt.type) (9.7.1.2.10)
source (2959)	coreprof%ti%source_term%source (vecstring.type) (9.7.1.2.15)
transp_coef (2658)	coreprof%ti%transp_coef (coretransion) (9.7.1.3.128)
diff (2678)	coreprof%ti%transp_coef%diff (matflt.type) (9.7.1.2.10)
vconv (2678)	coreprof%ti%transp_coef%vconv (matflt.type) (9.7.1.2.10)
source (2678)	coreprof%ti%transp_coef%source (vecstring.type) (9.7.1.2.15)
flux (2658)	coreprof%ti%flux (fluxion) (9.7.1.3.207)
flux_dv (2757)	coreprof%ti%flux%flux_dv (matflt.type) (9.7.1.2.10)
flux_interp (2757)	coreprof%ti%flux%flux_interp (matflt.type) (9.7.1.2.10)
flux_dv_surf (2658)	coreprof%ti%flux_dv_surf (matflt.type) (9.7.1.2.10)
time_deriv (2658)	coreprof%ti%time_deriv (matflt.type) (9.7.1.2.10)
codeparam (2658)	coreprof%ti%codeparam (codeparam) (9.7.1.3.77)
codename (2627)	coreprof%ti%codeparam%codename (string) (9.7.1.1.3)
codeversion (2627)	coreprof%ti%codeparam%codeversion (string) (9.7.1.1.3)
parameters (2627)	coreprof%ti%codeparam%parameters (string) (9.7.1.1.3)
output_diag (2627)	coreprof%ti%codeparam%output_diag (string) (9.7.1.1.3)
output_flag (2627)	coreprof%ti%codeparam%output_flag (integer) (9.7.1.1.2)
ne (2561)	coreprof%ne (corefield) (9.7.1.3.107)
value (2657)	coreprof%ne%value (vecflt.type) (9.7.1.2.13)
ddrho (2657)	coreprof%ne%ddrho (vecflt.type) (9.7.1.2.13)
d2drho2 (2657)	coreprof%ne%d2drho2 (vecflt.type) (9.7.1.2.13)
ddt (2657)	coreprof%ne%ddt (vecflt.type) (9.7.1.2.13)
source (2657)	coreprof%ne%source (string) (9.7.1.1.3)
flag (2657)	coreprof%ne%flag (integer) (9.7.1.1.2)
boundary (2657)	coreprof%ne%boundary (boundaryel) (9.7.1.3.69)
value (2619)	coreprof%ne%boundary%value (vecflt.type) (9.7.1.2.13)
source (2619)	coreprof%ne%boundary%source (string) (9.7.1.1.3)
type (2619)	coreprof%ne%boundary%type (integer) (9.7.1.1.2)
rho_tor (2619)	coreprof%ne%boundary%rho_tor (float) (9.7.1.1.1)
source_term (2657)	coreprof%ne%source_term (sourceel) (9.7.1.3.407)
value (2957)	coreprof%ne%source_term%value (vecflt.type) (9.7.1.2.13)
integral (2957)	coreprof%ne%source_term%integral (vecflt.type) (9.7.1.2.13)
source (2957)	coreprof%ne%source_term%source (string) (9.7.1.1.3)
transp_coef (2657)	coreprof%ne%transp_coef (coretransel) (9.7.1.3.126)
diff (2676)	coreprof%ne%transp_coef%diff (vecflt.type) (9.7.1.2.13)
vconv (2676)	coreprof%ne%transp_coef%vconv (vecflt.type) (9.7.1.2.13)
source (2676)	coreprof%ne%transp_coef%source (string) (9.7.1.1.3)
flux (2657)	coreprof%ne%flux (fluxel) (9.7.1.3.205)



flux_dv (2755)	coreprof%ne%flux%flux_dv (vecflt.type) (9.7.1.2.13)
flux_interp (2755)	coreprof%ne%flux%flux_interp (vecflt.type) (9.7.1.2.13)
flux_dv_surf (2657)	coreprof%ne%flux_dv_surf (vecflt.type) (9.7.1.2.13)
time_deriv (2657)	coreprof%ne%time_deriv (vecflt.type) (9.7.1.2.13)
codeparam (2657)	coreprof%ne%codeparam (codeparam) (9.7.1.3.77)
codename (2627)	coreprof%ne%codeparam%codename (string) (9.7.1.1.3)
codeversion (2627)	coreprof%ne%codeparam%codeversion (string) (9.7.1.1.3)
parameters (2627)	coreprof%ne%codeparam%parameters (string) (9.7.1.1.3)
output_diag (2627)	coreprof%ne%codeparam%output_diag (string) (9.7.1.1.3)
output_flag (2627)	coreprof%ne%codeparam%output_flag (integer) (9.7.1.1.2)
ni (2561)	coreprof%ni (corefieldion) (9.7.1.3.108)
value (2658)	coreprof%ni%value (matflt.type) (9.7.1.2.10)
ddrho (2658)	coreprof%ni%ddrho (matflt.type) (9.7.1.2.10)
d2drho2 (2658)	coreprof%ni%d2drho2 (matflt.type) (9.7.1.2.10)
ddt (2658)	coreprof%ni%ddt (matflt.type) (9.7.1.2.10)
source (2658)	coreprof%ni%source (vecstring.type) (9.7.1.2.15)
flag (2658)	coreprof%ni%flag (vecint.type) (9.7.1.2.14)
boundary (2658)	coreprof%ni%boundary (boundaryion) (9.7.1.3.71)
value (2621)	coreprof%ni%boundary%value (matflt.type) (9.7.1.2.10)
source (2621)	coreprof%ni%boundary%source (vecstring.type) (9.7.1.2.15)
type (2621)	coreprof%ni%boundary%type (vecint.type) (9.7.1.2.14)
rho_tor (2621)	coreprof%ni%boundary%rho_tor (vecflt.type) (9.7.1.2.13)
source_term (2658)	coreprof%ni%source_term (sourceion) (9.7.1.3.409)
value (2959)	coreprof%ni%source_term%value (matflt.type) (9.7.1.2.10)
integral (2959)	coreprof%ni%source_term%integral (matflt.type) (9.7.1.2.10)
source (2959)	coreprof%ni%source_term%source (vecstring.type) (9.7.1.2.15)
transp_coef (2658)	coreprof%ni%transp_coef (coretransion) (9.7.1.3.128)
diff (2678)	coreprof%ni%transp_coef%diff (matflt.type) (9.7.1.2.10)
vconv (2678)	coreprof%ni%transp_coef%vconv (matflt.type) (9.7.1.2.10)
source (2678)	coreprof%ni%transp_coef%source (vecstring.type) (9.7.1.2.15)
flux (2658)	coreprof%ni%flux (fluxion) (9.7.1.3.207)
flux_dv (2757)	coreprof%ni%flux%flux_dv (matflt.type) (9.7.1.2.10)
flux_interp (2757)	coreprof%ni%flux%flux_interp (matflt.type) (9.7.1.2.10)
flux_dv_surf (2658)	coreprof%ni%flux_dv_surf (matflt.type) (9.7.1.2.10)
time_deriv (2658)	coreprof%ni%time_deriv (matflt.type) (9.7.1.2.10)
codeparam (2658)	coreprof%ni%codeparam (codeparam) (9.7.1.3.77)
codename (2627)	coreprof%ni%codeparam%codename (string) (9.7.1.1.3)
codeversion (2627)	coreprof%ni%codeparam%codeversion (string) (9.7.1.1.3)
parameters (2627)	coreprof%ni%codeparam%parameters (string) (9.7.1.1.3)
output_diag (2627)	coreprof%ni%codeparam%output_diag (string) (9.7.1.1.3)
output_flag (2627)	coreprof%ni%codeparam%output_flag (integer) (9.7.1.1.2)
vtor (2561)	coreprof%vtor (corefieldion) (9.7.1.3.108)
value (2658)	coreprof%vtor%value (matflt.type) (9.7.1.2.10)
ddrho (2658)	coreprof%vtor%ddrho (matflt.type) (9.7.1.2.10)
d2drho2 (2658)	coreprof%vtor%d2drho2 (matflt.type) (9.7.1.2.10)
ddt (2658)	coreprof%vtor%ddt (matflt.type) (9.7.1.2.10)
source (2658)	coreprof%vtor%source (vecstring.type) (9.7.1.2.15)
flag (2658)	coreprof%vtor%flag (vecint.type) (9.7.1.2.14)
boundary (2658)	coreprof%vtor%boundary (boundaryion) (9.7.1.3.71)
value (2621)	coreprof%vtor%boundary%value (matflt.type) (9.7.1.2.10)
source (2621)	coreprof%vtor%boundary%source (vecstring.type) (9.7.1.2.15)
type (2621)	coreprof%vtor%boundary%type (vecint.type) (9.7.1.2.14)
rho_tor (2621)	coreprof%vtor%boundary%rho_tor (vecflt.type) (9.7.1.2.13)
source_term (2658)	coreprof%vtor%source_term (sourceion) (9.7.1.3.409)
value (2959)	coreprof%vtor%source_term%value (matflt.type) (9.7.1.2.10)
integral (2959)	coreprof%vtor%source_term%integral (matflt.type) (9.7.1.2.10)
source (2959)	coreprof%vtor%source_term%source (vecstring.type) (9.7.1.2.15)
transp_coef (2658)	coreprof%vtor%transp_coef (coretransion) (9.7.1.3.128)
diff (2678)	coreprof%vtor%transp_coef%diff (matflt.type) (9.7.1.2.10)
vconv (2678)	coreprof%vtor%transp_coef%vconv (matflt.type) (9.7.1.2.10)
source (2678)	coreprof%vtor%transp_coef%source (vecstring.type) (9.7.1.2.15)



flux (2658)	coreprof%vtor%flux (fluxion) (9.7.1.3.207)
flux_dv (2757)	coreprof%vtor%flux%flux_dv (matflt_type) (9.7.1.2.10)
flux_interp (2757)	coreprof%vtor%flux%flux_interp (matflt_type) (9.7.1.2.10)
flux_dv_surf (2658)	coreprof%vtor%flux_dv_surf (matflt_type) (9.7.1.2.10)
time_deriv (2658)	coreprof%vtor%time_deriv (matflt_type) (9.7.1.2.10)
codeparam (2658)	coreprof%vtor%codeparam (codeparam) (9.7.1.3.77)
codename (2627)	coreprof%vtor%codeparam%codename (string) (9.7.1.1.3)
codeversion (2627)	coreprof%vtor%codeparam%codeversion (string) (9.7.1.1.3)
parameters (2627)	coreprof%vtor%codeparam%parameters (string) (9.7.1.1.3)
output_diag (2627)	coreprof%vtor%codeparam%output_diag (string) (9.7.1.1.3)
output_flag (2627)	coreprof%vtor%codeparam%output_flag (integer) (9.7.1.1.2)
profiles1d (2561)	coreprof%profiles1d (profiles1d) (9.7.1.3.339)
pe (2889)	coreprof%profiles1d%pe (coreprofile) (9.7.1.3.123)
value (2673)	coreprof%profiles1d%pe%value (vecflt_type) (9.7.1.2.13)
source (2673)	coreprof%profiles1d%pe%source (string) (9.7.1.1.3)
dpedt (2889)	coreprof%profiles1d%dpedt (coreprofile) (9.7.1.3.123)
value (2673)	coreprof%profiles1d%dpedt%value (vecflt_type) (9.7.1.2.13)
source (2673)	coreprof%profiles1d%dpedt%source (string) (9.7.1.1.3)
pi (2889)	coreprof%profiles1d%pi (coreprofion) (9.7.1.3.124)
value (2674)	coreprof%profiles1d%pi%value (matflt_type) (9.7.1.2.10)
source (2674)	coreprof%profiles1d%pi%source (vecstring_type) (9.7.1.2.15)
pi_tot (2889)	coreprof%profiles1d%pi_tot (coreprofile) (9.7.1.3.123)
value (2673)	coreprof%profiles1d%pi_tot%value (vecflt_type) (9.7.1.2.13)
source (2673)	coreprof%profiles1d%pi_tot%source (string) (9.7.1.1.3)
dpi_totdt (2889)	coreprof%profiles1d%dpi_totdt (coreprofile) (9.7.1.3.123)
value (2673)	coreprof%profiles1d%dpi_totdt%value (vecflt_type) (9.7.1.2.13)
source (2673)	coreprof%profiles1d%dpi_totdt%source (string) (9.7.1.1.3)
pr_th (2889)	coreprof%profiles1d%pr_th (coreprofile) (9.7.1.3.123)
value (2673)	coreprof%profiles1d%pr_th%value (vecflt_type) (9.7.1.2.13)
source (2673)	coreprof%profiles1d%pr_th%source (string) (9.7.1.1.3)
pr_perp (2889)	coreprof%profiles1d%pr_perp (coreprofile) (9.7.1.3.123)
value (2673)	coreprof%profiles1d%pr_perp%value (vecflt_type) (9.7.1.2.13)
source (2673)	coreprof%profiles1d%pr_perp%source (string) (9.7.1.1.3)
pr_parallel (2889)	coreprof%profiles1d%pr_parallel (coreprofile) (9.7.1.3.123)
value (2673)	coreprof%profiles1d%pr_parallel%value (vecflt_type) (9.7.1.2.13)
source (2673)	coreprof%profiles1d%pr_parallel%source (string) (9.7.1.1.3)
jtot (2889)	coreprof%profiles1d%jtot (coreprofile) (9.7.1.3.123)
value (2673)	coreprof%profiles1d%jtot%value (vecflt_type) (9.7.1.2.13)
source (2673)	coreprof%profiles1d%jtot%source (string) (9.7.1.1.3)
jni (2889)	coreprof%profiles1d%jni (coreprofile) (9.7.1.3.123)
value (2673)	coreprof%profiles1d%jni%value (vecflt_type) (9.7.1.2.13)
source (2673)	coreprof%profiles1d%jni%source (string) (9.7.1.1.3)
jphi (2889)	coreprof%profiles1d%jphi (coreprofile) (9.7.1.3.123)
value (2673)	coreprof%profiles1d%jphi%value (vecflt_type) (9.7.1.2.13)
source (2673)	coreprof%profiles1d%jphi%source (string) (9.7.1.1.3)
joh (2889)	coreprof%profiles1d%joh (coreprofile) (9.7.1.3.123)
value (2673)	coreprof%profiles1d%joh%value (vecflt_type) (9.7.1.2.13)
source (2673)	coreprof%profiles1d%joh%source (string) (9.7.1.1.3)
vloop (2889)	coreprof%profiles1d%vloop (coreprofile) (9.7.1.3.123)
value (2673)	coreprof%profiles1d%vloop%value (vecflt_type) (9.7.1.2.13)
source (2673)	coreprof%profiles1d%vloop%source (string) (9.7.1.1.3)
sigmapar (2889)	coreprof%profiles1d%sigmapar (coreprofile) (9.7.1.3.123)
value (2673)	coreprof%profiles1d%sigmapar%value (vecflt_type) (9.7.1.2.13)
source (2673)	coreprof%profiles1d%sigmapar%source (string) (9.7.1.1.3)
qoh (2889)	coreprof%profiles1d%qoh (sourceel) (9.7.1.3.407)
value (2957)	coreprof%profiles1d%qoh%value (vecflt_type) (9.7.1.2.13)
integral (2957)	coreprof%profiles1d%qoh%integral (vecflt_type) (9.7.1.2.13)
source (2957)	coreprof%profiles1d%qoh%source (string) (9.7.1.1.3)
qei (2889)	coreprof%profiles1d%qei (coreprofile) (9.7.1.3.123)
value (2673)	coreprof%profiles1d%qei%value (vecflt_type) (9.7.1.2.13)
source (2673)	coreprof%profiles1d%qei%source (string) (9.7.1.1.3)

eparam (2889)	coreprof%profiles1d%eparam (coreprofile) (9.7.1.3.123)
value (2673)	coreprof%profiles1d%eparam%value (vecflt_type) (9.7.1.2.13)
source (2673)	coreprof%profiles1d%eparam%source (string) (9.7.1.1.3)
e_b (2889)	coreprof%profiles1d%e_b (coreprofile) (9.7.1.3.123)
value (2673)	coreprof%profiles1d%e_b%value (vecflt_type) (9.7.1.2.13)
source (2673)	coreprof%profiles1d%e_b%source (string) (9.7.1.1.3)
q (2889)	coreprof%profiles1d%q (coreprofile) (9.7.1.3.123)
value (2673)	coreprof%profiles1d%q%value (vecflt_type) (9.7.1.2.13)
source (2673)	coreprof%profiles1d%q%source (string) (9.7.1.1.3)
shear (2889)	coreprof%profiles1d%shear (coreprofile) (9.7.1.3.123)
value (2673)	coreprof%profiles1d%shear%value (vecflt_type) (9.7.1.2.13)
source (2673)	coreprof%profiles1d%shear%source (string) (9.7.1.1.3)
ns (2889)	coreprof%profiles1d%ns (coreprofile) (9.7.1.3.124)
value (2674)	coreprof%profiles1d%ns%value (matflt_type) (9.7.1.2.10)
source (2674)	coreprof%profiles1d%ns%source (vecstring_type) (9.7.1.2.15)
mtor (2889)	coreprof%profiles1d%mtor (coreprofile) (9.7.1.3.124)
value (2674)	coreprof%profiles1d%mtor%value (matflt_type) (9.7.1.2.10)
source (2674)	coreprof%profiles1d%mtor%source (vecstring_type) (9.7.1.2.15)
wtor (2889)	coreprof%profiles1d%wtor (coreprofile) (9.7.1.3.124)
value (2674)	coreprof%profiles1d%wtor%value (matflt_type) (9.7.1.2.10)
source (2674)	coreprof%profiles1d%wtor%source (vecstring_type) (9.7.1.2.15)
vpol (2889)	coreprof%profiles1d%vpol (coreprofile) (9.7.1.3.124)
value (2674)	coreprof%profiles1d%vpol%value (matflt_type) (9.7.1.2.10)
source (2674)	coreprof%profiles1d%vpol%source (vecstring_type) (9.7.1.2.15)
zeff (2889)	coreprof%profiles1d%zeff (coreprofile) (9.7.1.3.123)
value (2673)	coreprof%profiles1d%zeff%value (vecflt_type) (9.7.1.2.13)
source (2673)	coreprof%profiles1d%zeff%source (string) (9.7.1.1.3)
bpol (2889)	coreprof%profiles1d%bpol (coreprofile) (9.7.1.3.123)
value (2673)	coreprof%profiles1d%bpol%value (vecflt_type) (9.7.1.2.13)
source (2673)	coreprof%profiles1d%bpol%source (string) (9.7.1.1.3)
dvprimedt (2889)	coreprof%profiles1d%dvprimedt (coreprofile) (9.7.1.3.123)
value (2673)	coreprof%profiles1d%dvprimedt%value (vecflt_type) (9.7.1.2.13)
source (2673)	coreprof%profiles1d%dvprimedt%source (string) (9.7.1.1.3)
globalparam (2561)	coreprof%globalparam (globalparam) (9.7.1.3.229)
current_tot (2779)	coreprof%globalparam%current_tot (float) (9.7.1.1.1)
current_bnd (2779)	coreprof%globalparam%current_bnd (float) (9.7.1.1.1)
current_ni (2779)	coreprof%globalparam%current_ni (float) (9.7.1.1.1)
vloop (2779)	coreprof%globalparam%vloop (float) (9.7.1.1.1)
li (2779)	coreprof%globalparam%li (float) (9.7.1.1.1)
beta_tor (2779)	coreprof%globalparam%beta_tor (float) (9.7.1.1.1)
beta_normal (2779)	coreprof%globalparam%beta_normal (float) (9.7.1.1.1)
beta_pol (2779)	coreprof%globalparam%beta_pol (float) (9.7.1.1.1)
w_dia (2779)	coreprof%globalparam%w_dia (float) (9.7.1.1.1)
geom_axis (2779)	coreprof%globalparam%geom_axis (rz0D) (9.7.1.3.358)
r (2908)	coreprof%globalparam%geom_axis%r (float) (9.7.1.1.1)
z (2908)	coreprof%globalparam%geom_axis%z (float) (9.7.1.1.1)
codeparam (2561)	coreprof%codeparam (codeparam) (9.7.1.3.77)
codename (2627)	coreprof%codeparam%codename (string) (9.7.1.1.3)
codeversion (2627)	coreprof%codeparam%codeversion (string) (9.7.1.1.3)
parameters (2627)	coreprof%codeparam%parameters (string) (9.7.1.1.3)
output_diag (2627)	coreprof%codeparam%output_diag (string) (9.7.1.1.3)
output_flag (2627)	coreprof%codeparam%output_flag (integer) (9.7.1.1.2)
time (2561)	coreprof%time (float) (9.7.1.1.1)

### 9.7.2.1.10 coresource

datainfo (2562)	coresource%datainfo (datainfo) (9.7.1.3.134)
dataprovder (2684)	coresource%datainfo%dataprovder (string) (9.7.1.1.3)
putdate (2684)	coresource%datainfo%putdate (string) (9.7.1.1.3)
source (2684)	coresource%datainfo%source (string) (9.7.1.1.3)
comment (2684)	coresource%datainfo%comment (string) (9.7.1.1.3)

cocos (2684)	coresource%datainfo%cocos (integer) (9.7.1.1.2)
id (2684)	coresource%datainfo%id (integer) (9.7.1.1.2)
isref (2684)	coresource%datainfo%isref (integer) (9.7.1.1.2)
whatref (2684)	coresource%datainfo%whatref (whatref) (9.7.1.3.506)
user (3056)	coresource%datainfo%whatref%user (string) (9.7.1.1.3)
machine (3056)	coresource%datainfo%whatref%machine (string) (9.7.1.1.3)
shot (3056)	coresource%datainfo%whatref%shot (integer) (9.7.1.1.2)
run (3056)	coresource%datainfo%whatref%run (integer) (9.7.1.1.2)
occurrence (3056)	coresource%datainfo%whatref%occurrence (integer) (9.7.1.1.2)
putinfo (2684)	coresource%datainfo%putinfo (putinfo) (9.7.1.3.342)
putmethod (2892)	coresource%datainfo%putinfo%putmethod (string) (9.7.1.1.3)
putaccess (2892)	coresource%datainfo%putinfo%putaccess (string) (9.7.1.1.3)
putlocation (2892)	coresource%datainfo%putinfo%putlocation (string) (9.7.1.1.3)
rights (2892)	coresource%datainfo%putinfo%rights (string) (9.7.1.1.3)
composition (2562)	coresource%composition (composition) (9.7.1.3.95)
amn (2645)	coresource%composition%amn (vecflt_type) (9.7.1.2.13)
zn (2645)	coresource%composition%zn (vecflt_type) (9.7.1.2.13)
zion (2645)	coresource%composition%zion (vecflt_type) (9.7.1.2.13)
imp_flag (2645)	coresource%composition%imp_flag (vecint_type) (9.7.1.2.14)
label (2645)	coresource%composition%label (vecstring_type) (9.7.1.2.15)
desc_impur (2562)	coresource%desc_impur (desc_impur) (9.7.1.3.136)
amn (2686)	coresource%desc_impur%amn (vecflt_type) (9.7.1.2.13)
zn (2686)	coresource%desc_impur%zn (vecint_type) (9.7.1.2.14)
i_ion (2686)	coresource%desc_impur%i_ion (vecint_type) (9.7.1.2.14)
nzimp (2686)	coresource%desc_impur%nzimp (vecint_type) (9.7.1.2.14)
zmin (2686)	coresource%desc_impur%zmin (matint_type) (9.7.1.2.11)
zmax (2686)	coresource%desc_impur%zmax (matint_type) (9.7.1.2.11)
label (2686)	coresource%desc_impur%label (vecstring_type) (9.7.1.2.15)
compositions (2562)	coresource%compositions (compositions_type) (9.7.1.3.99)
nuclei (2649)	coresource%compositions%nuclei(:) (nuclei) (9.7.1.3.299)
zn (2849)	coresource%compositions%nuclei(:)%zn (float) (9.7.1.1.1)
amn (2849)	coresource%compositions%nuclei(:)%amn (float) (9.7.1.1.1)
label (2849)	coresource%compositions%nuclei(:)%label (string) (9.7.1.1.3)
ions (2649)	coresource%compositions%ions(:) (ions) (9.7.1.3.240)
nucindex (2790)	coresource%compositions%ions(:)%nucindex (integer) (9.7.1.1.2)
zion (2790)	coresource%compositions%ions(:)%zion (float) (9.7.1.1.1)
imp_flag (2790)	coresource%compositions%ions(:)%imp_flag (integer) (9.7.1.1.2)
label (2790)	coresource%compositions%ions(:)%label (string) (9.7.1.1.3)
impurities (2649)	coresource%compositions%impurities(:) (impurities) (9.7.1.3.237)
nucindex (2787)	coresource%compositions%impurities(:)%nucindex (integer) (9.7.1.1.2)
i_ion (2787)	coresource%compositions%impurities(:)%i_ion (integer) (9.7.1.1.2)
nzimp (2787)	coresource%compositions%impurities(:)%nzimp (integer) (9.7.1.1.2)
zmin (2787)	coresource%compositions%impurities(:)%zmin (vecflt_type) (9.7.1.2.13)
zmax (2787)	coresource%compositions%impurities(:)%zmax (vecflt_type) (9.7.1.2.13)
label (2787)	coresource%compositions%impurities(:)%label (vecstring_type) (9.7.1.2.15)
neutralscomp (2649)	coresource%compositions%neutralscomp(:) (composition_neutralscomp) (9.7.1.3.98)
neutcomp (2648)	coresource%compositions%neutralscomp(:)%neutcomp(:) (composition_neutrals_neutcomp) (9.7.1.3.97)
nucindex (2647)	coresource%compositions%neutralscomp(:)%neutcomp(:)%nucindex (integer) (9.7.1.1.2)
multiplicity (2647)	coresource%compositions%neutralscomp(:)%neutcomp(:)%multiplicity (integer) (9.7.1.1.2)
type (2648)	coresource%compositions%neutralscomp(:)%type(:) (identifier) (9.7.1.3.235)
id (2785)	coresource%compositions%neutralscomp(:)%type(:)%id (string) (9.7.1.1.3)
flag (2785)	coresource%compositions%neutralscomp(:)%type(:)%flag (integer) (9.7.1.1.2)
description (2785)	coresource%compositions%neutralscomp(:)%type(:)%description (string) (9.7.1.1.3)
label (2648)	coresource%compositions%neutralscomp(:)%label (string) (9.7.1.1.3)
edgespecies (2649)	coresource%compositions%edgespecies(:) (edgespecies) (9.7.1.3.185)
nucindex (2735)	coresource%compositions%edgespecies(:)%nucindex (integer) (9.7.1.1.2)
zmin (2735)	coresource%compositions%edgespecies(:)%zmin (float) (9.7.1.1.1)
zmax (2735)	coresource%compositions%edgespecies(:)%zmax (float) (9.7.1.1.1)
label (2735)	coresource%compositions%edgespecies(:)%label (string) (9.7.1.1.3)
signature (2649)	coresource%compositions%signature (identifier) (9.7.1.3.235)
id (2785)	coresource%compositions%signature%id (string) (9.7.1.1.3)

flag (2785)	coresource%compositions%signature%flag (integer) (9.7.1.1.2)
description (2785)	coresource%compositions%signature%description (string) (9.7.1.1.3)
toroid_field (2562)	coresource%toroid_field (b0r0) (9.7.1.3.59)
r0 (2609)	coresource%toroid_field%r0 (float) (9.7.1.1.1)
b0 (2609)	coresource%toroid_field%b0 (float) (9.7.1.1.1)
values (2562)	coresource%values(:) (coresource_values) (9.7.1.3.125)
sourceid (2675)	coresource%values(:)%sourceid (identifier) (9.7.1.3.235)
id (2785)	coresource%values(:)%sourceid%id (string) (9.7.1.1.3)
flag (2785)	coresource%values(:)%sourceid%flag (integer) (9.7.1.1.2)
description (2785)	coresource%values(:)%sourceid%description (string) (9.7.1.1.3)
rho.tor (2675)	coresource%values(:)%rho.tor (vecflt.type) (9.7.1.2.13)
rho.tor_norm (2675)	coresource%values(:)%rho.tor_norm (vecflt.type) (9.7.1.2.13)
psi (2675)	coresource%values(:)%psi (vecflt.type) (9.7.1.2.13)
volume (2675)	coresource%values(:)%volume (vecflt.type) (9.7.1.2.13)
area (2675)	coresource%values(:)%area (vecflt.type) (9.7.1.2.13)
j (2675)	coresource%values(:)%j (vecflt.type) (9.7.1.2.13)
sigma (2675)	coresource%values(:)%sigma (vecflt.type) (9.7.1.2.13)
si (2675)	coresource%values(:)%si (source_ion) (9.7.1.3.404)
exp (2954)	coresource%values(:)%si%exp (matflt.type) (9.7.1.2.10)
imp (2954)	coresource%values(:)%si%imp (matflt.type) (9.7.1.2.10)
se (2675)	coresource%values(:)%se (source_vec) (9.7.1.3.406)
exp (2956)	coresource%values(:)%se%exp (vecflt.type) (9.7.1.2.13)
imp (2956)	coresource%values(:)%se%imp (vecflt.type) (9.7.1.2.13)
sz (2675)	coresource%values(:)%sz(:) (source_imp) (9.7.1.3.403)
exp (2953)	coresource%values(:)%sz(:)%exp (matflt.type) (9.7.1.2.10)
imp (2953)	coresource%values(:)%sz(:)%imp (matflt.type) (9.7.1.2.10)
qi (2675)	coresource%values(:)%qi (source_ion) (9.7.1.3.404)
exp (2954)	coresource%values(:)%qi%exp (matflt.type) (9.7.1.2.10)
imp (2954)	coresource%values(:)%qi%imp (matflt.type) (9.7.1.2.10)
qe (2675)	coresource%values(:)%qe (source_vec) (9.7.1.3.406)
exp (2956)	coresource%values(:)%qe%exp (vecflt.type) (9.7.1.2.13)
imp (2956)	coresource%values(:)%qe%imp (vecflt.type) (9.7.1.2.13)
qz (2675)	coresource%values(:)%qz(:) (source_imp) (9.7.1.3.403)
exp (2953)	coresource%values(:)%qz(:)%exp (matflt.type) (9.7.1.2.10)
imp (2953)	coresource%values(:)%qz(:)%imp (matflt.type) (9.7.1.2.10)
ui (2675)	coresource%values(:)%ui (source_ion) (9.7.1.3.404)
exp (2954)	coresource%values(:)%ui%exp (matflt.type) (9.7.1.2.10)
imp (2954)	coresource%values(:)%ui%imp (matflt.type) (9.7.1.2.10)
ujxb (2675)	coresource%values(:)%ujxb (source_vec) (9.7.1.3.406)
exp (2956)	coresource%values(:)%ujxb%exp (vecflt.type) (9.7.1.2.13)
imp (2956)	coresource%values(:)%ujxb%imp (vecflt.type) (9.7.1.2.13)
codeparam (2675)	coresource%values(:)%codeparam (codeparam) (9.7.1.3.77)
codename (2627)	coresource%values(:)%codeparam%codename (string) (9.7.1.1.3)
codeversion (2627)	coresource%values(:)%codeparam%codeversion (string) (9.7.1.1.3)
parameters (2627)	coresource%values(:)%codeparam%parameters (string) (9.7.1.1.3)
output_diag (2627)	coresource%values(:)%codeparam%output_diag (string) (9.7.1.1.3)
output_flag (2627)	coresource%values(:)%codeparam%output_flag (integer) (9.7.1.1.2)
codeparam (2562)	coresource%codeparam (codeparam) (9.7.1.3.77)
codename (2627)	coresource%codeparam%codename (string) (9.7.1.1.3)
codeversion (2627)	coresource%codeparam%codeversion (string) (9.7.1.1.3)
parameters (2627)	coresource%codeparam%parameters (string) (9.7.1.1.3)
output_diag (2627)	coresource%codeparam%output_diag (string) (9.7.1.1.3)
output_flag (2627)	coresource%codeparam%output_flag (integer) (9.7.1.1.2)
time (2562)	coresource%time (float) (9.7.1.1.1)

### 9.7.2.1.11 coretransp

datainfo (2563)	coretransp%datainfo (datainfo) (9.7.1.3.134)
dataprovider (2684)	coretransp%datainfo%dataprovider (string) (9.7.1.1.3)
putdate (2684)	coretransp%datainfo%putdate (string) (9.7.1.1.3)
source (2684)	coretransp%datainfo%source (string) (9.7.1.1.3)

comment (2684)	coretransp%datainfo%comment (string) (9.7.1.1.3)
cocos (2684)	coretransp%datainfo%cocos (integer) (9.7.1.1.2)
id (2684)	coretransp%datainfo%id (integer) (9.7.1.1.2)
isref (2684)	coretransp%datainfo%isref (integer) (9.7.1.1.2)
whatref (2684)	coretransp%datainfo%whatref (whatref) (9.7.1.3.506)
user (3056)	coretransp%datainfo%whatref%user (string) (9.7.1.1.3)
machine (3056)	coretransp%datainfo%whatref%machine (string) (9.7.1.1.3)
shot (3056)	coretransp%datainfo%whatref%shot (integer) (9.7.1.1.2)
run (3056)	coretransp%datainfo%whatref%run (integer) (9.7.1.1.2)
occurrence (3056)	coretransp%datainfo%whatref%occurrence (integer) (9.7.1.1.2)
putinfo (2684)	coretransp%datainfo%putinfo (putinfo) (9.7.1.3.342)
putmethod (2892)	coretransp%datainfo%putinfo%putmethod (string) (9.7.1.1.3)
putaccess (2892)	coretransp%datainfo%putinfo%putaccess (string) (9.7.1.1.3)
putlocation (2892)	coretransp%datainfo%putinfo%putlocation (string) (9.7.1.1.3)
rights (2892)	coretransp%datainfo%putinfo%rights (string) (9.7.1.1.3)
composition (2563)	coretransp%composition (composition) (9.7.1.3.95)
amn (2645)	coretransp%composition%amn (vecflt.type) (9.7.1.2.13)
zn (2645)	coretransp%composition%zn (vecflt.type) (9.7.1.2.13)
zion (2645)	coretransp%composition%zion (vecflt.type) (9.7.1.2.13)
imp_flag (2645)	coretransp%composition%imp_flag (vecint.type) (9.7.1.2.14)
label (2645)	coretransp%composition%label (vecstring.type) (9.7.1.2.15)
desc_impur (2563)	coretransp%desc_impur (desc_impur) (9.7.1.3.136)
amn (2686)	coretransp%desc_impur%amn (vecflt.type) (9.7.1.2.13)
zn (2686)	coretransp%desc_impur%zn (vecint.type) (9.7.1.2.14)
i_ion (2686)	coretransp%desc_impur%i_ion (vecint.type) (9.7.1.2.14)
nzimp (2686)	coretransp%desc_impur%nzimp (vecint.type) (9.7.1.2.14)
zmin (2686)	coretransp%desc_impur%zmin (matint.type) (9.7.1.2.11)
zmax (2686)	coretransp%desc_impur%zmax (matint.type) (9.7.1.2.11)
label (2686)	coretransp%desc_impur%label (vecstring.type) (9.7.1.2.15)
compositions (2563)	coretransp%compositions (compositions.type) (9.7.1.3.99)
nuclei (2649)	coretransp%compositions%nuclei(:) (nuclei) (9.7.1.3.299)
zn (2849)	coretransp%compositions%nuclei(:)%zn (float) (9.7.1.1.1)
amn (2849)	coretransp%compositions%nuclei(:)%amn (float) (9.7.1.1.1)
label (2849)	coretransp%compositions%nuclei(:)%label (string) (9.7.1.1.3)
ions (2649)	coretransp%compositions%ions(:) (ions) (9.7.1.3.240)
nucindex (2790)	coretransp%compositions%ions(:)%nucindex (integer) (9.7.1.1.2)
zion (2790)	coretransp%compositions%ions(:)%zion (float) (9.7.1.1.1)
imp_flag (2790)	coretransp%compositions%ions(:)%imp_flag (integer) (9.7.1.1.2)
label (2790)	coretransp%compositions%ions(:)%label (string) (9.7.1.1.3)
impurities (2649)	coretransp%compositions%impurities(:) (impurities) (9.7.1.3.237)
nucindex (2787)	coretransp%compositions%impurities(:)%nucindex (integer) (9.7.1.1.2)
i_ion (2787)	coretransp%compositions%impurities(:)%i_ion (integer) (9.7.1.1.2)
nzimp (2787)	coretransp%compositions%impurities(:)%nzimp (integer) (9.7.1.1.2)
zmin (2787)	coretransp%compositions%impurities(:)%zmin (vecflt.type) (9.7.1.2.13)
zmax (2787)	coretransp%compositions%impurities(:)%zmax (vecflt.type) (9.7.1.2.13)
label (2787)	coretransp%compositions%impurities(:)%label (vecstring.type) (9.7.1.2.15)
neutralscomp (2649)	coretransp%compositions%neutralscomp(:) (composition_neutralscomp) (9.7.1.3.98)
neutcomp (2648)	coretransp%compositions%neutralscomp(:)%neutcomp(:) (composition_neutrals_neutcomp) (9.7.1.3.97)
nucindex (2647)	coretransp%compositions%neutralscomp(:)%neutcomp(:)%nucindex (integer) (9.7.1.1.2)
multiplicity (2647)	coretransp%compositions%neutralscomp(:)%neutcomp(:)%multiplicity (integer) (9.7.1.1.2)
type (2648)	coretransp%compositions%neutralscomp(:)%type(:) (identifier) (9.7.1.3.235)
id (2785)	coretransp%compositions%neutralscomp(:)%type(:)%id (string) (9.7.1.1.3)
flag (2785)	coretransp%compositions%neutralscomp(:)%type(:)%flag (integer) (9.7.1.1.2)
description (2785)	coretransp%compositions%neutralscomp(:)%type(:)%description (string) (9.7.1.1.3)
label (2648)	coretransp%compositions%neutralscomp(:)%label (string) (9.7.1.1.3)
edgespecies (2649)	coretransp%compositions%edgespecies(:) (edgespecies) (9.7.1.3.185)
nucindex (2735)	coretransp%compositions%edgespecies(:)%nucindex (integer) (9.7.1.1.2)
zmin (2735)	coretransp%compositions%edgespecies(:)%zmin (float) (9.7.1.1.1)
zmax (2735)	coretransp%compositions%edgespecies(:)%zmax (float) (9.7.1.1.1)
label (2735)	coretransp%compositions%edgespecies(:)%label (string) (9.7.1.1.3)
signature (2649)	coretransp%compositions%signature (identifier) (9.7.1.3.235)

id (2785)	coretransp%compositions%signature%id (string) (9.7.1.1.3)
flag (2785)	coretransp%compositions%signature%flag (integer) (9.7.1.1.2)
description (2785)	coretransp%compositions%signature%description (string) (9.7.1.1.3)
values (2563)	coretransp%values(:) (coretransp_values) (9.7.1.3.129)
transportid (2679)	coretransp%values(:)%transportid (identifier) (9.7.1.3.235)
id (2785)	coretransp%values(:)%transportid%id (string) (9.7.1.1.3)
flag (2785)	coretransp%values(:)%transportid%flag (integer) (9.7.1.1.2)
description (2785)	coretransp%values(:)%transportid%description (string) (9.7.1.1.3)
rho_tor_norm (2679)	coretransp%values(:)%rho_tor_norm (vecflt_type) (9.7.1.2.13)
rho_tor (2679)	coretransp%values(:)%rho_tor (vecflt_type) (9.7.1.2.13)
psi (2679)	coretransp%values(:)%psi (vecflt_type) (9.7.1.2.13)
volume (2679)	coretransp%values(:)%volume (vecflt_type) (9.7.1.2.13)
area (2679)	coretransp%values(:)%area (vecflt_type) (9.7.1.2.13)
sigma (2679)	coretransp%values(:)%sigma (vecflt_type) (9.7.1.2.13)
ni_transp (2679)	coretransp%values(:)%ni_transp (ni_transp) (9.7.1.3.292)
diff_eff (2842)	coretransp%values(:)%ni_transp%diff_eff (array3dflt_type) (9.7.1.2.2)
vconv_eff (2842)	coretransp%values(:)%ni_transp%vconv_eff (array3dflt_type) (9.7.1.2.2)
flux (2842)	coretransp%values(:)%ni_transp%flux (matflt_type) (9.7.1.2.10)
off_diagonal (2842)	coretransp%values(:)%ni_transp%off_diagonal (offdiagion) (9.7.1.3.302)
d_ni (2852)	coretransp%values(:)%ni_transp%off_diagonal%d_ni (array3dflt_type) (9.7.1.2.2)
d_ti (2852)	coretransp%values(:)%ni_transp%off_diagonal%d_ti (array3dflt_type) (9.7.1.2.2)
d_ne (2852)	coretransp%values(:)%ni_transp%off_diagonal%d_ne (matflt_type) (9.7.1.2.10)
d_te (2852)	coretransp%values(:)%ni_transp%off_diagonal%d_te (matflt_type) (9.7.1.2.10)
d_epar (2852)	coretransp%values(:)%ni_transp%off_diagonal%d_epar (matflt_type) (9.7.1.2.10)
d_mtor (2852)	coretransp%values(:)%ni_transp%off_diagonal%d_mtor (matflt_type) (9.7.1.2.10)
flag (2842)	coretransp%values(:)%ni_transp%flag (integer) (9.7.1.1.2)
ne_transp (2679)	coretransp%values(:)%ne_transp (ne_transp) (9.7.1.3.287)
diff_eff (2837)	coretransp%values(:)%ne_transp%diff_eff (matflt_type) (9.7.1.2.10)
vconv_eff (2837)	coretransp%values(:)%ne_transp%vconv_eff (matflt_type) (9.7.1.2.10)
flux (2837)	coretransp%values(:)%ne_transp%flux (vecflt_type) (9.7.1.2.13)
off_diagonal (2837)	coretransp%values(:)%ne_transp%off_diagonal (offdiagel) (9.7.1.3.301)
d_ni (2851)	coretransp%values(:)%ne_transp%off_diagonal%d_ni (matflt_type) (9.7.1.2.10)
d_ti (2851)	coretransp%values(:)%ne_transp%off_diagonal%d_ti (matflt_type) (9.7.1.2.10)
d_ne (2851)	coretransp%values(:)%ne_transp%off_diagonal%d_ne (vecflt_type) (9.7.1.2.13)
d_te (2851)	coretransp%values(:)%ne_transp%off_diagonal%d_te (vecflt_type) (9.7.1.2.13)
d_epar (2851)	coretransp%values(:)%ne_transp%off_diagonal%d_epar (vecflt_type) (9.7.1.2.13)
d_mtor (2851)	coretransp%values(:)%ne_transp%off_diagonal%d_mtor (vecflt_type) (9.7.1.2.13)
flag (2837)	coretransp%values(:)%ne_transp%flag (integer) (9.7.1.1.2)
nz_transp (2679)	coretransp%values(:)%nz_transp(:) (transcoefimp) (9.7.1.3.462)
diff_eff (3012)	coretransp%values(:)%nz_transp(:)%diff_eff (matflt_type) (9.7.1.2.10)
vconv_eff (3012)	coretransp%values(:)%nz_transp(:)%vconv_eff (matflt_type) (9.7.1.2.10)
exchange (3012)	coretransp%values(:)%nz_transp(:)%exchange (matflt_type) (9.7.1.2.10)
flux (3012)	coretransp%values(:)%nz_transp(:)%flux (matflt_type) (9.7.1.2.10)
flag (3012)	coretransp%values(:)%nz_transp(:)%flag (integer) (9.7.1.1.2)
ti_transp (2679)	coretransp%values(:)%ti_transp (transcoefion) (9.7.1.3.463)
diff_eff (3013)	coretransp%values(:)%ti_transp%diff_eff (matflt_type) (9.7.1.2.10)
vconv_eff (3013)	coretransp%values(:)%ti_transp%vconv_eff (matflt_type) (9.7.1.2.10)
exchange (3013)	coretransp%values(:)%ti_transp%exchange (matflt_type) (9.7.1.2.10)
qgi (3013)	coretransp%values(:)%ti_transp%qgi (matflt_type) (9.7.1.2.10)
flux (3013)	coretransp%values(:)%ti_transp%flux (matflt_type) (9.7.1.2.10)
off_diagonal (3013)	coretransp%values(:)%ti_transp%off_diagonal (offdiagion) (9.7.1.3.302)
d_ni (2852)	coretransp%values(:)%ti_transp%off_diagonal%d_ni (array3dflt_type) (9.7.1.2.2)
d_ti (2852)	coretransp%values(:)%ti_transp%off_diagonal%d_ti (array3dflt_type) (9.7.1.2.2)
d_ne (2852)	coretransp%values(:)%ti_transp%off_diagonal%d_ne (matflt_type) (9.7.1.2.10)
d_te (2852)	coretransp%values(:)%ti_transp%off_diagonal%d_te (matflt_type) (9.7.1.2.10)
d_epar (2852)	coretransp%values(:)%ti_transp%off_diagonal%d_epar (matflt_type) (9.7.1.2.10)
d_mtor (2852)	coretransp%values(:)%ti_transp%off_diagonal%d_mtor (matflt_type) (9.7.1.2.10)
flag (3013)	coretransp%values(:)%ti_transp%flag (integer) (9.7.1.1.2)
te_transp (2679)	coretransp%values(:)%te_transp (transcoefel) (9.7.1.3.461)
diff_eff (3011)	coretransp%values(:)%te_transp%diff_eff (vecflt_type) (9.7.1.2.13)
vconv_eff (3011)	coretransp%values(:)%te_transp%vconv_eff (vecflt_type) (9.7.1.2.13)



flux (3011)	coretransp%values(:)%te_transp%flux (vecflt_type) (9.7.1.2.13)
off_diagonal (3011)	coretransp%values(:)%te_transp%off_diagonal (offdiagonal) (9.7.1.3.301)
d_ni (2851)	coretransp%values(:)%te_transp%off_diagonal%d_ni (matflt_type) (9.7.1.2.10)
d_ti (2851)	coretransp%values(:)%te_transp%off_diagonal%d_ti (matflt_type) (9.7.1.2.10)
d_ne (2851)	coretransp%values(:)%te_transp%off_diagonal%d_ne (vecflt_type) (9.7.1.2.13)
d_te (2851)	coretransp%values(:)%te_transp%off_diagonal%d_te (vecflt_type) (9.7.1.2.13)
d_epar (2851)	coretransp%values(:)%te_transp%off_diagonal%d_epar (vecflt_type) (9.7.1.2.13)
d_mtor (2851)	coretransp%values(:)%te_transp%off_diagonal%d_mtor (vecflt_type) (9.7.1.2.13)
flag (3011)	coretransp%values(:)%te_transp%flag (integer) (9.7.1.1.2)
tz_transp (2679)	coretransp%values(:)%tz_transp(:) (transcoefimp) (9.7.1.3.462)
diff_eff (3012)	coretransp%values(:)%tz_transp(:)%diff_eff (matflt_type) (9.7.1.2.10)
vconv_eff (3012)	coretransp%values(:)%tz_transp(:)%vconv_eff (matflt_type) (9.7.1.2.10)
exchange (3012)	coretransp%values(:)%tz_transp(:)%exchange (matflt_type) (9.7.1.2.10)
flux (3012)	coretransp%values(:)%tz_transp(:)%flux (matflt_type) (9.7.1.2.10)
flag (3012)	coretransp%values(:)%tz_transp(:)%flag (integer) (9.7.1.1.2)
vtor_transp (2679)	coretransp%values(:)%vtor_transp (transcoefvtor) (9.7.1.3.464)
diff_eff (3014)	coretransp%values(:)%vtor_transp%diff_eff (matflt_type) (9.7.1.2.10)
vconv_eff (3014)	coretransp%values(:)%vtor_transp%vconv_eff (matflt_type) (9.7.1.2.10)
flux (3014)	coretransp%values(:)%vtor_transp%flux (matflt_type) (9.7.1.2.10)
off_diagonal (3014)	coretransp%values(:)%vtor_transp%off_diagonal (offdiagonal) (9.7.1.3.302)
d_ni (2852)	coretransp%values(:)%vtor_transp%off_diagonal%d_ni (array3dfilt_type) (9.7.1.2.2)
d_ti (2852)	coretransp%values(:)%vtor_transp%off_diagonal%d_ti (array3dfilt_type) (9.7.1.2.2)
d_ne (2852)	coretransp%values(:)%vtor_transp%off_diagonal%d_ne (matflt_type) (9.7.1.2.10)
d_te (2852)	coretransp%values(:)%vtor_transp%off_diagonal%d_te (matflt_type) (9.7.1.2.10)
d_epar (2852)	coretransp%values(:)%vtor_transp%off_diagonal%d_epar (matflt_type) (9.7.1.2.10)
d_mtor (2852)	coretransp%values(:)%vtor_transp%off_diagonal%d_mtor (matflt_type) (9.7.1.2.10)
flag (3014)	coretransp%values(:)%vtor_transp%flag (integer) (9.7.1.1.2)
codeparam (2679)	coretransp%values(:)%codeparam (codeparam) (9.7.1.3.77)
codename (2627)	coretransp%values(:)%codeparam%codename (string) (9.7.1.1.3)
codeversion (2627)	coretransp%values(:)%codeparam%codeversion (string) (9.7.1.1.3)
parameters (2627)	coretransp%values(:)%codeparam%parameters (string) (9.7.1.1.3)
output_diag (2627)	coretransp%values(:)%codeparam%output_diag (string) (9.7.1.1.3)
output_flag (2627)	coretransp%values(:)%codeparam%output_flag (integer) (9.7.1.1.2)
codeparam (2563)	coretransp%codeparam (codeparam) (9.7.1.3.77)
codename (2627)	coretransp%codeparam%codename (string) (9.7.1.1.3)
codeversion (2627)	coretransp%codeparam%codeversion (string) (9.7.1.1.3)
parameters (2627)	coretransp%codeparam%parameters (string) (9.7.1.1.3)
output_diag (2627)	coretransp%codeparam%output_diag (string) (9.7.1.1.3)
output_flag (2627)	coretransp%codeparam%output_flag (integer) (9.7.1.1.2)
time (2563)	coretransp%time (float) (9.7.1.1.1)

### 9.7.2.1.12 cxdiag

datainfo (2564)	cxdiag%datainfo (datainfo) (9.7.1.3.134)
dataprovider (2684)	cxdiag%datainfo%dataprovider (string) (9.7.1.1.3)
putdate (2684)	cxdiag%datainfo%putdate (string) (9.7.1.1.3)
source (2684)	cxdiag%datainfo%source (string) (9.7.1.1.3)
comment (2684)	cxdiag%datainfo%comment (string) (9.7.1.1.3)
cocos (2684)	cxdiag%datainfo%cocos (integer) (9.7.1.1.2)
id (2684)	cxdiag%datainfo%id (integer) (9.7.1.1.2)
isref (2684)	cxdiag%datainfo%isref (integer) (9.7.1.1.2)
whatref (2684)	cxdiag%datainfo%whatref (whatref) (9.7.1.3.506)
user (3056)	cxdiag%datainfo%whatref%user (string) (9.7.1.1.3)
machine (3056)	cxdiag%datainfo%whatref%machine (string) (9.7.1.1.3)
shot (3056)	cxdiag%datainfo%whatref%shot (integer) (9.7.1.1.2)
run (3056)	cxdiag%datainfo%whatref%run (integer) (9.7.1.1.2)
occurrence (3056)	cxdiag%datainfo%whatref%occurrence (integer) (9.7.1.1.2)
putinfo (2684)	cxdiag%datainfo%putinfo (putinfo) (9.7.1.3.342)
putmethod (2892)	cxdiag%datainfo%putinfo%putmethod (string) (9.7.1.1.3)
putaccess (2892)	cxdiag%datainfo%putinfo%putaccess (string) (9.7.1.1.3)
putlocation (2892)	cxdiag%datainfo%putinfo%putlocation (string) (9.7.1.1.3)



rights (2892)	cxdiag%datainfo%putinfo%rights (string) (9.7.1.1.3)
setup (2564)	cxdiag%setup (cxsetup) (9.7.1.3.132)
amn (2682)	cxdiag%setup%amn (vecflt.type) (9.7.1.2.13)
zn (2682)	cxdiag%setup%zn (vecflt.type) (9.7.1.2.13)
position (2682)	cxdiag%setup%position (rzphiIDexp) (9.7.1.3.366)
r (2916)	cxdiag%setup%position%r (exp1D) (9.7.1.3.197)
value (2747)	cxdiag%setup%position%r%value (vecflt.type) (9.7.1.2.13)
abserror (2747)	cxdiag%setup%position%r%abserror (vecflt.type) (9.7.1.2.13)
releror (2747)	cxdiag%setup%position%r%releror (vecflt.type) (9.7.1.2.13)
z (2916)	cxdiag%setup%position%z (exp1D) (9.7.1.3.197)
value (2747)	cxdiag%setup%position%z%value (vecflt.type) (9.7.1.2.13)
abserror (2747)	cxdiag%setup%position%z%abserror (vecflt.type) (9.7.1.2.13)
releror (2747)	cxdiag%setup%position%z%releror (vecflt.type) (9.7.1.2.13)
phi (2916)	cxdiag%setup%position%phi (exp1D) (9.7.1.3.197)
value (2747)	cxdiag%setup%position%phi%value (vecflt.type) (9.7.1.2.13)
abserror (2747)	cxdiag%setup%position%phi%abserror (vecflt.type) (9.7.1.2.13)
releror (2747)	cxdiag%setup%position%phi%releror (vecflt.type) (9.7.1.2.13)
measure (2564)	cxdiag%measure (cxmeasure) (9.7.1.3.131)
ti (2681)	cxdiag%measure%ti (exp1D) (9.7.1.3.197)
value (2747)	cxdiag%measure%ti%value (vecflt.type) (9.7.1.2.13)
abserror (2747)	cxdiag%measure%ti%abserror (vecflt.type) (9.7.1.2.13)
releror (2747)	cxdiag%measure%ti%releror (vecflt.type) (9.7.1.2.13)
vtr (2681)	cxdiag%measure%vtr (exp1D) (9.7.1.3.197)
value (2747)	cxdiag%measure%vtr%value (vecflt.type) (9.7.1.2.13)
abserror (2747)	cxdiag%measure%vtr%abserror (vecflt.type) (9.7.1.2.13)
releror (2747)	cxdiag%measure%vtr%releror (vecflt.type) (9.7.1.2.13)
vpol (2681)	cxdiag%measure%vpol (exp1D) (9.7.1.3.197)
value (2747)	cxdiag%measure%vpol%value (vecflt.type) (9.7.1.2.13)
abserror (2747)	cxdiag%measure%vpol%abserror (vecflt.type) (9.7.1.2.13)
releror (2747)	cxdiag%measure%vpol%releror (vecflt.type) (9.7.1.2.13)
codeparam (2564)	cxdiag%codeparam (codeparam) (9.7.1.3.77)
codename (2627)	cxdiag%codeparam%codename (string) (9.7.1.1.3)
codeversion (2627)	cxdiag%codeparam%codeversion (string) (9.7.1.1.3)
parameters (2627)	cxdiag%codeparam%parameters (string) (9.7.1.1.3)
output_diag (2627)	cxdiag%codeparam%output_diag (string) (9.7.1.1.3)
output_flag (2627)	cxdiag%codeparam%output_flag (integer) (9.7.1.1.2)
time (2564)	cxdiag%time (float) (9.7.1.1.1)

### 9.7.2.1.13 distribution

datainfo (2565)	distribution%datainfo (datainfo) (9.7.1.3.134)
dataproducer (2684)	distribution%datainfo%dataproducer (string) (9.7.1.1.3)
putdate (2684)	distribution%datainfo%putdate (string) (9.7.1.1.3)
source (2684)	distribution%datainfo%source (string) (9.7.1.1.3)
comment (2684)	distribution%datainfo%comment (string) (9.7.1.1.3)
cocos (2684)	distribution%datainfo%cocos (integer) (9.7.1.1.2)
id (2684)	distribution%datainfo%id (integer) (9.7.1.1.2)
isref (2684)	distribution%datainfo%isref (integer) (9.7.1.1.2)
whatref (2684)	distribution%datainfo%whatref (whatref) (9.7.1.3.506)
user (3056)	distribution%datainfo%whatref%user (string) (9.7.1.1.3)
machine (3056)	distribution%datainfo%whatref%machine (string) (9.7.1.1.3)
shot (3056)	distribution%datainfo%whatref%shot (integer) (9.7.1.1.2)
run (3056)	distribution%datainfo%whatref%run (integer) (9.7.1.1.2)
occurrence (3056)	distribution%datainfo%whatref%occurrence (integer) (9.7.1.1.2)
putinfo (2684)	distribution%datainfo%putinfo (putinfo) (9.7.1.3.342)
putmethod (2892)	distribution%datainfo%putinfo%putmethod (string) (9.7.1.1.3)
putaccess (2892)	distribution%datainfo%putinfo%putaccess (string) (9.7.1.1.3)
putlocation (2892)	distribution%datainfo%putinfo%putlocation (string) (9.7.1.1.3)
rights (2892)	distribution%datainfo%putinfo%rights (string) (9.7.1.1.3)
composition (2565)	distribution%composition (composition) (9.7.1.3.95)
amn (2645)	distribution%composition%amn (vecflt.type) (9.7.1.2.13)

zn (2645)	distribution%composition%zn (vecflt.type) (9.7.1.2.13)
zion (2645)	distribution%composition%zion (vecflt.type) (9.7.1.2.13)
imp_flag (2645)	distribution%composition%imp_flag (vecint.type) (9.7.1.2.14)
label (2645)	distribution%composition%label (vecstring.type) (9.7.1.2.15)
compositions (2565)	distribution%compositions (compositions.type) (9.7.1.3.99)
nuclei (2649)	distribution%compositions%nuclei(:) (nuclei) (9.7.1.3.299)
zn (2849)	distribution%compositions%nuclei(:)%zn (float) (9.7.1.1.1)
amn (2849)	distribution%compositions%nuclei(:)%amn (float) (9.7.1.1.1)
label (2849)	distribution%compositions%nuclei(:)%label (string) (9.7.1.1.3)
ions (2649)	distribution%compositions%ions(:) (ions) (9.7.1.3.240)
nucindex (2790)	distribution%compositions%ions(:)%nucindex (integer) (9.7.1.1.2)
zion (2790)	distribution%compositions%ions(:)%zion (float) (9.7.1.1.1)
imp_flag (2790)	distribution%compositions%ions(:)%imp_flag (integer) (9.7.1.1.2)
label (2790)	distribution%compositions%ions(:)%label (string) (9.7.1.1.3)
impurities (2649)	distribution%compositions%impurities(:) (impurities) (9.7.1.3.237)
nucindex (2787)	distribution%compositions%impurities(:)%nucindex (integer) (9.7.1.1.2)
i_ion (2787)	distribution%compositions%impurities(:)%i_ion (integer) (9.7.1.1.2)
nzimp (2787)	distribution%compositions%impurities(:)%nzimp (integer) (9.7.1.1.2)
zmin (2787)	distribution%compositions%impurities(:)%zmin (vecflt.type) (9.7.1.2.13)
zmax (2787)	distribution%compositions%impurities(:)%zmax (vecflt.type) (9.7.1.2.13)
label (2787)	distribution%compositions%impurities(:)%label (vecstring.type) (9.7.1.2.15)
neutralscomp (2649)	distribution%compositions%neutralscomp(:) (composition_neutralscomp) (9.7.1.3.98)
neutcomp (2648)	distribution%compositions%neutralscomp(:)%neutcomp(:) (composition_neutrals_neutcomp) (9.7.1.3.97)
nucindex (2647)	distribution%compositions%neutralscomp(:)%neutcomp(:)%nucindex (integer) (9.7.1.1.2)
multiplicity (2647)	distribution%compositions%neutralscomp(:)%neutcomp(:)%multiplicity (integer) (9.7.1.1.2)
type (2648)	distribution%compositions%neutralscomp(:)%type(:) (identifier) (9.7.1.3.235)
id (2785)	distribution%compositions%neutralscomp(:)%type(:)%id (string) (9.7.1.1.3)
flag (2785)	distribution%compositions%neutralscomp(:)%type(:)%flag (integer) (9.7.1.1.2)
description (2785)	distribution%compositions%neutralscomp(:)%type(:)%description (string) (9.7.1.1.3)
label (2648)	distribution%compositions%neutralscomp(:)%label (string) (9.7.1.1.3)
edgespecies (2649)	distribution%compositions%edgespecies(:) (edgespecies) (9.7.1.3.185)
nucindex (2735)	distribution%compositions%edgespecies(:)%nucindex (integer) (9.7.1.1.2)
zmin (2735)	distribution%compositions%edgespecies(:)%zmin (float) (9.7.1.1.1)
zmax (2735)	distribution%compositions%edgespecies(:)%zmax (float) (9.7.1.1.1)
label (2735)	distribution%compositions%edgespecies(:)%label (string) (9.7.1.1.3)
signature (2649)	distribution%compositions%signature (identifier) (9.7.1.3.235)
id (2785)	distribution%compositions%signature%id (string) (9.7.1.1.3)
flag (2785)	distribution%compositions%signature%flag (integer) (9.7.1.1.2)
description (2785)	distribution%compositions%signature%description (string) (9.7.1.1.3)
distri_vec (2565)	distribution%distri_vec(:) (distri_vec) (9.7.1.3.166)
wave_id (2716)	distribution%distri_vec(:)%wave_id(:) (enum_instance) (9.7.1.3.188)
type (2738)	distribution%distri_vec(:)%wave_id(:)%type (identifier) (9.7.1.3.235)
id (2785)	distribution%distri_vec(:)%wave_id(:)%type%id (string) (9.7.1.1.3)
flag (2785)	distribution%distri_vec(:)%wave_id(:)%type%flag (integer) (9.7.1.1.2)
description (2785)	distribution%distri_vec(:)%wave_id(:)%type%description (string) (9.7.1.1.3)
name (2738)	distribution%distri_vec(:)%wave_id(:)%name (string) (9.7.1.1.3)
index (2738)	distribution%distri_vec(:)%wave_id(:)%index (integer) (9.7.1.1.2)
source_id (2716)	distribution%distri_vec(:)%source_id(:) (enum_instance) (9.7.1.3.188)
type (2738)	distribution%distri_vec(:)%source_id(:)%type (identifier) (9.7.1.3.235)
id (2785)	distribution%distri_vec(:)%source_id(:)%type%id (string) (9.7.1.1.3)
flag (2785)	distribution%distri_vec(:)%source_id(:)%type%flag (integer) (9.7.1.1.2)
description (2785)	distribution%distri_vec(:)%source_id(:)%type%description (string) (9.7.1.1.3)
name (2738)	distribution%distri_vec(:)%source_id(:)%name (string) (9.7.1.1.3)
index (2738)	distribution%distri_vec(:)%source_id(:)%index (integer) (9.7.1.1.2)
species (2716)	distribution%distri_vec(:)%species (species_reference) (9.7.1.3.411)
type (2961)	distribution%distri_vec(:)%species%type (identifier) (9.7.1.3.235)
id (2785)	distribution%distri_vec(:)%species%type%id (string) (9.7.1.1.3)
flag (2785)	distribution%distri_vec(:)%species%type%flag (integer) (9.7.1.1.2)
description (2785)	distribution%distri_vec(:)%species%type%description (string) (9.7.1.1.3)
index (2961)	distribution%distri_vec(:)%species%index (integer) (9.7.1.1.2)
gyro_type (2716)	distribution%distri_vec(:)%gyro_type (integer) (9.7.1.1.2)

fast_filter (2716)	distribution%distri_vec(:)%fast_filter (fast_thermal_separation_filter) (9.7.1.3.200)
method (2750)	distribution%distri_vec(:)%fast_filter%method (identifier) (9.7.1.3.235)
id (2785)	distribution%distri_vec(:)%fast_filter%method%id (string) (9.7.1.1.3)
flag (2785)	distribution%distri_vec(:)%fast_filter%method%flag (integer) (9.7.1.1.2)
description (2785)	distribution%distri_vec(:)%fast_filter%method%description (string) (9.7.1.1.3)
energy_sep (2750)	distribution%distri_vec(:)%fast_filter%energy_sep (vecflt_type) (9.7.1.2.13)
global_param (2716)	distribution%distri_vec(:)%global_param (dist_global_param) (9.7.1.3.150)
geometry (2700)	distribution%distri_vec(:)%global_param%geometry (dist_geometry_0d) (9.7.1.3.147)
mag_axis (2697)	distribution%distri_vec(:)%global_param%geometry%mag_axis (rz0D) (9.7.1.3.358)
r (2908)	distribution%distri_vec(:)%global_param%geometry%mag_axis%r (float) (9.7.1.1.1)
z (2908)	distribution%distri_vec(:)%global_param%geometry%mag_axis%z (float) (9.7.1.1.1)
toroid_field (2697)	distribution%distri_vec(:)%global_param%geometry%toroid_field (b0r0) (9.7.1.3.59)
r0 (2609)	distribution%distri_vec(:)%global_param%geometry%toroid_field%r0 (float) (9.7.1.1.1)
b0 (2609)	distribution%distri_vec(:)%global_param%geometry%toroid_field%b0 (float) (9.7.1.1.1)
state (2700)	distribution%distri_vec(:)%global_param%state (dist_state_0d) (9.7.1.3.162)
n_particles (2712)	distribution%distri_vec(:)%global_param%state%n_particles (float) (9.7.1.1.1)
n_part_fast (2712)	distribution%distri_vec(:)%global_param%state%n_part_fast (float) (9.7.1.1.1)
enrg (2712)	distribution%distri_vec(:)%global_param%state%enrg (float) (9.7.1.1.1)
enrg_fast (2712)	distribution%distri_vec(:)%global_param%state%enrg_fast (float) (9.7.1.1.1)
enrg_fast.pa (2712)	distribution%distri_vec(:)%global_param%state%enrg_fast.pa (float) (9.7.1.1.1)
momentm_fast (2712)	distribution%distri_vec(:)%global_param%state%momentm_fast (float) (9.7.1.1.1)
current_dr (2712)	distribution%distri_vec(:)%global_param%state%current_dr (float) (9.7.1.1.1)
torque_jrxb (2712)	distribution%distri_vec(:)%global_param%state%torque_jrxb (float) (9.7.1.1.1)
collisions_e (2700)	distribution%distri_vec(:)%global_param%collisions_e (dist_collisional_transfer_0d) (9.7.1.3.141)
power_th (2691)	distribution%distri_vec(:)%global_param%collisions_e%power_th (float) (9.7.1.1.1)
power_fast (2691)	distribution%distri_vec(:)%global_param%collisions_e%power_fast (float) (9.7.1.1.1)
torque_th (2691)	distribution%distri_vec(:)%global_param%collisions_e%torque_th (float) (9.7.1.1.1)
torque_fast (2691)	distribution%distri_vec(:)%global_param%collisions_e%torque_fast (float) (9.7.1.1.1)
collisions_i (2700)	distribution%distri_vec(:)%global_param%collisions_i(:) (dist_collisional_transfer_0d) (9.7.1.3.141)
power_th (2691)	distribution%distri_vec(:)%global_param%collisions_i(:)%power_th (float) (9.7.1.1.1)
power_fast (2691)	distribution%distri_vec(:)%global_param%collisions_i(:)%power_fast (float) (9.7.1.1.1)
torque_th (2691)	distribution%distri_vec(:)%global_param%collisions_i(:)%torque_th (float) (9.7.1.1.1)
torque_fast (2691)	distribution%distri_vec(:)%global_param%collisions_i(:)%torque_fast (float) (9.7.1.1.1)
collisions_z (2700)	distribution%distri_vec(:)%global_param%collisions_z(:) (dist_global_param_collisions_z) (9.7.1.3.151)
charge_state (2701)	distribution%distri_vec(:)%global_param%collisions_z(:)%charge_state(:) (dist_collisional_transfer_0d) (9.7.1.3.141)
power_th (2691)	distribution%distri_vec(:)%global_param%collisions_z(:)%charge_state(:)%power_th (float) (9.7.1.1.1)
power_fast (2691)	distribution%distri_vec(:)%global_param%collisions_z(:)%charge_state(:)%power_fast (float) (9.7.1.1.1)
torque_th (2691)	distribution%distri_vec(:)%global_param%collisions_z(:)%charge_state(:)%torque_th (float) (9.7.1.1.1)
torque_fast (2691)	distribution%distri_vec(:)%global_param%collisions_z(:)%charge_state(:)%torque_fast (float) (9.7.1.1.1)
sources (2700)	distribution%distri_vec(:)%global_param%sources(:) (dist_sources_0d) (9.7.1.3.159)
source_ref (2709)	distribution%distri_vec(:)%global_param%sources(:)%source_ref (dist_sources_reference) (9.7.1.3.161)
type (2711)	distribution%distri_vec(:)%global_param%sources(:)%source_ref%type (identifier) (9.7.1.3.235)
id (2785)	distribution%distri_vec(:)%global_param%sources(:)%source_ref%type%id (string) (9.7.1.1.3)
flag (2785)	distribution%distri_vec(:)%global_param%sources(:)%source_ref%type%flag (integer) (9.7.1.1.2)
description (2785)	distribution%distri_vec(:)%global_param%sources(:)%source_ref%type%description (string) (9.7.1.1.3)
index_waveid (2711)	distribution%distri_vec(:)%global_param%sources(:)%source_ref%index_waveid (vecint_type) (9.7.1.2.14)
index_srcid (2711)	distribution%distri_vec(:)%global_param%sources(:)%source_ref%index_srcid (vecint_type) (9.7.1.2.14)
particle (2709)	distribution%distri_vec(:)%global_param%sources(:)%particle (float) (9.7.1.1.1)
momentum (2709)	distribution%distri_vec(:)%global_param%sources(:)%momentum (float) (9.7.1.1.1)
energy (2709)	distribution%distri_vec(:)%global_param%sources(:)%energy (float) (9.7.1.1.1)
profiles_1d (2716)	distribution%distri_vec(:)%profiles_1d (dist_profiles_1d) (9.7.1.3.156)
geometry (2706)	distribution%distri_vec(:)%profiles_1d%geometry (dist_geometry_1d) (9.7.1.3.148)

rho_tor (2698)	distribution%distri_vec(:)%profiles_1d%geometry%rho_tor (vecflt_type) (9.7.1.2.13)
rho_tor_norm (2698)	distribution%distri_vec(:)%profiles_1d%geometry%rho_tor_norm (vecflt_type) (9.7.1.2.13)
psi (2698)	distribution%distri_vec(:)%profiles_1d%geometry%psi (vecflt_type) (9.7.1.2.13)
volume (2698)	distribution%distri_vec(:)%profiles_1d%geometry%volume (vecflt_type) (9.7.1.2.13)
area (2698)	distribution%distri_vec(:)%profiles_1d%geometry%area (vecflt_type) (9.7.1.2.13)
state (2706)	distribution%distri_vec(:)%profiles_1d%state (dist_state_1d) (9.7.1.3.163)
dens (2713)	distribution%distri_vec(:)%profiles_1d%state%dens (vecflt_type) (9.7.1.2.13)
dens_fast (2713)	distribution%distri_vec(:)%profiles_1d%state%dens_fast (vecflt_type) (9.7.1.2.13)
pres (2713)	distribution%distri_vec(:)%profiles_1d%state%pres (vecflt_type) (9.7.1.2.13)
pres_fast (2713)	distribution%distri_vec(:)%profiles_1d%state%pres_fast (vecflt_type) (9.7.1.2.13)
pres_fast_pa (2713)	distribution%distri_vec(:)%profiles_1d%state%pres_fast_pa (vecflt_type) (9.7.1.2.13)
momentm_fast (2713)	distribution%distri_vec(:)%profiles_1d%state%momentm_fast (vecflt_type) (9.7.1.2.13)
current (2713)	distribution%distri_vec(:)%profiles_1d%state%current (vecflt_type) (9.7.1.2.13)
current_fast (2713)	distribution%distri_vec(:)%profiles_1d%state%current_fast (vecflt_type) (9.7.1.2.13)
torque_jrxb (2713)	distribution%distri_vec(:)%profiles_1d%state%torque_jrxb (vecflt_type) (9.7.1.2.13)
collisions_e (2706)	distribution%distri_vec(:)%profiles_1d%collisions_e (dist_collisional_transfer_1d) (9.7.1.3.142)
power_th (2692)	distribution%distri_vec(:)%profiles_1d%collisions_e%power_th (vecflt_type) (9.7.1.2.13)
power_fast (2692)	distribution%distri_vec(:)%profiles_1d%collisions_e%power_fast (vecflt_type) (9.7.1.2.13)
torque_th (2692)	distribution%distri_vec(:)%profiles_1d%collisions_e%torque_th (vecflt_type) (9.7.1.2.13)
torque_fast (2692)	distribution%distri_vec(:)%profiles_1d%collisions_e%torque_fast (vecflt_type) (9.7.1.2.13)
collisions_i (2706)	distribution%distri_vec(:)%profiles_1d%collisions_i(:) (dist_collisional_transfer_1d) (9.7.1.3.142)
power_th (2692)	distribution%distri_vec(:)%profiles_1d%collisions_i(:)%power_th (vecflt_type) (9.7.1.2.13)
power_fast (2692)	distribution%distri_vec(:)%profiles_1d%collisions_i(:)%power_fast (vecflt_type) (9.7.1.2.13)
torque_th (2692)	distribution%distri_vec(:)%profiles_1d%collisions_i(:)%torque_th (vecflt_type) (9.7.1.2.13)
torque_fast (2692)	distribution%distri_vec(:)%profiles_1d%collisions_i(:)%torque_fast (vecflt_type) (9.7.1.2.13)
collisions_z (2706)	distribution%distri_vec(:)%profiles_1d%collisions_z(:) (dist_profiles_1d_collisions_z) (9.7.1.3.157)
charge_state (2707)	distribution%distri_vec(:)%profiles_1d%collisions_z(:)%charge_state(:) (dist_collisional_transfer_1d) (9.7.1.3.142)
power_th (2692)	distribution%distri_vec(:)%profiles_1d%collisions_z(:)%charge_state(:)%power_th (vecflt_type) (9.7.1.2.13)
power_fast (2692)	distribution%distri_vec(:)%profiles_1d%collisions_z(:)%charge_state(:)%power_fast (vecflt_type) (9.7.1.2.13)
torque_th (2692)	distribution%distri_vec(:)%profiles_1d%collisions_z(:)%charge_state(:)%torque_th (vecflt_type) (9.7.1.2.13)
torque_fast (2692)	distribution%distri_vec(:)%profiles_1d%collisions_z(:)%charge_state(:)%torque_fast (vecflt_type) (9.7.1.2.13)
thermalised (2706)	distribution%distri_vec(:)%profiles_1d%thermalised (dist_thermalised_1d) (9.7.1.3.165)
particle (2715)	distribution%distri_vec(:)%profiles_1d%thermalised%particle (vecflt_type) (9.7.1.2.13)
momentum (2715)	distribution%distri_vec(:)%profiles_1d%thermalised%momentum (vecflt_type) (9.7.1.2.13)
energy (2715)	distribution%distri_vec(:)%profiles_1d%thermalised%energy (vecflt_type) (9.7.1.2.13)
sources (2706)	distribution%distri_vec(:)%profiles_1d%sources(:) (dist_sources_1d) (9.7.1.3.160)
source_ref (2710)	distribution%distri_vec(:)%profiles_1d%sources(:)%source_ref (dist_sources_reference) (9.7.1.3.161)
type (2711)	distribution%distri_vec(:)%profiles_1d%sources(:)%source_ref%type (identifier) (9.7.1.3.235)
id (2785)	distribution%distri_vec(:)%profiles_1d%sources(:)%source_ref%type%id (string) (9.7.1.1.3)
flag (2785)	distribution%distri_vec(:)%profiles_1d%sources(:)%source_ref%type%flag (integer) (9.7.1.1.2)
description (2785)	distribution%distri_vec(:)%profiles_1d%sources(:)%source_ref%type%description (string) (9.7.1.1.3)
index_waveid (2711)	distribution%distri_vec(:)%profiles_1d%sources(:)%source_ref%index_waveid (vecint_type) (9.7.1.2.14)
index_srcid (2711)	distribution%distri_vec(:)%profiles_1d%sources(:)%source_ref%index_srcid (vecint_type) (9.7.1.2.14)
particle (2710)	distribution%distri_vec(:)%profiles_1d%sources(:)%particle (vecflt_type) (9.7.1.2.13)
momentum (2710)	distribution%distri_vec(:)%profiles_1d%sources(:)%momentum (vecflt_type) (9.7.1.2.13)
energy (2710)	distribution%distri_vec(:)%profiles_1d%sources(:)%energy (vecflt_type) (9.7.1.2.13)
trapped (2706)	distribution%distri_vec(:)%profiles_1d%trapped (dist_profile_values_1d) (9.7.1.3.153)
state (2703)	distribution%distri_vec(:)%profiles_1d%trapped%state (dist_state_1d) (9.7.1.3.163)
dens (2713)	distribution%distri_vec(:)%profiles_1d%trapped%state%dens (vecflt_type) (9.7.1.2.13)
dens_fast (2713)	distribution%distri_vec(:)%profiles_1d%trapped%state%dens_fast (vecflt_type) (9.7.1.2.13)
pres (2713)	distribution%distri_vec(:)%profiles_1d%trapped%state%pres (vecflt_type) (9.7.1.2.13)
pres_fast (2713)	distribution%distri_vec(:)%profiles_1d%trapped%state%pres_fast (vecflt_type) (9.7.1.2.13)
pres_fast_pa (2713)	distribution%distri_vec(:)%profiles_1d%trapped%state%pres_fast_pa (vecflt_type) (9.7.1.2.13)
momentm_fast (2713)	distribution%distri_vec(:)%profiles_1d%trapped%state%momentm_fast (vecflt_type) (9.7.1.2.13)

current (2713)	distribution%distri_vec(:)%profiles_1d%trapped%state%current (vecflt.type) (9.7.1.2.13)
current_fast (2713)	distribution%distri_vec(:)%profiles_1d%trapped%state%current_fast (vecflt.type) (9.7.1.2.13)
torque_jrxb (2713)	distribution%distri_vec(:)%profiles_1d%trapped%state%torque_jrxb (vecflt.type) (9.7.1.2.13)
collisions_e (2703)	distribution%distri_vec(:)%profiles_1d%trapped%collisions_e (dist_collisional_transfer_1d) (9.7.1.3.142)
power_th (2692)	distribution%distri_vec(:)%profiles_1d%trapped%collisions_e%power_th (vecflt.type) (9.7.1.2.13)
power_fast (2692)	distribution%distri_vec(:)%profiles_1d%trapped%collisions_e%power_fast (vecflt.type) (9.7.1.2.13)
torque_th (2692)	distribution%distri_vec(:)%profiles_1d%trapped%collisions_e%torque_th (vecflt.type) (9.7.1.2.13)
torque_fast (2692)	distribution%distri_vec(:)%profiles_1d%trapped%collisions_e%torque_fast (vecflt.type) (9.7.1.2.13)
collisions_i (2703)	distribution%distri_vec(:)%profiles_1d%trapped%collisions_i(:) (dist_collisional_transfer_1d) (9.7.1.3.142)
power_th (2692)	distribution%distri_vec(:)%profiles_1d%trapped%collisions_i(:)%power_th (vecflt.type) (9.7.1.2.13)
power_fast (2692)	distribution%distri_vec(:)%profiles_1d%trapped%collisions_i(:)%power_fast (vecflt.type) (9.7.1.2.13)
torque_th (2692)	distribution%distri_vec(:)%profiles_1d%trapped%collisions_i(:)%torque_th (vecflt.type) (9.7.1.2.13)
torque_fast (2692)	distribution%distri_vec(:)%profiles_1d%trapped%collisions_i(:)%torque_fast (vecflt.type) (9.7.1.2.13)
collisions_z (2703)	distribution%distri_vec(:)%profiles_1d%trapped%collisions_z(:) (dist_profiles_1d_collisions_z) (9.7.1.3.157)
charge_state (2707)	distribution%distri_vec(:)%profiles_1d%trapped%collisions_z(:)%charge_state(:) (dist_collisional_transfer_1d) (9.7.1.3.142)
power_th (2692)	distribution%distri_vec(:)%profiles_1d%trapped%collisions_z(:)%charge_state(:)%power_th (vecflt.type) (9.7.1.2.13)
power_fast (2692)	distribution%distri_vec(:)%profiles_1d%trapped%collisions_z(:)%charge_state(:)%power_fast (vecflt.type) (9.7.1.2.13)
torque_th (2692)	distribution%distri_vec(:)%profiles_1d%trapped%collisions_z(:)%charge_state(:)%torque_th (vecflt.type) (9.7.1.2.13)
torque_fast (2692)	distribution%distri_vec(:)%profiles_1d%trapped%collisions_z(:)%charge_state(:)%torque_fast (vecflt.type) (9.7.1.2.13)
sources (2703)	distribution%distri_vec(:)%profiles_1d%trapped%sources(:) (dist_sources_1d) (9.7.1.3.160)
source_ref (2710)	distribution%distri_vec(:)%profiles_1d%trapped%sources(:)%source_ref (dist_sources_reference) (9.7.1.3.161)
type (2711)	distribution%distri_vec(:)%profiles_1d%trapped%sources(:)%source_ref%type (identifier) (9.7.1.3.235)
id (2785)	distribution%distri_vec(:)%profiles_1d%trapped%sources(:)%source_ref%type%id (string) (9.7.1.1.3)
flag (2785)	distribution%distri_vec(:)%profiles_1d%trapped%sources(:)%source_ref%type%flag (integer) (9.7.1.1.2)
description (2785)	distribution%distri_vec(:)%profiles_1d%trapped%sources(:)%source_ref%type%description (string) (9.7.1.1.3)
index_waveid (2711)	distribution%distri_vec(:)%profiles_1d%trapped%sources(:)%source_ref%index_waveid (vecint.type) (9.7.1.2.14)
index_srcid (2711)	distribution%distri_vec(:)%profiles_1d%trapped%sources(:)%source_ref%index_srcid (vecint.type) (9.7.1.2.14)
particle (2710)	distribution%distri_vec(:)%profiles_1d%trapped%sources(:)%particle (vecflt.type) (9.7.1.2.13)
momentum (2710)	distribution%distri_vec(:)%profiles_1d%trapped%sources(:)%momentum (vecflt.type) (9.7.1.2.13)
energy (2710)	distribution%distri_vec(:)%profiles_1d%trapped%sources(:)%energy (vecflt.type) (9.7.1.2.13)
co_passing (2706)	distribution%distri_vec(:)%profiles_1d%co_passing (dist_profile_values_1d) (9.7.1.3.153)
state (2703)	distribution%distri_vec(:)%profiles_1d%co_passing%state (dist_state_1d) (9.7.1.3.163)
dens (2713)	distribution%distri_vec(:)%profiles_1d%co_passing%state%dens (vecflt.type) (9.7.1.2.13)
dens_fast (2713)	distribution%distri_vec(:)%profiles_1d%co_passing%state%dens_fast (vecflt.type) (9.7.1.2.13)
pres (2713)	distribution%distri_vec(:)%profiles_1d%co_passing%state%pres (vecflt.type) (9.7.1.2.13)
pres_fast (2713)	distribution%distri_vec(:)%profiles_1d%co_passing%state%pres_fast (vecflt.type) (9.7.1.2.13)
pres_fast_pa (2713)	distribution%distri_vec(:)%profiles_1d%co_passing%state%pres_fast_pa (vecflt.type) (9.7.1.2.13)
momentm_fast (2713)	distribution%distri_vec(:)%profiles_1d%co_passing%state%momentm_fast (vecflt.type) (9.7.1.2.13)
current (2713)	distribution%distri_vec(:)%profiles_1d%co_passing%state%current (vecflt.type) (9.7.1.2.13)
current_fast (2713)	distribution%distri_vec(:)%profiles_1d%co_passing%state%current_fast (vecflt.type) (9.7.1.2.13)
torque_jrxb (2713)	distribution%distri_vec(:)%profiles_1d%co_passing%state%torque_jrxb (vecflt.type) (9.7.1.2.13)
collisions_e (2703)	distribution%distri_vec(:)%profiles_1d%co_passing%collisions_e (dist_collisional_transfer_1d) (9.7.1.3.142)

power_th (2692)	distribution%distri_vec(%)%profiles_1d%co_passing%collisions_e%power_th (9.7.1.2.13)	(vecflt.type)
power_fast (2692)	distribution%distri_vec(%)%profiles_1d%co_passing%collisions_e%power_fast (9.7.1.2.13)	(vecflt.type)
torque_th (2692)	distribution%distri_vec(%)%profiles_1d%co_passing%collisions_e%torque_th (9.7.1.2.13)	(vecflt.type)
torque_fast (2692)	distribution%distri_vec(%)%profiles_1d%co_passing%collisions_e%torque_fast (9.7.1.2.13)	(vecflt.type)
collisions_i (2703)	distribution%distri_vec(%)%profiles_1d%co_passing%collisions_i(%) (dist_collisional_transfer_1d) (9.7.1.3.142)	
power_th (2692)	distribution%distri_vec(%)%profiles_1d%co_passing%collisions_i(%)%power_th (9.7.1.2.13)	(vecflt.type)
power_fast (2692)	distribution%distri_vec(%)%profiles_1d%co_passing%collisions_i(%)%power_fast (9.7.1.2.13)	(vecflt.type)
torque_th (2692)	distribution%distri_vec(%)%profiles_1d%co_passing%collisions_i(%)%torque_th (9.7.1.2.13)	(vecflt.type)
torque_fast (2692)	distribution%distri_vec(%)%profiles_1d%co_passing%collisions_i(%)%torque_fast (9.7.1.2.13)	(vecflt.type)
collisions_z (2703)	distribution%distri_vec(%)%profiles_1d%co_passing%collisions_z(%) (dist_profiles_1d_collisions_z) (9.7.1.3.157)	
charge_state (2707)	distribution%distri_vec(%)%profiles_1d%co_passing%collisions_z(%)%charge_state(%) (dist_collisional_transfer_1d) (9.7.1.3.142)	
power_th (2692)	distribution%distri_vec(%)%profiles_1d%co_passing%collisions_z(%)%charge_state(%)%power_th (vecflt.type) (9.7.1.2.13)	(vecflt.type)
power_fast (2692)	distribution%distri_vec(%)%profiles_1d%co_passing%collisions_z(%)%charge_state(%)%power_fast (vecflt.type) (9.7.1.2.13)	(vecflt.type)
torque_th (2692)	distribution%distri_vec(%)%profiles_1d%co_passing%collisions_z(%)%charge_state(%)%torque_th (vecflt.type) (9.7.1.2.13)	(vecflt.type)
torque_fast (2692)	distribution%distri_vec(%)%profiles_1d%co_passing%collisions_z(%)%charge_state(%)%torque_fast (vecflt.type) (9.7.1.2.13)	(vecflt.type)
sources (2703)	distribution%distri_vec(%)%profiles_1d%co_passing%sources(%) (dist_sources_1d) (9.7.1.3.160)	
source_ref (2710)	distribution%distri_vec(%)%profiles_1d%co_passing%sources(%)%source_ref (dist_sources_reference) (9.7.1.3.161)	
type (2711)	distribution%distri_vec(%)%profiles_1d%co_passing%sources(%)%source_ref%type (identifier) (9.7.1.3.235)	
id (2785)	distribution%distri_vec(%)%profiles_1d%co_passing%sources(%)%source_ref%type%id (string) (9.7.1.1.3)	
flag (2785)	distribution%distri_vec(%)%profiles_1d%co_passing%sources(%)%source_ref%type%flag (integer) (9.7.1.1.2)	
description (2785)	distribution%distri_vec(%)%profiles_1d%co_passing%sources(%)%source_ref%type%description (string) (9.7.1.1.3)	
index_waveid (2711)	distribution%distri_vec(%)%profiles_1d%co_passing%sources(%)%source_ref%index_waveid (vecint.type) (9.7.1.2.14)	
index_srcid (2711)	distribution%distri_vec(%)%profiles_1d%co_passing%sources(%)%source_ref%index_srcid (vecint.type) (9.7.1.2.14)	
particle (2710)	distribution%distri_vec(%)%profiles_1d%co_passing%sources(%)%particle (vecflt.type) (9.7.1.2.13)	(vecflt.type)
momentum (2710)	distribution%distri_vec(%)%profiles_1d%co_passing%sources(%)%momentum (vecflt.type) (9.7.1.2.13)	(vecflt.type)
energy (2710)	distribution%distri_vec(%)%profiles_1d%co_passing%sources(%)%energy (vecflt.type) (9.7.1.2.13)	(vecflt.type)
cntr_passing (2706)	distribution%distri_vec(%)%profiles_1d%cntr_passing (dist_profile_values_1d) (9.7.1.3.153)	
state (2703)	distribution%distri_vec(%)%profiles_1d%cntr_passing%state (dist_state_1d) (9.7.1.3.163)	
dens (2713)	distribution%distri_vec(%)%profiles_1d%cntr_passing%state%dens (vecflt.type) (9.7.1.2.13)	(vecflt.type)
dens_fast (2713)	distribution%distri_vec(%)%profiles_1d%cntr_passing%state%dens_fast (vecflt.type) (9.7.1.2.13)	(vecflt.type)
pres (2713)	distribution%distri_vec(%)%profiles_1d%cntr_passing%state%pres (vecflt.type) (9.7.1.2.13)	(vecflt.type)
pres_fast (2713)	distribution%distri_vec(%)%profiles_1d%cntr_passing%state%pres_fast (vecflt.type) (9.7.1.2.13)	(vecflt.type)
pres_fast_pa (2713)	distribution%distri_vec(%)%profiles_1d%cntr_passing%state%pres_fast_pa (vecflt.type) (9.7.1.2.13)	(vecflt.type)
momentm_fast (2713)	distribution%distri_vec(%)%profiles_1d%cntr_passing%state%momentm_fast (vecflt.type) (9.7.1.2.13)	(vecflt.type)
current (2713)	distribution%distri_vec(%)%profiles_1d%cntr_passing%state%current (vecflt.type) (9.7.1.2.13)	(vecflt.type)
current_fast (2713)	distribution%distri_vec(%)%profiles_1d%cntr_passing%state%current_fast (vecflt.type) (9.7.1.2.13)	(vecflt.type)
torque_jrxb (2713)	distribution%distri_vec(%)%profiles_1d%cntr_passing%state%torque_jrxb (vecflt.type) (9.7.1.2.13)	(vecflt.type)
collisions_e (2703)	distribution%distri_vec(%)%profiles_1d%cntr_passing%collisions_e (dist_collisional_transfer_1d) (9.7.1.3.142)	
power_th (2692)	distribution%distri_vec(%)%profiles_1d%cntr_passing%collisions_e%power_th (vecflt.type) (9.7.1.2.13)	(vecflt.type)



power_fast (2692)	distribution%distri_vec(:)%profiles_1d%cntr_passing%collisions_e%power_fast (vecflt.type) (9.7.1.2.13)
torque_th (2692)	distribution%distri_vec(:)%profiles_1d%cntr_passing%collisions_e%torque_th (vecflt.type) (9.7.1.2.13)
torque_fast (2692)	distribution%distri_vec(:)%profiles_1d%cntr_passing%collisions_e%torque_fast (vecflt.type) (9.7.1.2.13)
collisions_i (2703)	distribution%distri_vec(:)%profiles_1d%cntr_passing%collisions_i(:) (dist_collisional_transfer_1d) (9.7.1.3.142)
power_th (2692)	distribution%distri_vec(:)%profiles_1d%cntr_passing%collisions_i(:)%power_th (vecflt.type) (9.7.1.2.13)
power_fast (2692)	distribution%distri_vec(:)%profiles_1d%cntr_passing%collisions_i(:)%power_fast (vecflt.type) (9.7.1.2.13)
torque_th (2692)	distribution%distri_vec(:)%profiles_1d%cntr_passing%collisions_i(:)%torque_th (vecflt.type) (9.7.1.2.13)
torque_fast (2692)	distribution%distri_vec(:)%profiles_1d%cntr_passing%collisions_i(:)%torque_fast (vecflt.type) (9.7.1.2.13)
collisions_z (2703)	distribution%distri_vec(:)%profiles_1d%cntr_passing%collisions_z(:) (dist_profiles_1d_collisions_z) (9.7.1.3.157)
charge_state (2707)	distribution%distri_vec(:)%profiles_1d%cntr_passing%collisions_z(:)%charge_state(:) (dist_collisional_transfer_1d) (9.7.1.3.142)
power_th (2692)	distribution%distri_vec(:)%profiles_1d%cntr_passing%collisions_z(:)%charge_state(:)%power_th (vecflt.type) (9.7.1.2.13)
power_fast (2692)	distribution%distri_vec(:)%profiles_1d%cntr_passing%collisions_z(:)%charge_state(:)%power_fast (vecflt.type) (9.7.1.2.13)
torque_th (2692)	distribution%distri_vec(:)%profiles_1d%cntr_passing%collisions_z(:)%charge_state(:)%torque_th (vecflt.type) (9.7.1.2.13)
torque_fast (2692)	distribution%distri_vec(:)%profiles_1d%cntr_passing%collisions_z(:)%charge_state(:)%torque_fast (vecflt.type) (9.7.1.2.13)
sources (2703)	distribution%distri_vec(:)%profiles_1d%cntr_passing%sources(:) (dist_sources_1d) (9.7.1.3.160)
source_ref (2710)	distribution%distri_vec(:)%profiles_1d%cntr_passing%sources(:)%source_ref (dist_sources_reference) (9.7.1.3.161)
type (2711)	distribution%distri_vec(:)%profiles_1d%cntr_passing%sources(:)%source_ref%type (identifier) (9.7.1.3.235)
id (2785)	distribution%distri_vec(:)%profiles_1d%cntr_passing%sources(:)%source_ref%type%id (string) (9.7.1.1.3)
flag (2785)	distribution%distri_vec(:)%profiles_1d%cntr_passing%sources(:)%source_ref%type%flag (integer) (9.7.1.1.2)
description (2785)	distribution%distri_vec(:)%profiles_1d%cntr_passing%sources(:)%source_ref%type%description (string) (9.7.1.1.3)
index_waveid (2711)	distribution%distri_vec(:)%profiles_1d%cntr_passing%sources(:)%source_ref%index_waveid (vecint.type) (9.7.1.2.14)
index_srcid (2711)	distribution%distri_vec(:)%profiles_1d%cntr_passing%sources(:)%source_ref%index_srcid (vecint.type) (9.7.1.2.14)
particle (2710)	distribution%distri_vec(:)%profiles_1d%cntr_passing%sources(:)%particle (vecflt.type) (9.7.1.2.13)
momentum (2710)	distribution%distri_vec(:)%profiles_1d%cntr_passing%sources(:)%momentum (vecflt.type) (9.7.1.2.13)
energy (2710)	distribution%distri_vec(:)%profiles_1d%cntr_passing%sources(:)%energy (vecflt.type) (9.7.1.2.13)
profiles_2d (2716)	distribution%distri_vec(:)%profiles_2d (dist_profiles_2d) (9.7.1.3.158)
geometry (2708)	distribution%distri_vec(:)%profiles_2d%geometry (dist_geometry_2d) (9.7.1.3.149)
coord_type (2699)	distribution%distri_vec(:)%profiles_2d%geometry%coord_type (integer) (9.7.1.1.2)
r (2699)	distribution%distri_vec(:)%profiles_2d%geometry%r (matflt.type) (9.7.1.2.10)
z (2699)	distribution%distri_vec(:)%profiles_2d%geometry%z (matflt.type) (9.7.1.2.10)
rho_tor (2699)	distribution%distri_vec(:)%profiles_2d%geometry%rho_tor (matflt.type) (9.7.1.2.10)
psi (2699)	distribution%distri_vec(:)%profiles_2d%geometry%psi (matflt.type) (9.7.1.2.10)
theta_geom (2699)	distribution%distri_vec(:)%profiles_2d%geometry%theta_geom (matflt.type) (9.7.1.2.10)
theta_strt (2699)	distribution%distri_vec(:)%profiles_2d%geometry%theta_strt (matflt.type) (9.7.1.2.10)
state (2708)	distribution%distri_vec(:)%profiles_2d%state (dist_state_2d) (9.7.1.3.164)
dens (2714)	distribution%distri_vec(:)%profiles_2d%state%dens (matflt.type) (9.7.1.2.10)
dens_fast (2714)	distribution%distri_vec(:)%profiles_2d%state%dens_fast (matflt.type) (9.7.1.2.10)
pres (2714)	distribution%distri_vec(:)%profiles_2d%state%pres (matflt.type) (9.7.1.2.10)
pres_fast (2714)	distribution%distri_vec(:)%profiles_2d%state%pres_fast (matflt.type) (9.7.1.2.10)
pres_fast_pa (2714)	distribution%distri_vec(:)%profiles_2d%state%pres_fast_pa (matflt.type) (9.7.1.2.10)
momentm_fast (2714)	distribution%distri_vec(:)%profiles_2d%state%momentm_fast (matflt.type) (9.7.1.2.10)
current (2714)	distribution%distri_vec(:)%profiles_2d%state%current (matflt.type) (9.7.1.2.10)
current_fast (2714)	distribution%distri_vec(:)%profiles_2d%state%current_fast (matflt.type) (9.7.1.2.10)
torque_jrxb (2714)	distribution%distri_vec(:)%profiles_2d%state%torque_jrxb (matflt.type) (9.7.1.2.10)
collisions_e (2708)	distribution%distri_vec(:)%profiles_2d%collisions_e (dist_collisional_transfer_2d) (9.7.1.3.143)



power_th (2693)	distribution%distri_vec(:)%profiles_2d%collisions_e%power_th (matflt_type) (9.7.1.2.10)
power_fast (2693)	distribution%distri_vec(:)%profiles_2d%collisions_e%power_fast (matflt_type) (9.7.1.2.10)
torque_th (2693)	distribution%distri_vec(:)%profiles_2d%collisions_e%torque_th (matflt_type) (9.7.1.2.10)
torque_fast (2693)	distribution%distri_vec(:)%profiles_2d%collisions_e%torque_fast (matflt_type) (9.7.1.2.10)
collisions_i (2708)	distribution%distri_vec(:)%profiles_2d%collisions_i(:) (dist_collisional_transfer_2d) (9.7.1.3.143)
power_th (2693)	distribution%distri_vec(:)%profiles_2d%collisions_i(:)%power_th (matflt_type) (9.7.1.2.10)
power_fast (2693)	distribution%distri_vec(:)%profiles_2d%collisions_i(:)%power_fast (matflt_type) (9.7.1.2.10)
torque_th (2693)	distribution%distri_vec(:)%profiles_2d%collisions_i(:)%torque_th (matflt_type) (9.7.1.2.10)
torque_fast (2693)	distribution%distri_vec(:)%profiles_2d%collisions_i(:)%torque_fast (matflt_type) (9.7.1.2.10)
collisions_z (2708)	distribution%distri_vec(:)%profiles_2d%collisions_z(:) (dist_profiles2d_collisions_z) (9.7.1.3.155)
charge_state (2705)	distribution%distri_vec(:)%profiles_2d%collisions_z(:)%charge_state(:) (dist_collisional_transfer_2d) (9.7.1.3.143)
power_th (2693)	distribution%distri_vec(:)%profiles_2d%collisions_z(:)%charge_state(:)%power_th (matflt_type) (9.7.1.2.10)
power_fast (2693)	distribution%distri_vec(:)%profiles_2d%collisions_z(:)%charge_state(:)%power_fast (matflt_type) (9.7.1.2.10)
torque_th (2693)	distribution%distri_vec(:)%profiles_2d%collisions_z(:)%charge_state(:)%torque_th (matflt_type) (9.7.1.2.10)
torque_fast (2693)	distribution%distri_vec(:)%profiles_2d%collisions_z(:)%charge_state(:)%torque_fast (matflt_type) (9.7.1.2.10)
trapped (2708)	distribution%distri_vec(:)%profiles_2d%trapped (dist_profile_values_2d) (9.7.1.3.154)
state (2704)	distribution%distri_vec(:)%profiles_2d%trapped%state (dist_state_2d) (9.7.1.3.164)
dens (2714)	distribution%distri_vec(:)%profiles_2d%trapped%state%dens (matflt_type) (9.7.1.2.10)
dens_fast (2714)	distribution%distri_vec(:)%profiles_2d%trapped%state%dens_fast (matflt_type) (9.7.1.2.10)
pres (2714)	distribution%distri_vec(:)%profiles_2d%trapped%state%pres (matflt_type) (9.7.1.2.10)
pres_fast (2714)	distribution%distri_vec(:)%profiles_2d%trapped%state%pres_fast (matflt_type) (9.7.1.2.10)
pres_fast_pa (2714)	distribution%distri_vec(:)%profiles_2d%trapped%state%pres_fast_pa (matflt_type) (9.7.1.2.10)
momentm_fast (2714)	distribution%distri_vec(:)%profiles_2d%trapped%state%momentm_fast (matflt_type) (9.7.1.2.10)
current (2714)	distribution%distri_vec(:)%profiles_2d%trapped%state%current (matflt_type) (9.7.1.2.10)
current_fast (2714)	distribution%distri_vec(:)%profiles_2d%trapped%state%current_fast (matflt_type) (9.7.1.2.10)
torque_jrxb (2714)	distribution%distri_vec(:)%profiles_2d%trapped%state%torque_jrxb (matflt_type) (9.7.1.2.10)
collisions_e (2704)	distribution%distri_vec(:)%profiles_2d%trapped%collisions_e (dist_collisional_transfer_2d) (9.7.1.3.143)
power_th (2693)	distribution%distri_vec(:)%profiles_2d%trapped%collisions_e%power_th (matflt_type) (9.7.1.2.10)
power_fast (2693)	distribution%distri_vec(:)%profiles_2d%trapped%collisions_e%power_fast (matflt_type) (9.7.1.2.10)
torque_th (2693)	distribution%distri_vec(:)%profiles_2d%trapped%collisions_e%torque_th (matflt_type) (9.7.1.2.10)
torque_fast (2693)	distribution%distri_vec(:)%profiles_2d%trapped%collisions_e%torque_fast (matflt_type) (9.7.1.2.10)
collisions_i (2704)	distribution%distri_vec(:)%profiles_2d%trapped%collisions_i(:) (dist_collisional_transfer_2d) (9.7.1.3.143)
power_th (2693)	distribution%distri_vec(:)%profiles_2d%trapped%collisions_i(:)%power_th (matflt_type) (9.7.1.2.10)
power_fast (2693)	distribution%distri_vec(:)%profiles_2d%trapped%collisions_i(:)%power_fast (matflt_type) (9.7.1.2.10)
torque_th (2693)	distribution%distri_vec(:)%profiles_2d%trapped%collisions_i(:)%torque_th (matflt_type) (9.7.1.2.10)
torque_fast (2693)	distribution%distri_vec(:)%profiles_2d%trapped%collisions_i(:)%torque_fast (matflt_type) (9.7.1.2.10)
collisions_z (2704)	distribution%distri_vec(:)%profiles_2d%trapped%collisions_z(:) (dist_profiles2d_collisions_z) (9.7.1.3.155)
charge_state (2705)	distribution%distri_vec(:)%profiles_2d%trapped%collisions_z(:)%charge_state(:) (dist_collisional_transfer_2d) (9.7.1.3.143)
power_th (2693)	distribution%distri_vec(:)%profiles_2d%trapped%collisions_z(:)%charge_state(:)%power_th (matflt_type) (9.7.1.2.10)
power_fast (2693)	distribution%distri_vec(:)%profiles_2d%trapped%collisions_z(:)%charge_state(:)%power_fast (matflt_type) (9.7.1.2.10)
torque_th (2693)	distribution%distri_vec(:)%profiles_2d%trapped%collisions_z(:)%charge_state(:)%torque_th (matflt_type) (9.7.1.2.10)
torque_fast (2693)	distribution%distri_vec(:)%profiles_2d%trapped%collisions_z(:)%charge_state(:)%torque_fast (matflt_type) (9.7.1.2.10)
co_passing (2708)	distribution%distri_vec(:)%profiles_2d%co_passing (dist_profile_values_2d) (9.7.1.3.154)
state (2704)	distribution%distri_vec(:)%profiles_2d%co_passing%state (dist_state_2d) (9.7.1.3.164)
dens (2714)	distribution%distri_vec(:)%profiles_2d%co_passing%state%dens (matflt_type) (9.7.1.2.10)

dens_fast (2714)	distribution%distri_vec(:)%profiles_2d%co_passing%state%dens_fast (matflt_type) (9.7.1.2.10)
pres (2714)	distribution%distri_vec(:)%profiles_2d%co_passing%state%pres (matflt_type) (9.7.1.2.10)
pres_fast (2714)	distribution%distri_vec(:)%profiles_2d%co_passing%state%pres_fast (matflt_type) (9.7.1.2.10)
pres_fast_pa (2714)	distribution%distri_vec(:)%profiles_2d%co_passing%state%pres_fast_pa (matflt_type) (9.7.1.2.10)
momentm_fast (2714)	distribution%distri_vec(:)%profiles_2d%co_passing%state%momentm_fast (matflt_type) (9.7.1.2.10)
current (2714)	distribution%distri_vec(:)%profiles_2d%co_passing%state%current (matflt_type) (9.7.1.2.10)
current_fast (2714)	distribution%distri_vec(:)%profiles_2d%co_passing%state%current_fast (matflt_type) (9.7.1.2.10)
torque_jrxb (2714)	distribution%distri_vec(:)%profiles_2d%co_passing%state%torque_jrxb (matflt_type) (9.7.1.2.10)
collisions_e (2704)	distribution%distri_vec(:)%profiles_2d%co_passing%collisions_e (dist_collisional_transfer_2d) (9.7.1.3.143)
power_th (2693)	distribution%distri_vec(:)%profiles_2d%co_passing%collisions_e%power_th (matflt_type) (9.7.1.2.10)
power_fast (2693)	distribution%distri_vec(:)%profiles_2d%co_passing%collisions_e%power_fast (matflt_type) (9.7.1.2.10)
torque_th (2693)	distribution%distri_vec(:)%profiles_2d%co_passing%collisions_e%torque_th (matflt_type) (9.7.1.2.10)
torque_fast (2693)	distribution%distri_vec(:)%profiles_2d%co_passing%collisions_e%torque_fast (matflt_type) (9.7.1.2.10)
collisions_i (2704)	distribution%distri_vec(:)%profiles_2d%co_passing%collisions_i(:) (dist_collisional_transfer_2d) (9.7.1.3.143)
power_th (2693)	distribution%distri_vec(:)%profiles_2d%co_passing%collisions_i(:)%power_th (matflt_type) (9.7.1.2.10)
power_fast (2693)	distribution%distri_vec(:)%profiles_2d%co_passing%collisions_i(:)%power_fast (matflt_type) (9.7.1.2.10)
torque_th (2693)	distribution%distri_vec(:)%profiles_2d%co_passing%collisions_i(:)%torque_th (matflt_type) (9.7.1.2.10)
torque_fast (2693)	distribution%distri_vec(:)%profiles_2d%co_passing%collisions_i(:)%torque_fast (matflt_type) (9.7.1.2.10)
collisions_z (2704)	distribution%distri_vec(:)%profiles_2d%co_passing%collisions_z(:) (dist_profiles2d_collisions_z) (9.7.1.3.155)
charge_state (2705)	distribution%distri_vec(:)%profiles_2d%co_passing%collisions_z(:)%charge_state(:) (dist_collisional_transfer_2d) (9.7.1.3.143)
power_th (2693)	distribution%distri_vec(:)%profiles_2d%co_passing%collisions_z(:)%charge_state(:)%power_th (matflt_type) (9.7.1.2.10)
power_fast (2693)	distribution%distri_vec(:)%profiles_2d%co_passing%collisions_z(:)%charge_state(:)%power_fast (matflt_type) (9.7.1.2.10)
torque_th (2693)	distribution%distri_vec(:)%profiles_2d%co_passing%collisions_z(:)%charge_state(:)%torque_th (matflt_type) (9.7.1.2.10)
torque_fast (2693)	distribution%distri_vec(:)%profiles_2d%co_passing%collisions_z(:)%charge_state(:)%torque_fast (matflt_type) (9.7.1.2.10)
cntr_passing (2708)	distribution%distri_vec(:)%profiles_2d%cntr_passing (dist_profile_values_2d) (9.7.1.3.154)
state (2704)	distribution%distri_vec(:)%profiles_2d%cntr_passing%state (dist_state_2d) (9.7.1.3.164)
dens (2714)	distribution%distri_vec(:)%profiles_2d%cntr_passing%state%dens (matflt_type) (9.7.1.2.10)
dens_fast (2714)	distribution%distri_vec(:)%profiles_2d%cntr_passing%state%dens_fast (matflt_type) (9.7.1.2.10)
pres (2714)	distribution%distri_vec(:)%profiles_2d%cntr_passing%state%pres (matflt_type) (9.7.1.2.10)
pres_fast (2714)	distribution%distri_vec(:)%profiles_2d%cntr_passing%state%pres_fast (matflt_type) (9.7.1.2.10)
pres_fast_pa (2714)	distribution%distri_vec(:)%profiles_2d%cntr_passing%state%pres_fast_pa (matflt_type) (9.7.1.2.10)
momentm_fast (2714)	distribution%distri_vec(:)%profiles_2d%cntr_passing%state%momentm_fast (matflt_type) (9.7.1.2.10)
current (2714)	distribution%distri_vec(:)%profiles_2d%cntr_passing%state%current (matflt_type) (9.7.1.2.10)
current_fast (2714)	distribution%distri_vec(:)%profiles_2d%cntr_passing%state%current_fast (matflt_type) (9.7.1.2.10)
torque_jrxb (2714)	distribution%distri_vec(:)%profiles_2d%cntr_passing%state%torque_jrxb (matflt_type) (9.7.1.2.10)
collisions_e (2704)	distribution%distri_vec(:)%profiles_2d%cntr_passing%collisions_e (dist_collisional_transfer_2d) (9.7.1.3.143)
power_th (2693)	distribution%distri_vec(:)%profiles_2d%cntr_passing%collisions_e%power_th (matflt_type) (9.7.1.2.10)
power_fast (2693)	distribution%distri_vec(:)%profiles_2d%cntr_passing%collisions_e%power_fast (matflt_type) (9.7.1.2.10)
torque_th (2693)	distribution%distri_vec(:)%profiles_2d%cntr_passing%collisions_e%torque_th (matflt_type) (9.7.1.2.10)
torque_fast (2693)	distribution%distri_vec(:)%profiles_2d%cntr_passing%collisions_e%torque_fast (matflt_type) (9.7.1.2.10)

collisions.i (2704)	distribution%distri_vec(%)%profiles_2d%cntr_passing%collisions.i:( (dist_collisional.transfer_2d) (9.7.1.3.143)
power.th (2693)	distribution%distri_vec(%)%profiles_2d%cntr_passing%collisions.i(%)%power.th (matflt.type) (9.7.1.2.10)
power.fast (2693)	distribution%distri_vec(%)%profiles_2d%cntr_passing%collisions.i(%)%power.fast (mat- flt.type) (9.7.1.2.10)
torque.th (2693)	distribution%distri_vec(%)%profiles_2d%cntr_passing%collisions.i(%)%torque.th (matflt.type) (9.7.1.2.10)
torque.fast (2693)	distribution%distri_vec(%)%profiles_2d%cntr_passing%collisions.i(%)%torque.fast (mat- flt.type) (9.7.1.2.10)
collisions.z (2704)	distribution%distri_vec(%)%profiles_2d%cntr_passing%collisions.z:( (dist_profiles2d_collisions.z) (9.7.1.3.155)
charge.state (2705)	distribution%distri_vec(%)%profiles_2d%cntr_passing%collisions.z(%)%charge.state:( (dist_collisional.transfer_2d) (9.7.1.3.143)
power.th (2693)	distribution%distri_vec(%)%profiles_2d%cntr_passing%collisions.z(%)%charge.state(%)%power.th (matflt.type) (9.7.1.2.10)
power.fast (2693)	distribution%distri_vec(%)%profiles_2d%cntr_passing%collisions.z(%)%charge.state(%)%power.fast (matflt.type) (9.7.1.2.10)
torque.th (2693)	distribution%distri_vec(%)%profiles_2d%cntr_passing%collisions.z(%)%charge.state(%)%torque.th (matflt.type) (9.7.1.2.10)
torque.fast (2693)	distribution%distri_vec(%)%profiles_2d%cntr_passing%collisions.z(%)%charge.state(%)%torque.fast (matflt.type) (9.7.1.2.10)
dist_func (2716)	distribution%distri_vec(%)%dist_func (dist_func) (9.7.1.3.146)
is_delta.f (2696)	distribution%distri_vec(%)%dist_func%is_delta.f (integer) (9.7.1.1.2)
markers (2696)	distribution%distri_vec(%)%dist_func%markers (weighted_markers) (9.7.1.3.505)
variable.ids (3055)	distribution%distri_vec(%)%dist_func%markers%variable.ids:( identifier) (9.7.1.3.235)
id (2785)	distribution%distri_vec(%)%dist_func%markers%variable.ids(%)%id (string) (9.7.1.1.3)
flag (2785)	distribution%distri_vec(%)%dist_func%markers%variable.ids(%)%flag (integer) (9.7.1.1.2)
description (2785)	distribution%distri_vec(%)%dist_func%markers%variable.ids(%)%description (string) (9.7.1.1.3)
coord (3055)	distribution%distri_vec(%)%dist_func%markers%coord (matflt.type) (9.7.1.2.10)
weight (3055)	distribution%distri_vec(%)%dist_func%markers%weight (vecflt.type) (9.7.1.2.13)
f_expan.topo (2696)	distribution%distri_vec(%)%dist_func%f_expan.topo:( dist.ff) (9.7.1.3.145)
grid.info (2695)	distribution%distri_vec(%)%dist_func%f_expan.topo(%)%grid.info (dist_grid.info) (9.7.1.3.152)
grid.type (2702)	distribution%distri_vec(%)%dist_func%f_expan.topo(%)%grid.info%grid.type (integer) (9.7.1.1.2)
ngriddim (2702)	distribution%distri_vec(%)%dist_func%f_expan.topo(%)%grid.info%ngriddim (integer) (9.7.1.1.2)
grid.coord (2702)	distribution%distri_vec(%)%dist_func%f_expan.topo(%)%grid.info%grid.coord (vecint.type) (9.7.1.2.14)
thin.orbits (2702)	distribution%distri_vec(%)%dist_func%f_expan.topo(%)%grid.info%thin.orbits (integer) (9.7.1.1.2)
topology (2702)	distribution%distri_vec(%)%dist_func%f_expan.topo(%)%grid.info%topology (string) (9.7.1.1.3)
omnigen.surf (2702)	distribution%distri_vec(%)%dist_func%f_expan.topo(%)%grid.info%omnigen.surf:( omni- gen.surf) (9.7.1.3.303)
rz (2853)	distribution%distri_vec(%)%dist_func%f_expan.topo(%)%grid.info%omnigen.surf(%)%rz (rz1D) (9.7.1.3.359)
r (2909)	distribution%distri_vec(%)%dist_func%f_expan.topo(%)%grid.info%omnigen.surf(%)%rz%r (vecflt.type) (9.7.1.2.13)
z (2909)	distribution%distri_vec(%)%dist_func%f_expan.topo(%)%grid.info%omnigen.surf(%)%rz%z (vecflt.type) (9.7.1.2.13)
s (2853)	distribution%distri_vec(%)%dist_func%f_expan.topo(%)%grid.info%omnigen.surf(%)%s (vecflt.type) (9.7.1.2.13)
topo.regions (2695)	distribution%distri_vec(%)%dist_func%f_expan.topo(%)%topo.regions:( (topo.regions) (9.7.1.3.458)
ind.omnigen (3008)	distribution%distri_vec(%)%dist_func%f_expan.topo(%)%topo.regions(%)%ind.omnigen (inte- ger) (9.7.1.1.2)
dim1 (3008)	distribution%distri_vec(%)%dist_func%f_expan.topo(%)%topo.regions(%)%dim1 (ar- ray6dflt.type) (9.7.1.2.6)
dim2 (3008)	distribution%distri_vec(%)%dist_func%f_expan.topo(%)%topo.regions(%)%dim2 (ar- ray6dflt.type) (9.7.1.2.6)
dim3 (3008)	distribution%distri_vec(%)%dist_func%f_expan.topo(%)%topo.regions(%)%dim3 (ar- ray6dflt.type) (9.7.1.2.6)
dim4 (3008)	distribution%distri_vec(%)%dist_func%f_expan.topo(%)%topo.regions(%)%dim4 (ar- ray6dflt.type) (9.7.1.2.6)
dim5 (3008)	distribution%distri_vec(%)%dist_func%f_expan.topo(%)%topo.regions(%)%dim5 (ar- ray6dflt.type) (9.7.1.2.6)
dim6 (3008)	distribution%distri_vec(%)%dist_func%f_expan.topo(%)%topo.regions(%)%dim6 (ar- ray6dflt.type) (9.7.1.2.6)
jacobian (3008)	distribution%distri_vec(%)%dist_func%f_expan.topo(%)%topo.regions(%)%jacobian (ar- ray6dflt.type) (9.7.1.2.6)
distfunc (3008)	distribution%distri_vec(%)%dist_func%f_expan.topo(%)%topo.regions(%)%distfunc (ar- ray6dflt.type) (9.7.1.2.6)

f_expansion (2696)	distribution%distri_vec(:)%dist_func%f_expansion(:) (f_expansion) (9.7.1.3.199)
grid (2749)	distribution%distri_vec(:)%dist_func%f_expansion(:)%grid (complexgrid) (9.7.1.3.82)
uid (2632)	distribution%distri_vec(:)%dist_func%f_expansion(:)%grid%uid (integer) (9.7.1.1.2)
id (2632)	distribution%distri_vec(:)%dist_func%f_expansion(:)%grid%id (string) (9.7.1.1.3)
spaces (2632)	distribution%distri_vec(:)%dist_func%f_expansion(:)%grid%spaces(:) (complexgrid_space) (9.7.1.3.91)
geotype (2641)	distribution%distri_vec(:)%dist_func%f_expansion(:)%grid%spaces(:)%geotype (vecint_type) (9.7.1.2.14)
geotypeid (2641)	distribution%distri_vec(:)%dist_func%f_expansion(:)%grid%spaces(:)%geotypeid (vecstring_type) (9.7.1.2.15)
coordtype (2641)	distribution%distri_vec(:)%dist_func%f_expansion(:)%grid%spaces(:)%coordtype (matint_type) (9.7.1.2.11)
objects (2641)	distribution%distri_vec(:)%dist_func%f_expansion(:)%grid%spaces(:)%objects(:) (objects) (9.7.1.3.300)
boundary (2850)	distribution%distri_vec(:)%dist_func%f_expansion(:)%grid%spaces(:)%objects(:)%boundary (matint_type) (9.7.1.2.11)
neighbour (2850)	distribution%distri_vec(:)%dist_func%f_expansion(:)%grid%spaces(:)%objects(:)%neighbour (array3dint_type) (9.7.1.2.3)
geo (2850)	distribution%distri_vec(:)%dist_func%f_expansion(:)%grid%spaces(:)%objects(:)%geo (array4dflt_type) (9.7.1.2.4)
measure (2850)	distribution%distri_vec(:)%dist_func%f_expansion(:)%grid%spaces(:)%objects(:)%measure (matflt_type) (9.7.1.2.10)
xpoints (2641)	distribution%distri_vec(:)%dist_func%f_expansion(:)%grid%spaces(:)%xpoints (vecint_type) (9.7.1.2.14)
subgrids (2632)	distribution%distri_vec(:)%dist_func%f_expansion(:)%grid%subgrids(:) (complexgrid_subgrid) (9.7.1.3.92)
id (2642)	distribution%distri_vec(:)%dist_func%f_expansion(:)%grid%subgrids(:)%id (string) (9.7.1.1.3)
list (2642)	distribution%distri_vec(:)%dist_func%f_expansion(:)%grid%subgrids(:)%list(:) (complexgrid_objectlist) (9.7.1.3.86)
cls (2636)	distribution%distri_vec(:)%dist_func%f_expansion(:)%grid%subgrids(:)%list(:)%cls (vecint_type) (9.7.1.2.14)
indset (2636)	distribution%distri_vec(:)%dist_func%f_expansion(:)%grid%subgrids(:)%list(:)%indset(:) (complexgrid_indexlist) (9.7.1.3.84)
range (2634)	distribution%distri_vec(:)%dist_func%f_expansion(:)%grid%subgrids(:)%list(:)%indset(:)%range (vecint_type) (9.7.1.2.14)
ind (2634)	distribution%distri_vec(:)%dist_func%f_expansion(:)%grid%subgrids(:)%list(:)%indset(:)%ind (vecint_type) (9.7.1.2.14)
ind (2636)	distribution%distri_vec(:)%dist_func%f_expansion(:)%grid%subgrids(:)%list(:)%ind (matint_type) (9.7.1.2.11)
metric (2632)	distribution%distri_vec(:)%dist_func%f_expansion(:)%grid%metric (complexgrid_metric) (9.7.1.3.85)
measure (2635)	distribution%distri_vec(:)%dist_func%f_expansion(:)%grid%metric%measure(:) (complexgrid_scalar) (9.7.1.3.87)
griduid (2637)	distribution%distri_vec(:)%dist_func%f_expansion(:)%grid%metric%measure(:)%griduid (integer) (9.7.1.1.2)
subgrid (2637)	distribution%distri_vec(:)%dist_func%f_expansion(:)%grid%metric%measure(:)%subgrid (integer) (9.7.1.1.2)
scalar (2637)	distribution%distri_vec(:)%dist_func%f_expansion(:)%grid%metric%measure(:)%scalar (vecflt_type) (9.7.1.2.13)
vector (2637)	distribution%distri_vec(:)%dist_func%f_expansion(:)%grid%metric%measure(:)%vector (matflt_type) (9.7.1.2.10)
matrix (2637)	distribution%distri_vec(:)%dist_func%f_expansion(:)%grid%metric%measure(:)%matrix (array3dflt_type) (9.7.1.2.2)
g11 (2635)	distribution%distri_vec(:)%dist_func%f_expansion(:)%grid%metric%g11(:) (complexgrid_scalar) (9.7.1.3.87)
griduid (2637)	distribution%distri_vec(:)%dist_func%f_expansion(:)%grid%metric%g11(:)%griduid (integer) (9.7.1.1.2)
subgrid (2637)	distribution%distri_vec(:)%dist_func%f_expansion(:)%grid%metric%g11(:)%subgrid (integer) (9.7.1.1.2)
scalar (2637)	distribution%distri_vec(:)%dist_func%f_expansion(:)%grid%metric%g11(:)%scalar (vecflt_type) (9.7.1.2.13)
vector (2637)	distribution%distri_vec(:)%dist_func%f_expansion(:)%grid%metric%g11(:)%vector (matflt_type) (9.7.1.2.10)
matrix (2637)	distribution%distri_vec(:)%dist_func%f_expansion(:)%grid%metric%g11(:)%matrix (array3dflt_type) (9.7.1.2.2)
g12 (2635)	distribution%distri_vec(:)%dist_func%f_expansion(:)%grid%metric%g12(:) (complexgrid_scalar) (9.7.1.3.87)
griduid (2637)	distribution%distri_vec(:)%dist_func%f_expansion(:)%grid%metric%g12(:)%griduid (integer) (9.7.1.1.2)
subgrid (2637)	distribution%distri_vec(:)%dist_func%f_expansion(:)%grid%metric%g12(:)%subgrid (integer) (9.7.1.1.2)
scalar (2637)	distribution%distri_vec(:)%dist_func%f_expansion(:)%grid%metric%g12(:)%scalar (vecflt_type) (9.7.1.2.13)

vector (2637)	distribution%distri_vec(:)%dist_func%of_expansion(:)%grid%metric%g12(:)%vector (matflt.type) (9.7.1.2.10)
matrix (2637)	distribution%distri_vec(:)%dist_func%of_expansion(:)%grid%metric%g12(:)%matrix (array3dflt.type) (9.7.1.2.2)
g13 (2635)	distribution%distri_vec(:)%dist_func%of_expansion(:)%grid%metric%g13(:) (complex-grid_scalar) (9.7.1.3.87)
griduid (2637)	distribution%distri_vec(:)%dist_func%of_expansion(:)%grid%metric%g13(:)%griduid (integer) (9.7.1.1.2)
subgrid (2637)	distribution%distri_vec(:)%dist_func%of_expansion(:)%grid%metric%g13(:)%subgrid (integer) (9.7.1.1.2)
scalar (2637)	distribution%distri_vec(:)%dist_func%of_expansion(:)%grid%metric%g13(:)%scalar (vecflt.type) (9.7.1.2.13)
vector (2637)	distribution%distri_vec(:)%dist_func%of_expansion(:)%grid%metric%g13(:)%vector (matflt.type) (9.7.1.2.10)
matrix (2637)	distribution%distri_vec(:)%dist_func%of_expansion(:)%grid%metric%g13(:)%matrix (array3dflt.type) (9.7.1.2.2)
g22 (2635)	distribution%distri_vec(:)%dist_func%of_expansion(:)%grid%metric%g22(:) (complex-grid_scalar) (9.7.1.3.87)
griduid (2637)	distribution%distri_vec(:)%dist_func%of_expansion(:)%grid%metric%g22(:)%griduid (integer) (9.7.1.1.2)
subgrid (2637)	distribution%distri_vec(:)%dist_func%of_expansion(:)%grid%metric%g22(:)%subgrid (integer) (9.7.1.1.2)
scalar (2637)	distribution%distri_vec(:)%dist_func%of_expansion(:)%grid%metric%g22(:)%scalar (vecflt.type) (9.7.1.2.13)
vector (2637)	distribution%distri_vec(:)%dist_func%of_expansion(:)%grid%metric%g22(:)%vector (matflt.type) (9.7.1.2.10)
matrix (2637)	distribution%distri_vec(:)%dist_func%of_expansion(:)%grid%metric%g22(:)%matrix (array3dflt.type) (9.7.1.2.2)
g23 (2635)	distribution%distri_vec(:)%dist_func%of_expansion(:)%grid%metric%g23(:) (complex-grid_scalar) (9.7.1.3.87)
griduid (2637)	distribution%distri_vec(:)%dist_func%of_expansion(:)%grid%metric%g23(:)%griduid (integer) (9.7.1.1.2)
subgrid (2637)	distribution%distri_vec(:)%dist_func%of_expansion(:)%grid%metric%g23(:)%subgrid (integer) (9.7.1.1.2)
scalar (2637)	distribution%distri_vec(:)%dist_func%of_expansion(:)%grid%metric%g23(:)%scalar (vecflt.type) (9.7.1.2.13)
vector (2637)	distribution%distri_vec(:)%dist_func%of_expansion(:)%grid%metric%g23(:)%vector (matflt.type) (9.7.1.2.10)
matrix (2637)	distribution%distri_vec(:)%dist_func%of_expansion(:)%grid%metric%g23(:)%matrix (array3dflt.type) (9.7.1.2.2)
g33 (2635)	distribution%distri_vec(:)%dist_func%of_expansion(:)%grid%metric%g33(:) (complex-grid_scalar) (9.7.1.3.87)
griduid (2637)	distribution%distri_vec(:)%dist_func%of_expansion(:)%grid%metric%g33(:)%griduid (integer) (9.7.1.1.2)
subgrid (2637)	distribution%distri_vec(:)%dist_func%of_expansion(:)%grid%metric%g33(:)%subgrid (integer) (9.7.1.1.2)
scalar (2637)	distribution%distri_vec(:)%dist_func%of_expansion(:)%grid%metric%g33(:)%scalar (vecflt.type) (9.7.1.2.13)
vector (2637)	distribution%distri_vec(:)%dist_func%of_expansion(:)%grid%metric%g33(:)%vector (matflt.type) (9.7.1.2.10)
matrix (2637)	distribution%distri_vec(:)%dist_func%of_expansion(:)%grid%metric%g33(:)%matrix (array3dflt.type) (9.7.1.2.2)
jacobian (2635)	distribution%distri_vec(:)%dist_func%of_expansion(:)%grid%metric%jacobian(:) (complex-grid_scalar) (9.7.1.3.87)
griduid (2637)	distribution%distri_vec(:)%dist_func%of_expansion(:)%grid%metric%jacobian(:)%griduid (integer) (9.7.1.1.2)
subgrid (2637)	distribution%distri_vec(:)%dist_func%of_expansion(:)%grid%metric%jacobian(:)%subgrid (integer) (9.7.1.1.2)
scalar (2637)	distribution%distri_vec(:)%dist_func%of_expansion(:)%grid%metric%jacobian(:)%scalar (vecflt.type) (9.7.1.2.13)
vector (2637)	distribution%distri_vec(:)%dist_func%of_expansion(:)%grid%metric%jacobian(:)%vector (matflt.type) (9.7.1.2.10)
matrix (2637)	distribution%distri_vec(:)%dist_func%of_expansion(:)%grid%metric%jacobian(:)%matrix (array3dflt.type) (9.7.1.2.2)
geo (2632)	distribution%distri_vec(:)%dist_func%of_expansion(:)%grid%geo(:) (complexgrid_geo_global) (9.7.1.3.83)
geotype (2633)	distribution%distri_vec(:)%dist_func%of_expansion(:)%grid%geo(:)%geotype (integer) (9.7.1.1.2)
geotypeid (2633)	distribution%distri_vec(:)%dist_func%of_expansion(:)%grid%geo(:)%geotypeid (string) (9.7.1.1.3)
coordtype (2633)	distribution%distri_vec(:)%dist_func%of_expansion(:)%grid%geo(:)%coordtype (vecint.type) (9.7.1.2.14)
geo_matrix (2633)	distribution%distri_vec(:)%dist_func%of_expansion(:)%grid%geo(:)%geo_matrix(:) (complex-grid_scalar) (9.7.1.3.87)

griduid (2637)	distribution%distri_vec(:)%dist_func%of_expansion(:)%grid%geo(:)%geo_matrix(:)%griduid (integer) (9.7.1.1.2)
subgrid (2637)	distribution%distri_vec(:)%dist_func%of_expansion(:)%grid%geo(:)%geo_matrix(:)%subgrid (integer) (9.7.1.1.2)
scalar (2637)	distribution%distri_vec(:)%dist_func%of_expansion(:)%grid%geo(:)%geo_matrix(:)%scalar (vecflt_type) (9.7.1.2.13)
vector (2637)	distribution%distri_vec(:)%dist_func%of_expansion(:)%grid%geo(:)%geo_matrix(:)%vector (matflt_type) (9.7.1.2.10)
matrix (2637)	distribution%distri_vec(:)%dist_func%of_expansion(:)%grid%geo(:)%geo_matrix(:)%matrix (array3dflt_type) (9.7.1.2.2)
measure (2633)	distribution%distri_vec(:)%dist_func%of_expansion(:)%grid%geo(:)%measure(:) (complex-grid_scalar) (9.7.1.3.87)
griduid (2637)	distribution%distri_vec(:)%dist_func%of_expansion(:)%grid%geo(:)%measure(:)%griduid (integer) (9.7.1.1.2)
subgrid (2637)	distribution%distri_vec(:)%dist_func%of_expansion(:)%grid%geo(:)%measure(:)%subgrid (integer) (9.7.1.1.2)
scalar (2637)	distribution%distri_vec(:)%dist_func%of_expansion(:)%grid%geo(:)%measure(:)%scalar (vecflt_type) (9.7.1.2.13)
vector (2637)	distribution%distri_vec(:)%dist_func%of_expansion(:)%grid%geo(:)%measure(:)%vector (matflt_type) (9.7.1.2.10)
matrix (2637)	distribution%distri_vec(:)%dist_func%of_expansion(:)%grid%geo(:)%measure(:)%matrix (array3dflt_type) (9.7.1.2.2)
bases (2632)	distribution%distri_vec(:)%dist_func%of_expansion(:)%grid%bases(:) (complexgrid_vector) (9.7.1.3.93)
griduid (2643)	distribution%distri_vec(:)%dist_func%of_expansion(:)%grid%bases(:)%griduid (integer) (9.7.1.1.2)
label (2643)	distribution%distri_vec(:)%dist_func%of_expansion(:)%grid%bases(:)%label (string) (9.7.1.1.3)
comp (2643)	distribution%distri_vec(:)%dist_func%of_expansion(:)%grid%bases(:)%comp(:) (complex-grid_scalar) (9.7.1.3.87)
griduid (2637)	distribution%distri_vec(:)%dist_func%of_expansion(:)%grid%bases(:)%comp(:)%griduid (integer) (9.7.1.1.2)
subgrid (2637)	distribution%distri_vec(:)%dist_func%of_expansion(:)%grid%bases(:)%comp(:)%subgrid (integer) (9.7.1.1.2)
scalar (2637)	distribution%distri_vec(:)%dist_func%of_expansion(:)%grid%bases(:)%comp(:)%scalar (vecflt_type) (9.7.1.2.13)
vector (2637)	distribution%distri_vec(:)%dist_func%of_expansion(:)%grid%bases(:)%comp(:)%vector (matflt_type) (9.7.1.2.10)
matrix (2637)	distribution%distri_vec(:)%dist_func%of_expansion(:)%grid%bases(:)%comp(:)%matrix (array3dflt_type) (9.7.1.2.2)
align (2643)	distribution%distri_vec(:)%dist_func%of_expansion(:)%grid%bases(:)%align (vecint_type) (9.7.1.2.14)
alignid (2643)	distribution%distri_vec(:)%dist_func%of_expansion(:)%grid%bases(:)%alignid (vecstring_type) (9.7.1.2.15)
basis (2643)	distribution%distri_vec(:)%dist_func%of_expansion(:)%grid%bases(:)%basis (integer) (9.7.1.1.2)
values (2749)	distribution%distri_vec(:)%dist_func%of_expansion(:)%values (complexgrid_scalar) (9.7.1.3.87)
griduid (2637)	distribution%distri_vec(:)%dist_func%of_expansion(:)%values%griduid (integer) (9.7.1.1.2)
subgrid (2637)	distribution%distri_vec(:)%dist_func%of_expansion(:)%values%subgrid (integer) (9.7.1.1.2)
scalar (2637)	distribution%distri_vec(:)%dist_func%of_expansion(:)%values%scalar (vecflt_type) (9.7.1.2.13)
vector (2637)	distribution%distri_vec(:)%dist_func%of_expansion(:)%values%vector (matflt_type) (9.7.1.2.10)
matrix (2637)	distribution%distri_vec(:)%dist_func%of_expansion(:)%values%matrix (array3dflt_type) (9.7.1.2.2)
parameters (2749)	distribution%distri_vec(:)%dist_func%of_expansion(:)%parameters (dist.distribvec.distfunc.fexp_param) (9.7.1.3.144)
equatorial (2694)	distribution%distri_vec(:)%dist_func%of_expansion(:)%parameters%equatorial (equatorial_plane) (9.7.1.3.193)
r (2743)	distribution%distri_vec(:)%dist_func%of_expansion(:)%parameters%equatorial%r (vecflt_type) (9.7.1.2.13)
z (2743)	distribution%distri_vec(:)%dist_func%of_expansion(:)%parameters%equatorial%z (vecflt_type) (9.7.1.2.13)
s (2743)	distribution%distri_vec(:)%dist_func%of_expansion(:)%parameters%equatorial%s (vecflt_type) (9.7.1.2.13)
rho_tor (2743)	distribution%distri_vec(:)%dist_func%of_expansion(:)%parameters%equatorial%rho_tor (vecflt_type) (9.7.1.2.13)
psi (2743)	distribution%distri_vec(:)%dist_func%of_expansion(:)%parameters%equatorial%psi (vecflt_type) (9.7.1.2.13)
b_mod (2743)	distribution%distri_vec(:)%dist_func%of_expansion(:)%parameters%equatorial%b_mod (vecflt_type) (9.7.1.2.13)
temperature (2694)	distribution%distri_vec(:)%dist_func%of_expansion(:)%parameters%temperature (vecflt_type) (9.7.1.2.13)
codeparam (2716)	distribution%distri_vec(:)%codeparam (codeparam) (9.7.1.3.77)
codename (2627)	distribution%distri_vec(:)%codeparam%codename (string) (9.7.1.1.3)



codeversion (2627)	distribution%distri_vec(:)%codeparam%codeversion (string) (9.7.1.1.3)
parameters (2627)	distribution%distri_vec(:)%codeparam%parameters (string) (9.7.1.1.3)
output_diag (2627)	distribution%distri_vec(:)%codeparam%output_diag (string) (9.7.1.1.3)
output_flag (2627)	distribution%distri_vec(:)%codeparam%output_flag (integer) (9.7.1.1.2)
codeparam (2565)	distribution%codeparam (codeparam) (9.7.1.3.77)
codename (2627)	distribution%codeparam%codename (string) (9.7.1.1.3)
codeversion (2627)	distribution%codeparam%codeversion (string) (9.7.1.1.3)
parameters (2627)	distribution%codeparam%parameters (string) (9.7.1.1.3)
output_diag (2627)	distribution%codeparam%output_diag (string) (9.7.1.1.3)
output_flag (2627)	distribution%codeparam%output_flag (integer) (9.7.1.1.2)
time (2565)	distribution%time (float) (9.7.1.1.1)

#### 9.7.2.1.14 distsource

datainfo (2566)	distsource%datainfo (datainfo) (9.7.1.3.134)
dataprovder (2684)	distsource%datainfo%dataprovder (string) (9.7.1.1.3)
putdate (2684)	distsource%datainfo%putdate (string) (9.7.1.1.3)
source (2684)	distsource%datainfo%source (string) (9.7.1.1.3)
comment (2684)	distsource%datainfo%comment (string) (9.7.1.1.3)
cocos (2684)	distsource%datainfo%cocos (integer) (9.7.1.1.2)
id (2684)	distsource%datainfo%id (integer) (9.7.1.1.2)
isref (2684)	distsource%datainfo%isref (integer) (9.7.1.1.2)
whatref (2684)	distsource%datainfo%whatref (whatref) (9.7.1.3.506)
user (3056)	distsource%datainfo%whatref%user (string) (9.7.1.1.3)
machine (3056)	distsource%datainfo%whatref%machine (string) (9.7.1.1.3)
shot (3056)	distsource%datainfo%whatref%shot (integer) (9.7.1.1.2)
run (3056)	distsource%datainfo%whatref%run (integer) (9.7.1.1.2)
occurrence (3056)	distsource%datainfo%whatref%occurrence (integer) (9.7.1.1.2)
putinfo (2684)	distsource%datainfo%putinfo (putinfo) (9.7.1.3.342)
putmethod (2892)	distsource%datainfo%putinfo%putmethod (string) (9.7.1.1.3)
putaccess (2892)	distsource%datainfo%putinfo%putaccess (string) (9.7.1.1.3)
putlocation (2892)	distsource%datainfo%putinfo%putlocation (string) (9.7.1.1.3)
rights (2892)	distsource%datainfo%putinfo%rights (string) (9.7.1.1.3)
composition (2566)	distsource%composition (composition) (9.7.1.3.95)
amn (2645)	distsource%composition%amn (vecflt_type) (9.7.1.2.13)
zn (2645)	distsource%composition%zn (vecflt_type) (9.7.1.2.13)
zion (2645)	distsource%composition%zion (vecflt_type) (9.7.1.2.13)
imp_flag (2645)	distsource%composition%imp_flag (vecint_type) (9.7.1.2.14)
label (2645)	distsource%composition%label (vecstring_type) (9.7.1.2.15)
compositions (2566)	distsource%compositions (compositions_type) (9.7.1.3.99)
nuclei (2649)	distsource%compositions%nuclei(:) (nuclei) (9.7.1.3.299)
zn (2849)	distsource%compositions%nuclei(:)%zn (float) (9.7.1.1.1)
amn (2849)	distsource%compositions%nuclei(:)%amn (float) (9.7.1.1.1)
label (2849)	distsource%compositions%nuclei(:)%label (string) (9.7.1.1.3)
ions (2649)	distsource%compositions%ions(:) (ions) (9.7.1.3.240)
nucindex (2790)	distsource%compositions%ions(:)%nucindex (integer) (9.7.1.1.2)
zion (2790)	distsource%compositions%ions(:)%zion (float) (9.7.1.1.1)
imp_flag (2790)	distsource%compositions%ions(:)%imp_flag (integer) (9.7.1.1.2)
label (2790)	distsource%compositions%ions(:)%label (string) (9.7.1.1.3)
impurities (2649)	distsource%compositions%impurities(:) (impurities) (9.7.1.3.237)
nucindex (2787)	distsource%compositions%impurities(:)%nucindex (integer) (9.7.1.1.2)
i_ion (2787)	distsource%compositions%impurities(:)%i_ion (integer) (9.7.1.1.2)
nzimp (2787)	distsource%compositions%impurities(:)%nzimp (integer) (9.7.1.1.2)
zmin (2787)	distsource%compositions%impurities(:)%zmin (vecflt_type) (9.7.1.2.13)
zmax (2787)	distsource%compositions%impurities(:)%zmax (vecflt_type) (9.7.1.2.13)
label (2787)	distsource%compositions%impurities(:)%label (vecstring_type) (9.7.1.2.15)
neutralscomp (2649)	distsource%compositions%neutralscomp(:) (composition_neutralscomp) (9.7.1.3.98)
neutcomp (2648)	distsource%compositions%neutralscomp(:)%neutcomp(:) (composition_neutrals_neutcomp) (9.7.1.3.97)
nucindex (2647)	distsource%compositions%neutralscomp(:)%neutcomp(:)%nucindex (integer) (9.7.1.1.2)
multiplicity (2647)	distsource%compositions%neutralscomp(:)%neutcomp(:)%multiplicity (integer) (9.7.1.1.2)



type (2648)	distsource%compositions%neutralscomp(:)%type(:) (identifier) (9.7.1.3.235)
id (2785)	distsource%compositions%neutralscomp(:)%type(:)%id (string) (9.7.1.1.3)
flag (2785)	distsource%compositions%neutralscomp(:)%type(:)%flag (integer) (9.7.1.1.2)
description (2785)	distsource%compositions%neutralscomp(:)%type(:)%description (string) (9.7.1.1.3)
label (2648)	distsource%compositions%neutralscomp(:)%label (string) (9.7.1.1.3)
edgespecies (2649)	distsource%compositions%edgespecies(:) (edgespecies) (9.7.1.3.185)
nucindex (2735)	distsource%compositions%edgespecies(:)%nucindex (integer) (9.7.1.1.2)
zmin (2735)	distsource%compositions%edgespecies(:)%zmin (float) (9.7.1.1.1)
zmax (2735)	distsource%compositions%edgespecies(:)%zmax (float) (9.7.1.1.1)
label (2735)	distsource%compositions%edgespecies(:)%label (string) (9.7.1.1.3)
signature (2649)	distsource%compositions%signature (identifier) (9.7.1.3.235)
id (2785)	distsource%compositions%signature%id (string) (9.7.1.1.3)
flag (2785)	distsource%compositions%signature%flag (integer) (9.7.1.1.2)
description (2785)	distsource%compositions%signature%description (string) (9.7.1.1.3)
source (2566)	distsource%source(:) (distsource_source) (9.7.1.3.171)
source_id (2721)	distsource%source(:)%source_id(:) (enum_instance) (9.7.1.3.188)
type (2738)	distsource%source(:)%source_id(:)%type (identifier) (9.7.1.3.235)
id (2785)	distsource%source(:)%source_id(:)%type%id (string) (9.7.1.1.3)
flag (2785)	distsource%source(:)%source_id(:)%type%flag (integer) (9.7.1.1.2)
description (2785)	distsource%source(:)%source_id(:)%type%description (string) (9.7.1.1.3)
name (2738)	distsource%source(:)%source_id(:)%name (string) (9.7.1.1.3)
index (2738)	distsource%source(:)%source_id(:)%index (integer) (9.7.1.1.2)
species (2721)	distsource%source(:)%species (species_reference) (9.7.1.3.411)
type (2961)	distsource%source(:)%species%type (identifier) (9.7.1.3.235)
id (2785)	distsource%source(:)%species%type%id (string) (9.7.1.1.3)
flag (2785)	distsource%source(:)%species%type%flag (integer) (9.7.1.1.2)
description (2785)	distsource%source(:)%species%type%description (string) (9.7.1.1.3)
index (2961)	distsource%source(:)%species%index (integer) (9.7.1.1.2)
gyro_type (2721)	distsource%source(:)%gyro_type (integer) (9.7.1.1.2)
global_param (2721)	distsource%source(:)%global_param (distsource_global_param) (9.7.1.3.167)
src_pow (2717)	distsource%source(:)%global_param%src_pow (exp0D) (9.7.1.3.196)
value (2746)	distsource%source(:)%global_param%src_pow%value (float) (9.7.1.1.1)
abserr (2746)	distsource%source(:)%global_param%src_pow%abserr (float) (9.7.1.1.1)
relerr (2746)	distsource%source(:)%global_param%src_pow%relerr (float) (9.7.1.1.1)
src_rate (2717)	distsource%source(:)%global_param%src_rate (exp0D) (9.7.1.3.196)
value (2746)	distsource%source(:)%global_param%src_rate%value (float) (9.7.1.1.1)
abserr (2746)	distsource%source(:)%global_param%src_rate%abserr (float) (9.7.1.1.1)
relerr (2746)	distsource%source(:)%global_param%src_rate%relerr (float) (9.7.1.1.1)
mag_axis (2717)	distsource%source(:)%global_param%mag_axis (rz0D) (9.7.1.3.358)
r (2908)	distsource%source(:)%global_param%mag_axis%r (float) (9.7.1.1.1)
z (2908)	distsource%source(:)%global_param%mag_axis%z (float) (9.7.1.1.1)
toroid_field (2717)	distsource%source(:)%global_param%toroid_field (b0r0) (9.7.1.3.59)
r0 (2609)	distsource%source(:)%global_param%toroid_field%r0 (float) (9.7.1.1.1)
b0 (2609)	distsource%source(:)%global_param%toroid_field%b0 (float) (9.7.1.1.1)
profiles_1d (2721)	distsource%source(:)%profiles_1d (distsource_profiles_1d) (9.7.1.3.169)
rho_tor (2719)	distsource%source(:)%profiles_1d%rho_tor (vecflt_type) (9.7.1.2.13)
rho_tor_norm (2719)	distsource%source(:)%profiles_1d%rho_tor_norm (vecflt_type) (9.7.1.2.13)
psi (2719)	distsource%source(:)%profiles_1d%psi (vecflt_type) (9.7.1.2.13)
volume (2719)	distsource%source(:)%profiles_1d%volume (vecflt_type) (9.7.1.2.13)
area (2719)	distsource%source(:)%profiles_1d%area (vecflt_type) (9.7.1.2.13)
pow_den (2719)	distsource%source(:)%profiles_1d%pow_den (exp1D) (9.7.1.3.197)
value (2747)	distsource%source(:)%profiles_1d%pow_den%value (vecflt_type) (9.7.1.2.13)
abserr (2747)	distsource%source(:)%profiles_1d%pow_den%abserr (vecflt_type) (9.7.1.2.13)
relerr (2747)	distsource%source(:)%profiles_1d%pow_den%relerr (vecflt_type) (9.7.1.2.13)
trq_den (2719)	distsource%source(:)%profiles_1d%trq_den (exp1D) (9.7.1.3.197)
value (2747)	distsource%source(:)%profiles_1d%trq_den%value (vecflt_type) (9.7.1.2.13)
abserr (2747)	distsource%source(:)%profiles_1d%trq_den%abserr (vecflt_type) (9.7.1.2.13)
relerr (2747)	distsource%source(:)%profiles_1d%trq_den%relerr (vecflt_type) (9.7.1.2.13)
src_rate (2719)	distsource%source(:)%profiles_1d%src_rate (exp1D) (9.7.1.3.197)
value (2747)	distsource%source(:)%profiles_1d%src_rate%value (vecflt_type) (9.7.1.2.13)
abserr (2747)	distsource%source(:)%profiles_1d%src_rate%abserr (vecflt_type) (9.7.1.2.13)

relelor (2747)	distsource%source(:)%profiles.1d%src_rate%relelor (vecflt.type) (9.7.1.2.13)
profiles.2d (2721)	distsource%source(:)%profiles.2d (distsource_profiles.2d) (9.7.1.3.170)
grid_coord (2720)	distsource%source(:)%profiles.2d%grid_coord (vecint.type) (9.7.1.2.14)
dim1 (2720)	distsource%source(:)%profiles.2d%dim1 (matflt.type) (9.7.1.2.10)
dim2 (2720)	distsource%source(:)%profiles.2d%dim2 (matflt.type) (9.7.1.2.10)
g11 (2720)	distsource%source(:)%profiles.2d%g11 (matflt.type) (9.7.1.2.10)
g12 (2720)	distsource%source(:)%profiles.2d%g12 (matflt.type) (9.7.1.2.10)
g21 (2720)	distsource%source(:)%profiles.2d%g21 (matflt.type) (9.7.1.2.10)
g22 (2720)	distsource%source(:)%profiles.2d%g22 (matflt.type) (9.7.1.2.10)
pow_den (2720)	distsource%source(:)%profiles.2d%pow_den (exp2D) (9.7.1.3.198)
value (2748)	distsource%source(:)%profiles.2d%pow_den%value (matflt.type) (9.7.1.2.10)
abserror (2748)	distsource%source(:)%profiles.2d%pow_den%abserror (matflt.type) (9.7.1.2.10)
relelor (2748)	distsource%source(:)%profiles.2d%pow_den%relelor (matflt.type) (9.7.1.2.10)
src_rate (2720)	distsource%source(:)%profiles.2d%src_rate (exp2D) (9.7.1.3.198)
value (2748)	distsource%source(:)%profiles.2d%src_rate%value (matflt.type) (9.7.1.2.10)
abserror (2748)	distsource%source(:)%profiles.2d%src_rate%abserror (matflt.type) (9.7.1.2.10)
relelor (2748)	distsource%source(:)%profiles.2d%src_rate%relelor (matflt.type) (9.7.1.2.10)
line_srcprof (2721)	distsource%source(:)%line_srcprof(:) (distsource_line_src_prof) (9.7.1.3.168)
rho_tor (2718)	distsource%source(:)%line_srcprof(:)%rho_tor (vecflt.type) (9.7.1.2.13)
rho_tor_norm (2718)	distsource%source(:)%line_srcprof(:)%rho_tor_norm (vecflt.type) (9.7.1.2.13)
psi (2718)	distsource%source(:)%line_srcprof(:)%psi (vecflt.type) (9.7.1.2.13)
R (2718)	distsource%source(:)%line_srcprof(:)%R (vecflt.type) (9.7.1.2.13)
Z (2718)	distsource%source(:)%line_srcprof(:)%Z (vecflt.type) (9.7.1.2.13)
theta (2718)	distsource%source(:)%line_srcprof(:)%theta (vecflt.type) (9.7.1.2.13)
theta_id (2718)	distsource%source(:)%line_srcprof(:)%theta_id (vecflt.type) (9.7.1.2.13)
th2th_pol (2718)	distsource%source(:)%line_srcprof(:)%th2th_pol (matflt.type) (9.7.1.2.10)
pitch (2718)	distsource%source(:)%line_srcprof(:)%pitch (vecflt.type) (9.7.1.2.13)
energy (2718)	distsource%source(:)%line_srcprof(:)%energy (vecflt.type) (9.7.1.2.13)
ang_momentum (2718)	distsource%source(:)%line_srcprof(:)%ang_momentum (vecflt.type) (9.7.1.2.13)
src_rate (2718)	distsource%source(:)%line_srcprof(:)%src_rate (vecflt.type) (9.7.1.2.13)
source_rate (2721)	distsource%source(:)%source_rate (source_rate) (9.7.1.3.405)
grid (2955)	distsource%source(:)%source_rate%grid (complexgrid) (9.7.1.3.82)
uid (2632)	distsource%source(:)%source_rate%grid%uid (integer) (9.7.1.1.2)
id (2632)	distsource%source(:)%source_rate%grid%id (string) (9.7.1.1.3)
spaces (2632)	distsource%source(:)%source_rate%grid%spaces(:) (complexgrid_space) (9.7.1.3.91)
geotype (2641)	distsource%source(:)%source_rate%grid%spaces(:)%geotype (vecint.type) (9.7.1.2.14)
geotypeid (2641)	distsource%source(:)%source_rate%grid%spaces(:)%geotypeid (vecstring.type) (9.7.1.2.15)
coordtype (2641)	distsource%source(:)%source_rate%grid%spaces(:)%coordtype (matint.type) (9.7.1.2.11)
objects (2641)	distsource%source(:)%source_rate%grid%spaces(:)%objects(:) (objects) (9.7.1.3.300)
boundary (2850)	distsource%source(:)%source_rate%grid%spaces(:)%objects(:)%boundary (matint.type) (9.7.1.2.11)
neighbour (2850)	distsource%source(:)%source_rate%grid%spaces(:)%objects(:)%neighbour (array3dint.type) (9.7.1.2.3)
geo (2850)	distsource%source(:)%source_rate%grid%spaces(:)%objects(:)%geo (array4dflt.type) (9.7.1.2.4)
measure (2850)	distsource%source(:)%source_rate%grid%spaces(:)%objects(:)%measure (matflt.type) (9.7.1.2.10)
xpoints (2641)	distsource%source(:)%source_rate%grid%spaces(:)%xpoints (vecint.type) (9.7.1.2.14)
subgrids (2632)	distsource%source(:)%source_rate%grid%subgrids(:) (complexgrid_subgrid) (9.7.1.3.92)
id (2642)	distsource%source(:)%source_rate%grid%subgrids(:)%id (string) (9.7.1.1.3)
list (2642)	distsource%source(:)%source_rate%grid%subgrids(:)%list(:) (complexgrid_objectlist) (9.7.1.3.86)
cls (2636)	distsource%source(:)%source_rate%grid%subgrids(:)%list(:)%cls (vecint.type) (9.7.1.2.14)
indset (2636)	distsource%source(:)%source_rate%grid%subgrids(:)%list(:)%indset(:) (complexgrid_indexlist) (9.7.1.3.84)
range (2634)	distsource%source(:)%source_rate%grid%subgrids(:)%list(:)%indset(:)%range (vecint.type) (9.7.1.2.14)
ind (2634)	distsource%source(:)%source_rate%grid%subgrids(:)%list(:)%indset(:)%ind (vecint.type) (9.7.1.2.14)
ind (2636)	distsource%source(:)%source_rate%grid%subgrids(:)%list(:)%ind (matint.type) (9.7.1.2.11)
metric (2632)	distsource%source(:)%source_rate%grid%metric (complexgrid_metric) (9.7.1.3.85)
measure (2635)	distsource%source(:)%source_rate%grid%metric%measure(:) (complexgrid_scalar) (9.7.1.3.87)
griduid (2637)	distsource%source(:)%source_rate%grid%metric%measure(:)%griduid (integer) (9.7.1.1.2)
subgrid (2637)	distsource%source(:)%source_rate%grid%metric%measure(:)%subgrid (integer) (9.7.1.1.2)



subgrid (2637)	distsource%source(:)%source_rate%grid%geo(:)%measure(:)%subgrid (integer) (9.7.1.1.2)
scalar (2637)	distsource%source(:)%source_rate%grid%geo(:)%measure(:)%scalar (vecflt_type) (9.7.1.2.13)
vector (2637)	distsource%source(:)%source_rate%grid%geo(:)%measure(:)%vector (matflt_type) (9.7.1.2.10)
matrix (2637)	distsource%source(:)%source_rate%grid%geo(:)%measure(:)%matrix (array3dflt_type) (9.7.1.2.2)
bases (2632)	distsource%source(:)%source_rate%grid%bases(:) (complexgrid_vector) (9.7.1.3.93)
griduid (2643)	distsource%source(:)%source_rate%grid%bases(:)%griduid (integer) (9.7.1.1.2)
label (2643)	distsource%source(:)%source_rate%grid%bases(:)%label (string) (9.7.1.1.3)
comp (2643)	distsource%source(:)%source_rate%grid%bases(:)%comp(:) (complexgrid_scalar) (9.7.1.3.87)
griduid (2637)	distsource%source(:)%source_rate%grid%bases(:)%comp(:)%griduid (integer) (9.7.1.1.2)
subgrid (2637)	distsource%source(:)%source_rate%grid%bases(:)%comp(:)%subgrid (integer) (9.7.1.1.2)
scalar (2637)	distsource%source(:)%source_rate%grid%bases(:)%comp(:)%scalar (vecflt_type) (9.7.1.2.13)
vector (2637)	distsource%source(:)%source_rate%grid%bases(:)%comp(:)%vector (matflt_type) (9.7.1.2.10)
matrix (2637)	distsource%source(:)%source_rate%grid%bases(:)%comp(:)%matrix (array3dflt_type) (9.7.1.2.2)
align (2643)	distsource%source(:)%source_rate%grid%bases(:)%align (vecint_type) (9.7.1.2.14)
alignid (2643)	distsource%source(:)%source_rate%grid%bases(:)%alignid (vecstring_type) (9.7.1.2.15)
basis (2643)	distsource%source(:)%source_rate%grid%bases(:)%basis (integer) (9.7.1.1.2)
value (2955)	distsource%source(:)%source_rate%value (complexgrid_scalar) (9.7.1.3.87)
griduid (2637)	distsource%source(:)%source_rate%value%griduid (integer) (9.7.1.1.2)
subgrid (2637)	distsource%source(:)%source_rate%value%subgrid (integer) (9.7.1.1.2)
scalar (2637)	distsource%source(:)%source_rate%value%scalar (vecflt_type) (9.7.1.2.13)
vector (2637)	distsource%source(:)%source_rate%value%vector (matflt_type) (9.7.1.2.10)
matrix (2637)	distsource%source(:)%source_rate%value%matrix (array3dflt_type) (9.7.1.2.2)
discrete (2955)	distsource%source(:)%source_rate%discrete (vecint_type) (9.7.1.2.14)
parameters (2955)	distsource%source(:)%source_rate%parameters (parameters) (9.7.1.3.311)
equatorial (2861)	distsource%source(:)%source_rate%parameters%equatorial (equatorial_plane) (9.7.1.3.193)
r (2743)	distsource%source(:)%source_rate%parameters%equatorial%r (vecflt_type) (9.7.1.2.13)
z (2743)	distsource%source(:)%source_rate%parameters%equatorial%z (vecflt_type) (9.7.1.2.13)
s (2743)	distsource%source(:)%source_rate%parameters%equatorial%s (vecflt_type) (9.7.1.2.13)
rho_tor (2743)	distsource%source(:)%source_rate%parameters%equatorial%rho_tor (vecflt_type) (9.7.1.2.13)
psi (2743)	distsource%source(:)%source_rate%parameters%equatorial%psi (vecflt_type) (9.7.1.2.13)
b_mod (2743)	distsource%source(:)%source_rate%parameters%equatorial%b_mod (vecflt_type) (9.7.1.2.13)
markers (2721)	distsource%source(:)%markers (weighted_markers) (9.7.1.3.505)
variable_ids (3055)	distsource%source(:)%markers%variable_ids(:) (identifier) (9.7.1.3.235)
id (2785)	distsource%source(:)%markers%variable_ids(:)%id (string) (9.7.1.1.3)
flag (2785)	distsource%source(:)%markers%variable_ids(:)%flag (integer) (9.7.1.1.2)
description (2785)	distsource%source(:)%markers%variable_ids(:)%description (string) (9.7.1.1.3)
coord (3055)	distsource%source(:)%markers%coord (matflt_type) (9.7.1.2.10)
weight (3055)	distsource%source(:)%markers%weight (vecflt_type) (9.7.1.2.13)
codeparam (2721)	distsource%source(:)%codeparam (codeparam) (9.7.1.3.77)
codename (2627)	distsource%source(:)%codeparam%codename (string) (9.7.1.1.3)
codeversion (2627)	distsource%source(:)%codeparam%codeversion (string) (9.7.1.1.3)
parameters (2627)	distsource%source(:)%codeparam%parameters (string) (9.7.1.1.3)
output_diag (2627)	distsource%source(:)%codeparam%output_diag (string) (9.7.1.1.3)
output_flag (2627)	distsource%source(:)%codeparam%output_flag (integer) (9.7.1.1.2)
codeparam (2566)	distsource%codeparam (codeparam) (9.7.1.3.77)
codename (2627)	distsource%codeparam%codename (string) (9.7.1.1.3)
codeversion (2627)	distsource%codeparam%codeversion (string) (9.7.1.1.3)
parameters (2627)	distsource%codeparam%parameters (string) (9.7.1.1.3)
output_diag (2627)	distsource%codeparam%output_diag (string) (9.7.1.1.3)
output_flag (2627)	distsource%codeparam%output_flag (integer) (9.7.1.1.2)
time (2566)	distsource%time (float) (9.7.1.1.1)

### 9.7.2.1.15 ecediag

datainfo (2567)	ecediag%datainfo (datainfo) (9.7.1.3.134)
dataprovider (2684)	ecediag%datainfo%dataprovider (string) (9.7.1.1.3)
putdate (2684)	ecediag%datainfo%putdate (string) (9.7.1.1.3)
source (2684)	ecediag%datainfo%source (string) (9.7.1.1.3)
comment (2684)	ecediag%datainfo%comment (string) (9.7.1.1.3)
cocos (2684)	ecediag%datainfo%cocos (integer) (9.7.1.1.2)

id (2684)	ecediag%datainfo%id (integer) (9.7.1.1.2)
isref (2684)	ecediag%datainfo%isref (integer) (9.7.1.1.2)
whatref (2684)	ecediag%datainfo%whatref (whatref) (9.7.1.3.506)
user (3056)	ecediag%datainfo%whatref%user (string) (9.7.1.1.3)
machine (3056)	ecediag%datainfo%whatref%machine (string) (9.7.1.1.3)
shot (3056)	ecediag%datainfo%whatref%shot (integer) (9.7.1.1.2)
run (3056)	ecediag%datainfo%whatref%run (integer) (9.7.1.1.2)
occurrence (3056)	ecediag%datainfo%whatref%occurrence (integer) (9.7.1.1.2)
putinfo (2684)	ecediag%datainfo%putinfo (putinfo) (9.7.1.3.342)
putmethod (2892)	ecediag%datainfo%putinfo%putmethod (string) (9.7.1.1.3)
putaccess (2892)	ecediag%datainfo%putinfo%putaccess (string) (9.7.1.1.3)
putlocation (2892)	ecediag%datainfo%putinfo%putlocation (string) (9.7.1.1.3)
rights (2892)	ecediag%datainfo%putinfo%rights (string) (9.7.1.1.3)
setup (2567)	ecediag%setup (ecesetup) (9.7.1.3.175)
frequency (2725)	ecediag%setup%frequency (vecflt_type) (9.7.1.2.13)
los (2725)	ecediag%setup%los (setup_line_exp) (9.7.1.3.397)
pivot_point (2947)	ecediag%setup%los%pivot_point (rzphi1Dexperimental) (9.7.1.3.367)
r (2917)	ecediag%setup%los%pivot_point%r (vecflt_type) (9.7.1.2.13)
z (2917)	ecediag%setup%los%pivot_point%z (vecflt_type) (9.7.1.2.13)
phi (2917)	ecediag%setup%los%pivot_point%phi (vecflt_type) (9.7.1.2.13)
horchordang1 (2947)	ecediag%setup%los%horchordang1 (vecflt_type) (9.7.1.2.13)
verchordang1 (2947)	ecediag%setup%los%verchordang1 (vecflt_type) (9.7.1.2.13)
width (2947)	ecediag%setup%los%width (vecflt_type) (9.7.1.2.13)
second_point (2947)	ecediag%setup%los%second_point (rzphi1Dexperimental) (9.7.1.3.367)
r (2917)	ecediag%setup%los%second_point%r (vecflt_type) (9.7.1.2.13)
z (2917)	ecediag%setup%los%second_point%z (vecflt_type) (9.7.1.2.13)
phi (2917)	ecediag%setup%los%second_point%phi (vecflt_type) (9.7.1.2.13)
horchordang2 (2947)	ecediag%setup%los%horchordang2 (vecflt_type) (9.7.1.2.13)
verchordang2 (2947)	ecediag%setup%los%verchordang2 (vecflt_type) (9.7.1.2.13)
third_point (2947)	ecediag%setup%los%third_point (rzphi1Dexperimental) (9.7.1.3.367)
r (2917)	ecediag%setup%los%third_point%r (vecflt_type) (9.7.1.2.13)
z (2917)	ecediag%setup%los%third_point%z (vecflt_type) (9.7.1.2.13)
phi (2917)	ecediag%setup%los%third_point%phi (vecflt_type) (9.7.1.2.13)
nchordpoints (2947)	ecediag%setup%los%nchordpoints (integer) (9.7.1.1.2)
measure (2567)	ecediag%measure (ecemeasure) (9.7.1.3.174)
harmonic (2724)	ecediag%measure%harmonic (integer) (9.7.1.1.2)
position (2724)	ecediag%measure%position (rzphi1Dexp) (9.7.1.3.366)
r (2916)	ecediag%measure%position%r (exp1D) (9.7.1.3.197)
value (2747)	ecediag%measure%position%r%value (vecflt_type) (9.7.1.2.13)
abserror (2747)	ecediag%measure%position%r%abserror (vecflt_type) (9.7.1.2.13)
relerror (2747)	ecediag%measure%position%r%relerror (vecflt_type) (9.7.1.2.13)
z (2916)	ecediag%measure%position%z (exp1D) (9.7.1.3.197)
value (2747)	ecediag%measure%position%z%value (vecflt_type) (9.7.1.2.13)
abserror (2747)	ecediag%measure%position%z%abserror (vecflt_type) (9.7.1.2.13)
relerror (2747)	ecediag%measure%position%z%relerror (vecflt_type) (9.7.1.2.13)
phi (2916)	ecediag%measure%position%phi (exp1D) (9.7.1.3.197)
value (2747)	ecediag%measure%position%phi%value (vecflt_type) (9.7.1.2.13)
abserror (2747)	ecediag%measure%position%phi%abserror (vecflt_type) (9.7.1.2.13)
relerror (2747)	ecediag%measure%position%phi%relerror (vecflt_type) (9.7.1.2.13)
te (2724)	ecediag%measure%te (exp1D) (9.7.1.3.197)
value (2747)	ecediag%measure%te%value (vecflt_type) (9.7.1.2.13)
abserror (2747)	ecediag%measure%te%abserror (vecflt_type) (9.7.1.2.13)
relerror (2747)	ecediag%measure%te%relerror (vecflt_type) (9.7.1.2.13)
codeparam (2567)	ecediag%codeparam (codeparam) (9.7.1.3.77)
codename (2627)	ecediag%codeparam%codename (string) (9.7.1.1.3)
codeversion (2627)	ecediag%codeparam%codeversion (string) (9.7.1.1.3)
parameters (2627)	ecediag%codeparam%parameters (string) (9.7.1.1.3)
output_diag (2627)	ecediag%codeparam%output_diag (string) (9.7.1.1.3)
output_flag (2627)	ecediag%codeparam%output_flag (integer) (9.7.1.1.2)
time (2567)	ecediag%time (float) (9.7.1.1.1)

## 9.7.2.1.16 edge

<code>datainfo</code> (2568)	<code>edge%datainfo</code> (datainfo) (9.7.1.3.134)
<code>dataproducer</code> (2684)	<code>edge%datainfo%dataproducer</code> (string) (9.7.1.1.3)
<code>putdate</code> (2684)	<code>edge%datainfo%putdate</code> (string) (9.7.1.1.3)
<code>source</code> (2684)	<code>edge%datainfo%source</code> (string) (9.7.1.1.3)
<code>comment</code> (2684)	<code>edge%datainfo%comment</code> (string) (9.7.1.1.3)
<code>cocos</code> (2684)	<code>edge%datainfo%cocos</code> (integer) (9.7.1.1.2)
<code>id</code> (2684)	<code>edge%datainfo%id</code> (integer) (9.7.1.1.2)
<code>isref</code> (2684)	<code>edge%datainfo%isref</code> (integer) (9.7.1.1.2)
<code>whatref</code> (2684)	<code>edge%datainfo%whatref</code> (whatref) (9.7.1.3.506)
<code>user</code> (3056)	<code>edge%datainfo%whatref%user</code> (string) (9.7.1.1.3)
<code>machine</code> (3056)	<code>edge%datainfo%whatref%machine</code> (string) (9.7.1.1.3)
<code>shot</code> (3056)	<code>edge%datainfo%whatref%shot</code> (integer) (9.7.1.1.2)
<code>run</code> (3056)	<code>edge%datainfo%whatref%run</code> (integer) (9.7.1.1.2)
<code>occurrence</code> (3056)	<code>edge%datainfo%whatref%occurrence</code> (integer) (9.7.1.1.2)
<code>putinfo</code> (2684)	<code>edge%datainfo%putinfo</code> (putinfo) (9.7.1.3.342)
<code>putmethod</code> (2892)	<code>edge%datainfo%putinfo%putmethod</code> (string) (9.7.1.1.3)
<code>putaccess</code> (2892)	<code>edge%datainfo%putinfo%putaccess</code> (string) (9.7.1.1.3)
<code>putlocation</code> (2892)	<code>edge%datainfo%putinfo%putlocation</code> (string) (9.7.1.1.3)
<code>rights</code> (2892)	<code>edge%datainfo%putinfo%rights</code> (string) (9.7.1.1.3)
<code>grid</code> (2568)	<code>edge%grid</code> (complexgrid) (9.7.1.3.82)
<code>uid</code> (2632)	<code>edge%grid%uid</code> (integer) (9.7.1.1.2)
<code>id</code> (2632)	<code>edge%grid%id</code> (string) (9.7.1.1.3)
<code>spaces</code> (2632)	<code>edge%grid%spaces(:)</code> (complexgrid_space) (9.7.1.3.91)
<code>geotype</code> (2641)	<code>edge%grid%spaces(:)%geotype</code> (vecint_type) (9.7.1.2.14)
<code>geotypeid</code> (2641)	<code>edge%grid%spaces(:)%geotypeid</code> (vecstring_type) (9.7.1.2.15)
<code>coordtype</code> (2641)	<code>edge%grid%spaces(:)%coordtype</code> (matint_type) (9.7.1.2.11)
<code>objects</code> (2641)	<code>edge%grid%spaces(:)%objects(:)</code> (objects) (9.7.1.3.300)
<code>boundary</code> (2850)	<code>edge%grid%spaces(:)%objects(:)%boundary</code> (matint_type) (9.7.1.2.11)
<code>neighbour</code> (2850)	<code>edge%grid%spaces(:)%objects(:)%neighbour</code> (array3dint_type) (9.7.1.2.3)
<code>geo</code> (2850)	<code>edge%grid%spaces(:)%objects(:)%geo</code> (array4dflt_type) (9.7.1.2.4)
<code>measure</code> (2850)	<code>edge%grid%spaces(:)%objects(:)%measure</code> (matflt_type) (9.7.1.2.10)
<code>xpoints</code> (2641)	<code>edge%grid%spaces(:)%xpoints</code> (vecint_type) (9.7.1.2.14)
<code>subgrids</code> (2632)	<code>edge%grid%subgrids(:)</code> (complexgrid_subgrid) (9.7.1.3.92)
<code>id</code> (2642)	<code>edge%grid%subgrids(:)%id</code> (string) (9.7.1.1.3)
<code>list</code> (2642)	<code>edge%grid%subgrids(:)%list(:)</code> (complexgrid_objectlist) (9.7.1.3.86)
<code>cls</code> (2636)	<code>edge%grid%subgrids(:)%list(:)%cls</code> (vecint_type) (9.7.1.2.14)
<code>indset</code> (2636)	<code>edge%grid%subgrids(:)%list(:)%indset(:)</code> (complexgrid_indexlist) (9.7.1.3.84)
<code>range</code> (2634)	<code>edge%grid%subgrids(:)%list(:)%indset(:)%range</code> (vecint_type) (9.7.1.2.14)
<code>ind</code> (2634)	<code>edge%grid%subgrids(:)%list(:)%indset(:)%ind</code> (vecint_type) (9.7.1.2.14)
<code>ind</code> (2636)	<code>edge%grid%subgrids(:)%list(:)%ind</code> (matint_type) (9.7.1.2.11)
<code>metric</code> (2632)	<code>edge%grid%metric</code> (complexgrid_metric) (9.7.1.3.85)
<code>measure</code> (2635)	<code>edge%grid%metric%measure(:)</code> (complexgrid_scalar) (9.7.1.3.87)
<code>griduid</code> (2637)	<code>edge%grid%metric%measure(:)%griduid</code> (integer) (9.7.1.1.2)
<code>subgrid</code> (2637)	<code>edge%grid%metric%measure(:)%subgrid</code> (integer) (9.7.1.1.2)
<code>scalar</code> (2637)	<code>edge%grid%metric%measure(:)%scalar</code> (vecflt_type) (9.7.1.2.13)
<code>vector</code> (2637)	<code>edge%grid%metric%measure(:)%vector</code> (matflt_type) (9.7.1.2.10)
<code>matrix</code> (2637)	<code>edge%grid%metric%measure(:)%matrix</code> (array3dflt_type) (9.7.1.2.2)
<code>g11</code> (2635)	<code>edge%grid%metric%g11(:)</code> (complexgrid_scalar) (9.7.1.3.87)
<code>griduid</code> (2637)	<code>edge%grid%metric%g11(:)%griduid</code> (integer) (9.7.1.1.2)
<code>subgrid</code> (2637)	<code>edge%grid%metric%g11(:)%subgrid</code> (integer) (9.7.1.1.2)
<code>scalar</code> (2637)	<code>edge%grid%metric%g11(:)%scalar</code> (vecflt_type) (9.7.1.2.13)
<code>vector</code> (2637)	<code>edge%grid%metric%g11(:)%vector</code> (matflt_type) (9.7.1.2.10)
<code>matrix</code> (2637)	<code>edge%grid%metric%g11(:)%matrix</code> (array3dflt_type) (9.7.1.2.2)
<code>g12</code> (2635)	<code>edge%grid%metric%g12(:)</code> (complexgrid_scalar) (9.7.1.3.87)
<code>griduid</code> (2637)	<code>edge%grid%metric%g12(:)%griduid</code> (integer) (9.7.1.1.2)
<code>subgrid</code> (2637)	<code>edge%grid%metric%g12(:)%subgrid</code> (integer) (9.7.1.1.2)
<code>scalar</code> (2637)	<code>edge%grid%metric%g12(:)%scalar</code> (vecflt_type) (9.7.1.2.13)
<code>vector</code> (2637)	<code>edge%grid%metric%g12(:)%vector</code> (matflt_type) (9.7.1.2.10)
<code>matrix</code> (2637)	<code>edge%grid%metric%g12(:)%matrix</code> (array3dflt_type) (9.7.1.2.2)
<code>g13</code> (2635)	<code>edge%grid%metric%g13(:)</code> (complexgrid_scalar) (9.7.1.3.87)



griduid (2637)	edge%grid%metric%g13(:)%griduid (integer) (9.7.1.1.2)
subgrid (2637)	edge%grid%metric%g13(:)%subgrid (integer) (9.7.1.1.2)
scalar (2637)	edge%grid%metric%g13(:)%scalar (vecflt_type) (9.7.1.2.13)
vector (2637)	edge%grid%metric%g13(:)%vector (matflt_type) (9.7.1.2.10)
matrix (2637)	edge%grid%metric%g13(:)%matrix (array3dflt_type) (9.7.1.2.2)
g22 (2635)	edge%grid%metric%g22(:) (complexgrid_scalar) (9.7.1.3.87)
griduid (2637)	edge%grid%metric%g22(:)%griduid (integer) (9.7.1.1.2)
subgrid (2637)	edge%grid%metric%g22(:)%subgrid (integer) (9.7.1.1.2)
scalar (2637)	edge%grid%metric%g22(:)%scalar (vecflt_type) (9.7.1.2.13)
vector (2637)	edge%grid%metric%g22(:)%vector (matflt_type) (9.7.1.2.10)
matrix (2637)	edge%grid%metric%g22(:)%matrix (array3dflt_type) (9.7.1.2.2)
g23 (2635)	edge%grid%metric%g23(:) (complexgrid_scalar) (9.7.1.3.87)
griduid (2637)	edge%grid%metric%g23(:)%griduid (integer) (9.7.1.1.2)
subgrid (2637)	edge%grid%metric%g23(:)%subgrid (integer) (9.7.1.1.2)
scalar (2637)	edge%grid%metric%g23(:)%scalar (vecflt_type) (9.7.1.2.13)
vector (2637)	edge%grid%metric%g23(:)%vector (matflt_type) (9.7.1.2.10)
matrix (2637)	edge%grid%metric%g23(:)%matrix (array3dflt_type) (9.7.1.2.2)
g33 (2635)	edge%grid%metric%g33(:) (complexgrid_scalar) (9.7.1.3.87)
griduid (2637)	edge%grid%metric%g33(:)%griduid (integer) (9.7.1.1.2)
subgrid (2637)	edge%grid%metric%g33(:)%subgrid (integer) (9.7.1.1.2)
scalar (2637)	edge%grid%metric%g33(:)%scalar (vecflt_type) (9.7.1.2.13)
vector (2637)	edge%grid%metric%g33(:)%vector (matflt_type) (9.7.1.2.10)
matrix (2637)	edge%grid%metric%g33(:)%matrix (array3dflt_type) (9.7.1.2.2)
jacobian (2635)	edge%grid%metric%jacobian(:) (complexgrid_scalar) (9.7.1.3.87)
griduid (2637)	edge%grid%metric%jacobian(:)%griduid (integer) (9.7.1.1.2)
subgrid (2637)	edge%grid%metric%jacobian(:)%subgrid (integer) (9.7.1.1.2)
scalar (2637)	edge%grid%metric%jacobian(:)%scalar (vecflt_type) (9.7.1.2.13)
vector (2637)	edge%grid%metric%jacobian(:)%vector (matflt_type) (9.7.1.2.10)
matrix (2637)	edge%grid%metric%jacobian(:)%matrix (array3dflt_type) (9.7.1.2.2)
geo (2632)	edge%grid%geo(:) (complexgrid_geo_global) (9.7.1.3.83)
geotype (2633)	edge%grid%geo(:)%geotype (integer) (9.7.1.1.2)
geotypeid (2633)	edge%grid%geo(:)%geotypeid (string) (9.7.1.1.3)
coordtype (2633)	edge%grid%geo(:)%coordtype (vecint_type) (9.7.1.2.14)
geo_matrix (2633)	edge%grid%geo(:)%geo_matrix(:) (complexgrid_scalar) (9.7.1.3.87)
griduid (2637)	edge%grid%geo(:)%geo_matrix(:)%griduid (integer) (9.7.1.1.2)
subgrid (2637)	edge%grid%geo(:)%geo_matrix(:)%subgrid (integer) (9.7.1.1.2)
scalar (2637)	edge%grid%geo(:)%geo_matrix(:)%scalar (vecflt_type) (9.7.1.2.13)
vector (2637)	edge%grid%geo(:)%geo_matrix(:)%vector (matflt_type) (9.7.1.2.10)
matrix (2637)	edge%grid%geo(:)%geo_matrix(:)%matrix (array3dflt_type) (9.7.1.2.2)
measure (2633)	edge%grid%geo(:)%measure(:) (complexgrid_scalar) (9.7.1.3.87)
griduid (2637)	edge%grid%geo(:)%measure(:)%griduid (integer) (9.7.1.1.2)
subgrid (2637)	edge%grid%geo(:)%measure(:)%subgrid (integer) (9.7.1.1.2)
scalar (2637)	edge%grid%geo(:)%measure(:)%scalar (vecflt_type) (9.7.1.2.13)
vector (2637)	edge%grid%geo(:)%measure(:)%vector (matflt_type) (9.7.1.2.10)
matrix (2637)	edge%grid%geo(:)%measure(:)%matrix (array3dflt_type) (9.7.1.2.2)
bases (2632)	edge%grid%bases(:) (complexgrid_vector) (9.7.1.3.93)
griduid (2643)	edge%grid%bases(:)%griduid (integer) (9.7.1.1.2)
label (2643)	edge%grid%bases(:)%label (string) (9.7.1.1.3)
comp (2643)	edge%grid%bases(:)%comp(:) (complexgrid_scalar) (9.7.1.3.87)
griduid (2637)	edge%grid%bases(:)%comp(:)%griduid (integer) (9.7.1.1.2)
subgrid (2637)	edge%grid%bases(:)%comp(:)%subgrid (integer) (9.7.1.1.2)
scalar (2637)	edge%grid%bases(:)%comp(:)%scalar (vecflt_type) (9.7.1.2.13)
vector (2637)	edge%grid%bases(:)%comp(:)%vector (matflt_type) (9.7.1.2.10)
matrix (2637)	edge%grid%bases(:)%comp(:)%matrix (array3dflt_type) (9.7.1.2.2)
align (2643)	edge%grid%bases(:)%align (vecint_type) (9.7.1.2.14)
alignid (2643)	edge%grid%bases(:)%alignid (vecstring_type) (9.7.1.2.15)
basis (2643)	edge%grid%bases(:)%basis (integer) (9.7.1.1.2)
species (2568)	edge%species(:) (species_desc) (9.7.1.3.410)
label (2960)	edge%species(:)%label (string) (9.7.1.1.3)
amn (2960)	edge%species(:)%amn (float) (9.7.1.1.1)
zn (2960)	edge%species(:)%zn (float) (9.7.1.1.1)



zmin (2960)	edge%species(:)%zmin (float) (9.7.1.1.1)
zmax (2960)	edge%species(:)%zmax (float) (9.7.1.1.1)
compositions (2568)	edge%compositions (compositions_type) (9.7.1.3.99)
nuclei (2649)	edge%compositions%nuclei(:) (nuclei) (9.7.1.3.299)
zn (2849)	edge%compositions%nuclei(:)%zn (float) (9.7.1.1.1)
amn (2849)	edge%compositions%nuclei(:)%amn (float) (9.7.1.1.1)
label (2849)	edge%compositions%nuclei(:)%label (string) (9.7.1.1.3)
ions (2649)	edge%compositions%ions(:) (ions) (9.7.1.3.240)
nucindex (2790)	edge%compositions%ions(:)%nucindex (integer) (9.7.1.1.2)
zion (2790)	edge%compositions%ions(:)%zion (float) (9.7.1.1.1)
imp_flag (2790)	edge%compositions%ions(:)%imp_flag (integer) (9.7.1.1.2)
label (2790)	edge%compositions%ions(:)%label (string) (9.7.1.1.3)
impurities (2649)	edge%compositions%impurities(:) (impurities) (9.7.1.3.237)
nucindex (2787)	edge%compositions%impurities(:)%nucindex (integer) (9.7.1.1.2)
i_ion (2787)	edge%compositions%impurities(:)%i_ion (integer) (9.7.1.1.2)
nzimp (2787)	edge%compositions%impurities(:)%nzimp (integer) (9.7.1.1.2)
zmin (2787)	edge%compositions%impurities(:)%zmin (vecflt_type) (9.7.1.2.13)
zmax (2787)	edge%compositions%impurities(:)%zmax (vecflt_type) (9.7.1.2.13)
label (2787)	edge%compositions%impurities(:)%label (vecstring_type) (9.7.1.2.15)
neutralscomp (2649)	edge%compositions%neutralscomp(:) (composition_neutralscomp) (9.7.1.3.98)
neutcomp (2648)	edge%compositions%neutralscomp(:)%neutcomp(:) (composition_neutrals_neutcomp) (9.7.1.3.97)
nucindex (2647)	edge%compositions%neutralscomp(:)%neutcomp(:)%nucindex (integer) (9.7.1.1.2)
multiplicity (2647)	edge%compositions%neutralscomp(:)%neutcomp(:)%multiplicity (integer) (9.7.1.1.2)
type (2648)	edge%compositions%neutralscomp(:)%type(:) (identifier) (9.7.1.3.235)
id (2785)	edge%compositions%neutralscomp(:)%type(:)%id (string) (9.7.1.1.3)
flag (2785)	edge%compositions%neutralscomp(:)%type(:)%flag (integer) (9.7.1.1.2)
description (2785)	edge%compositions%neutralscomp(:)%type(:)%description (string) (9.7.1.1.3)
label (2648)	edge%compositions%neutralscomp(:)%label (string) (9.7.1.1.3)
edgespecies (2649)	edge%compositions%edgespecies(:) (edgespecies) (9.7.1.3.185)
nucindex (2735)	edge%compositions%edgespecies(:)%nucindex (integer) (9.7.1.1.2)
zmin (2735)	edge%compositions%edgespecies(:)%zmin (float) (9.7.1.1.1)
zmax (2735)	edge%compositions%edgespecies(:)%zmax (float) (9.7.1.1.1)
label (2735)	edge%compositions%edgespecies(:)%label (string) (9.7.1.1.3)
signature (2649)	edge%compositions%signature (identifier) (9.7.1.3.235)
id (2785)	edge%compositions%signature%id (string) (9.7.1.1.3)
flag (2785)	edge%compositions%signature%flag (integer) (9.7.1.1.2)
description (2785)	edge%compositions%signature%description (string) (9.7.1.1.3)
fluid (2568)	edge%fluid (edge_fluid) (9.7.1.3.176)
ne (2726)	edge%fluid%ne (edge_fluid_scalar_simplestruct) (9.7.1.3.178)
value (2728)	edge%fluid%ne%value(:) (complexgrid_scalar) (9.7.1.3.87)
griduid (2637)	edge%fluid%ne%value(:)%griduid (integer) (9.7.1.1.2)
subgrid (2637)	edge%fluid%ne%value(:)%subgrid (integer) (9.7.1.1.2)
scalar (2637)	edge%fluid%ne%value(:)%scalar (vecflt_type) (9.7.1.2.13)
vector (2637)	edge%fluid%ne%value(:)%vector (matflt_type) (9.7.1.2.10)
matrix (2637)	edge%fluid%ne%value(:)%matrix (array3dflt_type) (9.7.1.2.2)
bndvalue (2728)	edge%fluid%ne%bndvalue(:) (complexgrid_scalar) (9.7.1.3.87)
griduid (2637)	edge%fluid%ne%bndvalue(:)%griduid (integer) (9.7.1.1.2)
subgrid (2637)	edge%fluid%ne%bndvalue(:)%subgrid (integer) (9.7.1.1.2)
scalar (2637)	edge%fluid%ne%bndvalue(:)%scalar (vecflt_type) (9.7.1.2.13)
vector (2637)	edge%fluid%ne%bndvalue(:)%vector (matflt_type) (9.7.1.2.10)
matrix (2637)	edge%fluid%ne%bndvalue(:)%matrix (array3dflt_type) (9.7.1.2.2)
flux (2728)	edge%fluid%ne%flux(:) (complexgrid_vector) (9.7.1.3.93)
griduid (2643)	edge%fluid%ne%flux(:)%griduid (integer) (9.7.1.1.2)
label (2643)	edge%fluid%ne%flux(:)%label (string) (9.7.1.1.3)
comp (2643)	edge%fluid%ne%flux(:)%comp(:) (complexgrid_scalar) (9.7.1.3.87)
griduid (2637)	edge%fluid%ne%flux(:)%comp(:)%griduid (integer) (9.7.1.1.2)
subgrid (2637)	edge%fluid%ne%flux(:)%comp(:)%subgrid (integer) (9.7.1.1.2)
scalar (2637)	edge%fluid%ne%flux(:)%comp(:)%scalar (vecflt_type) (9.7.1.2.13)
vector (2637)	edge%fluid%ne%flux(:)%comp(:)%vector (matflt_type) (9.7.1.2.10)
matrix (2637)	edge%fluid%ne%flux(:)%comp(:)%matrix (array3dflt_type) (9.7.1.2.2)
align (2643)	edge%fluid%ne%flux(:)%align (vecint_type) (9.7.1.2.14)

alignid (2643)	edge%fluid%ne%flux(:)%alignid (vecstring_type) (9.7.1.2.15)
basis (2643)	edge%fluid%ne%flux(:)%basis (integer) (9.7.1.1.2)
bndflux (2728)	edge%fluid%ne%bndflux(:) (complexgrid_vector) (9.7.1.3.93)
griduid (2643)	edge%fluid%ne%bndflux(:)%griduid (integer) (9.7.1.1.2)
label (2643)	edge%fluid%ne%bndflux(:)%label (string) (9.7.1.1.3)
comp (2643)	edge%fluid%ne%bndflux(:)%comp(:) (complexgrid_scalar) (9.7.1.3.87)
griduid (2637)	edge%fluid%ne%bndflux(:)%comp(:)%griduid (integer) (9.7.1.1.2)
subgrid (2637)	edge%fluid%ne%bndflux(:)%comp(:)%subgrid (integer) (9.7.1.1.2)
scalar (2637)	edge%fluid%ne%bndflux(:)%comp(:)%scalar (vecflt_type) (9.7.1.2.13)
vector (2637)	edge%fluid%ne%bndflux(:)%comp(:)%vector (matflt_type) (9.7.1.2.10)
matrix (2637)	edge%fluid%ne%bndflux(:)%comp(:)%matrix (array3dflt_type) (9.7.1.2.2)
align (2643)	edge%fluid%ne%bndflux(:)%align (vecint_type) (9.7.1.2.14)
alignid (2643)	edge%fluid%ne%bndflux(:)%alignid (vecstring_type) (9.7.1.2.15)
basis (2643)	edge%fluid%ne%bndflux(:)%basis (integer) (9.7.1.1.2)
transpcoeff (2728)	edge%fluid%ne%transpcoeff(:) (edge_fluid_scalar_transpcoeff) (9.7.1.3.179)
d (2729)	edge%fluid%ne%transpcoeff(:)%d (complexgrid_vector_simplestruct) (9.7.1.3.94)
label (2644)	edge%fluid%ne%transpcoeff(:)%d%label (string) (9.7.1.1.3)
comp (2644)	edge%fluid%ne%transpcoeff(:)%d%comp(:) (complexgrid_scalar) (9.7.1.3.87)
griduid (2637)	edge%fluid%ne%transpcoeff(:)%d%comp(:)%griduid (integer) (9.7.1.1.2)
subgrid (2637)	edge%fluid%ne%transpcoeff(:)%d%comp(:)%subgrid (integer) (9.7.1.1.2)
scalar (2637)	edge%fluid%ne%transpcoeff(:)%d%comp(:)%scalar (vecflt_type) (9.7.1.2.13)
vector (2637)	edge%fluid%ne%transpcoeff(:)%d%comp(:)%vector (matflt_type) (9.7.1.2.10)
matrix (2637)	edge%fluid%ne%transpcoeff(:)%d%comp(:)%matrix (array3dflt_type) (9.7.1.2.2)
align (2644)	edge%fluid%ne%transpcoeff(:)%d%align (vecint_type) (9.7.1.2.14)
alignid (2644)	edge%fluid%ne%transpcoeff(:)%d%alignid (vecstring_type) (9.7.1.2.15)
v (2729)	edge%fluid%ne%transpcoeff(:)%v (complexgrid_vector_simplestruct) (9.7.1.3.94)
label (2644)	edge%fluid%ne%transpcoeff(:)%v%label (string) (9.7.1.1.3)
comp (2644)	edge%fluid%ne%transpcoeff(:)%v%comp(:) (complexgrid_scalar) (9.7.1.3.87)
griduid (2637)	edge%fluid%ne%transpcoeff(:)%v%comp(:)%griduid (integer) (9.7.1.1.2)
subgrid (2637)	edge%fluid%ne%transpcoeff(:)%v%comp(:)%subgrid (integer) (9.7.1.1.2)
scalar (2637)	edge%fluid%ne%transpcoeff(:)%v%comp(:)%scalar (vecflt_type) (9.7.1.2.13)
vector (2637)	edge%fluid%ne%transpcoeff(:)%v%comp(:)%vector (matflt_type) (9.7.1.2.10)
matrix (2637)	edge%fluid%ne%transpcoeff(:)%v%comp(:)%matrix (array3dflt_type) (9.7.1.2.2)
align (2644)	edge%fluid%ne%transpcoeff(:)%v%align (vecint_type) (9.7.1.2.14)
alignid (2644)	edge%fluid%ne%transpcoeff(:)%v%alignid (vecstring_type) (9.7.1.2.15)
source (2728)	edge%fluid%ne%source(:) (complexgrid_scalar) (9.7.1.3.87)
griduid (2637)	edge%fluid%ne%source(:)%griduid (integer) (9.7.1.1.2)
subgrid (2637)	edge%fluid%ne%source(:)%subgrid (integer) (9.7.1.1.2)
scalar (2637)	edge%fluid%ne%source(:)%scalar (vecflt_type) (9.7.1.2.13)
vector (2637)	edge%fluid%ne%source(:)%vector (matflt_type) (9.7.1.2.10)
matrix (2637)	edge%fluid%ne%source(:)%matrix (array3dflt_type) (9.7.1.2.2)
ni (2726)	edge%fluid%ni(:) (edge_fluid_scalar) (9.7.1.3.177)
value (2727)	edge%fluid%ni(:)%value(:) (complexgrid_scalar) (9.7.1.3.87)
griduid (2637)	edge%fluid%ni(:)%value(:)%griduid (integer) (9.7.1.1.2)
subgrid (2637)	edge%fluid%ni(:)%value(:)%subgrid (integer) (9.7.1.1.2)
scalar (2637)	edge%fluid%ni(:)%value(:)%scalar (vecflt_type) (9.7.1.2.13)
vector (2637)	edge%fluid%ni(:)%value(:)%vector (matflt_type) (9.7.1.2.10)
matrix (2637)	edge%fluid%ni(:)%value(:)%matrix (array3dflt_type) (9.7.1.2.2)
bndvalue (2727)	edge%fluid%ni(:)%bndvalue(:) (complexgrid_scalar) (9.7.1.3.87)
griduid (2637)	edge%fluid%ni(:)%bndvalue(:)%griduid (integer) (9.7.1.1.2)
subgrid (2637)	edge%fluid%ni(:)%bndvalue(:)%subgrid (integer) (9.7.1.1.2)
scalar (2637)	edge%fluid%ni(:)%bndvalue(:)%scalar (vecflt_type) (9.7.1.2.13)
vector (2637)	edge%fluid%ni(:)%bndvalue(:)%vector (matflt_type) (9.7.1.2.10)
matrix (2637)	edge%fluid%ni(:)%bndvalue(:)%matrix (array3dflt_type) (9.7.1.2.2)
flux (2727)	edge%fluid%ni(:)%flux(:) (complexgrid_vector) (9.7.1.3.93)
griduid (2643)	edge%fluid%ni(:)%flux(:)%griduid (integer) (9.7.1.1.2)
label (2643)	edge%fluid%ni(:)%flux(:)%label (string) (9.7.1.1.3)
comp (2643)	edge%fluid%ni(:)%flux(:)%comp(:) (complexgrid_scalar) (9.7.1.3.87)
griduid (2637)	edge%fluid%ni(:)%flux(:)%comp(:)%griduid (integer) (9.7.1.1.2)
subgrid (2637)	edge%fluid%ni(:)%flux(:)%comp(:)%subgrid (integer) (9.7.1.1.2)
scalar (2637)	edge%fluid%ni(:)%flux(:)%comp(:)%scalar (vecflt_type) (9.7.1.2.13)

vector (2637)	edge%fluid%ni(:)%flux(:)%comp(:)%vector (matflt_type) (9.7.1.2.10)
matrix (2637)	edge%fluid%ni(:)%flux(:)%comp(:)%matrix (array3dflt_type) (9.7.1.2.2)
align (2643)	edge%fluid%ni(:)%flux(:)%align (vecint_type) (9.7.1.2.14)
alignid (2643)	edge%fluid%ni(:)%flux(:)%alignid (vecstring_type) (9.7.1.2.15)
basis (2643)	edge%fluid%ni(:)%flux(:)%basis (integer) (9.7.1.1.2)
bndflux (2727)	edge%fluid%ni(:)%bndflux(:) (complexgrid_vector) (9.7.1.3.93)
griduid (2643)	edge%fluid%ni(:)%bndflux(:)%griduid (integer) (9.7.1.1.2)
label (2643)	edge%fluid%ni(:)%bndflux(:)%label (string) (9.7.1.1.3)
comp (2643)	edge%fluid%ni(:)%bndflux(:)%comp(:) (complexgrid_scalar) (9.7.1.3.87)
griduid (2637)	edge%fluid%ni(:)%bndflux(:)%comp(:)%griduid (integer) (9.7.1.1.2)
subgrid (2637)	edge%fluid%ni(:)%bndflux(:)%comp(:)%subgrid (integer) (9.7.1.1.2)
scalar (2637)	edge%fluid%ni(:)%bndflux(:)%comp(:)%scalar (vecflt_type) (9.7.1.2.13)
vector (2637)	edge%fluid%ni(:)%bndflux(:)%comp(:)%vector (matflt_type) (9.7.1.2.10)
matrix (2637)	edge%fluid%ni(:)%bndflux(:)%comp(:)%matrix (array3dflt_type) (9.7.1.2.2)
align (2643)	edge%fluid%ni(:)%bndflux(:)%align (vecint_type) (9.7.1.2.14)
alignid (2643)	edge%fluid%ni(:)%bndflux(:)%alignid (vecstring_type) (9.7.1.2.15)
basis (2643)	edge%fluid%ni(:)%bndflux(:)%basis (integer) (9.7.1.1.2)
transpcoeff (2727)	edge%fluid%ni(:)%transpcoeff(:) (edge_fluid_scalar_transpcoeff) (9.7.1.3.179)
d (2729)	edge%fluid%ni(:)%transpcoeff(:)%d (complexgrid_vector_simplestruct) (9.7.1.3.94)
label (2644)	edge%fluid%ni(:)%transpcoeff(:)%d%label (string) (9.7.1.1.3)
comp (2644)	edge%fluid%ni(:)%transpcoeff(:)%d%comp(:) (complexgrid_scalar) (9.7.1.3.87)
griduid (2637)	edge%fluid%ni(:)%transpcoeff(:)%d%comp(:)%griduid (integer) (9.7.1.1.2)
subgrid (2637)	edge%fluid%ni(:)%transpcoeff(:)%d%comp(:)%subgrid (integer) (9.7.1.1.2)
scalar (2637)	edge%fluid%ni(:)%transpcoeff(:)%d%comp(:)%scalar (vecflt_type) (9.7.1.2.13)
vector (2637)	edge%fluid%ni(:)%transpcoeff(:)%d%comp(:)%vector (matflt_type) (9.7.1.2.10)
matrix (2637)	edge%fluid%ni(:)%transpcoeff(:)%d%comp(:)%matrix (array3dflt_type) (9.7.1.2.2)
align (2644)	edge%fluid%ni(:)%transpcoeff(:)%d%align (vecint_type) (9.7.1.2.14)
alignid (2644)	edge%fluid%ni(:)%transpcoeff(:)%d%alignid (vecstring_type) (9.7.1.2.15)
v (2729)	edge%fluid%ni(:)%transpcoeff(:)%v (complexgrid_vector_simplestruct) (9.7.1.3.94)
label (2644)	edge%fluid%ni(:)%transpcoeff(:)%v%label (string) (9.7.1.1.3)
comp (2644)	edge%fluid%ni(:)%transpcoeff(:)%v%comp(:) (complexgrid_scalar) (9.7.1.3.87)
griduid (2637)	edge%fluid%ni(:)%transpcoeff(:)%v%comp(:)%griduid (integer) (9.7.1.1.2)
subgrid (2637)	edge%fluid%ni(:)%transpcoeff(:)%v%comp(:)%subgrid (integer) (9.7.1.1.2)
scalar (2637)	edge%fluid%ni(:)%transpcoeff(:)%v%comp(:)%scalar (vecflt_type) (9.7.1.2.13)
vector (2637)	edge%fluid%ni(:)%transpcoeff(:)%v%comp(:)%vector (matflt_type) (9.7.1.2.10)
matrix (2637)	edge%fluid%ni(:)%transpcoeff(:)%v%comp(:)%matrix (array3dflt_type) (9.7.1.2.2)
align (2644)	edge%fluid%ni(:)%transpcoeff(:)%v%align (vecint_type) (9.7.1.2.14)
alignid (2644)	edge%fluid%ni(:)%transpcoeff(:)%v%alignid (vecstring_type) (9.7.1.2.15)
source (2727)	edge%fluid%ni(:)%source(:) (complexgrid_scalar) (9.7.1.3.87)
griduid (2637)	edge%fluid%ni(:)%source(:)%griduid (integer) (9.7.1.1.2)
subgrid (2637)	edge%fluid%ni(:)%source(:)%subgrid (integer) (9.7.1.1.2)
scalar (2637)	edge%fluid%ni(:)%source(:)%scalar (vecflt_type) (9.7.1.2.13)
vector (2637)	edge%fluid%ni(:)%source(:)%vector (matflt_type) (9.7.1.2.10)
matrix (2637)	edge%fluid%ni(:)%source(:)%matrix (array3dflt_type) (9.7.1.2.2)
ve (2726)	edge%fluid%ve (edge_fluid_vector_simplestruct) (9.7.1.3.181)
griduid (2731)	edge%fluid%ve%griduid (integer) (9.7.1.1.2)
basis (2731)	edge%fluid%ve%basis (integer) (9.7.1.1.2)
comps (2731)	edge%fluid%ve%comps(:) (edge_fluid_scalar) (9.7.1.3.177)
value (2727)	edge%fluid%ve%comps(:)%value(:) (complexgrid_scalar) (9.7.1.3.87)
griduid (2637)	edge%fluid%ve%comps(:)%value(:)%griduid (integer) (9.7.1.1.2)
subgrid (2637)	edge%fluid%ve%comps(:)%value(:)%subgrid (integer) (9.7.1.1.2)
scalar (2637)	edge%fluid%ve%comps(:)%value(:)%scalar (vecflt_type) (9.7.1.2.13)
vector (2637)	edge%fluid%ve%comps(:)%value(:)%vector (matflt_type) (9.7.1.2.10)
matrix (2637)	edge%fluid%ve%comps(:)%value(:)%matrix (array3dflt_type) (9.7.1.2.2)
bndvalue (2727)	edge%fluid%ve%comps(:)%bndvalue(:) (complexgrid_scalar) (9.7.1.3.87)
griduid (2637)	edge%fluid%ve%comps(:)%bndvalue(:)%griduid (integer) (9.7.1.1.2)
subgrid (2637)	edge%fluid%ve%comps(:)%bndvalue(:)%subgrid (integer) (9.7.1.1.2)
scalar (2637)	edge%fluid%ve%comps(:)%bndvalue(:)%scalar (vecflt_type) (9.7.1.2.13)
vector (2637)	edge%fluid%ve%comps(:)%bndvalue(:)%vector (matflt_type) (9.7.1.2.10)
matrix (2637)	edge%fluid%ve%comps(:)%bndvalue(:)%matrix (array3dflt_type) (9.7.1.2.2)
flux (2727)	edge%fluid%ve%comps(:)%flux(:) (complexgrid_vector) (9.7.1.3.93)

griduid (2643)	edge%fluid%ve%comps(:)%flux(:)%griduid (integer) (9.7.1.1.2)
label (2643)	edge%fluid%ve%comps(:)%flux(:)%label (string) (9.7.1.1.3)
comp (2643)	edge%fluid%ve%comps(:)%flux(:)%comp(:) (complexgrid_scalar) (9.7.1.3.87)
griduid (2637)	edge%fluid%ve%comps(:)%flux(:)%comp(:)%griduid (integer) (9.7.1.1.2)
subgrid (2637)	edge%fluid%ve%comps(:)%flux(:)%comp(:)%subgrid (integer) (9.7.1.1.2)
scalar (2637)	edge%fluid%ve%comps(:)%flux(:)%comp(:)%scalar (vecflt_type) (9.7.1.2.13)
vector (2637)	edge%fluid%ve%comps(:)%flux(:)%comp(:)%vector (matflt_type) (9.7.1.2.10)
matrix (2637)	edge%fluid%ve%comps(:)%flux(:)%comp(:)%matrix (array3dflt_type) (9.7.1.2.2)
align (2643)	edge%fluid%ve%comps(:)%flux(:)%align (vecint_type) (9.7.1.2.14)
alignid (2643)	edge%fluid%ve%comps(:)%flux(:)%alignid (vecstring_type) (9.7.1.2.15)
basis (2643)	edge%fluid%ve%comps(:)%flux(:)%basis (integer) (9.7.1.1.2)
bndflux (2727)	edge%fluid%ve%comps(:)%bndflux(:) (complexgrid_vector) (9.7.1.3.93)
griduid (2643)	edge%fluid%ve%comps(:)%bndflux(:)%griduid (integer) (9.7.1.1.2)
label (2643)	edge%fluid%ve%comps(:)%bndflux(:)%label (string) (9.7.1.1.3)
comp (2643)	edge%fluid%ve%comps(:)%bndflux(:)%comp(:) (complexgrid_scalar) (9.7.1.3.87)
griduid (2637)	edge%fluid%ve%comps(:)%bndflux(:)%comp(:)%griduid (integer) (9.7.1.1.2)
subgrid (2637)	edge%fluid%ve%comps(:)%bndflux(:)%comp(:)%subgrid (integer) (9.7.1.1.2)
scalar (2637)	edge%fluid%ve%comps(:)%bndflux(:)%comp(:)%scalar (vecflt_type) (9.7.1.2.13)
vector (2637)	edge%fluid%ve%comps(:)%bndflux(:)%comp(:)%vector (matflt_type) (9.7.1.2.10)
matrix (2637)	edge%fluid%ve%comps(:)%bndflux(:)%comp(:)%matrix (array3dflt_type) (9.7.1.2.2)
align (2643)	edge%fluid%ve%comps(:)%bndflux(:)%align (vecint_type) (9.7.1.2.14)
alignid (2643)	edge%fluid%ve%comps(:)%bndflux(:)%alignid (vecstring_type) (9.7.1.2.15)
basis (2643)	edge%fluid%ve%comps(:)%bndflux(:)%basis (integer) (9.7.1.1.2)
transpcoeff (2727)	edge%fluid%ve%comps(:)%transpcoeff(:) (edge_fluid_scalar_transpcoeff) (9.7.1.3.179)
d (2729)	edge%fluid%ve%comps(:)%transpcoeff(:)%d (complexgrid_vector_simplestruct) (9.7.1.3.94)
label (2644)	edge%fluid%ve%comps(:)%transpcoeff(:)%d%label (string) (9.7.1.1.3)
comp (2644)	edge%fluid%ve%comps(:)%transpcoeff(:)%d%comp(:) (complexgrid_scalar) (9.7.1.3.87)
griduid (2637)	edge%fluid%ve%comps(:)%transpcoeff(:)%d%comp(:)%griduid (integer) (9.7.1.1.2)
subgrid (2637)	edge%fluid%ve%comps(:)%transpcoeff(:)%d%comp(:)%subgrid (integer) (9.7.1.1.2)
scalar (2637)	edge%fluid%ve%comps(:)%transpcoeff(:)%d%comp(:)%scalar (vecflt_type) (9.7.1.2.13)
vector (2637)	edge%fluid%ve%comps(:)%transpcoeff(:)%d%comp(:)%vector (matflt_type) (9.7.1.2.10)
matrix (2637)	edge%fluid%ve%comps(:)%transpcoeff(:)%d%comp(:)%matrix (array3dflt_type) (9.7.1.2.2)
align (2644)	edge%fluid%ve%comps(:)%transpcoeff(:)%d%align (vecint_type) (9.7.1.2.14)
alignid (2644)	edge%fluid%ve%comps(:)%transpcoeff(:)%d%alignid (vecstring_type) (9.7.1.2.15)
v (2729)	edge%fluid%ve%comps(:)%transpcoeff(:)%v (complexgrid_vector_simplestruct) (9.7.1.3.94)
label (2644)	edge%fluid%ve%comps(:)%transpcoeff(:)%v%label (string) (9.7.1.1.3)
comp (2644)	edge%fluid%ve%comps(:)%transpcoeff(:)%v%comp(:) (complexgrid_scalar) (9.7.1.3.87)
griduid (2637)	edge%fluid%ve%comps(:)%transpcoeff(:)%v%comp(:)%griduid (integer) (9.7.1.1.2)
subgrid (2637)	edge%fluid%ve%comps(:)%transpcoeff(:)%v%comp(:)%subgrid (integer) (9.7.1.1.2)
scalar (2637)	edge%fluid%ve%comps(:)%transpcoeff(:)%v%comp(:)%scalar (vecflt_type) (9.7.1.2.13)
vector (2637)	edge%fluid%ve%comps(:)%transpcoeff(:)%v%comp(:)%vector (matflt_type) (9.7.1.2.10)
matrix (2637)	edge%fluid%ve%comps(:)%transpcoeff(:)%v%comp(:)%matrix (array3dflt_type) (9.7.1.2.2)
align (2644)	edge%fluid%ve%comps(:)%transpcoeff(:)%v%align (vecint_type) (9.7.1.2.14)
alignid (2644)	edge%fluid%ve%comps(:)%transpcoeff(:)%v%alignid (vecstring_type) (9.7.1.2.15)
source (2727)	edge%fluid%ve%comps(:)%source(:) (complexgrid_scalar) (9.7.1.3.87)
griduid (2637)	edge%fluid%ve%comps(:)%source(:)%griduid (integer) (9.7.1.1.2)
subgrid (2637)	edge%fluid%ve%comps(:)%source(:)%subgrid (integer) (9.7.1.1.2)
scalar (2637)	edge%fluid%ve%comps(:)%source(:)%scalar (vecflt_type) (9.7.1.2.13)
vector (2637)	edge%fluid%ve%comps(:)%source(:)%vector (matflt_type) (9.7.1.2.10)
matrix (2637)	edge%fluid%ve%comps(:)%source(:)%matrix (array3dflt_type) (9.7.1.2.2)
align (2731)	edge%fluid%ve%align (vecint_type) (9.7.1.2.14)
alignid (2731)	edge%fluid%ve%alignid (vecstring_type) (9.7.1.2.15)
vi (2726)	edge%fluid%vi(:) (edge_fluid_vector) (9.7.1.3.180)
griduid (2730)	edge%fluid%vi(:)%griduid (integer) (9.7.1.1.2)
basis (2730)	edge%fluid%vi(:)%basis (integer) (9.7.1.1.2)
align (2730)	edge%fluid%vi(:)%align (vecint_type) (9.7.1.2.14)
alignid (2730)	edge%fluid%vi(:)%alignid (vecstring_type) (9.7.1.2.15)
comps (2730)	edge%fluid%vi(:)%comps(:) (edge_fluid_scalar) (9.7.1.3.177)
value (2727)	edge%fluid%vi(:)%comps(:)%value(:) (complexgrid_scalar) (9.7.1.3.87)
griduid (2637)	edge%fluid%vi(:)%comps(:)%value(:)%griduid (integer) (9.7.1.1.2)
subgrid (2637)	edge%fluid%vi(:)%comps(:)%value(:)%subgrid (integer) (9.7.1.1.2)

scalar (2637)  
 vector (2637)  
 matrix (2637)  
 bndvalue (2727)  
   griduid (2637)  
   subgrid (2637)  
   scalar (2637)  
   vector (2637)  
   matrix (2637)  
 flux (2727)  
   griduid (2643)  
   label (2643)  
   comp (2643)  
     griduid (2637)  
     subgrid (2637)  
     scalar (2637)  
     vector (2637)  
     matrix (2637)  
   align (2643)  
   alignid (2643)  
   basis (2643)  
 bndflux (2727)  
   griduid (2643)  
   label (2643)  
   comp (2643)  
     griduid (2637)  
     subgrid (2637)  
     scalar (2637)  
     vector (2637)  
     matrix (2637)  
   align (2643)  
   alignid (2643)  
   basis (2643)  
 transpcoeff (2727)  
   d (2729)  
     label (2644)  
     comp (2644)  
       griduid (2637)  
       subgrid (2637)  
       scalar (2637)  
       vector (2637)  
       matrix (2637)  
     align (2644)  
     alignid (2644)  
   v (2729)  
     label (2644)  
     comp (2644)  
       griduid (2637)  
       subgrid (2637)  
       scalar (2637)  
       vector (2637)  
       matrix (2637)  
     align (2644)  
     alignid (2644)  
 source (2727)  
   griduid (2637)  
   subgrid (2637)  
   scalar (2637)  
   vector (2637)  
   matrix (2637)  
 te (2726)

edge%fluid%vi()%comps():%value():%scalar (vecflt\_type) (9.7.1.2.13)  
 edge%fluid%vi()%comps():%value():%vector (matflt\_type) (9.7.1.2.10)  
 edge%fluid%vi()%comps():%value():%matrix (array3dflt\_type) (9.7.1.2.2)  
 edge%fluid%vi()%comps():%bndvalue(): (complexgrid\_scalar) (9.7.1.3.87)  
 edge%fluid%vi()%comps():%bndvalue():%griduid (integer) (9.7.1.1.2)  
 edge%fluid%vi()%comps():%bndvalue():%subgrid (integer) (9.7.1.1.2)  
 edge%fluid%vi()%comps():%bndvalue():%scalar (vecflt\_type) (9.7.1.2.13)  
 edge%fluid%vi()%comps():%bndvalue():%vector (matflt\_type) (9.7.1.2.10)  
 edge%fluid%vi()%comps():%bndvalue():%matrix (array3dflt\_type) (9.7.1.2.2)  
 edge%fluid%vi()%comps():%flux(): (complexgrid\_vector) (9.7.1.3.93)  
 edge%fluid%vi()%comps():%flux():%griduid (integer) (9.7.1.1.2)  
 edge%fluid%vi()%comps():%flux():%label (string) (9.7.1.1.3)  
 edge%fluid%vi()%comps():%flux():%comp(): (complexgrid\_scalar) (9.7.1.3.87)  
 edge%fluid%vi()%comps():%flux():%comp():%griduid (integer) (9.7.1.1.2)  
 edge%fluid%vi()%comps():%flux():%comp():%subgrid (integer) (9.7.1.1.2)  
 edge%fluid%vi()%comps():%flux():%comp():%scalar (vecflt\_type) (9.7.1.2.13)  
 edge%fluid%vi()%comps():%flux():%comp():%vector (matflt\_type) (9.7.1.2.10)  
 edge%fluid%vi()%comps():%flux():%comp():%matrix (array3dflt\_type) (9.7.1.2.2)  
 edge%fluid%vi()%comps():%flux():%align (vecint\_type) (9.7.1.2.14)  
 edge%fluid%vi()%comps():%flux():%alignid (vecstring\_type) (9.7.1.2.15)  
 edge%fluid%vi()%comps():%flux():%basis (integer) (9.7.1.1.2)  
 edge%fluid%vi()%comps():%bndflux(): (complexgrid\_vector) (9.7.1.3.93)  
 edge%fluid%vi()%comps():%bndflux():%griduid (integer) (9.7.1.1.2)  
 edge%fluid%vi()%comps():%bndflux():%label (string) (9.7.1.1.3)  
 edge%fluid%vi()%comps():%bndflux():%comp(): (complexgrid\_scalar) (9.7.1.3.87)  
 edge%fluid%vi()%comps():%bndflux():%comp():%griduid (integer) (9.7.1.1.2)  
 edge%fluid%vi()%comps():%bndflux():%comp():%subgrid (integer) (9.7.1.1.2)  
 edge%fluid%vi()%comps():%bndflux():%comp():%scalar (vecflt\_type) (9.7.1.2.13)  
 edge%fluid%vi()%comps():%bndflux():%comp():%vector (matflt\_type) (9.7.1.2.10)  
 edge%fluid%vi()%comps():%bndflux():%comp():%matrix (array3dflt\_type) (9.7.1.2.2)  
 edge%fluid%vi()%comps():%bndflux():%align (vecint\_type) (9.7.1.2.14)  
 edge%fluid%vi()%comps():%bndflux():%alignid (vecstring\_type) (9.7.1.2.15)  
 edge%fluid%vi()%comps():%bndflux():%basis (integer) (9.7.1.1.2)  
 edge%fluid%vi()%comps():%transpcoeff(): (edge\_fluid\_scalar\_transpcoeff) (9.7.1.3.179)  
 edge%fluid%vi()%comps():%transpcoeff():%d (complexgrid\_vector\_simplestruct) (9.7.1.3.94)  
 edge%fluid%vi()%comps():%transpcoeff():%d%label (string) (9.7.1.1.3)  
 edge%fluid%vi()%comps():%transpcoeff():%d%comp(): (complexgrid\_scalar) (9.7.1.3.87)  
 edge%fluid%vi()%comps():%transpcoeff():%d%comp():%griduid (integer) (9.7.1.1.2)  
 edge%fluid%vi()%comps():%transpcoeff():%d%comp():%subgrid (integer) (9.7.1.1.2)  
 edge%fluid%vi()%comps():%transpcoeff():%d%comp():%scalar (vecflt\_type) (9.7.1.2.13)  
 edge%fluid%vi()%comps():%transpcoeff():%d%comp():%vector (matflt\_type) (9.7.1.2.10)  
 edge%fluid%vi()%comps():%transpcoeff():%d%comp():%matrix (array3dflt\_type) (9.7.1.2.2)  
 edge%fluid%vi()%comps():%transpcoeff():%d%align (vecint\_type) (9.7.1.2.14)  
 edge%fluid%vi()%comps():%transpcoeff():%d%alignid (vecstring\_type) (9.7.1.2.15)  
 edge%fluid%vi()%comps():%transpcoeff():%v (complexgrid\_vector\_simplestruct) (9.7.1.3.94)  
 edge%fluid%vi()%comps():%transpcoeff():%v%label (string) (9.7.1.1.3)  
 edge%fluid%vi()%comps():%transpcoeff():%v%comp(): (complexgrid\_scalar) (9.7.1.3.87)  
 edge%fluid%vi()%comps():%transpcoeff():%v%comp():%griduid (integer) (9.7.1.1.2)  
 edge%fluid%vi()%comps():%transpcoeff():%v%comp():%subgrid (integer) (9.7.1.1.2)  
 edge%fluid%vi()%comps():%transpcoeff():%v%comp():%scalar (vecflt\_type) (9.7.1.2.13)  
 edge%fluid%vi()%comps():%transpcoeff():%v%comp():%vector (matflt\_type) (9.7.1.2.10)  
 edge%fluid%vi()%comps():%transpcoeff():%v%comp():%matrix (array3dflt\_type) (9.7.1.2.2)  
 edge%fluid%vi()%comps():%transpcoeff():%v%align (vecint\_type) (9.7.1.2.14)  
 edge%fluid%vi()%comps():%transpcoeff():%v%alignid (vecstring\_type) (9.7.1.2.15)  
 edge%fluid%vi()%comps():%source(): (complexgrid\_scalar) (9.7.1.3.87)  
 edge%fluid%vi()%comps():%source():%griduid (integer) (9.7.1.1.2)  
 edge%fluid%vi()%comps():%source():%subgrid (integer) (9.7.1.1.2)  
 edge%fluid%vi()%comps():%source():%scalar (vecflt\_type) (9.7.1.2.13)  
 edge%fluid%vi()%comps():%source():%vector (matflt\_type) (9.7.1.2.10)  
 edge%fluid%vi()%comps():%source():%matrix (array3dflt\_type) (9.7.1.2.2)  
 edge%fluid%te (edge\_fluid\_scalar\_simplestruct) (9.7.1.3.178)



value (2728)	edge%fluid%te%value(:) (complexgrid_scalar) (9.7.1.3.87)
griduid (2637)	edge%fluid%te%value(:)%griduid (integer) (9.7.1.1.2)
subgrid (2637)	edge%fluid%te%value(:)%subgrid (integer) (9.7.1.1.2)
scalar (2637)	edge%fluid%te%value(:)%scalar (vecflt_type) (9.7.1.2.13)
vector (2637)	edge%fluid%te%value(:)%vector (matflt_type) (9.7.1.2.10)
matrix (2637)	edge%fluid%te%value(:)%matrix (array3dflt_type) (9.7.1.2.2)
bndvalue (2728)	edge%fluid%te%bndvalue(:) (complexgrid_scalar) (9.7.1.3.87)
griduid (2637)	edge%fluid%te%bndvalue(:)%griduid (integer) (9.7.1.1.2)
subgrid (2637)	edge%fluid%te%bndvalue(:)%subgrid (integer) (9.7.1.1.2)
scalar (2637)	edge%fluid%te%bndvalue(:)%scalar (vecflt_type) (9.7.1.2.13)
vector (2637)	edge%fluid%te%bndvalue(:)%vector (matflt_type) (9.7.1.2.10)
matrix (2637)	edge%fluid%te%bndvalue(:)%matrix (array3dflt_type) (9.7.1.2.2)
flux (2728)	edge%fluid%te%flux(:) (complexgrid_vector) (9.7.1.3.93)
griduid (2643)	edge%fluid%te%flux(:)%griduid (integer) (9.7.1.1.2)
label (2643)	edge%fluid%te%flux(:)%label (string) (9.7.1.1.3)
comp (2643)	edge%fluid%te%flux(:)%comp(:) (complexgrid_scalar) (9.7.1.3.87)
griduid (2637)	edge%fluid%te%flux(:)%comp(:)%griduid (integer) (9.7.1.1.2)
subgrid (2637)	edge%fluid%te%flux(:)%comp(:)%subgrid (integer) (9.7.1.1.2)
scalar (2637)	edge%fluid%te%flux(:)%comp(:)%scalar (vecflt_type) (9.7.1.2.13)
vector (2637)	edge%fluid%te%flux(:)%comp(:)%vector (matflt_type) (9.7.1.2.10)
matrix (2637)	edge%fluid%te%flux(:)%comp(:)%matrix (array3dflt_type) (9.7.1.2.2)
align (2643)	edge%fluid%te%flux(:)%align (vecint_type) (9.7.1.2.14)
alignid (2643)	edge%fluid%te%flux(:)%alignid (vecstring_type) (9.7.1.2.15)
basis (2643)	edge%fluid%te%flux(:)%basis (integer) (9.7.1.1.2)
bndflux (2728)	edge%fluid%te%bndflux(:) (complexgrid_vector) (9.7.1.3.93)
griduid (2643)	edge%fluid%te%bndflux(:)%griduid (integer) (9.7.1.1.2)
label (2643)	edge%fluid%te%bndflux(:)%label (string) (9.7.1.1.3)
comp (2643)	edge%fluid%te%bndflux(:)%comp(:) (complexgrid_scalar) (9.7.1.3.87)
griduid (2637)	edge%fluid%te%bndflux(:)%comp(:)%griduid (integer) (9.7.1.1.2)
subgrid (2637)	edge%fluid%te%bndflux(:)%comp(:)%subgrid (integer) (9.7.1.1.2)
scalar (2637)	edge%fluid%te%bndflux(:)%comp(:)%scalar (vecflt_type) (9.7.1.2.13)
vector (2637)	edge%fluid%te%bndflux(:)%comp(:)%vector (matflt_type) (9.7.1.2.10)
matrix (2637)	edge%fluid%te%bndflux(:)%comp(:)%matrix (array3dflt_type) (9.7.1.2.2)
align (2643)	edge%fluid%te%bndflux(:)%align (vecint_type) (9.7.1.2.14)
alignid (2643)	edge%fluid%te%bndflux(:)%alignid (vecstring_type) (9.7.1.2.15)
basis (2643)	edge%fluid%te%bndflux(:)%basis (integer) (9.7.1.1.2)
transpcoeff (2728)	edge%fluid%te%transpcoeff(:) (edge_fluid_scalar_transpcoeff) (9.7.1.3.179)
d (2729)	edge%fluid%te%transpcoeff(:)%d (complexgrid_vector_simplestruct) (9.7.1.3.94)
label (2644)	edge%fluid%te%transpcoeff(:)%d%label (string) (9.7.1.1.3)
comp (2644)	edge%fluid%te%transpcoeff(:)%d%comp(:) (complexgrid_scalar) (9.7.1.3.87)
griduid (2637)	edge%fluid%te%transpcoeff(:)%d%comp(:)%griduid (integer) (9.7.1.1.2)
subgrid (2637)	edge%fluid%te%transpcoeff(:)%d%comp(:)%subgrid (integer) (9.7.1.1.2)
scalar (2637)	edge%fluid%te%transpcoeff(:)%d%comp(:)%scalar (vecflt_type) (9.7.1.2.13)
vector (2637)	edge%fluid%te%transpcoeff(:)%d%comp(:)%vector (matflt_type) (9.7.1.2.10)
matrix (2637)	edge%fluid%te%transpcoeff(:)%d%comp(:)%matrix (array3dflt_type) (9.7.1.2.2)
align (2644)	edge%fluid%te%transpcoeff(:)%d%align (vecint_type) (9.7.1.2.14)
alignid (2644)	edge%fluid%te%transpcoeff(:)%d%alignid (vecstring_type) (9.7.1.2.15)
v (2729)	edge%fluid%te%transpcoeff(:)%v (complexgrid_vector_simplestruct) (9.7.1.3.94)
label (2644)	edge%fluid%te%transpcoeff(:)%v%label (string) (9.7.1.1.3)
comp (2644)	edge%fluid%te%transpcoeff(:)%v%comp(:) (complexgrid_scalar) (9.7.1.3.87)
griduid (2637)	edge%fluid%te%transpcoeff(:)%v%comp(:)%griduid (integer) (9.7.1.1.2)
subgrid (2637)	edge%fluid%te%transpcoeff(:)%v%comp(:)%subgrid (integer) (9.7.1.1.2)
scalar (2637)	edge%fluid%te%transpcoeff(:)%v%comp(:)%scalar (vecflt_type) (9.7.1.2.13)
vector (2637)	edge%fluid%te%transpcoeff(:)%v%comp(:)%vector (matflt_type) (9.7.1.2.10)
matrix (2637)	edge%fluid%te%transpcoeff(:)%v%comp(:)%matrix (array3dflt_type) (9.7.1.2.2)
align (2644)	edge%fluid%te%transpcoeff(:)%v%align (vecint_type) (9.7.1.2.14)
alignid (2644)	edge%fluid%te%transpcoeff(:)%v%alignid (vecstring_type) (9.7.1.2.15)
source (2728)	edge%fluid%te%source(:) (complexgrid_scalar) (9.7.1.3.87)
griduid (2637)	edge%fluid%te%source(:)%griduid (integer) (9.7.1.1.2)
subgrid (2637)	edge%fluid%te%source(:)%subgrid (integer) (9.7.1.1.2)
scalar (2637)	edge%fluid%te%source(:)%scalar (vecflt_type) (9.7.1.2.13)

vector (2637)	edge%fluid%te%source(:)%vector (matflt.type) (9.7.1.2.10)
matrix (2637)	edge%fluid%te%source(:)%matrix (array3dflt.type) (9.7.1.2.2)
ti (2726)	edge%fluid%ti(:) (edge_fluid_scalar) (9.7.1.3.177)
value (2727)	edge%fluid%ti(:)%value(:) (complexgrid_scalar) (9.7.1.3.87)
griduid (2637)	edge%fluid%ti(:)%value(:)%griduid (integer) (9.7.1.1.2)
subgrid (2637)	edge%fluid%ti(:)%value(:)%subgrid (integer) (9.7.1.1.2)
scalar (2637)	edge%fluid%ti(:)%value(:)%scalar (vecflt.type) (9.7.1.2.13)
vector (2637)	edge%fluid%ti(:)%value(:)%vector (matflt.type) (9.7.1.2.10)
matrix (2637)	edge%fluid%ti(:)%value(:)%matrix (array3dflt.type) (9.7.1.2.2)
bndvalue (2727)	edge%fluid%ti(:)%bndvalue(:) (complexgrid_scalar) (9.7.1.3.87)
griduid (2637)	edge%fluid%ti(:)%bndvalue(:)%griduid (integer) (9.7.1.1.2)
subgrid (2637)	edge%fluid%ti(:)%bndvalue(:)%subgrid (integer) (9.7.1.1.2)
scalar (2637)	edge%fluid%ti(:)%bndvalue(:)%scalar (vecflt.type) (9.7.1.2.13)
vector (2637)	edge%fluid%ti(:)%bndvalue(:)%vector (matflt.type) (9.7.1.2.10)
matrix (2637)	edge%fluid%ti(:)%bndvalue(:)%matrix (array3dflt.type) (9.7.1.2.2)
flux (2727)	edge%fluid%ti(:)%flux(:) (complexgrid_vector) (9.7.1.3.93)
griduid (2643)	edge%fluid%ti(:)%flux(:)%griduid (integer) (9.7.1.1.2)
label (2643)	edge%fluid%ti(:)%flux(:)%label (string) (9.7.1.1.3)
comp (2643)	edge%fluid%ti(:)%flux(:)%comp(:) (complexgrid_scalar) (9.7.1.3.87)
griduid (2637)	edge%fluid%ti(:)%flux(:)%comp(:)%griduid (integer) (9.7.1.1.2)
subgrid (2637)	edge%fluid%ti(:)%flux(:)%comp(:)%subgrid (integer) (9.7.1.1.2)
scalar (2637)	edge%fluid%ti(:)%flux(:)%comp(:)%scalar (vecflt.type) (9.7.1.2.13)
vector (2637)	edge%fluid%ti(:)%flux(:)%comp(:)%vector (matflt.type) (9.7.1.2.10)
matrix (2637)	edge%fluid%ti(:)%flux(:)%comp(:)%matrix (array3dflt.type) (9.7.1.2.2)
align (2643)	edge%fluid%ti(:)%flux(:)%align (vecint.type) (9.7.1.2.14)
alignid (2643)	edge%fluid%ti(:)%flux(:)%alignid (vecstring.type) (9.7.1.2.15)
basis (2643)	edge%fluid%ti(:)%flux(:)%basis (integer) (9.7.1.1.2)
bndflux (2727)	edge%fluid%ti(:)%bndflux(:) (complexgrid_vector) (9.7.1.3.93)
griduid (2643)	edge%fluid%ti(:)%bndflux(:)%griduid (integer) (9.7.1.1.2)
label (2643)	edge%fluid%ti(:)%bndflux(:)%label (string) (9.7.1.1.3)
comp (2643)	edge%fluid%ti(:)%bndflux(:)%comp(:) (complexgrid_scalar) (9.7.1.3.87)
griduid (2637)	edge%fluid%ti(:)%bndflux(:)%comp(:)%griduid (integer) (9.7.1.1.2)
subgrid (2637)	edge%fluid%ti(:)%bndflux(:)%comp(:)%subgrid (integer) (9.7.1.1.2)
scalar (2637)	edge%fluid%ti(:)%bndflux(:)%comp(:)%scalar (vecflt.type) (9.7.1.2.13)
vector (2637)	edge%fluid%ti(:)%bndflux(:)%comp(:)%vector (matflt.type) (9.7.1.2.10)
matrix (2637)	edge%fluid%ti(:)%bndflux(:)%comp(:)%matrix (array3dflt.type) (9.7.1.2.2)
align (2643)	edge%fluid%ti(:)%bndflux(:)%align (vecint.type) (9.7.1.2.14)
alignid (2643)	edge%fluid%ti(:)%bndflux(:)%alignid (vecstring.type) (9.7.1.2.15)
basis (2643)	edge%fluid%ti(:)%bndflux(:)%basis (integer) (9.7.1.1.2)
transpcoeff (2727)	edge%fluid%ti(:)%transpcoeff(:) (edge_fluid_scalar_transpcoeff) (9.7.1.3.179)
d (2729)	edge%fluid%ti(:)%transpcoeff(:)%d (complexgrid_vector_simplestruct) (9.7.1.3.94)
label (2644)	edge%fluid%ti(:)%transpcoeff(:)%d%label (string) (9.7.1.1.3)
comp (2644)	edge%fluid%ti(:)%transpcoeff(:)%d%comp(:) (complexgrid_scalar) (9.7.1.3.87)
griduid (2637)	edge%fluid%ti(:)%transpcoeff(:)%d%comp(:)%griduid (integer) (9.7.1.1.2)
subgrid (2637)	edge%fluid%ti(:)%transpcoeff(:)%d%comp(:)%subgrid (integer) (9.7.1.1.2)
scalar (2637)	edge%fluid%ti(:)%transpcoeff(:)%d%comp(:)%scalar (vecflt.type) (9.7.1.2.13)
vector (2637)	edge%fluid%ti(:)%transpcoeff(:)%d%comp(:)%vector (matflt.type) (9.7.1.2.10)
matrix (2637)	edge%fluid%ti(:)%transpcoeff(:)%d%comp(:)%matrix (array3dflt.type) (9.7.1.2.2)
align (2644)	edge%fluid%ti(:)%transpcoeff(:)%d%align (vecint.type) (9.7.1.2.14)
alignid (2644)	edge%fluid%ti(:)%transpcoeff(:)%d%alignid (vecstring.type) (9.7.1.2.15)
v (2729)	edge%fluid%ti(:)%transpcoeff(:)%v (complexgrid_vector_simplestruct) (9.7.1.3.94)
label (2644)	edge%fluid%ti(:)%transpcoeff(:)%v%label (string) (9.7.1.1.3)
comp (2644)	edge%fluid%ti(:)%transpcoeff(:)%v%comp(:) (complexgrid_scalar) (9.7.1.3.87)
griduid (2637)	edge%fluid%ti(:)%transpcoeff(:)%v%comp(:)%griduid (integer) (9.7.1.1.2)
subgrid (2637)	edge%fluid%ti(:)%transpcoeff(:)%v%comp(:)%subgrid (integer) (9.7.1.1.2)
scalar (2637)	edge%fluid%ti(:)%transpcoeff(:)%v%comp(:)%scalar (vecflt.type) (9.7.1.2.13)
vector (2637)	edge%fluid%ti(:)%transpcoeff(:)%v%comp(:)%vector (matflt.type) (9.7.1.2.10)
matrix (2637)	edge%fluid%ti(:)%transpcoeff(:)%v%comp(:)%matrix (array3dflt.type) (9.7.1.2.2)
align (2644)	edge%fluid%ti(:)%transpcoeff(:)%v%align (vecint.type) (9.7.1.2.14)
alignid (2644)	edge%fluid%ti(:)%transpcoeff(:)%v%alignid (vecstring.type) (9.7.1.2.15)
source (2727)	edge%fluid%ti(:)%source(:) (complexgrid_scalar) (9.7.1.3.87)



griduid (2637)	edge%fluid%ti(:)%source(:)%griduid (integer) (9.7.1.1.2)
subgrid (2637)	edge%fluid%ti(:)%source(:)%subgrid (integer) (9.7.1.1.2)
scalar (2637)	edge%fluid%ti(:)%source(:)%scalar (vecflt_type) (9.7.1.2.13)
vector (2637)	edge%fluid%ti(:)%source(:)%vector (matflt_type) (9.7.1.2.10)
matrix (2637)	edge%fluid%ti(:)%source(:)%matrix (array3dflt_type) (9.7.1.2.2)
te_aniso (2726)	edge%fluid%te_aniso (edge_fluid_vector_simplestruct) (9.7.1.3.181)
griduid (2731)	edge%fluid%te_aniso%griduid (integer) (9.7.1.1.2)
basis (2731)	edge%fluid%te_aniso%basis (integer) (9.7.1.1.2)
comps (2731)	edge%fluid%te_aniso%comps(:) (edge_fluid_scalar) (9.7.1.3.177)
value (2727)	edge%fluid%te_aniso%comps(:)%value(:) (complexgrid_scalar) (9.7.1.3.87)
griduid (2637)	edge%fluid%te_aniso%comps(:)%value(:)%griduid (integer) (9.7.1.1.2)
subgrid (2637)	edge%fluid%te_aniso%comps(:)%value(:)%subgrid (integer) (9.7.1.1.2)
scalar (2637)	edge%fluid%te_aniso%comps(:)%value(:)%scalar (vecflt_type) (9.7.1.2.13)
vector (2637)	edge%fluid%te_aniso%comps(:)%value(:)%vector (matflt_type) (9.7.1.2.10)
matrix (2637)	edge%fluid%te_aniso%comps(:)%value(:)%matrix (array3dflt_type) (9.7.1.2.2)
bndvalue (2727)	edge%fluid%te_aniso%comps(:)%bndvalue(:) (complexgrid_scalar) (9.7.1.3.87)
griduid (2637)	edge%fluid%te_aniso%comps(:)%bndvalue(:)%griduid (integer) (9.7.1.1.2)
subgrid (2637)	edge%fluid%te_aniso%comps(:)%bndvalue(:)%subgrid (integer) (9.7.1.1.2)
scalar (2637)	edge%fluid%te_aniso%comps(:)%bndvalue(:)%scalar (vecflt_type) (9.7.1.2.13)
vector (2637)	edge%fluid%te_aniso%comps(:)%bndvalue(:)%vector (matflt_type) (9.7.1.2.10)
matrix (2637)	edge%fluid%te_aniso%comps(:)%bndvalue(:)%matrix (array3dflt_type) (9.7.1.2.2)
flux (2727)	edge%fluid%te_aniso%comps(:)%flux(:) (complexgrid_vector) (9.7.1.3.93)
griduid (2643)	edge%fluid%te_aniso%comps(:)%flux(:)%griduid (integer) (9.7.1.1.2)
label (2643)	edge%fluid%te_aniso%comps(:)%flux(:)%label (string) (9.7.1.1.3)
comp (2643)	edge%fluid%te_aniso%comps(:)%flux(:)%comp(:) (complexgrid_scalar) (9.7.1.3.87)
griduid (2637)	edge%fluid%te_aniso%comps(:)%flux(:)%comp(:)%griduid (integer) (9.7.1.1.2)
subgrid (2637)	edge%fluid%te_aniso%comps(:)%flux(:)%comp(:)%subgrid (integer) (9.7.1.1.2)
scalar (2637)	edge%fluid%te_aniso%comps(:)%flux(:)%comp(:)%scalar (vecflt_type) (9.7.1.2.13)
vector (2637)	edge%fluid%te_aniso%comps(:)%flux(:)%comp(:)%vector (matflt_type) (9.7.1.2.10)
matrix (2637)	edge%fluid%te_aniso%comps(:)%flux(:)%comp(:)%matrix (array3dflt_type) (9.7.1.2.2)
align (2643)	edge%fluid%te_aniso%comps(:)%flux(:)%align (vecint_type) (9.7.1.2.14)
alignid (2643)	edge%fluid%te_aniso%comps(:)%flux(:)%alignid (vecstring_type) (9.7.1.2.15)
basis (2643)	edge%fluid%te_aniso%comps(:)%flux(:)%basis (integer) (9.7.1.1.2)
bndflux (2727)	edge%fluid%te_aniso%comps(:)%bndflux(:) (complexgrid_vector) (9.7.1.3.93)
griduid (2643)	edge%fluid%te_aniso%comps(:)%bndflux(:)%griduid (integer) (9.7.1.1.2)
label (2643)	edge%fluid%te_aniso%comps(:)%bndflux(:)%label (string) (9.7.1.1.3)
comp (2643)	edge%fluid%te_aniso%comps(:)%bndflux(:)%comp(:) (complexgrid_scalar) (9.7.1.3.87)
griduid (2637)	edge%fluid%te_aniso%comps(:)%bndflux(:)%comp(:)%griduid (integer) (9.7.1.1.2)
subgrid (2637)	edge%fluid%te_aniso%comps(:)%bndflux(:)%comp(:)%subgrid (integer) (9.7.1.1.2)
scalar (2637)	edge%fluid%te_aniso%comps(:)%bndflux(:)%comp(:)%scalar (vecflt_type) (9.7.1.2.13)
vector (2637)	edge%fluid%te_aniso%comps(:)%bndflux(:)%comp(:)%vector (matflt_type) (9.7.1.2.10)
matrix (2637)	edge%fluid%te_aniso%comps(:)%bndflux(:)%comp(:)%matrix (array3dflt_type) (9.7.1.2.2)
align (2643)	edge%fluid%te_aniso%comps(:)%bndflux(:)%align (vecint_type) (9.7.1.2.14)
alignid (2643)	edge%fluid%te_aniso%comps(:)%bndflux(:)%alignid (vecstring_type) (9.7.1.2.15)
basis (2643)	edge%fluid%te_aniso%comps(:)%bndflux(:)%basis (integer) (9.7.1.1.2)
transpcoeff (2727)	edge%fluid%te_aniso%comps(:)%transpcoeff(:) (edge_fluid_scalar_transpcoeff) (9.7.1.3.179)
d (2729)	edge%fluid%te_aniso%comps(:)%transpcoeff(:)%d (complexgrid_vector_simplestruct) (9.7.1.3.94)
label (2644)	edge%fluid%te_aniso%comps(:)%transpcoeff(:)%d%label (string) (9.7.1.1.3)
comp (2644)	edge%fluid%te_aniso%comps(:)%transpcoeff(:)%d%comp(:) (complexgrid_scalar) (9.7.1.3.87)
griduid (2637)	edge%fluid%te_aniso%comps(:)%transpcoeff(:)%d%comp(:)%griduid (integer) (9.7.1.1.2)
subgrid (2637)	edge%fluid%te_aniso%comps(:)%transpcoeff(:)%d%comp(:)%subgrid (integer) (9.7.1.1.2)
scalar (2637)	edge%fluid%te_aniso%comps(:)%transpcoeff(:)%d%comp(:)%scalar (vecflt_type) (9.7.1.2.13)
vector (2637)	edge%fluid%te_aniso%comps(:)%transpcoeff(:)%d%comp(:)%vector (matflt_type) (9.7.1.2.10)
matrix (2637)	edge%fluid%te_aniso%comps(:)%transpcoeff(:)%d%comp(:)%matrix (array3dflt_type) (9.7.1.2.2)
align (2644)	edge%fluid%te_aniso%comps(:)%transpcoeff(:)%d%align (vecint_type) (9.7.1.2.14)
alignid (2644)	edge%fluid%te_aniso%comps(:)%transpcoeff(:)%d%alignid (vecstring_type) (9.7.1.2.15)
v (2729)	edge%fluid%te_aniso%comps(:)%transpcoeff(:)%v (complexgrid_vector_simplestruct) (9.7.1.3.94)
label (2644)	edge%fluid%te_aniso%comps(:)%transpcoeff(:)%v%label (string) (9.7.1.1.3)
comp (2644)	edge%fluid%te_aniso%comps(:)%transpcoeff(:)%v%comp(:) (complexgrid_scalar) (9.7.1.3.87)

griduid (2637)	edge%fluid%te_aniso%comps(:)%transpcoeff(:)%v%comp(:)%griduid (integer) (9.7.1.1.2)
subgrid (2637)	edge%fluid%te_aniso%comps(:)%transpcoeff(:)%v%comp(:)%subgrid (integer) (9.7.1.1.2)
scalar (2637)	edge%fluid%te_aniso%comps(:)%transpcoeff(:)%v%comp(:)%scalar (vecflt_type) (9.7.1.2.13)
vector (2637)	edge%fluid%te_aniso%comps(:)%transpcoeff(:)%v%comp(:)%vector (matflt_type) (9.7.1.2.10)
matrix (2637)	edge%fluid%te_aniso%comps(:)%transpcoeff(:)%v%comp(:)%matrix (array3dflt_type) (9.7.1.2.2)
align (2644)	edge%fluid%te_aniso%comps(:)%transpcoeff(:)%v%align (vecint_type) (9.7.1.2.14)
alignid (2644)	edge%fluid%te_aniso%comps(:)%transpcoeff(:)%v%alignid (vecstring_type) (9.7.1.2.15)
source (2727)	edge%fluid%te_aniso%comps(:)%source(:) (complexgrid_scalar) (9.7.1.3.87)
griduid (2637)	edge%fluid%te_aniso%comps(:)%source(:)%griduid (integer) (9.7.1.1.2)
subgrid (2637)	edge%fluid%te_aniso%comps(:)%source(:)%subgrid (integer) (9.7.1.1.2)
scalar (2637)	edge%fluid%te_aniso%comps(:)%source(:)%scalar (vecflt_type) (9.7.1.2.13)
vector (2637)	edge%fluid%te_aniso%comps(:)%source(:)%vector (matflt_type) (9.7.1.2.10)
matrix (2637)	edge%fluid%te_aniso%comps(:)%source(:)%matrix (array3dflt_type) (9.7.1.2.2)
align (2731)	edge%fluid%te_aniso%align (vecint_type) (9.7.1.2.14)
alignid (2731)	edge%fluid%te_aniso%alignid (vecstring_type) (9.7.1.2.15)
ti_aniso (2726)	edge%fluid%ti_aniso(:) (edge_fluid_vector) (9.7.1.3.180)
griduid (2730)	edge%fluid%ti_aniso(:)%griduid (integer) (9.7.1.1.2)
basis (2730)	edge%fluid%ti_aniso(:)%basis (integer) (9.7.1.1.2)
align (2730)	edge%fluid%ti_aniso(:)%align (vecint_type) (9.7.1.2.14)
alignid (2730)	edge%fluid%ti_aniso(:)%alignid (vecstring_type) (9.7.1.2.15)
comps (2730)	edge%fluid%ti_aniso(:)%comps(:) (edge_fluid_scalar) (9.7.1.3.177)
value (2727)	edge%fluid%ti_aniso(:)%comps(:)%value(:) (complexgrid_scalar) (9.7.1.3.87)
griduid (2637)	edge%fluid%ti_aniso(:)%comps(:)%value(:)%griduid (integer) (9.7.1.1.2)
subgrid (2637)	edge%fluid%ti_aniso(:)%comps(:)%value(:)%subgrid (integer) (9.7.1.1.2)
scalar (2637)	edge%fluid%ti_aniso(:)%comps(:)%value(:)%scalar (vecflt_type) (9.7.1.2.13)
vector (2637)	edge%fluid%ti_aniso(:)%comps(:)%value(:)%vector (matflt_type) (9.7.1.2.10)
matrix (2637)	edge%fluid%ti_aniso(:)%comps(:)%value(:)%matrix (array3dflt_type) (9.7.1.2.2)
bndvalue (2727)	edge%fluid%ti_aniso(:)%comps(:)%bndvalue(:) (complexgrid_scalar) (9.7.1.3.87)
griduid (2637)	edge%fluid%ti_aniso(:)%comps(:)%bndvalue(:)%griduid (integer) (9.7.1.1.2)
subgrid (2637)	edge%fluid%ti_aniso(:)%comps(:)%bndvalue(:)%subgrid (integer) (9.7.1.1.2)
scalar (2637)	edge%fluid%ti_aniso(:)%comps(:)%bndvalue(:)%scalar (vecflt_type) (9.7.1.2.13)
vector (2637)	edge%fluid%ti_aniso(:)%comps(:)%bndvalue(:)%vector (matflt_type) (9.7.1.2.10)
matrix (2637)	edge%fluid%ti_aniso(:)%comps(:)%bndvalue(:)%matrix (array3dflt_type) (9.7.1.2.2)
flux (2727)	edge%fluid%ti_aniso(:)%comps(:)%flux(:) (complexgrid_vector) (9.7.1.3.93)
griduid (2643)	edge%fluid%ti_aniso(:)%comps(:)%flux(:)%griduid (integer) (9.7.1.1.2)
label (2643)	edge%fluid%ti_aniso(:)%comps(:)%flux(:)%label (string) (9.7.1.1.3)
comp (2643)	edge%fluid%ti_aniso(:)%comps(:)%flux(:)%comp(:) (complexgrid_scalar) (9.7.1.3.87)
griduid (2637)	edge%fluid%ti_aniso(:)%comps(:)%flux(:)%comp(:)%griduid (integer) (9.7.1.1.2)
subgrid (2637)	edge%fluid%ti_aniso(:)%comps(:)%flux(:)%comp(:)%subgrid (integer) (9.7.1.1.2)
scalar (2637)	edge%fluid%ti_aniso(:)%comps(:)%flux(:)%comp(:)%scalar (vecflt_type) (9.7.1.2.13)
vector (2637)	edge%fluid%ti_aniso(:)%comps(:)%flux(:)%comp(:)%vector (matflt_type) (9.7.1.2.10)
matrix (2637)	edge%fluid%ti_aniso(:)%comps(:)%flux(:)%comp(:)%matrix (array3dflt_type) (9.7.1.2.2)
align (2643)	edge%fluid%ti_aniso(:)%comps(:)%flux(:)%align (vecint_type) (9.7.1.2.14)
alignid (2643)	edge%fluid%ti_aniso(:)%comps(:)%flux(:)%alignid (vecstring_type) (9.7.1.2.15)
basis (2643)	edge%fluid%ti_aniso(:)%comps(:)%flux(:)%basis (integer) (9.7.1.1.2)
bndflux (2727)	edge%fluid%ti_aniso(:)%comps(:)%bndflux(:) (complexgrid_vector) (9.7.1.3.93)
griduid (2643)	edge%fluid%ti_aniso(:)%comps(:)%bndflux(:)%griduid (integer) (9.7.1.1.2)
label (2643)	edge%fluid%ti_aniso(:)%comps(:)%bndflux(:)%label (string) (9.7.1.1.3)
comp (2643)	edge%fluid%ti_aniso(:)%comps(:)%bndflux(:)%comp(:) (complexgrid_scalar) (9.7.1.3.87)
griduid (2637)	edge%fluid%ti_aniso(:)%comps(:)%bndflux(:)%comp(:)%griduid (integer) (9.7.1.1.2)
subgrid (2637)	edge%fluid%ti_aniso(:)%comps(:)%bndflux(:)%comp(:)%subgrid (integer) (9.7.1.1.2)
scalar (2637)	edge%fluid%ti_aniso(:)%comps(:)%bndflux(:)%comp(:)%scalar (vecflt_type) (9.7.1.2.13)
vector (2637)	edge%fluid%ti_aniso(:)%comps(:)%bndflux(:)%comp(:)%vector (matflt_type) (9.7.1.2.10)
matrix (2637)	edge%fluid%ti_aniso(:)%comps(:)%bndflux(:)%comp(:)%matrix (array3dflt_type) (9.7.1.2.2)
align (2643)	edge%fluid%ti_aniso(:)%comps(:)%bndflux(:)%align (vecint_type) (9.7.1.2.14)
alignid (2643)	edge%fluid%ti_aniso(:)%comps(:)%bndflux(:)%alignid (vecstring_type) (9.7.1.2.15)
basis (2643)	edge%fluid%ti_aniso(:)%comps(:)%bndflux(:)%basis (integer) (9.7.1.1.2)
transpcoeff (2727)	edge%fluid%ti_aniso(:)%comps(:)%transpcoeff(:) (edge_fluid_scalar.transpcoeff) (9.7.1.3.179)
d (2729)	edge%fluid%ti_aniso(:)%comps(:)%transpcoeff(:)%d (complexgrid_vector.simplestruct) (9.7.1.3.94)
label (2644)	edge%fluid%ti_aniso(:)%comps(:)%transpcoeff(:)%d%label (string) (9.7.1.1.3)

comp (2644)	edge%fluid%ti_aniso(:)%comps(:)%transpcoeff(:)%d%comp(:) (complexgrid_scalar) (9.7.1.3.87)
griduid (2637)	edge%fluid%ti_aniso(:)%comps(:)%transpcoeff(:)%d%comp(:)%griduid (integer) (9.7.1.1.2)
subgrid (2637)	edge%fluid%ti_aniso(:)%comps(:)%transpcoeff(:)%d%comp(:)%subgrid (integer) (9.7.1.1.2)
scalar (2637)	edge%fluid%ti_aniso(:)%comps(:)%transpcoeff(:)%d%comp(:)%scalar (vecflt_type) (9.7.1.2.13)
vector (2637)	edge%fluid%ti_aniso(:)%comps(:)%transpcoeff(:)%d%comp(:)%vector (matflt_type) (9.7.1.2.10)
matrix (2637)	edge%fluid%ti_aniso(:)%comps(:)%transpcoeff(:)%d%comp(:)%matrix (array3dflt_type) (9.7.1.2.2)
align (2644)	edge%fluid%ti_aniso(:)%comps(:)%transpcoeff(:)%d%align (vecint_type) (9.7.1.2.14)
alignid (2644)	edge%fluid%ti_aniso(:)%comps(:)%transpcoeff(:)%d%alignid (vecstring_type) (9.7.1.2.15)
v (2729)	edge%fluid%ti_aniso(:)%comps(:)%transpcoeff(:)%v (complexgrid_vector_simplestruct) (9.7.1.3.94)
label (2644)	edge%fluid%ti_aniso(:)%comps(:)%transpcoeff(:)%v%label (string) (9.7.1.1.3)
comp (2644)	edge%fluid%ti_aniso(:)%comps(:)%transpcoeff(:)%v%comp(:) (complexgrid_scalar) (9.7.1.3.87)
griduid (2637)	edge%fluid%ti_aniso(:)%comps(:)%transpcoeff(:)%v%comp(:)%griduid (integer) (9.7.1.1.2)
subgrid (2637)	edge%fluid%ti_aniso(:)%comps(:)%transpcoeff(:)%v%comp(:)%subgrid (integer) (9.7.1.1.2)
scalar (2637)	edge%fluid%ti_aniso(:)%comps(:)%transpcoeff(:)%v%comp(:)%scalar (vecflt_type) (9.7.1.2.13)
vector (2637)	edge%fluid%ti_aniso(:)%comps(:)%transpcoeff(:)%v%comp(:)%vector (matflt_type) (9.7.1.2.10)
matrix (2637)	edge%fluid%ti_aniso(:)%comps(:)%transpcoeff(:)%v%comp(:)%matrix (array3dflt_type) (9.7.1.2.2)
align (2644)	edge%fluid%ti_aniso(:)%comps(:)%transpcoeff(:)%v%align (vecint_type) (9.7.1.2.14)
alignid (2644)	edge%fluid%ti_aniso(:)%comps(:)%transpcoeff(:)%v%alignid (vecstring_type) (9.7.1.2.15)
source (2727)	edge%fluid%ti_aniso(:)%comps(:)%source(:) (complexgrid_scalar) (9.7.1.3.87)
griduid (2637)	edge%fluid%ti_aniso(:)%comps(:)%source(:)%griduid (integer) (9.7.1.1.2)
subgrid (2637)	edge%fluid%ti_aniso(:)%comps(:)%source(:)%subgrid (integer) (9.7.1.1.2)
scalar (2637)	edge%fluid%ti_aniso(:)%comps(:)%source(:)%scalar (vecflt_type) (9.7.1.2.13)
vector (2637)	edge%fluid%ti_aniso(:)%comps(:)%source(:)%vector (matflt_type) (9.7.1.2.10)
matrix (2637)	edge%fluid%ti_aniso(:)%comps(:)%source(:)%matrix (array3dflt_type) (9.7.1.2.2)
po (2726)	edge%fluid%po (edge_fluid_scalar_simplestruct) (9.7.1.3.178)
value (2728)	edge%fluid%po%value(:) (complexgrid_scalar) (9.7.1.3.87)
griduid (2637)	edge%fluid%po%value(:)%griduid (integer) (9.7.1.1.2)
subgrid (2637)	edge%fluid%po%value(:)%subgrid (integer) (9.7.1.1.2)
scalar (2637)	edge%fluid%po%value(:)%scalar (vecflt_type) (9.7.1.2.13)
vector (2637)	edge%fluid%po%value(:)%vector (matflt_type) (9.7.1.2.10)
matrix (2637)	edge%fluid%po%value(:)%matrix (array3dflt_type) (9.7.1.2.2)
bndvalue (2728)	edge%fluid%po%bndvalue(:) (complexgrid_scalar) (9.7.1.3.87)
griduid (2637)	edge%fluid%po%bndvalue(:)%griduid (integer) (9.7.1.1.2)
subgrid (2637)	edge%fluid%po%bndvalue(:)%subgrid (integer) (9.7.1.1.2)
scalar (2637)	edge%fluid%po%bndvalue(:)%scalar (vecflt_type) (9.7.1.2.13)
vector (2637)	edge%fluid%po%bndvalue(:)%vector (matflt_type) (9.7.1.2.10)
matrix (2637)	edge%fluid%po%bndvalue(:)%matrix (array3dflt_type) (9.7.1.2.2)
flux (2728)	edge%fluid%po%flux(:) (complexgrid_vector) (9.7.1.3.93)
griduid (2643)	edge%fluid%po%flux(:)%griduid (integer) (9.7.1.1.2)
label (2643)	edge%fluid%po%flux(:)%label (string) (9.7.1.1.3)
comp (2643)	edge%fluid%po%flux(:)%comp(:) (complexgrid_scalar) (9.7.1.3.87)
griduid (2637)	edge%fluid%po%flux(:)%comp(:)%griduid (integer) (9.7.1.1.2)
subgrid (2637)	edge%fluid%po%flux(:)%comp(:)%subgrid (integer) (9.7.1.1.2)
scalar (2637)	edge%fluid%po%flux(:)%comp(:)%scalar (vecflt_type) (9.7.1.2.13)
vector (2637)	edge%fluid%po%flux(:)%comp(:)%vector (matflt_type) (9.7.1.2.10)
matrix (2637)	edge%fluid%po%flux(:)%comp(:)%matrix (array3dflt_type) (9.7.1.2.2)
align (2643)	edge%fluid%po%flux(:)%align (vecint_type) (9.7.1.2.14)
alignid (2643)	edge%fluid%po%flux(:)%alignid (vecstring_type) (9.7.1.2.15)
basis (2643)	edge%fluid%po%flux(:)%basis (integer) (9.7.1.1.2)
bndflux (2728)	edge%fluid%po%bndflux(:) (complexgrid_vector) (9.7.1.3.93)
griduid (2643)	edge%fluid%po%bndflux(:)%griduid (integer) (9.7.1.1.2)
label (2643)	edge%fluid%po%bndflux(:)%label (string) (9.7.1.1.3)
comp (2643)	edge%fluid%po%bndflux(:)%comp(:) (complexgrid_scalar) (9.7.1.3.87)
griduid (2637)	edge%fluid%po%bndflux(:)%comp(:)%griduid (integer) (9.7.1.1.2)
subgrid (2637)	edge%fluid%po%bndflux(:)%comp(:)%subgrid (integer) (9.7.1.1.2)
scalar (2637)	edge%fluid%po%bndflux(:)%comp(:)%scalar (vecflt_type) (9.7.1.2.13)
vector (2637)	edge%fluid%po%bndflux(:)%comp(:)%vector (matflt_type) (9.7.1.2.10)

matrix (2637)	edge%fluid%po%bndflux(:)%comp(:)%matrix (array3dflt_type) (9.7.1.2.2)
align (2643)	edge%fluid%po%bndflux(:)%align (vecint_type) (9.7.1.2.14)
alignid (2643)	edge%fluid%po%bndflux(:)%alignid (vecstring_type) (9.7.1.2.15)
basis (2643)	edge%fluid%po%bndflux(:)%basis (integer) (9.7.1.1.2)
transpcoeff (2728)	edge%fluid%po%transpcoeff(:) (edge_fluid_scalar_transpcoeff) (9.7.1.3.179)
d (2729)	edge%fluid%po%transpcoeff(:)%d (complexgrid_vector_simplestruct) (9.7.1.3.94)
label (2644)	edge%fluid%po%transpcoeff(:)%d%label (string) (9.7.1.1.3)
comp (2644)	edge%fluid%po%transpcoeff(:)%d%comp(:) (complexgrid_scalar) (9.7.1.3.87)
griduid (2637)	edge%fluid%po%transpcoeff(:)%d%comp(:)%griduid (integer) (9.7.1.1.2)
subgrid (2637)	edge%fluid%po%transpcoeff(:)%d%comp(:)%subgrid (integer) (9.7.1.1.2)
scalar (2637)	edge%fluid%po%transpcoeff(:)%d%comp(:)%scalar (vecflt_type) (9.7.1.2.13)
vector (2637)	edge%fluid%po%transpcoeff(:)%d%comp(:)%vector (matflt_type) (9.7.1.2.10)
matrix (2637)	edge%fluid%po%transpcoeff(:)%d%comp(:)%matrix (array3dflt_type) (9.7.1.2.2)
align (2644)	edge%fluid%po%transpcoeff(:)%d%align (vecint_type) (9.7.1.2.14)
alignid (2644)	edge%fluid%po%transpcoeff(:)%d%alignid (vecstring_type) (9.7.1.2.15)
v (2729)	edge%fluid%po%transpcoeff(:)%v (complexgrid_vector_simplestruct) (9.7.1.3.94)
label (2644)	edge%fluid%po%transpcoeff(:)%v%label (string) (9.7.1.1.3)
comp (2644)	edge%fluid%po%transpcoeff(:)%v%comp(:) (complexgrid_scalar) (9.7.1.3.87)
griduid (2637)	edge%fluid%po%transpcoeff(:)%v%comp(:)%griduid (integer) (9.7.1.1.2)
subgrid (2637)	edge%fluid%po%transpcoeff(:)%v%comp(:)%subgrid (integer) (9.7.1.1.2)
scalar (2637)	edge%fluid%po%transpcoeff(:)%v%comp(:)%scalar (vecflt_type) (9.7.1.2.13)
vector (2637)	edge%fluid%po%transpcoeff(:)%v%comp(:)%vector (matflt_type) (9.7.1.2.10)
matrix (2637)	edge%fluid%po%transpcoeff(:)%v%comp(:)%matrix (array3dflt_type) (9.7.1.2.2)
align (2644)	edge%fluid%po%transpcoeff(:)%v%align (vecint_type) (9.7.1.2.14)
alignid (2644)	edge%fluid%po%transpcoeff(:)%v%alignid (vecstring_type) (9.7.1.2.15)
source (2728)	edge%fluid%po%source(:) (complexgrid_scalar) (9.7.1.3.87)
griduid (2637)	edge%fluid%po%source(:)%griduid (integer) (9.7.1.1.2)
subgrid (2637)	edge%fluid%po%source(:)%subgrid (integer) (9.7.1.1.2)
scalar (2637)	edge%fluid%po%source(:)%scalar (vecflt_type) (9.7.1.2.13)
vector (2637)	edge%fluid%po%source(:)%vector (matflt_type) (9.7.1.2.10)
matrix (2637)	edge%fluid%po%source(:)%matrix (array3dflt_type) (9.7.1.2.2)
j (2726)	edge%fluid%j (edge_fluid_vector_simplestruct) (9.7.1.3.181)
griduid (2731)	edge%fluid%j%griduid (integer) (9.7.1.1.2)
basis (2731)	edge%fluid%j%basis (integer) (9.7.1.1.2)
comps (2731)	edge%fluid%j%comps(:) (edge_fluid_scalar) (9.7.1.3.177)
value (2727)	edge%fluid%j%comps(:)%value(:) (complexgrid_scalar) (9.7.1.3.87)
griduid (2637)	edge%fluid%j%comps(:)%value(:)%griduid (integer) (9.7.1.1.2)
subgrid (2637)	edge%fluid%j%comps(:)%value(:)%subgrid (integer) (9.7.1.1.2)
scalar (2637)	edge%fluid%j%comps(:)%value(:)%scalar (vecflt_type) (9.7.1.2.13)
vector (2637)	edge%fluid%j%comps(:)%value(:)%vector (matflt_type) (9.7.1.2.10)
matrix (2637)	edge%fluid%j%comps(:)%value(:)%matrix (array3dflt_type) (9.7.1.2.2)
bndvalue (2727)	edge%fluid%j%comps(:)%bndvalue(:) (complexgrid_scalar) (9.7.1.3.87)
griduid (2637)	edge%fluid%j%comps(:)%bndvalue(:)%griduid (integer) (9.7.1.1.2)
subgrid (2637)	edge%fluid%j%comps(:)%bndvalue(:)%subgrid (integer) (9.7.1.1.2)
scalar (2637)	edge%fluid%j%comps(:)%bndvalue(:)%scalar (vecflt_type) (9.7.1.2.13)
vector (2637)	edge%fluid%j%comps(:)%bndvalue(:)%vector (matflt_type) (9.7.1.2.10)
matrix (2637)	edge%fluid%j%comps(:)%bndvalue(:)%matrix (array3dflt_type) (9.7.1.2.2)
flux (2727)	edge%fluid%j%comps(:)%flux(:) (complexgrid_vector) (9.7.1.3.93)
griduid (2643)	edge%fluid%j%comps(:)%flux(:)%griduid (integer) (9.7.1.1.2)
label (2643)	edge%fluid%j%comps(:)%flux(:)%label (string) (9.7.1.1.3)
comp (2643)	edge%fluid%j%comps(:)%flux(:)%comp(:) (complexgrid_scalar) (9.7.1.3.87)
griduid (2637)	edge%fluid%j%comps(:)%flux(:)%comp(:)%griduid (integer) (9.7.1.1.2)
subgrid (2637)	edge%fluid%j%comps(:)%flux(:)%comp(:)%subgrid (integer) (9.7.1.1.2)
scalar (2637)	edge%fluid%j%comps(:)%flux(:)%comp(:)%scalar (vecflt_type) (9.7.1.2.13)
vector (2637)	edge%fluid%j%comps(:)%flux(:)%comp(:)%vector (matflt_type) (9.7.1.2.10)
matrix (2637)	edge%fluid%j%comps(:)%flux(:)%comp(:)%matrix (array3dflt_type) (9.7.1.2.2)
align (2643)	edge%fluid%j%comps(:)%flux(:)%align (vecint_type) (9.7.1.2.14)
alignid (2643)	edge%fluid%j%comps(:)%flux(:)%alignid (vecstring_type) (9.7.1.2.15)
basis (2643)	edge%fluid%j%comps(:)%flux(:)%basis (integer) (9.7.1.1.2)
bndflux (2727)	edge%fluid%j%comps(:)%bndflux(:) (complexgrid_vector) (9.7.1.3.93)
griduid (2643)	edge%fluid%j%comps(:)%bndflux(:)%griduid (integer) (9.7.1.1.2)

label (2643)	edge%fluid%j%comps(:)%bndflux(:)%label (string) (9.7.1.1.3)
comp (2643)	edge%fluid%j%comps(:)%bndflux(:)%comp(:) (complexgrid_scalar) (9.7.1.3.87)
griduid (2637)	edge%fluid%j%comps(:)%bndflux(:)%comp(:)%griduid (integer) (9.7.1.1.2)
subgrid (2637)	edge%fluid%j%comps(:)%bndflux(:)%comp(:)%subgrid (integer) (9.7.1.1.2)
scalar (2637)	edge%fluid%j%comps(:)%bndflux(:)%comp(:)%scalar (vecflt_type) (9.7.1.2.13)
vector (2637)	edge%fluid%j%comps(:)%bndflux(:)%comp(:)%vector (matflt_type) (9.7.1.2.10)
matrix (2637)	edge%fluid%j%comps(:)%bndflux(:)%comp(:)%matrix (array3dflt_type) (9.7.1.2.2)
align (2643)	edge%fluid%j%comps(:)%bndflux(:)%align (vecint_type) (9.7.1.2.14)
alignid (2643)	edge%fluid%j%comps(:)%bndflux(:)%alignid (vecstring_type) (9.7.1.2.15)
basis (2643)	edge%fluid%j%comps(:)%bndflux(:)%basis (integer) (9.7.1.1.2)
transpcoeff (2727)	edge%fluid%j%comps(:)%transpcoeff(:) (edge_fluid_scalar_transpcoeff) (9.7.1.3.179)
d (2729)	edge%fluid%j%comps(:)%transpcoeff(:)%d (complexgrid_vector_simplestruct) (9.7.1.3.94)
label (2644)	edge%fluid%j%comps(:)%transpcoeff(:)%d%label (string) (9.7.1.1.3)
comp (2644)	edge%fluid%j%comps(:)%transpcoeff(:)%d%comp(:) (complexgrid_scalar) (9.7.1.3.87)
griduid (2637)	edge%fluid%j%comps(:)%transpcoeff(:)%d%comp(:)%griduid (integer) (9.7.1.1.2)
subgrid (2637)	edge%fluid%j%comps(:)%transpcoeff(:)%d%comp(:)%subgrid (integer) (9.7.1.1.2)
scalar (2637)	edge%fluid%j%comps(:)%transpcoeff(:)%d%comp(:)%scalar (vecflt_type) (9.7.1.2.13)
vector (2637)	edge%fluid%j%comps(:)%transpcoeff(:)%d%comp(:)%vector (matflt_type) (9.7.1.2.10)
matrix (2637)	edge%fluid%j%comps(:)%transpcoeff(:)%d%comp(:)%matrix (array3dflt_type) (9.7.1.2.2)
align (2644)	edge%fluid%j%comps(:)%transpcoeff(:)%d%align (vecint_type) (9.7.1.2.14)
alignid (2644)	edge%fluid%j%comps(:)%transpcoeff(:)%d%alignid (vecstring_type) (9.7.1.2.15)
v (2729)	edge%fluid%j%comps(:)%transpcoeff(:)%v (complexgrid_vector_simplestruct) (9.7.1.3.94)
label (2644)	edge%fluid%j%comps(:)%transpcoeff(:)%v%label (string) (9.7.1.1.3)
comp (2644)	edge%fluid%j%comps(:)%transpcoeff(:)%v%comp(:) (complexgrid_scalar) (9.7.1.3.87)
griduid (2637)	edge%fluid%j%comps(:)%transpcoeff(:)%v%comp(:)%griduid (integer) (9.7.1.1.2)
subgrid (2637)	edge%fluid%j%comps(:)%transpcoeff(:)%v%comp(:)%subgrid (integer) (9.7.1.1.2)
scalar (2637)	edge%fluid%j%comps(:)%transpcoeff(:)%v%comp(:)%scalar (vecflt_type) (9.7.1.2.13)
vector (2637)	edge%fluid%j%comps(:)%transpcoeff(:)%v%comp(:)%vector (matflt_type) (9.7.1.2.10)
matrix (2637)	edge%fluid%j%comps(:)%transpcoeff(:)%v%comp(:)%matrix (array3dflt_type) (9.7.1.2.2)
align (2644)	edge%fluid%j%comps(:)%transpcoeff(:)%v%align (vecint_type) (9.7.1.2.14)
alignid (2644)	edge%fluid%j%comps(:)%transpcoeff(:)%v%alignid (vecstring_type) (9.7.1.2.15)
source (2727)	edge%fluid%j%comps(:)%source(:) (complexgrid_scalar) (9.7.1.3.87)
griduid (2637)	edge%fluid%j%comps(:)%source(:)%griduid (integer) (9.7.1.1.2)
subgrid (2637)	edge%fluid%j%comps(:)%source(:)%subgrid (integer) (9.7.1.1.2)
scalar (2637)	edge%fluid%j%comps(:)%source(:)%scalar (vecflt_type) (9.7.1.2.13)
vector (2637)	edge%fluid%j%comps(:)%source(:)%vector (matflt_type) (9.7.1.2.10)
matrix (2637)	edge%fluid%j%comps(:)%source(:)%matrix (array3dflt_type) (9.7.1.2.2)
align (2731)	edge%fluid%j%align (vecint_type) (9.7.1.2.14)
alignid (2731)	edge%fluid%j%alignid (vecstring_type) (9.7.1.2.15)
b (2726)	edge%fluid%b(:) (complexgrid_vector) (9.7.1.3.93)
griduid (2643)	edge%fluid%b(:)%griduid (integer) (9.7.1.1.2)
label (2643)	edge%fluid%b(:)%label (string) (9.7.1.1.3)
comp (2643)	edge%fluid%b(:)%comp(:) (complexgrid_scalar) (9.7.1.3.87)
griduid (2637)	edge%fluid%b(:)%comp(:)%griduid (integer) (9.7.1.1.2)
subgrid (2637)	edge%fluid%b(:)%comp(:)%subgrid (integer) (9.7.1.1.2)
scalar (2637)	edge%fluid%b(:)%comp(:)%scalar (vecflt_type) (9.7.1.2.13)
vector (2637)	edge%fluid%b(:)%comp(:)%vector (matflt_type) (9.7.1.2.10)
matrix (2637)	edge%fluid%b(:)%comp(:)%matrix (array3dflt_type) (9.7.1.2.2)
align (2643)	edge%fluid%b(:)%align (vecint_type) (9.7.1.2.14)
alignid (2643)	edge%fluid%b(:)%alignid (vecstring_type) (9.7.1.2.15)
basis (2643)	edge%fluid%b(:)%basis (integer) (9.7.1.1.2)
kinetic (2568)	edge%kinetic (edge_kinetic) (9.7.1.3.182)
f (2732)	edge%kinetic%f(:) (edge_kinetic_distribution) (9.7.1.3.183)
value (2733)	edge%kinetic%f(:)%value(:) (complexgrid_scalar) (9.7.1.3.87)
griduid (2637)	edge%kinetic%f(:)%value(:)%griduid (integer) (9.7.1.1.2)
subgrid (2637)	edge%kinetic%f(:)%value(:)%subgrid (integer) (9.7.1.1.2)
scalar (2637)	edge%kinetic%f(:)%value(:)%scalar (vecflt_type) (9.7.1.2.13)
vector (2637)	edge%kinetic%f(:)%value(:)%vector (matflt_type) (9.7.1.2.10)
matrix (2637)	edge%kinetic%f(:)%value(:)%matrix (array3dflt_type) (9.7.1.2.2)
bndvalue (2733)	edge%kinetic%f(:)%bndvalue(:) (complexgrid_scalar) (9.7.1.3.87)
griduid (2637)	edge%kinetic%f(:)%bndvalue(:)%griduid (integer) (9.7.1.1.2)



subgrid (2637)	edge%kinetic%f(:)%bndvalue(:)%subgrid (integer) (9.7.1.1.2)
scalar (2637)	edge%kinetic%f(:)%bndvalue(:)%scalar (vecflt_type) (9.7.1.2.13)
vector (2637)	edge%kinetic%f(:)%bndvalue(:)%vector (matflt_type) (9.7.1.2.10)
matrix (2637)	edge%kinetic%f(:)%bndvalue(:)%matrix (array3dflt_type) (9.7.1.2.2)
fluxes (2733)	edge%kinetic%f(:)%fluxes(:) (complexgrid_vector) (9.7.1.3.93)
griduid (2643)	edge%kinetic%f(:)%fluxes(:)%griduid (integer) (9.7.1.1.2)
label (2643)	edge%kinetic%f(:)%fluxes(:)%label (string) (9.7.1.1.3)
comp (2643)	edge%kinetic%f(:)%fluxes(:)%comp(:) (complexgrid_scalar) (9.7.1.3.87)
griduid (2637)	edge%kinetic%f(:)%fluxes(:)%comp(:)%griduid (integer) (9.7.1.1.2)
subgrid (2637)	edge%kinetic%f(:)%fluxes(:)%comp(:)%subgrid (integer) (9.7.1.1.2)
scalar (2637)	edge%kinetic%f(:)%fluxes(:)%comp(:)%scalar (vecflt_type) (9.7.1.2.13)
vector (2637)	edge%kinetic%f(:)%fluxes(:)%comp(:)%vector (matflt_type) (9.7.1.2.10)
matrix (2637)	edge%kinetic%f(:)%fluxes(:)%comp(:)%matrix (array3dflt_type) (9.7.1.2.2)
align (2643)	edge%kinetic%f(:)%fluxes(:)%align (vecint_type) (9.7.1.2.14)
alignid (2643)	edge%kinetic%f(:)%fluxes(:)%alignid (vecstring_type) (9.7.1.2.15)
basis (2643)	edge%kinetic%f(:)%fluxes(:)%basis (integer) (9.7.1.1.2)
source (2733)	edge%kinetic%f(:)%source(:) (complexgrid_scalar) (9.7.1.3.87)
griduid (2637)	edge%kinetic%f(:)%source(:)%griduid (integer) (9.7.1.1.2)
subgrid (2637)	edge%kinetic%f(:)%source(:)%subgrid (integer) (9.7.1.1.2)
scalar (2637)	edge%kinetic%f(:)%source(:)%scalar (vecflt_type) (9.7.1.2.13)
vector (2637)	edge%kinetic%f(:)%source(:)%vector (matflt_type) (9.7.1.2.10)
matrix (2637)	edge%kinetic%f(:)%source(:)%matrix (array3dflt_type) (9.7.1.2.2)
codeparam (2568)	edge%codeparam (codeparam) (9.7.1.3.77)
codename (2627)	edge%codeparam%codename (string) (9.7.1.1.3)
codeversion (2627)	edge%codeparam%codeversion (string) (9.7.1.1.3)
parameters (2627)	edge%codeparam%parameters (string) (9.7.1.1.3)
output_diag (2627)	edge%codeparam%output_diag (string) (9.7.1.1.3)
output_flag (2627)	edge%codeparam%output_flag (integer) (9.7.1.1.2)
time (2568)	edge%time (float) (9.7.1.1.1)

### 9.7.2.1.17 efcc

datainfo (2569)	efcc%datainfo (datainfo) (9.7.1.3.134)
dataprovider (2684)	efcc%datainfo%dataprovider (string) (9.7.1.1.3)
putdate (2684)	efcc%datainfo%putdate (string) (9.7.1.1.3)
source (2684)	efcc%datainfo%source (string) (9.7.1.1.3)
comment (2684)	efcc%datainfo%comment (string) (9.7.1.1.3)
cocos (2684)	efcc%datainfo%cocos (integer) (9.7.1.1.2)
id (2684)	efcc%datainfo%id (integer) (9.7.1.1.2)
isref (2684)	efcc%datainfo%isref (integer) (9.7.1.1.2)
whatref (2684)	efcc%datainfo%whatref (whatref) (9.7.1.3.506)
user (3056)	efcc%datainfo%whatref%user (string) (9.7.1.1.3)
machine (3056)	efcc%datainfo%whatref%machine (string) (9.7.1.1.3)
shot (3056)	efcc%datainfo%whatref%shot (integer) (9.7.1.1.2)
run (3056)	efcc%datainfo%whatref%run (integer) (9.7.1.1.2)
occurrence (3056)	efcc%datainfo%whatref%occurrence (integer) (9.7.1.1.2)
putinfo (2684)	efcc%datainfo%putinfo (putinfo) (9.7.1.3.342)
putmethod (2892)	efcc%datainfo%putinfo%putmethod (string) (9.7.1.1.3)
putaccess (2892)	efcc%datainfo%putinfo%putaccess (string) (9.7.1.1.3)
putlocation (2892)	efcc%datainfo%putinfo%putlocation (string) (9.7.1.1.3)
rights (2892)	efcc%datainfo%putinfo%rights (string) (9.7.1.1.3)
coil (2569)	efcc%coil(:) (coil) (9.7.1.3.80)
desc_coils (2630)	efcc%coil(:)%desc_coils (desc_coils) (9.7.1.3.135)
name (2685)	efcc%coil(:)%desc_coils%name (string) (9.7.1.1.3)
res (2685)	efcc%coil(:)%desc_coils%res (float) (9.7.1.1.1)
nturns (2685)	efcc%coil(:)%desc_coils%nturns (integer) (9.7.1.1.2)
closed (2685)	efcc%coil(:)%desc_coils%closed (string) (9.7.1.1.3)
edges (2685)	efcc%coil(:)%desc_coils%edges(:) (edges) (9.7.1.3.184)
edge_rzphi (2734)	efcc%coil(:)%desc_coils%edges(:)%edge_rzphi (rzphiID) (9.7.1.3.365)
r (2915)	efcc%coil(:)%desc_coils%edges(:)%edge_rzphi%r (vecflt_type) (9.7.1.2.13)
z (2915)	efcc%coil(:)%desc_coils%edges(:)%edge_rzphi%z (vecflt_type) (9.7.1.2.13)

phi (2915)	efcc%coil(:)%desc.coils%edges(:)%edge_rzphi%phi (vecflt_type) (9.7.1.2.13)
coilcurrent (2630)	efcc%coil(:)%coilcurrent (exp1D) (9.7.1.3.197)
value (2747)	efcc%coil(:)%coilcurrent%value (vecflt_type) (9.7.1.2.13)
abserror (2747)	efcc%coil(:)%coilcurrent%abserror (vecflt_type) (9.7.1.2.13)
releror (2747)	efcc%coil(:)%coilcurrent%releror (vecflt_type) (9.7.1.2.13)
coilvoltage (2630)	efcc%coil(:)%coilvoltage (exp1D) (9.7.1.3.197)
value (2747)	efcc%coil(:)%coilvoltage%value (vecflt_type) (9.7.1.2.13)
abserror (2747)	efcc%coil(:)%coilvoltage%abserror (vecflt_type) (9.7.1.2.13)
releror (2747)	efcc%coil(:)%coilvoltage%releror (vecflt_type) (9.7.1.2.13)
time (2569)	efcc%time (float) (9.7.1.1.1)
codeparam (2569)	efcc%codeparam (codeparam) (9.7.1.3.77)
codename (2627)	efcc%codeparam%codename (string) (9.7.1.1.3)
codeversion (2627)	efcc%codeparam%codeversion (string) (9.7.1.1.3)
parameters (2627)	efcc%codeparam%parameters (string) (9.7.1.1.3)
output_diag (2627)	efcc%codeparam%output_diag (string) (9.7.1.1.3)
output_flag (2627)	efcc%codeparam%output_flag (integer) (9.7.1.1.2)

### 9.7.2.1.18 equilibrium

datainfo (2570)	equilibrium%datainfo (datainfo) (9.7.1.3.134)
dataprovider (2684)	equilibrium%datainfo%dataprovider (string) (9.7.1.1.3)
putdate (2684)	equilibrium%datainfo%putdate (string) (9.7.1.1.3)
source (2684)	equilibrium%datainfo%source (string) (9.7.1.1.3)
comment (2684)	equilibrium%datainfo%comment (string) (9.7.1.1.3)
cocos (2684)	equilibrium%datainfo%cocos (integer) (9.7.1.1.2)
id (2684)	equilibrium%datainfo%id (integer) (9.7.1.1.2)
isref (2684)	equilibrium%datainfo%isref (integer) (9.7.1.1.2)
whatref (2684)	equilibrium%datainfo%whatref (whatref) (9.7.1.3.506)
user (3056)	equilibrium%datainfo%whatref%user (string) (9.7.1.1.3)
machine (3056)	equilibrium%datainfo%whatref%machine (string) (9.7.1.1.3)
shot (3056)	equilibrium%datainfo%whatref%shot (integer) (9.7.1.1.2)
run (3056)	equilibrium%datainfo%whatref%run (integer) (9.7.1.1.2)
occurrence (3056)	equilibrium%datainfo%whatref%occurrence (integer) (9.7.1.1.2)
putinfo (2684)	equilibrium%datainfo%putinfo (putinfo) (9.7.1.3.342)
putmethod (2892)	equilibrium%datainfo%putinfo%putmethod (string) (9.7.1.1.3)
putaccess (2892)	equilibrium%datainfo%putinfo%putaccess (string) (9.7.1.1.3)
putlocation (2892)	equilibrium%datainfo%putinfo%putlocation (string) (9.7.1.1.3)
rights (2892)	equilibrium%datainfo%putinfo%rights (string) (9.7.1.1.3)
eqconstraint (2570)	equilibrium%eqconstraint (eqconstraint) (9.7.1.3.189)
bpol (2739)	equilibrium%eqconstraint%bpol (eqmes1D) (9.7.1.3.192)
measured (2742)	equilibrium%eqconstraint%bpol%measured (vecflt_type) (9.7.1.2.13)
source (2742)	equilibrium%eqconstraint%bpol%source (string) (9.7.1.1.3)
time (2742)	equilibrium%eqconstraint%bpol%time (float) (9.7.1.1.1)
exact (2742)	equilibrium%eqconstraint%bpol%exact (vecint_type) (9.7.1.2.14)
weight (2742)	equilibrium%eqconstraint%bpol%weight (vecflt_type) (9.7.1.2.13)
sigma (2742)	equilibrium%eqconstraint%bpol%sigma (vecflt_type) (9.7.1.2.13)
calculated (2742)	equilibrium%eqconstraint%bpol%calculated (vecflt_type) (9.7.1.2.13)
chi2 (2742)	equilibrium%eqconstraint%bpol%chi2 (vecflt_type) (9.7.1.2.13)
bvac_r (2739)	equilibrium%eqconstraint%bvac_r (eqmes0D) (9.7.1.3.191)
measured (2741)	equilibrium%eqconstraint%bvac_r%measured (float) (9.7.1.1.1)
source (2741)	equilibrium%eqconstraint%bvac_r%source (string) (9.7.1.1.3)
time (2741)	equilibrium%eqconstraint%bvac_r%time (float) (9.7.1.1.1)
exact (2741)	equilibrium%eqconstraint%bvac_r%exact (integer) (9.7.1.1.2)
weight (2741)	equilibrium%eqconstraint%bvac_r%weight (float) (9.7.1.1.1)
sigma (2741)	equilibrium%eqconstraint%bvac_r%sigma (float) (9.7.1.1.1)
calculated (2741)	equilibrium%eqconstraint%bvac_r%calculated (float) (9.7.1.1.1)
chi2 (2741)	equilibrium%eqconstraint%bvac_r%chi2 (float) (9.7.1.1.1)
diamagflux (2739)	equilibrium%eqconstraint%diamagflux (eqmes0D) (9.7.1.3.191)
measured (2741)	equilibrium%eqconstraint%diamagflux%measured (float) (9.7.1.1.1)
source (2741)	equilibrium%eqconstraint%diamagflux%source (string) (9.7.1.1.3)
time (2741)	equilibrium%eqconstraint%diamagflux%time (float) (9.7.1.1.1)



exact (2741)	equilibrium%eqconstraint%diamagflux%exact (integer) (9.7.1.1.2)
weight (2741)	equilibrium%eqconstraint%diamagflux%weight (float) (9.7.1.1.1)
sigma (2741)	equilibrium%eqconstraint%diamagflux%sigma (float) (9.7.1.1.1)
calculated (2741)	equilibrium%eqconstraint%diamagflux%calculated (float) (9.7.1.1.1)
chi2 (2741)	equilibrium%eqconstraint%diamagflux%chi2 (float) (9.7.1.1.1)
faraday (2739)	equilibrium%eqconstraint%faraday (eqmes1D) (9.7.1.3.192)
measured (2742)	equilibrium%eqconstraint%faraday%measured (vecflt.type) (9.7.1.2.13)
source (2742)	equilibrium%eqconstraint%faraday%source (string) (9.7.1.1.3)
time (2742)	equilibrium%eqconstraint%faraday%time (float) (9.7.1.1.1)
exact (2742)	equilibrium%eqconstraint%faraday%exact (vecint.type) (9.7.1.2.14)
weight (2742)	equilibrium%eqconstraint%faraday%weight (vecflt.type) (9.7.1.2.13)
sigma (2742)	equilibrium%eqconstraint%faraday%sigma (vecflt.type) (9.7.1.2.13)
calculated (2742)	equilibrium%eqconstraint%faraday%calculated (vecflt.type) (9.7.1.2.13)
chi2 (2742)	equilibrium%eqconstraint%faraday%chi2 (vecflt.type) (9.7.1.2.13)
flux (2739)	equilibrium%eqconstraint%flux (eqmes1D) (9.7.1.3.192)
measured (2742)	equilibrium%eqconstraint%flux%measured (vecflt.type) (9.7.1.2.13)
source (2742)	equilibrium%eqconstraint%flux%source (string) (9.7.1.1.3)
time (2742)	equilibrium%eqconstraint%flux%time (float) (9.7.1.1.1)
exact (2742)	equilibrium%eqconstraint%flux%exact (vecint.type) (9.7.1.2.14)
weight (2742)	equilibrium%eqconstraint%flux%weight (vecflt.type) (9.7.1.2.13)
sigma (2742)	equilibrium%eqconstraint%flux%sigma (vecflt.type) (9.7.1.2.13)
calculated (2742)	equilibrium%eqconstraint%flux%calculated (vecflt.type) (9.7.1.2.13)
chi2 (2742)	equilibrium%eqconstraint%flux%chi2 (vecflt.type) (9.7.1.2.13)
i.plasma (2739)	equilibrium%eqconstraint%i.plasma (eqmes0D) (9.7.1.3.191)
measured (2741)	equilibrium%eqconstraint%i.plasma%measured (float) (9.7.1.1.1)
source (2741)	equilibrium%eqconstraint%i.plasma%source (string) (9.7.1.1.3)
time (2741)	equilibrium%eqconstraint%i.plasma%time (float) (9.7.1.1.1)
exact (2741)	equilibrium%eqconstraint%i.plasma%exact (integer) (9.7.1.1.2)
weight (2741)	equilibrium%eqconstraint%i.plasma%weight (float) (9.7.1.1.1)
sigma (2741)	equilibrium%eqconstraint%i.plasma%sigma (float) (9.7.1.1.1)
calculated (2741)	equilibrium%eqconstraint%i.plasma%calculated (float) (9.7.1.1.1)
chi2 (2741)	equilibrium%eqconstraint%i.plasma%chi2 (float) (9.7.1.1.1)
isoflux (2739)	equilibrium%eqconstraint%isoflux (isoflux) (9.7.1.3.241)
position (2791)	equilibrium%eqconstraint%isoflux%position (rz1D) (9.7.1.3.359)
r (2909)	equilibrium%eqconstraint%isoflux%position%r (vecflt.type) (9.7.1.2.13)
z (2909)	equilibrium%eqconstraint%isoflux%position%z (vecflt.type) (9.7.1.2.13)
source (2791)	equilibrium%eqconstraint%isoflux%source (string) (9.7.1.1.3)
weight (2791)	equilibrium%eqconstraint%isoflux%weight (vecflt.type) (9.7.1.2.13)
sigma (2791)	equilibrium%eqconstraint%isoflux%sigma (vecflt.type) (9.7.1.2.13)
calculated (2791)	equilibrium%eqconstraint%isoflux%calculated (vecflt.type) (9.7.1.2.13)
chi2 (2791)	equilibrium%eqconstraint%isoflux%chi2 (vecflt.type) (9.7.1.2.13)
jsurf (2739)	equilibrium%eqconstraint%jsurf (eqmes1D) (9.7.1.3.192)
measured (2742)	equilibrium%eqconstraint%jsurf%measured (vecflt.type) (9.7.1.2.13)
source (2742)	equilibrium%eqconstraint%jsurf%source (string) (9.7.1.1.3)
time (2742)	equilibrium%eqconstraint%jsurf%time (float) (9.7.1.1.1)
exact (2742)	equilibrium%eqconstraint%jsurf%exact (vecint.type) (9.7.1.2.14)
weight (2742)	equilibrium%eqconstraint%jsurf%weight (vecflt.type) (9.7.1.2.13)
sigma (2742)	equilibrium%eqconstraint%jsurf%sigma (vecflt.type) (9.7.1.2.13)
calculated (2742)	equilibrium%eqconstraint%jsurf%calculated (vecflt.type) (9.7.1.2.13)
chi2 (2742)	equilibrium%eqconstraint%jsurf%chi2 (vecflt.type) (9.7.1.2.13)
magnet.iron (2739)	equilibrium%eqconstraint%magnet.iron (magnet.iron) (9.7.1.3.259)
mr (2809)	equilibrium%eqconstraint%magnet.iron%mr (eqmes1D) (9.7.1.3.192)
measured (2742)	equilibrium%eqconstraint%magnet.iron%mr%measured (vecflt.type) (9.7.1.2.13)
source (2742)	equilibrium%eqconstraint%magnet.iron%mr%source (string) (9.7.1.1.3)
time (2742)	equilibrium%eqconstraint%magnet.iron%mr%time (float) (9.7.1.1.1)
exact (2742)	equilibrium%eqconstraint%magnet.iron%mr%exact (vecint.type) (9.7.1.2.14)
weight (2742)	equilibrium%eqconstraint%magnet.iron%mr%weight (vecflt.type) (9.7.1.2.13)
sigma (2742)	equilibrium%eqconstraint%magnet.iron%mr%sigma (vecflt.type) (9.7.1.2.13)
calculated (2742)	equilibrium%eqconstraint%magnet.iron%mr%calculated (vecflt.type) (9.7.1.2.13)
chi2 (2742)	equilibrium%eqconstraint%magnet.iron%mr%chi2 (vecflt.type) (9.7.1.2.13)
mz (2809)	equilibrium%eqconstraint%magnet.iron%mz (eqmes1D) (9.7.1.3.192)

measured (2742)	equilibrium%eqconstraint%magnet_iron% <i>mz</i> %measured (vecflt_type) (9.7.1.2.13)
source (2742)	equilibrium%eqconstraint%magnet_iron% <i>mz</i> %source (string) (9.7.1.1.3)
time (2742)	equilibrium%eqconstraint%magnet_iron% <i>mz</i> %time (float) (9.7.1.1.1)
exact (2742)	equilibrium%eqconstraint%magnet_iron% <i>mz</i> %exact (vecint_type) (9.7.1.2.14)
weight (2742)	equilibrium%eqconstraint%magnet_iron% <i>mz</i> %weight (vecflt_type) (9.7.1.2.13)
sigma (2742)	equilibrium%eqconstraint%magnet_iron% <i>mz</i> %sigma (vecflt_type) (9.7.1.2.13)
calculated (2742)	equilibrium%eqconstraint%magnet_iron% <i>mz</i> %calculated (vecflt_type) (9.7.1.2.13)
chi2 (2742)	equilibrium%eqconstraint%magnet_iron% <i>mz</i> %chi2 (vecflt_type) (9.7.1.2.13)
mse (2739)	equilibrium%eqconstraint% <i>mse</i> (eqmes1D) (9.7.1.3.192)
measured (2742)	equilibrium%eqconstraint% <i>mse</i> %measured (vecflt_type) (9.7.1.2.13)
source (2742)	equilibrium%eqconstraint% <i>mse</i> %source (string) (9.7.1.1.3)
time (2742)	equilibrium%eqconstraint% <i>mse</i> %time (float) (9.7.1.1.1)
exact (2742)	equilibrium%eqconstraint% <i>mse</i> %exact (vecint_type) (9.7.1.2.14)
weight (2742)	equilibrium%eqconstraint% <i>mse</i> %weight (vecflt_type) (9.7.1.2.13)
sigma (2742)	equilibrium%eqconstraint% <i>mse</i> %sigma (vecflt_type) (9.7.1.2.13)
calculated (2742)	equilibrium%eqconstraint% <i>mse</i> %calculated (vecflt_type) (9.7.1.2.13)
chi2 (2742)	equilibrium%eqconstraint% <i>mse</i> %chi2 (vecflt_type) (9.7.1.2.13)
ne (2739)	equilibrium%eqconstraint% <i>ne</i> (eqmes1D) (9.7.1.3.192)
measured (2742)	equilibrium%eqconstraint% <i>ne</i> %measured (vecflt_type) (9.7.1.2.13)
source (2742)	equilibrium%eqconstraint% <i>ne</i> %source (string) (9.7.1.1.3)
time (2742)	equilibrium%eqconstraint% <i>ne</i> %time (float) (9.7.1.1.1)
exact (2742)	equilibrium%eqconstraint% <i>ne</i> %exact (vecint_type) (9.7.1.2.14)
weight (2742)	equilibrium%eqconstraint% <i>ne</i> %weight (vecflt_type) (9.7.1.2.13)
sigma (2742)	equilibrium%eqconstraint% <i>ne</i> %sigma (vecflt_type) (9.7.1.2.13)
calculated (2742)	equilibrium%eqconstraint% <i>ne</i> %calculated (vecflt_type) (9.7.1.2.13)
chi2 (2742)	equilibrium%eqconstraint% <i>ne</i> %chi2 (vecflt_type) (9.7.1.2.13)
pfcurrent (2739)	equilibrium%eqconstraint% <i>pfcurrent</i> (eqmes1D) (9.7.1.3.192)
measured (2742)	equilibrium%eqconstraint% <i>pfcurrent</i> %measured (vecflt_type) (9.7.1.2.13)
source (2742)	equilibrium%eqconstraint% <i>pfcurrent</i> %source (string) (9.7.1.1.3)
time (2742)	equilibrium%eqconstraint% <i>pfcurrent</i> %time (float) (9.7.1.1.1)
exact (2742)	equilibrium%eqconstraint% <i>pfcurrent</i> %exact (vecint_type) (9.7.1.2.14)
weight (2742)	equilibrium%eqconstraint% <i>pfcurrent</i> %weight (vecflt_type) (9.7.1.2.13)
sigma (2742)	equilibrium%eqconstraint% <i>pfcurrent</i> %sigma (vecflt_type) (9.7.1.2.13)
calculated (2742)	equilibrium%eqconstraint% <i>pfcurrent</i> %calculated (vecflt_type) (9.7.1.2.13)
chi2 (2742)	equilibrium%eqconstraint% <i>pfcurrent</i> %chi2 (vecflt_type) (9.7.1.2.13)
pressure (2739)	equilibrium%eqconstraint% <i>pressure</i> (eqmes1D) (9.7.1.3.192)
measured (2742)	equilibrium%eqconstraint% <i>pressure</i> %measured (vecflt_type) (9.7.1.2.13)
source (2742)	equilibrium%eqconstraint% <i>pressure</i> %source (string) (9.7.1.1.3)
time (2742)	equilibrium%eqconstraint% <i>pressure</i> %time (float) (9.7.1.1.1)
exact (2742)	equilibrium%eqconstraint% <i>pressure</i> %exact (vecint_type) (9.7.1.2.14)
weight (2742)	equilibrium%eqconstraint% <i>pressure</i> %weight (vecflt_type) (9.7.1.2.13)
sigma (2742)	equilibrium%eqconstraint% <i>pressure</i> %sigma (vecflt_type) (9.7.1.2.13)
calculated (2742)	equilibrium%eqconstraint% <i>pressure</i> %calculated (vecflt_type) (9.7.1.2.13)
chi2 (2742)	equilibrium%eqconstraint% <i>pressure</i> %chi2 (vecflt_type) (9.7.1.2.13)
q (2739)	equilibrium%eqconstraint% <i>q</i> (q) (9.7.1.3.343)
qvalue (2893)	equilibrium%eqconstraint% <i>q</i> %qvalue (vecflt_type) (9.7.1.2.13)
position (2893)	equilibrium%eqconstraint% <i>q</i> %position (rz1D) (9.7.1.3.359)
r (2909)	equilibrium%eqconstraint% <i>q</i> %position% <i>r</i> (vecflt_type) (9.7.1.2.13)
z (2909)	equilibrium%eqconstraint% <i>q</i> %position% <i>z</i> (vecflt_type) (9.7.1.2.13)
source (2893)	equilibrium%eqconstraint% <i>q</i> %source (string) (9.7.1.1.3)
exact (2893)	equilibrium%eqconstraint% <i>q</i> %exact (integer) (9.7.1.1.2)
weight (2893)	equilibrium%eqconstraint% <i>q</i> %weight (vecflt_type) (9.7.1.2.13)
sigma (2893)	equilibrium%eqconstraint% <i>q</i> %sigma (vecflt_type) (9.7.1.2.13)
calculated (2893)	equilibrium%eqconstraint% <i>q</i> %calculated (vecflt_type) (9.7.1.2.13)
chi2 (2893)	equilibrium%eqconstraint% <i>q</i> %chi2 (vecflt_type) (9.7.1.2.13)
xpts (2739)	equilibrium%eqconstraint% <i>xpts</i> (xpts) (9.7.1.3.508)
position (3058)	equilibrium%eqconstraint% <i>xpts</i> %position (rz1D) (9.7.1.3.359)
r (2909)	equilibrium%eqconstraint% <i>xpts</i> %position% <i>r</i> (vecflt_type) (9.7.1.2.13)
z (2909)	equilibrium%eqconstraint% <i>xpts</i> %position% <i>z</i> (vecflt_type) (9.7.1.2.13)
source (3058)	equilibrium%eqconstraint% <i>xpts</i> %source (string) (9.7.1.1.3)
weight (3058)	equilibrium%eqconstraint% <i>xpts</i> %weight (vecflt_type) (9.7.1.2.13)

sigma (3058)	equilibrium%eqconstraint%xpts%sigma (vecflt.type) (9.7.1.2.13)
calculated (3058)	equilibrium%eqconstraint%xpts%calculated (vecflt.type) (9.7.1.2.13)
chi2 (3058)	equilibrium%eqconstraint%xpts%chi2 (vecflt.type) (9.7.1.2.13)
eqgeometry (2570)	equilibrium%eqgeometry (eqgeometry) (9.7.1.3.190)
source (2740)	equilibrium%eqgeometry%source (string) (9.7.1.1.3)
boundarytype (2740)	equilibrium%eqgeometry%boundarytype (integer) (9.7.1.1.2)
boundary (2740)	equilibrium%eqgeometry%boundary(:) (rz1Dexp) (9.7.1.3.361)
r (2911)	equilibrium%eqgeometry%boundary(:)%r (vecflt.type) (9.7.1.2.13)
z (2911)	equilibrium%eqgeometry%boundary(:)%z (vecflt.type) (9.7.1.2.13)
geom_axis (2740)	equilibrium%eqgeometry%geom_axis (rz0D) (9.7.1.3.358)
r (2908)	equilibrium%eqgeometry%geom_axis%r (float) (9.7.1.1.1)
z (2908)	equilibrium%eqgeometry%geom_axis%z (float) (9.7.1.1.1)
a_minor (2740)	equilibrium%eqgeometry%a_minor (float) (9.7.1.1.1)
elongation (2740)	equilibrium%eqgeometry%elongation (float) (9.7.1.1.1)
elong_upper (2740)	equilibrium%eqgeometry%elong_upper (float) (9.7.1.1.1)
elong_lower (2740)	equilibrium%eqgeometry%elong_lower (float) (9.7.1.1.1)
tria_upper (2740)	equilibrium%eqgeometry%tria_upper (float) (9.7.1.1.1)
tria_lower (2740)	equilibrium%eqgeometry%tria_lower (float) (9.7.1.1.1)
xpts (2740)	equilibrium%eqgeometry%xpts(:) (rz1Dexp) (9.7.1.3.361)
r (2911)	equilibrium%eqgeometry%xpts(:)%r (vecflt.type) (9.7.1.2.13)
z (2911)	equilibrium%eqgeometry%xpts(:)%z (vecflt.type) (9.7.1.2.13)
left_low_st (2740)	equilibrium%eqgeometry%left_low_st (rz0D) (9.7.1.3.358)
r (2908)	equilibrium%eqgeometry%left_low_st%r (float) (9.7.1.1.1)
z (2908)	equilibrium%eqgeometry%left_low_st%z (float) (9.7.1.1.1)
right_low_st (2740)	equilibrium%eqgeometry%right_low_st (rz0D) (9.7.1.3.358)
r (2908)	equilibrium%eqgeometry%right_low_st%r (float) (9.7.1.1.1)
z (2908)	equilibrium%eqgeometry%right_low_st%z (float) (9.7.1.1.1)
left_up_st (2740)	equilibrium%eqgeometry%left_up_st (rz0D) (9.7.1.3.358)
r (2908)	equilibrium%eqgeometry%left_up_st%r (float) (9.7.1.1.1)
z (2908)	equilibrium%eqgeometry%left_up_st%z (float) (9.7.1.1.1)
right_up_st (2740)	equilibrium%eqgeometry%right_up_st (rz0D) (9.7.1.3.358)
r (2908)	equilibrium%eqgeometry%right_up_st%r (float) (9.7.1.1.1)
z (2908)	equilibrium%eqgeometry%right_up_st%z (float) (9.7.1.1.1)
active_limit (2740)	equilibrium%eqgeometry%active_limit (rz0D) (9.7.1.3.358)
r (2908)	equilibrium%eqgeometry%active_limit%r (float) (9.7.1.1.1)
z (2908)	equilibrium%eqgeometry%active_limit%z (float) (9.7.1.1.1)
ang_lcms_upo (2740)	equilibrium%eqgeometry%ang_lcms_upo (float) (9.7.1.1.1)
ang_lcms_upi (2740)	equilibrium%eqgeometry%ang_lcms_upi (float) (9.7.1.1.1)
ang_lcms_lwo (2740)	equilibrium%eqgeometry%ang_lcms_lwo (float) (9.7.1.1.1)
ang_lcms_lwi (2740)	equilibrium%eqgeometry%ang_lcms_lwi (float) (9.7.1.1.1)
flush (2570)	equilibrium%flush (flush) (9.7.1.3.203)
datainfo (2753)	equilibrium%flush%datainfo (datainfo) (9.7.1.3.134)
dataproducer (2684)	equilibrium%flush%datainfo%dataproducer (string) (9.7.1.1.3)
putdate (2684)	equilibrium%flush%datainfo%putdate (string) (9.7.1.1.3)
source (2684)	equilibrium%flush%datainfo%source (string) (9.7.1.1.3)
comment (2684)	equilibrium%flush%datainfo%comment (string) (9.7.1.1.3)
cocos (2684)	equilibrium%flush%datainfo%cocos (integer) (9.7.1.1.2)
id (2684)	equilibrium%flush%datainfo%id (integer) (9.7.1.1.2)
isref (2684)	equilibrium%flush%datainfo%isref (integer) (9.7.1.1.2)
whatref (2684)	equilibrium%flush%datainfo%whatref (whatref) (9.7.1.3.506)
user (3056)	equilibrium%flush%datainfo%whatref%user (string) (9.7.1.1.3)
machine (3056)	equilibrium%flush%datainfo%whatref%machine (string) (9.7.1.1.3)
shot (3056)	equilibrium%flush%datainfo%whatref%shot (integer) (9.7.1.1.2)
run (3056)	equilibrium%flush%datainfo%whatref%run (integer) (9.7.1.1.2)
occurrence (3056)	equilibrium%flush%datainfo%whatref%occurrence (integer) (9.7.1.1.2)
putinfo (2684)	equilibrium%flush%datainfo%putinfo (putinfo) (9.7.1.3.342)
putmethod (2892)	equilibrium%flush%datainfo%putinfo%putmethod (string) (9.7.1.1.3)
putaccess (2892)	equilibrium%flush%datainfo%putinfo%putaccess (string) (9.7.1.1.3)
putlocation (2892)	equilibrium%flush%datainfo%putinfo%putlocation (string) (9.7.1.1.3)
rights (2892)	equilibrium%flush%datainfo%putinfo%rights (string) (9.7.1.1.3)
position (2753)	equilibrium%flush%position (rz1D) (9.7.1.3.359)

r (2909)	equilibrium%flush%position%r (vecflt_type) (9.7.1.2.13)
z (2909)	equilibrium%flush%position%z (vecflt_type) (9.7.1.2.13)
coef (2753)	equilibrium%flush%coef (matflt_type) (9.7.1.2.10)
codeparam (2753)	equilibrium%flush%codeparam (codeparam) (9.7.1.3.77)
codename (2627)	equilibrium%flush%codeparam%codename (string) (9.7.1.1.3)
codeversion (2627)	equilibrium%flush%codeparam%codeversion (string) (9.7.1.1.3)
parameters (2627)	equilibrium%flush%codeparam%parameters (string) (9.7.1.1.3)
output_diag (2627)	equilibrium%flush%codeparam%output_diag (string) (9.7.1.1.3)
output_flag (2627)	equilibrium%flush%codeparam%output_flag (integer) (9.7.1.1.2)
global_param (2570)	equilibrium%global_param (global_param) (9.7.1.3.228)
beta_pol (2778)	equilibrium%global_param%beta_pol (float) (9.7.1.1.1)
beta_tor (2778)	equilibrium%global_param%beta_tor (float) (9.7.1.1.1)
beta_normal (2778)	equilibrium%global_param%beta_normal (float) (9.7.1.1.1)
i_plasma (2778)	equilibrium%global_param%i_plasma (float) (9.7.1.1.1)
li (2778)	equilibrium%global_param%li (float) (9.7.1.1.1)
volume (2778)	equilibrium%global_param%volume (float) (9.7.1.1.1)
area (2778)	equilibrium%global_param%area (float) (9.7.1.1.1)
psi_ax (2778)	equilibrium%global_param%psi_ax (float) (9.7.1.1.1)
psi_bound (2778)	equilibrium%global_param%psi_bound (float) (9.7.1.1.1)
mag_axis (2778)	equilibrium%global_param%mag_axis (mag_axis) (9.7.1.3.258)
position (2808)	equilibrium%global_param%mag_axis%position (rz0D) (9.7.1.3.358)
r (2908)	equilibrium%global_param%mag_axis%position%r (float) (9.7.1.1.1)
z (2908)	equilibrium%global_param%mag_axis%position%z (float) (9.7.1.1.1)
bphi (2808)	equilibrium%global_param%mag_axis%bphi (float) (9.7.1.1.1)
q (2808)	equilibrium%global_param%mag_axis%q (float) (9.7.1.1.1)
q_95 (2778)	equilibrium%global_param%q_95 (float) (9.7.1.1.1)
q_min (2778)	equilibrium%global_param%q_min (float) (9.7.1.1.1)
toroid_field (2778)	equilibrium%global_param%toroid_field (b0r0) (9.7.1.3.59)
r0 (2609)	equilibrium%global_param%toroid_field%r0 (float) (9.7.1.1.1)
b0 (2609)	equilibrium%global_param%toroid_field%b0 (float) (9.7.1.1.1)
w_mhd (2778)	equilibrium%global_param%w_mhd (float) (9.7.1.1.1)
gamma (2778)	equilibrium%global_param%gamma (float) (9.7.1.1.1)
profiles_1d (2570)	equilibrium%profiles_1d (profiles_1d) (9.7.1.3.340)
psi (2890)	equilibrium%profiles_1d%psi (vecflt_type) (9.7.1.2.13)
phi (2890)	equilibrium%profiles_1d%phi (vecflt_type) (9.7.1.2.13)
pressure (2890)	equilibrium%profiles_1d%pressure (vecflt_type) (9.7.1.2.13)
F_dia (2890)	equilibrium%profiles_1d%F_dia (vecflt_type) (9.7.1.2.13)
pprime (2890)	equilibrium%profiles_1d%pprime (vecflt_type) (9.7.1.2.13)
ffprime (2890)	equilibrium%profiles_1d%ffprime (vecflt_type) (9.7.1.2.13)
jphi (2890)	equilibrium%profiles_1d%jphi (vecflt_type) (9.7.1.2.13)
jparallel (2890)	equilibrium%profiles_1d%jparallel (vecflt_type) (9.7.1.2.13)
q (2890)	equilibrium%profiles_1d%q (vecflt_type) (9.7.1.2.13)
shear (2890)	equilibrium%profiles_1d%shear (vecflt_type) (9.7.1.2.13)
r_inboard (2890)	equilibrium%profiles_1d%r_inboard (vecflt_type) (9.7.1.2.13)
r_outboard (2890)	equilibrium%profiles_1d%r_outboard (vecflt_type) (9.7.1.2.13)
rho_tor (2890)	equilibrium%profiles_1d%rho_tor (vecflt_type) (9.7.1.2.13)
dpsidrho_tor (2890)	equilibrium%profiles_1d%dpsidrho_tor (vecflt_type) (9.7.1.2.13)
rho_vol (2890)	equilibrium%profiles_1d%rho_vol (vecflt_type) (9.7.1.2.13)
beta_pol (2890)	equilibrium%profiles_1d%beta_pol (vecflt_type) (9.7.1.2.13)
li (2890)	equilibrium%profiles_1d%li (vecflt_type) (9.7.1.2.13)
elongation (2890)	equilibrium%profiles_1d%elongation (vecflt_type) (9.7.1.2.13)
tria_upper (2890)	equilibrium%profiles_1d%tria_upper (vecflt_type) (9.7.1.2.13)
tria_lower (2890)	equilibrium%profiles_1d%tria_lower (vecflt_type) (9.7.1.2.13)
volume (2890)	equilibrium%profiles_1d%volume (vecflt_type) (9.7.1.2.13)
vprime (2890)	equilibrium%profiles_1d%vprime (vecflt_type) (9.7.1.2.13)
dvdrho (2890)	equilibrium%profiles_1d%dvdrho (vecflt_type) (9.7.1.2.13)
area (2890)	equilibrium%profiles_1d%area (vecflt_type) (9.7.1.2.13)
aprime (2890)	equilibrium%profiles_1d%aprime (vecflt_type) (9.7.1.2.13)
surface (2890)	equilibrium%profiles_1d%surface (vecflt_type) (9.7.1.2.13)
ftrap (2890)	equilibrium%profiles_1d%ftrap (vecflt_type) (9.7.1.2.13)
gm1 (2890)	equilibrium%profiles_1d%gm1 (vecflt_type) (9.7.1.2.13)

gm2 (2890)	equilibrium%profiles_1d%gm2 (vecflt.type) (9.7.1.2.13)
gm3 (2890)	equilibrium%profiles_1d%gm3 (vecflt.type) (9.7.1.2.13)
gm4 (2890)	equilibrium%profiles_1d%gm4 (vecflt.type) (9.7.1.2.13)
gm5 (2890)	equilibrium%profiles_1d%gm5 (vecflt.type) (9.7.1.2.13)
gm6 (2890)	equilibrium%profiles_1d%gm6 (vecflt.type) (9.7.1.2.13)
gm7 (2890)	equilibrium%profiles_1d%gm7 (vecflt.type) (9.7.1.2.13)
gm8 (2890)	equilibrium%profiles_1d%gm8 (vecflt.type) (9.7.1.2.13)
gm9 (2890)	equilibrium%profiles_1d%gm9 (vecflt.type) (9.7.1.2.13)
b_av (2890)	equilibrium%profiles_1d%b_av (vecflt.type) (9.7.1.2.13)
b_min (2890)	equilibrium%profiles_1d%b_min (vecflt.type) (9.7.1.2.13)
b_max (2890)	equilibrium%profiles_1d%b_max (vecflt.type) (9.7.1.2.13)
omega (2890)	equilibrium%profiles_1d%omega (vecflt.type) (9.7.1.2.13)
omegaprime (2890)	equilibrium%profiles_1d%omegaprime (vecflt.type) (9.7.1.2.13)
mach_a (2890)	equilibrium%profiles_1d%mach_a (vecflt.type) (9.7.1.2.13)
phi_flow (2890)	equilibrium%profiles_1d%phi_flow (vecflt.type) (9.7.1.2.13)
s_flow (2890)	equilibrium%profiles_1d%s_flow (vecflt.type) (9.7.1.2.13)
h_flow (2890)	equilibrium%profiles_1d%h_flow (vecflt.type) (9.7.1.2.13)
rho.mass (2890)	equilibrium%profiles_1d%rho.mass (vecflt.type) (9.7.1.2.13)
profiles_2d (2570)	equilibrium%profiles_2d(:) (equilibrium_profiles_2d) (9.7.1.3.195)
grid_type (2745)	equilibrium%profiles_2d(:)%grid_type (vecstring.type) (9.7.1.2.15)
grid (2745)	equilibrium%profiles_2d(:)%grid (equilibrium_profiles2d_grid) (9.7.1.3.194)
dim1 (2744)	equilibrium%profiles_2d(:)%grid%dim1 (vecflt.type) (9.7.1.2.13)
dim2 (2744)	equilibrium%profiles_2d(:)%grid%dim2 (vecflt.type) (9.7.1.2.13)
connect (2744)	equilibrium%profiles_2d(:)%grid%connect (matint.type) (9.7.1.2.11)
r (2745)	equilibrium%profiles_2d(:)%r (matflt.type) (9.7.1.2.10)
z (2745)	equilibrium%profiles_2d(:)%z (matflt.type) (9.7.1.2.10)
psi (2745)	equilibrium%profiles_2d(:)%psi (matflt.type) (9.7.1.2.10)
theta (2745)	equilibrium%profiles_2d(:)%theta (matflt.type) (9.7.1.2.10)
phi (2745)	equilibrium%profiles_2d(:)%phi (matflt.type) (9.7.1.2.10)
jphi (2745)	equilibrium%profiles_2d(:)%jphi (matflt.type) (9.7.1.2.10)
jpar (2745)	equilibrium%profiles_2d(:)%jpar (matflt.type) (9.7.1.2.10)
br (2745)	equilibrium%profiles_2d(:)%br (matflt.type) (9.7.1.2.10)
bz (2745)	equilibrium%profiles_2d(:)%bz (matflt.type) (9.7.1.2.10)
bphi (2745)	equilibrium%profiles_2d(:)%bphi (matflt.type) (9.7.1.2.10)
vphi (2745)	equilibrium%profiles_2d(:)%vphi (matflt.type) (9.7.1.2.10)
vtheta (2745)	equilibrium%profiles_2d(:)%vtheta (matflt.type) (9.7.1.2.10)
rho.mass (2745)	equilibrium%profiles_2d(:)%rho.mass (matflt.type) (9.7.1.2.10)
pressure (2745)	equilibrium%profiles_2d(:)%pressure (matflt.type) (9.7.1.2.10)
temperature (2745)	equilibrium%profiles_2d(:)%temperature (matflt.type) (9.7.1.2.10)
coord_sys (2570)	equilibrium%coord_sys (coord_sys) (9.7.1.3.101)
grid_type (2651)	equilibrium%coord_sys%grid_type (string) (9.7.1.1.3)
grid (2651)	equilibrium%coord_sys%grid (reggrid) (9.7.1.3.354)
dim1 (2904)	equilibrium%coord_sys%grid%dim1 (vecflt.type) (9.7.1.2.13)
dim2 (2904)	equilibrium%coord_sys%grid%dim2 (vecflt.type) (9.7.1.2.13)
jacobian (2651)	equilibrium%coord_sys%jacobian (matflt.type) (9.7.1.2.10)
g_11 (2651)	equilibrium%coord_sys%g_11 (matflt.type) (9.7.1.2.10)
g_12 (2651)	equilibrium%coord_sys%g_12 (matflt.type) (9.7.1.2.10)
g_13 (2651)	equilibrium%coord_sys%g_13 (matflt.type) (9.7.1.2.10)
g_22 (2651)	equilibrium%coord_sys%g_22 (matflt.type) (9.7.1.2.10)
g_23 (2651)	equilibrium%coord_sys%g_23 (matflt.type) (9.7.1.2.10)
g_33 (2651)	equilibrium%coord_sys%g_33 (matflt.type) (9.7.1.2.10)
position (2651)	equilibrium%coord_sys%position (rz2D) (9.7.1.3.362)
r (2912)	equilibrium%coord_sys%position%r (matflt.type) (9.7.1.2.10)
z (2912)	equilibrium%coord_sys%position%z (matflt.type) (9.7.1.2.10)
time (2570)	equilibrium%time (float) (9.7.1.1.1)
codeparam (2570)	equilibrium%codeparam (codeparam) (9.7.1.3.77)
codename (2627)	equilibrium%codeparam%codename (string) (9.7.1.1.3)
codeversion (2627)	equilibrium%codeparam%codeversion (string) (9.7.1.1.3)
parameters (2627)	equilibrium%codeparam%parameters (string) (9.7.1.1.3)
output_diag (2627)	equilibrium%codeparam%output_diag (string) (9.7.1.1.3)
output_flag (2627)	equilibrium%codeparam%output_flag (integer) (9.7.1.1.2)

### 9.7.2.1.19 fusiondiag

datainfo (2571)	fusiondiag%datainfo (datainfo) (9.7.1.3.134)
dataproducer (2684)	fusiondiag%datainfo%dataproducer (string) (9.7.1.1.3)
putdate (2684)	fusiondiag%datainfo%putdate (string) (9.7.1.1.3)
source (2684)	fusiondiag%datainfo%source (string) (9.7.1.1.3)
comment (2684)	fusiondiag%datainfo%comment (string) (9.7.1.1.3)
cocos (2684)	fusiondiag%datainfo%cocos (integer) (9.7.1.1.2)
id (2684)	fusiondiag%datainfo%id (integer) (9.7.1.1.2)
isref (2684)	fusiondiag%datainfo%isref (integer) (9.7.1.1.2)
whatref (2684)	fusiondiag%datainfo%whatref (whatref) (9.7.1.3.506)
user (3056)	fusiondiag%datainfo%whatref%user (string) (9.7.1.1.3)
machine (3056)	fusiondiag%datainfo%whatref%machine (string) (9.7.1.1.3)
shot (3056)	fusiondiag%datainfo%whatref%shot (integer) (9.7.1.1.2)
run (3056)	fusiondiag%datainfo%whatref%run (integer) (9.7.1.1.2)
occurrence (3056)	fusiondiag%datainfo%whatref%occurrence (integer) (9.7.1.1.2)
putinfo (2684)	fusiondiag%datainfo%putinfo (putinfo) (9.7.1.3.342)
putmethod (2892)	fusiondiag%datainfo%putinfo%putmethod (string) (9.7.1.1.3)
putaccess (2892)	fusiondiag%datainfo%putinfo%putaccess (string) (9.7.1.1.3)
putlocation (2892)	fusiondiag%datainfo%putinfo%putlocation (string) (9.7.1.1.3)
rights (2892)	fusiondiag%datainfo%putinfo%rights (string) (9.7.1.1.3)
fus_product (2571)	fusiondiag%fus_product(:) (fusiondiag_fus_product) (9.7.1.3.222)
product (2772)	fusiondiag%fus_product(:)%product (string) (9.7.1.1.3)
reaction (2772)	fusiondiag%fus_product(:)%reaction (string) (9.7.1.1.3)
collimator (2772)	fusiondiag%fus_product(:)%collimator (fusiondiag_collimator) (9.7.1.3.213)
colli_circ (2763)	fusiondiag%fus_product(:)%collimator%colli_circ(:) (fusiondiag_colli_circ) (9.7.1.3.211)
name (2761)	fusiondiag%fus_product(:)%collimator%colli_circ(:)%name (string) (9.7.1.1.3)
setup_line (2761)	fusiondiag%fus_product(:)%collimator%colli_circ(:)%setup_line (setup_line) (9.7.1.3.396)
pivot_point (2946)	fusiondiag%fus_product(:)%collimator%colli_circ(:)%setup_line%pivot_point (rzphi1D) (9.7.1.3.365)
r (2915)	fusiondiag%fus_product(:)%collimator%colli_circ(:)%setup_line%pivot_point%r (vecflt_type) (9.7.1.2.13)
z (2915)	fusiondiag%fus_product(:)%collimator%colli_circ(:)%setup_line%pivot_point%z (vecflt_type) (9.7.1.2.13)
phi (2915)	fusiondiag%fus_product(:)%collimator%colli_circ(:)%setup_line%pivot_point%phi (vecflt_type) (9.7.1.2.13)
horchordang1 (2946)	fusiondiag%fus_product(:)%collimator%colli_circ(:)%setup_line%horchordang1 (vecflt_type) (9.7.1.2.13)
verchordang1 (2946)	fusiondiag%fus_product(:)%collimator%colli_circ(:)%setup_line%verchordang1 (vecflt_type) (9.7.1.2.13)
width (2946)	fusiondiag%fus_product(:)%collimator%colli_circ(:)%setup_line%width (vecflt_type) (9.7.1.2.13)
second_point (2946)	fusiondiag%fus_product(:)%collimator%colli_circ(:)%setup_line%second_point (rzphi1D) (9.7.1.3.365)
r (2915)	fusiondiag%fus_product(:)%collimator%colli_circ(:)%setup_line%second_point%r (vecflt_type) (9.7.1.2.13)
z (2915)	fusiondiag%fus_product(:)%collimator%colli_circ(:)%setup_line%second_point%z (vecflt_type) (9.7.1.2.13)
phi (2915)	fusiondiag%fus_product(:)%collimator%colli_circ(:)%setup_line%second_point%phi (vecflt_type) (9.7.1.2.13)
horchordang2 (2946)	fusiondiag%fus_product(:)%collimator%colli_circ(:)%setup_line%horchordang2 (vecflt_type) (9.7.1.2.13)
verchordang2 (2946)	fusiondiag%fus_product(:)%collimator%colli_circ(:)%setup_line%verchordang2 (vecflt_type) (9.7.1.2.13)
third_point (2946)	fusiondiag%fus_product(:)%collimator%colli_circ(:)%setup_line%third_point (rzphi1D) (9.7.1.3.365)
r (2915)	fusiondiag%fus_product(:)%collimator%colli_circ(:)%setup_line%third_point%r (vecflt_type) (9.7.1.2.13)
z (2915)	fusiondiag%fus_product(:)%collimator%colli_circ(:)%setup_line%third_point%z (vecflt_type) (9.7.1.2.13)
phi (2915)	fusiondiag%fus_product(:)%collimator%colli_circ(:)%setup_line%third_point%phi (vecflt_type) (9.7.1.2.13)
nchordpoints (2946)	fusiondiag%fus_product(:)%collimator%colli_circ(:)%setup_line%nchordpoints (integer) (9.7.1.1.2)
colliunit (2761)	fusiondiag%fus_product(:)%collimator%colli_circ(:)%colliunit(:) (fusiondiag_colliunit_circ) (9.7.1.3.214)
radius (2764)	fusiondiag%fus_product(:)%collimator%colli_circ(:)%colliunit(:)%radius (vecflt_type) (9.7.1.2.13)



centre (2764)	fusiondiag%fus_product(:)%collimator%colli_circ(:)%colliunit(:)%centre (9.7.1.3.365)	(rzphi1D)
r (2915)	fusiondiag%fus_product(:)%collimator%colli_circ(:)%colliunit(:)%centre%r (9.7.1.2.13)	(vecflt.type)
z (2915)	fusiondiag%fus_product(:)%collimator%colli_circ(:)%colliunit(:)%centre%z (9.7.1.2.13)	(vecflt.type)
phi (2915)	fusiondiag%fus_product(:)%collimator%colli_circ(:)%colliunit(:)%centre%phi (9.7.1.2.13)	(vecflt.type)
colli_poly (2763)	fusiondiag%fus_product(:)%collimator%colli_poly(:) (fusiondiag_colli_poly) (9.7.1.3.212)	
name (2762)	fusiondiag%fus_product(:)%collimator%colli_poly(:)%name (string) (9.7.1.1.3)	
setup_line (2762)	fusiondiag%fus_product(:)%collimator%colli_poly(:)%setup_line (setup_line) (9.7.1.3.396)	
pivot_point (2946)	fusiondiag%fus_product(:)%collimator%colli_poly(:)%setup_line%pivot_point (9.7.1.3.365)	(rzphi1D)
r (2915)	fusiondiag%fus_product(:)%collimator%colli_poly(:)%setup_line%pivot_point%r (9.7.1.2.13)	(vecflt.type)
z (2915)	fusiondiag%fus_product(:)%collimator%colli_poly(:)%setup_line%pivot_point%z (vecflt.type) (9.7.1.2.13)	
phi (2915)	fusiondiag%fus_product(:)%collimator%colli_poly(:)%setup_line%pivot_point%phi (vecflt.type) (9.7.1.2.13)	
horchordang1 (2946)	fusiondiag%fus_product(:)%collimator%colli_poly(:)%setup_line%horchordang1 (9.7.1.2.13)	(vecflt.type)
verchordang1 (2946)	fusiondiag%fus_product(:)%collimator%colli_poly(:)%setup_line%verchordang1 (9.7.1.2.13)	(vecflt.type)
width (2946)	fusiondiag%fus_product(:)%collimator%colli_poly(:)%setup_line%width (9.7.1.2.13)	(vecflt.type)
second_point (2946)	fusiondiag%fus_product(:)%collimator%colli_poly(:)%setup_line%second_point (9.7.1.3.365)	(rzphi1D)
r (2915)	fusiondiag%fus_product(:)%collimator%colli_poly(:)%setup_line%second_point%r (vecflt.type) (9.7.1.2.13)	
z (2915)	fusiondiag%fus_product(:)%collimator%colli_poly(:)%setup_line%second_point%z (vecflt.type) (9.7.1.2.13)	
phi (2915)	fusiondiag%fus_product(:)%collimator%colli_poly(:)%setup_line%second_point%phi (vecflt.type) (9.7.1.2.13)	
horchordang2 (2946)	fusiondiag%fus_product(:)%collimator%colli_poly(:)%setup_line%horchordang2 (9.7.1.2.13)	(vecflt.type)
verchordang2 (2946)	fusiondiag%fus_product(:)%collimator%colli_poly(:)%setup_line%verchordang2 (9.7.1.2.13)	(vecflt.type)
third_point (2946)	fusiondiag%fus_product(:)%collimator%colli_poly(:)%setup_line%third_point (9.7.1.3.365)	(rzphi1D)
r (2915)	fusiondiag%fus_product(:)%collimator%colli_poly(:)%setup_line%third_point%r (9.7.1.2.13)	(vecflt.type)
z (2915)	fusiondiag%fus_product(:)%collimator%colli_poly(:)%setup_line%third_point%z (9.7.1.2.13)	(vecflt.type)
phi (2915)	fusiondiag%fus_product(:)%collimator%colli_poly(:)%setup_line%third_point%phi (vecflt.type) (9.7.1.2.13)	
nchordpoints (2946)	fusiondiag%fus_product(:)%collimator%colli_poly(:)%setup_line%nchordpoints (9.7.1.1.2)	(integer)
colliunit (2762)	fusiondiag%fus_product(:)%collimator%colli_poly(:)%colliunit(:) (fusiondiag_colliunit_poly) (9.7.1.3.215)	
dimension (2765)	fusiondiag%fus_product(:)%collimator%colli_poly(:)%colliunit(:)%dimension (9.7.1.1.1)	(float)
nodes (2765)	fusiondiag%fus_product(:)%collimator%colli_poly(:)%colliunit(:)%nodes (9.7.1.3.368)	(rzphi2D)
r (2918)	fusiondiag%fus_product(:)%collimator%colli_poly(:)%colliunit(:)%nodes%r (9.7.1.2.10)	(matflt.type)
z (2918)	fusiondiag%fus_product(:)%collimator%colli_poly(:)%colliunit(:)%nodes%z (9.7.1.2.10)	(matflt.type)
phi (2918)	fusiondiag%fus_product(:)%collimator%colli_poly(:)%colliunit(:)%nodes%phi (9.7.1.2.10)	(matflt.type)
colli_3d (2763)	fusiondiag%fus_product(:)%collimator%colli_3d(:) (fusiondiag_colli_3d) (9.7.1.3.210)	
name (2760)	fusiondiag%fus_product(:)%collimator%colli_3d(:)%name (string) (9.7.1.1.3)	
voxels (2760)	fusiondiag%fus_product(:)%collimator%colli_3d(:)%voxels(:) (fusiondiag_voxels) (9.7.1.3.225)	
centre (2775)	fusiondiag%fus_product(:)%collimator%colli_3d(:)%voxels(:)%centre (rzphi0D) (9.7.1.3.364)	
r (2914)	fusiondiag%fus_product(:)%collimator%colli_3d(:)%voxels(:)%centre%r (float) (9.7.1.1.1)	
z (2914)	fusiondiag%fus_product(:)%collimator%colli_3d(:)%voxels(:)%centre%z (float) (9.7.1.1.1)	
phi (2914)	fusiondiag%fus_product(:)%collimator%colli_3d(:)%voxels(:)%centre%phi (float) (9.7.1.1.1)	
direction (2775)	fusiondiag%fus_product(:)%collimator%colli_3d(:)%voxels(:)%direction (9.7.1.3.364)	(rzphi0D)
r (2914)	fusiondiag%fus_product(:)%collimator%colli_3d(:)%voxels(:)%direction%r (float) (9.7.1.1.1)	
z (2914)	fusiondiag%fus_product(:)%collimator%colli_3d(:)%voxels(:)%direction%z (float) (9.7.1.1.1)	
phi (2914)	fusiondiag%fus_product(:)%collimator%colli_3d(:)%voxels(:)%direction%phi (float) (9.7.1.1.1)	



volume (2775)	fusiondiag%fus_product(:)%collimator%colli_3d(:)%voxels(:)%volume (float) (9.7.1.1.1)
solid_angle (2775)	fusiondiag%fus_product(:)%collimator%colli_3d(:)%voxels(:)%solid_angle (float) (9.7.1.1.1)
counts (2772)	fusiondiag%fus_product(:)%counts (fusiondiag_counts) (9.7.1.3.216)
units (2766)	fusiondiag%fus_product(:)%counts%units (string) (9.7.1.1.3)
ct_chords (2766)	fusiondiag%fus_product(:)%counts%ct_chords(:) (fusiondiag_ct_chords) (9.7.1.3.217)
name (2767)	fusiondiag%fus_product(:)%counts%ct_chords(:)%name (vecstring_type) (9.7.1.2.15)
energy (2767)	fusiondiag%fus_product(:)%counts%ct_chords(:)%energy (exp0D) (9.7.1.3.196)
value (2746)	fusiondiag%fus_product(:)%counts%ct_chords(:)%energy%value (float) (9.7.1.1.1)
abserror (2746)	fusiondiag%fus_product(:)%counts%ct_chords(:)%energy%abserror (float) (9.7.1.1.1)
releror (2746)	fusiondiag%fus_product(:)%counts%ct_chords(:)%energy%releror (float) (9.7.1.1.1)
measure (2767)	fusiondiag%fus_product(:)%counts%ct_chords(:)%measure (exp1D) (9.7.1.3.197)
value (2747)	fusiondiag%fus_product(:)%counts%ct_chords(:)%measure%value (vecflt_type) (9.7.1.2.13)
abserror (2747)	fusiondiag%fus_product(:)%counts%ct_chords(:)%measure%abserror (vecflt_type) (9.7.1.2.13)
releror (2747)	fusiondiag%fus_product(:)%counts%ct_chords(:)%measure%releror (vecflt_type) (9.7.1.2.13)
ct_energy (2766)	fusiondiag%fus_product(:)%counts%ct_energy(:) (fusiondiag_ct_energy) (9.7.1.3.218)
energy (2768)	fusiondiag%fus_product(:)%counts%ct_energy(:)%energy (exp1D) (9.7.1.3.197)
value (2747)	fusiondiag%fus_product(:)%counts%ct_energy(:)%energy%value (vecflt_type) (9.7.1.2.13)
abserror (2747)	fusiondiag%fus_product(:)%counts%ct_energy(:)%energy%abserror (vecflt_type) (9.7.1.2.13)
releror (2747)	fusiondiag%fus_product(:)%counts%ct_energy(:)%energy%releror (vecflt_type) (9.7.1.2.13)
measure (2768)	fusiondiag%fus_product(:)%counts%ct_energy(:)%measure (exp1D) (9.7.1.3.197)
value (2747)	fusiondiag%fus_product(:)%counts%ct_energy(:)%measure%value (vecflt_type) (9.7.1.2.13)
abserror (2747)	fusiondiag%fus_product(:)%counts%ct_energy(:)%measure%abserror (vecflt_type) (9.7.1.2.13)
releror (2747)	fusiondiag%fus_product(:)%counts%ct_energy(:)%measure%releror (vecflt_type) (9.7.1.2.13)
detect_ct (2766)	fusiondiag%fus_product(:)%counts%detect_ct(:) (fusiondiag_detect_ct_energy) (9.7.1.3.219)
energy (2769)	fusiondiag%fus_product(:)%counts%detect_ct(:)%energy (exp1D) (9.7.1.3.197)
value (2747)	fusiondiag%fus_product(:)%counts%detect_ct(:)%energy%value (vecflt_type) (9.7.1.2.13)
abserror (2747)	fusiondiag%fus_product(:)%counts%detect_ct(:)%energy%abserror (vecflt_type) (9.7.1.2.13)
releror (2747)	fusiondiag%fus_product(:)%counts%detect_ct(:)%energy%releror (vecflt_type) (9.7.1.2.13)
measure (2769)	fusiondiag%fus_product(:)%counts%detect_ct(:)%measure (exp1D) (9.7.1.3.197)
value (2747)	fusiondiag%fus_product(:)%counts%detect_ct(:)%measure%value (vecflt_type) (9.7.1.2.13)
abserror (2747)	fusiondiag%fus_product(:)%counts%detect_ct(:)%measure%abserror (vecflt_type) (9.7.1.2.13)
releror (2747)	fusiondiag%fus_product(:)%counts%detect_ct(:)%measure%releror (vecflt_type) (9.7.1.2.13)
diag_func (2769)	fusiondiag%fus_product(:)%counts%detect_ct(:)%diag_func (diag_func) (9.7.1.3.140)
description (2690)	fusiondiag%fus_product(:)%counts%detect_ct(:)%diag_func%description (string) (9.7.1.1.3)
transf_mat (2690)	fusiondiag%fus_product(:)%counts%detect_ct(:)%diag_func%transf_mat (matflt_type) (9.7.1.2.10)
emissivity1d (2772)	fusiondiag%fus_product(:)%emissivity1d (fusiondiag_emissivity1d) (9.7.1.3.220)
units (2770)	fusiondiag%fus_product(:)%emissivity1d%units (string) (9.7.1.1.3)
r (2770)	fusiondiag%fus_product(:)%emissivity1d%r (exp1D) (9.7.1.3.197)
value (2747)	fusiondiag%fus_product(:)%emissivity1d%r%value (vecflt_type) (9.7.1.2.13)
abserror (2747)	fusiondiag%fus_product(:)%emissivity1d%r%abserror (vecflt_type) (9.7.1.2.13)
releror (2747)	fusiondiag%fus_product(:)%emissivity1d%r%releror (vecflt_type) (9.7.1.2.13)
z (2770)	fusiondiag%fus_product(:)%emissivity1d%z (exp1D) (9.7.1.3.197)
value (2747)	fusiondiag%fus_product(:)%emissivity1d%z%value (vecflt_type) (9.7.1.2.13)
abserror (2747)	fusiondiag%fus_product(:)%emissivity1d%z%abserror (vecflt_type) (9.7.1.2.13)
releror (2747)	fusiondiag%fus_product(:)%emissivity1d%z%releror (vecflt_type) (9.7.1.2.13)
spec1d (2770)	fusiondiag%fus_product(:)%emissivity1d%spec1d(:) (fusiondiag_spec1d) (9.7.1.3.223)
energy (2773)	fusiondiag%fus_product(:)%emissivity1d%spec1d(:)%energy (exp0D) (9.7.1.3.196)
value (2746)	fusiondiag%fus_product(:)%emissivity1d%spec1d(:)%energy%value (float) (9.7.1.1.1)
abserror (2746)	fusiondiag%fus_product(:)%emissivity1d%spec1d(:)%energy%abserror (float) (9.7.1.1.1)
releror (2746)	fusiondiag%fus_product(:)%emissivity1d%spec1d(:)%energy%releror (float) (9.7.1.1.1)
measure (2773)	fusiondiag%fus_product(:)%emissivity1d%spec1d(:)%measure (exp1D) (9.7.1.3.197)
value (2747)	fusiondiag%fus_product(:)%emissivity1d%spec1d(:)%measure%value (vecflt_type) (9.7.1.2.13)
abserror (2747)	fusiondiag%fus_product(:)%emissivity1d%spec1d(:)%measure%abserror (vecflt_type) (9.7.1.2.13)
releror (2747)	fusiondiag%fus_product(:)%emissivity1d%spec1d(:)%measure%releror (vecflt_type) (9.7.1.2.13)
emissivity2d (2772)	fusiondiag%fus_product(:)%emissivity2d (fusiondiag_emissivity2d) (9.7.1.3.221)
units (2771)	fusiondiag%fus_product(:)%emissivity2d%units (string) (9.7.1.1.3)
r (2771)	fusiondiag%fus_product(:)%emissivity2d%r (exp2D) (9.7.1.3.198)
value (2748)	fusiondiag%fus_product(:)%emissivity2d%r%value (matflt_type) (9.7.1.2.10)
abserror (2748)	fusiondiag%fus_product(:)%emissivity2d%r%abserror (matflt_type) (9.7.1.2.10)

releror (2748)	fusiondiag%fus_product(:)%emissivity2d%r%releror (matflt.type) (9.7.1.2.10)
z (2771)	fusiondiag%fus_product(:)%emissivity2d%z (exp2D) (9.7.1.3.198)
value (2748)	fusiondiag%fus_product(:)%emissivity2d%z%value (matflt.type) (9.7.1.2.10)
abserror (2748)	fusiondiag%fus_product(:)%emissivity2d%z%abserror (matflt.type) (9.7.1.2.10)
releror (2748)	fusiondiag%fus_product(:)%emissivity2d%z%releror (matflt.type) (9.7.1.2.10)
spec2d (2771)	fusiondiag%fus_product(:)%emissivity2d%spec2d(:) (fusiondiag_spec2d) (9.7.1.3.224)
energy (2774)	fusiondiag%fus_product(:)%emissivity2d%spec2d(:)%energy (exp0D) (9.7.1.3.196)
value (2746)	fusiondiag%fus_product(:)%emissivity2d%spec2d(:)%energy%value (float) (9.7.1.1.1)
abserror (2746)	fusiondiag%fus_product(:)%emissivity2d%spec2d(:)%energy%abserror (float) (9.7.1.1.1)
releror (2746)	fusiondiag%fus_product(:)%emissivity2d%spec2d(:)%energy%releror (float) (9.7.1.1.1)
measure (2774)	fusiondiag%fus_product(:)%emissivity2d%spec2d(:)%measure (exp2D) (9.7.1.3.198)
value (2748)	fusiondiag%fus_product(:)%emissivity2d%spec2d(:)%measure%value (matflt.type) (9.7.1.2.10)
abserror (2748)	fusiondiag%fus_product(:)%emissivity2d%spec2d(:)%measure%abserror (matflt.type) (9.7.1.2.10)
releror (2748)	fusiondiag%fus_product(:)%emissivity2d%spec2d(:)%measure%releror (matflt.type) (9.7.1.2.10)
codeparam (2772)	fusiondiag%fus_product(:)%codeparam (codeparam) (9.7.1.3.77)
codename (2627)	fusiondiag%fus_product(:)%codeparam%codename (string) (9.7.1.1.3)
codeversion (2627)	fusiondiag%fus_product(:)%codeparam%codeversion (string) (9.7.1.1.3)
parameters (2627)	fusiondiag%fus_product(:)%codeparam%parameters (string) (9.7.1.1.3)
output_diag (2627)	fusiondiag%fus_product(:)%codeparam%output_diag (string) (9.7.1.1.3)
output_flag (2627)	fusiondiag%fus_product(:)%codeparam%output_flag (integer) (9.7.1.1.2)
codeparam (2571)	fusiondiag%codeparam (codeparam) (9.7.1.3.77)
codename (2627)	fusiondiag%codeparam%codename (string) (9.7.1.1.3)
codeversion (2627)	fusiondiag%codeparam%codeversion (string) (9.7.1.1.3)
parameters (2627)	fusiondiag%codeparam%parameters (string) (9.7.1.1.3)
output_diag (2627)	fusiondiag%codeparam%output_diag (string) (9.7.1.1.3)
output_flag (2627)	fusiondiag%codeparam%output_flag (integer) (9.7.1.1.2)
time (2571)	fusiondiag%time (float) (9.7.1.1.1)

### 9.7.2.1.20 halphadiag

datainfo (2572)	halphadiag%datainfo (datainfo) (9.7.1.3.134)
dataprovider (2684)	halphadiag%datainfo%dataprovider (string) (9.7.1.1.3)
putdate (2684)	halphadiag%datainfo%putdate (string) (9.7.1.1.3)
source (2684)	halphadiag%datainfo%source (string) (9.7.1.1.3)
comment (2684)	halphadiag%datainfo%comment (string) (9.7.1.1.3)
cocos (2684)	halphadiag%datainfo%cocos (integer) (9.7.1.1.2)
id (2684)	halphadiag%datainfo%id (integer) (9.7.1.1.2)
isref (2684)	halphadiag%datainfo%isref (integer) (9.7.1.1.2)
whatref (2684)	halphadiag%datainfo%whatref (whatref) (9.7.1.3.506)
user (3056)	halphadiag%datainfo%whatref%user (string) (9.7.1.1.3)
machine (3056)	halphadiag%datainfo%whatref%machine (string) (9.7.1.1.3)
shot (3056)	halphadiag%datainfo%whatref%shot (integer) (9.7.1.1.2)
run (3056)	halphadiag%datainfo%whatref%run (integer) (9.7.1.1.2)
occurrence (3056)	halphadiag%datainfo%whatref%occurrence (integer) (9.7.1.1.2)
putinfo (2684)	halphadiag%datainfo%putinfo (putinfo) (9.7.1.3.342)
putmethod (2892)	halphadiag%datainfo%putinfo%putmethod (string) (9.7.1.1.3)
putaccess (2892)	halphadiag%datainfo%putinfo%putaccess (string) (9.7.1.1.3)
putlocation (2892)	halphadiag%datainfo%putinfo%putlocation (string) (9.7.1.1.3)
rights (2892)	halphadiag%datainfo%putinfo%rights (string) (9.7.1.1.3)
setup (2572)	halphadiag%setup (halpha_setup) (9.7.1.3.230)
name (2780)	halphadiag%setup%name (vecstring.type) (9.7.1.2.15)
pivot_point (2780)	halphadiag%setup%pivot_point (rzphi1D) (9.7.1.3.365)
r (2915)	halphadiag%setup%pivot_point%r (vecflt.type) (9.7.1.2.13)
z (2915)	halphadiag%setup%pivot_point%z (vecflt.type) (9.7.1.2.13)
phi (2915)	halphadiag%setup%pivot_point%phi (vecflt.type) (9.7.1.2.13)
horchordang (2780)	halphadiag%setup%horchordang (vecflt.type) (9.7.1.2.13)
verchordang (2780)	halphadiag%setup%verchordang (vecflt.type) (9.7.1.2.13)
second_point (2780)	halphadiag%setup%second_point (rzphi1D) (9.7.1.3.365)
r (2915)	halphadiag%setup%second_point%r (vecflt.type) (9.7.1.2.13)

z (2915)	halphadiag%setup%second_point%z (vecflt.type) (9.7.1.2.13)
phi (2915)	halphadiag%setup%second_point%phi (vecflt.type) (9.7.1.2.13)
solidangle (2780)	halphadiag%setup%solidangle (exp1D) (9.7.1.3.197)
value (2747)	halphadiag%setup%solidangle%value (vecflt.type) (9.7.1.2.13)
abserror (2747)	halphadiag%setup%solidangle%abserror (vecflt.type) (9.7.1.2.13)
releror (2747)	halphadiag%setup%solidangle%releror (vecflt.type) (9.7.1.2.13)
intensity (2572)	halphadiag%intensity (exp1D) (9.7.1.3.197)
value (2747)	halphadiag%intensity%value (vecflt.type) (9.7.1.2.13)
abserror (2747)	halphadiag%intensity%abserror (vecflt.type) (9.7.1.2.13)
releror (2747)	halphadiag%intensity%releror (vecflt.type) (9.7.1.2.13)
codeparam (2572)	halphadiag%codeparam (codeparam) (9.7.1.3.77)
codename (2627)	halphadiag%codeparam%codename (string) (9.7.1.1.3)
codeversion (2627)	halphadiag%codeparam%codeversion (string) (9.7.1.1.3)
parameters (2627)	halphadiag%codeparam%parameters (string) (9.7.1.1.3)
output_diag (2627)	halphadiag%codeparam%output_diag (string) (9.7.1.1.3)
output_flag (2627)	halphadiag%codeparam%output_flag (integer) (9.7.1.1.2)
time (2572)	halphadiag%time (float) (9.7.1.1.1)

### 9.7.2.1.21 heat\_sources

datainfo (2573)	heat_sources%datainfo (datainfo) (9.7.1.3.134)
dataprovider (2684)	heat_sources%datainfo%dataprovider (string) (9.7.1.1.3)
putdate (2684)	heat_sources%datainfo%putdate (string) (9.7.1.1.3)
source (2684)	heat_sources%datainfo%source (string) (9.7.1.1.3)
comment (2684)	heat_sources%datainfo%comment (string) (9.7.1.1.3)
cocos (2684)	heat_sources%datainfo%cocos (integer) (9.7.1.1.2)
id (2684)	heat_sources%datainfo%id (integer) (9.7.1.1.2)
isref (2684)	heat_sources%datainfo%isref (integer) (9.7.1.1.2)
whatref (2684)	heat_sources%datainfo%whatref (whatref) (9.7.1.3.506)
user (3056)	heat_sources%datainfo%whatref%user (string) (9.7.1.1.3)
machine (3056)	heat_sources%datainfo%whatref%machine (string) (9.7.1.1.3)
shot (3056)	heat_sources%datainfo%whatref%shot (integer) (9.7.1.1.2)
run (3056)	heat_sources%datainfo%whatref%run (integer) (9.7.1.1.2)
occurrence (3056)	heat_sources%datainfo%whatref%occurrence (integer) (9.7.1.1.2)
putinfo (2684)	heat_sources%datainfo%putinfo (putinfo) (9.7.1.3.342)
putmethod (2892)	heat_sources%datainfo%putinfo%putmethod (string) (9.7.1.1.3)
putaccess (2892)	heat_sources%datainfo%putinfo%putaccess (string) (9.7.1.1.3)
putlocation (2892)	heat_sources%datainfo%putinfo%putlocation (string) (9.7.1.1.3)
rights (2892)	heat_sources%datainfo%putinfo%rights (string) (9.7.1.1.3)
sources (2573)	heat_sources%sources(:) (calorimetry_heat_source) (9.7.1.3.73)
name (2623)	heat_sources%sources(:)%name (string) (9.7.1.1.3)
temp_in (2623)	heat_sources%sources(:)%temp_in (float) (9.7.1.1.1)
temp_out (2623)	heat_sources%sources(:)%temp_out (float) (9.7.1.1.1)
press_in (2623)	heat_sources%sources(:)%press_in (float) (9.7.1.1.1)
press_out (2623)	heat_sources%sources(:)%press_out (float) (9.7.1.1.1)
flow (2623)	heat_sources%sources(:)%flow (float) (9.7.1.1.1)
power (2623)	heat_sources%sources(:)%power (float) (9.7.1.1.1)
sinks (2573)	heat_sources%sinks(:) (calorimetry_heat_source) (9.7.1.3.73)
name (2623)	heat_sources%sinks(:)%name (string) (9.7.1.1.3)
temp_in (2623)	heat_sources%sinks(:)%temp_in (float) (9.7.1.1.1)
temp_out (2623)	heat_sources%sinks(:)%temp_out (float) (9.7.1.1.1)
press_in (2623)	heat_sources%sinks(:)%press_in (float) (9.7.1.1.1)
press_out (2623)	heat_sources%sinks(:)%press_out (float) (9.7.1.1.1)
flow (2623)	heat_sources%sinks(:)%flow (float) (9.7.1.1.1)
power (2623)	heat_sources%sinks(:)%power (float) (9.7.1.1.1)
codeparam (2573)	heat_sources%codeparam (codeparam) (9.7.1.3.77)
codename (2627)	heat_sources%codeparam%codename (string) (9.7.1.1.3)
codeversion (2627)	heat_sources%codeparam%codeversion (string) (9.7.1.1.3)
parameters (2627)	heat_sources%codeparam%parameters (string) (9.7.1.1.3)
output_diag (2627)	heat_sources%codeparam%output_diag (string) (9.7.1.1.3)
output_flag (2627)	heat_sources%codeparam%output_flag (integer) (9.7.1.1.2)

### 9.7.2.1.22 interfdiag

datainfo (2804)	lineintegraldiag%datainfo (datainfo) (9.7.1.3.134)
dataprovder (2684)	lineintegraldiag%datainfo%dataprovder (string) (9.7.1.1.3)
putdate (2684)	lineintegraldiag%datainfo%putdate (string) (9.7.1.1.3)
source (2684)	lineintegraldiag%datainfo%source (string) (9.7.1.1.3)
comment (2684)	lineintegraldiag%datainfo%comment (string) (9.7.1.1.3)
cocos (2684)	lineintegraldiag%datainfo%cocos (integer) (9.7.1.1.2)
id (2684)	lineintegraldiag%datainfo%id (integer) (9.7.1.1.2)
isref (2684)	lineintegraldiag%datainfo%isref (integer) (9.7.1.1.2)
whatref (2684)	lineintegraldiag%datainfo%whatref (whatref) (9.7.1.3.506)
user (3056)	lineintegraldiag%datainfo%whatref%user (string) (9.7.1.1.3)
machine (3056)	lineintegraldiag%datainfo%whatref%machine (string) (9.7.1.1.3)
shot (3056)	lineintegraldiag%datainfo%whatref%shot (integer) (9.7.1.1.2)
run (3056)	lineintegraldiag%datainfo%whatref%run (integer) (9.7.1.1.2)
occurrence (3056)	lineintegraldiag%datainfo%whatref%occurrence (integer) (9.7.1.1.2)
putinfo (2684)	lineintegraldiag%datainfo%putinfo (putinfo) (9.7.1.3.342)
putmethod (2892)	lineintegraldiag%datainfo%putinfo%putmethod (string) (9.7.1.1.3)
putaccess (2892)	lineintegraldiag%datainfo%putinfo%putaccess (string) (9.7.1.1.3)
putlocation (2892)	lineintegraldiag%datainfo%putinfo%putlocation (string) (9.7.1.1.3)
rights (2892)	lineintegraldiag%datainfo%putinfo%rights (string) (9.7.1.1.3)
expression (2804)	lineintegraldiag%expression (string) (9.7.1.1.3)
setup_line (2804)	lineintegraldiag%setup_line (setup_line) (9.7.1.3.396)
pivot_point (2946)	lineintegraldiag%setup_line%pivot_point (rzphi1D) (9.7.1.3.365)
r (2915)	lineintegraldiag%setup_line%pivot_point%r (vecflt.type) (9.7.1.2.13)
z (2915)	lineintegraldiag%setup_line%pivot_point%z (vecflt.type) (9.7.1.2.13)
phi (2915)	lineintegraldiag%setup_line%pivot_point%phi (vecflt.type) (9.7.1.2.13)
horchordang1 (2946)	lineintegraldiag%setup_line%horchordang1 (vecflt.type) (9.7.1.2.13)
verchordang1 (2946)	lineintegraldiag%setup_line%verchordang1 (vecflt.type) (9.7.1.2.13)
width (2946)	lineintegraldiag%setup_line%width (vecflt.type) (9.7.1.2.13)
second_point (2946)	lineintegraldiag%setup_line%second_point (rzphi1D) (9.7.1.3.365)
r (2915)	lineintegraldiag%setup_line%second_point%r (vecflt.type) (9.7.1.2.13)
z (2915)	lineintegraldiag%setup_line%second_point%z (vecflt.type) (9.7.1.2.13)
phi (2915)	lineintegraldiag%setup_line%second_point%phi (vecflt.type) (9.7.1.2.13)
horchordang2 (2946)	lineintegraldiag%setup_line%horchordang2 (vecflt.type) (9.7.1.2.13)
verchordang2 (2946)	lineintegraldiag%setup_line%verchordang2 (vecflt.type) (9.7.1.2.13)
third_point (2946)	lineintegraldiag%setup_line%third_point (rzphi1D) (9.7.1.3.365)
r (2915)	lineintegraldiag%setup_line%third_point%r (vecflt.type) (9.7.1.2.13)
z (2915)	lineintegraldiag%setup_line%third_point%z (vecflt.type) (9.7.1.2.13)
phi (2915)	lineintegraldiag%setup_line%third_point%phi (vecflt.type) (9.7.1.2.13)
nchordpoints (2946)	lineintegraldiag%setup_line%nchordpoints (integer) (9.7.1.1.2)
measure (2804)	lineintegraldiag%measure (exp1D) (9.7.1.3.197)
value (2747)	lineintegraldiag%measure%value (vecflt.type) (9.7.1.2.13)
abserror (2747)	lineintegraldiag%measure%abserror (vecflt.type) (9.7.1.2.13)
relerror (2747)	lineintegraldiag%measure%relerror (vecflt.type) (9.7.1.2.13)
codeparam (2804)	lineintegraldiag%codeparam (codeparam) (9.7.1.3.77)
codename (2627)	lineintegraldiag%codeparam%codename (string) (9.7.1.1.3)
codeversion (2627)	lineintegraldiag%codeparam%codeversion (string) (9.7.1.1.3)
parameters (2627)	lineintegraldiag%codeparam%parameters (string) (9.7.1.1.3)
output_diag (2627)	lineintegraldiag%codeparam%output_diag (string) (9.7.1.1.3)
output_flag (2627)	lineintegraldiag%codeparam%output_flag (integer) (9.7.1.1.2)
time (2804)	lineintegraldiag%time (float) (9.7.1.1.1)

### 9.7.2.1.23 ironmodel

datainfo (2575)	ironmodel%datainfo (datainfo) (9.7.1.3.134)
dataprovder (2684)	ironmodel%datainfo%dataprovder (string) (9.7.1.1.3)
putdate (2684)	ironmodel%datainfo%putdate (string) (9.7.1.1.3)
source (2684)	ironmodel%datainfo%source (string) (9.7.1.1.3)

comment (2684)	ironmodel%datainfo%comment (string) (9.7.1.1.3)
cocos (2684)	ironmodel%datainfo%cocos (integer) (9.7.1.1.2)
id (2684)	ironmodel%datainfo%id (integer) (9.7.1.1.2)
isref (2684)	ironmodel%datainfo%isref (integer) (9.7.1.1.2)
whatref (2684)	ironmodel%datainfo%whatref (whatref) (9.7.1.3.506)
user (3056)	ironmodel%datainfo%whatref%user (string) (9.7.1.1.3)
machine (3056)	ironmodel%datainfo%whatref%machine (string) (9.7.1.1.3)
shot (3056)	ironmodel%datainfo%whatref%shot (integer) (9.7.1.1.2)
run (3056)	ironmodel%datainfo%whatref%run (integer) (9.7.1.1.2)
occurrence (3056)	ironmodel%datainfo%whatref%occurrence (integer) (9.7.1.1.2)
putinfo (2684)	ironmodel%datainfo%putinfo (putinfo) (9.7.1.3.342)
putmethod (2892)	ironmodel%datainfo%putinfo%putmethod (string) (9.7.1.1.3)
putaccess (2892)	ironmodel%datainfo%putinfo%putaccess (string) (9.7.1.1.3)
putlocation (2892)	ironmodel%datainfo%putinfo%putlocation (string) (9.7.1.1.3)
rights (2892)	ironmodel%datainfo%putinfo%rights (string) (9.7.1.1.3)
desc_iron (2575)	ironmodel%desc_iron (desc_iron) (9.7.1.3.137)
name (2687)	ironmodel%desc_iron%name (vecstring_type) (9.7.1.2.15)
id (2687)	ironmodel%desc_iron%id (vecstring_type) (9.7.1.2.15)
permeability (2687)	ironmodel%desc_iron%permeability (permeability) (9.7.1.3.320)
b (2870)	ironmodel%desc_iron%permeability%b (matflt_type) (9.7.1.2.10)
mur (2870)	ironmodel%desc_iron%permeability%mur (matflt_type) (9.7.1.2.10)
geom_iron (2687)	ironmodel%desc_iron%geom_iron (geom_iron) (9.7.1.3.227)
npoints (2777)	ironmodel%desc_iron%geom_iron%npoints (vecint_type) (9.7.1.2.14)
rzcoordinate (2777)	ironmodel%desc_iron%geom_iron%rzcoordinate (rz2D) (9.7.1.3.362)
r (2912)	ironmodel%desc_iron%geom_iron%rzcoordinate%r (matflt_type) (9.7.1.2.10)
z (2912)	ironmodel%desc_iron%geom_iron%rzcoordinate%z (matflt_type) (9.7.1.2.10)
magnetise (2575)	ironmodel%magnetise (magnetise) (9.7.1.3.260)
mr (2810)	ironmodel%magnetise%mr (exp1D) (9.7.1.3.197)
value (2747)	ironmodel%magnetise%mr%value (vecflt_type) (9.7.1.2.13)
abserror (2747)	ironmodel%magnetise%mr%abserror (vecflt_type) (9.7.1.2.13)
relelror (2747)	ironmodel%magnetise%mr%relelror (vecflt_type) (9.7.1.2.13)
mz (2810)	ironmodel%magnetise%mz (exp1D) (9.7.1.3.197)
value (2747)	ironmodel%magnetise%mz%value (vecflt_type) (9.7.1.2.13)
abserror (2747)	ironmodel%magnetise%mz%abserror (vecflt_type) (9.7.1.2.13)
relelror (2747)	ironmodel%magnetise%mz%relelror (vecflt_type) (9.7.1.2.13)
codeparam (2575)	ironmodel%codeparam (codeparam) (9.7.1.3.77)
codename (2627)	ironmodel%codeparam%codename (string) (9.7.1.1.3)
codeversion (2627)	ironmodel%codeparam%codeversion (string) (9.7.1.1.3)
parameters (2627)	ironmodel%codeparam%parameters (string) (9.7.1.1.3)
output_diag (2627)	ironmodel%codeparam%output_diag (string) (9.7.1.1.3)
output_flag (2627)	ironmodel%codeparam%output_flag (integer) (9.7.1.1.2)
time (2575)	ironmodel%time (float) (9.7.1.1.1)

### 9.7.2.1.24 langmuirdiag

datainfo (2576)	langmuirdiag%datainfo (datainfo) (9.7.1.3.134)
dataprovider (2684)	langmuirdiag%datainfo%dataprovider (string) (9.7.1.1.3)
putdate (2684)	langmuirdiag%datainfo%putdate (string) (9.7.1.1.3)
source (2684)	langmuirdiag%datainfo%source (string) (9.7.1.1.3)
comment (2684)	langmuirdiag%datainfo%comment (string) (9.7.1.1.3)
cocos (2684)	langmuirdiag%datainfo%cocos (integer) (9.7.1.1.2)
id (2684)	langmuirdiag%datainfo%id (integer) (9.7.1.1.2)
isref (2684)	langmuirdiag%datainfo%isref (integer) (9.7.1.1.2)
whatref (2684)	langmuirdiag%datainfo%whatref (whatref) (9.7.1.3.506)
user (3056)	langmuirdiag%datainfo%whatref%user (string) (9.7.1.1.3)
machine (3056)	langmuirdiag%datainfo%whatref%machine (string) (9.7.1.1.3)
shot (3056)	langmuirdiag%datainfo%whatref%shot (integer) (9.7.1.1.2)
run (3056)	langmuirdiag%datainfo%whatref%run (integer) (9.7.1.1.2)
occurrence (3056)	langmuirdiag%datainfo%whatref%occurrence (integer) (9.7.1.1.2)
putinfo (2684)	langmuirdiag%datainfo%putinfo (putinfo) (9.7.1.3.342)
putmethod (2892)	langmuirdiag%datainfo%putinfo%putmethod (string) (9.7.1.1.3)

putaccess (2892)	langmuirdiag%datainfo%putinfo%putaccess (string) (9.7.1.1.3)
putlocation (2892)	langmuirdiag%datainfo%putinfo%putlocation (string) (9.7.1.1.3)
rights (2892)	langmuirdiag%datainfo%putinfo%rights (string) (9.7.1.1.3)
potential (2576)	langmuirdiag%potential (lang_measure) (9.7.1.3.244)
name (2794)	langmuirdiag%potential%name (vecstring_type) (9.7.1.2.15)
direction (2794)	langmuirdiag%potential%direction (vecstring_type) (9.7.1.2.15)
area (2794)	langmuirdiag%potential%area (exp1D) (9.7.1.3.197)
value (2747)	langmuirdiag%potential%area%value (vecflt_type) (9.7.1.2.13)
abserror (2747)	langmuirdiag%potential%area%abserror (vecflt_type) (9.7.1.2.13)
releror (2747)	langmuirdiag%potential%area%releror (vecflt_type) (9.7.1.2.13)
position (2794)	langmuirdiag%potential%position (rzphi1Dexp) (9.7.1.3.366)
r (2916)	langmuirdiag%potential%position%r (exp1D) (9.7.1.3.197)
value (2747)	langmuirdiag%potential%position%r%value (vecflt_type) (9.7.1.2.13)
abserror (2747)	langmuirdiag%potential%position%r%abserror (vecflt_type) (9.7.1.2.13)
releror (2747)	langmuirdiag%potential%position%r%releror (vecflt_type) (9.7.1.2.13)
z (2916)	langmuirdiag%potential%position%z (exp1D) (9.7.1.3.197)
value (2747)	langmuirdiag%potential%position%z%value (vecflt_type) (9.7.1.2.13)
abserror (2747)	langmuirdiag%potential%position%z%abserror (vecflt_type) (9.7.1.2.13)
releror (2747)	langmuirdiag%potential%position%z%releror (vecflt_type) (9.7.1.2.13)
phi (2916)	langmuirdiag%potential%position%phi (exp1D) (9.7.1.3.197)
value (2747)	langmuirdiag%potential%position%phi%value (vecflt_type) (9.7.1.2.13)
abserror (2747)	langmuirdiag%potential%position%phi%abserror (vecflt_type) (9.7.1.2.13)
releror (2747)	langmuirdiag%potential%position%phi%releror (vecflt_type) (9.7.1.2.13)
measure (2794)	langmuirdiag%potential%measure (exp1D) (9.7.1.3.197)
value (2747)	langmuirdiag%potential%measure%value (vecflt_type) (9.7.1.2.13)
abserror (2747)	langmuirdiag%potential%measure%abserror (vecflt_type) (9.7.1.2.13)
releror (2747)	langmuirdiag%potential%measure%releror (vecflt_type) (9.7.1.2.13)
bias (2576)	langmuirdiag%bias (lang_measure) (9.7.1.3.244)
name (2794)	langmuirdiag%bias%name (vecstring_type) (9.7.1.2.15)
direction (2794)	langmuirdiag%bias%direction (vecstring_type) (9.7.1.2.15)
area (2794)	langmuirdiag%bias%area (exp1D) (9.7.1.3.197)
value (2747)	langmuirdiag%bias%area%value (vecflt_type) (9.7.1.2.13)
abserror (2747)	langmuirdiag%bias%area%abserror (vecflt_type) (9.7.1.2.13)
releror (2747)	langmuirdiag%bias%area%releror (vecflt_type) (9.7.1.2.13)
position (2794)	langmuirdiag%bias%position (rzphi1Dexp) (9.7.1.3.366)
r (2916)	langmuirdiag%bias%position%r (exp1D) (9.7.1.3.197)
value (2747)	langmuirdiag%bias%position%r%value (vecflt_type) (9.7.1.2.13)
abserror (2747)	langmuirdiag%bias%position%r%abserror (vecflt_type) (9.7.1.2.13)
releror (2747)	langmuirdiag%bias%position%r%releror (vecflt_type) (9.7.1.2.13)
z (2916)	langmuirdiag%bias%position%z (exp1D) (9.7.1.3.197)
value (2747)	langmuirdiag%bias%position%z%value (vecflt_type) (9.7.1.2.13)
abserror (2747)	langmuirdiag%bias%position%z%abserror (vecflt_type) (9.7.1.2.13)
releror (2747)	langmuirdiag%bias%position%z%releror (vecflt_type) (9.7.1.2.13)
phi (2916)	langmuirdiag%bias%position%phi (exp1D) (9.7.1.3.197)
value (2747)	langmuirdiag%bias%position%phi%value (vecflt_type) (9.7.1.2.13)
abserror (2747)	langmuirdiag%bias%position%phi%abserror (vecflt_type) (9.7.1.2.13)
releror (2747)	langmuirdiag%bias%position%phi%releror (vecflt_type) (9.7.1.2.13)
measure (2794)	langmuirdiag%bias%measure (exp1D) (9.7.1.3.197)
value (2747)	langmuirdiag%bias%measure%value (vecflt_type) (9.7.1.2.13)
abserror (2747)	langmuirdiag%bias%measure%abserror (vecflt_type) (9.7.1.2.13)
releror (2747)	langmuirdiag%bias%measure%releror (vecflt_type) (9.7.1.2.13)
jsat (2576)	langmuirdiag%jsat (lang_measure) (9.7.1.3.244)
name (2794)	langmuirdiag%jsat%name (vecstring_type) (9.7.1.2.15)
direction (2794)	langmuirdiag%jsat%direction (vecstring_type) (9.7.1.2.15)
area (2794)	langmuirdiag%jsat%area (exp1D) (9.7.1.3.197)
value (2747)	langmuirdiag%jsat%area%value (vecflt_type) (9.7.1.2.13)
abserror (2747)	langmuirdiag%jsat%area%abserror (vecflt_type) (9.7.1.2.13)
releror (2747)	langmuirdiag%jsat%area%releror (vecflt_type) (9.7.1.2.13)
position (2794)	langmuirdiag%jsat%position (rzphi1Dexp) (9.7.1.3.366)
r (2916)	langmuirdiag%jsat%position%r (exp1D) (9.7.1.3.197)
value (2747)	langmuirdiag%jsat%position%r%value (vecflt_type) (9.7.1.2.13)



abserror (2747)	langmuirdiag%jsat%position%r%abserror (vecflt_type) (9.7.1.2.13)
releror (2747)	langmuirdiag%jsat%position%r%releror (vecflt_type) (9.7.1.2.13)
z (2916)	langmuirdiag%jsat%position%z (exp1D) (9.7.1.3.197)
value (2747)	langmuirdiag%jsat%position%z%value (vecflt_type) (9.7.1.2.13)
abserror (2747)	langmuirdiag%jsat%position%z%abserror (vecflt_type) (9.7.1.2.13)
releror (2747)	langmuirdiag%jsat%position%z%releror (vecflt_type) (9.7.1.2.13)
phi (2916)	langmuirdiag%jsat%position%phi (exp1D) (9.7.1.3.197)
value (2747)	langmuirdiag%jsat%position%phi%value (vecflt_type) (9.7.1.2.13)
abserror (2747)	langmuirdiag%jsat%position%phi%abserror (vecflt_type) (9.7.1.2.13)
releror (2747)	langmuirdiag%jsat%position%phi%releror (vecflt_type) (9.7.1.2.13)
measure (2794)	langmuirdiag%jsat%measure (exp1D) (9.7.1.3.197)
value (2747)	langmuirdiag%jsat%measure%value (vecflt_type) (9.7.1.2.13)
abserror (2747)	langmuirdiag%jsat%measure%abserror (vecflt_type) (9.7.1.2.13)
releror (2747)	langmuirdiag%jsat%measure%releror (vecflt_type) (9.7.1.2.13)
ne (2576)	langmuirdiag%ne (lang_derived) (9.7.1.3.243)
source (2793)	langmuirdiag%ne%source (vecstring_type) (9.7.1.2.15)
position (2793)	langmuirdiag%ne%position (rzphi1Dexp) (9.7.1.3.366)
r (2916)	langmuirdiag%ne%position%r (exp1D) (9.7.1.3.197)
value (2747)	langmuirdiag%ne%position%r%value (vecflt_type) (9.7.1.2.13)
abserror (2747)	langmuirdiag%ne%position%r%abserror (vecflt_type) (9.7.1.2.13)
releror (2747)	langmuirdiag%ne%position%r%releror (vecflt_type) (9.7.1.2.13)
z (2916)	langmuirdiag%ne%position%z (exp1D) (9.7.1.3.197)
value (2747)	langmuirdiag%ne%position%z%value (vecflt_type) (9.7.1.2.13)
abserror (2747)	langmuirdiag%ne%position%z%abserror (vecflt_type) (9.7.1.2.13)
releror (2747)	langmuirdiag%ne%position%z%releror (vecflt_type) (9.7.1.2.13)
phi (2916)	langmuirdiag%ne%position%phi (exp1D) (9.7.1.3.197)
value (2747)	langmuirdiag%ne%position%phi%value (vecflt_type) (9.7.1.2.13)
abserror (2747)	langmuirdiag%ne%position%phi%abserror (vecflt_type) (9.7.1.2.13)
releror (2747)	langmuirdiag%ne%position%phi%releror (vecflt_type) (9.7.1.2.13)
measure (2793)	langmuirdiag%ne%measure (exp1D) (9.7.1.3.197)
value (2747)	langmuirdiag%ne%measure%value (vecflt_type) (9.7.1.2.13)
abserror (2747)	langmuirdiag%ne%measure%abserror (vecflt_type) (9.7.1.2.13)
releror (2747)	langmuirdiag%ne%measure%releror (vecflt_type) (9.7.1.2.13)
te (2576)	langmuirdiag%te (lang_derived) (9.7.1.3.243)
source (2793)	langmuirdiag%te%source (vecstring_type) (9.7.1.2.15)
position (2793)	langmuirdiag%te%position (rzphi1Dexp) (9.7.1.3.366)
r (2916)	langmuirdiag%te%position%r (exp1D) (9.7.1.3.197)
value (2747)	langmuirdiag%te%position%r%value (vecflt_type) (9.7.1.2.13)
abserror (2747)	langmuirdiag%te%position%r%abserror (vecflt_type) (9.7.1.2.13)
releror (2747)	langmuirdiag%te%position%r%releror (vecflt_type) (9.7.1.2.13)
z (2916)	langmuirdiag%te%position%z (exp1D) (9.7.1.3.197)
value (2747)	langmuirdiag%te%position%z%value (vecflt_type) (9.7.1.2.13)
abserror (2747)	langmuirdiag%te%position%z%abserror (vecflt_type) (9.7.1.2.13)
releror (2747)	langmuirdiag%te%position%z%releror (vecflt_type) (9.7.1.2.13)
phi (2916)	langmuirdiag%te%position%phi (exp1D) (9.7.1.3.197)
value (2747)	langmuirdiag%te%position%phi%value (vecflt_type) (9.7.1.2.13)
abserror (2747)	langmuirdiag%te%position%phi%abserror (vecflt_type) (9.7.1.2.13)
releror (2747)	langmuirdiag%te%position%phi%releror (vecflt_type) (9.7.1.2.13)
measure (2793)	langmuirdiag%te%measure (exp1D) (9.7.1.3.197)
value (2747)	langmuirdiag%te%measure%value (vecflt_type) (9.7.1.2.13)
abserror (2747)	langmuirdiag%te%measure%abserror (vecflt_type) (9.7.1.2.13)
releror (2747)	langmuirdiag%te%measure%releror (vecflt_type) (9.7.1.2.13)
machpar (2576)	langmuirdiag%machpar (lang_derived) (9.7.1.3.243)
source (2793)	langmuirdiag%machpar%source (vecstring_type) (9.7.1.2.15)
position (2793)	langmuirdiag%machpar%position (rzphi1Dexp) (9.7.1.3.366)
r (2916)	langmuirdiag%machpar%position%r (exp1D) (9.7.1.3.197)
value (2747)	langmuirdiag%machpar%position%r%value (vecflt_type) (9.7.1.2.13)
abserror (2747)	langmuirdiag%machpar%position%r%abserror (vecflt_type) (9.7.1.2.13)
releror (2747)	langmuirdiag%machpar%position%r%releror (vecflt_type) (9.7.1.2.13)
z (2916)	langmuirdiag%machpar%position%z (exp1D) (9.7.1.3.197)
value (2747)	langmuirdiag%machpar%position%z%value (vecflt_type) (9.7.1.2.13)



abserror (2747)	langmuirdiag%machpar%position%z%abserror (vecflt_type) (9.7.1.2.13)
releror (2747)	langmuirdiag%machpar%position%z%releror (vecflt_type) (9.7.1.2.13)
phi (2916)	langmuirdiag%machpar%position%phi (exp1D) (9.7.1.3.197)
value (2747)	langmuirdiag%machpar%position%phi%value (vecflt_type) (9.7.1.2.13)
abserror (2747)	langmuirdiag%machpar%position%phi%abserror (vecflt_type) (9.7.1.2.13)
releror (2747)	langmuirdiag%machpar%position%phi%releror (vecflt_type) (9.7.1.2.13)
measure (2793)	langmuirdiag%machpar%measure (exp1D) (9.7.1.3.197)
value (2747)	langmuirdiag%machpar%measure%value (vecflt_type) (9.7.1.2.13)
abserror (2747)	langmuirdiag%machpar%measure%abserror (vecflt_type) (9.7.1.2.13)
releror (2747)	langmuirdiag%machpar%measure%releror (vecflt_type) (9.7.1.2.13)
codeparam (2576)	langmuirdiag%codeparam (codeparam) (9.7.1.3.77)
codename (2627)	langmuirdiag%codeparam%codename (string) (9.7.1.1.3)
codeversion (2627)	langmuirdiag%codeparam%codeversion (string) (9.7.1.1.3)
parameters (2627)	langmuirdiag%codeparam%parameters (string) (9.7.1.1.3)
output_diag (2627)	langmuirdiag%codeparam%output_diag (string) (9.7.1.1.3)
output_flag (2627)	langmuirdiag%codeparam%output_flag (integer) (9.7.1.1.2)
time (2576)	langmuirdiag%time (float) (9.7.1.1.1)

### 9.7.2.1.25 launches

datainfo (2577)	launchs%datainfo (datainfo) (9.7.1.3.134)
dataprovider (2684)	launchs%datainfo%dataprovider (string) (9.7.1.1.3)
putdate (2684)	launchs%datainfo%putdate (string) (9.7.1.1.3)
source (2684)	launchs%datainfo%source (string) (9.7.1.1.3)
comment (2684)	launchs%datainfo%comment (string) (9.7.1.1.3)
cocos (2684)	launchs%datainfo%cocos (integer) (9.7.1.1.2)
id (2684)	launchs%datainfo%id (integer) (9.7.1.1.2)
isref (2684)	launchs%datainfo%isref (integer) (9.7.1.1.2)
whatref (2684)	launchs%datainfo%whatref (whatref) (9.7.1.3.506)
user (3056)	launchs%datainfo%whatref%user (string) (9.7.1.1.3)
machine (3056)	launchs%datainfo%whatref%machine (string) (9.7.1.1.3)
shot (3056)	launchs%datainfo%whatref%shot (integer) (9.7.1.1.2)
run (3056)	launchs%datainfo%whatref%run (integer) (9.7.1.1.2)
occurrence (3056)	launchs%datainfo%whatref%occurrence (integer) (9.7.1.1.2)
putinfo (2684)	launchs%datainfo%putinfo (putinfo) (9.7.1.3.342)
putmethod (2892)	launchs%datainfo%putinfo%putmethod (string) (9.7.1.1.3)
putaccess (2892)	launchs%datainfo%putinfo%putaccess (string) (9.7.1.1.3)
putlocation (2892)	launchs%datainfo%putinfo%putlocation (string) (9.7.1.1.3)
rights (2892)	launchs%datainfo%putinfo%rights (string) (9.7.1.1.3)
name (2577)	launchs%name (vecstring_type) (9.7.1.2.15)
type (2577)	launchs%type (vecstring_type) (9.7.1.2.15)
frequency (2577)	launchs%frequency (vecflt_type) (9.7.1.2.13)
mode (2577)	launchs%mode (vecint_type) (9.7.1.2.14)
position (2577)	launchs%position (rzphi1D) (9.7.1.3.365)
r (2915)	launchs%position%r (vecflt_type) (9.7.1.2.13)
z (2915)	launchs%position%z (vecflt_type) (9.7.1.2.13)
phi (2915)	launchs%position%phi (vecflt_type) (9.7.1.2.13)
spectrum (2577)	launchs%spectrum (spectrum) (9.7.1.3.413)
phi_theta (2963)	launchs%spectrum%phi_theta (launchs_phi_theta) (9.7.1.3.247)
nn_phi (2797)	launchs%spectrum%phi_theta%nn_phi (vecint_type) (9.7.1.2.14)
nn_theta (2797)	launchs%spectrum%phi_theta%nn_theta (vecint_type) (9.7.1.2.14)
n_phi (2797)	launchs%spectrum%phi_theta%n_phi (matflt_type) (9.7.1.2.10)
n_theta (2797)	launchs%spectrum%phi_theta%n_theta (matflt_type) (9.7.1.2.10)
power (2797)	launchs%spectrum%phi_theta%power (array3dflt_type) (9.7.1.2.2)
parallel (2963)	launchs%spectrum%parallel (launchs_parallel) (9.7.1.3.246)
nn_par (2796)	launchs%spectrum%parallel%nn_par (vecint_type) (9.7.1.2.14)
n_par (2796)	launchs%spectrum%parallel%n_par (matflt_type) (9.7.1.2.10)
power (2796)	launchs%spectrum%parallel%power (vecflt_type) (9.7.1.2.13)
beam (2577)	launchs%beam (launchs_rfbeam) (9.7.1.3.248)
spot (2798)	launchs%beam%spot (launchs_rfbeam_spot) (9.7.1.3.250)
waist (2800)	launchs%beam%spot%waist (matflt_type) (9.7.1.2.10)

angle (2800)	launchs%beam%spot%angle (vecflt.type) (9.7.1.2.13)
phaseellipse (2798)	launchs%beam%phaseellipse (launchs_rfbeam_phaseellipse) (9.7.1.3.249)
invcurvrad (2799)	launchs%beam%phaseellipse%invcurvrad (matflt.type) (9.7.1.2.10)
angle (2799)	launchs%beam%phaseellipse%angle (vecflt.type) (9.7.1.2.13)
codeparam (2577)	launchs%codeparam (codeparam) (9.7.1.3.77)
codename (2627)	launchs%codeparam%codename (string) (9.7.1.1.3)
codeversion (2627)	launchs%codeparam%codeversion (string) (9.7.1.1.3)
parameters (2627)	launchs%codeparam%parameters (string) (9.7.1.1.3)
output_diag (2627)	launchs%codeparam%output_diag (string) (9.7.1.1.3)
output_flag (2627)	launchs%codeparam%output_flag (integer) (9.7.1.1.2)
time (2577)	launchs%time (float) (9.7.1.1.1)

### 9.7.2.1.26 lithiumdiag

datainfo (2578)	lithiumdiag%datainfo (datainfo) (9.7.1.3.134)
dataprovder (2684)	lithiumdiag%datainfo%dataprovder (string) (9.7.1.1.3)
putdate (2684)	lithiumdiag%datainfo%putdate (string) (9.7.1.1.3)
source (2684)	lithiumdiag%datainfo%source (string) (9.7.1.1.3)
comment (2684)	lithiumdiag%datainfo%comment (string) (9.7.1.1.3)
cocos (2684)	lithiumdiag%datainfo%cocos (integer) (9.7.1.1.2)
id (2684)	lithiumdiag%datainfo%id (integer) (9.7.1.1.2)
isref (2684)	lithiumdiag%datainfo%isref (integer) (9.7.1.1.2)
whatref (2684)	lithiumdiag%datainfo%whatref (whatref) (9.7.1.3.506)
user (3056)	lithiumdiag%datainfo%whatref%user (string) (9.7.1.1.3)
machine (3056)	lithiumdiag%datainfo%whatref%machine (string) (9.7.1.1.3)
shot (3056)	lithiumdiag%datainfo%whatref%shot (integer) (9.7.1.1.2)
run (3056)	lithiumdiag%datainfo%whatref%run (integer) (9.7.1.1.2)
occurrence (3056)	lithiumdiag%datainfo%whatref%occurrence (integer) (9.7.1.1.2)
putinfo (2684)	lithiumdiag%datainfo%putinfo (putinfo) (9.7.1.3.342)
putmethod (2892)	lithiumdiag%datainfo%putinfo%putmethod (string) (9.7.1.1.3)
putaccess (2892)	lithiumdiag%datainfo%putinfo%putaccess (string) (9.7.1.1.3)
putlocation (2892)	lithiumdiag%datainfo%putinfo%putlocation (string) (9.7.1.1.3)
rights (2892)	lithiumdiag%datainfo%putinfo%rights (string) (9.7.1.1.3)
setup (2578)	lithiumdiag%setup (lithsetup) (9.7.1.3.256)
position (2806)	lithiumdiag%setup%position (rzphi1D) (9.7.1.3.365)
r (2915)	lithiumdiag%setup%position%r (vecflt.type) (9.7.1.2.13)
z (2915)	lithiumdiag%setup%position%z (vecflt.type) (9.7.1.2.13)
phi (2915)	lithiumdiag%setup%position%phi (vecflt.type) (9.7.1.2.13)
measure (2578)	lithiumdiag%measure (lithmeasure) (9.7.1.3.255)
ne (2805)	lithiumdiag%measure%ne (exp1D) (9.7.1.3.197)
value (2747)	lithiumdiag%measure%ne%value (vecflt.type) (9.7.1.2.13)
abserror (2747)	lithiumdiag%measure%ne%abserror (vecflt.type) (9.7.1.2.13)
releror (2747)	lithiumdiag%measure%ne%releror (vecflt.type) (9.7.1.2.13)
codeparam (2578)	lithiumdiag%codeparam (codeparam) (9.7.1.3.77)
codename (2627)	lithiumdiag%codeparam%codename (string) (9.7.1.1.3)
codeversion (2627)	lithiumdiag%codeparam%codeversion (string) (9.7.1.1.3)
parameters (2627)	lithiumdiag%codeparam%parameters (string) (9.7.1.1.3)
output_diag (2627)	lithiumdiag%codeparam%output_diag (string) (9.7.1.1.3)
output_flag (2627)	lithiumdiag%codeparam%output_flag (integer) (9.7.1.1.2)
time (2578)	lithiumdiag%time (float) (9.7.1.1.1)

### 9.7.2.1.27 magdiag

datainfo (2579)	magdiag%datainfo (datainfo) (9.7.1.3.134)
dataprovder (2684)	magdiag%datainfo%dataprovder (string) (9.7.1.1.3)
putdate (2684)	magdiag%datainfo%putdate (string) (9.7.1.1.3)
source (2684)	magdiag%datainfo%source (string) (9.7.1.1.3)
comment (2684)	magdiag%datainfo%comment (string) (9.7.1.1.3)
cocos (2684)	magdiag%datainfo%cocos (integer) (9.7.1.1.2)
id (2684)	magdiag%datainfo%id (integer) (9.7.1.1.2)
isref (2684)	magdiag%datainfo%isref (integer) (9.7.1.1.2)

whatref (2684)	magdiag%datainfo%whatref (whatref) (9.7.1.3.506)
user (3056)	magdiag%datainfo%whatref%user (string) (9.7.1.1.3)
machine (3056)	magdiag%datainfo%whatref%machine (string) (9.7.1.1.3)
shot (3056)	magdiag%datainfo%whatref%shot (integer) (9.7.1.1.2)
run (3056)	magdiag%datainfo%whatref%run (integer) (9.7.1.1.2)
occurrence (3056)	magdiag%datainfo%whatref%occurrence (integer) (9.7.1.1.2)
putinfo (2684)	magdiag%datainfo%putinfo (putinfo) (9.7.1.3.342)
putmethod (2892)	magdiag%datainfo%putinfo%putmethod (string) (9.7.1.1.3)
putaccess (2892)	magdiag%datainfo%putinfo%putaccess (string) (9.7.1.1.3)
putlocation (2892)	magdiag%datainfo%putinfo%putlocation (string) (9.7.1.1.3)
rights (2892)	magdiag%datainfo%putinfo%rights (string) (9.7.1.1.3)
ip (2579)	magdiag%ip (exp0D) (9.7.1.3.196)
value (2746)	magdiag%ip%value (float) (9.7.1.1.1)
abserror (2746)	magdiag%ip%abserror (float) (9.7.1.1.1)
releror (2746)	magdiag%ip%releror (float) (9.7.1.1.1)
diamagflux (2579)	magdiag%diamagflux (exp0D) (9.7.1.3.196)
value (2746)	magdiag%diamagflux%value (float) (9.7.1.1.1)
abserror (2746)	magdiag%diamagflux%abserror (float) (9.7.1.1.1)
releror (2746)	magdiag%diamagflux%releror (float) (9.7.1.1.1)
diamagener (2579)	magdiag%diamagener (exp0D) (9.7.1.3.196)
value (2746)	magdiag%diamagener%value (float) (9.7.1.1.1)
abserror (2746)	magdiag%diamagener%abserror (float) (9.7.1.1.1)
releror (2746)	magdiag%diamagener%releror (float) (9.7.1.1.1)
flux_loops (2579)	magdiag%flux_loops (flux_loops) (9.7.1.3.204)
setup_floops (2754)	magdiag%flux_loops%setup_floops (setup_floops) (9.7.1.3.395)
name (2945)	magdiag%flux_loops%setup_floops%name (vecstring_type) (9.7.1.2.15)
id (2945)	magdiag%flux_loops%setup_floops%id (vecstring_type) (9.7.1.2.15)
position (2945)	magdiag%flux_loops%setup_floops%position (rzphi2D) (9.7.1.3.368)
r (2918)	magdiag%flux_loops%setup_floops%position%r (matflt_type) (9.7.1.2.10)
z (2918)	magdiag%flux_loops%setup_floops%position%z (matflt_type) (9.7.1.2.10)
phi (2918)	magdiag%flux_loops%setup_floops%position%phi (matflt_type) (9.7.1.2.10)
npoints (2945)	magdiag%flux_loops%setup_floops%npoints (vecint_type) (9.7.1.2.14)
measure (2754)	magdiag%flux_loops%measure (exp1D) (9.7.1.3.197)
value (2747)	magdiag%flux_loops%measure%value (vecflt_type) (9.7.1.2.13)
abserror (2747)	magdiag%flux_loops%measure%abserror (vecflt_type) (9.7.1.2.13)
releror (2747)	magdiag%flux_loops%measure%releror (vecflt_type) (9.7.1.2.13)
bpol_probes (2579)	magdiag%bpol_probes (bpol_probes) (9.7.1.3.72)
setup_bprobe (2622)	magdiag%bpol_probes%setup_bprobe (setup_bprobe) (9.7.1.3.394)
name (2944)	magdiag%bpol_probes%setup_bprobe%name (vecstring_type) (9.7.1.2.15)
id (2944)	magdiag%bpol_probes%setup_bprobe%id (vecstring_type) (9.7.1.2.15)
position (2944)	magdiag%bpol_probes%setup_bprobe%position (rz1D) (9.7.1.3.359)
r (2909)	magdiag%bpol_probes%setup_bprobe%position%r (vecflt_type) (9.7.1.2.13)
z (2909)	magdiag%bpol_probes%setup_bprobe%position%z (vecflt_type) (9.7.1.2.13)
polangle (2944)	magdiag%bpol_probes%setup_bprobe%polangle (vecflt_type) (9.7.1.2.13)
torangle (2944)	magdiag%bpol_probes%setup_bprobe%torangle (vecflt_type) (9.7.1.2.13)
area (2944)	magdiag%bpol_probes%setup_bprobe%area (vecflt_type) (9.7.1.2.13)
length (2944)	magdiag%bpol_probes%setup_bprobe%length (vecflt_type) (9.7.1.2.13)
turns (2944)	magdiag%bpol_probes%setup_bprobe%turns (vecint_type) (9.7.1.2.14)
measure (2622)	magdiag%bpol_probes%measure (exp1D) (9.7.1.3.197)
value (2747)	magdiag%bpol_probes%measure%value (vecflt_type) (9.7.1.2.13)
abserror (2747)	magdiag%bpol_probes%measure%abserror (vecflt_type) (9.7.1.2.13)
releror (2747)	magdiag%bpol_probes%measure%releror (vecflt_type) (9.7.1.2.13)
codeparam (2579)	magdiag%codeparam (codeparam) (9.7.1.3.77)
codename (2627)	magdiag%codeparam%codename (string) (9.7.1.1.3)
codeversion (2627)	magdiag%codeparam%codeversion (string) (9.7.1.1.3)
parameters (2627)	magdiag%codeparam%parameters (string) (9.7.1.1.3)
output_diag (2627)	magdiag%codeparam%output_diag (string) (9.7.1.1.3)
output_flag (2627)	magdiag%codeparam%output_flag (integer) (9.7.1.1.2)
time (2579)	magdiag%time (float) (9.7.1.1.1)

datainfo (2580)	mhd%datainfo (datainfo) (9.7.1.3.134)
dataprovider (2684)	mhd%datainfo%dataprovider (string) (9.7.1.1.3)
putdate (2684)	mhd%datainfo%putdate (string) (9.7.1.1.3)
source (2684)	mhd%datainfo%source (string) (9.7.1.1.3)
comment (2684)	mhd%datainfo%comment (string) (9.7.1.1.3)
cocos (2684)	mhd%datainfo%cocos (integer) (9.7.1.1.2)
id (2684)	mhd%datainfo%id (integer) (9.7.1.1.2)
isref (2684)	mhd%datainfo%isref (integer) (9.7.1.1.2)
whatref (2684)	mhd%datainfo%whatref (whatref) (9.7.1.3.506)
user (3056)	mhd%datainfo%whatref%user (string) (9.7.1.1.3)
machine (3056)	mhd%datainfo%whatref%machine (string) (9.7.1.1.3)
shot (3056)	mhd%datainfo%whatref%shot (integer) (9.7.1.1.2)
run (3056)	mhd%datainfo%whatref%run (integer) (9.7.1.1.2)
occurrence (3056)	mhd%datainfo%whatref%occurrence (integer) (9.7.1.1.2)
putinfo (2684)	mhd%datainfo%putinfo (putinfo) (9.7.1.3.342)
putmethod (2892)	mhd%datainfo%putinfo%putmethod (string) (9.7.1.1.3)
putaccess (2892)	mhd%datainfo%putinfo%putaccess (string) (9.7.1.1.3)
putlocation (2892)	mhd%datainfo%putinfo%putlocation (string) (9.7.1.1.3)
rights (2892)	mhd%datainfo%putinfo%rights (string) (9.7.1.1.3)
toroid_field (2580)	mhd%toroid_field (b0r0) (9.7.1.3.59)
r0 (2609)	mhd%toroid_field%r0 (float) (9.7.1.1.1)
b0 (2609)	mhd%toroid_field%b0 (float) (9.7.1.1.1)
n (2580)	mhd%n(:) (mhd_mode) (9.7.1.3.264)
modenum (2814)	mhd%n(:)%modenum (integer) (9.7.1.1.2)
growthrate (2814)	mhd%n(:)%growthrate (float) (9.7.1.1.1)
frequency (2814)	mhd%n(:)%frequency (float) (9.7.1.1.1)
plasma (2814)	mhd%n(:)%plasma (mhd_plasma) (9.7.1.3.265)
psi (2815)	mhd%n(:)%plasma%psi (vecflt_type) (9.7.1.2.13)
rho_tor_norm (2815)	mhd%n(:)%plasma%rho_tor_norm (vecflt_type) (9.7.1.2.13)
rho_tor (2815)	mhd%n(:)%plasma%rho_tor (vecflt_type) (9.7.1.2.13)
m (2815)	mhd%n(:)%plasma%m (matflt_type) (9.7.1.2.10)
disp_perp (2815)	mhd%n(:)%plasma%disp_perp (matcplx_type) (9.7.1.2.9)
disp_par (2815)	mhd%n(:)%plasma%disp_par (matcplx_type) (9.7.1.2.9)
tau_alfven (2815)	mhd%n(:)%plasma%tau_alfven (vecflt_type) (9.7.1.2.13)
tau_res (2815)	mhd%n(:)%plasma%tau_res (vecflt_type) (9.7.1.2.13)
coord_sys (2815)	mhd%n(:)%plasma%coord_sys (coord_sys) (9.7.1.3.101)
grid_type (2651)	mhd%n(:)%plasma%coord_sys%grid_type (string) (9.7.1.1.3)
grid (2651)	mhd%n(:)%plasma%coord_sys%grid (reggrid) (9.7.1.3.354)
dim1 (2904)	mhd%n(:)%plasma%coord_sys%grid%dim1 (vecflt_type) (9.7.1.2.13)
dim2 (2904)	mhd%n(:)%plasma%coord_sys%grid%dim2 (vecflt_type) (9.7.1.2.13)
jacobian (2651)	mhd%n(:)%plasma%coord_sys%jacobian (matflt_type) (9.7.1.2.10)
g_11 (2651)	mhd%n(:)%plasma%coord_sys%g_11 (matflt_type) (9.7.1.2.10)
g_12 (2651)	mhd%n(:)%plasma%coord_sys%g_12 (matflt_type) (9.7.1.2.10)
g_13 (2651)	mhd%n(:)%plasma%coord_sys%g_13 (matflt_type) (9.7.1.2.10)
g_22 (2651)	mhd%n(:)%plasma%coord_sys%g_22 (matflt_type) (9.7.1.2.10)
g_23 (2651)	mhd%n(:)%plasma%coord_sys%g_23 (matflt_type) (9.7.1.2.10)
g_33 (2651)	mhd%n(:)%plasma%coord_sys%g_33 (matflt_type) (9.7.1.2.10)
position (2651)	mhd%n(:)%plasma%coord_sys%position (rz2D) (9.7.1.3.362)
r (2912)	mhd%n(:)%plasma%coord_sys%position%r (matflt_type) (9.7.1.2.10)
z (2912)	mhd%n(:)%plasma%coord_sys%position%z (matflt_type) (9.7.1.2.10)
a_pert (2815)	mhd%n(:)%plasma%a_pert (mhd_vector) (9.7.1.3.268)
coord1 (2818)	mhd%n(:)%plasma%a_pert%coord1 (matcplx_type) (9.7.1.2.9)
coord2 (2818)	mhd%n(:)%plasma%a_pert%coord2 (matcplx_type) (9.7.1.2.9)
coord3 (2818)	mhd%n(:)%plasma%a_pert%coord3 (matcplx_type) (9.7.1.2.9)
b_pert (2815)	mhd%n(:)%plasma%b_pert (mhd_vector) (9.7.1.3.268)
coord1 (2818)	mhd%n(:)%plasma%b_pert%coord1 (matcplx_type) (9.7.1.2.9)
coord2 (2818)	mhd%n(:)%plasma%b_pert%coord2 (matcplx_type) (9.7.1.2.9)
coord3 (2818)	mhd%n(:)%plasma%b_pert%coord3 (matcplx_type) (9.7.1.2.9)
v_pert (2815)	mhd%n(:)%plasma%v_pert (mhd_vector) (9.7.1.3.268)
coord1 (2818)	mhd%n(:)%plasma%v_pert%coord1 (matcplx_type) (9.7.1.2.9)
coord2 (2818)	mhd%n(:)%plasma%v_pert%coord2 (matcplx_type) (9.7.1.2.9)

coord3 (2818)	mhd%n(:)%plasma%v_pert%coord3 (matcplx_type) (9.7.1.2.9)
p_pert (2815)	mhd%n(:)%plasma%p_pert (matcplx_type) (9.7.1.2.9)
rho_mass_per (2815)	mhd%n(:)%plasma%rho_mass_per (matcplx_type) (9.7.1.2.9)
temp_per (2815)	mhd%n(:)%plasma%temp_per (matcplx_type) (9.7.1.2.9)
vacuum (2814)	mhd%n(:)%vacuum (mhd_vacuum) (9.7.1.3.267)
m (2817)	mhd%n(:)%vacuum%m (array3dflt_type) (9.7.1.2.2)
coord_sys (2817)	mhd%n(:)%vacuum%coord_sys (coord_sys) (9.7.1.3.101)
grid_type (2651)	mhd%n(:)%vacuum%coord_sys%grid_type (string) (9.7.1.1.3)
grid (2651)	mhd%n(:)%vacuum%coord_sys%grid (reggrid) (9.7.1.3.354)
dim1 (2904)	mhd%n(:)%vacuum%coord_sys%grid%dim1 (vecflt_type) (9.7.1.2.13)
dim2 (2904)	mhd%n(:)%vacuum%coord_sys%grid%dim2 (vecflt_type) (9.7.1.2.13)
jacobian (2651)	mhd%n(:)%vacuum%coord_sys%jacobian (matflt_type) (9.7.1.2.10)
g_11 (2651)	mhd%n(:)%vacuum%coord_sys%g_11 (matflt_type) (9.7.1.2.10)
g_12 (2651)	mhd%n(:)%vacuum%coord_sys%g_12 (matflt_type) (9.7.1.2.10)
g_13 (2651)	mhd%n(:)%vacuum%coord_sys%g_13 (matflt_type) (9.7.1.2.10)
g_22 (2651)	mhd%n(:)%vacuum%coord_sys%g_22 (matflt_type) (9.7.1.2.10)
g_23 (2651)	mhd%n(:)%vacuum%coord_sys%g_23 (matflt_type) (9.7.1.2.10)
g_33 (2651)	mhd%n(:)%vacuum%coord_sys%g_33 (matflt_type) (9.7.1.2.10)
position (2651)	mhd%n(:)%vacuum%coord_sys%position (rz2D) (9.7.1.3.362)
r (2912)	mhd%n(:)%vacuum%coord_sys%position%r (matflt_type) (9.7.1.2.10)
z (2912)	mhd%n(:)%vacuum%coord_sys%position%z (matflt_type) (9.7.1.2.10)
a_pert (2817)	mhd%n(:)%vacuum%a_pert (mhd_vector) (9.7.1.3.268)
coord1 (2818)	mhd%n(:)%vacuum%a_pert%coord1 (matcplx_type) (9.7.1.2.9)
coord2 (2818)	mhd%n(:)%vacuum%a_pert%coord2 (matcplx_type) (9.7.1.2.9)
coord3 (2818)	mhd%n(:)%vacuum%a_pert%coord3 (matcplx_type) (9.7.1.2.9)
b_pert (2817)	mhd%n(:)%vacuum%b_pert (mhd_vector) (9.7.1.3.268)
coord1 (2818)	mhd%n(:)%vacuum%b_pert%coord1 (matcplx_type) (9.7.1.2.9)
coord2 (2818)	mhd%n(:)%vacuum%b_pert%coord2 (matcplx_type) (9.7.1.2.9)
coord3 (2818)	mhd%n(:)%vacuum%b_pert%coord3 (matcplx_type) (9.7.1.2.9)
time (2580)	mhd%time (float) (9.7.1.1.1)
codeparam (2580)	mhd%codeparam (codeparam) (9.7.1.3.77)
codename (2627)	mhd%codeparam%codename (string) (9.7.1.1.3)
codeversion (2627)	mhd%codeparam%codeversion (string) (9.7.1.1.3)
parameters (2627)	mhd%codeparam%parameters (string) (9.7.1.1.3)
output_diag (2627)	mhd%codeparam%output_diag (string) (9.7.1.1.3)
output_flag (2627)	mhd%codeparam%output_flag (integer) (9.7.1.1.2)

### 9.7.2.1.29 msediag

datainfo (2581)	msediag%datainfo (datainfo) (9.7.1.3.134)
dataprovider (2684)	msediag%datainfo%dataprovider (string) (9.7.1.1.3)
putdate (2684)	msediag%datainfo%putdate (string) (9.7.1.1.3)
source (2684)	msediag%datainfo%source (string) (9.7.1.1.3)
comment (2684)	msediag%datainfo%comment (string) (9.7.1.1.3)
cocos (2684)	msediag%datainfo%cocos (integer) (9.7.1.1.2)
id (2684)	msediag%datainfo%id (integer) (9.7.1.1.2)
isref (2684)	msediag%datainfo%isref (integer) (9.7.1.1.2)
whatref (2684)	msediag%datainfo%whatref (whatref) (9.7.1.3.506)
user (3056)	msediag%datainfo%whatref%user (string) (9.7.1.1.3)
machine (3056)	msediag%datainfo%whatref%machine (string) (9.7.1.1.3)
shot (3056)	msediag%datainfo%whatref%shot (integer) (9.7.1.1.2)
run (3056)	msediag%datainfo%whatref%run (integer) (9.7.1.1.2)
occurrence (3056)	msediag%datainfo%whatref%occurrence (integer) (9.7.1.1.2)
putinfo (2684)	msediag%datainfo%putinfo (putinfo) (9.7.1.3.342)
putmethod (2892)	msediag%datainfo%putinfo%putmethod (string) (9.7.1.1.3)
putaccess (2892)	msediag%datainfo%putinfo%putaccess (string) (9.7.1.1.3)
putlocation (2892)	msediag%datainfo%putinfo%putlocation (string) (9.7.1.1.3)
rights (2892)	msediag%datainfo%putinfo%rights (string) (9.7.1.1.3)
polarimetry (2581)	msediag%polarimetry (polarimetry) (9.7.1.3.334)
setup (2884)	msediag%polarimetry%setup (msediag_setup_polarimetry) (9.7.1.3.282)
rzgamma (2832)	msediag%polarimetry%setup%rzgamma (rzphidrdzphi1D) (9.7.1.3.370)

r (2920)	msediag%polarimetry%setup%rzgamma%r (vecflt.type) (9.7.1.2.13)
z (2920)	msediag%polarimetry%setup%rzgamma%z (vecflt.type) (9.7.1.2.13)
phi (2920)	msediag%polarimetry%setup%rzgamma%phi (vecflt.type) (9.7.1.2.13)
dr (2920)	msediag%polarimetry%setup%rzgamma%dr (vecflt.type) (9.7.1.2.13)
dz (2920)	msediag%polarimetry%setup%rzgamma%dz (vecflt.type) (9.7.1.2.13)
dphi (2920)	msediag%polarimetry%setup%rzgamma%dphi (vecflt.type) (9.7.1.2.13)
geom_coef (2832)	msediag%polarimetry%setup%geom_coef (matflt.type) (9.7.1.2.10)
measure (2884)	msediag%polarimetry%measure (exp1D) (9.7.1.3.197)
value (2747)	msediag%polarimetry%measure%value (vecflt.type) (9.7.1.2.13)
abserror (2747)	msediag%polarimetry%measure%abserror (vecflt.type) (9.7.1.2.13)
releror (2747)	msediag%polarimetry%measure%releror (vecflt.type) (9.7.1.2.13)
spectral (2581)	msediag%spectral (spectral) (9.7.1.3.412)
emissivity (2962)	msediag%spectral%emissivity (msediag_emissivity) (9.7.1.3.277)
wavelength (2827)	msediag%spectral%emissivity%wavelength (vecflt.type) (9.7.1.2.13)
emiss_chord (2827)	msediag%spectral%emissivity%emiss_chord(:) (msediag_emiss_chord) (9.7.1.3.276)
volume (2826)	msediag%spectral%emissivity%emiss_chord(:)%volume (float) (9.7.1.1.1)
setup (2826)	msediag%spectral%emissivity%emiss_chord(:)%setup (rzphi1D) (9.7.1.3.365)
r (2915)	msediag%spectral%emissivity%emiss_chord(:)%setup%r (vecflt.type) (9.7.1.2.13)
z (2915)	msediag%spectral%emissivity%emiss_chord(:)%setup%z (vecflt.type) (9.7.1.2.13)
phi (2915)	msediag%spectral%emissivity%emiss_chord(:)%setup%phi (vecflt.type) (9.7.1.2.13)
polarization (2826)	msediag%spectral%emissivity%emiss_chord(:)%polarization(:) (msediag_polarization) (9.7.1.3.278)
type (2828)	msediag%spectral%emissivity%emiss_chord(:)%polarization(:)%type (identifier) (9.7.1.3.235)
id (2785)	msediag%spectral%emissivity%emiss_chord(:)%polarization(:)%type%id (string) (9.7.1.1.3)
flag (2785)	msediag%spectral%emissivity%emiss_chord(:)%polarization(:)%type%flag (integer) (9.7.1.1.2)
description (2785)	msediag%spectral%emissivity%emiss_chord(:)%polarization(:)%type%description (string) (9.7.1.1.3)
spec_emiss (2828)	msediag%spectral%emissivity%emiss_chord(:)%polarization(:)%spec_emiss (matflt.type) (9.7.1.2.10)
quantiaxis (2826)	msediag%spectral%emissivity%emiss_chord(:)%quantiaxis (vecflt.type) (9.7.1.2.13)
radiance (2962)	msediag%spectral%radiance (msediag_radiance) (9.7.1.3.280)
wavelength (2830)	msediag%spectral%radiance%wavelength (exp1D) (9.7.1.3.197)
value (2747)	msediag%spectral%radiance%wavelength%value (vecflt.type) (9.7.1.2.13)
abserror (2747)	msediag%spectral%radiance%wavelength%abserror (vecflt.type) (9.7.1.2.13)
releror (2747)	msediag%spectral%radiance%wavelength%releror (vecflt.type) (9.7.1.2.13)
radia_chord (2830)	msediag%spectral%radiance%radia_chord(:) (msediag_radia_chord) (9.7.1.3.279)
setup (2829)	msediag%spectral%radiance%radia_chord(:)%setup (msediag_setup) (9.7.1.3.281)
pivot_point (2831)	msediag%spectral%radiance%radia_chord(:)%setup%pivot_point (rzphi0D) (9.7.1.3.364)
r (2914)	msediag%spectral%radiance%radia_chord(:)%setup%pivot_point%r (float) (9.7.1.1.1)
z (2914)	msediag%spectral%radiance%radia_chord(:)%setup%pivot_point%z (float) (9.7.1.1.1)
phi (2914)	msediag%spectral%radiance%radia_chord(:)%setup%pivot_point%phi (float) (9.7.1.1.1)
horchordang (2831)	msediag%spectral%radiance%radia_chord(:)%setup%horchordang (float) (9.7.1.1.1)
verchordang (2831)	msediag%spectral%radiance%radia_chord(:)%setup%verchordang (float) (9.7.1.1.1)
second_point (2831)	msediag%spectral%radiance%radia_chord(:)%setup%second_point (rzphi0D) (9.7.1.3.364)
r (2914)	msediag%spectral%radiance%radia_chord(:)%setup%second_point%r (float) (9.7.1.1.1)
z (2914)	msediag%spectral%radiance%radia_chord(:)%setup%second_point%z (float) (9.7.1.1.1)
phi (2914)	msediag%spectral%radiance%radia_chord(:)%setup%second_point%phi (float) (9.7.1.1.1)
stokes (2829)	msediag%spectral%radiance%radia_chord(:)%stokes(:) (msediag_stokes) (9.7.1.3.283)
type (2833)	msediag%spectral%radiance%radia_chord(:)%stokes(:)%type (identifier) (9.7.1.3.235)
id (2785)	msediag%spectral%radiance%radia_chord(:)%stokes(:)%type%id (string) (9.7.1.1.3)
flag (2785)	msediag%spectral%radiance%radia_chord(:)%stokes(:)%type%flag (integer) (9.7.1.1.2)
description (2785)	msediag%spectral%radiance%radia_chord(:)%stokes(:)%type%description (string) (9.7.1.1.3)
vector (2833)	msediag%spectral%radiance%radia_chord(:)%stokes(:)%vector (matflt.type) (9.7.1.2.10)
totradiance (2829)	msediag%spectral%radiance%radia_chord(:)%totradiance (exp1D) (9.7.1.3.197)
value (2747)	msediag%spectral%radiance%radia_chord(:)%totradiance%value (vecflt.type) (9.7.1.2.13)
abserror (2747)	msediag%spectral%radiance%radia_chord(:)%totradiance%abserror (vecflt.type) (9.7.1.2.13)
releror (2747)	msediag%spectral%radiance%radia_chord(:)%totradiance%releror (vecflt.type) (9.7.1.2.13)
codeparam (2962)	msediag%spectral%codeparam (codeparam) (9.7.1.3.77)
codename (2627)	msediag%spectral%codeparam%codename (string) (9.7.1.1.3)
codeversion (2627)	msediag%spectral%codeparam%codeversion (string) (9.7.1.1.3)
parameters (2627)	msediag%spectral%codeparam%parameters (string) (9.7.1.1.3)
output_diag (2627)	msediag%spectral%codeparam%output_diag (string) (9.7.1.1.3)



output_flag (2627)	msediag%spectral%codeparam%output_flag (integer) (9.7.1.1.2)
codeparam (2581)	msediag%codeparam (codeparam) (9.7.1.3.77)
codename (2627)	msediag%codeparam%codename (string) (9.7.1.1.3)
codeversion (2627)	msediag%codeparam%codeversion (string) (9.7.1.1.3)
parameters (2627)	msediag%codeparam%parameters (string) (9.7.1.1.3)
output_diag (2627)	msediag%codeparam%output_diag (string) (9.7.1.1.3)
output_flag (2627)	msediag%codeparam%output_flag (integer) (9.7.1.1.2)
time (2581)	msediag%time (float) (9.7.1.1.1)

### 9.7.2.1.30 nbi

datainfo (2582)	nbi%datainfo (datainfo) (9.7.1.3.134)
dataprovider (2684)	nbi%datainfo%dataprovider (string) (9.7.1.1.3)
putdate (2684)	nbi%datainfo%putdate (string) (9.7.1.1.3)
source (2684)	nbi%datainfo%source (string) (9.7.1.1.3)
comment (2684)	nbi%datainfo%comment (string) (9.7.1.1.3)
cocos (2684)	nbi%datainfo%cocos (integer) (9.7.1.1.2)
id (2684)	nbi%datainfo%id (integer) (9.7.1.1.2)
isref (2684)	nbi%datainfo%isref (integer) (9.7.1.1.2)
whatref (2684)	nbi%datainfo%whatref (whatref) (9.7.1.3.506)
user (3056)	nbi%datainfo%whatref%user (string) (9.7.1.1.3)
machine (3056)	nbi%datainfo%whatref%machine (string) (9.7.1.1.3)
shot (3056)	nbi%datainfo%whatref%shot (integer) (9.7.1.1.2)
run (3056)	nbi%datainfo%whatref%run (integer) (9.7.1.1.2)
occurrence (3056)	nbi%datainfo%whatref%occurrence (integer) (9.7.1.1.2)
putinfo (2684)	nbi%datainfo%putinfo (putinfo) (9.7.1.3.342)
putmethod (2892)	nbi%datainfo%putinfo%putmethod (string) (9.7.1.1.3)
putaccess (2892)	nbi%datainfo%putinfo%putaccess (string) (9.7.1.1.3)
putlocation (2892)	nbi%datainfo%putinfo%putlocation (string) (9.7.1.1.3)
rights (2892)	nbi%datainfo%putinfo%rights (string) (9.7.1.1.3)
nbi_unit (2582)	nbi%nbi_unit(:) (nbi_unit) (9.7.1.3.286)
name (2836)	nbi%nbi_unit(:)%name (string) (9.7.1.1.3)
inj_spec (2836)	nbi%nbi_unit(:)%inj_spec (inj_spec) (9.7.1.3.239)
amn (2789)	nbi%nbi_unit(:)%inj_spec%amn (float) (9.7.1.1.1)
zn (2789)	nbi%nbi_unit(:)%inj_spec%zn (float) (9.7.1.1.1)
pow_unit (2836)	nbi%nbi_unit(:)%pow_unit (exp0D) (9.7.1.3.196)
value (2746)	nbi%nbi_unit(:)%pow_unit%value (float) (9.7.1.1.1)
abserror (2746)	nbi%nbi_unit(:)%pow_unit%abserror (float) (9.7.1.1.1)
releror (2746)	nbi%nbi_unit(:)%pow_unit%releror (float) (9.7.1.1.1)
inj_eng_unit (2836)	nbi%nbi_unit(:)%inj_eng_unit (exp0D) (9.7.1.3.196)
value (2746)	nbi%nbi_unit(:)%inj_eng_unit%value (float) (9.7.1.1.1)
abserror (2746)	nbi%nbi_unit(:)%inj_eng_unit%abserror (float) (9.7.1.1.1)
releror (2746)	nbi%nbi_unit(:)%inj_eng_unit%releror (float) (9.7.1.1.1)
beamcurfrac (2836)	nbi%nbi_unit(:)%beamcurfrac (exp1D) (9.7.1.3.197)
value (2747)	nbi%nbi_unit(:)%beamcurfrac%value (vecflt.type) (9.7.1.2.13)
abserror (2747)	nbi%nbi_unit(:)%beamcurfrac%abserror (vecflt.type) (9.7.1.2.13)
releror (2747)	nbi%nbi_unit(:)%beamcurfrac%releror (vecflt.type) (9.7.1.2.13)
beampowfrac (2836)	nbi%nbi_unit(:)%beampowfrac (exp1D) (9.7.1.3.197)
value (2747)	nbi%nbi_unit(:)%beampowfrac%value (vecflt.type) (9.7.1.2.13)
abserror (2747)	nbi%nbi_unit(:)%beampowfrac%abserror (vecflt.type) (9.7.1.2.13)
releror (2747)	nbi%nbi_unit(:)%beampowfrac%releror (vecflt.type) (9.7.1.2.13)
beamletgroup (2836)	nbi%nbi_unit(:)%beamletgroup(:) (beamletgroup) (9.7.1.3.64)
position (2614)	nbi%nbi_unit(:)%beamletgroup(:)%position (rzphi0D) (9.7.1.3.364)
r (2914)	nbi%nbi_unit(:)%beamletgroup(:)%position%r (float) (9.7.1.1.1)
z (2914)	nbi%nbi_unit(:)%beamletgroup(:)%position%z (float) (9.7.1.1.1)
phi (2914)	nbi%nbi_unit(:)%beamletgroup(:)%position%phi (float) (9.7.1.1.1)
tang_rad (2614)	nbi%nbi_unit(:)%beamletgroup(:)%tang_rad (float) (9.7.1.1.1)
angle (2614)	nbi%nbi_unit(:)%beamletgroup(:)%angle (float) (9.7.1.1.1)
direction (2614)	nbi%nbi_unit(:)%beamletgroup(:)%direction (integer) (9.7.1.1.2)
width_horiz (2614)	nbi%nbi_unit(:)%beamletgroup(:)%width_horiz (float) (9.7.1.1.1)
width_vert (2614)	nbi%nbi_unit(:)%beamletgroup(:)%width_vert (float) (9.7.1.1.1)



focussing (2614)	nbi%nbi.unit(:)%beamletgroup(:)%focussing (focussing) (9.7.1.3.208)
focal_len_hz (2758)	nbi%nbi.unit(:)%beamletgroup(:)%focussing%focal_len_hz (float) (9.7.1.1.1)
focal_len_vc (2758)	nbi%nbi.unit(:)%beamletgroup(:)%focussing%focal_len_vc (float) (9.7.1.1.1)
width_min_hz (2758)	nbi%nbi.unit(:)%beamletgroup(:)%focussing%width_min_hz (float) (9.7.1.1.1)
width_min_vc (2758)	nbi%nbi.unit(:)%beamletgroup(:)%focussing%width_min_vc (float) (9.7.1.1.1)
divergence (2614)	nbi%nbi.unit(:)%beamletgroup(:)%divergence (divergence) (9.7.1.3.172)
frac_divcomp (2722)	nbi%nbi.unit(:)%beamletgroup(:)%divergence%frac_divcomp (vecflt.type) (9.7.1.2.13)
div_vert (2722)	nbi%nbi.unit(:)%beamletgroup(:)%divergence%div_vert (vecflt.type) (9.7.1.2.13)
div_horiz (2722)	nbi%nbi.unit(:)%beamletgroup(:)%divergence%div_horiz (vecflt.type) (9.7.1.2.13)
beamlets (2614)	nbi%nbi.unit(:)%beamletgroup(:)%beamlets (beamlets) (9.7.1.3.65)
position (2615)	nbi%nbi.unit(:)%beamletgroup(:)%beamlets%position (rzphi1D) (9.7.1.3.365)
r (2915)	nbi%nbi.unit(:)%beamletgroup(:)%beamlets%position%r (vecflt.type) (9.7.1.2.13)
z (2915)	nbi%nbi.unit(:)%beamletgroup(:)%beamlets%position%z (vecflt.type) (9.7.1.2.13)
phi (2915)	nbi%nbi.unit(:)%beamletgroup(:)%beamlets%position%phi (vecflt.type) (9.7.1.2.13)
tang_rad_blt (2615)	nbi%nbi.unit(:)%beamletgroup(:)%beamlets%tang_rad_blt (vecflt.type) (9.7.1.2.13)
angle_blt (2615)	nbi%nbi.unit(:)%beamletgroup(:)%beamlets%angle_blt (vecflt.type) (9.7.1.2.13)
pow_frc_blt (2615)	nbi%nbi.unit(:)%beamletgroup(:)%beamlets%pow_frc_blt (vecflt.type) (9.7.1.2.13)
wall (2836)	nbi%nbi.unit(:)%wall (nbi.nbi.unit.wall) (9.7.1.3.284)
surface (2834)	nbi%nbi.unit(:)%wall%surface (nbi.nbi.unit.wall.surface) (9.7.1.3.285)
triangle (2835)	nbi%nbi.unit(:)%wall%surface%triangle(:) (trianglexyz) (9.7.1.3.466)
point1 (3016)	nbi%nbi.unit(:)%wall%surface%triangle(:)%point1 (xyz0D) (9.7.1.3.509)
x (3059)	nbi%nbi.unit(:)%wall%surface%triangle(:)%point1%x (float) (9.7.1.1.1)
y (3059)	nbi%nbi.unit(:)%wall%surface%triangle(:)%point1%y (float) (9.7.1.1.1)
z (3059)	nbi%nbi.unit(:)%wall%surface%triangle(:)%point1%z (float) (9.7.1.1.1)
point2 (3016)	nbi%nbi.unit(:)%wall%surface%triangle(:)%point2 (xyz0D) (9.7.1.3.509)
x (3059)	nbi%nbi.unit(:)%wall%surface%triangle(:)%point2%x (float) (9.7.1.1.1)
y (3059)	nbi%nbi.unit(:)%wall%surface%triangle(:)%point2%y (float) (9.7.1.1.1)
z (3059)	nbi%nbi.unit(:)%wall%surface%triangle(:)%point2%z (float) (9.7.1.1.1)
point3 (3016)	nbi%nbi.unit(:)%wall%surface%triangle(:)%point3 (xyz0D) (9.7.1.3.509)
x (3059)	nbi%nbi.unit(:)%wall%surface%triangle(:)%point3%x (float) (9.7.1.1.1)
y (3059)	nbi%nbi.unit(:)%wall%surface%triangle(:)%point3%y (float) (9.7.1.1.1)
z (3059)	nbi%nbi.unit(:)%wall%surface%triangle(:)%point3%z (float) (9.7.1.1.1)
rectangle (2835)	nbi%nbi.unit(:)%wall%surface%rectangle(:) (rectanglexyz) (9.7.1.3.346)
point01 (2896)	nbi%nbi.unit(:)%wall%surface%rectangle(:)%point01 (xyz0D) (9.7.1.3.509)
x (3059)	nbi%nbi.unit(:)%wall%surface%rectangle(:)%point01%x (float) (9.7.1.1.1)
y (3059)	nbi%nbi.unit(:)%wall%surface%rectangle(:)%point01%y (float) (9.7.1.1.1)
z (3059)	nbi%nbi.unit(:)%wall%surface%rectangle(:)%point01%z (float) (9.7.1.1.1)
point11 (2896)	nbi%nbi.unit(:)%wall%surface%rectangle(:)%point11 (xyz0D) (9.7.1.3.509)
x (3059)	nbi%nbi.unit(:)%wall%surface%rectangle(:)%point11%x (float) (9.7.1.1.1)
y (3059)	nbi%nbi.unit(:)%wall%surface%rectangle(:)%point11%y (float) (9.7.1.1.1)
z (3059)	nbi%nbi.unit(:)%wall%surface%rectangle(:)%point11%z (float) (9.7.1.1.1)
point10 (2896)	nbi%nbi.unit(:)%wall%surface%rectangle(:)%point10 (xyz0D) (9.7.1.3.509)
x (3059)	nbi%nbi.unit(:)%wall%surface%rectangle(:)%point10%x (float) (9.7.1.1.1)
y (3059)	nbi%nbi.unit(:)%wall%surface%rectangle(:)%point10%y (float) (9.7.1.1.1)
z (3059)	nbi%nbi.unit(:)%wall%surface%rectangle(:)%point10%z (float) (9.7.1.1.1)
collimator (2834)	nbi%nbi.unit(:)%wall%collimator(:) (flat_polygon) (9.7.1.3.202)
origin (2752)	nbi%nbi.unit(:)%wall%collimator(:)%origin (xyz0D) (9.7.1.3.509)
x (3059)	nbi%nbi.unit(:)%wall%collimator(:)%origin%x (float) (9.7.1.1.1)
y (3059)	nbi%nbi.unit(:)%wall%collimator(:)%origin%y (float) (9.7.1.1.1)
z (3059)	nbi%nbi.unit(:)%wall%collimator(:)%origin%z (float) (9.7.1.1.1)
basis1 (2752)	nbi%nbi.unit(:)%wall%collimator(:)%basis1 (xyz0D) (9.7.1.3.509)
x (3059)	nbi%nbi.unit(:)%wall%collimator(:)%basis1%x (float) (9.7.1.1.1)
y (3059)	nbi%nbi.unit(:)%wall%collimator(:)%basis1%y (float) (9.7.1.1.1)
z (3059)	nbi%nbi.unit(:)%wall%collimator(:)%basis1%z (float) (9.7.1.1.1)
basis2 (2752)	nbi%nbi.unit(:)%wall%collimator(:)%basis2 (xyz0D) (9.7.1.3.509)
x (3059)	nbi%nbi.unit(:)%wall%collimator(:)%basis2%x (float) (9.7.1.1.1)
y (3059)	nbi%nbi.unit(:)%wall%collimator(:)%basis2%y (float) (9.7.1.1.1)
z (3059)	nbi%nbi.unit(:)%wall%collimator(:)%basis2%z (float) (9.7.1.1.1)
coord1 (2752)	nbi%nbi.unit(:)%wall%collimator(:)%coord1 (vecflt.type) (9.7.1.2.13)
coord2 (2752)	nbi%nbi.unit(:)%wall%collimator(:)%coord2 (vecflt.type) (9.7.1.2.13)
codeparam (2836)	nbi%nbi.unit(:)%codeparam (codeparam) (9.7.1.3.77)

codename (2627)	nbi%nbi_unit(:)%codeparam%codename (string) (9.7.1.1.3)
codeversion (2627)	nbi%nbi_unit(:)%codeparam%codeversion (string) (9.7.1.1.3)
parameters (2627)	nbi%nbi_unit(:)%codeparam%parameters (string) (9.7.1.1.3)
output_diag (2627)	nbi%nbi_unit(:)%codeparam%output_diag (string) (9.7.1.1.3)
output_flag (2627)	nbi%nbi_unit(:)%codeparam%output_flag (integer) (9.7.1.1.2)
codeparam (2582)	nbi%codeparam (codeparam) (9.7.1.3.77)
codename (2627)	nbi%codeparam%codename (string) (9.7.1.1.3)
codeversion (2627)	nbi%codeparam%codeversion (string) (9.7.1.1.3)
parameters (2627)	nbi%codeparam%parameters (string) (9.7.1.1.3)
output_diag (2627)	nbi%codeparam%output_diag (string) (9.7.1.1.3)
output_flag (2627)	nbi%codeparam%output_flag (integer) (9.7.1.1.2)
time (2582)	nbi%time (float) (9.7.1.1.1)

### 9.7.2.1.31 neoclassic

datainfo (2583)	neoclassic%datainfo (datainfo) (9.7.1.3.134)
dataprovder (2684)	neoclassic%datainfo%dataprovder (string) (9.7.1.1.3)
putdate (2684)	neoclassic%datainfo%putdate (string) (9.7.1.1.3)
source (2684)	neoclassic%datainfo%source (string) (9.7.1.1.3)
comment (2684)	neoclassic%datainfo%comment (string) (9.7.1.1.3)
cocos (2684)	neoclassic%datainfo%cocos (integer) (9.7.1.1.2)
id (2684)	neoclassic%datainfo%id (integer) (9.7.1.1.2)
isref (2684)	neoclassic%datainfo%isref (integer) (9.7.1.1.2)
whatref (2684)	neoclassic%datainfo%whatref (whatref) (9.7.1.3.506)
user (3056)	neoclassic%datainfo%whatref%user (string) (9.7.1.1.3)
machine (3056)	neoclassic%datainfo%whatref%machine (string) (9.7.1.1.3)
shot (3056)	neoclassic%datainfo%whatref%shot (integer) (9.7.1.1.2)
run (3056)	neoclassic%datainfo%whatref%run (integer) (9.7.1.1.2)
occurrence (3056)	neoclassic%datainfo%whatref%occurrence (integer) (9.7.1.1.2)
putinfo (2684)	neoclassic%datainfo%putinfo (putinfo) (9.7.1.3.342)
putmethod (2892)	neoclassic%datainfo%putinfo%putmethod (string) (9.7.1.1.3)
putaccess (2892)	neoclassic%datainfo%putinfo%putaccess (string) (9.7.1.1.3)
putlocation (2892)	neoclassic%datainfo%putinfo%putlocation (string) (9.7.1.1.3)
rights (2892)	neoclassic%datainfo%putinfo%rights (string) (9.7.1.1.3)
rho_tor_norm (2583)	neoclassic%rho_tor_norm (vecflt_type) (9.7.1.2.13)
rho_tor (2583)	neoclassic%rho_tor (vecflt_type) (9.7.1.2.13)
composition (2583)	neoclassic%composition (composition) (9.7.1.3.95)
amn (2645)	neoclassic%composition%amn (vecflt_type) (9.7.1.2.13)
zn (2645)	neoclassic%composition%zn (vecflt_type) (9.7.1.2.13)
zion (2645)	neoclassic%composition%zion (vecflt_type) (9.7.1.2.13)
imp_flag (2645)	neoclassic%composition%imp_flag (vecint_type) (9.7.1.2.14)
label (2645)	neoclassic%composition%label (vecstring_type) (9.7.1.2.15)
desc_impur (2583)	neoclassic%desc_impur (desc_impur) (9.7.1.3.136)
amn (2686)	neoclassic%desc_impur%amn (vecflt_type) (9.7.1.2.13)
zn (2686)	neoclassic%desc_impur%zn (vecint_type) (9.7.1.2.14)
i_ion (2686)	neoclassic%desc_impur%i_ion (vecint_type) (9.7.1.2.14)
nzimp (2686)	neoclassic%desc_impur%nzimp (vecint_type) (9.7.1.2.14)
zmin (2686)	neoclassic%desc_impur%zmin (matint_type) (9.7.1.2.11)
zmax (2686)	neoclassic%desc_impur%zmax (matint_type) (9.7.1.2.11)
label (2686)	neoclassic%desc_impur%label (vecstring_type) (9.7.1.2.15)
compositions (2583)	neoclassic%compositions (compositions_type) (9.7.1.3.99)
nuclei (2649)	neoclassic%compositions%nuclei(:) (nuclei) (9.7.1.3.299)
zn (2849)	neoclassic%compositions%nuclei(:)%zn (float) (9.7.1.1.1)
amn (2849)	neoclassic%compositions%nuclei(:)%amn (float) (9.7.1.1.1)
label (2849)	neoclassic%compositions%nuclei(:)%label (string) (9.7.1.1.3)
ions (2649)	neoclassic%compositions%ions(:) (ions) (9.7.1.3.240)
nucindex (2790)	neoclassic%compositions%ions(:)%nucindex (integer) (9.7.1.1.2)
zion (2790)	neoclassic%compositions%ions(:)%zion (float) (9.7.1.1.1)
imp_flag (2790)	neoclassic%compositions%ions(:)%imp_flag (integer) (9.7.1.1.2)
label (2790)	neoclassic%compositions%ions(:)%label (string) (9.7.1.1.3)
impurities (2649)	neoclassic%compositions%impurities(:) (impurities) (9.7.1.3.237)

nucindex (2787)	neoclassic%compositions%impurities(:)%nucindex (integer) (9.7.1.1.2)
i.ion (2787)	neoclassic%compositions%impurities(:)%i.ion (integer) (9.7.1.1.2)
nzimp (2787)	neoclassic%compositions%impurities(:)%nzimp (integer) (9.7.1.1.2)
zmin (2787)	neoclassic%compositions%impurities(:)%zmin (vecflt_type) (9.7.1.2.13)
zmax (2787)	neoclassic%compositions%impurities(:)%zmax (vecflt_type) (9.7.1.2.13)
label (2787)	neoclassic%compositions%impurities(:)%label (vecstring_type) (9.7.1.2.15)
neutralscomp (2649)	neoclassic%compositions%neutralscomp(:) (composition_neutralscomp) (9.7.1.3.98)
neutcomp (2648)	neoclassic%compositions%neutralscomp(:)%neutcomp(:) (composition_neutrals_neutcomp) (9.7.1.3.97)
nucindex (2647)	neoclassic%compositions%neutralscomp(:)%neutcomp(:)%nucindex (integer) (9.7.1.1.2)
multiplicity (2647)	neoclassic%compositions%neutralscomp(:)%neutcomp(:)%multiplicity (integer) (9.7.1.1.2)
type (2648)	neoclassic%compositions%neutralscomp(:)%type(:) (identifier) (9.7.1.3.235)
id (2785)	neoclassic%compositions%neutralscomp(:)%type(:)%id (string) (9.7.1.1.3)
flag (2785)	neoclassic%compositions%neutralscomp(:)%type(:)%flag (integer) (9.7.1.1.2)
description (2785)	neoclassic%compositions%neutralscomp(:)%type(:)%description (string) (9.7.1.1.3)
label (2648)	neoclassic%compositions%neutralscomp(:)%label (string) (9.7.1.1.3)
edgespecies (2649)	neoclassic%compositions%edgespecies(:) (edgespecies) (9.7.1.3.185)
nucindex (2735)	neoclassic%compositions%edgespecies(:)%nucindex (integer) (9.7.1.1.2)
zmin (2735)	neoclassic%compositions%edgespecies(:)%zmin (float) (9.7.1.1.1)
zmax (2735)	neoclassic%compositions%edgespecies(:)%zmax (float) (9.7.1.1.1)
label (2735)	neoclassic%compositions%edgespecies(:)%label (string) (9.7.1.1.3)
signature (2649)	neoclassic%compositions%signature (identifier) (9.7.1.3.235)
id (2785)	neoclassic%compositions%signature%id (string) (9.7.1.1.3)
flag (2785)	neoclassic%compositions%signature%flag (integer) (9.7.1.1.2)
description (2785)	neoclassic%compositions%signature%description (string) (9.7.1.1.3)
ni_neo (2583)	neoclassic%ni_neo (transcoefion) (9.7.1.3.463)
diff_eff (3013)	neoclassic%ni_neo%diff_eff (matflt_type) (9.7.1.2.10)
vconv_eff (3013)	neoclassic%ni_neo%vconv_eff (matflt_type) (9.7.1.2.10)
exchange (3013)	neoclassic%ni_neo%exchange (matflt_type) (9.7.1.2.10)
qgi (3013)	neoclassic%ni_neo%qgi (matflt_type) (9.7.1.2.10)
flux (3013)	neoclassic%ni_neo%flux (matflt_type) (9.7.1.2.10)
off_diagonal (3013)	neoclassic%ni_neo%off_diagonal (offdiagion) (9.7.1.3.302)
d_ni (2852)	neoclassic%ni_neo%off_diagonal%d_ni (array3dflt_type) (9.7.1.2.2)
d_ti (2852)	neoclassic%ni_neo%off_diagonal%d_ti (array3dflt_type) (9.7.1.2.2)
d_ne (2852)	neoclassic%ni_neo%off_diagonal%d_ne (matflt_type) (9.7.1.2.10)
d_te (2852)	neoclassic%ni_neo%off_diagonal%d_te (matflt_type) (9.7.1.2.10)
d_epar (2852)	neoclassic%ni_neo%off_diagonal%d_epar (matflt_type) (9.7.1.2.10)
d_mtor (2852)	neoclassic%ni_neo%off_diagonal%d_mtor (matflt_type) (9.7.1.2.10)
flag (3013)	neoclassic%ni_neo%flag (integer) (9.7.1.1.2)
ne_neo (2583)	neoclassic%ne_neo (transcoefel) (9.7.1.3.461)
diff_eff (3011)	neoclassic%ne_neo%diff_eff (vecflt_type) (9.7.1.2.13)
vconv_eff (3011)	neoclassic%ne_neo%vconv_eff (vecflt_type) (9.7.1.2.13)
flux (3011)	neoclassic%ne_neo%flux (vecflt_type) (9.7.1.2.13)
off_diagonal (3011)	neoclassic%ne_neo%off_diagonal (offdiagel) (9.7.1.3.301)
d_ni (2851)	neoclassic%ne_neo%off_diagonal%d_ni (matflt_type) (9.7.1.2.10)
d_ti (2851)	neoclassic%ne_neo%off_diagonal%d_ti (matflt_type) (9.7.1.2.10)
d_ne (2851)	neoclassic%ne_neo%off_diagonal%d_ne (vecflt_type) (9.7.1.2.13)
d_te (2851)	neoclassic%ne_neo%off_diagonal%d_te (vecflt_type) (9.7.1.2.13)
d_epar (2851)	neoclassic%ne_neo%off_diagonal%d_epar (vecflt_type) (9.7.1.2.13)
d_mtor (2851)	neoclassic%ne_neo%off_diagonal%d_mtor (vecflt_type) (9.7.1.2.13)
flag (3011)	neoclassic%ne_neo%flag (integer) (9.7.1.1.2)
nz_neo (2583)	neoclassic%nz_neo(:) (transcoefimp) (9.7.1.3.462)
diff_eff (3012)	neoclassic%nz_neo(:)%diff_eff (matflt_type) (9.7.1.2.10)
vconv_eff (3012)	neoclassic%nz_neo(:)%vconv_eff (matflt_type) (9.7.1.2.10)
exchange (3012)	neoclassic%nz_neo(:)%exchange (matflt_type) (9.7.1.2.10)
flux (3012)	neoclassic%nz_neo(:)%flux (matflt_type) (9.7.1.2.10)
flag (3012)	neoclassic%nz_neo(:)%flag (integer) (9.7.1.1.2)
ti_neo (2583)	neoclassic%ti_neo (transcoefion) (9.7.1.3.463)
diff_eff (3013)	neoclassic%ti_neo%diff_eff (matflt_type) (9.7.1.2.10)
vconv_eff (3013)	neoclassic%ti_neo%vconv_eff (matflt_type) (9.7.1.2.10)
exchange (3013)	neoclassic%ti_neo%exchange (matflt_type) (9.7.1.2.10)
qgi (3013)	neoclassic%ti_neo%qgi (matflt_type) (9.7.1.2.10)

flux (3013)	neoclassic%ti_neo%flux (matflt_type) (9.7.1.2.10)
off_diagonal (3013)	neoclassic%ti_neo%off_diagonal (offdiagion) (9.7.1.3.302)
d_ni (2852)	neoclassic%ti_neo%off_diagonal%d_ni (array3dflt_type) (9.7.1.2.2)
d_ti (2852)	neoclassic%ti_neo%off_diagonal%d_ti (array3dflt_type) (9.7.1.2.2)
d_ne (2852)	neoclassic%ti_neo%off_diagonal%d_ne (matflt_type) (9.7.1.2.10)
d_te (2852)	neoclassic%ti_neo%off_diagonal%d_te (matflt_type) (9.7.1.2.10)
d_epar (2852)	neoclassic%ti_neo%off_diagonal%d_epar (matflt_type) (9.7.1.2.10)
d_mtor (2852)	neoclassic%ti_neo%off_diagonal%d_mtor (matflt_type) (9.7.1.2.10)
flag (3013)	neoclassic%ti_neo%flag (integer) (9.7.1.1.2)
te_neo (2583)	neoclassic%te_neo (transcoefel) (9.7.1.3.461)
diff_eff (3011)	neoclassic%te_neo%diff_eff (vecflt_type) (9.7.1.2.13)
vconv_eff (3011)	neoclassic%te_neo%vconv_eff (vecflt_type) (9.7.1.2.13)
flux (3011)	neoclassic%te_neo%flux (vecflt_type) (9.7.1.2.13)
off_diagonal (3011)	neoclassic%te_neo%off_diagonal (offdiagel) (9.7.1.3.301)
d_ni (2851)	neoclassic%te_neo%off_diagonal%d_ni (matflt_type) (9.7.1.2.10)
d_ti (2851)	neoclassic%te_neo%off_diagonal%d_ti (matflt_type) (9.7.1.2.10)
d_ne (2851)	neoclassic%te_neo%off_diagonal%d_ne (vecflt_type) (9.7.1.2.13)
d_te (2851)	neoclassic%te_neo%off_diagonal%d_te (vecflt_type) (9.7.1.2.13)
d_epar (2851)	neoclassic%te_neo%off_diagonal%d_epar (vecflt_type) (9.7.1.2.13)
d_mtor (2851)	neoclassic%te_neo%off_diagonal%d_mtor (vecflt_type) (9.7.1.2.13)
flag (3011)	neoclassic%te_neo%flag (integer) (9.7.1.1.2)
tz_neo (2583)	neoclassic%tz_neo(:) (transcoefimp) (9.7.1.3.462)
diff_eff (3012)	neoclassic%tz_neo(:)%diff_eff (matflt_type) (9.7.1.2.10)
vconv_eff (3012)	neoclassic%tz_neo(:)%vconv_eff (matflt_type) (9.7.1.2.10)
exchange (3012)	neoclassic%tz_neo(:)%exchange (matflt_type) (9.7.1.2.10)
flux (3012)	neoclassic%tz_neo(:)%flux (matflt_type) (9.7.1.2.10)
flag (3012)	neoclassic%tz_neo(:)%flag (integer) (9.7.1.1.2)
mtor_neo (2583)	neoclassic%mtor_neo (transcoefel) (9.7.1.3.461)
diff_eff (3011)	neoclassic%mtor_neo%diff_eff (vecflt_type) (9.7.1.2.13)
vconv_eff (3011)	neoclassic%mtor_neo%vconv_eff (vecflt_type) (9.7.1.2.13)
flux (3011)	neoclassic%mtor_neo%flux (vecflt_type) (9.7.1.2.13)
off_diagonal (3011)	neoclassic%mtor_neo%off_diagonal (offdiagel) (9.7.1.3.301)
d_ni (2851)	neoclassic%mtor_neo%off_diagonal%d_ni (matflt_type) (9.7.1.2.10)
d_ti (2851)	neoclassic%mtor_neo%off_diagonal%d_ti (matflt_type) (9.7.1.2.10)
d_ne (2851)	neoclassic%mtor_neo%off_diagonal%d_ne (vecflt_type) (9.7.1.2.13)
d_te (2851)	neoclassic%mtor_neo%off_diagonal%d_te (vecflt_type) (9.7.1.2.13)
d_epar (2851)	neoclassic%mtor_neo%off_diagonal%d_epar (vecflt_type) (9.7.1.2.13)
d_mtor (2851)	neoclassic%mtor_neo%off_diagonal%d_mtor (vecflt_type) (9.7.1.2.13)
flag (3011)	neoclassic%mtor_neo%flag (integer) (9.7.1.1.2)
sigma (2583)	neoclassic%sigma (vecflt_type) (9.7.1.2.13)
jboot (2583)	neoclassic%jboot (vecflt_type) (9.7.1.2.13)
er (2583)	neoclassic%er (vecflt_type) (9.7.1.2.13)
vpol (2583)	neoclassic%vpol (matflt_type) (9.7.1.2.10)
vtor (2583)	neoclassic%vtor (matflt_type) (9.7.1.2.10)
mach (2583)	neoclassic%mach (matflt_type) (9.7.1.2.10)
utheta_e (2583)	neoclassic%utheta_e (vecflt_type) (9.7.1.2.13)
utheta_i (2583)	neoclassic%utheta_i (matflt_type) (9.7.1.2.10)
viscosity_par (2583)	neoclassic%viscosity_par (matflt_type) (9.7.1.2.10)
impurity (2583)	neoclassic%impurity(:) (neoclassic_impurity) (9.7.1.3.288)
utheta_z (2838)	neoclassic%impurity(:)%utheta_z (matflt_type) (9.7.1.2.10)
fext (2583)	neoclassic%fext (array3dflt_type) (9.7.1.2.2)
jext (2583)	neoclassic%jext (vecflt_type) (9.7.1.2.13)
time (2583)	neoclassic%time (float) (9.7.1.1.1)
codeparam (2583)	neoclassic%codeparam (codeparam) (9.7.1.3.77)
codename (2627)	neoclassic%codeparam%codename (string) (9.7.1.1.3)
codeversion (2627)	neoclassic%codeparam%codeversion (string) (9.7.1.1.3)
parameters (2627)	neoclassic%codeparam%parameters (string) (9.7.1.1.3)
output_diag (2627)	neoclassic%codeparam%output_diag (string) (9.7.1.1.3)
output_flag (2627)	neoclassic%codeparam%output_flag (integer) (9.7.1.1.2)

datainfo (2584)	ntm%datainfo (datainfo) (9.7.1.3.134)
dataprovder (2684)	ntm%datainfo%dataprovder (string) (9.7.1.1.3)
putdate (2684)	ntm%datainfo%putdate (string) (9.7.1.1.3)
source (2684)	ntm%datainfo%source (string) (9.7.1.1.3)
comment (2684)	ntm%datainfo%comment (string) (9.7.1.1.3)
cocos (2684)	ntm%datainfo%cocos (integer) (9.7.1.1.2)
id (2684)	ntm%datainfo%id (integer) (9.7.1.1.2)
isref (2684)	ntm%datainfo%isref (integer) (9.7.1.1.2)
whatref (2684)	ntm%datainfo%whatref (whatref) (9.7.1.3.506)
user (3056)	ntm%datainfo%whatref%user (string) (9.7.1.1.3)
machine (3056)	ntm%datainfo%whatref%machine (string) (9.7.1.1.3)
shot (3056)	ntm%datainfo%whatref%shot (integer) (9.7.1.1.2)
run (3056)	ntm%datainfo%whatref%run (integer) (9.7.1.1.2)
occurrence (3056)	ntm%datainfo%whatref%occurrence (integer) (9.7.1.1.2)
putinfo (2684)	ntm%datainfo%putinfo (putinfo) (9.7.1.3.342)
putmethod (2892)	ntm%datainfo%putinfo%putmethod (string) (9.7.1.1.3)
putaccess (2892)	ntm%datainfo%putinfo%putaccess (string) (9.7.1.1.3)
putlocation (2892)	ntm%datainfo%putinfo%putlocation (string) (9.7.1.1.3)
rights (2892)	ntm%datainfo%putinfo%rights (string) (9.7.1.1.3)
mode (2584)	ntm%mode(:) (ntm_mode) (9.7.1.3.293)
onset (2843)	ntm%mode(:)%onset (ntm_mode_onset) (9.7.1.3.298)
w (2848)	ntm%mode(:)%onset%w (float) (9.7.1.1.1)
time_onset (2848)	ntm%mode(:)%onset%time_onset (float) (9.7.1.1.1)
time_offset (2848)	ntm%mode(:)%onset%time_offset (float) (9.7.1.1.1)
phase (2848)	ntm%mode(:)%onset%phase (float) (9.7.1.1.1)
n (2848)	ntm%mode(:)%onset%n (integer) (9.7.1.1.2)
m (2848)	ntm%mode(:)%onset%m (integer) (9.7.1.1.2)
description (2848)	ntm%mode(:)%onset%description (string) (9.7.1.1.3)
full_evol (2843)	ntm%mode(:)%full_evol (ntm_mode_full_evol) (9.7.1.3.296)
time_evol (2846)	ntm%mode(:)%full_evol%time_evol (vecflt_type) (9.7.1.2.13)
w (2846)	ntm%mode(:)%full_evol%w (vecflt_type) (9.7.1.2.13)
dwdt (2846)	ntm%mode(:)%full_evol%dwdt (vecflt_type) (9.7.1.2.13)
phase (2846)	ntm%mode(:)%full_evol%phase (vecflt_type) (9.7.1.2.13)
dphasedt (2846)	ntm%mode(:)%full_evol%dphasedt (vecflt_type) (9.7.1.2.13)
frequency (2846)	ntm%mode(:)%full_evol%frequency (vecflt_type) (9.7.1.2.13)
dfrequencydt (2846)	ntm%mode(:)%full_evol%dfrequencydt (vecflt_type) (9.7.1.2.13)
island (2846)	ntm%mode(:)%full_evol%island (ntm_mode_full_evol_island) (9.7.1.3.297)
geometry (2847)	ntm%mode(:)%full_evol%island%geometry (matflt_type) (9.7.1.2.10)
coord_values (2847)	ntm%mode(:)%full_evol%island%coord_values (matflt_type) (9.7.1.2.10)
coord_desc (2847)	ntm%mode(:)%full_evol%island%coord_desc (string) (9.7.1.1.3)
n (2846)	ntm%mode(:)%full_evol%n (integer) (9.7.1.1.2)
m (2846)	ntm%mode(:)%full_evol%m (integer) (9.7.1.1.2)
deltaw_value (2846)	ntm%mode(:)%full_evol%deltaw_value (matflt_type) (9.7.1.2.10)
deltaw_name (2846)	ntm%mode(:)%full_evol%deltaw_name (vecstring_type) (9.7.1.2.15)
torque_value (2846)	ntm%mode(:)%full_evol%torque_value (matflt_type) (9.7.1.2.10)
torque_name (2846)	ntm%mode(:)%full_evol%torque_name (vecstring_type) (9.7.1.2.15)
delta_diff (2846)	ntm%mode(:)%full_evol%delta_diff (matflt_type) (9.7.1.2.10)
description (2846)	ntm%mode(:)%full_evol%description (string) (9.7.1.1.3)
rho_tor (2846)	ntm%mode(:)%full_evol%rho_tor (vecflt_type) (9.7.1.2.13)
evolution (2843)	ntm%mode(:)%evolution (ntm_mode_evolution) (9.7.1.3.294)
w (2844)	ntm%mode(:)%evolution%w (float) (9.7.1.1.1)
dwdt (2844)	ntm%mode(:)%evolution%dwdt (float) (9.7.1.1.1)
phase (2844)	ntm%mode(:)%evolution%phase (float) (9.7.1.1.1)
dphasedt (2844)	ntm%mode(:)%evolution%dphasedt (float) (9.7.1.1.1)
frequency (2844)	ntm%mode(:)%evolution%frequency (float) (9.7.1.1.1)
dfrequencydt (2844)	ntm%mode(:)%evolution%dfrequencydt (float) (9.7.1.1.1)
island (2844)	ntm%mode(:)%evolution%island (ntm_mode_evolution_island) (9.7.1.3.295)
geometry (2845)	ntm%mode(:)%evolution%island%geometry (vecflt_type) (9.7.1.2.13)
coord_values (2845)	ntm%mode(:)%evolution%island%coord_values (vecflt_type) (9.7.1.2.13)
coord_desc (2845)	ntm%mode(:)%evolution%island%coord_desc (string) (9.7.1.1.3)
n (2844)	ntm%mode(:)%evolution%n (integer) (9.7.1.1.2)

m (2844)	ntm%mode(:)%evolution%m (integer) (9.7.1.1.2)
deltaw_value (2844)	ntm%mode(:)%evolution%deltaw_value (vecflt.type) (9.7.1.2.13)
deltaw_name (2844)	ntm%mode(:)%evolution%deltaw_name (vecstring.type) (9.7.1.2.15)
torque_value (2844)	ntm%mode(:)%evolution%torque_value (vecflt.type) (9.7.1.2.13)
torque_name (2844)	ntm%mode(:)%evolution%torque_name (vecstring.type) (9.7.1.2.15)
delta_diff (2844)	ntm%mode(:)%evolution%delta_diff (vecflt.type) (9.7.1.2.13)
description (2844)	ntm%mode(:)%evolution%description (string) (9.7.1.1.3)
rho_tor (2844)	ntm%mode(:)%evolution%rho_tor (float) (9.7.1.1.1)
time (2584)	ntm%time (float) (9.7.1.1.1)
codeparam (2584)	ntm%codeparam (codeparam) (9.7.1.3.77)
codename (2627)	ntm%codeparam%codename (string) (9.7.1.1.3)
codeversion (2627)	ntm%codeparam%codeversion (string) (9.7.1.1.3)
parameters (2627)	ntm%codeparam%parameters (string) (9.7.1.1.3)
output_diag (2627)	ntm%codeparam%output_diag (string) (9.7.1.1.3)
output_flag (2627)	ntm%codeparam%output_flag (integer) (9.7.1.1.2)

### 9.7.2.1.33 orbit

datainfo (2585)	orbit%datainfo (datainfo) (9.7.1.3.134)
dataprovider (2684)	orbit%datainfo%dataprovider (string) (9.7.1.1.3)
putdate (2684)	orbit%datainfo%putdate (string) (9.7.1.1.3)
source (2684)	orbit%datainfo%source (string) (9.7.1.1.3)
comment (2684)	orbit%datainfo%comment (string) (9.7.1.1.3)
cocos (2684)	orbit%datainfo%cocos (integer) (9.7.1.1.2)
id (2684)	orbit%datainfo%id (integer) (9.7.1.1.2)
isref (2684)	orbit%datainfo%isref (integer) (9.7.1.1.2)
whatref (2684)	orbit%datainfo%whatref (whatref) (9.7.1.3.506)
user (3056)	orbit%datainfo%whatref <sup>f</sup> user (string) (9.7.1.1.3)
machine (3056)	orbit%datainfo%whatref <sup>f</sup> machine (string) (9.7.1.1.3)
shot (3056)	orbit%datainfo%whatref <sup>f</sup> shot (integer) (9.7.1.1.2)
run (3056)	orbit%datainfo%whatref <sup>f</sup> run (integer) (9.7.1.1.2)
occurrence (3056)	orbit%datainfo%whatref <sup>f</sup> occurrence (integer) (9.7.1.1.2)
putinfo (2684)	orbit%datainfo%putinfo (putinfo) (9.7.1.3.342)
putmethod (2892)	orbit%datainfo%putinfo%putmethod (string) (9.7.1.1.3)
putaccess (2892)	orbit%datainfo%putinfo%putaccess (string) (9.7.1.1.3)
putlocation (2892)	orbit%datainfo%putinfo%putlocation (string) (9.7.1.1.3)
rights (2892)	orbit%datainfo%putinfo%rights (string) (9.7.1.1.3)
com (2585)	orbit%com (com) (9.7.1.3.81)
amn (2631)	orbit%com%amn (float) (9.7.1.1.1)
zion (2631)	orbit%com%zion (float) (9.7.1.1.1)
energy (2631)	orbit%com%energy (vecflt.type) (9.7.1.2.13)
magn_mom (2631)	orbit%com%magn_mom (vecflt.type) (9.7.1.2.13)
p_phi (2631)	orbit%com%p_phi (vecflt.type) (9.7.1.2.13)
sigma (2631)	orbit%com%sigma (vecint.type) (9.7.1.2.14)
trace (2585)	orbit%trace (trace) (9.7.1.3.460)
time_orb (3010)	orbit%trace%time_orb (matflt.type) (9.7.1.2.10)
ntorb (3010)	orbit%trace%ntorb (vecint.type) (9.7.1.2.14)
r (3010)	orbit%trace%r (matflt.type) (9.7.1.2.10)
z (3010)	orbit%trace%z (matflt.type) (9.7.1.2.10)
phi (3010)	orbit%trace%phi (matflt.type) (9.7.1.2.10)
psi (3010)	orbit%trace%psi (matflt.type) (9.7.1.2.10)
theta_b (3010)	orbit%trace%theta_b (matflt.type) (9.7.1.2.10)
v_parallel (3010)	orbit%trace%v_parallel (matflt.type) (9.7.1.2.10)
v_perp (3010)	orbit%trace%v_perp (matflt.type) (9.7.1.2.10)
global_param (2585)	orbit%global_param (orbit_global_param) (9.7.1.3.304)
orbit_type (2854)	orbit%global_param%orbit_type (vecint.type) (9.7.1.2.14)
omega_b (2854)	orbit%global_param%omega_b (vecflt.type) (9.7.1.2.13)
omega_phi (2854)	orbit%global_param%omega_phi (vecflt.type) (9.7.1.2.13)
omega_c.av (2854)	orbit%global_param%omega_c.av (vecflt.type) (9.7.1.2.13)
special_pos (2854)	orbit%global_param%special_pos (orbit_special_pos) (9.7.1.3.307)
midplane (2857)	orbit%global_param%special_pos%midplane (orbit_midplane) (9.7.1.3.305)



outer (2855)	orbit%global_param%special_pos%midplane%outer (orbit_pos) (9.7.1.3.306)
r (2856)	orbit%global_param%special_pos%midplane%outer%r (vecflt_type) (9.7.1.2.13)
z (2856)	orbit%global_param%special_pos%midplane%outer%z (vecflt_type) (9.7.1.2.13)
phi (2856)	orbit%global_param%special_pos%midplane%outer%phi (vecflt_type) (9.7.1.2.13)
psi (2856)	orbit%global_param%special_pos%midplane%outer%psi (vecflt_type) (9.7.1.2.13)
theta_b (2856)	orbit%global_param%special_pos%midplane%outer%theta_b (vecflt_type) (9.7.1.2.13)
inner (2855)	orbit%global_param%special_pos%midplane%inner (orbit_pos) (9.7.1.3.306)
r (2856)	orbit%global_param%special_pos%midplane%inner%r (vecflt_type) (9.7.1.2.13)
z (2856)	orbit%global_param%special_pos%midplane%inner%z (vecflt_type) (9.7.1.2.13)
phi (2856)	orbit%global_param%special_pos%midplane%inner%phi (vecflt_type) (9.7.1.2.13)
psi (2856)	orbit%global_param%special_pos%midplane%inner%psi (vecflt_type) (9.7.1.2.13)
theta_b (2856)	orbit%global_param%special_pos%midplane%inner%theta_b (vecflt_type) (9.7.1.2.13)
turning_pts (2857)	orbit%global_param%special_pos%turning_pts (orbit_turning_pts) (9.7.1.3.308)
upper (2858)	orbit%global_param%special_pos%turning_pts%upper (orbit_pos) (9.7.1.3.306)
r (2856)	orbit%global_param%special_pos%turning_pts%upper%r (vecflt_type) (9.7.1.2.13)
z (2856)	orbit%global_param%special_pos%turning_pts%upper%z (vecflt_type) (9.7.1.2.13)
phi (2856)	orbit%global_param%special_pos%turning_pts%upper%phi (vecflt_type) (9.7.1.2.13)
psi (2856)	orbit%global_param%special_pos%turning_pts%upper%psi (vecflt_type) (9.7.1.2.13)
theta_b (2856)	orbit%global_param%special_pos%turning_pts%upper%theta_b (vecflt_type) (9.7.1.2.13)
lower (2858)	orbit%global_param%special_pos%turning_pts%lower (orbit_pos) (9.7.1.3.306)
r (2856)	orbit%global_param%special_pos%turning_pts%lower%r (vecflt_type) (9.7.1.2.13)
z (2856)	orbit%global_param%special_pos%turning_pts%lower%z (vecflt_type) (9.7.1.2.13)
phi (2856)	orbit%global_param%special_pos%turning_pts%lower%phi (vecflt_type) (9.7.1.2.13)
psi (2856)	orbit%global_param%special_pos%turning_pts%lower%psi (vecflt_type) (9.7.1.2.13)
theta_b (2856)	orbit%global_param%special_pos%turning_pts%lower%theta_b (vecflt_type) (9.7.1.2.13)
codeparam (2585)	orbit%codeparam (codeparam) (9.7.1.3.77)
codename (2627)	orbit%codeparam%codename (string) (9.7.1.1.3)
codeversion (2627)	orbit%codeparam%codeversion (string) (9.7.1.1.3)
parameters (2627)	orbit%codeparam%parameters (string) (9.7.1.1.3)
output_diag (2627)	orbit%codeparam%output_diag (string) (9.7.1.1.3)
output_flag (2627)	orbit%codeparam%output_flag (integer) (9.7.1.1.2)
time (2585)	orbit%time (float) (9.7.1.1.1)

### 9.7.2.1.34 pellets

datainfo (2586)	pellets%datainfo (datainfo) (9.7.1.3.134)
dataprovider (2684)	pellets%datainfo%dataprovider (string) (9.7.1.1.3)
putdate (2684)	pellets%datainfo%putdate (string) (9.7.1.1.3)
source (2684)	pellets%datainfo%source (string) (9.7.1.1.3)
comment (2684)	pellets%datainfo%comment (string) (9.7.1.1.3)
cocos (2684)	pellets%datainfo%cocos (integer) (9.7.1.1.2)
id (2684)	pellets%datainfo%id (integer) (9.7.1.1.2)
isref (2684)	pellets%datainfo%isref (integer) (9.7.1.1.2)
whatref (2684)	pellets%datainfo%whatref (whatref) (9.7.1.3.506)
user (3056)	pellets%datainfo%whatref%user (string) (9.7.1.1.3)
machine (3056)	pellets%datainfo%whatref%machine (string) (9.7.1.1.3)
shot (3056)	pellets%datainfo%whatref%shot (integer) (9.7.1.1.2)
run (3056)	pellets%datainfo%whatref%run (integer) (9.7.1.1.2)
occurrence (3056)	pellets%datainfo%whatref%occurrence (integer) (9.7.1.1.2)
putinfo (2684)	pellets%datainfo%putinfo (putinfo) (9.7.1.3.342)
putmethod (2892)	pellets%datainfo%putinfo%putmethod (string) (9.7.1.1.3)
putaccess (2892)	pellets%datainfo%putinfo%putaccess (string) (9.7.1.1.3)
putlocation (2892)	pellets%datainfo%putinfo%putlocation (string) (9.7.1.1.3)
rights (2892)	pellets%datainfo%putinfo%rights (string) (9.7.1.1.3)
compositions (2586)	pellets%compositions (compositions_type) (9.7.1.3.99)
nuclei (2649)	pellets%compositions%nuclei(:) (nuclei) (9.7.1.3.299)
zn (2849)	pellets%compositions%nuclei(:)%zn (float) (9.7.1.1.1)
amn (2849)	pellets%compositions%nuclei(:)%amn (float) (9.7.1.1.1)
label (2849)	pellets%compositions%nuclei(:)%label (string) (9.7.1.1.3)
ions (2649)	pellets%compositions%ions(:) (ions) (9.7.1.3.240)
nucindex (2790)	pellets%compositions%ions(:)%nucindex (integer) (9.7.1.1.2)



zion (2790)	pellets%compositions%ions(:)%zion (float) (9.7.1.1.1)
imp_flag (2790)	pellets%compositions%ions(:)%imp_flag (integer) (9.7.1.1.2)
label (2790)	pellets%compositions%ions(:)%label (string) (9.7.1.1.3)
impurities (2649)	pellets%compositions%impurities(:) (impurities) (9.7.1.3.237)
nucindex (2787)	pellets%compositions%impurities(:)%nucindex (integer) (9.7.1.1.2)
i_ion (2787)	pellets%compositions%impurities(:)%i_ion (integer) (9.7.1.1.2)
nzimp (2787)	pellets%compositions%impurities(:)%nzimp (integer) (9.7.1.1.2)
zmin (2787)	pellets%compositions%impurities(:)%zmin (vecflt_type) (9.7.1.2.13)
zmax (2787)	pellets%compositions%impurities(:)%zmax (vecflt_type) (9.7.1.2.13)
label (2787)	pellets%compositions%impurities(:)%label (vecstring_type) (9.7.1.2.15)
neutralscomp (2649)	pellets%compositions%neutralscomp(:) (composition_neutralscomp) (9.7.1.3.98)
neutcomp (2648)	pellets%compositions%neutralscomp(:)%neutcomp(:) (composition_neutrals_neutcomp) (9.7.1.3.97)
nucindex (2647)	pellets%compositions%neutralscomp(:)%neutcomp(:)%nucindex (integer) (9.7.1.1.2)
multiplicity (2647)	pellets%compositions%neutralscomp(:)%neutcomp(:)%multiplicity (integer) (9.7.1.1.2)
type (2648)	pellets%compositions%neutralscomp(:)%type(:) (identifier) (9.7.1.3.235)
id (2785)	pellets%compositions%neutralscomp(:)%type(:)%id (string) (9.7.1.1.3)
flag (2785)	pellets%compositions%neutralscomp(:)%type(:)%flag (integer) (9.7.1.1.2)
description (2785)	pellets%compositions%neutralscomp(:)%type(:)%description (string) (9.7.1.1.3)
label (2648)	pellets%compositions%neutralscomp(:)%label (string) (9.7.1.1.3)
edgespecies (2649)	pellets%compositions%edgespecies(:) (edgespecies) (9.7.1.3.185)
nucindex (2735)	pellets%compositions%edgespecies(:)%nucindex (integer) (9.7.1.1.2)
zmin (2735)	pellets%compositions%edgespecies(:)%zmin (float) (9.7.1.1.1)
zmax (2735)	pellets%compositions%edgespecies(:)%zmax (float) (9.7.1.1.1)
label (2735)	pellets%compositions%edgespecies(:)%label (string) (9.7.1.1.3)
signature (2649)	pellets%compositions%signature (identifier) (9.7.1.3.235)
id (2785)	pellets%compositions%signature%id (string) (9.7.1.1.3)
flag (2785)	pellets%compositions%signature%flag (integer) (9.7.1.1.2)
description (2785)	pellets%compositions%signature%description (string) (9.7.1.1.3)
pellet (2586)	pellets%pellet(:) (pellet) (9.7.1.3.312)
shape (2862)	pellets%pellet(:)%shape (pellet_shape) (9.7.1.3.319)
type (2869)	pellets%pellet(:)%shape%type (identifier) (9.7.1.3.235)
id (2785)	pellets%pellet(:)%shape%type%id (string) (9.7.1.1.3)
flag (2785)	pellets%pellet(:)%shape%type%flag (integer) (9.7.1.1.2)
description (2785)	pellets%pellet(:)%shape%type%description (string) (9.7.1.1.3)
dimensions (2869)	pellets%pellet(:)%shape%dimensions (vecflt_type) (9.7.1.2.13)
elements (2862)	pellets%pellet(:)%elements (pellet_elements) (9.7.1.3.315)
nucindex (2865)	pellets%pellet(:)%elements%nucindex (vecint_type) (9.7.1.2.14)
density (2865)	pellets%pellet(:)%elements%density (vecflt_type) (9.7.1.2.13)
fraction (2865)	pellets%pellet(:)%elements%fraction (vecflt_type) (9.7.1.2.13)
subl.energy (2865)	pellets%pellet(:)%elements%subl.energy (vecflt_type) (9.7.1.2.13)
geometry (2862)	pellets%pellet(:)%geometry (pellet_geometry) (9.7.1.3.316)
pivot_point (2866)	pellets%pellet(:)%geometry%pivot_point (rzphi0D) (9.7.1.3.364)
r (2914)	pellets%pellet(:)%geometry%pivot_point%r (float) (9.7.1.1.1)
z (2914)	pellets%pellet(:)%geometry%pivot_point%z (float) (9.7.1.1.1)
phi (2914)	pellets%pellet(:)%geometry%pivot_point%phi (float) (9.7.1.1.1)
second_point (2866)	pellets%pellet(:)%geometry%second_point (rzphi0D) (9.7.1.3.364)
r (2914)	pellets%pellet(:)%geometry%second_point%r (float) (9.7.1.1.1)
z (2914)	pellets%pellet(:)%geometry%second_point%z (float) (9.7.1.1.1)
phi (2914)	pellets%pellet(:)%geometry%second_point%phi (float) (9.7.1.1.1)
velocity (2866)	pellets%pellet(:)%geometry%velocity (float) (9.7.1.1.1)
angles (2866)	pellets%pellet(:)%geometry%angles (pellet_angles) (9.7.1.3.313)
horizontal (2863)	pellets%pellet(:)%geometry%angles%horizontal (float) (9.7.1.1.1)
vertical (2863)	pellets%pellet(:)%geometry%angles%vertical (float) (9.7.1.1.1)
pathprofiles (2862)	pellets%pellet(:)%pathprofiles (pellet_pathprofiles) (9.7.1.3.318)
distance (2868)	pellets%pellet(:)%pathprofiles%distance (vecflt_type) (9.7.1.2.13)
rho_tor (2868)	pellets%pellet(:)%pathprofiles%rho_tor (vecflt_type) (9.7.1.2.13)
rho_pol (2868)	pellets%pellet(:)%pathprofiles%rho_pol (vecflt_type) (9.7.1.2.13)
velocity (2868)	pellets%pellet(:)%pathprofiles%velocity (vecflt_type) (9.7.1.2.13)
ne (2868)	pellets%pellet(:)%pathprofiles%ne (vecflt_type) (9.7.1.2.13)
te (2868)	pellets%pellet(:)%pathprofiles%te (vecflt_type) (9.7.1.2.13)
abl_rate (2868)	pellets%pellet(:)%pathprofiles%abl_rate (vecflt_type) (9.7.1.2.13)

abl_particles (2868)	pellets%pellet(:)%pathprofiles%abl_particles (vecflt.type) (9.7.1.2.13)
delta_drift (2868)	pellets%pellet(:)%pathprofiles%delta_drift (vecflt.type) (9.7.1.2.13)
position (2868)	pellets%pellet(:)%pathprofiles%position (rzphiD) (9.7.1.3.365)
r (2915)	pellets%pellet(:)%pathprofiles%position%r (vecflt.type) (9.7.1.2.13)
z (2915)	pellets%pellet(:)%pathprofiles%position%z (vecflt.type) (9.7.1.2.13)
phi (2915)	pellets%pellet(:)%pathprofiles%position%phi (vecflt.type) (9.7.1.2.13)
deposition (2862)	pellets%pellet(:)%deposition (pellet.deposition) (9.7.1.3.314)
rho_tor (2864)	pellets%pellet(:)%deposition%rho_tor (vecflt.type) (9.7.1.2.13)
rho_pol (2864)	pellets%pellet(:)%deposition%rho_pol (vecflt.type) (9.7.1.2.13)
delta_ne (2864)	pellets%pellet(:)%deposition%delta_ne (vecflt.type) (9.7.1.2.13)
delta_te (2864)	pellets%pellet(:)%deposition%delta_te (vecflt.type) (9.7.1.2.13)
delta_ni (2864)	pellets%pellet(:)%deposition%delta_ni (matflt.type) (9.7.1.2.10)
delta_ti (2864)	pellets%pellet(:)%deposition%delta_ti (matflt.type) (9.7.1.2.10)
delta_vtor (2864)	pellets%pellet(:)%deposition%delta_vtor (matflt.type) (9.7.1.2.10)
impurity (2864)	pellets%pellet(:)%deposition%impurity(:) (pellet_impurity) (9.7.1.3.317)
delta_nz (2867)	pellets%pellet(:)%deposition%impurity(:)%delta_nz (matflt.type) (9.7.1.2.10)
codeparam (2586)	pellets%codeparam (codeparam) (9.7.1.3.77)
codename (2627)	pellets%codeparam%codename (string) (9.7.1.1.3)
codeversion (2627)	pellets%codeparam%codeversion (string) (9.7.1.1.3)
parameters (2627)	pellets%codeparam%parameters (string) (9.7.1.1.3)
output_diag (2627)	pellets%codeparam%output_diag (string) (9.7.1.1.3)
output_flag (2627)	pellets%codeparam%output_flag (integer) (9.7.1.1.2)
time (2586)	pellets%time (float) (9.7.1.1.1)

### 9.7.2.1.35 pfsystems

datainfo (2587)	pfsystems%datainfo (datainfo) (9.7.1.3.134)
dataprovider (2684)	pfsystems%datainfo%dataprovider (string) (9.7.1.1.3)
putdate (2684)	pfsystems%datainfo%putdate (string) (9.7.1.1.3)
source (2684)	pfsystems%datainfo%source (string) (9.7.1.1.3)
comment (2684)	pfsystems%datainfo%comment (string) (9.7.1.1.3)
cocos (2684)	pfsystems%datainfo%cocos (integer) (9.7.1.1.2)
id (2684)	pfsystems%datainfo%id (integer) (9.7.1.1.2)
isref (2684)	pfsystems%datainfo%isref (integer) (9.7.1.1.2)
whatref (2684)	pfsystems%datainfo%whatref (whatref) (9.7.1.3.506)
user (3056)	pfsystems%datainfo%whatref%user (string) (9.7.1.1.3)
machine (3056)	pfsystems%datainfo%whatref%machine (string) (9.7.1.1.3)
shot (3056)	pfsystems%datainfo%whatref%shot (integer) (9.7.1.1.2)
run (3056)	pfsystems%datainfo%whatref%run (integer) (9.7.1.1.2)
occurrence (3056)	pfsystems%datainfo%whatref%occurrence (integer) (9.7.1.1.2)
putinfo (2684)	pfsystems%datainfo%putinfo (putinfo) (9.7.1.3.342)
putmethod (2892)	pfsystems%datainfo%putinfo%putmethod (string) (9.7.1.1.3)
putaccess (2892)	pfsystems%datainfo%putinfo%putaccess (string) (9.7.1.1.3)
putlocation (2892)	pfsystems%datainfo%putinfo%putlocation (string) (9.7.1.1.3)
rights (2892)	pfsystems%datainfo%putinfo%rights (string) (9.7.1.1.3)
pfcoils (2587)	pfsystems%pfcoils (pfcoils) (9.7.1.3.322)
desc_pfcoils (2872)	pfsystems%pfcoils%desc_pfcoils (desc_pfcoils) (9.7.1.3.138)
name (2688)	pfsystems%pfcoils%desc_pfcoils%name (vecstring.type) (9.7.1.2.15)
id (2688)	pfsystems%pfcoils%desc_pfcoils%id (vecstring.type) (9.7.1.2.15)
res (2688)	pfsystems%pfcoils%desc_pfcoils%res (vecflt.type) (9.7.1.2.13)
emax (2688)	pfsystems%pfcoils%desc_pfcoils%emax (vecflt.type) (9.7.1.2.13)
structure_cs (2688)	pfsystems%pfcoils%desc_pfcoils%structure_cs (structure_cs) (9.7.1.3.417)
gaptf (2967)	pfsystems%pfcoils%desc_pfcoils%structure_cs%gaptf (float) (9.7.1.1.1)
ri (2967)	pfsystems%pfcoils%desc_pfcoils%structure_cs%ri (float) (9.7.1.1.1)
re (2967)	pfsystems%pfcoils%desc_pfcoils%structure_cs%re (float) (9.7.1.1.1)
jcable (2967)	pfsystems%pfcoils%desc_pfcoils%structure_cs%jcable (float) (9.7.1.1.1)
current_nom (2967)	pfsystems%pfcoils%desc_pfcoils%structure_cs%current_nom (float) (9.7.1.1.1)
sigma (2967)	pfsystems%pfcoils%desc_pfcoils%structure_cs%sigma (float) (9.7.1.1.1)
tiso (2967)	pfsystems%pfcoils%desc_pfcoils%structure_cs%tiso (float) (9.7.1.1.1)
nlay (2967)	pfsystems%pfcoils%desc_pfcoils%structure_cs%nlay (float) (9.7.1.1.1)
pol_flux_cs (2688)	pfsystems%pfcoils%desc_pfcoils%pol_flux_cs (float) (9.7.1.1.1)

nelement (2688)	pfsystems%pfcoils%desc_pfcoils%nelement (vecint.type) (9.7.1.2.14)
pfelement (2688)	pfsystems%pfcoils%desc_pfcoils%pfelement (pfelement) (9.7.1.3.323)
name (2873)	pfsystems%pfcoils%desc_pfcoils%pfelement%name (vecstring.type) (9.7.1.2.15)
id (2873)	pfsystems%pfcoils%desc_pfcoils%pfelement%id (vecstring.type) (9.7.1.2.15)
turnsign (2873)	pfsystems%pfcoils%desc_pfcoils%pfelement%turnsign (matflt.type) (9.7.1.2.10)
area (2873)	pfsystems%pfcoils%desc_pfcoils%pfelement%area (matflt.type) (9.7.1.2.10)
pfgeometry (2873)	pfsystems%pfcoils%desc_pfcoils%pfelement%pfgeometry (pfgeometry) (9.7.1.3.324)
type (2874)	pfsystems%pfcoils%desc_pfcoils%pfelement%pfgeometry%type (matint.type) (9.7.1.2.11)
npoints (2874)	pfsystems%pfcoils%desc_pfcoils%pfelement%pfgeometry%npoints (matint.type) (9.7.1.2.11)
rzcoordinate (2874)	pfsystems%pfcoils%desc_pfcoils%pfelement%pfgeometry%rzcoordinate (rz3D) (9.7.1.3.363)
r (2913)	pfsystems%pfcoils%desc_pfcoils%pfelement%pfgeometry%rzcoordinate%r (array3dflt.type) (9.7.1.2.2)
z (2913)	pfsystems%pfcoils%desc_pfcoils%pfelement%pfgeometry%rzcoordinate%z (array3dflt.type) (9.7.1.2.2)
rzdrdz (2874)	pfsystems%pfcoils%desc_pfcoils%pfelement%pfgeometry%rzdrdz (array3dflt.type) (9.7.1.2.2)
coilcurrent (2872)	pfsystems%pfcoils%coilcurrent (exp1D) (9.7.1.3.197)
value (2747)	pfsystems%pfcoils%coilcurrent%value (vecflt.type) (9.7.1.2.13)
abserror (2747)	pfsystems%pfcoils%coilcurrent%abserror (vecflt.type) (9.7.1.2.13)
relerror (2747)	pfsystems%pfcoils%coilcurrent%relerror (vecflt.type) (9.7.1.2.13)
coilvoltage (2872)	pfsystems%pfcoils%coilvoltage (exp1D) (9.7.1.3.197)
value (2747)	pfsystems%pfcoils%coilvoltage%value (vecflt.type) (9.7.1.2.13)
abserror (2747)	pfsystems%pfcoils%coilvoltage%abserror (vecflt.type) (9.7.1.2.13)
relerror (2747)	pfsystems%pfcoils%coilvoltage%relerror (vecflt.type) (9.7.1.2.13)
p_cryo (2872)	pfsystems%pfcoils%p_cryo (float) (9.7.1.1.1)
p_nh (2872)	pfsystems%pfcoils%p_nh (vecflt.type) (9.7.1.2.13)
pfpassive (2587)	pfsystems%pfpassive (pfpassive) (9.7.1.3.326)
name (2876)	pfsystems%pfpassive%name (vecstring.type) (9.7.1.2.15)
area (2876)	pfsystems%pfpassive%area (vecflt.type) (9.7.1.2.13)
res (2876)	pfsystems%pfpassive%res (vecflt.type) (9.7.1.2.13)
eta (2876)	pfsystems%pfpassive%eta (vecflt.type) (9.7.1.2.13)
current (2876)	pfsystems%pfpassive%current (pfpassive.current) (9.7.1.3.327)
toroidal (2877)	pfsystems%pfpassive%current%toroidal (exp1D) (9.7.1.3.197)
value (2747)	pfsystems%pfpassive%current%toroidal%value (vecflt.type) (9.7.1.2.13)
abserror (2747)	pfsystems%pfpassive%current%toroidal%abserror (vecflt.type) (9.7.1.2.13)
relerror (2747)	pfsystems%pfpassive%current%toroidal%relerror (vecflt.type) (9.7.1.2.13)
poloidal (2877)	pfsystems%pfpassive%current%poloidal (exp1D) (9.7.1.3.197)
value (2747)	pfsystems%pfpassive%current%poloidal%value (vecflt.type) (9.7.1.2.13)
abserror (2747)	pfsystems%pfpassive%current%poloidal%abserror (vecflt.type) (9.7.1.2.13)
relerror (2747)	pfsystems%pfpassive%current%poloidal%relerror (vecflt.type) (9.7.1.2.13)
pfpageometry (2876)	pfsystems%pfpassive%pfpageometry (pfpageometry) (9.7.1.3.325)
type (2875)	pfsystems%pfpassive%pfpageometry%type (vecint.type) (9.7.1.2.14)
npoints (2875)	pfsystems%pfpassive%pfpageometry%npoints (vecint.type) (9.7.1.2.14)
rzcoordinate (2875)	pfsystems%pfpassive%pfpageometry%rzcoordinate (rz2D) (9.7.1.3.362)
r (2912)	pfsystems%pfpassive%pfpageometry%rzcoordinate%r (matflt.type) (9.7.1.2.10)
z (2912)	pfsystems%pfpassive%pfpageometry%rzcoordinate%z (matflt.type) (9.7.1.2.10)
rzdrdz (2875)	pfsystems%pfpassive%pfpageometry%rzdrdz (matflt.type) (9.7.1.2.10)
pfcircuits (2587)	pfsystems%pfcircuits (pfcircuits) (9.7.1.3.321)
name (2871)	pfsystems%pfcircuits%name (vecstring.type) (9.7.1.2.15)
id (2871)	pfsystems%pfcircuits%id (vecstring.type) (9.7.1.2.15)
type (2871)	pfsystems%pfcircuits%type (vecstring.type) (9.7.1.2.15)
nnodes (2871)	pfsystems%pfcircuits%nnodes (vecint.type) (9.7.1.2.14)
connections (2871)	pfsystems%pfcircuits%connections (array3dint.type) (9.7.1.2.3)
pfsupplies (2587)	pfsystems%pfsupplies (pfsupplies) (9.7.1.3.328)
desc_supply (2878)	pfsystems%pfsupplies%desc_supply (desc_supply) (9.7.1.3.139)
name (2689)	pfsystems%pfsupplies%desc_supply%name (vecstring.type) (9.7.1.2.15)
id (2689)	pfsystems%pfsupplies%desc_supply%id (vecstring.type) (9.7.1.2.15)
type (2689)	pfsystems%pfsupplies%desc_supply%type (vecstring.type) (9.7.1.2.15)
delay (2689)	pfsystems%pfsupplies%desc_supply%delay (vecflt.type) (9.7.1.2.13)
filter (2689)	pfsystems%pfsupplies%desc_supply%filter (filter) (9.7.1.3.201)
num (2751)	pfsystems%pfsupplies%desc_supply%filter%num (matflt.type) (9.7.1.2.10)
den (2751)	pfsystems%pfsupplies%desc_supply%filter%den (matflt.type) (9.7.1.2.10)

imin (2689)	pfsystems%pfsupplies%desc_supply%imin (vecflt_type) (9.7.1.2.13)
imax (2689)	pfsystems%pfsupplies%desc_supply%imax (vecflt_type) (9.7.1.2.13)
res (2689)	pfsystems%pfsupplies%desc_supply%res (vecflt_type) (9.7.1.2.13)
umin (2689)	pfsystems%pfsupplies%desc_supply%umin (vecflt_type) (9.7.1.2.13)
umax (2689)	pfsystems%pfsupplies%desc_supply%umax (vecflt_type) (9.7.1.2.13)
emax (2689)	pfsystems%pfsupplies%desc_supply%emax (vecflt_type) (9.7.1.2.13)
voltage (2878)	pfsystems%pfsupplies%voltage (exp1D) (9.7.1.3.197)
value (2747)	pfsystems%pfsupplies%voltage%value (vecflt_type) (9.7.1.2.13)
abserror (2747)	pfsystems%pfsupplies%voltage%abserror (vecflt_type) (9.7.1.2.13)
releror (2747)	pfsystems%pfsupplies%voltage%releror (vecflt_type) (9.7.1.2.13)
current (2878)	pfsystems%pfsupplies%current (exp1D) (9.7.1.3.197)
value (2747)	pfsystems%pfsupplies%current%value (vecflt_type) (9.7.1.2.13)
abserror (2747)	pfsystems%pfsupplies%current%abserror (vecflt_type) (9.7.1.2.13)
releror (2747)	pfsystems%pfsupplies%current%releror (vecflt_type) (9.7.1.2.13)
codeparam (2587)	pfsystems%codeparam (codeparam) (9.7.1.3.77)
codename (2627)	pfsystems%codeparam%codename (string) (9.7.1.1.3)
codeversion (2627)	pfsystems%codeparam%codeversion (string) (9.7.1.1.3)
parameters (2627)	pfsystems%codeparam%parameters (string) (9.7.1.1.3)
output_diag (2627)	pfsystems%codeparam%output_diag (string) (9.7.1.1.3)
output_flag (2627)	pfsystems%codeparam%output_flag (integer) (9.7.1.1.2)
time (2587)	pfsystems%time (float) (9.7.1.1.1)

### 9.7.2.1.36 polarddiag

datainfo (2804)	lineintegralsdiag%datainfo (datainfo) (9.7.1.3.134)
dataprovder (2684)	lineintegralsdiag%datainfo%dataprovder (string) (9.7.1.1.3)
putdate (2684)	lineintegralsdiag%datainfo%putdate (string) (9.7.1.1.3)
source (2684)	lineintegralsdiag%datainfo%source (string) (9.7.1.1.3)
comment (2684)	lineintegralsdiag%datainfo%comment (string) (9.7.1.1.3)
cocos (2684)	lineintegralsdiag%datainfo%cocos (integer) (9.7.1.1.2)
id (2684)	lineintegralsdiag%datainfo%id (integer) (9.7.1.1.2)
isref (2684)	lineintegralsdiag%datainfo%isref (integer) (9.7.1.1.2)
whatref (2684)	lineintegralsdiag%datainfo%whatref (whatref) (9.7.1.3.506)
user (3056)	lineintegralsdiag%datainfo%whatref%user (string) (9.7.1.1.3)
machine (3056)	lineintegralsdiag%datainfo%whatref%machine (string) (9.7.1.1.3)
shot (3056)	lineintegralsdiag%datainfo%whatref%shot (integer) (9.7.1.1.2)
run (3056)	lineintegralsdiag%datainfo%whatref%run (integer) (9.7.1.1.2)
occurrence (3056)	lineintegralsdiag%datainfo%whatref%occurrence (integer) (9.7.1.1.2)
putinfo (2684)	lineintegralsdiag%datainfo%putinfo (putinfo) (9.7.1.3.342)
putmethod (2892)	lineintegralsdiag%datainfo%putinfo%putmethod (string) (9.7.1.1.3)
putaccess (2892)	lineintegralsdiag%datainfo%putinfo%putaccess (string) (9.7.1.1.3)
putlocation (2892)	lineintegralsdiag%datainfo%putinfo%putlocation (string) (9.7.1.1.3)
rights (2892)	lineintegralsdiag%datainfo%putinfo%rights (string) (9.7.1.1.3)
expression (2804)	lineintegralsdiag%expression (string) (9.7.1.1.3)
setup_line (2804)	lineintegralsdiag%setup_line (setup_line) (9.7.1.3.396)
pivot_point (2946)	lineintegralsdiag%setup_line%pivot_point (rzphi1D) (9.7.1.3.365)
r (2915)	lineintegralsdiag%setup_line%pivot_point%r (vecflt_type) (9.7.1.2.13)
z (2915)	lineintegralsdiag%setup_line%pivot_point%z (vecflt_type) (9.7.1.2.13)
phi (2915)	lineintegralsdiag%setup_line%pivot_point%phi (vecflt_type) (9.7.1.2.13)
horchordang1 (2946)	lineintegralsdiag%setup_line%horchordang1 (vecflt_type) (9.7.1.2.13)
verchordang1 (2946)	lineintegralsdiag%setup_line%verchordang1 (vecflt_type) (9.7.1.2.13)
width (2946)	lineintegralsdiag%setup_line%width (vecflt_type) (9.7.1.2.13)
second_point (2946)	lineintegralsdiag%setup_line%second_point (rzphi1D) (9.7.1.3.365)
r (2915)	lineintegralsdiag%setup_line%second_point%r (vecflt_type) (9.7.1.2.13)
z (2915)	lineintegralsdiag%setup_line%second_point%z (vecflt_type) (9.7.1.2.13)
phi (2915)	lineintegralsdiag%setup_line%second_point%phi (vecflt_type) (9.7.1.2.13)
horchordang2 (2946)	lineintegralsdiag%setup_line%horchordang2 (vecflt_type) (9.7.1.2.13)
verchordang2 (2946)	lineintegralsdiag%setup_line%verchordang2 (vecflt_type) (9.7.1.2.13)
third_point (2946)	lineintegralsdiag%setup_line%third_point (rzphi1D) (9.7.1.3.365)
r (2915)	lineintegralsdiag%setup_line%third_point%r (vecflt_type) (9.7.1.2.13)
z (2915)	lineintegralsdiag%setup_line%third_point%z (vecflt_type) (9.7.1.2.13)

phi (2915)	lineintegraldiag%setup_line%third_point%phi (vecflt.type) (9.7.1.2.13)
nchordpoints (2946)	lineintegraldiag%setup_line%nchordpoints (integer) (9.7.1.1.2)
measure (2804)	lineintegraldiag%measure (exp1D) (9.7.1.3.197)
value (2747)	lineintegraldiag%measure%value (vecflt.type) (9.7.1.2.13)
abserror (2747)	lineintegraldiag%measure%abserror (vecflt.type) (9.7.1.2.13)
releror (2747)	lineintegraldiag%measure%releror (vecflt.type) (9.7.1.2.13)
codeparam (2804)	lineintegraldiag%codeparam (codeparam) (9.7.1.3.77)
codename (2627)	lineintegraldiag%codeparam%codename (string) (9.7.1.1.3)
codeversion (2627)	lineintegraldiag%codeparam%codeversion (string) (9.7.1.1.3)
parameters (2627)	lineintegraldiag%codeparam%parameters (string) (9.7.1.1.3)
output_diag (2627)	lineintegraldiag%codeparam%output_diag (string) (9.7.1.1.3)
output_flag (2627)	lineintegraldiag%codeparam%output_flag (integer) (9.7.1.1.2)
time (2804)	lineintegraldiag%time (float) (9.7.1.1.1)

### 9.7.2.1.37 power\_conv

datainfo (2589)	power_conv%datainfo (datainfo) (9.7.1.3.134)
dataprovider (2684)	power_conv%datainfo%dataprovider (string) (9.7.1.1.3)
putdate (2684)	power_conv%datainfo%putdate (string) (9.7.1.1.3)
source (2684)	power_conv%datainfo%source (string) (9.7.1.1.3)
comment (2684)	power_conv%datainfo%comment (string) (9.7.1.1.3)
cocos (2684)	power_conv%datainfo%cocos (integer) (9.7.1.1.2)
id (2684)	power_conv%datainfo%id (integer) (9.7.1.1.2)
isref (2684)	power_conv%datainfo%isref (integer) (9.7.1.1.2)
whatref (2684)	power_conv%datainfo%whatref (whatref) (9.7.1.3.506)
user (3056)	power_conv%datainfo%whatref%user (string) (9.7.1.1.3)
machine (3056)	power_conv%datainfo%whatref%machine (string) (9.7.1.1.3)
shot (3056)	power_conv%datainfo%whatref%shot (integer) (9.7.1.1.2)
run (3056)	power_conv%datainfo%whatref%run (integer) (9.7.1.1.2)
occurrence (3056)	power_conv%datainfo%whatref%occurrence (integer) (9.7.1.1.2)
putinfo (2684)	power_conv%datainfo%putinfo (putinfo) (9.7.1.3.342)
putmethod (2892)	power_conv%datainfo%putinfo%putmethod (string) (9.7.1.1.3)
putaccess (2892)	power_conv%datainfo%putinfo%putaccess (string) (9.7.1.1.3)
putlocation (2892)	power_conv%datainfo%putinfo%putlocation (string) (9.7.1.1.3)
rights (2892)	power_conv%datainfo%putinfo%rights (string) (9.7.1.1.3)
cycle_type (2589)	power_conv%cycle_type (string) (9.7.1.1.3)
circuits (2589)	power_conv%circuits(:) (circuits) (9.7.1.3.74)
component (2624)	power_conv%circuits(:)%component(:) (power_conv_component) (9.7.1.3.336)
name (2886)	power_conv%circuits(:)%component(:)%name (string) (9.7.1.1.3)
temp_in (2886)	power_conv%circuits(:)%component(:)%temp_in (float) (9.7.1.1.1)
temp_out (2886)	power_conv%circuits(:)%component(:)%temp_out (float) (9.7.1.1.1)
press_in (2886)	power_conv%circuits(:)%component(:)%press_in (float) (9.7.1.1.1)
press_out (2886)	power_conv%circuits(:)%component(:)%press_out (float) (9.7.1.1.1)
power (2886)	power_conv%circuits(:)%component(:)%power (float) (9.7.1.1.1)
flow (2886)	power_conv%circuits(:)%component(:)%flow (float) (9.7.1.1.1)
power_net (2624)	power_conv%circuits(:)%power_net (float) (9.7.1.1.1)
power_int (2624)	power_conv%circuits(:)%power_int (float) (9.7.1.1.1)
efficiency (2624)	power_conv%circuits(:)%efficiency (float) (9.7.1.1.1)
power_recirc (2589)	power_conv%power_recirc (float) (9.7.1.1.1)
power_net (2589)	power_conv%power_net (float) (9.7.1.1.1)
power_int (2589)	power_conv%power_int (float) (9.7.1.1.1)
efficiency (2589)	power_conv%efficiency (float) (9.7.1.1.1)
codeparam (2589)	power_conv%codeparam (codeparam) (9.7.1.3.77)
codename (2627)	power_conv%codeparam%codename (string) (9.7.1.1.3)
codeversion (2627)	power_conv%codeparam%codeversion (string) (9.7.1.1.3)
parameters (2627)	power_conv%codeparam%parameters (string) (9.7.1.1.3)
output_diag (2627)	power_conv%codeparam%output_diag (string) (9.7.1.1.3)
output_flag (2627)	power_conv%codeparam%output_flag (integer) (9.7.1.1.2)
time (2589)	power_conv%time (float) (9.7.1.1.1)

### 9.7.2.1.38 reflectomet

datainfo (2590)	reflectomet%datainfo (datainfo) (9.7.1.3.134)
dataprovider (2684)	reflectomet%datainfo%dataprovider (string) (9.7.1.1.3)
putdate (2684)	reflectomet%datainfo%putdate (string) (9.7.1.1.3)
source (2684)	reflectomet%datainfo%source (string) (9.7.1.1.3)
comment (2684)	reflectomet%datainfo%comment (string) (9.7.1.1.3)
cocos (2684)	reflectomet%datainfo%cocos (integer) (9.7.1.1.2)
id (2684)	reflectomet%datainfo%id (integer) (9.7.1.1.2)
isref (2684)	reflectomet%datainfo%isref (integer) (9.7.1.1.2)
whatref (2684)	reflectomet%datainfo%whatref (whatref) (9.7.1.3.506)
user (3056)	reflectomet%datainfo%whatref%user (string) (9.7.1.1.3)
machine (3056)	reflectomet%datainfo%whatref%machine (string) (9.7.1.1.3)
shot (3056)	reflectomet%datainfo%whatref%shot (integer) (9.7.1.1.2)
run (3056)	reflectomet%datainfo%whatref%run (integer) (9.7.1.1.2)
occurrence (3056)	reflectomet%datainfo%whatref%occurrence (integer) (9.7.1.1.2)
putinfo (2684)	reflectomet%datainfo%putinfo (putinfo) (9.7.1.3.342)
putmethod (2892)	reflectomet%datainfo%putinfo%putmethod (string) (9.7.1.1.3)
putaccess (2892)	reflectomet%datainfo%putinfo%putaccess (string) (9.7.1.1.3)
putlocation (2892)	reflectomet%datainfo%putinfo%putlocation (string) (9.7.1.1.3)
rights (2892)	reflectomet%datainfo%putinfo%rights (string) (9.7.1.1.3)
refl_receive (2590)	reflectomet%refl_receive(:) (refl_receive) (9.7.1.3.349)
name (2899)	reflectomet%refl_receive(:)%name (string) (9.7.1.1.3)
raw_signal (2899)	reflectomet%refl_receive(:)%raw_signal (t.series_real) (9.7.1.3.419)
time_wind (2969)	reflectomet%refl_receive(:)%raw_signal%time_wind (vecflt_type) (9.7.1.2.13)
values (2969)	reflectomet%refl_receive(:)%raw_signal%values (vecflt_type) (9.7.1.2.13)
io_signal (2899)	reflectomet%refl_receive(:)%io_signal (t.series_real) (9.7.1.3.419)
time_wind (2969)	reflectomet%refl_receive(:)%io_signal%time_wind (vecflt_type) (9.7.1.2.13)
values (2969)	reflectomet%refl_receive(:)%io_signal%values (vecflt_type) (9.7.1.2.13)
iq_receiver (2899)	reflectomet%refl_receive(:)%iq_receiver (t.series_cplx) (9.7.1.3.418)
time_wind (2968)	reflectomet%refl_receive(:)%iq_receiver%time_wind (vecflt_type) (9.7.1.2.13)
values_re (2968)	reflectomet%refl_receive(:)%iq_receiver%values_re (vecflt_type) (9.7.1.2.13)
values_im (2968)	reflectomet%refl_receive(:)%iq_receiver%values_im (vecflt_type) (9.7.1.2.13)
antenna_ind (2899)	reflectomet%refl_receive(:)%antenna_ind (integer) (9.7.1.1.2)
antennas (2590)	reflectomet%antennas(:) (reflectometry_antennas) (9.7.1.3.350)
name (2900)	reflectomet%antennas(:)%name (string) (9.7.1.1.3)
type (2900)	reflectomet%antennas(:)%type (identifier) (9.7.1.3.235)
id (2785)	reflectomet%antennas(:)%type%id (string) (9.7.1.1.3)
flag (2785)	reflectomet%antennas(:)%type%flag (integer) (9.7.1.1.2)
description (2785)	reflectomet%antennas(:)%type%description (string) (9.7.1.1.3)
origin (2900)	reflectomet%antennas(:)%origin (origin) (9.7.1.3.309)
refpos (2859)	reflectomet%antennas(:)%origin%refpos (rzphi0D) (9.7.1.3.364)
r (2914)	reflectomet%antennas(:)%origin%refpos%r (float) (9.7.1.1.1)
z (2914)	reflectomet%antennas(:)%origin%refpos%z (float) (9.7.1.1.1)
phi (2914)	reflectomet%antennas(:)%origin%refpos%phi (float) (9.7.1.1.1)
alpha (2859)	reflectomet%antennas(:)%origin%alpha (float) (9.7.1.1.1)
beta (2859)	reflectomet%antennas(:)%origin%beta (float) (9.7.1.1.1)
gamma (2859)	reflectomet%antennas(:)%origin%gamma (float) (9.7.1.1.1)
radfield (2900)	reflectomet%antennas(:)%radfield (reflectometry_radfield) (9.7.1.3.351)
type (2901)	reflectomet%antennas(:)%radfield%type (identifier) (9.7.1.3.235)
id (2785)	reflectomet%antennas(:)%radfield%type%id (string) (9.7.1.1.3)
flag (2785)	reflectomet%antennas(:)%radfield%type%flag (integer) (9.7.1.1.2)
description (2785)	reflectomet%antennas(:)%radfield%type%description (string) (9.7.1.1.3)
position (2901)	reflectomet%antennas(:)%radfield%position (vecflt_type) (9.7.1.2.13)
gaussian (2901)	reflectomet%antennas(:)%radfield%gaussian(:) (reflectometry_radfield_gaussian) (9.7.1.3.352)
aperture (2902)	reflectomet%antennas(:)%radfield%gaussian(:)%aperture (simp_apert) (9.7.1.3.400)
type (2950)	reflectomet%antennas(:)%radfield%gaussian(:)%aperture%type (identifier) (9.7.1.3.235)
id (2785)	reflectomet%antennas(:)%radfield%gaussian(:)%aperture%type%id (string) (9.7.1.1.3)
flag (2785)	reflectomet%antennas(:)%radfield%gaussian(:)%aperture%type%flag (integer) (9.7.1.1.2)
description (2785)	reflectomet%antennas(:)%radfield%gaussian(:)%aperture%type%description (string) (9.7.1.1.3)
sizes (2950)	reflectomet%antennas(:)%radfield%gaussian(:)%aperture%sizes (vecflt_type) (9.7.1.2.13)
angle (2950)	reflectomet%antennas(:)%radfield%gaussian(:)%aperture%angle (float) (9.7.1.1.1)
waistsize (2902)	reflectomet%antennas(:)%radfield%gaussian(:)%waistsize (vecflt_type) (9.7.1.2.13)



waistzpos (2902)	reflectomet%antennas(:)%radfield%gaussian(:)%waistzpos (vecflt_type) (9.7.1.2.13)
tiltangle (2902)	reflectomet%antennas(:)%radfield%gaussian(:)%tiltangle (vecflt_type) (9.7.1.2.13)
polar_angle (2902)	reflectomet%antennas(:)%radfield%gaussian(:)%polar_angle (vecflt_type) (9.7.1.2.13)
frequency (2902)	reflectomet%antennas(:)%radfield%gaussian(:)%frequency (float) (9.7.1.1.1)
efield (2901)	reflectomet%antennas(:)%radfield%efield(:) (reflectometry_radifield_efield) (9.7.1.3.353)
grid2d (2903)	reflectomet%antennas(:)%radfield%efield(:)%grid2d (reggrid) (9.7.1.3.354)
dim1 (2904)	reflectomet%antennas(:)%radfield%efield(:)%grid2d%dim1 (vecflt_type) (9.7.1.2.13)
dim2 (2904)	reflectomet%antennas(:)%radfield%efield(:)%grid2d%dim2 (vecflt_type) (9.7.1.2.13)
e1 (2903)	reflectomet%antennas(:)%radfield%efield(:)%e1 (matcplx_type) (9.7.1.2.9)
e2 (2903)	reflectomet%antennas(:)%radfield%efield(:)%e2 (matcplx_type) (9.7.1.2.9)
frequency (2903)	reflectomet%antennas(:)%radfield%efield(:)%frequency (float) (9.7.1.1.1)
geometry (2900)	reflectomet%antennas(:)%geometry (float) (9.7.1.1.1)
launchsignal (2900)	reflectomet%antennas(:)%launchsignal (launchsignal) (9.7.1.3.251)
time_launch (2801)	reflectomet%antennas(:)%launchsignal%time_launch (vecflt_type) (9.7.1.2.13)
freq (2801)	reflectomet%antennas(:)%launchsignal%freq (vecflt_type) (9.7.1.2.13)
amplitude (2801)	reflectomet%antennas(:)%launchsignal%amplitude (vecflt_type) (9.7.1.2.13)
phase (2801)	reflectomet%antennas(:)%launchsignal%phase (vecflt_type) (9.7.1.2.13)
codeparam (2590)	reflectomet%codeparam (codeparam) (9.7.1.3.77)
codename (2627)	reflectomet%codeparam%codename (string) (9.7.1.1.3)
codeversion (2627)	reflectomet%codeparam%codeversion (string) (9.7.1.1.3)
parameters (2627)	reflectomet%codeparam%parameters (string) (9.7.1.1.3)
output_diag (2627)	reflectomet%codeparam%output_diag (string) (9.7.1.1.3)
output_flag (2627)	reflectomet%codeparam%output_flag (integer) (9.7.1.1.2)
time (2590)	reflectomet%time (float) (9.7.1.1.1)

### 9.7.2.1.39 rfadiag

datainfo (2591)	rfadiag%datainfo (datainfo) (9.7.1.3.134)
dataprovider (2684)	rfadiag%datainfo%dataprovider (string) (9.7.1.1.3)
putdate (2684)	rfadiag%datainfo%putdate (string) (9.7.1.1.3)
source (2684)	rfadiag%datainfo%source (string) (9.7.1.1.3)
comment (2684)	rfadiag%datainfo%comment (string) (9.7.1.1.3)
cocos (2684)	rfadiag%datainfo%cocos (integer) (9.7.1.1.2)
id (2684)	rfadiag%datainfo%id (integer) (9.7.1.1.2)
isref (2684)	rfadiag%datainfo%isref (integer) (9.7.1.1.2)
whatref (2684)	rfadiag%datainfo%whatref (whatref) (9.7.1.3.506)
user (3056)	rfadiag%datainfo%whatref%user (string) (9.7.1.1.3)
machine (3056)	rfadiag%datainfo%whatref%machine (string) (9.7.1.1.3)
shot (3056)	rfadiag%datainfo%whatref%shot (integer) (9.7.1.1.2)
run (3056)	rfadiag%datainfo%whatref%run (integer) (9.7.1.1.2)
occurrence (3056)	rfadiag%datainfo%whatref%occurrence (integer) (9.7.1.1.2)
putinfo (2684)	rfadiag%datainfo%putinfo (putinfo) (9.7.1.3.342)
putmethod (2892)	rfadiag%datainfo%putinfo%putmethod (string) (9.7.1.1.3)
putaccess (2892)	rfadiag%datainfo%putinfo%putaccess (string) (9.7.1.1.3)
putlocation (2892)	rfadiag%datainfo%putinfo%putlocation (string) (9.7.1.1.3)
rights (2892)	rfadiag%datainfo%putinfo%rights (string) (9.7.1.1.3)
setup (2591)	rfadiag%setup (rfasetup) (9.7.1.3.356)
position (2906)	rfadiag%setup%position (rzphi1Dexp) (9.7.1.3.366)
r (2916)	rfadiag%setup%position%r (exp1D) (9.7.1.3.197)
value (2747)	rfadiag%setup%position%r%value (vecflt_type) (9.7.1.2.13)
abserror (2747)	rfadiag%setup%position%r%abserror (vecflt_type) (9.7.1.2.13)
releror (2747)	rfadiag%setup%position%r%releror (vecflt_type) (9.7.1.2.13)
z (2916)	rfadiag%setup%position%z (exp1D) (9.7.1.3.197)
value (2747)	rfadiag%setup%position%z%value (vecflt_type) (9.7.1.2.13)
abserror (2747)	rfadiag%setup%position%z%abserror (vecflt_type) (9.7.1.2.13)
releror (2747)	rfadiag%setup%position%z%releror (vecflt_type) (9.7.1.2.13)
phi (2916)	rfadiag%setup%position%phi (exp1D) (9.7.1.3.197)
value (2747)	rfadiag%setup%position%phi%value (vecflt_type) (9.7.1.2.13)
abserror (2747)	rfadiag%setup%position%phi%abserror (vecflt_type) (9.7.1.2.13)
releror (2747)	rfadiag%setup%position%phi%releror (vecflt_type) (9.7.1.2.13)
measure (2591)	rfadiag%measure (rfameasure) (9.7.1.3.355)



ti (2905)	rfdiag%measure%ti (exp1D) (9.7.1.3.197)
value (2747)	rfdiag%measure%ti%value (vecflt.type) (9.7.1.2.13)
abserror (2747)	rfdiag%measure%ti%abserror (vecflt.type) (9.7.1.2.13)
releror (2747)	rfdiag%measure%ti%releror (vecflt.type) (9.7.1.2.13)
codeparam (2591)	rfdiag%codeparam (codeparam) (9.7.1.3.77)
codename (2627)	rfdiag%codeparam%codename (string) (9.7.1.1.3)
codeversion (2627)	rfdiag%codeparam%codeversion (string) (9.7.1.1.3)
parameters (2627)	rfdiag%codeparam%parameters (string) (9.7.1.1.3)
output_diag (2627)	rfdiag%codeparam%output_diag (string) (9.7.1.1.3)
output_flag (2627)	rfdiag%codeparam%output_flag (integer) (9.7.1.1.2)
time (2591)	rfdiag%time (float) (9.7.1.1.1)

### 9.7.2.1.40 sawteeth

datainfo (2592)	sawteeth%datainfo (datainfo) (9.7.1.3.134)
dataprovider (2684)	sawteeth%datainfo%dataprovider (string) (9.7.1.1.3)
putdate (2684)	sawteeth%datainfo%putdate (string) (9.7.1.1.3)
source (2684)	sawteeth%datainfo%source (string) (9.7.1.1.3)
comment (2684)	sawteeth%datainfo%comment (string) (9.7.1.1.3)
cocos (2684)	sawteeth%datainfo%cocos (integer) (9.7.1.1.2)
id (2684)	sawteeth%datainfo%id (integer) (9.7.1.1.2)
isref (2684)	sawteeth%datainfo%isref (integer) (9.7.1.1.2)
whatref (2684)	sawteeth%datainfo%whatref (whatref) (9.7.1.3.506)
user (3056)	sawteeth%datainfo%whatref%user (string) (9.7.1.1.3)
machine (3056)	sawteeth%datainfo%whatref%machine (string) (9.7.1.1.3)
shot (3056)	sawteeth%datainfo%whatref%shot (integer) (9.7.1.1.2)
run (3056)	sawteeth%datainfo%whatref%run (integer) (9.7.1.1.2)
occurrence (3056)	sawteeth%datainfo%whatref%occurrence (integer) (9.7.1.1.2)
putinfo (2684)	sawteeth%datainfo%putinfo (putinfo) (9.7.1.3.342)
putmethod (2892)	sawteeth%datainfo%putinfo%putmethod (string) (9.7.1.1.3)
putaccess (2892)	sawteeth%datainfo%putinfo%putaccess (string) (9.7.1.1.3)
putlocation (2892)	sawteeth%datainfo%putinfo%putlocation (string) (9.7.1.1.3)
rights (2892)	sawteeth%datainfo%putinfo%rights (string) (9.7.1.1.3)
crash_trig (2592)	sawteeth%crash_trig (integer) (9.7.1.1.2)
composition (2592)	sawteeth%composition (composition) (9.7.1.3.95)
amn (2645)	sawteeth%composition%amn (vecflt.type) (9.7.1.2.13)
zn (2645)	sawteeth%composition%zn (vecflt.type) (9.7.1.2.13)
zion (2645)	sawteeth%composition%zion (vecflt.type) (9.7.1.2.13)
imp_flag (2645)	sawteeth%composition%imp_flag (vecint.type) (9.7.1.2.14)
label (2645)	sawteeth%composition%label (vecstring.type) (9.7.1.2.15)
rho_tor_norm (2592)	sawteeth%rho_tor_norm (vecflt.type) (9.7.1.2.13)
rho_tor (2592)	sawteeth%rho_tor (vecflt.type) (9.7.1.2.13)
profiles1d (2592)	sawteeth%profiles1d (sawteeth_profiles1d) (9.7.1.3.372)
ne (2922)	sawteeth%profiles1d%ne (vecflt.type) (9.7.1.2.13)
ni (2922)	sawteeth%profiles1d%ni (matflt.type) (9.7.1.2.10)
te (2922)	sawteeth%profiles1d%te (vecflt.type) (9.7.1.2.13)
ti (2922)	sawteeth%profiles1d%ti (matflt.type) (9.7.1.2.10)
psi (2922)	sawteeth%profiles1d%psi (vecflt.type) (9.7.1.2.13)
phi (2922)	sawteeth%profiles1d%phi (vecflt.type) (9.7.1.2.13)
psistar (2922)	sawteeth%profiles1d%psistar (vecflt.type) (9.7.1.2.13)
volume (2922)	sawteeth%profiles1d%volume (vecflt.type) (9.7.1.2.13)
q (2922)	sawteeth%profiles1d%q (vecflt.type) (9.7.1.2.13)
diags (2592)	sawteeth%diags (sawteeth_diags) (9.7.1.3.371)
shear1 (2921)	sawteeth%diags%shear1 (float) (9.7.1.1.1)
rhotom_q1 (2921)	sawteeth%diags%rhotom_q1 (float) (9.7.1.1.1)
rhotom_inv (2921)	sawteeth%diags%rhotom_inv (float) (9.7.1.1.1)
rhotom_mix (2921)	sawteeth%diags%rhotom_mix (float) (9.7.1.1.1)
codeparam (2592)	sawteeth%codeparam (codeparam) (9.7.1.3.77)
codename (2627)	sawteeth%codeparam%codename (string) (9.7.1.1.3)
codeversion (2627)	sawteeth%codeparam%codeversion (string) (9.7.1.1.3)
parameters (2627)	sawteeth%codeparam%parameters (string) (9.7.1.1.3)

output_diag (2627)	sawteeth%codeparam%output_diag (string) (9.7.1.1.3)
output_flag (2627)	sawteeth%codeparam%output_flag (integer) (9.7.1.1.2)
time (2592)	sawteeth%time (float) (9.7.1.1.1)

### 9.7.2.1.41 scenario

datainfo (2593)	scenario%datainfo (datainfo) (9.7.1.3.134)
dataprovider (2684)	scenario%datainfo%dataprovider (string) (9.7.1.1.3)
putdate (2684)	scenario%datainfo%putdate (string) (9.7.1.1.3)
source (2684)	scenario%datainfo%source (string) (9.7.1.1.3)
comment (2684)	scenario%datainfo%comment (string) (9.7.1.1.3)
cocos (2684)	scenario%datainfo%cocos (integer) (9.7.1.1.2)
id (2684)	scenario%datainfo%id (integer) (9.7.1.1.2)
isref (2684)	scenario%datainfo%isref (integer) (9.7.1.1.2)
whatref (2684)	scenario%datainfo%whatref (whatref) (9.7.1.3.506)
user (3056)	scenario%datainfo%whatref%user (string) (9.7.1.1.3)
machine (3056)	scenario%datainfo%whatref%machine (string) (9.7.1.1.3)
shot (3056)	scenario%datainfo%whatref%shot (integer) (9.7.1.1.2)
run (3056)	scenario%datainfo%whatref%run (integer) (9.7.1.1.2)
occurrence (3056)	scenario%datainfo%whatref%occurrence (integer) (9.7.1.1.2)
putinfo (2684)	scenario%datainfo%putinfo (putinfo) (9.7.1.3.342)
putmethod (2892)	scenario%datainfo%putinfo%putmethod (string) (9.7.1.1.3)
putaccess (2892)	scenario%datainfo%putinfo%putaccess (string) (9.7.1.1.3)
putlocation (2892)	scenario%datainfo%putinfo%putlocation (string) (9.7.1.1.3)
rights (2892)	scenario%datainfo%putinfo%rights (string) (9.7.1.1.3)
centre (2593)	scenario%centre (scenario_centre) (9.7.1.3.373)
te0 (2923)	scenario%centre%te0 (scenario_ref) (9.7.1.3.390)
value (2940)	scenario%centre%te0%value (float) (9.7.1.1.1)
source (2940)	scenario%centre%te0%source (string) (9.7.1.1.3)
ti0 (2923)	scenario%centre%ti0 (scenario_ref) (9.7.1.3.390)
value (2940)	scenario%centre%ti0%value (float) (9.7.1.1.1)
source (2940)	scenario%centre%ti0%source (string) (9.7.1.1.3)
ne0 (2923)	scenario%centre%ne0 (scenario_ref) (9.7.1.3.390)
value (2940)	scenario%centre%ne0%value (float) (9.7.1.1.1)
source (2940)	scenario%centre%ne0%source (string) (9.7.1.1.3)
ni0 (2923)	scenario%centre%ni0 (scenario_ref) (9.7.1.3.390)
value (2940)	scenario%centre%ni0%value (float) (9.7.1.1.1)
source (2940)	scenario%centre%ni0%source (string) (9.7.1.1.3)
shift0 (2923)	scenario%centre%shift0 (scenario_ref) (9.7.1.3.390)
value (2940)	scenario%centre%shift0%value (float) (9.7.1.1.1)
source (2940)	scenario%centre%shift0%source (string) (9.7.1.1.3)
psi0 (2923)	scenario%centre%psi0 (scenario_ref) (9.7.1.3.390)
value (2940)	scenario%centre%psi0%value (float) (9.7.1.1.1)
source (2940)	scenario%centre%psi0%source (string) (9.7.1.1.3)
phi0 (2923)	scenario%centre%phi0 (scenario_ref) (9.7.1.3.390)
value (2940)	scenario%centre%phi0%value (float) (9.7.1.1.1)
source (2940)	scenario%centre%phi0%source (string) (9.7.1.1.3)
q0 (2923)	scenario%centre%q0 (scenario_ref) (9.7.1.3.390)
value (2940)	scenario%centre%q0%value (float) (9.7.1.1.1)
source (2940)	scenario%centre%q0%source (string) (9.7.1.1.3)
Rmag (2923)	scenario%centre%Rmag (scenario_ref) (9.7.1.3.390)
value (2940)	scenario%centre%Rmag%value (float) (9.7.1.1.1)
source (2940)	scenario%centre%Rmag%source (string) (9.7.1.1.3)
Zmag (2923)	scenario%centre%Zmag (scenario_ref) (9.7.1.3.390)
value (2940)	scenario%centre%Zmag%value (float) (9.7.1.1.1)
source (2940)	scenario%centre%Zmag%source (string) (9.7.1.1.3)
vtor_0 (2923)	scenario%centre%vtor_0 (scenario_ref) (9.7.1.3.390)
value (2940)	scenario%centre%vtor_0%value (float) (9.7.1.1.1)
source (2940)	scenario%centre%vtor_0%source (string) (9.7.1.1.3)
composition (2593)	scenario%composition (scenario_composition) (9.7.1.3.374)
amn (2924)	scenario%composition%amn (vecflt.type) (9.7.1.2.13)

zn (2924)	scenario%composition%zn (vecflt.type) (9.7.1.2.13)
zion (2924)	scenario%composition%zion (vecflt.type) (9.7.1.2.13)
imp_flag (2924)	scenario%composition%imp_flag (vecint.type) (9.7.1.2.14)
rot_imp_flag (2924)	scenario%composition%rot_imp_flag (vecint.type) (9.7.1.2.14)
pellet_amn (2924)	scenario%composition%pellet_amn (vecflt.type) (9.7.1.2.13)
pellet_zn (2924)	scenario%composition%pellet_zn (vecflt.type) (9.7.1.2.13)
nbi_amn (2924)	scenario%composition%nbi_amn (vecflt.type) (9.7.1.2.13)
nbi_zn (2924)	scenario%composition%nbi_zn (vecflt.type) (9.7.1.2.13)
configs (2593)	scenario%configs (scenario_configuration) (9.7.1.3.375)
config (2925)	scenario%configs%config (scenario_int) (9.7.1.3.382)
value (2932)	scenario%configs%config%value (integer) (9.7.1.1.2)
source (2932)	scenario%configs%config%source (string) (9.7.1.1.3)
lmode_sc (2925)	scenario%configs%lmode_sc (string) (9.7.1.1.3)
hmode_sc (2925)	scenario%configs%hmode_sc (string) (9.7.1.1.3)
core_sc (2925)	scenario%configs%core_sc (string) (9.7.1.1.3)
pedestal_sc (2925)	scenario%configs%pedestal_sc (string) (9.7.1.1.3)
helium_sc (2925)	scenario%configs%helium_sc (string) (9.7.1.1.3)
impurity_sc (2925)	scenario%configs%impurity_sc (string) (9.7.1.1.3)
l2h_sc (2925)	scenario%configs%l2h_sc (string) (9.7.1.1.3)
tor_rot_sc (2925)	scenario%configs%tor_rot_sc (string) (9.7.1.1.3)
wall_mat (2925)	scenario%configs%wall_mat (string) (9.7.1.1.3)
evap_mat (2925)	scenario%configs%evap_mat (string) (9.7.1.1.3)
lim_mat (2925)	scenario%configs%lim_mat (string) (9.7.1.1.3)
div_mat (2925)	scenario%configs%div_mat (string) (9.7.1.1.3)
coordinate (2925)	scenario%configs%coordinate (string) (9.7.1.1.3)
ecrh_freq (2925)	scenario%configs%ecrh_freq (scenario_ref) (9.7.1.3.390)
value (2940)	scenario%configs%ecrh_freq%value (float) (9.7.1.1.1)
source (2940)	scenario%configs%ecrh_freq%source (string) (9.7.1.1.3)
ecrh_loc (2925)	scenario%configs%ecrh_loc (scenario_ref) (9.7.1.3.390)
value (2940)	scenario%configs%ecrh_loc%value (float) (9.7.1.1.1)
source (2940)	scenario%configs%ecrh_loc%source (string) (9.7.1.1.3)
ecrh_mode (2925)	scenario%configs%ecrh_mode (scenario_int) (9.7.1.3.382)
value (2932)	scenario%configs%ecrh_mode%value (integer) (9.7.1.1.2)
source (2932)	scenario%configs%ecrh_mode%source (string) (9.7.1.1.3)
ecrh_tor_ang (2925)	scenario%configs%ecrh_tor_ang (scenario_ref) (9.7.1.3.390)
value (2940)	scenario%configs%ecrh_tor_ang%value (float) (9.7.1.1.1)
source (2940)	scenario%configs%ecrh_tor_ang%source (string) (9.7.1.1.3)
ecrh_pol_ang (2925)	scenario%configs%ecrh_pol_ang (scenario_ref) (9.7.1.3.390)
value (2940)	scenario%configs%ecrh_pol_ang%value (float) (9.7.1.1.1)
source (2940)	scenario%configs%ecrh_pol_ang%source (string) (9.7.1.1.3)
ecrh_harm (2925)	scenario%configs%ecrh_harm (scenario_int) (9.7.1.3.382)
value (2932)	scenario%configs%ecrh_harm%value (integer) (9.7.1.1.2)
source (2932)	scenario%configs%ecrh_harm%source (string) (9.7.1.1.3)
enbi (2925)	scenario%configs%enbi (scenario_ref) (9.7.1.3.390)
value (2940)	scenario%configs%enbi%value (float) (9.7.1.1.1)
source (2940)	scenario%configs%enbi%source (string) (9.7.1.1.3)
r_nbi (2925)	scenario%configs%r_nbi (scenario_ref) (9.7.1.3.390)
value (2940)	scenario%configs%r_nbi%value (float) (9.7.1.1.1)
source (2940)	scenario%configs%r_nbi%source (string) (9.7.1.1.3)
grad_b_drift (2925)	scenario%configs%grad_b_drift (scenario_int) (9.7.1.3.382)
value (2932)	scenario%configs%grad_b_drift%value (integer) (9.7.1.1.2)
source (2932)	scenario%configs%grad_b_drift%source (string) (9.7.1.1.3)
icrh_freq (2925)	scenario%configs%icrh_freq (scenario_ref) (9.7.1.3.390)
value (2940)	scenario%configs%icrh_freq%value (float) (9.7.1.1.1)
source (2940)	scenario%configs%icrh_freq%source (string) (9.7.1.1.3)
icrh_scheme (2925)	scenario%configs%icrh_scheme (string) (9.7.1.1.3)
icrh_phase (2925)	scenario%configs%icrh_phase (scenario_ref) (9.7.1.3.390)
value (2940)	scenario%configs%icrh_phase%value (float) (9.7.1.1.1)
source (2940)	scenario%configs%icrh_phase%source (string) (9.7.1.1.3)
LH_freq (2925)	scenario%configs%LH_freq (scenario_ref) (9.7.1.3.390)
value (2940)	scenario%configs%LH_freq%value (float) (9.7.1.1.1)

source (2940)	scenario%configs%LH_freq%source (string) (9.7.1.1.3)
LH_npar (2925)	scenario%configs%LH_npar (scenario_ref) (9.7.1.3.390)
value (2940)	scenario%configs%LH_npar%value (float) (9.7.1.1.1)
source (2940)	scenario%configs%LH_npar%source (string) (9.7.1.1.3)
pellet_ang (2925)	scenario%configs%pellet_ang (scenario_ref) (9.7.1.3.390)
value (2940)	scenario%configs%pellet_ang%value (float) (9.7.1.1.1)
source (2940)	scenario%configs%pellet_ang%source (string) (9.7.1.1.3)
pellet_v (2925)	scenario%configs%pellet_v (scenario_ref) (9.7.1.3.390)
value (2940)	scenario%configs%pellet_v%value (float) (9.7.1.1.1)
source (2940)	scenario%configs%pellet_v%source (string) (9.7.1.1.3)
pellet_nba (2925)	scenario%configs%pellet_nba (scenario_ref) (9.7.1.3.390)
value (2940)	scenario%configs%pellet_nba%value (float) (9.7.1.1.1)
source (2940)	scenario%configs%pellet_nba%source (string) (9.7.1.1.3)
confinement (2593)	scenario%confinement (scenario_confinement) (9.7.1.3.376)
tau_e (2926)	scenario%confinement%tau_e (scenario_ref) (9.7.1.3.390)
value (2940)	scenario%confinement%tau_e%value (float) (9.7.1.1.1)
source (2940)	scenario%confinement%tau_e%source (string) (9.7.1.1.3)
tau_l_sc (2926)	scenario%confinement%tau_l_sc (scenario_ref) (9.7.1.3.390)
value (2940)	scenario%confinement%tau_l_sc%value (float) (9.7.1.1.1)
source (2940)	scenario%confinement%tau_l_sc%source (string) (9.7.1.1.3)
tau_h_sc (2926)	scenario%confinement%tau_h_sc (scenario_ref) (9.7.1.3.390)
value (2940)	scenario%confinement%tau_h_sc%value (float) (9.7.1.1.1)
source (2940)	scenario%confinement%tau_h_sc%source (string) (9.7.1.1.3)
tau_he (2926)	scenario%confinement%tau_he (scenario_ref) (9.7.1.3.390)
value (2940)	scenario%confinement%tau_he%value (float) (9.7.1.1.1)
source (2940)	scenario%confinement%tau_he%source (string) (9.7.1.1.3)
tau_e_ee (2926)	scenario%confinement%tau_e_ee (scenario_ref) (9.7.1.3.390)
value (2940)	scenario%confinement%tau_e_ee%value (float) (9.7.1.1.1)
source (2940)	scenario%confinement%tau_e_ee%source (string) (9.7.1.1.3)
tau_e_ii (2926)	scenario%confinement%tau_e_ii (scenario_ref) (9.7.1.3.390)
value (2940)	scenario%confinement%tau_e_ii%value (float) (9.7.1.1.1)
source (2940)	scenario%confinement%tau_e_ii%source (string) (9.7.1.1.3)
tau_e_ei (2926)	scenario%confinement%tau_e_ei (scenario_ref) (9.7.1.3.390)
value (2940)	scenario%confinement%tau_e_ei%value (float) (9.7.1.1.1)
source (2940)	scenario%confinement%tau_e_ei%source (string) (9.7.1.1.3)
tau_cur_diff (2926)	scenario%confinement%tau_cur_diff (scenario_ref) (9.7.1.3.390)
value (2940)	scenario%confinement%tau_cur_diff%value (float) (9.7.1.1.1)
source (2940)	scenario%confinement%tau_cur_diff%source (string) (9.7.1.1.3)
tau_i_rol (2926)	scenario%confinement%tau_i_rol (scenario_ref) (9.7.1.3.390)
value (2940)	scenario%confinement%tau_i_rol%value (float) (9.7.1.1.1)
source (2940)	scenario%confinement%tau_i_rol%source (string) (9.7.1.1.3)
currents (2593)	scenario%currents (scenario_currents) (9.7.1.3.377)
RR (2927)	scenario%currents%RR (scenario_ref) (9.7.1.3.390)
value (2940)	scenario%currents%RR%value (float) (9.7.1.1.1)
source (2940)	scenario%currents%RR%source (string) (9.7.1.1.3)
i_align (2927)	scenario%currents%i_align (scenario_ref) (9.7.1.3.390)
value (2940)	scenario%currents%i_align%value (float) (9.7.1.1.1)
source (2940)	scenario%currents%i_align%source (string) (9.7.1.1.3)
i_boot (2927)	scenario%currents%i_boot (scenario_ref) (9.7.1.3.390)
value (2940)	scenario%currents%i_boot%value (float) (9.7.1.1.1)
source (2940)	scenario%currents%i_boot%source (string) (9.7.1.1.3)
i_cd_tot (2927)	scenario%currents%i_cd_tot (scenario_ref) (9.7.1.3.390)
value (2940)	scenario%currents%i_cd_tot%value (float) (9.7.1.1.1)
source (2940)	scenario%currents%i_cd_tot%source (string) (9.7.1.1.3)
i_eccd (2927)	scenario%currents%i_eccd (scenario_ref) (9.7.1.3.390)
value (2940)	scenario%currents%i_eccd%value (float) (9.7.1.1.1)
source (2940)	scenario%currents%i_eccd%source (string) (9.7.1.1.3)
i_fast_ion (2927)	scenario%currents%i_fast_ion (scenario_ref) (9.7.1.3.390)
value (2940)	scenario%currents%i_fast_ion%value (float) (9.7.1.1.1)
source (2940)	scenario%currents%i_fast_ion%source (string) (9.7.1.1.3)
i_fwcd (2927)	scenario%currents%i_fwcd (scenario_ref) (9.7.1.3.390)

value (2940)	scenario%currents%i_fwcd%value (float) (9.7.1.1.1)
source (2940)	scenario%currents%i_fwcd%source (string) (9.7.1.1.3)
i_lhcd (2927)	scenario%currents%i_lhcd (scenario_ref) (9.7.1.3.390)
value (2940)	scenario%currents%i_lhcd%value (float) (9.7.1.1.1)
source (2940)	scenario%currents%i_lhcd%source (string) (9.7.1.1.3)
i_nbcd (2927)	scenario%currents%i_nbcd (scenario_ref) (9.7.1.3.390)
value (2940)	scenario%currents%i_nbcd%value (float) (9.7.1.1.1)
source (2940)	scenario%currents%i_nbcd%source (string) (9.7.1.1.3)
i_ni_tot (2927)	scenario%currents%i_ni_tot (scenario_ref) (9.7.1.3.390)
value (2940)	scenario%currents%i_ni_tot%value (float) (9.7.1.1.1)
source (2940)	scenario%currents%i_ni_tot%source (string) (9.7.1.1.3)
i_ohm (2927)	scenario%currents%i_ohm (scenario_ref) (9.7.1.3.390)
value (2940)	scenario%currents%i_ohm%value (float) (9.7.1.1.1)
source (2940)	scenario%currents%i_ohm%source (string) (9.7.1.1.3)
i_par (2927)	scenario%currents%i_par (scenario_ref) (9.7.1.3.390)
value (2940)	scenario%currents%i_par%value (float) (9.7.1.1.1)
source (2940)	scenario%currents%i_par%source (string) (9.7.1.1.3)
i_runaway (2927)	scenario%currents%i_runaway (scenario_ref) (9.7.1.3.390)
value (2940)	scenario%currents%i_runaway%value (float) (9.7.1.1.1)
source (2940)	scenario%currents%i_runaway%source (string) (9.7.1.1.3)
v_loop (2927)	scenario%currents%v_loop (scenario_ref) (9.7.1.3.390)
value (2940)	scenario%currents%v_loop%value (float) (9.7.1.1.1)
source (2940)	scenario%currents%v_loop%source (string) (9.7.1.1.3)
v_meas (2927)	scenario%currents%v_meas (scenario_ref) (9.7.1.3.390)
value (2940)	scenario%currents%v_meas%value (float) (9.7.1.1.1)
source (2940)	scenario%currents%v_meas%source (string) (9.7.1.1.3)
edge (2593)	scenario%edge (scenario_ref) (9.7.1.3.378)
te_edge (2928)	scenario%edge%te_edge (scenario_ref) (9.7.1.3.390)
value (2940)	scenario%edge%te_edge%value (float) (9.7.1.1.1)
source (2940)	scenario%edge%te_edge%source (string) (9.7.1.1.3)
ti_edge (2928)	scenario%edge%ti_edge (scenario_ref) (9.7.1.3.390)
value (2940)	scenario%edge%ti_edge%value (float) (9.7.1.1.1)
source (2940)	scenario%edge%ti_edge%source (string) (9.7.1.1.3)
ne_edge (2928)	scenario%edge%ne_edge (scenario_ref) (9.7.1.3.390)
value (2940)	scenario%edge%ne_edge%value (float) (9.7.1.1.1)
source (2940)	scenario%edge%ne_edge%source (string) (9.7.1.1.3)
ni_edge (2928)	scenario%edge%ni_edge (scenario_ref) (9.7.1.3.390)
value (2940)	scenario%edge%ni_edge%value (float) (9.7.1.1.1)
source (2940)	scenario%edge%ni_edge%source (string) (9.7.1.1.3)
psi_edge (2928)	scenario%edge%psi_edge (scenario_ref) (9.7.1.3.390)
value (2940)	scenario%edge%psi_edge%value (float) (9.7.1.1.1)
source (2940)	scenario%edge%psi_edge%source (string) (9.7.1.1.3)
phi_edge (2928)	scenario%edge%phi_edge (scenario_ref) (9.7.1.3.390)
value (2940)	scenario%edge%phi_edge%value (float) (9.7.1.1.1)
source (2940)	scenario%edge%phi_edge%source (string) (9.7.1.1.3)
rho_edge (2928)	scenario%edge%rho_edge (scenario_ref) (9.7.1.3.390)
value (2940)	scenario%edge%rho_edge%value (float) (9.7.1.1.1)
source (2940)	scenario%edge%rho_edge%source (string) (9.7.1.1.3)
drho_edge_dt (2928)	scenario%edge%drho_edge_dt (scenario_ref) (9.7.1.3.390)
value (2940)	scenario%edge%drho_edge_dt%value (float) (9.7.1.1.1)
source (2940)	scenario%edge%drho_edge_dt%source (string) (9.7.1.1.3)
q_edge (2928)	scenario%edge%q_edge (scenario_ref) (9.7.1.3.390)
value (2940)	scenario%edge%q_edge%value (float) (9.7.1.1.1)
source (2940)	scenario%edge%q_edge%source (string) (9.7.1.1.3)
neutral_flux (2928)	scenario%edge%neutral_flux (scenario_ref) (9.7.1.3.390)
value (2940)	scenario%edge%neutral_flux%value (float) (9.7.1.1.1)
source (2940)	scenario%edge%neutral_flux%source (string) (9.7.1.1.3)
phi_plasma (2928)	scenario%edge%phi_plasma (scenario_ref) (9.7.1.3.390)
value (2940)	scenario%edge%phi_plasma%value (float) (9.7.1.1.1)
source (2940)	scenario%edge%phi_plasma%source (string) (9.7.1.1.3)
vtor_edge (2928)	scenario%edge%vtor_edge (scenario_ref) (9.7.1.3.390)

value (2940)	scenario%edge%svtor_edge%value (float) (9.7.1.1.1)
source (2940)	scenario%edge%svtor_edge%source (string) (9.7.1.1.3)
energy (2593)	scenario%energy (scenario_energy) (9.7.1.3.379)
w_tot (2929)	scenario%energy%w_tot (scenario_ref) (9.7.1.3.390)
value (2940)	scenario%energy%w_tot%value (float) (9.7.1.1.1)
source (2940)	scenario%energy%w_tot%source (string) (9.7.1.1.3)
w_b_pol (2929)	scenario%energy%w_b_pol (scenario_ref) (9.7.1.3.390)
value (2940)	scenario%energy%w_b_pol%value (float) (9.7.1.1.1)
source (2940)	scenario%energy%w_b_pol%source (string) (9.7.1.1.3)
w_dia (2929)	scenario%energy%w_dia (scenario_ref) (9.7.1.3.390)
value (2940)	scenario%energy%w_dia%value (float) (9.7.1.1.1)
source (2940)	scenario%energy%w_dia%source (string) (9.7.1.1.3)
dwdia_dt (2929)	scenario%energy%dwdia_dt (scenario_ref) (9.7.1.3.390)
value (2940)	scenario%energy%dwdia_dt%value (float) (9.7.1.1.1)
source (2940)	scenario%energy%dwdia_dt%source (string) (9.7.1.1.3)
w_b_tor_pla (2929)	scenario%energy%w_b_tor_pla (scenario_ref) (9.7.1.3.390)
value (2940)	scenario%energy%w_b_tor_pla%value (float) (9.7.1.1.1)
source (2940)	scenario%energy%w_b_tor_pla%source (string) (9.7.1.1.3)
w_th (2929)	scenario%energy%w_th (scenario_ref) (9.7.1.3.390)
value (2940)	scenario%energy%w_th%value (float) (9.7.1.1.1)
source (2940)	scenario%energy%w_th%source (string) (9.7.1.1.3)
dwtot_dt (2929)	scenario%energy%dwtot_dt (scenario_ref) (9.7.1.3.390)
value (2940)	scenario%energy%dwtot_dt%value (float) (9.7.1.1.1)
source (2940)	scenario%energy%dwtot_dt%source (string) (9.7.1.1.3)
dwbpol_dt (2929)	scenario%energy%dwbpol_dt (scenario_ref) (9.7.1.3.390)
value (2940)	scenario%energy%dwbpol_dt%value (float) (9.7.1.1.1)
source (2940)	scenario%energy%dwbpol_dt%source (string) (9.7.1.1.3)
dwbtorpla_dt (2929)	scenario%energy%dwbtorpla_dt (scenario_ref) (9.7.1.3.390)
value (2940)	scenario%energy%dwbtorpla_dt%value (float) (9.7.1.1.1)
source (2940)	scenario%energy%dwbtorpla_dt%source (string) (9.7.1.1.3)
dwth_dt (2929)	scenario%energy%dwth_dt (scenario_ref) (9.7.1.3.390)
value (2940)	scenario%energy%dwth_dt%value (float) (9.7.1.1.1)
source (2940)	scenario%energy%dwth_dt%source (string) (9.7.1.1.3)
esup_icrhtot (2929)	scenario%energy%esup_icrhtot (scenario_ref) (9.7.1.3.390)
value (2940)	scenario%energy%esup_icrhtot%value (float) (9.7.1.1.1)
source (2940)	scenario%energy%esup_icrhtot%source (string) (9.7.1.1.3)
esup_icrhp (2929)	scenario%energy%esup_icrhp (scenario_ref) (9.7.1.3.390)
value (2940)	scenario%energy%esup_icrhp%value (float) (9.7.1.1.1)
source (2940)	scenario%energy%esup_icrhp%source (string) (9.7.1.1.3)
esup_nbitot (2929)	scenario%energy%esup_nbitot (scenario_ref) (9.7.1.3.390)
value (2940)	scenario%energy%esup_nbitot%value (float) (9.7.1.1.1)
source (2940)	scenario%energy%esup_nbitot%source (string) (9.7.1.1.3)
esup_nbiperp (2929)	scenario%energy%esup_nbiperp (scenario_ref) (9.7.1.3.390)
value (2940)	scenario%energy%esup_nbiperp%value (float) (9.7.1.1.1)
source (2940)	scenario%energy%esup_nbiperp%source (string) (9.7.1.1.3)
esup_lhcd (2929)	scenario%energy%esup_lhcd (scenario_ref) (9.7.1.3.390)
value (2940)	scenario%energy%esup_lhcd%value (float) (9.7.1.1.1)
source (2940)	scenario%energy%esup_lhcd%source (string) (9.7.1.1.3)
esup_alpha (2929)	scenario%energy%esup_alpha (scenario_ref) (9.7.1.3.390)
value (2940)	scenario%energy%esup_alpha%value (float) (9.7.1.1.1)
source (2940)	scenario%energy%esup_alpha%source (string) (9.7.1.1.3)
eqgeometry (2593)	scenario%eqgeometry (eqgeometry) (9.7.1.3.190)
source (2740)	scenario%eqgeometry%source (string) (9.7.1.1.3)
boundarytype (2740)	scenario%eqgeometry%boundarytype (integer) (9.7.1.1.2)
boundary (2740)	scenario%eqgeometry%boundary(:) (rz1Dexp) (9.7.1.3.361)
r (2911)	scenario%eqgeometry%boundary(:)%r (vecflt.type) (9.7.1.2.13)
z (2911)	scenario%eqgeometry%boundary(:)%z (vecflt.type) (9.7.1.2.13)
geom_axis (2740)	scenario%eqgeometry%geom_axis (rz0D) (9.7.1.3.358)
r (2908)	scenario%eqgeometry%geom_axis%r (float) (9.7.1.1.1)
z (2908)	scenario%eqgeometry%geom_axis%z (float) (9.7.1.1.1)
a_minor (2740)	scenario%eqgeometry%a_minor (float) (9.7.1.1.1)



elongation (2740)	scenario%eqgeometry%elongation (float) (9.7.1.1.1)
elong_upper (2740)	scenario%eqgeometry%elong_upper (float) (9.7.1.1.1)
elong_lower (2740)	scenario%eqgeometry%elong_lower (float) (9.7.1.1.1)
tria_upper (2740)	scenario%eqgeometry%tria_upper (float) (9.7.1.1.1)
tria_lower (2740)	scenario%eqgeometry%tria_lower (float) (9.7.1.1.1)
xpts (2740)	scenario%eqgeometry%xpts(:) (rz1Dexp) (9.7.1.3.361)
r (2911)	scenario%eqgeometry%xpts(:)%r (vecflt_type) (9.7.1.2.13)
z (2911)	scenario%eqgeometry%xpts(:)%z (vecflt_type) (9.7.1.2.13)
left_low_st (2740)	scenario%eqgeometry%left_low_st (rz0D) (9.7.1.3.358)
r (2908)	scenario%eqgeometry%left_low_st%r (float) (9.7.1.1.1)
z (2908)	scenario%eqgeometry%left_low_st%z (float) (9.7.1.1.1)
right_low_st (2740)	scenario%eqgeometry%right_low_st (rz0D) (9.7.1.3.358)
r (2908)	scenario%eqgeometry%right_low_st%r (float) (9.7.1.1.1)
z (2908)	scenario%eqgeometry%right_low_st%z (float) (9.7.1.1.1)
left_up_st (2740)	scenario%eqgeometry%left_up_st (rz0D) (9.7.1.3.358)
r (2908)	scenario%eqgeometry%left_up_st%r (float) (9.7.1.1.1)
z (2908)	scenario%eqgeometry%left_up_st%z (float) (9.7.1.1.1)
right_up_st (2740)	scenario%eqgeometry%right_up_st (rz0D) (9.7.1.3.358)
r (2908)	scenario%eqgeometry%right_up_st%r (float) (9.7.1.1.1)
z (2908)	scenario%eqgeometry%right_up_st%z (float) (9.7.1.1.1)
active_limit (2740)	scenario%eqgeometry%active_limit (rz0D) (9.7.1.3.358)
r (2908)	scenario%eqgeometry%active_limit%r (float) (9.7.1.1.1)
z (2908)	scenario%eqgeometry%active_limit%z (float) (9.7.1.1.1)
ang_lcms.upo (2740)	scenario%eqgeometry%ang_lcms.upo (float) (9.7.1.1.1)
ang_lcms.upi (2740)	scenario%eqgeometry%ang_lcms.upi (float) (9.7.1.1.1)
ang_lcms.lwo (2740)	scenario%eqgeometry%ang_lcms.lwo (float) (9.7.1.1.1)
ang_lcms.lwi (2740)	scenario%eqgeometry%ang_lcms.lwi (float) (9.7.1.1.1)
global_param (2593)	scenario%global_param (scenario_global) (9.7.1.3.380)
ip (2930)	scenario%global_param%ip (scenario_ref) (9.7.1.3.390)
value (2940)	scenario%global_param%ip%value (float) (9.7.1.1.1)
source (2940)	scenario%global_param%ip%source (string) (9.7.1.1.3)
dip_dt (2930)	scenario%global_param%dip_dt (scenario_ref) (9.7.1.3.390)
value (2940)	scenario%global_param%dip_dt%value (float) (9.7.1.1.1)
source (2940)	scenario%global_param%dip_dt%source (string) (9.7.1.1.3)
beta_pol (2930)	scenario%global_param%beta_pol (scenario_ref) (9.7.1.3.390)
value (2940)	scenario%global_param%beta_pol%value (float) (9.7.1.1.1)
source (2940)	scenario%global_param%beta_pol%source (string) (9.7.1.1.3)
beta_tor (2930)	scenario%global_param%beta_tor (scenario_ref) (9.7.1.3.390)
value (2940)	scenario%global_param%beta_tor%value (float) (9.7.1.1.1)
source (2940)	scenario%global_param%beta_tor%source (string) (9.7.1.1.3)
beta_normal (2930)	scenario%global_param%beta_normal (scenario_ref) (9.7.1.3.390)
value (2940)	scenario%global_param%beta_normal%value (float) (9.7.1.1.1)
source (2940)	scenario%global_param%beta_normal%source (string) (9.7.1.1.3)
li (2930)	scenario%global_param%li (scenario_ref) (9.7.1.3.390)
value (2940)	scenario%global_param%li%value (float) (9.7.1.1.1)
source (2940)	scenario%global_param%li%source (string) (9.7.1.1.3)
volume (2930)	scenario%global_param%volume (scenario_ref) (9.7.1.3.390)
value (2940)	scenario%global_param%volume%value (float) (9.7.1.1.1)
source (2940)	scenario%global_param%volume%source (string) (9.7.1.1.3)
area_pol (2930)	scenario%global_param%area_pol (scenario_ref) (9.7.1.3.390)
value (2940)	scenario%global_param%area_pol%value (float) (9.7.1.1.1)
source (2940)	scenario%global_param%area_pol%source (string) (9.7.1.1.3)
area_ext (2930)	scenario%global_param%area_ext (scenario_ref) (9.7.1.3.390)
value (2940)	scenario%global_param%area_ext%value (float) (9.7.1.1.1)
source (2940)	scenario%global_param%area_ext%source (string) (9.7.1.1.3)
len_sepa (2930)	scenario%global_param%len_sepa (scenario_ref) (9.7.1.3.390)
value (2940)	scenario%global_param%len_sepa%value (float) (9.7.1.1.1)
source (2940)	scenario%global_param%len_sepa%source (string) (9.7.1.1.3)
beta_pol.th (2930)	scenario%global_param%beta_pol.th (scenario_ref) (9.7.1.3.390)
value (2940)	scenario%global_param%beta_pol.th%value (float) (9.7.1.1.1)
source (2940)	scenario%global_param%beta_pol.th%source (string) (9.7.1.1.3)



beta_tor.th (2930)	scenario%global_param%beta_tor.th (scenario_ref) (9.7.1.3.390)
value (2940)	scenario%global_param%beta_tor.th%value (float) (9.7.1.1.1)
source (2940)	scenario%global_param%beta_tor.th%source (string) (9.7.1.1.3)
beta_n.th (2930)	scenario%global_param%beta_n.th (scenario_ref) (9.7.1.3.390)
value (2940)	scenario%global_param%beta_n.th%value (float) (9.7.1.1.1)
source (2940)	scenario%global_param%beta_n.th%source (string) (9.7.1.1.3)
disruption (2930)	scenario%global_param%disruption (scenario_ref) (9.7.1.3.390)
value (2940)	scenario%global_param%disruption%value (float) (9.7.1.1.1)
source (2940)	scenario%global_param%disruption%source (string) (9.7.1.1.3)
mode.h (2930)	scenario%global_param%mode.h (scenario_ref) (9.7.1.3.390)
value (2940)	scenario%global_param%mode.h%value (float) (9.7.1.1.1)
source (2940)	scenario%global_param%mode.h%source (string) (9.7.1.1.3)
s.alpha (2930)	scenario%global_param%s.alpha (scenario_ref) (9.7.1.3.390)
value (2940)	scenario%global_param%s.alpha%value (float) (9.7.1.1.1)
source (2940)	scenario%global_param%s.alpha%source (string) (9.7.1.1.3)
heat.power (2593)	scenario%heat_power (scenario_heat_power) (9.7.1.3.381)
plh (2931)	scenario%heat_power%plh (scenario_ref) (9.7.1.3.390)
value (2940)	scenario%heat_power%plh%value (float) (9.7.1.1.1)
source (2940)	scenario%heat_power%plh%source (string) (9.7.1.1.3)
pohmic (2931)	scenario%heat_power%pohmic (scenario_ref) (9.7.1.3.390)
value (2940)	scenario%heat_power%pohmic%value (float) (9.7.1.1.1)
source (2940)	scenario%heat_power%pohmic%source (string) (9.7.1.1.3)
picrh (2931)	scenario%heat_power%picrh (scenario_ref) (9.7.1.3.390)
value (2940)	scenario%heat_power%picrh%value (float) (9.7.1.1.1)
source (2940)	scenario%heat_power%picrh%source (string) (9.7.1.1.3)
pecrh (2931)	scenario%heat_power%pecrh (scenario_ref) (9.7.1.3.390)
value (2940)	scenario%heat_power%pecrh%value (float) (9.7.1.1.1)
source (2940)	scenario%heat_power%pecrh%source (string) (9.7.1.1.3)
pnbi (2931)	scenario%heat_power%pnbi (scenario_ref) (9.7.1.3.390)
value (2940)	scenario%heat_power%pnbi%value (float) (9.7.1.1.1)
source (2940)	scenario%heat_power%pnbi%source (string) (9.7.1.1.3)
pnbi.co.cur (2931)	scenario%heat_power%pnbi.co.cur (scenario_ref) (9.7.1.3.390)
value (2940)	scenario%heat_power%pnbi.co.cur%value (float) (9.7.1.1.1)
source (2940)	scenario%heat_power%pnbi.co.cur%source (string) (9.7.1.1.3)
pnbi.counter (2931)	scenario%heat_power%pnbi.counter (scenario_ref) (9.7.1.3.390)
value (2940)	scenario%heat_power%pnbi.counter%value (float) (9.7.1.1.1)
source (2940)	scenario%heat_power%pnbi.counter%source (string) (9.7.1.1.3)
plh.th (2931)	scenario%heat_power%plh.th (scenario_ref) (9.7.1.3.390)
value (2940)	scenario%heat_power%plh.th%value (float) (9.7.1.1.1)
source (2940)	scenario%heat_power%plh.th%source (string) (9.7.1.1.3)
picrh.th (2931)	scenario%heat_power%picrh.th (scenario_ref) (9.7.1.3.390)
value (2940)	scenario%heat_power%picrh.th%value (float) (9.7.1.1.1)
source (2940)	scenario%heat_power%picrh.th%source (string) (9.7.1.1.3)
pecrh.th (2931)	scenario%heat_power%pecrh.th (scenario_ref) (9.7.1.3.390)
value (2940)	scenario%heat_power%pecrh.th%value (float) (9.7.1.1.1)
source (2940)	scenario%heat_power%pecrh.th%source (string) (9.7.1.1.3)
pnbi.th (2931)	scenario%heat_power%pnbi.th (scenario_ref) (9.7.1.3.390)
value (2940)	scenario%heat_power%pnbi.th%value (float) (9.7.1.1.1)
source (2940)	scenario%heat_power%pnbi.th%source (string) (9.7.1.1.3)
ploss.icrh (2931)	scenario%heat_power%ploss.icrh (scenario_ref) (9.7.1.3.390)
value (2940)	scenario%heat_power%ploss.icrh%value (float) (9.7.1.1.1)
source (2940)	scenario%heat_power%ploss.icrh%source (string) (9.7.1.1.3)
ploss.nbi (2931)	scenario%heat_power%ploss.nbi (scenario_ref) (9.7.1.3.390)
value (2940)	scenario%heat_power%ploss.nbi%value (float) (9.7.1.1.1)
source (2940)	scenario%heat_power%ploss.nbi%source (string) (9.7.1.1.3)
pbrem (2931)	scenario%heat_power%pbrem (scenario_ref) (9.7.1.3.390)
value (2940)	scenario%heat_power%pbrem%value (float) (9.7.1.1.1)
source (2940)	scenario%heat_power%pbrem%source (string) (9.7.1.1.3)
pcyclo (2931)	scenario%heat_power%pcyclo (scenario_ref) (9.7.1.3.390)
value (2940)	scenario%heat_power%pcyclo%value (float) (9.7.1.1.1)
source (2940)	scenario%heat_power%pcyclo%source (string) (9.7.1.1.3)

prad (2931)	scenario%heat_power%prad (scenario_ref) (9.7.1.3.390)
value (2940)	scenario%heat_power%prad%value (float) (9.7.1.1.1)
source (2940)	scenario%heat_power%prad%source (string) (9.7.1.1.3)
pdd_fus (2931)	scenario%heat_power%pdd_fus (scenario_ref) (9.7.1.3.390)
value (2940)	scenario%heat_power%pdd_fus%value (float) (9.7.1.1.1)
source (2940)	scenario%heat_power%pdd_fus%source (string) (9.7.1.1.3)
pei (2931)	scenario%heat_power%pei (scenario_ref) (9.7.1.3.390)
value (2940)	scenario%heat_power%pei%value (float) (9.7.1.1.1)
source (2940)	scenario%heat_power%pei%source (string) (9.7.1.1.3)
pel_tot (2931)	scenario%heat_power%pel_tot (scenario_ref) (9.7.1.3.390)
value (2940)	scenario%heat_power%pel_tot%value (float) (9.7.1.1.1)
source (2940)	scenario%heat_power%pel_tot%source (string) (9.7.1.1.3)
pel_fus (2931)	scenario%heat_power%pel_fus (scenario_ref) (9.7.1.3.390)
value (2940)	scenario%heat_power%pel_fus%value (float) (9.7.1.1.1)
source (2940)	scenario%heat_power%pel_fus%source (string) (9.7.1.1.3)
pel_icrh (2931)	scenario%heat_power%pel_icrh (scenario_ref) (9.7.1.3.390)
value (2940)	scenario%heat_power%pel_icrh%value (float) (9.7.1.1.1)
source (2940)	scenario%heat_power%pel_icrh%source (string) (9.7.1.1.3)
pel_nbi (2931)	scenario%heat_power%pel_nbi (scenario_ref) (9.7.1.3.390)
value (2940)	scenario%heat_power%pel_nbi%value (float) (9.7.1.1.1)
source (2940)	scenario%heat_power%pel_nbi%source (string) (9.7.1.1.3)
pfus_dt (2931)	scenario%heat_power%pfus_dt (scenario_ref) (9.7.1.3.390)
value (2940)	scenario%heat_power%pfus_dt%value (float) (9.7.1.1.1)
source (2940)	scenario%heat_power%pfus_dt%source (string) (9.7.1.1.3)
ploss_fus (2931)	scenario%heat_power%ploss_fus (scenario_ref) (9.7.1.3.390)
value (2940)	scenario%heat_power%ploss_fus%value (float) (9.7.1.1.1)
source (2940)	scenario%heat_power%ploss_fus%source (string) (9.7.1.1.3)
pfus_nbi (2931)	scenario%heat_power%pfus_nbi (scenario_ref) (9.7.1.3.390)
value (2940)	scenario%heat_power%pfus_nbi%value (float) (9.7.1.1.1)
source (2940)	scenario%heat_power%pfus_nbi%source (string) (9.7.1.1.3)
pfus_th (2931)	scenario%heat_power%pfus_th (scenario_ref) (9.7.1.3.390)
value (2940)	scenario%heat_power%pfus_th%value (float) (9.7.1.1.1)
source (2940)	scenario%heat_power%pfus_th%source (string) (9.7.1.1.3)
padd_tot (2931)	scenario%heat_power%padd_tot (scenario_ref) (9.7.1.3.390)
value (2940)	scenario%heat_power%padd_tot%value (float) (9.7.1.1.1)
source (2940)	scenario%heat_power%padd_tot%source (string) (9.7.1.1.3)
pion_tot (2931)	scenario%heat_power%pion_tot (scenario_ref) (9.7.1.3.390)
value (2940)	scenario%heat_power%pion_tot%value (float) (9.7.1.1.1)
source (2940)	scenario%heat_power%pion_tot%source (string) (9.7.1.1.3)
pion_fus (2931)	scenario%heat_power%pion_fus (scenario_ref) (9.7.1.3.390)
value (2940)	scenario%heat_power%pion_fus%value (float) (9.7.1.1.1)
source (2940)	scenario%heat_power%pion_fus%source (string) (9.7.1.1.3)
pion_icrh (2931)	scenario%heat_power%pion_icrh (scenario_ref) (9.7.1.3.390)
value (2940)	scenario%heat_power%pion_icrh%value (float) (9.7.1.1.1)
source (2940)	scenario%heat_power%pion_icrh%source (string) (9.7.1.1.3)
pion_nbi (2931)	scenario%heat_power%pion_nbi (scenario_ref) (9.7.1.3.390)
value (2940)	scenario%heat_power%pion_nbi%value (float) (9.7.1.1.1)
source (2940)	scenario%heat_power%pion_nbi%source (string) (9.7.1.1.3)
pioniz (2931)	scenario%heat_power%pioniz (scenario_ref) (9.7.1.3.390)
value (2940)	scenario%heat_power%pioniz%value (float) (9.7.1.1.1)
source (2940)	scenario%heat_power%pioniz%source (string) (9.7.1.1.3)
ploss (2931)	scenario%heat_power%ploss (scenario_ref) (9.7.1.3.390)
value (2940)	scenario%heat_power%ploss%value (float) (9.7.1.1.1)
source (2940)	scenario%heat_power%ploss%source (string) (9.7.1.1.3)
p_wth (2931)	scenario%heat_power%p_wth (scenario_ref) (9.7.1.3.390)
value (2940)	scenario%heat_power%p_wth%value (float) (9.7.1.1.1)
source (2940)	scenario%heat_power%p_wth%source (string) (9.7.1.1.3)
p_w (2931)	scenario%heat_power%p_w (scenario_ref) (9.7.1.3.390)
value (2940)	scenario%heat_power%p_w%value (float) (9.7.1.1.1)
source (2940)	scenario%heat_power%p_w%source (string) (9.7.1.1.3)
p_l2h_thr (2931)	scenario%heat_power%p_l2h_thr (scenario_ref) (9.7.1.3.390)

value (2940)	scenario%heat_power%p_l2h_thr%value (float) (9.7.1.1.1)
source (2940)	scenario%heat_power%p_l2h_thr%source (string) (9.7.1.1.3)
p_l2h_sc (2931)	scenario%heat_power%p_l2h_sc (scenario_ref) (9.7.1.3.390)
value (2940)	scenario%heat_power%p_l2h_sc%value (float) (9.7.1.1.1)
source (2940)	scenario%heat_power%p_l2h_sc%source (string) (9.7.1.1.3)
p_nbi_icrh (2931)	scenario%heat_power%p_nbi_icrh (scenario_ref) (9.7.1.3.390)
value (2940)	scenario%heat_power%p_nbi_icrh%value (float) (9.7.1.1.1)
source (2940)	scenario%heat_power%p_nbi_icrh%source (string) (9.7.1.1.3)
itb (2593)	scenario%itb (scenario_itb) (9.7.1.3.383)
q_min (2933)	scenario%itb%q_min (scenario_ref) (9.7.1.3.390)
value (2940)	scenario%itb%q_min%value (float) (9.7.1.1.1)
source (2940)	scenario%itb%q_min%source (string) (9.7.1.1.3)
te_itb (2933)	scenario%itb%te_itb (scenario_ref) (9.7.1.3.390)
value (2940)	scenario%itb%te_itb%value (float) (9.7.1.1.1)
source (2940)	scenario%itb%te_itb%source (string) (9.7.1.1.3)
ti_itb (2933)	scenario%itb%ti_itb (scenario_ref) (9.7.1.3.390)
value (2940)	scenario%itb%ti_itb%value (float) (9.7.1.1.1)
source (2940)	scenario%itb%ti_itb%source (string) (9.7.1.1.3)
ne_itb (2933)	scenario%itb%ne_itb (scenario_ref) (9.7.1.3.390)
value (2940)	scenario%itb%ne_itb%value (float) (9.7.1.1.1)
source (2940)	scenario%itb%ne_itb%source (string) (9.7.1.1.3)
ni_itb (2933)	scenario%itb%ni_itb (scenario_ref) (9.7.1.3.390)
value (2940)	scenario%itb%ni_itb%value (float) (9.7.1.1.1)
source (2940)	scenario%itb%ni_itb%source (string) (9.7.1.1.3)
psi_itb (2933)	scenario%itb%psi_itb (scenario_ref) (9.7.1.3.390)
value (2940)	scenario%itb%psi_itb%value (float) (9.7.1.1.1)
source (2940)	scenario%itb%psi_itb%source (string) (9.7.1.1.3)
phi_itb (2933)	scenario%itb%phi_itb (scenario_ref) (9.7.1.3.390)
value (2940)	scenario%itb%phi_itb%value (float) (9.7.1.1.1)
source (2940)	scenario%itb%phi_itb%source (string) (9.7.1.1.3)
rho_itb (2933)	scenario%itb%rho_itb (scenario_ref) (9.7.1.3.390)
value (2940)	scenario%itb%rho_itb%value (float) (9.7.1.1.1)
source (2940)	scenario%itb%rho_itb%source (string) (9.7.1.1.3)
h_itb (2933)	scenario%itb%h_itb (scenario_ref) (9.7.1.3.390)
value (2940)	scenario%itb%h_itb%value (float) (9.7.1.1.1)
source (2940)	scenario%itb%h_itb%source (string) (9.7.1.1.3)
width_itb (2933)	scenario%itb%width_itb (scenario_ref) (9.7.1.3.390)
value (2940)	scenario%itb%width_itb%value (float) (9.7.1.1.1)
source (2940)	scenario%itb%width_itb%source (string) (9.7.1.1.3)
vtor_itb (2933)	scenario%itb%vtor_itb (scenario_ref) (9.7.1.3.390)
value (2940)	scenario%itb%vtor_itb%value (float) (9.7.1.1.1)
source (2940)	scenario%itb%vtor_itb%source (string) (9.7.1.1.3)
itb_type (2933)	scenario%itb%itb_type (scenario_int) (9.7.1.3.382)
value (2932)	scenario%itb%itb_type%value (integer) (9.7.1.1.2)
source (2932)	scenario%itb%itb_type%source (string) (9.7.1.1.3)
lim_div_wall (2593)	scenario%lim_div_wall (scenario_lim_div_wall) (9.7.1.3.384)
te_lim_div (2934)	scenario%lim_div_wall%te_lim_div (scenario_ref) (9.7.1.3.390)
value (2940)	scenario%lim_div_wall%te_lim_div%value (float) (9.7.1.1.1)
source (2940)	scenario%lim_div_wall%te_lim_div%source (string) (9.7.1.1.3)
ti_lim_div (2934)	scenario%lim_div_wall%ti_lim_div (scenario_ref) (9.7.1.3.390)
value (2940)	scenario%lim_div_wall%ti_lim_div%value (float) (9.7.1.1.1)
source (2940)	scenario%lim_div_wall%ti_lim_div%source (string) (9.7.1.1.3)
ne_lim_div (2934)	scenario%lim_div_wall%ne_lim_div (scenario_ref) (9.7.1.3.390)
value (2940)	scenario%lim_div_wall%ne_lim_div%value (float) (9.7.1.1.1)
source (2940)	scenario%lim_div_wall%ne_lim_div%source (string) (9.7.1.1.3)
ni_lim_div (2934)	scenario%lim_div_wall%ni_lim_div (scenario_ref) (9.7.1.3.390)
value (2940)	scenario%lim_div_wall%ni_lim_div%value (float) (9.7.1.1.1)
source (2940)	scenario%lim_div_wall%ni_lim_div%source (string) (9.7.1.1.3)
q_peak_div (2934)	scenario%lim_div_wall%q_peak_div (scenario_ref) (9.7.1.3.390)
value (2940)	scenario%lim_div_wall%q_peak_div%value (float) (9.7.1.1.1)
source (2940)	scenario%lim_div_wall%q_peak_div%source (string) (9.7.1.1.3)

q_peak.wall (2934)	scenario%lim_div_wall%q_peak.wall (scenario_ref) (9.7.1.3.390)
value (2940)	scenario%lim_div_wall%q_peak.wall%value (float) (9.7.1.1.1)
source (2940)	scenario%lim_div_wall%q_peak.wall%source (string) (9.7.1.1.3)
surf_temp (2934)	scenario%lim_div_wall%surf_temp (scenario_ref) (9.7.1.3.390)
value (2940)	scenario%lim_div_wall%surf_temp%value (float) (9.7.1.1.1)
source (2940)	scenario%lim_div_wall%surf_temp%source (string) (9.7.1.1.3)
p_lim_div (2934)	scenario%lim_div_wall%p_lim_div (scenario_ref) (9.7.1.3.390)
value (2940)	scenario%lim_div_wall%p_lim_div%value (float) (9.7.1.1.1)
source (2940)	scenario%lim_div_wall%p_lim_div%source (string) (9.7.1.1.3)
p_rad_div (2934)	scenario%lim_div_wall%p_rad_div (scenario_ref) (9.7.1.3.390)
value (2940)	scenario%lim_div_wall%p_rad_div%value (float) (9.7.1.1.1)
source (2940)	scenario%lim_div_wall%p_rad_div%source (string) (9.7.1.1.3)
p_neut_div (2934)	scenario%lim_div_wall%p_neut_div (scenario_ref) (9.7.1.3.390)
value (2940)	scenario%lim_div_wall%p_neut_div%value (float) (9.7.1.1.1)
source (2940)	scenario%lim_div_wall%p_neut_div%source (string) (9.7.1.1.3)
p_wall (2934)	scenario%lim_div_wall%p_wall (scenario_ref) (9.7.1.3.390)
value (2940)	scenario%lim_div_wall%p_wall%value (float) (9.7.1.1.1)
source (2940)	scenario%lim_div_wall%p_wall%source (string) (9.7.1.1.3)
wall_temp (2934)	scenario%lim_div_wall%wall_temp (scenario_ref) (9.7.1.3.390)
value (2940)	scenario%lim_div_wall%wall_temp%value (float) (9.7.1.1.1)
source (2940)	scenario%lim_div_wall%wall_temp%source (string) (9.7.1.1.3)
wall_state (2934)	scenario%lim_div_wall%wall_state (scenario_ref) (9.7.1.3.390)
value (2940)	scenario%lim_div_wall%wall_state%value (float) (9.7.1.1.1)
source (2940)	scenario%lim_div_wall%wall_state%source (string) (9.7.1.1.3)
detach_state (2934)	scenario%lim_div_wall%detach_state (scenario_ref) (9.7.1.3.390)
value (2940)	scenario%lim_div_wall%detach_state%value (float) (9.7.1.1.1)
source (2940)	scenario%lim_div_wall%detach_state%source (string) (9.7.1.1.3)
pump_flux (2934)	scenario%lim_div_wall%pump_flux (scenario_ref) (9.7.1.3.390)
value (2940)	scenario%lim_div_wall%pump_flux%value (float) (9.7.1.1.1)
source (2940)	scenario%lim_div_wall%pump_flux%source (string) (9.7.1.1.3)
p_rad_fw (2934)	scenario%lim_div_wall%p_rad_fw (scenario_ref) (9.7.1.3.390)
value (2940)	scenario%lim_div_wall%p_rad_fw%value (float) (9.7.1.1.1)
source (2940)	scenario%lim_div_wall%p_rad_fw%source (string) (9.7.1.1.3)
p_cond_fw (2934)	scenario%lim_div_wall%p_cond_fw (scenario_ref) (9.7.1.3.390)
value (2940)	scenario%lim_div_wall%p_cond_fw%value (float) (9.7.1.1.1)
source (2940)	scenario%lim_div_wall%p_cond_fw%source (string) (9.7.1.1.3)
div_wetted (2934)	scenario%lim_div_wall%div_wetted (scenario_ref) (9.7.1.3.390)
value (2940)	scenario%lim_div_wall%div_wetted%value (float) (9.7.1.1.1)
source (2940)	scenario%lim_div_wall%div_wetted%source (string) (9.7.1.1.3)
gas_puff (2934)	scenario%lim_div_wall%gas_puff (scenario_ref) (9.7.1.3.390)
value (2940)	scenario%lim_div_wall%gas_puff%value (float) (9.7.1.1.1)
source (2940)	scenario%lim_div_wall%gas_puff%source (string) (9.7.1.1.3)
ar_concentr (2934)	scenario%lim_div_wall%ar_concentr (scenario_ref) (9.7.1.3.390)
value (2940)	scenario%lim_div_wall%ar_concentr%value (float) (9.7.1.1.1)
source (2940)	scenario%lim_div_wall%ar_concentr%source (string) (9.7.1.1.3)
part_exhaust (2934)	scenario%lim_div_wall%part_exhaust (scenario_ref) (9.7.1.3.390)
value (2940)	scenario%lim_div_wall%part_exhaust%value (float) (9.7.1.1.1)
source (2940)	scenario%lim_div_wall%part_exhaust%source (string) (9.7.1.1.3)
f_inner (2934)	scenario%lim_div_wall%f_inner (scenario_ref) (9.7.1.3.390)
value (2940)	scenario%lim_div_wall%f_inner%value (float) (9.7.1.1.1)
source (2940)	scenario%lim_div_wall%f_inner%source (string) (9.7.1.1.3)
f_outer (2934)	scenario%lim_div_wall%f_outer (scenario_ref) (9.7.1.3.390)
value (2940)	scenario%lim_div_wall%f_outer%value (float) (9.7.1.1.1)
source (2940)	scenario%lim_div_wall%f_outer%source (string) (9.7.1.1.3)
f_pfr (2934)	scenario%lim_div_wall%f_pfr (scenario_ref) (9.7.1.3.390)
value (2940)	scenario%lim_div_wall%f_pfr%value (float) (9.7.1.1.1)
source (2940)	scenario%lim_div_wall%f_pfr%source (string) (9.7.1.1.3)
f_rad_fw (2934)	scenario%lim_div_wall%f_rad_fw (scenario_ref) (9.7.1.3.390)
value (2940)	scenario%lim_div_wall%f_rad_fw%value (float) (9.7.1.1.1)
source (2940)	scenario%lim_div_wall%f_rad_fw%source (string) (9.7.1.1.3)
q_div (2934)	scenario%lim_div_wall%q_div (vecflt_type) (9.7.1.2.13)

p_cond_div (2934)	scenario%lim_div_wall%p_cond_div (scenario_ref) (9.7.1.3.390)
value (2940)	scenario%lim_div_wall%p_cond_div%value (float) (9.7.1.1.1)
source (2940)	scenario%lim_div_wall%p_cond_div%source (string) (9.7.1.1.3)
pol_ext (2934)	scenario%lim_div_wall%pol_ext (float) (9.7.1.1.1)
flux_exp (2934)	scenario%lim_div_wall%flux_exp (float) (9.7.1.1.1)
tilt_angle (2934)	scenario%lim_div_wall%tilt_angle (float) (9.7.1.1.1)
n_div (2934)	scenario%lim_div_wall%n_div (float) (9.7.1.1.1)
div_dz (2934)	scenario%lim_div_wall%div_dz (float) (9.7.1.1.1)
div_dro (2934)	scenario%lim_div_wall%div_dro (float) (9.7.1.1.1)
div_dri (2934)	scenario%lim_div_wall%div_dri (float) (9.7.1.1.1)
p_nh_div (2934)	scenario%lim_div_wall%p_nh_div (scenario_ref) (9.7.1.3.390)
value (2940)	scenario%lim_div_wall%p_nh_div%value (float) (9.7.1.1.1)
source (2940)	scenario%lim_div_wall%p_nh_div%source (string) (9.7.1.1.3)
line_ave (2593)	scenario%line_ave (scenario_line_ave) (9.7.1.3.385)
ne_line (2935)	scenario%line_ave%ne_line (scenario_ref) (9.7.1.3.390)
value (2940)	scenario%line_ave%ne_line%value (float) (9.7.1.1.1)
source (2940)	scenario%line_ave%ne_line%source (string) (9.7.1.1.3)
zeff_line (2935)	scenario%line_ave%zeff_line (scenario_ref) (9.7.1.3.390)
value (2940)	scenario%line_ave%zeff_line%value (float) (9.7.1.1.1)
source (2940)	scenario%line_ave%zeff_line%source (string) (9.7.1.1.3)
ne_zeff_line (2935)	scenario%line_ave%ne_zeff_line (scenario_ref) (9.7.1.3.390)
value (2940)	scenario%line_ave%ne_zeff_line%value (float) (9.7.1.1.1)
source (2940)	scenario%line_ave%ne_zeff_line%source (string) (9.7.1.1.3)
dne_line_dt (2935)	scenario%line_ave%dne_line_dt (scenario_ref) (9.7.1.3.390)
value (2940)	scenario%line_ave%dne_line_dt%value (float) (9.7.1.1.1)
source (2940)	scenario%line_ave%dne_line_dt%source (string) (9.7.1.1.3)
neutron (2593)	scenario%neutron (scenario_neutron) (9.7.1.3.386)
nnd_tot (2936)	scenario%neutron%nnd_tot (scenario_ref) (9.7.1.3.390)
value (2940)	scenario%neutron%nnd_tot%value (float) (9.7.1.1.1)
source (2940)	scenario%neutron%nnd_tot%source (string) (9.7.1.1.3)
nnd_th (2936)	scenario%neutron%nnd_th (scenario_ref) (9.7.1.3.390)
value (2940)	scenario%neutron%nnd_th%value (float) (9.7.1.1.1)
source (2940)	scenario%neutron%nnd_th%source (string) (9.7.1.1.3)
nnd_nbi_th (2936)	scenario%neutron%nnd_nbi_th (scenario_ref) (9.7.1.3.390)
value (2940)	scenario%neutron%nnd_nbi_th%value (float) (9.7.1.1.1)
source (2940)	scenario%neutron%nnd_nbi_th%source (string) (9.7.1.1.3)
nnd_nbi_nbi (2936)	scenario%neutron%nnd_nbi_nbi (scenario_ref) (9.7.1.3.390)
value (2940)	scenario%neutron%nnd_nbi_nbi%value (float) (9.7.1.1.1)
source (2940)	scenario%neutron%nnd_nbi_nbi%source (string) (9.7.1.1.3)
ndt_tot (2936)	scenario%neutron%ndt_tot (scenario_ref) (9.7.1.3.390)
value (2940)	scenario%neutron%ndt_tot%value (float) (9.7.1.1.1)
source (2940)	scenario%neutron%ndt_tot%source (string) (9.7.1.1.3)
ndt_th (2936)	scenario%neutron%ndt_th (scenario_ref) (9.7.1.3.390)
value (2940)	scenario%neutron%ndt_th%value (float) (9.7.1.1.1)
source (2940)	scenario%neutron%ndt_th%source (string) (9.7.1.1.3)
ninety_five (2593)	scenario%ninety_five (scenario_ninety_five) (9.7.1.3.387)
q_95 (2937)	scenario%ninety_five%q_95 (scenario_ref) (9.7.1.3.390)
value (2940)	scenario%ninety_five%q_95%value (float) (9.7.1.1.1)
source (2940)	scenario%ninety_five%q_95%source (string) (9.7.1.1.3)
elong_95 (2937)	scenario%ninety_five%elong_95 (scenario_ref) (9.7.1.3.390)
value (2940)	scenario%ninety_five%elong_95%value (float) (9.7.1.1.1)
source (2940)	scenario%ninety_five%elong_95%source (string) (9.7.1.1.3)
tria_95 (2937)	scenario%ninety_five%tria_95 (scenario_ref) (9.7.1.3.390)
value (2940)	scenario%ninety_five%tria_95%value (float) (9.7.1.1.1)
source (2940)	scenario%ninety_five%tria_95%source (string) (9.7.1.1.3)
tria_up_95 (2937)	scenario%ninety_five%tria_up_95 (scenario_ref) (9.7.1.3.390)
value (2940)	scenario%ninety_five%tria_up_95%value (float) (9.7.1.1.1)
source (2940)	scenario%ninety_five%tria_up_95%source (string) (9.7.1.1.3)
tria_lo_95 (2937)	scenario%ninety_five%tria_lo_95 (scenario_ref) (9.7.1.3.390)
value (2940)	scenario%ninety_five%tria_lo_95%value (float) (9.7.1.1.1)
source (2940)	scenario%ninety_five%tria_lo_95%source (string) (9.7.1.1.3)

te_95 (2937)	scenario%ninety_five%te_95 (scenario_ref) (9.7.1.3.390)
value (2940)	scenario%ninety_five%te_95%value (float) (9.7.1.1.1)
source (2940)	scenario%ninety_five%te_95%source (string) (9.7.1.1.3)
ti_95 (2937)	scenario%ninety_five%ti_95 (scenario_ref) (9.7.1.3.390)
value (2940)	scenario%ninety_five%ti_95%value (float) (9.7.1.1.1)
source (2940)	scenario%ninety_five%ti_95%source (string) (9.7.1.1.3)
ne_95 (2937)	scenario%ninety_five%ne_95 (scenario_ref) (9.7.1.3.390)
value (2940)	scenario%ninety_five%ne_95%value (float) (9.7.1.1.1)
source (2940)	scenario%ninety_five%ne_95%source (string) (9.7.1.1.3)
ni_95 (2937)	scenario%ninety_five%ni_95 (scenario_ref) (9.7.1.3.390)
value (2940)	scenario%ninety_five%ni_95%value (float) (9.7.1.1.1)
source (2940)	scenario%ninety_five%ni_95%source (string) (9.7.1.1.3)
phi_95 (2937)	scenario%ninety_five%phi_95 (scenario_ref) (9.7.1.3.390)
value (2940)	scenario%ninety_five%phi_95%value (float) (9.7.1.1.1)
source (2940)	scenario%ninety_five%phi_95%source (string) (9.7.1.1.3)
rho_95 (2937)	scenario%ninety_five%rho_95 (scenario_ref) (9.7.1.3.390)
value (2940)	scenario%ninety_five%rho_95%value (float) (9.7.1.1.1)
source (2940)	scenario%ninety_five%rho_95%source (string) (9.7.1.1.3)
vtor_95 (2937)	scenario%ninety_five%vtor_95 (scenario_ref) (9.7.1.3.390)
value (2940)	scenario%ninety_five%vtor_95%value (float) (9.7.1.1.1)
source (2940)	scenario%ninety_five%vtor_95%source (string) (9.7.1.1.3)
pedestal (2593)	scenario%pedestal (scenario_pedestal) (9.7.1.3.388)
te_ped (2938)	scenario%pedestal%te_ped (scenario_ref) (9.7.1.3.390)
value (2940)	scenario%pedestal%te_ped%value (float) (9.7.1.1.1)
source (2940)	scenario%pedestal%te_ped%source (string) (9.7.1.1.3)
ti_ped (2938)	scenario%pedestal%ti_ped (scenario_ref) (9.7.1.3.390)
value (2940)	scenario%pedestal%ti_ped%value (float) (9.7.1.1.1)
source (2940)	scenario%pedestal%ti_ped%source (string) (9.7.1.1.3)
ne_ped (2938)	scenario%pedestal%ne_ped (scenario_ref) (9.7.1.3.390)
value (2940)	scenario%pedestal%ne_ped%value (float) (9.7.1.1.1)
source (2940)	scenario%pedestal%ne_ped%source (string) (9.7.1.1.3)
ni_ped (2938)	scenario%pedestal%ni_ped (scenario_ref) (9.7.1.3.390)
value (2940)	scenario%pedestal%ni_ped%value (float) (9.7.1.1.1)
source (2940)	scenario%pedestal%ni_ped%source (string) (9.7.1.1.3)
psi_ped (2938)	scenario%pedestal%psi_ped (scenario_ref) (9.7.1.3.390)
value (2940)	scenario%pedestal%psi_ped%value (float) (9.7.1.1.1)
source (2940)	scenario%pedestal%psi_ped%source (string) (9.7.1.1.3)
phi_ped (2938)	scenario%pedestal%phi_ped (scenario_ref) (9.7.1.3.390)
value (2940)	scenario%pedestal%phi_ped%value (float) (9.7.1.1.1)
source (2940)	scenario%pedestal%phi_ped%source (string) (9.7.1.1.3)
rho_ped (2938)	scenario%pedestal%rho_ped (scenario_ref) (9.7.1.3.390)
value (2940)	scenario%pedestal%rho_ped%value (float) (9.7.1.1.1)
source (2940)	scenario%pedestal%rho_ped%source (string) (9.7.1.1.3)
q_ped (2938)	scenario%pedestal%q_ped (scenario_ref) (9.7.1.3.390)
value (2940)	scenario%pedestal%q_ped%value (float) (9.7.1.1.1)
source (2940)	scenario%pedestal%q_ped%source (string) (9.7.1.1.3)
pressure_ped (2938)	scenario%pedestal%pressure_ped (scenario_ref) (9.7.1.3.390)
value (2940)	scenario%pedestal%pressure_ped%value (float) (9.7.1.1.1)
source (2940)	scenario%pedestal%pressure_ped%source (string) (9.7.1.1.3)
vtor_ped (2938)	scenario%pedestal%vtor_ped (scenario_ref) (9.7.1.3.390)
value (2940)	scenario%pedestal%vtor_ped%value (float) (9.7.1.1.1)
source (2940)	scenario%pedestal%vtor_ped%source (string) (9.7.1.1.3)
references (2593)	scenario%references (scenario_references) (9.7.1.3.391)
plh (2941)	scenario%references%plh (scenario_ref) (9.7.1.3.390)
value (2940)	scenario%references%plh%value (float) (9.7.1.1.1)
source (2940)	scenario%references%plh%source (string) (9.7.1.1.3)
picrh (2941)	scenario%references%picrh (scenario_ref) (9.7.1.3.390)
value (2940)	scenario%references%picrh%value (float) (9.7.1.1.1)
source (2940)	scenario%references%picrh%source (string) (9.7.1.1.3)
pecrh (2941)	scenario%references%pecrh (scenario_ref) (9.7.1.3.390)
value (2940)	scenario%references%pecrh%value (float) (9.7.1.1.1)



source (2940)	scenario%references%pechr%source (string) (9.7.1.1.3)
pnbi (2941)	scenario%references%pnbi (scenario_ref) (9.7.1.3.390)
value (2940)	scenario%references%pnbi%value (float) (9.7.1.1.1)
source (2940)	scenario%references%pnbi%source (string) (9.7.1.1.3)
ip (2941)	scenario%references%ip (scenario_ref) (9.7.1.3.390)
value (2940)	scenario%references%ip%value (float) (9.7.1.1.1)
source (2940)	scenario%references%ip%source (string) (9.7.1.1.3)
bvac_r (2941)	scenario%references%bvac_r (scenario_ref) (9.7.1.3.390)
value (2940)	scenario%references%bvac_r%value (float) (9.7.1.1.1)
source (2940)	scenario%references%bvac_r%source (string) (9.7.1.1.3)
zeffl (2941)	scenario%references%zeffl (scenario_ref) (9.7.1.3.390)
value (2940)	scenario%references%zeffl%value (float) (9.7.1.1.1)
source (2940)	scenario%references%zeffl%source (string) (9.7.1.1.3)
nbar (2941)	scenario%references%nbar (scenario_ref) (9.7.1.3.390)
value (2940)	scenario%references%nbar%value (float) (9.7.1.1.1)
source (2940)	scenario%references%nbar%source (string) (9.7.1.1.3)
xecrh (2941)	scenario%references%xecrh (scenario_ref) (9.7.1.3.390)
value (2940)	scenario%references%xecrh%value (float) (9.7.1.1.1)
source (2940)	scenario%references%xecrh%source (string) (9.7.1.1.3)
pol_flux (2941)	scenario%references%pol_flux (scenario_ref) (9.7.1.3.390)
value (2940)	scenario%references%pol_flux%value (float) (9.7.1.1.1)
source (2940)	scenario%references%pol_flux%source (string) (9.7.1.1.3)
enhancement (2941)	scenario%references%enhancement (scenario_ref) (9.7.1.3.390)
value (2940)	scenario%references%enhancement%value (float) (9.7.1.1.1)
source (2940)	scenario%references%enhancement%source (string) (9.7.1.1.3)
isotopic (2941)	scenario%references%isotopic (scenario_ref) (9.7.1.3.390)
value (2940)	scenario%references%isotopic%value (float) (9.7.1.1.1)
source (2940)	scenario%references%isotopic%source (string) (9.7.1.1.3)
nbi_td_ratio (2941)	scenario%references%nbi_td_ratio (scenario_ref) (9.7.1.3.390)
value (2940)	scenario%references%nbi_td_ratio%value (float) (9.7.1.1.1)
source (2940)	scenario%references%nbi_td_ratio%source (string) (9.7.1.1.3)
gas_puff (2941)	scenario%references%gas_puff (scenario_ref) (9.7.1.3.390)
value (2940)	scenario%references%gas_puff%value (float) (9.7.1.1.1)
source (2940)	scenario%references%gas_puff%source (string) (9.7.1.1.3)
reactor (2593)	scenario%reactor (scenario_reactor) (9.7.1.3.389)
pnetwork (2939)	scenario%reactor%pnetwork (float) (9.7.1.1.1)
sol (2593)	scenario%sol (scenario_sol) (9.7.1.3.392)
l_te_sol (2942)	scenario%sol%l_te_sol (scenario_ref) (9.7.1.3.390)
value (2940)	scenario%sol%l_te_sol%value (float) (9.7.1.1.1)
source (2940)	scenario%sol%l_te_sol%source (string) (9.7.1.1.3)
l_ti_sol (2942)	scenario%sol%l_ti_sol (scenario_ref) (9.7.1.3.390)
value (2940)	scenario%sol%l_ti_sol%value (float) (9.7.1.1.1)
source (2940)	scenario%sol%l_ti_sol%source (string) (9.7.1.1.3)
l_ne_sol (2942)	scenario%sol%l_ne_sol (scenario_ref) (9.7.1.3.390)
value (2940)	scenario%sol%l_ne_sol%value (float) (9.7.1.1.1)
source (2940)	scenario%sol%l_ne_sol%source (string) (9.7.1.1.3)
l_ni_sol (2942)	scenario%sol%l_ni_sol (scenario_ref) (9.7.1.3.390)
value (2940)	scenario%sol%l_ni_sol%value (float) (9.7.1.1.1)
source (2940)	scenario%sol%l_ni_sol%source (string) (9.7.1.1.3)
l_qe_sol (2942)	scenario%sol%l_qe_sol (scenario_ref) (9.7.1.3.390)
value (2940)	scenario%sol%l_qe_sol%value (float) (9.7.1.1.1)
source (2940)	scenario%sol%l_qe_sol%source (string) (9.7.1.1.3)
l_qi_sol (2942)	scenario%sol%l_qi_sol (scenario_ref) (9.7.1.3.390)
value (2940)	scenario%sol%l_qi_sol%value (float) (9.7.1.1.1)
source (2940)	scenario%sol%l_qi_sol%source (string) (9.7.1.1.3)
p_rad_sol (2942)	scenario%sol%p_rad_sol (scenario_ref) (9.7.1.3.390)
value (2940)	scenario%sol%p_rad_sol%value (float) (9.7.1.1.1)
source (2940)	scenario%sol%p_rad_sol%source (string) (9.7.1.1.3)
p_neut (2942)	scenario%sol%p_neut (float) (9.7.1.1.1)
gas_puff (2942)	scenario%sol%gas_puff (scenario_ref) (9.7.1.3.390)
value (2940)	scenario%sol%gas_puff%value (float) (9.7.1.1.1)



source (2940)	scenario%sol%gas_puff%source (string) (9.7.1.1.3)
delta_r.in (2942)	scenario%sol%delta_r.in (float) (9.7.1.1.1)
delta_r.out (2942)	scenario%sol%delta_r.out (float) (9.7.1.1.1)
r.in (2942)	scenario%sol%r.in (float) (9.7.1.1.1)
r.out (2942)	scenario%sol%r.out (float) (9.7.1.1.1)
sol_width (2942)	scenario%sol%sol_width (float) (9.7.1.1.1)
vol_ave (2593)	scenario%vol_ave (scenario_vol_ave) (9.7.1.3.393)
te_ave (2943)	scenario%vol_ave%te_ave (scenario_ref) (9.7.1.3.390)
value (2940)	scenario%vol_ave%te_ave%value (float) (9.7.1.1.1)
source (2940)	scenario%vol_ave%te_ave%source (string) (9.7.1.1.3)
ti_ave (2943)	scenario%vol_ave%ti_ave (scenario_ref) (9.7.1.3.390)
value (2940)	scenario%vol_ave%ti_ave%value (float) (9.7.1.1.1)
source (2940)	scenario%vol_ave%ti_ave%source (string) (9.7.1.1.3)
ne_ave (2943)	scenario%vol_ave%ne_ave (scenario_ref) (9.7.1.3.390)
value (2940)	scenario%vol_ave%ne_ave%value (float) (9.7.1.1.1)
source (2940)	scenario%vol_ave%ne_ave%source (string) (9.7.1.1.3)
dne_ave.dt (2943)	scenario%vol_ave%dne_ave.dt (scenario_ref) (9.7.1.3.390)
value (2940)	scenario%vol_ave%dne_ave.dt%value (float) (9.7.1.1.1)
source (2940)	scenario%vol_ave%dne_ave.dt%source (string) (9.7.1.1.3)
ni_ave (2943)	scenario%vol_ave%ni_ave (scenario_ref) (9.7.1.3.390)
value (2940)	scenario%vol_ave%ni_ave%value (float) (9.7.1.1.1)
source (2940)	scenario%vol_ave%ni_ave%source (string) (9.7.1.1.3)
zeff_ave (2943)	scenario%vol_ave%zeff_ave (scenario_ref) (9.7.1.3.390)
value (2940)	scenario%vol_ave%zeff_ave%value (float) (9.7.1.1.1)
source (2940)	scenario%vol_ave%zeff_ave%source (string) (9.7.1.1.3)
ti_o.te_ave (2943)	scenario%vol_ave%ti_o.te_ave (scenario_ref) (9.7.1.3.390)
value (2940)	scenario%vol_ave%ti_o.te_ave%value (float) (9.7.1.1.1)
source (2940)	scenario%vol_ave%ti_o.te_ave%source (string) (9.7.1.1.3)
meff_ave (2943)	scenario%vol_ave%meff_ave (scenario_ref) (9.7.1.3.390)
value (2940)	scenario%vol_ave%meff_ave%value (float) (9.7.1.1.1)
source (2940)	scenario%vol_ave%meff_ave%source (string) (9.7.1.1.3)
pellet_flux (2943)	scenario%vol_ave%pellet_flux (scenario_ref) (9.7.1.3.390)
value (2940)	scenario%vol_ave%pellet_flux%value (float) (9.7.1.1.1)
source (2940)	scenario%vol_ave%pellet_flux%source (string) (9.7.1.1.3)
nions_ave (2943)	scenario%vol_ave%nions_ave (vecflt_type) (9.7.1.2.13)
omega_ave (2943)	scenario%vol_ave%omega_ave (scenario_ref) (9.7.1.3.390)
value (2940)	scenario%vol_ave%omega_ave%value (float) (9.7.1.1.1)
source (2940)	scenario%vol_ave%omega_ave%source (string) (9.7.1.1.3)
codeparam (2593)	scenario%codeparam (codeparam) (9.7.1.3.77)
codename (2627)	scenario%codeparam%codename (string) (9.7.1.1.3)
codeversion (2627)	scenario%codeparam%codeversion (string) (9.7.1.1.3)
parameters (2627)	scenario%codeparam%parameters (string) (9.7.1.1.3)
output_diag (2627)	scenario%codeparam%output_diag (string) (9.7.1.1.3)
output_flag (2627)	scenario%codeparam%output_flag (integer) (9.7.1.1.2)
time (2593)	scenario%time (float) (9.7.1.1.1)

### 9.7.2.1.42 solcurdiag

datainfo (2594)	solcurdiag%datainfo (datainfo) (9.7.1.3.134)
dataprovider (2684)	solcurdiag%datainfo%dataprovider (string) (9.7.1.1.3)
putdate (2684)	solcurdiag%datainfo%putdate (string) (9.7.1.1.3)
source (2684)	solcurdiag%datainfo%source (string) (9.7.1.1.3)
comment (2684)	solcurdiag%datainfo%comment (string) (9.7.1.1.3)
cocos (2684)	solcurdiag%datainfo%cocos (integer) (9.7.1.1.2)
id (2684)	solcurdiag%datainfo%id (integer) (9.7.1.1.2)
isref (2684)	solcurdiag%datainfo%isref (integer) (9.7.1.1.2)
whatref (2684)	solcurdiag%datainfo%whatref (whatref) (9.7.1.3.506)
user (3056)	solcurdiag%datainfo%whatref%user (string) (9.7.1.1.3)
machine (3056)	solcurdiag%datainfo%whatref%machine (string) (9.7.1.1.3)
shot (3056)	solcurdiag%datainfo%whatref%shot (integer) (9.7.1.1.2)
run (3056)	solcurdiag%datainfo%whatref%run (integer) (9.7.1.1.2)

occurrence (3056)	solcurdiag%datainfo%whatref%occurrence (integer) (9.7.1.1.2)
putinfo (2684)	solcurdiag%datainfo%putinfo (putinfo) (9.7.1.3.342)
putmethod (2892)	solcurdiag%datainfo%putinfo%putmethod (string) (9.7.1.1.3)
putaccess (2892)	solcurdiag%datainfo%putinfo%putaccess (string) (9.7.1.1.3)
putlocation (2892)	solcurdiag%datainfo%putinfo%putlocation (string) (9.7.1.1.3)
rights (2892)	solcurdiag%datainfo%putinfo%rights (string) (9.7.1.1.3)
sol_current (2594)	solcurdiag%sol_current(:) (solcurdiag_sol_current) (9.7.1.3.401)
setup (2951)	solcurdiag%sol_current(:)%setup (solcurdiag_sol_current_setup) (9.7.1.3.402)
name (2952)	solcurdiag%sol_current(:)%setup%name (string) (9.7.1.1.3)
id (2952)	solcurdiag%sol_current(:)%setup%id (integer) (9.7.1.1.2)
position (2952)	solcurdiag%sol_current(:)%setup%position (rz1D) (9.7.1.3.359)
r (2909)	solcurdiag%sol_current(:)%setup%position%r (vecflt.type) (9.7.1.2.13)
z (2909)	solcurdiag%sol_current(:)%setup%position%z (vecflt.type) (9.7.1.2.13)
tiles_turn (2952)	solcurdiag%sol_current(:)%setup%tiles_turn (integer) (9.7.1.1.2)
measure (2951)	solcurdiag%sol_current(:)%measure (exp0D) (9.7.1.3.196)
value (2746)	solcurdiag%sol_current(:)%measure%value (float) (9.7.1.1.1)
abserror (2746)	solcurdiag%sol_current(:)%measure%abserror (float) (9.7.1.1.1)
releror (2746)	solcurdiag%sol_current(:)%measure%releror (float) (9.7.1.1.1)
clusters (2594)	solcurdiag%clusters(:) (clusters) (9.7.1.3.76)
name (2626)	solcurdiag%clusters(:)%name (string) (9.7.1.1.3)
start (2626)	solcurdiag%clusters(:)%start (integer) (9.7.1.1.2)
finish (2626)	solcurdiag%clusters(:)%finish (integer) (9.7.1.1.2)
time (2594)	solcurdiag%time (float) (9.7.1.1.1)
codeparam (2594)	solcurdiag%codeparam (codeparam) (9.7.1.3.77)
codename (2627)	solcurdiag%codeparam%codename (string) (9.7.1.1.3)
codeversion (2627)	solcurdiag%codeparam%codeversion (string) (9.7.1.1.3)
parameters (2627)	solcurdiag%codeparam%parameters (string) (9.7.1.1.3)
output_diag (2627)	solcurdiag%codeparam%output_diag (string) (9.7.1.1.3)
output_flag (2627)	solcurdiag%codeparam%output_flag (integer) (9.7.1.1.2)

### 9.7.2.1.43 temporary

datainfo (2595)	temporary%datainfo (datainfo) (9.7.1.3.134)
dataprovider (2684)	temporary%datainfo%dataprovider (string) (9.7.1.1.3)
putdate (2684)	temporary%datainfo%putdate (string) (9.7.1.1.3)
source (2684)	temporary%datainfo%source (string) (9.7.1.1.3)
comment (2684)	temporary%datainfo%comment (string) (9.7.1.1.3)
cocos (2684)	temporary%datainfo%cocos (integer) (9.7.1.1.2)
id (2684)	temporary%datainfo%id (integer) (9.7.1.1.2)
isref (2684)	temporary%datainfo%isref (integer) (9.7.1.1.2)
whatref (2684)	temporary%datainfo%whatref (whatref) (9.7.1.3.506)
user (3056)	temporary%datainfo%whatref%user (string) (9.7.1.1.3)
machine (3056)	temporary%datainfo%whatref%machine (string) (9.7.1.1.3)
shot (3056)	temporary%datainfo%whatref%shot (integer) (9.7.1.1.2)
run (3056)	temporary%datainfo%whatref%run (integer) (9.7.1.1.2)
occurrence (3056)	temporary%datainfo%whatref%occurrence (integer) (9.7.1.1.2)
putinfo (2684)	temporary%datainfo%putinfo (putinfo) (9.7.1.3.342)
putmethod (2892)	temporary%datainfo%putinfo%putmethod (string) (9.7.1.1.3)
putaccess (2892)	temporary%datainfo%putinfo%putaccess (string) (9.7.1.1.3)
putlocation (2892)	temporary%datainfo%putinfo%putlocation (string) (9.7.1.1.3)
rights (2892)	temporary%datainfo%putinfo%rights (string) (9.7.1.1.3)
non_timed (2595)	temporary%non_timed (temporary_nt) (9.7.1.3.423)
float0d (2973)	temporary%non_timed%float0d(:) (temporary_nt_0dr) (9.7.1.3.426)
identifier (2976)	temporary%non_timed%float0d(:)%identifier (identifier) (9.7.1.3.235)
id (2785)	temporary%non_timed%float0d(:)%identifier%id (string) (9.7.1.1.3)
flag (2785)	temporary%non_timed%float0d(:)%identifier%flag (integer) (9.7.1.1.2)
description (2785)	temporary%non_timed%float0d(:)%identifier%description (string) (9.7.1.1.3)
value (2976)	temporary%non_timed%float0d(:)%value (float) (9.7.1.1.1)
integer0d (2973)	temporary%non_timed%integer0d(:) (temporary_nt_0di) (9.7.1.3.425)
identifier (2975)	temporary%non_timed%integer0d(:)%identifier (identifier) (9.7.1.3.235)
id (2785)	temporary%non_timed%integer0d(:)%identifier%id (string) (9.7.1.1.3)

flag (2785)	temporary%non.timed%integer0d(:)%identifier%flag (integer) (9.7.1.1.2)
description (2785)	temporary%non.timed%integer0d(:)%identifier%description (string) (9.7.1.1.3)
value (2975)	temporary%non.timed%integer0d(:)%value (integer) (9.7.1.1.2)
complex0d (2973)	temporary%non.timed%complex0d(:) (temporary_nt_0dc) (9.7.1.3.424)
identifier (2974)	temporary%non.timed%complex0d(:)%identifier (identifier) (9.7.1.3.235)
id (2785)	temporary%non.timed%complex0d(:)%identifier%id (string) (9.7.1.1.3)
flag (2785)	temporary%non.timed%complex0d(:)%identifier%flag (integer) (9.7.1.1.2)
description (2785)	temporary%non.timed%complex0d(:)%identifier%description (string) (9.7.1.1.3)
value (2974)	temporary%non.timed%complex0d(:)%value (cplx_type) (9.7.1.2.8)
string0d (2973)	temporary%non.timed%string0d(:) (temporary_nt_0ds) (9.7.1.3.427)
identifier (2977)	temporary%non.timed%string0d(:)%identifier (identifier) (9.7.1.3.235)
id (2785)	temporary%non.timed%string0d(:)%identifier%id (string) (9.7.1.1.3)
flag (2785)	temporary%non.timed%string0d(:)%identifier%flag (integer) (9.7.1.1.2)
description (2785)	temporary%non.timed%string0d(:)%identifier%description (string) (9.7.1.1.3)
value (2977)	temporary%non.timed%string0d(:)%value (string) (9.7.1.1.3)
float1d (2973)	temporary%non.timed%float1d(:) (temporary_nt_1dr) (9.7.1.3.430)
identifier (2980)	temporary%non.timed%float1d(:)%identifier (identifier) (9.7.1.3.235)
id (2785)	temporary%non.timed%float1d(:)%identifier%id (string) (9.7.1.1.3)
flag (2785)	temporary%non.timed%float1d(:)%identifier%flag (integer) (9.7.1.1.2)
description (2785)	temporary%non.timed%float1d(:)%identifier%description (string) (9.7.1.1.3)
value (2980)	temporary%non.timed%float1d(:)%value (vecflt_type) (9.7.1.2.13)
integer1d (2973)	temporary%non.timed%integer1d(:) (temporary_nt_1di) (9.7.1.3.429)
identifier (2979)	temporary%non.timed%integer1d(:)%identifier (identifier) (9.7.1.3.235)
id (2785)	temporary%non.timed%integer1d(:)%identifier%id (string) (9.7.1.1.3)
flag (2785)	temporary%non.timed%integer1d(:)%identifier%flag (integer) (9.7.1.1.2)
description (2785)	temporary%non.timed%integer1d(:)%identifier%description (string) (9.7.1.1.3)
value (2979)	temporary%non.timed%integer1d(:)%value (vecint_type) (9.7.1.2.14)
string1d (2973)	temporary%non.timed%string1d(:) (temporary_nt_1dr) (9.7.1.3.430)
identifier (2980)	temporary%non.timed%string1d(:)%identifier (identifier) (9.7.1.3.235)
id (2785)	temporary%non.timed%string1d(:)%identifier%id (string) (9.7.1.1.3)
flag (2785)	temporary%non.timed%string1d(:)%identifier%flag (integer) (9.7.1.1.2)
description (2785)	temporary%non.timed%string1d(:)%identifier%description (string) (9.7.1.1.3)
value (2980)	temporary%non.timed%string1d(:)%value (vecflt_type) (9.7.1.2.13)
complex1d (2973)	temporary%non.timed%complex1d(:) (temporary_nt_1dc) (9.7.1.3.428)
identifier (2978)	temporary%non.timed%complex1d(:)%identifier (identifier) (9.7.1.3.235)
id (2785)	temporary%non.timed%complex1d(:)%identifier%id (string) (9.7.1.1.3)
flag (2785)	temporary%non.timed%complex1d(:)%identifier%flag (integer) (9.7.1.1.2)
description (2785)	temporary%non.timed%complex1d(:)%identifier%description (string) (9.7.1.1.3)
value (2978)	temporary%non.timed%complex1d(:)%value (vecplx_type) (9.7.1.2.12)
float2d (2973)	temporary%non.timed%float2d(:) (temporary_nt_2dr) (9.7.1.3.434)
identifier (2984)	temporary%non.timed%float2d(:)%identifier (identifier) (9.7.1.3.235)
id (2785)	temporary%non.timed%float2d(:)%identifier%id (string) (9.7.1.1.3)
flag (2785)	temporary%non.timed%float2d(:)%identifier%flag (integer) (9.7.1.1.2)
description (2785)	temporary%non.timed%float2d(:)%identifier%description (string) (9.7.1.1.3)
value (2984)	temporary%non.timed%float2d(:)%value (matflt_type) (9.7.1.2.10)
integer2d (2973)	temporary%non.timed%integer2d(:) (temporary_nt_2di) (9.7.1.3.433)
identifier (2983)	temporary%non.timed%integer2d(:)%identifier (identifier) (9.7.1.3.235)
id (2785)	temporary%non.timed%integer2d(:)%identifier%id (string) (9.7.1.1.3)
flag (2785)	temporary%non.timed%integer2d(:)%identifier%flag (integer) (9.7.1.1.2)
description (2785)	temporary%non.timed%integer2d(:)%identifier%description (string) (9.7.1.1.3)
value (2983)	temporary%non.timed%integer2d(:)%value (matint_type) (9.7.1.2.11)
complex2d (2973)	temporary%non.timed%complex2d(:) (temporary_nt_2dc) (9.7.1.3.432)
identifier (2982)	temporary%non.timed%complex2d(:)%identifier (identifier) (9.7.1.3.235)
id (2785)	temporary%non.timed%complex2d(:)%identifier%id (string) (9.7.1.1.3)
flag (2785)	temporary%non.timed%complex2d(:)%identifier%flag (integer) (9.7.1.1.2)
description (2785)	temporary%non.timed%complex2d(:)%identifier%description (string) (9.7.1.1.3)
value (2982)	temporary%non.timed%complex2d(:)%value (matcplx_type) (9.7.1.2.9)
float3d (2973)	temporary%non.timed%float3d(:) (temporary_nt_3dr) (9.7.1.3.437)
identifier (2987)	temporary%non.timed%float3d(:)%identifier (identifier) (9.7.1.3.235)
id (2785)	temporary%non.timed%float3d(:)%identifier%id (string) (9.7.1.1.3)
flag (2785)	temporary%non.timed%float3d(:)%identifier%flag (integer) (9.7.1.1.2)

description (2785)	temporary%non.timed%float3d(:)%identifier%description (string) (9.7.1.1.3)
value (2987)	temporary%non.timed%float3d(:)%value (array3dflt.type) (9.7.1.2.2)
integer3d (2973)	temporary%non.timed%integer3d(:) (temporary_nt_3di) (9.7.1.3.436)
identifier (2986)	temporary%non.timed%integer3d(:)%identifier (identifier) (9.7.1.3.235)
id (2785)	temporary%non.timed%integer3d(:)%identifier%id (string) (9.7.1.1.3)
flag (2785)	temporary%non.timed%integer3d(:)%identifier%flag (integer) (9.7.1.1.2)
description (2785)	temporary%non.timed%integer3d(:)%identifier%description (string) (9.7.1.1.3)
value (2986)	temporary%non.timed%integer3d(:)%value (array3dint.type) (9.7.1.2.3)
complex3d (2973)	temporary%non.timed%complex3d(:) (temporary_nt_3dc) (9.7.1.3.435)
identifier (2985)	temporary%non.timed%complex3d(:)%identifier (identifier) (9.7.1.3.235)
id (2785)	temporary%non.timed%complex3d(:)%identifier%id (string) (9.7.1.1.3)
flag (2785)	temporary%non.timed%complex3d(:)%identifier%flag (integer) (9.7.1.1.2)
description (2785)	temporary%non.timed%complex3d(:)%identifier%description (string) (9.7.1.1.3)
value (2985)	temporary%non.timed%complex3d(:)%value (array3dcplx.type) (9.7.1.2.1)
float4d (2973)	temporary%non.timed%float4d(:) (temporary_nt_4dr) (9.7.1.3.438)
identifier (2988)	temporary%non.timed%float4d(:)%identifier (identifier) (9.7.1.3.235)
id (2785)	temporary%non.timed%float4d(:)%identifier%id (string) (9.7.1.1.3)
flag (2785)	temporary%non.timed%float4d(:)%identifier%flag (integer) (9.7.1.1.2)
description (2785)	temporary%non.timed%float4d(:)%identifier%description (string) (9.7.1.1.3)
value (2988)	temporary%non.timed%float4d(:)%value (array4dflt.type) (9.7.1.2.4)
timed (2595)	temporary%timed (temporary_t) (9.7.1.3.439)
float0d (2989)	temporary%timed%float0d(:) (temporary_t_0dr) (9.7.1.3.442)
identifier (2992)	temporary%timed%float0d(:)%identifier (identifier) (9.7.1.3.235)
id (2785)	temporary%timed%float0d(:)%identifier%id (string) (9.7.1.1.3)
flag (2785)	temporary%timed%float0d(:)%identifier%flag (integer) (9.7.1.1.2)
description (2785)	temporary%timed%float0d(:)%identifier%description (string) (9.7.1.1.3)
value (2992)	temporary%timed%float0d(:)%value (float) (9.7.1.1.1)
integer0d (2989)	temporary%timed%integer0d(:) (temporary_t_0di) (9.7.1.3.441)
identifier (2991)	temporary%timed%integer0d(:)%identifier (identifier) (9.7.1.3.235)
id (2785)	temporary%timed%integer0d(:)%identifier%id (string) (9.7.1.1.3)
flag (2785)	temporary%timed%integer0d(:)%identifier%flag (integer) (9.7.1.1.2)
description (2785)	temporary%timed%integer0d(:)%identifier%description (string) (9.7.1.1.3)
value (2991)	temporary%timed%integer0d(:)%value (integer) (9.7.1.1.2)
complex0d (2989)	temporary%timed%complex0d(:) (temporary_t_0dc) (9.7.1.3.440)
identifier (2990)	temporary%timed%complex0d(:)%identifier (identifier) (9.7.1.3.235)
id (2785)	temporary%timed%complex0d(:)%identifier%id (string) (9.7.1.1.3)
flag (2785)	temporary%timed%complex0d(:)%identifier%flag (integer) (9.7.1.1.2)
description (2785)	temporary%timed%complex0d(:)%identifier%description (string) (9.7.1.1.3)
value (2990)	temporary%timed%complex0d(:)%value (cplx.type) (9.7.1.2.8)
string0d (2989)	temporary%timed%string0d(:) (temporary_t_0ds) (9.7.1.3.443)
identifier (2993)	temporary%timed%string0d(:)%identifier (identifier) (9.7.1.3.235)
id (2785)	temporary%timed%string0d(:)%identifier%id (string) (9.7.1.1.3)
flag (2785)	temporary%timed%string0d(:)%identifier%flag (integer) (9.7.1.1.2)
description (2785)	temporary%timed%string0d(:)%identifier%description (string) (9.7.1.1.3)
value (2993)	temporary%timed%string0d(:)%value (string) (9.7.1.1.3)
float1d (2989)	temporary%timed%float1d(:) (temporary_t_1dr) (9.7.1.3.446)
identifier (2996)	temporary%timed%float1d(:)%identifier (identifier) (9.7.1.3.235)
id (2785)	temporary%timed%float1d(:)%identifier%id (string) (9.7.1.1.3)
flag (2785)	temporary%timed%float1d(:)%identifier%flag (integer) (9.7.1.1.2)
description (2785)	temporary%timed%float1d(:)%identifier%description (string) (9.7.1.1.3)
value (2996)	temporary%timed%float1d(:)%value (vecflt.type) (9.7.1.2.13)
integer1d (2989)	temporary%timed%integer1d(:) (temporary_t_1di) (9.7.1.3.445)
identifier (2995)	temporary%timed%integer1d(:)%identifier (identifier) (9.7.1.3.235)
id (2785)	temporary%timed%integer1d(:)%identifier%id (string) (9.7.1.1.3)
flag (2785)	temporary%timed%integer1d(:)%identifier%flag (integer) (9.7.1.1.2)
description (2785)	temporary%timed%integer1d(:)%identifier%description (string) (9.7.1.1.3)
value (2995)	temporary%timed%integer1d(:)%value (vecint.type) (9.7.1.2.14)
complex1d (2989)	temporary%timed%complex1d(:) (temporary_t_1dc) (9.7.1.3.444)
identifier (2994)	temporary%timed%complex1d(:)%identifier (identifier) (9.7.1.3.235)
id (2785)	temporary%timed%complex1d(:)%identifier%id (string) (9.7.1.1.3)
flag (2785)	temporary%timed%complex1d(:)%identifier%flag (integer) (9.7.1.1.2)

description (2785)	temporary%timed%complex1d(:)%identifier%description (string) (9.7.1.1.3)
value (2994)	temporary%timed%complex1d(:)%value (vecplx_type) (9.7.1.2.12)
float2d (2989)	temporary%timed%float2d(:) (temporary_t_2dr) (9.7.1.3.449)
identifier (2999)	temporary%timed%float2d(:)%identifier (identifier) (9.7.1.3.235)
id (2785)	temporary%timed%float2d(:)%identifier%id (string) (9.7.1.1.3)
flag (2785)	temporary%timed%float2d(:)%identifier%flag (integer) (9.7.1.1.2)
description (2785)	temporary%timed%float2d(:)%identifier%description (string) (9.7.1.1.3)
value (2999)	temporary%timed%float2d(:)%value (matflt_type) (9.7.1.2.10)
integer2d (2989)	temporary%timed%integer2d(:) (temporary_t_2di) (9.7.1.3.448)
identifier (2998)	temporary%timed%integer2d(:)%identifier (identifier) (9.7.1.3.235)
id (2785)	temporary%timed%integer2d(:)%identifier%id (string) (9.7.1.1.3)
flag (2785)	temporary%timed%integer2d(:)%identifier%flag (integer) (9.7.1.1.2)
description (2785)	temporary%timed%integer2d(:)%identifier%description (string) (9.7.1.1.3)
value (2998)	temporary%timed%integer2d(:)%value (matint_type) (9.7.1.2.11)
complex2d (2989)	temporary%timed%complex2d(:) (temporary_t_2dc) (9.7.1.3.447)
identifier (2997)	temporary%timed%complex2d(:)%identifier (identifier) (9.7.1.3.235)
id (2785)	temporary%timed%complex2d(:)%identifier%id (string) (9.7.1.1.3)
flag (2785)	temporary%timed%complex2d(:)%identifier%flag (integer) (9.7.1.1.2)
description (2785)	temporary%timed%complex2d(:)%identifier%description (string) (9.7.1.1.3)
value (2997)	temporary%timed%complex2d(:)%value (matcplx_type) (9.7.1.2.9)
float3d (2989)	temporary%timed%float3d(:) (temporary_t_3dr) (9.7.1.3.452)
identifier (3002)	temporary%timed%float3d(:)%identifier (identifier) (9.7.1.3.235)
id (2785)	temporary%timed%float3d(:)%identifier%id (string) (9.7.1.1.3)
flag (2785)	temporary%timed%float3d(:)%identifier%flag (integer) (9.7.1.1.2)
description (2785)	temporary%timed%float3d(:)%identifier%description (string) (9.7.1.1.3)
value (3002)	temporary%timed%float3d(:)%value (array3dflt_type) (9.7.1.2.2)
integer3d (2989)	temporary%timed%integer3d(:) (temporary_t_3di) (9.7.1.3.451)
identifier (3001)	temporary%timed%integer3d(:)%identifier (identifier) (9.7.1.3.235)
id (2785)	temporary%timed%integer3d(:)%identifier%id (string) (9.7.1.1.3)
flag (2785)	temporary%timed%integer3d(:)%identifier%flag (integer) (9.7.1.1.2)
description (2785)	temporary%timed%integer3d(:)%identifier%description (string) (9.7.1.1.3)
value (3001)	temporary%timed%integer3d(:)%value (array3dint_type) (9.7.1.2.3)
complex3d (2989)	temporary%timed%complex3d(:) (temporary_t_3dc) (9.7.1.3.450)
identifier (3000)	temporary%timed%complex3d(:)%identifier (identifier) (9.7.1.3.235)
id (2785)	temporary%timed%complex3d(:)%identifier%id (string) (9.7.1.1.3)
flag (2785)	temporary%timed%complex3d(:)%identifier%flag (integer) (9.7.1.1.2)
description (2785)	temporary%timed%complex3d(:)%identifier%description (string) (9.7.1.1.3)
value (3000)	temporary%timed%complex3d(:)%value (array3dcplx_type) (9.7.1.2.1)
float4d (2989)	temporary%timed%float4d(:) (temporary_t_4dr) (9.7.1.3.453)
identifier (3003)	temporary%timed%float4d(:)%identifier (identifier) (9.7.1.3.235)
id (2785)	temporary%timed%float4d(:)%identifier%id (string) (9.7.1.1.3)
flag (2785)	temporary%timed%float4d(:)%identifier%flag (integer) (9.7.1.1.2)
description (2785)	temporary%timed%float4d(:)%identifier%description (string) (9.7.1.1.3)
value (3003)	temporary%timed%float4d(:)%value (array4dflt_type) (9.7.1.2.4)
codeparam (2595)	temporary%codeparam (codeparam) (9.7.1.3.77)
codename (2627)	temporary%codeparam%codename (string) (9.7.1.1.3)
codeversion (2627)	temporary%codeparam%codeversion (string) (9.7.1.1.3)
parameters (2627)	temporary%codeparam%parameters (string) (9.7.1.1.3)
output_diag (2627)	temporary%codeparam%output_diag (string) (9.7.1.1.3)
output_flag (2627)	temporary%codeparam%output_flag (integer) (9.7.1.1.2)
time (2595)	temporary%time (float) (9.7.1.1.1)

#### 9.7.2.1.44 topinfo

dataprovder (2596)	topinfo%dataprovder (string) (9.7.1.1.3)
description (2596)	topinfo%description (string) (9.7.1.1.3)
firstputdate (2596)	topinfo%firstputdate (string) (9.7.1.1.3)
lastupdate (2596)	topinfo%lastupdate (string) (9.7.1.1.3)
source (2596)	topinfo%source (string) (9.7.1.1.3)
comment (2596)	topinfo%comment (string) (9.7.1.1.3)
dataversion (2596)	topinfo%dataversion (string) (9.7.1.1.3)

workflow (2596)	topinfo%workflow (string) (9.7.1.1.3)
entry (2596)	topinfo%entry (entry_def) (9.7.1.3.187)
user (2737)	topinfo%entry%user (string) (9.7.1.1.3)
machine (2737)	topinfo%entry%machine (string) (9.7.1.1.3)
shot (2737)	topinfo%entry%shot (integer) (9.7.1.1.2)
run (2737)	topinfo%entry%run (integer) (9.7.1.1.2)
parent_entry (2596)	topinfo%parent_entry (entry_def) (9.7.1.3.187)
user (2737)	topinfo%parent_entry%user (string) (9.7.1.1.3)
machine (2737)	topinfo%parent_entry%machine (string) (9.7.1.1.3)
shot (2737)	topinfo%parent_entry%shot (integer) (9.7.1.1.2)
run (2737)	topinfo%parent_entry%run (integer) (9.7.1.1.2)
mdinfo (2596)	topinfo%mdinfo (mdinfo) (9.7.1.3.262)
shot_min (2812)	topinfo%mdinfo%shot_min (integer) (9.7.1.1.2)
shot_max (2812)	topinfo%mdinfo%shot_max (integer) (9.7.1.1.2)
md_entry (2812)	topinfo%mdinfo%md_entry (entry_def) (9.7.1.3.187)
user (2737)	topinfo%mdinfo%md_entry%user (string) (9.7.1.1.3)
machine (2737)	topinfo%mdinfo%md_entry%machine (string) (9.7.1.1.3)
shot (2737)	topinfo%mdinfo%md_entry%shot (integer) (9.7.1.1.2)
run (2737)	topinfo%mdinfo%md_entry%run (integer) (9.7.1.1.2)

### 9.7.2.1.45 toroidfield

datainfo (2597)	toroidfield%datainfo (datainfo) (9.7.1.3.134)
dataprovider (2684)	toroidfield%datainfo%dataprovider (string) (9.7.1.1.3)
putdate (2684)	toroidfield%datainfo%putdate (string) (9.7.1.1.3)
source (2684)	toroidfield%datainfo%source (string) (9.7.1.1.3)
comment (2684)	toroidfield%datainfo%comment (string) (9.7.1.1.3)
cocos (2684)	toroidfield%datainfo%cocos (integer) (9.7.1.1.2)
id (2684)	toroidfield%datainfo%id (integer) (9.7.1.1.2)
isref (2684)	toroidfield%datainfo%isref (integer) (9.7.1.1.2)
whatref (2684)	toroidfield%datainfo%whatref (whatref) (9.7.1.3.506)
user (3056)	toroidfield%datainfo%whatref%user (string) (9.7.1.1.3)
machine (3056)	toroidfield%datainfo%whatref%machine (string) (9.7.1.1.3)
shot (3056)	toroidfield%datainfo%whatref%shot (integer) (9.7.1.1.2)
run (3056)	toroidfield%datainfo%whatref%run (integer) (9.7.1.1.2)
occurrence (3056)	toroidfield%datainfo%whatref%occurrence (integer) (9.7.1.1.2)
putinfo (2684)	toroidfield%datainfo%putinfo (putinfo) (9.7.1.3.342)
putmethod (2892)	toroidfield%datainfo%putinfo%putmethod (string) (9.7.1.1.3)
putaccess (2892)	toroidfield%datainfo%putinfo%putaccess (string) (9.7.1.1.3)
putlocation (2892)	toroidfield%datainfo%putinfo%putlocation (string) (9.7.1.1.3)
rights (2892)	toroidfield%datainfo%putinfo%rights (string) (9.7.1.1.3)
desc_tfcoils (2597)	toroidfield%desc_tfcoils (tf_desc_tfcoils) (9.7.1.3.454)
type (3004)	toroidfield%desc_tfcoils%type (integer) (9.7.1.1.2)
phi (3004)	toroidfield%desc_tfcoils%phi (float) (9.7.1.1.1)
circularcoil (3004)	toroidfield%desc_tfcoils%circularcoil (circularcoil) (9.7.1.3.75)
centre (2625)	toroidfield%desc_tfcoils%circularcoil%centre (rz0D) (9.7.1.3.358)
r (2908)	toroidfield%desc_tfcoils%circularcoil%centre%r (float) (9.7.1.1.1)
z (2908)	toroidfield%desc_tfcoils%circularcoil%centre%z (float) (9.7.1.1.1)
hlength (2625)	toroidfield%desc_tfcoils%circularcoil%hlength (float) (9.7.1.1.1)
radialwidth (2625)	toroidfield%desc_tfcoils%circularcoil%radialwidth (float) (9.7.1.1.1)
planecoil (3004)	toroidfield%desc_tfcoils%planecoil (planecoil) (9.7.1.3.330)
coordinates (2880)	toroidfield%desc_tfcoils%planecoil%coordinates (rz1D) (9.7.1.3.359)
r (2909)	toroidfield%desc_tfcoils%planecoil%coordinates%r (vecflt.type) (9.7.1.2.13)
z (2909)	toroidfield%desc_tfcoils%planecoil%coordinates%z (vecflt.type) (9.7.1.2.13)
hlength (2880)	toroidfield%desc_tfcoils%planecoil%hlength (vecflt.type) (9.7.1.2.13)
radialwidth (2880)	toroidfield%desc_tfcoils%planecoil%radialwidth (vecflt.type) (9.7.1.2.13)
inboard (3004)	toroidfield%desc_tfcoils%inboard (tf_structure) (9.7.1.3.456)
jcable (3006)	toroidfield%desc_tfcoils%inboard%jcable (float) (9.7.1.1.1)
tisotf (3006)	toroidfield%desc_tfcoils%inboard%tisotf (float) (9.7.1.1.1)
efcasing (3006)	toroidfield%desc_tfcoils%inboard%efcasing (float) (9.7.1.1.1)
escasing (3006)	toroidfield%desc_tfcoils%inboard%escasing (float) (9.7.1.1.1)



sigjackettf (3006)	toroidfield%desc.tfcoils%inboard%sigjackettf (float) (9.7.1.1.1)
sigvaulttf (3006)	toroidfield%desc.tfcoils%inboard%sigvaulttf (float) (9.7.1.1.1)
ktf (3006)	toroidfield%desc.tfcoils%inboard%ktf (float) (9.7.1.1.1)
riif (3006)	toroidfield%desc.tfcoils%inboard%riif (float) (9.7.1.1.1)
riitf (3006)	toroidfield%desc.tfcoils%inboard%riitf (float) (9.7.1.1.1)
retf (3006)	toroidfield%desc.tfcoils%inboard%retf (float) (9.7.1.1.1)
he_fraction (3006)	toroidfield%desc.tfcoils%inboard%he_fraction (float) (9.7.1.1.1)
ss_fraction (3006)	toroidfield%desc.tfcoils%inboard%ss_fraction (float) (9.7.1.1.1)
pow_dens_wp (3006)	toroidfield%desc.tfcoils%inboard%pow_dens_wp (float) (9.7.1.1.1)
outboard (3004)	toroidfield%desc.tfcoils%outboard (tf_structure) (9.7.1.3.456)
jcable (3006)	toroidfield%desc.tfcoils%outboard%jcable (float) (9.7.1.1.1)
tisotf (3006)	toroidfield%desc.tfcoils%outboard%tisotf (float) (9.7.1.1.1)
efcasing (3006)	toroidfield%desc.tfcoils%outboard%efcasing (float) (9.7.1.1.1)
escasing (3006)	toroidfield%desc.tfcoils%outboard%escasing (float) (9.7.1.1.1)
sigjackettf (3006)	toroidfield%desc.tfcoils%outboard%sigjackettf (float) (9.7.1.1.1)
sigvaulttf (3006)	toroidfield%desc.tfcoils%outboard%sigvaulttf (float) (9.7.1.1.1)
ktf (3006)	toroidfield%desc.tfcoils%outboard%ktf (float) (9.7.1.1.1)
riif (3006)	toroidfield%desc.tfcoils%outboard%riif (float) (9.7.1.1.1)
riitf (3006)	toroidfield%desc.tfcoils%outboard%riitf (float) (9.7.1.1.1)
retf (3006)	toroidfield%desc.tfcoils%outboard%retf (float) (9.7.1.1.1)
he_fraction (3006)	toroidfield%desc.tfcoils%outboard%he_fraction (float) (9.7.1.1.1)
ss_fraction (3006)	toroidfield%desc.tfcoils%outboard%ss_fraction (float) (9.7.1.1.1)
pow_dens_wp (3006)	toroidfield%desc.tfcoils%outboard%pow_dens_wp (float) (9.7.1.1.1)
nturns (2597)	toroidfield%nturns (integer) (9.7.1.1.2)
ncoils (2597)	toroidfield%ncoils (integer) (9.7.1.1.2)
current (2597)	toroidfield%current (exp0D) (9.7.1.3.196)
value (2746)	toroidfield%current%value (float) (9.7.1.1.1)
abserror (2746)	toroidfield%current%abserror (float) (9.7.1.1.1)
relerror (2746)	toroidfield%current%relerror (float) (9.7.1.1.1)
bvac_r (2597)	toroidfield%bvac_r (exp0D) (9.7.1.3.196)
value (2746)	toroidfield%bvac_r%value (float) (9.7.1.1.1)
abserror (2746)	toroidfield%bvac_r%abserror (float) (9.7.1.1.1)
relerror (2746)	toroidfield%bvac_r%relerror (float) (9.7.1.1.1)
r0 (2597)	toroidfield%r0 (float) (9.7.1.1.1)
p_cryo (2597)	toroidfield%p_cryo (float) (9.7.1.1.1)
wp_nh_max (2597)	toroidfield%wp_nh_max (float) (9.7.1.1.1)
tfc_nh (2597)	toroidfield%tfc_nh (float) (9.7.1.1.1)
neut_flux_inb (2597)	toroidfield%neut_flux_inb (float) (9.7.1.1.1)
neut_flux_outb (2597)	toroidfield%neut_flux_outb (float) (9.7.1.1.1)
codeparam (2597)	toroidfield%codeparam (codeparam) (9.7.1.3.77)
codename (2627)	toroidfield%codeparam%codename (string) (9.7.1.1.3)
codeversion (2627)	toroidfield%codeparam%codeversion (string) (9.7.1.1.3)
parameters (2627)	toroidfield%codeparam%parameters (string) (9.7.1.1.3)
output_diag (2627)	toroidfield%codeparam%output_diag (string) (9.7.1.1.3)
output_flag (2627)	toroidfield%codeparam%output_flag (integer) (9.7.1.1.2)
time (2597)	toroidfield%time (float) (9.7.1.1.1)

### 9.7.2.1.46 tsdiag

datainfo (2598)	tsdiag%datainfo (datainfo) (9.7.1.3.134)
dataprovider (2684)	tsdiag%datainfo%dataprovider (string) (9.7.1.1.3)
putdate (2684)	tsdiag%datainfo%putdate (string) (9.7.1.1.3)
source (2684)	tsdiag%datainfo%source (string) (9.7.1.1.3)
comment (2684)	tsdiag%datainfo%comment (string) (9.7.1.1.3)
cocos (2684)	tsdiag%datainfo%cocos (integer) (9.7.1.1.2)
id (2684)	tsdiag%datainfo%id (integer) (9.7.1.1.2)
isref (2684)	tsdiag%datainfo%isref (integer) (9.7.1.1.2)
whatref (2684)	tsdiag%datainfo%whatref (whatref) (9.7.1.3.506)
user (3056)	tsdiag%datainfo%whatref%user (string) (9.7.1.1.3)
machine (3056)	tsdiag%datainfo%whatref%machine (string) (9.7.1.1.3)
shot (3056)	tsdiag%datainfo%whatref%shot (integer) (9.7.1.1.2)



run (3056)	tsdiag%datainfo%whatref%run (integer) (9.7.1.1.2)
occurrence (3056)	tsdiag%datainfo%whatref%occurrence (integer) (9.7.1.1.2)
putinfo (2684)	tsdiag%datainfo%putinfo (putinfo) (9.7.1.3.342)
putmethod (2892)	tsdiag%datainfo%putinfo%putmethod (string) (9.7.1.1.3)
putaccess (2892)	tsdiag%datainfo%putinfo%putaccess (string) (9.7.1.1.3)
putlocation (2892)	tsdiag%datainfo%putinfo%putlocation (string) (9.7.1.1.3)
rights (2892)	tsdiag%datainfo%putinfo%rights (string) (9.7.1.1.3)
setup (2598)	tsdiag%setup (tssetup) (9.7.1.3.468)
position (3018)	tsdiag%setup%position (rzphiID) (9.7.1.3.365)
r (2915)	tsdiag%setup%position%r (vecflt.type) (9.7.1.2.13)
z (2915)	tsdiag%setup%position%z (vecflt.type) (9.7.1.2.13)
phi (2915)	tsdiag%setup%position%phi (vecflt.type) (9.7.1.2.13)
measure (2598)	tsdiag%measure (tsmeasure) (9.7.1.3.467)
te (3017)	tsdiag%measure%te (exp1D) (9.7.1.3.197)
value (2747)	tsdiag%measure%te%value (vecflt.type) (9.7.1.2.13)
abserror (2747)	tsdiag%measure%te%abserror (vecflt.type) (9.7.1.2.13)
releror (2747)	tsdiag%measure%te%releror (vecflt.type) (9.7.1.2.13)
ne (3017)	tsdiag%measure%ne (exp1D) (9.7.1.3.197)
value (2747)	tsdiag%measure%ne%value (vecflt.type) (9.7.1.2.13)
abserror (2747)	tsdiag%measure%ne%abserror (vecflt.type) (9.7.1.2.13)
releror (2747)	tsdiag%measure%ne%releror (vecflt.type) (9.7.1.2.13)
codeparam (2598)	tsdiag%codeparam (codeparam) (9.7.1.3.77)
codename (2627)	tsdiag%codeparam%codename (string) (9.7.1.1.3)
codeversion (2627)	tsdiag%codeparam%codeversion (string) (9.7.1.1.3)
parameters (2627)	tsdiag%codeparam%parameters (string) (9.7.1.1.3)
output_diag (2627)	tsdiag%codeparam%output_diag (string) (9.7.1.1.3)
output_flag (2627)	tsdiag%codeparam%output_flag (integer) (9.7.1.1.2)
time (2598)	tsdiag%time (float) (9.7.1.1.1)

### 9.7.2.1.47 turbulence

datainfo (2599)	turbulence%datainfo (datainfo) (9.7.1.3.134)
dataproducer (2684)	turbulence%datainfo%dataproducer (string) (9.7.1.1.3)
putdate (2684)	turbulence%datainfo%putdate (string) (9.7.1.1.3)
source (2684)	turbulence%datainfo%source (string) (9.7.1.1.3)
comment (2684)	turbulence%datainfo%comment (string) (9.7.1.1.3)
cocos (2684)	turbulence%datainfo%cocos (integer) (9.7.1.1.2)
id (2684)	turbulence%datainfo%id (integer) (9.7.1.1.2)
isref (2684)	turbulence%datainfo%isref (integer) (9.7.1.1.2)
whatref (2684)	turbulence%datainfo%whatref (whatref) (9.7.1.3.506)
user (3056)	turbulence%datainfo%whatref%user (string) (9.7.1.1.3)
machine (3056)	turbulence%datainfo%whatref%machine (string) (9.7.1.1.3)
shot (3056)	turbulence%datainfo%whatref%shot (integer) (9.7.1.1.2)
run (3056)	turbulence%datainfo%whatref%run (integer) (9.7.1.1.2)
occurrence (3056)	turbulence%datainfo%whatref%occurrence (integer) (9.7.1.1.2)
putinfo (2684)	turbulence%datainfo%putinfo (putinfo) (9.7.1.3.342)
putmethod (2892)	turbulence%datainfo%putinfo%putmethod (string) (9.7.1.1.3)
putaccess (2892)	turbulence%datainfo%putinfo%putaccess (string) (9.7.1.1.3)
putlocation (2892)	turbulence%datainfo%putinfo%putlocation (string) (9.7.1.1.3)
rights (2892)	turbulence%datainfo%putinfo%rights (string) (9.7.1.1.3)
composition (2599)	turbulence%composition (turbcomposition) (9.7.1.3.469)
amn (3019)	turbulence%composition%amn (vecflt.type) (9.7.1.2.13)
zn (3019)	turbulence%composition%zn (vecflt.type) (9.7.1.2.13)
zion (3019)	turbulence%composition%zion (vecflt.type) (9.7.1.2.13)
ie.mass (3019)	turbulence%composition%ie.mass (vecflt.type) (9.7.1.2.13)
coordsys (2599)	turbulence%coordsys (turbcoordsys) (9.7.1.3.470)
grid.type (3020)	turbulence%coordsys%grid.type (string) (9.7.1.1.3)
turbgrid (3020)	turbulence%coordsys%turbgrid (turbgrid) (9.7.1.3.472)
dim1 (3022)	turbulence%coordsys%turbgrid%dim1 (vecflt.type) (9.7.1.2.13)
dim2 (3022)	turbulence%coordsys%turbgrid%dim2 (vecflt.type) (9.7.1.2.13)
dim3 (3022)	turbulence%coordsys%turbgrid%dim3 (vecflt.type) (9.7.1.2.13)

dim.v1 (3022)	turbulence%coordsys%turbgrid%dim.v1 (vecflt.type) (9.7.1.2.13)
dim.v2 (3022)	turbulence%coordsys%turbgrid%dim.v2 (vecflt.type) (9.7.1.2.13)
jacobian (3020)	turbulence%coordsys%jacobian (matflt.type) (9.7.1.2.10)
g_11 (3020)	turbulence%coordsys%g_11 (matflt.type) (9.7.1.2.10)
g_12 (3020)	turbulence%coordsys%g_12 (matflt.type) (9.7.1.2.10)
g_13 (3020)	turbulence%coordsys%g_13 (matflt.type) (9.7.1.2.10)
g_22 (3020)	turbulence%coordsys%g_22 (matflt.type) (9.7.1.2.10)
g_23 (3020)	turbulence%coordsys%g_23 (matflt.type) (9.7.1.2.10)
g_33 (3020)	turbulence%coordsys%g_33 (matflt.type) (9.7.1.2.10)
position (3020)	turbulence%coordsys%position (rzphi3D) (9.7.1.3.369)
r (2919)	turbulence%coordsys%position%r (array3dflt.type) (9.7.1.2.2)
z (2919)	turbulence%coordsys%position%z (array3dflt.type) (9.7.1.2.2)
phi (2919)	turbulence%coordsys%position%phi (array3dflt.type) (9.7.1.2.2)
var0d (2599)	turbulence%var0d (turbvar0d) (9.7.1.3.474)
dtime.type (3024)	turbulence%var0d%dtime.type (string) (9.7.1.1.3)
dtime (3024)	turbulence%var0d%dtime (vecflt.type) (9.7.1.2.13)
en_exb (3024)	turbulence%var0d%en_exb (vecflt.type) (9.7.1.2.13)
en_mag (3024)	turbulence%var0d%en_mag (vecflt.type) (9.7.1.2.13)
en_el.th (3024)	turbulence%var0d%en_el.th (vecflt.type) (9.7.1.2.13)
en_ion.th (3024)	turbulence%var0d%en_ion.th (matflt.type) (9.7.1.2.10)
en_el.par (3024)	turbulence%var0d%en_el.par (vecflt.type) (9.7.1.2.13)
en_ion.par (3024)	turbulence%var0d%en_ion.par (matflt.type) (9.7.1.2.10)
en_tot (3024)	turbulence%var0d%en_tot (vecflt.type) (9.7.1.2.13)
fl_el (3024)	turbulence%var0d%fl_el (vecflt.type) (9.7.1.2.13)
fl_heatel (3024)	turbulence%var0d%fl_heatel (vecflt.type) (9.7.1.2.13)
fl_ion (3024)	turbulence%var0d%fl_ion (matflt.type) (9.7.1.2.10)
fl_heation (3024)	turbulence%var0d%fl_heation (matflt.type) (9.7.1.2.10)
fl_magel (3024)	turbulence%var0d%fl_magel (vecflt.type) (9.7.1.2.13)
fl_magheatel (3024)	turbulence%var0d%fl_magheatel (vecflt.type) (9.7.1.2.13)
fl_magion (3024)	turbulence%var0d%fl_magion (matflt.type) (9.7.1.2.10)
flmagheation (3024)	turbulence%var0d%flmagheation (matflt.type) (9.7.1.2.10)
var1d (2599)	turbulence%var1d (turbvar1d) (9.7.1.3.475)
rho_tor_norm (3025)	turbulence%var1d%rho_tor_norm (vecflt.type) (9.7.1.2.13)
phi (3025)	turbulence%var1d%phi (vecflt.type) (9.7.1.2.13)
er (3025)	turbulence%var1d%er (vecflt.type) (9.7.1.2.13)
vor (3025)	turbulence%var1d%vor (vecflt.type) (9.7.1.2.13)
apl (3025)	turbulence%var1d%apl (vecflt.type) (9.7.1.2.13)
jpl (3025)	turbulence%var1d%jpl (vecflt.type) (9.7.1.2.13)
ne (3025)	turbulence%var1d%ne (vecflt.type) (9.7.1.2.13)
te (3025)	turbulence%var1d%te (vecflt.type) (9.7.1.2.13)
ni (3025)	turbulence%var1d%ni (matflt.type) (9.7.1.2.10)
ti (3025)	turbulence%var1d%ti (matflt.type) (9.7.1.2.10)
ui (3025)	turbulence%var1d%ui (matflt.type) (9.7.1.2.10)
var2d (2599)	turbulence%var2d (turbvar2d) (9.7.1.3.476)
rho_tor_norm (3026)	turbulence%var2d%rho_tor_norm (vecflt.type) (9.7.1.2.13)
theta (3026)	turbulence%var2d%theta (vecflt.type) (9.7.1.2.13)
phi (3026)	turbulence%var2d%phi (matflt.type) (9.7.1.2.10)
apl (3026)	turbulence%var2d%apl (matflt.type) (9.7.1.2.10)
jpl (3026)	turbulence%var2d%jpl (matflt.type) (9.7.1.2.10)
vor (3026)	turbulence%var2d%vor (matflt.type) (9.7.1.2.10)
ne (3026)	turbulence%var2d%ne (matflt.type) (9.7.1.2.10)
te (3026)	turbulence%var2d%te (matflt.type) (9.7.1.2.10)
ni (3026)	turbulence%var2d%ni (array3dflt.type) (9.7.1.2.2)
ti (3026)	turbulence%var2d%ti (array3dflt.type) (9.7.1.2.2)
ui (3026)	turbulence%var2d%ui (array3dflt.type) (9.7.1.2.2)
var3d (2599)	turbulence%var3d (turbvar3d) (9.7.1.3.477)
phi (3027)	turbulence%var3d%phi (array3dflt.type) (9.7.1.2.2)
vor (3027)	turbulence%var3d%vor (array3dflt.type) (9.7.1.2.2)
jpl (3027)	turbulence%var3d%jpl (array3dflt.type) (9.7.1.2.2)
ne (3027)	turbulence%var3d%ne (array3dflt.type) (9.7.1.2.2)
var4d (2599)	turbulence%var4d (turbvar4d) (9.7.1.3.478)

fe (3028)	turbulence%var4d%fe (array4dflt.type) (9.7.1.2.4)
fi (3028)	turbulence%var4d%fi (array5dflt.type) (9.7.1.2.5)
var5d (2599)	turbulence%var5d (turbvar5d) (9.7.1.3.479)
fe (3029)	turbulence%var5d%fe (array5dflt.type) (9.7.1.2.5)
fi (3029)	turbulence%var5d%fi (array6dflt.type) (9.7.1.2.6)
spec1d (2599)	turbulence%spec1d (turbspec1d) (9.7.1.3.473)
kperp (3023)	turbulence%spec1d%kperp (vecflt.type) (9.7.1.2.13)
phi (3023)	turbulence%spec1d%phi (vecflt.type) (9.7.1.2.13)
vor (3023)	turbulence%spec1d%vor (vecflt.type) (9.7.1.2.13)
b (3023)	turbulence%spec1d%b (vecflt.type) (9.7.1.2.13)
jpl (3023)	turbulence%spec1d%jpl (vecflt.type) (9.7.1.2.13)
ne (3023)	turbulence%spec1d%ne (vecflt.type) (9.7.1.2.13)
te (3023)	turbulence%spec1d%te (vecflt.type) (9.7.1.2.13)
ti (3023)	turbulence%spec1d%ti (matflt.type) (9.7.1.2.10)
fe (3023)	turbulence%spec1d%fe (vecflt.type) (9.7.1.2.13)
qe (3023)	turbulence%spec1d%qe (vecflt.type) (9.7.1.2.13)
qi (3023)	turbulence%spec1d%qi (matflt.type) (9.7.1.2.10)
me (3023)	turbulence%spec1d%me (vecflt.type) (9.7.1.2.13)
mi (3023)	turbulence%spec1d%mi (matflt.type) (9.7.1.2.10)
env1d (2599)	turbulence%env1d (turbenv1d) (9.7.1.3.471)
theta (3021)	turbulence%env1d%theta (vecflt.type) (9.7.1.2.13)
phi (3021)	turbulence%env1d%phi (vecflt.type) (9.7.1.2.13)
vor (3021)	turbulence%env1d%vor (vecflt.type) (9.7.1.2.13)
jpl (3021)	turbulence%env1d%jpl (vecflt.type) (9.7.1.2.13)
ne (3021)	turbulence%env1d%ne (vecflt.type) (9.7.1.2.13)
he (3021)	turbulence%env1d%he (vecflt.type) (9.7.1.2.13)
te (3021)	turbulence%env1d%te (vecflt.type) (9.7.1.2.13)
ni (3021)	turbulence%env1d%ni (matflt.type) (9.7.1.2.10)
ti (3021)	turbulence%env1d%ti (matflt.type) (9.7.1.2.10)
ui (3021)	turbulence%env1d%ui (matflt.type) (9.7.1.2.10)
fe (3021)	turbulence%env1d%fe (vecflt.type) (9.7.1.2.13)
qe (3021)	turbulence%env1d%qe (vecflt.type) (9.7.1.2.13)
qi (3021)	turbulence%env1d%qi (matflt.type) (9.7.1.2.10)
me (3021)	turbulence%env1d%me (vecflt.type) (9.7.1.2.13)
mi (3021)	turbulence%env1d%mi (matflt.type) (9.7.1.2.10)
codeparam (2599)	turbulence%codeparam (codeparam) (9.7.1.3.77)
codename (2627)	turbulence%codeparam%codename (string) (9.7.1.1.3)
codeversion (2627)	turbulence%codeparam%codeversion (string) (9.7.1.1.3)
parameters (2627)	turbulence%codeparam%parameters (string) (9.7.1.1.3)
output.diag (2627)	turbulence%codeparam%output.diag (string) (9.7.1.1.3)
output.flag (2627)	turbulence%codeparam%output.flag (integer) (9.7.1.1.2)
time (2599)	turbulence%time (float) (9.7.1.1.1)

### 9.7.2.1.48 wall

datainfo (2600)	wall%datainfo (datainfo) (9.7.1.3.134)
dataproducer (2684)	wall%datainfo%dataproducer (string) (9.7.1.1.3)
putdate (2684)	wall%datainfo%putdate (string) (9.7.1.1.3)
source (2684)	wall%datainfo%source (string) (9.7.1.1.3)
comment (2684)	wall%datainfo%comment (string) (9.7.1.1.3)
cocos (2684)	wall%datainfo%cocos (integer) (9.7.1.1.2)
id (2684)	wall%datainfo%id (integer) (9.7.1.1.2)
isref (2684)	wall%datainfo%isref (integer) (9.7.1.1.2)
whatref (2684)	wall%datainfo%whatref (whatref) (9.7.1.3.506)
user (3056)	wall%datainfo%whatref%user (string) (9.7.1.1.3)
machine (3056)	wall%datainfo%whatref%machine (string) (9.7.1.1.3)
shot (3056)	wall%datainfo%whatref%shot (integer) (9.7.1.1.2)
run (3056)	wall%datainfo%whatref%run (integer) (9.7.1.1.2)
occurrence (3056)	wall%datainfo%whatref%occurrence (integer) (9.7.1.1.2)
putinfo (2684)	wall%datainfo%putinfo (putinfo) (9.7.1.3.342)
putmethod (2892)	wall%datainfo%putinfo%putmethod (string) (9.7.1.1.3)

putaccess (2892)	wall%datainfo%putinfo%putaccess (string) (9.7.1.1.3)
putlocation (2892)	wall%datainfo%putinfo%putlocation (string) (9.7.1.1.3)
rights (2892)	wall%datainfo%putinfo%rights (string) (9.7.1.1.3)
wall0d (2600)	wall%wall0d (wall_wall0d) (9.7.1.3.494)
pumping_speed (3044)	wall%wall0d%pumping_speed (vecflt.type) (9.7.1.2.13)
gas_puff (3044)	wall%wall0d%gas_puff (vecflt.type) (9.7.1.2.13)
wall_inventory (3044)	wall%wall0d%wall_inventory (vecflt.type) (9.7.1.2.13)
recycling_coefficient (3044)	wall%wall0d%recycling_coefficient (vecflt.type) (9.7.1.2.13)
wall_temperature (3044)	wall%wall0d%wall_temperature (float) (9.7.1.1.1)
power_from_plasma (3044)	wall%wall0d%power_from_plasma (float) (9.7.1.1.1)
power_to_cooling (3044)	wall%wall0d%power_to_cooling (float) (9.7.1.1.1)
plasma (3044)	wall%wall0d%plasma (wall_wall0d_plasma) (9.7.1.3.495)
species_index (3045)	wall%wall0d%plasma%species_index (matint.type) (9.7.1.2.11)
flux (3045)	wall%wall0d%plasma%flux (vecflt.type) (9.7.1.2.13)
energy (3045)	wall%wall0d%plasma%energy (vecflt.type) (9.7.1.2.13)
wall2d_mhd (2600)	wall%wall2d_mhd (wall2d_mhd) (9.7.1.3.482)
res_wall (3032)	wall%wall2d_mhd%res_wall(:) (mhd_res_wall2d) (9.7.1.3.266)
walltype (2816)	wall%wall2d_mhd%res_wall(:)%walltype (identifier) (9.7.1.3.235)
id (2785)	wall%wall2d_mhd%res_wall(:)%walltype%id (string) (9.7.1.1.3)
flag (2785)	wall%wall2d_mhd%res_wall(:)%walltype%flag (integer) (9.7.1.1.2)
description (2785)	wall%wall2d_mhd%res_wall(:)%walltype%description (string) (9.7.1.1.3)
delta (2816)	wall%wall2d_mhd%res_wall(:)%delta (float) (9.7.1.1.1)
eta (2816)	wall%wall2d_mhd%res_wall(:)%eta (float) (9.7.1.1.1)
npoloidal (2816)	wall%wall2d_mhd%res_wall(:)%npoloidal (integer) (9.7.1.1.2)
position (2816)	wall%wall2d_mhd%res_wall(:)%position (rz1D) (9.7.1.3.359)
r (2909)	wall%wall2d_mhd%res_wall(:)%position%r (vecflt.type) (9.7.1.2.13)
z (2909)	wall%wall2d_mhd%res_wall(:)%position%z (vecflt.type) (9.7.1.2.13)
holes (2816)	wall%wall2d_mhd%res_wall(:)%holes (holes) (9.7.1.3.234)
n_holes (2784)	wall%wall2d_mhd%res_wall(:)%holes%n_holes (integer) (9.7.1.1.2)
coordinates (2784)	wall%wall2d_mhd%res_wall(:)%holes%coordinates (coordinates) (9.7.1.3.102)
theta (2652)	wall%wall2d_mhd%res_wall(:)%holes%coordinates%theta (vecflt.type) (9.7.1.2.13)
phi (2652)	wall%wall2d_mhd%res_wall(:)%holes%coordinates%phi (vecflt.type) (9.7.1.2.13)
width (2784)	wall%wall2d_mhd%res_wall(:)%holes%width (width) (9.7.1.3.507)
dtheta (3057)	wall%wall2d_mhd%res_wall(:)%holes%width%dtheta (vecflt.type) (9.7.1.2.13)
phi (3057)	wall%wall2d_mhd%res_wall(:)%holes%width%phi (vecflt.type) (9.7.1.2.13)
eta (2784)	wall%wall2d_mhd%res_wall(:)%holes%eta (vecflt.type) (9.7.1.2.13)
ideal_wall (3032)	wall%wall2d_mhd%ideal_wall (mhd_ideal_wall2d) (9.7.1.3.263)
walltype (2813)	wall%wall2d_mhd%ideal_wall%walltype (identifier) (9.7.1.3.235)
id (2785)	wall%wall2d_mhd%ideal_wall%walltype%id (string) (9.7.1.1.3)
flag (2785)	wall%wall2d_mhd%ideal_wall%walltype%flag (integer) (9.7.1.1.2)
description (2785)	wall%wall2d_mhd%ideal_wall%walltype%description (string) (9.7.1.1.3)
position (2813)	wall%wall2d_mhd%ideal_wall%position (rz1D) (9.7.1.3.359)
r (2909)	wall%wall2d_mhd%ideal_wall%position%r (vecflt.type) (9.7.1.2.13)
z (2909)	wall%wall2d_mhd%ideal_wall%position%z (vecflt.type) (9.7.1.2.13)
wall2d (2600)	wall%wall2d(:) (wall2d) (9.7.1.3.481)
wall_id (3031)	wall%wall2d(:)%wall_id (identifier) (9.7.1.3.235)
id (2785)	wall%wall2d(:)%wall_id%id (string) (9.7.1.1.3)
flag (2785)	wall%wall2d(:)%wall_id%flag (integer) (9.7.1.1.2)
description (2785)	wall%wall2d(:)%wall_id%description (string) (9.7.1.1.3)
limiter (3031)	wall%wall2d(:)%limiter (wall_limiter) (9.7.1.3.486)
limiter_id (3036)	wall%wall2d(:)%limiter%limiter_id (identifier) (9.7.1.3.235)
id (2785)	wall%wall2d(:)%limiter%limiter_id%id (string) (9.7.1.1.3)
flag (2785)	wall%wall2d(:)%limiter%limiter_id%flag (integer) (9.7.1.1.2)
description (2785)	wall%wall2d(:)%limiter%limiter_id%description (string) (9.7.1.1.3)
limiter_unit (3036)	wall%wall2d(:)%limiter%limiter_unit(:) (limiter_unit) (9.7.1.3.252)
name (2802)	wall%wall2d(:)%limiter%limiter_unit(:)%name (string) (9.7.1.1.3)
closed (2802)	wall%wall2d(:)%limiter%limiter_unit(:)%closed (string) (9.7.1.1.3)
position (2802)	wall%wall2d(:)%limiter%limiter_unit(:)%position (rz1D) (9.7.1.3.359)
r (2909)	wall%wall2d(:)%limiter%limiter_unit(:)%position%r (vecflt.type) (9.7.1.2.13)
z (2909)	wall%wall2d(:)%limiter%limiter_unit(:)%position%z (vecflt.type) (9.7.1.2.13)
eta (2802)	wall%wall2d(:)%limiter%limiter_unit(:)%eta (float) (9.7.1.1.1)

delta (2802)	wall%wall2d(:)%limiter%limiter_unit(:)%delta (float) (9.7.1.1.1)
permeability (2802)	wall%wall2d(:)%limiter%limiter_unit(:)%permeability (float) (9.7.1.1.1)
vessel (3031)	wall%wall2d(:)%vessel (wall_vessel) (9.7.1.3.491)
vessel_id (3041)	wall%wall2d(:)%vessel%vessel_id (identifier) (9.7.1.3.235)
id (2785)	wall%wall2d(:)%vessel%vessel_id%id (string) (9.7.1.1.3)
flag (2785)	wall%wall2d(:)%vessel%vessel_id%flag (integer) (9.7.1.1.2)
description (2785)	wall%wall2d(:)%vessel%vessel_id%description (string) (9.7.1.1.3)
vessel_unit (3041)	wall%wall2d(:)%vessel%vessel_unit(:) (wall_vessel_unit) (9.7.1.3.493)
annular (3043)	wall%wall2d(:)%vessel%vessel_unit(:)%annular (wall_vessel_annular) (9.7.1.3.492)
name (3042)	wall%wall2d(:)%vessel%vessel_unit(:)%annular%name (string) (9.7.1.1.3)
inside (3042)	wall%wall2d(:)%vessel%vessel_unit(:)%annular%inside (rz1D) (9.7.1.3.359)
r (2909)	wall%wall2d(:)%vessel%vessel_unit(:)%annular%inside%r (vecflt_type) (9.7.1.2.13)
z (2909)	wall%wall2d(:)%vessel%vessel_unit(:)%annular%inside%z (vecflt_type) (9.7.1.2.13)
outside (3042)	wall%wall2d(:)%vessel%vessel_unit(:)%annular%outside (rz1D) (9.7.1.3.359)
r (2909)	wall%wall2d(:)%vessel%vessel_unit(:)%annular%outside%r (vecflt_type) (9.7.1.2.13)
z (2909)	wall%wall2d(:)%vessel%vessel_unit(:)%annular%outside%z (vecflt_type) (9.7.1.2.13)
eta (3042)	wall%wall2d(:)%vessel%vessel_unit(:)%annular%eta (float) (9.7.1.1.1)
permeability (3042)	wall%wall2d(:)%vessel%vessel_unit(:)%annular%permeability (float) (9.7.1.1.1)
blocks (3043)	wall%wall2d(:)%vessel%vessel_unit(:)%blocks (wall_blocks) (9.7.1.3.484)
blocks_unit (3034)	wall%wall2d(:)%vessel%vessel_unit(:)%blocks%blocks_unit(:) (wall_blocks_unit) (9.7.1.3.485)
name (3035)	wall%wall2d(:)%vessel%vessel_unit(:)%blocks%blocks_unit(:)%name (string) (9.7.1.1.3)
position (3035)	wall%wall2d(:)%vessel%vessel_unit(:)%blocks%blocks_unit(:)%position (rz1D) (9.7.1.3.359)
r (2909)	wall%wall2d(:)%vessel%vessel_unit(:)%blocks%blocks_unit(:)%position%r (vecflt_type) (9.7.1.2.13)
z (2909)	wall%wall2d(:)%vessel%vessel_unit(:)%blocks%blocks_unit(:)%position%z (vecflt_type) (9.7.1.2.13)
eta (3035)	wall%wall2d(:)%vessel%vessel_unit(:)%blocks%blocks_unit(:)%eta (float) (9.7.1.1.1)
permeability (3035)	wall%wall2d(:)%vessel%vessel_unit(:)%blocks%blocks_unit(:)%permeability (float) (9.7.1.1.1)
j_phi (3035)	wall%wall2d(:)%vessel%vessel_unit(:)%blocks%blocks_unit(:)%j_phi (float) (9.7.1.1.1)
resistance (3035)	wall%wall2d(:)%vessel%vessel_unit(:)%blocks%blocks_unit(:)%resistance (float) (9.7.1.1.1)
radial_build (3043)	wall%wall2d(:)%vessel%vessel_unit(:)%radial_build (wall_wall2d_vessel_radial_build) (9.7.1.3.496)
r1_inb (3046)	wall%wall2d(:)%vessel%vessel_unit(:)%radial_build%r1_inb (float) (9.7.1.1.1)
r2_inb (3046)	wall%wall2d(:)%vessel%vessel_unit(:)%radial_build%r2_inb (float) (9.7.1.1.1)
r1_outb (3046)	wall%wall2d(:)%vessel%vessel_unit(:)%radial_build%r1_outb (float) (9.7.1.1.1)
r2_outb (3046)	wall%wall2d(:)%vessel%vessel_unit(:)%radial_build%r2_outb (float) (9.7.1.1.1)
raddim (3046)	wall%wall2d(:)%vessel%vessel_unit(:)%radial_build%raddim (float) (9.7.1.1.1)
nmat (3046)	wall%wall2d(:)%vessel%vessel_unit(:)%radial_build%nmat (float) (9.7.1.1.1)
composition (3046)	wall%wall2d(:)%vessel%vessel_unit(:)%radial_build%composition (vecflt_type) (9.7.1.2.13)
pow_dens_inb (3046)	wall%wall2d(:)%vessel%vessel_unit(:)%radial_build%pow_dens_inb (float) (9.7.1.1.1)
pow_dens_outb (3046)	wall%wall2d(:)%vessel%vessel_unit(:)%radial_build%pow_dens_outb (float) (9.7.1.1.1)
fn_flux_inb (3046)	wall%wall2d(:)%vessel%vessel_unit(:)%radial_build%fn_flux_inb (float) (9.7.1.1.1)
fn_flux_outb (3046)	wall%wall2d(:)%vessel%vessel_unit(:)%radial_build%fn_flux_outb (float) (9.7.1.1.1)
plasma (3031)	wall%wall2d(:)%plasma(:) (plasmaComplexType) (9.7.1.3.331)
species (2881)	wall%wall2d(:)%plasma(:)%species (vecint_type) (9.7.1.2.14)
flux (2881)	wall%wall2d(:)%plasma(:)%flux (matflt_type) (9.7.1.2.10)
b (2881)	wall%wall2d(:)%plasma(:)%b (matflt_type) (9.7.1.2.10)
energy (2881)	wall%wall2d(:)%plasma(:)%energy (matflt_type) (9.7.1.2.10)
wall_state (3031)	wall%wall2d(:)%wall_state(:) (wall_unitsComplexType) (9.7.1.3.489)
wall_type (3039)	wall%wall2d(:)%wall_state(:)%wall_type (integer) (9.7.1.1.2)
n_depo_layer (3039)	wall%wall2d(:)%wall_state(:)%n_depo_layer (integer) (9.7.1.1.2)
layers (3039)	wall%wall2d(:)%wall_state(:)%layers(:) (wall_unitsComplexType_layers) (9.7.1.3.490)
elements (3040)	wall%wall2d(:)%wall_state(:)%layers(:)%elements (vecint_type) (9.7.1.2.14)
gases (3040)	wall%wall2d(:)%wall_state(:)%layers(:)%gases (vecint_type) (9.7.1.2.14)
compounds (3040)	wall%wall2d(:)%wall_state(:)%layers(:)%compounds (vecint_type) (9.7.1.2.14)
density (3040)	wall%wall2d(:)%wall_state(:)%layers(:)%density (matflt_type) (9.7.1.2.10)
dx (3040)	wall%wall2d(:)%wall_state(:)%layers(:)%dx (matflt_type) (9.7.1.2.10)
thickness (3040)	wall%wall2d(:)%wall_state(:)%layers(:)%thickness (vecflt_type) (9.7.1.2.13)
roughness (3040)	wall%wall2d(:)%wall_state(:)%layers(:)%roughness (array3dflt_type) (9.7.1.2.2)
porosity (3040)	wall%wall2d(:)%wall_state(:)%layers(:)%porosity (array3dflt_type) (9.7.1.2.2)
dpa (3040)	wall%wall2d(:)%wall_state(:)%layers(:)%dpa (matflt_type) (9.7.1.2.10)
temperature (3040)	wall%wall2d(:)%wall_state(:)%layers(:)%temperature (matflt_type) (9.7.1.2.10)

element_frac (3040)	wall%wall2d(:)%wall_state(:)%layers(:)%element_frac (array3dflt.type) (9.7.1.2.2)
chem_comp (3040)	wall%wall2d(:)%wall_state(:)%layers(:)%chem_comp (array3dflt.type) (9.7.1.2.2)
bulk_D (3040)	wall%wall2d(:)%wall_state(:)%layers(:)%bulk_D (array4dflt.type) (9.7.1.2.4)
surface_D (3040)	wall%wall2d(:)%wall_state(:)%layers(:)%surface_D (array4dflt.type) (9.7.1.2.4)
bulk_solute (3040)	wall%wall2d(:)%wall_state(:)%layers(:)%bulk_solute (array4dflt.type) (9.7.1.2.4)
surf_solute (3040)	wall%wall2d(:)%wall_state(:)%layers(:)%surf_solute (array4dflt.type) (9.7.1.2.4)
pore_content (3040)	wall%wall2d(:)%wall_state(:)%layers(:)%pore_content (array3dflt.type) (9.7.1.2.2)
trap_type (3040)	wall%wall2d(:)%wall_state(:)%layers(:)%trap_type(:) (trap_type) (9.7.1.3.465)
trap_id (3015)	wall%wall2d(:)%wall_state(:)%layers(:)%trap_type(:)%trap_id (identifier) (9.7.1.3.235)
id (2785)	wall%wall2d(:)%wall_state(:)%layers(:)%trap_type(:)%trap_id%id (string) (9.7.1.1.3)
flag (2785)	wall%wall2d(:)%wall_state(:)%layers(:)%trap_type(:)%trap_id%flag (integer) (9.7.1.1.2)
description (2785)	wall%wall2d(:)%wall_state(:)%layers(:)%trap_type(:)%trap_id%description (string) (9.7.1.1.3)
compound (3015)	wall%wall2d(:)%wall_state(:)%layers(:)%trap_type(:)%compound (integer) (9.7.1.1.2)
gas_species (3015)	wall%wall2d(:)%wall_state(:)%layers(:)%trap_type(:)%gas_species (integer) (9.7.1.1.2)
energy (3015)	wall%wall2d(:)%wall_state(:)%layers(:)%trap_type(:)%energy (float) (9.7.1.1.1)
fill_factor (3015)	wall%wall2d(:)%wall_state(:)%layers(:)%trap_type(:)%fill_factor (matflt.type) (9.7.1.2.10)
density (3015)	wall%wall2d(:)%wall_state(:)%layers(:)%trap_type(:)%density (matflt.type) (9.7.1.2.10)
eta (3039)	wall%wall2d(:)%wall_state(:)%eta (complexgrid_scalar) (9.7.1.3.87)
griduid (2637)	wall%wall2d(:)%wall_state(:)%eta%griduid (integer) (9.7.1.1.2)
subgrid (2637)	wall%wall2d(:)%wall_state(:)%eta%subgrid (integer) (9.7.1.1.2)
scalar (2637)	wall%wall2d(:)%wall_state(:)%eta%scalar (vecflt.type) (9.7.1.2.13)
vector (2637)	wall%wall2d(:)%wall_state(:)%eta%vector (matflt.type) (9.7.1.2.10)
matrix (2637)	wall%wall2d(:)%wall_state(:)%eta%matrix (array3dflt.type) (9.7.1.2.2)
permeability (3039)	wall%wall2d(:)%wall_state(:)%permeability (complexgrid_scalar) (9.7.1.3.87)
griduid (2637)	wall%wall2d(:)%wall_state(:)%permeability%griduid (integer) (9.7.1.1.2)
subgrid (2637)	wall%wall2d(:)%wall_state(:)%permeability%subgrid (integer) (9.7.1.1.2)
scalar (2637)	wall%wall2d(:)%wall_state(:)%permeability%scalar (vecflt.type) (9.7.1.2.13)
vector (2637)	wall%wall2d(:)%wall_state(:)%permeability%vector (matflt.type) (9.7.1.2.10)
matrix (2637)	wall%wall2d(:)%wall_state(:)%permeability%matrix (array3dflt.type) (9.7.1.2.2)
j (3039)	wall%wall2d(:)%wall_state(:)%j (complexgrid_vector) (9.7.1.3.93)
griduid (2643)	wall%wall2d(:)%wall_state(:)%j%griduid (integer) (9.7.1.1.2)
label (2643)	wall%wall2d(:)%wall_state(:)%j%label (string) (9.7.1.1.3)
comp (2643)	wall%wall2d(:)%wall_state(:)%j%comp(:) (complexgrid_scalar) (9.7.1.3.87)
griduid (2637)	wall%wall2d(:)%wall_state(:)%j%comp(:)%griduid (integer) (9.7.1.1.2)
subgrid (2637)	wall%wall2d(:)%wall_state(:)%j%comp(:)%subgrid (integer) (9.7.1.1.2)
scalar (2637)	wall%wall2d(:)%wall_state(:)%j%comp(:)%scalar (vecflt.type) (9.7.1.2.13)
vector (2637)	wall%wall2d(:)%wall_state(:)%j%comp(:)%vector (matflt.type) (9.7.1.2.10)
matrix (2637)	wall%wall2d(:)%wall_state(:)%j%comp(:)%matrix (array3dflt.type) (9.7.1.2.2)
align (2643)	wall%wall2d(:)%wall_state(:)%j%align (vecint.type) (9.7.1.2.14)
alignid (2643)	wall%wall2d(:)%wall_state(:)%j%alignid (vecstring.type) (9.7.1.2.15)
basis (2643)	wall%wall2d(:)%wall_state(:)%j%basis (integer) (9.7.1.1.2)
wall3d (2600)	wall%wall3d(:) (wall3d) (9.7.1.3.483)
wall_id (3033)	wall%wall3d(:)%wall_id (identifier) (9.7.1.3.235)
id (2785)	wall%wall3d(:)%wall_id%id (string) (9.7.1.1.3)
flag (2785)	wall%wall3d(:)%wall_id%flag (integer) (9.7.1.1.2)
description (2785)	wall%wall3d(:)%wall_id%description (string) (9.7.1.1.3)
grid (3033)	wall%wall3d(:)%grid (complexgrid) (9.7.1.3.82)
uid (2632)	wall%wall3d(:)%grid%uid (integer) (9.7.1.1.2)
id (2632)	wall%wall3d(:)%grid%id (string) (9.7.1.1.3)
spaces (2632)	wall%wall3d(:)%grid%spaces(:) (complexgrid_space) (9.7.1.3.91)
geotype (2641)	wall%wall3d(:)%grid%spaces(:)%geotype (vecint.type) (9.7.1.2.14)
geotypeid (2641)	wall%wall3d(:)%grid%spaces(:)%geotypeid (vecstring.type) (9.7.1.2.15)
coordtype (2641)	wall%wall3d(:)%grid%spaces(:)%coordtype (matint.type) (9.7.1.2.11)
objects (2641)	wall%wall3d(:)%grid%spaces(:)%objects(:) (objects) (9.7.1.3.300)
boundary (2850)	wall%wall3d(:)%grid%spaces(:)%objects(:)%boundary (matint.type) (9.7.1.2.11)
neighbour (2850)	wall%wall3d(:)%grid%spaces(:)%objects(:)%neighbour (array3dint.type) (9.7.1.2.3)
geo (2850)	wall%wall3d(:)%grid%spaces(:)%objects(:)%geo (array4dflt.type) (9.7.1.2.4)
measure (2850)	wall%wall3d(:)%grid%spaces(:)%objects(:)%measure (matflt.type) (9.7.1.2.10)
xpoints (2641)	wall%wall3d(:)%grid%spaces(:)%xpoints (vecint.type) (9.7.1.2.14)
subgrids (2632)	wall%wall3d(:)%grid%subgrids(:) (complexgrid_subgrid) (9.7.1.3.92)
id (2642)	wall%wall3d(:)%grid%subgrids(:)%id (string) (9.7.1.1.3)



list (2642)	wall%wall3d(:)%grid%subgrids(:)%list(:) (complexgrid_objectlist) (9.7.1.3.86)
cls (2636)	wall%wall3d(:)%grid%subgrids(:)%list(:)%cls (vecint_type) (9.7.1.2.14)
indset (2636)	wall%wall3d(:)%grid%subgrids(:)%list(:)%indset(:) (complexgrid_indexlist) (9.7.1.3.84)
range (2634)	wall%wall3d(:)%grid%subgrids(:)%list(:)%indset(:)%range (vecint_type) (9.7.1.2.14)
ind (2634)	wall%wall3d(:)%grid%subgrids(:)%list(:)%indset(:)%ind (vecint_type) (9.7.1.2.14)
ind (2636)	wall%wall3d(:)%grid%subgrids(:)%list(:)%ind (matint_type) (9.7.1.2.11)
metric (2632)	wall%wall3d(:)%grid%metric (complexgrid_metric) (9.7.1.3.85)
measure (2635)	wall%wall3d(:)%grid%metric%measure(:) (complexgrid_scalar) (9.7.1.3.87)
griduid (2637)	wall%wall3d(:)%grid%metric%measure(:)%griduid (integer) (9.7.1.1.2)
subgrid (2637)	wall%wall3d(:)%grid%metric%measure(:)%subgrid (integer) (9.7.1.1.2)
scalar (2637)	wall%wall3d(:)%grid%metric%measure(:)%scalar (vecflt_type) (9.7.1.2.13)
vector (2637)	wall%wall3d(:)%grid%metric%measure(:)%vector (matflt_type) (9.7.1.2.10)
matrix (2637)	wall%wall3d(:)%grid%metric%measure(:)%matrix (array3dflt_type) (9.7.1.2.2)
g11 (2635)	wall%wall3d(:)%grid%metric%g11(:) (complexgrid_scalar) (9.7.1.3.87)
griduid (2637)	wall%wall3d(:)%grid%metric%g11(:)%griduid (integer) (9.7.1.1.2)
subgrid (2637)	wall%wall3d(:)%grid%metric%g11(:)%subgrid (integer) (9.7.1.1.2)
scalar (2637)	wall%wall3d(:)%grid%metric%g11(:)%scalar (vecflt_type) (9.7.1.2.13)
vector (2637)	wall%wall3d(:)%grid%metric%g11(:)%vector (matflt_type) (9.7.1.2.10)
matrix (2637)	wall%wall3d(:)%grid%metric%g11(:)%matrix (array3dflt_type) (9.7.1.2.2)
g12 (2635)	wall%wall3d(:)%grid%metric%g12(:) (complexgrid_scalar) (9.7.1.3.87)
griduid (2637)	wall%wall3d(:)%grid%metric%g12(:)%griduid (integer) (9.7.1.1.2)
subgrid (2637)	wall%wall3d(:)%grid%metric%g12(:)%subgrid (integer) (9.7.1.1.2)
scalar (2637)	wall%wall3d(:)%grid%metric%g12(:)%scalar (vecflt_type) (9.7.1.2.13)
vector (2637)	wall%wall3d(:)%grid%metric%g12(:)%vector (matflt_type) (9.7.1.2.10)
matrix (2637)	wall%wall3d(:)%grid%metric%g12(:)%matrix (array3dflt_type) (9.7.1.2.2)
g13 (2635)	wall%wall3d(:)%grid%metric%g13(:) (complexgrid_scalar) (9.7.1.3.87)
griduid (2637)	wall%wall3d(:)%grid%metric%g13(:)%griduid (integer) (9.7.1.1.2)
subgrid (2637)	wall%wall3d(:)%grid%metric%g13(:)%subgrid (integer) (9.7.1.1.2)
scalar (2637)	wall%wall3d(:)%grid%metric%g13(:)%scalar (vecflt_type) (9.7.1.2.13)
vector (2637)	wall%wall3d(:)%grid%metric%g13(:)%vector (matflt_type) (9.7.1.2.10)
matrix (2637)	wall%wall3d(:)%grid%metric%g13(:)%matrix (array3dflt_type) (9.7.1.2.2)
g22 (2635)	wall%wall3d(:)%grid%metric%g22(:) (complexgrid_scalar) (9.7.1.3.87)
griduid (2637)	wall%wall3d(:)%grid%metric%g22(:)%griduid (integer) (9.7.1.1.2)
subgrid (2637)	wall%wall3d(:)%grid%metric%g22(:)%subgrid (integer) (9.7.1.1.2)
scalar (2637)	wall%wall3d(:)%grid%metric%g22(:)%scalar (vecflt_type) (9.7.1.2.13)
vector (2637)	wall%wall3d(:)%grid%metric%g22(:)%vector (matflt_type) (9.7.1.2.10)
matrix (2637)	wall%wall3d(:)%grid%metric%g22(:)%matrix (array3dflt_type) (9.7.1.2.2)
g23 (2635)	wall%wall3d(:)%grid%metric%g23(:) (complexgrid_scalar) (9.7.1.3.87)
griduid (2637)	wall%wall3d(:)%grid%metric%g23(:)%griduid (integer) (9.7.1.1.2)
subgrid (2637)	wall%wall3d(:)%grid%metric%g23(:)%subgrid (integer) (9.7.1.1.2)
scalar (2637)	wall%wall3d(:)%grid%metric%g23(:)%scalar (vecflt_type) (9.7.1.2.13)
vector (2637)	wall%wall3d(:)%grid%metric%g23(:)%vector (matflt_type) (9.7.1.2.10)
matrix (2637)	wall%wall3d(:)%grid%metric%g23(:)%matrix (array3dflt_type) (9.7.1.2.2)
g33 (2635)	wall%wall3d(:)%grid%metric%g33(:) (complexgrid_scalar) (9.7.1.3.87)
griduid (2637)	wall%wall3d(:)%grid%metric%g33(:)%griduid (integer) (9.7.1.1.2)
subgrid (2637)	wall%wall3d(:)%grid%metric%g33(:)%subgrid (integer) (9.7.1.1.2)
scalar (2637)	wall%wall3d(:)%grid%metric%g33(:)%scalar (vecflt_type) (9.7.1.2.13)
vector (2637)	wall%wall3d(:)%grid%metric%g33(:)%vector (matflt_type) (9.7.1.2.10)
matrix (2637)	wall%wall3d(:)%grid%metric%g33(:)%matrix (array3dflt_type) (9.7.1.2.2)
jacobian (2635)	wall%wall3d(:)%grid%metric%jacobian(:) (complexgrid_scalar) (9.7.1.3.87)
griduid (2637)	wall%wall3d(:)%grid%metric%jacobian(:)%griduid (integer) (9.7.1.1.2)
subgrid (2637)	wall%wall3d(:)%grid%metric%jacobian(:)%subgrid (integer) (9.7.1.1.2)
scalar (2637)	wall%wall3d(:)%grid%metric%jacobian(:)%scalar (vecflt_type) (9.7.1.2.13)
vector (2637)	wall%wall3d(:)%grid%metric%jacobian(:)%vector (matflt_type) (9.7.1.2.10)
matrix (2637)	wall%wall3d(:)%grid%metric%jacobian(:)%matrix (array3dflt_type) (9.7.1.2.2)
geo (2632)	wall%wall3d(:)%grid%geo(:) (complexgrid_geo_global) (9.7.1.3.83)
geotype (2633)	wall%wall3d(:)%grid%geo(:)%geotype (integer) (9.7.1.1.2)
geotypeid (2633)	wall%wall3d(:)%grid%geo(:)%geotypeid (string) (9.7.1.1.3)
coordtype (2633)	wall%wall3d(:)%grid%geo(:)%coordtype (vecint_type) (9.7.1.2.14)
geo_matrix (2633)	wall%wall3d(:)%grid%geo(:)%geo_matrix(:) (complexgrid_scalar) (9.7.1.3.87)
griduid (2637)	wall%wall3d(:)%grid%geo(:)%geo_matrix(:)%griduid (integer) (9.7.1.1.2)



subgrid (2637)	wall%wall3d(:)%grid%geo(:)%geo_matrix(:)%subgrid (integer) (9.7.1.1.2)
scalar (2637)	wall%wall3d(:)%grid%geo(:)%geo_matrix(:)%scalar (vecflt_type) (9.7.1.2.13)
vector (2637)	wall%wall3d(:)%grid%geo(:)%geo_matrix(:)%vector (matflt_type) (9.7.1.2.10)
matrix (2637)	wall%wall3d(:)%grid%geo(:)%geo_matrix(:)%matrix (array3dflt_type) (9.7.1.2.2)
measure (2633)	wall%wall3d(:)%grid%geo(:)%measure(:) (complexgrid_scalar) (9.7.1.3.87)
griduid (2637)	wall%wall3d(:)%grid%geo(:)%measure(:)%griduid (integer) (9.7.1.1.2)
subgrid (2637)	wall%wall3d(:)%grid%geo(:)%measure(:)%subgrid (integer) (9.7.1.1.2)
scalar (2637)	wall%wall3d(:)%grid%geo(:)%measure(:)%scalar (vecflt_type) (9.7.1.2.13)
vector (2637)	wall%wall3d(:)%grid%geo(:)%measure(:)%vector (matflt_type) (9.7.1.2.10)
matrix (2637)	wall%wall3d(:)%grid%geo(:)%measure(:)%matrix (array3dflt_type) (9.7.1.2.2)
bases (2632)	wall%wall3d(:)%grid%bases(:) (complexgrid_vector) (9.7.1.3.93)
griduid (2643)	wall%wall3d(:)%grid%bases(:)%griduid (integer) (9.7.1.1.2)
label (2643)	wall%wall3d(:)%grid%bases(:)%label (string) (9.7.1.1.3)
comp (2643)	wall%wall3d(:)%grid%bases(:)%comp(:) (complexgrid_scalar) (9.7.1.3.87)
griduid (2637)	wall%wall3d(:)%grid%bases(:)%comp(:)%griduid (integer) (9.7.1.1.2)
subgrid (2637)	wall%wall3d(:)%grid%bases(:)%comp(:)%subgrid (integer) (9.7.1.1.2)
scalar (2637)	wall%wall3d(:)%grid%bases(:)%comp(:)%scalar (vecflt_type) (9.7.1.2.13)
vector (2637)	wall%wall3d(:)%grid%bases(:)%comp(:)%vector (matflt_type) (9.7.1.2.10)
matrix (2637)	wall%wall3d(:)%grid%bases(:)%comp(:)%matrix (array3dflt_type) (9.7.1.2.2)
align (2643)	wall%wall3d(:)%grid%bases(:)%align (vecint_type) (9.7.1.2.14)
alignid (2643)	wall%wall3d(:)%grid%bases(:)%alignid (vecstring_type) (9.7.1.2.15)
basis (2643)	wall%wall3d(:)%grid%bases(:)%basis (integer) (9.7.1.1.2)
plasma (3033)	wall%wall3d(:)%plasma(:) (plasmaComplexType) (9.7.1.3.331)
species (2881)	wall%wall3d(:)%plasma(:)%species (vecint_type) (9.7.1.2.14)
flux (2881)	wall%wall3d(:)%plasma(:)%flux (matflt_type) (9.7.1.2.10)
b (2881)	wall%wall3d(:)%plasma(:)%b (matflt_type) (9.7.1.2.10)
energy (2881)	wall%wall3d(:)%plasma(:)%energy (matflt_type) (9.7.1.2.10)
wall_state (3033)	wall%wall3d(:)%wall_state(:) (wall_unitsComplexType) (9.7.1.3.489)
wall_type (3039)	wall%wall3d(:)%wall_state(:)%wall_type (integer) (9.7.1.1.2)
n_depo_layer (3039)	wall%wall3d(:)%wall_state(:)%n_depo_layer (integer) (9.7.1.1.2)
layers (3039)	wall%wall3d(:)%wall_state(:)%layers(:) (wall_unitsComplexType.layers) (9.7.1.3.490)
elements (3040)	wall%wall3d(:)%wall_state(:)%layers(:)%elements (vecint_type) (9.7.1.2.14)
gases (3040)	wall%wall3d(:)%wall_state(:)%layers(:)%gases (vecint_type) (9.7.1.2.14)
compounds (3040)	wall%wall3d(:)%wall_state(:)%layers(:)%compounds (vecint_type) (9.7.1.2.14)
density (3040)	wall%wall3d(:)%wall_state(:)%layers(:)%density (matflt_type) (9.7.1.2.10)
dx (3040)	wall%wall3d(:)%wall_state(:)%layers(:)%dx (matflt_type) (9.7.1.2.10)
thickness (3040)	wall%wall3d(:)%wall_state(:)%layers(:)%thickness (vecflt_type) (9.7.1.2.13)
roughness (3040)	wall%wall3d(:)%wall_state(:)%layers(:)%roughness (array3dflt_type) (9.7.1.2.2)
porosity (3040)	wall%wall3d(:)%wall_state(:)%layers(:)%porosity (array3dflt_type) (9.7.1.2.2)
dpa (3040)	wall%wall3d(:)%wall_state(:)%layers(:)%dpa (matflt_type) (9.7.1.2.10)
temperature (3040)	wall%wall3d(:)%wall_state(:)%layers(:)%temperature (matflt_type) (9.7.1.2.10)
element_frac (3040)	wall%wall3d(:)%wall_state(:)%layers(:)%element_frac (array3dflt_type) (9.7.1.2.2)
chem_comp (3040)	wall%wall3d(:)%wall_state(:)%layers(:)%chem_comp (array3dflt_type) (9.7.1.2.2)
bulk_D (3040)	wall%wall3d(:)%wall_state(:)%layers(:)%bulk_D (array4dflt_type) (9.7.1.2.4)
surface_D (3040)	wall%wall3d(:)%wall_state(:)%layers(:)%surface_D (array4dflt_type) (9.7.1.2.4)
bulk_solute (3040)	wall%wall3d(:)%wall_state(:)%layers(:)%bulk_solute (array4dflt_type) (9.7.1.2.4)
surf_solute (3040)	wall%wall3d(:)%wall_state(:)%layers(:)%surf_solute (array4dflt_type) (9.7.1.2.4)
pore_content (3040)	wall%wall3d(:)%wall_state(:)%layers(:)%pore_content (array3dflt_type) (9.7.1.2.2)
trap_type (3040)	wall%wall3d(:)%wall_state(:)%layers(:)%trap_type(:) (trap_type) (9.7.1.3.465)
trap_id (3015)	wall%wall3d(:)%wall_state(:)%layers(:)%trap_type(:)%trap_id (identifier) (9.7.1.3.235)
id (2785)	wall%wall3d(:)%wall_state(:)%layers(:)%trap_type(:)%trap_id%id (string) (9.7.1.1.3)
flag (2785)	wall%wall3d(:)%wall_state(:)%layers(:)%trap_type(:)%trap_id%flag (integer) (9.7.1.1.2)
description (2785)	wall%wall3d(:)%wall_state(:)%layers(:)%trap_type(:)%trap_id%description (string) (9.7.1.1.3)
compound (3015)	wall%wall3d(:)%wall_state(:)%layers(:)%trap_type(:)%compound (integer) (9.7.1.1.2)
gas_species (3015)	wall%wall3d(:)%wall_state(:)%layers(:)%trap_type(:)%gas_species (integer) (9.7.1.1.2)
energy (3015)	wall%wall3d(:)%wall_state(:)%layers(:)%trap_type(:)%energy (float) (9.7.1.1.1)
fill_factor (3015)	wall%wall3d(:)%wall_state(:)%layers(:)%trap_type(:)%fill_factor (matflt_type) (9.7.1.2.10)
density (3015)	wall%wall3d(:)%wall_state(:)%layers(:)%trap_type(:)%density (matflt_type) (9.7.1.2.10)
eta (3039)	wall%wall3d(:)%wall_state(:)%eta (complexgrid_scalar) (9.7.1.3.87)
griduid (2637)	wall%wall3d(:)%wall_state(:)%eta%griduid (integer) (9.7.1.1.2)
subgrid (2637)	wall%wall3d(:)%wall_state(:)%eta%subgrid (integer) (9.7.1.1.2)

scalar (2637)	wall%wall3d(:)%wall_state(:)%eta%scalar (vecflt_type) (9.7.1.2.13)
vector (2637)	wall%wall3d(:)%wall_state(:)%eta%vector (matflt_type) (9.7.1.2.10)
matrix (2637)	wall%wall3d(:)%wall_state(:)%eta%matrix (array3dflt_type) (9.7.1.2.2)
permeability (3039)	wall%wall3d(:)%wall_state(:)%permeability (complexgrid_scalar) (9.7.1.3.87)
griduid (2637)	wall%wall3d(:)%wall_state(:)%permeability%griduid (integer) (9.7.1.1.2)
subgrid (2637)	wall%wall3d(:)%wall_state(:)%permeability%subgrid (integer) (9.7.1.1.2)
scalar (2637)	wall%wall3d(:)%wall_state(:)%permeability%scalar (vecflt_type) (9.7.1.2.13)
vector (2637)	wall%wall3d(:)%wall_state(:)%permeability%vector (matflt_type) (9.7.1.2.10)
matrix (2637)	wall%wall3d(:)%wall_state(:)%permeability%matrix (array3dflt_type) (9.7.1.2.2)
j (3039)	wall%wall3d(:)%wall_state(:)%j (complexgrid_vector) (9.7.1.3.93)
griduid (2643)	wall%wall3d(:)%wall_state(:)%j%griduid (integer) (9.7.1.1.2)
label (2643)	wall%wall3d(:)%wall_state(:)%j%label (string) (9.7.1.1.3)
comp (2643)	wall%wall3d(:)%wall_state(:)%j%comp(:) (complexgrid_scalar) (9.7.1.3.87)
griduid (2637)	wall%wall3d(:)%wall_state(:)%j%comp(:)%griduid (integer) (9.7.1.1.2)
subgrid (2637)	wall%wall3d(:)%wall_state(:)%j%comp(:)%subgrid (integer) (9.7.1.1.2)
scalar (2637)	wall%wall3d(:)%wall_state(:)%j%comp(:)%scalar (vecflt_type) (9.7.1.2.13)
vector (2637)	wall%wall3d(:)%wall_state(:)%j%comp(:)%vector (matflt_type) (9.7.1.2.10)
matrix (2637)	wall%wall3d(:)%wall_state(:)%j%comp(:)%matrix (array3dflt_type) (9.7.1.2.2)
align (2643)	wall%wall3d(:)%wall_state(:)%j%align (vecint_type) (9.7.1.2.14)
alignid (2643)	wall%wall3d(:)%wall_state(:)%j%alignid (vecstring_type) (9.7.1.2.15)
basis (2643)	wall%wall3d(:)%wall_state(:)%j%basis (integer) (9.7.1.1.2)
basis_index (3033)	wall%wall3d(:)%basis_index (integer) (9.7.1.1.2)
wall.types (2600)	wall%wall_types(:) (wall_types) (9.7.1.3.487)
label (3037)	wall%wall_types(:)%label (string) (9.7.1.1.3)
layers (3037)	wall%wall_types(:)%layers(:) (wall_types_layers) (9.7.1.3.488)
thickness (3038)	wall%wall_types(:)%layers(:)%thickness (float) (9.7.1.1.1)
chem_comp (3038)	wall%wall_types(:)%layers(:)%chem_comp (vecflt_type) (9.7.1.2.13)
compounds (2600)	wall%compounds(:) (compound_desc) (9.7.1.3.100)
label (2650)	wall%compounds(:)%label (string) (9.7.1.1.3)
stoichiometry (2650)	wall%compounds(:)%stoichiometry (vecflt_type) (9.7.1.2.13)
density (2650)	wall%compounds(:)%density (float) (9.7.1.1.1)
heat_cap (2650)	wall%compounds(:)%heat_cap (float) (9.7.1.1.1)
heat_cond (2650)	wall%compounds(:)%heat_cond (vecflt_type) (9.7.1.2.13)
surf_recrate (2650)	wall%compounds(:)%surf_recrate (matflt_type) (9.7.1.2.10)
elements (2600)	wall%elements(:) (element_desc) (9.7.1.3.186)
nucindex (2736)	wall%elements(:)%nucindex (integer) (9.7.1.1.2)
label (2736)	wall%elements(:)%label (string) (9.7.1.1.3)
zn (2736)	wall%elements(:)%zn (float) (9.7.1.1.1)
amn (2736)	wall%elements(:)%amn (float) (9.7.1.1.1)
compositions (2600)	wall%compositions (compositions_type) (9.7.1.3.99)
nuclei (2649)	wall%compositions%nuclei(:) (nuclei) (9.7.1.3.299)
zn (2849)	wall%compositions%nuclei(:)%zn (float) (9.7.1.1.1)
amn (2849)	wall%compositions%nuclei(:)%amn (float) (9.7.1.1.1)
label (2849)	wall%compositions%nuclei(:)%label (string) (9.7.1.1.3)
ions (2649)	wall%compositions%ions(:) (ions) (9.7.1.3.240)
nucindex (2790)	wall%compositions%ions(:)%nucindex (integer) (9.7.1.1.2)
zion (2790)	wall%compositions%ions(:)%zion (float) (9.7.1.1.1)
imp_flag (2790)	wall%compositions%ions(:)%imp_flag (integer) (9.7.1.1.2)
label (2790)	wall%compositions%ions(:)%label (string) (9.7.1.1.3)
impurities (2649)	wall%compositions%impurities(:) (impurities) (9.7.1.3.237)
nucindex (2787)	wall%compositions%impurities(:)%nucindex (integer) (9.7.1.1.2)
i_ion (2787)	wall%compositions%impurities(:)%i_ion (integer) (9.7.1.1.2)
nzimp (2787)	wall%compositions%impurities(:)%nzimp (integer) (9.7.1.1.2)
zmin (2787)	wall%compositions%impurities(:)%zmin (vecflt_type) (9.7.1.2.13)
zmax (2787)	wall%compositions%impurities(:)%zmax (vecflt_type) (9.7.1.2.13)
label (2787)	wall%compositions%impurities(:)%label (vecstring_type) (9.7.1.2.15)
neutralscomp (2649)	wall%compositions%neutralscomp(:) (composition_neutralscomp) (9.7.1.3.98)
neutcomp (2648)	wall%compositions%neutralscomp(:)%neutcomp(:) (composition_neutrals_neutcomp) (9.7.1.3.97)
nucindex (2647)	wall%compositions%neutralscomp(:)%neutcomp(:)%nucindex (integer) (9.7.1.1.2)
multiplicity (2647)	wall%compositions%neutralscomp(:)%neutcomp(:)%multiplicity (integer) (9.7.1.1.2)
type (2648)	wall%compositions%neutralscomp(:)%type(:) (identifier) (9.7.1.3.235)

id (2785)	wall%compositions%neutralscomp(:)%type(:)%id (string) (9.7.1.1.3)
flag (2785)	wall%compositions%neutralscomp(:)%type(:)%flag (integer) (9.7.1.1.2)
description (2785)	wall%compositions%neutralscomp(:)%type(:)%description (string) (9.7.1.1.3)
label (2648)	wall%compositions%neutralscomp(:)%label (string) (9.7.1.1.3)
edgespecies (2649)	wall%compositions%edgespecies(:) (edgespecies) (9.7.1.3.185)
nucindex (2735)	wall%compositions%edgespecies(:)%nucindex (integer) (9.7.1.1.2)
zmin (2735)	wall%compositions%edgespecies(:)%zmin (float) (9.7.1.1.1)
zmax (2735)	wall%compositions%edgespecies(:)%zmax (float) (9.7.1.1.1)
label (2735)	wall%compositions%edgespecies(:)%label (string) (9.7.1.1.3)
signature (2649)	wall%compositions%signature (identifier) (9.7.1.3.235)
id (2785)	wall%compositions%signature%id (string) (9.7.1.1.3)
flag (2785)	wall%compositions%signature%flag (integer) (9.7.1.1.2)
description (2785)	wall%compositions%signature%description (string) (9.7.1.1.3)
codeparam (2600)	wall%codeparam (codeparam) (9.7.1.3.77)
codename (2627)	wall%codeparam%codename (string) (9.7.1.1.3)
codeversion (2627)	wall%codeparam%codeversion (string) (9.7.1.1.3)
parameters (2627)	wall%codeparam%parameters (string) (9.7.1.1.3)
output_diag (2627)	wall%codeparam%output_diag (string) (9.7.1.1.3)
output_flag (2627)	wall%codeparam%output_flag (integer) (9.7.1.1.2)
time (2600)	wall%time (float) (9.7.1.1.1)

### 9.7.2.1.49 waves

datainfo (2601)	waves%datainfo (datainfo) (9.7.1.3.134)
dataprovider (2684)	waves%datainfo%dataprovider (string) (9.7.1.1.3)
putdate (2684)	waves%datainfo%putdate (string) (9.7.1.1.3)
source (2684)	waves%datainfo%source (string) (9.7.1.1.3)
comment (2684)	waves%datainfo%comment (string) (9.7.1.1.3)
cocos (2684)	waves%datainfo%cocos (integer) (9.7.1.1.2)
id (2684)	waves%datainfo%id (integer) (9.7.1.1.2)
isref (2684)	waves%datainfo%isref (integer) (9.7.1.1.2)
whatref (2684)	waves%datainfo%whatref (whatref) (9.7.1.3.506)
user (3056)	waves%datainfo%whatref%user (string) (9.7.1.1.3)
machine (3056)	waves%datainfo%whatref%machine (string) (9.7.1.1.3)
shot (3056)	waves%datainfo%whatref%shot (integer) (9.7.1.1.2)
run (3056)	waves%datainfo%whatref%run (integer) (9.7.1.1.2)
occurrence (3056)	waves%datainfo%whatref%occurrence (integer) (9.7.1.1.2)
putinfo (2684)	waves%datainfo%putinfo (putinfo) (9.7.1.3.342)
putmethod (2892)	waves%datainfo%putinfo%putmethod (string) (9.7.1.1.3)
putaccess (2892)	waves%datainfo%putinfo%putaccess (string) (9.7.1.1.3)
putlocation (2892)	waves%datainfo%putinfo%putlocation (string) (9.7.1.1.3)
rights (2892)	waves%datainfo%putinfo%rights (string) (9.7.1.1.3)
coherentwave (2601)	waves%coherentwave(:) (coherentwave) (9.7.1.3.79)
wave_id (2629)	waves%coherentwave(:)%wave_id (enum_instance) (9.7.1.3.188)
type (2738)	waves%coherentwave(:)%wave_id%type (identifier) (9.7.1.3.235)
id (2785)	waves%coherentwave(:)%wave_id%type%id (string) (9.7.1.1.3)
flag (2785)	waves%coherentwave(:)%wave_id%type%flag (integer) (9.7.1.1.2)
description (2785)	waves%coherentwave(:)%wave_id%type%description (string) (9.7.1.1.3)
name (2738)	waves%coherentwave(:)%wave_id%name (string) (9.7.1.1.3)
index (2738)	waves%coherentwave(:)%wave_id%index (integer) (9.7.1.1.2)
composition (2629)	waves%coherentwave(:)%composition (composition) (9.7.1.3.95)
amn (2645)	waves%coherentwave(:)%composition%amn (vecflt_type) (9.7.1.2.13)
zn (2645)	waves%coherentwave(:)%composition%zn (vecflt_type) (9.7.1.2.13)
zion (2645)	waves%coherentwave(:)%composition%zion (vecflt_type) (9.7.1.2.13)
imp_flag (2645)	waves%coherentwave(:)%composition%imp_flag (vecint_type) (9.7.1.2.14)
label (2645)	waves%coherentwave(:)%composition%label (vecstring_type) (9.7.1.2.15)
compositions (2629)	waves%coherentwave(:)%compositions (compositions_type) (9.7.1.3.99)
nuclei (2649)	waves%coherentwave(:)%compositions%nuclei(:) (nuclei) (9.7.1.3.299)
zn (2849)	waves%coherentwave(:)%compositions%nuclei(:)%zn (float) (9.7.1.1.1)
amn (2849)	waves%coherentwave(:)%compositions%nuclei(:)%amn (float) (9.7.1.1.1)
label (2849)	waves%coherentwave(:)%compositions%nuclei(:)%label (string) (9.7.1.1.3)

ions (2649)	waves%coherentwave(:)%compositions%ions(:) (ions) (9.7.1.3.240)
nucindex (2790)	waves%coherentwave(:)%compositions%ions(:)%nucindex (integer) (9.7.1.1.2)
zion (2790)	waves%coherentwave(:)%compositions%ions(:)%zion (float) (9.7.1.1.1)
imp_flag (2790)	waves%coherentwave(:)%compositions%ions(:)%imp_flag (integer) (9.7.1.1.2)
label (2790)	waves%coherentwave(:)%compositions%ions(:)%label (string) (9.7.1.1.3)
impurities (2649)	waves%coherentwave(:)%compositions%impurities(:) (impurities) (9.7.1.3.237)
nucindex (2787)	waves%coherentwave(:)%compositions%impurities(:)%nucindex (integer) (9.7.1.1.2)
i_ion (2787)	waves%coherentwave(:)%compositions%impurities(:)%i_ion (integer) (9.7.1.1.2)
nzimp (2787)	waves%coherentwave(:)%compositions%impurities(:)%nzimp (integer) (9.7.1.1.2)
zmin (2787)	waves%coherentwave(:)%compositions%impurities(:)%zmin (vecflt_type) (9.7.1.2.13)
zmax (2787)	waves%coherentwave(:)%compositions%impurities(:)%zmax (vecflt_type) (9.7.1.2.13)
label (2787)	waves%coherentwave(:)%compositions%impurities(:)%label (vecstring_type) (9.7.1.2.15)
neutralscomp (2649)	waves%coherentwave(:)%compositions%neutralscomp(:) (composition_neutralscomp) (9.7.1.3.98)
neutcomp (2648)	waves%coherentwave(:)%compositions%neutralscomp(:)%neutcomp(:) (composition_neutrals_neutcomp) (9.7.1.3.97)
nucindex (2647)	waves%coherentwave(:)%compositions%neutralscomp(:)%neutcomp(:)%nucindex (integer) (9.7.1.1.2)
multiplicity (2647)	waves%coherentwave(:)%compositions%neutralscomp(:)%neutcomp(:)%multiplicity (integer) (9.7.1.1.2)
type (2648)	waves%coherentwave(:)%compositions%neutralscomp(:)%type(:) (identifier) (9.7.1.3.235)
id (2785)	waves%coherentwave(:)%compositions%neutralscomp(:)%type(:)%id (string) (9.7.1.1.3)
flag (2785)	waves%coherentwave(:)%compositions%neutralscomp(:)%type(:)%flag (integer) (9.7.1.1.2)
description (2785)	waves%coherentwave(:)%compositions%neutralscomp(:)%type(:)%description (string) (9.7.1.1.3)
label (2648)	waves%coherentwave(:)%compositions%neutralscomp(:)%label (string) (9.7.1.1.3)
edgespecies (2649)	waves%coherentwave(:)%compositions%edgespecies(:) (edgespecies) (9.7.1.3.185)
nucindex (2735)	waves%coherentwave(:)%compositions%edgespecies(:)%nucindex (integer) (9.7.1.1.2)
zmin (2735)	waves%coherentwave(:)%compositions%edgespecies(:)%zmin (float) (9.7.1.1.1)
zmax (2735)	waves%coherentwave(:)%compositions%edgespecies(:)%zmax (float) (9.7.1.1.1)
label (2735)	waves%coherentwave(:)%compositions%edgespecies(:)%label (string) (9.7.1.1.3)
signature (2649)	waves%coherentwave(:)%compositions%signature (identifier) (9.7.1.3.235)
id (2785)	waves%coherentwave(:)%compositions%signature%id (string) (9.7.1.1.3)
flag (2785)	waves%coherentwave(:)%compositions%signature%flag (integer) (9.7.1.1.2)
description (2785)	waves%coherentwave(:)%compositions%signature%description (string) (9.7.1.1.3)
global_param (2629)	waves%coherentwave(:)%global_param (waves_global_param) (9.7.1.3.498)
name (3048)	waves%coherentwave(:)%global_param%name (string) (9.7.1.1.3)
type (3048)	waves%coherentwave(:)%global_param%type (string) (9.7.1.1.3)
f_assumption (3048)	waves%coherentwave(:)%global_param%f_assumption (vecint_type) (9.7.1.2.14)
code_type (3048)	waves%coherentwave(:)%global_param%code_type (integer) (9.7.1.1.2)
frequency (3048)	waves%coherentwave(:)%global_param%frequency (float) (9.7.1.1.1)
ntor (3048)	waves%coherentwave(:)%global_param%ntor (vecint_type) (9.7.1.2.14)
power_tot (3048)	waves%coherentwave(:)%global_param%power_tot (float) (9.7.1.1.1)
p_frac_ntor (3048)	waves%coherentwave(:)%global_param%p_frac_ntor (vecflt_type) (9.7.1.2.13)
pow_e (3048)	waves%coherentwave(:)%global_param%pow_e (float) (9.7.1.1.1)
pow_i (3048)	waves%coherentwave(:)%global_param%pow_i (vecflt_type) (9.7.1.2.13)
pow_z (3048)	waves%coherentwave(:)%global_param%pow_z (matflt_type) (9.7.1.2.10)
pow_fe (3048)	waves%coherentwave(:)%global_param%pow_fe (float) (9.7.1.1.1)
pow_fi (3048)	waves%coherentwave(:)%global_param%pow_fi (vecflt_type) (9.7.1.2.13)
pow_fz (3048)	waves%coherentwave(:)%global_param%pow_fz (matflt_type) (9.7.1.2.10)
pow_ntor_e (3048)	waves%coherentwave(:)%global_param%pow_ntor_e (vecflt_type) (9.7.1.2.13)
pow_ntor_i (3048)	waves%coherentwave(:)%global_param%pow_ntor_i (matflt_type) (9.7.1.2.10)
pow_ntor_z (3048)	waves%coherentwave(:)%global_param%pow_ntor_z (array3dflt_type) (9.7.1.2.2)
pow_ntor_fe (3048)	waves%coherentwave(:)%global_param%pow_ntor_fe (vecflt_type) (9.7.1.2.13)
pow_ntor_fi (3048)	waves%coherentwave(:)%global_param%pow_ntor_fi (matflt_type) (9.7.1.2.10)
pow_ntor_fz (3048)	waves%coherentwave(:)%global_param%pow_ntor_fz (array3dflt_type) (9.7.1.2.2)
cur_tor (3048)	waves%coherentwave(:)%global_param%cur_tor (float) (9.7.1.1.1)
cur_tor_ntor (3048)	waves%coherentwave(:)%global_param%cur_tor_ntor (vecflt_type) (9.7.1.2.13)
mag_axis (3048)	waves%coherentwave(:)%global_param%mag_axis (rz0D) (9.7.1.3.358)
r (2908)	waves%coherentwave(:)%global_param%mag_axis%r (float) (9.7.1.1.1)
z (2908)	waves%coherentwave(:)%global_param%mag_axis%z (float) (9.7.1.1.1)
toroid_field (3048)	waves%coherentwave(:)%global_param%toroid_field (b0r0) (9.7.1.3.59)
r0 (2609)	waves%coherentwave(:)%global_param%toroid_field%r0 (float) (9.7.1.1.1)

b0 (2609)	waves%coherentwave(:)%global_param%toroid_field%b0 (float) (9.7.1.1.1)
grid.1d (2629)	waves%coherentwave(:)%grid.1d (waves_grid.1d) (9.7.1.3.499)
rho_tor (3049)	waves%coherentwave(:)%grid.1d%rho_tor (vecflt_type) (9.7.1.2.13)
rho_tor_norm (3049)	waves%coherentwave(:)%grid.1d%rho_tor_norm (vecflt_type) (9.7.1.2.13)
psi (3049)	waves%coherentwave(:)%grid.1d%psi (vecflt_type) (9.7.1.2.13)
volume (3049)	waves%coherentwave(:)%grid.1d%volume (vecflt_type) (9.7.1.2.13)
area (3049)	waves%coherentwave(:)%grid.1d%area (vecflt_type) (9.7.1.2.13)
grid.2d (2629)	waves%coherentwave(:)%grid.2d (waves_grid.2d) (9.7.1.3.500)
grid_type (3050)	waves%coherentwave(:)%grid.2d%grid_type (integer) (9.7.1.1.2)
rho_tor_norm (3050)	waves%coherentwave(:)%grid.2d%rho_tor_norm (matflt_type) (9.7.1.2.10)
rho_tor (3050)	waves%coherentwave(:)%grid.2d%rho_tor (matflt_type) (9.7.1.2.10)
psi (3050)	waves%coherentwave(:)%grid.2d%psi (matflt_type) (9.7.1.2.10)
theta (3050)	waves%coherentwave(:)%grid.2d%theta (matflt_type) (9.7.1.2.10)
r (3050)	waves%coherentwave(:)%grid.2d%r (matflt_type) (9.7.1.2.10)
z (3050)	waves%coherentwave(:)%grid.2d%z (matflt_type) (9.7.1.2.10)
theta_info (3050)	waves%coherentwave(:)%grid.2d%theta_info (theta_info) (9.7.1.3.457)
angl_type (3007)	waves%coherentwave(:)%grid.2d%theta_info%angl_type (integer) (9.7.1.1.2)
th2th_pol (3007)	waves%coherentwave(:)%grid.2d%theta_info%th2th_pol (matflt_type) (9.7.1.2.10)
profiles.1d (2629)	waves%coherentwave(:)%profiles.1d (waves_profiles.1d) (9.7.1.3.501)
powd_tot (3051)	waves%coherentwave(:)%profiles.1d%powd_tot (vecflt_type) (9.7.1.2.13)
powd_e (3051)	waves%coherentwave(:)%profiles.1d%powd_e (vecflt_type) (9.7.1.2.13)
powd_i (3051)	waves%coherentwave(:)%profiles.1d%powd_i (matflt_type) (9.7.1.2.10)
powd_z (3051)	waves%coherentwave(:)%profiles.1d%powd_z (array3dflt_type) (9.7.1.2.2)
powd_fe (3051)	waves%coherentwave(:)%profiles.1d%powd_fe (vecflt_type) (9.7.1.2.13)
powd_fi (3051)	waves%coherentwave(:)%profiles.1d%powd_fi (matflt_type) (9.7.1.2.10)
powd_fz (3051)	waves%coherentwave(:)%profiles.1d%powd_fz (array3dflt_type) (9.7.1.2.2)
powd_ntor (3051)	waves%coherentwave(:)%profiles.1d%powd_ntor (matflt_type) (9.7.1.2.10)
powd_ntor_e (3051)	waves%coherentwave(:)%profiles.1d%powd_ntor_e (matflt_type) (9.7.1.2.10)
powd_ntor_i (3051)	waves%coherentwave(:)%profiles.1d%powd_ntor_i (array3dflt_type) (9.7.1.2.2)
powd_ntor_z (3051)	waves%coherentwave(:)%profiles.1d%powd_ntor_z (array4dflt_type) (9.7.1.2.4)
powd_ntor_fe (3051)	waves%coherentwave(:)%profiles.1d%powd_ntor_fe (matflt_type) (9.7.1.2.10)
powd_ntor_fi (3051)	waves%coherentwave(:)%profiles.1d%powd_ntor_fi (array3dflt_type) (9.7.1.2.2)
powd_ntor_fz (3051)	waves%coherentwave(:)%profiles.1d%powd_ntor_fz (array4dflt_type) (9.7.1.2.4)
curd_tor (3051)	waves%coherentwave(:)%profiles.1d%curd_tor (vecflt_type) (9.7.1.2.13)
curd_torntor (3051)	waves%coherentwave(:)%profiles.1d%curd_torntor (matflt_type) (9.7.1.2.10)
pow_tot (3051)	waves%coherentwave(:)%profiles.1d%pow_tot (vecflt_type) (9.7.1.2.13)
pow_e (3051)	waves%coherentwave(:)%profiles.1d%pow_e (vecflt_type) (9.7.1.2.13)
pow_i (3051)	waves%coherentwave(:)%profiles.1d%pow_i (matflt_type) (9.7.1.2.10)
pow_z (3051)	waves%coherentwave(:)%profiles.1d%pow_z (array3dflt_type) (9.7.1.2.2)
pow_fe (3051)	waves%coherentwave(:)%profiles.1d%pow_fe (vecflt_type) (9.7.1.2.13)
pow_fi (3051)	waves%coherentwave(:)%profiles.1d%pow_fi (matflt_type) (9.7.1.2.10)
pow_fz (3051)	waves%coherentwave(:)%profiles.1d%pow_fz (array3dflt_type) (9.7.1.2.2)
pow_ntor (3051)	waves%coherentwave(:)%profiles.1d%pow_ntor (matflt_type) (9.7.1.2.10)
pow_ntor_e (3051)	waves%coherentwave(:)%profiles.1d%pow_ntor_e (matflt_type) (9.7.1.2.10)
pow_ntor_i (3051)	waves%coherentwave(:)%profiles.1d%pow_ntor_i (array3dflt_type) (9.7.1.2.2)
pow_ntor_z (3051)	waves%coherentwave(:)%profiles.1d%pow_ntor_z (array3dflt_type) (9.7.1.2.2)
pow_ntor_fe (3051)	waves%coherentwave(:)%profiles.1d%pow_ntor_fe (matflt_type) (9.7.1.2.10)
pow_ntor_fi (3051)	waves%coherentwave(:)%profiles.1d%pow_ntor_fi (array3dflt_type) (9.7.1.2.2)
pow_ntor_fz (3051)	waves%coherentwave(:)%profiles.1d%pow_ntor_fz (array3dflt_type) (9.7.1.2.2)
curd_par (3051)	waves%coherentwave(:)%profiles.1d%curd_par (vecflt_type) (9.7.1.2.13)
curd_parntor (3051)	waves%coherentwave(:)%profiles.1d%curd_parntor (matflt_type) (9.7.1.2.10)
cur_tor (3051)	waves%coherentwave(:)%profiles.1d%cur_tor (vecflt_type) (9.7.1.2.13)
cur_tor_ntor (3051)	waves%coherentwave(:)%profiles.1d%cur_tor_ntor (matflt_type) (9.7.1.2.10)
e_plus_ave (3051)	waves%coherentwave(:)%profiles.1d%e_plus_ave (matflt_type) (9.7.1.2.10)
e_minus_ave (3051)	waves%coherentwave(:)%profiles.1d%e_minus_ave (matflt_type) (9.7.1.2.10)
e_para_ave (3051)	waves%coherentwave(:)%profiles.1d%e_para_ave (matflt_type) (9.7.1.2.10)
k_perp_ave (3051)	waves%coherentwave(:)%profiles.1d%k_perp_ave (matflt_type) (9.7.1.2.10)
profiles.2d (2629)	waves%coherentwave(:)%profiles.2d (waves_profiles.2d) (9.7.1.3.502)
powd_tot (3052)	waves%coherentwave(:)%profiles.2d%powd_tot (matflt_type) (9.7.1.2.10)
powd_e (3052)	waves%coherentwave(:)%profiles.2d%powd_e (matflt_type) (9.7.1.2.10)
powd_i (3052)	waves%coherentwave(:)%profiles.2d%powd_i (array3dflt_type) (9.7.1.2.2)



powd_z (3052)	waves%coherentwave(:)%profiles_2d%powd_z (array4dflt.type) (9.7.1.2.4)
powd_fe (3052)	waves%coherentwave(:)%profiles_2d%powd_fe (matflt.type) (9.7.1.2.10)
powd_fi (3052)	waves%coherentwave(:)%profiles_2d%powd_fi (array3dflt.type) (9.7.1.2.2)
powd_fz (3052)	waves%coherentwave(:)%profiles_2d%powd_fz (array4dflt.type) (9.7.1.2.4)
powd_ntor (3052)	waves%coherentwave(:)%profiles_2d%powd_ntor (array3dflt.type) (9.7.1.2.2)
powd_ntor_e (3052)	waves%coherentwave(:)%profiles_2d%powd_ntor_e (array3dflt.type) (9.7.1.2.2)
powd_ntor_i (3052)	waves%coherentwave(:)%profiles_2d%powd_ntor_i (array4dflt.type) (9.7.1.2.4)
powd_ntor_z (3052)	waves%coherentwave(:)%profiles_2d%powd_ntor_z (array5dflt.type) (9.7.1.2.5)
powd_ntor_fe (3052)	waves%coherentwave(:)%profiles_2d%powd_ntor_fe (array3dflt.type) (9.7.1.2.2)
powd_ntor_fi (3052)	waves%coherentwave(:)%profiles_2d%powd_ntor_fi (array4dflt.type) (9.7.1.2.4)
powd_ntor_fz (3052)	waves%coherentwave(:)%profiles_2d%powd_ntor_fz (array5dflt.type) (9.7.1.2.5)
powd_iharm (3052)	waves%coherentwave(:)%profiles_2d%powd_iharm (array5dflt.type) (9.7.1.2.5)
beamtracing (2629)	waves%coherentwave(:)%beamtracing(:) (beamtracing) (9.7.1.3.66)
npoints (2616)	waves%coherentwave(:)%beamtracing(:)%npoints (integer) (9.7.1.1.2)
power (2616)	waves%coherentwave(:)%beamtracing(:)%power (float) (9.7.1.1.1)
dnpar (2616)	waves%coherentwave(:)%beamtracing(:)%dnpar (vecflt.type) (9.7.1.2.13)
length (2616)	waves%coherentwave(:)%beamtracing(:)%length (vecflt.type) (9.7.1.2.13)
position (2616)	waves%coherentwave(:)%beamtracing(:)%position (waves_rtposition) (9.7.1.3.503)
r (3053)	waves%coherentwave(:)%beamtracing(:)%position%r (vecflt.type) (9.7.1.2.13)
z (3053)	waves%coherentwave(:)%beamtracing(:)%position%z (vecflt.type) (9.7.1.2.13)
phi (3053)	waves%coherentwave(:)%beamtracing(:)%position%phi (vecflt.type) (9.7.1.2.13)
psi (3053)	waves%coherentwave(:)%beamtracing(:)%position%psi (vecflt.type) (9.7.1.2.13)
theta (3053)	waves%coherentwave(:)%beamtracing(:)%position%theta (vecflt.type) (9.7.1.2.13)
wavevector (2616)	waves%coherentwave(:)%beamtracing(:)%wavevector (waves_rtwavevector) (9.7.1.3.504)
kr (3054)	waves%coherentwave(:)%beamtracing(:)%wavevector%kr (vecflt.type) (9.7.1.2.13)
kz (3054)	waves%coherentwave(:)%beamtracing(:)%wavevector%kz (vecflt.type) (9.7.1.2.13)
kphi (3054)	waves%coherentwave(:)%beamtracing(:)%wavevector%kphi (vecflt.type) (9.7.1.2.13)
npar (3054)	waves%coherentwave(:)%beamtracing(:)%wavevector%npar (vecflt.type) (9.7.1.2.13)
nperp (3054)	waves%coherentwave(:)%beamtracing(:)%wavevector%nperp (vecflt.type) (9.7.1.2.13)
ntor (3054)	waves%coherentwave(:)%beamtracing(:)%wavevector%ntor (vecflt.type) (9.7.1.2.13)
var_ntor (3054)	waves%coherentwave(:)%beamtracing(:)%wavevector%var_ntor (integer) (9.7.1.1.2)
polarization (2616)	waves%coherentwave(:)%beamtracing(:)%polarization (polarization) (9.7.1.3.335)
epol_p_re (2885)	waves%coherentwave(:)%beamtracing(:)%polarization%epol_p_re (vecflt.type) (9.7.1.2.13)
epol_p_im (2885)	waves%coherentwave(:)%beamtracing(:)%polarization%epol_p_im (vecflt.type) (9.7.1.2.13)
epol_m_re (2885)	waves%coherentwave(:)%beamtracing(:)%polarization%epol_m_re (vecflt.type) (9.7.1.2.13)
epol_m_im (2885)	waves%coherentwave(:)%beamtracing(:)%polarization%epol_m_im (vecflt.type) (9.7.1.2.13)
epol_par_re (2885)	waves%coherentwave(:)%beamtracing(:)%polarization%epol_par_re (vecflt.type) (9.7.1.2.13)
epol_par_im (2885)	waves%coherentwave(:)%beamtracing(:)%polarization%epol_par_im (vecflt.type) (9.7.1.2.13)
powerflow (2616)	waves%coherentwave(:)%beamtracing(:)%powerflow (powerflow) (9.7.1.3.338)
phi_perp (2888)	waves%coherentwave(:)%beamtracing(:)%powerflow%phi_perp (vecflt.type) (9.7.1.2.13)
phi_par (2888)	waves%coherentwave(:)%beamtracing(:)%powerflow%phi_par (vecflt.type) (9.7.1.2.13)
power_e (2888)	waves%coherentwave(:)%beamtracing(:)%powerflow%power_e (vecflt.type) (9.7.1.2.13)
power_i (2888)	waves%coherentwave(:)%beamtracing(:)%powerflow%power_i (matflt.type) (9.7.1.2.10)
fullwave (2629)	waves%coherentwave(:)%fullwave (fullwave) (9.7.1.3.209)
grid (2759)	waves%coherentwave(:)%fullwave%grid (complexgrid) (9.7.1.3.82)
uid (2632)	waves%coherentwave(:)%fullwave%grid%uid (integer) (9.7.1.1.2)
id (2632)	waves%coherentwave(:)%fullwave%grid%id (string) (9.7.1.1.3)
spaces (2632)	waves%coherentwave(:)%fullwave%grid%spaces(:) (complexgrid_space) (9.7.1.3.91)
geotype (2641)	waves%coherentwave(:)%fullwave%grid%spaces(:)%geotype (vecint.type) (9.7.1.2.14)
geotypeid (2641)	waves%coherentwave(:)%fullwave%grid%spaces(:)%geotypeid (vecstring.type) (9.7.1.2.15)
coordtype (2641)	waves%coherentwave(:)%fullwave%grid%spaces(:)%coordtype (matint.type) (9.7.1.2.11)
objects (2641)	waves%coherentwave(:)%fullwave%grid%spaces(:)%objects(:) (objects) (9.7.1.3.300)
boundary (2850)	waves%coherentwave(:)%fullwave%grid%spaces(:)%objects(:)%boundary (matint.type) (9.7.1.2.11)
neighbour (2850)	waves%coherentwave(:)%fullwave%grid%spaces(:)%objects(:)%neighbour (array3dint.type) (9.7.1.2.3)
geo (2850)	waves%coherentwave(:)%fullwave%grid%spaces(:)%objects(:)%geo (array4dflt.type) (9.7.1.2.4)
measure (2850)	waves%coherentwave(:)%fullwave%grid%spaces(:)%objects(:)%measure (matflt.type) (9.7.1.2.10)
xpoints (2641)	waves%coherentwave(:)%fullwave%grid%spaces(:)%xpoints (vecint.type) (9.7.1.2.14)
subgrids (2632)	waves%coherentwave(:)%fullwave%grid%subgrids(:) (complexgrid_subgrid) (9.7.1.3.92)
id (2642)	waves%coherentwave(:)%fullwave%grid%subgrids(:)%id (string) (9.7.1.1.3)





matrix (2637)	waves%coherentwave(:)%fullwave%grid%metric%jacobian(:)%matrix (array3dflt.type) (9.7.1.2.2)
geo (2632)	waves%coherentwave(:)%fullwave%grid%geo(:) (complexgrid_geo_global) (9.7.1.3.83)
geotype (2633)	waves%coherentwave(:)%fullwave%grid%geo(:)%geotype (integer) (9.7.1.1.2)
geotypeid (2633)	waves%coherentwave(:)%fullwave%grid%geo(:)%geotypeid (string) (9.7.1.1.3)
coordtype (2633)	waves%coherentwave(:)%fullwave%grid%geo(:)%coordtype (vecint.type) (9.7.1.2.14)
geo_matrix (2633)	waves%coherentwave(:)%fullwave%grid%geo(:)%geo_matrix(:) (complexgrid_scalar) (9.7.1.3.87)
griduid (2637)	waves%coherentwave(:)%fullwave%grid%geo(:)%geo_matrix(:)%griduid (integer) (9.7.1.1.2)
subgrid (2637)	waves%coherentwave(:)%fullwave%grid%geo(:)%geo_matrix(:)%subgrid (integer) (9.7.1.1.2)
scalar (2637)	waves%coherentwave(:)%fullwave%grid%geo(:)%geo_matrix(:)%scalar (vecflt.type) (9.7.1.2.13)
vector (2637)	waves%coherentwave(:)%fullwave%grid%geo(:)%geo_matrix(:)%vector (matflt.type) (9.7.1.2.10)
matrix (2637)	waves%coherentwave(:)%fullwave%grid%geo(:)%geo_matrix(:)%matrix (array3dflt.type) (9.7.1.2.2)
measure (2633)	waves%coherentwave(:)%fullwave%grid%geo(:)%measure(:) (complexgrid_scalar) (9.7.1.3.87)
griduid (2637)	waves%coherentwave(:)%fullwave%grid%geo(:)%measure(:)%griduid (integer) (9.7.1.1.2)
subgrid (2637)	waves%coherentwave(:)%fullwave%grid%geo(:)%measure(:)%subgrid (integer) (9.7.1.1.2)
scalar (2637)	waves%coherentwave(:)%fullwave%grid%geo(:)%measure(:)%scalar (vecflt.type) (9.7.1.2.13)
vector (2637)	waves%coherentwave(:)%fullwave%grid%geo(:)%measure(:)%vector (matflt.type) (9.7.1.2.10)
matrix (2637)	waves%coherentwave(:)%fullwave%grid%geo(:)%measure(:)%matrix (array3dflt.type) (9.7.1.2.2)
bases (2632)	waves%coherentwave(:)%fullwave%grid%bases(:) (complexgrid_vector) (9.7.1.3.93)
griduid (2643)	waves%coherentwave(:)%fullwave%grid%bases(:)%griduid (integer) (9.7.1.1.2)
label (2643)	waves%coherentwave(:)%fullwave%grid%bases(:)%label (string) (9.7.1.1.3)
comp (2643)	waves%coherentwave(:)%fullwave%grid%bases(:)%comp(:) (complexgrid_scalar) (9.7.1.3.87)
griduid (2637)	waves%coherentwave(:)%fullwave%grid%bases(:)%comp(:)%griduid (integer) (9.7.1.1.2)
subgrid (2637)	waves%coherentwave(:)%fullwave%grid%bases(:)%comp(:)%subgrid (integer) (9.7.1.1.2)
scalar (2637)	waves%coherentwave(:)%fullwave%grid%bases(:)%comp(:)%scalar (vecflt.type) (9.7.1.2.13)
vector (2637)	waves%coherentwave(:)%fullwave%grid%bases(:)%comp(:)%vector (matflt.type) (9.7.1.2.10)
matrix (2637)	waves%coherentwave(:)%fullwave%grid%bases(:)%comp(:)%matrix (array3dflt.type) (9.7.1.2.2)
align (2643)	waves%coherentwave(:)%fullwave%grid%bases(:)%align (vecint.type) (9.7.1.2.14)
alignid (2643)	waves%coherentwave(:)%fullwave%grid%bases(:)%alignid (vecstring.type) (9.7.1.2.15)
basis (2643)	waves%coherentwave(:)%fullwave%grid%bases(:)%basis (integer) (9.7.1.1.2)
e_components (2759)	waves%coherentwave(:)%fullwave%e_components (e_components) (9.7.1.3.173)
e_plus (2723)	waves%coherentwave(:)%fullwave%e_components%e_plus (complexgrid_scalar_cplx) (9.7.1.3.88)
griduid (2638)	waves%coherentwave(:)%fullwave%e_components%e_plus%griduid (integer) (9.7.1.1.2)
subgrid (2638)	waves%coherentwave(:)%fullwave%e_components%e_plus%subgrid (integer) (9.7.1.1.2)
scalar (2638)	waves%coherentwave(:)%fullwave%e_components%e_plus%scalar (vecplx.type) (9.7.1.2.12)
vector (2638)	waves%coherentwave(:)%fullwave%e_components%e_plus%vector (matcplx.type) (9.7.1.2.9)
matrix (2638)	waves%coherentwave(:)%fullwave%e_components%e_plus%matrix (array3dcplx.type) (9.7.1.2.1)
e_minus (2723)	waves%coherentwave(:)%fullwave%e_components%e_minus (complexgrid_scalar_cplx) (9.7.1.3.88)
griduid (2638)	waves%coherentwave(:)%fullwave%e_components%e_minus%griduid (integer) (9.7.1.1.2)
subgrid (2638)	waves%coherentwave(:)%fullwave%e_components%e_minus%subgrid (integer) (9.7.1.1.2)
scalar (2638)	waves%coherentwave(:)%fullwave%e_components%e_minus%scalar (vecplx.type) (9.7.1.2.12)
vector (2638)	waves%coherentwave(:)%fullwave%e_components%e_minus%vector (matcplx.type) (9.7.1.2.9)
matrix (2638)	waves%coherentwave(:)%fullwave%e_components%e_minus%matrix (array3dcplx.type) (9.7.1.2.1)
e_para (2723)	waves%coherentwave(:)%fullwave%e_components%e_para (complexgrid_scalar_cplx) (9.7.1.3.88)
griduid (2638)	waves%coherentwave(:)%fullwave%e_components%e_para%griduid (integer) (9.7.1.1.2)
subgrid (2638)	waves%coherentwave(:)%fullwave%e_components%e_para%subgrid (integer) (9.7.1.1.2)
scalar (2638)	waves%coherentwave(:)%fullwave%e_components%e_para%scalar (vecplx.type) (9.7.1.2.12)
vector (2638)	waves%coherentwave(:)%fullwave%e_components%e_para%vector (matcplx.type) (9.7.1.2.9)
matrix (2638)	waves%coherentwave(:)%fullwave%e_components%e_para%matrix (array3dcplx.type) (9.7.1.2.1)
e_norm (2723)	waves%coherentwave(:)%fullwave%e_components%e_norm (complexgrid_scalar_cplx) (9.7.1.3.88)

griduid (2638)	waves%coherentwave(:)%fullwave%e_components%e_norm%griduid (integer) (9.7.1.1.2)
subgrid (2638)	waves%coherentwave(:)%fullwave%e_components%e_norm%subgrid (integer) (9.7.1.1.2)
scalar (2638)	waves%coherentwave(:)%fullwave%e_components%e_norm%scalar (vecplx_type) (9.7.1.2.12)
vector (2638)	waves%coherentwave(:)%fullwave%e_components%e_norm%vector (matcplx_type) (9.7.1.2.9)
matrix (2638)	waves%coherentwave(:)%fullwave%e_components%e_norm%matrix (array3dcplx_type) (9.7.1.2.1)
e_binorm (2723)	waves%coherentwave(:)%fullwave%e_components%e_binorm (complexgrid_scalar_cplx) (9.7.1.3.88)
griduid (2638)	waves%coherentwave(:)%fullwave%e_components%e_binorm%griduid (integer) (9.7.1.1.2)
subgrid (2638)	waves%coherentwave(:)%fullwave%e_components%e_binorm%subgrid (integer) (9.7.1.1.2)
scalar (2638)	waves%coherentwave(:)%fullwave%e_components%e_binorm%scalar (vecplx_type) (9.7.1.2.12)
vector (2638)	waves%coherentwave(:)%fullwave%e_components%e_binorm%vector (matcplx_type) (9.7.1.2.9)
matrix (2638)	waves%coherentwave(:)%fullwave%e_components%e_binorm%matrix (array3dcplx_type) (9.7.1.2.1)
b_norm (2723)	waves%coherentwave(:)%fullwave%e_components%b_norm (complexgrid_scalar_cplx) (9.7.1.3.88)
griduid (2638)	waves%coherentwave(:)%fullwave%e_components%b_norm%griduid (integer) (9.7.1.1.2)
subgrid (2638)	waves%coherentwave(:)%fullwave%e_components%b_norm%subgrid (integer) (9.7.1.1.2)
scalar (2638)	waves%coherentwave(:)%fullwave%e_components%b_norm%scalar (vecplx_type) (9.7.1.2.12)
vector (2638)	waves%coherentwave(:)%fullwave%e_components%b_norm%vector (matcplx_type) (9.7.1.2.9)
matrix (2638)	waves%coherentwave(:)%fullwave%e_components%b_norm%matrix (array3dcplx_type) (9.7.1.2.1)
b_binorm (2723)	waves%coherentwave(:)%fullwave%e_components%b_binorm (complexgrid_scalar_cplx) (9.7.1.3.88)
griduid (2638)	waves%coherentwave(:)%fullwave%e_components%b_binorm%griduid (integer) (9.7.1.1.2)
subgrid (2638)	waves%coherentwave(:)%fullwave%e_components%b_binorm%subgrid (integer) (9.7.1.1.2)
scalar (2638)	waves%coherentwave(:)%fullwave%e_components%b_binorm%scalar (vecplx_type) (9.7.1.2.12)
vector (2638)	waves%coherentwave(:)%fullwave%e_components%b_binorm%vector (matcplx_type) (9.7.1.2.9)
matrix (2638)	waves%coherentwave(:)%fullwave%e_components%b_binorm%matrix (array3dcplx_type) (9.7.1.2.1)
b_para (2723)	waves%coherentwave(:)%fullwave%e_components%b_para (complexgrid_scalar_cplx) (9.7.1.3.88)
griduid (2638)	waves%coherentwave(:)%fullwave%e_components%b_para%griduid (integer) (9.7.1.1.2)
subgrid (2638)	waves%coherentwave(:)%fullwave%e_components%b_para%subgrid (integer) (9.7.1.1.2)
scalar (2638)	waves%coherentwave(:)%fullwave%e_components%b_para%scalar (vecplx_type) (9.7.1.2.12)
vector (2638)	waves%coherentwave(:)%fullwave%e_components%b_para%vector (matcplx_type) (9.7.1.2.9)
matrix (2638)	waves%coherentwave(:)%fullwave%e_components%b_para%matrix (array3dcplx_type) (9.7.1.2.1)
k_perp (2723)	waves%coherentwave(:)%fullwave%e_components%k_perp (complexgrid_scalar_cplx) (9.7.1.3.88)
griduid (2638)	waves%coherentwave(:)%fullwave%e_components%k_perp%griduid (integer) (9.7.1.1.2)
subgrid (2638)	waves%coherentwave(:)%fullwave%e_components%k_perp%subgrid (integer) (9.7.1.1.2)
scalar (2638)	waves%coherentwave(:)%fullwave%e_components%k_perp%scalar (vecplx_type) (9.7.1.2.12)
vector (2638)	waves%coherentwave(:)%fullwave%e_components%k_perp%vector (matcplx_type) (9.7.1.2.9)
matrix (2638)	waves%coherentwave(:)%fullwave%e_components%k_perp%matrix (array3dcplx_type) (9.7.1.2.1)
pol_decomp (2759)	waves%coherentwave(:)%fullwave%pol_decomp (pol_decomp) (9.7.1.3.333)
mpol (2883)	waves%coherentwave(:)%fullwave%pol_decomp%mpol (vecint_type) (9.7.1.2.14)
e_plus (2883)	waves%coherentwave(:)%fullwave%pol_decomp%e_plus (array3dflt_type) (9.7.1.2.2)
e_plus_ph (2883)	waves%coherentwave(:)%fullwave%pol_decomp%e_plus_ph (array3dflt_type) (9.7.1.2.2)
e_minus (2883)	waves%coherentwave(:)%fullwave%pol_decomp%e_minus (array3dflt_type) (9.7.1.2.2)
e_minus_ph (2883)	waves%coherentwave(:)%fullwave%pol_decomp%e_minus_ph (array3dflt_type) (9.7.1.2.2)
e_norm (2883)	waves%coherentwave(:)%fullwave%pol_decomp%e_norm (array3dflt_type) (9.7.1.2.2)
e_norm_ph (2883)	waves%coherentwave(:)%fullwave%pol_decomp%e_norm_ph (array3dflt_type) (9.7.1.2.2)
e_binorm (2883)	waves%coherentwave(:)%fullwave%pol_decomp%e_binorm (array3dflt_type) (9.7.1.2.2)
e_binorm_ph (2883)	waves%coherentwave(:)%fullwave%pol_decomp%e_binorm_ph (array3dflt_type) (9.7.1.2.2)
e_para (2883)	waves%coherentwave(:)%fullwave%pol_decomp%e_para (array3dflt_type) (9.7.1.2.2)
e_para_ph (2883)	waves%coherentwave(:)%fullwave%pol_decomp%e_para_ph (array3dflt_type) (9.7.1.2.2)
b_norm (2883)	waves%coherentwave(:)%fullwave%pol_decomp%b_norm (array3dflt_type) (9.7.1.2.2)

b_norm_ph (2883)	waves%coherentwave(:)%fullwave%pol_decomp%b_norm_ph (array3dflt_type) (9.7.1.2.2)
b_binorm (2883)	waves%coherentwave(:)%fullwave%pol_decomp%b_binorm (array3dflt_type) (9.7.1.2.2)
b_binorm_ph (2883)	waves%coherentwave(:)%fullwave%pol_decomp%b_binorm_ph (array3dflt_type) (9.7.1.2.2)
b_para (2883)	waves%coherentwave(:)%fullwave%pol_decomp%b_para (array3dflt_type) (9.7.1.2.2)
b_para_ph (2883)	waves%coherentwave(:)%fullwave%pol_decomp%b_para_ph (array3dflt_type) (9.7.1.2.2)
k_perp (2883)	waves%coherentwave(:)%fullwave%pol_decomp%k_perp (array3dflt_type) (9.7.1.2.2)
local (2759)	waves%coherentwave(:)%fullwave%local (local) (9.7.1.3.257)
e_plus (2807)	waves%coherentwave(:)%fullwave%local%e_plus (array3dflt_type) (9.7.1.2.2)
e_plus_ph (2807)	waves%coherentwave(:)%fullwave%local%e_plus_ph (array3dflt_type) (9.7.1.2.2)
e_minus (2807)	waves%coherentwave(:)%fullwave%local%e_minus (array3dflt_type) (9.7.1.2.2)
e_minus_ph (2807)	waves%coherentwave(:)%fullwave%local%e_minus_ph (array3dflt_type) (9.7.1.2.2)
e_norm (2807)	waves%coherentwave(:)%fullwave%local%e_norm (array3dint_type) (9.7.1.2.3)
enorm_ph (2807)	waves%coherentwave(:)%fullwave%local%enorm_ph (array3dflt_type) (9.7.1.2.2)
e_binorm (2807)	waves%coherentwave(:)%fullwave%local%e_binorm (array3dflt_type) (9.7.1.2.2)
e_binorm_ph (2807)	waves%coherentwave(:)%fullwave%local%e_binorm_ph (array3dflt_type) (9.7.1.2.2)
e_para (2807)	waves%coherentwave(:)%fullwave%local%e_para (array3dflt_type) (9.7.1.2.2)
e_para_ph (2807)	waves%coherentwave(:)%fullwave%local%e_para_ph (array3dflt_type) (9.7.1.2.2)
b_norm (2807)	waves%coherentwave(:)%fullwave%local%b_norm (array3dflt_type) (9.7.1.2.2)
b_norm_ph (2807)	waves%coherentwave(:)%fullwave%local%b_norm_ph (array3dflt_type) (9.7.1.2.2)
b_binorm (2807)	waves%coherentwave(:)%fullwave%local%b_binorm (array3dflt_type) (9.7.1.2.2)
b_binorm_ph (2807)	waves%coherentwave(:)%fullwave%local%b_binorm_ph (array3dflt_type) (9.7.1.2.2)
b_para (2807)	waves%coherentwave(:)%fullwave%local%b_para (array3dflt_type) (9.7.1.2.2)
b_para_ph (2807)	waves%coherentwave(:)%fullwave%local%b_para_ph (array3dflt_type) (9.7.1.2.2)
k_perp (2807)	waves%coherentwave(:)%fullwave%local%k_perp (array3dflt_type) (9.7.1.2.2)
codeparam (2629)	waves%coherentwave(:)%codeparam (codeparam) (9.7.1.3.77)
codename (2627)	waves%coherentwave(:)%codeparam%codename (string) (9.7.1.1.3)
codeversion (2627)	waves%coherentwave(:)%codeparam%codeversion (string) (9.7.1.1.3)
parameters (2627)	waves%coherentwave(:)%codeparam%parameters (string) (9.7.1.1.3)
output_diag (2627)	waves%coherentwave(:)%codeparam%output_diag (string) (9.7.1.1.3)
output_flag (2627)	waves%coherentwave(:)%codeparam%output_flag (integer) (9.7.1.1.2)
codeparam (2601)	waves%codeparam (codeparam) (9.7.1.3.77)
codename (2627)	waves%codeparam%codename (string) (9.7.1.1.3)
codeversion (2627)	waves%codeparam%codeversion (string) (9.7.1.1.3)
parameters (2627)	waves%codeparam%parameters (string) (9.7.1.1.3)
output_diag (2627)	waves%codeparam%output_diag (string) (9.7.1.1.3)
output_flag (2627)	waves%codeparam%output_flag (integer) (9.7.1.1.2)
time (2601)	waves%time (float) (9.7.1.1.1)

[cpinstances](#) <sup>186</sup>

## 9.8 4.10b.11

### 9.8.1 ITM Types

Generated from the ITM data structure schemas. Time-dependent values are shown in green. Anonymous structure (complex) types in the schemas are given parent element names; a prefix or suffix (eg type\_, \_type, \_t) can be added if required.

#### 9.8.1.1 Primitive Types

Clear definitions required.

##### 9.8.1.1.1 float

##### 9.8.1.1.2 integer

##### 9.8.1.1.3 string

#### 9.8.1.2 Array Types

Clear definitions required.

<sup>186</sup>[https://www.efda-itm.eu/ITM/html/cpinstances\\_\\_4.10b.10.html](https://www.efda-itm.eu/ITM/html/cpinstances__4.10b.10.html)

### 9.8.1.2.1 array3dcplx\_type

Example: Complex numbers (3D)

### 9.8.1.2.2 array3dflt\_type

Example: [[[1.0,2.0,3.0],[5.0,6.0,7.0]],[[1.0,2.0,3.0],[5.0,6.0,7.0]]]

### 9.8.1.2.3 array3dint\_type

Example: [[[1,2,3],[5,6,7]],[[1,2,3],[5,6,7]]]

### 9.8.1.2.4 array4dflt\_type

Example: [[[[1.0,2.0,3.0],[5.0,6.0,7.0]],[[1.0,2.0,3.0],[5.0,6.0,7.0]]],[[[1.0,2.0,3.0],[5.0,6.0,7.0]],[[1.0,2.0,3.0],[5.0,6.0,7.0]]]]]

### 9.8.1.2.5 array5dflt\_type

Example: [[[[[1.0,2.0,3.0],[5.0,6.0,7.0]],[[1.0,2.0,3.0],[5.0,6.0,7.0]]],[[1.0,2.0,3.0],[5.0,6.0,7.0]],[[1.0,2.0,3.0],[5.0,6.0,7.0]]]],[[[1.0,2.0,3.0],[5.0,6.0,7.0]],[[1.0,2.0,3.0],[5.0,6.0,7.0]]]]]

### 9.8.1.2.6 array6dflt\_type

Example: [[[[[1.0,2.0,3.0],[5.0,6.0,7.0]],[[1.0,2.0,3.0],[5.0,6.0,7.0]]],[[1.0,2.0,3.0],[5.0,6.0,7.0]],[[1.0,2.0,3.0],[5.0,6.0,7.0]]]],[[[1.0,2.0,3.0],[5.0,6.0,7.0]],[[1.0,2.0,3.0],[5.0,6.0,7.0]]]]]

### 9.8.1.2.7 array7dflt\_type

Example: [[[[[1.0,2.0,3.0],[5.0,6.0,7.0]],[[1.0,2.0,3.0],[5.0,6.0,7.0]]],[[1.0,2.0,3.0],[5.0,6.0,7.0]],[[1.0,2.0,3.0],[5.0,6.0,7.0]]]],[[[1.0,2.0,3.0],[5.0,6.0,7.0]],[[1.0,2.0,3.0],[5.0,6.0,7.0]]]]]

### 9.8.1.2.8 cplx\_type

Example: Complex number (scalar)

### 9.8.1.2.9 matcplx\_type

Example: Complex numbers (matrix)

### 9.8.1.2.10 matflt\_type

Example: [[1.0,2.0,3.0],[5.0,6.0,7.0]]

### 9.8.1.2.11 matint\_type

Example: [[1,2,3],[4,5,6]]

### 9.8.1.2.12 veccplx\_type

Example: Complex numbers (vector)

### 9.8.1.2.13 vecflt\_type

Example: [1.0,-3e5,-4.0e-3]

### 9.8.1.2.14 vecint\_type

Example: [1,2,3]

### 9.8.1.2.15 vecstring\_type

Example: ["aaa","bb","cccc"]

### 9.8.1.3 Structure Types

#### 9.8.1.3.1 CPO Structures

##### 9.8.1.3.2 amns

Description of AMNS processes for one species.

member	type	description
datainfo	datainfo (9.8.1.3.141)	Generic information on a data item
version	string (9.8.1.1.3)	Version of the data.
source	string (9.8.1.1.3)	Source of the data.
zn	integer (9.8.1.1.2)	Nuclear charge [units of elementary charge];
amn	float (9.8.1.1.1)	Mass of atom [amu]
process(:)	amns_processType (9.8.1.3.55)	Identifiers for processes; Vector(nprocs)
tables(:)	tables (9.8.1.3.428)	Rate tables for processes. Vector(nprocs)
tables_coord(:)	tables_coord (9.8.1.3.429)	Array of possible coordinate systems for tables. Vector(ncoordbases)
version_ind(:)	version_ind (9.8.1.3.487)	Array of available releases/versions of the AMNS data; each element contains information about the AMNS data that is included in the release. This part of the CPO is filled and stored only into shot/run=0/1, playing the role of a catalogue.
codeparam	codeparam (9.8.1.3.84)	Code parameters
time	float (9.8.1.1.1)	Time [s]; Time-dependent; Scalar

##### 9.8.1.3.3 antennas

Antenna systems for heating and current drive in the electron cyclotron (EC), ion cyclotron (IC) and lower hybrid (LH) frequencies. Time-dependent CPO.

member	type	description
datainfo	datainfo (9.8.1.3.141)	Generic information on a data item
antenna_ec(:)	antenna_ec (9.8.1.3.56)	Vector of Electron Cyclotron antennas. Time-dependent
antenna_ic(:)	antenna_ic (9.8.1.3.57)	Vector of Ion Cyclotron antennas. Time-dependent
antenna_lh(:)	antenna_lh (9.8.1.3.58)	Vector of Lower Hybrid antennas. Time-dependent
codeparam	codeparam (9.8.1.3.84)	Code parameters
time	float (9.8.1.1.1)	Time [s]; Time-dependent; Scalar

##### 9.8.1.3.4 bb\_shield

Breeding blanket and relevant shield. CPO. Time-dependent CPO.

member	type	description
datainfo	datainfo (9.8.1.3.141)	Generic information on a data item
type	string (9.8.1.1.3)	Type of breeding blanket (HCLL, DCLL, HCPB, ...). String
limits	limits (9.8.1.3.260)	Limits
li6_enrich	float (9.8.1.1.1)	Lithium 6 enrichment (at%).
geom	geom (9.8.1.3.233)	Geometry between components
neut_results	neut_results (9.8.1.3.296)	Neutronic results
shield	shield (9.8.1.3.405)	Shield
bb	bb (9.8.1.3.62)	Breeding blanket
hcll	hcll (9.8.1.3.238)	Data specific to HCLL blanket concept
codeparam	codeparam (9.8.1.3.84)	Code parameters
time	float (9.8.1.1.1)	Time [s]; Time-dependent; Scalar

##### 9.8.1.3.5 bolometer

Bolometer diagnostic; Time-dependent CPO

member	type	description
datainfo	datainfo (9.8.1.3.141)	Generic information on a data item
setup	bolometer_setup (9.8.1.3.71)	diagnostic setup information
measure	bolometer_measure (9.8.1.3.69)	Measured values
process	bolometer_processed (9.8.1.3.70)	Processed quantities

member	type	description
codeparam	codeparam (9.8.1.3.84)	Code parameters
time	float (9.8.1.1.1)	Time [s]; Time-dependent; Scalar

### 9.8.1.3.6 bremsstrahl

Bremsstrahlung diagnostic; Time-dependent CPO

member	type	description
datainfo	datainfo (9.8.1.3.141)	Generic information on a data item
setup	bremsstrahl.setup (9.8.1.3.79)	diagnostic setup information
measure	bremsstrahl.measure (9.8.1.3.78)	Measured values
codeparam	codeparam (9.8.1.3.84)	Code parameters
time	float (9.8.1.1.1)	Time [s]; Time-dependent; Scalar

### 9.8.1.3.7 compositionc

Species description (ions, impurities, neutrals).

member	type	description
datainfo	datainfo (9.8.1.3.141)	Generic information on a data item
compositions	compositions.type (9.8.1.3.106)	Contains all the composition information for the simulation (main ions, impurities, neutrals, edge species).
codeparam	codeparam (9.8.1.3.84)	Code parameters
time	float (9.8.1.1.1)	Time [s]; Time-dependent; Scalar

### 9.8.1.3.8 coredelta

Generic instant change of the radial core profiles due to pellet, MHD, ... Time-dependent CPO.

member	type	description
datainfo	datainfo (9.8.1.3.141)	Generic information on a data item
composition	composition (9.8.1.3.102)	Plasma composition (description of ion species). OBSOLES-CENT.
desc_impur	desc_impur (9.8.1.3.143)	Description of the impurities (list of ion species and possibly different charge states). OBSOLES-CENT.
compositions	compositions.type (9.8.1.3.106)	Contains all the composition information for the simulation (main ions, impurities, neutrals, edge species).
values(:)	coredelta.values (9.8.1.3.111)	Description of the delta term for the various origins. Array of structure (ndelta). Time-dependent
codeparam	codeparam (9.8.1.3.84)	Code parameters
time	float (9.8.1.1.1)	Time [s]; Time-dependent; Scalar

### 9.8.1.3.9 corefast

Flux surface averaged fluid measures and transport coefficients of fast particle populations. Here the concept of a fast particle population refer to the difference between the total population and the thermal population. This separation of populations may in practise be achieved differently depending on the physics model. A description of how the separation is achieved should therefore be provided in corefast/values/filter/. Time-dependent CPO.

member	type	description
datainfo	datainfo (9.8.1.3.141)	Generic information on a data item
composition	composition (9.8.1.3.102)	Plasma composition (description of ion species). OBSOLES-CENT.
desc_impur	desc_impur (9.8.1.3.143)	Description of the impurities (list of ion species and possibly different charge states). OBSOLES-CENT.
compositions	compositions.type (9.8.1.3.106)	Contains all the composition information for the simulation (main ions, impurities, neutrals, edge species).
toroid_field	b0r0 (9.8.1.3.61)	Characteristics of the vacuum toroidal field, redundant with the toroidfield CPO, to document the normalisation of rho and j in this CPO.
values(:)	corefast.values (9.8.1.3.113)	Description of the fast particle terms of various origins. Array of structure (nfast). Time-dependent.
codeparam	codeparam (9.8.1.3.84)	Code parameters
time	float (9.8.1.1.1)	Time [s]; Time-dependent; Scalar

### 9.8.1.3.10 coreimpur

Impurity species (i.e. ion species with multiple charge states), radial core profiles. For heavy impurities, some ionisation states can be grouped into "bundles". Can be the result of an impurity transport code or experimental measurements. Time-dependent CPO

member	type	description
datainfo	datainfo (9.8.1.3.141)	Generic information on a data item
rho_tor_norm	vecflt_type (9.8.1.2.13)	Normalised toroidal flux coordinate values (= rho_tor normalised to the value at the last grid point); Time-dependent; Vector (nrho)
rho_tor	vecflt_type (9.8.1.2.13)	Toroidal flux coordinate (not normalised, equivalent to rho_tor_norm) [m]; Vector (nrho). Time-dependent.
psi	vecflt_type (9.8.1.2.13)	Poloidal flux [Wb], without $1/2\pi$ and such that $B_p =  \text{grad } \psi  / R/2/\pi$ . Time-dependent; Vector (nrho)
volume	vecflt_type (9.8.1.2.13)	Volume enclosed in the flux surface [m <sup>3</sup> ]; Time-dependent; Vector (nrho)
area	vecflt_type (9.8.1.2.13)	Cross-sectional area of the flux surface [m <sup>2</sup> ]; Time-dependent; Vector (nrho)
source	vecstring_type (9.8.1.2.15)	Source of the profile (any comment describing the origin of the impurity profiles : code, path to diagnostic signals, massaging, ...); Array of strings (nimp)
flag	vecint_type (9.8.1.2.14)	Flag describing how the profile has been processed : 0-not calculated; 1-interpretative; 2-calculated by the transport solver; 3-calculated by a separate code : in that case only, description of the code provided in codeparam at the same level; 4-used value from the previous time step; Time-dependent; Vector(nimp)
desc_impur	desc_impur (9.8.1.3.143)	Description of the impurities (list of ion species and possibly different charge states). OBSOLETE.
compositions	compositions_type (9.8.1.3.106)	Contains all the composition information for the simulation (main ions, impurities, neutrals, edge species).
atomic_data	vecstring_type (9.8.1.2.15)	Reference for the atomic data used for each impurity. Array of strings (nimp)
impurity(:)	impurity_type (9.8.1.3.245)	Array(nimp). Time-dependent
diagnostic	coreimpurediag_type (9.8.1.3.125)	NO DOCS
diagnosticsum	coreimpurediag_sum (9.8.1.3.123)	NO DOCS
codeparam	codeparam (9.8.1.3.84)	Code parameters
time	float (9.8.1.1.1)	Time [s]; Time-dependent; Scalar.

### 9.8.1.3.11 coreneutrals

Core plasma neutrals description. Time-dependent CPO.

member	type	description
datainfo	datainfo (9.8.1.3.141)	Generic information on a data item
rho_tor	vecflt_type (9.8.1.2.13)	Toroidal flux coordinate (not normalised, equivalent to rho_tor_norm) [m]; Vector (nrho). Time-dependent.
rho_tor_norm	vecflt_type (9.8.1.2.13)	Normalised toroidal flux coordinate values (= rho_tor normalised to the value at the last grid point); Time-dependent; Vector (nrho)
psi	vecflt_type (9.8.1.2.13)	Poloidal flux [Wb], without $1/2\pi$ and such that $B_p =  \text{grad } \psi  / R/2/\pi$ . Time-dependent; Vector (nrho)
volume	vecflt_type (9.8.1.2.13)	Volume enclosed in the flux surface [m <sup>3</sup> ]; Time-dependent; Vector (nrho)
area	vecflt_type (9.8.1.2.13)	Cross-sectional area of the flux surface [m <sup>2</sup> ]; Time-dependent; Vector (nrho)
neutcompo	composition_neutrals (9.8.1.3.103)	Description of neutrals species. OBSOLETE
composition	composition (9.8.1.3.102)	Plasma composition (description of ion species). OBSOLETE.
desc_impur	desc_impur (9.8.1.3.143)	Description of the impurities (list of ion species and possibly different charge states). OBSOLETE.
compositions	compositions_type (9.8.1.3.106)	Contains all the composition information for the simulation (main ions, impurities, neutrals, edge species).
profiles(:)	neutral_complex_type (9.8.1.3.297)	Profiles derived from the fields solved in the transport equations, or from experiment. Array(nneut). Time-dependent
ioncoeff(:)	coefficients_neutrals (9.8.1.3.85)	Recycling and sputtering coefficients for each ion in composition. Array(nion). Time-dependent
impcoeff(:)	impcoeff (9.8.1.3.243)	Recycling and sputtering coefficients for each impurity ion in desc_impur. Array(nimp). Time-dependent.
codeparam	codeparam (9.8.1.3.84)	Code parameters
time	float (9.8.1.1.1)	Time [s]; Time-dependent; Scalar

### 9.8.1.3.12 coreprof

Core plasma 1D profiles as a function of the toroidal flux coordinate, obtained by solving the core transport equations (can be also fitted profiles from experimental data). The codeparam element here describes the pa-



parameters of the transport equation solver and/or those of the fitting program. Time-dependent CPO.

member	type	description
datainfo	datainfo (9.8.1.3.141)	Generic information on a data item
rho_tor_norm	vecflt_type (9.8.1.2.13)	Normalised toroidal flux coordinate values (= rho_tor normalised to the value at the last radial grid point, which is quasi at the Last Closed Flux Surface); Time-dependent; Vector (nrho)
rho_tor	vecflt_type (9.8.1.2.13)	Toroidal flux coordinate (not normalised, equivalent to rho_tor_norm) [m]; Vector (nrho). Time-dependent.
drho_dt	vecflt_type (9.8.1.2.13)	Time derivative of rho_tor [m/s]; Vector (nrho). Time-dependent.
toroid_field	toroid_field (9.8.1.3.466)	Toroidal field information entering the definition of rho_tor, for reference only. The physical value of the toroidal field should be taken from the toroidfield CPO. Time-dependent.
composition	composition (9.8.1.3.102)	Plasma composition (description of ion species). OBSOLES-CENT.
desc_impur	desc_impur (9.8.1.3.143)	Description of the impurities (list of ion species and possibly different charge states). OBSOLES-CENT.
compositions	compositions_type (9.8.1.3.106)	Contains all the composition information for the simulation (main ions, impurities, neutrals, edge species).
psi	psi (9.8.1.3.348)	Poloidal magnetic flux [Wb]; Time-dependent;
te	corefield (9.8.1.3.114)	Electron temperature [eV]; (source term in [W.m <sup>-3</sup> ]). Time-dependent;
ti	corefieldion (9.8.1.3.115)	Ion temperature [eV]; (source term in [W.m <sup>-3</sup> ]). Time-dependent;
ne	corefield (9.8.1.3.114)	Electron density [m <sup>-3</sup> ]; (source term in [m <sup>-3</sup> ]). Time-dependent;
ni	corefieldion (9.8.1.3.115)	Ion density [m <sup>-3</sup> ]; (source term in [m <sup>-3</sup> ]). Time-dependent;
vtor	corefieldion (9.8.1.3.115)	Toroidal velocity of the various ion species [m.s <sup>-1</sup> ]; Time-dependent;
profiles1d	profiles1d (9.8.1.3.346)	Profiles derived from the fields solved in the transport equations, or from experiment.
globalparam	globalparam (9.8.1.3.236)	Various global quantities calculated from the 1D profiles. Time-dependent
codeparam	codeparam (9.8.1.3.84)	Code parameters
time	float (9.8.1.1.1)	Time [s]; Time-dependent; Scalar

### 9.8.1.3.13 coresource

Generic source term for the core transport equations (radial profile). Time-dependent CPO.

member	type	description
datainfo	datainfo (9.8.1.3.141)	Generic information on a data item
composition	composition (9.8.1.3.102)	Plasma composition (description of ion species). OBSOLES-CENT.
desc_impur	desc_impur (9.8.1.3.143)	Description of the impurities (list of ion species and possibly different charge states). OBSOLES-CENT.
compositions	compositions_type (9.8.1.3.106)	Contains all the composition information for the simulation (main ions, impurities, neutrals, edge species).
toroid_field	b0r0 (9.8.1.3.61)	Characteristics of the vacuum toroidal field, redundant with the toroidfield CPO, to document the normalisation of rho and j in this CPO.
values(:)	coresource_values (9.8.1.3.132)	Description of the source terms of various origins. Array of structure (nsource). Time-dependent.
codeparam	codeparam (9.8.1.3.84)	Code parameters
time	float (9.8.1.1.1)	Time [s]; Time-dependent; Scalar

### 9.8.1.3.14 coretransp

Generic transport coefficients for the core transport equations (radial profile). Time-dependent CPO

member	type	description
datainfo	datainfo (9.8.1.3.141)	Generic information on a data item
composition	composition (9.8.1.3.102)	Plasma composition (description of ion species). OBSOLES-CENT.
desc_impur	desc_impur (9.8.1.3.143)	Description of the impurities (list of ion species and possibly different charge states). OBSOLES-CENT.
compositions	compositions_type (9.8.1.3.106)	Contains all the composition information for the simulation (main ions, impurities, neutrals, edge species).
values(:)	coretransp_values (9.8.1.3.136)	Description of transport term coming from various origins. Array of structure (ntransp). Time-dependent
codeparam	codeparam (9.8.1.3.84)	Code parameters
time	float (9.8.1.1.1)	Time [s]; Time-dependent; Scalar

### 9.8.1.3.15 cxdiag

Charge Exchange Diagnostic; Time-dependent CPO

member	type	description
datainfo	datainfo (9.8.1.3.141)	Generic information on a data item
setup	cxsetup (9.8.1.3.139)	diagnostic setup information
measure	cxmeasure (9.8.1.3.138)	Measured values
codeparam	codeparam (9.8.1.3.84)	Code parameters
time	float (9.8.1.1.1)	Time [s]; Time-dependent; Scalar

### 9.8.1.3.16 distribution

Datastructure for representing data associated with a distribution function one or many particle species. This structure is specifically designed to handle non-Maxwellian distribution function generated during heating and current drive, typically solved using a Fokker-Planck calculation perturbed by a heating scheme (e.g. IC, EC, LH, NBI, or alpha heating) and then relaxed by Coloumb collisions. Time-dependent CPO

member	type	description
datainfo	datainfo (9.8.1.3.141)	Generic information on a data item
composition	composition (9.8.1.3.102)	Plasma composition (description of ion species). OBSOLESCECENT.
compositions	compositions.type (9.8.1.3.106)	Contains all the composition information for the simulation (main ions, impurities, neutrals, edge species).
distri.vec(:)	distri.vec (9.8.1.3.173)	Vector over all distribution functions. Every distribution function has to be associated with only one particle species, speciefc in <code>distri.vec/species/</code> , but there could be multiple distribution function for each species. In this case, the fast particle populations should be superposed. Time-dependent. Structure array( <code>ndistri.vec</code> )
codeparam	codeparam (9.8.1.3.84)	Code parameters
time	float (9.8.1.1.1)	Time [s]; Time-dependent; Scalar

### 9.8.1.3.17 distsource

Sources of particles for input to kinetic equations, e.g. Fokker-Planck calculation. The sources could originate from e.g. NBI or fusion reactions. Time-dependent CPO

member	type	description
datainfo	datainfo (9.8.1.3.141)	Generic information on a data item
composition	composition (9.8.1.3.102)	Plasma composition (description of ion species). OBSOLESCECENT.
compositions	compositions.type (9.8.1.3.106)	Contains detailed information on the plasma composition (main ions, impurities, neutrals, edge species).
source(:)	distsource_source (9.8.1.3.178)	Source. Time-dependent. Structure array( <code>nsrc_spec</code> )
codeparam	codeparam (9.8.1.3.84)	Code parameters
time	float (9.8.1.1.1)	Time [s]; Time-dependent; scalar

### 9.8.1.3.18 ecediag

Electron Cyclotron Emission Diagnostic; Time-dependent CPO

member	type	description
datainfo	datainfo (9.8.1.3.141)	Generic information on a data item
setup	ecsetup (9.8.1.3.182)	diagnostic setup information
measure	ecemeasure (9.8.1.3.181)	Measured values
codeparam	codeparam (9.8.1.3.84)	Code parameters
time	float (9.8.1.1.1)	Time [s]; Time-dependent; Scalar

### 9.8.1.3.19 edge

CPO for edge/SOL plasma description. Time-dependent CPO

member	type	description
datainfo	datainfo (9.8.1.3.141)	Generic information on a data item
grid	complexgrid (9.8.1.3.89)	Grid description
species(:)	species_desc (9.8.1.3.417)	Description of ion species. Array of structures( <code>nspecies</code> )
compositions	compositions.type (9.8.1.3.106)	Contains all the composition information for the simulation (main ions, impurities, neutrals, edge species).
fluid	edge_fluid (9.8.1.3.183)	Fluid description of edge plasma. Time-dependent.
kinetic	edge_kinetic (9.8.1.3.189)	Kinetic description of edge plasma. Time-dependent.

member	type	description
codeparam	codeparam (9.8.1.3.84)	Code parameters
time	float (9.8.1.1.1)	Time [s]; Time-dependent; Scalar

### 9.8.1.3.20 efcc

Error field correction coils. Time-dependent CPO.

member	type	description
datainfo	datainfo (9.8.1.3.141)	Generic information on a data item
coil(:)	coil (9.8.1.3.87)	Individual coil. Time-dependent. Structure array. Replicate this coil structure for coil element in the efcc array.
time	float (9.8.1.1.1)	Time [s]; Time-dependent; Scalar
codeparam	codeparam (9.8.1.3.84)	Code parameters

### 9.8.1.3.21 equilibrium

Description of a 2D, axi-symmetric, tokamak equilibrium; result of an equilibrium code. Time-dependent CPO

member	type	description
datainfo	datainfo (9.8.1.3.141)	Generic information on a data item
eqconstraint	eqconstraint (9.8.1.3.196)	measurements to constrain the equilibrium, output values and accuracy of the fit
eggeometry	eggeometry (9.8.1.3.197)	Geometry of the plasma boundary
flush	flush (9.8.1.3.210)	FLUSH package coefficients for the mapping of the equilibrium. The time grid of this structure is the same as the equilibrium structure above.
global_param	global_param (9.8.1.3.235)	0d output parameters
profiles_1d	profiles_1d (9.8.1.3.347)	output profiles as a function of the poloidal flux
profiles_2d(:)	equilibrium_profiles_2d (9.8.1.3.202)	Output profiles in the poloidal plane. Time-dependent
coord_sys	coord_sys (9.8.1.3.108)	flux surface coordinate system on a square grid of flux and angle
time	float (9.8.1.1.1)	Time [s]; Time-dependent; Scalar
codeparam	codeparam (9.8.1.3.84)	Code parameters

### 9.8.1.3.22 fusiondiag

Fusion product diagnostics; Time-dependent CPO

member	type	description
datainfo	datainfo (9.8.1.3.141)	Generic information on a data item
fus_product(:)	fusiondiag_fus_product (9.8.1.3.229)	Source. Time-dependent. Structure array. Replicate this source structure to accommodate neutron and gammas.
codeparam	codeparam (9.8.1.3.84)	Code parameters
time	float (9.8.1.1.1)	Time [s]; Time-dependent; Scalar

### 9.8.1.3.23 halphadiag

H/D alpha line integrated diagnostic; Time-dependent CPO

member	type	description
datainfo	datainfo (9.8.1.3.141)	Generic information on a data item
setup	halpha_setup (9.8.1.3.237)	setup for the lines of sight of the line integrated measurement
intensity	exp1D (9.8.1.3.204)	Measured light intensity (a.u.). Time-dependent. Vector (nlos)
codeparam	codeparam (9.8.1.3.84)	Code parameters
time	float (9.8.1.1.1)	Time [s]; Time-dependent; Scalar

### 9.8.1.3.24 heat\_sources

Description of a set of heat sources or sinks. Time-dependent CPO.

member	type	description
datainfo	datainfo (9.8.1.3.141)	Generic information on a data item
sources(:)	calorimetry_heat_source (9.8.1.3.80)	Heat sources. Array of structure (nheat_source)

member	type	description
sinks(:)	calorimetry_heat_source (9.8.1.3.80)	Heat sinks. Array of structure (nheat.sink)
codeparam	codeparam (9.8.1.3.84)	Code parameters
time	float (9.8.1.1.1)	Time [s]; Time-dependent; Scalar

### 9.8.1.3.25 interfdiag

General line integral diagnostic

member	type	description
datainfo	datainfo (9.8.1.3.141)	Generic information on a data item
expression	string (9.8.1.1.3)	Formal expression for the line integral to be evaluated as a function of ne, ni, Te, Ti, Zeff, Br, Bz
setup_line	setup_line (9.8.1.3.403)	Geometric description of the lines of sight
measure	exp1D (9.8.1.3.204)	Measured value. Time-dependent; Vector (nchords)
codeparam	codeparam (9.8.1.3.84)	Code parameters
time	float (9.8.1.1.1)	Time [s]; Time-dependent; Scalar

### 9.8.1.3.26 ironmodel

Model of the iron circuit; Time-dependent CPO

member	type	description
datainfo	datainfo (9.8.1.3.141)	Generic information on a data item
desc_iron	desc_iron (9.8.1.3.144)	Description of the iron segments
magnetise	magnetise (9.8.1.3.267)	Magnetisation M of the iron segment, assumed to be constant inside a given iron segment. Reminder : $H = 1/\mu_0 * B - \mu_r * M$ ; [A/m].
codeparam	codeparam (9.8.1.3.84)	Code parameters
time	float (9.8.1.1.1)	Time [s]; Time-dependent; Scalar

### 9.8.1.3.27 langmuirdiag

Langmuir probes; Time-dependent CPO

member	type	description
datainfo	datainfo (9.8.1.3.141)	Generic information on a data item
potential	lang_measure (9.8.1.3.251)	Floating potential [V]. All children are vectors(npot)
bias	lang_measure (9.8.1.3.251)	Biasing potential [V]. All children are vectors(bias)
jsat	lang_measure (9.8.1.3.251)	Ion saturation current [A/m <sup>2</sup> ]. All children are vectors(njsat)
ne	lang_derived (9.8.1.3.250)	Electron density [m <sup>-3</sup> ]. All children are vectors(ndensity).
te	lang_derived (9.8.1.3.250)	Electron Temperature [eV]. All children are vectors(nte)
machpar	lang_derived (9.8.1.3.250)	Parallel Mach number. All children are vectors(nmach)
codeparam	codeparam (9.8.1.3.84)	Code parameters
time	float (9.8.1.1.1)	Time [s]; Time-dependent; Scalar

### 9.8.1.3.28 launches

RF wave launch conditions. Time-dependent CPO

member	type	description
datainfo	datainfo (9.8.1.3.141)	Generic information on a data item
name	vecstring_type (9.8.1.2.15)	Antenna name, Vector of strings (nantenna)
type	vecstring_type (9.8.1.2.15)	Wave type (LH, EC, IC, ...), Vector of strings (nantenna)
frequency	vecflt_type (9.8.1.2.13)	Wave frequency [Hz], Vector (nantenna).
mode	vecint_type (9.8.1.2.14)	Incoming wave mode (+ 1 : slow wave only; -1 both slow and fast wave modes). Vector of integers (nantenna). Time-dependent
position	rzphi1D (9.8.1.3.372)	Reference global position of the antenna. Time-dependent
spectrum	spectrum (9.8.1.3.420)	Spectral properties of the wave.
beam	launchs_rfbeam (9.8.1.3.255)	Beam characteristics
codeparam	codeparam (9.8.1.3.84)	Code parameters
time	float (9.8.1.1.1)	Time [s]; Time-dependent; Scalar

### 9.8.1.3.29 lithiumdiag

Lithium Beam Diagnostic; Time-dependent CPO

member	type	description
datainfo	datainfo (9.8.1.3.141)	Generic information on a data item
setup	lithsetup (9.8.1.3.263)	diagnostic setup information
measure	lithmeasure (9.8.1.3.262)	Measured values
codeparam	codeparam (9.8.1.3.84)	Code parameters
time	float (9.8.1.1.1)	Time [s]; Time-dependent; Scalar

### 9.8.1.3.30 magdiag

Magnetic diagnostics. Time-dependent CPO

member	type	description
datainfo	datainfo (9.8.1.3.141)	Generic information on a data item
ip	exp0D (9.8.1.3.203)	Plasma current [A]. Positive sign means anti-clockwise when viewed from above. Time-dependent. Scalar
diamagflux	exp0D (9.8.1.3.203)	Diamagnetic flux [Wb]; Time-dependent; Scalar
diamagener	exp0D (9.8.1.3.203)	Diamagnetic energy [J]; Time-dependent; Scalar
flux_loops	flux_loops (9.8.1.3.211)	Poloidal flux loops RZ coordinates have 1 component for the full loop and two if there is a negative reference loop
bpol_probes	bpol_probes (9.8.1.3.77)	Poloidal field probes
codeparam	codeparam (9.8.1.3.84)	Code parameters
time	float (9.8.1.1.1)	Time [s]; Time-dependent; Scalar

### 9.8.1.3.31 mhd

MHD linear stability. Time-dependent CPO

member	type	description
datainfo	datainfo (9.8.1.3.141)	Generic information on a data item
toroid_field	b0r0 (9.8.1.3.61)	Characteristics of the vacuum toroidal field, redundant with the toroidfield CPO, to document the normalisation of rho and j in this CPO.
n(:)	mhd_mode (9.8.1.3.271)	Vector of toroidal mode numbers; Structure Array (ntor); Time-dependent
time	float (9.8.1.1.1)	Time [s]; Time-dependent; Scalar.
codeparam	codeparam (9.8.1.3.84)	Code parameters

### 9.8.1.3.32 msediag

MSE Diagnostic; Time-dependent CPO

member	type	description
datainfo	datainfo (9.8.1.3.141)	Generic information on a data item
polarimetry	polarimetry (9.8.1.3.341)	This structure accomodates the polarimetry setup and measurements of a mse diagnostic, as widely used in fusion devices. The final measurement is the tan(gamma) where gamma is the polarization angle of a particular spectral mse component.
spectral	spectral (9.8.1.3.419)	This structure accommodates the types needed on a spectral MSE diagnostic namely the emmissivity and the radiance spectra. It will be subsequently upgraded with optical + photon detection elements since the structure will also be used for a synthetic spectral mse code.
codeparam	codeparam (9.8.1.3.84)	Code parameters
time	float (9.8.1.1.1)	Time [s]; Time-dependent; Scalar

### 9.8.1.3.33 nbi

Neutral Beam Injection. Input to NBI source codes; describes the neutrals that are about to be launched into the torus; Time-dependent CPO

member	type	description
datainfo	datainfo (9.8.1.3.141)	Generic information on a data item
nbi.unit(:)	nbi_unit (9.8.1.3.293)	Vector of Neutral Beam Injector units. The NBI system should be separated in to the individually power strucutres. Structure array(nunits). Time-dependent
codeparam	codeparam (9.8.1.3.84)	Code parameters

member	type	description
time	float (9.8.1.1.1)	Time [s]; Time-dependent; Scalar

### 9.8.1.3.34 neoclassic

Neoclassical quantities (including transport coefficients). Time-dependent CPO

member	type	description
datainfo	datainfo (9.8.1.3.141)	Generic information on a data item
rho_tor_norm	vecflt_type (9.8.1.2.13)	Normalised toroidal flux coordinate values (= rho_tor normalised to the value at the last grid point); Vector (nrho)
rho_tor	vecflt_type (9.8.1.2.13)	Toroidal flux coordinate (not normalised, equivalent to rho_tor_norm) [m]; Vector (nrho). Time-dependent.
composition	composition (9.8.1.3.102)	Plasma composition (description of ion species). OBSOLES-CENT.
desc_impur	desc_impur (9.8.1.3.143)	Description of the impurities (list of ion species and possibly different charge states). OBSOLES-CENT.
compositions	compositions.type (9.8.1.3.106)	Contains all the composition information for the simulation (main ions, impurities, neutrals, edge species).
ni_neo	transcoefion (9.8.1.3.470)	Neoclassical transport coefficients for ion density equation. Time-dependent.
ne_neo	transcoefel (9.8.1.3.468)	Neoclassical transport coefficients for electron density equation. Time-dependent.
nz_neo(:)	transcoefimp (9.8.1.3.469)	Neoclassical transport coefficients for impurity (multiple charge state) density equation. Time-dependent.
ti_neo	transcoefion (9.8.1.3.470)	Neoclassical transport coefficients for ion temperature equation. Time-dependent.
te_neo	transcoefel (9.8.1.3.468)	Neoclassical transport coefficients for electron temperature equation. Time-dependent.
tz_neo(:)	transcoefimp (9.8.1.3.469)	Neoclassical transport coefficients for impurity (multiple charge state) temperature equation. Time-dependent.
mtor_neo	transcoefel (9.8.1.3.468)	Neoclassical transport coefficients for total toroidal momentum equation. Time-dependent.
sigma	vecflt_type (9.8.1.2.13)	Neoclassical conductivity [ohm <sup>-1</sup> .m <sup>-1</sup> ]. Time-dependent. Vector(nrho).
jboot	vecflt_type (9.8.1.2.13)	Bootstrap current density [A.m <sup>-2</sup> ]. Time-dependent. Vector(nrho).
er	vecflt_type (9.8.1.2.13)	Radial electric field [V/m]. Time-dependent. Vector(nrho).
vpol	mafft.type (9.8.1.2.10)	Neoclassical poloidal rotation of each ion species [m/s]. Time-dependent. Matrix(nrho,nion).
vtor	mafft.type (9.8.1.2.10)	Neoclassical toroidal rotation of each ion species [m/s]. Time-dependent. Matrix(nrho,nion).
mach	mafft.type (9.8.1.2.10)	Mach number of each ion species. Time-dependent. Matrix(nrho,nion).
utheta_e	vecflt_type (9.8.1.2.13)	Electron poloidal flow [m/s]. Time-dependent. Vector(nrho).
utheta_i	mafft.type (9.8.1.2.10)	Ion poloidal flow [m/s]. Time-dependent. Matrix(nrho,nion).
viscosity_par	mafft.type (9.8.1.2.10)	Ion parallel viscosity [?]. Time-dependent. Matrix(nrho,nion).
impurity(:)	neoclassic_impurity (9.8.1.3.295)	Array(nimp). Time-dependent
fext	array3dflt.type (9.8.1.2.2)	Moments of parallel external force on each ion species [T].m <sup>-3</sup> . Time-dependent. Array3D(nrho,nion,nmoment).
jext	vecflt_type (9.8.1.2.13)	Current density response to fext [A.m <sup>-2</sup> ]. Time-dependent. Vector(nrho).
time	float (9.8.1.1.1)	Time [s]; Time-dependent; Scalar.
codeparam	codeparam (9.8.1.3.84)	Code parameters

### 9.8.1.3.35 ntm

Description of a Neoclassical Tearing Mode and its evolution. Time-dependent CPO

member	type	description
datainfo	datainfo (9.8.1.3.141)	Generic information on a data item
mode(:)	ntm_mode (9.8.1.3.300)	List of the various NTM modes appearing during the simulation. If a given (m,n) mode appears several times, use the "event" index of onset and full.evol to describe every occurrence of the mode. All descendant nodes are marked as Time-dependent for technical reasons, to allow the size of the mode AoS to vary.
time	float (9.8.1.1.1)	Time [s]; Time-dependent; Scalar.
codeparam	codeparam (9.8.1.3.84)	Code parameters

### 9.8.1.3.36 orbit

Orbits for a set of particles. Time-dependent CPO

member	type	description
datainfo	datainfo (9.8.1.3.141)	Generic information on a data item
com	com (9.8.1.3.88)	COM (Constants Of Motion) parameters identifying an orbit
trace	trace (9.8.1.3.467)	Position of particle in 5D space (3D in real and 2D in velocity).

member	type	description
global_param	orbit_global_param (9.8.1.3.311)	Global quantities associated with an orbit.
codeparam	codeparam (9.8.1.3.84)	Code parameters
time	float (9.8.1.1.1)	Time [s]; Time-dependent; Scalar

### 9.8.1.3.37 pellets

Description of pellets. Time-dependent CPO.

member	type	description
datainfo	datainfo (9.8.1.3.141)	Generic information on a data item
compositions	compositions.type (9.8.1.3.106)	Pellet composition
pellet(:)	pellet (9.8.1.3.319)	Description of the pellets entering the plasma at given time. Array of structures (NPEL). Time-dependent.
codeparam	codeparam (9.8.1.3.84)	Code parameters
time	float (9.8.1.1.1)	Time [s]; Time-dependent; Scalar

### 9.8.1.3.38 pfsystems

Description of the active poloidal coils, passive conductors, currents flowing in those and mutual electromagnetic effects of the device; Time-dependent CPO

member	type	description
datainfo	datainfo (9.8.1.3.141)	Generic information on a data item
pccoils	pccoils (9.8.1.3.329)	Active poloidal field coils
pfpassive	pfpassive (9.8.1.3.333)	Passive axisymmetric conductor description
pfcircuits	pfcircuits (9.8.1.3.328)	Circuits, connected to multiple coils and to multiple supplies, defining the current and voltage relationships in the system
pfsupplies	pfsupplies (9.8.1.3.335)	PF power supplies
codeparam	codeparam (9.8.1.3.84)	Code parameters
time	float (9.8.1.1.1)	Time [s]; Time-dependent; Scalar

### 9.8.1.3.39 polardiag

General line integral diagnostic

member	type	description
datainfo	datainfo (9.8.1.3.141)	Generic information on a data item
expression	string (9.8.1.1.3)	Formal expression for the line integral to be evaluated as a function of $n_e$ , $n_i$ , $T_e$ , $T_i$ , $Z_{eff}$ , $B_r$ , $B_z$
setup_line	setup_line (9.8.1.3.403)	Geometric description of the lines of sight
measure	expID (9.8.1.3.204)	Measured value. Time-dependent; Vector (nchords)
codeparam	codeparam (9.8.1.3.84)	Code parameters
time	float (9.8.1.1.1)	Time [s]; Time-dependent; Scalar

### 9.8.1.3.40 power\_conv

Power conversion system. Time-dependent CPO.

member	type	description
datainfo	datainfo (9.8.1.3.141)	Generic information on a data item
cycle_type	string (9.8.1.1.3)	Type of cycle. String
circuits(:)	circuits (9.8.1.3.81)	Description of the circuit of the power conversion system. Array of structure. (ncircuits).
power_recirc	float (9.8.1.1.1)	Recirculated electric power (input to the power conversion actor). [W] Scalar
power_net	float (9.8.1.1.1)	Net electric power generated [W]. Scalar
power_int	float (9.8.1.1.1)	Total electric power consumption of the power conversion system.[W]. Scalar
efficiency	float (9.8.1.1.1)	Efficiency of the reactor (ratio of the alternator electrical power to the total power needed to operate the reactor)
codeparam	codeparam (9.8.1.3.84)	Code parameters
time	float (9.8.1.1.1)	Time [s]; Time-dependent; Scalar



### 9.8.1.3.41 reflectomet

Reflectometry CPO, contains antennas and received signals; Time-dependent CPO.

member	type	description
datainfo	datainfo (9.8.1.3.141)	Generic information on a data item
refl.receive(:)	refl.receive (9.8.1.3.356)	Reflectometry signal; experimental or code output. Time-dependent. Vector(nreceivers); If output from ERC3D, contains short, high-resolution (ps) time series anchored to the time of the CPO or, for a combination of runs, longer, coarse time signals. For experimental signals, time series may span much longer durations. For slowly varying signals, may contain only one point and have a separate CPO instance with different time field for every point. For code output, the signals are usually normalised to unity power.
antennas(:)	reflectometry_antennas (9.8.1.3.357)	Vector of reflectometry antenna descriptions. These include radiation fields as well as material antenna structures (feeds, horns, later mirrors); Vector(nantennas); refl.receive entries refer to their antenna by index in this array. Time-dependent.
codeparam	codeparam (9.8.1.3.84)	Code parameters
time	float (9.8.1.1.1)	Time [s]; Time-dependent; Scalar

### 9.8.1.3.42 rfadiag

Retarding field analyser Diagnostic; Time-dependent CPO

member	type	description
datainfo	datainfo (9.8.1.3.141)	Generic information on a data item
setup	rfasetup (9.8.1.3.363)	diagnostic setup information
measure	rfameasure (9.8.1.3.362)	Measured values
codeparam	codeparam (9.8.1.3.84)	Code parameters
time	float (9.8.1.1.1)	Time [s]; Time-dependent; Scalar

### 9.8.1.3.43 sawteeth

Description of sawtooth events. Time-dependent CPO

member	type	description
datainfo	datainfo (9.8.1.3.141)	Generic information on a data item
crash_trig	integer (9.8.1.1.2)	Flag indicating whether a crash condition has been satisfied : 0 = no crash. N( $\zeta$ 0) = crash triggered due to condition ii=N. Integer. Time-dependent.
composition	composition (9.8.1.3.102)	Plasma composition (description of ion species). OBSOLESCE.
rho_tor_norm	vecflt_type (9.8.1.2.13)	Normalised toroidal flux coordinate values (= rho_tor normalised to the value at the last grid point); Vector (nrho)
rho_tor	vecflt_type (9.8.1.2.13)	Toroidal flux coordinate [m] given by $\sqrt{\phi/B_0/\pi}$ , where $B_0 = \text{toroidfield}\%bvac.r\%value / \text{toroidfield}\%r0$ . Vector (nrho). Time-dependent.
profiles1d	sawteeth_profiles1d (9.8.1.3.379)	Core profiles after sawtooth crash
diags	sawteeth_diags (9.8.1.3.378)	NO DOCS
codeparam	codeparam (9.8.1.3.84)	Code parameters
time	float (9.8.1.1.1)	Time [s]; Time-dependent; Scalar

### 9.8.1.3.44 scenario

Scenario characteristics, to be used as input or output of a whole discharge simulator. Time-dependent CPO.

member	type	description
datainfo	datainfo (9.8.1.3.141)	Generic information on a data item
centre	scenario_centre (9.8.1.3.380)	central values of the profiles (at magnetic axis)
composition	scenario_composition (9.8.1.3.381)	Plasma composition (description of ion species).
configs	scenario_configuration (9.8.1.3.382)	Strings describing the tokamak configuration
confinement	scenario_confinement (9.8.1.3.383)	characteristic confinement times
currents	scenario_currents (9.8.1.3.384)	data related to current sources and current diffusion
edge	scenario_edge (9.8.1.3.385)	edge value (@ LCMS)
energy	scenario_energy (9.8.1.3.386)	plasma energy content
eqgeometry	eqgeometry (9.8.1.3.197)	Geometry of the plasma boundary
global_param	scenario_global (9.8.1.3.387)	Global scalar values

member	type	description
heat_power	scenario_heat_power (9.8.1.3.388)	Power delivered to plasma (thermal and non thermal)
itb	scenario_itb (9.8.1.3.390)	Values characteristics of the Internal Transport Barrier
lim_div_wall	scenario_lim_div_wall (9.8.1.3.391)	values on the plate of divertor or on the limiter or on the wall (@ LCMS)
line_ave	scenario_line_ave (9.8.1.3.392)	line averaged value
neutron	scenario_neutron (9.8.1.3.393)	neutron flux for DD and DT reactions
ninety_five	scenario_ninety_five (9.8.1.3.394)	values at 95% of poloidal flux
pedestal	scenario_pedestal (9.8.1.3.395)	Values at the top of the H-mode pedestal
references	scenario_references (9.8.1.3.398)	References
reactor	scenario_reactor (9.8.1.3.396)	reactor data (such as electricity cost ...)
sol	scenario_sol (9.8.1.3.399)	SOL characteristic (@ LCMS)
vol_ave	scenario_vol_ave (9.8.1.3.400)	volume averaged value
codeparam	codeparam (9.8.1.3.84)	Code parameters
time	float (9.8.1.1.1)	Time [s]; Time-dependent; Scalar

### 9.8.1.3.45 solcurdiag

SOL current diagnostic. Time-dependent CPO

member	type	description
datainfo	datainfo (9.8.1.3.141)	Generic information on a data item
sol_current(:)	solcurdiag_sol_current (9.8.1.3.408)	Vector of toroidal rings of divertor tiles. Structure array(nrings). Time-dependent
clusters(:)	clusters (9.8.1.3.83)	Cluster of tile rings to define and reference superset structures using the individual tile rings. A coil ring can coexist on two top level structures. Structure array (ncluster).
time	float (9.8.1.1.1)	Time [s]; Time-dependent; Scalar
codeparam	codeparam (9.8.1.3.84)	Code parameters

### 9.8.1.3.46 temporary

Storage of undeclared data model components; Time-dependent CPO

member	type	description
datainfo	datainfo (9.8.1.3.141)	Generic information on a data item
non_timed	temporary_nt (9.8.1.3.430)	Time-independent quantities (parameters)
timed	temporary_t (9.8.1.3.446)	Time-dependent quantities
codeparam	codeparam (9.8.1.3.84)	Code parameters
time	float (9.8.1.1.1)	Time [s]; Time-dependent; Scalar

### 9.8.1.3.47 topinfo

General info about the database entry. CPO.

member	type	description
dataprovder	string (9.8.1.1.3)	Name of the main data provider (the person who filled the original data)
description	string (9.8.1.1.3)	Pulse/Entry description
firstputdate	string (9.8.1.1.3)	Date of the original data submission
lastupdate	string (9.8.1.1.3)	Date of the last data addition in the tree
source	string (9.8.1.1.3)	Exact reference of the data source (e.g. original reference in the native machine data base)
comment	string (9.8.1.1.3)	Any additional comment
dataversion	string (9.8.1.1.3)	Version of the data structure
workflow	string (9.8.1.1.3)	Workflow which has been used to produce the present entry. Exact format to be defined with the platform group. User-specific input files (if allowed) must be stored there as well.
entry	entry_def (9.8.1.3.194)	Definition of this database entry
parent_entry	entry_def (9.8.1.3.194)	Definition of the entry of the direct parent (if any)

member	type	description
mdinfo	mdinfo (9.8.1.3.269)	Information related to machine description for this entry

### 9.8.1.3.48 toroidfield

Toroidal field. Time-dependent CPO

member	type	description
datainfo	datainfo (9.8.1.3.141)	Generic information on a data item
desc_tfcoils	tf_desc_tfcoils (9.8.1.3.461)	Description of the toroidal field coils
nturns	integer (9.8.1.1.2)	Number of total turns in the toroidal field coil
ncoils	integer (9.8.1.1.2)	Number of packets of coils
current	exp0D (9.8.1.3.203)	Current in the toroidal field coils [A]; Time-dependent. Scalar.
bvac.r	exp0D (9.8.1.3.203)	Vacuum field times radius in the toroidal field magnet [T.m]. Positive sign means anti-clockwise when viewed from above. Time-dependent. Scalar.
r0	float (9.8.1.1.1)	Characteristic major radius of the device (used in publications, usually middle of the vessel at the equatorial midplane) [m]. Scalar.
p_cryo	float (9.8.1.1.1)	Total electric power consumed by the cryoplant system [W]; Time-dependent. Scalar.
wp_nh.max	float (9.8.1.1.1)	Peak nuclear heating in winding pack [ $W \cdot m^{-3}$ ]. Time-dependent. Scalar
tfc_nh	float (9.8.1.1.1)	Nuclear heating on the toroidal field coils [W]; Time-dependent. Scalar
neut_flux.inb	float (9.8.1.1.1)	Neutron flux arriving at the inboard surface of the coil (on the plasma side) [ $neutron.s^{-1}.m^{-2}$ ]; Time-dependent. Scalar.
neut_flux.outb	float (9.8.1.1.1)	Neutron flux arriving at the ouboard surface of the coil (on the plasma side) [ $neutron.s^{-1}.m^{-2}$ ]; Time-dependent. Scalar.
codeparam	codeparam (9.8.1.3.84)	Code parameters
time	float (9.8.1.1.1)	Time [s]; Time-dependent. Scalar.

### 9.8.1.3.49 tsdiag

Thomson scattering Diagnostic; Time-dependent CPO

member	type	description
datainfo	datainfo (9.8.1.3.141)	Generic information on a data item
setup	tssetup (9.8.1.3.475)	diagnostic setup information
measure	tsmeasure (9.8.1.3.474)	Measured values
codeparam	codeparam (9.8.1.3.84)	Code parameters
time	float (9.8.1.1.1)	Time [s]; Time-dependent; Scalar

### 9.8.1.3.50 turbulence

Turbulence; Time-dependent CPO.

member	type	description
datainfo	datainfo (9.8.1.3.141)	Generic information on a data item
composition	turbcomposition (9.8.1.3.476)	Plasma composition (description of ion species).
coordsys	turbcoordsys (9.8.1.3.477)	Description of the coordinates and metric used by the codes.
var0d	turbvar0d (9.8.1.3.481)	Diagnostic fast time traces.
var1d	turbvar1d (9.8.1.3.482)	Dependent variable radial profile.
var2d	turbvar2d (9.8.1.3.483)	Dependent variable axisymmetric.
var3d	turbvar3d (9.8.1.3.484)	Dependent variable morphology. Grid is defined in coord_sys/turbgrid.
var4d	turbvar4d (9.8.1.3.485)	Gyrokinetic distribution function, axisymmetric component. Grid is defined in coord_sys/turbgrid.
var5d	turbvar5d (9.8.1.3.486)	Gyrokinetic distribution function. Grid is defined in coord_sys/turbgrid.
spec1d	turbpec1d (9.8.1.3.480)	Toroidal mode number spectra.
env1d	turbenv1d (9.8.1.3.478)	Parallel fluctuation envelope.
codeparam	codeparam (9.8.1.3.84)	Code parameters
time	float (9.8.1.1.1)	Time [s]; Time-dependent; Scalar.

### 9.8.1.3.51 wall

General Wall representation. Time-dependent CPO.

member	type	description
datainfo	datainfo (9.8.1.3.141)	Generic information on a data item
wall0d	wall.wall0d (9.8.1.3.501)	Simple 0D description of plasma-wall interaction
wall2d_mhd	wall2d_mhd (9.8.1.3.489)	Simplified wall that encloses necessary information for RWM codes.
wall2d(:)	wall2d (9.8.1.3.488)	2D wall descriptions; Array of structures (number of wall descriptions). Replicate this element for each type of possible physics or engineering configurations necessary (gas tight vs wall with ports and holes, coarse vs fine representation, single contour limiter, disjoint gapped plasma facing components, ...). Time-dependent
wall3d(:)	wall3d (9.8.1.3.490)	3D wall descriptions; Array of structures (number of wall descriptions). Replicate this element for each type of possible physics or engineering configurations necessary (gas tight vs wall with ports and holes, coarse vs fine representation, ...). Time-dependent
wall.types(:)	wall.types (9.8.1.3.494)	List of reference wall types (e.g. bulk tungsten, tungsten-coated CFC, ...); Array of structures (number of reference wall types)
compounds(:)	compound_desc (9.8.1.3.107)	Chemical compounds (e.g. solid tungsten, WC, CFC, ...) possibly present in the wall. Array of structure (number of compounds)
elements(:)	element_desc (9.8.1.3.193)	Chemical elements present in the wall units, including elements from the plasma (gas + impurities). Use by compounds. Array of structures (number of elements)
compositions	compositions.type (9.8.1.3.106)	NO DOCS
codeparam	codeparam (9.8.1.3.84)	Code parameters
time	float (9.8.1.1.1)	Time [s]; Time-dependent; Scalar.

### 9.8.1.3.52 waves

RF wave propagation and deposition. Time-dependent CPO

member	type	description
datainfo	datainfo (9.8.1.3.141)	Generic information on a data item
coherentwave(:)	coherentwave (9.8.1.3.86)	Wave description for each frequency. Time-dependent. Structure array(nfreq)
codeparam	codeparam (9.8.1.3.84)	Code parameters
time	float (9.8.1.1.1)	Time [s]; Time-dependent; Scalar

### 9.8.1.3.53 Utility Structures

#### 9.8.1.3.54 amns\_constituentType

Contains all of the information to characterize an AMNS constituent.

member	type	description
label	string (9.8.1.1.3)	String identifier for reaction constituent (e.g. "D", "C").
zn	integer (9.8.1.1.2)	Number of protons in the nucleus (nuclear charge); 0 if none (e-, gamma)
mn	integer (9.8.1.1.2)	Number of nucleons in the nucleus (nuclear mass); 0 if none (e-, gamma); Not set if not important (e.g. for an atomic process that is not isotope dependent)
multiplicity	float (9.8.1.1.1)	Multiplicity in the compound

Type of: reacprodType:constituents (3457)

#### 9.8.1.3.55 amns\_processType

Contains all of the information to characterize an AMNS process; Vector(nprocs).

member	type	description
proc_label	string (9.8.1.1.3)	Label for process (e.g. EI, RC; could also include error estimates)
reactant(:)	reacprodType (9.8.1.3.351)	Array of reactants; Vector(nreac).
product(:)	reacprodType (9.8.1.3.351)	Array of products; Vector(nprod).
sup_string	vecstring_type (9.8.1.2.15)	String array to be used if supplementary information is required.
sup_real	vecflt_type (9.8.1.2.13)	Real array to be used if supplementary information is required.
sup_int	vecint_type (9.8.1.2.14)	Int array to be used if supplementary information is required.
quality	identifier (9.8.1.3.242)	Characterize the data quality
err_proc_label	string (9.8.1.1.3)	"proc_label" of an associated error table of the same type as the primary quantity

Type of: amns:process (3109)

### 9.8.1.3.56 antenna\_ec

Vector of Electron Cyclotron antennas. Time-dependent

member	type	description
name	string (9.8.1.1.3)	Antenna name
frequency	float (9.8.1.1.1)	Frequency [Hz]
power	exp0D (9.8.1.3.203)	Power [W]; Time-dependent
mode	integer (9.8.1.1.2)	Incoming wave mode (+ or -1 for O/X mode); Time-dependent
position	rzphi0D (9.8.1.3.371)	Launching position in the global reference system; Time-dependent
launchangles	launchangles (9.8.1.3.252)	Launching angles of the beam
beam	rfbeam (9.8.1.3.364)	Beam characteristics at the launching position
codeparam	codeparam (9.8.1.3.84)	Code parameters

Type of: antennas:antenna\_ec (3110)

### 9.8.1.3.57 antenna\_ic

Vector of Ion Cyclotron antennas. Time-dependent

member	type	description
name	string (9.8.1.1.3)	Antenna name; String
frequency	exp0D (9.8.1.3.203)	Frequency [Hz]; Time-dependent; Exp0d
power	exp0D (9.8.1.3.203)	Power [W]; Time-dependent; Exp0d
ntor	vecint.type (9.8.1.2.14)	Toroidal mode numbers [-]; Time-dependent; Vector(n_ntor)
power_ntor	vecflt.type (9.8.1.2.13)	Power coupled in each toroidal mode [W]; Time-dependent; Vector(n_ntor)
setup	antennaic_setup (9.8.1.3.59)	Detailed description of IC antenna hardware and internal settings
codeparam	codeparam (9.8.1.3.84)	Code parameters

Type of: antennas:antenna\_ic (3110)

### 9.8.1.3.58 antenna\_lh

Vector of Lower Hybrid antennas. Time-dependent

member	type	description
name	string (9.8.1.1.3)	Antenna name, String
frequency	float (9.8.1.1.1)	Frequency [Hz]
power	exp0D (9.8.1.3.203)	Power [W]; Exp0d. Time-dependent
n_par	float (9.8.1.1.1)	Main parallel refractive index of the launched spectrum, for multi-junction antennas. Time-dependent
position	rzphi0D (9.8.1.3.371)	Reference global antenna position. Time-dependent
setup	antennalh_setup (9.8.1.3.60)	Detailed description of LH antennas.
plasmaedge	plasmaedge (9.8.1.3.339)	Plasma edge characteristics in front of the antenna.
beam	rfbeam (9.8.1.3.364)	Beam characteristics
codeparam	codeparam (9.8.1.3.84)	Code parameters

Type of: antennas:antenna\_lh (3110)

### 9.8.1.3.59 antennaic\_setup

Detailed description of an ICRH antenna; hardware and settings

member	type	description
straps(:)	straps (9.8.1.3.423)	Properties of the IC antenna strap; Time-dependent; Vector(nstraps)
current	current (9.8.1.3.137)	Description of the IC surface currents on the antenna straps and on passive components.

Type of: antenna\_ic:setup (3163)

### 9.8.1.3.60 antennalh\_setup

Detailed description of LH antennas

member	type	description
modules	modules (9.8.1.3.282)	Modules description. NB there are nmodules per antenna, distributed among nma.phi toroidal positions and nma.theta poloidal positions

Type of: antenna\_lh:setup (3164)

### 9.8.1.3.61 b0r0

Characteristics of the vacuum toroidal field, redundant with the toroidfield CPO, normalisation used by the ETS

member	type	description
r0	float (9.8.1.1.1)	Characteristic major radius of the device (used in publications, usually middle of the vessel at the equatorial midplane) [m]. Scalar.
b0	float (9.8.1.1.1)	Vacuum field at r0 [T]; Positive sign means anti-clockwise when viewed from above. Scalar. Time-dependent.

Type of: corefast:toroid\_field (3116) I coresource:toroid\_field (3120) I dist\_geometry\_0d:toroid\_field (3260) I dist-source\_global\_param:toroid\_field (3280) I global\_param:toroid\_field (3341) I mhd:toroid\_field (3138) I waves\_global\_param:toroid\_field (3611)

### 9.8.1.3.62 bb

Breeding blanket

member	type	description
nb_bb	float (9.8.1.1.1)	Total (in the reactor) number of breeding blanket module; Scalar
nb_bb_polcut	float (9.8.1.1.1)	Number of bb modules on a poloidal cut; Scalar
teta_bb	float (9.8.1.1.1)	Angle (0 for equatorial outboard, then in anti-clockwise direction) of bb module; [deg]
tbr	float (9.8.1.1.1)	Tritium breeding ratio of the blanket [-]; Scalar
neutro_resul	neutro_resul (9.8.1.3.298)	Neutronic results
inboard	bb_specs (9.8.1.3.65)	Inboard
outboard	bb_specs (9.8.1.3.65)	Outboard

Type of: bb\_shield:bb (3111)

### 9.8.1.3.63 bb\_dimension

dimension of the various modules

member	type	description
radial	vecflt_type (9.8.1.2.13)	Radial dimension [m]. Vector(nmodules)
toroidal	vecflt_type (9.8.1.2.13)	Toroidal dimension [m]. Vector(nmodules)
poloidal	vecflt_type (9.8.1.2.13)	Poloidal dimension [m]. Vector(nmodules)

Type of: bb\_geometry:bot\_cap\_dim (3170) I bb\_geometry:top\_cap\_dim (3170) I bb\_specs:dimension (3171)

### 9.8.1.3.64 bb\_geometry

Geometrical parameters of "the" reference outboard blanket module

member	type	description
dr_fw	float (9.8.1.1.1)	Radial thickness of the FW [m]; Scalar
dr_bz	float (9.8.1.1.1)	Radial thickness of the BZ (between the FW and the 1st back plate wall) [m]; Scalar
dr_bp	float (9.8.1.1.1)	Radial thickness of the BPs integrated to the module [m]; Scalar
dr_bp_plates	vecflt_type (9.8.1.2.13)	Radial thickness of every BP integrated to the module [m]; Vector(nplates)
dr_bp_he	vecflt_type (9.8.1.2.13)	Radial thickness of Helium layers [m]; Vector(nplates)
dr_man	float (9.8.1.1.1)	Radial thickness of the banana manifold common to all modules [m]; Scalar
dt_sw	float (9.8.1.1.1)	Toroidal thickness of side walls (or covers) [m]; Scalar
dt_bz	float (9.8.1.1.1)	Toroidal dimension of the BZ (between the two side walls [m]; Scalar
dp_bz	float (9.8.1.1.1)	Poloidal dimension of the Breeder zone [m]; Scalar
top_cap_dim	bb_dimension (9.8.1.3.63)	Top cap dimension of bb modules

member	type	description
bot_cap_dim	bb_dimension (9.8.1.3.63)	Bottom cap dimension of bb modules
a_fw_ch	float (9.8.1.1.1)	First wall channel radial dimension [m]; Scalar
b_fw_ch	float (9.8.1.1.1)	First wall channel toroidal dimension [m]; Scalar
td_tc_ch	float (9.8.1.1.1)	Top cap channel toroidal dimension [m]; Scalar
rd_tc_ch	float (9.8.1.1.1)	Top cap channel radial dimension [m]; Scalar
td_bc_ch	float (9.8.1.1.1)	Bottom cap channel toroidal dimension [m]; Scalar
rd_bc_ch	float (9.8.1.1.1)	Bottom cap channel radial dimension [m]; Scalar
n_fw_ch	float (9.8.1.1.1)	Number of first wall channels; Scalar
n_fw_circ	float (9.8.1.1.1)	Number of circulation in channel first wall channels; Scalar
a_sg_ch	float (9.8.1.1.1)	Stiffening grid channel dimension 1 [m]; Scalar
b_sg_ch	float (9.8.1.1.1)	Stiffening grid channel dimension 2 [m]; Scalar
n_sg_ch	float (9.8.1.1.1)	Number of channels per stiffening plate [m]; Scalar
sg_thick	float (9.8.1.1.1)	Stiffening grid thickness [m]; Scalar
sg_weld	float (9.8.1.1.1)	Stiffening grid required dimension for welding [m]; Scalar
sg_in_out	float (9.8.1.1.1)	Stiffening grid input/output geometry length [m]; Scalar
r_sg_cp	float (9.8.1.1.1)	Percentage of the cooling plate length [-]; Scalar
cp_tor_gap	float (9.8.1.1.1)	Gap between cooling plates and toroidal breeder [m]; Scalar
a_cp_ch	float (9.8.1.1.1)	Cooling plates channel dimension 1 [m]; Scalar
b_cp_ch	float (9.8.1.1.1)	Cooling plates channel dimension 2 [m]; Scalar
n_cp_ch	float (9.8.1.1.1)	Number of channels per cooling plates [m]; Scalar
cp_thick	float (9.8.1.1.1)	Cooling plates thickness [m]; Scalar
n_pol_bu	float (9.8.1.1.1)	Number of poloidal breeder units; Scalar
n_tor_bu	float (9.8.1.1.1)	Number of toroidal breeder units; Scalar
n_cp_bu	float (9.8.1.1.1)	Number of cooling plates per breeder unit; Scalar
cp_in_out	float (9.8.1.1.1)	Cooling plate input/output geometry length [m]; Scalar
he_man_tck	float (9.8.1.1.1)	Helium stage manifold thickness [m]; Scalar
man_tck	float (9.8.1.1.1)	Manifold zone thickness [m]; Scalar
pbli_bptb_od	float (9.8.1.1.1)	Output diameter of pbli tube [m]; Scalar
pbli_bptb_id	float (9.8.1.1.1)	Input diameter of pbli tube [m]; Scalar
he_bptb_od	float (9.8.1.1.1)	Output diameter of He inlet tube [m]; Scalar
he_bptb_id	float (9.8.1.1.1)	Input diameter of He inlet tube [m]; Scalar
dr_max_fw	float (9.8.1.1.1)	First wall frontmost thickness [m]; Scalar
dr_fwpl	float (9.8.1.1.1)	Radial thickness of first protective layer [m]; Scalar

Type of: hcllbb\_specs:mod\_geom (3346)

### 9.8.1.3.65 bb\_specs

Inboard

member	type	description
nbb	float (9.8.1.1.1)	Number of inboard or outboard bb modules (in a poloidal cut), Scalar
r1	float (9.8.1.1.1)	Inner radius (nearest to the plasma), in the global tokamak coordinate system of the inboard or outboard bb located at the equatorial plane [m]; Scalar
r2	float (9.8.1.1.1)	Outer radius (farthest to the plasma), in the global tokamak coordinate system of the inboard or outboard bb located at the equatorial plane [m]; Scalar
dimension	bb_dimension (9.8.1.3.63)	dimension of the various modules

Type of: bb:inboard (3168) I bb:outboard (3168)

### 9.8.1.3.66 beamletgroup

Group of beamlets with common vertical and horizontal focal point. If there are no common focal points, then select small groups of beamlets such that a focal point description of the beamlet-group provides a fair description.

member	type	description
position	rzphi0D (9.8.1.3.371)	Position of centre of injection unit surface (or grounded grid).
tang_rad	float (9.8.1.1.1)	Tangency radius (major radius where the central line of a NBI unit is tangent to a circle around the torus) [m]
angle	float (9.8.1.1.1)	Angle of inclination between a line at the centre of the injection unit surface and the horizontal plane [rad]



member	type	description
direction	integer (9.8.1.1.2)	Direction of the beam seen from above the torus: -1 = clockwise; 1 = counter clockwise
width_horiz	float (9.8.1.1.1)	Horizontal width of the beam group at the injection unit surface (or grounded grid) [m]
width_vert	float (9.8.1.1.1)	Vertical width of the beam group at the injection unit surface (or grounded grid) [m]
focussing	focussing (9.8.1.3.215)	Describes how the beam is focussed.
divergence	divergence (9.8.1.3.179)	Detailed information on beamlet divergence. Divergens is described as a super position of Gaussian profiles with amplitude "frac.divcomp" and vertical/horizontal divergence "div_vert"/"div_horiz". Note that for positive ion NBI the divergence is well described by a single Gaussian.
beamlets	beamlets (9.8.1.3.67)	Detailed information on beamlets.

Type of: nbi\_unit:beamletgroup (3399)

### 9.8.1.3.67 beamlets

Detailed information on beamlets.

member	type	description
position	rzphi1D (9.8.1.3.372)	Position of beamlets. Vector rzphi1D (nbeamlets)
tang_rad_blt	vecflt_type (9.8.1.2.13)	Tangency radius (major radius where the central line of a beamlet is tangent to a circle around the torus) [m]; Vector(nbeamlets)
angle_blt	vecflt_type (9.8.1.2.13)	Angle of inclination between a line at the centre of a beamlet and the horizontal plane [rad]; Vector(nbeamlets)
pow_frc_blt	vecflt_type (9.8.1.2.13)	Fraction of power of a unit injected by a beamlet; Vector(nbeamlets)

Type of: beamletgroup:beamlets (3172)

### 9.8.1.3.68 beamtracing

Beam-tracing or ray-tracing solver. Vector(nbeams). Time-dependent

member	type	description
npoints	integer (9.8.1.1.2)	Number of points along each ray/beam. Integer
power	float (9.8.1.1.1)	Initial power in each ray/beam [W]. Float. Time-dependent
dnpar	vecflt_type (9.8.1.2.13)	Spectral width in refractive index associated with each ray/beam, Vector (npoints). Time-dependent
length	vecflt_type (9.8.1.2.13)	Ray/beam curvilinear length [m], Vector (npoints). Time-dependent
position	waves_rtposition (9.8.1.3.510)	Ray/beam position
wavevector	waves_rtwavevector (9.8.1.3.511)	Ray/beam wave vector.
polarization	polarization (9.8.1.3.342)	Wave field polarization along the ray/beam.
powerflow	powerflow (9.8.1.3.345)	Power flow along the ray/beam.

Type of: coherentwave:beamtracing (3192)

### 9.8.1.3.69 bolometer\_measure

Measured values

member	type	description
prad	exp1D (9.8.1.3.204)	Radiated power measured by the various lines of sights [W]. Vector (nchords). Time-dependent.

Type of: bolometer:measure (3112)

### 9.8.1.3.70 bolometer\_processed

Processed values

member	type	description
prad_tot	exp0D (9.8.1.3.203)	Total radiated power [W]. Time-dependent.
prad_core	exp0D (9.8.1.3.203)	Radiated power from the core plasma [W]. Time-dependent.

Type of: bolometer:process (3112)

### 9.8.1.3.71 bolometer\_setup

diagnostic setup information

member	type	description
id	vecstring.type (9.8.1.2.15)	ID of the lines of sight. Array of strings (nchords).
los	setup_line (9.8.1.3.403)	Geometry of the lines of sight.
etendue	vecflt.type (9.8.1.2.13)	Etendue of the detector geometry [m <sup>2</sup> .sr]. Array of floats (nchords).

Type of: bolometer:setup (3112)

### 9.8.1.3.72 boundary

Boundary condition for the transport equation. Time-dependent.

member	type	description
value	vecflt.type (9.8.1.2.13)	Value of the boundary condition (in case flag = 2). Unit depends on type, respectively [1-Wb, 2-A, 3-V]. For type 1 to 3, only the first position in the vector is used. For type 5, all three positions are used, meaning respectively a1, a2, a3. Time-dependent. Vector(3).
source	string (9.8.1.1.3)	Source of the boundary condition (any comment describing its origin : code, path to diagnostic signals, massaging); String
type	integer (9.8.1.1.2)	Type of the boundary condition for the transport solver (in case flag = 2). 0- equation not solved; 1- edge value of poloidal flux; 2- total current inside boundary; 3- edge Vloop; 4- not defined; 5- generic boundary condition expressed as a1*(dpsi.drho.tor)+a2*psi=a3. . Time-dependent.Scalar
rho	float (9.8.1.1.1)	Position of the boundary condition (in terms of toroidal flux coordinate) for the transport solver [m]. Outside this boundary, the value of the data are considered to be prescribed. Scalar
codeparam	codeparam (9.8.1.3.84)	Code parameters

Type of: psi:boundary (3454)

### 9.8.1.3.73 boundary\_neutrals

Structure for the boundary condition of core transport equations (neutrals). Time-dependent;

member	type	description
value	vecflt.type (9.8.1.2.13)	Value of the boundary condition. Unit depends on type, respectively [1-field, 2-field.m <sup>-1</sup> , 3-m, 4-field.s <sup>-1</sup> ]. For type 1 to 4, only the first position in the vector is used. For type 5, all three positions are used, meaning respectively a1, a2, a3. Time-dependent. Array1D(3)
type	integer (9.8.1.1.2)	Type of the boundary condition for the transport solver. 0- equation not solved; 1- value of the field y; 2-radial derivative of the field (-dy/drho.tor); 3-scale length of the field y/(-dy/drho.tor); 4- flux; 5- generic boundary condition y expressed as a1y'+a2y=a3. Time-dependent. Int
rho.tor	float (9.8.1.1.1)	Position of the boundary condition (in terms of toroidal flux coordinate) for the transport solver [m]. Outside this boundary, the value of the data are considered to be prescribed. Time-dependent. Float.

Type of: corefieldneutral:boundary (3222) | corefieldneutrals:boundary (3223) | corefieldneutralv:boundary (3224)

### 9.8.1.3.74 boundaryyel

Structure for the boundary condition of core transport equations (electrons) Time-dependent;

member	type	description
value	vecflt.type (9.8.1.2.13)	Value of the boundary condition (in case flag = 2). Unit depends on type, respectively [1-field, 2-field.m <sup>-1</sup> , 3-m, 4-field.s <sup>-1</sup> ]. For type 1 to 4, only the first position in the vector is used. For type 5, all three positions are used, meaning respectively a1, a2, a3. Time-dependent. Vector(3).
source	string (9.8.1.1.3)	Source of the boundary condition (any comment describing its origin : code, path to diagnostic signals, massaging); String
type	integer (9.8.1.1.2)	Type of the boundary condition for the transport solver (in case flag = 2). 0- equation not solved; 1- value of the field y; 2-radial derivative of the field (-dy/drho.tor); 3-scale length of the field y/(-dy/drho.tor); 4- flux; 5- generic boundary condition y expressed as a1y'+a2y=a3. Time-dependent. Scalar

member	type	description
rho_tor	float (9.8.1.1.1)	Position of the boundary condition (in terms of toroidal flux coordinate) for the transport solver [m]. Outside this boundary, the value of the data are considered to be prescribed. Time-dependent. Scalar

Type of: corefield:boundary (3220)

### 9.8.1.3.75 boundaryimp

Structure for the boundary condition of core transport equations (impurities) Time-dependent

member	type	description
value	matflt.type (9.8.1.2.10)	Value of the boundary condition (in case flag = 2). Unit depends on type, respectively [1-field, 2-field.m <sup>-1</sup> , 3-m, 4-field.s <sup>-1</sup> ]. For type 1 to 4, only the first position in the first dimension is used. For type 5, all three positions are used, meaning respectively a1, a2, a3. Time-dependent. Array 2D (3,nzimp)
source	string (9.8.1.1.3)	Source of the boundary condition (any comment describing its origin : code, path to diagnostic signals, massaging); String
type	vecint.type (9.8.1.2.14)	Type of the boundary condition for the transport solver (in case flag = 2). 0- equation not solved; 1- value of the field y; 2-radial derivative of the field (-dy/drho_tor); 3-scale length of the field y/(-dy/drho_tor); 4- flux; 5- generic boundary condition y expressed as a1y'+a2y=a3. Time-dependent. Vector(nzimp)
rho	vecflt.type (9.8.1.2.13)	Position of the boundary condition (in terms of toroidal flux coordinate) for the transport solver [m]. Outside this boundary, the value of the data are considered to be prescribed. Time-dependent. Vector(nzimp)
codeparam	codeparam (9.8.1.3.84)	Code parameters

Type of: impurity\_type:boundary (3351)

### 9.8.1.3.76 boundaryion

Structure for the boundary condition of core transport equations (ions) Time-dependent

member	type	description
value	matflt.type (9.8.1.2.10)	Value of the boundary condition (in case flag = 2). Unit depends on type, respectively [1-field, 2-field.m <sup>-1</sup> , 3-m, 4-field.s <sup>-1</sup> ]. For type 1 to 4, only the first position in the first dimension is used. For type 5, all three positions are used, meaning respectively a1, a2, a3. Time-dependent. Matrix(3,nion)
source	vecstring.type (9.8.1.2.15)	Source of the boundary condition (any comment describing its origin : code, path to diagnostic signals, massaging); Array of strings (nion)
type	vecint.type (9.8.1.2.14)	Type of the boundary condition for the transport solver (in case flag = 2). 0- equation not solved; 1- value of the field y; 2-radial derivative of the field (-dy/drho_tor); 3-scale length of the field y/(-dy/drho_tor); 4- flux; 5- generic boundary condition y expressed as a1y'+a2y=a3. Time-dependent. Vector(nion)
rho_tor	vecflt.type (9.8.1.2.13)	Position of the boundary condition (in terms of toroidal flux coordinate) for the transport solver [m]. Outside this boundary, the value of the data are considered to be prescribed. Time-dependent. Vector(nion)

Type of: corefieldion:boundary (3221)

### 9.8.1.3.77 bpol\_probes

Poloidal field probes

member	type	description
setup_bprobe	setup_bprobe (9.8.1.3.401)	diagnostic setup information
measure	exp1D (9.8.1.3.204)	Measured value [T]; Time-dependent; Vector (nprobes)

Type of: magdiag:bpol\_probes (3137)

### 9.8.1.3.78 bremsstrahl\_measure

Measured values

member	type	description
zeff	exp1D (9.8.1.3.204)	Effective charge measured along a line of sight [-]. Time-dependent. Vector (nchords)

Type of: bremsstrahl:measure (3113)

### 9.8.1.3.79 bremsstrahl\_setup

diagnostic setup information

member	type	description
id	vecstring_type (9.8.1.2.15)	ID of the lines of sight. Array of strings (nchords).
los	setup_line_exp (9.8.1.3.404)	Geometry of the lines of sight.

Type of: bremsstrahl:setup (3113)

### 9.8.1.3.80 calorimetry\_heat\_source

Generic complex type for heat source or sink

member	type	description
name	string (9.8.1.1.3)	Name of the source. String
temp_in	float (9.8.1.1.1)	Temperature of the input flow [K]; Scalar
temp_out	float (9.8.1.1.1)	Temperature of the output flow [K]; Scalar
press_in	float (9.8.1.1.1)	Input Pressure [Pa]; Scalar
press_out	float (9.8.1.1.1)	Output Pressure [Pa]; Scalar
flow	float (9.8.1.1.1)	Flow of the source [kg/s]; Scalar
power	float (9.8.1.1.1)	Power of the source [W]; Scalar

Type of: heat\_sources:sinks (3131) | heat\_sources:sources (3131)

### 9.8.1.3.81 circuits

Description of the circuit of the power conversion system. Array of structure. (ncircuits).

member	type	description
component(:)	power_conv_component (9.8.1.3.343)	Description of the components of the power conversion system. Array of structure (ncomp).
power_net	float (9.8.1.1.1)	Net electric power generated [W]. Scalar
power_int	float (9.8.1.1.1)	Total electric power consumption of the power conversion system.[W]. Scalar
efficiency	float (9.8.1.1.1)	Efficiency of the reactor (ratio of the alternator electrical power to the total power needed to operate the reactor)

Type of: power\_conv:circuits (3147)

### 9.8.1.3.82 circularcoil

Circular coil description

member	type	description
centre	rz0D (9.8.1.3.365)	Circular coil centre
hlength	float (9.8.1.1.1)	Half length along coil axis [m]
radialwidth	float (9.8.1.1.1)	Half width, (outer radius-inner radius)/2 [m]

Type of: tf\_desc\_tfcoils:circularcoil (3567)

### 9.8.1.3.83 clusters

Cluster of tile rings to define and reference superset structures using the individual tile rings. A coil ring can coexist on two top level structures. Structure array (ncluster).

member	type	description
name	string (9.8.1.1.3)	Name of the toroidally distributed tile set. String.
start	integer (9.8.1.1.2)	ID of the tile set as a scalar where this superset starts. Integer.
finish	integer (9.8.1.1.2)	ID of the tile set as a scalar where this superset finishes. Integer.

Type of: solcurdiag:clusters (3152)

### 9.8.1.3.84 codeparam

Code parameters

member	type	description
codename	string (9.8.1.1.3)	Name of the code
codeversion	string (9.8.1.1.3)	Version of the code (as in the ITM repository)
parameters	string (9.8.1.1.3)	List of the code specific parameters, string expected to be in XML format.
output_diag	string (9.8.1.1.3)	List of the code specific diagnostic/output, string expected to be in XML format.
output_flag	integer (9.8.1.1.2)	Output flag : 0 means the run is successful, other values meaning some difficulty has been encountered, the exact meaning is then code specific. Negative values mean the result shall not be used. Exact rules could discussed and implemented in the module wrapper. Time-dependent.

Type of: amns:codeparam (3109) I antenna\_ec:codeparam (3162) I antenna\_ic:codeparam (3163) I antenna\_lh:codeparam (3164) I antennas:codeparam (3110) I bb\_shield:codeparam (3111) I bolometer:codeparam (3112) I boundary:codeparam (3178) I boundaryimp:codeparam (3181) I bremsstrahl:codeparam (3113) I coherentwave:codeparam (3192) I compositionc:codeparam (3114) I coredelta:codeparam (3115) I coredelta\_values:codeparam (3217) I corefast:codeparam (3116) I corefast\_values:codeparam (3219) I corefield:codeparam (3220) I corefieldion:codeparam (3221) I coreimpur:codeparam (3117) I coreneutrals:codeparam (3118) I coreprof:codeparam (3119) I coresource:codeparam (3120) I coresource\_values:codeparam (3238) I coretransp:codeparam (3121) I coretransp\_values:codeparam (3242) I cxdiag:codeparam (3122) I distri\_vec:codeparam (3279) I distribution:codeparam (3123) I distsource:codeparam (3124) I distsource\_source:codeparam (3284) I ecediag:codeparam (3125) I edge:codeparam (3126) I effc:codeparam (3127) I equilibrium:codeparam (3128) I flush:codeparam (3316) I fusiondiag:codeparam (3129) I fusiondiag\_fus\_product:codeparam (3335) I halphadiag:codeparam (3130) I heat\_sources:codeparam (3131) I ironmodel:codeparam (3133) I langmuirdiag:codeparam (3134) I launches:codeparam (3135) I lineintegraldiag:codeparam (3367) I lithiumdiag:codeparam (3136) I magdiag:codeparam (3137) I mhd:codeparam (3138) I msediag:codeparam (3139) I nbi:codeparam (3140) I nbi\_unit:codeparam (3399) I neoclassic:codeparam (3141) I ntm:codeparam (3142) I orbit:codeparam (3143) I pellets:codeparam (3144) I pfsystems:codeparam (3145) I power\_conv:codeparam (3147) I psi:codeparam (3454) I reflectomet:codeparam (3148) I rfadiag:codeparam (3149) I sawteeth:codeparam (3150) I scenario:codeparam (3151) I solcurdiag:codeparam (3152) I spectral:codeparam (3525) I temporary:codeparam (3153) I toroidfield:codeparam (3155) I tsdiag:codeparam (3156) I turbulence:codeparam (3157) I wall:codeparam (3158) I waves:codeparam (3159)

### 9.8.1.3.85 coefficients\_neutrals

Recycling and sputtering coefficients used by the neutral solver. The particular causing ion or impurity charge state is determined by the path.

member	type	description
recycling	recycling_neutrals (9.8.1.3.354)	Recycling coefficients. Time-dependent
sputtering	sputtering_neutrals (9.8.1.3.422)	Sputtering coefficients. Time-dependent

Type of: coreneutrals:ioncoeff (3118) I impcoeff:chargestate (3349)

### 9.8.1.3.86 coherentwave

Wave description for each frequency. Time-dependent. Structure array(nfreq)

member	type	description
wave_id	enum_instance (9.8.1.3.195)	List of identifiers for the coherent-wave, in terms of the type and name of the antenna driving the wave and an index separating waves driven by the same antenna. Possible types: EC/LH/IC (see waves.types in the Documentation website under Conventions/Enumerated.datatypes); the field name should include the name of the antenna as specified in either antennas(*)%ec_antenna%name, antennas(*)%ic_antenna%name, or antennas(*)%lh_antenna%name; the field index should separate different waves generated from a single antenna.
composition	composition (9.8.1.3.102)	Plasma composition (description of ion species). OBSOLESCEMENT.
compositions	compositions.type (9.8.1.3.106)	Contains detailed information on the plasma composition (main ions, impurities, neutrals, edge species).
global_param	waves_global_param (9.8.1.3.505)	Global wave deposition parameters
grid_1d	waves_grid_1d (9.8.1.3.506)	Grid points for 1D profiles.

member	type	description
grid_2d	waves_grid_2d (9.8.1.3.507)	Grid points for 2D profiles and for full wave solutions.
profiles_1d	waves_profiles_1d (9.8.1.3.508)	1D radial profiles
profiles_2d	waves_profiles_2d (9.8.1.3.509)	2D profiles in poloidal cross-section
beamtracing(:)	beamtracing (9.8.1.3.68)	Beam-tracing or ray-tracing solver. Vector(nbeams). Time-dependent
fullwave	fullwave (9.8.1.3.216)	Solution by full wave code
codeparam	codeparam (9.8.1.3.84)	Code parameters

Type of: waves:coherentwave (3159)

### 9.8.1.3.87 coil

Individual coil. Time-dependent. Structure array. Replicate this coil structure for coil element in the efcc array.

member	type	description
desc_coils	desc_coils (9.8.1.3.142)	Description of the coils
coilcurrent	exp1D (9.8.1.3.204)	Circuit feed current in the coil, defined positive if it flows from point 1 to point 2 of the geometry description [A]; Time-dependent
coilvoltage	exp1D (9.8.1.3.204)	Voltage on the full coil [V]; Time-dependent

Type of: efcc:coil (3127)

### 9.8.1.3.88 com

COM (Constants Of Motion) parameters identifying an orbit

member	type	description
amn	float (9.8.1.1.1)	Atomic mass of the particle; Scalar
zion	float (9.8.1.1.1)	Atomic charge of the particle; Scalar
energy	vecflt_type (9.8.1.2.13)	Energy of the particle [keV]; Time-dependent; Vector (norbits).
magn_mom	vecflt_type (9.8.1.2.13)	Magnetic momentum [ $\text{kg m}^2 / \text{s}^2 / \text{T}$ ]; Time-dependent; Vector(norbits).
p_phi	vecflt_type (9.8.1.2.13)	toroidal angular momentum [ $\text{kg m}^2 / \text{s}$ ]; Time-dependent; Vector(norbits);
sigma	vecint_type (9.8.1.2.14)	Sign of parallel velocity at $\psi=\psi_{\text{max}}$ along the orbit; Time-dependent; Vector(norbits)

Type of: orbit:com (3143)

### 9.8.1.3.89 complexgrid

Generic definition of a complex grid

member	type	description
uid	integer (9.8.1.1.2)	Unique index of this grid. Used for handling multiple grids
id	string (9.8.1.1.3)	Name / identifier string for this grid
spaces(:)	complexgrid_space (9.8.1.3.98)	Definitions of grid spaces. Array of structures (number of spaces)
subgrids(:)	complexgrid_subgrid (9.8.1.3.99)	Definitions of subgrids. Array of structures (number of subgrids)
metric	complexgrid_metric (9.8.1.3.92)	Metric coefficients
geo(:)	complexgrid_geo_global (9.8.1.3.90)	Geometry data for implicit objects
bases(:)	complexgrid_vector (9.8.1.3.100)	Vector bases. Used for aligned vector representation. Time-dependent (added systematically for the COMP child inheritance of that property). Array of structures (number of bases)

Type of: edge:grid (3126) I f\_expansion:grid (3312) I fullwave:grid (3322) I source\_rate:grid (3518) I wall3d:grid (3596)

### 9.8.1.3.90 complexgrid\_geo\_global

Geometry information for implicitly defined grid objects (which cannot be stored in the space definitions); Array of structures (number of alternate geometries).

member	type	description
geotype	integer (9.8.1.1.2)	Type of geometry (id flag). A flag defining how the geometry data associated with grid objects is to be interpreted. If the field is undefined (0=GRID.UNDEFINED), the standard interpretation for; the given coordinate types is assumed.
geotypeid	string (9.8.1.1.3)	Type of geometry (id string).
coordtype	vecint_type (9.8.1.2.14)	Type of coordinates describing the physical space. Vector (number of space dimensions); The size of coordtype defines the dimension of the space.; For predefined integer constants for standard coordinates see; the documentation of the grid service library.
geo_matrix(:)	complexgrid_scalar (9.8.1.3.94)	Geometry data matrix associated with implicit objects. Array of structures (number of subgrids this information is stored on); The exact definition of the stored values depends on the geometry type of the geometry complexgrid_geo_global.geotype;
measure(:)	complexgrid_scalar (9.8.1.3.94)	Measure of object, i.e. physical size (length for 1d, area for 2d, volume for 3d objects) in this geometry. [m <sup>dim</sup> ]; Use this field to store measures of implicitly defined grid objects.; Array of structures (number of subgrids this information is stored on)

Type of: complexgrid:geo (3195)

### 9.8.1.3.91 complexgrid\_indexlist

An index list describing a list of indices or a range of indices.; If the explicit index list ind is defined and has nonzero size, the list is assumed to be an explicit index list.; Otherwise it is assumed to be a range of indices.; A single index can either be defined by using an explicit list with a single entry or as a range with identical; start and end index.

member	type	description
range	vecint_type (9.8.1.2.14)	Defines an index range enumerating from range[1] to range[2] (with both range[1] and range[2] included). If additionally a third value range(3) is given, it is used as a stride. If it is omitted, a stride of 1 is assumed. Vector(3)
ind	vecint_type (9.8.1.2.14)	An explicit list of indices. If this member is defined and has nonzero size, the list is assumed to be explicit. Vector(length of explicit index list)

Type of: complexgrid\_objectlist:indset (3199)

### 9.8.1.3.92 complexgrid\_metric

Metric information for grid objects

member	type	description
measure(:)	complexgrid_scalar (9.8.1.3.94)	Measure of object, i.e. physical size (length for 1d, area for 2d, volume for 3d objects). [m <sup>dim</sup> ]; Use this field to store measures of implicitly defined grid objects.; Array of structures (number of subgrids this information is stored on)
g11(:)	complexgrid_scalar (9.8.1.3.94)	Metric coefficients g11. Array of structures (number of subgrids this information is stored on)
g12(:)	complexgrid_scalar (9.8.1.3.94)	Metric coefficients g12. Array of structures (number of subgrids this information is stored on)
g13(:)	complexgrid_scalar (9.8.1.3.94)	Metric coefficients g13. Array of structures (number of subgrids this information is stored on)
g22(:)	complexgrid_scalar (9.8.1.3.94)	Metric coefficients g22. Array of structures (number of subgrids this information is stored on)
g23(:)	complexgrid_scalar (9.8.1.3.94)	Metric coefficients g23. Array of structures (number of subgrids this information is stored on)
g33(:)	complexgrid_scalar (9.8.1.3.94)	Metric coefficients g33. Array of structures (number of subgrids this information is stored on)
jacobian(:)	complexgrid_scalar (9.8.1.3.94)	Jacobian. Array of structures (number of subgrids this information is stored on)

Type of: complexgrid:metric (3195)

### 9.8.1.3.93 complexgrid\_objectlist

A list of grid objects with a common class, either in explicit or implicit form.; The list is explicit if the matrix ind is given and has nonzero size. In this case the index tuples are listed in ind.; Otherwise the list is implicit and the index tuples are defined by a list of index lists stored in indset.



member	type	description
cls	vecint.type (9.8.1.2.14)	Class tuple of the grid objects in this object list. Vector (number of grid spaces)
indset(:)	complexgrid.indexlist (9.8.1.3.91)	Implicit list of the object indices.; Array of structures (number of grid spaces = length of index tuple). Every index of the index tuple is described by an index set, which defines either a list of index values or a range of index values.
ind	matint.type (9.8.1.2.11)	Explicit list of index tuples. Matrix (number of objects, number of spaces in grid).; First dimension: object index, second dimension: index tuple/space index.; If this field is defined and has nonzero size, the object list is understood to be explicit.

Type of: complexgrid\_subgrid:list (3205)

### 9.8.1.3.94 complexgrid\_scalar

A quantity stored on a grid. The data is given either as a vector of scalars, vectors or matrices.; Note that the vector and matrix storage methods are not meant for multidimensional data, but; for complex data representations with multiple degrees of freedom.; To be used as arrays of structure; FIXME: add non-timedependent element "label" of type string

member	type	description
griduid	integer (9.8.1.1.2)	Unique identifier of the grid this scalar quantity is associated with.
subgrid	integer (9.8.1.1.2)	Index of the subgrid (as stored in grid.subgrids) the data is stored on.
scalar	vecflt.type (9.8.1.2.13)	Scalar representation of data. One scalar entry is stored per object in the subgrid.; The order is implicitly defined by the subgrid.; Float Vector(nobjects_subgrid). First dimension: object index.
vector	matflt.type (9.8.1.2.10)	Vector representation of data. One vector is stored per object in the subgrid. The order is implicitly defined by the subgrid.; Float matrix(nobjects_subgrid, ndata).First dimension: object index, second dimension: index of data vector.
matrix	array3dflt.type (9.8.1.2.2)	Matrix representation of data. One matrix is stored per object in the subgrid. The order is implicitly defined by the subgrid.; 3d float array(nobjects_subgrid,ndata1,ndata2). First dimension: object index, second dimension: matrix row, third dimension: matrix column.

Type of: complexgrid\_geo\_global:geo\_matrix (3196) I complexgrid\_geo\_global:measure (3196) I complexgrid\_metric:g11 (3198) I complexgrid\_metric:g12 (3198) I complexgrid\_metric:g13 (3198) I complexgrid\_metric:g22 (3198) I complexgrid\_metric:g23 (3198) I complexgrid\_metric:g33 (3198) I complexgrid\_metric:jacobian (3198) I complexgrid\_metric:measure (3198) I complexgrid\_vector:comp (3206) I complexgrid\_vector\_simplestruct:comp (3207) I edge\_fluid\_scalar:bdvalue (3290) I edge\_fluid\_scalar:source (3290) I edge\_fluid\_scalar:value (3290) I edge\_fluid\_scalar\_simplestruct:source (3291) I edge\_fluid\_scalar\_simplestruct:value (3291) I edge\_kinetic\_distribution:source (3296) I edge\_kinetic\_distribution:value (3296) I f\_expansion:values (3312) I source\_rate:value (3518) I wall\_unitsComplexType:eta (3602) I wall\_unitsComplexType:permeability (3602)

### 9.8.1.3.95 complexgrid\_scalar\_cplx

A quantity stored on a grid. The data is given either as a vector of scalars, vectors or matrices.; Note that the vector and matrix storage methods are not meant for multidimensional data, but; for complex data representations with multiple degrees of freedom.; To be used as arrays of structure; FIXME: add non-timedependent element "label" of type string

member	type	description
griduid	integer (9.8.1.1.2)	Unique identifier of the grid this scalar quantity is associated with.
subgrid	integer (9.8.1.1.2)	Index of the subgrid (as stored in grid.subgrids) the data is stored on.
scalar	vecplx.type (9.8.1.2.12)	Scalar representation of data. One scalar entry is stored per object in the subgrid.; The order is implicitly defined by the subgrid.; Complex Vector(nobjects_subgrid). First dimension: object index.
vector	matplx.type (9.8.1.2.9)	Vector representation of data. One vector is stored per object in the subgrid. The order is implicitly defined by the subgrid.; Complex matrix(nobjects_subgrid, ndata).First dimension: object index, second dimension: index of data vector.
matrix	array3dcplx.type (9.8.1.2.1)	Matrix representation of data. One matrix is stored per object in the subgrid. The order is implicitly defined by the subgrid.; 3d complex array(nobjects_subgrid,ndata1,ndata2). First dimension: object index, second dimension: matrix row, third dimension: matrix column.

Type of: e\_components:b\_binorm (3286) I e\_components:b\_norm (3286) I e\_components:b\_para (3286) I e\_components:e\_binorm (3286) I e\_components:e\_minus (3286) I e\_components:e\_norm (3286) I e\_components:e\_para (3286) I e\_components:e\_plus (3286) I e\_components:k\_perp (3286)

### 9.8.1.3.96 complexgrid\_scalar\_int

A quantity stored on a grid. The data is given either as a vector of scalars, vectors or matrices.; Note that the vector and matrix storage methods are not meant for multidimensional data, but; for complex data representations with multiple degrees of freedom.; To be used as arrays of structure; FIXME: add non-timedependent element "label" of type string

member	type	description
griduid	integer (9.8.1.1.2)	Unique identifier of the grid this scalar quantity is associated with.
subgrid	integer (9.8.1.1.2)	Index of the subgrid (as stored in grid.subgrids) the data is stored on.
scalar	vecint.type (9.8.1.2.14)	Scalar representation of data. One scalar entry is stored per object in the subgrid.; The order is implicitly defined by the subgrid.; Float Vector(nobjects.subgrid). First dimension: object index.
vector	matint.type (9.8.1.2.11)	Vector representation of data. One vector is stored per object in the subgrid. The order is implicitly defined by the subgrid.; Float matrix(nobjects.subgrid, ndata).First dimension: object index, second dimension: index of data vector.
matrix	array3dint.type (9.8.1.2.3)	Matrix representation of data. One matrix is stored per object in the subgrid. The order is implicitly defined by the subgrid.; 3d float array(nobjects.subgrid,ndata1,ndata2). First dimension: object index, second dimension: matrix row, third dimension: matrix column.

### 9.8.1.3.97 complexgrid\_scalar\_simplestruct

A quantity stored on a grid. The data is given either as a vector of scalars, vectors or matrices.; Note that the vector and matrix storage methods are not meant for multidimensional data, but; for complex data representations with multiple degrees of freedom.; To be used as a simple structure; FIXME: add non-timedependent element "label" of type string

member	type	description
subgrid	integer (9.8.1.1.2)	Index of the subgrid (as stored in grid.subgrids) the data is stored on.
scalar	vecflt.type (9.8.1.2.13)	Scalar representation of data. One scalar entry is stored per object in the subgrid.; The order is implicitly defined by the subgrid.; Float Vector(nobjects.subgrid). First dimension: object index.
vector	matflt.type (9.8.1.2.10)	Vector representation of data. One vector is stored per object in the subgrid. The order is implicitly defined by the subgrid.; Float matrix(nobjects.subgrid, ndata).First dimension: object index, second dimension: index of data vector.
matrix	array3dflt.type (9.8.1.2.2)	Matrix representation of data. One matrix is stored per object in the subgrid. The order is implicitly defined by the subgrid.; 3d float array(nobjects.subgrid,ndata1,ndata2). First dimension: object index, second dimension: matrix row, third dimension: matrix column.

### 9.8.1.3.98 complexgrid\_space

Description of a grid space

member	type	description
geotype	vecint.type (9.8.1.2.14)	Type of space geometry (id flags). Flags defining how the geometry (objects.geo) fields associated with; space objects are to be interpreted. Array (number of geometries defined for this space); first dimension: geometry index. A flag value of GRID.UNDEFINED=0 indicates the standard interpretation for; the given coordinates.
geotypeid	vecstring.type (9.8.1.2.15)	Type of space geometries (id string). See geotype.
coordtype	matint.type (9.8.1.2.11)	Type of coordinates describing the physical space. Vector (number of space dimensions); The size of coordtype defines the dimension of the space.; For predefined integer constants for standard coordinates see; the documentation of the grid service library.
objects(:)	objects (9.8.1.3.307)	Definition of the space objects.; Array of structures (dimension of highest-dimensional objects); First dimension: dimension of the objects (1=nodes, 2=edges, 3=faces, 4=cells/volumes, ...)
xpoints	vecint.type (9.8.1.2.14)	List of indices of all nodes which are x-points. Vector (number of x-points)

Type of: complexgrid:spaces (3195)

### 9.8.1.3.99 complexgrid\_subgrid

Subgrid definition. A subgrid is a list of grid objects, given as a list of explicit or implicit object lists.

member	type	description
id	string (9.8.1.1.3)	ID string (name) of the subgrid.
list(:)	complexgrid_objectlist (9.8.1.3.93)	List of object lists. Array of structures (number of object lists).

Type of: complexgrid:subgrids (3195)

### 9.8.1.3.100 complexgrid\_vector

A vector quantity stored on a grid, with components possibly explicitly aligned to a coordinate direction. To be used as array of structure.

member	type	description
griduid	integer (9.8.1.1.2)	Unique identifier of the grid this vector quantity is associated with.
label	string (9.8.1.1.3)	Label describing the data
comp(:)	complexgrid_scalar (9.8.1.3.94)	Components of the vector. Array of structures (number of vector components). Time-dependent; FIXME: inherit time-dependence for this element
align	vecint.type (9.8.1.2.14)	Alignment flag for vector components. Integer vector (number of vector components).
alignid	vecstring.type (9.8.1.2.15)	Alignment id for vector components. String vector (number of vector components).
basis	integer (9.8.1.1.2)	Index of basis (defined in associated grid) this vector is aligned to; If set to GRID.UNDEFINED=0, the canonical basis of the default coordinates of the grid assumed.

Type of: complexgrid:bases (3195) I edge\_fluid:b (3289) I edge\_fluid\_scalar:bndflux (3290) I edge\_fluid\_scalar:flux (3290) I edge\_fluid\_scalar\_simplestruct:bndflux (3291) I edge\_fluid\_scalar\_simplestruct:flux (3291) I edge\_kinetic\_distribution (3296) I wall\_unitsComplexType:j (3602)

### 9.8.1.3.101 complexgrid\_vector\_simplestruct

A vector quantity stored on a grid, with components possibly explicitly aligned to a coordinate direction. To be used as simple structure

member	type	description
label	string (9.8.1.1.3)	Label describing the data
comp(:)	complexgrid_scalar (9.8.1.3.94)	Components of the vector. Vector of griddata(ndim). Time-dependent; FIXME: inherit time-dependence for this element
align	vecint.type (9.8.1.2.14)	Alignment of vector components, numerical flag. Int vector(ndim)
alignid	vecstring.type (9.8.1.2.15)	Alignment of vector components, string description. String vector(ndim)

Type of: edge\_fluid\_scalar\_transpcoeff:d (3292) I edge\_fluid\_scalar\_transpcoeff:v (3292)

### 9.8.1.3.102 composition

Plasma composition (description of ion species). OBSOLESCEANT.

member	type	description
amn	vecflt.type (9.8.1.2.13)	Atomic mass number (lumped ions are allowed); Vector (nion)
zn	vecflt.type (9.8.1.2.13)	Nuclear charge (lumped ions are allowed); Vector (nion)
zion	vecflt.type (9.8.1.2.13)	Ion charge (of the dominant ionisation state; lumped ions are allowed); Vector (nion)
imp_flag	vecint.type (9.8.1.2.14)	Multiple charge state calculation flag : 0-Only one charge state is considered; 1-Multiple charge state are considered and are described in impurity CPO; Vector (nion)
label	vecstring.type (9.8.1.2.15)	Label for the ions - note the charge state is not included; String Vector (nion)

Type of: coherentwave:composition (3192) I coredelta:composition (3115) I corefast:composition (3116) I coreneutrals:composition (3118) I coreprof:composition (3119) I coresource:composition (3120) I coretransp:composition (3121) I distribution:composition (3123) I distsource:composition (3124) I neoclassic:composition (3141) I sawteeth:composition (3150)

### 9.8.1.3.103 composition\_neutrals

Description of neutrals species

member	type	description
atomlist(:)	coreneutrals_atomlist (9.8.1.3.128)	List of the atoms that enter the composition of the neutral species. Vector(natm)
neutral(:)	composition_neutralscomp (9.8.1.3.105)	List of neutrals. Vector(nneut)

Type of: coreneutrals:neutcompo (3118)

### 9.8.1.3.104 composition\_neutrals\_neutcomp

Array of components to the atom or molecule. Vector (ncomp)

member	type	description
nucindex	integer (9.8.1.1.2)	Index into list of nuclei; int
multiplicity	integer (9.8.1.1.2)	Multiplicity of the atom; int

Type of: composition\_neutralscomp:neutcomp (3211)

### 9.8.1.3.105 composition\_neutralscomp

Array of neutrals.

member	type	description
neutcomp(:)	composition_neutrals_neutcomp (9.8.1.3.104)	Array of components to the atom or molecule. Vector (ncomp)
type(:)	identifier (9.8.1.3.242)	Type of neutral, in terms of energy : 0=cold, 1=thermal, 2= fast, 3=NBI. Vector (ntype) of identifiers
label	string (9.8.1.1.3)	String identifying the atom or molecule (e.g. D2, DT, CD4, ...)

Type of: composition\_neutrals:neutral (3209) I compositions\_type:neutralscomp (3212)

### 9.8.1.3.106 compositions\_type

Generic declaration of Plasma composition for a simulation

member	type	description
nuclei(:)	nuclei (9.8.1.3.306)	Array of nuclei considered.
ions(:)	ions (9.8.1.3.247)	Array of main plasma ions.
impurities(:)	impurities (9.8.1.3.244)	Array of impurities.
neutralscomp(:)	composition_neutralscomp (9.8.1.3.105)	Array of neutrals.
edgespecies(:)	edgespecies (9.8.1.3.192)	Array of edge species.
signature	identifier (9.8.1.3.242)	Identifier for species choices. The goal of this is to uniquely capture the species blocks so that if the signatures are the same then the species blocks will also be the same.

Type of: coherentwave:compositions (3192) I compositionc:compositions (3114) I coredelta:compositions (3115) I corefast:compositions (3116) I coreimpur:compositions (3117) I coreneutrals:compositions (3118) I coreprof:compositions (3119) I coresource:compositions (3120) I coretransp:compositions (3121) I distribution:compositions (3123) I distsource:compositions (3124) I edge:compositions (3126) I neoclassic:compositions (3141) I pellets:compositions (3144) I wall:compositions (3158)

### 9.8.1.3.107 compound\_desc

Chemical compounds (e.g. solid tungsten, WC, CFC, ...) possibly present in the wall. Array of structure (number of compounds)

member	type	description
label	string (9.8.1.1.3)	Compound name/label
stoichiometry	vecflt_type (9.8.1.2.13)	Fractional composition of the compound. Float vector, dimensions: 1. element number (numbering as in wall/elements array)
density	float (9.8.1.1.1)	Compound density (molecules/m <sup>3</sup> )
heat_cap	float (9.8.1.1.1)	Specific heat capacity [J/(eV kg)]
heat_cond	vecflt_type (9.8.1.2.13)	Thermal conductivity [W/(m eV)]
surf_recrate	matflt_type (9.8.1.2.10)	Recombination rate on surface (only for pure elements, not compounds) [molecules*m <sup>-2</sup> /s]; Dimensions: index 1: first recombining element, index 2: second recombining element (numbering as in wall/elements array)

Type of: wall:compounds (3158)

### 9.8.1.3.108 coord\_sys

flux surface coordinate system on a square grid of flux and angle

member	type	description
grid_type	string (9.8.1.1.3)	Type of coordinate system
grid	reggrid (9.8.1.3.361)	Regular grid definition; Time-dependent
jacobian	matflt_type (9.8.1.2.10)	Jacobian of the coordinate system; Time-dependent; Matrix (ndim1, ndim2)
g_11	matflt_type (9.8.1.2.10)	metric coefficients g_11; $g_{ij}=g^{ij}$ are contravariant metric tensor for the grid described by grid_type. Time-dependent; Matrix (ndim1, ndim2)
g_12	matflt_type (9.8.1.2.10)	metric coefficients g_12; $g_{ij}=g^{ij}$ are contravariant metric tensor for the grid described by grid_type. Time-dependent; Matrix (ndim1, ndim2)
g_13	matflt_type (9.8.1.2.10)	metric coefficients g_13; $g_{ij}=g^{ij}$ are contravariant metric tensor for the grid described by grid_type. Time-dependent; Matrix (ndim1, ndim2)
g_22	matflt_type (9.8.1.2.10)	metric coefficients g_22; $g_{ij}=g^{ij}$ are contravariant metric tensor for the grid described by grid_type. Time-dependent; Matrix (ndim1, ndim2)
g_23	matflt_type (9.8.1.2.10)	metric coefficients g_23; $g_{ij}=g^{ij}$ are contravariant metric tensor for the grid described by grid_type. Time-dependent; Matrix (ndim1, ndim2)
g_33	matflt_type (9.8.1.2.10)	metric coefficients g_33; $g_{ij}=g^{ij}$ are contravariant metric tensor for the grid described by grid_type. Time-dependent; Matrix (ndim1, ndim2)
position	rz2D (9.8.1.3.369)	R and Z position of grid points; Time-dependent; Matrix (ndim1, ndim2)

Type of: equilibrium:coord\_sys (3128) I mhd\_plasma:coord\_sys (3378) I mhd\_vacuum:coord\_sys (3380)

### 9.8.1.3.109 coordinates

Poloidal and Toroidal coordinates of the center of each hole;

member	type	description
theta	vecflt_type (9.8.1.2.13)	Theta coordinate of holes center; Vector (n_holes)
phi	vecflt_type (9.8.1.2.13)	Toroidal coordinate of holes center; Vector (n_holes)

Type of: holes:coordinates (3347)

### 9.8.1.3.110 coords

Specification of coordinates in one dimension. Can be either a range of real values or a set of discrete values (if interp\_type=0).

member	type	description
coord	vecflt_type (9.8.1.2.13)	Coordinate values. Vector(npoints).
coord_label	vecstring_type (9.8.1.2.15)	String description of discrete coordinate values (if interp_type=0). Vector(npoints). E.g., for spectroscopic lines, the spectroscopic description of the transition.
extrap_type	vecint_type (9.8.1.2.14)	Extrapolation strategy when leaving the domain. Vector(2). Entry 1: behaviour at lower bound, entry 2: behaviour at upper bound.; Possible values: 0=none, report error; 1=boundary value; 2=linear extrapolation;
interp_type	integer (9.8.1.1.2)	Interpolation strategy in this coordinate direction. Integer flag: 0=discrete (no interpolation); 1=linear; ...
label	string (9.8.1.1.3)	Description of coordinate (e.g. "Electron temperature")
unit	string (9.8.1.1.3)	Units of coordinate (e.g. [eV])
transform	integer (9.8.1.1.2)	Coordinate transformation applied to coordinate values stored in coord. Integer flag: 0=none; 1=log10; 2=ln
spacing	integer (9.8.1.1.2)	Flag for specific coordinate spacing (for optimization purposes). Integer flag: 0=undefined; 1=uniform; ...

Type of: tables\_coord:coords (3535)

### 9.8.1.3.111 coredelta\_values

Description of the delta term for a given origin

member	type	description
deltaid	identifier (9.8.1.3.242)	Identifier for the origin of the delta terms (see conventions in the ITM website)
rho_tor	vecflt_type (9.8.1.2.13)	Toroidal flux coordinate (not normalised, equivalent to rho_tor_norm) [m]; Vector (nrho). Time-dependent.
rho_tor_norm	vecflt_type (9.8.1.2.13)	Normalised toroidal flux coordinate values (= rho_tor normalised to the value at the last grid point); Time-dependent; Vector (nrho)

member	type	description
psi	vecflt.type (9.8.1.2.13)	Poloidal flux [Wb], without $1/2\pi$ and such that $B_p =  \text{grad } \psi  / R/2/\pi$ . Time-dependent; Vector (nrho)
volume	vecflt.type (9.8.1.2.13)	Volume enclosed in the flux surface [ $\text{m}^3$ ]; Time-dependent; Vector (nrho)
area	vecflt.type (9.8.1.2.13)	Cross-sectional area of the flux surface [ $\text{m}^2$ ]; Time-dependent; Vector (nrho)
delta_psi	vecflt.type (9.8.1.2.13)	Instant change of the poloidal flux [Wb]. Time-dependent. Vector(nrho).
delta_te	vecflt.type (9.8.1.2.13)	Instant change of the electron temperature [eV]. Time-dependent. Vector(nrho).
delta_ti	matflt.type (9.8.1.2.10)	Instant change of the ion temperature [eV]. Time-dependent. Matrix (nrho,nion).
delta_ne	vecflt.type (9.8.1.2.13)	Instant change of the electron density [ $\text{m}^{-3}$ ]. Time-dependent. Vector(nrho).
delta_ni	matflt.type (9.8.1.2.10)	Instant change of the ion density [ $\text{m}^{-3}$ ]. Time-dependent. Matrix (nrho,nion).
impurity(:)	coredelta_values_impurity (9.8.1.3.112)	Array(nimp). Time-dependent
delta_vtor	matflt.type (9.8.1.2.10)	Instant change of the toroidal velocity [ $\text{m}\cdot\text{s}^{-1}$ ]. Time-dependent. Matrix (nrho,nion).
codeparam	codeparam (9.8.1.3.84)	Code parameters

Type of: coredelta:values (3115)

### 9.8.1.3.112 coredelta\_values\_impurity

Description of the delta term for an impurity

member	type	description
delta_tz	matflt.type (9.8.1.2.10)	Instant change of the impurity (multiple charge states) temperature [eV]. Time-dependent. Matrix (nrho,nzimp).
delta_nz	matflt.type (9.8.1.2.10)	Instant change of the impurity (multiple charge states) density [ $\text{m}^{-3}$ ]. Time-dependent. Matrix (nrho,nzimp).

Type of: coredelta\_values:impurity (3217)

### 9.8.1.3.113 corefast\_values

Description of the source terms for a given origin

member	type	description
fastid	identfier (9.8.1.3.242)	Identifier for the origin of the non-thermal contributions (see fast_particle_origin_identifier in the Documentation website under Conventions/Enumerated.datatypes). Time-dependent.
filter	fast_thermal_separation_filter (9.8.1.3.207)	Description of how the fast and the thermal particle populations were separated. Time-dependent.
rho_tor	vecflt.type (9.8.1.2.13)	Toroidal flux coordinate (not normalised, equivalent to rho_tor_norm) [m]; Vector (nrho). Time-dependent.
rho_tor_norm	vecflt.type (9.8.1.2.13)	Normalised toroidal flux coordinate values (= rho_tor normalised to the value at the last grid point). Vector (nrho). Time-dependent.
psi	vecflt.type (9.8.1.2.13)	Poloidal flux at the grid points for 1D profiles [Wb], without $1/2\pi$ and such that $B_p =  \text{grad } \psi  / R/2/\pi$ . Vector (nrho). Time-dependent.
volume	vecflt.type (9.8.1.2.13)	Volume enclosed in the flux surface [ $\text{m}^3$ ]. Vector (nrho). Time-dependent.
area	vecflt.type (9.8.1.2.13)	Cross-sectional area of the flux surface [ $\text{m}^2$ ]. Vector (nrho). Time-dependent.
j	vecflt.type (9.8.1.2.13)	Non thermal current, = average(j.B) / B0, where B0 = corefast/toroid.field/b0 [ $\text{A}\cdot\text{m}^{-2}$ ]. Vector(nrho). Time-dependent.
sigma	vecflt.type (9.8.1.2.13)	Non-thermal induced parallel conductivity [ $\text{ohm}^{-1}\cdot\text{m}^{-1}$ ]. EXACT DEFINITION PENDING. Vector(nrho). Time-dependent.
ni	matflt.type (9.8.1.2.10)	Non-thermal ion density [ $\text{m}^{-3}$ ]. Matrix(nrho,nions). Time-dependent.
ne	vecflt.type (9.8.1.2.13)	Non-thermal electron density [ $\text{m}^{-3}$ ]. Vector(nrho). Time-dependent.
nz	matflt.type (9.8.1.2.10)	Non-thermal impurity density [ $\text{m}^{-3}$ ]. Matrix(nrho,nimpur). Time-dependent.
pi	matflt.type (9.8.1.2.10)	Non-thermal ion pressure; the flux surface average of the $m^*v^2/3$ moment of the fast particle distribution function [Pa]. Matrix(nrho,nions). Time-dependent.
pe	vecflt.type (9.8.1.2.13)	Non-thermal electron pressure; the flux surface average of the $m^*v^2/3$ moment of the fast particle distribution function [Pa]. Vector(nrho). Time-dependent.
pz	matflt.type (9.8.1.2.10)	Non-thermal impurity total pressure; the flux surface average of the $m^*v^2/3$ moment of the fast particle distribution function [Pa]. Matrix(nrho,nimpur). Time-dependent.
pi_para	matflt.type (9.8.1.2.10)	Non-thermal ion parallel pressure; the flux surface average of the $m^*v_{\text{parallel}}^2$ moment of the fast particle distribution function [Pa]. Matrix(nrho,nions). Time-dependent.
pe_para	vecflt.type (9.8.1.2.13)	Non-thermal electron parallel pressure; the flux surface average of the $m^*v_{\text{parallel}}^2$ moment of the fast particle distribution function [Pa]. Vector(nrho). Time-dependent.
pz_para	matflt.type (9.8.1.2.10)	Non-thermal impurity parallel pressure; the flux surface average of the $m^*v_{\text{parallel}}^2$ moment of the fast particle distribution function [Pa]. Matrix(nrho,nimpur). Time-dependent.
ui	matflt.type (9.8.1.2.10)	Non-thermal ion toroidal velocity [ $\text{m}\cdot\text{s}^{-1}$ ]. Matrix(nrho,nions). Time-dependent.
uz	matflt.type (9.8.1.2.10)	Non-thermal impurity toroidal velocity [ $\text{m}\cdot\text{s}^{-1}$ ]. Matrix(nrho,nimpur). Time-dependent.

member	type	description
codeparam	codeparam (9.8.1.3.84)	Code parameters

Type of: corefast:values (3116)

#### 9.8.1.3.114 corefield

Structure for a main field of core transport equations; Time-dependent;

member	type	description
value	vecflt.type (9.8.1.2.13)	Signal value; Time-dependent; Vector (nrho)
ddrho	vecflt.type (9.8.1.2.13)	Radial derivative (dvalue/drho_tor) [signal_value.unit.m <sup>-1</sup> ]; Time-dependent; Vector (nrho)
d2drho2	vecflt.type (9.8.1.2.13)	Second order radial derivative (d2value/drho_tor <sup>2</sup> ) [signal_value.unit.m <sup>-2</sup> ]; Time-dependent; Vector (nrho)
ddt	vecflt.type (9.8.1.2.13)	Time derivative (dvalue/dtime) [signal_value.unit.s <sup>-1</sup> ]; Time-dependent; Vector (nrho)
source	string (9.8.1.1.3)	Source of the profile (any comment describing the origin of the profile : code, path to diagnostic signals, massaging, ...); String
flag	integer (9.8.1.1.2)	Flag describing how the profile has been processed : 0-not calculated 1-interpretative; 2-calculated by the transport solver; 3-calculated by a separate code : in that case only, description of the code provided in codeparam at the same level; 4-used value from the previous time step; Time-dependent; Scalar
boundary	boundaryel (9.8.1.3.74)	Boundary condition for the transport equation. Time-dependent.
source_term	sourceel (9.8.1.3.414)	Total source term for the transport equation. Time-dependent.
transp_coef	coretransel (9.8.1.3.133)	Total transport coefficients. Time-dependent.
flux	fluxel (9.8.1.3.212)	Fluxes of the quantity, two definitions. Time-dependent.
flux_dv_surf	vecflt.type (9.8.1.2.13)	Net flux through the magnetic surface, i.e. integral over the magnetic surface area of flux.dv. Time-dependent; Vector (nrho)
time_deriv	vecflt.type (9.8.1.2.13)	Integral of the time derivative term of the transport equation. Time-dependent. Vector (nrho)
codeparam	codeparam (9.8.1.3.84)	Code parameters

Type of: coreprof:ne (3119) I coreprof:te (3119)

#### 9.8.1.3.115 corefieldion

Structure for an ion field of core transport equations; Time-dependent;

member	type	description
value	matflt.type (9.8.1.2.10)	Signal value; Time-dependent; Matrix (nrho,nion)
ddrho	matflt.type (9.8.1.2.10)	Radial derivative (dvalue/drho_tor) [signal_value.unit.m <sup>-1</sup> ]; Time-dependent; Matrix (nrho,nion)
d2drho2	matflt.type (9.8.1.2.10)	Second order radial derivative (d2value/drho_tor <sup>2</sup> ) [signal_value.unit.m <sup>-2</sup> ]; Time-dependent; Matrix (nrho,nion)
ddt	matflt.type (9.8.1.2.10)	Time derivative (dvalue/dtime) [signal_value.unit.s <sup>-1</sup> ]; Time-dependent; Matrix (nrho,nion)
source	vecstring.type (9.8.1.2.15)	Source of the profile (any comment describing the origin of the profile : code, path to diagnostic signals, massaging, ...); Array of strings (nion)
flag	vecint.type (9.8.1.2.14)	Flag describing how the profile has been processed : 0-not calculated 1-interpretative; 2-calculated by the transport solver; 3-calculated by a separate code : in that case only, description of the code provided in codeparam at the same level; 4-used value from the previous time step; Time-dependent; Vector(nion)
boundary	boundaryion (9.8.1.3.76)	Boundary condition for the transport equation
source_term	sourceion (9.8.1.3.416)	Total source term for the transport equation. Time-dependent.
transp_coef	coretransion (9.8.1.3.135)	Total transport coefficients. Time-dependent.
flux	fluxion (9.8.1.3.214)	Fluxes of the quantity, two definitions. Time-dependent.
flux_dv_surf	matflt.type (9.8.1.2.10)	Net flux through the magnetic surface, i.e. integral over the magnetic surface area of flux.dv. Time-dependent; Matrix(nrho,nion)
time_deriv	matflt.type (9.8.1.2.10)	Integral of the time derivative term of the transport equation. Time-dependent. Matrix (nrho,nion)
codeparam	codeparam (9.8.1.3.84)	Code parameters

Type of: coreprof:ni (3119) I coreprof:ti (3119) I coreprof:vtor (3119)

#### 9.8.1.3.116 corefieldneutral

Structure for a main field of core neutral transport equations; Time-dependent;



member	type	description
value	vecflt.type (9.8.1.2.13)	Signal value; Array1D(nrho). Time-dependent
flux	vecflt.type (9.8.1.2.13)	Net neutral flux through the magnetic surface, positive values correspond to the direction from the center to the edge [ $s^{-1}$ ]. Array1D(nrho). Time-dependent;
boundary	boundary_neutrals (9.8.1.3.73)	Boundary condition for the transport equation. Time-dependent.

Type of: coreneutrals\_neutraltype:n0 (3235)

### 9.8.1.3.117 corefieldneutrals

Structure for a main field of core neutral transport equations, (Temperature, with flux as energy); Time-dependent;

member	type	description
value	vecflt.type (9.8.1.2.13)	Signal value; Array1D(nrho). Time-dependent
flux	vecflt.type (9.8.1.2.13)	Net flux of the kinetic energy through the magnetic surface ( $3/2 * E * n * V$ ), positive values correspond to the direction from the center to the edge [W]. Array1D(nrho). Time-dependent;
boundary	boundary_neutrals (9.8.1.3.73)	Boundary condition for the transport equation. Time-dependent.

Type of: coreneutrals\_neutraltype:t0 (3235)

### 9.8.1.3.118 corefieldneutralv

Structure for a main field of core neutral transport equations (without flux variable); Time-dependent;

member	type	description
value	vecflt.type (9.8.1.2.13)	Signal value; Vector(nrho). Time-dependent;
boundary	boundary_neutrals (9.8.1.3.73)	Boundary condition for the transport equation. Time-dependent.

Type of: corefieldneutralv0:poloidal (3225) | corefieldneutralv0:radial (3225) | corefieldneutralv0:toroidal (3225)

### 9.8.1.3.119 corefieldneutralv0

Neutral velocity

member	type	description
toroidal	corefieldneutralv (9.8.1.3.118)	Neutral velocity in the toroidal direction [ $m.s^{-1}$ ]. Positive is anti-clockwise when viewed from above. Time-dependent;
poloidal	corefieldneutralv (9.8.1.3.118)	Velocity of neutrals in the poloidal direction. 0 is directed towards low field side, pi is towards high field side. Positive is anti-clockwise when viewed with low field side at the right. [ $m.s^{-1}$ ]. Array3D(nrho,nneut,max_nstype). Time-dependent;
radial	corefieldneutralv (9.8.1.3.118)	Neutral velocity in the radial direction (perpendicular to the magnetic surface), positive is from the centre to the edge [ $m.s^{-1}$ ]. Array3D(nrho,nneut,max_nstype). Time-dependent;

Type of: coreneutrals\_neutraltype:v0 (3235)

### 9.8.1.3.120 coreimpurediag\_sum\_radiation

member	type	description
line_rad	coreimpurediagsum.type (9.8.1.3.127)	NO DOCS
brem_radrec	coreimpurediagsum.type (9.8.1.3.127)	NO DOCS
sum	coreimpurediagsum.type (9.8.1.3.127)	NO DOCS

Type of: coreimpurediag\_sum:radiation (3229)

### 9.8.1.3.121 coreimpurediag\_energy

member	type	description
ionization	coreimpurediagprof.type (9.8.1.3.126)	NO DOCS
recombin	coreimpurediagprof.type (9.8.1.3.126)	NO DOCS
sum	coreimpurediagprof.type (9.8.1.3.126)	NO DOCS

Type of: coreimpurediag.type:energy (3231)

#### 9.8.1.3.122 coreimpurediag\_radiation

member	type	description
line_rad	coreimpurediagprof.type (9.8.1.3.126)	NO DOCS
brem_radrec	coreimpurediagprof.type (9.8.1.3.126)	NO DOCS
sum	coreimpurediagprof.type (9.8.1.3.126)	NO DOCS

Type of: coreimpurediag.type:radiation (3231)

#### 9.8.1.3.123 coreimpurediag\_sum

member	type	description
radiation	coreimpurdiag_sum.radiation (9.8.1.3.120)	NO DOCS
energy	coreimpurediag_sum.energy (9.8.1.3.124)	NO DOCS

Type of: coreimpur:diagnosticsum (3117)

#### 9.8.1.3.124 coreimpurediag\_sum\_energy

member	type	description
ionization	coreimpurediagsum.type (9.8.1.3.127)	NO DOCS
recombin	coreimpurediagsum.type (9.8.1.3.127)	NO DOCS
sum	coreimpurediagsum.type (9.8.1.3.127)	NO DOCS

Type of: coreimpurediag\_sum:energy (3229)

#### 9.8.1.3.125 coreimpurediag\_type

member	type	description
radiation	coreimpurediag_radiation (9.8.1.3.122)	NO DOCS
energy	coreimpurediag.energy (9.8.1.3.121)	NO DOCS

Type of: coreimpur:diagnostic (3117) | impurity.type:diagnostic (3351)

#### 9.8.1.3.126 coreimpurediagprof\_type

member	type	description
profile	matflt.type (9.8.1.2.10)	Profile of the radiation or energy sources. Time-dependent. Array2D (nrho,nzimp or nimp)
integral	matflt.type (9.8.1.2.10)	Running integral over nrho of the radiation or energy sources. Time-dependent. Array2D (nrho,nzimp or nimp)

Type of: coreimpurediag\_energy:ionization (3227) I coreimpurediag\_energy:recombin (3227) I coreimpurediag\_energy:sum (3227) I coreimpurediag\_radiation:brem\_radrec (3228) I coreimpurediag\_radiation:line\_rad (3228) I coreimpurediag\_radiation:sum (3228)

### 9.8.1.3.127 coreimpurediagsum\_type

member	type	description
profile	vecflt_type (9.8.1.2.13)	Profile of the radiation or energy sources. Time-dependent. Array1D (nrho)
integral	vecflt_type (9.8.1.2.13)	Running integral over nrho of the radiation or energy sources. Time-dependent. Array1D (nrho)

Type of: coreimpurdiag\_sum\_radiation:brem\_radrec (3226) I coreimpurdiag\_sum\_radiation:line\_rad (3226) I coreimpurdiag\_sum\_radiation:sum (3226) I coreimpurediag\_sum\_energy:ionization (3230) I coreimpurediag\_sum\_energy:recombin (3230) I coreimpurediag\_sum\_energy:sum (3230)

### 9.8.1.3.128 coreneutrals\_atomlist

List of the atoms that enter the composition of the neutral species. Vector(natm)

member	type	description
amn	float (9.8.1.1.1)	Atomic mass number; Float
zn	float (9.8.1.1.1)	Nuclear charge; Float
ionimptype	identifier (9.8.1.3.242)	Identifier whether ion in coreprof or impurity in coreimpur.
ionimpindex	integer (9.8.1.1.2)	Index in composition or desc_impur of the corresponding ion or impurity.

Type of: composition\_neutrals:atomlist (3209)

### 9.8.1.3.129 coreneutrals\_neutraltype

Array (ntype) over neutral types.

member	type	description
n0	corefieldneutral (9.8.1.3.116)	Neutral density [ $m^{-3}$ ]. Time-dependent;
t0	corefieldneutralt (9.8.1.3.117)	Neutral temperature [eV]. Time-dependent;
v0	corefieldneutralv0 (9.8.1.3.119)	Neutral velocity [ $m.s^{-1}$ ]. Time-dependent;

Type of: neutral\_complex\_type:neutraltype (3403)

### 9.8.1.3.130 coreprofile

Structure for core plasma profile; Time-dependent

member	type	description
value	vecflt_type (9.8.1.2.13)	Signal value; Time-dependent; Vector (nrho)
source	string (9.8.1.1.3)	Source of the profile (any comment describing the origin of the profile : code, path to diagnostic signals, massaging, ...); String

Type of: profiles1d:bpol (3452) I profiles1d:dpedt (3452) I profiles1d:dpi\_totdt (3452) I profiles1d:dvprimedt (3452) I profiles1d:e\_b (3452) I profiles1d:eparallel (3452) I profiles1d:jni (3452) I profiles1d:joh (3452) I profiles1d:jphi (3452) I profiles1d:jtot (3452) I profiles1d:pe (3452) I profiles1d:pi\_tot (3452) I profiles1d:pr\_parallel (3452) I profiles1d:pr\_perp (3452) I profiles1d:pr\_th (3452) I profiles1d:q (3452) I profiles1d:qei (3452) I profiles1d:shear (3452) I profiles1d:sigmapar (3452) I profiles1d:vloop (3452) I profiles1d:zeff (3452) I psi:sigma\_par (3454)

### 9.8.1.3.131 coreprofion

Structure for core plasma ion profile; Time-dependent

member	type	description
value	matflt.type (9.8.1.2.10)	Signal value; Time-dependent; Matrix (nrho,nion)
source	vecstring.type (9.8.1.2.15)	Source of the profile (any comment describing the origin of the profile : code, path to diagnostic signals, massaging, ...); Array of strings (nion)

Type of: profiles1d:mtor (3452) I profiles1d:ns (3452) I profiles1d:pi (3452) I profiles1d:vpol (3452) I profiles1d:wtor (3452)

### 9.8.1.3.132 coresource.values

Description of the source terms for a given origin

member	type	description
sourceid	identifier (9.8.1.3.242)	Identifier for the origin of the source terms (see conventions in the ITM website)
rho.tor	vecflt.type (9.8.1.2.13)	Toroidal flux coordinate (not normalised, equivalent to rho.tor_norm) [m]; Vector (nrho). Time-dependent.
rho.tor_norm	vecflt.type (9.8.1.2.13)	Normalised toroidal flux coordinate values (= rho.tor normalised to the value at the last grid point); Time-dependent; Vector (nrho)
psi	vecflt.type (9.8.1.2.13)	Poloidal flux [Wb], without $1/2\pi$ and such that $B_p =  \text{grad } \psi  / R/2/\pi$ . Time-dependent; Vector (nrho)
volume	vecflt.type (9.8.1.2.13)	Volume enclosed in the flux surface [m <sup>3</sup> ]; Time-dependent; Vector (nrho)
area	vecflt.type (9.8.1.2.13)	Cross-sectional area of the flux surface [m <sup>2</sup> ]; Time-dependent; Vector (nrho)
j	vecflt.type (9.8.1.2.13)	Parallel current source for psi transport equation, = average(j.B) / B0, where B0 = core-source/toroid_field/b0 [A.m <sup>-2</sup> ]. Vector(nrho). Time-dependent.
sigma	vecflt.type (9.8.1.2.13)	Induced parallel conductivity [ohm <sup>-1</sup> .m <sup>-1</sup> ]. EXACT DEFINITION PENDING. Vector(nrho). Time-dependent.
si	source.ion (9.8.1.3.411)	Particle source for ion density transport equation [m <sup>-3</sup> .s <sup>-1</sup> ]. Time-dependent.
se	source.vec (9.8.1.3.413)	Particle source for electron density transport equation [m <sup>-3</sup> .s <sup>-1</sup> ]. Time-dependent.
sz(:)	source.imp (9.8.1.3.410)	Particle source for impurity density transport equation [m <sup>-3</sup> .s <sup>-1</sup> ]. Vector(nimpur). Time-dependent.
qi	source.ion (9.8.1.3.411)	Heat source for ion heat transport equations [W.m <sup>-3</sup> ]. Time-dependent.
qe	source.vec (9.8.1.3.413)	Heat source for electron heat transport equation [W.m <sup>-3</sup> ]. Time-dependent.
qz(:)	source.imp (9.8.1.3.410)	Heat source for impurity heat transport equations [W.m <sup>-3</sup> ]. Vector(nimpur). Time-dependent.
ui	source.ion (9.8.1.3.411)	Toroidal torque on individual ion species; for toroidal momentum transport equation [kg.m <sup>-1</sup> .s <sup>-2</sup> ]. Time-dependent.
ujxb	source.vec (9.8.1.3.413)	Toroidal jxB torque on bulk plasma; for toroidal momentum transport equation [kg.m <sup>-1</sup> .s <sup>-2</sup> ]. Here J is the return current from fast ion radial currents Jfast=-J. Time-dependent.
codeparam	codeparam (9.8.1.3.84)	Code parameters

Type of: coresource:values (3120)

### 9.8.1.3.133 coretransel

Structure for the transport coefficients for the transport equation (electrons). Time-dependent;

member	type	description
diff	vecflt.type (9.8.1.2.13)	Diffusion coefficient [m <sup>2</sup> .s <sup>-1</sup> ]. Time-dependent; Vector (nrho)
vconv	vecflt.type (9.8.1.2.13)	Convection coefficient [m.s <sup>-1</sup> ]. Time-dependent; Vector (nrho)
source	string (9.8.1.1.3)	Source of the profile (any comment describing the origin of the profile : code, path to diagnostic signals, massaging, ...); String

Type of: corefield:transp\_coef (3220)

### 9.8.1.3.134 coretransimp

Structure for the transport coefficients for the transport equation (impurities). Time-dependent;

member	type	description
diff	matflt.type (9.8.1.2.10)	Diffusion coefficient [m <sup>2</sup> .s <sup>-1</sup> ]. Time-dependent; Array2D(nrho,nzimp)
vconv	matflt.type (9.8.1.2.10)	Convection coefficient [m.s <sup>-1</sup> ]. Time-dependent; Array2D(nrho,nzimp)
source	vecstring.type (9.8.1.2.15)	Source of the profile (any comment describing the origin of the impurity profiles : code, path to diagnostic signals, massaging, ...); Array of strings (nimp)

Type of: impurity\_type:transp\_coef (3351)

### 9.8.1.3.135 coretransion

Structure for the transport coefficients for the transport equation (ions). Time-dependent;

member	type	description
diff	matflt_type (9.8.1.2.10)	Diffusion coefficient [ $m^2.s^{-1}$ ]. Time-dependent; Matrix (nrho,nion)
vconv	matflt_type (9.8.1.2.10)	Convection coefficient [ $m.s^{-1}$ ]. Time-dependent; Matrix (nrho,nion)
source	vecstring_type (9.8.1.2.15)	Source of the profile (any comment describing the origin of the profile : code, path to diagnostic signals, massaging, ...); Array of strings (nion)

Type of: corefieldion:transp\_coef (3221)

### 9.8.1.3.136 coretransp\_values

Description of transport term coming from various origins. Array of structure (ntransp)

member	type	description
transportid	identifier (9.8.1.3.242)	Identifier for the origin of the transport terms (see conventions in the ITM website)
rho_tor_norm	vecflt_type (9.8.1.2.13)	Normalised toroidal flux coordinate values (= rho_tor normalised to the value at the last grid point); Time-dependent; Vector (nrho)
rho_tor	vecflt_type (9.8.1.2.13)	Toroidal flux coordinate (not normalised, equivalent to rho_tor_norm) [m]; Vector (nrho). Time-dependent.
psi	vecflt_type (9.8.1.2.13)	Poloidal flux [Wb], without $1/2\pi$ and such that $B_p =  grad\ psi  / R/2/\pi$ . Time-dependent; Vector (nrho)
volume	vecflt_type (9.8.1.2.13)	Volume enclosed in the flux surface [ $m^3$ ]; Time-dependent; Vector (nrho)
area	vecflt_type (9.8.1.2.13)	Cross-sectional area of the flux surface [ $m^2$ ]; Time-dependent; Vector (nrho)
sigma	vecflt_type (9.8.1.2.13)	Parallel conductivity [ $ohm^{-1}.m^{-1}$ ]. Time-dependent. Vector(nrho).
ni_transp	ni_transp (9.8.1.3.299)	Transport coefficients for ion density equation. Time-dependent.
ne_transp	ne_transp (9.8.1.3.294)	Transport coefficients for electron density equation. Time-dependent.
nz_transp(:)	transcoefimp (9.8.1.3.469)	Transport coefficients for impurity (multiple charge state) density equation. Time-dependent.
ti_transp	transcoefion (9.8.1.3.470)	Transport coefficients for ion temperature equation. Time-dependent.
te_transp	transcoefel (9.8.1.3.468)	Transport coefficients for electron temperature equation. Time-dependent.
tz_transp(:)	transcoefimp (9.8.1.3.469)	Transport coefficients for impurity (multiple charge state) temperature equation. Time-dependent.
vtor_transp	transcoefvtor (9.8.1.3.471)	Transport coefficients for toroidal velocity equation. Time-dependent.
codeparam	codeparam (9.8.1.3.84)	Code parameters

Type of: coretransp:values (3121)

### 9.8.1.3.137 current

Description of the IC surface currents on the antenna straps and on passive components.

member	type	description
mpol	vecint_type (9.8.1.2.14)	Poloidal modes, used to describe the spectrum of the antenna current. The poloidal angle is defined from the reference point rz_reference; the angle at a point (R,Z) is given by $atan((Z-Zref)/(R-Rref))$ , where $Rref=rz\_reference/r$ and $Zref=rz\_reference/z$ . Time-Dependent; Integer(n_poloidal_modes)
ntor	vecint_type (9.8.1.2.14)	Toroidal modes, used to describe the spectrum of the antenna current. Time-Dependent; Integer(n_toroidal_modes)
spectrum	exp1D (9.8.1.3.204)	Spectrum of the total surface current on the antenna strap and passive components expressed in poloidal and toroidal mode [A]. Calculated using a geometrical poloidal angle around the point rz_reference. Time-dependent; exp1D(n_poloidal_modes , n_toroidal_modes)
rz_reference	rz0D (9.8.1.3.365)	Reference point used to define the poloidal angle, e.g. the geometrical centre of the vacuum vessel. Time-dependent; rz0d

Type of: antennaic\_setup:current (3165)

### 9.8.1.3.138 cxmeasure

Measured values

member	type	description
ti	exp1D (9.8.1.3.204)	Ion temperature [eV]. Vector (nchannels)
vtor	exp1D (9.8.1.3.204)	Toroidal velocity [m/s]. Vector (nchannels)
vpol	exp1D (9.8.1.3.204)	Poloidal velocity [m/s]. Vector (nchannels)

Type of: [cxdiag:measure \(3122\)](#)

### 9.8.1.3.139 cxsetup

diagnostic setup information

member	type	description
amn	<a href="#">vecflt.type (9.8.1.2.13)</a>	Mass of the emitting impurity. Varies according to channels since they are spanning different lines of sight; Vector (nchannels)
zn	<a href="#">vecflt.type (9.8.1.2.13)</a>	Nuclear charge of the emitting impurity. Varies according to channels since they are spanning different lines of sight; Vector (nchannels)
position	<a href="#">rzphi1Dexp (9.8.1.3.373)</a>	Position of the measurement. Time-dependent. Vector (nchannels)

Type of: [cxdiag:setup \(3122\)](#)

### 9.8.1.3.140 data\_release

Stores information about each entry available at this version.

member	type	description
shot	<a href="#">integer (9.8.1.1.2)</a>	Shot number = Mass*100+Nuclear.charge.
run	<a href="#">integer (9.8.1.1.2)</a>	Which run number is the active run number for this version.
description	<a href="#">vecstring.type (9.8.1.2.15)</a>	Possible description of why this version of the data is the current version.

Type of: [version\\_ind:data\\_release \(3593\)](#)

### 9.8.1.3.141 datainfo

Generic information on a data item

member	type	description
dataproducer	<a href="#">string (9.8.1.1.3)</a>	Name of the actual data provider (the person who filled the data)
putdate	<a href="#">string (9.8.1.1.3)</a>	Date at which the data has been put in the DB
source	<a href="#">string (9.8.1.1.3)</a>	Exact reference of the data source (e.g. original reference in the native machine data base)
comment	<a href="#">string (9.8.1.1.3)</a>	Any additional comment
cocos	<a href="#">integer (9.8.1.1.2)</a>	COordinates COventionS followed by this CPO
id	<a href="#">integer (9.8.1.1.2)</a>	CPO id for checking its provenance in the workflow
isref	<a href="#">integer (9.8.1.1.2)</a>	1 if the data can be found in the present data base entry; 2 if the data can be found in a parent data base entry; 0 if no data consistent with the present entry can be found.
whatref	<a href="#">whatref (9.8.1.3.513)</a>	Structure defining a database entry and the CPO occurrence
putinfo	<a href="#">putinfo (9.8.1.3.349)</a>	Level 2 information describing how to retrieve the actual data for the UAL. Not to be filled/used by the ITM user !

Type of: [amns:datainfo \(3109\)](#) [I antennas:datainfo \(3110\)](#) [I bb\\_shield:datainfo \(3111\)](#) [I bolometer:datainfo \(3112\)](#) [I bremsstrahl:datainfo \(3113\)](#) [I compositionc:datainfo \(3114\)](#) [I coredelta:datainfo \(3115\)](#) [I corefast:datainfo \(3116\)](#) [I coreimpur:datainfo \(3117\)](#) [I coreneutrals:datainfo \(3118\)](#) [I coreprof:datainfo \(3119\)](#) [I coresource:datainfo \(3120\)](#) [I coretransp:datainfo \(3121\)](#) [I cxdiag:datainfo \(3122\)](#) [I distribution:datainfo \(3123\)](#) [I distsource:datainfo \(3124\)](#) [I ecediag:datainfo \(3125\)](#) [I edge:datainfo \(3126\)](#) [I effc:datainfo \(3127\)](#) [I equilibrium:datainfo \(3128\)](#) [I flush:datainfo \(3316\)](#) [I fusiondiag:datainfo \(3129\)](#) [I halphadiag:datainfo \(3130\)](#) [I heat\\_sources:datainfo \(3131\)](#) [I ironmodel:datainfo \(3133\)](#) [I langmuirdiag:datainfo \(3134\)](#) [I launches:datainfo \(3135\)](#) [I lineintegraldiag:datainfo \(3367\)](#) [I lithium-diag:datainfo \(3136\)](#) [I magdiag:datainfo \(3137\)](#) [I mhd:datainfo \(3138\)](#) [I msediag:datainfo \(3139\)](#) [I nbi:datainfo \(3140\)](#) [I neoclassic:datainfo \(3141\)](#) [I ntm:datainfo \(3142\)](#) [I orbit:datainfo \(3143\)](#) [I pellets:datainfo \(3144\)](#) [I pfsystems:datainfo \(3145\)](#) [I power\\_conv:datainfo \(3147\)](#) [I reflectomet:datainfo \(3148\)](#) [I rfadiag:datainfo \(3149\)](#) [I sawteeth:datainfo \(3150\)](#) [I scenario:datainfo \(3151\)](#) [I solcurdiag:datainfo \(3152\)](#) [I temporary:datainfo \(3153\)](#) [I toroid-field:datainfo \(3155\)](#) [I tsdiag:datainfo \(3156\)](#) [I turbulence:datainfo \(3157\)](#) [I wall:datainfo \(3158\)](#) [I waves:datainfo \(3159\)](#)

### 9.8.1.3.142 desc\_coils

Description of the coils

member	type	description
name	<a href="#">string (9.8.1.1.3)</a>	Name of coil.

member	type	description
res	float (9.8.1.1.1)	Coil resistance [Ohm]
nturns	integer (9.8.1.1.2)	number of turns inside the coil
closed	string (9.8.1.1.3)	Identify whether the coil is closed (y) or open (n). For closed coils there is no need to replicate the first r,z,phi point as last point
edges(:)	edges (9.8.1.3.191)	Edges defining the coil volume faces. Structure array. Replicate this edge structure N-times for N-edge cross sections. Use just one for wire coil approximation.

Type of: coil:desc\_coils (3193)

### 9.8.1.3.143 desc\_impur

Description of the impurities (list of ion species and possibly different charge states). OBSOLESCE.

member	type	description
amn	vecflt.type (9.8.1.2.13)	Atomic mass number of the impurity; Vector (nimp)
zn	vecint.type (9.8.1.2.14)	Nuclear charge of the impurity; Vector (nimp)
i_ion	vecint.type (9.8.1.2.14)	Index of the impurity species in the coreprof ion species ordering. Vector (nimp)
nzimp	vecint.type (9.8.1.2.14)	Number of charge states (or bundles) considered for each impurity species. Vector (nimp)
zmin	matint.type (9.8.1.2.11)	Minimum Z of impurity ionisation state bundle. Matrix (nimp,max.nzimp)
zmax	matint.type (9.8.1.2.11)	Maximum Z of impurity ionisation state bundle. If no bundle, zmax=zmin. Matrix (nimp,max.nzimp)
label	vecstring.type (9.8.1.2.15)	Label for the impurities - note that the charge state is not included; String Vector (nimp)

Type of: coredelta:desc\_impur (3115) I corefast:desc\_impur (3116) I coreimpur:desc\_impur (3117) I coreneutrals:desc\_impur (3118) I coreprof:desc\_impur (3119) I coresource:desc\_impur (3120) I coretransp:desc\_impur (3121) I neoclassic:desc\_impur (3141)

### 9.8.1.3.144 desc\_iron

Description of the iron segments

member	type	description
name	vecstring.type (9.8.1.2.15)	Name of circuit. Array of strings (ncircuit).
id	vecstring.type (9.8.1.2.15)	ID of circuit. Array of strings (ncircuit).
permeability	permeability (9.8.1.3.327)	Permeability model (can be different for each iron segment)
geom_iron	geom_iron (9.8.1.3.234)	Geometry of the iron segments

Type of: ironmodel:desc\_iron (3133)

### 9.8.1.3.145 desc\_pfcoils

Description of the coils

member	type	description
name	vecstring.type (9.8.1.2.15)	Name of coil. Array of strings (ncoils)
id	vecstring.type (9.8.1.2.15)	ID of coil. Array of strings (ncoils)
res	vecflt.type (9.8.1.2.13)	Coil resistance [Ohm]; Vector (ncoils)
emax	vecflt.type (9.8.1.2.13)	Maximum Energy to be dissipated in coils []; Vector (ncoils)
structure_cs	structure_cs (9.8.1.3.424)	Detailed description of the coil structure, for coils that are part of the central solenoid.
pol_flux_cs	float (9.8.1.1.1)	Maximum poloidal flux available in the Central Solenoid for a plasma pulse [Wb].
nelement	vecint.type (9.8.1.2.14)	Number of elements used to describe a coil; Vector (ncoils)
pfelement	pfelement (9.8.1.3.330)	Axisymmetric conductor description

Type of: pfcoils:desc\_pfcoils (3435)

### 9.8.1.3.146 desc\_supply

Description of the power supplies



member	type	description
name	vecstring_type (9.8.1.2.15)	Name of the supply; Array of strings (nsupplies)
id	vecstring_type (9.8.1.2.15)	ID of the supply; Array of strings (nsupplies)
type	vecstring_type (9.8.1.2.15)	Type of supply; Array of strings (nsupplies)
delay	vecflt_type (9.8.1.2.13)	Pure delay in the supply [s]; Vector (nsupplies)
filter	filter (9.8.1.3.208)	Laplace proper filter
imin	vecflt_type (9.8.1.2.13)	Minimum current [A]; Vector (nsupplies)
imax	vecflt_type (9.8.1.2.13)	Maximum current [A]; Vector (nsupplies)
res	vecflt_type (9.8.1.2.13)	Supply internal resistance [Ohm]; Vector (nsupplies)
umin	vecflt_type (9.8.1.2.13)	Minimum voltage [V]; Vector (nsupplies)
umax	vecflt_type (9.8.1.2.13)	Maximum voltage [V]; Vector (nsupplies)
emax	vecflt_type (9.8.1.2.13)	Maximum Energy to be dissipated in supply [J]; Vector (nsupplies)

Type of: pfsupplies:desc\_supply (3441)

### 9.8.1.3.147 diag\_func

Structure to provide the description on the detector used and store the transfer matrix of the detector for that l.o.s.

member	type	description
description	string (9.8.1.1.3)	Short description of the detector with reference to the number of cells (ncells).
transf_mat	matflt_type (9.8.1.2.10)	Transfer matrix of the detector. Each l.o.s. might have a dedicated detector response function and energy resolution (and number of cells). Time-independent. Matrix (ncells, nenergy)

Type of: fusiondiag\_detect\_ct.energy:diag\_func (3332)

### 9.8.1.3.148 dist\_collisional\_transfer\_0d

Collisional exchange with the impurities. The ion indexing should match the one in distribution/compositions/impurities/z. Time-dependent; Vector(nzimp)

member	type	description
power_th	float (9.8.1.1.1)	Collisional power to the thermal particle population [W]; Time-dependent; Scalar
power_fast	float (9.8.1.1.1)	Collisional power to the fast particle population [W]; Time-dependent; Scalar
torque_th	float (9.8.1.1.1)	Collisional toroidal torque to the thermal particle population [N.m]; Time-dependent; Scalar
torque_fast	float (9.8.1.1.1)	Collisional toroidal torque to the fast particle population [N.m]; Time-dependent; Scalar

Type of: dist\_global\_param:collisions\_e (3263) I dist\_global\_param:collisions\_i (3263) I dist\_global\_param:collisions\_z:charge\_e (3264)

### 9.8.1.3.149 dist\_collisional\_transfer\_1d

Collisional exchange from the background electrons to the distribution function. Time-dependent

member	type	description
power_th	vecflt_type (9.8.1.2.13)	Flux surface averaged collisional power density to the thermal particle population [W.m <sup>-3</sup> ]; Time-dependent; Vector(npsi)
power_fast	vecflt_type (9.8.1.2.13)	Flux surface averaged collisional power density to the fast particle population [W.m <sup>-3</sup> ]; Time-dependent; Vector(npsi)
torque_th	vecflt_type (9.8.1.2.13)	Flux surface averaged collisional toroidal torque density to the thermal particle population [N.m <sup>-2</sup> ]; Time-dependent; Vector(npsi)
torque_fast	vecflt_type (9.8.1.2.13)	Flux surface averaged collisional toroidal torque density to the fast particle population [N.m <sup>-2</sup> ]; Time-dependent; Vector(npsi)

Type of: dist\_profile\_values\_1d:collisions\_e (3266) I dist\_profile\_values\_1d:collisions\_i (3266) I dist\_profiles\_1d:collisions\_e (3269) I dist\_profiles\_1d:collisions\_i (3269) I dist\_profiles\_1d:collisions\_z:charge\_state (3270)

### 9.8.1.3.150 dist\_collisional\_transfer\_2d

Collisional exchange from the background electrons to the distribution function. Time-dependent

member	type	description
power.th	matflt.type (9.8.1.2.10)	Collisional power density to the thermal particle population [ $W.m^{-3}$ ]; Time-dependent; Matrix( $n.coord1, n.coord2$ )
power.fast	matflt.type (9.8.1.2.10)	Collisional power density to the fast particle population [ $W.m^{-3}$ ]; Time-dependent; Matrix( $n.coord1, n.coord2$ )
torque.th	matflt.type (9.8.1.2.10)	Collisional toroidal torque density to the thermal particle population [ $N.m^{-2}$ ]; Time-dependent; Matrix( $n.coord1, n.coord2$ )
torque.fast	matflt.type (9.8.1.2.10)	Collisional toroidal torque density to the fast particle population [ $N.m^{-2}$ ]; Time-dependent; Matrix( $n.coord1, n.coord2$ )

Type of: dist\_profile\_values\_2d:collisions\_e (3267) I dist\_profile\_values\_2d:collisions\_i (3267) I dist\_profiles2d\_collisions\_z:char (3268) I dist\_profiles\_2d:collisions\_e (3271) I dist\_profiles\_2d:collisions\_i (3271)

### 9.8.1.3.151 dist\_distrivec\_distfunc\_fexp\_param

Parameters used to defined the grid coordinates. Time-dependent

member	type	description
equatorial	equatorial_plane (9.8.1.3.200)	Description of the equatorial plane or any other omnigeuous surfaces. Time-dependent
temperature	vecflt.type (9.8.1.2.13)	Reference temperature profile (eV); on the grid in /distsource/source/profiles_1d/rho_tor. Used to define the local thermal energy and the thermal velocity. Time-dependent; Vector(npsi)

Type of: f\_expansion:parameters (3312)

### 9.8.1.3.152 dist\_ff

Distribution function of e.g. ions, or electrons; the density of particles in the velocity space, the real space and spin state. The grid is split into topological regions, which could overlap in coordiante space (i.e. one coordinated can correspond to more than one orbit). The number of topological region is given by nregion\_topo. For nregion\_topo=2 the topology should be that of a high aspect ratio tokamak with two topological regions, where the passing orbits moving counter to the plasma current are stored in region\_topo=2 and all other orbits are stored in nregion\_topo=1. For nregion\_topo  $\geq 2$  (e.g. for spherical tokamaks) the topology should be described in the field topology.

member	type	description
grid_info	dist_grid_info (9.8.1.3.159)	Specification of grids used in topo_regions. Grid coordinates could either be invariants of motion, or information at single point along orbit, e.g. xi and s for grid_coord=3. This point should always be on a so-called omnigenous surface (a generalised equitorial plane); $grad(\psi) \times grad(B) = 0$ . All closed orbits cross omnigenous surfaces at least two times. The omnigenous surfaces are described in omnigen_surf.
topo_regions(:)	topo_regions (9.8.1.3.465)	List with distribution function in each topological region; Time-dependent. Structure array(nregion_topo)

Type of: dist\_func:f\_expan\_topo (3259)

### 9.8.1.3.153 dist\_func

Distribution functions. The total distribution total distribution can either be given by the a set of markers/test particles (in markers), or by a gridded function (dist\_expand). Note that the gridded distribution can be written as sum of successive approximations, where each term is given by an element in the vector dist\_expand. Finally, the distribution can be written as a sum of a marker distribution and a gridded distribution, e.g. for delta-f Monte Carlo solution. Time-dependent

member	type	description
is_delta.f	integer (9.8.1.1.2)	If is_delta.f=1, then the distribution represents the deviation from a Maxwellian; is_delta.f=0, then the distribution represents all particles, i.e. the full-f solution. Time-dependent
markers	weighted_markers (9.8.1.3.512)	Distribution represented by a set of markers (test particles). Time-dependent
f_expan_topo(:)	dist_ff (9.8.1.3.152)	TO BE REMOVED. KEPT TEMPORARILY AS AN ALTERNATIVE TO f_expansion. [Distribution function, f, expanded into a vector of successive approximations (topology-based formulation, without the grid-cpo). The first element in the vector (f_expansion(1)) is the zeroth order distribution function, while the K:th elemnet in the vector (f_expansion(K)) is the K:th correction, such that the total distribution function is a sum over all elements in the f_expansion vector. Time-dependent. Structure array(Nf_expansion)]. Time-dependent

member	type	description
f_expansion(:)	f_expansion (9.8.1.3.206)	Distribution function, f, expanded into a vector of successive approximations. The first element in the vector (f_expansion(1)) is the zeroth order distribution function, while the K:th element in the vector (f_expansion(K)) is the K:th correction, such that the total distribution function is a sum over all elements in the f_expansion vector. Time-dependent. Structure array(Nf_expansion)

Type of: `distri_vec:dist_func` (3279)

### 9.8.1.3.154 dist\_geometry\_0d

Geometrical constants

member	type	description
mag_axis	rz0D (9.8.1.3.365)	Position of the magnetic axis [m]. Time-dependent; Scalar
toroid_field	b0r0 (9.8.1.3.61)	Characteristics of the vacuum toroidal field. Used to define the radial coordiante rho_tor and to measure the current drive. Time-dependent; Scalar

Type of: `dist_global_param:geometry` (3263)

### 9.8.1.3.155 dist\_geometry\_1d

Grids and metric information; including rho\_tor, psi, area and volume. Time-dependent

member	type	description
rho_tor	vecflt_type (9.8.1.2.13)	Toroidal flux coordinate [m]. Defined as $\sqrt{(\phi - \phi_{axis})/\pi/B_0}$ , where $B_0 = \dots/global\_param/toroid\_field/b_0$ , $\phi$ is the toroidal flux and $\phi_{axis}$ is the toroidal flux at the magnetic axis. Time-dependent; Vector (npsi)
rho_tor_norm	vecflt_type (9.8.1.2.13)	The toroidal flux coordinate normalised to be zero at the axis and unity at the last closed flux surface, or last available fluxsurface if the last closed flux surface is not defined. Time-dependent; Vector (npsi)
psi	vecflt_type (9.8.1.2.13)	Poloidal flux at the grid points for 1D profiles [Wb], without $1/2\pi$ and such that $B_p =  grad\ psi  / R/2/\pi$ . Time-dependent; Vector (npsi)
volume	vecflt_type (9.8.1.2.13)	Volume enclosed by the flux surface [m <sup>3</sup> ]; Time-dependent; Vector (npsi)
area	vecflt_type (9.8.1.2.13)	Cross-sectional area of the flux surface [m <sup>2</sup> ]; Time-dependent; Vector (npsi)

Type of: `dist_profiles_1d:geometry` (3269)

### 9.8.1.3.156 dist\_geometry\_2d

Grids and metric information; including R, Z, rho\_tor, psi, theta\_geom and theta\_strt. The grid has to be rectangular in a pair of these coordinates; this is specified in coord\_type. Time-dependent

member	type	description
coord_type	integer (9.8.1.1.2)	0: Rectangular grid in the (R,Z) coordinates; 1: Rectangular grid in the (rho_tor,theta_geom) coordinates; 2: Rectangular grid in the (rho_tor,theta_straight) coordinates.
r	matflt_type (9.8.1.2.10)	Major radius coordinate [m]; Time-dependent; Matrix (n_coord1,n_coord2)
z	matflt_type (9.8.1.2.10)	Vertical coordinate [m]; Time-dependent; Matrix (n_coord1,n_coord2)
rho_tor	matflt_type (9.8.1.2.10)	Toroidal flux coordinate [m]. Defined as $\sqrt{(\phi - \phi_{axis})/\pi/B_0}$ , where $B_0 = \dots/global\_param/toroid\_field/b_0$ , $\phi$ is the toroidal flux and $\phi_{axis}$ is the toroidal flux at the magnetic axis. Time-dependent; Matrix (n_coord1,n_coord2)
psi	matflt_type (9.8.1.2.10)	Poloidal flux at the grid points for 1D profiles [Wb], without $1/2\pi$ and such that $B_p =  grad\ psi  / R/2/\pi$ . Time-dependent; Matrix (n_coord1,n_coord2)
theta_geom	matflt_type (9.8.1.2.10)	Geometrical poloidal angle [rad]; Time-dependent; Matrix (n_coord1,n_coord2)
theta_strt	matflt_type (9.8.1.2.10)	Straight field line poloidal angle [rad]; Time-dependent; Matrix (n_coord1,n_coord2)

Type of: `dist_profiles_2d:geometry` (3271)

### 9.8.1.3.157 dist\_global\_param

Global parameters; spatial constants, volume integrated quantities and quantities averaged over the cross-sectional area. Here the dimensions used refer to: nion - size of distribution/compositions/ions; nimpur - size of distribution/compositions/impurities; nzimp - size of distribution/compositions/impurities/zmin.

member	type	description
geometry	dist_geometry_0d (9.8.1.3.154)	Geometrical constants
state	dist_state_0d (9.8.1.3.169)	Algebraic moments of the distribution function integrated over the plasma volume, e.g. total number of particles, energy etc. Time-dependent
collisions_e	dist_collisional_transfer_0d (9.8.1.3.148)	Collisional exchange with the electrons. Time-dependent
collisions_i(:)	dist_collisional_transfer_0d (9.8.1.3.148)	Collisional exchange with each ion species. The ion indexing should match the one in /distribution/compositions/ions. Time-dependent; Vector(nion)
collisions_z(:)	dist_global_param_collisions_z (9.8.1.3.158)	Collisional exchange with each impurity species. The ion indexing should match the one in /distribution/compositions/impurities. Time-dependent; Vector(nimpur)
sources(:)	dist_sources_0d (9.8.1.3.166)	Vector of volume integrated sources and sinks of particles, momentum and power included in the Fokker-Planck modelling. The physical meaning of each source term is specified through the identifier ./sources/type. Note that it is possible to store multiple source terms with the same value for ./source/type. Time-dependent; Scalar

Type of: distri\_vec:global\_param (3279)

### 9.8.1.3.158 dist\_global\_param\_collisions\_z

Collisional exchange with each impurity species. The ion indexing should match the one in /distribution/compositions/impurities. Time-dependent

member	type	description
charge_state(:)	dist_collisional_transfer_0d (9.8.1.3.148)	Collisional exchange with the impurities. The ion indexing should match the one in distribution/compositions/impurities/zmin. Time-dependent; Vector(nzimp)

Type of: dist\_global\_param:collisions\_z (3263)

### 9.8.1.3.159 dist\_grid\_info

Specification of grids used in topo\_regions. Grid coordinates could either be invariants of motion, or information at single point along orbit, e.g. xi and s for grid.coord=3. This point should always be on a so-called omnigenous surface (a generalised equatorial plane);  $\text{grad}(\psi) \times \text{grad}(B) = 0$ . All closed orbits cross omnigenous surfaces at least two times. The omnigenous surfaces are described in omnigen\_surf.

member	type	description
grid_type	integer (9.8.1.1.2)	Type of grid: 1=unstructured grid; 2=structured non-rectangular grid, here ndim11=ndim12=ndim13, ndim21=ndim22=ndim23, ndim31=ndim32=ndim33; 3=rectangular grid, where grid coordinates are stored in the vectors dim1(1,ndim1,1,1), dim2(1,1,ndim2,1), dim3(1,1,1,ndim3)
ngriddim	integer (9.8.1.1.2)	Number of grid dimension. For ngriddim=2 the grid is specified by dim1 and dim2 only, while dim3, dim4, dim5, dim6 can be ignored (should not be allocated). For ngriddim=3 also dim3 is used to describe the grid etc. E.g. if your distribution is given by the three variables the poloidal flux, perpendicular and parallel velocities, then ngriddim=3 and grid.coord(1)=15, grid.coord(1)=16, grid.coord(3)=6.
grid_coord	vecint.type (9.8.1.2.14)	Identifies the coordinates specified in dim1, dim2, dim3, dim4, dim5, and dim6. grid_coord(K) describes the coordinate represented in dimK, for K=1,2,...6. The possible coordinates are: 1=R, Major radius [m]; 2=Z, Vertical position [m]; 3=X, first cartesian coordinate in the horizontal plane [m]; 4=Y, second cartesian coordinate in the horizontal plane ( $\text{grad}(X) \times \text{grad}(Y) = \text{grad}(Z)$ ) [m]; 5=phi, toroidal angle [rad]; 6=psi, poloidal magnetic flux [ $T \cdot m^2$ ]; 7=rhotor, the square root of the toroidal flux; 8=theta, geometrical poloidal angle [rad]; 9=theta_b, Boozer poloidal angle [rad]; 10=vx, velocity in the x-direction [m/s]; 11=vy, velocity in the y-direction [m/s]; 12=vz, velocity in the z-direction [m/s]; 13=vel, total velocity [m/s]; 14=vphi, velocity in the phi-direction [m/s]; 15=vpar, velocity in the parallel direction [m/s]; 16=vperp, velocity in the perpendicular direction [m/s]; 17=E, Hamiltonian energy [J]; 18=Pphi, canonical toroidal angular momentum [ $kg \cdot m^2/s$ ]; 19=mu, magnetic moment [J/T]; 20=Lambda=mu/E [1/T]; 21=pitch=vpar/v [-]; 22=s, the position of the omnigenous plane (generalised equatorial plane) as described by the fields omnigen_surf% <i>s</i> and omnigen_surf% <i>rz</i> ; 23=particle spin; 24=n_Legendre, the index of the Legendre polynomial of the pitch, e.g. if the k:th component of dim3(1,1,k,1,1,1)=5 then this refer to the 5:th Legendre polynomial P_5(xi). Vector (6)
thin_orbits	integer (9.8.1.1.2)	Specifies if guiding centre orbits are thin. Note: only used for orbit averaged distribution functions. For thin_orbits=1 the orbit are considered thin, i.e. each orbit is bound to follow a single flux surface; for thin_orbits=0 the orbits are assumed to follow guiding centre trajectories. E.g. thin_orbits=0 using constants of motion as given in a generalised equatorial plane, then the orbit outside the equatorial plane are described by the guiding centre equations of motion.
topology	string (9.8.1.1.3)	Description of the topology of the grid. NOTE: only used for nregion.topo>2.
omnigen_surf(:)	omnigen_surf (9.8.1.3.310)	List of omnigenous magnetic surfaces to which the s-coordinates in grid.coord refer. NOTE: only used for grid.coord=3. NOTE: all guiding centre orbits intersect at least one omnigenous (or stagnation) surfaces, i.e. the omnigenous generalised the equatorial plane (the midplane). nsurfs=Number of omnigenous surfaces. Structure array(nregion.topo)

Type of: dist\_ff:grid.info (3258)

### 9.8.1.3.160 dist\_profile\_values\_1d

1D profiles; includes flux surface averaged quantities. Here the dimensions used refer to: npsi - size of the internal radial grid defined by rho\_tor; nion - size of distribution/compositions/ions; nimpur - size of distribution/compositions/impurities; nzimp - size of distribution/compositions/impurities/zmin. Time-dependent

member	type	description
state	dist_state_1d (9.8.1.3.170)	Fluid moments describing the state of the distribution; calculated from the distribution. Time-dependent
collisions_e	dist_collisional.transfer_1d (9.8.1.3.149)	Collisional exchange from the background electrons to the distribution function. Time-dependent
collisions_i(:)	dist_collisional.transfer_1d (9.8.1.3.149)	Collisional exchange from each background ion speices to the distribution function. Time-dependent; Vector (nions)
collisions_z(:)	dist_profiles_1d.collisions_z (9.8.1.3.164)	Collisional exchange from each background impurities species to the distribution function. Time-dependent; Vector (nimpur)
sources(:)	dist_sources_1d (9.8.1.3.167)	Vector of flux surface averaged sources and sinks of particles, momentum and power included in the Fokker-Planck modelling. The physical meaning of each source term is specified through the identifier ./sources/type. Note that it is possible to store multiple source terms with the same value for source/type. Time-dependent; Vector(n_source_terms)

Type of: dist\_profiles\_1d:cntr\_passing (3269) I dist\_profiles\_1d:co\_passing (3269) I dist\_profiles\_1d:trapped (3269)

### 9.8.1.3.161 dist\_profile\_values\_2d

2D profiles in the poloidal plane; includes velocity space integrated quantities. Time-dependent

member	type	description
state	dist_state_2d (9.8.1.3.171)	Fluid moments describing the state of the distribution; calculated from the distribution. Time-dependent
collisions_e	dist_collisional.transfer_2d (9.8.1.3.150)	Collisional exchange from the background electrons to the distribution function. Time-dependent
collisions_i(:)	dist_collisional.transfer_2d (9.8.1.3.150)	Collisional exchange from each background ion speices to the distribution function. Time-dependent; Vector (nions)
collisions_z(:)	dist_profiles2d.collisions_z (9.8.1.3.162)	Collisional exchange from each background impurities species to the distribution function. Time-dependent; Vector (nimpur)

Type of: dist\_profiles\_2d:cntr\_passing (3271) I dist\_profiles\_2d:co\_passing (3271) I dist\_profiles\_2d:trapped (3271)

### 9.8.1.3.162 dist\_profiles2d\_collisions\_z

Collisional exchange from each background impurities species to the distribution function. Time-dependent;

member	type	description
charge_state(:)	dist_collisional.transfer_2d (9.8.1.3.150)	Collisional exchange from each charge state (or bundled charge state) to the distribution function. Time-dependent; Vector (nzimp)

Type of: dist\_profile\_values\_2d:collisions\_z (3267) I dist\_profiles\_2d:collisions\_z (3271)

### 9.8.1.3.163 dist\_profiles\_1d

1D profiles; includes flux surface averaged quantities. Here the dimensions used refer to: npsi - size of the internal radial grid defined by rho\_tor; nion - size of distribution/compositions/ions; nimpur - size of distribution/compositions/impurities; nzimp - size of distribution/compositions/impurities/zmin. Time-dependent

member	type	description
geometry	dist_geometry_1d (9.8.1.3.155)	Grids and metric information; including rho_tor, psi, area and volume. Time-dependent
state	dist_state_1d (9.8.1.3.170)	Fluid moments describing the state of the distribution; calculated from the distribution. Time-dependent
collisions_e	dist_collisional.transfer_1d (9.8.1.3.149)	Collisional exchange from the background electrons to the distribution function. Time-dependent
collisions_i(:)	dist_collisional.transfer_1d (9.8.1.3.149)	Collisional exchange from each background ion speices to the distribution function. Time-dependent; Vector (nions)
collisions_z(:)	dist_profiles_1d.collisions_z (9.8.1.3.164)	Collisional exchange from each background impurities species to the distribution function. Time-dependent; Vector (nimpur)

member	type	description
thermalised	dist_thermalised_1d (9.8.1.3.172)	Representation of the flux surface averaged source of thermal particles, momentum and energy due to thermalisation. Here thermalisation refers to non-thermal particles, sufficiently assimilated to the thermal background to be re-categorised as thermal particles. Note that this source may also be negative if thermal particles are being accelerated such that they form a distinct non-thermal contribution, e.g. due run-away of RF interactions.
sources(:)	dist_sources_1d (9.8.1.3.167)	Vector of flux surface averaged sources and sinks of particles, momentum and power included in the Fokker-Planck modelling. The physical meaning of each source term is specified through the identifier ./sources/type. Note that it is possible to store multiple source terms with the same value for source/type. Time-dependent; Vector(n_source_terms)
trapped	dist_profile_values_1d (9.8.1.3.160)	Flux surface averaged profile evaluated using the trapped particle part of the distribution.
co-passing	dist_profile_values_1d (9.8.1.3.160)	Flux surface averaged profile evaluated using the co-current passing particle part of the distribution.
cntr_passing	dist_profile_values_1d (9.8.1.3.160)	Flux surface averaged profile evaluated using the counter-current passing particle part of the distribution.

Type of: distri\_vec:profiles\_1d (3279)

### 9.8.1.3.164 dist\_profiles\_1d\_collisions\_z

Collisional exchange from each background impurities species to the distribution function. Time-dependent;

member	type	description
charge_state(:)	dist_collisional_transfer_1d (9.8.1.3.149)	Collisional exchange from each charge state (or bundled charge state) to the distribution function. Time-dependent; Vector (n_zimp)

Type of: dist\_profile\_values\_1d:collisions\_z (3266) | dist\_profiles\_1d:collisions\_z (3269)

### 9.8.1.3.165 dist\_profiles\_2d

2D profiles in the poloidal plane; includes velocity space integrated quantities. Time-dependent

member	type	description
geometry	dist_geometry_2d (9.8.1.3.156)	Grids and metric information; including R, Z, rho_tor, psi, theta_geom and theta_strt. The grid has to be rectangular in a pair of these coordinates; this is specified in coord_type. Time-dependent
state	dist_state_2d (9.8.1.3.171)	Fluid moments describing the state of the distribution; calculated from the distribution. Time-dependent
collisions_e	dist_collisional_transfer_2d (9.8.1.3.150)	Collisional exchange from the background electrons to the distribution function. Time-dependent
collisions_i(:)	dist_collisional_transfer_2d (9.8.1.3.150)	Collisional exchange from each background ion species to the distribution function. Time-dependent; Vector (n_ions)
collisions_z(:)	dist_profiles2d_collisions_z (9.8.1.3.162)	Collisional exchange from each background impurities species to the distribution function. Time-dependent; Vector (nimpur)
trapped	dist_profile_values_2d (9.8.1.3.161)	2D profiles evaluated using the trapped particle part of the distribution.
co-passing	dist_profile_values_2d (9.8.1.3.161)	2D profiles evaluated using the co-current passing particle part of the distribution.
cntr_passing	dist_profile_values_2d (9.8.1.3.161)	2D profiles evaluated using the counter-current passing particle part of the distribution.

Type of: distri\_vec:profiles\_2d (3279)

### 9.8.1.3.166 dist\_sources\_0d

Volume integrated source included in the Fokker-Planck model.

member	type	description
source_ref	dist_sources_reference (9.8.1.3.168)	Reference identifying the origin and type of source; Time-dependendent
particle	float (9.8.1.1.1)	Source (or sink) rate of particles [1/s]; Time-dependendent; Scalar
momentum	float (9.8.1.1.1)	Source (or sink) rate of toroidal angular momentum [Nm/s]; Time-dependendent; Scalar
energy	float (9.8.1.1.1)	Source (or sink) rate of energy [J/s]; Time-dependendent; Scalar

Type of: dist\_global\_param:sources (3263)

### 9.8.1.3.167 `dist_sources_1d`

Flux surface averaged source included in the Fokker-Planck model.

member	type	description
source_ref	dist_sources_reference (9.8.1.3.168)	Reference identifying the origin and type of source; Time-dependendent
particle	vecflt_type (9.8.1.2.13)	Source (or sink) rate of particles density [ $1/s/m^3$ ]; Time-dependendent; Vector (npsi)
momentum	vecflt_type (9.8.1.2.13)	Source (or sink) rate of toroidal angular momentum density [ $Nm/s/m^3$ ]; Time-dependendent; Vector (npsi)
energy	vecflt_type (9.8.1.2.13)	Source (or sink) rate of energy density [ $J/s/m^3$ ]; Time-dependendent; Vector (npsi)

Type of: `dist_profile_values_1d:sources` (3266) I `dist_profiles_1d:sources` (3269)

### 9.8.1.3.168 `dist_sources_reference`

Volume integrated source included in the Fokker-Planck model.

member	type	description
type	identifier (9.8.1.3.242)	Identifier for sources and sinks in Fokker-Planck solver; type.flag=1 for wave source, type.flag=2 for particle source, etc (see <code>fokker_planck_source_identifier_definition</code> in the Documentation website under Conventions/Enumerated_datatypes); Time-dependendent
index_waveid	vecint_type (9.8.1.2.14)	Index pointing to <code>/distribution/distri_vec/wave_id[index_waveid]</code> from which the source is taken. Time-dependendent; Vector (npsi)
index_srcid	vecint_type (9.8.1.2.14)	Index pointing to <code>/distribution/distri_vec/source_id[index_waveid]</code> from which the source is taken. Time-dependendent; Vector (npsi)

Type of: `dist_sources_0d:source_ref` (3272) I `dist_sources_1d:source_ref` (3273)

### 9.8.1.3.169 `dist_state_0d`

Algebraic moments of the distribution function integrated over the plasma volume, e.g. total number of particles, energy etc. Time-dependent

member	type	description
n_particles	float (9.8.1.1.1)	Number of particles in the distribution; the volume integral of the density (note: this is the number of real particles and not markers); Time-dependent
n_part_fast	float (9.8.1.1.1)	Number of fast particles in the distribution; the volume integral of the fast particle density (note: this is the number of real particles and not markers); Time-dependent
enrg	float (9.8.1.1.1)	Total energy distribution [ $J$ ]; Time-dependent
enrg_fast	float (9.8.1.1.1)	Total energy of the fast particle distribution [ $J$ ]; Time-dependent
enrg_fast_pa	float (9.8.1.1.1)	Parallel energy of the fast particle distribution [ $J$ ]; Time-dependent
momentm_fast	float (9.8.1.1.1)	Kinetic toroidal angular momentum of the fast ions [ $Nms$ ]; Time-dependent; Vector (npsi)
current_dr	float (9.8.1.1.1)	Toroidal non-inductive current drive [ $A$ ]; Time-dependent.
torque_jrx	float (9.8.1.1.1)	Toroidal torque due to radial currents [ $N.m$ ]; Time-dependent.

Type of: `dist_global_param:state` (3263)

### 9.8.1.3.170 `dist_state_1d`

Fluid moments describing the state of the distribution; calculated from the distribution. Time-dependent

member	type	description
dens	vecflt_type (9.8.1.2.13)	Flux surface averaged particle density (including both thermal and fast particles) [ $1/m^3$ ]; Time-dependent; Vector (npsi)
dens_fast	vecflt_type (9.8.1.2.13)	Flux surface averaged fast particle density [ $1/m^3$ ]; Time-dependent; Vector (npsi)
pres	vecflt_type (9.8.1.2.13)	Scalar pressure (including both thermal and fast particles) [ $J/m^3$ ]. Related to the energy content, $W$ , according to: $pres=2*W/3$ . Time-dependent; Vector (npsi)
pres_fast	vecflt_type (9.8.1.2.13)	Scalar pressure of the fast particles [ $J/m^3$ ]. Related to the fast particle energy content, $Wf$ , according to: $pres_fast=2*Wf/3$ . Time-dependent; Vector (npsi)
pres_fast_pa	vecflt_type (9.8.1.2.13)	Parallel pressure of the fast particles [ $J/m^3$ ]. Related to the fast particle parallel energy content, $Wfpar$ , according to: $pres_fast_pa=2*Wfpar$ . Time-dependent; Vector (npsi)
momentm_fast	vecflt_type (9.8.1.2.13)	Kinetic toroidal angular momentum density of the fast ions [ $Ns/m^2$ ]; Time-dependent; Vector (npsi)
current	vecflt_type (9.8.1.2.13)	Total toroidal driven current density (including electron and thermal ion back-current, or drag-current) [ $A/m^3$ ]; Time-dependent; Vector (npsi)



member	type	description
current_fast	vecflt.type (9.8.1.2.13)	Flux surface averaged toroidal current density of fast (non-thermal) particles (excluding electron and thermal ion back-current, or drag-current) [ $A \cdot m^{-2}$ ]; Time-dependent; Vector (npsi).
torque_jrxb	vecflt.type (9.8.1.2.13)	Toroidal torque density due to radial currents, excluding radial current due to neoclassical effect [ $N/m^2$ ]; Time-dependent; Vector (npsi)

Type of: dist\_profile\_values\_1d:state (3266) I dist\_profiles\_1d:state (3269)

### 9.8.1.3.171 dist\_state\_2d

Fluid moments describing the state of the distribution; calculated from the distribution. Time-dependent

member	type	description
dens	matflt.type (9.8.1.2.10)	Particle density (including both thermal and fast particles) [ $1/m^3$ ]; Time-dependent; Matrix (n_coord1, n_coord2)
dens_fast	matflt.type (9.8.1.2.10)	Fast particle density [ $1/m^3$ ]; Time-dependent; Matrix (n_coord1, n_coord2)
pres	matflt.type (9.8.1.2.10)	Scalar pressure (including both thermal and fast particles) [ $J/m^3$ ]. Related to the energy content, $W$ , according to: $pres=2*W/3$ . Time-dependent; Matrix (n_coord1, n_coord2)
pres_fast	matflt.type (9.8.1.2.10)	Scalar pressure of the fast particles [ $J/m^3$ ]. Related to the fast particle energy content, $W_f$ , according to: $pres\_fast=2*W_f/3$ . Time-dependent; Matrix (n_coord1, n_coord2)
pres_fast_pa	matflt.type (9.8.1.2.10)	Parallel pressure of the fast particles [ $J/m^3$ ]. Related to the fast particle parallel energy content, $W_{fpar}$ , according to: $pres\_fast\_pa=2*W_{fpar}$ . Time-dependent; Matrix (n_coord1, n_coord2)
momentm_fast	matflt.type (9.8.1.2.10)	Kinetic toroidal angular momentum density of the fast ions [ $Ns/m^2$ ]; Time-dependent; Matrix (n_coord1, n_coord2)
current	matflt.type (9.8.1.2.10)	Total toroidal driven current density (including electron and thermal ion back-current, or drag-current) [ $A/m^3$ ]; Time-dependent; Matrix (n_coord1, n_coord2)
current_fast	matflt.type (9.8.1.2.10)	Toroidal current density of fast (non-thermal) particles of the distribution species (excluding electron and thermal ion back-current, or drag-current) [ $A \cdot m^{-2}$ ]; Time-dependent; Matrix (n_coord1, n_coord2).
torque_jrxb	matflt.type (9.8.1.2.10)	Toroidal torque density due to radial currents, excluding radial current due to neoclassical effect [ $N/m^2$ ]; Time-dependent; Matrix (n_coord1, n_coord2)

Type of: dist\_profile\_values\_2d:state (3267) I dist\_profiles\_2d:state (3271)

### 9.8.1.3.172 dist\_thermalised\_1d

Representation of the flux surface averaged source of thermal particles, momentum and energy due to thermalisation. Here thermalisation refers to non-thermal particles, sufficiently assimilated to the thermal background to be re-categorised as thermal particles. Note that this source may also be negative if thermal particles are being accelerated such that they form a distinct non-thermal contribution, e.g. due run-away of RF interactions.

member	type	description
particle	vecflt.type (9.8.1.2.13)	Source rate for the thermal particle density due to the thermalisation of fast (non-thermal) particles [ $1/s/m^3$ ]; Time-dependendent; Vector (npsi)
momentum	vecflt.type (9.8.1.2.13)	Source rate for the toroidal angular momentum density within the thermal particle population due to the thermalisation of fast (non-thermal) particles [ $N/m^2$ ]; Time-dependendent; Vector (npsi)
energy	vecflt.type (9.8.1.2.13)	Source rate for the energy density within the thermal particle population due to the thermalisation of fast (non-thermal) particles [ $W/m^3$ ]; Time-dependendent; Vector (npsi)

Type of: dist\_profiles\_1d:thermalised (3269)

### 9.8.1.3.173 distri\_vec

Vector over all distribution functions. Every distribution function has to be associated with only one particle species, specified in distri\_vec/species/, but there could be multiple distribution function for each species. In this case, the fast particle populations should be superposed. Time-dependent. Structure array(ndistri\_vec)

member	type	description
wave_id(:)	enum_instance (9.8.1.3.195)	List all waves affecting the distribution, as specified in waves/coherentwave/wave_id (see waves_types in the Documentation website under Conventions/Enumerated_datatypes). Vector(n_antennas)
source_id(:)	enum_instance (9.8.1.3.195)	List all neutral beam injectors and reactions contributing to the source, as specified in dist_source/source/source_id (see distsource_types in the Documentation website under Conventions/Enumerated_datatypes). Vector(n_injectors_and_reactions)
species	species_reference (9.8.1.3.418)	Defines the distribution function species represented in this element of distri_vec. Time-dependent

member	type	description
gyro.type	integer (9.8.1.1.2)	Defines how to interpret the spatial coordinates: 1 = given at the actual particle position; 2 = given at the gyro centre of the particle position. Time-dependent
fast_filter	fast_thermal_separation_filter (9.8.1.3.207)	Description of how the fast and the thermal particle populations, used in global_param and profiles_1d, were separated.
global_param	dist_global_param (9.8.1.3.157)	Global parameters (in most cases volume integrated and surface averaged quantities). Time-dependent
profiles_1d	dist_profiles_1d (9.8.1.3.163)	Flux surface averaged profiles.
profiles_2d	dist_profiles_2d (9.8.1.3.165)	2D profiles in the poloidal plane
dist_func	dist_func (9.8.1.3.153)	Distribution functions. The total distribution total distribution can either be given by the a set of markers/test particles (in markers), or by a gridded function (dist.expand). Note that the gridded distribution can be written as sum of successive approximations, where each term is given by an element in the vector dist.expand. Finally, the distribution can be written as a sum of a marker distribution and a gridded distribution, e.g. for delta-f Monte Carlo solution. Time-dependent
codeparam	codeparam (9.8.1.3.84)	Code parameters

Type of: distribution:distri\_vec (3123)

### 9.8.1.3.174 distsource\_global\_param

Global parameters (volume integrated).

member	type	description
src_pow	exp0D (9.8.1.3.203)	Total power source [W]; Time-dependent.
src_rate	exp0D (9.8.1.3.203)	Particle source rate [1/s]; Time-dependent.
mag_axis	rz0D (9.8.1.3.365)	Position of the magnetic axis. Time-dependent; Scalar
toroid_field	b0r0 (9.8.1.3.61)	Characteristics of the vacuum toroidal field. Used to define the radial coordiante rho_tor. Time-dependent; Scalar

Type of: distsource\_source:global\_param (3284)

### 9.8.1.3.175 distsource\_line\_src\_prof

1D profiles representation of a line source. Time-dependent

member	type	description
rho_tor	vecflt.type (9.8.1.2.13)	Toroidal flux coordinate at the grid points for 1D profiles [m]. Defined as $\sqrt{\phi/\pi/B_0}$ , where $B_0 = \text{equilibrium}/\text{global\_param}/\text{toroid\_field}/b_0$ . Time-dependent; Vector (npsi)
rho_tor_norm	vecflt.type (9.8.1.2.13)	Normalised toroidal flux coordinate at the grid points for 1D profiles; Time-dependent; Vector (npsi)
psi	vecflt.type (9.8.1.2.13)	Poloidal flux at the grid points for 1D profiles [Wb], without $1/2\pi$ and such that $B_p =  \text{grad } \psi  / (R \ 2 \ \pi)$ . Time-dependent; Vector (npsi)
R	vecflt.type (9.8.1.2.13)	Major radius at the line source. Time-dependent; Vector (npsi)
Z	vecflt.type (9.8.1.2.13)	Vertical position of the line source. Time-dependent; Vector (npsi)
theta	vecflt.type (9.8.1.2.13)	Poloidal angle [rad]. Time-dependent; Vector (npsi)
theta_id	vecflt.type (9.8.1.2.13)	Type of poloidal angle: 1 : same as the poloidal angle in the equilibrium cpo; 2 : geometrical polar angle, $\tan(\theta) = Z/(R-R_0)$ ; 3 : other. If option 3, a transformation to the geometrical poloidal angle is provided in th2th_pol.
th2th_pol	matflt.type (9.8.1.2.10)	Geometrical poloidal angle at grid points in theta, i.e. the transformation from theta to the polar poloidal angle; used only if angl.type=3; Time-dependent; Matrix (ndim1, ndim2)
pitch	vecflt.type (9.8.1.2.13)	Pitch (i.e. $v_{\text{parallel}}/v$ ) of source particles. Time-dependent; Vector (npsi)
energy	vecflt.type (9.8.1.2.13)	Kinetic energy of source particles [eV]. Time-dependent; Vector (npsi)
ang_momentum	vecflt.type (9.8.1.2.13)	Kinetic angular momentum of a single source particles, $R \ m \ v_{\text{phi}}$ [Nms]. Time-dependent; Vector (npsi)
src_rate	vecflt.type (9.8.1.2.13)	Source density of particles [1/m <sup>3</sup> /s]. Time-dependent; Vector (npsi)

Type of: distsource\_source:line\_srcprof (3284)

### 9.8.1.3.176 distsource\_profiles\_1d

1D radial profiles

member	type	description
rho_tor	vecflt_type (9.8.1.2.13)	Toroidal flux coordinate [m]. Defined as $\sqrt{(\phi - \phi_{\text{axis}})/\pi/B_0}$ , where $B_0 = \dots / \text{global.param}/\text{toroid.field}/b_0$ , $\phi$ is the toroidal flux and $\phi_{\text{axis}}$ is the toroidal flux at the magnetic axis. Time-dependent; Vector (npsi)
rho_tor_norm	vecflt_type (9.8.1.2.13)	The toroidal flux coordinate normalised to be zero at the axis and unity at the last closed flux surface, or last available fluxsurface if the last closed flux surface is not defined. Time-dependent; Vector (npsi)
psi	vecflt_type (9.8.1.2.13)	Poloidal flux [Wb], evaluated without $1/2\pi$ and such that $B_p =  \text{grad psi}  / R/2/\pi$ . Time-dependent; Vector (npsi)
volume	vecflt_type (9.8.1.2.13)	Volume enclosed by the flux surface [ $\text{m}^3$ ]. Time-dependent; Vector (npsi)
area	vecflt_type (9.8.1.2.13)	Cross-sectional area of the flux surface [ $\text{m}^2$ ]. Time-dependent; Vector (npsi)
pow_den	exp1D (9.8.1.3.204)	Flux surface averaged power density [ $\text{W}/\text{m}^3$ ]; Time-dependent; Vector (npsi)
trq_den	exp1D (9.8.1.3.204)	Flux surface averaged toroidal torque density [ $\text{N}/\text{m}^2$ ]; Time-dependent; Vector (npsi)
src_rate	exp1D (9.8.1.3.204)	Flux surface averaged total source density of particles [ $\text{m}^{-3} \text{s}^{-1}$ ]; Time-dependent; Vector (npsi)

Type of: `distsource_source:profiles_1d` (3284)

### 9.8.1.3.177 `distsource_profiles_2d`

2D source profiles in terms of two phase space coordinates

member	type	description
grid_coord	vecint_type (9.8.1.2.14)	Identifies the coordinates specified in <code>dim1</code> and <code>dim2</code> . <code>grid_coord(1)</code> and <code>grid_coord(2)</code> describe the coordinate represented in <code>dim1</code> and <code>dim2</code> . The possible coordinates are: 1=R, Major radius [m]; 2=Z, Vertical position [m]; 3=X, first cartesian coordinate in the horizontal plane [m]; 4=Y, second cartesian coordinate in the horizontal plane ( $\text{grad}(X) \times \text{grad}(Y) = \text{grad}(Z)$ ) [m]; 5= $\phi$ , toroidal angle [rad]; 6= $\psi$ , poloidal magnetic flux [ $\text{T}^2 \text{m}^2$ ]; 7= $\rho$ , the square root of the toroidal flux; 8= $\theta$ , geometrical poloidal angle [rad]; 9= $\theta_b$ , Boozer poloidal angle [rad]; 10= $v_x$ , velocity in the x-direction [m/s]; 11= $v_y$ , velocity in the y-direction [m/s]; 12= $v_z$ , velocity in the z-direction [m/s]; 13= $v$ , total velocity [m/s]; 14= $v_\phi$ , velocity in the phi-direction [m/s]; 15= $v_{\parallel}$ , velocity in the parallel direction [m/s]; 16= $v_{\perp}$ , velocity in the perpendicular direction [m/s]; 17=E, Hamiltonian energy [J]; 18=P $\phi$ , canonical toroidal angular momentum [ $\text{kg m}^2/\text{s}$ ]; 19= $\mu$ , magnetic moment [J/T]; 20= $\Lambda = \mu/E$ [1/T]. Vector (2)
dim1	matflt_type (9.8.1.2.10)	First coordinate of 2D grid. Time-dependent; Vector (ndim1,ndim2)
dim2	matflt_type (9.8.1.2.10)	Second coordinate of 2D grid. Time-dependent; Vector (ndim1,ndim2)
g11	matflt_type (9.8.1.2.10)	11 component of the covariant metric tensor in the (dim1, dim2) coordinate system. Time-dependent; Vector (ndim1,ndim2)
g12	matflt_type (9.8.1.2.10)	12 component of the covariant metric tensor in the (dim1, dim2) coordinate system. Time-dependent; Vector (ndim1,ndim2)
g21	matflt_type (9.8.1.2.10)	21 component of the covariant metric tensor in the (dim1, dim2) coordinate system. Time-dependent; Vector (ndim1,ndim2)
g22	matflt_type (9.8.1.2.10)	22 component of the covariant metric tensor in the (dim1, dim2) coordinate system. Time-dependent; Vector (ndim1,ndim2)
pow_den	exp2D (9.8.1.3.205)	Source power density. Here $\sum(M,N=1,2; \text{pow\_den} * g_{NM} * \text{dim}_N * \text{dim}_M)$ have unit [W]. Time-dependent; Vector (ndim1,ndim2)
src_rate	exp2D (9.8.1.3.205)	Source density of particles. Here $\sum(M,N=1,2; \text{src\_rate} * g_{NM} * \text{dim}_N * \text{dim}_M)$ have unit [1/s]. Time-dependent; Vector (ndim1,ndim2)

Type of: `distsource_source:profiles_2d` (3284)

### 9.8.1.3.178 `distsource_source`

Source

member	type	description
source_id(:)	enum_instance (9.8.1.3.195)	List of identifiers for the source, in terms of the type and name of the injectors and reactions that provide the source, along with an index separating sources with the same name and type. Possible content for type: NBI or reaction names (see <code>distsource_types</code> in the Documentation website under Conventions/Enumerated.datatypes); the field name should either be taken from <code>nbi(*)%nbi_unit(*)%name</code> , or describe the populations involved in the reaction, e.g. fast-thermal; the field index should separate different sources generated from a single injector or reaction. Vector(n_injectors_and_reactions)
species	species_reference (9.8.1.3.418)	Defines the source species represented in this element of the vector <code>/distsource/source</code> . Time-dependent
gyro_type	integer (9.8.1.1.2)	Defines how to interpret the spatial coordinates: 1 = given at the actual particle birth point; 2 = given at the gyro centre of the birth point.
global_param	distsource_global_param (9.8.1.3.174)	Global parameters.

member	type	description
profiles_1d	distsource_profiles_1d (9.8.1.3.176)	1D radial profiles
profiles_2d	distsource_profiles_2d (9.8.1.3.177)	2D source profiles in terms of two phase space coordinates
line_srcprof(:)	distsource_line_src_prof (9.8.1.3.175)	1D profiles representation of a line source. Time-dependent
source_rate	source_rate (9.8.1.3.412)	Source density of particles in phase space (real space, velocity space, spin state).
markers	weighted_markers (9.8.1.3.512)	Source given as a set of markers (test particles) born per second.
codeparam	codeparam (9.8.1.3.84)	Code parameters

Type of: distsource:source (3124)

### 9.8.1.3.179 divergence

Detailed information on beamlet divergence. Divergens is described as a super position of Gaussian profiles with amplitude "frac\_divcomp" and vertical/horizontal divergence "div\_vert"/"div\_horiz". Note that for positive ion NBI the divergence is well described by a single Gaussian.

member	type	description
frac_divcomp	vecflt_type (9.8.1.2.13)	Fraction of injected particles. Vector(ndiv_comp)
div_vert	vecflt_type (9.8.1.2.13)	The vertical beamlet divergence [rad]. Here the divergence is defined for Gaussian beams as the angel where the beam density is reduced by a factor 1/e compared to the maximum density. For non-Gaussian beams the divergence is $\sqrt{2} \cdot \text{mean}((x-\text{mean}(x))^2)$ , where x is the angle and the mean should be performed over the beam density, $P(x): \text{mean}(y)=\int(y \cdot P(x) \cdot dx)$ . Vector(ndiv_comp)
div_horiz	vecflt_type (9.8.1.2.13)	The horizontal beamlet divergence [rad]. Here the divergence is defined for Gaussian beams as the angel where the beam density is reduced by a factor 1/e compared to the maximum density. For non-Gaussian beams the divergence is $\sqrt{2} \cdot \text{mean}((x-\text{mean}(x))^2)$ , where x is the angle and the mean should be performed over the beam density, $P(x): \text{mean}(y)=\int(y \cdot P(x) \cdot dx)$ . Vector(ndiv_comp)

Type of: beamletgroup:divergence (3172)

### 9.8.1.3.180 e.components

E-field representation in terms of the parallel and circularly polarised components

member	type	description
e_plus	complexgrid_scalar_cplx (9.8.1.3.95)	Left hand circularly polarised component of the perpendicular (to the static magnetic field) electric field [V/m]. Time-dependent; Complexgrid_scalar
e_minus	complexgrid_scalar_cplx (9.8.1.3.95)	Right hand circularly polarised component of the perpendicular (to the static magnetic field) electric field [V/m]. Time-dependent; Complexgrid_scalar
e_para	complexgrid_scalar_cplx (9.8.1.3.95)	Parallel (to the static magnetic field) component of electric field [V/m]. Time-dependent; Complexgrid_scalar
e_norm	complexgrid_scalar_cplx (9.8.1.3.95)	Magnitude of wave electric field normal to a flux surface [V/m]; Time-dependent; Complexgrid_scalar
e_binorm	complexgrid_scalar_cplx (9.8.1.3.95)	Magnitude of perpendicular (to the static magnetic field) wave electric field tangent to a flux surface [V/m]; Time-dependent; Complexgrid_scalar
b_norm	complexgrid_scalar_cplx (9.8.1.3.95)	Magnitude of perpendicular (to the static magnetic field) wave magnetic field normal to a flux surface [T]; Time-dependent; Complexgrid_scalar
b_binorm	complexgrid_scalar_cplx (9.8.1.3.95)	Magnitude of wave magnetic field tangent to a flux surface [T]; Time-dependent; Complexgrid_scalar
b_para	complexgrid_scalar_cplx (9.8.1.3.95)	Magnitude of wave magnetic field parallel to the equilibrium magnetic field [T]; Time-dependent; Complexgrid_scalar
k_perp	complexgrid_scalar_cplx (9.8.1.3.95)	Perpendicular wave number [1/m]; Time-dependent; Complexgrid_scalar

Type of: fullwave:e.components (3322)

### 9.8.1.3.181 ecemeasure

Measured values

member	type	description
harmonic	integer (9.8.1.1.2)	Harmonic detected by the ECE channels. Time-dependent.
position	rzphi1Dexp (9.8.1.3.373)	Position of the measurement. Time-dependent. Vector (nchannels)

member	type	description
te	exp1D (9.8.1.3.204)	Electron temperature [eV]. Time-dependent. Vector (nchannels)

Type of: ecediag:measure (3125)

### 9.8.1.3.182 ecesetup

diagnostic setup information

member	type	description
frequency	vecflt_type (9.8.1.2.13)	Frequency of the ECE channels. Vector (nchannels)
los	setup_line_exp (9.8.1.3.404)	Geometry of the line of sight.

Type of: ecediag:setup (3125)

### 9.8.1.3.183 edge\_fluid

Fluid quantities

member	type	description
ne	edge_fluid_scalar_simplestruct (9.8.1.3.185)	Electron density [ $1/m^3$ ]; Time-dependent;
ni(:)	edge_fluid_scalar (9.8.1.3.184)	Ion density [ $1/m^3$ ] (per species). Array of structures(nspecies); Time-dependent;
ve	edge_fluid_vector_simplestruct (9.8.1.3.188)	Electron velocity [m/s]; Time-dependent;
vi(:)	edge_fluid_vector (9.8.1.3.187)	Ion velocity [m/s] (per species).Array of structures(nspecies); Time-dependent;
te	edge_fluid_scalar_simplestruct (9.8.1.3.185)	Electron temperature [eV]; Time-dependent;
ti(:)	edge_fluid_scalar (9.8.1.3.184)	Ion temperature [eV] (per species). Array of structures(nspecies); Time-dependent;
te_aniso	edge_fluid_vector_simplestruct (9.8.1.3.188)	Anisotropic electron temperature [eV]; Time-dependent;
ti_aniso(:)	edge_fluid_vector (9.8.1.3.187)	Anisotropic ion temperature [eV] (per species). Array of structures(nspecies); Time-dependent;
po	edge_fluid_scalar_simplestruct (9.8.1.3.185)	Electric potential [V]; Time-dependent;
j	edge_fluid_vector_simplestruct (9.8.1.3.188)	Electric current [A]; Time-dependent;
b(:)	complexgrid_vector (9.8.1.3.100)	Magnetic field vector [T]; Time-dependent;

Type of: edge:fluid (3126)

### 9.8.1.3.184 edge\_fluid\_scalar

A scalar fluid quantity. To be used as array of structure

member	type	description
value(:)	complexgrid_scalar (9.8.1.3.94)	Value of the quantity. Possibly stored on multiple subgrids.; Time-dependent; Array of structures (nsubgrid_quantity)
bndvalue(:)	complexgrid_scalar (9.8.1.3.94)	Boundary values of the quantity. Possibly stored on multiple (boundary) subgrids.; Time-dependent; Array of structures (nsubgrid_quantity)
flux(:)	complexgrid_vector (9.8.1.3.100)	Flux of the quantity. Possibly stored on multiple subgrids.; Time-dependent; Array of structures (nsubgrid_quantity)
bndflux(:)	complexgrid_vector (9.8.1.3.100)	Flux of the quantity. Possibly stored on multiple (boundary) subgrids.; Time-dependent; Array of structures (nsubgrid_quantity)
transpcoeff(:)	edge_fluid_scalar_transpcoeff (9.8.1.3.186)	Transport coefficients; Time-dependent; Array of structures (nsubgrid_quantity)
source(:)	complexgrid_scalar (9.8.1.3.94)	Source; Time-dependent; Array of structures (nsubgrid_quantity)

Type of: edge\_fluid:ni (3289) | edge\_fluid:ti (3289) | edge\_fluid\_vector:comps (3293) | edge\_fluid\_vector\_simplestruct:comps (3294)

### 9.8.1.3.185 edge\_fluid\_scalar\_simplestruct

A scalar fluid quantity. To be used as simple structure.

member	type	description
value(:)	complexgrid_scalar (9.8.1.3.94)	Value of the quantity. Possibly stored on multiple subgrids.; Time-dependent; Array of structures (nsubgrid_quantity)
bndvalue(:)	complexgrid_scalar (9.8.1.3.94)	Boundary values of the quantity. Possibly stored on multiple (boundary) subgrids.; Time-dependent; Array of structures (nsubgrid_quantity)
flux(:)	complexgrid_vector (9.8.1.3.100)	Flux of the quantity. Possibly stored on multiple subgrids.; Time-dependent; Array of structures (nsubgrid_quantity)
bndflux(:)	complexgrid_vector (9.8.1.3.100)	Flux of the quantity. Possibly stored on multiple (boundary) subgrids.; Time-dependent; Array of structures (nsubgrid_quantity)
transpcoeff(:)	edge_fluid_scalar_transpcoeff (9.8.1.3.186)	Transport coefficients; Time-dependent; Array of structures (nsubgrid_quantity)
source(:)	complexgrid_scalar (9.8.1.3.94)	Source; Time-dependent; Array of structures (nsubgrid_quantity)

Type of: edge\_fluid:ne (3289) I edge\_fluid:po (3289) I edge\_fluid:te (3289)

### 9.8.1.3.186 edge\_fluid\_scalar\_transpcoeff

Transport coefficients; Time-dependent; Array of structures (nsubgrid\_quantity)

member	type	description
d	complexgrid_vector_simplestruct (9.8.1.3.101)	Diffusivity [m <sup>2</sup> /s]; Time-dependent;
v	complexgrid_vector_simplestruct (9.8.1.3.101)	Velocity [m/s]; Time-dependent;

Type of: edge\_fluid\_scalar:transpcoeff (3290) I edge\_fluid\_scalar\_simplestruct:transpcoeff (3291)

### 9.8.1.3.187 edge\_fluid\_vector

A fluid vector quantity, with components possibly explicitly aligned to a coordinate direction. To be used as array of structure

member	type	description
griduid	integer (9.8.1.1.2)	Unique identifier of the grid this vector quantity is associated with.
basis	integer (9.8.1.1.2)	Index of basis (defined in associated grid) this vector is aligned to; If set to GRID.UNDEFINED=0, the canonical basis of the default coordinates of the grid assumed.
align	vecint_type (9.8.1.2.14)	Alignment of vector components, numerical flag. Int vector (number of vector components);
alignid	vecstring_type (9.8.1.2.15)	Alignment of vector components, string description. String vector (number of vector components);
comps(:)	edge_fluid_scalar (9.8.1.3.184)	Components of the vector. Array of structures (number of vector components); Time-dependent;

Type of: edge\_fluid:ti\_aniso (3289) I edge\_fluid:vi (3289)

### 9.8.1.3.188 edge\_fluid\_vector\_simplestruct

A fluid vector quantity, with components possibly explicitly aligned to a coordinate direction. To be used as simple structure.

member	type	description
griduid	integer (9.8.1.1.2)	Unique identifier of the grid this vector quantity is associated with.
basis	integer (9.8.1.1.2)	Index of basis (defined in associated grid) this vector is aligned to; If set to GRID.UNDEFINED=0, the canonical basis of the default coordinates of the grid assumed.
comps(:)	edge_fluid_scalar (9.8.1.3.184)	Components of the vector. Array of structures(ndim); Time-dependent;
align	vecint_type (9.8.1.2.14)	Alignment of vector components, numerical flag. Int vector(ndim);
alignid	vecstring_type (9.8.1.2.15)	Alignment of vector components, string description. String vector(ndim);

Type of: edge\_fluid:j (3289) I edge\_fluid:te\_aniso (3289) I edge\_fluid:ve (3289)

### 9.8.1.3.189 edge\_kinetic

Kinetic quantities

member	type	description
f(:)	edge_kinetic_distribution (9.8.1.3.190)	Distribution function [ $1/m^3 (m/s)^{-3}$ ]. Array of structuresr(nspecies); Time-dependent;

Type of: edge:kinetic (3126)

### 9.8.1.3.190 edge\_kinetic\_distribution

Distribution function [ $1/m^3 (m/s)^{-3}$ ]. Array of structuresr(nspecies); Time-dependent;

member	type	description
value(:)	complexgrid_scalar (9.8.1.3.94)	Value of distribution function. Possibly stored on multiple subgrids.; Vector (nsubgrid_quantity). Time-dependent;
bndvalue(:)	complexgrid_scalar (9.8.1.3.94)	Boundary value of distribution function. Possibly stored on multiple subgrids.; Vector (nsubgrid_quantity). Time-dependent;
fluxes(:)	complexgrid_vector (9.8.1.3.100)	Fluxes in phase space. Possibly stored on multiple subgrids.; Vector (nsubgrid_quantity). Time-dependent;
source(:)	complexgrid_scalar (9.8.1.3.94)	Sources in phase space. Possibly stored on multiple subgrids.; Vector (nsubgrid_quantity). Time-dependent;

Type of: edge\_kinetic:f (3295)

### 9.8.1.3.191 edges

Edges defining the coil volume faces. Structure array. Replicate this edge structure N-times for N-edge cross sections. Use just one for wire coil approximation.

member	type	description
edge_rzphi	rzphi1D (9.8.1.3.372)	Sequence of points describing a coil edge. Vector (npoints)

Type of: desc\_coils:edges (3248)

### 9.8.1.3.192 edgespecies

Array of edge species.

member	type	description
nucindex	integer (9.8.1.1.2)	Index into list of nuclei; int
zmin	float (9.8.1.1.1)	Minimum Z of species charge state bundle
zmax	float (9.8.1.1.1)	Maximum Z of species charge state bundle
label	string (9.8.1.1.3)	String identifying the species (e.g. D0, D+, C0, C+, C+2, ...)

Type of: compositions\_type:edgespecies (3212)

### 9.8.1.3.193 element\_desc

Element description (equivalent to wall/compositions/nuclei, can link there using nucindex).

member	type	description
nucindex	integer (9.8.1.1.2)	Index into list of nuclei in wall/compositions/nuclei if the element is present there. Otherwise it is 0 and zn, amn and label have to be set.
label	string (9.8.1.1.3)	Element name/label
zn	float (9.8.1.1.1)	Nuclear charge [units of elementary charge];
amn	float (9.8.1.1.1)	Mass of atom [amu]

Type of: wall:elements (3158)



### 9.8.1.3.194 entry\_def

Structure defining a database entry

member	type	description
user	string (9.8.1.1.3)	Name of the user if private data. Value should be ITM if stored in the official common ITM tree
machine	string (9.8.1.1.3)	Name of the device
shot	integer (9.8.1.1.2)	Shot number
run	integer (9.8.1.1.2)	Run number

Type of: mdinfo:md\_entry (3375)

### 9.8.1.3.195 enum\_instance

Specifies a specific enumerated instance of an object or process in term of its type, name and an index. E.g. the input could be the wave with index=2, selected from all waves launched by the antenna with name=A2, where the antenna is of type=IC.

member	type	description
type	identifier (9.8.1.3.242)	Identify the type of the object or process.
name	string (9.8.1.1.3)	The name of the object or process. Here the object should be an instans of the type specified in the field type.
index	integer (9.8.1.1.2)	Index the separating objects or processes with the same name.

Type of: coherentwave:wave\_id (3192) I distri\_vec:source\_id (3279) I distri\_vec:wave\_id (3279) I distsource\_source:source\_id (3284)

### 9.8.1.3.196 eqconstraint

measurements to constrain the equilibrium, output values and accuracy of the fit

member	type	description
bpol	eqmes1D (9.8.1.3.199)	poloidal pickup coils [T]
bvac_r	eqmes0D (9.8.1.3.198)	Vacuum field times radius in the toroidal field magnet [T.m];
diamagflux	eqmes0D (9.8.1.3.198)	Diamagnetic flux [Wb], defined as integral (Btor - Btor,vac) dS where the integral is over the poloidal cross section of the plasma. It is measured by a single wire loop around the cross section of the torus (e.g. Wesson, Tokamaks, 1997, p.473). It gives information about the separation of the two source profiles p' and FF' of the Grad-Shafranov equation.
faraday	eqmes1D (9.8.1.3.199)	Faraday rotation angles [rad]
flux	eqmes1D (9.8.1.3.199)	Poloidal flux loops [Wb]
i_plasma	eqmes0D (9.8.1.3.198)	Plasma current [A];
isoflux	isoflux (9.8.1.3.248)	Point series at which the flux is considered the same
jsurf	eqmes1D (9.8.1.3.199)	Average of current density on the flux surface [A/m <sup>2</sup> ]
magnet_iron	magnet_iron (9.8.1.3.266)	Magnetisation in iron segments [T]
mse	eqmes1D (9.8.1.3.199)	MSE angles [rad]
ne	eqmes1D (9.8.1.3.199)	Electron density [m <sup>-3</sup> for local measurement, m <sup>-2</sup> if line integrated]
pfcurrent	eqmes1D (9.8.1.3.199)	Current in poloidal field coils [A]
pressure	eqmes1D (9.8.1.3.199)	Total pressure [Pa]
q	q (9.8.1.3.350)	Safety factor
xpts	xpts (9.8.1.3.515)	Position of the X-point(s)

Type of: equilibrium:eqconstraint (3128)

### 9.8.1.3.197 eqgeometry

Geometry of the plasma boundary

member	type	description
source	string (9.8.1.1.3)	Comment describing the origin of the eqgeometry data; String
boundarytype	integer (9.8.1.1.2)	0 (limiter) or 1 (separatrix); Integer; Time-dependent
boundary(:)	rz1Dexp (9.8.1.3.368)	RZ description of the plasma boundary; This is formally declared as an array of structure to allow for time-dependent size of the R and Z vectors in the sub-structure below. However, boundary must be allocated to size 1. Time-dependent;

member	type	description
geom_axis	rz0D (9.8.1.3.365)	RZ position of the geometric axis (defined as (Rmin+Rmax) / 2 and (Zmin+Zmax) / 2 of the boundary) [m]; Time-dependent; Scalar
a_minor	float (9.8.1.1.1)	Minor radius of the plasma boundary [m]; Time-dependent; Scalar
elongation	float (9.8.1.1.1)	Elongation of the plasma boundary; Time-dependent; Scalar
elong_upper	float (9.8.1.1.1)	Elongation upper of the plasma boundary; Time-dependent; Scalar
elong_lower	float (9.8.1.1.1)	Elongation lower of the plasma boundary; Time-dependent; Scalar
tria_upper	float (9.8.1.1.1)	Upper triangularity of the plasma boundary; Time-dependent; Scalar
tria_lower	float (9.8.1.1.1)	Lower triangularity of the plasma boundary; Time-dependent; Scalar
xpts(:)	rz1Dexp (9.8.1.3.368)	Position of the Xpoints, first is the active xpoint if diverted [m]; This is formally declared as an array of structure to allow for time-dependent size of the R and Z vectors in the sub-structure below. However, xpts must be allocated to size 1. Time-dependent;
left_low_st	rz0D (9.8.1.3.365)	Position of the lower left strike point [m]; Time-dependent; Scalar
right_low_st	rz0D (9.8.1.3.365)	Position of the lower right strike point [m]; Time-dependent; Scalar
left_up_st	rz0D (9.8.1.3.365)	Position of the upper left strike point [m]; Time-dependent; Scalar
right_up_st	rz0D (9.8.1.3.365)	Position of the upper right strike point [m]; Time-dependent; Scalar
active_limit	rz0D (9.8.1.3.365)	Position of the active limiter point (point of the plasma boundary in contact with the limiter) [m]; Set R = 0 for X-point plasma; Time-dependent; Scalar
ang_lcms_upo	float (9.8.1.1.1)	Angle at the LMCS X point upper outer; Time-dependent; Scalar
ang_lcms_upi	float (9.8.1.1.1)	Angle at the LMCS X point upper inner; Time-dependent; Scalar
ang_lcms_lwo	float (9.8.1.1.1)	Angle at the LMCS X point lower outer; Time-dependent; Scalar
ang_lcms_lwi	float (9.8.1.1.1)	Angle at the LMCS X point lower inner; Time-dependent; Scalar

Type of: equilibrium:eqgeometry (3128) I scenario:eqgeometry (3151)

### 9.8.1.3.198 eqmes0D

Structure for equilibrium measurement 0D signal

member	type	description
measured	float (9.8.1.1.1)	Measured value of the signal; Time-dependent; Scalar.
source	string (9.8.1.1.3)	Path to the source signal (diagnostic or genprof, from which to read all info on the signal); String
time	float (9.8.1.1.1)	Time (exact time slice used from the time array of the source signal. If the time slice does not exist in the time array of the source signal, it means linear interpolation has been used); Time-dependent; Scalar.
exact	integer (9.8.1.1.2)	1 means exact data, is not fitted; 0 means the equilibrium code does a least square fit; scalar integer
weight	float (9.8.1.1.1)	weight given to the measurement ( $\zeta=0$ ); Time-dependent; Scalar.
sigma	float (9.8.1.1.1)	standard deviation of the measurement; Time-dependent; Scalar.
calculated	float (9.8.1.1.1)	Signal as recalculated by the equilibrium code; Time-dependent; Scalar.
chi2	float (9.8.1.1.1)	chi <sup>2</sup> of (calculated-measured); Time-dependent; Scalar.

Type of: eqconstraint:bvac\_r (3302) I eqconstraint:diamagflux (3302) I eqconstraint:i\_plasma (3302)

### 9.8.1.3.199 eqmes1D

Structure for equilibrium measurement 1D signal

member	type	description
measured	vecflt_type (9.8.1.2.13)	Measured value of the signal; Time-dependent; Array(nmeas)
source	string (9.8.1.1.3)	Path to the source signal (diagnostic or genprof, from which to read all info on the signal), e.g. 'magdiag/bpol.probes/measure/value'. String
time	float (9.8.1.1.1)	Exact time slice used from the time array of the source signal. If the time slice does not exist in the time array of the source signal, it means linear interpolation has been used); Time-dependent; Scalar
exact	vecint_type (9.8.1.2.14)	1 means exact data, is not fitted; 0 means the equilibrium code does a least square fit; Time-dependent; Array(nmeas)
weight	vecflt_type (9.8.1.2.13)	weight given to the measurement ( $\zeta=0$ ); Time-dependent; Array(nmeas)
sigma	vecflt_type (9.8.1.2.13)	standard deviation of the measurement; Time-dependent; Array(nmeas)
calculated	vecflt_type (9.8.1.2.13)	Signal as recalculated by the equilibrium code; Time-dependent; Array(nmeas)
chi2	vecflt_type (9.8.1.2.13)	chi <sup>2</sup> of (calculated-measured); Time-dependent; Array(nmeas)

Type of: eqconstraint:bpol (3302) I eqconstraint:faraday (3302) I eqconstraint:flux (3302) I eqconstraint:jsurf

(3302) I eqconstraint:mse (3302) I eqconstraint:ne (3302) I eqconstraint:pfcurrent (3302) I eqconstraint:pressure (3302) I magnet\_iron:mr (3372) I magnet\_iron:mz (3372)

### 9.8.1.3.200 equatorial\_plane

Description of the equatorial plane or any other omnigeuous surfaces. Time-dependent

member	type	description
r	vecflt.type (9.8.1.2.13)	Major radius coordinate of the equatorial plane (m). Time-dependent; Vector(n.equatorial_grid)
z	vecflt.type (9.8.1.2.13)	Major radius coordinate of the equatorial plane (m). Time-dependent; Vector(n.equatorial_grid)
s	vecflt.type (9.8.1.2.13)	Distance along the poloidal projection of the equatorial plane (m). Here s=0 should be at the magnetic axis, s>0 on the low field side and s<0 on the high field side. For example, in up-down symmetric fields s=R-R0, where R is the major radius and R0 the major radius at the magnetic axis. Time-dependent; Vector(n.equatorial_grid)
rho_tor	vecflt.type (9.8.1.2.13)	Toroidal flux coordinate [m]. Defined as $\sqrt{(\phi - \phi_{\text{axis}}) / \pi / B_0}$ , where B0 is the reference magnetic field, phi is the toroidal flux and phi_axis is the toroidal flux at the magnetic axis. Time-dependent; Vector (n.equatorial_grid)
psi	vecflt.type (9.8.1.2.13)	Poloidal flux [Wb], evaluated without $1/2\pi$ and such that $B_p =  \text{grad } \psi  / R / 2 / \pi$ . Time-dependent; Vector (n.equatorial_grid)
b_mod	vecflt.type (9.8.1.2.13)	The modulus of the magnetic field along the equatorial plane, or more generally of the omnigeuous surfaces [T]. Time-dependent; Vector (n.equatorial_grid)

Type of: dist\_dstrivec\_distfunc\_fexp\_param:equatorial (3257) I parameters:equatorial (3424)

### 9.8.1.3.201 equilibrium\_profiles2d\_grid

definition of the 2D grid

member	type	description
dim1	vecflt.type (9.8.1.2.13)	First dimension values; Time-dependent; Vector (ndim1)
dim2	vecflt.type (9.8.1.2.13)	Second dimension values; Time-dependent; Vector (ndim2)
connect	matint.type (9.8.1.2.11)	In case of a finite elemnt representation, lists the points (3 for triangles, 4 for quadrangles) which define a finite element. In this case, ndim1=ndim2 and the value of grid_connect represents the index of the points in the list 1:ndim. E.g. : grid_connect(i,1:4) is a list of four integers [k1 k2 k3 k4] meaning that finite element #i is defined by the points (dim1(k1),dim2(k1)),(dim1(k2),dim2(k2)),(dim1(k3),dim2(k3)) and (dim1(k4),dim2(k4)); Time-dependent; Matrix of integers (nelement,4)

Type of: equilibrium\_profiles\_2d:grid (3308)

### 9.8.1.3.202 equilibrium\_profiles\_2d

output profiles in the poloidal plane

member	type	description
grid.type	vecstring.type (9.8.1.2.15)	Selection of one of a set of grid types. 1-rectangular (R,Z) grid, in this case the position arrays should not be filled since they are redundant with grid/dim1 and dim2.
grid	equilibrium_profiles2d_grid (9.8.1.3.201)	definition of the 2D grid
r	matflt.type (9.8.1.2.10)	values of the major radius on the grid [m]; Time-dependent; Matrix (ndim1, ndim2)
z	matflt.type (9.8.1.2.10)	values of the altitude on the grid [m]; Time-dependent; Matrix (ndim1, ndim2)
psi	matflt.type (9.8.1.2.10)	values of the poloidal flux at the grid in the poloidal plane [Wb]; Time-dependent; Matrix (ndim1, ndim2)
theta	matflt.type (9.8.1.2.10)	values of the poloidal angle on the grid [rad]; Time-dependent; Matrix (ndim1, ndim2)
phi	matflt.type (9.8.1.2.10)	Toroidal flux [Wb]. Time-dependent; Matrix (ndim1, ndim2)
jphi	matflt.type (9.8.1.2.10)	toroidal plasma current density [A m-2]; Time-dependent; Matrix (ndim1, ndim2)
jpar	matflt.type (9.8.1.2.10)	parallel (to magnetic field) plasma current density [A m-2]; Time-dependent; Matrix (ndim1, ndim2)
br	matflt.type (9.8.1.2.10)	R component of the poloidal magnetic field at the specified grid [T]; Time-dependent; Matrix (ndim1, ndim2)
bz	matflt.type (9.8.1.2.10)	Z component of the poloidal magnetic field at the specified grid [T]; Time-dependent; Matrix (ndim1, ndim2)
bphi	matflt.type (9.8.1.2.10)	toroidal component of the magnetic field at the specified grid [T]; Time-dependent; Matrix (ndim1, ndim2)
vphi	matflt.type (9.8.1.2.10)	toroidal flow velocity [m/s]; Time-dependent; Matrix (ndim1, ndim2)
vtheta	matflt.type (9.8.1.2.10)	Poloidal flow velocity [m/s]; Time-dependent; Matrix (ndim1, ndim2)
rho_mass	matflt.type (9.8.1.2.10)	Mass density [kg/m^3]; Time-dependent; Matrix (ndim1, ndim2)

member	type	description
pressure	matflt.type (9.8.1.2.10)	Pressure [Pa]; Time-dependent; Matrix (ndim1, ndim2)
temperature	matflt.type (9.8.1.2.10)	Temperature [eV]; Time-dependent; Matrix (ndim1, ndim2)

Type of: equilibrium:profiles\_2d (3128)

### 9.8.1.3.203 exp0D

Structure for experimental time-dependent scalar signal

member	type	description
value	float (9.8.1.1.1)	Signal value; Time-dependent; Scalar
abserror	float (9.8.1.1.1)	Absolute error on signal; Time-dependent; Scalar
relerror	float (9.8.1.1.1)	Relative error on signal (normalised to signal value); Time-dependent; Scalar

Type of: antenna\_ec:power (3162) I antenna\_ic:frequency (3163) I antenna\_ic:power (3163) I antenna\_lh:power (3164) I bolometer\_processed:prad\_core (3176) I bolometer\_processed:prad\_tot (3176) I distsource\_global\_param:src\_pow (3280) I distsource\_global\_param:src\_rate (3280) I fusiondiag\_ct\_chords:energy (3330) I fusiondiag\_spec1d:energy (3336) I fusiondiag\_spec2d:energy (3337) I magdiag:diamagener (3137) I magdiag:diamagflux (3137) I magdiag:ip (3137) I nbi\_unit:inj\_eng\_unit (3399) I nbi\_unit:pow\_unit (3399) I solcurdiag\_sol\_current:measure (3514) I straps:current (3529) I straps:phase (3529) I toroidfield:bvac\_r (3155) I toroidfield:current (3155)

### 9.8.1.3.204 exp1D

Structure for experimental 1D signal

member	type	description
value	vecflt.type (9.8.1.2.13)	Signal value; Time-dependent; Vector
abserror	vecflt.type (9.8.1.2.13)	Absolute error on signal; Time-dependent; Vector
relerror	vecflt.type (9.8.1.2.13)	Relative error on signal (normalised to signal value); Time-dependent; Vector

Type of: bolometer\_measure:prad (3175) I bpol\_probes:measure (3183) I bremsstrahl\_measure:zeff (3184) I coil:coilcurrent (3193) I coil:coilvoltage (3193) I current:spectrum (3243) I cxmeasure:ti (3244) I cxmeasure:vpol (3244) I cxmeasure:vtor (3244) I distsource\_profiles\_1d:pow\_den (3282) I distsource\_profiles\_1d:src\_rate (3282) I distsource\_profiles\_1d:trq\_d (3282) I ecemeasure:te (3287) I flux\_loops:measure (3317) I fusiondiag\_ct\_chords:measure (3330) I fusiondiag\_ct\_energy:energy (3331) I fusiondiag\_ct\_energy:measure (3331) I fusiondiag\_detect\_ct\_energy:energy (3332) I fusiondiag\_detect\_ct\_energy:measure (3332) I fusiondiag\_emissivity1d:r (3333) I fusiondiag\_emissivity1d:z (3333) I fusiondiag\_spec1d:measure (3336) I halpha\_setup:solidangle (3343) I halphadiag:intensity (3130) I lang\_derived:measure (3356) I lang\_measure:area (3357) I lang\_measure:measure (3357) I lineintegraldiag:measure (3367) I lithmeasure:ne (3368) I magnetise:mr (3373) I magnetise:mz (3373) I modules:amplitude (3388) I modules:phase (3388) I msediag\_radia\_chord:totradiance (3392) I msediag\_radiance:wavelength (3393) I nbi\_unit:beamcurfrac (3399) I nbi\_unit:beampowfrac (3399) I pfcoils:coilcurrent (3435) I pfcoils:coilvoltage (3435) I pfpassive\_current:poloidal (3440) I pfpassive\_current:toroidal (3440) I pfsupplies:current (3441) I pfsupplies:voltage (3441) I polarimetry:measure (3447) I rfameasure:ti (3468) I rzphi1Dexp:phi (3479) I rzphi1Dexp:r (3479) I rzphi1Dexp:z (3479) I tsmeasure:ne (3580) I tsmeasure:te (3580)

### 9.8.1.3.205 exp2D

Structure for experimental 2D signal

member	type	description
value	matflt.type (9.8.1.2.10)	Signal value; Time-dependent; Matrix
abserror	matflt.type (9.8.1.2.10)	Absolute error on signal; Time-dependent; Matrix
relerror	matflt.type (9.8.1.2.10)	Relative error on signal (normalised to signal value); Time-dependent; Matrix

Type of: distsource\_profiles\_2d:pow\_den (3283) I distsource\_profiles\_2d:src\_rate (3283) I fusiondiag\_emissivity2d:r (3334) I fusiondiag\_emissivity2d:z (3334) I fusiondiag\_spec2d:measure (3337)

### 9.8.1.3.206 f\_expansion

Distribution function,  $f$ , expanded into a vector of successive approximations. The first element in the vector ( $f\_expansion(1)$ ) is the zeroth order distribution function, while the  $K$ :th element in the vector ( $f\_expansion(K)$ ) is the  $K$ :th correction, such that the total distribution function is a sum over all elements in the  $f\_expansion$  vector. Time-dependent. Structure array ( $Nf\_expansion$ )

member	type	description
grid	complexgrid (9.8.1.3.89)	Grid for storing the distribution function. Time-dependent; Complexgrid
values	complexgrid_scalar (9.8.1.3.94)	Values of the distribution function [ $m^{-3} (m/s)^{-3}$ ]. Time-dependent; Complexgrid_scalar.
parameters	dist_distribvec_distfunc_fexp_parameters (9.8.1.3.151)	Parameters used to defined the grid coordinates. Time-dependent

Type of: dist\_func:f\_expansion (3259)

### 9.8.1.3.207 fast\_thermal\_separation\_filter

Description of how the fast and the thermal particle populations were separated.

member	type	description
method	identifier (9.8.1.3.242)	Identifier describing the method used to separate the fast and thermal particle population (see fast_thermal_separation_filter_identifier_definition in the Documentation website under Conventions/Enumerated_datatypes)
energy_sep	vecflt_type (9.8.1.2.13)	Energy at which the fast and thermal particle populations were separated [eV]. Vector (nrho). Time-dependent.

Type of: corefast\_values:filter (3219) I distri\_vec:fast\_filter (3279)

### 9.8.1.3.208 filter

Laplace proper filter

member	type	description
num	matflt_type (9.8.1.2.10)	Coefficients of the numerator, in increasing order : $a_0 + a_1*s + \dots + a_n*s^n$ ; Matrix (nsupplies,n)
den	matflt_type (9.8.1.2.10)	Coefficients of the denominator, in increasing order : $b_0 + b_1*s + \dots + b_m*s^m$ ; Matrix (nsupplies,m)

Type of: desc\_supply:filter (3252)

### 9.8.1.3.209 flat\_polygon

Polygon lying on a flat surface on a 3D cartesian space ( $x,y,z$ ). The coordinate system on the surface is defined by the origin, "origin", and two basis vectors in ( $x,y,z$ ) space, "basis1" and "basis2". The polyon is then represented as the origin, plus a linear combination of the two basis vectors using coord1 and coord2, i.e. the  $j$ :th point is described by "origin+basis1\*coord1(j)+basis2\*coord2(j)". As an example, a rectangle centered at the origin, with two of the corners given by "origin+basis1" and "origin+basis2" can be described using coord1=[1,0,-1,0] and coord2=[0,1,0,-1]. The normal vector of the surface is defined to be in the direction "basis1 x basis2".

member	type	description
origin	xyz0D (9.8.1.3.516)	Origin of the surface coordinate system.
basis1	xyz0D (9.8.1.3.516)	First basis vector on the surface.
basis2	xyz0D (9.8.1.3.516)	First basis vector on the surface.
coord1	vecflt_type (9.8.1.2.13)	First coordinate of the polygon points, conjugate to basis1.
coord2	vecflt_type (9.8.1.2.13)	Second coordinate of the polygon points, conjugate to basis2.

Type of: nbi\_nbi\_unit\_wall:collimator (3397)

### 9.8.1.3.210 flush

FLUSH package coefficients for the mapping of the equilibrium. The time grid of this structure is the same as the equilibrium structure above.

member	type	description
datainfo	datainfo (9.8.1.3.141)	Generic information on a data item
position	rz1D (9.8.1.3.366)	Major radius and altitude of the FLUSH grid [m]; Time-dependent; Vectors resp. (nR) and (nZ)
coef	matflt.type (9.8.1.2.10)	Coefficients of the fit; Time-dependent; Matrix 2D (nR,nZ)
codeparam	codeparam (9.8.1.3.84)	Code parameters

Type of: equilibrium:flush (3128)

### 9.8.1.3.211 flux\_loops

Poloidal flux loops RZ coordinates have 1 component for the full loop and two if there is a negative reference loop

member	type	description
setup_floops	setup_floops (9.8.1.3.402)	diagnostic setup information
measure	exp1D (9.8.1.3.204)	Measured flux [Wb]; Time-dependent; Vector (nloops)

Type of: magdiag:flux\_loops (3137)

### 9.8.1.3.212 fluxel

Structure for the fluxes of a field of the core transport equations (electrons); Time-dependent;

member	type	description
flux_dv	vecflt.type (9.8.1.2.13)	Flux of the field calculated from the transport coefficients. Time-dependent; Vector (nrho)
flux_interp	vecflt.type (9.8.1.2.13)	Interpretative flux deduced from measured data, the integral of the source term, and the time derivative of the field. Time-dependent; Vector (nrho)

Type of: corefield:flux (3220)

### 9.8.1.3.213 fluximp

Structure for the fluxes of a field of the core transport equations (impurities); Time-dependent;

member	type	description
flux_dv	matflt.type (9.8.1.2.10)	Flux of the field calculated from the transport coefficients. Time-dependent; Array2D (nrho,nzimp)
flux_interp	matflt.type (9.8.1.2.10)	Interpretative flux deduced from measured data, the integral of the source term, and the time derivative of the field. Time-dependent; Array2D (nrho,nzimp)

Type of: impurity\_type:flux (3351)

### 9.8.1.3.214 fluxion

Structure for the fluxes of a field of the core transport equations (ions); Time-dependent;

member	type	description
flux_dv	matflt.type (9.8.1.2.10)	Flux of the field calculated from the transport coefficients. Time-dependent; Matrix (nrho,nion)
flux_interp	matflt.type (9.8.1.2.10)	Interpretative flux deduced from measured data, the integral of the source term, and the time derivative of the field. Time-dependent; Matrix (nrho,nion)

Type of: corefieldion:flux (3221)

### 9.8.1.3.215 focussing

Describes how the beam is focussed.

member	type	description
focal_len_hz	float (9.8.1.1.1)	Horizontal focal length along the beam line, i.e. the point along the centre of the beamlet-group where the beamlet-group has its minimum horizontal width [m]. Scalar
focal_len_vc	float (9.8.1.1.1)	Vertical focal length along the beam line, i.e. the point along the centre of the beamlet-group where the beamlet-group has its minimum vertical width [m]. Scalar

member	type	description
width_min_hz	float (9.8.1.1.1)	The horizontal width of the beamlet-group at the at the horizontal focal point [m]. Scalar
width_min_vc	float (9.8.1.1.1)	The vertical width of the beamlet-group at the at the vertical focal point [m]. Scalar

Type of: beamletgroup:focussing (3172)

### 9.8.1.3.216 fullwave

Solution by full wave code

member	type	description
grid	complexgrid (9.8.1.3.89)	Grid for storing the components of the wave field; Time-dependent
e.components	e.components (9.8.1.3.180)	E-field representation in terms of the parallel and circularly polarised components
pol.decomp	pol.decomp (9.8.1.3.340)	TO BE REMOVED, being replaced by e.components and grid. Kept only to make smooth transition between data-type versions. [Poloidal decomposition of the wave fields. Uses the flux surface grid in grid.1d.]
local	local (9.8.1.3.264)	TO BE REMOVED, being replaced by e.components and grid. Kept only to make smooth transition between data-type versions. [Local description of the wave fields. Uses the grid in grid.2d].

Type of: coherentwave:fullwave (3192)

### 9.8.1.3.217 fusiondiag\_colli\_3d

Geometry of each channel of detector for arbitrary cross section. Replicate this structure for each channel.

member	type	description
name	string (9.8.1.1.3)	Name tag for the chord. String.
voxels(:)	fusiondiag_voxels (9.8.1.3.232)	Array of voxel structures defining the plasma region viewed from each collimator and scaling factor for effective solid angle for sources.

Type of: fusiondiag\_collimator:colli\_3d (3326)

### 9.8.1.3.218 fusiondiag\_colli\_circ

Geometry of each channel of detector for circular cross section. Replicate this structure for each channel.

member	type	description
name	string (9.8.1.1.3)	Name tag for the chord.
setup_line	setup_line (9.8.1.3.403)	Geometric description of the line of sight. First pivot close to detector position and second pivot at first wall hit.
colliunit(:)	fusiondiag_colliunit_circ (9.8.1.3.221)	Detail of each collimator unit of each chord. Replicate this structure for each collimator.

Type of: fusiondiag\_collimator:colli\_circ (3326)

### 9.8.1.3.219 fusiondiag\_colli\_poly

Geometry of each channel of detector for polygon cross section. Replicate this structure for each channel.

member	type	description
name	string (9.8.1.1.3)	Name tag for the chord.
setup_line	setup_line (9.8.1.3.403)	Geometric description of the line of sight. First pivot close to detector position and second pivot at first wall hit.
colliunit(:)	fusiondiag_colliunit_poly (9.8.1.3.222)	Detail of each collimator unit of each chord. Replicate this structure for each collimator.

Type of: fusiondiag\_collimator:colli\_poly (3326)



### 9.8.1.3.220 fusiondiag\_collimator

Collimator array.

member	type	description
colli_circ(:)	fusiondiag_colli_circ (9.8.1.3.218)	Geometry of each channel of detector for circular cross section. Replicate this structure for each channel.
colli_poly(:)	fusiondiag_colli_poly (9.8.1.3.219)	Geometry of each channel of detector for polygon cross section. Replicate this structure for each channel.
colli_3d(:)	fusiondiag_colli_3d (9.8.1.3.217)	Geometry of each channel of detector for arbitrary cross section. Replicate this structure for each channel.

Type of: fusiondiag\_fus\_product:collimator (3335)

### 9.8.1.3.221 fusiondiag\_colliunit\_circ

Detail of each collimator unit of each chord. Replicate this structure for each collimator.

member	type	description
radius	vecflt_type (9.8.1.2.13)	Radius of cross section; Typically dim=2 for just entry and exit of collimator; Vector (dim)
centre	rzphi1D (9.8.1.3.372)	Position of cross section centre; Typically dim=2 for just entry and exit of collimator; Vector (dim)

Type of: fusiondiag\_colli\_circ:colliunit (3324)

### 9.8.1.3.222 fusiondiag\_colliunit\_poly

Detail of each collimator unit of each chord. Replicate this structure for each collimator.

member	type	description
dimension	float (9.8.1.1.1)	Number of edges of cross section.
nodes	rzphi2D (9.8.1.3.375)	Coordinates of nodes defining each cross section; Typically dim=2 for just entry and exit of collimator; Vector (dim,nnodes)

Type of: fusiondiag\_colli\_poly:colliunit (3325)

### 9.8.1.3.223 fusiondiag\_counts

Integrated emissivity [ $s^{-1}$ ].

member	type	description
units	string (9.8.1.1.3)	Energy units (ev, tof - time of flight)
ct_chords(:)	fusiondiag_ct_chords (9.8.1.3.224)	Integrated emissivity for all spatial chords. Replicate the structure for each energy bin [ $s^{-1}$ ]. Time-dependent
ct_energy(:)	fusiondiag_ct_energy (9.8.1.3.225)	Integrated emissivity for each chord as function of energy like variable. Replicate this structure for each chord [ $s^{-1}$ ]. Time-dependent
detect_ct(:)	fusiondiag_detect_ct_energy (9.8.1.3.226)	Detected integrated emissivity for each chord as function of energy like variable. Replicate this structure for each chord. This structure contains the actual experimental data as obtained from the detector. To get from species emissivity to the detector counts a detector transfer matrix is used (should be shot independent) since a monoenergetic beam will ultimately show up with a given spread in the detector channels. Each detector type or l.o.s. might have a dedicated detector transfer matrix since the energy discrimination can vary. [ $s^{-1}$ ]. Time-dependent

Type of: fusiondiag\_fus\_product:counts (3335)

### 9.8.1.3.224 fusiondiag\_ct\_chords

Integrated emissivity for all spatial chords. Replicate the structure for each energy bin [ $s^{-1}$ ].

member	type	description
name	vecstring_type (9.8.1.2.15)	Name tag for each chord. Vector (nchords)
energy	exp0D (9.8.1.3.203)	Energy like variable span. Use minimum energy when no energy spectra is resolved.
measure	exp1D (9.8.1.3.204)	Measured counts. Vector (nchords)

Type of: fusiondiag\_counts:ct\_chords (3329)

### 9.8.1.3.225 fusiondiag\_ct\_energy

Integrated emissivity for each chord as function of energy like variable. Replicate this structure for each chord [s<sup>-1</sup>].

member	type	description
energy	exp1D (9.8.1.3.204)	Energy array of detected counts spectra. Vector (nenergy)
measure	exp1D (9.8.1.3.204)	Measured counts spectra. Vector (nenergy)

Type of: fusiondiag\_counts:ct\_energy (3329)

### 9.8.1.3.226 fusiondiag\_detect\_ct\_energy

Detected integrated emissivity for each chord as function of energy like variable. Replicate this structure for each chord. This structure contains the actual experimental data as obtained from the detector. To get from species emissivity to the detector counts a detector transfer matrix is used (should be shot independent) since a monoenergetic beam will ultimately show up with a given spread in the detector channels. Each detector type or l.o.s. might have a dedicated detector transfer matrix since the energy discrimination can vary. [s<sup>-1</sup>].

member	type	description
energy	exp1D (9.8.1.3.204)	Energy array of detected counts spectra. Vector (nenergy)
measure	exp1D (9.8.1.3.204)	Measured counts spectra. Vector (nenergy)
diag_func	diag_func (9.8.1.3.147)	Structure to provide the description on the detector used and store the transfer matrix of the detector for that l.o.s.

Type of: fusiondiag\_counts:detect\_ct (3329)

### 9.8.1.3.227 fusiondiag\_emissivity1d

Reconstructed 1D emissivity [counts.m<sup>-3</sup>.s<sup>-1</sup>].

member	type	description
units	string (9.8.1.1.3)	Energy units (ev, tof - time of flight)
r	exp1D (9.8.1.3.204)	horizontal grid. Vector (dim)
z	exp1D (9.8.1.3.204)	vertical grid. Vector (dim)
spec1d(:)	fusiondiag_spec1d (9.8.1.3.230)	Emissivity in given energy like variable range [counts.m <sup>-3</sup> .s <sup>-1</sup> ]; Time-dependent

Type of: fusiondiag\_fus\_product:emissivity1d (3335)

### 9.8.1.3.228 fusiondiag\_emissivity2d

Reconstructed 2D emissivity [counts.m<sup>-3</sup>.s<sup>-1</sup>].

member	type	description
units	string (9.8.1.1.3)	Energy units (ev, tof - time of flight)
r	exp2D (9.8.1.3.205)	radial grid. Vector (dim1,dim2)
z	exp2D (9.8.1.3.205)	vertical grid. Vector (dim1,dim2)
spec2d(:)	fusiondiag_spec2d (9.8.1.3.231)	Emissivity in given energy like variable range [counts.m <sup>-3</sup> .s <sup>-1</sup> ]; Time-dependent

Type of: fusiondiag\_fus\_product:emissivity2d (3335)

### 9.8.1.3.229 fusiondiag\_fus\_product

Source. Time-dependent. Structure array. Replicate this source structure to accommodate neutron and gammas.

member	type	description
product	string (9.8.1.1.3)	Type of fusion product (neutron,gamma)

member	type	description
reaction	string (9.8.1.1.3)	Type of reaction involved (e.g. DD neutron, Be-alpha,n,gamma-C)
collimator	fusiondiag_collimator (9.8.1.3.220)	Collimator array.
counts	fusiondiag_counts (9.8.1.3.223)	Integrated emissivity [ $s^{-1}$ ].
emissivity1d	fusiondiag_emissivity1d (9.8.1.3.227)	Reconstructed 1D emissivity [ $counts.m^{-3}.s^{-1}$ ].
emissivity2d	fusiondiag_emissivity2d (9.8.1.3.228)	Reconstructed 2D emissivity [ $counts.m^{-3}.s^{-1}$ ].
codeparam	codeparam (9.8.1.3.84)	Code parameters

Type of: fusiondiag:fus\_product (3129)

### 9.8.1.3.230 fusiondiag\_spec1d

Emissivity in given energy like variable range [ $counts.m^{-3}.s^{-1}$ ].

member	type	description
energy	exp0D (9.8.1.3.203)	Energy like variable span. Use minimum energy when no energy spectra is resolved. Scalar
measure	exp1D (9.8.1.3.204)	reconstruction. Vector (dim)

Type of: fusiondiag\_emissivity1d:spec1d (3333)

### 9.8.1.3.231 fusiondiag\_spec2d

Emissivity in given energy like variable range [ $counts.m^{-3}.s^{-1}$ ].

member	type	description
energy	exp0D (9.8.1.3.203)	Energy like variable span. Use minimum energy when no energy spectra is resolved. Scalar
measure	exp2D (9.8.1.3.205)	reconstruction. Vector (dim1,dim2)

Type of: fusiondiag\_emissivity2d:spec2d (3334)

### 9.8.1.3.232 fusiondiag\_voxels

Array of voxel structures defining the plasma region viewed from each collimator and scaling factor for effective solid angle for sources.

member	type	description
centre	rzphi0D (9.8.1.3.371)	Centre of voxel; used also as origin of direction to detector
direction	rzphi0D (9.8.1.3.371)	Second point defining the direction to detector.
volume	float (9.8.1.1.1)	Voxel Volume
solid_angle	float (9.8.1.1.1)	effective solid angle (divided by $4\pi$ ) of the voxel towards detector.

Type of: fusiondiag\_colli\_3d:voxels (3323)

### 9.8.1.3.233 geom

Geometry between components

member	type	description
dr_bb_sh_ib	float (9.8.1.1.1)	Gap between the breeding blanket module and the shield (inboard) in the equatorial section [m]; Scalar
dr_sh_vv_ib	float (9.8.1.1.1)	Gap between the shield and the vacuum vessel (inboard) in the equatorial section [m]; Scalar
dr_bb_sh_ob	float (9.8.1.1.1)	Gap between the breeding blanket module and the shield (outboard) in the equatorial section [m]; Scalar
dr_sh_vv_ob	float (9.8.1.1.1)	Gap between the shield and the vacuum vessel (outboard) in the equatorial section [m]; Scalar
dr_bb_sh_ib	float (9.8.1.1.1)	Overall radial dimension of the ensemble BB plus shield (inboard) [m]; Scalar
dr_bb_sh_ob	float (9.8.1.1.1)	Overall radial dimension of the ensemble BB plus shield (outboard) [m]; Scalar
delta_int	float (9.8.1.1.1)	Distance between the inner plasma surface and the plasma facing side of the superconducting winding of the toroidal field coil [m]; Scalar

Type of: bb\_shield:geom (3111)

### 9.8.1.3.234 geom\_iron

Geometry of the iron segments

member	type	description
npoints	vecint.type (9.8.1.2.14)	Number of points describing an element (irregular outline rzcoordinate); Vector (nsegment)
rzcoordinate	rz2D (9.8.1.3.369)	Irregular outline [m]; 2D arrays (nsegment,max.npoints)

Type of: desc\_iron:geom\_iron (3250)

### 9.8.1.3.235 global\_param

0d output parameters

member	type	description
beta_pol	float (9.8.1.1.1)	poloidal beta; Time-dependent; Scalar
beta_tor	float (9.8.1.1.1)	toroidal beta; Time-dependent; Scalar
beta_normal	float (9.8.1.1.1)	normalised beta; Time-dependent; Scalar
i_plasma	float (9.8.1.1.1)	total toroidal plasma current [A]; Positive sign means anti-clockwise when viewed from above. Time-dependent; Scalar
li	float (9.8.1.1.1)	internal inductance; Time-dependent; Scalar
volume	float (9.8.1.1.1)	total plasma volume [m <sup>3</sup> ]; Time-dependent; Scalar
area	float (9.8.1.1.1)	area poloidal cross section [m <sup>2</sup> ]; Time-dependent; Scalar
psi_ax	float (9.8.1.1.1)	poloidal flux at the magnetic axis [Wb]; Time-dependent; Scalar
psi_bound	float (9.8.1.1.1)	poloidal flux at the selected plasma boundary (separatrix for a free boundary code; fixed boundary for fixed boundary code) [Wb]; Time-dependent; Scalar
mag_axis	mag_axis (9.8.1.3.265)	Magnetic axis values
q_95	float (9.8.1.1.1)	q at the 95% poloidal flux surface; Time-dependent; Scalar
q_min	float (9.8.1.1.1)	minimum q value in the plasma; Time-dependent; Scalar
toroid_field	b0r0 (9.8.1.3.61)	Characteristics of the vacuum toroidal field, redundant with the toroidfield CPO, to be used by the ETS
w_mhd	float (9.8.1.1.1)	Plasma energy content = $3/2 * \int(p,dV)$ with p being the total pressure (thermal + fast particles) [J]. Time-dependent; Scalar
gamma	float (9.8.1.1.1)	Adiabatic index. Time-dependent; Scalar

Type of: equilibrium:global\_param (3128)

### 9.8.1.3.236 globalparam

Various global quantities calculated from the 1D profiles. Time-dependent

member	type	description
current_tot	float (9.8.1.1.1)	Total plasma current [A]; Time-dependent; Scalar
current_bnd	float (9.8.1.1.1)	Plasma current inside transport solver boundary rho_tor_bnd [A]; Time-dependent; Scalar
current_ni	float (9.8.1.1.1)	Total non-inductive parallel current [A]; Time-dependent; Scalar
vloop	float (9.8.1.1.1)	Toroidal loop voltage [V]; Time-dependent; Scalar
li	float (9.8.1.1.1)	Internal inductance; Time-dependent; Scalar
beta_tor	float (9.8.1.1.1)	toroidal beta; Time-dependent; Scalar
beta_normal	float (9.8.1.1.1)	normalised beta; Time-dependent; Scalar
beta_pol	float (9.8.1.1.1)	poloidal beta; Time-dependent; Scalar
w_dia	float (9.8.1.1.1)	Plasma energy content = $3/2 * \int(p,dV)$ with p being the total pressure (pr_th + pr_perp). Time-dependent; Scalar
geom_axis	rz0D (9.8.1.3.365)	RZ position of the geometric axis (defined as $(Rmin+Rmax) / 2$ and $(Zmin+Zmax) / 2$ of the boundary) [m]; Time-dependent; Scalar

Type of: coreprof:globalparam (3119)

### 9.8.1.3.237 halpha\_setup

setup for the lines of sight of the line integrated measurement

member	type	description
name	vecstring_type (9.8.1.2.15)	Name of the channel. Array of strings (nlos).
pivot_point	rzphi1D (9.8.1.3.372)	Pivot point of l.o.s. it can be either the collimator position or entry point on the vessel. Vector (nlos)
horchordang	vecflt_type (9.8.1.2.13)	Angle [rad] of horizontal projection of l.o.s. with poloidal cross section (0 for HFS to LFS trajectory - see Convention_angles_interfdiag.pdf) [rad]. Vector (nlos)
verchordang	vecflt_type (9.8.1.2.13)	Angle of l.o.s. with vertical axis (0 for bottom-top trajectory, Pi for top-bottom trajectory - see Convention_angles_interfdiag.pdf) [rad]; Vector (npos)
second_point	rzphi1D (9.8.1.3.372)	Second point defining the l.o.s. together with the pivot_point. Vector (nlos)
solidangle	exp1D (9.8.1.3.204)	Solid angle of the detector; [sr] Vector (nlos)

Type of: halphadiag:setup (3130)

### 9.8.1.3.238 hcll

Data specific to HCLL blanket concept

member	type	description
mat_lim	mat_lim (9.8.1.3.268)	Material limits specific to HCLL breeding blanket
hcll.bb	hcll.bb (9.8.1.3.239)	HCLL breeding blanket. Radially, the blanket is divided in 4 layers: 1: First Wall, 2: breeder zone, 3: back plates, 4: manifolds

Type of: bb\_shield:hcll (3111)

### 9.8.1.3.239 hcll.bb

HCLL breeding blanket. Radially, the blanket is divided in 4 layers: 1: First Wall, 2: breeder zone, 3: back plates, 4: manifolds

member	type	description
bb_lifetime	float (9.8.1.1.1)	Breeding blanket lifetime [years]; Scalar
he_inl_t	float (9.8.1.1.1)	Inlet temperature (to the bb module) [K]; Scalar
he_fr	float (9.8.1.1.1)	Coolant mass flow rate in "the" reference bb module (or in each module) [Kg/s];
he_inl_p	float (9.8.1.1.1)	Helium inlet pressure [Pa]; Scalar
loca_des_p	float (9.8.1.1.1)	Box design pressure (coincident He circuit design pressure) [Pa]; Scalar
he_dp	float (9.8.1.1.1)	Coolant pressure drops in the breeding blankets [Pa]; Scalar
lipb_dp	float (9.8.1.1.1)	Pb-15.7Li pressure drops in the bb [Pa]; Scalar
react	react (9.8.1.3.352)	In the reactor region
inboard	hcllbb_specs (9.8.1.3.240)	Inboard
outboard	hcllbb_specs (9.8.1.3.240)	Outboard

Type of: hcll:hcll.bb (3344)

### 9.8.1.3.240 hcllbb\_specs

Inboard

member	type	description
mass	vecflt_type (9.8.1.2.13)	Mass of inboard or outboard breeding blanket modules (located at equatorial midplane if only one considered) [Kg]; Vector(nmodules)
dr	vecflt_type (9.8.1.2.13)	Inboard or outboard breeding blanket radial build giving the thickness of each layer [m]; Vector(nlayers)
mat	vecflt_type (9.8.1.2.13)	Inboard or outboard breeding blanket materials; Vector(nlayers)
composition	matflt_type (9.8.1.2.10)	Inboard or outboard breeding blanket radial build giving for each layer (1: First Wall protective layer, 2: First Wall, 3: breeder zone, 4: back plates, 5: manifolds), the percentage of each material respectively (Meaning of the material index 1: Eurofer, 2: Pb-15.7Li, 3: He, 4: Water, 5: Tungsten Carbide, 6: Boron, 7: Tungsten, 8: Stainless Steel 316) in %vol; Matrix(nlayers(=5), max_nmaterials)
mod_geom	bb_geometry (9.8.1.3.64)	Geometrical parameters of "the" reference region blanket module
mod_neutr	mode_neutr (9.8.1.3.278)	Neutrons "effects"
mod_therm	mode_therm (9.8.1.3.280)	Thermical parameters
mod_th_hyd	mode_th_hyd (9.8.1.3.279)	hydrodynamics parameters
mod_mech	mode_mech (9.8.1.3.277)	Mechanical parameters
mod_lipb	mode_lipb (9.8.1.3.276)	Pb-15.7Li "effects"

member	type	description
mod_tritium	mode_tritium (9.8.1.3.281)	Tritium parameters

Type of: hcll\_bb:inboard (3345) | hcll\_bb:outboard (3345)

### 9.8.1.3.241 holes

Structure to describe the placing and properties of the holes

member	type	description
n_holes	integer (9.8.1.1.2)	Number of holes on each wall;
coordinates	coordinates (9.8.1.3.109)	Poloidal and Toroidal coordinates of the center of each hole;
width	width (9.8.1.3.514)	Angular width of each in the poloidal and toroidal direction;
eta	vecfft_type (9.8.1.2.13)	Resistivity of each hole [ohm.m]; Vector (n_holes)

Type of: mhd\_res\_wall2d:holes (3379)

### 9.8.1.3.242 identifier

Standard type for identifiers. The three fields: id, flag and description are all representations of the same information. Associated with each application of this identifier-type, there should be a translation table defining the three fields for all objects to be identified.

member	type	description
id	string (9.8.1.1.3)	Short string identifier
flag	integer (9.8.1.1.2)	Integer identifier
description	string (9.8.1.1.3)	Verbose description of identifier

Type of: amns\_processType:quality (3161) | composition\_neutralscomp:type (3211) | compositions\_type:signature (3212) | coredelta\_values:deltaid (3217) | corefast\_values:fastid (3219) | coreneutrals\_atomlist:ionimptype (3234) | coresource\_values:sourceid (3238) | coretransp\_values:transportid (3242) | dist\_sources\_reference:type (3274) | enum\_instance:type (3301) | fast\_thermal\_separation\_filter:method (3313) | mhd\_ideal\_wall2d:walltype (3376) | mhd\_res\_wall2d:walltype (3379) | msediag\_polarization:type (3391) | msediag\_stokes:type (3396) | pellet\_shape:type (3432) | reacprodType:role (3457) | reflectometry\_antennas:type (3463) | reflectometry\_radfield:type (3464) | simp\_apert:type (3513) | species\_reference:type (3524) | table:quality (3533) | temporary\_nt\_0dc:identifier (3537) | temporary\_nt\_0di:identifier (3538) | temporary\_nt\_0dr:identifier (3539) | temporary\_nt\_0ds:identifier (3540) | temporary\_nt\_1dc:identifier (3541) | temporary\_nt\_1di:identifier (3542) | temporary\_nt\_1dr:identifier (3543) | temporary\_nt\_1ds:identifier (3544) | temporary\_nt\_2dc:identifier (3545) | temporary\_nt\_2di:identifier (3546) | temporary\_nt\_2dr:identifier (3547) | temporary\_nt\_3dc:identifier (3548) | temporary\_nt\_3di:identifier (3549) | temporary\_nt\_3dr:identifier (3550) | temporary\_nt\_4dr:identifier (3551) | temporary\_t\_0dc:identifier (3553) | temporary\_t\_0di:identifier (3554) | temporary\_t\_0dr:identifier (3555) | temporary\_t\_0ds:identifier (3556) | temporary\_t\_1dc:identifier (3557) | temporary\_t\_1di:identifier (3558) | temporary\_t\_1dr:identifier (3559) | temporary\_t\_2dc:identifier (3560) | temporary\_t\_2di:identifier (3561) | temporary\_t\_2dr:identifier (3562) | temporary\_t\_3dc:identifier (3563) | temporary\_t\_3di:identifier (3564) | temporary\_t\_3dr:identifier (3565) | temporary\_t\_4dr:identifier (3566) | trap\_type:trap\_id (3578) | wall2d:wall\_id (3594) | wall3d:wall\_id (3596) | wall\_limiter:limiter\_id (3599) | wall\_vessel:vessel\_id (3604) | weighted\_markers:variable\_ids (3618)

### 9.8.1.3.243 impcoeff

Array over charge states for this particular impurity.

member	type	description
chargestate(·)	coefficients_neutrals (9.8.1.3.85)	Time-dependent

Type of: coreneutrals:impcoeff (3118)

### 9.8.1.3.244 impurities

Array of impurities.

member	type	description
nucindex	integer (9.8.1.1.2)	Index into list of nuclei; int
i_ion	integer (9.8.1.1.2)	Index of the impurity species in the ions array of structures. Vector (nimp)
nzimp	integer (9.8.1.1.2)	Number of charge states (or bundles) considered for this impurity species.
zmin	vecflt.type (9.8.1.2.13)	Minimum Z of impurity ionisation state bundle. Vector (nzimp)
zmax	vecflt.type (9.8.1.2.13)	Maximum Z of impurity ionisation state bundle. If no bundle, zmax=zmin. Vector (nzimp)
label	vecstring.type (9.8.1.2.15)	String array (nzimp) identifying impurities (e.g. C+, C+2, C+3, C+4, C+5, C+6, ...)

Type of: compositions.type:impurities (3212)

### 9.8.1.3.245 impurity\_type

Array(nimp). Time-dependent

member	type	description
z	matflt.type (9.8.1.2.10)	Impurity ionisation state (averaged for bundle); Time-dependent; Array2D (nrho,nzimp)
zsq	matflt.type (9.8.1.2.10)	Z <sup>2</sup> , Square of impurity ionisation state (averaged for bundle); Time-dependent; Array2D (nrho,nzimp)
nz	matflt.type (9.8.1.2.10)	Density of impurity in a given charge state [m <sup>-3</sup> ]. Time-dependent; Array2D (nrho,nzimp)
tz	matflt.type (9.8.1.2.10)	Temperature of impurity in a given charge state [m <sup>-3</sup> ]. Time-dependent; Array2D (nrho,nzimp)
source_term	sourceimp (9.8.1.3.415)	Source term for each charge state. Time-dependent.
boundary	boundaryimp (9.8.1.3.75)	Boundary condition for each charge state. Time-dependent
transp_coef	coretransimp (9.8.1.3.134)	Transport coefficients for each charge state
flux	fluximp (9.8.1.3.213)	Fluxes of impurity particles, two definitions [m <sup>-2</sup> .s <sup>-1</sup> ]. Time-dependent.
time_deriv	matflt.type (9.8.1.2.10)	Integral of the time derivative term of the transport equation. Time-dependent. Array2D (nrho,nzimp)
diagnostic	coreimpurediag.type (9.8.1.3.125)	NO DOCS

Type of: coreimpur:impurity (3117)

### 9.8.1.3.246 inj\_spec

Injected species

member	type	description
amn	float (9.8.1.1.1)	Atomic mass number
zn	float (9.8.1.1.1)	Nuclear charge

Type of: nbi\_unit:inj\_spec (3399)

### 9.8.1.3.247 ions

Array of main plasma ions.

member	type	description
nucindex	integer (9.8.1.1.2)	Index into list of nuclei; int
zion	float (9.8.1.1.1)	Ion charge (of the dominant ionisation state; lumped ions are allowed); Vector (nion)
imp_flag	integer (9.8.1.1.2)	Multiple charge state calculation flag : 0-Only one charge state is considered; 1-Multiple charge state are considered and are described in impurity CPO; Vector (nion)
label	string (9.8.1.1.3)	String identifying ion (e.g. H+, D+, T+, He+2, C+, ...)

Type of: compositions.type:ions (3212)

### 9.8.1.3.248 isoflux

Point series at which the flux is considered the same

member	type	description
position	rz1D (9.8.1.3.366)	Position of the points at which the flux is considered the same; Time-dependent; Vector (nmeas)
source	string (9.8.1.1.3)	Description or path to the source signal (diagnostic or genprof, from which to read all info on the signal), e.g. 'magdiag/bpol.probes/measure/value'. String



member	type	description
weight	vecflt_type (9.8.1.2.13)	weight given to the measurement ( $\zeta=0$ ); -1 if exact data; Time-dependent; Vector (nmeas)
sigma	vecflt_type (9.8.1.2.13)	standard deviation of the measurement; Time-dependent; Vector (nmeas)
calculated	vecflt_type (9.8.1.2.13)	Signal as recalculated by the equilibrium code; Time-dependent; Vector (nmeas)
chi2	vecflt_type (9.8.1.2.13)	chi <sup>2</sup> of (calculated-measured); Time-dependent; Vector (nmeas)

Type of: eqconstraint:isoflux (3302)

### 9.8.1.3.249 jni

Non-inductive parallel current density [A/m<sup>2</sup>]; Time-dependent;

member	type	description
value	vecflt_type (9.8.1.2.13)	Value of jni; Time-dependent; Vector (nrho)
integral	vecflt_type (9.8.1.2.13)	Integral from 0 to rho of jni. Time-dependent; Vector (nrho)
source	string (9.8.1.1.3)	Source of the profile (any comment describing the origin of the profile : code, path to diagnostic signals, massaging, ...); String

Type of: psi:jni (3454)

### 9.8.1.3.250 lang\_derived

Structure for physics quantities derived from Langmuir probe measurements

member	type	description
source	vecstring_type (9.8.1.2.15)	Probes in probe holder used to derive measure. String vector
position	rzphi1Dexp (9.8.1.3.373)	Position of the measurement. Time-dependent.
measure	exp1D (9.8.1.3.204)	Measured quantity. Time-dependent.

Type of: langmuirdiag:machpar (3134) | langmuirdiag:ne (3134) | langmuirdiag:te (3134)

### 9.8.1.3.251 lang\_measure

Structure for elementary Langmuir probe measurement

member	type	description
name	vecstring_type (9.8.1.2.15)	Name of the probe e.g. Jsatur1,Vfloat1). String vector
direction	vecstring_type (9.8.1.2.15)	Direction of the probe w.r.t. magnetic field. For Mach arrangement use 'co' (co-field) and 'ct' (counter field) for the pair, otherwise use 'both'. String vector
area	exp1D (9.8.1.3.204)	Effective area of probe [m <sup>2</sup> ]. Time-dependent.
position	rzphi1Dexp (9.8.1.3.373)	Position of the measurement. Time-dependent.
measure	exp1D (9.8.1.3.204)	Measured quantity. Time-dependent.

Type of: langmuirdiag:bias (3134) | langmuirdiag:jsat (3134) | langmuirdiag:potential (3134)

### 9.8.1.3.252 launchangles

Launching angles of the beam

member	type	description
alpha	float (9.8.1.1.1)	Poloidal launching angle between the horizontal plane and the poloidal component of the nominal beam centerline [rad], Tan(alpha)=k.z/k.R; Time-dependent
beta	float (9.8.1.1.1)	Toroidal launching angle between the poloidal plane and the nominal beam centerline [rad], Sin(beta)=k_phi; Time-dependent

Type of: antenna\_ec:launchangles (3162)

### 9.8.1.3.253 launches\_parallel

Power spectrum as a function of the parallel refractive index.

member	type	description
nn_par	vecint.type (9.8.1.2.14)	Number of points for the discretization of the spectrum in the poloidal direction, Vector of integers (nantenna).
n_par	matflt.type (9.8.1.2.10)	Refraction index in the parallel direction, Matrix (nantenna,max_nn_par).
power	vecflt.type (9.8.1.2.13)	W/dN_par [W], Matrix(nantenna, max_nn_par). Time-dependent

Type of: spectrum:parallel (3526)

#### 9.8.1.3.254 launches\_phi\_theta

Power spectrum as a function of the refractive index in the toroidal and poloidal directions.

member	type	description
nn_phi	vecint.type (9.8.1.2.14)	Number of points for the discretization of the spectrum in the toroidal direction, Vector of integers (nantenna).
nn_theta	vecint.type (9.8.1.2.14)	Number of points for the discretization of the spectrum in the poloidal direction, Vector of integers (nantenna).
n_phi	matflt.type (9.8.1.2.10)	Refraction index in the toroidal direction, Matrix (nantenna,max_nn_phi).
n_theta	matflt.type (9.8.1.2.10)	Refraction index in poloidal direction, Matrix (nantenna,max_nn_theta).
power	array3dflt.type (9.8.1.2.2)	W/dNphi/dNtheta [W], Array (nantenna, max_nn_phi, max_nn_theta). Time-dependent

Type of: spectrum:phi\_theta (3526)

#### 9.8.1.3.255 launches\_rfbeam

Beam characteristics (RF wave description)

member	type	description
spot	launchs_rfbeam_spot (9.8.1.3.257)	Spot characteristics
phaseellipse	launchs_rfbeam_phaseellipse (9.8.1.3.256)	Phase ellipse characteristics of the spot

Type of: launchs:beam (3135)

#### 9.8.1.3.256 launchs\_rfbeam\_phaseellipse

Phase ellipse characteristics of the spot

member	type	description
invcurrad	matflt.type (9.8.1.2.10)	Inverse curvature radii for the phase ellipse [m-1], Matrix (nantenna,2). Time-dependent
angle	vecflt.type (9.8.1.2.13)	Rotation angle for the phase ellipse [rd], Vector(nantenna). Time-dependent

Type of: launchs\_rfbeam:phaseellipse (3361)

#### 9.8.1.3.257 launchs\_rfbeam\_spot

Spot characteristics

member	type	description
waist	matflt.type (9.8.1.2.10)	Waist for the spot ellipse [m], Matrix (nantenna,2). Time-dependent
angle	vecflt.type (9.8.1.2.13)	Rotation angle for the spot ellipse [rd], Vector(nantenna). Time-dependent

Type of: launchs\_rfbeam:spot (3361)

#### 9.8.1.3.258 launchsignal

member	type	description
time_launch	vecflt.type (9.8.1.2.13)	Time stamp for particular event e.g. ramp of frequency sweep (but it should not be needed since it should be tied to the cpo time !); Time-dependent

member	type	description
freq	vecflt.type (9.8.1.2.13)	Frequency of the injected waves (should not be needed since it is already used in the injected signal !), typical data stored experimentally; Time-dependent
amplitude	vecflt.type (9.8.1.2.13)	Amplitude of the injected waves (essential if using gaussian, already encoded in the Electric field pattern), typical data stored experimentally; Time-dependent
phase	vecflt.type (9.8.1.2.13)	Phase of the sinusoidal (e.g. voltage) signal injected in the antenna, typical data stored experimentally; Time-dependent

Type of: reflectometry\_antennas:launchsignal (3463)

### 9.8.1.3.259 limiter\_unit

Vector of limiting surfaces. Replicate this limiter\_unit element ncomponents times. Each unit contains a plasma facing component that can have dedicated number of points. Array of structures (ncomponents)

member	type	description
name	string (9.8.1.1.3)	Name or description of the limiter_unit
closed	string (9.8.1.1.3)	Identify whether the contour is closed (y) or open (n)
position	rz1D (9.8.1.3.366)	Position (R,Z coordinates) of a limiting surface. No need to repeat first point for closed contours [m]; Vector(npoints)
eta	float (9.8.1.1.1)	Wall resistivity [ohm.m]; Scalar
delta	float (9.8.1.1.1)	Wall thickness [m] (Optional if a closed facing component is given but useful for simpler closed contour limiter); Time-dependent; Scalar
permeability	float (9.8.1.1.1)	Vessel relative permeability; Scalar

Type of: wall\_limiter:limiter\_unit (3599)

### 9.8.1.3.260 limits

Limits

member	type	description
fw_dpa	float (9.8.1.1.1)	max allowable displacement per atom on FW [dpa]; Scalar.
he_appm	float (9.8.1.1.1)	He concentration limit in re-welding areas [appm]; Scalar
ins_dose	float (9.8.1.1.1)	Integral radiation dose in insulator (Epoxy) [Gy] [J*Kg <sup>-1</sup> ]; Scalar
fn_flu	float (9.8.1.1.1)	Peak fast neutron fluence (E <sub>0</sub> 0.1 MeV) to the Nb3Sn superconductor [m <sup>-2</sup> ]; Scalar
dpa_cu	float (9.8.1.1.1)	Peak displacement damage to copper stabilizer [dpa]; Scalar
wp_nh	float (9.8.1.1.1)	Peak nuclear eating in winding pack [W*m <sup>-3</sup> ]; Scalar

Type of: bb\_shield:limits (3111)

### 9.8.1.3.261 lineintegraldiag

General line integral diagnostic

member	type	description
datainfo	datainfo (9.8.1.3.141)	Generic information on a data item
expression	string (9.8.1.1.3)	Formal expression for the line integral to be evaluated as a function of ne, ni, Te, Ti, Zeff, Br, Bz
setup_line	setup_line (9.8.1.3.403)	Geometric description of the lines of sight
measure	exp1D (9.8.1.3.204)	Measured value. Time-dependent; Vector (nchords)
codeparam	codeparam (9.8.1.3.84)	Code parameters
time	float (9.8.1.1.1)	Time [s]; Time-dependent; Scalar

### 9.8.1.3.262 lithmeasure

Measured values

member	type	description
ne	exp1D (9.8.1.3.204)	Electron density [m <sup>-3</sup> ]. Vector (nchannels)

Type of: lithiumdiag:measure (3136)

### 9.8.1.3.263 lithsetup

diagnostic setup information

member	type	description
position	rzphi1D (9.8.1.3.372)	Position of the measurement. Vector (nchannels)

Type of: lithiumdiag:setup (3136)

### 9.8.1.3.264 local

TO BE REMOVED, being replaced by e\_components and grid. Kept only to make smooth transition between data-type versions. [Local description of the wave fields. Uses the grid in grid\_2d].

member	type	description
e.plus	array3dfilt.type (9.8.1.2.2)	Magnitude of left hand polarised component of the wave electric field [V/m]; Time-dependent; Array 3D (ntor, ndim1, ndim2)
e.plus.ph	array3dfilt.type (9.8.1.2.2)	Phase of left hand polarised component of the wave electric field [rad]; Time-dependent; Array 3D (ntor, ndim1, ndim2)
e.minus	array3dfilt.type (9.8.1.2.2)	Magnitude of right hand polarised component of the wave electric field [v/m]; Time-dependent; Array 3D (ntor, ndim1, ndim2)
e.minus.ph	array3dfilt.type (9.8.1.2.2)	Phase of right hand polarised component of the wave electric field [rad]; Time-dependent; Array 3D (ntor, ndim1, ndim2)
e.norm	array3dint.type (9.8.1.2.3)	Magnitude of wave electric field normal to a flux surface [V/m]; Time-dependent; 3D (ntor, ndim1, ndim2)
enorm.ph	array3dfilt.type (9.8.1.2.2)	Phase of wave electric field normal to a flux surface [rad]; Time-dependent; 3D (ntor, ndim1, ndim2)
e.binorm	array3dfilt.type (9.8.1.2.2)	Magnitude of wave electric field tangent to a flux surface [V/m]; Time-dependent; 3D (ntor, ndim1, ndim2)
e.binorm.ph	array3dfilt.type (9.8.1.2.2)	Phase of wave electric field tangent to a flux surface [rad]; Time-dependent; 3D (ntor, ndim1, ndim2)
e.para	array3dfilt.type (9.8.1.2.2)	Magnitude of parallel wave electric field [V/m]; Time-dependent; Array 3D (ntor, ndim1, ndim2)
e.para.ph	array3dfilt.type (9.8.1.2.2)	Phase of parallel wave electric field [rad]; Time-dependent; Array 3D (ntor, ndim1, ndim2)
b.norm	array3dfilt.type (9.8.1.2.2)	Magnitude of wave magnetic field normal to a flux surface [T]; Time-dependent; Array 3D (ntor, ndim1, ndim2)
b.norm.ph	array3dfilt.type (9.8.1.2.2)	Phase of wave magnetic field normal to a flux surface [rad]; Time-dependent; Array 3D (ntor, ndim1, ndim2)
b.binorm	array3dfilt.type (9.8.1.2.2)	Magnitude of wave magnetic field tangent to a flux surface [T]; Time-dependent; Array 3D (ntor, ndim1, ndim2)
b.binorm.ph	array3dfilt.type (9.8.1.2.2)	Phase of wave magnetic field tangent to a flux surface [rad]; Time-dependent; Array 3D (ntor, ndim1, ndim2)
b.para	array3dfilt.type (9.8.1.2.2)	Magnitude of wave magnetic field parallel to the equilibrium magnetic field [T]; Time-dependent; Array 3D (ntor, ndim1, ndim2)
b.para.ph	array3dfilt.type (9.8.1.2.2)	Phase of wave magnetic field parallel to the equilibrium magnetic field [rad]; Time-dependent; Array 3D (ntor, ndim1, ndim2)
k.perp	array3dfilt.type (9.8.1.2.2)	Perpendicular wave number [T]; Time-dependent; Array 3D (ntor, ndim1, ndim2)

Type of: fullwave:local (3322)

### 9.8.1.3.265 mag\_axis

Magnetic axis values

member	type	description
position	rz0D (9.8.1.3.365)	Position of the magnetic axis [m]; Time-dependent; Scalar;
bphi	float (9.8.1.1.1)	Total toroidal magnetic field at the magnetic axis [T]; Time-dependent; Scalar
q	float (9.8.1.1.1)	q at the magnetic axis; Time-dependent; Scalar

Type of: global\_param:mag\_axis (3341)

### 9.8.1.3.266 magnet\_iron

Magnetisation in iron segments [T]

member	type	description
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member	type	description
mr	eqmes1D (9.8.1.3.199)	Magnetisation along the R axis [T];
mz	eqmes1D (9.8.1.3.199)	Magnetisation along the Z axis [T];

Type of: eqconstraint:magnet\_iron (3302)

### 9.8.1.3.267 magnetise

Magnetisation M of the iron segment, assumed to be constant inside a given iron segment. Reminder :  $H = 1/\mu_0 * B - \mu_r * M$ ; [A/m].

member	type	description
mr	exp1D (9.8.1.3.204)	Magnetisation along the R axis [T]; Time-dependent; Vector (nsegment)
mz	exp1D (9.8.1.3.204)	Magnetisation along the Z axis [T]; Time-dependent; Vector (nsegment)

Type of: ironmodel:magnetise (3133)

### 9.8.1.3.268 mat\_lim

Material limits specific to HCLL breeding blanket

member	type	description
cool.t_lim	float (9.8.1.1.1)	Min, max allowable He temperature [K];
steel.t_lim	float (9.8.1.1.1)	Min, max allowable steel temperature [K];
lipb.t_lim	float (9.8.1.1.1)	Min, max allowable LiPb temperature [K];

Type of: hcll:mat\_lim (3344)

### 9.8.1.3.269 mdinfo

Information related to machine description for this entry

member	type	description
shot_min	integer (9.8.1.1.2)	Minimum shot number to which the machine description applies
shot_max	integer (9.8.1.1.2)	Maximum shot number to which the machine description applies
md_entry	entry_def (9.8.1.3.194)	Entry of the machine description used. NB : just for information : for the moment, no guarantee that machine description data have not been modified with respect to the data in md_entry. Machine description data are written explicitly in each CPO.

Type of

### 9.8.1.3.270 mhd\_ideal\_wall2d

Ideal wall

member	type	description
walltype	identifier (9.8.1.3.242)	Tag the type of wall to be used, 0 (conformal) or 1 (free)
position	rz1D (9.8.1.3.366)	RZ description of the wall;

Type of: wall2d\_mhd:ideal\_wall (3595)

### 9.8.1.3.271 mhd\_mode

MHD modes in the confined plasma

member	type	description
modenum	integer (9.8.1.1.2)	Toroidal mode number of the MHD mode; Scalar; Time-dependent.
growthrate	float (9.8.1.1.1)	Linear growthrate of the mode [Hz]; Scalar; Time-dependent.
frequency	float (9.8.1.1.1)	Frequency of the mode [Hz]; Scalar; Time-dependent.
plasma	mhd_plasma (9.8.1.3.272)	MHD modes in the confined plasma

member	type	description
vacuum	mhd_vacuum (9.8.1.3.274)	External modes

Type of: mhd:n (3138)

### 9.8.1.3.272 mhd\_plasma

MHD modes in the confined plasma

member	type	description
psi	vecflt_type (9.8.1.2.13)	Position in poloidal flux [Wb] (without $1/2\pi$ and such that $B_p =  \text{grad } \psi  / R/2/\pi$ ). Time-dependent; Vector (npsi)
rho_tor_norm	vecflt_type (9.8.1.2.13)	Normalised toroidal flux coordinate values (= rho_tor normalised to the value at the last grid point); Time-dependent; Vector (nrho)
rho_tor	vecflt_type (9.8.1.2.13)	Toroidal flux coordinate (not normalised, equivalent to rho_tor_norm) [m]; Vector (nrho). Time-dependent.
m	matflt_type (9.8.1.2.10)	Poloidal mode number; Time-dependent; Array2D (npsi,nm)
disp_perp	matcplx_type (9.8.1.2.9)	Perpendicular displacement of the mode (in Fourier space) [m]; Time-dependent; Array 2D (npsi,nm)
disp_par	matcplx_type (9.8.1.2.9)	Parallel displacement of the mode (in Fourier space) [m]; Time-dependent; Array 2D (npsi,nm)
tau_alfven	vecflt_type (9.8.1.2.13)	Alven time= $R/v_A=R0 \sqrt{\mu_0 \rho_0} / B0$ [s]; Definitions of R0, B0, $\mu_0$ , $\rho_0$ to be clarified. rho grid should be included in the MHD CPO ? Time-dependent; Vector (npsi)
tau_res	vecflt_type (9.8.1.2.13)	Resistive time = $\mu_0 \rho_0 / 1.22 / \eta_{\text{neo}}$ [s]; Source of $\eta_{\text{neo}}$ to be clarified. Time-dependent; Vector (npsi)
coord_sys	coord_sys (9.8.1.3.108)	flux surface coordinate system on a square grid of flux and angle
a_pert	mhd_vector (9.8.1.3.275)	Perturbed vector potential (in Fourier space) [T.m]
b_pert	mhd_vector (9.8.1.3.275)	Perturbed magnetic field (in Fourier space) [T]
v_pert	mhd_vector (9.8.1.3.275)	Perturbed velocity (in Fourier space) [m/s]
p_pert	matcplx_type (9.8.1.2.9)	Perturbed pressure (in Fourier space) [Pa]; Time-dependent; Array 2D (npsi,nm)
rho_mass_per	matcplx_type (9.8.1.2.9)	Perturbed mass density (in Fourier space) [ $\text{kg}/\text{m}^3$ ]; Time-dependent; Array 2D (npsi,nm)
temp_per	matcplx_type (9.8.1.2.9)	Perturbed temperature (in Fourier space) [eV]; Time-dependent; Array 2D (npsi,nm)

Type of: mhd\_mode:plasma (3377)

### 9.8.1.3.273 mhd\_res\_wall2d

Resistive wall

member	type	description
walltype	identifier (9.8.1.3.242)	Tag the type of wall to be used, 0 (conformal) or 1 (free)
delta	float (9.8.1.1.1)	Wall thickness [m]; Scalar
eta	float (9.8.1.1.1)	Wall resistivity [ohm.m]; Scalar
npoloidal	integer (9.8.1.1.2)	Number of poloidal coordinates for each wall (dimension of R and Z);
position	rz1D (9.8.1.3.366)	RZ description of the wall; wall coordinates are defined at a middle line (line passing through the middle of the real wall as defined by thickness parameter delta)
holes	holes (9.8.1.3.241)	Structure to describe the placing and properties of the holes

Type of: wall2d\_mhd:res\_wall (3595)

### 9.8.1.3.274 mhd\_vacuum

External modes

member	type	description
m	matflt_type (9.8.1.2.10)	Poloidal mode number; Time-dependent; Array2D (npsi,nm)
coord_sys	coord_sys (9.8.1.3.108)	flux surface coordinate system on a square grid of flux and angle
a_pert	mhd_vector (9.8.1.3.275)	Perturbed vector potential (in Fourier space) [T.m]
b_pert	mhd_vector (9.8.1.3.275)	Perturbed magnetic field (in Fourier space) [T]

Type of: mhd\_mode:vacuum (3377)

### 9.8.1.3.275 mhd\_vector

Vector structure for MHD CPO

member	type	description
coord1	matcplx_type (9.8.1.2.9)	Fourier components of first coordinate; Time-dependent; Array 2D (npsi,nm)
coord2	matcplx_type (9.8.1.2.9)	Fourier components of second coordinate; Time-dependent; Array 2D (npsi,nm)
coord3	matcplx_type (9.8.1.2.9)	Fourier components of third coordinate; Time-dependent; Array 2D (npsi,nm)

Type of: mhd\_plasma:a\_pert (3378) I mhd\_plasma:b\_pert (3378) I mhd\_plasma:v\_pert (3378) I mhd\_vacuum:a\_pert (3380) I mhd\_vacuum:b\_pert (3380)

### 9.8.1.3.276 mode\_lipb

Pb-15.7Li "effects"

member	type	description
lp_rec_day	float (9.8.1.1.1)	nb of Pb-15.7Li recirculation per day [Pa]; Scalar
bb_lp_fr	vecflt_type (9.8.1.2.13)	Pb-15.7Li mass flow rate in "the" bb module (or in each bb module) [Kg/s]; Vector(nmodules)
lp_inl_p	float (9.8.1.1.1)	Pb-15.7Li inlet pressure [Pa]; Scalar
bu_dp_lp	float (9.8.1.1.1)	Pb-15.7Li pressure drops in the breeder unit [Pa]; Scalar
man_dp_lp	float (9.8.1.1.1)	Pb-15.7Li pressure drops in the bb manifolds [Pa]; Scalar
tot_dp_lp	float (9.8.1.1.1)	Pb-15.7Li total pressure drops [Pa]; Scalar
bu_lp_ave_t	float (9.8.1.1.1)	Pb-15.7Li average temperature in a breeder unit [K]; Scalar
bu_lp_max_t	float (9.8.1.1.1)	Pb-15.7Li max temperature in a breeder unit [K]; Scalar

Type of: hcllbb\_specs:mod\_lipb (3346)

### 9.8.1.3.277 mode\_mech

Mechanical parameters

member	type	description
fw_min_ts_mg	float (9.8.1.1.1)	Min margin to tensile stress limit in the first wall; Scalar
fw_min_bd_mg	float (9.8.1.1.1)	Min margin to banding stress limit in the first wall; Scalar
sg_min_ts_mg	float (9.8.1.1.1)	Min margin to tensile stress limit in the stiffening grid; Scalar
sg_min_bd_mg	float (9.8.1.1.1)	Min margin to bending stress limit in the stiffening grid; Scalar
cp_min_ts_mg	float (9.8.1.1.1)	Min margin to tensile stress limit in the cooling plate; Scalar
cp_min_bd_mg	float (9.8.1.1.1)	Min margin to bending stress limit in the cooling plate; Scalar
min_ts_mg_ac	float (9.8.1.1.1)	Min tensile margin in accidental conditions; Scalar
min_bd_mg_ac	float (9.8.1.1.1)	Min bending margin in accidental conditions; Scalar

Type of: hcllbb\_specs:mod\_mech (3346)

### 9.8.1.3.278 mode\_neutr

Neutrons "effects"

member	type	description
r	vecflt_type (9.8.1.2.13)	Major radius position at wich power density is calculated [m]; Vector(nr)
pd_rad	vecflt_type (9.8.1.2.13)	Power density distribution in radial direction [W/m <sup>3</sup> ]; Vector(nr)
lipb_coef_pd	vecflt_type (9.8.1.2.13)	Pb-15.7Li power density distribution in radial direction: coefficients of bi-exponential law if this one is used [W/m <sup>-3</sup> ,W/m <sup>-3</sup> ,m <sup>-1</sup> ,m <sup>-1</sup> ]; Matrix
steel_coef_pd	vecflt_type (9.8.1.2.13)	Eurofer power density distribution in radial direction: coefficients of bi-exponential law if this one is used
pow_exchange	power_exchange (9.8.1.3.344)	NO DOCS

Type of: hcllbb\_specs:mod\_neutr (3346)



### 9.8.1.3.279 mode.th.hyd

hydrodynamics parameters

member	type	description
fw_dp_he	float (9.8.1.1.1)	Pressure drops in the first wall [Pa]; Scalar
sg_dp_he	float (9.8.1.1.1)	Pressure drops in the stiffening grid [Pa]; Scalar
cp_dp_he	float (9.8.1.1.1)	Pressure drops in the cooling plates [Pa]; Scalar
man_dp_he	float (9.8.1.1.1)	Pressure drops in the manifolds [Pa]; Scalar
tot_dp_he	float (9.8.1.1.1)	Total pressure drops in bb module [Pa]; Scalar
bp_dp_he	float (9.8.1.1.1)	Total pressure drops in the by pass (if any) [Pa]; ScalarScalar
circ_dp_he	float (9.8.1.1.1)	Pressure drops in one He circuit [Pa]; Scalar

Type of: hcllbb\_specs:mod.th.hyd (3346)

### 9.8.1.3.280 mode.therm

Thermal parameters

member	type	description
he_fr	float (9.8.1.1.1)	Coolant mass flow rate in "the" reference bb (inboard or outboard) module [Kg/s]; Scalar
perc_bp_he	float (9.8.1.1.1)	% of Helium going through the bypass (set to 0 if not otherwise specified)
he_out_t	float (9.8.1.1.1)	Outlet temperature (from the bb module) [K]; Scalar
fw_he_out_t	float (9.8.1.1.1)	First wall outlet temperature [K]; Scalar
sg_he_out_t	float (9.8.1.1.1)	Stiffening grid outlet temperature [K]; Scalar
cp_he_out_t	float (9.8.1.1.1)	Cooling plates outlet temperature [K]; Scalar
fw_st_max_t	float (9.8.1.1.1)	First wall eurofer maximum temperature [K]; Scalar
sg_st_max_t	float (9.8.1.1.1)	Stiffening grid eurofer maximum temperature [K]; Scalar
cp_st_max_t	float (9.8.1.1.1)	Cooling plates eurofer maximum temperature [K]; Scalar

Type of: hcllbb\_specs:mod.therm (3346)

### 9.8.1.3.281 mode.tritium

Tritium parameters

member	type	description
t.conc_lipb	float (9.8.1.1.1)	Tritium concentration in Pb-15.7Li; Scalar
t.conc_he	float (9.8.1.1.1)	Tritium concentration in He; Scalar

Type of: hcllbb\_specs:mod.tritium (3346)

### 9.8.1.3.282 modules

Modules description. NB there are nmodules per antenna, distributed among nma\_phi toroidal positions and nma\_theta poloidal positions

member	type	description
nma_theta	integer (9.8.1.1.2)	Number of modules per antenna in the poloidal direction.
nma_phi	integer (9.8.1.1.2)	Number of modules per antenna in the toroidal direction.
ima_theta	vecint.type (9.8.1.2.14)	Position index of the module in the poloidal direction (from low theta to high theta, i.e. from bottom to top if the antenna is on LFS). Vector of integers (nmodules).
ima_phi	vecint.type (9.8.1.2.14)	Position index of the module in the toroidal direction (from low phi to high phi, counter-clockwise when seen from above). Vector of integers (nmodules).
sm_theta	float (9.8.1.1.1)	Spacing between poloidally neighboring modules [m]
amplitude	exp1D (9.8.1.3.204)	Amplitude of the TE10 mode injected in the module [W], Vector exp1d (nmodules). Time-dependent
phase	exp1D (9.8.1.3.204)	Phase of the TE10 mode injected in the module [radians], Vector exp1d (nmodules). Time-dependent
waveguides	waveguides (9.8.1.3.504)	Waveguides description

Type of: antennalh\_setup:modules (3166)

### 9.8.1.3.283 msediag\_emiss\_chord

MSE Emissivity characterization. This structure is used for each line of sight of the MSE setup and contains the geometry of the line of sight, the emissivity(wavelength,pos) for each polarization state along the line of sight, the quantization axis and the emission volume. Replicate the structure for each line of sight.

member	type	description
volume	float (9.8.1.1.1)	Emitting volume ( $m^{-3}$ ). Scalar
setup	rzphi1D (9.8.1.3.372)	Description of the line of sight (for the moment a line - not a cone of sight). Vector (npos).
polarization(:)	msediag_polarization (9.8.1.3.285)	Polarized and unpolarized emissivity of the relevant MSE spectral lines. Structure Array (ncomp). Time-dependent.
quantiaxis	vecflt.type (9.8.1.2.13)	Quantization axis for the line of sight (eR,ePhi,eZ). It is a unitary vector associated to the line of sight and to the emissivity, e.g. the Lorentzian electric field direction); Vector (3). Time-dependent

Type of: msediag\_emissivity:emiss\_chord (3390)

### 9.8.1.3.284 msediag\_emissivity

Emissivity characteristics.

member	type	description
wavelength	vecflt.type (9.8.1.2.13)	Wavelength [m]. Vector (nwavelength)
emiss_chord(:)	msediag_emiss_chord (9.8.1.3.283)	MSE Emissivity characterization. This structure is used for each line of sight of the MSE setup and contains the geometry of the line of sight, the emissivity(wavelength,pos) for each polarization state along the line of sight, the quantization axis and the emission volume. Replicate the structure for each line of sight. Time-dependent

Type of: spectral:emissivity (3525)

### 9.8.1.3.285 msediag\_polarization

Polarized and unpolarized emissivity of the relevant MSE spectral lines. Structure Array (ncomp). Time-dependent.

member	type	description
type	identifier (9.8.1.3.242)	Type of the polarization. 0 for unpolarised, 1 for Pi, 2 for $\sigma^+$ and 3 for $\sigma^-$
spec.emiss	matflt.type (9.8.1.2.10)	Spectral emissivity of a particular polarization ( $Wm^{-3}sr^{-1}$ ). Matrix (npos,nwavelength). Time-dependent

Type of: msediag\_emiss\_chord:polarization (3389)

### 9.8.1.3.286 msediag\_radia\_chord

MSE radiance characterization. This structure is used for each line of sight of the MSE setup and contains the geometry of the line of sight, the radiance(wavelength) for each polarization state, the quantization axis. Replicate the structure for each line of sight.

member	type	description
setup	msediag_setup (9.8.1.3.288)	Geometry for the observation line of sight
stokes(:)	msediag_stokes (9.8.1.3.290)	Stokes vector (I,U,S,V) as a function of the wavelength for the polarized and unpolarized relevant MSE spectral lines. Replicate for each spectral component. Structure array (ncomp). Time-dependent.
totradiance	exp1D (9.8.1.3.204)	Total Radiance integrated along the lines of sight ( $Wm^{-2}sr^{-1}$ ). Vector (nwavelength)

Type of: msediag\_radiance:radia\_chord (3393)

### 9.8.1.3.287 msediag\_radiance

Emissivity characteristics.

member	type	description
wavelength	exp1D (9.8.1.3.204)	Wavelength [m]. Vector (nwavelength)

member	type	description
radia_chord(:)	msediag_radia_chord (9.8.1.3.286)	MSE radiance characterization. This structure is used for each line of sight of the MSE setup and contains the geometry of the line of sight, the radiance(wavelength) for each polarization state, the quantization axis. Replicate the structure for each line of sight. Time-dependent

Type of: spectral:radiance (3525)

### 9.8.1.3.288 msediag\_setup

Geometry for the observation line of sight

member	type	description
pivot_point	rzphi0D (9.8.1.3.371)	Pivot point of mse line of sight. Scalar
horchordang	float (9.8.1.1.1)	Angle [rad] of horizontal projection of mse line of sight with poloidal cross section (0 for HFS to LFS trajectory - see Convention_angles_interfdiag.pdf) [rad]. Scalar
verchordang	float (9.8.1.1.1)	Angle of mse line of sight with vertical axis (0 for bottom-top trajectory, Pi for top-bottom trajectory - see Convention_angles_interfdiag.pdf) [rad]; Scalar
second_point	rzphi0D (9.8.1.3.371)	Second point defining the mse line of sight together with the pivot_point. Scalar

Type of: msediag\_radia\_chord:setup (3392)

### 9.8.1.3.289 msediag\_setup\_polarimetry

diagnostic setup information

member	type	description
rzgamma	rzphidrdzphi1D (9.8.1.3.377)	Position and width of the intersection between beam and line of sight. Vectors (nchords)
geom_coef	matflt.type (9.8.1.2.10)	Geometric coefficients (9) describing the angle between beam and line of sight; The first dimension contains successively : numerator, coefficients of BZ, BR, Bphi, ER; denominator, coefficients of BZ, BR, Bphi, ER, EZ; Matrix (9,nchords). In versions of the data structure before 4.08, there were only 6 coefficients namely : numerator, coefficients of BZ, BR, Bphi; denominator, coefficients of BZ, BR, Bphi.

Type of: polarimetry:setup (3447)

### 9.8.1.3.290 msediag\_stokes

Stokes vector (I,U,S,V) as a function of the wavelength for the polarized and unpolarized relevant MSE spectral lines. Replicate for each spectral component. Structure array (ncomp). Time-dependent.

member	type	description
type	identifier (9.8.1.3.242)	Type of the polarization. 0 for unpolarised, 1 for Pi, 2 for sigma <sup>+</sup> and 3 for sigma <sup>-</sup>
vector	matflt.type (9.8.1.2.10)	Stokes vector (I,U,S,V) as a function of the wavelength. Vector (4,nwavelength).

Type of: msediag\_radia\_chord:stokes (3392)

### 9.8.1.3.291 nbi\_nbi\_unit\_wall

Description of the wall components in the NBI system that limits the beam spatial width of the beam. The wall is here described a superposition of surface segments and collimating holes.

member	type	description
surface	nbi_nbi_unit_wall.surface (9.8.1.3.292)	A collimating solid surface described by a polygon; no particle can pass through this surface
collimator(:)	flat_polygon (9.8.1.3.209)	Vector of collimating holes (openings). Each hole has to be flat, i.e. it lies on a surface. Particles can only cross this surface by passing through the hole. To describe the hole we first construct a coordinate system on the surface by defining the original and two basis vectors in (x,y,z) space. The polyon is then represented as the origin, plus a linear combination of the two basis vectors using coord1 and coord2. As an example, a rectangle with two of the corners given by "origin+basis1" and "origin+basis2" can be described using coord1=[1,0,-1,0] and coord2=[0,1,0,-1].

Type of: nbi\_unit:wall (3399)

### 9.8.1.3.292 nbi\_nbi\_unit\_wall\_surface

A collimating solid surface described by a polygon; no particle can pass through this surface

member	type	description
triangle(:)	trianglexyz (9.8.1.3.473)	Triangular wall surface described by its three corners: point1, point2, and point3. Vector(n.triangles)
rectangle(:)	rectanglexyz (9.8.1.3.353)	Rectangular wall surface described by its four corners. These form an ordered sequence: point00, point01, point11, point10. Here the first point should be calculated from the other three as point00=point01+point10-point11. Vector(n.rectangles)

Type of: nbi\_nbi\_unit\_wall:surface (3397)

### 9.8.1.3.293 nbi\_unit

Vector of Neutral Beam Injector units. The NBI system should be separated in to the individually power strucutres. Structure array(nunits). Time-dependent

member	type	description
name	string (9.8.1.1.3)	Name of the neutral beam injector
inj_spec	inj_spec (9.8.1.3.246)	Injected species
pow_unit	exp0D (9.8.1.3.203)	Power delivered by an NBI unit [W]; Time-dependent
inj_eng_unit	exp0D (9.8.1.3.203)	Full injection energy of a unit [ev]; Time-dependent
beamcurfrac	exp1D (9.8.1.3.204)	Beam current fractions; beamcurfrac(j) is the fraction of the beam current from beam neutrals with the j:th harmonic energy, inj_eng_unit. Vector(3); Time-dependent
beampowfrac	exp1D (9.8.1.3.204)	Beam power fractions; beampowfrac(j) is the fraction of the beam power from beam neutrals with the j:th harmonic energy, inj_eng_unit;. Vector(3); Time-dependent
beamletgroup(:)	beamletgroup (9.8.1.3.66)	Group of beamlets with common vertical and horizontal focal point. If there are no common focal points, then select small groups of beamlets such that a focal point description of the beamlet-group provides a fair description.
wall	nbi_nbi_unit_wall (9.8.1.3.291)	Description of the wall components in the NBI system that limits the beam spatial width of the beam. The wall is here described a superposition of surface segments and collimating holes.
codeparam	codeparam (9.8.1.3.84)	Code parameters

Type of: nbi:nbi\_unit (3140)

### 9.8.1.3.294 ne\_transp

Transport coefficients for electron density equation. Time-dependent.

member	type	description
diff_eff	matflt_type (9.8.1.2.10)	Effective diffusivity [ $m^2.s^{-1}$ ]. The last index of the array describes which multiplier should be applied to the particule flux when adding its contribution in the expression of the heat flux : position 1 is multiplied by 0, 2 is multiplied by 3/2, 3 is multiplied by 5/2. The total particle flux (for the particle transport equation) is obtained as the sum over the three positions. Time-dependent. Matrix (nrho,3)
vconv_eff	matflt_type (9.8.1.2.10)	Effective convection [ $m.s^{-1}$ ]. The last index of the array describes which multiplier should be applied to the particule flux when adding its contribution in the expression of the heat flux : position 1 is multiplied by 0, 2 is multiplied by 3/2, 3 is multiplied by 5/2. The total particle flux (for the particle transport equation) is obtained as the sum over the three positions. Time-dependent. Matrix (nrho,3)
flux	vecflt_type (9.8.1.2.13)	Flux. Not used in transport equations [ $field.m.s^{-1}, m^{-3}$ if field is not a density itself]. Time-dependent. Vector (nrho)
off_diagonal	offdiagel (9.8.1.3.308)	Details of the transport matrix, just for diagnostic (not used in transport equations). Time-dependent.
flag	integer (9.8.1.1.2)	Flag describing the form of transport produced by the original model : 0- not calculated, 1- D and V, 2- flux, 3- full transport matrix. Scalar.

Type of: coretransp\_values:ne\_transp (3242)

### 9.8.1.3.295 neoclassic\_impurity

Array(nimp). Time-dependent

member	type	description
utheta_z	matflt_type (9.8.1.2.10)	Ion poloidal flow for various charge states [m/s]. Time-dependent. Matrix(nrho,nzimp).

Type of: neoclassic:impurity (3141)

### 9.8.1.3.296 neut\_results

Neutronic results

member	type	description
tbr_bk	float (9.8.1.1.1)	Resulting global breeding blanket tritium breeding ratio; Scalar
tbr_bk_inb	float (9.8.1.1.1)	Resulting inboard breeding blanket Tritium Breeding Ratio [-]; Scalar
tbr_bk_outb	float (9.8.1.1.1)	Resulting outboard breeding blanket Tritium Breeding Ratio [-]; Scalar
me_bk	float (9.8.1.1.1)	Energy multiplication factor in breeding blanket; Scalar
me_shield	float (9.8.1.1.1)	Energy multiplication factor in shield; Scalar
he_appm_res	float (9.8.1.1.1)	He production in areas needing to be rewelded; Scalar
ins_dose_max	float (9.8.1.1.1)	Integral radiation dose in insulator (Epoxy) [ $\text{J}^*\text{Kg}^{-1}$ ]; Scalar
fn_flu_max	float (9.8.1.1.1)	Peak fast neutron fluence ( $E \geq 0.1$ MeV) to the Nb3Sn superconductor [ $\text{m}^{-2}$ ]; Scalar
dpa_cu_max	float (9.8.1.1.1)	Peak displacement damage to copper stabilizer [dpa]; Scalar
fn_flux_bz	float (9.8.1.1.1)	Fast neutron flux in breeding zone inboard [ $\text{m}^{-2}.\text{s}^{-1}$ ]; Scalar
fn_flux_bp	float (9.8.1.1.1)	Fast neutron flux in backplate inboard [ $\text{m}^{-2}.\text{s}^{-1}$ ]; Scalar
fn_flux_man	float (9.8.1.1.1)	Fast neutron flux in manifold inboard [ $\text{m}^{-2}.\text{s}^{-1}$ ]; Scalar
fn_flux_sh	float (9.8.1.1.1)	Fast neutron flux in shield inboard [ $\text{m}^{-2}.\text{s}^{-1}$ ]; Scalar
p_nh_bk	float (9.8.1.1.1)	Total nuclear heating in blanket [W]; Scalar
p_nh_sh	float (9.8.1.1.1)	Total nuclear heating in shield [W]; Scalar

Type of: bb\_shield:neut\_results (3111)

### 9.8.1.3.297 neutral\_complex\_type

Profiles derived from the fields solved in the transport equations, or from experiment. Array(nneut). Time-dependent

member	type	description
neutraltype(:)	coreneutrals_neutraltype (9.8.1.3.129)	Array (nntype) over neutral types. Time-dependent.
prad0	vecflt.type (9.8.1.2.13)	Power radiated by neutrals [ $\text{W}.\text{m}^{-3}$ ]. Vector (nrho). Time-dependent.

Type of: coreneutrals:profiles (3118)

### 9.8.1.3.298 neutro\_resul

Neutronic results

member	type	description
nwl_max	float (9.8.1.1.1)	Maximum neutron wall load (on equatorial outboard module) [ $\text{W}^*\text{m}^{-2}$ ]; Scalar
nwl_pol_prof	vecflt.type (9.8.1.2.13)	NWL scaling factor coefficient for each bb module; Vector(nmodules)

Type of: bb:neutro\_resul (3168)

### 9.8.1.3.299 ni\_transp

Transport coefficients for ion density equation. Time-dependent.

member	type	description
diff_eff	array3dflt.type (9.8.1.2.2)	Effective diffusivity [ $\text{m}^2.\text{s}^{-1}$ ]. The last index of the array describes which multiplier should be applied to the particule flux when adding its contribution in the expression of the heat flux : position 1 is multiplied by 0, 2 is multiplied by 3/2, 3 is multiplied by 5/2. The total particle flux (for the particle transport equation) is obtained as the sum over the three positions. Time-dependent. Array3d (nrho,nion,3)
vconv_eff	array3dflt.type (9.8.1.2.2)	Effective convection [ $\text{m}.\text{s}^{-1}$ ]. The last index of the array describes which multiplier should be applied to the particule flux when adding its contribution in the expression of the heat flux : position 1 is multiplied by 0, 2 is multiplied by 3/2, 3 is multiplied by 5/2. The total particle flux (for the particle transport equation) is obtained as the sum over the three positions. Time-dependent. Array3d (nrho,nion,3)
flux	matflt.type (9.8.1.2.10)	Flux. Not used in transport equations [ $\text{field}.\text{m}.\text{s}^{-1}, \text{m}^{-3}$ if field is not a density itself]. Time-dependent. Matrix (nrho,nion)

member	type	description
off.diagonal	offdiagion (9.8.1.3.309)	Details of the transport matrix, just for diagnostic (not used in transport equations). Time-dependent.
flag	integer (9.8.1.1.2)	Flag describing the form of transport produced by the original model : 0- not calculated, 1- D and V, 2- flux, 3- full transport matrix. Scalar.

Type of: coretransp\_values:ni.transp (3242)

### 9.8.1.3.300 ntm\_mode

List of the various NTM modes appearing during the simulation. If a mode appears several times, use several indices in this array of structure with the same m,n values. All descendant nodes are marked as Time-dependent for technical reasons, to allow the size of the mode AoS to vary.

member	type	description
m	integer (9.8.1.1.2)	Poloidal mode number. Time-dependent.
n	integer (9.8.1.1.2)	Toroidal mode number. Time-dependent.
onset(:)	ntm_mode_onset (9.8.1.3.305)	NTM onset characteristics. Array of structure(nevent). Time-dependent
full_evolution(:)	ntm_mode_full_evolution (9.8.1.3.303)	Detailed NTM evolution on a finer timebase than the CPO timebase. Array of structure(nevent). Time-dependent.
evolution	ntm_mode_evolution (9.8.1.3.301)	NTM evolution corresponding to the CPO timebase. Time-dependent.

Type of: ntm:mode (3142)

### 9.8.1.3.301 ntm\_mode\_evolution

NTM evolution corresponding to the CPO timebase. Time-dependent.

member	type	description
w	float (9.8.1.1.1)	Full width of the mode [m]. Time-dependent.
dwdt	float (9.8.1.1.1)	Time derivative of the full width of the mode [m/s]. Time-dependent.
phase	float (9.8.1.1.1)	Phase of the mode [rad]. Time-dependent.
dphasedt	float (9.8.1.1.1)	Time-derivative of the phase of the mode [rad]. Time-dependent.
frequency	float (9.8.1.1.1)	Frequency of the mode [Hz]. Time-dependent.
dfrequencydt	float (9.8.1.1.1)	Time derivative of the frequency of the mode [Hz]. Time-dependent.
island	ntm_mode_evolution_island (9.8.1.3.302)	Island description
deltaw_value	vecflt_type (9.8.1.2.13)	Vector(n_type). Time-dependent.
deltaw_name	vecstring_type (9.8.1.2.15)	Name of the deltaw contribution. String vector (n_type). Time-dependent.
torque_value	vecflt_type (9.8.1.2.13)	Vector(n_type_torque). Time-dependent.
torque_name	vecstring_type (9.8.1.2.15)	Name of the torque contribution. String vector (n_type). Time-dependent.
delta_diff	vecflt_type (9.8.1.2.13)	Extra diffusion coefficient for Te, ne, Ti equation. Vector(nequation). Time-dependent.
description	string (9.8.1.1.3)	How the mode evolution is calculated. Time-dependent.
rho_tor	float (9.8.1.1.1)	[m]. Time-dependent.

Type of: ntm\_mode:evolution (3406)

### 9.8.1.3.302 ntm\_mode\_evolution\_island

Island description

member	type	description
geometry	vecflt_type (9.8.1.2.13)	Description of island geometry [?]. Vector(nradial). Time-dependent.
coord_values	vecflt_type (9.8.1.2.13)	Radial coordinate values [?]. Vector(nradial). Time-dependent.
coord_desc	string (9.8.1.1.3)	Description of flux label, use the same for all islands. Time-dependent.

Type of: ntm\_mode\_evolution:island (3407)

### 9.8.1.3.303 ntm\_mode\_full\_evolution

Detailed NTM evolution on a finer timebase than the CPO timebase. Time-dependent.

member	type	description
timeevol	vecflt.type (9.8.1.2.13)	Time array used to describe the detailed mode evolution which can be different from the CPO timebase [s]. Vector(ntimeevol). Time-dependent.
w	vecflt.type (9.8.1.2.13)	Full width of the mode [m]. Vector(ntimeevol). Time-dependent.
dwdt	vecflt.type (9.8.1.2.13)	Time derivative of the full width of the mode [m/s]. Vector(ntimeevol). Time-dependent.
phase	vecflt.type (9.8.1.2.13)	Phase of the mode [rad]. Vector(ntimeevol). Time-dependent.
dphasedt	vecflt.type (9.8.1.2.13)	Time-derivative of the phase of the mode [rad]. Vector(ntimeevol). Time-dependent.
frequency	vecflt.type (9.8.1.2.13)	Frequency of the mode [Hz]. Vector(ntimeevol). Time-dependent.
dfrequencydt	vecflt.type (9.8.1.2.13)	time derivative of the frequency of the mode [Hz]. Vector(ntimeevol). Time-dependent.
island	ntm_mode_fullevol_island (9.8.1.3.304)	Island description
deltaw_value	matflt.type (9.8.1.2.10)	Matrix(ntype, ntimeevol). Time-dependent.
deltaw_name	vecstring.type (9.8.1.2.15)	Name of the deltaw contribution. String vector (ntype). Time-dependent.
torque_value	matflt.type (9.8.1.2.10)	Matrix(ntype_torque, ntimeevol). Time-dependent.
torque_name	vecstring.type (9.8.1.2.15)	Name of the torque contribution. String vector (ntype_torque). Time-dependent.
delta_diff	matflt.type (9.8.1.2.10)	Extra diffusion coefficient for Te, ne, Ti equation. Matrix(nequation, ntimeevol). Time-dependent.
description	string (9.8.1.1.3)	How the mode evolution is calculated. Time-dependent.
rho_tor	vecflt.type (9.8.1.2.13)	[m]. Vector(ntimeevol) Time-dependent.

Type of: ntm\_mode:fullevol (3406)

### 9.8.1.3.304 ntm\_mode\_fullevol\_island

Island description

member	type	description
geometry	matflt.type (9.8.1.2.10)	Description of island geometry [?]. Matrix(nradial, ntimeevol). Time-dependent.
coord_values	matflt.type (9.8.1.2.10)	Radial coordinate values [?]. Matrix(nradial, ntimeevol). Time-dependent.
coord_desc	string (9.8.1.1.3)	Description of flux label, use the same for all islands. Time-dependent.

Type of: ntm\_mode\_fullevol:island (3409)

### 9.8.1.3.305 ntm\_mode\_onset

NTM onset characteristics. Time-dependent

member	type	description
w_seed	float (9.8.1.1.1)	Seed island full width [m]. Time-dependent.
time_onset	float (9.8.1.1.1)	Onset time [s]. Time-dependent.
time_offset	float (9.8.1.1.1)	Offset time [s] (when a mode disappears). If the mode reappears later in the simulation, use another index of the mode array of structure. Time-dependent.
phase	float (9.8.1.1.1)	Phase of the mode at onset [rad]. Time-dependent.
description	string (9.8.1.1.3)	Cause of the mode onset. Time-dependent.

Type of: ntm\_mode:onset (3406)

### 9.8.1.3.306 nuclei

Array of nuclei considered.

member	type	description
zn	float (9.8.1.1.1)	Nuclear charge [units of elementary charge];
amn	float (9.8.1.1.1)	Mass of atom [amu]
label	string (9.8.1.1.3)	String identifying element (e.g. H, D, T, He, C, ...)

Type of: compositions.type:nuclei (3212)

### 9.8.1.3.307 objects

Definition of space objects (nodes, edges, faces, cells, ...); A space object of dimension n is defined; by enumerating the (n-1)-dimensional space objects defining its boundaries



member	type	description
boundary	matint.type (9.8.1.2.11)	Lists of (n-1)-dimensional space objects defining the boundary of an n-dimensional space object.; Matrix(number of objects of dimension n, maximum number of boundary objects).; First dimension: object index, second dimension: boundary object index
neighbour	array3dint.type (9.8.1.2.3)	Connectivity information. Array (number of objects, maximum number of boundaries per object, maximum number of neighbours per boundary).; Stores the indices of the n-dimensional objects adjacent to the given n-dimensional object.;An object can possibly have multiple neighbours on every boundary.; First dimension: object index, second dimension: boundary index, third dimension: neighbour index on the boundary.
geo	array4dflt.type (9.8.1.2.4)	Geometry data matrix associated with every object. Float array (number of objects, number of geometry coeff. 1, number of geometry coeff. 2, number of geometries).; The exact definition depends on the geometry type of the space (complexgrid.space.geotype).; First dimension: object index, second+third dimension: geometry coefficient matrix row+column, third dimension: geometry index (for definition of multiple geometries).
measure	matflt.type (9.8.1.2.10)	Measure of space objects, i.e. physical size (length for 1d, area for 2d, volume for 3d objects,...). [m <sup>dim</sup> ].; First dimension: object index, second dimension: geometry index

Type of: complexgrid\_space:objects (3204)

### 9.8.1.3.308 offdiagel

Subtree containing the full transport matrix from a transport model, for the electrons. Time-dependent.

member	type	description
d.ni	matflt.type (9.8.1.2.10)	Off-Diagonal term coupling ion density gradient to the transport equation [m. <sup>2</sup> .s <sup>-1</sup> ]. Time-dependent. Matrix (nrho,nion)
d.ti	matflt.type (9.8.1.2.10)	Off-Diagonal term coupling ion density gradient to the transport equation [m. <sup>2</sup> .s <sup>-1</sup> ]. Time-dependent. Matrix (nrho,nion)
d.ne	vecflt.type (9.8.1.2.13)	Off-Diagonal term coupling electron density gradient to the transport equation [m. <sup>2</sup> .s <sup>-1</sup> ]. Time-dependent. Vector (nrho)
d.te	vecflt.type (9.8.1.2.13)	Off-Diagonal term coupling electron temperature gradient to the transport equation [m. <sup>2</sup> .s <sup>-1</sup> ]. Time-dependent. Vector (nrho)
d.epar	vecflt.type (9.8.1.2.13)	Off-Diagonal term coupling parallel electric field to the transport equation [m. <sup>2</sup> .s <sup>-1</sup> ]. Time-dependent. Vector (nrho)
d.mtor	vecflt.type (9.8.1.2.13)	Off-Diagonal term coupling total toroidal momentum to the transport equation [m. <sup>2</sup> .s <sup>-1</sup> ]. Time-dependent. Vector (nrho)

Type of: ne\_transp:off\_diagonal (3400) I transcoefel:off\_diagonal (3574)

### 9.8.1.3.309 offdiagion

Subtree containing the full transport matrix from a transport model, for the various ion species

member	type	description
d.ni	array3dflt.type (9.8.1.2.2)	Off-Diagonal term coupling ion density gradient to the transport equation [m. <sup>2</sup> .s <sup>-1</sup> ]. Time-dependent. Array3d (nrho,nion,nion)
d.ti	array3dflt.type (9.8.1.2.2)	Off-Diagonal term coupling ion density gradient to the transport equation [m. <sup>2</sup> .s <sup>-1</sup> ]. Time-dependent. Array3d (nrho,nion,nion)
d.ne	matflt.type (9.8.1.2.10)	Off-Diagonal term coupling electron density gradient to the transport equation [m. <sup>2</sup> .s <sup>-1</sup> ]. Time-dependent. Matrix (nrho,nion)
d.te	matflt.type (9.8.1.2.10)	Off-Diagonal term coupling electron temperature gradient to the transport equation [m. <sup>2</sup> .s <sup>-1</sup> ]. Time-dependent. Matrix (nrho,nion)
d.epar	matflt.type (9.8.1.2.10)	Off-Diagonal term coupling parallel electric field to the transport equation [m. <sup>2</sup> .s <sup>-1</sup> ]. Time-dependent. Matrix (nrho,nion)
d.mtor	matflt.type (9.8.1.2.10)	Off-Diagonal term coupling total toroidal momentum to the transport equation [m. <sup>2</sup> .s <sup>-1</sup> ]. Time-dependent. Matrix (nrho,nion)

Type of: ni\_transp:off\_diagonal (3405) I transcoefion:off\_diagonal (3576) I transcoefvtor:off\_diagonal (3577)

### 9.8.1.3.310 omnigen\_surf

List of omnigenous magnetic surfaces to which the s-coordinates in grid.coord refer. NOTE: only used for gridcoord=3. NOTE: all guiding centre orbits intersect at least one omnigenous (or stagnation) surfaces, i.e. the omnigenous generalised the equatorial plane (the midplane). nsurfs=Number of omnigenous surfaces. Structure array(nregion.topo)

member	type	description
rz	rz1D (9.8.1.3.366)	(R,z) coordinates of the omnigenous magnetic surfaces (generalised equatorial plane). NOTE: only used for gridcoord=3. Vector rz1d (nsurfs)

member	type	description
s	vecflt.type (9.8.1.2.13)	Coordinates which uniquely maps the omnigeuous magnetic surfaces (generalised equitorial plane). NOTE: only used for gridcoord=3. Vector (nsurfs)

Type of: dist\_grid\_info:omnigen\_surf (3265)

### 9.8.1.3.311 orbit\_global\_param

Global quantities associated with an orbit.

member	type	description
orbit.type	vecint.type (9.8.1.2.14)	Identifier of orbit type: 0 trapped, -1 co-passing, + 1 counter-passing ; Time-dependent; Vector (norbits)
omega.b	vecflt.type (9.8.1.2.13)	Bounce angular frequency rad/s; Time-dependent; Vector (norbits)
omega.phi	vecflt.type (9.8.1.2.13)	Toroidal angular precession frequency [rad/s]; Time-dependent; Vector (norbits).
omega.c.av	vecflt.type (9.8.1.2.13)	Orbit averaged cyclotron frequency [rad/a]; Time-dependent; Vector(norbits).
special_pos	orbit_special_pos (9.8.1.3.314)	Special positions along an orbit (like turning points).

Type of: orbit:global\_param (3143)

### 9.8.1.3.312 orbit\_midplane

Intersections with the midplane

member	type	description
outer	orbit_pos (9.8.1.3.313)	Position at outer mid-plane
inner	orbit_pos (9.8.1.3.313)	Position at inner mid-plane

Type of: orbit\_special\_pos:midplane (3420)

### 9.8.1.3.313 orbit\_pos

Complex type for orbit position (Vector)

member	type	description
r	vecflt.type (9.8.1.2.13)	Major radius [m]; Time-dependent; Vector (norbits).
z	vecflt.type (9.8.1.2.13)	Altitude [m]; Time-dependent; Vector (norbits).
phi	vecflt.type (9.8.1.2.13)	Toroidal angle [rad]; Time-dependent; Vector (norbits).
psi	vecflt.type (9.8.1.2.13)	Position in psi [normalised poloidal flux]; Time-dependent; Vector (norbits).
theta.b	vecflt.type (9.8.1.2.13)	Poloidal Boozer angle [rad]; Time-dependent; Vector (norbits).

Type of: orbit\_midplane:inner (3418) | orbit\_midplane:outer (3418) | orbit\_turning\_pts:lower (3421) | orbit\_turning\_pts:upper (3421)

### 9.8.1.3.314 orbit\_special\_pos

Special positions along an orbit (like turning points).

member	type	description
midplane	orbit_midplane (9.8.1.3.312)	Intersections with the midplane
turning_pts	orbit_turning_pts (9.8.1.3.315)	Location of turning points

Type of: orbit\_global\_param:special\_pos (3417)

### 9.8.1.3.315 orbit\_turning\_pts

Location of turning points

member	type	description
upper	orbit_pos (9.8.1.3.313)	Position at upper turning point
lower	orbit_pos (9.8.1.3.313)	Position at lower turning point

Type of: orbit\_special\_pos:turning\_pts (3420)

### 9.8.1.3.316 origin

member	type	description
refpos	rzphi0D (9.8.1.3.371)	Reference point of the local coordinate system; the position of either the last quasi-optical element, or the horn antenna. Default is facing horizontally away from the central axis. The local coordinate system is cartesian, with the local z axis defining the nominal beam direction, x parallel to the global z, and y completing the right-handed local coordinate system
alpha	float (9.8.1.1.1)	Poloidal tilt angle [rad]; angle between local z axis and horizontal plane, 0 is facing outward, pi/2 is downwards, pi inwards
beta	float (9.8.1.1.1)	Toroidal tilt angle [rad]; angle between local z axis and r-z plane
gamma	float (9.8.1.1.1)	Rotation angle about local z axis [rad]

Type of: reflectometry\_antennas:origin (3463)

### 9.8.1.3.317 param

Code parameters block passed from the wrapper to the subroutine. Does not appear as such in the data structure (in fact each string is an instance of codeparam/parameters). This is inserted in utilities.xsd for automatic declaration in the Fortran type definitions.

member	type	description
parameters	string (9.8.1.1.3)	Actual value of the code parameters (instance of coparam/parameters in XML format).
default_param	string (9.8.1.1.3)	Default value of the code parameters (instance of coparam/parameters in XML format).
schema	string (9.8.1.1.3)	Code parameters schema.

Type of

### 9.8.1.3.318 parameters

Parameters used to defined the grid coordiantes. Time-dependent

member	type	description
equatorial	equatorial_plane (9.8.1.3.200)	Description of the equatorial plane or any other omnigeuous surfaces. Time-dependent

Type of: source\_rate:parameters (3518)

### 9.8.1.3.319 pellet

Description of the pellets entering the plasma at given time. Array of structures (NPEL). Time-dependent.

member	type	description
shape	pellet_shape (9.8.1.3.326)	Structure defining the shape of the pellet. Time-dependent.
elements	pellet_elements (9.8.1.3.322)	Structure defining the composition of the pellet. Time-dependent.
geometry	pellet_geometry (9.8.1.3.323)	Structure describing the geometry of the pellet path. Time-dependent.
pathprofiles	pellet_pathprofiles (9.8.1.3.325)	Structure describing 1-D profiles of plasma and pellet along the pellet path. Time-dependent.
deposition	pellet_deposition (9.8.1.3.321)	Structure defining the pellet action on the plasma (along rho_tor). Time-dependent.

Type of: pellets:pellet (3144)

### 9.8.1.3.320 pellet\_angles

Angles of the pellet trajectory. Time-dependent.

member	type	description
horizontal	float (9.8.1.1.1)	Angle [rad] of the horizontal projection of the path with poloidal cross section (0 for HFS , then counter clockwise looking from above), scalar. Time-dependent.
vertical	float (9.8.1.1.1)	Angle [rad] of the path with vertical axis section (0 for bottom-top trajectory, then counter clockwise), scalar. Time-dependent.

Type of: pellet\_geometry:angles (3429)

### 9.8.1.3.321 pellet\_deposition

Structure defining the pellet action on the plasma (along rho\_tor). Time-dependent.

member	type	description
rho_tor	vecflt_type (9.8.1.2.13)	Toroidal flux coordinate [m], array (NRHO). Time-dependent.
rho_pol	vecflt_type (9.8.1.2.13)	Poloidal flux coordinate [m], array(NRHO). Time-dependent.
delta_ne	vecflt_type (9.8.1.2.13)	Instant change of ne profile due to pellet ablation [m <sup>-3</sup> ], array(NRHO). Time-dependent.
delta_te	vecflt_type (9.8.1.2.13)	Instant change of Te profile due to pellet ablation [eV], array(NRHO). Time-dependent.
delta_ni	matflt_type (9.8.1.2.10)	Instant change of ni profile due to pellet ablation [m <sup>-3</sup> ], array (NRHO, NION). Time-dependent.
delta_ti	matflt_type (9.8.1.2.10)	Instant change of Ti profile due to pellet ablation [eV], array (NRHO, NION). Time-dependent.
delta_vtor	matflt_type (9.8.1.2.10)	Instant change of Vtor profile due to pellet ablation [m/s], array (NRHO, NION). Time-dependent.
impurity(:)	pellet_impurity (9.8.1.3.324)	Contributions to impurity array of structures (NIMP). Time-dependent

Type of: pellet:deposition (3425)

### 9.8.1.3.322 pellet\_elements

Structure defining the composition of the pellet. Time-dependent.

member	type	description
nucindex	vecint_type (9.8.1.2.14)	Index into list of nuclei, array over elements in pellet (NATM). Time-dependent.
density	vecflt_type (9.8.1.2.13)	Material density of each element of the pellet, array over elements (NATM). Time-dependent.
fraction	vecflt_type (9.8.1.2.13)	Fraction of each element in the pellet, array over elements in pellet (NATM). Time-dependent.
subl_energy	vecflt_type (9.8.1.2.13)	Sublimation energy per atom, array over elements in pellet (NATM). Time-dependent.

Type of: pellet:elements (3425)

### 9.8.1.3.323 pellet\_geometry

Structure describing the geometry of the pellet path. Time-dependent.

member	type	description
pivot_point	rzphi0D (9.8.1.3.371)	Coordinates of the pivot point for pellet trajectory. Time-dependent.
second_point	rzphi0D (9.8.1.3.371)	Coordinates of the second point for pellet trajectory. Time-dependent.
velocity	float (9.8.1.1.1)	Starting velocity of the pellet [m/s]. Scalar. Time-dependent.
angles	pellet_angles (9.8.1.3.320)	Angles of the pellet trajectory. Time-dependent.

Type of: pellet:geometry (3425)

### 9.8.1.3.324 pellet\_impurity

Contributions to impurity array of structures (NIMP). Time-dependent

member	type	description
delta_nz	matflt_type (9.8.1.2.10)	Instant change of Nz profile (per charge state) due to pellet ablation [m <sup>-3</sup> ], array (NRHO, NZ-IMP). Time-dependent.

Type of: pellet\_deposition:impurity (3427)

### 9.8.1.3.325 pellet\_pathprofiles

Structure describing 1-D profiles of plasma and pellet along the pellet path. Time-dependent.

member	type	description
distance	vecflt.type (9.8.1.2.13)	Coordinate along the pellet trajectory [m], array (NPATH). Time-dependent.
rho_tor	vecflt.type (9.8.1.2.13)	Toroidal flux coordinate along the pellet trajectory [m], array (NPATH). Time-dependent.
rho_pol	vecflt.type (9.8.1.2.13)	Poloidal flux coordinate along the pellet trajectory [m], array (NPATH). Time-dependent.
velocity	vecflt.type (9.8.1.2.13)	Pellet velocity along the pellet trajectory [m/s], array (NPATH). Time-dependent.
ne	vecflt.type (9.8.1.2.13)	Electron density along the pellet trajectory [m <sup>-3</sup> ], array (NPATH). Time-dependent.
te	vecflt.type (9.8.1.2.13)	Electron temperature along the pellet trajectory [eV], array (NPATH). Time-dependent.
abl_rate	vecflt.type (9.8.1.2.13)	Ablation rate along the pellet trajectory [part/s], array (NPATH). Time-dependent.
abl_particles	vecflt.type (9.8.1.2.13)	Number of ablated particles along the pellet trajectory [part], array (NPATH). Time-dependent.
delta_drift	vecflt.type (9.8.1.2.13)	Radial displacement due to ExB drifts along the pellet trajectory [m], array (NPATH). Time-dependent.
position	rzphi1D (9.8.1.3.372)	Coordinates of the pellet trajectory line, array (NPATH). Time-dependent.

Type of: pellet:pathprofiles (3425)

### 9.8.1.3.326 pellet\_shape

Structure defining the shape of the pellet. Time-dependent.

member	type	description
type	identifier (9.8.1.3.242)	Identifier for the shape of the pellet: 1-spherical; 2-cylindrical; 3-rectangular; 4-generic. Time-dependent.
dimensions	vecflt.type (9.8.1.2.13)	Vector specifying the dimensions of the pellet following the order for predefined shapes. Spherical pellets: dimensions(1) is the radius [m] of the pellet; Cylindrical pellets: dimensions(1) is the radius [m] and dimensions(2) is the height [m] of the cylinder; Rectangular pellets: dimensions(1) is the height [m], dimensions(2) is the width [m] and dimensions(3) is the length [m]; Time-dependent.

Type of: pellet:shape (3425)

### 9.8.1.3.327 permeability

Permeability model (can be different for each iron segment)

member	type	description
b	matflt.type (9.8.1.2.10)	List of B values for description of the mur(B) dependence [T]; Matrix (nsegment,nB)
mur	matflt.type (9.8.1.2.10)	Relative permeability mur(B) [dimensionless]; Matrix (nsegment,nB)

Type of: desc\_iron:permeability (3250)

### 9.8.1.3.328 pfcircuits

Circuits, connected to multiple coils and to multiple supplies, defining the current and voltage relationships in the system

member	type	description
name	vecstring.type (9.8.1.2.15)	Name of circuit, array of strings (ncircuits)
id	vecstring.type (9.8.1.2.15)	ID of circuit, array of strings (ncircuits)
type	vecstring.type (9.8.1.2.15)	Type of circuit, array of strings (ncircuits)
nnodes	vecint.type (9.8.1.2.14)	Number of nodes used to describe a circuit. Vector (ncircuits)
connections	array3dint.type (9.8.1.2.3)	Description of the supplies and coils connections (nodes) across each circuit. Array 3D (ncircuits,max_nnodes,2*ncomponents), describing for each node which component are connected to it (1 if connected, 0 otherwise). There are 2 sides at each component, thus 2*ncomponents as the size of the third dimension, listing first all supplies, then all coils (in the same order as listed in PFSUPPLIES and PFCOILS). An example can be found in the data structure documentation PFconnections.pdf

Type of: pfsystems:pfcircuits (3145)

### 9.8.1.3.329 pfoils

Active poloidal field coils

member	type	description
desc_pfoils	desc_pfoils (9.8.1.3.145)	Description of the coils
coilcurrent	exp1D (9.8.1.3.204)	Circuit feed current in the coil, defined positive if it flows from point 1 to point 2 of the component in the pfcircuit description [A]; Time-dependent; Vector (ncoils)
coilvoltage	exp1D (9.8.1.3.204)	Voltage on the full coil [V]; Time-dependent; Vector (ncoils)
p_cryo	float (9.8.1.1.1)	Total electric power consumed by the cryoplant system [W]; Time-dependent. Scalar.
p_nh	vecflt_type (9.8.1.2.13)	Nuclear heating on the poloidal field coils [W]; Time-dependent. Vector(ncoils)

Type of: pfsystems:pfoils (3145)

### 9.8.1.3.330 pfelement

Axisymmetric conductor description

member	type	description
name	vecstring_type (9.8.1.2.15)	Name of this element. Should be a matrix of strings (ncoils,max_nelements), but not supported by the UAL yet.
id	vecstring_type (9.8.1.2.15)	ID of this element. Should be a matrix of strings (ncoils,max_nelements), but not supported by the UAL yet.
turnsign	matflt_type (9.8.1.2.10)	Sign of turn and fraction of a turn for calculating magnetic field of the Element; Matrix (ncoils,max_nelements)
area	matflt_type (9.8.1.2.10)	Surface area of this element [m <sup>2</sup> ]; Matrix (ncoils,max_nelements)
pfgeometry	pfgeometry (9.8.1.3.331)	Shape of a PF Coil Element

Type of: desc\_pfoils:pfelement (3251)

### 9.8.1.3.331 pfgeometry

Shape of a PF Coil Element

member	type	description
type	matint_type (9.8.1.2.11)	Type used to describe a coil shape (0 for 'rzcoordinates' or 1 for 'rzdrdz'); Matrix of integers (ncoils,max_nelements)
npoints	matint_type (9.8.1.2.11)	Number of points describing an element (irregular outline rzcoordinates); Matrix (ncoils,max_nelements)
rzcoordinate	rz3D (9.8.1.3.370)	Irregular outline [m]; 3D arrays (ncoils,max_nelements,max_npoints)
rzdrdz	array3dflt_type (9.8.1.2.2)	4-vector defining Centre R,Z and full extents dR, dZ [m]; 3D Array (ncoils,max_nelements,4)

Type of: pfelement:pfgeometry (3436)

### 9.8.1.3.332 pfpgeometry

Geometry of the passive elements

member	type	description
type	vecint_type (9.8.1.2.14)	Type used to describe the shape (0 for 'rzcoordinates' or 1 for 'rzdrdz'); Vector of integers (nelements)
npoints	vecint_type (9.8.1.2.14)	Number of points describing an element (irregular outline rzcoordinates); Vector of integers (nelements)
rzcoordinate	rz2D (9.8.1.3.369)	Irregular outline [m]; Matrix (nelements,max_npoints)
rzdrdz	matflt_type (9.8.1.2.10)	4-vector defining Centre R,Z and full extents dR, dZ [m]; Matrix (nelements,4)

Type of: pfpassive:pfpgeometry (3439)

### 9.8.1.3.333 pfpassive

Passive axisymmetric conductor description

member	type	description
name	vecstring_type (9.8.1.2.15)	Name of coil. Array of strings (nelements)
area	vecflt_type (9.8.1.2.13)	Surface area of this passive element [m <sup>2</sup> ]; Vector (nelements)
res	vecflt_type (9.8.1.2.13)	Passive element resistance [Ohm]; Vector (nelements)
eta	vecflt_type (9.8.1.2.13)	Passive element resistivity [Ohm.m]; Vector (nelements)
current	pfpasive_current (9.8.1.3.334)	Current induced in passive structures.
pfpageometry	pfpageometry (9.8.1.3.332)	Geometry of the passive elements

Type of: pfsystems:pfpasive (3145)

### 9.8.1.3.334 pfpasive\_current

Current induced in passive structures.

member	type	description
toroidal	exp1D (9.8.1.3.204)	Toroidal current induced in passive structures [A]. Vector (nelements); Time-dependent
poloidal	exp1D (9.8.1.3.204)	Poloidal current induced in passive structures [A]. Vector (nelements); Time-dependent

Type of: pfpasive:current (3439)

### 9.8.1.3.335 pfsupplies

PF power supplies

member	type	description
desc_supply	desc_supply (9.8.1.3.146)	Description of the power supplies
voltage	exp1D (9.8.1.3.204)	Voltage at the supply output [V]; Time-dependent; Vector (nsupplies)
current	exp1D (9.8.1.3.204)	Current at the supply output, defined positive if it flows from point 1 to point 2 of the component in the pfcircuit description [A]; Time-dependent; Vector (nsupplies)

Type of: pfsystems:pfsupplies (3145)

### 9.8.1.3.336 phaseellipse

Phase ellipse characteristics

member	type	description
invcurvrad	vecflt_type (9.8.1.2.13)	Inverse curvature radii for the phase ellipse [m <sup>-1</sup> ], positive/negative for divergent/convergent beams, Vector (2). Time-dependent
angle	float (9.8.1.1.1)	Rotation angle for the phase ellipse [rd], Float. Time-dependent

Type of: rfbeam:phaseellipse (3470)

### 9.8.1.3.337 planecoil

Plane coil description

member	type	description
coordinates	rz1D (9.8.1.3.366)	Coordinate points of centre of conductor; vectors(nelements)
hlength	vecflt_type (9.8.1.2.13)	Half length perpendicular to plane where coil is defined; vector(nelements) [m].
radialhwidth	vecflt_type (9.8.1.2.13)	Half width, (outer contour-inner contour)/2; vector(nelements) [m].

Type of: tf\_desc.tfcoils:planecoil (3567)

### 9.8.1.3.338 plasmaComplexType

Description of incoming plasma



member	type	description
species	vecint.type (9.8.1.2.14)	Definition of plasma species. Index into wall/compositions/edgespecies. Integer vector (number of plasma species).
flux	matflt.type (9.8.1.2.10)	Plasma particle flux density from/to plasma facing wall surfaces [ $1/(m^2 s)$ ]. Positive means incoming onto the wall, negative means sent back into the plasma. Time-dependent; Float matrix (number of plasma species, number of discretization elements in the subgrid)
b	matflt.type (9.8.1.2.10)	Magnetic field vector at the surface [T]; Time-dependent; Float matrix (number of space dimensions, number of discretization elements in the subgrid). If two-dimensional: unit vectors with first coordinate perpendicular to the wall facing towards the plasma, second coordinate parallel to the surface (in the direction of the surface discretization), third dimension is zero. If three-dimensional: vector is relative to basis vectors stored in wall/wall3d/grid/basis with basis index as given in wall/wall3d/basis.index.
energy	matflt.type (9.8.1.2.10)	Total energy flux density of incoming particles of given species [ $W/m^2$ ]; Positive means incoming onto the wall, negative means sent back into the plasma. Time-dependent; Float matrix (number of plasma species, number of discretization elements in the subgrid)

Type of: wall2d:plasma (3594) I wall3d:plasma (3596)

### 9.8.1.3.339 plasmaedge

Plasma edge characteristics in front of the antenna.

member	type	description
npoints	integer (9.8.1.1.2)	Number of points in the distance grid. Integer
distance	vecflt.type (9.8.1.2.13)	Grid for electron density, defined as the perpendicular distance to the antenna waveguide plane (the origin being described in the position sub-structure) [m]. Vector (npoints). Time-dependent.
density	vecflt.type (9.8.1.2.13)	Electron density in front of the antenna [ $m^{-3}$ ]. Vector (npoints). Time-dependent.

Type of: antenna.lh:plasmaedge (3164)

### 9.8.1.3.340 pol\_decomp

TO BE REMOVED, being replaced by e.components and grid. Kept only to make smooth transition between data-type versions. [Poloidal decomposition of the wave fields. Uses the flux surface grid in grid.1d.]

member	type	description
mpol	vecint.type (9.8.1.2.14)	Poloidal mode numbers; Vector (nmpol)
e.plus	array3dflt.type (9.8.1.2.2)	Magnitude of poloidal Fourier decomposition of left hand polarised component of the wave electric field [V/m]; Time-dependent; Array 3D (ntor, npsi, nmpol)
e.plus.ph	array3dflt.type (9.8.1.2.2)	Phase of poloidal Fourier decomposition of left hand polarised component of the wave electric field [rad]; Time-dependent; Array 3D (ntor, npsi, nmpol)
e.minus	array3dflt.type (9.8.1.2.2)	Magnitude of poloidal Fourier decomposition of right hand polarised component of the wave electric field; Time-dependent (V/m); Array 3D (ntor, npsi, nmpol)
e.minus.ph	array3dflt.type (9.8.1.2.2)	Phase of poloidal Fourier decomposition of right hand polarised component of the wave electric field [rad]; Time-dependent; Array 3D (ntor, npsi, nmpol)
e.norm	array3dflt.type (9.8.1.2.2)	Magnitude of poloidal Fourier decomposition of wave electric field normal to a flux surface [V/m]; Time-dependent; Array 3D (ntor, npsi, nmpol)
e.norm.ph	array3dflt.type (9.8.1.2.2)	Phase of poloidal Fourier decomposition of wave electric field normal to a flux surface [rad]; Time-dependent; Array 3D (ntor, npsi, nmpol)
e.binorm	array3dflt.type (9.8.1.2.2)	Magnitude of poloidal Fourier decomposition of wave electric field tangent to a flux surface [V/m]; Time-dependent; Array 3D (ntor, npsi, nmpol)
e.binorm.ph	array3dflt.type (9.8.1.2.2)	Phase of poloidal Fourier decomposition of wave electric field tangent to a flux surface [rad]; Time-dependent; Array 3D (ntor, npsi, nmpol)
e.para	array3dflt.type (9.8.1.2.2)	Magnitude of poloidal Fourier decomposition of parallel wave electric field [V/m]; Time-dependent; Array 3D (ntor, npsi, nmpol)
e.para.ph	array3dflt.type (9.8.1.2.2)	Phase of poloidal Fourier decomposition of parallel wave electric field [rad]; Time-dependent; Array 3D (ntor, npsi, nmpol)
b.norm	array3dflt.type (9.8.1.2.2)	Magnitude of poloidal Fourier decomposition of wave magnetic field normal to a flux surface [T]; Time-dependent; Array 3D (ntor, npsi, nmpol)
b.norm.ph	array3dflt.type (9.8.1.2.2)	Phase of poloidal Fourier decomposition of normal wave magnetic field [rad]; Time-dependent; Array 3D (ntor, npsi, nmpol)
b.binorm	array3dflt.type (9.8.1.2.2)	Magnitude of poloidal Fourier decomposition of wave magnetic field tangent to a flux surface [T]; Time-dependent; Array 3D (ntor, npsi, nmpol)
b.binorm.ph	array3dflt.type (9.8.1.2.2)	Phase of poloidal Fourier decomposition of wave magnetic field tangent to a flux surface [rad]; Time-dependent; Array 3D (ntor, npsi, nmpol)
b.para	array3dflt.type (9.8.1.2.2)	Magnitude of Fourier decomposition of wave magnetic field parallel to the equilibrium magnetic field [T]; Time-dependent; Array 3D (ntor, npsi, nmpol)
b.para.ph	array3dflt.type (9.8.1.2.2)	Phase of Fourier decomposition of wave magnetic field parallel to the equilibrium magnetic field [T]; Time-dependent; Array 3D (ntor, npsi, nmpol)

member	type	description
k_perp	array3dflt.type (9.8.1.2.2)	Perpendicular wave number [T]; Time-dependent; Array 3D (ntor, npsi, nmpol)

Type of: fullwave:pol\_decomp (3322)

### 9.8.1.3.341 polarimetry

This structure accomodates the polarimetry setup and measurements of a mse diagnostic, as widely used in fusion devices. The final measurement is the  $\tan(\gamma)$  where  $\gamma$  is the polarization angle of a particular spectral mse component.

member	type	description
setup	msediag_setup_polarimetry (9.8.1.3.289)	diagnostic setup information
measure	exp1D (9.8.1.3.204)	Measured value (MSE angle $\gamma$ [rad]). Time-dependent; Vector (nchords)

Type of: msediag:polarimetry (3139)

### 9.8.1.3.342 polarization

Wave field polarization along the ray/beam.

member	type	description
epol_p_re	vecflt.type (9.8.1.2.13)	Real part of the left hand polarized electric field (rotating with the ions), Vector (npoints). Time-dependent
epol_p_im	vecflt.type (9.8.1.2.13)	Imaginary part of the left hand polarized electric field (rotating with the ions), Vector (npoints). Time-dependent
epol_m_re	vecflt.type (9.8.1.2.13)	Real part of the right hand polarized electric field (rotating with the electrons), Vector (npoints). Time-dependent
epol_m_im	vecflt.type (9.8.1.2.13)	Real part of the right hand polarized electric field (rotating with the electrons), Vector (npoints). Time-dependent
epol_par_re	vecflt.type (9.8.1.2.13)	Real part of the electric field polarization vector in the magnetic field direction, Vector (npoints). Time-dependent
epol_par_im	vecflt.type (9.8.1.2.13)	Imaginary part of the electric field polarization vector in the magnetic field direction, Vector (npoints). Time-dependent

Type of: beamtracing:polarization (3174)

### 9.8.1.3.343 power\_conv\_component

Description of the components of the power conversion system. Array of structure (ncomp).

member	type	description
name	string (9.8.1.1.3)	name of the component
temp_in	float (9.8.1.1.1)	temperature of the input [K];Scalar
temp_out	float (9.8.1.1.1)	temperature of the output [K];Scalar
press_in	float (9.8.1.1.1)	Pressure of the input [Pa];Scalar
press_out	float (9.8.1.1.1)	Pressure of the output [Pa];Scalar
power	float (9.8.1.1.1)	electric consumption by the component; (consumption power)[W];Scalar
flow	float (9.8.1.1.1)	Flow through the component [kg/s]; Scalar

Type of: circuits:component (3187)

### 9.8.1.3.344 power\_exchange

member	type	description
dep_pow	vecflt.type (9.8.1.2.13)	Power deposited in each bb module (the reference outboard module if only value is given) [W]; Vector(nmodules)
dep_fw	float (9.8.1.1.1)	Power deposited in the first wall (heat flux + neutrons) [W]; Scalar
dep_sg	float (9.8.1.1.1)	Power deposited in the stiffening grid (neutrons) [W]; Scalar
dep_cp	float (9.8.1.1.1)	Power deposited in the cooling plates (neutrons) [W]; Scalar
dep_lp	float (9.8.1.1.1)	Power deposited in the Pb-15.7Li (neutrons) [W]; Scalar

member	type	description
dep_man	float (9.8.1.1.1)	Power deposited in the manifolds (neutrons) [W]; Scalar
dep_pl	float (9.8.1.1.1)	Power deposited in the protect layer (made of tungsten) (neutrons) [W]; Scalar
rec_fw	float (9.8.1.1.1)	Power recovered from He in first wall channels [W]; Scalar
rec_sg	float (9.8.1.1.1)	Power recovered from He in stiffening grid channels [W]; Scalar
rec_cp	float (9.8.1.1.1)	Power recovered from He in cooling plates channels [W]; Scalar
pow_dens_fw	float (9.8.1.1.1)	Peak energy deposition in first wall [W.m <sup>-3</sup> ]; Scalar
pow_dens_bz	float (9.8.1.1.1)	Peak energy deposition in breeding zone [W.m <sup>-3</sup> ]; Scalar
pow_dens_bz10	float (9.8.1.1.1)	Peak energy deposition in breeding zone (first ten centimeters) [W.m <sup>-3</sup> ]; Scalar
pow_dens_bp	float (9.8.1.1.1)	Peak energy deposition in back plate [W.m <sup>-3</sup> ]; Scalar
pow_dens_man	float (9.8.1.1.1)	Peak energy deposition in manifold [W.m <sup>-3</sup> ]; Scalar
pow_dens_sh	float (9.8.1.1.1)	Peak energy deposition in shield [W.m <sup>-3</sup> ]; Scalar

Type of: mode\_neutr:pow\_exchange (3384)

### 9.8.1.3.345 powerflow

Power flow along the ray/beam.

member	type	description
phi_perp	vecflt.type (9.8.1.2.13)	Normalized power flow in the direction perpendicular to the magnetic field; Vector (npoints). Time-dependent
phi_par	vecflt.type (9.8.1.2.13)	Normalized power flow in the direction parallel to the magnetic field; Vector (npoints). Time-dependent
power_e	vecflt.type (9.8.1.2.13)	Power absorbed along the beam by electrons [W]; Vector (npoints). Time-dependent
power_i	matflt.type (9.8.1.2.10)	Power absorbed along the beam by an ion species [W]; Matrix (npoints, nion). Time-dependent

Type of: beamtracing:powerflow (3174)

### 9.8.1.3.346 profiles1d

Profiles derived from the fields solved in the transport equations, or from experiment.

member	type	description
pe	coreprofile (9.8.1.3.130)	Electron pressure [Pa]; Time-dependent;
dpedt	coreprofile (9.8.1.3.130)	Time derivative of the electron pressure [Pa/s]; Time-dependent;
pi	coreprofion (9.8.1.3.131)	Ion pressure [Pa]; Time-dependent;
pi_tot	coreprofile (9.8.1.3.130)	Total ion pressure (sum of the species) [Pa]; Time-dependent;
dpi_totdt	coreprofile (9.8.1.3.130)	Time derivative of the total ion pressure [Pa/s]; Time-dependent;
pr_th	coreprofile (9.8.1.3.130)	Thermal pressure (electrons+ions) [Pa]; Time-dependent;
pr_perp	coreprofile (9.8.1.3.130)	Total perpendicular pressure (electrons+ions, thermal+non-thermal) [Pa]; Time-dependent;
pr_parallel	coreprofile (9.8.1.3.130)	Total parallel pressure (electrons+ions, thermal+non-thermal) [Pa]; Time-dependent;
jtot	coreprofile (9.8.1.3.130)	total parallel current density = average(jtot.B) / B0, where B0 = coreprof/toroid_field/b0 [A/m <sup>2</sup> ]; Time-dependent;
jni	coreprofile (9.8.1.3.130)	non-inductive parallel current density = average(jni.B) / B0, where B0 = coreprof/toroid_field/b0 [A/m <sup>2</sup> ]; Time-dependent;
jphi	coreprofile (9.8.1.3.130)	total toroidal current density = average(jphi/R) / average(1/R) [A/m <sup>2</sup> ]; Time-dependent;
joh	coreprofile (9.8.1.3.130)	ohmic parallel current density = average(joh.B) / B0, where B0 = coreprof/toroid_field/b0 [A/m <sup>2</sup> ]; Time-dependent;
vloop	coreprofile (9.8.1.3.130)	Toroidal loop voltage [V]. Time-dependent.
sigmapar	coreprofile (9.8.1.3.130)	Parallel conductivity [ohm <sup>-1</sup> .m <sup>-1</sup> ]. Time-dependent.
qoh	sourcecel (9.8.1.3.414)	ohmic heating [W/m <sup>3</sup> ]; Time-dependent;
qei	coreprofile (9.8.1.3.130)	Collisional heat transfer from electrons to ions (equipartition term) [W/m <sup>3</sup> ]; Time-dependent;
eparallel	coreprofile (9.8.1.3.130)	Parallel electric field = average(E.B) / B0, where B0 = coreprof/toroid_field/b0 [V.m <sup>-1</sup> ]. Time-dependent.
e.b	coreprofile (9.8.1.3.130)	Average(E.B) [V.T.m <sup>-1</sup> ]. Time-dependent.
q	coreprofile (9.8.1.3.130)	Safety factor profile; Time-dependent;
shear	coreprofile (9.8.1.3.130)	Magnetic shear profile; Time-dependent;
ns	coreprofion (9.8.1.3.131)	Density of fast ions, for the various ion species [m <sup>-3</sup> ]; Time-dependent;
mtor	coreprofion (9.8.1.3.131)	Toroidal momentum of the various ion species [UNITS?]; Time-dependent;
wtor	coreprofion (9.8.1.3.131)	Angular toroidal rotation frequency of the various ion species [s <sup>-1</sup> ]; Time-dependent;

member	type	description
vpol	coreprofion (9.8.1.3.131)	Neoclassical poloidal rotation of each ion species [m/s]. Time-dependent.
zeff	coreprofile (9.8.1.3.130)	Effective charge profile; Time-dependent;
bpol	coreprofile (9.8.1.3.130)	Average poloidal magnetic field, defined as $\sqrt{\text{ave}(\text{grad } \rho^2/R^2)}$ .dpsi/drho [T]. Time-dependent.
dvprimedt	coreprofile (9.8.1.3.130)	Time derivative of the radial derivative of the volume enclosed in the flux surface, i.e. $d/dt(dV/drho.tor)$ [ $\text{m}^2.\text{s}^{-1}$ ]; Time-dependent.

Type of: coreprof:profiles1d (3119)

### 9.8.1.3.347 profiles\_1d

output profiles as a function of the poloidal flux

member	type	description
psi	vecflt_type (9.8.1.2.13)	Poloidal flux [Wb], without $1/2\pi$ and such that $B_p =  \text{grad } \psi  / R / 2 / \pi$ . Time-dependent; Vector (npsi)
phi	vecflt_type (9.8.1.2.13)	toroidal flux [Wb]; Time-dependent; Vector (npsi)
pressure	vecflt_type (9.8.1.2.13)	pressure profile as a function of the poloidal flux [Pa]; Time-dependent; Vector (npsi)
F.dia	vecflt_type (9.8.1.2.13)	diamagnetic profile (R B_phi) [T m]; Time-dependent; Vector (npsi)
pprime	vecflt_type (9.8.1.2.13)	psi derivative of the pressure profile [Pa/Wb]; Time-dependent; Vector (npsi)
ffprime	vecflt_type (9.8.1.2.13)	psi derivative of F.dia multiplied with F.dia [ $\text{T}^2 \text{m}^2/\text{Wb}$ ]; Time-dependent; Vector (npsi)
jphi	vecflt_type (9.8.1.2.13)	flux surface averaged toroidal current density = $\text{average}(j_{\text{phi}}/R) / \text{average}(1/R)$ [ $\text{A}/\text{m}^2$ ]; Time-dependent; Vector (npsi)
jparallel	vecflt_type (9.8.1.2.13)	flux surface averaged parallel current density = $\text{average}(j_{\text{B}}) / B_0$ , where $B_0 = \text{equilibrium}/\text{global\_param}/\text{toroid\_field}/b_0$ ; [ $\text{A}/\text{m}^2$ ]; Time-dependent; Vector (npsi)
q	vecflt_type (9.8.1.2.13)	Safety factor = $d\psi/d\psi_{\text{tor}}$ [-]; Time-dependent; Vector (npsi)
shear	vecflt_type (9.8.1.2.13)	Magnetic shear, defined as $\rho_{\text{tor}}/q * dq/drho_{\text{tor}}$ [-]; Time-dependent; Vector (npsi)
r_inboard	vecflt_type (9.8.1.2.13)	radial coordinate (major radius) at the height and on the left of the magnetic axis [m]; Time-dependent; Vector (npsi)
r_outboard	vecflt_type (9.8.1.2.13)	radial coordinate (major radius) at the height and on the right of the magnetic axis [m]; Time-dependent; Vector (npsi)
rho_tor	vecflt_type (9.8.1.2.13)	Toroidal flux coordinate [m], to be used by the ETS and in many CPOs (coreprof, ...). Defined as $\sqrt{(\psi/\pi)/B_0}$ , where $B_0 = \text{equilibrium}/\text{global\_param}/\text{toroid\_field}/b_0$ . Time-dependent; Vector (npsi)
dpsidrho_tor	vecflt_type (9.8.1.2.13)	$d\psi/d\rho_{\text{tor}}$ [Wb/m]; Time-dependent; Vector (npsi)
rho_vol	vecflt_type (9.8.1.2.13)	Normalised radial coordinate related to the plasma volume. Defined as $\sqrt{(\text{volume} / \text{volume}[\text{LCFS}])}$ . Time-dependent; Vector (npsi)
beta_pol	vecflt_type (9.8.1.2.13)	poloidal beta (inside the magnetic surface); Time-dependent; Vector (npsi)
li	vecflt_type (9.8.1.2.13)	internal inductance (inside the magnetic surface); Time-dependent; Vector (npsi)
elongation	vecflt_type (9.8.1.2.13)	Elongation; Time-dependent; Vector (npsi)
tria_upper	vecflt_type (9.8.1.2.13)	Upper triangularity profile; Time-dependent; Vector (npsi)
tria_lower	vecflt_type (9.8.1.2.13)	Lower triangularity profile; Time-dependent; Vector (npsi)
volume	vecflt_type (9.8.1.2.13)	Volume enclosed in the flux surface [ $\text{m}^3$ ]; Time-dependent; Vector (npsi)
vprime	vecflt_type (9.8.1.2.13)	Radial derivative of the volume enclosed in the flux surface with respect to psi, i.e. $dV/d\psi$ [ $\text{m}^3/\text{Wb}$ ]; Time-dependent; Vector (npsi)
dvdrho	vecflt_type (9.8.1.2.13)	Radial derivative of the volume enclosed in the flux surface with respect to rho_tor, i.e. $dV/drho_{\text{tor}}$ [ $\text{m}^2$ ]; Time-dependent; Vector (npsi)
area	vecflt_type (9.8.1.2.13)	Cross-sectional area of the flux surface [ $\text{m}^2$ ]; Time-dependent; Vector (npsi)
aprime	vecflt_type (9.8.1.2.13)	Radial derivative of the cross-sectional area of the flux surface with respect to psi, i.e. $d\text{area}/d\psi$ [ $\text{m}^2/\text{Wb}$ ]; Time-dependent; Vector (npsi)
surface	vecflt_type (9.8.1.2.13)	Surface area of the flux surface [ $\text{m}^2$ ]; Time-dependent; Vector (npsi)
frap	vecflt_type (9.8.1.2.13)	Trapped particle fraction; Time-dependent; Vector (npsi)
gm1	vecflt_type (9.8.1.2.13)	$\text{average}(1/R^2)$ ; Time-dependent; Vector (npsi)
gm2	vecflt_type (9.8.1.2.13)	$\text{average}(\text{grad\_rho}^2/R^2)$ ; Time-dependent; Vector (npsi)
gm3	vecflt_type (9.8.1.2.13)	$\text{average}(\text{grad\_rho}^2)$ ; Time-dependent; Vector (npsi)
gm4	vecflt_type (9.8.1.2.13)	$\text{average}(1/B^2)$ [ $\text{T}^{-2}$ ]; Time-dependent; Vector (npsi)
gm5	vecflt_type (9.8.1.2.13)	$\text{average}(B^2)$ [ $\text{T}^2$ ]; Time-dependent; Vector (npsi)
gm6	vecflt_type (9.8.1.2.13)	$\text{average}(\text{grad\_rho}^2/B^2)$ [ $\text{T}^{-2}$ ]; Time-dependent; Vector (npsi)
gm7	vecflt_type (9.8.1.2.13)	$\text{average}(\text{grad\_rho})$ ; Time-dependent; Vector (npsi)
gm8	vecflt_type (9.8.1.2.13)	$\text{average}(R)$ ; Time-dependent; Vector (npsi)
gm9	vecflt_type (9.8.1.2.13)	$\text{average}(1/R)$ ; Time-dependent; Vector (npsi)
b_av	vecflt_type (9.8.1.2.13)	$\text{average}(B)$ ; Time-dependent; Vector (npsi)
b_min	vecflt_type (9.8.1.2.13)	minimum(B) on the flux surface; Time-dependent; Vector (npsi)
b_max	vecflt_type (9.8.1.2.13)	maximum(B) on the flux surface; Time-dependent; Vector (npsi)

member	type	description
omega	vecflt_type (9.8.1.2.13)	Toroidal rotation angular frequency (assumed constant on the flux surface) [rad/s]; Time-dependent; Vector (npsi)
omegaprime	vecflt_type (9.8.1.2.13)	Psi derivative of the toroidal rotation angular frequency (assumed constant on the flux surface) [rad/(s.Wb)]; Time-dependent; Vector (npsi)
mach_a	vecflt_type (9.8.1.2.13)	Alfvénic Mach number; Time-dependent; Vector (npsi)
phi_flow	vecflt_type (9.8.1.2.13)	Poloidal flow function $\phi_{flow} = \rho * v_{pol} / B_{pol} [kg / (V.s^2)]$ where $\rho$ is mass density; Time-dependent; Vector (npsi)
s_flow	vecflt_type (9.8.1.2.13)	Flux function in the closure equation $p = S(\psi) \cdot \rho^{(\gamma)}$ ; Entropy ( $\gamma=5/3$ ) or Temperature ( $\gamma=1$ ); Time-dependent; Vector (npsi)
h_flow	vecflt_type (9.8.1.2.13)	flow function $h_{flow} = \gamma / (\gamma - 1) * s_{flow} * \rho^{(\gamma - 1)} + 0.5 * (\phi_{flow} * B / \rho)^2 - 0.5 * (R * \omega)^2 [m^2 / s^2]$ ; Time-dependent; Vector (npsi)
rho_mass	vecflt_type (9.8.1.2.13)	Mass density [kg/m <sup>3</sup> ]; Time-dependent; Vector (npsi)

Type of: equilibrium:profiles\_1d (3128)

### 9.8.1.3.348 psi

Poloidal magnetic flux [Wb]; Time-dependent;

member	type	description
value	vecflt_type (9.8.1.2.13)	Signal value [Wb]; Time-dependent; Vector (nrho)
ddrho	vecflt_type (9.8.1.2.13)	Radial derivative (dvalue/drho_tor) [Wb.m <sup>-1</sup> ]; Time-dependent; Vector (nrho)
d2drho2	vecflt_type (9.8.1.2.13)	Second order radial derivative (d2value/drho_tor2) [Wb.m <sup>-2</sup> ]; Time-dependent; Vector (nrho)
ddt_rotorn	vecflt_type (9.8.1.2.13)	Time derivative of the poloidal flux at constant rho_tor_norm [V]. Time-dependent.
ddt_phi	vecflt_type (9.8.1.2.13)	Time derivative of the poloidal flux at constant toroidal flux [V]. Time-dependent.
source	string (9.8.1.1.3)	Source of the profile (any comment describing the origin of the profile : code, path to diagnostic signals, messaging, ...); String
flag	integer (9.8.1.1.2)	Flag describing how the profile has been processed : 0-not calculated; 1-interpretative; 2-calculated by the transport solver; 3-calculated by a separate code : in that case only, description of the code provided in codeparam at the same level; 4-used value from the previous time step; Time-dependent; Scalar
boundary	boundary (9.8.1.3.72)	Boundary condition for the transport equation. Time-dependent.
jni	jni (9.8.1.3.249)	Non-inductive parallel current density [A/m <sup>2</sup> ]; Time-dependent;
sigma_par	coreprofile (9.8.1.3.130)	Parallel conductivity [ohm <sup>-1</sup> .m <sup>-1</sup> ]. Time-dependent
codeparam	codeparam (9.8.1.3.84)	Code parameters

Type of: coreprof:psi (3119)

### 9.8.1.3.349 putinfo

Structure which is type independent, describing the data item

member	type	description
putmethod	string (9.8.1.1.3)	Storage method for this data
putaccess	string (9.8.1.1.3)	Instructions to access the data using this method
putlocation	string (9.8.1.1.3)	Name of this data under this method
rights	string (9.8.1.1.3)	Access rights to this data

Type of: datainfo:putinfo (3247)

### 9.8.1.3.350 q

Safety factor

member	type	description
qvalue	vecflt_type (9.8.1.2.13)	Safety factor values; Time-dependent; Vector (nmeas)
position	rz1D (9.8.1.3.366)	Major radius of the given safety factor values [m]; Time-dependent; Vector (nmeas)
source	string (9.8.1.1.3)	Description or path to the source signal (diagnostic or genprof, from which to read all info on the signal), e.g. 'magdiag/bpol_probes/measure/value'. String
exact	integer (9.8.1.1.2)	1 means exact data, is not fitted; 0 means the equilibrium code does a least square fit; scalar integer
weight	vecflt_type (9.8.1.2.13)	weight given to the measurement ( $\zeta=0$ ); Time-dependent; Vector (nmeas)
sigma	vecflt_type (9.8.1.2.13)	standard deviation of the measurement; Time-dependent; Vector (nmeas)

member	type	description
calculated	vecflt.type (9.8.1.2.13)	Signal as recalculated by the equilibrium code; Time-dependent; Vector (nmeas)
chi2	vecflt.type (9.8.1.2.13)	chi <sup>2</sup> of (calculated-measured); Time-dependent; Vector (nmeas)

Type of: eqconstraint:q (3302)

### 9.8.1.3.351 reacprodType

Characterizes a reactant or product in an AMNS reaction.

member	type	description
label	string (9.8.1.1.3)	String identifier for reaction participant (e.g. "D", "e", "W", "CD4", "photon", "n").
constituents(:)	amns.constituentType (9.8.1.3.54)	Array specifying the constituents of this reactant/product; For an atom or ion the array will be of length 1, for a molecule there will be more than one element in the array; Vector (nconst)
role	identifier (9.8.1.3.242)	Identifier for the role of this participant in the reaction. For surface reactions distinguish between projectile and wall.
amn	float (9.8.1.1.1)	Mass of the participant (amu).
relative	integer (9.8.1.1.2)	This is a flag indicating that charges are absolute (if set to 0), relative (if 1) or irrelevant (-1); relative would be used to categorize the ionization reactions from i to i+1 for all charge states; in the case of bundles, the +1 relative indicates the next bundle.
za	float (9.8.1.1.1)	Charge of the participant. Not set if not important (e.g. for a nuclear reaction). For the case where we are describing a set of reactions for different charge states, then this is the relative charge.
multiplicity	float (9.8.1.1.1)	Multiplicity in the reaction
metastable	vecint.type (9.8.1.2.14)	An array identifying the metastable; if zero-length, then not a metastable; if of length 1, then the value indicates the electronic level for the metastable (mostly used for atoms/ions); if of length 2, then the 1st would indicate the electronic level and the second the vibrational level for the metastable (mostly used for molecules and molecular ions); if of length 3, then the 1st would indicate the electronic level, the second the vibrational level and the third the rotational level for the metastable (mostly used for molecules and molecular ions)
metastable_label	string (9.8.1.1.3)	Label identifying in text form the metastable

Type of: amns\_processType:product (3161) | amns\_processType:reactant (3161)

### 9.8.1.3.352 react

In the reactor region

member	type	description
he_fr	float (9.8.1.1.1)	Coolant mass flow rate in the whole reactor [Kg/s]; Scalar
lp_fr	float (9.8.1.1.1)	Pb-15.7Li mass flow rate in the whole reactor [Kg/s]; Scalar
he_dp	float (9.8.1.1.1)	Coolant pressure drops in the reactor (compressing pipelines) [Pa]; Scalar
lip_dp	float (9.8.1.1.1)	Pb-15.7Li pressure drops in the reactor [Pa]; Scalar

Type of: hcll\_bb:react (3345)

### 9.8.1.3.353 rectanglexyz

Rectangle defined by its four corners. These form an ordered sequence: point00, point01, point11, point10. Here the first point can be calculated from the other three as point00=point01+point10-point11, thus the rectangle is defined by the triplet (point01, point11, point10). The normal vector of this rectangle is defined to be in the direction (point01-point11)x(point10-point11).

member	type	description
point01	xyz0D (9.8.1.3.516)	Point 01 on the rectangle
point11	xyz0D (9.8.1.3.516)	Point 11 on the rectangle
point10	xyz0D (9.8.1.3.516)	Point 10 on the rectangle

Type of: nbi\_nbi\_unit.wall\_surface:rectangle (3398)

### 9.8.1.3.354 recycling\_neutrals

Recycling coefficients

member	type	description
particles	vecflt.type (9.8.1.2.13)	Particle recycling coefficient corresponding to the conversion to the neutral type INEUT. Vector(nneut.). Time-dependent.
energy	vecflt.type (9.8.1.2.13)	Energy recycling coefficient corresponding to the conversion to the neutral type INEUT. Vector(nneut.). Time-dependent.

Type of: coefficients\_neutrals:recycling (3191)

### 9.8.1.3.355 reduced

Structure for a reduced data signal (0D data)

member	type	description
value	float (9.8.1.1.1)	Data value; Real
source	string (9.8.1.1.3)	Path to the source signal (diagnostic or genprof, from which to read all info on the signal); String
time	float (9.8.1.1.1)	Time (exact time slice used from the time array of the source signal); Real

### 9.8.1.3.356 refl\_receive

Reflectometry signal; experimental or code output. Time-dependent. Vector(nreceivers); If output from ERC3D, contains short, high-resolution (ps) time series anchored to the time of the CPO or, for a combination of runs, longer, coarse time signals. For experimental signals, time series may span much longer durations. For slowly varying signals, may contain only one point and have a separate CPO instance with different time field for every point. For code output, the signals are usually normalised to unity power.

member	type	description
name	string (9.8.1.1.3)	Signal name
raw_signal	t.series.real (9.8.1.3.426)	Raw antenna signal, possibly code dependent, may not always be available; usually without mixing of local oscillator; Time series; Vector (ntime.raw); Time-dependent
io_signal	t.series.real (9.8.1.3.426)	Local oscillator signal, for mixing with raw signal; Time series; Vector (ntime.raw); Time-dependent
iq_receiver	t.series.cplx (9.8.1.3.425)	I and Q signals from the receiver; already processed by code (or hardware); Time series; Vector (ntime.receiver); Time-dependent
antenna_ind	integer (9.8.1.1.2)	Index of the receiving antenna in the antennas vector, starting at 0

Type of: reflectomet:refl\_receive (3148)

### 9.8.1.3.357 reflectometry\_antennas

Vector of reflectometry antenna descriptions. These include radiation fields as well as material antenna structures (feeds, horns, later mirrors); Vector(nantennas); refl\_received entries refer to their antenna by index in this array.

member	type	description
name	string (9.8.1.1.3)	Antenna name
type	identifier (9.8.1.3.242)	Antenna type: 1: sending, 2: receiving, 3: both
origin	origin (9.8.1.3.316)	NO DOCS
radfield	reflectometry_radfield (9.8.1.3.358)	Complex valued radiation field for injection into grid; Can be a Gaussian, or a waveguide mode, or an arbitrary E field. The latter method can be used with measured radiation patterns of actual antennas. Needs to be matched with any material structures in the geometry section of this CPO. Frequency dependence: in the launchsignal part, the launch frequency can be varied arbitrarily, which changes the radiation field (or Gaussian waist sizes) when radiated from a fixed size antenna; therefore, all entries here can be specified frequency-dependent; Time-dependent
geometry	float (9.8.1.1.1)	To be defined: annotation and type
launchsignal	launchsignal (9.8.1.3.258)	NO DOCS

Type of: reflectomet:antennas (3148)

### 9.8.1.3.358 reflectometry\_radfield

Complex valued radiation field for injection into grid; Can be a Gaussian, or a waveguide mode, or an arbitrary E field. The latter method can be used with measured radiation patterns of actual antennas. Needs to be matched with any material structures in the geometry section of this CPO. Frequency dependence: in the launchsignal part, the launch frequency can be varied arbitrarily, which changes the radiation field (or Gaussian



waist sizes) when radiated from a fixed size antenna; therefore, all entries here can be specified frequency-dependent

member	type	description
type	identifier (9.8.1.3.242)	Identify type of source: 0: Gaussian, 1: waveguide mode, 2: arbitrary E field; corresponding sub-structure must be filled to provide the information.
position	vecflt_type (9.8.1.2.13)	Center position in local x-y-z coordinate system [m]; Vector(3)
gaussian(:)	reflectometry_radfield_gaussian (9.8.1.3.359)	Parameters if radiation field is a pure Gaussian; major axes of the Gaussian are aligned with the x and y axis of the local coordinate system given in origin; linear polarisation only. Time-dependent
efield(:)	reflectometry_radifield_efield (9.8.1.3.360)	complex electric field at the aperture, given as a 2d grid in the local x and y directions (corresponding to dim1 and dim2); Time-dependent

Type of: reflectometry\_antennas:radfield (3463)

### 9.8.1.3.359 reflectometry\_radfield\_gaussian

Parameters if radiation field is a pure Gaussian; major axes of the Gaussian are aligned with the x and y axis of the local coordinate system given in origin; linear polarisation only; Time-dependent

member	type	description
aperture	simp_apert (9.8.1.3.407)	Physical limits of the Gaussian wave field; any rotation here is at odds with the Gaussian geometry
waistsize	vecflt_type (9.8.1.2.13)	Beam waist size [m]; Vector(2)
waistzpos	vecflt_type (9.8.1.2.13)	Beam waist position along local z axis [m]; Vector(2)
tiltangle	vecflt_type (9.8.1.2.13)	tilt angle relative to local z axis [rad]; Vector(2)
polar_angle	vecflt_type (9.8.1.2.13)	Polarisation angle around local z [rad]; 0 means along the local x axis, i.e. vertical if all angles in the origin field are 0; Scalar
frequency	float (9.8.1.1.1)	Frequency for this occurrence of the gaussian/efield/wgmode CPO [Hz]; Scalar; can be zero of no frequency dependence is desired and only one CPO is given; Time-dependent

Type of: reflectometry\_radfield:gaussian (3464)

### 9.8.1.3.360 reflectometry\_radifield\_efield

complex electric field at the aperture, given as a 2d grid in the local x and y directions (corresponding to dim1 and dim2); Time-dependent

member	type	description
grid2d	reggrid (9.8.1.3.361)	Coordinate values for the grid for the electric field arrays. Vector(ndim1) and Vector(ndim2); Time-dependent
e1	matcplx_type (9.8.1.2.9)	Electric field component along local x direction [V/m]. Matrix(ndim1,ndim2); Time-dependent
e2	matcplx_type (9.8.1.2.9)	Electric field component along local y direction [V/m]. Matrix(ndim1,ndim2); Time-dependent
frequency	float (9.8.1.1.1)	Frequency for this occurrence of the gaussian/efield/wgmode CPO [Hz]; Scalar; can be zero of no frequency dependence is desired and only one CPO is given; Time-dependent

Type of: reflectometry\_radfield:efield (3464)

### 9.8.1.3.361 reggrid

Generic structure for a regular grid

member	type	description
dim1	vecflt_type (9.8.1.2.13)	First dimension values; Vector (ndim1)
dim2	vecflt_type (9.8.1.2.13)	Second dimension values; Vector (ndim2)

Type of: coord\_sys:grid (3214) I reflectometry\_radifield\_efield:grid2d (3466)

### 9.8.1.3.362 rfmeasure

Measured values

member	type	description
ti	expID (9.8.1.3.204)	Ion temperature [eV]. Vector (nchannels)

Type of: rfdiag:measure (3149)

### 9.8.1.3.363 rfsetup

diagnostic setup information

member	type	description
position	rzphiLDexp (9.8.1.3.373)	Position of the measurement. Time-dependent. Vector (nchannels)

Type of: rfdiag:setup (3149)

### 9.8.1.3.364 rfbeam

Beam characteristics

member	type	description
spot	spot (9.8.1.3.421)	Spot characteristics
phaseellipse	phaseellipse (9.8.1.3.336)	Phase ellipse characteristics

Type of: antenna\_ec:beam (3162) | antenna\_lh:beam (3164)

### 9.8.1.3.365 rz0D

Structure for one (R,Z) position (0D)

member	type	description
r	float (9.8.1.1.1)	Major radius [m]
z	float (9.8.1.1.1)	Altitude [m]

Type of: circularcoil:centre (3188) | current:rz\_reference (3243) | dist\_geometry\_0d:mag\_axis (3260) | distsource\_global\_param: (3280) | eqgeometry:active\_limit (3303) | eqgeometry:geom\_axis (3303) | eqgeometry:left\_low\_st (3303) | eqgeometry:left\_up\_st (3303) | eqgeometry:right\_low\_st (3303) | eqgeometry:right\_up\_st (3303) | globalparam:geom\_axis (3342) | mag\_axis:position (3371) | waves\_global\_param:mag\_axis (3611)

### 9.8.1.3.366 rz1D

Structure for list of R,Z positions (1D)

member	type	description
r	vecflt_type (9.8.1.2.13)	Major radius [m]
z	vecflt_type (9.8.1.2.13)	Altitude [m]

Type of: flush:position (3316) | isoflux:position (3354) | limiter\_unit:position (3365) | mhd\_ideal\_wall2d:position (3376) | mhd\_res\_wall2d:position (3379) | omnigen\_surf:rz (3416) | planecoil:coordinates (3443) | q:position (3456) | setup\_bprobe:position (3507) | solcurdiag\_sol\_current\_setup:position (3515) | straps:coord\_strap (3529) | wall\_blocks\_unit:position (3598) | wall\_vessel\_annular:inside (3605) | wall\_vessel\_annular:outside (3605) | xpts:position (3621)

### 9.8.1.3.367 rz1D\_npoints

Structure for list of R,Z positions (1D), with mention of the number of points relevant for a given time slice

member	type	description
r	vecflt_type (9.8.1.2.13)	Major radius [m]. Vector(max_npoints). Time-dependent
z	vecflt_type (9.8.1.2.13)	Altitude [m]. Vector(max_npoints). Time-dependent

member	type	description
npoints	integer (9.8.1.1.2)	Number of meaningful points in the above vectors at a given time slice. Time-dependent

### 9.8.1.3.368 rz1Dexp

Structure for list of R,Z positions (1D), with R and Z time-depent and experimental.

member	type	description
r	vecflt.type (9.8.1.2.13)	Major radius [m]. Vector(npoints). Time-dependent
z	vecflt.type (9.8.1.2.13)	Altitude [m]. Vector(npoints). Time-dependent

Type of: eqgeometry:boundary (3303) I eqgeometry:xpts (3303)

### 9.8.1.3.369 rz2D

Structure for list of R,Z positions (2D)

member	type	description
r	maflt.type (9.8.1.2.10)	Major radius [m]
z	maflt.type (9.8.1.2.10)	Altitude [m]

Type of: coord\_sys:position (3214) I geom.iron:rzcoordinate (3340) I pfpageometry:rzcoordinate (3438)

### 9.8.1.3.370 rz3D

Structure for list of R,Z positions (3D)

member	type	description
r	array3dflt.type (9.8.1.2.2)	Major radius [m]
z	array3dflt.type (9.8.1.2.2)	Altitude [m]

Type of: pfgeometry:rzcoordinate (3437)

### 9.8.1.3.371 rzphi0D

Structure for a single R,Z,phi position (0D)

member	type	description
r	float (9.8.1.1.1)	Major radius [m]
z	float (9.8.1.1.1)	Altitude [m]
phi	float (9.8.1.1.1)	Toroidal angle [rad]

Type of: antenna\_ec:position (3162) I antenna\_lh:position (3164) I beamletgroup:position (3172) I fusiondiag\_voxels:centre (3338) I fusiondiag\_voxels:direction (3338) I msediag\_setup:pivot\_point (3394) I msediag\_setup:second\_point (3394) I origin:refpos (3422) I pellet\_geometry:pivot\_point (3429) I pellet\_geometry:second\_point (3429)

### 9.8.1.3.372 rzphi1D

Structure for list of R,Z,phi positions (1D)

member	type	description
r	vecflt.type (9.8.1.2.13)	Major radius [m]
z	vecflt.type (9.8.1.2.13)	Altitude [m]
phi	vecflt.type (9.8.1.2.13)	Toroidal angle [rad]

Type of: beamlets:position (3173) I edges:edge\_rzphi (3297) I fusiondiag\_colliunit\_circ:centre (3327) I halpha\_setup:pivot\_point (3343) I halpha\_setup:second\_point (3343) I launches:position (3135) I lithsetup:position (3369) I msediag\_emiss\_chord:setup (3389) I pellet\_pathprofiles:position (3431) I setup\_line:pivot\_point (3509) I setup\_line:second\_point (3509) I setup\_line:third\_point (3509) I tsetup:position (3581)

### 9.8.1.3.373 rzphi1Dexp

Structure for list of R,Z,phi positions (1D) with experimental structure (value, abserror, relerror)

member	type	description
r	exp1D (9.8.1.3.204)	Major radius [m]
z	exp1D (9.8.1.3.204)	Altitude [m]
phi	exp1D (9.8.1.3.204)	Toroidal angle [rad]

Type of: cxsetup:position (3245) Iecemeasure:position (3287) Ilang\_derived:position (3356) Ilang\_measure:position (3357) Irfasetup:position (3469)

### 9.8.1.3.374 rzphi1Dexperimental

Structure for list of R,Z,phi positions (1D) with additional appinfo tags to have some nodes both in MD and DM

member	type	description
r	vecflt.type (9.8.1.2.13)	Major radius [m]
z	vecflt.type (9.8.1.2.13)	Altitude [m]
phi	vecflt.type (9.8.1.2.13)	Toroidal angle [rad]

Type of: setup\_line\_exp:pivot\_point (3510) I setup\_line\_exp:second\_point (3510) I setup\_line\_exp:third\_point (3510)

### 9.8.1.3.375 rzphi2D

Structure for list of R,Z,phi positions (2D)

member	type	description
r	matflt.type (9.8.1.2.10)	Major radius [m]
z	matflt.type (9.8.1.2.10)	Altitude [m]
phi	matflt.type (9.8.1.2.10)	Toroidal angle [rad]

Type of: fusiondiag\_colliunit\_poly:nodes (3328) I setup\_floops:position (3508)

### 9.8.1.3.376 rzphi3D

Structure for list of R,Z,phi positions (3D)

member	type	description
r	array3dfilt.type (9.8.1.2.2)	Major radius [m]
z	array3dfilt.type (9.8.1.2.2)	Altitude [m]
phi	array3dfilt.type (9.8.1.2.2)	Toroidal angle [rad]

Type of: turbcoordsys:position (3583)

### 9.8.1.3.377 rzphidrdzdphi1D

Structure for list of R,Z,phi positions and width dR dZ dphi (1D)

member	type	description
r	vecflt.type (9.8.1.2.13)	Position : major radius [m]
z	vecflt.type (9.8.1.2.13)	Position : altitude [m]
phi	vecflt.type (9.8.1.2.13)	Position : toroidal angle [rad]
dr	vecflt.type (9.8.1.2.13)	Width : major radius [m]
dz	vecflt.type (9.8.1.2.13)	Width : altitude [m]
dphi	vecflt.type (9.8.1.2.13)	Width : toroidal angle [rad]

Type of: msediag\_setup\_polarimetry:rzgamma (3395)

### 9.8.1.3.378 sawteeth\_diags

Inversion and mixing radii

member	type	description
shear1	float (9.8.1.1.1)	Magnetic shear at $q = 1$ [-]. Time-dependent. Real scalar.
rhotorn_q1	float (9.8.1.1.1)	Rho_tor_norm at $q=1$ radius [-]. Time-dependent. Real scalar.
rhotorn_inv	float (9.8.1.1.1)	Rho_tor_norm at inversion radius [-]. Time-dependent. Real scalar.
rhotorn_mix	float (9.8.1.1.1)	Rho_tor_norm at mixing radius [-]. Time-dependent. Real scalar.
pr_crash_trig	integer (9.8.1.1.2)	Previous crash trigger. Flag indicating whether a crash condition has been satisfied : 0 = no crash. $N(\zeta_0)$ = crash triggered due to condition $ii=N$ . Integer. Time-dependent.
pr_crash_time	float (9.8.1.1.1)	Previous crash time [s]. Time-dependent. Real scalar.
pr_st_period	float (9.8.1.1.1)	Previous sawtooth period [s]. Time-dependent. Real scalar.

Type of: sawteeth:diags (3150)

### 9.8.1.3.379 sawteeth\_profiles1d

Core profiles after sawtooth crash

member	type	description
psi	vecflt.type (9.8.1.2.13)	Poloidal magnetic flux [Wb]. Time-dependent. Vector (nrho).
psistar	vecflt.type (9.8.1.2.13)	$\Psi^* = \psi - \phi$ [Wb]. Time-dependent. Vector (nrho).
q	vecflt.type (9.8.1.2.13)	Safety factor = $d\phi/d\psi$ [-]. Time-dependent. Vector (nrho).

Type of: sawteeth:profiles1d (3150)

### 9.8.1.3.380 scenario\_centre

central values of the profiles (at magnetic axis)

member	type	description
te0	scenario_ref (9.8.1.3.397)	central electron temperature [eV]. Time-dependent.
ti0	scenario_ref (9.8.1.3.397)	central ion temperature [eV]. Time-dependent.
ne0	scenario_ref (9.8.1.3.397)	central electron density [ $m^{-3}$ ]. Time-dependent.
ni0	scenario_ref (9.8.1.3.397)	central ion density [ $m^{-3}$ ]. Time-dependent.
shift0	scenario_ref (9.8.1.3.397)	central value of Shafranov shift [m]. Time-dependent.
psi0	scenario_ref (9.8.1.3.397)	pedestal poloidal flux [Wb]. Time-dependent.
phi0	scenario_ref (9.8.1.3.397)	central toroidal flux [Wb]. Time-dependent.
q0	scenario_ref (9.8.1.3.397)	central safety factor value []. Time-dependent.
Rmag	scenario_ref (9.8.1.3.397)	radius of magnetic axis [R]. Time-dependent.
Zmag	scenario_ref (9.8.1.3.397)	Z coordinate of magnetic axis [R]. Time-dependent.
vtor_0	scenario_ref (9.8.1.3.397)	central rotation velocity of selected impurity [m/s]. Time-dependent.

Type of: scenario:centre (3151)

### 9.8.1.3.381 scenario\_composition

Plasma composition (description of ion species).

member	type	description
amn	vecflt.type (9.8.1.2.13)	Atomic mass number (lumped ions are allowed); Vector (nion)
zn	vecflt.type (9.8.1.2.13)	Nuclear charge (lumped ions are allowed); Vector (nion)
zion	vecflt.type (9.8.1.2.13)	Ion charge (of the dominant ionisation state; lumped ions are allowed); Vector (nion)
imp_flag	vecint.type (9.8.1.2.14)	Multiple charge state calculation flag : 0-Only one charge state is considered; 1-Multiple charge state are considered and are described in impurity CPO; Vector (nion)
rot_imp_flag	vecint.type (9.8.1.2.14)	set to 1 for the impurity corresponding at the given toroidal rotation, otherwise = 0
pellet_amn	vecflt.type (9.8.1.2.13)	Atomic mass number (for pellet injector); Vector (nion)
pellet_zn	vecflt.type (9.8.1.2.13)	Nuclear charge (pellet injector); Vector (nion)
nbi_amn	vecflt.type (9.8.1.2.13)	Atomic mass number (for neutral beam injection); Vector (nion)
nbi_zn	vecflt.type (9.8.1.2.13)	Nuclear charge (for neutral beam injection); Vector (nion)

Type of: scenario:composition (3151)

### 9.8.1.3.382 scenario\_configuration

Strings describing the tokamak configuration

member	type	description
config	scenario_int (9.8.1.3.389)	plasma configuration (limiter/divertor ...) []. Time-dependent. Possible values : 0 = undetermined; 1 = poloidal limiter (ring); 2 = poloidal limiter (LFS); 3 = poloidal limiter (HFS); 4 = toroidal limiter (ring); 5 = toroidal limiter (segment); 6 = poloidal divertor; 7 = toroidal divertor (single null, ion drift in direction of divertor); 8 = toroidal divertor (single null, ion drift in opposite direction of divertor); 9 = toroidal divertor (double null).
lmode_sc	string (9.8.1.1.3)	name of the L-mode scaling law. String.
hmode_sc	string (9.8.1.1.3)	name of the H-mode scaling law. String.
core_sc	string (9.8.1.1.3)	name of the core plasma energy scaling law. String.
pedestal_sc	string (9.8.1.1.3)	name of the pedestal energy scaling law. String.
helium_sc	string (9.8.1.1.3)	name of the helium confinement time scaling law. String.
impurity_sc	string (9.8.1.1.3)	name of the impurities confinement time scaling law
l2h_sc	string (9.8.1.1.3)	name of the L-mode to H-mode power threshold scaling law. String.
tor_rot_sc	string (9.8.1.1.3)	name of the toroidal spontaneous rotation scaling law. String.
wall_mat	string (9.8.1.1.3)	chemical composition of the wall. String.
evap_mat	string (9.8.1.1.3)	chemical composition evaporated wall conditioning material. String.
lim_mat	string (9.8.1.1.3)	chemical composition of the limiter. String.
div_mat	string (9.8.1.1.3)	chemical composition of the divertor
coordinate	string (9.8.1.1.3)	name/definition of the internal coordinate of the simulator that are given by the data named rho
ecrh_freq	scenario_ref (9.8.1.3.397)	ECRH frequency [Hz]. Time-dependent.
ecrh_loc	scenario_ref (9.8.1.3.397)	position of maximum ECRH deposition on scale of rho [rho]. Time-dependent.
ecrh_mode	scenario_int (9.8.1.3.389)	polarisation of ecrh wave (0 = O mode, 1 = X mode) []. Time-dependent.
ecrh_tor_ang	scenario_ref (9.8.1.3.397)	toroidal angle of ECRH at resonance [rad] Time-dependent.
ecrh_pol_ang	scenario_ref (9.8.1.3.397)	poloidal angle of ECRH resonance position (0= LFS, pi/2 = top, -pi/2 = down, pi = HFS) [rad]. Time-dependent.
ecrh_harm	scenario_int (9.8.1.3.389)	harmonic number of the absorbed ecrh wave []. Time-dependent.
enbi	scenario_ref (9.8.1.3.397)	energy of the neutral beam [eV]. Time-dependent.
r_nbi	scenario_ref (9.8.1.3.397)	Major radius of tencance of NBI [m]. Time-dependent.
grad_b_drift	scenario_int (9.8.1.3.389)	direction of ion grad-B drift (1= to lower divertor, -1 = from lower divertor) []. Time-dependent.
icrh_freq	scenario_ref (9.8.1.3.397)	ICRH frequency [Hz]. Time-dependent.
icrh_scheme	string (9.8.1.1.3)	icrh scheme either : H_min_1; He3_min; T_harm_2; FW; FW_CD; FW_CCD
icrh_phase	scenario_ref (9.8.1.3.397)	ICRH antenna phasing [rad]. Time-dependent.
LH_freq	scenario_ref (9.8.1.3.397)	LHCD frequency [Hz]. Time-dependent.
LH_npar	scenario_ref (9.8.1.3.397)	LHCD parallel indice []. Time-dependent.
pellet_ang	scenario_ref (9.8.1.3.397)	pellet injection position (0= LFS, pi/2 = top, -pi/2 = down, pi = HFS) [rad]. Time-dependent.
pellet_v	scenario_ref (9.8.1.3.397)	pellet injection velocity [m/s]. Time-dependent.
pellet_nba	scenario_ref (9.8.1.3.397)	initial number of atoms in pellet []. Time-dependent.

Type of: scenario:configs (3151)

### 9.8.1.3.383 scenario\_confinement

characteristic confinement times

member	type	description
tau_e	scenario_ref (9.8.1.3.397)	thermal energy confinement time [s]. Time-dependent.
tau_l_sc	scenario_ref (9.8.1.3.397)	confinement time given by the selected L-mode scaling law [s]. Time-dependent.
tau_h_sc	scenario_ref (9.8.1.3.397)	confinement time given by the selected H-mode scaling law [s]. Time-dependent.
tau_he	scenario_ref (9.8.1.3.397)	Helium ashes confinement time [s]. Time-dependent.
tau_e_ee	scenario_ref (9.8.1.3.397)	electron energy confinement time [s]. Time-dependent.
tau_e_ii	scenario_ref (9.8.1.3.397)	ion energy confinement time [s]. Time-dependent.
tau_e_ei	scenario_ref (9.8.1.3.397)	energy equipartition characteristic time [s]. Time-dependent.
tau_cur_diff	scenario_ref (9.8.1.3.397)	characteristic time for current diffusion [s]. Time-dependent.
tau_i_rol	scenario_ref (9.8.1.3.397)	characteristic time for current decrease in tokamak equivalent R/L circuit [s]. Time-dependent.

Type of: scenario:confinement (3151)

### 9.8.1.3.384 scenario\_currents

data related to current sources and current diffusion

member	type	description
RR	scenario_ref (9.8.1.3.397)	plasma resistivity [ohm]. Time-dependent.
i_align	scenario_ref (9.8.1.3.397)	current drive alignment quality parameter (1 = good , 0 = bad). Time-dependent.
i_boot	scenario_ref (9.8.1.3.397)	bootstrap current [A]. Time-dependent.
i_cd_tot	scenario_ref (9.8.1.3.397)	total current drive [A]. Time-dependent.
i_eccd	scenario_ref (9.8.1.3.397)	Electron Cyclotron current drive [A]. Time-dependent.
i_fast_ion	scenario_ref (9.8.1.3.397)	fast ions bootstrap like current drive (i.e. fast alpha) [A]. Time-dependent.
i_fwcd	scenario_ref (9.8.1.3.397)	Fast Wave current drive [A]. Time-dependent.
i_lhcd	scenario_ref (9.8.1.3.397)	Lower Hybrid current drive [A]. Time-dependent.
i_nbicd	scenario_ref (9.8.1.3.397)	Neutral Beam Injection current drive [A]. Time-dependent.
i_ni_tot	scenario_ref (9.8.1.3.397)	total non inductive current [A]. Time-dependent.
i_ohm	scenario_ref (9.8.1.3.397)	ohmic current [A]. Time-dependent.
i_par	scenario_ref (9.8.1.3.397)	total plasma current (projected on B : $\langle J_{\parallel} / B_0 \rangle$ [A]. Time-dependent.
i_runaway	scenario_ref (9.8.1.3.397)	runaway current [A]. Time-dependent.
v_loop	scenario_ref (9.8.1.3.397)	loop voltage @ LCMS / LFS , equatorial point [V]. Time-dependent.
v_meas	scenario_ref (9.8.1.3.397)	loop voltage measured on a coil [V]. Time-dependent.

Type of: scenario:currents (3151)

### 9.8.1.3.385 scenario\_edge

edge value (@ LCMS)

member	type	description
te_edge	scenario_ref (9.8.1.3.397)	edge electron temperature [eV]. Time-dependent.
ti_edge	scenario_ref (9.8.1.3.397)	edge ion temperature [eV]. Time-dependent.
ne_edge	scenario_ref (9.8.1.3.397)	edge electron density [ $m^{-3}$ ]. Time-dependent.
ni_edge	scenario_ref (9.8.1.3.397)	edge ion density [ $m^{-3}$ ]. Time-dependent.
psi_edge	scenario_ref (9.8.1.3.397)	edge poloidal flux [Wb]. Time-dependent.
phi_edge	scenario_ref (9.8.1.3.397)	edge toroidal flux [Wb]. Time-dependent.
rho_edge	scenario_ref (9.8.1.3.397)	edge value of internal simulator coordinate [m]. Time-dependent.
drho_edge.dt	scenario_ref (9.8.1.3.397)	time derivative of edge value of internal simulator coordinate [m/s]. Time-dependent.
q_edge	scenario_ref (9.8.1.3.397)	edge or effective safety factor value []. Time-dependent.
neutral_flux	scenario_ref (9.8.1.3.397)	number of cold neutral (in equivalent electron for Z $\geq 1$ ) that input in plasma at the edge every second coming from recycling and gaz puff [ $s^{-1}$ ]. Time-dependent.
phi_plasma	scenario_ref (9.8.1.3.397)	contribution of the plasma to the toroidal flux (used for toroidal coils heat load computation) [Wb]. Time-dependent.
vtor_edge	scenario_ref (9.8.1.3.397)	rotation velocity of selected impurity on the separatrix [m/s]. Time-dependent.

Type of: scenario:edge (3151)

### 9.8.1.3.386 scenario\_energy

plasma energy content

member	type	description
w_tot	scenario_ref (9.8.1.3.397)	total plasma energy [J]. Time-dependent.
w_b_pol	scenario_ref (9.8.1.3.397)	poloidal field energy of the plasma [J]. Time-dependent.
w_dia	scenario_ref (9.8.1.3.397)	3/2 perpendicular plasma energy [J]. Time-dependent.
dwdia.dt	scenario_ref (9.8.1.3.397)	time derivative of Wdia [W]. Time-dependent.
w_b_tor_pla	scenario_ref (9.8.1.3.397)	toroidal magnetic plasma energy [J]. Time-dependent.
w_th	scenario_ref (9.8.1.3.397)	thermal plasma energy [J]. Time-dependent.
dwtot.dt	scenario_ref (9.8.1.3.397)	time derivative of total plasma energy [W]. Time-dependent.
dwbpol.dt	scenario_ref (9.8.1.3.397)	time derivative of plasma poloidal field energy [W]. Time-dependent.
dwbtorpla.dt	scenario_ref (9.8.1.3.397)	time derivative of toroidal magnetic plasma energy [W]. Time-dependent.
dwth.dt	scenario_ref (9.8.1.3.397)	time derivative of thermal plasma energy [W]. Time-dependent.
esup_icrhtot	scenario_ref (9.8.1.3.397)	total suprathermal energy of fast ions accelerated by ICRH [J]. Time-dependent.
esup_icrpper	scenario_ref (9.8.1.3.397)	perpendicular part of suprathermal energy of fast ions accelerated by ICRH [J]. Time-dependent.



member	type	description
esup_nbitot	scenario_ref (9.8.1.3.397)	total suprathermal energy of fast ions from NBI ionisation [J]. Time-dependent.
esup_nbiperp	scenario_ref (9.8.1.3.397)	perpendicular part of suprathermal energy of fast ions from NBI ionisation [J]. Time-dependent.
esup_lhcd	scenario_ref (9.8.1.3.397)	total suprathermal energy of fast electron from LHCD [J]. Time-dependent.
esup_alpha	scenario_ref (9.8.1.3.397)	total suprathermal energy of fast alpha particules [J]. Time-dependent.

Type of: scenario:energy (3151)

### 9.8.1.3.387 scenario\_global

global scalar value

member	type	description
ip	scenario_ref (9.8.1.3.397)	Plasma current [A]. Time-dependent.
dip_dt	scenario_ref (9.8.1.3.397)	time derivative of plasma current [A/s]. Time-dependent.
beta_pol	scenario_ref (9.8.1.3.397)	poloidal beta []. Time-dependent.
beta_tor	scenario_ref (9.8.1.3.397)	toroidal beta []. Time-dependent.
beta_normal	scenario_ref (9.8.1.3.397)	normalised beta []. Time-dependent.
li	scenario_ref (9.8.1.3.397)	internal inductance (definition 3). Time-dependent.
volume	scenario_ref (9.8.1.3.397)	total plasma volume [m <sup>3</sup> ]. Time-dependent.
area_pol	scenario_ref (9.8.1.3.397)	area poloidal cross section [m <sup>2</sup> ]. Time-dependent.
area_ext	scenario_ref (9.8.1.3.397)	external plasma surface [m <sup>2</sup> ]. Time-dependent.
len_sepa	scenario_ref (9.8.1.3.397)	length of the separatrix [m]. Time-dependent.
beta_pol_th	scenario_ref (9.8.1.3.397)	poloidal beta, thermal contribution []. Time-dependent.
beta_tor_th	scenario_ref (9.8.1.3.397)	toroidal beta, thermal contribution []. Time-dependent.
beta_n_th	scenario_ref (9.8.1.3.397)	normalised beta, thermal contribution []. Time-dependent.
disruption	scenario_ref (9.8.1.3.397)	flag for disruption (set to 1 for disruption, otherwise equal 0) []. Time-dependent.
mode_h	scenario_ref (9.8.1.3.397)	confinement mode versus time: 0 = L-mode et 1 = H-mode []. Time-dependent.
s.alpha	scenario_ref (9.8.1.3.397)	total number of alpha fusion particules from D-T ractions per second [s <sup>-1</sup> ]. Time-dependent.

Type of: scenario:global\_param (3151)

### 9.8.1.3.388 scenario\_heat\_power

Power delivred to plasma (thermal an non thermal)

member	type	description
plh	scenario_ref (9.8.1.3.397)	Lower hybrid power [W]. Time-dependent.
pohmic	scenario_ref (9.8.1.3.397)	ohmic power (thermal species contribution only) [W]. Time-dependent.
picrh	scenario_ref (9.8.1.3.397)	Ion cyclotron resonance heating power [W]. Time-dependent.
pecrh	scenario_ref (9.8.1.3.397)	electron cyclotron resonance heating power [W]. Time-dependent.
pnbi	scenario_ref (9.8.1.3.397)	neutral beam injection power [W]. Time-dependent.
pnbi_co_cur	scenario_ref (9.8.1.3.397)	neutral beam injection power injeted in co-current direction [W]. Time-dependent.
pnbi_counter	scenario_ref (9.8.1.3.397)	neutral beam injection power injeted in counter-current direction [W]. Time-dependent.
plh_th	scenario_ref (9.8.1.3.397)	lower hybrid power deposited on thermal electrons [W]. Time-dependent.
picrh_th	scenario_ref (9.8.1.3.397)	ion cyclotron resonance heating power deposited on thermal species [W]. Time-dependent.
pecrh_th	scenario_ref (9.8.1.3.397)	electron cyclotron resonance heating power deposited on thermal electrons [W]. Time-dependent.
pnbi_th	scenario_ref (9.8.1.3.397)	neutral beam injection power deposited on thermal species [W]. Time-dependent.
ploss_icrh	scenario_ref (9.8.1.3.397)	Ion cyclotron resonance heating power losses [W]. Time-dependent.
ploss_nbi	scenario_ref (9.8.1.3.397)	neutral beam injection power losses (including shine-through) [W]. Time-dependent.
pbrem	scenario_ref (9.8.1.3.397)	Bremsstrahlung radition losses [W]. Time-dependent.
pcyclo	scenario_ref (9.8.1.3.397)	cyclotron radiation losses [W]. Time-dependent.
prad	scenario_ref (9.8.1.3.397)	impurity radition losses in core plamsa , without Bremsstrahlung [W]. Time-dependent.
pdd_fus	scenario_ref (9.8.1.3.397)	fusion power due to DD reactions [W]. Time-dependent.
pei	scenario_ref (9.8.1.3.397)	power exchange between eletron and ion (equipartition) [W]. Time-dependent.
pel_tot	scenario_ref (9.8.1.3.397)	total thermal electron power deposition without equipartition [W]. Time-dependent.
pel_fus	scenario_ref (9.8.1.3.397)	fusion electron power deposition [W]. Time-dependent.
pel_icrh	scenario_ref (9.8.1.3.397)	ICRH electron power deposition [W]. Time-dependent.
pel_nbi	scenario_ref (9.8.1.3.397)	NBI electron power deposition [W]. Time-dependent.

member	type	description
pfus.dt	scenario_ref (9.8.1.3.397)	total D-T fusion power of alpha [W]. Time-dependent.
ploss.fus	scenario_ref (9.8.1.3.397)	D-T fusion power of alpha losses [W]. Time-dependent.
pfus.nbi	scenario_ref (9.8.1.3.397)	NBI induce D-T fusion power of alpha [W]. Time-dependent.
pfus.th	scenario_ref (9.8.1.3.397)	alpha (from DT fusion reaction) power deposited on thermal species [W]. Time-dependent.
padd.tot	scenario_ref (9.8.1.3.397)	total additional power input including ohmic power [W]. Time-dependent.
pion.tot	scenario_ref (9.8.1.3.397)	total thermal ion power deposition without equipartition [W]. Time-dependent.
pion.fus	scenario_ref (9.8.1.3.397)	fusion ion power deposition [W]. Time-dependent.
pion.icrh	scenario_ref (9.8.1.3.397)	ICRH ion power deposition [W]. Time-dependent.
pion.nbi	scenario_ref (9.8.1.3.397)	NBI ion power deposition [W]. Time-dependent.
pioniz	scenario_ref (9.8.1.3.397)	power losses due to cold neutral ionization [W]. Time-dependent.
ploss	scenario_ref (9.8.1.3.397)	plasma losses power, as define in ITER basis [W]. Time-dependent.
p.wth	scenario_ref (9.8.1.3.397)	thermal power input, define as $\tau.E * P.th = Wth$ [W]. Time-dependent.
p.w	scenario_ref (9.8.1.3.397)	effective power define as $\tau.E * P.w = W.tot$ [W]. Time-dependent.
p.l2h.thr	scenario_ref (9.8.1.3.397)	additionnal power crossing the LCMS; must be compare to L- $\zeta$ H threshold power (Ryter PPCF 2002) [W]. Time-dependent.
p.l2h.sc	scenario_ref (9.8.1.3.397)	threshold power given by the choosen scaling law for transition from L-mode to H-mode [W]. Time-dependent.
p.nbi.icrh	scenario_ref (9.8.1.3.397)	beam power increase due to ICRH effects [W]. Time-dependent.

Type of: scenario:heat\_power (3151)

### 9.8.1.3.389 scenario\_int

Structure for scenario integer flag; Time-dependent

member	type	description
value	integer (9.8.1.1.2)	Signal value; Time-dependent; Scalar Integer.
source	string (9.8.1.1.3)	Source of the signal (any comment describing the origin of the signal : code, path to diagnostic signals, massaging, ...); String

Type of: scenario\_configuration:config (3488) I scenario\_configuration:ecrh\_harm (3488) I scenario\_configuration:ecrh\_mode (3488) I scenario\_configuration:grad\_b\_drift (3488) I scenario\_itb:itb\_type (3496)

### 9.8.1.3.390 scenario\_itb

Values characteristics of the Internal Transport Barrier

member	type	description
q_min	scenario_ref (9.8.1.3.397)	minimal value of safety factor []. Time-dependent.
te_itb	scenario_ref (9.8.1.3.397)	electron temperature @ $q = q_{min}$ [eV]. Time-dependent.
ti_itb	scenario_ref (9.8.1.3.397)	ion temperature @ $q = q_{min}$ [eV]. Time-dependent.
ne_itb	scenario_ref (9.8.1.3.397)	electron density @ $q = q_{min}$ [ $m^{-3}$ ]. Time-dependent.
ni_itb	scenario_ref (9.8.1.3.397)	ion density @ $q = q_{min}$ [ $m^{-3}$ ]. Time-dependent.
psi_itb	scenario_ref (9.8.1.3.397)	poloidal flux @ $q = q_{min}$ [Wb]. Time-dependent.
phi_itb	scenario_ref (9.8.1.3.397)	toroidal flux @ $q = q_{min}$ [Wb]. Time-dependent.
rho_itb	scenario_ref (9.8.1.3.397)	value of internal simulator coordinate @ $q = q_{min}$ [m]. Time-dependent.
h_itb	scenario_ref (9.8.1.3.397)	energy enhancement ITB factor [m]. Time-dependent.
width_itb	scenario_ref (9.8.1.3.397)	width of the high pressure gradient region (on scale of rho_itb) [m]. Time-dependent.
vtor_itb	scenario_ref (9.8.1.3.397)	rotation velocity of selected impurity @ rho_itb [m/s]. Time-dependent.
itb_type	scenario_int (9.8.1.3.389)	itb type []. Time-dependent. Any combinaison of :0 = none; 1 = on T <sub>i</sub> ; 2 = on T <sub>e</sub> ; 4 = on n <sub>e</sub> ; 8 = reverse shear triggered; 16 = toroidal rotation triggered; 32 = alpha stabilisation triggered; 64 = T <sub>i</sub> / T <sub>e</sub> triggered; 128 = radiation triggered; 256 = rationnal q triggered

Type of: scenario:itb (3151)

### 9.8.1.3.391 scenario\_lim\_div\_wall

values on the plate of divertor or on the limiter or on the wall (@ LCMS)

member	type	description
te_lim_div	scenario_ref (9.8.1.3.397)	limiter/divertor electron temperature [eV]. Time-dependent.
ti_lim_div	scenario_ref (9.8.1.3.397)	limiter/divertor ion temperature [eV]. Time-dependent.

member	type	description
ne_lim_div	scenario_ref (9.8.1.3.397)	limiter/divertor electron density [m <sup>-3</sup> ]. Time-dependent.
ni_lim_div	scenario_ref (9.8.1.3.397)	limiter/divertor ion density [m <sup>-3</sup> ]. Time-dependent.
q_peak_div	scenario_ref (9.8.1.3.397)	Peak power flux on limiter or divertor plate [W.m <sup>-2</sup> ]. Time-dependent.
q_peak_wall	scenario_ref (9.8.1.3.397)	Peak power flux on the wall [W.m <sup>-2</sup> ]. Time-dependent.
surf_temp	scenario_ref (9.8.1.3.397)	limiter surface or divertor plate temperature [K]. Time-dependent.
p_lim_div	scenario_ref (9.8.1.3.397)	Total power on limiter or divertor plate [W]. Time-dependent.
p_rad_div	scenario_ref (9.8.1.3.397)	radiative power in the divertor zone [W]. Time-dependent.
p_neut_div	scenario_ref (9.8.1.3.397)	Neutral pressure in the divertor zone [Pa]; Time-dependent.
p_wall	scenario_ref (9.8.1.3.397)	Total power on the wall [W]. Time-dependent.
wall_temp	scenario_ref (9.8.1.3.397)	wall temperature [K]. Time-dependent.
wall_state	scenario_ref (9.8.1.3.397)	saturation state of the wall (0 = completely pumping wall, 1 = completely saturate wall) []. Time-dependent.
detach_state	scenario_ref (9.8.1.3.397)	plasma detachment state (0= attach plasma, 1 = completely detach plasma) []. Time-dependent.
pump_flux	scenario_ref (9.8.1.3.397)	flux pump out for each ion species [s <sup>-1</sup> ]. Time-dependent.
p_rad_fw	scenario_ref (9.8.1.3.397)	Radiated power on the first wall [W]; Time-dependent
p_cond_fw	scenario_ref (9.8.1.3.397)	Conducted/convected power on the first wall [W]; Time-dependent
div_wetted	scenario_ref (9.8.1.3.397)	Divertor wetted area [m <sup>2</sup> ]; Time-dependent
gas_puff	scenario_ref (9.8.1.3.397)	Gas puff (D/T) in the divertor (PFR) [Pa.m <sup>3</sup> .s <sup>-1</sup> ]; Time-dependent
ar_concentr	scenario_ref (9.8.1.3.397)	Argon concentration in the divertor; Time-dependent
part_exhaust	scenario_ref (9.8.1.3.397)	Assuming a pumping speed [Pa.m <sup>3</sup> .s <sup>-1</sup> ]; Time-dependent
f_inner	scenario_ref (9.8.1.3.397)	Fraction of power to the inner divertor; Time-dependent
f_outer	scenario_ref (9.8.1.3.397)	Fraction of power to the outer divertor; Time-dependent
f_pfr	scenario_ref (9.8.1.3.397)	Fraction of power flowing into the private flux region; Time-dependent
f_rad_fw	scenario_ref (9.8.1.3.397)	Fraction of the divertor radiated power deposited in the main chamber; Time-dependent
q_div	vecflt.type (9.8.1.2.13)	Heat flux on divertor plate [W/m <sup>2</sup> ]; Vector(theta). Time-dependent
p_cond_div	scenario_ref (9.8.1.3.397)	Conducted/convected power on divertor plate [W]; Time-dependent
pol_ext	float (9.8.1.1.1)	Poloidal extension of the divertor or outer major radius of the divertor region (and inner major radius) [rad]; Scalar
flux_exp	float (9.8.1.1.1)	Flux expansion at the divertor plate ((B.theta/B)midplane)/((B.theta/B)target); Scalar
tilt_angle	float (9.8.1.1.1)	Tilt angle between the field lines and the divertor plate in a poloidal plane [rad]; Scalar
n_div	float (9.8.1.1.1)	Number of divertor, assuming symmetric configuration; Scalar
div_dz	float (9.8.1.1.1)	Divertor extension in z direction from the x-point [m]; Scalar
div_dro	float (9.8.1.1.1)	Divertor extension in r outward direction from the x-point [m]; Scalar
div_dri	float (9.8.1.1.1)	Divertor extension in r inward direction from the x-point [m]; Scalar
p_nh.div	scenario_ref (9.8.1.3.397)	Total nuclear heating in divertor [W]. Time-dependent.

Type of: scenario:lim\_div\_wall (3151)

### 9.8.1.3.392 scenario\_line\_ave

line averaged value

member	type	description
ne_line	scenario_ref (9.8.1.3.397)	line averaged electron density [m <sup>-3</sup> ]. Time-dependent.
zeff_line	scenario_ref (9.8.1.3.397)	line averaged effective charge. Time-dependent.
ne_zeff_line	scenario_ref (9.8.1.3.397)	line averaged electron density * Zeff . Time-dependent.
dne_line_dt	scenario_ref (9.8.1.3.397)	time derivative of line averaged electron density [m <sup>-3</sup> /s]. Time-dependent.

Type of: scenario:line\_ave (3151)

### 9.8.1.3.393 scenario\_neutron

neutron flux for DD and DT reactions

member	type	description
ndd_tot	scenario_ref (9.8.1.3.397)	total neutron flux coming from DD reactions [Hz]. Time-dependent.
ndd_th	scenario_ref (9.8.1.3.397)	neutron flux coming from thermal DD reactions [Hz]. Time-dependent.
ndd_nbi_th	scenario_ref (9.8.1.3.397)	neutron flux coming from beam/plasma DD reactions [Hz]. Time-dependent.
ndd_nbi_nbi	scenario_ref (9.8.1.3.397)	neutron flux coming from beam/beam DD reactions [Hz]. Time-dependent.
ndt_tot	scenario_ref (9.8.1.3.397)	total neutron flux coming from DT reactions [Hz]. Time-dependent.

member	type	description
ndt.th	scenario_ref (9.8.1.3.397)	neutron flux coming from thermal DT reactions [Hz]. Time-dependent.

Type of: scenario:neutron (3151)

### 9.8.1.3.394 scenario\_ninety\_five

values at 95% of poloidal flux

member	type	description
q_95	scenario_ref (9.8.1.3.397)	safety factor value @ 95 % of poloidal flux span []. Time-dependent.
elong_95	scenario_ref (9.8.1.3.397)	plasma elongation @ 95 % of poloidal flux span []. Time-dependent.
tria_95	scenario_ref (9.8.1.3.397)	averaged plasma triangularity @ 95 % of poloidal flux span []. Time-dependent.
tria_up_95	scenario_ref (9.8.1.3.397)	upper plasma triangularity @ 95 % of poloidal flux span []. Time-dependent.
tria_lo_95	scenario_ref (9.8.1.3.397)	lower plasma triangularity @ 95 % of poloidal flux span []. Time-dependent.
te_95	scenario_ref (9.8.1.3.397)	electron temperature @ 95 % of poloidal flux [eV]. Time-dependent.
ti_95	scenario_ref (9.8.1.3.397)	ion temperature @ 95 % of poloidal flux [eV]. Time-dependent.
ne_95	scenario_ref (9.8.1.3.397)	electron density @ 95 % of poloidal flux [m <sup>-3</sup> ]. Time-dependent.
ni_95	scenario_ref (9.8.1.3.397)	ion density @ 95 % of poloidal flux [m <sup>-3</sup> ]. Time-dependent.
phi_95	scenario_ref (9.8.1.3.397)	toroidal flux @ 95 % of poloidal flux [Wb]. Time-dependent.
rho_95	scenario_ref (9.8.1.3.397)	value of internal simulator coordinate @ 95 % of poloidal flux [m]. Time-dependent.
vtor_95	scenario_ref (9.8.1.3.397)	rotation velocity of selected impurity @ 95 % of poloidal flux [m/s]. Time-dependent.

Type of: scenario:ninety\_five (3151)

### 9.8.1.3.395 scenario\_pedestal

Values at the top of the H-mode pedestal

member	type	description
te_ped	scenario_ref (9.8.1.3.397)	pedestal electron temperature [eV]. Time-dependent.
ti_ped	scenario_ref (9.8.1.3.397)	pedestal ion temperature [eV]. Time-dependent.
ne_ped	scenario_ref (9.8.1.3.397)	pedestal electron density [m <sup>-3</sup> ]. Time-dependent.
ni_ped	scenario_ref (9.8.1.3.397)	pedestal ion density [m <sup>-3</sup> ]. Time-dependent.
psi_ped	scenario_ref (9.8.1.3.397)	pedestal poloidal flux [Wb]. Time-dependent.
phi_ped	scenario_ref (9.8.1.3.397)	pedestal toroidal flux [Wb]. Time-dependent.
rho_ped	scenario_ref (9.8.1.3.397)	top pedestal value of internal simulator coordinate [m]. Time-dependent.
q_ped	scenario_ref (9.8.1.3.397)	top pedestal safety factor value []. Time-dependent.
pressure_ped	scenario_ref (9.8.1.3.397)	top pedestal thermal pressure ( $n_e * T_e + n_i * T_i$ ) [Pa]. Time-dependent.
vtor_ped	scenario_ref (9.8.1.3.397)	top pedestal value of rotation velocity of selected impurity [m/s]. Time-dependent.

Type of: scenario:pedestal (3151)

### 9.8.1.3.396 scenario\_reactor

reactor data (such as electricity cost ...)

member	type	description
pnetwork	float (9.8.1.1.1)	reactor electric power provide to the network [W].

Type of: scenario:reactor (3151)

### 9.8.1.3.397 scenario\_ref

Structure for scenario reference; Time-dependent

member	type	description
value	float (9.8.1.1.1)	Signal value; Time-dependent; Scalar
source	string (9.8.1.1.3)	Source of the signal (any comment describing the origin of the signal : code, path to diagnostic signals, massaging, ...); String

Type of: scenario\_centre:Rmag (3486) I scenario\_centre:Zmag (3486) I scenario\_centre:ne0 (3486) I scenario\_centre:ni0 (3486) I scenario\_centre:phi0 (3486) I scenario\_centre:psi0 (3486) I scenario\_centre:q0 (3486) I scenario\_centre:shift0 (3486) I scenario\_centre:te0 (3486) I scenario\_centre:ti0 (3486) I scenario\_centre:vtor\_0 (3486) I scenario\_configuration:LH\_freq (3488) I scenario\_configuration:LH\_npar (3488) I scenario\_configuration:ecrh\_freq (3488) I scenario\_configuration:ecrh\_loc (3488) I scenario\_configuration:ecrh\_pol\_ang (3488) I scenario\_configuration:ecrh\_tor\_ang (3488) I scenario\_configuration:enb (3488) I scenario\_configuration:icrh\_freq (3488) I scenario\_configuration:icrh\_phase (3488) I scenario\_configuration:pellet\_ang (3488) I scenario\_configuration:pellet\_nba (3488) I scenario\_configuration:pellet\_v (3488) I scenario\_configuration:r\_nbi (3488) I scenario\_confinement:tau\_cur\_diff (3489) I scenario\_confinement:tau\_e (3489) I scenario\_confinement:tau\_e\_ee (3489) I scenario\_confinement:tau\_e\_ei (3489) I scenario\_confinement:tau\_e\_ii (3489) I scenario\_confinement:tau\_h\_sc (3489) I scenario\_confinement:tau\_he (3489) I scenario\_confinement:tau\_i\_rol (3489) I scenario\_confinement:tau\_l\_sc (3489) I scenario\_currents:RR (3490) I scenario\_currents:i\_align (3490) I scenario\_currents:i\_boot (3490) I scenario\_currents:i\_cd\_tot (3490) I scenario\_currents:i\_eccd (3490) I scenario\_currents:i\_fast\_ion (3490) I scenario\_currents:i\_fwcd (3490) I scenario\_currents:i\_lhcd (3490) I scenario\_currents:i\_nbicd (3490) I scenario\_currents:i\_ni\_tot (3490) I scenario\_currents:i\_ohm (3490) I scenario\_currents:i\_par (3490) I scenario\_currents:i\_runaway (3490) I scenario\_currents:v\_loop (3490) I scenario\_currents:v\_meas (3490) I scenario\_edge:drho\_edge\_dt (3491) I scenario\_edge:ne\_edge (3491) I scenario\_edge:neutral\_flux (3491) I scenario\_edge:ni\_edge (3491) I scenario\_edge:phi\_edge (3491) I scenario\_edge:phi\_plasma (3491) I scenario\_edge:psi\_edge (3491) I scenario\_edge:q\_edge (3491) I scenario\_edge:rho\_edge (3491) I scenario\_edge:te\_edge (3491) I scenario\_edge:ti\_edge (3491) I scenario\_edge:vtor\_edge (3491) I scenario\_energy:dwbpol\_dt (3492) I scenario\_energy:dwbtorpla\_dt (3492) I scenario\_energy:dwdia\_dt (3492) I scenario\_energy:dwth\_dt (3492) I scenario\_energy:dwtot\_dt (3492) I scenario\_energy:esup\_alpha (3492) I scenario\_energy:esup\_icrhper (3492) I scenario\_energy:esup\_icrhtot (3492) I scenario\_energy:esup\_lhcd (3492) I scenario\_energy:esup\_nbiperp (3492) I scenario\_energy:esup\_nbitot (3492) I scenario\_energy:w\_b\_pol (3492) I scenario\_energy:w\_b\_tor\_pla (3492) I scenario\_energy:w\_dia (3492) I scenario\_energy:w\_th (3492) I scenario\_energy:w\_tot (3492) I scenario\_global:area\_ext (3493) I scenario\_global:area\_pol (3493) I scenario\_global:beta\_n\_th (3493) I scenario\_global:beta\_normal (3493) I scenario\_global:beta\_pol (3493) I scenario\_global:beta\_pol\_th (3493) I scenario\_global:beta\_tor (3493) I scenario\_global:beta\_tor\_th (3493) I scenario\_global:dip\_dt (3493) I scenario\_global:disruption (3493) I scenario\_global:ip (3493) I scenario\_global:len\_sepa (3493) I scenario\_global:li (3493) I scenario\_global:mode\_h (3493) I scenario\_global:s\_alpha (3493) I scenario\_global:volume (3493) I scenario\_heat\_power:p\_l2h\_sc (3494) I scenario\_heat\_power:p\_l2h\_thr (3494) I scenario\_heat\_power:p\_nbi\_icrh (3494) I scenario\_heat\_power:p\_w (3494) I scenario\_heat\_power:p\_wth (3494) I scenario\_heat\_power:padd\_tot (3494) I scenario\_heat\_power:pbrem (3494) I scenario\_heat\_power:pcyclo (3494) I scenario\_heat\_power:pdd\_fus (3494) I scenario\_heat\_power:pecrh (3494) I scenario\_heat\_power:pecrh\_th (3494) I scenario\_heat\_power:pei (3494) I scenario\_heat\_power:pel\_fus (3494) I scenario\_heat\_power:pel\_icrh (3494) I scenario\_heat\_power:pel\_nbi (3494) I scenario\_heat\_power:pel\_tot (3494) I scenario\_heat\_power:pfus\_dt (3494) I scenario\_heat\_power:pfus\_nbi (3494) I scenario\_heat\_power:pfus\_th (3494) I scenario\_heat\_power:picrh (3494) I scenario\_heat\_power:picrh\_th (3494) I scenario\_heat\_power:pion\_fus (3494) I scenario\_heat\_power:pion\_icrh (3494) I scenario\_heat\_power:pion\_nbi (3494) I scenario\_heat\_power:pion\_tot (3494) I scenario\_heat\_power:pioniz (3494) I scenario\_heat\_power:plh (3494) I scenario\_heat\_power:plh\_th (3494) I scenario\_heat\_power:ploss (3494) I scenario\_heat\_power:ploss\_fus (3494) I scenario\_heat\_power:ploss\_icrh (3494) I scenario\_heat\_power:ploss\_nbi (3494) I scenario\_heat\_power:pnbi (3494) I scenario\_heat\_power:pnbi\_co\_cur (3494) I scenario\_heat\_power:pnbi\_counter (3494) I scenario\_heat\_power:pnbi\_th (3494) I scenario\_heat\_power:pohmic (3494) I scenario\_heat\_power:prad (3494) I scenario\_itb:h\_itb (3496) I scenario\_itb:ne\_itb (3496) I scenario\_itb:ni\_itb (3496) I scenario\_itb:phi\_itb (3496) I scenario\_itb:psi\_itb (3496) I scenario\_itb:q\_min (3496) I scenario\_itb:rho\_itb (3496) I scenario\_itb:te\_itb (3496) I scenario\_itb:ti\_itb (3496) I scenario\_itb:vtor\_itb (3496) I scenario\_itb:width\_itb (3496) I scenario\_lim\_div\_wall:ar\_conc (3497) I scenario\_lim\_div\_wall:detach\_state (3497) I scenario\_lim\_div\_wall:div\_wetted (3497) I scenario\_lim\_div\_wall:f\_inner (3497) I scenario\_lim\_div\_wall:f\_outer (3497) I scenario\_lim\_div\_wall:f\_pfr (3497) I scenario\_lim\_div\_wall:f\_rad\_fw (3497) I scenario\_lim\_div\_wall:gas\_puff (3497) I scenario\_lim\_div\_wall:ne\_lim\_div (3497) I scenario\_lim\_div\_wall:ni\_lim\_div (3497) I scenario\_lim\_div\_wall:p\_cond\_div (3497) I scenario\_lim\_div\_wall:p\_cond\_fw (3497) I scenario\_lim\_div\_wall:p\_lim\_div (3497) I scenario\_lim\_div\_wall:p\_neut\_div (3497) I scenario\_lim\_div\_wall:p\_nh\_div (3497) I scenario\_lim\_div\_wall:p\_rad\_div (3497) I scenario\_lim\_div\_wall:p\_rad\_fw (3497) I scenario\_lim\_div\_wall:p\_wall (3497) I scenario\_lim\_div\_wall:part\_exhaust (3497) I scenario\_lim\_div\_wall:pump\_flux (3497) I scenario\_lim\_div\_wall:q\_peak\_div (3497) I scenario\_lim\_div\_wall:q\_peak\_w (3497) I scenario\_lim\_div\_wall:surf\_temp (3497) I scenario\_lim\_div\_wall:te\_lim\_div (3497) I scenario\_lim\_div\_wall:ti\_lim\_div (3497) I scenario\_lim\_div\_wall:wall\_state (3497) I scenario\_lim\_div\_wall:wall\_temp (3497) I scenario\_line\_ave:dne\_line\_dt (3498) I scenario\_line\_ave:ne\_line (3498) I scenario\_line\_ave:ne\_zeff\_line (3498) I scenario\_line\_ave:zeff\_line (3498) I scenario\_neutron:ndd\_nbi\_nbi (3499) I scenario\_neutron:ndd\_nbi\_th (3499) I scenario\_neutron:ndd\_th (3499) I scenario\_neutron:ndd\_tot (3499) I scenario\_neutron:ndt\_th (3499) I scenario\_neutron:ndt\_tot (3499) I scenario\_ninety\_five:elon (3500) I scenario\_ninety\_five:ne\_95 (3500) I scenario\_ninety\_five:ni\_95 (3500) I scenario\_ninety\_five:phi\_95 (3500) I scenario\_ninety\_five:q\_95 (3500) I scenario\_ninety\_five:rho\_95 (3500) I scenario\_ninety\_five:te\_95 (3500) I scenario\_ninety\_five:ti\_95 (3500) I scenario\_ninety\_five:tria\_95 (3500) I scenario\_ninety\_five:tria\_lo\_95 (3500) I scenario\_ninety\_five:tria\_up\_95 (3500) I scenario\_ninety\_five:vtor\_95 (3500) I scenario\_pedestal:ne\_ped (3501) I scenario\_pedestal:ni\_ped (3501) I scenario\_pedestal:phi\_ped (3501) I scenario\_pedestal:pressure\_ped (3501) I scenario\_pedestal:psi\_ped (3501) I scenario\_pedestal:q\_ped (3501) I scenario\_pedestal:rho\_ped (3501) I scenario\_pedestal:te\_ped (3501) I scenario\_pedestal:ti\_ped (3501) I scenario\_pedestal:vtor\_ped (3501) I scenario\_references:bvac\_r (3504)

I scenario\_references:enhancement (3504) I scenario\_references:gas\_puff (3504) I scenario\_references:ip (3504) I scenario\_references:isotopic (3504) I scenario\_references:nbar (3504) I scenario\_references:nbi\_td\_ratio (3504) I scenario\_references:pecrh (3504) I scenario\_references:picrh (3504) I scenario\_references:plh (3504) I scenario\_references:pnbi (3504) I scenario\_references:pol\_flux (3504) I scenario\_references:xecrh (3504) I scenario\_references:zeffl (3504) I scenario\_sol:gas\_puff (3505) I scenario\_sol:l\_ne\_sol (3505) I scenario\_sol:l\_ni\_sol (3505) I scenario\_sol:l\_qe\_sol (3505) I scenario\_sol:l\_qi\_sol (3505) I scenario\_sol:l\_te\_sol (3505) I scenario\_sol:l\_ti\_sol (3505) I scenario\_sol:p\_rad\_sol (3505) I scenario\_vol\_ave:dne\_ave\_dt (3506) I scenario\_vol\_ave:meff\_ave (3506) I scenario\_vol\_ave:ne\_ave (3506) I scenario\_vol\_ave:ni\_ave (3506) I scenario\_vol\_ave:omega\_ave (3506) I scenario\_vol\_ave:pellet\_flux (3506) I scenario\_vol\_ave:te\_ave (3506) I scenario\_vol\_ave:ti\_ave (3506) I scenario\_vol\_ave:ti\_o\_te\_ave (3506) I scenario\_vol\_ave:zeff\_ave (3506)

### 9.8.1.3.398 scenario\_references

References

member	type	description
plh	scenario_ref (9.8.1.3.397)	Lower hybrid power [W]. Time-dependent.
picrh	scenario_ref (9.8.1.3.397)	Ion cyclotron resonance heating power [W]. Time-dependent.
pecrh	scenario_ref (9.8.1.3.397)	electron cyclotron resonance heating power [W]. Time-dependent.
pnbi	scenario_ref (9.8.1.3.397)	neutral beam injection power [W]. Time-dependent.
ip	scenario_ref (9.8.1.3.397)	Plasma current [A]. Time-dependent.
bvac_r	scenario_ref (9.8.1.3.397)	Vacuum field times radius in the toroidal field magnet [T.m]. Time-dependent.
zeffl	scenario_ref (9.8.1.3.397)	line averaged effective charge []. Time-dependent.
nbar	scenario_ref (9.8.1.3.397)	line averaged electron density [m <sup>-3</sup> ]. Time-dependent.
xecrh	scenario_ref (9.8.1.3.397)	position of maximum (normalized rho coordinate) of electron cyclotron resonance heating power []. Time-dependent.
pol_flux	scenario_ref (9.8.1.3.397)	separatrix poloidal flux [Wb]. Time-dependent.
enhancement	scenario_ref (9.8.1.3.397)	energy enhancement factor []. Time-dependent.
isotopic	scenario_ref (9.8.1.3.397)	ratio between tritium and deuterium density (for burning plasma) []. Time-dependent.
nbi_td_ratio	scenario_ref (9.8.1.3.397)	ratio between tritium and deuterium power in neutral beam injection []. Time-dependent.
gas_puff	scenario_ref (9.8.1.3.397)	gas puff flux reference, in equivalent [electrons.s <sup>-1</sup> ]. Time-dependent.

Type of: scenario:references (3151)

### 9.8.1.3.399 scenario\_sol

SOL characteristic (@ LCMS)

member	type	description
l_te_sol	scenario_ref (9.8.1.3.397)	electron temperature radial decay length [m]. Time-dependent.
l_ti_sol	scenario_ref (9.8.1.3.397)	ion temperature radial decay length [m]. Time-dependent.
l_ne_sol	scenario_ref (9.8.1.3.397)	electron density radial decay length [m]. Time-dependent.
l_ni_sol	scenario_ref (9.8.1.3.397)	ion density radial decay length [m]. Time-dependent.
l_qe_sol	scenario_ref (9.8.1.3.397)	electron heat flux radial decay length [m]. Time-dependent.
l_qi_sol	scenario_ref (9.8.1.3.397)	ion heat flux radial decay length [m]. Time-dependent.
p_rad_sol	scenario_ref (9.8.1.3.397)	radiative power of the SOL [W]. Time-dependent.
p_neut	float (9.8.1.1.1)	Neutral pressure of the SOL [Pa]; Scalar
gas_puff	scenario_ref (9.8.1.3.397)	gas puff flux for each ion species [s <sup>-1</sup> ]. Time-dependent.
delta_r_in	float (9.8.1.1.1)	Inner gap between the plasma and the first wall [m]; Scalar
delta_r_out	float (9.8.1.1.1)	Outer gap between the plasma and the first wall [m]; Scalar
r_in	float (9.8.1.1.1)	Inner radius of the first wall [m]; Scalar
r_out	float (9.8.1.1.1)	Outer radius of the first wall [m]; Scalar
sol_width	float (9.8.1.1.1)	Width of the SOL (the heat flux is assumed to fall off exponentially in the SOL according to the width parameter) [m]; Scalar

Type of: scenario:sol (3151)

### 9.8.1.3.400 scenario\_vol\_ave

volume averaged values

member	type	description
te_ave	scenario_ref (9.8.1.3.397)	volume averaged electron temperature [eV]. Time-dependent.



member	type	description
ti_ave	scenario_ref (9.8.1.3.397)	volume averaged ion temperature [eV]. Time-dependent.
ne_ave	scenario_ref (9.8.1.3.397)	volume averaged electron density [m <sup>-3</sup> ]. Time-dependent.
dne_ave_dt	scenario_ref (9.8.1.3.397)	time derivative of volume averaged electron density [m <sup>-3</sup> /s]. Time-dependent.
ni_ave	scenario_ref (9.8.1.3.397)	volume averaged ion density ( $\langle \sum(n_k)_i, k \text{ in species} \rangle$ ) [m <sup>-3</sup> ]. Time-dependent.
zeff_ave	scenario_ref (9.8.1.3.397)	volume averaged effective charge. Time-dependent.
ti_o_te_ave	scenario_ref (9.8.1.3.397)	volume averaged ion temperature over electron temperature ( $\langle T_i/T_e \rangle$ ) []. Time-dependent.
meff_ave	scenario_ref (9.8.1.3.397)	volume averaged effective mass ( $\langle \sum(n_k * m_k)_i / \langle \sum(n_k)_i \rangle$ ) []. Time-dependent.
pellet_flux	scenario_ref (9.8.1.3.397)	number of electrons fuelling the plasma every second coming from pellet injection [s <sup>-1</sup> ]. Time-dependent.
nions_ave	vecflt.type (9.8.1.2.13)	volume averaged ions densities (vector, one element per ion species) [m <sup>-3</sup> ]. Time-dependent.
omega_ave	scenario_ref (9.8.1.3.397)	bulk volume average toroidal rotation velocity (whole plasma) [rad/s]. Time-dependent.

Type of: scenario:vol\_ave (3151)

### 9.8.1.3.401 setup\_bprobe

diagnostic setup information

member	type	description
name	vecstring.type (9.8.1.2.15)	Name of the probe. Array of strings (nprobes).
id	vecstring.type (9.8.1.2.15)	ID of the probe. Array of strings (nprobes).
position	rz1D (9.8.1.3.366)	RZ of coil centre [m]; Vector (nprobes)
polangle	vecflt.type (9.8.1.2.13)	Poloidal angle of coil orientation (w.r.t. horizontal ?? to be checked) [rad]; Vector (nprobes)
torangle	vecflt.type (9.8.1.2.13)	Toroidal angle of coil orientation (0 if fully in the poloidal plane) [rad] ; Vector (nprobes)
area	vecflt.type (9.8.1.2.13)	Area of coil [m <sup>2</sup> ]; Vector (nprobes)
length	vecflt.type (9.8.1.2.13)	Length of coil [m]; Vector (nprobes)
turns	vecint.type (9.8.1.2.14)	Turns in the coil; Vector (nprobes)

Type of: bpol\_probes:setup\_bprobe (3183)

### 9.8.1.3.402 setup\_floops

diagnostic setup information

member	type	description
name	vecstring.type (9.8.1.2.15)	Name of loop. Array of strings (nloops).
id	vecstring.type (9.8.1.2.15)	ID of loop. Array of strings (nloops).
position	rzphi2D (9.8.1.3.375)	List of (R,Z,phi) points defining the position of the loop (see data structure documentation FLUXLOOPposition.pdf); Matrices (nloops, max_npoints)
npoints	vecint.type (9.8.1.2.14)	Number of points describing each loop in the "position" matrices. Vector (nloops)

Type of: flux\_loops:setup\_floops (3317)

### 9.8.1.3.403 setup\_line

Geometric description of the lines of sight for line integral diagnostic

member	type	description
pivot_point	rzphi1D (9.8.1.3.372)	Pivot point of each line of sight; Vector (nchords)
horchordang1	vecflt.type (9.8.1.2.13)	Angle [rad] of horizontal projection of l.o.s. with poloidal cross section (0 for HFS to LFS chord - see Convention_angles_interfdiag.pdf) [rad]. Vector (nchords)
verchordang1	vecflt.type (9.8.1.2.13)	Angle of chord with vertical axis (0 for bottom-top chord, Pi for top-bottom chord - see Convention_angles_interfdiag.pdf) [rad]; Vector (nchords)
width	vecflt.type (9.8.1.2.13)	Width of the laser beam (1/e) [m]; Vector (nchords)
second_point	rzphi1D (9.8.1.3.372)	Second point defining the line of sight together with the pivot_point. In case the probing wave is reflected, this should be the position of the mirror. This data is redundant with horchordang1 and verchordang1. Vector (nchords).
horchordang2	vecflt.type (9.8.1.2.13)	For reflected l.o.s. only (undefined otherwise) : Angle [rad] of horizontal projection of reflected l.o.s. with poloidal cross section (0 for HFS to LFS chord - see Convention_angles_interfdiag.pdf) [rad]. Vector (nchords)
verchordang2	vecflt.type (9.8.1.2.13)	For reflected l.o.s. only (undefined otherwise) : Angle of reflected chord with vertical axis (0 for bottom-top chord, Pi for top-bottom chord - see Convention_angles_interfdiag.pdf) [rad]; Vector (nchords)



member	type	description
third_point	rzphi1D (9.8.1.3.372)	Third point defining the reflected line of sight together with the second_point (undefined if the probing wave is not reflected). This data is redundant with horchordang2 and verchordang2. Vector (nchords).
nchordpoints	integer (9.8.1.1.2)	Number of points along the viewing chords (used for synthetic diagnostic signal reconstruction)

Type of: bolometer\_setup:los (3177) I fusiondiag\_colli\_circ:setup\_line (3324) I fusiondiag\_colli\_poly:setup\_line (3325) I lineintegraldiag:setup\_line (3367)

#### 9.8.1.3.404 setup\_line\_exp

Geometric description of the lines of sight for line integral diagnostic with additional appinfo tags to have some nodes both in MD and DM

member	type	description
pivot_point	rzphi1DExperimental (9.8.1.3.374)	Pivot point of each line of sight; Vector (nchords)
horchordang1	vecflt_type (9.8.1.2.13)	Angle [rad] of horizontal projection of l.o.s. with poloidal cross section (0 for HFS to LFS chord - see Convention_angles_interfdiag.pdf) [rad]. Vector (nchords)
verchordang1	vecflt_type (9.8.1.2.13)	Angle of chord with vertical axis (0 for bottom-top chord, Pi for top-bottom chord - see Convention_angles_interfdiag.pdf) [rad]; Vector (nchords)
width	vecflt_type (9.8.1.2.13)	Width of the laser beam (1/e) [m]; Vector (nchords)
second_point	rzphi1DExperimental (9.8.1.3.374)	Second point defining the line of sight together with the pivot_point. In case the probing wave is reflected, this should be the position of the mirror. This data is redundant with horchordang1 and verchordang1. Vector (nchords).
horchordang2	vecflt_type (9.8.1.2.13)	For reflected l.o.s. only (undefined otherwise) : Angle [rad] of horizontal projection of reflected l.o.s. with poloidal cross section (0 for HFS to LFS chord - see Convention_angles_interfdiag.pdf) [rad]. Vector (nchords)
verchordang2	vecflt_type (9.8.1.2.13)	For reflected l.o.s. only (undefined otherwise) : Angle of reflected chord with vertical axis (0 for bottom-top chord, Pi for top-bottom chord - see Convention_angles_interfdiag.pdf) [rad]; Vector (nchords)
third_point	rzphi1DExperimental (9.8.1.3.374)	Third point defining the reflected line of sight together with the second_point (undefined if the probing wave is not reflected). This data is redundant with horchordang2 and verchordang2. Vector (nchords).
nchordpoints	integer (9.8.1.1.2)	Number of points along the viewing chords (used for synthetic diagnostic signal reconstruction)

Type of: bremsstrahl\_setup:los (3185) I ecesetup:los (3288)

#### 9.8.1.3.405 shield

Shield

member	type	description
inboard	shield_specs (9.8.1.3.406)	Inboard
outboard	shield_specs (9.8.1.3.406)	Outboard

Type of: bb\_shield:shield (3111)

#### 9.8.1.3.406 shield\_specs

Inboard

member	type	description
nmat	integer (9.8.1.1.2)	Number of materials; Scalar
composition	vecflt_type (9.8.1.2.13)	Inboard or outboard shield radial build the percentage of each material respectively (Meaning of the material index 1: Eurofer, 2: Pb-15.7Li, 3: He, 4: Water, 5: Tungsten Carbide, 6: Boron, 7: Tungsten, 8: Stainless Steel 316) in %vol; Vector(nmat).
r1	float (9.8.1.1.1)	Inner radius (nearest to the plasma), in the global tokamak coordinate system of the inboard or outboard shield located at the equatorial plane [m]; Scalar
r2	float (9.8.1.1.1)	Outer radius (farrest to the plasma), in the global tokamak coordinate system of the inboard or outboard shield located at the equatorial plane [m]; Scalar
mass	float (9.8.1.1.1)	Mass of inboard or outboard shield [Kg]; Scalar

Type of: shield:inboard (3511) I shield:outboard (3511)

### 9.8.1.3.407 `simp_apert`

Simple aperture specification: rectangular or elliptical

member	type	description
type	identifier (9.8.1.3.242)	Shape identifier; 0: rectangular, 1: elliptical
sizes	vecflt.type (9.8.1.2.13)	Rectangular size a, b or diameters for elliptical shapes [m]; Time-dependent; Vector (2)
angle	float (9.8.1.1.1)	Rotation of aperture around its center [rad]

Type of: `reflectometry_radfield_gaussian:aperture` (3465)

### 9.8.1.3.408 `solcurdiag_sol_current`

Vector of toroidal rings of divertor tiles. Structure array(nrings). Time-dependent

member	type	description
setup	<code>solcurdiag_sol_current_setup</code> (9.8.1.3.409)	diagnostic setup information
measure	<code>exp0D</code> (9.8.1.3.203)	Measured value for the current through the toroidal ring of tiles [A]; Time-dependent; Scalar

Type of: `solcurdiag:sol_current` (3152)

### 9.8.1.3.409 `solcurdiag_sol_current_setup`

diagnostic setup information

member	type	description
name	string (9.8.1.1.3)	Name of the toroidally distributed tile set. String.
id	integer (9.8.1.1.2)	ID of the tile set as a scalar, to be used in connectivity. Integer.
position	<code>rz1D</code> (9.8.1.3.366)	RZ points defining the shape of the toroidal tile set [m]; Vector (npoints)
tiles_turn	integer (9.8.1.1.2)	Number of tiles used to get the full toroidal coverage; Scalar

Type of: `solcurdiag_sol_current:setup` (3514)

### 9.8.1.3.410 `source_imp`

Subtree containing source terms for the impurity species

member	type	description
exp	<code>matflt.type</code> (9.8.1.2.10)	Explicit source term [same unit as root quantity]. Time-dependent. Array2d (nrho,nzimp)
imp	<code>matflt.type</code> (9.8.1.2.10)	Implicit source term [ $s^{-1}.m^{-3}$ ]. Time-dependent. Array2d (nrho,nzimp)

Type of: `coresource_values:qz` (3238) | `coresource_values:sz` (3238)

### 9.8.1.3.411 `source_ion`

Subtree containing source terms for the various ion species

member	type	description
exp	<code>matflt.type</code> (9.8.1.2.10)	Explicit source term [same unit as root quantity]. Time-dependent. Matrix (nrho,nion)
imp	<code>matflt.type</code> (9.8.1.2.10)	Implicit source term [ $s^{-1}.m^{-3}$ ]. Time-dependent. Matrix (nrho,nion)

Type of: `coresource_values:qi` (3238) | `coresource_values:si` (3238) | `coresource_values:ui` (3238)

### 9.8.1.3.412 `source_rate`

Source density of particles in phase space (real space, velocity space, spin state).

member	type	description
grid	<code>complexgrid</code> (9.8.1.3.89)	Grid for storing the source-rate. Time-dependent; Complexgrid
value	<code>complexgrid_scalar</code> (9.8.1.3.94)	The source-rate of particles in phase space; given on grid [ $(m/s)^{-3} m^{-3} s^{-1}$ ]. Time-dependent; Complexgrid.scalar

member	type	description
discrete	vecint.type (9.8.1.2.14)	List of indexes for the dimensions (coordinates) of grid for which the source is discretely distributed. For example consider a source of 3.5 MeV alpha particles provided on a grid with two coordinates; rho.tor and energy. To specify that the source is given at energies exactly equal to 3.5 MeV, let discret have length 1 and set discrete=(1)=2 since energy is dimension number 2. The source is then proportional to delta( 1 - energy / 3.5MeV ), where delta is the Direct delta distribution. Discrete dimensions can only be used when the grid is rectangular. Time-dependent; Vector(n_discrete_dimensions)
parameters	parameters (9.8.1.3.318)	Parameters used to defined the grid coordiantes. Time-dependent

Type of: distsource\_source:source\_rate (3284)

#### 9.8.1.3.413 source\_vec

Subtree containing vector source term (radial dimension only)

member	type	description
exp	vecflt.type (9.8.1.2.13)	Explicit source term [same unit as root quantity]. Time-dependent. Vector (nrho)
imp	vecflt.type (9.8.1.2.13)	Implicit source term [ $s^{-1}.m^{-3}$ ]. Time-dependent. Vector (nrho)

Type of: coresource\_values:qe (3238) I coresource\_values:se (3238) I coresource\_values:ujxb (3238)

#### 9.8.1.3.414 sourceel

Structure for the total source term for the transport equation (electrons). Time-dependent;

member	type	description
value	vecflt.type (9.8.1.2.13)	Value of the source term; Time-dependent; Vector (nrho)
integral	vecflt.type (9.8.1.2.13)	Integral from 0 to rho of the source term. Time-dependent; Vector (nrho)
source	string (9.8.1.1.3)	Source of the profile (any comment describing the origin of the profile : code, path to diagnostic signals, massaging, ...); String

Type of: corefield:source\_term (3220) I profiles1d:qoh (3452)

#### 9.8.1.3.415 sourceimp

Structure for the total source term for the transport equation (impurities). Time-dependent;

member	type	description
value	matflt.type (9.8.1.2.10)	Value of the source term [ $m^{-3}.s^{-1}$ ]; Time-dependent; Array2D (nrho,nzimp)
integral	matflt.type (9.8.1.2.10)	Integral from 0 to rho of the source term. Time-dependent; Array2D(nrho,nzimp)
source	vecstring.type (9.8.1.2.15)	Source of the profile (any comment describing the origin of the impurity profiles : code, path to diagnostic signals, massaging, ...); Array of strings (nimp)

Type of: impurity\_type:source\_term (3351)

#### 9.8.1.3.416 sourceion

Structure for the total source term for the transport equation (ions). Time-dependent;

member	type	description
value	matflt.type (9.8.1.2.10)	Value of the source term; Time-dependent; Matrix (nrho,nion)
integral	matflt.type (9.8.1.2.10)	Integral from 0 to rho of the source term. Time-dependent; Matrix (nrho,nion)
source	vecstring.type (9.8.1.2.15)	Source of the profile (any comment describing the origin of the profile : code, path to diagnostic signals, massaging, ...); Array of strings (nion)

Type of: corefieldion:source\_term (3221)

#### 9.8.1.3.417 species\_desc

Description of a single ion species or bundled charge state.

member	type	description
label	string (9.8.1.1.3)	Name of species
amn	float (9.8.1.1.1)	Atomic mass number of the species
zn	float (9.8.1.1.1)	Nuclear charge of the impurity
zmin	float (9.8.1.1.1)	Minimum Z of species charge state bundle
zmax	float (9.8.1.1.1)	Maximum Z of species charge state bundle

Type of: edge:species (3126)

#### 9.8.1.3.418 species\_reference

Defines a reference to a single species in a CPO that includes a compositions structure.

member	type	description
type	identifier (9.8.1.3.242)	The type species: type.flag=1 for electron source; type.flag=2 for ion source taken from compositions/ions; type.flag=3 for impurity source taken from compositions/impur; 4=neutron source; 4=photon source etc (see species_reference.identifier.definition in the Documentation website under Conventions/Enumerated.datatypes).
index	integer (9.8.1.1.2)	Index of the species. This definition of index depends on the value of type; if the species is an ion (type.flag=1) or an impurity (type.flag=2) then the index refers to distribution/compositions/ions, or distribution/compositions/impur, respectively. This field has no meaning for other species, e.g. like electrons, neutrons or photons. The indexing follows the Fortran/Matlab convention where the first element in an array has index 1.

Type of: distri\_vec:species (3279) I distsource\_source:species (3284)

#### 9.8.1.3.419 spectral

This structure accommodates the types needed on a spectral MSE diagnostic namely the emissivity and the radiance spectra. It will be subsequently upgraded with optical + photon detection elements since the structure will also be used for a synthetic spectral mse code.

member	type	description
emissivity	msediag_emissivity (9.8.1.3.284)	Emissivity characteristics.
radiance	msediag_radiance (9.8.1.3.287)	Emissivity characteristics.
codeparam	codeparam (9.8.1.3.84)	Code parameters

Type of: msediag:spectral (3139)

#### 9.8.1.3.420 spectrum

Spectral properties of the wave.

member	type	description
phi.theta	launchs_phi_theta (9.8.1.3.254)	Power spectrum as a function of the refractive index in the toroidal and poloidal directions.
parallel	launchs_parallel (9.8.1.3.253)	Power spectrum as a function of the parallel refractive index.

Type of: launchs:spectrum (3135)

#### 9.8.1.3.421 spot

Spot characteristics

member	type	description
size	vecflt_type (9.8.1.2.13)	Size of the spot ellipse [m], Vector (2). Time-dependent
angle	float (9.8.1.1.1)	Rotation angle for the spot ellipse [rd], Float. Time-dependent

Type of: rfbeam:spot (3470)

### 9.8.1.3.422 sputtering\_neutrals

Sputtering coefficients

member	type	description
physical	vecflt.type (9.8.1.2.13)	Effective coefficient of physical sputtering of the neutral type INEUT. Vector(nneut). Time-dependent.
chemical	vecflt.type (9.8.1.2.13)	Effective coefficient of chemical sputtering of the neutral type INEUT. Vector(nneut). Time-dependent.

Type of: coefficients\_neutrals:sputtering (3191)

### 9.8.1.3.423 straps

Properties of the IC antenna strap; Time-dependent; Vector(nstraps)

member	type	description
current	exp0D (9.8.1.3.203)	Root mean square current flowing along the strap [A]; Time-Dependent; Float
phase	exp0D (9.8.1.3.203)	Phase of strap current [rad]; Time-dependent; exp0D
phi_centre	float (9.8.1.1.1)	Toroidal angle at the centre of the strap [rad]; Float
width	float (9.8.1.1.1)	Width of strap in the toroidal direction [m]; Float
dist2wall	float (9.8.1.1.1)	Distance to conducting wall or other conductor behind the antenna straps [m]; Float
coord_strap	rz1D (9.8.1.3.366)	Coordinates (R,z) of polygon describing the antenna in the poloidal plane; rz1d vector (ncoord_strap)

Type of: antennaic\_setup:straps (3165)

### 9.8.1.3.424 structure\_cs

Detailed description of the coil structure, for coils that are part of the central solenoid.

member	type	description
gaptf	float (9.8.1.1.1)	gap between CS external radius and TF internal vault radius [m]; Scalar
ri	float (9.8.1.1.1)	CS internal radius [m]; Scalar
re	float (9.8.1.1.1)	CS external radius [m]; Scalar
jcable	float (9.8.1.1.1)	Maximum allowable CS Cable In Conduit current density [A/m <sup>2</sup> ]; Scalar
current_nom	float (9.8.1.1.1)	Nominal current in the CS conductor [A]; Scalar
sigma	float (9.8.1.1.1)	Maximum allowable stress in the CS [Pa]; Scalar
tiso	float (9.8.1.1.1)	Insulation thickness of CS conductor [m]; Scalar
nlay	float (9.8.1.1.1)	Number of conductor layers in the Central Solenoid; Scalar

Type of: desc\_pfcoils:structure\_cs (3251)

### 9.8.1.3.425 t\_series\_cplx

Time series

member	type	description
time_wind	vecflt.type (9.8.1.2.13)	Time trace [s]; Time-dependent; Vector (n)
values_re	vecflt.type (9.8.1.2.13)	Real part of data; Time-dependent; Vector (n)
values_im	vecflt.type (9.8.1.2.13)	Imaginary part of data; Time-dependent; Vector (n)

Type of: refl\_receive:iq\_receiver (3462)

### 9.8.1.3.426 t\_series\_real

Time series; Time-dependent

member	type	description
time_wind	vecflt.type (9.8.1.2.13)	Time trace [s]; Time-dependent; Vector (n)

member	type	description
values	vecflt.type (9.8.1.2.13)	Values of the signal; Time-dependent; Vector (n)

Type of: refl\_receive:io\_signal (3462) | refl\_receive:raw\_signal (3462)

#### 9.8.1.3.427 table

Stores the interpolation table (0d to 7d). Only one entry should be used.

member	type	description
filled	integer (9.8.1.1.2)	Identifier whether the tables have real data.
table_0d	float (9.8.1.1.1)	NO DOCS
table_1d	vecflt.type (9.8.1.2.13)	NO DOCS
table_2d	matflt.type (9.8.1.2.10)	NO DOCS
table_3d	array3dfilt.type (9.8.1.2.2)	NO DOCS
table_4d	array4dfilt.type (9.8.1.2.4)	NO DOCS
table_5d	array5dfilt.type (9.8.1.2.5)	NO DOCS
table_6d	array6dfilt.type (9.8.1.2.6)	NO DOCS
coord1_str	vecstring.type (9.8.1.2.15)	If needed, an array of strings describing coordinate 1
coord2_str	vecstring.type (9.8.1.2.15)	If needed, an array of strings describing coordinate 2
coord3_str	vecstring.type (9.8.1.2.15)	If needed, an array of strings describing coordinate 3
coord4_str	vecstring.type (9.8.1.2.15)	If needed, an array of strings describing coordinate 4
coord5_str	vecstring.type (9.8.1.2.15)	If needed, an array of strings describing coordinate 5
coord6_str	vecstring.type (9.8.1.2.15)	If needed, an array of strings describing coordinate 6
quality	identifier (9.8.1.3.242)	Characterize the data quality

Type of: tables:table (3534)

#### 9.8.1.3.428 tables

Definition of a process

member	type	description
ndim	integer (9.8.1.1.2)	Table dimensionality of the process. Indicates which of the tables is filled.
coord_index	integer (9.8.1.1.2)	Index in tables.coord, specifying what coordinate specification to use for this table.
result_label	string (9.8.1.1.3)	Description of the process result (rate, cross section, sputtering yield, ...)
result_unit	string (9.8.1.1.3)	Unit of the process result
result_trans	integer (9.8.1.1.2)	Transformation of the process result. Integer flag: 0=no transformation; 1=10 <sup>-</sup> ; 2=exp()
zmin	vecint.type (9.8.1.2.14)	Minimum charge state [units of elementary charge]; if equal to zmax then no bundling; Vector(nchargestates)
zmax	vecint.type (9.8.1.2.14)	Maximum charge state [units of elementary charge]; if equal to zmin then no bundling; Vector(nchargestates)
state_label	vecstring.type (9.8.1.2.15)	Label for charge state (e.g. D0, D1+, ...); Vector(nchargestates)
table(:)	table (9.8.1.3.427)	Array of data tables, one entry per species. Vector(nchargestates)
data_source	string (9.8.1.1.3)	Filename or subroutine name used to provide this data.
data_provide	string (9.8.1.1.3)	ITM responsible person for this data.
data_citation	string (9.8.1.1.3)	Reference to publication(s).

Type of: amns:tables (3109)

#### 9.8.1.3.429 tables\_coord

Definition of coordinates for one specific coordinate system used in one or more tables.

member	type	description
coords(:)	coords (9.8.1.3.110)	Vector(ndim) of coordinates. ndim is number of parameters for a process.

Type of: amns:tables\_coord (3109)

### 9.8.1.3.430 temporary\_nt

set of non-timed temporary quantities

member	type	description
float0d(:)	temporary_nt_0dr (9.8.1.3.433)	Constant 0D float
integer0d(:)	temporary_nt_0di (9.8.1.3.432)	Constant 0D integer
complex0d(:)	temporary_nt_0dc (9.8.1.3.431)	Constant 0D complex
string0d(:)	temporary_nt_0ds (9.8.1.3.434)	Constant 0D string
float1d(:)	temporary_nt_1dr (9.8.1.3.437)	Constant 1D float
integer1d(:)	temporary_nt_1di (9.8.1.3.436)	Constant 1D integer
string1d(:)	temporary_nt_1dr (9.8.1.3.437)	Constant 1D string
complex1d(:)	temporary_nt_1dc (9.8.1.3.435)	Constant 1D complex
float2d(:)	temporary_nt_2dr (9.8.1.3.441)	Constant 2D float
integer2d(:)	temporary_nt_2di (9.8.1.3.440)	Constant 2D integer
complex2d(:)	temporary_nt_2dc (9.8.1.3.439)	Constant 2D complex
float3d(:)	temporary_nt_3dr (9.8.1.3.444)	Constant 3D float
integer3d(:)	temporary_nt_3di (9.8.1.3.443)	Constant 3D integer
complex3d(:)	temporary_nt_3dc (9.8.1.3.442)	Constant 3D complex
float4d(:)	temporary_nt_4dr (9.8.1.3.445)	Constant 4D float

Type of: temporary:non\_timed (3153)

### 9.8.1.3.431 temporary\_nt\_0dc

a non-timed temporary quantity of complex type

member	type	description
identifier	identifier (9.8.1.3.242)	Identifier.
value	cplx_type (9.8.1.2.8)	Value. Complex scalar.

Type of: temporary\_nt:complex0d (3536)

### 9.8.1.3.432 temporary\_nt\_0di

a non-timed temporary quantity of integer type

member	type	description
identifier	identifier (9.8.1.3.242)	Identifier.
value	integer (9.8.1.1.2)	Value. integer scalar

Type of: temporary\_nt:integer0d (3536)

### 9.8.1.3.433 temporary\_nt\_0dr

a non-timed temporary quantity of real type

member	type	description
identifier	identifier (9.8.1.3.242)	Identifier.
value	float (9.8.1.1.1)	Value. Real scalar.



Type of: `temporary_nt:float0d` (3536)

#### 9.8.1.3.434 `temporary_nt.0ds`

a non-timed temporary quantity of string type

member	type	description
identifier	identifier (9.8.1.3.242)	Identifier.
value	string (9.8.1.1.3)	Value. String.

Type of: `temporary_nt:string0d` (3536)

#### 9.8.1.3.435 `temporary_nt.1dc`

a non-timed temporary quantity of veccomplex type

member	type	description
identifier	identifier (9.8.1.3.242)	Identifier.
value	vecplx.type (9.8.1.2.12)	Value. Vector of complex numbers

Type of: `temporary_nt:complex1d` (3536)

#### 9.8.1.3.436 `temporary_nt.1di`

a non-timed temporary quantity of vecint type

member	type	description
identifier	identifier (9.8.1.3.242)	Identifier.
value	vecint.type (9.8.1.2.14)	Value. Vector of integers

Type of: `temporary_nt:integer1d` (3536)

#### 9.8.1.3.437 `temporary_nt.1dr`

a non-timed temporary quantity of vecflt type

member	type	description
identifier	identifier (9.8.1.3.242)	Identifier.
value	vecflt.type (9.8.1.2.13)	Value. Vector of float.

Type of: `temporary_nt:float1d` (3536) | `temporary_nt:string1d` (3536)

#### 9.8.1.3.438 `temporary_nt.1ds`

a non-timed temporary quantity of vecstring type

member	type	description
identifier	identifier (9.8.1.3.242)	Identifier.
value	vecstring.type (9.8.1.2.15)	Value. Vector of strings.

#### 9.8.1.3.439 `temporary_nt.2dc`

a non-timed temporary quantity of matcomplex type

member	type	description
identifier	identifier (9.8.1.3.242)	Identifier.
value	matplx.type (9.8.1.2.9)	Value. Matrix of complex numbers

Type of: `temporary_nt:complex2d` (3536)

#### 9.8.1.3.440 temporary\_nt\_2di

a non-timed temporary quantity of matint type

member	type	description
identifier	identifier (9.8.1.3.242)	Identifier.
value	matint.type (9.8.1.2.11)	Value. Matrix of integers

Type of: temporary\_nt:integer2d (3536)

#### 9.8.1.3.441 temporary\_nt\_2dr

a non-timed temporary quantity of matflt type

member	type	description
identifier	identifier (9.8.1.3.242)	Identifier.
value	matflt.type (9.8.1.2.10)	Value. Matrix of float.

Type of: temporary\_nt:float2d (3536)

#### 9.8.1.3.442 temporary\_nt\_3dc

a non-timed temporary quantity of array3dcomplex type

member	type	description
identifier	identifier (9.8.1.3.242)	Identifier.
value	array3dcplx.type (9.8.1.2.1)	Value. array 3D of complex numbers

Type of: temporary\_nt:complex3d (3536)

#### 9.8.1.3.443 temporary\_nt\_3di

a non-timed temporary quantity of array3dint type

member	type	description
identifier	identifier (9.8.1.3.242)	Identifier.
value	array3dint.type (9.8.1.2.3)	Value. array 3D of integers

Type of: temporary\_nt:integer3d (3536)

#### 9.8.1.3.444 temporary\_nt\_3dr

a non-timed temporary quantity of array3dfloat type

member	type	description
identifier	identifier (9.8.1.3.242)	Identifier.
value	array3dfilt.type (9.8.1.2.2)	Value. array 3D of floats

Type of: temporary\_nt:float3d (3536)

#### 9.8.1.3.445 temporary\_nt\_4dr

a non-timed temporary quantity of array4dfloat type

member	type	description
identifier	identifier (9.8.1.3.242)	Identifier.
value	array4dfilt.type (9.8.1.2.4)	Value. array 4D of floats

Type of: temporary\_nt:float4d (3536)

### 9.8.1.3.446 temporary\_t

set of timed temporary quantities

member	type	description
float0d(:)	temporary_t.0dr (9.8.1.3.449)	Time-dependent 0D float
integer0d(:)	temporary_t.0di (9.8.1.3.448)	Time-dependent 0D integer.
complex0d(:)	temporary_t.0dc (9.8.1.3.447)	Time-dependent 0D complex.
string0d(:)	temporary_t.0ds (9.8.1.3.450)	Time-dependent 0D string.
float1d(:)	temporary_t.1dr (9.8.1.3.453)	Time-dependent 1D float.
integer1d(:)	temporary_t.1di (9.8.1.3.452)	Time-dependent 1D integer.
complex1d(:)	temporary_t.1dc (9.8.1.3.451)	Time-dependent 1D complex
float2d(:)	temporary_t.2dr (9.8.1.3.456)	Time-dependent 2D float
integer2d(:)	temporary_t.2di (9.8.1.3.455)	Time-dependent 2D integer
complex2d(:)	temporary_t.2dc (9.8.1.3.454)	Time-dependent 2D complex
float3d(:)	temporary_t.3dr (9.8.1.3.459)	Time-dependent 3D float
integer3d(:)	temporary_t.3di (9.8.1.3.458)	Time-dependent 3D integer
complex3d(:)	temporary_t.3dc (9.8.1.3.457)	Time-dependent 3D complex
float4d(:)	temporary_t.4dr (9.8.1.3.460)	Time-dependent 4D float

Type of: temporary:timed (3153)

### 9.8.1.3.447 temporary\_t.0dc

a timed temporary quantity of complex type

member	type	description
identifier	identifier (9.8.1.3.242)	Identifier.
value	cplx_type (9.8.1.2.8)	Value. Time-dependent. Complex scalar.

Type of: temporary\_t:complex0d (3552)

### 9.8.1.3.448 temporary\_t.0di

a timed temporary quantity of integer type

member	type	description
identifier	identifier (9.8.1.3.242)	Identifier.
value	integer (9.8.1.1.2)	Value. Time-dependent. integer scalar

Type of: temporary\_t:integer0d (3552)

### 9.8.1.3.449 temporary\_t.0dr

a timed temporary quantity of real type

member	type	description
identifier	identifier (9.8.1.3.242)	Identifier.
value	float (9.8.1.1.1)	Value. Time-dependent. Real scalar.

Type of: temporary\_t:float0d (3552)

### 9.8.1.3.450 `temporary_t_0ds`

a timed temporary quantity of string type

member	type	description
identifier	identifier (9.8.1.3.242)	Identifier.
value	string (9.8.1.1.3)	Value. Time-dependent. String.

Type of: `temporary_t:string0d` (3552)

### 9.8.1.3.451 `temporary_t_1dc`

a timed temporary quantity of `veccomplex` type

member	type	description
identifier	identifier (9.8.1.3.242)	Identifier.
value	<code>vecplx_type</code> (9.8.1.2.12)	Value. Time-dependent. Vector of complex numbers

Type of: `temporary_t:complex1d` (3552)

### 9.8.1.3.452 `temporary_t_1di`

a timed temporary quantity of `vecint` type

member	type	description
identifier	identifier (9.8.1.3.242)	Identifier.
value	<code>vecint_type</code> (9.8.1.2.14)	Value. Time-dependent. Vector of integers

Type of: `temporary_t:integer1d` (3552)

### 9.8.1.3.453 `temporary_t_1dr`

a timed temporary quantity of `vecflt` type

member	type	description
identifier	identifier (9.8.1.3.242)	Identifier.
value	<code>vecflt_type</code> (9.8.1.2.13)	Value. Time-dependent. Vector of float.

Type of: `temporary_t:float1d` (3552)

### 9.8.1.3.454 `temporary_t_2dc`

a timed temporary quantity of `matcomplex` type

member	type	description
identifier	identifier (9.8.1.3.242)	Identifier.
value	<code>matplx_type</code> (9.8.1.2.9)	Value. Time-dependent. Matrix of complex numbers

Type of: `temporary_t:complex2d` (3552)

### 9.8.1.3.455 `temporary_t_2di`

a timed temporary quantity of `matint` type

member	type	description
identifier	identifier (9.8.1.3.242)	Identifier.
value	<code>matint_type</code> (9.8.1.2.11)	Value. Time-dependent. Matrix of integers

Type of: `temporary_t:integer2d` (3552)

### 9.8.1.3.456 `temporary_t.2dr`

a timed temporary quantity of `matflt` type

member	type	description
identifier	identifier (9.8.1.3.242)	Identifier.
value	<code>matflt.type</code> (9.8.1.2.10)	Value. Time-dependent. Matrix of float.

Type of: `temporary_t:float2d` (3552)

### 9.8.1.3.457 `temporary_t.3dc`

a timed temporary quantity of `array3dcomplex` type

member	type	description
identifier	identifier (9.8.1.3.242)	Identifier.
value	<code>array3dcplx.type</code> (9.8.1.2.1)	Value. Time-dependent. array 3D of complex numbers

Type of: `temporary_t:complex3d` (3552)

### 9.8.1.3.458 `temporary_t.3di`

a timed temporary quantity of `array3dint` type

member	type	description
identifier	identifier (9.8.1.3.242)	Identifier.
value	<code>array3dint.type</code> (9.8.1.2.3)	Value. Time-dependent. array 3D of integers

Type of: `temporary_t:integer3d` (3552)

### 9.8.1.3.459 `temporary_t.3dr`

a timed temporary quantity of `array3dfloat` type

member	type	description
identifier	identifier (9.8.1.3.242)	Identifier.
value	<code>array3dfilt.type</code> (9.8.1.2.2)	Value. Time-dependent. array 3D of floats

Type of: `temporary_t:float3d` (3552)

### 9.8.1.3.460 `temporary_t.4dr`

a timed temporary quantity of `array4dfloat` type

member	type	description
identifier	identifier (9.8.1.3.242)	Identifier.
value	<code>array4dfilt.type</code> (9.8.1.2.4)	Value. Time-dependent. array 4D of floats

Type of: `temporary_t:float4d` (3552)

### 9.8.1.3.461 `tf_desc_tfcoils`

Description of the toroidal field coils

member	type	description
<code>type</code>	integer (9.8.1.1.2)	Type of coil, 0=circular coil, 1=plane coil with arbitrary shape.
<code>phi</code>	float (9.8.1.1.1)	Toroidal angle of centre of coil 1, assuming all coils are identical and evenly distributed around the torus [rad]. Scalar
<code>circularcoil</code>	<code>circularcoil</code> (9.8.1.3.82)	Circular coil description
<code>planecoil</code>	<code>planecoil</code> (9.8.1.3.337)	Plane coil description
<code>inboard</code>	<code>tf_structure</code> (9.8.1.3.463)	Description of TF inboard structure

member	type	description
outboard	tf.structure (9.8.1.3.463)	Description of TF outboard structure

Type of: toroidfield:desc\_tfcoils (3155)

### 9.8.1.3.462 tf\_desc\_tfcoils\_board

Description of TF inboard/outboard properties

member	type	description
structure	tf.structure (9.8.1.3.463)	TF coil structure

### 9.8.1.3.463 tf\_structure

Inner TF coil structure

member	type	description
jcable	float (9.8.1.1.1)	CICS cable in current density [A/m]; Scalar
tisotf	float (9.8.1.1.1)	Insulation thickness of TF conductor [m]; Scalar
efcasing	float (9.8.1.1.1)	Thickness front casing [m]; Scalar
escasing	float (9.8.1.1.1)	Thickness side casing [m]; Scalar
sigjackettf	float (9.8.1.1.1)	Jacket stress limit [Pa]; Scalar
sigvaulttf	float (9.8.1.1.1)	Vault stress limit [Pa]; Scalar
ktf	float (9.8.1.1.1)	Amplification factor for magnetic field
ritf	float (9.8.1.1.1)	Internal TF coil radius [m]; Scalar
riitf	float (9.8.1.1.1)	Internal vault TF coil radius [m]; Scalar
ref	float (9.8.1.1.1)	External TF coil radius [m]; Scalar
he_fraction	float (9.8.1.1.1)	Helium fraction (percentage) in TF structure in front of winding package [-]; Scalar
ss_fraction	float (9.8.1.1.1)	Stainless steel 316 fraction (percentage) in TF structure in front of winding package [-]; Scalar
pow_dens_wp	float (9.8.1.1.1)	Peak energy deposition in winding pack [W.m <sup>-3</sup> ]; Scalar

Type of: tf\_desc\_tfcoils:inboard (3567) | tf\_desc\_tfcoils:outboard (3567) | tf\_desc\_tfcoils\_board:structure (3568)

### 9.8.1.3.464 theta\_info

Information on the poloidal angle theta.

member	type	description
angl.type	integer (9.8.1.1.2)	Type of poloidal angle: 1 : same as the poloidal angle in the equilibrium cpo; 2 : geometrical polar angle, $\tan(\theta) = Z/(R-R_0)$ ; 3 : other. If option 3, a transformation to the geometrical poloidal angle is provided in th2th_pol.
th2th_pol	matflt.type (9.8.1.2.10)	Geometrical poloidal angle at grid points in theta, i.e. the transformation from theta to the polar poloidal angle; used only if angl.type=3; Time-dependent; Matrix (ndim1, ndim2)

Type of: waves\_grid\_2d:theta\_info (3613)

### 9.8.1.3.465 topo\_regions

List with distribution function in each topological region; Time-dependent. Structure array(nregion.topo)

member	type	description
ind_omnigen	integer (9.8.1.1.2)	Index of the omnigenous magnetic surfaces (generalised equatorial plane) to which the s-coordinates refer. NOTE: only used for gridcoord=3.
dim1	array6dflt.type (9.8.1.2.6)	First dimension in phase space; Time-dependent; Array6d(ndim11, ndim21, ndim31, ndim41, ndim51, ndim61).
dim2	array6dflt.type (9.8.1.2.6)	Second dimension in phase space; Time-dependent; Array6d(ndim12, ndim22, ndim32, ndim42, ndim52, ndim62).
dim3	array6dflt.type (9.8.1.2.6)	Third dimension in phase space; Time-dependent; Array6d(ndim13, ndim23, ndim33, ndim43, ndim53, ndim63).
dim4	array6dflt.type (9.8.1.2.6)	Fourth dimension in phase space; Time-dependent; Array6d(ndim14, ndim24, ndim34, ndim44, ndim54, ndim64).
dim5	array6dflt.type (9.8.1.2.6)	Fifth dimension in phase space; Time-dependent; Array6d(ndim15, ndim25, ndim35, ndim45, ndim55, ndim65).

member	type	description
dim6	array6dflt.type (9.8.1.2.6)	Sixth dimension in phase space; Time-dependent; Array6d(ndim16, ndim26, ndim36, ndim46, ndim56, ndim66).
jacobian	array6dflt.type (9.8.1.2.6)	Jacobian of the transformation of the phase space grid variables; Time-dependent; Array6d(ndim11, ndim22, ndim33, ndim44, ndim55, ndim66).
distfunc	array6dflt.type (9.8.1.2.6)	Orbit (or bounce) averaged distribution function given on a grid [ $1/m^3 (m/s)^{-3}$ ]; Time-dependent; Array6d(ndim11, ndim22, ndim33, ndim44, ndim55, ndim66).

### 9.8.1.3.466 toroid\_field

Toroidal field information entering the definition of rho\_tor, for reference only. The physical value of the toroidal field should be taken from the toroidfield CPO. Time-dependent.

member	type	description
b0	float (9.8.1.1.1)	Vacuum field at r0 [T]; Time-dependent. Scalar.
b0prime	float (9.8.1.1.1)	Time derivative of the vacuum field at r0 [T/s]; Time-dependent. Scalar.
r0	float (9.8.1.1.1)	Characteristic major radius of the device (used in publications, usually middle of the vessel at the equatorial midplane) [m]. Scalar.
time	float (9.8.1.1.1)	Time [s] (exact time slice used from the time array of the source signal, here the toroidfield CPO. If the time slice does not exist in the time array of the source signal, it means linear interpolation has been used); Time-dependent; Scalar.

Type of: coreprof:toroid\_field (3119)

### 9.8.1.3.467 trace

Position of particle in 5D space (3D in real and 2D in velocity).

member	type	description
time_orb	matflt.type (9.8.1.2.10)	Time along the orbit [s]; Time-dependent; Matrix (norbits, max_ntorb)
ntorb	vecint.type (9.8.1.2.14)	Number of time slices along the orbit, for each orbit. Time-dependent; Vector (norbits)
r	matflt.type (9.8.1.2.10)	Major radius of the guiding centre [m], Major radius; Time-dependent; Matrix (norbits, max_ntorb).
z	matflt.type (9.8.1.2.10)	Altitude of the guiding centre [m]; Time-dependent; Matrix (norbits, max_ntorb).
phi	matflt.type (9.8.1.2.10)	Toroidal angle of the guiding centre [rad]; Time-dependent; Matrix (norbits, max_ntorb).
psi	matflt.type (9.8.1.2.10)	Guiding centre position in psi [normalised poloidal flux]; Time-dependent; Matrix (norbits, max_ntorb).
theta_b	matflt.type (9.8.1.2.10)	Position of the guiding centre in poloidal Boozer angle [rad]; Time-dependent; Matrix (norbits, max_ntorb).
v_parallel	matflt.type (9.8.1.2.10)	Parallel velocity along the orbit [m/s]; Time-dependent; Matrix (norbits, max_ntorb).
v_perp	matflt.type (9.8.1.2.10)	Perpendicular velocity along the orbit [m/s]; Time-dependent; Matrix (norbits, max_ntorb).

Type of: orbit:trace (3143)

### 9.8.1.3.468 transcoefel

Subtree containing transport coefficients from a transport model, for the electrons

member	type	description
diff_eff	vecflt.type (9.8.1.2.13)	Effective diffusivity [ $m^2.s^{-1}$ ]. Time-dependent. Vector (nrho)
vconv_eff	vecflt.type (9.8.1.2.13)	Effective convection [ $m.s^{-1}$ ]. Time-dependent. Vector (nrho)
flux	vecflt.type (9.8.1.2.13)	Flux. Not used in transport equations [ $field.m.s^{-1}, m^{-3}$ if field is not a density itself]. Time-dependent. Vector (nrho)
off_diagonal	offdiagel (9.8.1.3.308)	Details of the transport matrix, just for diagnostic (not used in transport equations). Time-dependent.
flag	integer (9.8.1.1.2)	Flag describing the form of transport produced by the original model : 0- not calculated, 1- D and V, 2- flux, 3- full transport matrix. Scalar.

Type of: coretransp\_values:te\_transp (3242) I neoclassic:mtor\_neo (3141) I neoclassic:ne\_neo (3141) I neoclassic:te\_neo (3141)

### 9.8.1.3.469 transcoefimp

Subtree containing transport coefficients from a transport model, for the various impurity species (multiple charge states)



member	type	description
diff_eff	matflt.type (9.8.1.2.10)	Effective diffusivity [ $m^2.s^{-1}$ ]. Time-dependent. Array2d (nrho,nzimp)
vconv_eff	matflt.type (9.8.1.2.10)	Effective convection [ $m.s^{-1}$ ]. Time-dependent. Array2d (nrho,nzimp)
exchange	matflt.type (9.8.1.2.10)	Ion to electron energy exchange [ $W.m^{-3}$ ]. Time-dependent. Array2d (nrho,nzimp)
flux	matflt.type (9.8.1.2.10)	Flux. Not used in transport equations [ $field.m.s^{-1},m^{-3}$ if field is not a density itself]. Time-dependent. Array2d (nrho,nzimp)
flag	integer (9.8.1.1.2)	Flag describing the form of transport produced by the original model : 0- not calculated, 1- D and V, 2- flux, 3- full transport matrix (off-diagonal subtree not available for impurities for the moment). Scalar.

Type of: coretransp\_values:nz\_transp (3242) I coretransp\_values:tz\_transp (3242) I neoclassic:nz\_neo (3141) I neoclassic:tz\_neo (3141)

### 9.8.1.3.470 transcoefion

Subtree containing transport coefficients from a transport model, for the various ion species, including the energy exchange term qgi.

member	type	description
diff_eff	matflt.type (9.8.1.2.10)	Effective diffusivity [ $m^2.s^{-1}$ ]. Time-dependent. Matrix (nrho,nion)
vconv_eff	matflt.type (9.8.1.2.10)	Effective convection [ $m.s^{-1}$ ]. Time-dependent. Matrix (nrho,nion)
exchange	matflt.type (9.8.1.2.10)	Ion to electron energy exchange [ $W.m^{-3}$ ]. Time-dependent. Matrix(nrho,nion).
qgi	matflt.type (9.8.1.2.10)	Energy exchange term due to transport. [ $W.m^{-3}$ ]. Time-dependent. Matrix (nrho,nion)
flux	matflt.type (9.8.1.2.10)	Flux. Not used in transport equations [ $field.m.s^{-1},m^{-3}$ if field is not a density itself]. Time-dependent. Matrix (nrho,nion)
off_diagonal	offdiagion (9.8.1.3.309)	Details of the transport matrix, just for diagnostic (not used in transport equations). Time-dependent.
flag	integer (9.8.1.1.2)	Flag describing the form of transport produced by the original model : 0- not calculated, 1- D and V, 2- flux, 3- full transport matrix. Scalar.

Type of: coretransp\_values:ti\_transp (3242) I neoclassic:ni\_neo (3141) I neoclassic:ti\_neo (3141)

### 9.8.1.3.471 transcoefvtor

Subtree containing transport coefficients from a transport model, for the various ion species

member	type	description
diff_eff	matflt.type (9.8.1.2.10)	Effective diffusivity [ $m^2.s^{-1}$ ]. Time-dependent. Matrix (nrho,nion)
vconv_eff	matflt.type (9.8.1.2.10)	Effective convection [ $m.s^{-1}$ ]. Time-dependent. Matrix (nrho,nion)
flux	matflt.type (9.8.1.2.10)	Flux. Not used in transport equations [ $field.m.s^{-1},m^{-3}$ if field is not a density itself]. Time-dependent. Matrix (nrho,nion)
off_diagonal	offdiagion (9.8.1.3.309)	Details of the transport matrix, just for diagnostic (not used in transport equations). Time-dependent.
flag	integer (9.8.1.1.2)	Flag describing the form of transport produced by the original model : 0- not calculated, 1- D and V, 2- flux, 3- full transport matrix. Scalar.

Type of: coretransp\_values:vtor\_transp (3242)

### 9.8.1.3.472 trap\_type

Definition of trap types. Array of structures (number of trap types)

member	type	description
trap_id	identifier (9.8.1.3.242)	Identifier for the trap type
compound	integer (9.8.1.1.2)	Index of the compound doing the trapping. Refers to (local) ../compounds.
gas_species	integer (9.8.1.1.2)	Index of the gas species being trapped. Refers to (local) ../gases.
energy	float (9.8.1.1.1)	Energy depth of the trap [eV]
fill_factor	matflt.type (9.8.1.2.10)	Discretized filling fraction of traps in this layer (0..1) [-]. Dimensions: 1. index: cell index of depth discretization in this layer; 2. index: number of discretization elements in the subgrid
density	matflt.type (9.8.1.2.10)	Discretized density of traps in this layer [ $1/m^3$ ]. Dimensions: 1. index: cell index of depth discretization in this layer; 2. index: number of discretization elements in the subgrid

Type of: wall\_unitsComplexType.layers:trap\_type (3603)

### 9.8.1.3.473 trianglexyz

Triangular surface described by its three corners: point1, point2, and point3. The normal vector of this triangle is defined to be in the direction  $(\text{point2}-\text{point1})\times(\text{point3}-\text{point1})$ .

member	type	description
point1	xyz0D (9.8.1.3.516)	Point 1 on the triangle
point2	xyz0D (9.8.1.3.516)	Point 2 on the triangle
point3	xyz0D (9.8.1.3.516)	Point 3 on the triangle

Type of: nbi\_nbi\_unit\_wall\_surface:triangle (3398)

### 9.8.1.3.474 tsmeasure

Measured values (Thomson scattering)

member	type	description
te	exp1D (9.8.1.3.204)	Electron temperature [eV]. Vector (nchords)
ne	exp1D (9.8.1.3.204)	Electron density [ $\text{m}^{-3}$ ]. Vector (nchords)

Type of: tsdiag:measure (3156)

### 9.8.1.3.475 tssetup

diagnostic setup information

member	type	description
position	rzphi1D (9.8.1.3.372)	Position of intersection between laser and line of sight; Vector (nchords)

Type of: tsdiag:setup (3156)

### 9.8.1.3.476 turbcomposition

Plasma composition (description of ion species).

member	type	description
amn	vecflt_type (9.8.1.2.13)	Atomic mass number (lumped ions are allowed); Vector (nion)
zn	vecflt_type (9.8.1.2.13)	Nuclear charge (lumped ions are allowed); Vector (nion)
zion	vecflt_type (9.8.1.2.13)	Ion charge (of the dominant ionisation state; lumped ions are allowed); Vector (nion)
ie_mass	vecflt_type (9.8.1.2.13)	Ion to electron mass ratio as used in the code for each species. To be used only by models which keep electron inertia. Vector (nion)

Type of: turbulence:composition (3157)

### 9.8.1.3.477 turbcoordsys

Description of the coordinates and metric.

member	type	description
grid_type	string (9.8.1.1.3)	Type of coordinate system.
turbgrid	turbgrid (9.8.1.3.479)	Turbulence grid used by the codes; Time-dependent.
jacobian	matflt_type (9.8.1.2.10)	Jacobian of the coordinate system; Time-dependent; Matrix (ndim1, ndim2).
g_11	matflt_type (9.8.1.2.10)	metric coefficients g_11; Time-dependent; Matrix (ndim1, ndim2).
g_12	matflt_type (9.8.1.2.10)	metric coefficients g_12; Time-dependent; Matrix (ndim1, ndim2).
g_13	matflt_type (9.8.1.2.10)	metric coefficients g_13; Time-dependent; Matrix (ndim1, ndim2).
g_22	matflt_type (9.8.1.2.10)	metric coefficients g_22; Time-dependent; Matrix (ndim1, ndim2).
g_23	matflt_type (9.8.1.2.10)	metric coefficients g_23; Time-dependent; Matrix (ndim1, ndim2).
g_33	matflt_type (9.8.1.2.10)	metric coefficients g_33; Time-dependent; Matrix (ndim1, ndim2).
position	rzphi3D (9.8.1.3.376)	R Z phi positions of grid points; Time-dependent; Array3D (ndim1, ndim2, ndim3).

Type of: turbulence:coordsys (3157)

### 9.8.1.3.478 turbenv1d

Parallel fluctuation envelope.

member	type	description
theta	vecflt_type (9.8.1.2.13)	Straight field line poloidal angle [rad]; Vector (ntheta_env).
phi	vecflt_type (9.8.1.2.13)	Electrostatic potential [V <sup>2</sup> ]; Time-dependent; Vector (ntheta_env).
vor	vecflt_type (9.8.1.2.13)	Vorticity [coulomb <sup>2</sup> /m <sup>6</sup> ]; Time-dependent; Vector (ntheta_env).
jpl	vecflt_type (9.8.1.2.13)	Parallel current [A <sup>2</sup> /m <sup>4</sup> ]; Time-dependent; Vector (ntheta_env).
ne	vecflt_type (9.8.1.2.13)	Electron density [m <sup>-6</sup> ]; Time-dependent; Vector (ntheta_env).
he	vecflt_type (9.8.1.2.13)	Nonadiabatic electron density [m <sup>-6</sup> ]; Time-dependent; Vector (ntheta_env).
te	vecflt_type (9.8.1.2.13)	Electron temperature [eV <sup>2</sup> ]; Time-dependent; Vector (ntheta_env).
ni	matflt_type (9.8.1.2.10)	Ion density [m <sup>-6</sup> ]; Time-dependent; Matrix(ntheta_env,nion).
ti	matflt_type (9.8.1.2.10)	Ion temperature [eV <sup>2</sup> ]; Time-dependent; Matrix(ntheta_env,nion).
ui	matflt_type (9.8.1.2.10)	Ion parallel velocity [m <sup>2</sup> /s <sup>2</sup> ]; Time-dependent; Matrix (ntheta_env,nion).
fe	vecflt_type (9.8.1.2.13)	Electron particle flux [m <sup>-2</sup> /s per mode]; Time-dependent; Vector (ntheta_env).
qe	vecflt_type (9.8.1.2.13)	Electron conductive heat flux [W.m <sup>-2</sup> per mode]; Time-dependent; Vector (ntheta_env).
qi	matflt_type (9.8.1.2.10)	Ion conductive heat flux [W.m <sup>-2</sup> per mode]; Time-dependent; Matrix(ntheta_env,nion).
me	vecflt_type (9.8.1.2.13)	Magnetic electron heat flux [W.m <sup>-2</sup> per mode]; Time-dependent; Vector (ntheta_env).
mi	matflt_type (9.8.1.2.10)	Magnetic ion heat flux [W.m <sup>-2</sup> per mode]; Time-dependent; Matrix(ntheta_env,nion).

Type of: turbulence:env1d (3157)

### 9.8.1.3.479 turbgrid

Generic structure for a turbulence grid.

member	type	description
dim1	vecflt_type (9.8.1.2.13)	First dimension values; Vector (ndim1).
dim2	vecflt_type (9.8.1.2.13)	Second dimension values; Vector (ndim2).
dim3	vecflt_type (9.8.1.2.13)	Third dimension values; Vector (ndim3).
dim.v1	vecflt_type (9.8.1.2.13)	First v-space dimension values; Vector (ndim.v1).
dim.v2	vecflt_type (9.8.1.2.13)	Second v-space dimension values; Vector (ndim.v2).

Type of: turbcoordsys:turbgrid (3583)

### 9.8.1.3.480 turbspec1d

Perpendicular wavenumber spectra.

member	type	description
kperp	vecflt_type (9.8.1.2.13)	Perpendicular wavenumber [m <sup>-1</sup> ]; Vector (ndim_spec).
phi	vecflt_type (9.8.1.2.13)	Electrostatic potential [V <sup>2</sup> per mode]; Time-dependent; Vector (ndim_spec).
vor	vecflt_type (9.8.1.2.13)	Vorticity [s <sup>-2</sup> per mode]; Time-dependent; Vector (ndim_spec).
b	vecflt_type (9.8.1.2.13)	Magnetic energy [T <sup>2</sup> per mode]; Time-dependent; Vector (ndim_spec).
jpl	vecflt_type (9.8.1.2.13)	Current [A <sup>2</sup> /m <sup>4</sup> per mode]; Time-dependent; Vector (ndim_spec).
ne	vecflt_type (9.8.1.2.13)	Electron density [m <sup>-6</sup> per mode]; Time-dependent; Vector (ndim_spec).
te	vecflt_type (9.8.1.2.13)	Electron temperature [eV <sup>2</sup> per mode]; Time-dependent; Vector (ndim_spec).
ti	matflt_type (9.8.1.2.10)	Ion temperature [eV <sup>2</sup> per mode]; Time-dependent; Matrix (ndim_spec,nion).
fe	vecflt_type (9.8.1.2.13)	Electron particle flux [m <sup>-2</sup> /s per mode]; Time-dependent; Vector (ndim_spec).
qe	vecflt_type (9.8.1.2.13)	Electron conductive heat flux [W.m <sup>-2</sup> per mode]; Time-dependent; Vector (ndim_spec).
qi	matflt_type (9.8.1.2.10)	Ion conductive heat flux [W.m <sup>-2</sup> per mode]; Time-dependent; Matrix(ndim_spec,nion).
me	vecflt_type (9.8.1.2.13)	Magnetic electron heat flux [W.m <sup>-2</sup> per mode]; Time-dependent; Matrix (ndim_spec).
mi	matflt_type (9.8.1.2.10)	Magnetic ion heat flux [W.m <sup>-2</sup> per mode]; Time-dependent; Matrix (ndim_spec,nion).

Type of: turbulence:spec1d (3157)

### 9.8.1.3.481 turbvar0d

Time traces.

member	type	description
dtime_type	string (9.8.1.1.3)	Description of time trace e.g. last ndtime points.
dtime	vecflt_type (9.8.1.2.13)	Fast diagnostic time [s]; Time-dependent; Vector (ndtime).
en_exb	vecflt_type (9.8.1.2.13)	ExB energy [ $J/m^3$ ]; Time-dependent; Vector (ndtime).
en_mag	vecflt_type (9.8.1.2.13)	Magnetic energy [ $J/m^3$ ]; Time-dependent; Vector (ndtime).
en_el.th	vecflt_type (9.8.1.2.13)	electron thermal energy or free energy [ $J/m^3$ ]; Time-dependent.
en_ion.th	matflt_type (9.8.1.2.10)	Ion thermal energy or free energy [ $J/m^3$ ]; Time-dependent; Matrix (ndtime, nion).
en_el.par	vecflt_type (9.8.1.2.13)	Electron parallel energy [ $J/m^3$ ]; Time-dependent; Vector (ndtime).
en_ion.par	matflt_type (9.8.1.2.10)	Ion parallel energy [ $J/m^3$ ]; Time-dependent; Matrix (ndtime, nion).
en_tot	vecflt_type (9.8.1.2.13)	Total energy or free energy [ $J/m^3$ ]; Time-dependent; Vector (ndtime).
fl_el	vecflt_type (9.8.1.2.13)	Electron flux [ $m^{-2} s^{-1}$ ]; Time-dependent; Vector (ndtime).
fl_heatel	vecflt_type (9.8.1.2.13)	Conductive electron heat flux [ $W.m^{-2}$ ]; Time-dependent; Vector (ndtime).
fl_ion	matflt_type (9.8.1.2.10)	Ion flux [ $m^{-2} s^{-1}$ ]; Time-dependent; Matrix (ndtime, nion).
fl_heation	matflt_type (9.8.1.2.10)	Conductive ion heat flux [ $W.m^{-2}$ ]; Time-dependent; Matrix (ndtime, nion).
fl_magel	vecflt_type (9.8.1.2.13)	Electron flux [ $m^{-2} s^{-1}$ ]; Time-dependent; Vector (ndtime).
fl_magheatel	vecflt_type (9.8.1.2.13)	Conductive electron heat flux [ $W.m^{-2}$ ]; Time-dependent; Vector (ndtime).
fl_magion	matflt_type (9.8.1.2.10)	Ion flux [ $m^{-2} s^{-1}$ ]; Time-dependent; Matrix (ndtime, nion).
flmagheation	matflt_type (9.8.1.2.10)	Conductive ion heat flux [ $W.m^{-2}$ ]; Time-dependent; Matrix (ndtime, nion).

Type of: turbulence:var0d (3157)

### 9.8.1.3.482 turbvar1d

Dependent variable zonal average radial profile.

member	type	description
rho_tor_norm	vecflt_type (9.8.1.2.13)	Normalised toroidal flux coordinate. Vector(nrho1d)
phi	vecflt_type (9.8.1.2.13)	Electrostatic potential [V]; Time-dependent; Vector (nrho1d).
er	vecflt_type (9.8.1.2.13)	Radial electric field [V/m]; Time-dependent; Vector (nrho1d).
vor	vecflt_type (9.8.1.2.13)	Vorticity [ $s^{-1}$ ]; Time-dependent; Vector (nrho1d).
apl	vecflt_type (9.8.1.2.13)	Parallel magnetic potential divided by B [m]; Time-dependent; Vector (nrho1d).
jpl	vecflt_type (9.8.1.2.13)	Parallel current divided by B [ $A/m^2$ per T]; Time-dependent; Vector (nrho1d).
ne	vecflt_type (9.8.1.2.13)	Electron density [ $m^{-3}$ ]; Time-dependent; Vector (nrho1d).
te	vecflt_type (9.8.1.2.13)	Electron temperature [eV]; Time-dependent; Vector (nrho1d).
ni	matflt_type (9.8.1.2.10)	Ion density [ $m^{-3}$ ]; Time-dependent; Matrix (nrho1d, nion).
ti	matflt_type (9.8.1.2.10)	Ion temperature [eV]; Time-dependent; Matrix (nrho1d, nion).
ui	matflt_type (9.8.1.2.10)	Ion parallel velocity divided by B [m/s per T]; Time-dependent; Matrix (nrho1d, nion).

Type of: turbulence:var1d (3157)

### 9.8.1.3.483 turbvar2d

Dependent variable axisymmetric component.

member	type	description
rho_tor_norm	vecflt_type (9.8.1.2.13)	Normalised toroidal flux coordinate. Vector(nrho2d)
theta	vecflt_type (9.8.1.2.13)	Straight field line poloidal angle [rad]. Vector(ntheta2d)
phi	matflt_type (9.8.1.2.10)	Electrostatic potential [V]; Time-dependent; Matrix (nrho2d, ntheta2d).
apl	matflt_type (9.8.1.2.10)	Parallel magnetic potential divided by B [m]; Time-dependent; Matrix (nrho2d, ntheta2d).
jpl	matflt_type (9.8.1.2.10)	Parallel current divided by B [ $A/m^2$ per T]; Time-dependent; Matrix (nrho2d, ntheta2d).
vor	matflt_type (9.8.1.2.10)	Vorticity [ $s^{-1}$ ]; Time-dependent; Matrix (nrho2d, ntheta2d).
ne	matflt_type (9.8.1.2.10)	Electron density [ $m^{-3}$ ]; Time-dependent; Matrix (nrho2d, ntheta2d).
te	matflt_type (9.8.1.2.10)	Electron temperature [eV]; Time-dependent; Matrix (nrho2d, ntheta2d).
ni	array3dfilt_type (9.8.1.2.2)	Ion density [ $m^{-3}$ ]; Time-dependent; Array3D (nrho2d, ntheta2d, nion).
ti	array3dfilt_type (9.8.1.2.2)	Ion temperature [eV]; Time-dependent; Array3D (nrho2d, ntheta2d, nion).
ui	array3dfilt_type (9.8.1.2.2)	Ion parallel velocity divided by B [m/s per T]; Time-dependent; Array3D (nrho2d, ntheta2d, nion).

Type of: turbulence:var2d (3157)

### 9.8.1.3.484 turbvar3d

Dependent variable morphology (on the internal grid code coord\_sys/turbgrid).

member	type	description
phi	array3dfit.type (9.8.1.2.2)	Electrostatic potential [V]; Time-dependent; Array3D(ndim1,ndim2,ndim3).
vor	array3dfit.type (9.8.1.2.2)	Vorticity [ $s^{-1}$ ]; Time-dependent; Array3D(ndim1,ndim2,ndim3).
jpl	array3dfit.type (9.8.1.2.2)	Parallel current [ $A/m^2$ ]; Time-dependent; Array3D(ndim1,ndim2,ndim3).
ne	array3dfit.type (9.8.1.2.2)	Electron density [ $m^{-3}$ ]; Time-dependent; Array3D(ndim1,ndim2,ndim3).

Type of: turbulence:var3d (3157)

### 9.8.1.3.485 turbvar4d

Gyrokinetic distribution function, axisymmetric component. Grid is defined in coord\_sys/turbgrid.

member	type	description
fe	array4dfit.type (9.8.1.2.4)	Electron distribution function times V-space volume element, axisymmetric component [ $m^{-3}$ ]; Time-dependent; Array4D(ndim1,ndim2,ndim3,ndim.v1).
fi	array5dfit.type (9.8.1.2.5)	Ion distribution function times V-space volume element, axisymmetric component [ $m^{-3}$ ]; Time-dependent; Array5D(ndim1,ndim2,ndim3,ndim.v1,nion).

Type of: turbulence:var4d (3157)

### 9.8.1.3.486 turbvar5d

Gyrokinetic distribution function. Grid is defined in coord\_sys/turbgrid.

member	type	description
fe	array5dfit.type (9.8.1.2.5)	Electron distribution function times V-space volume element [ $m^{-3}$ ]; Time-dependent; Array5D(ndim1,ndim2,ndim3,ndim.v1,ndim.v2).
fi	array6dfit.type (9.8.1.2.6)	Ion distribution function times V-space volume element [ $m^{-3}$ ]; Time-dependent; Array6D(ndim1,ndim2,ndim3,ndim.v1,ndim.v2,nion).

Type of: turbulence:var5d (3157)

### 9.8.1.3.487 version\_ind

Array of available releases/versions of the AMNS data; each element contains information about the AMNS data that is included in the release. This part of the CPO is filled and stored only into shot/run=0/1, playing the role of a catalogue.

member	type	description
description	vecstring.type (9.8.1.2.15)	Description of each version.
releasedate	string (9.8.1.1.3)	Release date
data_release(:)	data_release (9.8.1.3.140)	For this release, an array over each data item (i.e. shot/run pair containing the actual data) included in this release

Type of: amns:version\_ind (3109)

### 9.8.1.3.488 wall2d

A 2D wall type; Structure array. Replicate this element for each type of possible physics configurations necessary (gas tight vs wall with ports and holes)

member	type	description
wall_id	identifier (9.8.1.3.242)	Use this identifier to tag the type of 2d wall you are using. Use 0 for equilibrium codes (single closed limiter and vessel); 1 for gas-tight walls (disjoint PFCs with inner vessel as last limiter.unit; no vessel structure); 2 for free boundary codes (disjoint PFCs and vessel)
limiter	wall.limiter (9.8.1.3.493)	Description of the immobile limiting surface(s) or plasma facing components for defining the Last Closed Flux Surface. Two representations are admitted: single contour or disjoint PFC. The limiter_id identifies the type of limiter set and code-specific representations derived from the official ones are also allowed if documented. Array of structures (nlimiter.type). Time-dependent

member	type	description
vessel	wall.vessel (9.8.1.3.498)	Mechanical structure of the vacuum vessel. Vessel assumed as set of nested layers with given physics properties; Two representations are admitted for each vessel unit : annular (two contours) or blocks. The vessel_id identifies the type of vessel.unit set one is using and code-specific representations derived from the official ones are also allowed if documented. Array of structures (nvessel.type)
plasma(:)	plasmaComplexType (9.8.1.3.338)	Description of incoming plasma for every wall component. Array of structures (number of wall components). The geometry of the wall component with index i is given by the limiter unit with index i in wall/wall2d/limiter/limiter.unit. Time-dependent
wall_state(:)	wall_unitsComplexType (9.8.1.3.496)	Dynamic wall state of every wall component. Array of structures (number of wall components). The geometry of the wall component with index i is given by the limiter unit with index i in wall/wall2d/limiter/limiter.unit. Time-dependent

Type of: wall:wall2d (3158)

### 9.8.1.3.489 wall2d\_mhd

Simplified wall that encloses necessary information for RWM codes.

member	type	description
res.wall(:)	mhd_res_wall2d (9.8.1.3.273)	Resistive Wall(s).
ideal_wall	mhd_ideal_wall2d (9.8.1.3.270)	Ideal wall

Type of: wall:wall2d\_mhd (3158)

### 9.8.1.3.490 wall3d

3D wall descriptions; Array of structures (number of wall descriptions). Replicate this element for each type of possible physics or engineering configurations necessary (gas tight vs wall with ports and holes, coarse vs fine representation, ...). Time-dependent

member	type	description
wall_id	identifier (9.8.1.3.242)	Identify the type of wall - 0 for gas tight and 1 for a wall with holes/open ports
grid	complexgrid (9.8.1.3.89)	Grid description
plasma(:)	plasmaComplexType (9.8.1.3.338)	Description of incoming plasma for every wall component. Array of structures (number of wall components). The geometry of the wall component with index i is given by the corresponding subgrid with index i in wall/wall3d/grid. Time-dependent
wall_state(:)	wall_unitsComplexType (9.8.1.3.496)	Dynamic wall state of every wall component. Array of structures (number of wall components). The geometry of the wall component with index i is given by the corresponding subgrid with index i in wall/wall3d/grid. Time-dependent
basis_index	integer (9.8.1.1.2)	Index of basis vectors in wall/wall3d/grid/basis used to define vector quantities e.g. in plasma.

Type of: wall:wall3d (3158)

### 9.8.1.3.491 wall\_blocks

Vector of vacuum vessel units. Replicate this vessel.unit element ncomponents times. Each unit contains a mechanical structure of the vessel with distinct physics properties. Array of structures (ncomponents)

member	type	description
blocks.unit(:)	wall_blocks_unit (9.8.1.3.492)	Vector of blocks that build of the vessel layer. Replicate this element nblocks times. Each unit contains a building block of the vessel and can have dedicated number of points. Array of structures (nblocks)

Type of: wall.vessel.unit:blocks (3606)

### 9.8.1.3.492 wall\_blocks\_unit

Vector of blocks that build of the vessel layer. Replicate this element nblocks times. Each unit contains a building block of the vessel and can have dedicated number of points. Array of structures (nblocks)

member	type	description
name	string (9.8.1.1.3)	Name or description of the blocks.unit

member	type	description
position	rz1D (9.8.1.3.366)	Position (R,Z coordinates) of a vessel segment. No need to repeat first point for closed contours [m]; Vector(npoints)
eta	float (9.8.1.1.1)	Resistivity of the vessel segment [ohm.m]; Scalar
permeability	float (9.8.1.1.1)	Vessel relative permeability; Scalar
j_phi	float (9.8.1.1.1)	induced currents inside the vessel; time dependent; [A]
resistance	float (9.8.1.1.1)	resistance of block; [Ohm]

Type of: wall.blocks:blocks\_unit (3597)

### 9.8.1.3.493 wall\_limiter

Description of the immobile limiting surface(s) or plasma facing components for defining the Last Closed Flux Surface. Two representations are admitted : single contour or disjoint PFC. The limiter\_id identifies the type of limiter set and code-specific representations derived from the official ones are also allowed if documented. Array of structures (nlimiter\_type)

member	type	description
limiter_id	identifier (9.8.1.3.242)	Use this identifier to tag the type of limiter you are using. Use flag=0 for the official single contour limiter and 1 for the official disjoint PFC structure like first wall. Additional representations needed on a code-by-code basis follow same incremental pair tagging starting on flag=2
limiter_unit(:)	limiter_unit (9.8.1.3.259)	Array of ncomponents limiting surfaces making up the limiter type (single contour or disjoint PFC). Replicate this limiter_unit element ncomponents times. Each unit contains a plasma facing component that can have dedicated number of points. Array of structures (ncomponents). Time-dependent

Type of: wall2d:limiter (3594)

### 9.8.1.3.494 wall\_types

Reference wall type

member	type	description
label	string (9.8.1.1.3)	Label for this reference wall type
layers(:)	wall_types.layers (9.8.1.3.495)	Engineering layers composing the wall element; array of structures (number of engineering layers). First layer is facing the plasma, increasing index means moving away from the plasma facing surface

Type of: wall:wall\_types (3158)

### 9.8.1.3.495 wall\_types.layers

Engineering layers composing the wall element; array of structures (number of engineering layers). First layer is facing the plasma, increasing index means moving away from the plasma facing surface

member	type	description
thickness	float (9.8.1.1.1)	Thickness of layer [m]
chem_comp	vecflt_type (9.8.1.2.13)	Chemical composition of the layer in terms of the chemical compounds defined in wall/design_comp/compounds. Vector of fractional concentrations.

Type of: wall\_types:layers (3600)

### 9.8.1.3.496 wall\_unitsComplexType

Data for individual wall elements; Time-dependent

member	type	description
wall_type	integer (9.8.1.1.2)	Definition of reference wall composition for every subgrid of the wall discretization. Vector of integers (number of subgrids). The indices point to wall/wall_types.
n_depo_layer	integer (9.8.1.1.2)	Number of deposited layers (in addition to the engineering layers)
layers(:)	wall_unitsComplexType.layers (9.8.1.3.497)	Data on wall element layers; Array of structures (number of engineering layers + number of deposited layers); Layers can possibly be void (e.g. completely eroded), which is indicated by zero thickness. Time-dependent
eta	complexgrid_scalar (9.8.1.3.94)	Resitivity of wall element described by grid geometry [Ohm.m]



member	type	description
permeability	complexgrid_scalar (9.8.1.3.94)	Relative permeability of wall element described by grid geometry [-]
j	complexgrid_vector (9.8.1.3.100)	Current density vector in the element specified by the grid representation. [A/m <sup>2</sup> ]

Type of: wall2d:wall\_state (3594) I wall3d:wall\_state (3596)

### 9.8.1.3.497 wall\_unitsComplexType\_layers

Data on wall element layers; Array of structures (number of engineering layers + number of deposited layers); Layers can possibly be void (e.g. completely eroded), which is indicated by zero thickness. Time-dependent

member	type	description
elements	vecint.type (9.8.1.2.14)	List of elements present in the solid phase in this layer. Vector (number of elements). Holds indices pointing to wall/elements
gases	vecint.type (9.8.1.2.14)	List of gases present in this layer. Vector (number of gases). Holds indices pointing to wall/elements
compounds	vecint.type (9.8.1.2.14)	List of compounds present in the solid phase in this layer. Vector (number of compounds). Holds indices pointing to wall/compounds
density	matflt.type (9.8.1.2.10)	Discretized density distribution in the layer of the discrete wall elements in the subgrid [kg/m <sup>3</sup> ]; Time-dependent; Float matrix (number of vertical cells in layer, number of discretization elements in the subgrid)
dx	matflt.type (9.8.1.2.10)	Size of the vertical cells in the layer of the discrete wall elements in the subgrid [kg/m <sup>3</sup> ]; Time-dependent; Float matrix (number of vertical cells in layer, number of discretization elements in the subgrid)
thickness	vecflt.type (9.8.1.2.13)	Total size of the layer [m] (i.e. sum of dx over the number of vertical cells in the layer); Time-dependent; Vector (number of discretization elements in the subgrid)
roughness	array3dflt.type (9.8.1.2.2)	Interface roughness description between the discrete elements and their top neighbour (i.e. towards the plasma); Time-dependent; Float 3d array (number of vertical cells in layer, number of discretization elements in the subgrid, index of porosity parameter); Roughness parameter 1: RMS height [m], parameter 2: wavelength along projection of B on the surface [m], parameter 3: wavelength perpendicular to projection of B on the surface [m]. If only two parameters are given the parameters are assumed to be isotropic
porosity	array3dflt.type (9.8.1.2.2)	Discrete description of porosity of the layer. Time-dependent; Float 3d array (number of vertical cells in layer, number of discretization elements in the subgrid, index of porosity parameter); Porosity parameter 1: Volume fraction occupied by the pores [-], parameter 2: average size of the pores [m]
dpa	matflt.type (9.8.1.2.10)	Discretized number of displacements per atom in the layer of the discrete wall elements in the subgrid [-]; Time-dependent; Float matrix (number of vertical cells in layer, number of discretization elements in the subgrid)
temperature	matflt.type (9.8.1.2.10)	Discretized temperature distribution in the layer of the discrete wall elements in the subgrid [eV]; Time-dependent; Float matrix (number of vertical cells in layer, number of discretization elements in the subgrid)
element_frac	array3dflt.type (9.8.1.2.2)	Fractional abundance of elements in the layer of the discrete wall elements in the subgrid [-]; Time-dependent; Float matrix (number of chemical elements as given in (local) elements, number of vertical cells in layer, number of discretization elements in the subgrid)
chem_comp	array3dflt.type (9.8.1.2.2)	Fractional abundance of chemical compounds in the layer of the discrete wall elements in the subgrid [-]; Time-dependent; Float matrix (number of chemical compounds as given in (local) compounds, number of vertical cells in layer, number of discretization elements in the subgrid)
bulk_D	array4dflt.type (9.8.1.2.4)	Diffusivity of gas species in bulks of different compounds [m <sup>2</sup> /s]; Time-dependent; 4d float array. Dimensions: 1. index of compound (indexing as in (local) compounds), 2. index of gas element (indexing as in (local) gases), 3. cell index of 1d layer height discretization, 4. number of discretization elements in the subgrid
surface_D	array4dflt.type (9.8.1.2.4)	Diffusivity of hydrogen species of surface of different compounds [m <sup>2</sup> /s]; Time-dependent; Dimensions: see bulk_D
bulk_solute	array4dflt.type (9.8.1.2.4)	Bulk mobile (solute) concentration [atoms/m <sup>3</sup> ]; Time-dependent; Dimensions: see bulk_D
surf_solute	array4dflt.type (9.8.1.2.4)	Surface mobile (solute) concentration [atoms/m <sup>2</sup> ]; Time-dependent; Dimensions: see bulk_D
pore_content	array3dflt.type (9.8.1.2.2)	Amount of gas species trapped in pores per cubic meter [1/m <sup>3</sup> ]; Time-dependent; 3d float array. Dimensions: 1. index of gas element (indexing as in (local) gases), 2. cell index of 1d layer height discretization, 3. number of discretization element in the subgrid
trap_type(:)	trap_type (9.8.1.3.472)	Definition of trap types. Array of structures (number of trap types)

Type of: wall\_unitsComplexType\_layers (3602)

### 9.8.1.3.498 wall\_vessel

Mechanical structure of the vacuum vessel. Vessel assumed as set of nested layers with given physics properties; Two representations are admitted for each vessel unit : annular (two contours) or blocks. The vessel\_id identifies the type of vessel\_unit set one is using and code-specific representations derived from the official ones are also allowed if documented. Array of structures (nvessel\_type)

member	type	description
vessel_id	identifier (9.8.1.3.242)	Use this identifier to tag the type of vessel you are using. Use flag=0 for the official single/multiple annular vessel and 1 for the official block element representation for each vessel unit. Additional representations needed on a code-by-code basis follow same incremental pair tagging starting on flag=2
vessel_unit(:)	wall_vessel_unit (9.8.1.3.500)	Array of vacuum vessel units. Replicate this vessel_unit element ncomponents times. Each unit contains a mechanical structure of the vessel with distinct physics properties. Array of structures (ncomponents)

Type of: wall2d:vessel (3594)

### 9.8.1.3.499 wall\_vessel\_annular

Vector of vacuum vessel units. Replicate this vessel\_unit element ncomponents times. Each unit contains a mechanical structure of the vessel with distinct physics properties. Array of structures (ncomponents)

member	type	description
name	string (9.8.1.1.3)	Name or description of the vessel_unit
inside	rz1D (9.8.1.3.366)	Inner Vessel wall outline (list of R,Z co-ordinates) [m]; Vector (npoints_inner)
outside	rz1D (9.8.1.3.366)	Outer Vessel wall outline (list of R,Z co-ordinates) [m]; Vector (npoints_outer)
eta	float (9.8.1.1.1)	Vessel resistivity [ohm.m]; Scalar
permeability	float (9.8.1.1.1)	Vessel relative permeability; Scalar

Type of: wall\_vessel\_unit:annular (3606)

### 9.8.1.3.500 wall\_vessel\_unit

Vector of vacuum vessel units. Replicate this vessel\_unit element ncomponents times. Each unit contains a mechanical structure of the vessel with distinct physics properties. Array of structures (ncomponents)

member	type	description
annular	wall_vessel_annular (9.8.1.3.499)	Annular representation of a vessel layer by two free-hand contours.
blocks	wall_blocks (9.8.1.3.491)	Block element representation of vessel units. Each vessel unit is decomposed in elementary small units (blocks) characterized by a position, resistivity and relative permeability.
radial_build	wall_wall2d_vessel_radial_build (9.8.1.3.503)	Simple description of this vessel unit for the radial_build in system codes

Type of: wall\_vessel:vessel\_unit (3604)

### 9.8.1.3.501 wall\_wall0d

Simple 0D description of plasma-wall interaction

member	type	description
pumping_speed	vecflt_type (9.8.1.2.13)	pumping speed; Time-dependent. vector(nneut); [particles/s]
gas_puff	vecflt_type (9.8.1.2.13)	gas puff; vector(nneut); Time-dependent. [particles/s]
wall_inventory	vecflt_type (9.8.1.2.13)	wall inventory; vector(nneut); Time-dependent. [particles]
recycling_coefficient	vecflt_type (9.8.1.2.13)	Recycling coefficient. Vector(nneut) Time-dependent.
wall_temperature	float (9.8.1.1.1)	Wall temperature [K]. Time-dependent. Scalar
power_from_plasma	float (9.8.1.1.1)	Power flowing from the plasma to the wall [W]. Time-dependent. Scalar
power_to_cooling	float (9.8.1.1.1)	Power to cooling systems [W]. Time-dependent. Scalar
plasma	wall_wall0d_plasma (9.8.1.3.502)	NO DOCS

Type of: wall:wall0d (3158)

### 9.8.1.3.502 wall\_wall0d\_plasma

member	type	description
species_index	matint.type (9.8.1.2.11)	Index of species into wall/compositions; matrix(nspecies,3); 1st element indicates {1: main ions; 2:impurities; 3:neutrals; 4:edge species}; 2nd element indicates index into that array; 3rd index indicates charge state if 1st element points to impurities or neutral type if 1st element points to neutrals;
flux	vecflt.type (9.8.1.2.13)	flux of species indicated by species_index; array of nspecies; positive implies incoming onto wall; negative implies sent back into plasma; time-dependent; [particles/s]
energy	vecflt.type (9.8.1.2.13)	energy flux of species indicated by species_index; array of nspecies; positive implies incoming onto wall; negative implies sent back into plasma; time-dependent; [W]

Type of: wall\_wall0d:plasma (3607)

### 9.8.1.3.503 wall\_wall2d\_vessel\_radial\_build

Simple description of this vessel unit for the radial\_build in system codes

member	type	description
r1_inb	float (9.8.1.1.1)	Inner radius (nearest to the plasma), in the global tokamak coordinate system of the vv measured at the equatorial plane (inboard side) [m]; Scalar
r2_inb	float (9.8.1.1.1)	Outer radius (farrest from the plasma), in the global tokamak coordinate system of the vv measured at the equatorial plane (inboard side) [m]; Scalar
r1_outb	float (9.8.1.1.1)	Inner radius (nearest to the plasma), in the global tokamak coordinate system of the vv measured at the equatorial plane (outboard side) [m]; Scalar
r2_outb	float (9.8.1.1.1)	Outer radius (farrest from the plasma), in the global tokamak coordinate system of the vv measured at the equatorial plane (outboard side) [m]; Scalar
raddim	float (9.8.1.1.1)	Radial thickness of the vacuum vessel; Scalar
nmat	float (9.8.1.1.1)	Number of materials; Scalar
composition	vecflt.type (9.8.1.2.13)	Inboard shield radial build giving the percentage of each material respectively (Meaning of the material index 1: Eurofer, 2: Pb-15.7Li, 3: He, 4: Water, 5: Tungsten Carbide, 6: Boron, 7: Tungsten, 8: Stainless Steel 316) in %vol; Vector
pow_dens_inb	float (9.8.1.1.1)	Peak energy deposition in vaccum vessel inboard [W.m <sup>-3</sup> ]; Scalar
pow_dens_outb	float (9.8.1.1.1)	Peak energy deposition in vaccum vessel outboard [W.m <sup>-3</sup> ]; Scalar
fn_flux_inb	float (9.8.1.1.1)	Fast neutron flux in vaccum vessel inboard [m <sup>-2</sup> .s <sup>-1</sup> ]; Scalar
fn_flux_outb	float (9.8.1.1.1)	Fast neutron flux in vaccum vessel outboard [m <sup>-2</sup> .s <sup>-1</sup> ]; Scalar

Type of: wall\_vessel\_unit:radial\_build (3606)

### 9.8.1.3.504 waveguides

Waveguides description

member	type	description
nwm_theta	integer (9.8.1.1.2)	Number of waveguides per module in the poloidal direction.
nwm_phi	integer (9.8.1.1.2)	Number of waveguides per module in the toroidal direction.
mask	vecint.type (9.8.1.2.14)	Mask of passive and active waveguides for an internal module; Vector of integers (nwm_phi)
npwbm_phi	integer (9.8.1.1.2)	Number of passive waveguide between modules in the toroidal direction
npwe_phi	integer (9.8.1.1.2)	Number of passive waveguides on each antenna edge in the toroidal direction
sw_theta	float (9.8.1.1.1)	Spacing between poloidally neighboring waveguides [m]
hw_theta	float (9.8.1.1.1)	Height of waveguides in the poloidal direction [m]
bwa	float (9.8.1.1.1)	Width of active waveguides [m]; Float
biwp	float (9.8.1.1.1)	Width of internal passive waveguides [m]; Float
bewp	float (9.8.1.1.1)	Width of edge passive waveguides [m]; Float
e_phi	vecflt.type (9.8.1.2.13)	Thickness between waveguides in the toroidal direction [m], Vector (nthick_phi). Reminder : nthick_phi = nmp_phi*nwm_phi + (nmp_phi - 1)*npwbm_phi + 2*npwe_phi
scl	vecflt.type (9.8.1.2.13)	Short circuit length for passive waveguides [m], Vector (nshort_phi). Reminder : nshort_phi = nmp_phi*npwm_phi + (nmp_phi - 1)*npwbm_phi + 2*npwe_phi

Type of: modules:waveguides (3388)

### 9.8.1.3.505 waves\_global\_param

Global wave deposition parameters

member	type	description
name	string (9.8.1.1.3)	Antenna name, String
type	string (9.8.1.1.3)	Wave type (LH, EC, IC, ...), String
f.assumption	vecint.type (9.8.1.2.14)	Assumption on the functions distribution used by the wave solver to calculate the power deposition : 0 = Maxwellian (linear absorption); 1 = quasi-linear (F given by a distribution function CPO). Integer vector (nion+1). The first value corresponds to the electrons, then to the other ion species. Time-dependent.
code.type	integer (9.8.1.1.2)	Type of wave deposition code for a given frequency: 1=beam/ray tracing; 2=full wave; Integer
frequency	float (9.8.1.1.1)	Wave frequency [Hz]; Time-dependent, floating
ntor	vecint.type (9.8.1.2.14)	Toroidal mode numbers; Time-dependent; Vector (ntor)
power_tot	float (9.8.1.1.1)	Total absorbed wave power [W]; Time-dependent
p_frac_ntor	vecflt.type (9.8.1.2.13)	Fraction of wave power per toroidal mode number; Time-dependent; Vector (ntor)
pow_e	float (9.8.1.1.1)	Wave power absorbed by the thermal electrons [W]; Time-dependent; Float
pow_i	vecflt.type (9.8.1.2.13)	Wave power absorbed by the thermal ion species [W]; Time-dependent; Vector (nion)
pow_z	matflt.type (9.8.1.2.10)	Wave power absorbed by the thermal impurity species [W]; Time-dependent; Vector (nimpur, nzimp)
pow_fe	float (9.8.1.1.1)	Wave power absorbed by the fast electrons [W]; Time-dependent; Float
pow_fi	vecflt.type (9.8.1.2.13)	Wave power absorbed by the fast ion species [W]; Time-dependent; Vector (nion)
pow_fz	matflt.type (9.8.1.2.10)	Wave power absorbed by the fast impurity species [W]; Time-dependent; Vector (nimpur, nzimp)
pow_ntor_e	vecflt.type (9.8.1.2.13)	Wave power absorbed by the thermal electrons for each toroidal mode [W]; Time-dependent; Vector (ntor)
pow_ntor_i	matflt.type (9.8.1.2.10)	Wave power absorbed by an the thermal ion species for each toroidal mode [W]; Time-dependent; Matrix (ntor, nion)
pow_ntor_z	array3dflt.type (9.8.1.2.2)	Wave power absorbed by an the thermal impurity species for each toroidal mode [W]; Time-dependent; Matrix (ntor, nimpur, nzimp)
pow_ntor_fe	vecflt.type (9.8.1.2.13)	Wave power absorbed by the fast electrons for each toroidal mode [W]; Time-dependent; Vector (ntor)
pow_ntor_fi	matflt.type (9.8.1.2.10)	Wave power absorbed by an the fast ion species for each toroidal mode [W]; Time-dependent; Matrix (ntor, nion)
pow_ntor_fz	array3dflt.type (9.8.1.2.2)	Wave power absorbed by an the fast impurity species for each toroidal mode [W]; Time-dependent; Matrix (ntor, nimpur, nzimp)
cur_tor	float (9.8.1.1.1)	Wave driven toroidal current from a stand alone calculation (not consistent with other sources) [A]; Time-dependent, Float
cur_tor_ntor	vecflt.type (9.8.1.2.13)	Wave driven toroidal current for each toroidal mode number from a stand alone calculation (not consistent with other sources) [A]; Time-dependent; Vector (ntor)
mag_axis	rz0D (9.8.1.3.365)	Position of the magnetic axis. Time-dependent; Scalar
toroid_field	b0r0 (9.8.1.3.61)	Characteristics of the vacuum toroidal field (used to define the rho.tor coordinate and the normalisation of parallel current densities).

Type of: coherentwave:global\_param (3192)

### 9.8.1.3.506 waves\_grid\_1d

Grid points for profiles

member	type	description
rho_tor	vecflt.type (9.8.1.2.13)	Toroidal flux coordinate [m]. Defined as $\sqrt{(\phi - \phi_{axis}) / \pi / B_0}$ , where $B_0 = \dots / \text{global\_param} / \text{toroid\_field} / b_0$ , $\phi$ is the toroidal flux and $\phi_{axis}$ is the toroidal flux at the magnetic axis. Time-dependent; Vector (npsi)
rho_tor_norm	vecflt.type (9.8.1.2.13)	The toroidal flux coordinate normalised to be zero at the axis and unity at the last closed flux surface, or last available fluxsurface if the last closed flux surface is not defined. Time-dependent; Vector (npsi)
psi	vecflt.type (9.8.1.2.13)	Poloidal flux function [Wb], evaluated without $1/2\pi$ , such that $B_p =  \text{grad } \psi  / R / 2 / \pi$ . Time-dependent; Vector (npsi)
volume	vecflt.type (9.8.1.2.13)	Volume enclosed by the flux surface [m <sup>3</sup> ]. Time-dependent; Vector (npsi)
area	vecflt.type (9.8.1.2.13)	Cross-sectional area of the flux surface [m <sup>2</sup> ]. Time-dependent; Vector (npsi)

Type of: coherentwave:grid.1d (3192)

### 9.8.1.3.507 waves\_grid\_2d

Grid points for 2D profiles

member	type	description
grid.type	integer (9.8.1.1.2)	Grid type. 1: rectangular grid in (R,Z). 2: rectangular grid in (psi, theta). 3: unstructured grid. Integer.

member	type	description
rho_tor_norm	matflt_type (9.8.1.2.10)	The toroidal flux coordinate normalised to be zero at the axis and unity at the last closed flux surface (or last available fluxsurface from a fix boundary equilibrium code). Time-dependent; Matrix (ndim1, ndim2)
rho_tor	matflt_type (9.8.1.2.10)	Toroidal flux coordinate [m]. Defined as $\sqrt{(\phi - \phi_{\text{axis}})/\pi/B_0}$ , where $B_0 = \dots / \text{global\_param}/\text{toroid\_field}/b_0$ , $\phi$ is the toroidal flux and $\phi_{\text{axis}}$ is the toroidal flux at the magnetic axis. Time-dependent; Matrix (ndim1, ndim2)
psi	matflt_type (9.8.1.2.10)	Grid points in poloidal flux function [Wb], without $1/2\pi$ and such that $B_p =  \text{grad } \psi  / R / 2 / \pi$ . Time-dependent; Matrix (ndim1, ndim2)
theta	matflt_type (9.8.1.2.10)	Poloidal angle at the grid points (see theta.info for detailed definition); Time-dependent; Matrix (ndim1, ndim2)
r	matflt_type (9.8.1.2.10)	R (major radius) of grid points; Time-dependent; Matrix(ndim1, ndim2)
z	matflt_type (9.8.1.2.10)	Z (altitude) of grid points; Time-dependent; Matrix (ndim1, ndim2)
theta_info	theta_info (9.8.1.3.464)	Information on the poloidal angle theta.

Type of: coherentwave:grid\_2d (3192)

### 9.8.1.3.508 waves\_profiles\_1d

waves 1D radial profiles

member	type	description
powd_tot	vecflt_type (9.8.1.2.13)	Total flux surface averaged wave power density [ $\text{W}/\text{m}^3$ ]; Time-dependent; Vector (npsi)
powd_e	vecflt_type (9.8.1.2.13)	Flux surface averaged absorbed wave power density on the thermal electrons [ $\text{W}/\text{m}^3$ ]; Time-dependent; Vector (npsi)
powd_i	matflt_type (9.8.1.2.10)	Flux surface averaged absorbed wave power density on the thermal ion species [ $\text{W}/\text{m}^3$ ]; Time-dependent; Matrix (npsi, nion)
powd_z	array3dflt_type (9.8.1.2.2)	Flux surface averaged absorbed wave power density on the thermal impurities species [ $\text{W}/\text{m}^3$ ]; Time-dependent; Matrix (npsi, nimpur, nzimp)
powd_fe	vecflt_type (9.8.1.2.13)	Flux surface averaged absorbed wave power density on the fast electrons [ $\text{W}/\text{m}^3$ ]; Time-dependent; Vector (npsi)
powd_fi	matflt_type (9.8.1.2.10)	Flux surface averaged absorbed wave power density on the fast ion species [ $\text{W}/\text{m}^3$ ]; Time-dependent; Matrix (npsi, nion)
powd_fz	array3dflt_type (9.8.1.2.2)	Flux surface averaged absorbed wave power density on the fast impurities species [ $\text{W}/\text{m}^3$ ]; Time-dependent; Matrix (npsi, nimpur, nzimp)
powd_ntor	matflt_type (9.8.1.2.10)	Flux surface averaged power density for each toroidal mode number [ $\text{W}/\text{m}^3$ ]; Time-dependent; Matrix(npsi, ntor)
powd_ntor_e	matflt_type (9.8.1.2.10)	Flux surface averaged power density absorbed for each toroidal mode number on the thermal electrons [ $\text{W}/\text{m}^3$ ]; Time-dependent; Matrix (npsi, ntor)
powd_ntor_i	array3dflt_type (9.8.1.2.2)	Flux surface averaged power density absorbed for each toroidal mode number on each thermal ions species [ $\text{W}/\text{m}^3$ ]; Time-dependent; Array3D (npsi, ntor, nion)
powd_ntor_z	array4dflt_type (9.8.1.2.4)	Flux surface averaged power density absorbed for each toroidal mode number on each thermal impurity species [ $\text{W}/\text{m}^3$ ]; Time-dependent; Array3D (npsi, ntor, nimpur, nzimp)
powd_ntor_fe	matflt_type (9.8.1.2.10)	Flux surface averaged power density absorbed for each toroidal mode number on the fast electrons [ $\text{W}/\text{m}^3$ ]; Time-dependent; Matrix (npsi, ntor)
powd_ntor_fi	array3dflt_type (9.8.1.2.2)	Flux surface averaged power density absorbed for each toroidal mode number on each fast ions species [ $\text{W}/\text{m}^3$ ]; Time-dependent; Array3D (npsi, ntor, nion)
powd_ntor_fz	array4dflt_type (9.8.1.2.4)	Flux surface averaged power density absorbed for each toroidal mode number on each fast impurity species [ $\text{W}/\text{m}^3$ ]; Time-dependent; Array3D (npsi, ntor, nimpur, nzimp)
curd_tor	vecflt_type (9.8.1.2.13)	Flux surface averaged wave driven toroidal current density = $\text{average}(j\phi/R) / \text{average}(1/R)$ [ $\text{A}/\text{m}^2$ ]; Time-dependent; Vector (npsi)
curd_torntor	matflt_type (9.8.1.2.10)	Flux surface averaged wave driven toroidal current density for each toroidal mode number = $\text{average}(j\phi/R) / \text{average}(1/R)$ [ $\text{A}/\text{m}^2$ ]; Time-dependent; Matrix (npsi, ntor)
pow_tot	vecflt_type (9.8.1.2.13)	Cumulative volume integral of the absorbed wave power density [W]; Time-dependent; Vector (npsi)
pow_e	vecflt_type (9.8.1.2.13)	Cumulative volume integral of the absorbed wave power on the thermal electrons [W]; Time-dependent; Vector (npsi)
pow_i	matflt_type (9.8.1.2.10)	Cumulative volume integral of the absorbed wave power on the thermal ion species [W]; Time-dependent; Matrix (npsi, nion)
pow_z	array3dflt_type (9.8.1.2.2)	Cumulative volume integral of the absorbed wave power on the thermal impurities species [W]; Time-dependent; Matrix (npsi, nimpur, nzimp)
pow_fe	vecflt_type (9.8.1.2.13)	Cumulative volume integral of the absorbed wave power on the fast electrons [W]; Time-dependent; Vector (npsi)
pow_fi	matflt_type (9.8.1.2.10)	Cumulative volume integral of the absorbed wave power on the fast ion species [W]; Time-dependent; Matrix (npsi, nion)
pow_fz	array3dflt_type (9.8.1.2.2)	Cumulative volume integral of the absorbed wave power on the fast impurities species [W]; Time-dependent; Matrix (npsi, nimpur, nzimp)
pow_ntor	matflt_type (9.8.1.2.10)	Cumulative volume integral of the absorbed wave power for each toroidal mode number [W]; Time-dependent; Matrix (npsi, ntor)
pow_ntor_e	matflt_type (9.8.1.2.10)	Cumulative volume integral of the absorbed wave power for each toroidal mode number on the thermal electrons [W]; Time-dependent; Matrix (npsi, ntor)

member	type	description
pow_ntor_i	array3dflt.type (9.8.1.2.2)	Cumulative volume integral of the absorbed wave power for each toroidal mode number on each thermal ions species [W]; Time-dependent; Array3D (npsi, ntor, nion)
pow_ntor_z	array3dflt.type (9.8.1.2.2)	Cumulative volume integral of the absorbed wave power for each toroidal mode number on each thermal impurity species [W]; Time-dependent; Array3D (npsi, ntor, nimpur, nzimp)
pow_ntor_fe	matflt.type (9.8.1.2.10)	Cumulative volume integral of the absorbed wave power for each toroidal mode number on the fast electrons [W]; Time-dependent; Matrix (npsi, ntor)
pow_ntor_fi	array3dflt.type (9.8.1.2.2)	Cumulative volume integral of the absorbed wave power for each toroidal mode number on each fast ions species [W]; Time-dependent; Array3D (npsi, ntor, nion)
pow_ntor_fz	array3dflt.type (9.8.1.2.2)	Cumulative volume integral of the absorbed wave power for each toroidal mode number on each fast impurity species [W]; Time-dependent; Array3D (npsi, ntor, nimpur, nzimp)
curd_par	vecflt.type (9.8.1.2.13)	Flux surface averaged wave driven parallel current density = average(j.B) / B0, where B0 = global.param/toroid.field/b0; [A/m <sup>2</sup> ]; Time-dependent; Vector (npsi)
curd_pamtor	matflt.type (9.8.1.2.10)	Flux surface averaged wave driven parallel current density for each toroidal mode number = average(j.B) / B0, where B0 = global.param/toroid.field/b0; [A/m <sup>2</sup> ]; Time-dependent; Matrix (npsi, ntor)
cur_tor	vecflt.type (9.8.1.2.13)	Wave driven toroidal current inside a flux surface [A]; Time-dependent; Vector (npsi)
cur_tor_ntor	matflt.type (9.8.1.2.10)	Wave driven toroidal current inside a flux surface for each toroidal mode number [A]; Time-dependent; Matrix (npsi, ntor)
e_plus_ave	matflt.type (9.8.1.2.10)	The left hand polarised electric field component, E_plus [V/m], averaged over the flux surface, where the averaged is weighted with the power deposition, P, such that e_plus_ave = ave( E_plus P ) / ave( P ), where ave(*) is the flux surface average operator; Time-dependent; Matrix (npsi, ntor)
e_minus_ave	matflt.type (9.8.1.2.10)	The right hand polarised electric field component, E_minus [V/m], averaged over the flux surface, where the averaged is weighted with the power deposition, P, such that e_minus_ave = ave( E_minus P ) / ave( P ), where (*) is the flux surface average operator; Time-dependent; Matrix (npsi, ntor)
e_para_ave	matflt.type (9.8.1.2.10)	The parallel electric field component, E_para [V/m], averaged over the flux surface, where the averaged is weighted with the power deposition, P, such that e_para_ave = ave( E_para P ) / ave( P ), where ave(*) is the flux surface average operator; Time-dependent; Matrix (npsi, ntor)
k_perp_ave	matflt.type (9.8.1.2.10)	The perpendicular wave number, k_perp [1/m], averaged over the flux surface, where the averaged is weighted with the power deposition, P, such that k_perp_ave = ave( k_perp P ) / ( P ), where ave(*) is the flux surface average operator; Time-dependent; Matrix (npsi, ntor)

Type of: coherentwave:profiles\_1d (3192)

### 9.8.1.3.509 waves\_profiles\_2d

waves 2D profiles in poloidal cross-section

member	type	description
powd_tot	matflt.type (9.8.1.2.10)	Total wave power density; Time-dependent [W/m <sup>3</sup> ]; Matrix (ndim1, ndim2)
powd_e	matflt.type (9.8.1.2.10)	Absorbed wave power density on the thermal electrons [W/m <sup>3</sup> ]; Time-dependent; Matrix (ndim1, ndim2)
powd_i	array3dflt.type (9.8.1.2.2)	Absorbed wave power density on each thermal ion species [W/m <sup>3</sup> ]; Time-dependent; Array3D (ndim1, ndim2, nion)
powd_z	array4dflt.type (9.8.1.2.4)	Absorbed wave power density on each thermal impurity species [W/m <sup>3</sup> ]; Time-dependent; Array3D (ndim1, ndim2, nimpur, nzimp)
powd_fe	matflt.type (9.8.1.2.10)	Absorbed wave power density on the fast electrons [W/m <sup>3</sup> ]; Time-dependent; Matrix (ndim1, ndim2)
powd_fi	array3dflt.type (9.8.1.2.2)	Absorbed wave power density on each fast ion species [W/m <sup>3</sup> ]; Time-dependent; Array3D (ndim1, ndim2, nion)
powd_fz	array4dflt.type (9.8.1.2.4)	Absorbed wave power density on each fast impurity species [W/m <sup>3</sup> ]; Time-dependent; Array3D (ndim1, ndim2, nimpur, nzimp)
powd_ntor	array3dflt.type (9.8.1.2.2)	Absorbed power density for each toroidal mode number [W/m <sup>3</sup> ]; Time-dependent; Array 3D (ndim1, ndim2, ntor)
powd_ntor_e	array3dflt.type (9.8.1.2.2)	Absorbed power density for each toroidal mode number on the thermal electrons [W/m <sup>3</sup> ]; Time-dependent; Array 3D (ndim1, ndim2, ntor)
powd_ntor_i	array4dflt.type (9.8.1.2.4)	Absorbed power density for each toroidal mode number on each thermal ions species [W/m <sup>3</sup> ]; Time-dependent; Array4D (ndim1, ndim2, ntor, nion)
powd_ntor_z	array5dflt.type (9.8.1.2.5)	Absorbed power density for each toroidal mode number on each thermal impurity species [W/m <sup>3</sup> ]; Time-dependent; Array4D (ndim1, ndim2, ntor, nimpur, nzimp)
powd_ntor_fe	array3dflt.type (9.8.1.2.2)	Absorbed power density for each toroidal mode number on the fast electrons [W/m <sup>3</sup> ]; Time-dependent; Array 3D (ndim1, ndim2, ntor)
powd_ntor_fi	array4dflt.type (9.8.1.2.4)	Absorbed power density for each toroidal mode number on each fast ions species [W/m <sup>3</sup> ]; Time-dependent; Array4D (ndim1, ndim2, ntor, nion)
powd_ntor_fz	array5dflt.type (9.8.1.2.5)	Absorbed power density for each toroidal mode number on each fast impurity species [W/m <sup>3</sup> ]; Time-dependent; Array4D (ndim1, ndim2, ntor, nimpur, nzimp)
powd_iharm	array5dflt.type (9.8.1.2.5)	Power density absorbed by an ion species for each toroidal mode number at a given harmonic cyclotron resonance; Time-dependent (W/m <sup>3</sup> ); Array5D (ndim1, ndim2, ntor, nion, nharm)

Type of: coherentwave:profiles\_2d (3192)



### 9.8.1.3.510 waves\_rtposition

Ray/beam position

member	type	description
r	vecflt_type (9.8.1.2.13)	Major radius location [m]; Time-dependent; Vector (npoints)
z	vecflt_type (9.8.1.2.13)	Vertical location [m]; Time-dependent; Vector (npoints)
phi	vecflt_type (9.8.1.2.13)	Toroidal angle location [rad]; Time-dependent; Vector (npoints)
psi	vecflt_type (9.8.1.2.13)	Poloidal magnetic flux coordinate [Wb], without $1/2\pi$ and such that $B_p =  \text{grad } \psi  / R / 2 / \pi$ ; Time-dependent; Vector (npoints)
theta	vecflt_type (9.8.1.2.13)	Poloidal angle location [rad]; Time-dependent; Vector (npoints). PRECISE THE DEFINITION OF THE POLOIDAL ANGLE, SEE WAVES/COHERENTWAVE(:)/GRID_2D.

Type of: beamtracing:position (3174)

### 9.8.1.3.511 waves\_rtwavevector

Ray/beam wave vector

member	type	description
kr	vecflt_type (9.8.1.2.13)	Wave vector in the major radius direction [ $m^{-1}$ ], Vector (npoints). Time-dependent
kz	vecflt_type (9.8.1.2.13)	Wave vector in the vertical direction [ $m^{-1}$ ], Vector (npoints). Time-dependent
kphi	vecflt_type (9.8.1.2.13)	Wave vector in the toroidal direction [ $m^{-1}$ ], Vector (npoints). Time-dependent
npar	vecflt_type (9.8.1.2.13)	Parallel refractive index, Vector (npoints). Time-dependent
nperp	vecflt_type (9.8.1.2.13)	Perpendicular refractive index, Vector (npoints). Time-dependent
ntor	vecflt_type (9.8.1.2.13)	Toroidal wave number, Vector (npoints/1). If var_ntor=0, ntor is constant along the ray path and the last dimension is of size 1 in order to avoid useless repetition of ntor constant value. Time-dependent
var_ntor	integer (9.8.1.1.2)	Flag telling whether ntor is constant along the ray path (0) or varying (1). Integer

Type of: beamtracing:wavevector (3174)

### 9.8.1.3.512 weighted\_markers

Array of NMARK weighted markers in NDIM dimensions

member	type	description
variable_ids(:)	identifier (9.8.1.3.242)	Identifier for the variable_ids stored in the coord matrix (see coordinate.identifier_definitions in the Documentation website under Conventions/Enumerated.datatypes). Vector(NDIM)
coord	matflt_type (9.8.1.2.10)	Coordinates of the markers. The coordinates used is specified in variable_ids. Time-dependent; Float(NMARK,NDIM)
weight	vecflt_type (9.8.1.2.13)	Weight of the marker; number of real particles represented by the marker. Time-dependent; Float(NMARK)

Type of: dist\_func:markers (3259) | distsource\_source:markers (3284)

### 9.8.1.3.513 whatref

Structure defining a database entry and the CPO occurrence

member	type	description
user	string (9.8.1.1.3)	Name of the user if private data, public if public ITM database.
machine	string (9.8.1.1.3)	Name of the device
shot	integer (9.8.1.1.2)	Shot number
run	integer (9.8.1.1.2)	Run number
occurrence	integer (9.8.1.1.2)	Occurrence number of the CPO in the reference entry

Type of: datainfo:whatref (3247)

### 9.8.1.3.514 width

Angular width of each in the poloidal and toroidal direction;



member	type	description
dtheta	vecflt_type (9.8.1.2.13)	Angular poloidal width of holes; Vector (n.holes)
phi	vecflt_type (9.8.1.2.13)	Angular toroidal width of holes; Vector (n.holes)

Type of: holes:width (3347)

### 9.8.1.3.515 xpts

Position of the X-point(s)

member	type	description
position	rz1D (9.8.1.3.366)	Position of the X-point(s); Time-dependent; Vector (nmeas)
source	string (9.8.1.1.3)	Description or path to the source signal (diagnostic or genprof, from which to read all info on the signal), e.g. 'magdiag/bpol.probes/measure/value'. String
weight	vecflt_type (9.8.1.2.13)	weight given to the measurement ( $\zeta=0$ ); -1 if exact data; Time-dependent; Vector (nmeas)
sigma	vecflt_type (9.8.1.2.13)	standard deviation of the measurement; Time-dependent; Vector (nmeas)
calculated	vecflt_type (9.8.1.2.13)	Signal as recalculated by the equilibrium code; Time-dependent; Vector (nmeas)
chi2	vecflt_type (9.8.1.2.13)	chi <sup>2</sup> of (calculated-measured); Time-dependent; Vector (nmeas)

Type of: eqconstraint:xpts (3302)

### 9.8.1.3.516 xyz0D

Structure for a single (x,y,z) position (0D)

member	type	description
x	float (9.8.1.1.1)	Spatial coordinate x [m]
y	float (9.8.1.1.1)	Spatial coordinate y [m]
z	float (9.8.1.1.1)	Spatial coordinate z [m]

Type of: flat\_polygon:basis1 (3315) I flat\_polygon:basis2 (3315) I flat\_polygon:origin (3315) I rectanglexyz:point01 (3459) I rectanglexyz:point10 (3459) I rectanglexyz:point11 (3459) I trianglexyz:point1 (3579) I trianglexyz:point2 (3579) I trianglexyz:point3 (3579) [itmtypes](#) <sup>187</sup>

## 9.8.2 CPO Instances

Generated from the ITM data structure schemas.

### 9.8.2.1 Fortran

#### 9.8.2.1.1 amns

<a href="#">datainfo</a> (3109)	amns%datainfo (datainfo) (9.8.1.3.141)
<a href="#">dataprovider</a> (3247)	amns%datainfo%dataprovider (string) (9.8.1.1.3)
<a href="#">putdate</a> (3247)	amns%datainfo%putdate (string) (9.8.1.1.3)
<a href="#">source</a> (3247)	amns%datainfo%source (string) (9.8.1.1.3)
<a href="#">comment</a> (3247)	amns%datainfo%comment (string) (9.8.1.1.3)
<a href="#">cocos</a> (3247)	amns%datainfo%cocos (integer) (9.8.1.1.2)
<a href="#">id</a> (3247)	amns%datainfo%id (integer) (9.8.1.1.2)
<a href="#">isref</a> (3247)	amns%datainfo%isref (integer) (9.8.1.1.2)
<a href="#">whatref</a> (3247)	amns%datainfo%whatref (whatref) (9.8.1.3.513)
<a href="#">user</a> (3619)	amns%datainfo%whatref%user (string) (9.8.1.1.3)
<a href="#">machine</a> (3619)	amns%datainfo%whatref%machine (string) (9.8.1.1.3)
<a href="#">shot</a> (3619)	amns%datainfo%whatref%shot (integer) (9.8.1.1.2)
<a href="#">run</a> (3619)	amns%datainfo%whatref%run (integer) (9.8.1.1.2)
<a href="#">occurrence</a> (3619)	amns%datainfo%whatref%occurrence (integer) (9.8.1.1.2)
<a href="#">putinfo</a> (3247)	amns%datainfo%putinfo (putinfo) (9.8.1.3.349)
<a href="#">putmethod</a> (3455)	amns%datainfo%putinfo%putmethod (string) (9.8.1.1.3)
<a href="#">putaccess</a> (3455)	amns%datainfo%putinfo%putaccess (string) (9.8.1.1.3)

<sup>187</sup>[https://www.efda-itm.eu/ITM/html/itmtypes\\_\\_4.10b.11.html](https://www.efda-itm.eu/ITM/html/itmtypes__4.10b.11.html)

putlocation (3455)	amns%datainfo%putinfo%putlocation (string) (9.8.1.1.3)
rights (3455)	amns%datainfo%putinfo%rights (string) (9.8.1.1.3)
version (3109)	amns%version (string) (9.8.1.1.3)
source (3109)	amns%source (string) (9.8.1.1.3)
zn (3109)	amns%zn (integer) (9.8.1.1.2)
amn (3109)	amns%amn (float) (9.8.1.1.1)
process (3109)	amns%process(:) (amns_processType) (9.8.1.3.55)
proc_label (3161)	amns%process(:)%proc_label (string) (9.8.1.1.3)
reactant (3161)	amns%process(:)%reactant(:) (reacprodType) (9.8.1.3.351)
label (3457)	amns%process(:)%reactant(:)%label (string) (9.8.1.1.3)
constituents (3457)	amns%process(:)%reactant(:)%constituents(:) (amns_constituentType) (9.8.1.3.54)
label (3160)	amns%process(:)%reactant(:)%constituents(:)%label (string) (9.8.1.1.3)
zn (3160)	amns%process(:)%reactant(:)%constituents(:)%zn (integer) (9.8.1.1.2)
mn (3160)	amns%process(:)%reactant(:)%constituents(:)%mn (integer) (9.8.1.1.2)
multiplicity (3160)	amns%process(:)%reactant(:)%constituents(:)%multiplicity (float) (9.8.1.1.1)
role (3457)	amns%process(:)%reactant(:)%role (identifier) (9.8.1.3.242)
id (3348)	amns%process(:)%reactant(:)%role%id (string) (9.8.1.1.3)
flag (3348)	amns%process(:)%reactant(:)%role%flag (integer) (9.8.1.1.2)
description (3348)	amns%process(:)%reactant(:)%role%description (string) (9.8.1.1.3)
amn (3457)	amns%process(:)%reactant(:)%amn (float) (9.8.1.1.1)
relative (3457)	amns%process(:)%reactant(:)%relative (integer) (9.8.1.1.2)
za (3457)	amns%process(:)%reactant(:)%za (float) (9.8.1.1.1)
multiplicity (3457)	amns%process(:)%reactant(:)%multiplicity (float) (9.8.1.1.1)
metastable (3457)	amns%process(:)%reactant(:)%metastable (vecint_type) (9.8.1.2.14)
metastable_label (3457)	amns%process(:)%reactant(:)%metastable_label (string) (9.8.1.1.3)
product (3161)	amns%process(:)%product(:) (reacprodType) (9.8.1.3.351)
label (3457)	amns%process(:)%product(:)%label (string) (9.8.1.1.3)
constituents (3457)	amns%process(:)%product(:)%constituents(:) (amns_constituentType) (9.8.1.3.54)
label (3160)	amns%process(:)%product(:)%constituents(:)%label (string) (9.8.1.1.3)
zn (3160)	amns%process(:)%product(:)%constituents(:)%zn (integer) (9.8.1.1.2)
mn (3160)	amns%process(:)%product(:)%constituents(:)%mn (integer) (9.8.1.1.2)
multiplicity (3160)	amns%process(:)%product(:)%constituents(:)%multiplicity (float) (9.8.1.1.1)
role (3457)	amns%process(:)%product(:)%role (identifier) (9.8.1.3.242)
id (3348)	amns%process(:)%product(:)%role%id (string) (9.8.1.1.3)
flag (3348)	amns%process(:)%product(:)%role%flag (integer) (9.8.1.1.2)
description (3348)	amns%process(:)%product(:)%role%description (string) (9.8.1.1.3)
amn (3457)	amns%process(:)%product(:)%amn (float) (9.8.1.1.1)
relative (3457)	amns%process(:)%product(:)%relative (integer) (9.8.1.1.2)
za (3457)	amns%process(:)%product(:)%za (float) (9.8.1.1.1)
multiplicity (3457)	amns%process(:)%product(:)%multiplicity (float) (9.8.1.1.1)
metastable (3457)	amns%process(:)%product(:)%metastable (vecint_type) (9.8.1.2.14)
metastable_label (3457)	amns%process(:)%product(:)%metastable_label (string) (9.8.1.1.3)
sup_string (3161)	amns%process(:)%sup_string (vecstring_type) (9.8.1.2.15)
sup_real (3161)	amns%process(:)%sup_real (vecflt_type) (9.8.1.2.13)
sup_int (3161)	amns%process(:)%sup_int (vecint_type) (9.8.1.2.14)
quality (3161)	amns%process(:)%quality (identifier) (9.8.1.3.242)
id (3348)	amns%process(:)%quality%id (string) (9.8.1.1.3)
flag (3348)	amns%process(:)%quality%flag (integer) (9.8.1.1.2)
description (3348)	amns%process(:)%quality%description (string) (9.8.1.1.3)
err_proc_label (3161)	amns%process(:)%err_proc_label (string) (9.8.1.1.3)
tables (3109)	amns%tables(:) (tables) (9.8.1.3.428)
ndim (3534)	amns%tables(:)%ndim (integer) (9.8.1.1.2)
coord_index (3534)	amns%tables(:)%coord_index (integer) (9.8.1.1.2)
result_label (3534)	amns%tables(:)%result_label (string) (9.8.1.1.3)
result_unit (3534)	amns%tables(:)%result_unit (string) (9.8.1.1.3)
result_trans (3534)	amns%tables(:)%result_trans (integer) (9.8.1.1.2)
zmin (3534)	amns%tables(:)%zmin (vecint_type) (9.8.1.2.14)
zmax (3534)	amns%tables(:)%zmax (vecint_type) (9.8.1.2.14)
state_label (3534)	amns%tables(:)%state_label (vecstring_type) (9.8.1.2.15)
table (3534)	amns%tables(:)%table(:) (table) (9.8.1.3.427)
filled (3533)	amns%tables(:)%table(:)%filled (integer) (9.8.1.1.2)

table_0d (3533)	amns%tables(:)%table(:)%table_0d (float) (9.8.1.1.1)
table_1d (3533)	amns%tables(:)%table(:)%table_1d (vecflt_type) (9.8.1.2.13)
table_2d (3533)	amns%tables(:)%table(:)%table_2d (matflt_type) (9.8.1.2.10)
table_3d (3533)	amns%tables(:)%table(:)%table_3d (array3dfilt_type) (9.8.1.2.2)
table_4d (3533)	amns%tables(:)%table(:)%table_4d (array4dfilt_type) (9.8.1.2.4)
table_5d (3533)	amns%tables(:)%table(:)%table_5d (array5dfilt_type) (9.8.1.2.5)
table_6d (3533)	amns%tables(:)%table(:)%table_6d (array6dfilt_type) (9.8.1.2.6)
coord1_str (3533)	amns%tables(:)%table(:)%coord1_str (vecstring_type) (9.8.1.2.15)
coord2_str (3533)	amns%tables(:)%table(:)%coord2_str (vecstring_type) (9.8.1.2.15)
coord3_str (3533)	amns%tables(:)%table(:)%coord3_str (vecstring_type) (9.8.1.2.15)
coord4_str (3533)	amns%tables(:)%table(:)%coord4_str (vecstring_type) (9.8.1.2.15)
coord5_str (3533)	amns%tables(:)%table(:)%coord5_str (vecstring_type) (9.8.1.2.15)
coord6_str (3533)	amns%tables(:)%table(:)%coord6_str (vecstring_type) (9.8.1.2.15)
quality (3533)	amns%tables(:)%table(:)%quality (identifier) (9.8.1.3.242)
id (3348)	amns%tables(:)%table(:)%quality%id (string) (9.8.1.1.3)
flag (3348)	amns%tables(:)%table(:)%quality%flag (integer) (9.8.1.1.2)
description (3348)	amns%tables(:)%table(:)%quality%description (string) (9.8.1.1.3)
data_source (3534)	amns%tables(:)%data_source (string) (9.8.1.1.3)
data_provide (3534)	amns%tables(:)%data_provide (string) (9.8.1.1.3)
data_citation (3534)	amns%tables(:)%data_citation (string) (9.8.1.1.3)
tables.coord (3109)	amns%tables.coord(:) (tables_coord) (9.8.1.3.429)
coords (3535)	amns%tables.coord(:)%coords(:) (coords) (9.8.1.3.110)
coord (3216)	amns%tables.coord(:)%coords(:)%coord (vecflt_type) (9.8.1.2.13)
coord_label (3216)	amns%tables.coord(:)%coords(:)%coord_label (vecstring_type) (9.8.1.2.15)
extrap_type (3216)	amns%tables.coord(:)%coords(:)%extrap_type (vecint_type) (9.8.1.2.14)
interp_type (3216)	amns%tables.coord(:)%coords(:)%interp_type (integer) (9.8.1.1.2)
label (3216)	amns%tables.coord(:)%coords(:)%label (string) (9.8.1.1.3)
unit (3216)	amns%tables.coord(:)%coords(:)%unit (string) (9.8.1.1.3)
transform (3216)	amns%tables.coord(:)%coords(:)%transform (integer) (9.8.1.1.2)
spacing (3216)	amns%tables.coord(:)%coords(:)%spacing (integer) (9.8.1.1.2)
version_ind (3109)	amns%version_ind(:) (version_ind) (9.8.1.3.487)
description (3593)	amns%version_ind(:)%description (vecstring_type) (9.8.1.2.15)
releasedate (3593)	amns%version_ind(:)%releasedate (string) (9.8.1.1.3)
data_release (3593)	amns%version_ind(:)%data_release(:) (data_release) (9.8.1.3.140)
shot (3246)	amns%version_ind(:)%data_release(:)%shot (integer) (9.8.1.1.2)
run (3246)	amns%version_ind(:)%data_release(:)%run (integer) (9.8.1.1.2)
description (3246)	amns%version_ind(:)%data_release(:)%description (vecstring_type) (9.8.1.2.15)
codeparam (3109)	amns%codeparam (codeparam) (9.8.1.3.84)
codename (3190)	amns%codeparam%codename (string) (9.8.1.1.3)
codeversion (3190)	amns%codeparam%codeversion (string) (9.8.1.1.3)
parameters (3190)	amns%codeparam%parameters (string) (9.8.1.1.3)
output_diag (3190)	amns%codeparam%output_diag (string) (9.8.1.1.3)
output_flag (3190)	amns%codeparam%output_flag (integer) (9.8.1.1.2)
time (3109)	amns%time (float) (9.8.1.1.1)

### 9.8.2.1.2 antennas

datainfo (3110)	antennas%datainfo (datainfo) (9.8.1.3.141)
dataprovider (3247)	antennas%datainfo%dataprovider (string) (9.8.1.1.3)
putdate (3247)	antennas%datainfo%putdate (string) (9.8.1.1.3)
source (3247)	antennas%datainfo%source (string) (9.8.1.1.3)
comment (3247)	antennas%datainfo%comment (string) (9.8.1.1.3)
cocos (3247)	antennas%datainfo%cocos (integer) (9.8.1.1.2)
id (3247)	antennas%datainfo%id (integer) (9.8.1.1.2)
isref (3247)	antennas%datainfo%isref (integer) (9.8.1.1.2)
whatref (3247)	antennas%datainfo%whatref (whatref) (9.8.1.3.513)
user (3619)	antennas%datainfo%whatref%user (string) (9.8.1.1.3)
machine (3619)	antennas%datainfo%whatref%machine (string) (9.8.1.1.3)
shot (3619)	antennas%datainfo%whatref%shot (integer) (9.8.1.1.2)
run (3619)	antennas%datainfo%whatref%run (integer) (9.8.1.1.2)
occurrence (3619)	antennas%datainfo%whatref%occurrence (integer) (9.8.1.1.2)

putinfo (3247)	antennas%datainfo%putinfo (putinfo) (9.8.1.3.349)
putmethod (3455)	antennas%datainfo%putinfo%putmethod (string) (9.8.1.1.3)
putaccess (3455)	antennas%datainfo%putinfo%putaccess (string) (9.8.1.1.3)
putlocation (3455)	antennas%datainfo%putinfo%putlocation (string) (9.8.1.1.3)
rights (3455)	antennas%datainfo%putinfo%rights (string) (9.8.1.1.3)
antenna_ec (3110)	antennas%antenna_ec(:) (antenna_ec) (9.8.1.3.56)
name (3162)	antennas%antenna_ec(:)%name (string) (9.8.1.1.3)
frequency (3162)	antennas%antenna_ec(:)%frequency (float) (9.8.1.1.1)
power (3162)	antennas%antenna_ec(:)%power (exp0D) (9.8.1.3.203)
value (3309)	antennas%antenna_ec(:)%power%value (float) (9.8.1.1.1)
abserror (3309)	antennas%antenna_ec(:)%power%abserror (float) (9.8.1.1.1)
relerror (3309)	antennas%antenna_ec(:)%power%relerror (float) (9.8.1.1.1)
mode (3162)	antennas%antenna_ec(:)%mode (integer) (9.8.1.1.2)
position (3162)	antennas%antenna_ec(:)%position (rzphi0D) (9.8.1.3.371)
r (3477)	antennas%antenna_ec(:)%position%r (float) (9.8.1.1.1)
z (3477)	antennas%antenna_ec(:)%position%z (float) (9.8.1.1.1)
phi (3477)	antennas%antenna_ec(:)%position%phi (float) (9.8.1.1.1)
launchangles (3162)	antennas%antenna_ec(:)%launchangles (launchangles) (9.8.1.3.252)
alpha (3358)	antennas%antenna_ec(:)%launchangles%alpha (float) (9.8.1.1.1)
beta (3358)	antennas%antenna_ec(:)%launchangles%beta (float) (9.8.1.1.1)
beam (3162)	antennas%antenna_ec(:)%beam (rfbeam) (9.8.1.3.364)
spot (3470)	antennas%antenna_ec(:)%beam%spot (spot) (9.8.1.3.421)
size (3527)	antennas%antenna_ec(:)%beam%spot%size (vecflt_type) (9.8.1.2.13)
angle (3527)	antennas%antenna_ec(:)%beam%spot%angle (float) (9.8.1.1.1)
phaseellipse (3470)	antennas%antenna_ec(:)%beam%phaseellipse (phaseellipse) (9.8.1.3.336)
invcurvrad (3442)	antennas%antenna_ec(:)%beam%phaseellipse%invcurvrad (vecflt_type) (9.8.1.2.13)
angle (3442)	antennas%antenna_ec(:)%beam%phaseellipse%angle (float) (9.8.1.1.1)
codeparam (3162)	antennas%antenna_ec(:)%codeparam (codeparam) (9.8.1.3.84)
codename (3190)	antennas%antenna_ec(:)%codeparam%codename (string) (9.8.1.1.3)
codeversion (3190)	antennas%antenna_ec(:)%codeparam%codeversion (string) (9.8.1.1.3)
parameters (3190)	antennas%antenna_ec(:)%codeparam%parameters (string) (9.8.1.1.3)
output_diag (3190)	antennas%antenna_ec(:)%codeparam%output_diag (string) (9.8.1.1.3)
output_flag (3190)	antennas%antenna_ec(:)%codeparam%output_flag (integer) (9.8.1.1.2)
antenna_ic (3110)	antennas%antenna_ic(:) (antenna_ic) (9.8.1.3.57)
name (3163)	antennas%antenna_ic(:)%name (string) (9.8.1.1.3)
frequency (3163)	antennas%antenna_ic(:)%frequency (exp0D) (9.8.1.3.203)
value (3309)	antennas%antenna_ic(:)%frequency%value (float) (9.8.1.1.1)
abserror (3309)	antennas%antenna_ic(:)%frequency%abserror (float) (9.8.1.1.1)
relerror (3309)	antennas%antenna_ic(:)%frequency%relerror (float) (9.8.1.1.1)
power (3163)	antennas%antenna_ic(:)%power (exp0D) (9.8.1.3.203)
value (3309)	antennas%antenna_ic(:)%power%value (float) (9.8.1.1.1)
abserror (3309)	antennas%antenna_ic(:)%power%abserror (float) (9.8.1.1.1)
relerror (3309)	antennas%antenna_ic(:)%power%relerror (float) (9.8.1.1.1)
ntor (3163)	antennas%antenna_ic(:)%ntor (vecint_type) (9.8.1.2.14)
power_ntor (3163)	antennas%antenna_ic(:)%power_ntor (vecflt_type) (9.8.1.2.13)
setup (3163)	antennas%antenna_ic(:)%setup (antennaic_setup) (9.8.1.3.59)
straps (3165)	antennas%antenna_ic(:)%setup%straps(:) (straps) (9.8.1.3.423)
current (3529)	antennas%antenna_ic(:)%setup%straps(:)%current (exp0D) (9.8.1.3.203)
value (3309)	antennas%antenna_ic(:)%setup%straps(:)%current%value (float) (9.8.1.1.1)
abserror (3309)	antennas%antenna_ic(:)%setup%straps(:)%current%abserror (float) (9.8.1.1.1)
relerror (3309)	antennas%antenna_ic(:)%setup%straps(:)%current%relerror (float) (9.8.1.1.1)
phase (3529)	antennas%antenna_ic(:)%setup%straps(:)%phase (exp0D) (9.8.1.3.203)
value (3309)	antennas%antenna_ic(:)%setup%straps(:)%phase%value (float) (9.8.1.1.1)
abserror (3309)	antennas%antenna_ic(:)%setup%straps(:)%phase%abserror (float) (9.8.1.1.1)
relerror (3309)	antennas%antenna_ic(:)%setup%straps(:)%phase%relerror (float) (9.8.1.1.1)
phi_centre (3529)	antennas%antenna_ic(:)%setup%straps(:)%phi_centre (float) (9.8.1.1.1)
width (3529)	antennas%antenna_ic(:)%setup%straps(:)%width (float) (9.8.1.1.1)
dist2wall (3529)	antennas%antenna_ic(:)%setup%straps(:)%dist2wall (float) (9.8.1.1.1)
coord_strap (3529)	antennas%antenna_ic(:)%setup%straps(:)%coord_strap (rz1D) (9.8.1.3.366)
r (3472)	antennas%antenna_ic(:)%setup%straps(:)%coord_strap%r (vecflt_type) (9.8.1.2.13)
z (3472)	antennas%antenna_ic(:)%setup%straps(:)%coord_strap%z (vecflt_type) (9.8.1.2.13)

current (3165)	antennas%antenna.ic(:)%setup%current (current) (9.8.1.3.137)
mpol (3243)	antennas%antenna.ic(:)%setup%current%mpol (vecint.type) (9.8.1.2.14)
ntor (3243)	antennas%antenna.ic(:)%setup%current%ntor (vecint.type) (9.8.1.2.14)
spectrum (3243)	antennas%antenna.ic(:)%setup%current%spectrum (exp1D) (9.8.1.3.204)
value (3310)	antennas%antenna.ic(:)%setup%current%spectrum%value (vecflt.type) (9.8.1.2.13)
abserror (3310)	antennas%antenna.ic(:)%setup%current%spectrum%abserror (vecflt.type) (9.8.1.2.13)
releror (3310)	antennas%antenna.ic(:)%setup%current%spectrum%releror (vecflt.type) (9.8.1.2.13)
rz_reference (3243)	antennas%antenna.ic(:)%setup%current%rz_reference (rz0D) (9.8.1.3.365)
r (3471)	antennas%antenna.ic(:)%setup%current%rz_reference%r (float) (9.8.1.1.1)
z (3471)	antennas%antenna.ic(:)%setup%current%rz_reference%z (float) (9.8.1.1.1)
codeparam (3163)	antennas%antenna.ic(:)%codeparam (codeparam) (9.8.1.3.84)
codename (3190)	antennas%antenna.ic(:)%codeparam%codename (string) (9.8.1.1.3)
codeversion (3190)	antennas%antenna.ic(:)%codeparam%codeversion (string) (9.8.1.1.3)
parameters (3190)	antennas%antenna.ic(:)%codeparam%parameters (string) (9.8.1.1.3)
output_diag (3190)	antennas%antenna.ic(:)%codeparam%output_diag (string) (9.8.1.1.3)
output_flag (3190)	antennas%antenna.ic(:)%codeparam%output_flag (integer) (9.8.1.1.2)
antenna_lh (3110)	antennas%antenna.lh(:) (antenna_lh) (9.8.1.3.58)
name (3164)	antennas%antenna.lh(:)%name (string) (9.8.1.1.3)
frequency (3164)	antennas%antenna.lh(:)%frequency (float) (9.8.1.1.1)
power (3164)	antennas%antenna.lh(:)%power (exp0D) (9.8.1.3.203)
value (3309)	antennas%antenna.lh(:)%power%value (float) (9.8.1.1.1)
abserror (3309)	antennas%antenna.lh(:)%power%abserror (float) (9.8.1.1.1)
releror (3309)	antennas%antenna.lh(:)%power%releror (float) (9.8.1.1.1)
n_par (3164)	antennas%antenna.lh(:)%n_par (float) (9.8.1.1.1)
position (3164)	antennas%antenna.lh(:)%position (rzphi0D) (9.8.1.3.371)
r (3477)	antennas%antenna.lh(:)%position%r (float) (9.8.1.1.1)
z (3477)	antennas%antenna.lh(:)%position%z (float) (9.8.1.1.1)
phi (3477)	antennas%antenna.lh(:)%position%phi (float) (9.8.1.1.1)
setup (3164)	antennas%antenna.lh(:)%setup (antennalh_setup) (9.8.1.3.60)
modules (3166)	antennas%antenna.lh(:)%setup%modules (modules) (9.8.1.3.282)
nma_theta (3388)	antennas%antenna.lh(:)%setup%modules%nma_theta (integer) (9.8.1.1.2)
nma_phi (3388)	antennas%antenna.lh(:)%setup%modules%nma_phi (integer) (9.8.1.1.2)
ima_theta (3388)	antennas%antenna.lh(:)%setup%modules%ima_theta (vecint.type) (9.8.1.2.14)
ima_phi (3388)	antennas%antenna.lh(:)%setup%modules%ima_phi (vecint.type) (9.8.1.2.14)
sm_theta (3388)	antennas%antenna.lh(:)%setup%modules%sm_theta (float) (9.8.1.1.1)
amplitude (3388)	antennas%antenna.lh(:)%setup%modules%amplitude (exp1D) (9.8.1.3.204)
value (3310)	antennas%antenna.lh(:)%setup%modules%amplitude%value (vecflt.type) (9.8.1.2.13)
abserror (3310)	antennas%antenna.lh(:)%setup%modules%amplitude%abserror (vecflt.type) (9.8.1.2.13)
releror (3310)	antennas%antenna.lh(:)%setup%modules%amplitude%releror (vecflt.type) (9.8.1.2.13)
phase (3388)	antennas%antenna.lh(:)%setup%modules%phase (exp1D) (9.8.1.3.204)
value (3310)	antennas%antenna.lh(:)%setup%modules%phase%value (vecflt.type) (9.8.1.2.13)
abserror (3310)	antennas%antenna.lh(:)%setup%modules%phase%abserror (vecflt.type) (9.8.1.2.13)
releror (3310)	antennas%antenna.lh(:)%setup%modules%phase%releror (vecflt.type) (9.8.1.2.13)
waveguides (3388)	antennas%antenna.lh(:)%setup%modules%waveguides (waveguides) (9.8.1.3.504)
nwm_theta (3610)	antennas%antenna.lh(:)%setup%modules%waveguides%nwm_theta (integer) (9.8.1.1.2)
nwm_phi (3610)	antennas%antenna.lh(:)%setup%modules%waveguides%nwm_phi (integer) (9.8.1.1.2)
mask (3610)	antennas%antenna.lh(:)%setup%modules%waveguides%mask (vecint.type) (9.8.1.2.14)
npwbm_phi (3610)	antennas%antenna.lh(:)%setup%modules%waveguides%npwbm_phi (integer) (9.8.1.1.2)
npwe_phi (3610)	antennas%antenna.lh(:)%setup%modules%waveguides%npwe_phi (integer) (9.8.1.1.2)
sw_theta (3610)	antennas%antenna.lh(:)%setup%modules%waveguides%sw_theta (float) (9.8.1.1.1)
hw_theta (3610)	antennas%antenna.lh(:)%setup%modules%waveguides%hw_theta (float) (9.8.1.1.1)
bwa (3610)	antennas%antenna.lh(:)%setup%modules%waveguides%bwa (float) (9.8.1.1.1)
biwp (3610)	antennas%antenna.lh(:)%setup%modules%waveguides%biwp (float) (9.8.1.1.1)
bewp (3610)	antennas%antenna.lh(:)%setup%modules%waveguides%bewp (float) (9.8.1.1.1)
e_phi (3610)	antennas%antenna.lh(:)%setup%modules%waveguides%e_phi (vecflt.type) (9.8.1.2.13)
scl (3610)	antennas%antenna.lh(:)%setup%modules%waveguides%scl (vecflt.type) (9.8.1.2.13)
plasmaedge (3164)	antennas%antenna.lh(:)%plasmaedge (plasmaedge) (9.8.1.3.339)
npoints (3445)	antennas%antenna.lh(:)%plasmaedge%npoints (integer) (9.8.1.1.2)
distance (3445)	antennas%antenna.lh(:)%plasmaedge%distance (vecflt.type) (9.8.1.2.13)
density (3445)	antennas%antenna.lh(:)%plasmaedge%density (vecflt.type) (9.8.1.2.13)
beam (3164)	antennas%antenna.lh(:)%beam (rfbeam) (9.8.1.3.364)

spot (3470)	antennas%antenna.lh(:)%beam%spot (spot) (9.8.1.3.421)
size (3527)	antennas%antenna.lh(:)%beam%spot%size (vecflt_type) (9.8.1.2.13)
angle (3527)	antennas%antenna.lh(:)%beam%spot%angle (float) (9.8.1.1.1)
phaseellipse (3470)	antennas%antenna.lh(:)%beam%phaseellipse (phaseellipse) (9.8.1.3.336)
invcurvrad (3442)	antennas%antenna.lh(:)%beam%phaseellipse%invcurvrad (vecflt_type) (9.8.1.2.13)
angle (3442)	antennas%antenna.lh(:)%beam%phaseellipse%angle (float) (9.8.1.1.1)
codeparam (3164)	antennas%antenna.lh(:)%codeparam (codeparam) (9.8.1.3.84)
codename (3190)	antennas%antenna.lh(:)%codeparam%codename (string) (9.8.1.1.3)
codeversion (3190)	antennas%antenna.lh(:)%codeparam%codeversion (string) (9.8.1.1.3)
parameters (3190)	antennas%antenna.lh(:)%codeparam%parameters (string) (9.8.1.1.3)
output_diag (3190)	antennas%antenna.lh(:)%codeparam%output_diag (string) (9.8.1.1.3)
output_flag (3190)	antennas%antenna.lh(:)%codeparam%output_flag (integer) (9.8.1.1.2)
codeparam (3110)	antennas%codeparam (codeparam) (9.8.1.3.84)
codename (3190)	antennas%codeparam%codename (string) (9.8.1.1.3)
codeversion (3190)	antennas%codeparam%codeversion (string) (9.8.1.1.3)
parameters (3190)	antennas%codeparam%parameters (string) (9.8.1.1.3)
output_diag (3190)	antennas%codeparam%output_diag (string) (9.8.1.1.3)
output_flag (3190)	antennas%codeparam%output_flag (integer) (9.8.1.1.2)
time (3110)	antennas%time (float) (9.8.1.1.1)

### 9.8.2.1.3 bb\_shield

datainfo (3111)	bb_shield%datainfo (datainfo) (9.8.1.3.141)
dataprovider (3247)	bb_shield%datainfo%dataprovider (string) (9.8.1.1.3)
putdate (3247)	bb_shield%datainfo%putdate (string) (9.8.1.1.3)
source (3247)	bb_shield%datainfo%source (string) (9.8.1.1.3)
comment (3247)	bb_shield%datainfo%comment (string) (9.8.1.1.3)
cocos (3247)	bb_shield%datainfo%cocos (integer) (9.8.1.1.2)
id (3247)	bb_shield%datainfo%id (integer) (9.8.1.1.2)
isref (3247)	bb_shield%datainfo%isref (integer) (9.8.1.1.2)
whatref (3247)	bb_shield%datainfo%whatref (whatref) (9.8.1.3.513)
user (3619)	bb_shield%datainfo%whatref%user (string) (9.8.1.1.3)
machine (3619)	bb_shield%datainfo%whatref%machine (string) (9.8.1.1.3)
shot (3619)	bb_shield%datainfo%whatref%shot (integer) (9.8.1.1.2)
run (3619)	bb_shield%datainfo%whatref%run (integer) (9.8.1.1.2)
occurrence (3619)	bb_shield%datainfo%whatref%occurrence (integer) (9.8.1.1.2)
putinfo (3247)	bb_shield%datainfo%putinfo (putinfo) (9.8.1.3.349)
putmethod (3455)	bb_shield%datainfo%putinfo%putmethod (string) (9.8.1.1.3)
putaccess (3455)	bb_shield%datainfo%putinfo%putaccess (string) (9.8.1.1.3)
putlocation (3455)	bb_shield%datainfo%putinfo%putlocation (string) (9.8.1.1.3)
rights (3455)	bb_shield%datainfo%putinfo%rights (string) (9.8.1.1.3)
type (3111)	bb_shield%type (string) (9.8.1.1.3)
limits (3111)	bb_shield%limits (limits) (9.8.1.3.260)
fw_dpa (3366)	bb_shield%limits%fw_dpa (float) (9.8.1.1.1)
he_appm (3366)	bb_shield%limits%he_appm (float) (9.8.1.1.1)
ins_dose (3366)	bb_shield%limits%ins_dose (float) (9.8.1.1.1)
fn_flu (3366)	bb_shield%limits%fn_flu (float) (9.8.1.1.1)
dpa_cu (3366)	bb_shield%limits%dpa_cu (float) (9.8.1.1.1)
wp_nh (3366)	bb_shield%limits%wp_nh (float) (9.8.1.1.1)
li6_enrich (3111)	bb_shield%li6_enrich (float) (9.8.1.1.1)
geom (3111)	bb_shield%geom (geom) (9.8.1.3.233)
dr_bb_sh_ib (3339)	bb_shield%geom%dr_bb_sh_ib (float) (9.8.1.1.1)
dr_sh_vv_ib (3339)	bb_shield%geom%dr_sh_vv_ib (float) (9.8.1.1.1)
dr_bb_sh_ob (3339)	bb_shield%geom%dr_bb_sh_ob (float) (9.8.1.1.1)
dr_sh_vv_ob (3339)	bb_shield%geom%dr_sh_vv_ob (float) (9.8.1.1.1)
dr_bb_sh_ib (3339)	bb_shield%geom%dr_bb_sh_ib (float) (9.8.1.1.1)
dr_bb_sh_ob (3339)	bb_shield%geom%dr_bb_sh_ob (float) (9.8.1.1.1)
delta_int (3339)	bb_shield%geom%delta_int (float) (9.8.1.1.1)
neut_results (3111)	bb_shield%neut_results (neut_results) (9.8.1.3.296)
tbr_bk (3402)	bb_shield%neut_results%tbr_bk (float) (9.8.1.1.1)
tbr_bk_inb (3402)	bb_shield%neut_results%tbr_bk_inb (float) (9.8.1.1.1)



tbr_bk_outb (3402)	bb_shield%neut_results%tbr_bk_outb (float) (9.8.1.1.1)
me_bk (3402)	bb_shield%neut_results%me_bk (float) (9.8.1.1.1)
me_shield (3402)	bb_shield%neut_results%me_shield (float) (9.8.1.1.1)
he_appm_res (3402)	bb_shield%neut_results%he_appm_res (float) (9.8.1.1.1)
ins_dose_max (3402)	bb_shield%neut_results%ins_dose_max (float) (9.8.1.1.1)
fn_flu_max (3402)	bb_shield%neut_results%fn_flu_max (float) (9.8.1.1.1)
dpa_cu_max (3402)	bb_shield%neut_results%dpa_cu_max (float) (9.8.1.1.1)
fn_flux_bz (3402)	bb_shield%neut_results%fn_flux_bz (float) (9.8.1.1.1)
fn_flux_bp (3402)	bb_shield%neut_results%fn_flux_bp (float) (9.8.1.1.1)
fn_flux_man (3402)	bb_shield%neut_results%fn_flux_man (float) (9.8.1.1.1)
fn_flux_sh (3402)	bb_shield%neut_results%fn_flux_sh (float) (9.8.1.1.1)
p_nh_bk (3402)	bb_shield%neut_results%p_nh_bk (float) (9.8.1.1.1)
p_nh_sh (3402)	bb_shield%neut_results%p_nh_sh (float) (9.8.1.1.1)
shield (3111)	bb_shield%shield (shield) (9.8.1.3.405)
inboard (3511)	bb_shield%shield%inboard (shield_specs) (9.8.1.3.406)
nmat (3512)	bb_shield%shield%inboard%nmat (integer) (9.8.1.1.2)
composition (3512)	bb_shield%shield%inboard%composition (vecflt_type) (9.8.1.2.13)
r1 (3512)	bb_shield%shield%inboard%r1 (float) (9.8.1.1.1)
r2 (3512)	bb_shield%shield%inboard%r2 (float) (9.8.1.1.1)
mass (3512)	bb_shield%shield%inboard%mass (float) (9.8.1.1.1)
outboard (3511)	bb_shield%shield%outboard (shield_specs) (9.8.1.3.406)
nmat (3512)	bb_shield%shield%outboard%nmat (integer) (9.8.1.1.2)
composition (3512)	bb_shield%shield%outboard%composition (vecflt_type) (9.8.1.2.13)
r1 (3512)	bb_shield%shield%outboard%r1 (float) (9.8.1.1.1)
r2 (3512)	bb_shield%shield%outboard%r2 (float) (9.8.1.1.1)
mass (3512)	bb_shield%shield%outboard%mass (float) (9.8.1.1.1)
bb (3111)	bb_shield%bb (bb) (9.8.1.3.62)
nb_bb (3168)	bb_shield%bb%nb_bb (float) (9.8.1.1.1)
nb_bb_polcut (3168)	bb_shield%bb%nb_bb_polcut (float) (9.8.1.1.1)
teta_bb (3168)	bb_shield%bb%teta_bb (float) (9.8.1.1.1)
tbr (3168)	bb_shield%bb%tbr (float) (9.8.1.1.1)
neutro_resul (3168)	bb_shield%bb%neutro_resul (neutro_resul) (9.8.1.3.298)
nwl_max (3404)	bb_shield%bb%neutro_resul%nwl_max (float) (9.8.1.1.1)
nwl_pol_prof (3404)	bb_shield%bb%neutro_resul%nwl_pol_prof (vecflt_type) (9.8.1.2.13)
inboard (3168)	bb_shield%bb%inboard (bb_specs) (9.8.1.3.65)
nbb (3171)	bb_shield%bb%inboard%nbb (float) (9.8.1.1.1)
r1 (3171)	bb_shield%bb%inboard%r1 (float) (9.8.1.1.1)
r2 (3171)	bb_shield%bb%inboard%r2 (float) (9.8.1.1.1)
dimension (3171)	bb_shield%bb%inboard%dimension (bb_dimension) (9.8.1.3.63)
radial (3169)	bb_shield%bb%inboard%dimension%radial (vecflt_type) (9.8.1.2.13)
toroidal (3169)	bb_shield%bb%inboard%dimension%toroidal (vecflt_type) (9.8.1.2.13)
poloidal (3169)	bb_shield%bb%inboard%dimension%poloidal (vecflt_type) (9.8.1.2.13)
outboard (3168)	bb_shield%bb%outboard (bb_specs) (9.8.1.3.65)
nbb (3171)	bb_shield%bb%outboard%nbb (float) (9.8.1.1.1)
r1 (3171)	bb_shield%bb%outboard%r1 (float) (9.8.1.1.1)
r2 (3171)	bb_shield%bb%outboard%r2 (float) (9.8.1.1.1)
dimension (3171)	bb_shield%bb%outboard%dimension (bb_dimension) (9.8.1.3.63)
radial (3169)	bb_shield%bb%outboard%dimension%radial (vecflt_type) (9.8.1.2.13)
toroidal (3169)	bb_shield%bb%outboard%dimension%toroidal (vecflt_type) (9.8.1.2.13)
poloidal (3169)	bb_shield%bb%outboard%dimension%poloidal (vecflt_type) (9.8.1.2.13)
hcll (3111)	bb_shield%hcll (hcll) (9.8.1.3.238)
mat_lim (3344)	bb_shield%hcll%mat_lim (mat_lim) (9.8.1.3.268)
cool_t_lim (3374)	bb_shield%hcll%mat_lim%cool_t_lim (float) (9.8.1.1.1)
steel_t_lim (3374)	bb_shield%hcll%mat_lim%steel_t_lim (float) (9.8.1.1.1)
lipb_t_lim (3374)	bb_shield%hcll%mat_lim%lipb_t_lim (float) (9.8.1.1.1)
hcll_bb (3344)	bb_shield%hcll%hcll_bb (hcll_bb) (9.8.1.3.239)
bb_lifetime (3345)	bb_shield%hcll%hcll_bb%bb_lifetime (float) (9.8.1.1.1)
he_inl_t (3345)	bb_shield%hcll%hcll_bb%he_inl_t (float) (9.8.1.1.1)
he_fr (3345)	bb_shield%hcll%hcll_bb%he_fr (float) (9.8.1.1.1)
he_inl_p (3345)	bb_shield%hcll%hcll_bb%he_inl_p (float) (9.8.1.1.1)
loca_des_p (3345)	bb_shield%hcll%hcll_bb%loca_des_p (float) (9.8.1.1.1)



he_dp (3345)	bb_shield%hcll%hcll.bb%he_dp (float) (9.8.1.1.1)
lipb_dp (3345)	bb_shield%hcll%hcll.bb%lipb_dp (float) (9.8.1.1.1)
react (3345)	bb_shield%hcll%hcll.bb%react (react) (9.8.1.3.352)
he_fr (3458)	bb_shield%hcll%hcll.bb%react%he_fr (float) (9.8.1.1.1)
lp_fr (3458)	bb_shield%hcll%hcll.bb%react%lp_fr (float) (9.8.1.1.1)
he_dp (3458)	bb_shield%hcll%hcll.bb%react%he_dp (float) (9.8.1.1.1)
lipb_dp (3458)	bb_shield%hcll%hcll.bb%react%lipb_dp (float) (9.8.1.1.1)
inboard (3345)	bb_shield%hcll%hcll.bb%inboard (hcllbb_specs) (9.8.1.3.240)
mass (3346)	bb_shield%hcll%hcll.bb%inboard%mass (vecflt_type) (9.8.1.2.13)
dr (3346)	bb_shield%hcll%hcll.bb%inboard%dr (vecflt_type) (9.8.1.2.13)
mat (3346)	bb_shield%hcll%hcll.bb%inboard%mat (vecflt_type) (9.8.1.2.13)
composition (3346)	bb_shield%hcll%hcll.bb%inboard%composition (matflt_type) (9.8.1.2.10)
mod_geom (3346)	bb_shield%hcll%hcll.bb%inboard%mod_geom (bb_geometry) (9.8.1.3.64)
dr_fw (3170)	bb_shield%hcll%hcll.bb%inboard%mod_geom%dr_fw (float) (9.8.1.1.1)
dr_bz (3170)	bb_shield%hcll%hcll.bb%inboard%mod_geom%dr_bz (float) (9.8.1.1.1)
dr_bp (3170)	bb_shield%hcll%hcll.bb%inboard%mod_geom%dr_bp (float) (9.8.1.1.1)
dr_bp_plates (3170)	bb_shield%hcll%hcll.bb%inboard%mod_geom%dr_bp_plates (vecflt_type) (9.8.1.2.13)
dr_bp_he (3170)	bb_shield%hcll%hcll.bb%inboard%mod_geom%dr_bp_he (vecflt_type) (9.8.1.2.13)
dr_man (3170)	bb_shield%hcll%hcll.bb%inboard%mod_geom%dr_man (float) (9.8.1.1.1)
dt_sw (3170)	bb_shield%hcll%hcll.bb%inboard%mod_geom%dt_sw (float) (9.8.1.1.1)
dt_bz (3170)	bb_shield%hcll%hcll.bb%inboard%mod_geom%dt_bz (float) (9.8.1.1.1)
dp_bz (3170)	bb_shield%hcll%hcll.bb%inboard%mod_geom%dp_bz (float) (9.8.1.1.1)
top_cap_dim (3170)	bb_shield%hcll%hcll.bb%inboard%mod_geom%top_cap_dim (bb_dimension) (9.8.1.3.63)
radial (3169)	bb_shield%hcll%hcll.bb%inboard%mod_geom%top_cap_dim%radial (vecflt_type) (9.8.1.2.13)
toroidal (3169)	bb_shield%hcll%hcll.bb%inboard%mod_geom%top_cap_dim%toroidal (vecflt_type) (9.8.1.2.13)
poloidal (3169)	bb_shield%hcll%hcll.bb%inboard%mod_geom%top_cap_dim%poloidal (vecflt_type) (9.8.1.2.13)
bot_cap_dim (3170)	bb_shield%hcll%hcll.bb%inboard%mod_geom%bot_cap_dim (bb_dimension) (9.8.1.3.63)
radial (3169)	bb_shield%hcll%hcll.bb%inboard%mod_geom%bot_cap_dim%radial (vecflt_type) (9.8.1.2.13)
toroidal (3169)	bb_shield%hcll%hcll.bb%inboard%mod_geom%bot_cap_dim%toroidal (vecflt_type) (9.8.1.2.13)
poloidal (3169)	bb_shield%hcll%hcll.bb%inboard%mod_geom%bot_cap_dim%poloidal (vecflt_type) (9.8.1.2.13)
a_fw_ch (3170)	bb_shield%hcll%hcll.bb%inboard%mod_geom%a_fw_ch (float) (9.8.1.1.1)
b_fw_ch (3170)	bb_shield%hcll%hcll.bb%inboard%mod_geom%b_fw_ch (float) (9.8.1.1.1)
td_tc_ch (3170)	bb_shield%hcll%hcll.bb%inboard%mod_geom%td_tc_ch (float) (9.8.1.1.1)
rd_tc_ch (3170)	bb_shield%hcll%hcll.bb%inboard%mod_geom%rd_tc_ch (float) (9.8.1.1.1)
td_bc_ch (3170)	bb_shield%hcll%hcll.bb%inboard%mod_geom%td_bc_ch (float) (9.8.1.1.1)
rd_bc_ch (3170)	bb_shield%hcll%hcll.bb%inboard%mod_geom%rd_bc_ch (float) (9.8.1.1.1)
n_fw_ch (3170)	bb_shield%hcll%hcll.bb%inboard%mod_geom%n_fw_ch (float) (9.8.1.1.1)
n_fw_circ (3170)	bb_shield%hcll%hcll.bb%inboard%mod_geom%n_fw_circ (float) (9.8.1.1.1)
a_sg_ch (3170)	bb_shield%hcll%hcll.bb%inboard%mod_geom%a_sg_ch (float) (9.8.1.1.1)
b_sg_ch (3170)	bb_shield%hcll%hcll.bb%inboard%mod_geom%b_sg_ch (float) (9.8.1.1.1)
n_sg_ch (3170)	bb_shield%hcll%hcll.bb%inboard%mod_geom%n_sg_ch (float) (9.8.1.1.1)
sg_thick (3170)	bb_shield%hcll%hcll.bb%inboard%mod_geom%sg_thick (float) (9.8.1.1.1)
sg_weld (3170)	bb_shield%hcll%hcll.bb%inboard%mod_geom%sg_weld (float) (9.8.1.1.1)
sg_in_out (3170)	bb_shield%hcll%hcll.bb%inboard%mod_geom%sg_in_out (float) (9.8.1.1.1)
r_sg_cp (3170)	bb_shield%hcll%hcll.bb%inboard%mod_geom%r_sg_cp (float) (9.8.1.1.1)
cp_tor_gap (3170)	bb_shield%hcll%hcll.bb%inboard%mod_geom%cp_tor_gap (float) (9.8.1.1.1)
a_cp_ch (3170)	bb_shield%hcll%hcll.bb%inboard%mod_geom%a_cp_ch (float) (9.8.1.1.1)
b_cp_ch (3170)	bb_shield%hcll%hcll.bb%inboard%mod_geom%b_cp_ch (float) (9.8.1.1.1)
n_cp_ch (3170)	bb_shield%hcll%hcll.bb%inboard%mod_geom%n_cp_ch (float) (9.8.1.1.1)
cp_thick (3170)	bb_shield%hcll%hcll.bb%inboard%mod_geom%cp_thick (float) (9.8.1.1.1)
n_pol_bu (3170)	bb_shield%hcll%hcll.bb%inboard%mod_geom%n_pol_bu (float) (9.8.1.1.1)
n_tor_bu (3170)	bb_shield%hcll%hcll.bb%inboard%mod_geom%n_tor_bu (float) (9.8.1.1.1)
n_cp_bu (3170)	bb_shield%hcll%hcll.bb%inboard%mod_geom%n_cp_bu (float) (9.8.1.1.1)
cp_in_out (3170)	bb_shield%hcll%hcll.bb%inboard%mod_geom%cp_in_out (float) (9.8.1.1.1)
he_man_tck (3170)	bb_shield%hcll%hcll.bb%inboard%mod_geom%he_man_tck (float) (9.8.1.1.1)
man_tck (3170)	bb_shield%hcll%hcll.bb%inboard%mod_geom%man_tck (float) (9.8.1.1.1)
pbli_bptb_od (3170)	bb_shield%hcll%hcll.bb%inboard%mod_geom%pbli_bptb_od (float) (9.8.1.1.1)
pbli_bptb_id (3170)	bb_shield%hcll%hcll.bb%inboard%mod_geom%pbli_bptb_id (float) (9.8.1.1.1)
he_bptb_od (3170)	bb_shield%hcll%hcll.bb%inboard%mod_geom%he_bptb_od (float) (9.8.1.1.1)

he_bptb_id (3170)	bb_shield%hcll%hcll.bb%inboard%mod_geom%he_bptb_id (float) (9.8.1.1.1)
dr_max_fw (3170)	bb_shield%hcll%hcll.bb%inboard%mod_geom%dr_max_fw (float) (9.8.1.1.1)
dr_fwpl (3170)	bb_shield%hcll%hcll.bb%inboard%mod_geom%dr_fwpl (float) (9.8.1.1.1)
mod_neutr (3346)	bb_shield%hcll%hcll.bb%inboard%mod_neutr (mode_neutr) (9.8.1.3.278)
r (3384)	bb_shield%hcll%hcll.bb%inboard%mod_neutr%r (vecflt_type) (9.8.1.2.13)
pd_rad (3384)	bb_shield%hcll%hcll.bb%inboard%mod_neutr%pd_rad (vecflt_type) (9.8.1.2.13)
lipb_coef_pd (3384)	bb_shield%hcll%hcll.bb%inboard%mod_neutr%lipb_coef_pd (vecflt_type) (9.8.1.2.13)
steel_coef_pd (3384)	bb_shield%hcll%hcll.bb%inboard%mod_neutr%steel_coef_pd (vecflt_type) (9.8.1.2.13)
pow_exchange (3384)	bb_shield%hcll%hcll.bb%inboard%mod_neutr%pow_exchange (power_exchange) (9.8.1.3.344)
dep_pow (3450)	bb_shield%hcll%hcll.bb%inboard%mod_neutr%pow_exchange%dep_pow (vecflt_type) (9.8.1.2.13)
dep_fw (3450)	bb_shield%hcll%hcll.bb%inboard%mod_neutr%pow_exchange%dep_fw (float) (9.8.1.1.1)
dep_sg (3450)	bb_shield%hcll%hcll.bb%inboard%mod_neutr%pow_exchange%dep_sg (float) (9.8.1.1.1)
dep_cp (3450)	bb_shield%hcll%hcll.bb%inboard%mod_neutr%pow_exchange%dep_cp (float) (9.8.1.1.1)
dep_lp (3450)	bb_shield%hcll%hcll.bb%inboard%mod_neutr%pow_exchange%dep_lp (float) (9.8.1.1.1)
dep_man (3450)	bb_shield%hcll%hcll.bb%inboard%mod_neutr%pow_exchange%dep_man (float) (9.8.1.1.1)
dep_pl (3450)	bb_shield%hcll%hcll.bb%inboard%mod_neutr%pow_exchange%dep_pl (float) (9.8.1.1.1)
rec_fw (3450)	bb_shield%hcll%hcll.bb%inboard%mod_neutr%pow_exchange%rec_fw (float) (9.8.1.1.1)
rec_sg (3450)	bb_shield%hcll%hcll.bb%inboard%mod_neutr%pow_exchange%rec_sg (float) (9.8.1.1.1)
rec_cp (3450)	bb_shield%hcll%hcll.bb%inboard%mod_neutr%pow_exchange%rec_cp (float) (9.8.1.1.1)
pow_dens_fw (3450)	bb_shield%hcll%hcll.bb%inboard%mod_neutr%pow_exchange%pow_dens_fw (float) (9.8.1.1.1)
pow_dens_bz (3450)	bb_shield%hcll%hcll.bb%inboard%mod_neutr%pow_exchange%pow_dens_bz (float) (9.8.1.1.1)
pow_dens_bz10 (3450)	bb_shield%hcll%hcll.bb%inboard%mod_neutr%pow_exchange%pow_dens_bz10 (float) (9.8.1.1.1)
pow_dens_bp (3450)	bb_shield%hcll%hcll.bb%inboard%mod_neutr%pow_exchange%pow_dens_bp (float) (9.8.1.1.1)
pow_dens_man (3450)	bb_shield%hcll%hcll.bb%inboard%mod_neutr%pow_exchange%pow_dens_man (float) (9.8.1.1.1)
pow_dens_sh (3450)	bb_shield%hcll%hcll.bb%inboard%mod_neutr%pow_exchange%pow_dens_sh (float) (9.8.1.1.1)
mod_therm (3346)	bb_shield%hcll%hcll.bb%inboard%mod_therm (mode_therm) (9.8.1.3.280)
he_fr (3386)	bb_shield%hcll%hcll.bb%inboard%mod_therm%he_fr (float) (9.8.1.1.1)
perc_bp_he (3386)	bb_shield%hcll%hcll.bb%inboard%mod_therm%perc_bp_he (float) (9.8.1.1.1)
he_out_t (3386)	bb_shield%hcll%hcll.bb%inboard%mod_therm%he_out_t (float) (9.8.1.1.1)
fw_he_out_t (3386)	bb_shield%hcll%hcll.bb%inboard%mod_therm%fw_he_out_t (float) (9.8.1.1.1)
sg_he_out_t (3386)	bb_shield%hcll%hcll.bb%inboard%mod_therm%sg_he_out_t (float) (9.8.1.1.1)
cp_he_out_t (3386)	bb_shield%hcll%hcll.bb%inboard%mod_therm%cp_he_out_t (float) (9.8.1.1.1)
fw_st_max_t (3386)	bb_shield%hcll%hcll.bb%inboard%mod_therm%fw_st_max_t (float) (9.8.1.1.1)
sg_st_max_t (3386)	bb_shield%hcll%hcll.bb%inboard%mod_therm%sg_st_max_t (float) (9.8.1.1.1)
cp_st_max_t (3386)	bb_shield%hcll%hcll.bb%inboard%mod_therm%cp_st_max_t (float) (9.8.1.1.1)
mod_th_hyd (3346)	bb_shield%hcll%hcll.bb%inboard%mod_th_hyd (mode_th_hyd) (9.8.1.3.279)
fw_dp_he (3385)	bb_shield%hcll%hcll.bb%inboard%mod_th_hyd%fw_dp_he (float) (9.8.1.1.1)
sg_dp_he (3385)	bb_shield%hcll%hcll.bb%inboard%mod_th_hyd%sg_dp_he (float) (9.8.1.1.1)
cp_dp_he (3385)	bb_shield%hcll%hcll.bb%inboard%mod_th_hyd%cp_dp_he (float) (9.8.1.1.1)
man_dp_he (3385)	bb_shield%hcll%hcll.bb%inboard%mod_th_hyd%man_dp_he (float) (9.8.1.1.1)
tot_dp_he (3385)	bb_shield%hcll%hcll.bb%inboard%mod_th_hyd%tot_dp_he (float) (9.8.1.1.1)
bp_dp_he (3385)	bb_shield%hcll%hcll.bb%inboard%mod_th_hyd%bp_dp_he (float) (9.8.1.1.1)
circ_dp_he (3385)	bb_shield%hcll%hcll.bb%inboard%mod_th_hyd%circ_dp_he (float) (9.8.1.1.1)
mod_mech (3346)	bb_shield%hcll%hcll.bb%inboard%mod_mech (mode_mech) (9.8.1.3.277)
fw_min_ts_mg (3383)	bb_shield%hcll%hcll.bb%inboard%mod_mech%fw_min_ts_mg (float) (9.8.1.1.1)
fw_min_bd_mg (3383)	bb_shield%hcll%hcll.bb%inboard%mod_mech%fw_min_bd_mg (float) (9.8.1.1.1)
sg_min_ts_mg (3383)	bb_shield%hcll%hcll.bb%inboard%mod_mech%sg_min_ts_mg (float) (9.8.1.1.1)
sg_min_bd_mg (3383)	bb_shield%hcll%hcll.bb%inboard%mod_mech%sg_min_bd_mg (float) (9.8.1.1.1)
cp_min_ts_mg (3383)	bb_shield%hcll%hcll.bb%inboard%mod_mech%cp_min_ts_mg (float) (9.8.1.1.1)
cp_min_bd_mg (3383)	bb_shield%hcll%hcll.bb%inboard%mod_mech%cp_min_bd_mg (float) (9.8.1.1.1)
min_ts_mg_ac (3383)	bb_shield%hcll%hcll.bb%inboard%mod_mech%min_ts_mg_ac (float) (9.8.1.1.1)
min_bd_mg_ac (3383)	bb_shield%hcll%hcll.bb%inboard%mod_mech%min_bd_mg_ac (float) (9.8.1.1.1)
mod_lipb (3346)	bb_shield%hcll%hcll.bb%inboard%mod_lipb (mode_lipb) (9.8.1.3.276)
lp_rec_day (3382)	bb_shield%hcll%hcll.bb%inboard%mod_lipb%lp_rec_day (float) (9.8.1.1.1)
bb_lp_fr (3382)	bb_shield%hcll%hcll.bb%inboard%mod_lipb%bb_lp_fr (vecflt_type) (9.8.1.2.13)
lp_inl_p (3382)	bb_shield%hcll%hcll.bb%inboard%mod_lipb%lp_inl_p (float) (9.8.1.1.1)

bu_dp_lp (3382)	bb_shield%hcll%hcll.bb%inboard%mod_lipb%bu_dp_lp (float) (9.8.1.1.1)
man_dp_lp (3382)	bb_shield%hcll%hcll.bb%inboard%mod_lipb%man_dp_lp (float) (9.8.1.1.1)
tot_dp_lp (3382)	bb_shield%hcll%hcll.bb%inboard%mod_lipb%tot_dp_lp (float) (9.8.1.1.1)
bu_lp_ave.t (3382)	bb_shield%hcll%hcll.bb%inboard%mod_lipb%bu_lp_ave.t (float) (9.8.1.1.1)
bu_lp_max.t (3382)	bb_shield%hcll%hcll.bb%inboard%mod_lipb%bu_lp_max.t (float) (9.8.1.1.1)
mod_tritium (3346)	bb_shield%hcll%hcll.bb%inboard%mod_tritium (mode.tritium) (9.8.1.3.281)
t_conc_lipb (3387)	bb_shield%hcll%hcll.bb%inboard%mod_tritium%t_conc_lipb (float) (9.8.1.1.1)
t_conc_he (3387)	bb_shield%hcll%hcll.bb%inboard%mod_tritium%t_conc_he (float) (9.8.1.1.1)
outboard (3345)	bb_shield%hcll%hcll.bb%outboard (hcllbb_specs) (9.8.1.3.240)
mass (3346)	bb_shield%hcll%hcll.bb%outboard%mass (vecflt.type) (9.8.1.2.13)
dr (3346)	bb_shield%hcll%hcll.bb%outboard%dr (vecflt.type) (9.8.1.2.13)
mat (3346)	bb_shield%hcll%hcll.bb%outboard%mat (vecflt.type) (9.8.1.2.13)
composition (3346)	bb_shield%hcll%hcll.bb%outboard%composition (matflt.type) (9.8.1.2.10)
mod_geom (3346)	bb_shield%hcll%hcll.bb%outboard%mod_geom (bb_geometry) (9.8.1.3.64)
dr_fw (3170)	bb_shield%hcll%hcll.bb%outboard%mod_geom%dr_fw (float) (9.8.1.1.1)
dr_bz (3170)	bb_shield%hcll%hcll.bb%outboard%mod_geom%dr_bz (float) (9.8.1.1.1)
dr_bp (3170)	bb_shield%hcll%hcll.bb%outboard%mod_geom%dr_bp (float) (9.8.1.1.1)
dr_bp_plates (3170)	bb_shield%hcll%hcll.bb%outboard%mod_geom%dr_bp_plates (vecflt.type) (9.8.1.2.13)
dr_bp_he (3170)	bb_shield%hcll%hcll.bb%outboard%mod_geom%dr_bp_he (vecflt.type) (9.8.1.2.13)
dr_man (3170)	bb_shield%hcll%hcll.bb%outboard%mod_geom%dr_man (float) (9.8.1.1.1)
dt_sw (3170)	bb_shield%hcll%hcll.bb%outboard%mod_geom%dt_sw (float) (9.8.1.1.1)
dt_bz (3170)	bb_shield%hcll%hcll.bb%outboard%mod_geom%dt_bz (float) (9.8.1.1.1)
dp_bz (3170)	bb_shield%hcll%hcll.bb%outboard%mod_geom%dp_bz (float) (9.8.1.1.1)
top_cap_dim (3170)	bb_shield%hcll%hcll.bb%outboard%mod_geom%top_cap_dim (bb_dimension) (9.8.1.3.63)
radial (3169)	bb_shield%hcll%hcll.bb%outboard%mod_geom%top_cap_dim%radial (vecflt.type) (9.8.1.2.13)
toroidal (3169)	bb_shield%hcll%hcll.bb%outboard%mod_geom%top_cap_dim%toroidal (vecflt.type) (9.8.1.2.13)
poloidal (3169)	bb_shield%hcll%hcll.bb%outboard%mod_geom%top_cap_dim%poloidal (vecflt.type) (9.8.1.2.13)
bot_cap_dim (3170)	bb_shield%hcll%hcll.bb%outboard%mod_geom%bot_cap_dim (bb_dimension) (9.8.1.3.63)
radial (3169)	bb_shield%hcll%hcll.bb%outboard%mod_geom%bot_cap_dim%radial (vecflt.type) (9.8.1.2.13)
toroidal (3169)	bb_shield%hcll%hcll.bb%outboard%mod_geom%bot_cap_dim%toroidal (vecflt.type) (9.8.1.2.13)
poloidal (3169)	bb_shield%hcll%hcll.bb%outboard%mod_geom%bot_cap_dim%poloidal (vecflt.type) (9.8.1.2.13)
a_fw_ch (3170)	bb_shield%hcll%hcll.bb%outboard%mod_geom%a_fw_ch (float) (9.8.1.1.1)
b_fw_ch (3170)	bb_shield%hcll%hcll.bb%outboard%mod_geom%b_fw_ch (float) (9.8.1.1.1)
td_tc_ch (3170)	bb_shield%hcll%hcll.bb%outboard%mod_geom%td_tc_ch (float) (9.8.1.1.1)
rd_tc_ch (3170)	bb_shield%hcll%hcll.bb%outboard%mod_geom%rd_tc_ch (float) (9.8.1.1.1)
td_bc_ch (3170)	bb_shield%hcll%hcll.bb%outboard%mod_geom%td_bc_ch (float) (9.8.1.1.1)
rd_bc_ch (3170)	bb_shield%hcll%hcll.bb%outboard%mod_geom%rd_bc_ch (float) (9.8.1.1.1)
n_fw_ch (3170)	bb_shield%hcll%hcll.bb%outboard%mod_geom%n_fw_ch (float) (9.8.1.1.1)
n_fw_circ (3170)	bb_shield%hcll%hcll.bb%outboard%mod_geom%n_fw_circ (float) (9.8.1.1.1)
a_sg_ch (3170)	bb_shield%hcll%hcll.bb%outboard%mod_geom%a_sg_ch (float) (9.8.1.1.1)
b_sg_ch (3170)	bb_shield%hcll%hcll.bb%outboard%mod_geom%b_sg_ch (float) (9.8.1.1.1)
n_sg_ch (3170)	bb_shield%hcll%hcll.bb%outboard%mod_geom%n_sg_ch (float) (9.8.1.1.1)
sg_thick (3170)	bb_shield%hcll%hcll.bb%outboard%mod_geom%sg_thick (float) (9.8.1.1.1)
sg_weld (3170)	bb_shield%hcll%hcll.bb%outboard%mod_geom%sg_weld (float) (9.8.1.1.1)
sg_in_out (3170)	bb_shield%hcll%hcll.bb%outboard%mod_geom%sg_in_out (float) (9.8.1.1.1)
r_sg_cp (3170)	bb_shield%hcll%hcll.bb%outboard%mod_geom%r_sg_cp (float) (9.8.1.1.1)
cp_tor_gap (3170)	bb_shield%hcll%hcll.bb%outboard%mod_geom%cp_tor_gap (float) (9.8.1.1.1)
a_cp_ch (3170)	bb_shield%hcll%hcll.bb%outboard%mod_geom%a_cp_ch (float) (9.8.1.1.1)
b_cp_ch (3170)	bb_shield%hcll%hcll.bb%outboard%mod_geom%b_cp_ch (float) (9.8.1.1.1)
n_cp_ch (3170)	bb_shield%hcll%hcll.bb%outboard%mod_geom%n_cp_ch (float) (9.8.1.1.1)
cp_thick (3170)	bb_shield%hcll%hcll.bb%outboard%mod_geom%cp_thick (float) (9.8.1.1.1)
n_pol_bu (3170)	bb_shield%hcll%hcll.bb%outboard%mod_geom%n_pol_bu (float) (9.8.1.1.1)
n_tor_bu (3170)	bb_shield%hcll%hcll.bb%outboard%mod_geom%n_tor_bu (float) (9.8.1.1.1)
n_cp_bu (3170)	bb_shield%hcll%hcll.bb%outboard%mod_geom%n_cp_bu (float) (9.8.1.1.1)
cp_in_out (3170)	bb_shield%hcll%hcll.bb%outboard%mod_geom%cp_in_out (float) (9.8.1.1.1)
he_man_tck (3170)	bb_shield%hcll%hcll.bb%outboard%mod_geom%he_man_tck (float) (9.8.1.1.1)
man_tck (3170)	bb_shield%hcll%hcll.bb%outboard%mod_geom%man_tck (float) (9.8.1.1.1)

pbli_bptb_od (3170)	bb_shield%hcll%hcll.bb%outboard%mod_geom%pbli_bptb_od (float) (9.8.1.1.1)
pbli_bptb_id (3170)	bb_shield%hcll%hcll.bb%outboard%mod_geom%pbli_bptb_id (float) (9.8.1.1.1)
he_bptb_od (3170)	bb_shield%hcll%hcll.bb%outboard%mod_geom%he_bptb_od (float) (9.8.1.1.1)
he_bptb_id (3170)	bb_shield%hcll%hcll.bb%outboard%mod_geom%he_bptb_id (float) (9.8.1.1.1)
dr_max_fw (3170)	bb_shield%hcll%hcll.bb%outboard%mod_geom%dr_max_fw (float) (9.8.1.1.1)
dr_fwpl (3170)	bb_shield%hcll%hcll.bb%outboard%mod_geom%dr_fwpl (float) (9.8.1.1.1)
mod_neutr (3346)	bb_shield%hcll%hcll.bb%outboard%mod_neutr (mode_neutr) (9.8.1.3.278)
r (3384)	bb_shield%hcll%hcll.bb%outboard%mod_neutr%r (vecflt.type) (9.8.1.2.13)
pd_rad (3384)	bb_shield%hcll%hcll.bb%outboard%mod_neutr%pd_rad (vecflt.type) (9.8.1.2.13)
lipb_coef_pd (3384)	bb_shield%hcll%hcll.bb%outboard%mod_neutr%lipb_coef_pd (vecflt.type) (9.8.1.2.13)
steel_coef_pd (3384)	bb_shield%hcll%hcll.bb%outboard%mod_neutr%steel_coef_pd (vecflt.type) (9.8.1.2.13)
pow_exchange (3384)	bb_shield%hcll%hcll.bb%outboard%mod_neutr%pow_exchange (power_exchange) (9.8.1.3.344)
dep_pow (3450)	bb_shield%hcll%hcll.bb%outboard%mod_neutr%pow_exchange%dep_pow (vecflt.type) (9.8.1.2.13)
dep_fw (3450)	bb_shield%hcll%hcll.bb%outboard%mod_neutr%pow_exchange%dep_fw (float) (9.8.1.1.1)
dep_sg (3450)	bb_shield%hcll%hcll.bb%outboard%mod_neutr%pow_exchange%dep_sg (float) (9.8.1.1.1)
dep_cp (3450)	bb_shield%hcll%hcll.bb%outboard%mod_neutr%pow_exchange%dep_cp (float) (9.8.1.1.1)
dep_lp (3450)	bb_shield%hcll%hcll.bb%outboard%mod_neutr%pow_exchange%dep_lp (float) (9.8.1.1.1)
dep_man (3450)	bb_shield%hcll%hcll.bb%outboard%mod_neutr%pow_exchange%dep_man (float) (9.8.1.1.1)
dep_pl (3450)	bb_shield%hcll%hcll.bb%outboard%mod_neutr%pow_exchange%dep_pl (float) (9.8.1.1.1)
rec_fw (3450)	bb_shield%hcll%hcll.bb%outboard%mod_neutr%pow_exchange%rec_fw (float) (9.8.1.1.1)
rec_sg (3450)	bb_shield%hcll%hcll.bb%outboard%mod_neutr%pow_exchange%rec_sg (float) (9.8.1.1.1)
rec_cp (3450)	bb_shield%hcll%hcll.bb%outboard%mod_neutr%pow_exchange%rec_cp (float) (9.8.1.1.1)
pow_dens_fw (3450)	bb_shield%hcll%hcll.bb%outboard%mod_neutr%pow_exchange%pow_dens_fw (float) (9.8.1.1.1)
pow_dens_bz (3450)	bb_shield%hcll%hcll.bb%outboard%mod_neutr%pow_exchange%pow_dens_bz (float) (9.8.1.1.1)
pow_dens_bz10 (3450)	bb_shield%hcll%hcll.bb%outboard%mod_neutr%pow_exchange%pow_dens_bz10 (float) (9.8.1.1.1)
pow_dens_bp (3450)	bb_shield%hcll%hcll.bb%outboard%mod_neutr%pow_exchange%pow_dens_bp (float) (9.8.1.1.1)
pow_dens_man (3450)	bb_shield%hcll%hcll.bb%outboard%mod_neutr%pow_exchange%pow_dens_man (float) (9.8.1.1.1)
pow_dens_sh (3450)	bb_shield%hcll%hcll.bb%outboard%mod_neutr%pow_exchange%pow_dens_sh (float) (9.8.1.1.1)
mod_therm (3346)	bb_shield%hcll%hcll.bb%outboard%mod_therm (mode_therm) (9.8.1.3.280)
he_fr (3386)	bb_shield%hcll%hcll.bb%outboard%mod_therm%he_fr (float) (9.8.1.1.1)
perc_bp_he (3386)	bb_shield%hcll%hcll.bb%outboard%mod_therm%perc_bp_he (float) (9.8.1.1.1)
he_out_t (3386)	bb_shield%hcll%hcll.bb%outboard%mod_therm%he_out_t (float) (9.8.1.1.1)
fw_he_out_t (3386)	bb_shield%hcll%hcll.bb%outboard%mod_therm%fw_he_out_t (float) (9.8.1.1.1)
sg_he_out_t (3386)	bb_shield%hcll%hcll.bb%outboard%mod_therm%sg_he_out_t (float) (9.8.1.1.1)
cp_he_out_t (3386)	bb_shield%hcll%hcll.bb%outboard%mod_therm%cp_he_out_t (float) (9.8.1.1.1)
fw_st_max_t (3386)	bb_shield%hcll%hcll.bb%outboard%mod_therm%fw_st_max_t (float) (9.8.1.1.1)
sg_st_max_t (3386)	bb_shield%hcll%hcll.bb%outboard%mod_therm%sg_st_max_t (float) (9.8.1.1.1)
cp_st_max_t (3386)	bb_shield%hcll%hcll.bb%outboard%mod_therm%cp_st_max_t (float) (9.8.1.1.1)
mod_th_hyd (3346)	bb_shield%hcll%hcll.bb%outboard%mod_th_hyd (mode_th_hyd) (9.8.1.3.279)
fw_dp_he (3385)	bb_shield%hcll%hcll.bb%outboard%mod_th_hyd%fw_dp_he (float) (9.8.1.1.1)
sg_dp_he (3385)	bb_shield%hcll%hcll.bb%outboard%mod_th_hyd%sg_dp_he (float) (9.8.1.1.1)
cp_dp_he (3385)	bb_shield%hcll%hcll.bb%outboard%mod_th_hyd%cp_dp_he (float) (9.8.1.1.1)
man_dp_he (3385)	bb_shield%hcll%hcll.bb%outboard%mod_th_hyd%man_dp_he (float) (9.8.1.1.1)
tot_dp_he (3385)	bb_shield%hcll%hcll.bb%outboard%mod_th_hyd%tot_dp_he (float) (9.8.1.1.1)
bp_dp_he (3385)	bb_shield%hcll%hcll.bb%outboard%mod_th_hyd%bp_dp_he (float) (9.8.1.1.1)
circ_dp_he (3385)	bb_shield%hcll%hcll.bb%outboard%mod_th_hyd%circ_dp_he (float) (9.8.1.1.1)
mod_mech (3346)	bb_shield%hcll%hcll.bb%outboard%mod_mech (mode_mech) (9.8.1.3.277)
fw_min_ts_mg (3383)	bb_shield%hcll%hcll.bb%outboard%mod_mech%fw_min_ts_mg (float) (9.8.1.1.1)
fw_min_bd_mg (3383)	bb_shield%hcll%hcll.bb%outboard%mod_mech%fw_min_bd_mg (float) (9.8.1.1.1)
sg_min_ts_mg (3383)	bb_shield%hcll%hcll.bb%outboard%mod_mech%sg_min_ts_mg (float) (9.8.1.1.1)
sg_min_bd_mg (3383)	bb_shield%hcll%hcll.bb%outboard%mod_mech%sg_min_bd_mg (float) (9.8.1.1.1)
cp_min_ts_mg (3383)	bb_shield%hcll%hcll.bb%outboard%mod_mech%cp_min_ts_mg (float) (9.8.1.1.1)
cp_min_bd_mg (3383)	bb_shield%hcll%hcll.bb%outboard%mod_mech%cp_min_bd_mg (float) (9.8.1.1.1)
min_ts_mg_ac (3383)	bb_shield%hcll%hcll.bb%outboard%mod_mech%min_ts_mg_ac (float) (9.8.1.1.1)
min_bd_mg_ac (3383)	bb_shield%hcll%hcll.bb%outboard%mod_mech%min_bd_mg_ac (float) (9.8.1.1.1)
mod_lipb (3346)	bb_shield%hcll%hcll.bb%outboard%mod_lipb (mode_lipb) (9.8.1.3.276)

lp_rec.day (3382)	bb_shield%hcll%hcll.bb%outboard%mod.libb%lp_rec.day (float) (9.8.1.1.1)
bb_lp_fr (3382)	bb_shield%hcll%hcll.bb%outboard%mod.libb%bb_lp_fr (vecflt.type) (9.8.1.2.13)
lp_inl_p (3382)	bb_shield%hcll%hcll.bb%outboard%mod.libb%lp_inl_p (float) (9.8.1.1.1)
bu_dp_lp (3382)	bb_shield%hcll%hcll.bb%outboard%mod.libb%bu_dp_lp (float) (9.8.1.1.1)
man_dp_lp (3382)	bb_shield%hcll%hcll.bb%outboard%mod.libb%man_dp_lp (float) (9.8.1.1.1)
tot_dp_lp (3382)	bb_shield%hcll%hcll.bb%outboard%mod.libb%tot_dp_lp (float) (9.8.1.1.1)
bu_lp_ave.t (3382)	bb_shield%hcll%hcll.bb%outboard%mod.libb%bu_lp_ave.t (float) (9.8.1.1.1)
bu_lp_max.t (3382)	bb_shield%hcll%hcll.bb%outboard%mod.libb%bu_lp_max.t (float) (9.8.1.1.1)
mod_tritium (3346)	bb_shield%hcll%hcll.bb%outboard%mod.tritium (mode.tritium) (9.8.1.3.281)
t_conc.libb (3387)	bb_shield%hcll%hcll.bb%outboard%mod.tritium%t_conc.libb (float) (9.8.1.1.1)
t_conc.he (3387)	bb_shield%hcll%hcll.bb%outboard%mod.tritium%t_conc.he (float) (9.8.1.1.1)
codeparam (3111)	bb_shield%codeparam (codeparam) (9.8.1.3.84)
codename (3190)	bb_shield%codeparam%codename (string) (9.8.1.1.3)
codeversion (3190)	bb_shield%codeparam%codeversion (string) (9.8.1.1.3)
parameters (3190)	bb_shield%codeparam%parameters (string) (9.8.1.1.3)
output_diag (3190)	bb_shield%codeparam%output_diag (string) (9.8.1.1.3)
output_flag (3190)	bb_shield%codeparam%output_flag (integer) (9.8.1.1.2)
time (3111)	bb_shield%time (float) (9.8.1.1.1)

### 9.8.2.1.4 bolometer

datainfo (3112)	bolometer%datainfo (datainfo) (9.8.1.3.141)
dataprovider (3247)	bolometer%datainfo%dataprovider (string) (9.8.1.1.3)
putdate (3247)	bolometer%datainfo%putdate (string) (9.8.1.1.3)
source (3247)	bolometer%datainfo%source (string) (9.8.1.1.3)
comment (3247)	bolometer%datainfo%comment (string) (9.8.1.1.3)
cocos (3247)	bolometer%datainfo%cocos (integer) (9.8.1.1.2)
id (3247)	bolometer%datainfo%id (integer) (9.8.1.1.2)
isref (3247)	bolometer%datainfo%isref (integer) (9.8.1.1.2)
whatref (3247)	bolometer%datainfo%whatref (whatref) (9.8.1.3.513)
user (3619)	bolometer%datainfo%whatref%user (string) (9.8.1.1.3)
machine (3619)	bolometer%datainfo%whatref%machine (string) (9.8.1.1.3)
shot (3619)	bolometer%datainfo%whatref%shot (integer) (9.8.1.1.2)
run (3619)	bolometer%datainfo%whatref%run (integer) (9.8.1.1.2)
occurrence (3619)	bolometer%datainfo%whatref%occurrence (integer) (9.8.1.1.2)
putinfo (3247)	bolometer%datainfo%putinfo (putinfo) (9.8.1.3.349)
putmethod (3455)	bolometer%datainfo%putinfo%putmethod (string) (9.8.1.1.3)
putaccess (3455)	bolometer%datainfo%putinfo%putaccess (string) (9.8.1.1.3)
putlocation (3455)	bolometer%datainfo%putinfo%putlocation (string) (9.8.1.1.3)
rights (3455)	bolometer%datainfo%putinfo%rights (string) (9.8.1.1.3)
setup (3112)	bolometer%setup (bolometer_setup) (9.8.1.3.71)
id (3177)	bolometer%setup%id (vecstring.type) (9.8.1.2.15)
los (3177)	bolometer%setup%los (setup_line) (9.8.1.3.403)
pivot_point (3509)	bolometer%setup%los%pivot_point (rzphi1D) (9.8.1.3.372)
r (3478)	bolometer%setup%los%pivot_point%r (vecflt.type) (9.8.1.2.13)
z (3478)	bolometer%setup%los%pivot_point%z (vecflt.type) (9.8.1.2.13)
phi (3478)	bolometer%setup%los%pivot_point%phi (vecflt.type) (9.8.1.2.13)
horchordang1 (3509)	bolometer%setup%los%horchordang1 (vecflt.type) (9.8.1.2.13)
verchordang1 (3509)	bolometer%setup%los%verchordang1 (vecflt.type) (9.8.1.2.13)
width (3509)	bolometer%setup%los%width (vecflt.type) (9.8.1.2.13)
second_point (3509)	bolometer%setup%los%second_point (rzphi1D) (9.8.1.3.372)
r (3478)	bolometer%setup%los%second_point%r (vecflt.type) (9.8.1.2.13)
z (3478)	bolometer%setup%los%second_point%z (vecflt.type) (9.8.1.2.13)
phi (3478)	bolometer%setup%los%second_point%phi (vecflt.type) (9.8.1.2.13)
horchordang2 (3509)	bolometer%setup%los%horchordang2 (vecflt.type) (9.8.1.2.13)
verchordang2 (3509)	bolometer%setup%los%verchordang2 (vecflt.type) (9.8.1.2.13)
third_point (3509)	bolometer%setup%los%third_point (rzphi1D) (9.8.1.3.372)
r (3478)	bolometer%setup%los%third_point%r (vecflt.type) (9.8.1.2.13)
z (3478)	bolometer%setup%los%third_point%z (vecflt.type) (9.8.1.2.13)
phi (3478)	bolometer%setup%los%third_point%phi (vecflt.type) (9.8.1.2.13)
nchordpoints (3509)	bolometer%setup%los%nchordpoints (integer) (9.8.1.1.2)

etendue (3177)	bolometer%setup%etendue (vecflt_type) (9.8.1.2.13)
measure (3112)	bolometer%measure (bolometer_measure) (9.8.1.3.69)
prad (3175)	bolometer%measure%prad (exp1D) (9.8.1.3.204)
value (3310)	bolometer%measure%prad%value (vecflt_type) (9.8.1.2.13)
abserror (3310)	bolometer%measure%prad%abserror (vecflt_type) (9.8.1.2.13)
releror (3310)	bolometer%measure%prad%releror (vecflt_type) (9.8.1.2.13)
process (3112)	bolometer%process (bolometer_processed) (9.8.1.3.70)
prad_tot (3176)	bolometer%process%prad_tot (exp0D) (9.8.1.3.203)
value (3309)	bolometer%process%prad_tot%value (float) (9.8.1.1.1)
abserror (3309)	bolometer%process%prad_tot%abserror (float) (9.8.1.1.1)
releror (3309)	bolometer%process%prad_tot%releror (float) (9.8.1.1.1)
prad_core (3176)	bolometer%process%prad_core (exp0D) (9.8.1.3.203)
value (3309)	bolometer%process%prad_core%value (float) (9.8.1.1.1)
abserror (3309)	bolometer%process%prad_core%abserror (float) (9.8.1.1.1)
releror (3309)	bolometer%process%prad_core%releror (float) (9.8.1.1.1)
codeparam (3112)	bolometer%codeparam (codeparam) (9.8.1.3.84)
codename (3190)	bolometer%codeparam%codename (string) (9.8.1.1.3)
codeversion (3190)	bolometer%codeparam%codeversion (string) (9.8.1.1.3)
parameters (3190)	bolometer%codeparam%parameters (string) (9.8.1.1.3)
output_diag (3190)	bolometer%codeparam%output_diag (string) (9.8.1.1.3)
output_flag (3190)	bolometer%codeparam%output_flag (integer) (9.8.1.1.2)
time (3112)	bolometer%time (float) (9.8.1.1.1)

### 9.8.2.1.5 bremsstrahl

datainfo (3113)	bremsstrahl%datainfo (datainfo) (9.8.1.3.141)
dataprovider (3247)	bremsstrahl%datainfo%dataprovider (string) (9.8.1.1.3)
putdate (3247)	bremsstrahl%datainfo%putdate (string) (9.8.1.1.3)
source (3247)	bremsstrahl%datainfo%source (string) (9.8.1.1.3)
comment (3247)	bremsstrahl%datainfo%comment (string) (9.8.1.1.3)
cocos (3247)	bremsstrahl%datainfo%cocos (integer) (9.8.1.1.2)
id (3247)	bremsstrahl%datainfo%id (integer) (9.8.1.1.2)
isref (3247)	bremsstrahl%datainfo%isref (integer) (9.8.1.1.2)
whatref (3247)	bremsstrahl%datainfo%whatref (whatref) (9.8.1.3.513)
user (3619)	bremsstrahl%datainfo%whatref%user (string) (9.8.1.1.3)
machine (3619)	bremsstrahl%datainfo%whatref%machine (string) (9.8.1.1.3)
shot (3619)	bremsstrahl%datainfo%whatref%shot (integer) (9.8.1.1.2)
run (3619)	bremsstrahl%datainfo%whatref%run (integer) (9.8.1.1.2)
occurrence (3619)	bremsstrahl%datainfo%whatref%occurrence (integer) (9.8.1.1.2)
putinfo (3247)	bremsstrahl%datainfo%putinfo (putinfo) (9.8.1.3.349)
putmethod (3455)	bremsstrahl%datainfo%putinfo%putmethod (string) (9.8.1.1.3)
putaccess (3455)	bremsstrahl%datainfo%putinfo%putaccess (string) (9.8.1.1.3)
putlocation (3455)	bremsstrahl%datainfo%putinfo%putlocation (string) (9.8.1.1.3)
rights (3455)	bremsstrahl%datainfo%putinfo%rights (string) (9.8.1.1.3)
setup (3113)	bremsstrahl%setup (bremsstrahl_setup) (9.8.1.3.79)
id (3185)	bremsstrahl%setup%id (vecstring_type) (9.8.1.2.15)
los (3185)	bremsstrahl%setup%los (setup_line_exp) (9.8.1.3.404)
pivot_point (3510)	bremsstrahl%setup%los%pivot_point (rzphi1Dexperimental) (9.8.1.3.374)
r (3480)	bremsstrahl%setup%los%pivot_point%r (vecflt_type) (9.8.1.2.13)
z (3480)	bremsstrahl%setup%los%pivot_point%z (vecflt_type) (9.8.1.2.13)
phi (3480)	bremsstrahl%setup%los%pivot_point%phi (vecflt_type) (9.8.1.2.13)
horchordang1 (3510)	bremsstrahl%setup%los%horchordang1 (vecflt_type) (9.8.1.2.13)
verchordang1 (3510)	bremsstrahl%setup%los%verchordang1 (vecflt_type) (9.8.1.2.13)
width (3510)	bremsstrahl%setup%los%width (vecflt_type) (9.8.1.2.13)
second_point (3510)	bremsstrahl%setup%los%second_point (rzphi1Dexperimental) (9.8.1.3.374)
r (3480)	bremsstrahl%setup%los%second_point%r (vecflt_type) (9.8.1.2.13)
z (3480)	bremsstrahl%setup%los%second_point%z (vecflt_type) (9.8.1.2.13)
phi (3480)	bremsstrahl%setup%los%second_point%phi (vecflt_type) (9.8.1.2.13)
horchordang2 (3510)	bremsstrahl%setup%los%horchordang2 (vecflt_type) (9.8.1.2.13)
verchordang2 (3510)	bremsstrahl%setup%los%verchordang2 (vecflt_type) (9.8.1.2.13)
third_point (3510)	bremsstrahl%setup%los%third_point (rzphi1Dexperimental) (9.8.1.3.374)



r (3480)	bremsstrahl%setup%los%third_point%r (vecflt.type) (9.8.1.2.13)
z (3480)	bremsstrahl%setup%los%third_point%z (vecflt.type) (9.8.1.2.13)
phi (3480)	bremsstrahl%setup%los%third_point%phi (vecflt.type) (9.8.1.2.13)
nchordpoints (3510)	bremsstrahl%setup%los%nchordpoints (integer) (9.8.1.1.2)
measure (3113)	bremsstrahl%measure (bremsstrahl_measure) (9.8.1.3.78)
zeff (3184)	bremsstrahl%measure%zeff (exp1D) (9.8.1.3.204)
value (3310)	bremsstrahl%measure%zeff%value (vecflt.type) (9.8.1.2.13)
abserror (3310)	bremsstrahl%measure%zeff%abserror (vecflt.type) (9.8.1.2.13)
releror (3310)	bremsstrahl%measure%zeff%releror (vecflt.type) (9.8.1.2.13)
codeparam (3113)	bremsstrahl%codeparam (codeparam) (9.8.1.3.84)
codename (3190)	bremsstrahl%codeparam%codename (string) (9.8.1.1.3)
codeversion (3190)	bremsstrahl%codeparam%codeversion (string) (9.8.1.1.3)
parameters (3190)	bremsstrahl%codeparam%parameters (string) (9.8.1.1.3)
output_diag (3190)	bremsstrahl%codeparam%output_diag (string) (9.8.1.1.3)
output_flag (3190)	bremsstrahl%codeparam%output_flag (integer) (9.8.1.1.2)
time (3113)	bremsstrahl%time (float) (9.8.1.1.1)

### 9.8.2.1.6 compositionc

datainfo (3114)	compositionc%datainfo (datainfo) (9.8.1.3.141)
dataprovider (3247)	compositionc%datainfo%dataprovider (string) (9.8.1.1.3)
putdate (3247)	compositionc%datainfo%putdate (string) (9.8.1.1.3)
source (3247)	compositionc%datainfo%source (string) (9.8.1.1.3)
comment (3247)	compositionc%datainfo%comment (string) (9.8.1.1.3)
cocos (3247)	compositionc%datainfo%cocos (integer) (9.8.1.1.2)
id (3247)	compositionc%datainfo%id (integer) (9.8.1.1.2)
isref (3247)	compositionc%datainfo%isref (integer) (9.8.1.1.2)
whatref (3247)	compositionc%datainfo%whatref (whatref) (9.8.1.3.513)
user (3619)	compositionc%datainfo%whatref%user (string) (9.8.1.1.3)
machine (3619)	compositionc%datainfo%whatref%machine (string) (9.8.1.1.3)
shot (3619)	compositionc%datainfo%whatref%shot (integer) (9.8.1.1.2)
run (3619)	compositionc%datainfo%whatref%run (integer) (9.8.1.1.2)
occurrence (3619)	compositionc%datainfo%whatref%occurrence (integer) (9.8.1.1.2)
putinfo (3247)	compositionc%datainfo%putinfo (putinfo) (9.8.1.3.349)
putmethod (3455)	compositionc%datainfo%putinfo%putmethod (string) (9.8.1.1.3)
putaccess (3455)	compositionc%datainfo%putinfo%putaccess (string) (9.8.1.1.3)
putlocation (3455)	compositionc%datainfo%putinfo%putlocation (string) (9.8.1.1.3)
rights (3455)	compositionc%datainfo%putinfo%rights (string) (9.8.1.1.3)
compositions (3114)	compositionc%compositions (compositions.type) (9.8.1.3.106)
nuclei (3212)	compositionc%compositions%nuclei(:) (nuclei) (9.8.1.3.306)
zn (3412)	compositionc%compositions%nuclei(:)%zn (float) (9.8.1.1.1)
amn (3412)	compositionc%compositions%nuclei(:)%amn (float) (9.8.1.1.1)
label (3412)	compositionc%compositions%nuclei(:)%label (string) (9.8.1.1.3)
ions (3212)	compositionc%compositions%ions(:) (ions) (9.8.1.3.247)
nucindex (3353)	compositionc%compositions%ions(:)%nucindex (integer) (9.8.1.1.2)
zion (3353)	compositionc%compositions%ions(:)%zion (float) (9.8.1.1.1)
imp_flag (3353)	compositionc%compositions%ions(:)%imp_flag (integer) (9.8.1.1.2)
label (3353)	compositionc%compositions%ions(:)%label (string) (9.8.1.1.3)
impurities (3212)	compositionc%compositions%impurities(:) (impurities) (9.8.1.3.244)
nucindex (3350)	compositionc%compositions%impurities(:)%nucindex (integer) (9.8.1.1.2)
i_ion (3350)	compositionc%compositions%impurities(:)%i_ion (integer) (9.8.1.1.2)
nzimp (3350)	compositionc%compositions%impurities(:)%nzimp (integer) (9.8.1.1.2)
zmin (3350)	compositionc%compositions%impurities(:)%zmin (vecflt.type) (9.8.1.2.13)
zmax (3350)	compositionc%compositions%impurities(:)%zmax (vecflt.type) (9.8.1.2.13)
label (3350)	compositionc%compositions%impurities(:)%label (vecstring.type) (9.8.1.2.15)
neutralscomp (3212)	compositionc%compositions%neutralscomp(:) (composition_neutralscomp) (9.8.1.3.105)
neutcomp (3211)	compositionc%compositions%neutralscomp(:)%neutcomp(:) (composition_neutrals_neutcomp) (9.8.1.3.104)
nucindex (3210)	compositionc%compositions%neutralscomp(:)%neutcomp(:)%nucindex (integer) (9.8.1.1.2)
multiplicity (3210)	compositionc%compositions%neutralscomp(:)%neutcomp(:)%multiplicity (integer) (9.8.1.1.2)
type (3211)	compositionc%compositions%neutralscomp(:)%type(:) (identifier) (9.8.1.3.242)



id (3348)	composition%compositions%neutralscomp(:)%type(:)%id (string) (9.8.1.1.3)
flag (3348)	composition%compositions%neutralscomp(:)%type(:)%flag (integer) (9.8.1.1.2)
description (3348)	composition%compositions%neutralscomp(:)%type(:)%description (string) (9.8.1.1.3)
label (3211)	composition%compositions%neutralscomp(:)%label (string) (9.8.1.1.3)
edgespecies (3212)	composition%compositions%edgespecies(:) (edgespecies) (9.8.1.3.192)
nucindex (3298)	composition%compositions%edgespecies(:)%nucindex (integer) (9.8.1.1.2)
zmin (3298)	composition%compositions%edgespecies(:)%zmin (float) (9.8.1.1.1)
zmax (3298)	composition%compositions%edgespecies(:)%zmax (float) (9.8.1.1.1)
label (3298)	composition%compositions%edgespecies(:)%label (string) (9.8.1.1.3)
signature (3212)	composition%compositions%signature (identifier) (9.8.1.3.242)
id (3348)	composition%compositions%signature%id (string) (9.8.1.1.3)
flag (3348)	composition%compositions%signature%flag (integer) (9.8.1.1.2)
description (3348)	composition%compositions%signature%description (string) (9.8.1.1.3)
codeparam (3114)	composition%codeparam (codeparam) (9.8.1.3.84)
codename (3190)	composition%codeparam%codename (string) (9.8.1.1.3)
codeversion (3190)	composition%codeparam%codeversion (string) (9.8.1.1.3)
parameters (3190)	composition%codeparam%parameters (string) (9.8.1.1.3)
output_diag (3190)	composition%codeparam%output_diag (string) (9.8.1.1.3)
output_flag (3190)	composition%codeparam%output_flag (integer) (9.8.1.1.2)
time (3114)	composition%time (float) (9.8.1.1.1)

### 9.8.2.1.7 coredelta

datainfo (3115)	coredelta%datainfo (datainfo) (9.8.1.3.141)
dataprovider (3247)	coredelta%datainfo%dataprovider (string) (9.8.1.1.3)
putdate (3247)	coredelta%datainfo%putdate (string) (9.8.1.1.3)
source (3247)	coredelta%datainfo%source (string) (9.8.1.1.3)
comment (3247)	coredelta%datainfo%comment (string) (9.8.1.1.3)
cocos (3247)	coredelta%datainfo%cocos (integer) (9.8.1.1.2)
id (3247)	coredelta%datainfo%id (integer) (9.8.1.1.2)
isref (3247)	coredelta%datainfo%isref (integer) (9.8.1.1.2)
whatref (3247)	coredelta%datainfo%whatref (whatref) (9.8.1.3.513)
user (3619)	coredelta%datainfo%whatref%user (string) (9.8.1.1.3)
machine (3619)	coredelta%datainfo%whatref%machine (string) (9.8.1.1.3)
shot (3619)	coredelta%datainfo%whatref%shot (integer) (9.8.1.1.2)
run (3619)	coredelta%datainfo%whatref%run (integer) (9.8.1.1.2)
occurrence (3619)	coredelta%datainfo%whatref%occurrence (integer) (9.8.1.1.2)
putinfo (3247)	coredelta%datainfo%putinfo (putinfo) (9.8.1.3.349)
putmethod (3455)	coredelta%datainfo%putinfo%putmethod (string) (9.8.1.1.3)
putaccess (3455)	coredelta%datainfo%putinfo%putaccess (string) (9.8.1.1.3)
putlocation (3455)	coredelta%datainfo%putinfo%putlocation (string) (9.8.1.1.3)
rights (3455)	coredelta%datainfo%putinfo%rights (string) (9.8.1.1.3)
composition (3115)	coredelta%composition (composition) (9.8.1.3.102)
amn (3208)	coredelta%composition%amn (vecflt_type) (9.8.1.2.13)
zn (3208)	coredelta%composition%zn (vecflt_type) (9.8.1.2.13)
zion (3208)	coredelta%composition%zion (vecflt_type) (9.8.1.2.13)
imp_flag (3208)	coredelta%composition%imp_flag (vecint_type) (9.8.1.2.14)
label (3208)	coredelta%composition%label (vecstring_type) (9.8.1.2.15)
desc_impur (3115)	coredelta%desc_impur (desc_impur) (9.8.1.3.143)
amn (3249)	coredelta%desc_impur%amn (vecflt_type) (9.8.1.2.13)
zn (3249)	coredelta%desc_impur%zn (vecint_type) (9.8.1.2.14)
i_ion (3249)	coredelta%desc_impur%i_ion (vecint_type) (9.8.1.2.14)
nzimp (3249)	coredelta%desc_impur%nzimp (vecint_type) (9.8.1.2.14)
zmin (3249)	coredelta%desc_impur%zmin (matint_type) (9.8.1.2.11)
zmax (3249)	coredelta%desc_impur%zmax (matint_type) (9.8.1.2.11)
label (3249)	coredelta%desc_impur%label (vecstring_type) (9.8.1.2.15)
compositions (3115)	coredelta%compositions (compositions_type) (9.8.1.3.106)
nuclei (3212)	coredelta%compositions%nuclei(:) (nuclei) (9.8.1.3.306)
zn (3412)	coredelta%compositions%nuclei(:)%zn (float) (9.8.1.1.1)
amn (3412)	coredelta%compositions%nuclei(:)%amn (float) (9.8.1.1.1)
label (3412)	coredelta%compositions%nuclei(:)%label (string) (9.8.1.1.3)

ions (3212)	coredelta%compositions%ions(:) (ions) (9.8.1.3.247)
nucindex (3353)	coredelta%compositions%ions(:)%nucindex (integer) (9.8.1.1.2)
zion (3353)	coredelta%compositions%ions(:)%zion (float) (9.8.1.1.1)
imp_flag (3353)	coredelta%compositions%ions(:)%imp_flag (integer) (9.8.1.1.2)
label (3353)	coredelta%compositions%ions(:)%label (string) (9.8.1.1.3)
impurities (3212)	coredelta%compositions%impurities(:) (impurities) (9.8.1.3.244)
nucindex (3350)	coredelta%compositions%impurities(:)%nucindex (integer) (9.8.1.1.2)
i_ion (3350)	coredelta%compositions%impurities(:)%i_ion (integer) (9.8.1.1.2)
nzimp (3350)	coredelta%compositions%impurities(:)%nzimp (integer) (9.8.1.1.2)
zmin (3350)	coredelta%compositions%impurities(:)%zmin (vecflt_type) (9.8.1.2.13)
zmax (3350)	coredelta%compositions%impurities(:)%zmax (vecflt_type) (9.8.1.2.13)
label (3350)	coredelta%compositions%impurities(:)%label (vecstring_type) (9.8.1.2.15)
neutralscomp (3212)	coredelta%compositions%neutralscomp(:) (composition_neutralscomp) (9.8.1.3.105)
neutcomp (3211)	coredelta%compositions%neutralscomp(:)%neutcomp(:) (composition_neutrals_neutcomp) (9.8.1.3.104)
nucindex (3210)	coredelta%compositions%neutralscomp(:)%neutcomp(:)%nucindex (integer) (9.8.1.1.2)
multiplicity (3210)	coredelta%compositions%neutralscomp(:)%neutcomp(:)%multiplicity (integer) (9.8.1.1.2)
type (3211)	coredelta%compositions%neutralscomp(:)%type(:) (identifier) (9.8.1.3.242)
id (3348)	coredelta%compositions%neutralscomp(:)%type(:)%id (string) (9.8.1.1.3)
flag (3348)	coredelta%compositions%neutralscomp(:)%type(:)%flag (integer) (9.8.1.1.2)
description (3348)	coredelta%compositions%neutralscomp(:)%type(:)%description (string) (9.8.1.1.3)
label (3211)	coredelta%compositions%neutralscomp(:)%label (string) (9.8.1.1.3)
edgespecies (3212)	coredelta%compositions%edgespecies(:) (edgespecies) (9.8.1.3.192)
nucindex (3298)	coredelta%compositions%edgespecies(:)%nucindex (integer) (9.8.1.1.2)
zmin (3298)	coredelta%compositions%edgespecies(:)%zmin (float) (9.8.1.1.1)
zmax (3298)	coredelta%compositions%edgespecies(:)%zmax (float) (9.8.1.1.1)
label (3298)	coredelta%compositions%edgespecies(:)%label (string) (9.8.1.1.3)
signature (3212)	coredelta%compositions%signature (identifier) (9.8.1.3.242)
id (3348)	coredelta%compositions%signature%id (string) (9.8.1.1.3)
flag (3348)	coredelta%compositions%signature%flag (integer) (9.8.1.1.2)
description (3348)	coredelta%compositions%signature%description (string) (9.8.1.1.3)
values (3115)	coredelta%values(:) (coredelta_values) (9.8.1.3.111)
deltaid (3217)	coredelta%values(:)%deltaid (identifier) (9.8.1.3.242)
id (3348)	coredelta%values(:)%deltaid%id (string) (9.8.1.1.3)
flag (3348)	coredelta%values(:)%deltaid%flag (integer) (9.8.1.1.2)
description (3348)	coredelta%values(:)%deltaid%description (string) (9.8.1.1.3)
rho_tor (3217)	coredelta%values(:)%rho_tor (vecflt_type) (9.8.1.2.13)
rho_tor_norm (3217)	coredelta%values(:)%rho_tor_norm (vecflt_type) (9.8.1.2.13)
psi (3217)	coredelta%values(:)%psi (vecflt_type) (9.8.1.2.13)
volume (3217)	coredelta%values(:)%volume (vecflt_type) (9.8.1.2.13)
area (3217)	coredelta%values(:)%area (vecflt_type) (9.8.1.2.13)
delta_psi (3217)	coredelta%values(:)%delta_psi (vecflt_type) (9.8.1.2.13)
delta_te (3217)	coredelta%values(:)%delta_te (vecflt_type) (9.8.1.2.13)
delta_ti (3217)	coredelta%values(:)%delta_ti (matflt_type) (9.8.1.2.10)
delta_ne (3217)	coredelta%values(:)%delta_ne (vecflt_type) (9.8.1.2.13)
delta_ni (3217)	coredelta%values(:)%delta_ni (matflt_type) (9.8.1.2.10)
impurity (3217)	coredelta%values(:)%impurity(:) (coredelta_values_impurity) (9.8.1.3.112)
delta_tz (3218)	coredelta%values(:)%impurity(:)%delta_tz (matflt_type) (9.8.1.2.10)
delta_nz (3218)	coredelta%values(:)%impurity(:)%delta_nz (matflt_type) (9.8.1.2.10)
delta_vtor (3217)	coredelta%values(:)%delta_vtor (matflt_type) (9.8.1.2.10)
codeparam (3217)	coredelta%values(:)%codeparam (codeparam) (9.8.1.3.84)
codename (3190)	coredelta%values(:)%codeparam%codename (string) (9.8.1.1.3)
codeversion (3190)	coredelta%values(:)%codeparam%codeversion (string) (9.8.1.1.3)
parameters (3190)	coredelta%values(:)%codeparam%parameters (string) (9.8.1.1.3)
output_diag (3190)	coredelta%values(:)%codeparam%output_diag (string) (9.8.1.1.3)
output_flag (3190)	coredelta%values(:)%codeparam%output_flag (integer) (9.8.1.1.2)
codeparam (3115)	coredelta%codeparam (codeparam) (9.8.1.3.84)
codename (3190)	coredelta%codeparam%codename (string) (9.8.1.1.3)
codeversion (3190)	coredelta%codeparam%codeversion (string) (9.8.1.1.3)
parameters (3190)	coredelta%codeparam%parameters (string) (9.8.1.1.3)
output_diag (3190)	coredelta%codeparam%output_diag (string) (9.8.1.1.3)
output_flag (3190)	coredelta%codeparam%output_flag (integer) (9.8.1.1.2)

## 9.8.2.1.8 corefast

datainfo (3116)	corefast%datainfo (datainfo) (9.8.1.3.141)
dataprovder (3247)	corefast%datainfo%dataprovder (string) (9.8.1.1.3)
putdate (3247)	corefast%datainfo%putdate (string) (9.8.1.1.3)
source (3247)	corefast%datainfo%source (string) (9.8.1.1.3)
comment (3247)	corefast%datainfo%comment (string) (9.8.1.1.3)
cocos (3247)	corefast%datainfo%cocos (integer) (9.8.1.1.2)
id (3247)	corefast%datainfo%id (integer) (9.8.1.1.2)
isref (3247)	corefast%datainfo%isref (integer) (9.8.1.1.2)
whatref (3247)	corefast%datainfo%whatref (whatref) (9.8.1.3.513)
user (3619)	corefast%datainfo%whatref%user (string) (9.8.1.1.3)
machine (3619)	corefast%datainfo%whatref%machine (string) (9.8.1.1.3)
shot (3619)	corefast%datainfo%whatref%shot (integer) (9.8.1.1.2)
run (3619)	corefast%datainfo%whatref%run (integer) (9.8.1.1.2)
occurrence (3619)	corefast%datainfo%whatref%occurrence (integer) (9.8.1.1.2)
putinfo (3247)	corefast%datainfo%putinfo (putinfo) (9.8.1.3.349)
putmethod (3455)	corefast%datainfo%putinfo%putmethod (string) (9.8.1.1.3)
putaccess (3455)	corefast%datainfo%putinfo%putaccess (string) (9.8.1.1.3)
putlocation (3455)	corefast%datainfo%putinfo%putlocation (string) (9.8.1.1.3)
rights (3455)	corefast%datainfo%putinfo%rights (string) (9.8.1.1.3)
composition (3116)	corefast%composition (composition) (9.8.1.3.102)
amn (3208)	corefast%composition%amn (vecflt.type) (9.8.1.2.13)
zn (3208)	corefast%composition%zn (vecflt.type) (9.8.1.2.13)
zion (3208)	corefast%composition%zion (vecflt.type) (9.8.1.2.13)
imp_flag (3208)	corefast%composition%imp_flag (vecint.type) (9.8.1.2.14)
label (3208)	corefast%composition%label (vecstring.type) (9.8.1.2.15)
desc_impur (3116)	corefast%desc_impur (desc_impur) (9.8.1.3.143)
amn (3249)	corefast%desc_impur%amn (vecflt.type) (9.8.1.2.13)
zn (3249)	corefast%desc_impur%zn (vecint.type) (9.8.1.2.14)
i_ion (3249)	corefast%desc_impur%i_ion (vecint.type) (9.8.1.2.14)
nzimp (3249)	corefast%desc_impur%nzimp (vecint.type) (9.8.1.2.14)
zmin (3249)	corefast%desc_impur%zmin (matint.type) (9.8.1.2.11)
zmax (3249)	corefast%desc_impur%zmax (matint.type) (9.8.1.2.11)
label (3249)	corefast%desc_impur%label (vecstring.type) (9.8.1.2.15)
compositions (3116)	corefast%compositions (compositions.type) (9.8.1.3.106)
nuclei (3212)	corefast%compositions%nuclei(:) (nuclei) (9.8.1.3.306)
zn (3412)	corefast%compositions%nuclei(:)%zn (float) (9.8.1.1.1)
amn (3412)	corefast%compositions%nuclei(:)%amn (float) (9.8.1.1.1)
label (3412)	corefast%compositions%nuclei(:)%label (string) (9.8.1.1.3)
ions (3212)	corefast%compositions%ions(:) (ions) (9.8.1.3.247)
nucindex (3353)	corefast%compositions%ions(:)%nucindex (integer) (9.8.1.1.2)
zion (3353)	corefast%compositions%ions(:)%zion (float) (9.8.1.1.1)
imp_flag (3353)	corefast%compositions%ions(:)%imp_flag (integer) (9.8.1.1.2)
label (3353)	corefast%compositions%ions(:)%label (string) (9.8.1.1.3)
impurities (3212)	corefast%compositions%impurities(:) (impurities) (9.8.1.3.244)
nucindex (3350)	corefast%compositions%impurities(:)%nucindex (integer) (9.8.1.1.2)
i_ion (3350)	corefast%compositions%impurities(:)%i_ion (integer) (9.8.1.1.2)
nzimp (3350)	corefast%compositions%impurities(:)%nzimp (integer) (9.8.1.1.2)
zmin (3350)	corefast%compositions%impurities(:)%zmin (vecflt.type) (9.8.1.2.13)
zmax (3350)	corefast%compositions%impurities(:)%zmax (vecflt.type) (9.8.1.2.13)
label (3350)	corefast%compositions%impurities(:)%label (vecstring.type) (9.8.1.2.15)
neutralscomp (3212)	corefast%compositions%neutralscomp(:) (composition_neutralscomp) (9.8.1.3.105)
neutcomp (3211)	corefast%compositions%neutralscomp(:)%neutcomp(:) (composition_neutrals_neutcomp) (9.8.1.3.104)
nucindex (3210)	corefast%compositions%neutralscomp(:)%neutcomp(:)%nucindex (integer) (9.8.1.1.2)
multiplicity (3210)	corefast%compositions%neutralscomp(:)%neutcomp(:)%multiplicity (integer) (9.8.1.1.2)
type (3211)	corefast%compositions%neutralscomp(:)%type(:) (identifier) (9.8.1.3.242)
id (3348)	corefast%compositions%neutralscomp(:)%type(:)%id (string) (9.8.1.1.3)

flag (3348)	corefast%compositions%neutralscomp(:)%type(:)%flag (integer) (9.8.1.1.2)
description (3348)	corefast%compositions%neutralscomp(:)%type(:)%description (string) (9.8.1.1.3)
label (3211)	corefast%compositions%neutralscomp(:)%label (string) (9.8.1.1.3)
edgespecies (3212)	corefast%compositions%edgespecies(:) (edgespecies) (9.8.1.3.192)
nucindex (3298)	corefast%compositions%edgespecies(:)%nucindex (integer) (9.8.1.1.2)
zmin (3298)	corefast%compositions%edgespecies(:)%zmin (float) (9.8.1.1.1)
zmax (3298)	corefast%compositions%edgespecies(:)%zmax (float) (9.8.1.1.1)
label (3298)	corefast%compositions%edgespecies(:)%label (string) (9.8.1.1.3)
signature (3212)	corefast%compositions%signature (identifier) (9.8.1.3.242)
id (3348)	corefast%compositions%signature%id (string) (9.8.1.1.3)
flag (3348)	corefast%compositions%signature%flag (integer) (9.8.1.1.2)
description (3348)	corefast%compositions%signature%description (string) (9.8.1.1.3)
toroid_field (3116)	corefast%toroid_field (b0r0) (9.8.1.3.61)
r0 (3167)	corefast%toroid_field%r0 (float) (9.8.1.1.1)
b0 (3167)	corefast%toroid_field%b0 (float) (9.8.1.1.1)
values (3116)	corefast%values(:) (corefast_values) (9.8.1.3.113)
fastid (3219)	corefast%values(:)%fastid (identifier) (9.8.1.3.242)
id (3348)	corefast%values(:)%fastid%id (string) (9.8.1.1.3)
flag (3348)	corefast%values(:)%fastid%flag (integer) (9.8.1.1.2)
description (3348)	corefast%values(:)%fastid%description (string) (9.8.1.1.3)
filter (3219)	corefast%values(:)%filter (fast_thermal_separation_filter) (9.8.1.3.207)
method (3313)	corefast%values(:)%filter%method (identifier) (9.8.1.3.242)
id (3348)	corefast%values(:)%filter%method%id (string) (9.8.1.1.3)
flag (3348)	corefast%values(:)%filter%method%flag (integer) (9.8.1.1.2)
description (3348)	corefast%values(:)%filter%method%description (string) (9.8.1.1.3)
energy_sep (3313)	corefast%values(:)%filter%energy_sep (vecflt_type) (9.8.1.2.13)
rho_tor (3219)	corefast%values(:)%rho_tor (vecflt_type) (9.8.1.2.13)
rho_tor_norm (3219)	corefast%values(:)%rho_tor_norm (vecflt_type) (9.8.1.2.13)
psi (3219)	corefast%values(:)%psi (vecflt_type) (9.8.1.2.13)
volume (3219)	corefast%values(:)%volume (vecflt_type) (9.8.1.2.13)
area (3219)	corefast%values(:)%area (vecflt_type) (9.8.1.2.13)
j (3219)	corefast%values(:)%j (vecflt_type) (9.8.1.2.13)
sigma (3219)	corefast%values(:)%sigma (vecflt_type) (9.8.1.2.13)
ni (3219)	corefast%values(:)%ni (matflt_type) (9.8.1.2.10)
ne (3219)	corefast%values(:)%ne (vecflt_type) (9.8.1.2.13)
nz (3219)	corefast%values(:)%nz (matflt_type) (9.8.1.2.10)
pi (3219)	corefast%values(:)%pi (matflt_type) (9.8.1.2.10)
pe (3219)	corefast%values(:)%pe (vecflt_type) (9.8.1.2.13)
pz (3219)	corefast%values(:)%pz (matflt_type) (9.8.1.2.10)
pi_para (3219)	corefast%values(:)%pi_para (matflt_type) (9.8.1.2.10)
pe_para (3219)	corefast%values(:)%pe_para (vecflt_type) (9.8.1.2.13)
pz_para (3219)	corefast%values(:)%pz_para (matflt_type) (9.8.1.2.10)
ui (3219)	corefast%values(:)%ui (matflt_type) (9.8.1.2.10)
uz (3219)	corefast%values(:)%uz (matflt_type) (9.8.1.2.10)
codeparam (3219)	corefast%values(:)%codeparam (codeparam) (9.8.1.3.84)
codename (3190)	corefast%values(:)%codeparam%codename (string) (9.8.1.1.3)
codeversion (3190)	corefast%values(:)%codeparam%codeversion (string) (9.8.1.1.3)
parameters (3190)	corefast%values(:)%codeparam%parameters (string) (9.8.1.1.3)
output_diag (3190)	corefast%values(:)%codeparam%output_diag (string) (9.8.1.1.3)
output_flag (3190)	corefast%values(:)%codeparam%output_flag (integer) (9.8.1.1.2)
codeparam (3116)	corefast%codeparam (codeparam) (9.8.1.3.84)
codename (3190)	corefast%codeparam%codename (string) (9.8.1.1.3)
codeversion (3190)	corefast%codeparam%codeversion (string) (9.8.1.1.3)
parameters (3190)	corefast%codeparam%parameters (string) (9.8.1.1.3)
output_diag (3190)	corefast%codeparam%output_diag (string) (9.8.1.1.3)
output_flag (3190)	corefast%codeparam%output_flag (integer) (9.8.1.1.2)
time (3116)	corefast%time (float) (9.8.1.1.1)

### 9.8.2.1.9 coreimpur

datainfo (3117)	coreimpur%datainfo (datainfo) (9.8.1.3.141)
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dataprovider (3247)	coreimpur%datainfo%dataprovider (string) (9.8.1.1.3)
putdate (3247)	coreimpur%datainfo%putdate (string) (9.8.1.1.3)
source (3247)	coreimpur%datainfo%source (string) (9.8.1.1.3)
comment (3247)	coreimpur%datainfo%comment (string) (9.8.1.1.3)
cocos (3247)	coreimpur%datainfo%cocos (integer) (9.8.1.1.2)
id (3247)	coreimpur%datainfo%id (integer) (9.8.1.1.2)
isref (3247)	coreimpur%datainfo%isref (integer) (9.8.1.1.2)
whatref (3247)	coreimpur%datainfo%whatref (whatref) (9.8.1.3.513)
user (3619)	coreimpur%datainfo%whatref%user (string) (9.8.1.1.3)
machine (3619)	coreimpur%datainfo%whatref%machine (string) (9.8.1.1.3)
shot (3619)	coreimpur%datainfo%whatref%shot (integer) (9.8.1.1.2)
run (3619)	coreimpur%datainfo%whatref%run (integer) (9.8.1.1.2)
occurrence (3619)	coreimpur%datainfo%whatref%occurrence (integer) (9.8.1.1.2)
putinfo (3247)	coreimpur%datainfo%putinfo (putinfo) (9.8.1.3.349)
putmethod (3455)	coreimpur%datainfo%putinfo%putmethod (string) (9.8.1.1.3)
putaccess (3455)	coreimpur%datainfo%putinfo%putaccess (string) (9.8.1.1.3)
putlocation (3455)	coreimpur%datainfo%putinfo%putlocation (string) (9.8.1.1.3)
rights (3455)	coreimpur%datainfo%putinfo%rights (string) (9.8.1.1.3)
rho_tor_norm (3117)	coreimpur%rho_tor_norm (vecflt_type) (9.8.1.2.13)
rho_tor (3117)	coreimpur%rho_tor (vecflt_type) (9.8.1.2.13)
psi (3117)	coreimpur%psi (vecflt_type) (9.8.1.2.13)
volume (3117)	coreimpur%volume (vecflt_type) (9.8.1.2.13)
area (3117)	coreimpur%area (vecflt_type) (9.8.1.2.13)
source (3117)	coreimpur%source (vecstring_type) (9.8.1.2.15)
flag (3117)	coreimpur%flag (vecint_type) (9.8.1.2.14)
desc_impur (3117)	coreimpur%desc_impur (desc_impur) (9.8.1.3.143)
amn (3249)	coreimpur%desc_impur%amn (vecflt_type) (9.8.1.2.13)
zn (3249)	coreimpur%desc_impur%zn (vecint_type) (9.8.1.2.14)
i_ion (3249)	coreimpur%desc_impur%i_ion (vecint_type) (9.8.1.2.14)
nzimp (3249)	coreimpur%desc_impur%nzimp (vecint_type) (9.8.1.2.14)
zmin (3249)	coreimpur%desc_impur%zmin (matint_type) (9.8.1.2.11)
zmax (3249)	coreimpur%desc_impur%zmax (matint_type) (9.8.1.2.11)
label (3249)	coreimpur%desc_impur%label (vecstring_type) (9.8.1.2.15)
compositions (3117)	coreimpur%compositions (compositions_type) (9.8.1.3.106)
nuclei (3212)	coreimpur%compositions%nuclei(:) (nuclei) (9.8.1.3.306)
zn (3412)	coreimpur%compositions%nuclei(:)%zn (float) (9.8.1.1.1)
amn (3412)	coreimpur%compositions%nuclei(:)%amn (float) (9.8.1.1.1)
label (3412)	coreimpur%compositions%nuclei(:)%label (string) (9.8.1.1.3)
ions (3212)	coreimpur%compositions%ions(:) (ions) (9.8.1.3.247)
nucindex (3353)	coreimpur%compositions%ions(:)%nucindex (integer) (9.8.1.1.2)
zion (3353)	coreimpur%compositions%ions(:)%zion (float) (9.8.1.1.1)
imp_flag (3353)	coreimpur%compositions%ions(:)%imp_flag (integer) (9.8.1.1.2)
label (3353)	coreimpur%compositions%ions(:)%label (string) (9.8.1.1.3)
impurities (3212)	coreimpur%compositions%impurities(:) (impurities) (9.8.1.3.244)
nucindex (3350)	coreimpur%compositions%impurities(:)%nucindex (integer) (9.8.1.1.2)
i_ion (3350)	coreimpur%compositions%impurities(:)%i_ion (integer) (9.8.1.1.2)
nzimp (3350)	coreimpur%compositions%impurities(:)%nzimp (integer) (9.8.1.1.2)
zmin (3350)	coreimpur%compositions%impurities(:)%zmin (vecflt_type) (9.8.1.2.13)
zmax (3350)	coreimpur%compositions%impurities(:)%zmax (vecflt_type) (9.8.1.2.13)
label (3350)	coreimpur%compositions%impurities(:)%label (vecstring_type) (9.8.1.2.15)
neutralscomp (3212)	coreimpur%compositions%neutralscomp(:) (composition_neutralscomp) (9.8.1.3.105)
neutcomp (3211)	coreimpur%compositions%neutralscomp(:)%neutcomp(:) (composition_neutrals_neutcomp) (9.8.1.3.104)
nucindex (3210)	coreimpur%compositions%neutralscomp(:)%neutcomp(:)%nucindex (integer) (9.8.1.1.2)
multiplicity (3210)	coreimpur%compositions%neutralscomp(:)%neutcomp(:)%multiplicity (integer) (9.8.1.1.2)
type (3211)	coreimpur%compositions%neutralscomp(:)%type(:) (identifier) (9.8.1.3.242)
id (3348)	coreimpur%compositions%neutralscomp(:)%type(:)%id (string) (9.8.1.1.3)
flag (3348)	coreimpur%compositions%neutralscomp(:)%type(:)%flag (integer) (9.8.1.1.2)
description (3348)	coreimpur%compositions%neutralscomp(:)%type(:)%description (string) (9.8.1.1.3)
label (3211)	coreimpur%compositions%neutralscomp(:)%label (string) (9.8.1.1.3)
edgespecies (3212)	coreimpur%compositions%edgespecies(:) (edgespecies) (9.8.1.3.192)
nucindex (3298)	coreimpur%compositions%edgespecies(:)%nucindex (integer) (9.8.1.1.2)

zmin (3298)	coreimpur%compositions%edgespecies(:)%zmin (float) (9.8.1.1.1)
zmax (3298)	coreimpur%compositions%edgespecies(:)%zmax (float) (9.8.1.1.1)
label (3298)	coreimpur%compositions%edgespecies(:)%label (string) (9.8.1.1.3)
signature (3212)	coreimpur%compositions%signature (identifier) (9.8.1.3.242)
id (3348)	coreimpur%compositions%signature%id (string) (9.8.1.1.3)
flag (3348)	coreimpur%compositions%signature%flag (integer) (9.8.1.1.2)
description (3348)	coreimpur%compositions%signature%description (string) (9.8.1.1.3)
atomic_data (3117)	coreimpur%atomic_data (vecstring_type) (9.8.1.2.15)
impurity (3117)	coreimpur%impurity(:) (impurity_type) (9.8.1.3.245)
z (3351)	coreimpur%impurity(:)%z (matflt_type) (9.8.1.2.10)
zsq (3351)	coreimpur%impurity(:)%zsq (matflt_type) (9.8.1.2.10)
nz (3351)	coreimpur%impurity(:)%nz (matflt_type) (9.8.1.2.10)
tz (3351)	coreimpur%impurity(:)%tz (matflt_type) (9.8.1.2.10)
source_term (3351)	coreimpur%impurity(:)%source_term (sourceimp) (9.8.1.3.415)
value (3521)	coreimpur%impurity(:)%source_term%value (matflt_type) (9.8.1.2.10)
integral (3521)	coreimpur%impurity(:)%source_term%integral (matflt_type) (9.8.1.2.10)
source (3521)	coreimpur%impurity(:)%source_term%source (vecstring_type) (9.8.1.2.15)
boundary (3351)	coreimpur%impurity(:)%boundary (boundaryimp) (9.8.1.3.75)
value (3181)	coreimpur%impurity(:)%boundary%value (matflt_type) (9.8.1.2.10)
source (3181)	coreimpur%impurity(:)%boundary%source (string) (9.8.1.1.3)
type (3181)	coreimpur%impurity(:)%boundary%type (vecint_type) (9.8.1.2.14)
rho (3181)	coreimpur%impurity(:)%boundary%rho (vecflt_type) (9.8.1.2.13)
codeparam (3181)	coreimpur%impurity(:)%boundary%codeparam (codeparam) (9.8.1.3.84)
codename (3190)	coreimpur%impurity(:)%boundary%codeparam%codename (string) (9.8.1.1.3)
codeversion (3190)	coreimpur%impurity(:)%boundary%codeparam%codeversion (string) (9.8.1.1.3)
parameters (3190)	coreimpur%impurity(:)%boundary%codeparam%parameters (string) (9.8.1.1.3)
output_diag (3190)	coreimpur%impurity(:)%boundary%codeparam%output_diag (string) (9.8.1.1.3)
output_flag (3190)	coreimpur%impurity(:)%boundary%codeparam%output_flag (integer) (9.8.1.1.2)
transp_coef (3351)	coreimpur%impurity(:)%transp_coef (coretransimp) (9.8.1.3.134)
diff (3240)	coreimpur%impurity(:)%transp_coef%diff (matflt_type) (9.8.1.2.10)
vconv (3240)	coreimpur%impurity(:)%transp_coef%vconv (matflt_type) (9.8.1.2.10)
source (3240)	coreimpur%impurity(:)%transp_coef%source (vecstring_type) (9.8.1.2.15)
flux (3351)	coreimpur%impurity(:)%flux (fluximp) (9.8.1.3.213)
flux_dv (3319)	coreimpur%impurity(:)%flux%flux_dv (matflt_type) (9.8.1.2.10)
flux_interp (3319)	coreimpur%impurity(:)%flux%flux_interp (matflt_type) (9.8.1.2.10)
time_deriv (3351)	coreimpur%impurity(:)%time_deriv (matflt_type) (9.8.1.2.10)
diagnostic (3351)	coreimpur%impurity(:)%diagnostic (coreimpurediag_type) (9.8.1.3.125)
radiation (3231)	coreimpur%impurity(:)%diagnostic%radiation (coreimpurediag_radiation) (9.8.1.3.122)
line_rad (3228)	coreimpur%impurity(:)%diagnostic%radiation%line_rad (coreimpurediagprof_type) (9.8.1.3.126)
profile (3232)	coreimpur%impurity(:)%diagnostic%radiation%line_rad%profile (matflt_type) (9.8.1.2.10)
integral (3232)	coreimpur%impurity(:)%diagnostic%radiation%line_rad%integral (matflt_type) (9.8.1.2.10)
brem_radrec (3228)	coreimpur%impurity(:)%diagnostic%radiation%brem_radrec (coreimpurediagprof_type) (9.8.1.3.126)
profile (3232)	coreimpur%impurity(:)%diagnostic%radiation%brem_radrec%profile (matflt_type) (9.8.1.2.10)
integral (3232)	coreimpur%impurity(:)%diagnostic%radiation%brem_radrec%integral (matflt_type) (9.8.1.2.10)
sum (3228)	coreimpur%impurity(:)%diagnostic%radiation%sum (coreimpurediagprof_type) (9.8.1.3.126)
profile (3232)	coreimpur%impurity(:)%diagnostic%radiation%sum%profile (matflt_type) (9.8.1.2.10)
integral (3232)	coreimpur%impurity(:)%diagnostic%radiation%sum%integral (matflt_type) (9.8.1.2.10)
energy (3231)	coreimpur%impurity(:)%diagnostic%energy (coreimpurediag_energy) (9.8.1.3.121)
ionization (3227)	coreimpur%impurity(:)%diagnostic%energy%ionization (coreimpurediagprof_type) (9.8.1.3.126)
profile (3232)	coreimpur%impurity(:)%diagnostic%energy%ionization%profile (matflt_type) (9.8.1.2.10)
integral (3232)	coreimpur%impurity(:)%diagnostic%energy%ionization%integral (matflt_type) (9.8.1.2.10)
recombin (3227)	coreimpur%impurity(:)%diagnostic%energy%recombin (coreimpurediagprof_type) (9.8.1.3.126)
profile (3232)	coreimpur%impurity(:)%diagnostic%energy%recombin%profile (matflt_type) (9.8.1.2.10)
integral (3232)	coreimpur%impurity(:)%diagnostic%energy%recombin%integral (matflt_type) (9.8.1.2.10)
sum (3227)	coreimpur%impurity(:)%diagnostic%energy%sum (coreimpurediagprof_type) (9.8.1.3.126)
profile (3232)	coreimpur%impurity(:)%diagnostic%energy%sum%profile (matflt_type) (9.8.1.2.10)
integral (3232)	coreimpur%impurity(:)%diagnostic%energy%sum%integral (matflt_type) (9.8.1.2.10)



diagnostic (3117)	coreimpur%diagnostic (coreimpurediag_type) (9.8.1.3.125)
radiation (3231)	coreimpur%diagnostic%radiation (coreimpurediag_radiation) (9.8.1.3.122)
line_rad (3228)	coreimpur%diagnostic%radiation%line_rad (coreimpurediagprof_type) (9.8.1.3.126)
profile (3232)	coreimpur%diagnostic%radiation%line_rad%profile (matflt_type) (9.8.1.2.10)
integral (3232)	coreimpur%diagnostic%radiation%line_rad%integral (matflt_type) (9.8.1.2.10)
brem_radrec (3228)	coreimpur%diagnostic%radiation%brem_radrec (coreimpurediagprof_type) (9.8.1.3.126)
profile (3232)	coreimpur%diagnostic%radiation%brem_radrec%profile (matflt_type) (9.8.1.2.10)
integral (3232)	coreimpur%diagnostic%radiation%brem_radrec%integral (matflt_type) (9.8.1.2.10)
sum (3228)	coreimpur%diagnostic%radiation%sum (coreimpurediagprof_type) (9.8.1.3.126)
profile (3232)	coreimpur%diagnostic%radiation%sum%profile (matflt_type) (9.8.1.2.10)
integral (3232)	coreimpur%diagnostic%radiation%sum%integral (matflt_type) (9.8.1.2.10)
energy (3231)	coreimpur%diagnostic%energy (coreimpurediag_energy) (9.8.1.3.121)
ionization (3227)	coreimpur%diagnostic%energy%ionization (coreimpurediagprof_type) (9.8.1.3.126)
profile (3232)	coreimpur%diagnostic%energy%ionization%profile (matflt_type) (9.8.1.2.10)
integral (3232)	coreimpur%diagnostic%energy%ionization%integral (matflt_type) (9.8.1.2.10)
recombin (3227)	coreimpur%diagnostic%energy%recombin (coreimpurediagprof_type) (9.8.1.3.126)
profile (3232)	coreimpur%diagnostic%energy%recombin%profile (matflt_type) (9.8.1.2.10)
integral (3232)	coreimpur%diagnostic%energy%recombin%integral (matflt_type) (9.8.1.2.10)
sum (3227)	coreimpur%diagnostic%energy%sum (coreimpurediagprof_type) (9.8.1.3.126)
profile (3232)	coreimpur%diagnostic%energy%sum%profile (matflt_type) (9.8.1.2.10)
integral (3232)	coreimpur%diagnostic%energy%sum%integral (matflt_type) (9.8.1.2.10)
diagnosticsum (3117)	coreimpur%diagnosticsum (coreimpurediag_sum) (9.8.1.3.123)
radiation (3229)	coreimpur%diagnosticsum%radiation (coreimpurdiag_sum_radiation) (9.8.1.3.120)
line_rad (3226)	coreimpur%diagnosticsum%radiation%line_rad (coreimpurediagsum_type) (9.8.1.3.127)
profile (3233)	coreimpur%diagnosticsum%radiation%line_rad%profile (vecflt_type) (9.8.1.2.13)
integral (3233)	coreimpur%diagnosticsum%radiation%line_rad%integral (vecflt_type) (9.8.1.2.13)
brem_radrec (3226)	coreimpur%diagnosticsum%radiation%brem_radrec (coreimpurediagsum_type) (9.8.1.3.127)
profile (3233)	coreimpur%diagnosticsum%radiation%brem_radrec%profile (vecflt_type) (9.8.1.2.13)
integral (3233)	coreimpur%diagnosticsum%radiation%brem_radrec%integral (vecflt_type) (9.8.1.2.13)
sum (3226)	coreimpur%diagnosticsum%radiation%sum (coreimpurediagsum_type) (9.8.1.3.127)
profile (3233)	coreimpur%diagnosticsum%radiation%sum%profile (vecflt_type) (9.8.1.2.13)
integral (3233)	coreimpur%diagnosticsum%radiation%sum%integral (vecflt_type) (9.8.1.2.13)
energy (3229)	coreimpur%diagnosticsum%energy (coreimpurediag_sum_energy) (9.8.1.3.124)
ionization (3230)	coreimpur%diagnosticsum%energy%ionization (coreimpurediagsum_type) (9.8.1.3.127)
profile (3233)	coreimpur%diagnosticsum%energy%ionization%profile (vecflt_type) (9.8.1.2.13)
integral (3233)	coreimpur%diagnosticsum%energy%ionization%integral (vecflt_type) (9.8.1.2.13)
recombin (3230)	coreimpur%diagnosticsum%energy%recombin (coreimpurediagsum_type) (9.8.1.3.127)
profile (3233)	coreimpur%diagnosticsum%energy%recombin%profile (vecflt_type) (9.8.1.2.13)
integral (3233)	coreimpur%diagnosticsum%energy%recombin%integral (vecflt_type) (9.8.1.2.13)
sum (3230)	coreimpur%diagnosticsum%energy%sum (coreimpurediagsum_type) (9.8.1.3.127)
profile (3233)	coreimpur%diagnosticsum%energy%sum%profile (vecflt_type) (9.8.1.2.13)
integral (3233)	coreimpur%diagnosticsum%energy%sum%integral (vecflt_type) (9.8.1.2.13)
codeparam (3117)	coreimpur%codeparam (codeparam) (9.8.1.3.84)
codename (3190)	coreimpur%codeparam%codename (string) (9.8.1.1.3)
codeversion (3190)	coreimpur%codeparam%codeversion (string) (9.8.1.1.3)
parameters (3190)	coreimpur%codeparam%parameters (string) (9.8.1.1.3)
output_diag (3190)	coreimpur%codeparam%output_diag (string) (9.8.1.1.3)
output_flag (3190)	coreimpur%codeparam%output_flag (integer) (9.8.1.1.2)
time (3117)	coreimpur%time (float) (9.8.1.1.1)

### 9.8.2.1.10 coreneutrals

datainfo (3118)	coreneutrals%datainfo (datainfo) (9.8.1.3.141)
dataprovder (3247)	coreneutrals%datainfo%dataprovder (string) (9.8.1.1.3)
putdate (3247)	coreneutrals%datainfo%putdate (string) (9.8.1.1.3)
source (3247)	coreneutrals%datainfo%source (string) (9.8.1.1.3)
comment (3247)	coreneutrals%datainfo%comment (string) (9.8.1.1.3)
cocos (3247)	coreneutrals%datainfo%cocos (integer) (9.8.1.1.2)
id (3247)	coreneutrals%datainfo%id (integer) (9.8.1.1.2)
isref (3247)	coreneutrals%datainfo%isref (integer) (9.8.1.1.2)
whatref (3247)	coreneutrals%datainfo%whatref (whatref) (9.8.1.3.513)



user (3619)	coreneutrals%datainfo%whatref%user (string) (9.8.1.1.3)
machine (3619)	coreneutrals%datainfo%whatref%machine (string) (9.8.1.1.3)
shot (3619)	coreneutrals%datainfo%whatref%shot (integer) (9.8.1.1.2)
run (3619)	coreneutrals%datainfo%whatref%run (integer) (9.8.1.1.2)
occurrence (3619)	coreneutrals%datainfo%whatref%occurrence (integer) (9.8.1.1.2)
putinfo (3247)	coreneutrals%datainfo%putinfo (putinfo) (9.8.1.3.349)
putmethod (3455)	coreneutrals%datainfo%putinfo%putmethod (string) (9.8.1.1.3)
putaccess (3455)	coreneutrals%datainfo%putinfo%putaccess (string) (9.8.1.1.3)
putlocation (3455)	coreneutrals%datainfo%putinfo%putlocation (string) (9.8.1.1.3)
rights (3455)	coreneutrals%datainfo%putinfo%rights (string) (9.8.1.1.3)
rho_tor (3118)	coreneutrals%rho_tor (vecflt_type) (9.8.1.2.13)
rho_tor_norm (3118)	coreneutrals%rho_tor_norm (vecflt_type) (9.8.1.2.13)
psi (3118)	coreneutrals%psi (vecflt_type) (9.8.1.2.13)
volume (3118)	coreneutrals%volume (vecflt_type) (9.8.1.2.13)
area (3118)	coreneutrals%area (vecflt_type) (9.8.1.2.13)
neutcompo (3118)	coreneutrals%neutcompo (composition_neutrals) (9.8.1.3.103)
atomlist (3209)	coreneutrals%neutcompo%atomlist(:) (coreneutrals_atomlist) (9.8.1.3.128)
amn (3234)	coreneutrals%neutcompo%atomlist(:)%amn (float) (9.8.1.1.1)
zn (3234)	coreneutrals%neutcompo%atomlist(:)%zn (float) (9.8.1.1.1)
ionimptype (3234)	coreneutrals%neutcompo%atomlist(:)%ionimptype (identifier) (9.8.1.3.242)
id (3348)	coreneutrals%neutcompo%atomlist(:)%ionimptype%id (string) (9.8.1.1.3)
flag (3348)	coreneutrals%neutcompo%atomlist(:)%ionimptype%flag (integer) (9.8.1.1.2)
description (3348)	coreneutrals%neutcompo%atomlist(:)%ionimptype%description (string) (9.8.1.1.3)
ionimpindex (3234)	coreneutrals%neutcompo%atomlist(:)%ionimpindex (integer) (9.8.1.1.2)
neutral (3209)	coreneutrals%neutcompo%neutral(:) (composition_neutralscomp) (9.8.1.3.105)
neutcomp (3211)	coreneutrals%neutcompo%neutral(:)%neutcomp(:) (composition_neutrals_neutcomp) (9.8.1.3.104)
nucindex (3210)	coreneutrals%neutcompo%neutral(:)%neutcomp(:)%nucindex (integer) (9.8.1.1.2)
multiplicity (3210)	coreneutrals%neutcompo%neutral(:)%neutcomp(:)%multiplicity (integer) (9.8.1.1.2)
type (3211)	coreneutrals%neutcompo%neutral(:)%type(:) (identifier) (9.8.1.3.242)
id (3348)	coreneutrals%neutcompo%neutral(:)%type(:)%id (string) (9.8.1.1.3)
flag (3348)	coreneutrals%neutcompo%neutral(:)%type(:)%flag (integer) (9.8.1.1.2)
description (3348)	coreneutrals%neutcompo%neutral(:)%type(:)%description (string) (9.8.1.1.3)
label (3211)	coreneutrals%neutcompo%neutral(:)%label (string) (9.8.1.1.3)
composition (3118)	coreneutrals%composition (composition) (9.8.1.3.102)
amn (3208)	coreneutrals%composition%amn (vecflt_type) (9.8.1.2.13)
zn (3208)	coreneutrals%composition%zn (vecflt_type) (9.8.1.2.13)
zion (3208)	coreneutrals%composition%zion (vecflt_type) (9.8.1.2.13)
imp_flag (3208)	coreneutrals%composition%imp_flag (vecint_type) (9.8.1.2.14)
label (3208)	coreneutrals%composition%label (vecstring_type) (9.8.1.2.15)
desc_impur (3118)	coreneutrals%desc_impur (desc_impur) (9.8.1.3.143)
amn (3249)	coreneutrals%desc_impur%amn (vecflt_type) (9.8.1.2.13)
zn (3249)	coreneutrals%desc_impur%zn (vecint_type) (9.8.1.2.14)
i_ion (3249)	coreneutrals%desc_impur%i_ion (vecint_type) (9.8.1.2.14)
nzimp (3249)	coreneutrals%desc_impur%nzimp (vecint_type) (9.8.1.2.14)
zmin (3249)	coreneutrals%desc_impur%zmin (matint_type) (9.8.1.2.11)
zmax (3249)	coreneutrals%desc_impur%zmax (matint_type) (9.8.1.2.11)
label (3249)	coreneutrals%desc_impur%label (vecstring_type) (9.8.1.2.15)
compositions (3118)	coreneutrals%compositions (compositions_type) (9.8.1.3.106)
nuclei (3212)	coreneutrals%compositions%nuclei(:) (nuclei) (9.8.1.3.306)
zn (3412)	coreneutrals%compositions%nuclei(:)%zn (float) (9.8.1.1.1)
amn (3412)	coreneutrals%compositions%nuclei(:)%amn (float) (9.8.1.1.1)
label (3412)	coreneutrals%compositions%nuclei(:)%label (string) (9.8.1.1.3)
ions (3212)	coreneutrals%compositions%ions(:) (ions) (9.8.1.3.247)
nucindex (3353)	coreneutrals%compositions%ions(:)%nucindex (integer) (9.8.1.1.2)
zion (3353)	coreneutrals%compositions%ions(:)%zion (float) (9.8.1.1.1)
imp_flag (3353)	coreneutrals%compositions%ions(:)%imp_flag (integer) (9.8.1.1.2)
label (3353)	coreneutrals%compositions%ions(:)%label (string) (9.8.1.1.3)
impurities (3212)	coreneutrals%compositions%impurities(:) (impurities) (9.8.1.3.244)
nucindex (3350)	coreneutrals%compositions%impurities(:)%nucindex (integer) (9.8.1.1.2)
i_ion (3350)	coreneutrals%compositions%impurities(:)%i_ion (integer) (9.8.1.1.2)
nzimp (3350)	coreneutrals%compositions%impurities(:)%nzimp (integer) (9.8.1.1.2)

zmin (3350)	coreneutrals%compositions%impurities(:)%zmin (vecflt_type) (9.8.1.2.13)
zmax (3350)	coreneutrals%compositions%impurities(:)%zmax (vecflt_type) (9.8.1.2.13)
label (3350)	coreneutrals%compositions%impurities(:)%label (vecstring_type) (9.8.1.2.15)
neutralscomp (3212)	coreneutrals%compositions%neutralscomp(:) (composition_neutralscomp) (9.8.1.3.105)
neutcomp (3211)	coreneutrals%compositions%neutralscomp(:)%neutcomp(:) (composition_neutrals_neutcomp) (9.8.1.3.104)
nucindex (3210)	coreneutrals%compositions%neutralscomp(:)%neutcomp(:)%nucindex (integer) (9.8.1.1.2)
multiplicity (3210)	coreneutrals%compositions%neutralscomp(:)%neutcomp(:)%multiplicity (integer) (9.8.1.1.2)
type (3211)	coreneutrals%compositions%neutralscomp(:)%type(:) (identifier) (9.8.1.3.242)
id (3348)	coreneutrals%compositions%neutralscomp(:)%type(:)%id (string) (9.8.1.1.3)
flag (3348)	coreneutrals%compositions%neutralscomp(:)%type(:)%flag (integer) (9.8.1.1.2)
description (3348)	coreneutrals%compositions%neutralscomp(:)%type(:)%description (string) (9.8.1.1.3)
label (3211)	coreneutrals%compositions%neutralscomp(:)%label (string) (9.8.1.1.3)
edgespecies (3212)	coreneutrals%compositions%edgespecies(:) (edgespecies) (9.8.1.3.192)
nucindex (3298)	coreneutrals%compositions%edgespecies(:)%nucindex (integer) (9.8.1.1.2)
zmin (3298)	coreneutrals%compositions%edgespecies(:)%zmin (float) (9.8.1.1.1)
zmax (3298)	coreneutrals%compositions%edgespecies(:)%zmax (float) (9.8.1.1.1)
label (3298)	coreneutrals%compositions%edgespecies(:)%label (string) (9.8.1.1.3)
signature (3212)	coreneutrals%compositions%signature (identifier) (9.8.1.3.242)
id (3348)	coreneutrals%compositions%signature%id (string) (9.8.1.1.3)
flag (3348)	coreneutrals%compositions%signature%flag (integer) (9.8.1.1.2)
description (3348)	coreneutrals%compositions%signature%description (string) (9.8.1.1.3)
profiles (3118)	coreneutrals%profiles(:) (neutral_complex_type) (9.8.1.3.297)
neutraltype (3403)	coreneutrals%profiles(:)%neutraltype(:) (coreneutrals_neutraltype) (9.8.1.3.129)
n0 (3235)	coreneutrals%profiles(:)%neutraltype(:)%n0 (corefieldneutral) (9.8.1.3.116)
value (3222)	coreneutrals%profiles(:)%neutraltype(:)%n0%value (vecflt_type) (9.8.1.2.13)
flux (3222)	coreneutrals%profiles(:)%neutraltype(:)%n0%flux (vecflt_type) (9.8.1.2.13)
boundary (3222)	coreneutrals%profiles(:)%neutraltype(:)%n0%boundary (boundary_neutrals) (9.8.1.3.73)
value (3179)	coreneutrals%profiles(:)%neutraltype(:)%n0%boundary%value (vecflt_type) (9.8.1.2.13)
type (3179)	coreneutrals%profiles(:)%neutraltype(:)%n0%boundary%type (integer) (9.8.1.1.2)
rho_tor (3179)	coreneutrals%profiles(:)%neutraltype(:)%n0%boundary%rho_tor (float) (9.8.1.1.1)
t0 (3235)	coreneutrals%profiles(:)%neutraltype(:)%t0 (corefieldneutrals) (9.8.1.3.117)
value (3223)	coreneutrals%profiles(:)%neutraltype(:)%t0%value (vecflt_type) (9.8.1.2.13)
flux (3223)	coreneutrals%profiles(:)%neutraltype(:)%t0%flux (vecflt_type) (9.8.1.2.13)
boundary (3223)	coreneutrals%profiles(:)%neutraltype(:)%t0%boundary (boundary_neutrals) (9.8.1.3.73)
value (3179)	coreneutrals%profiles(:)%neutraltype(:)%t0%boundary%value (vecflt_type) (9.8.1.2.13)
type (3179)	coreneutrals%profiles(:)%neutraltype(:)%t0%boundary%type (integer) (9.8.1.1.2)
rho_tor (3179)	coreneutrals%profiles(:)%neutraltype(:)%t0%boundary%rho_tor (float) (9.8.1.1.1)
v0 (3235)	coreneutrals%profiles(:)%neutraltype(:)%v0 (corefieldneutralv0) (9.8.1.3.119)
toroidal (3225)	coreneutrals%profiles(:)%neutraltype(:)%v0%toroidal (corefieldneutralv) (9.8.1.3.118)
value (3224)	coreneutrals%profiles(:)%neutraltype(:)%v0%toroidal%value (vecflt_type) (9.8.1.2.13)
boundary (3224)	coreneutrals%profiles(:)%neutraltype(:)%v0%toroidal%boundary (boundary_neutrals) (9.8.1.3.73)
value (3179)	coreneutrals%profiles(:)%neutraltype(:)%v0%toroidal%boundary%value (vecflt_type) (9.8.1.2.13)
type (3179)	coreneutrals%profiles(:)%neutraltype(:)%v0%toroidal%boundary%type (integer) (9.8.1.1.2)
rho_tor (3179)	coreneutrals%profiles(:)%neutraltype(:)%v0%toroidal%boundary%rho_tor (float) (9.8.1.1.1)
poloidal (3225)	coreneutrals%profiles(:)%neutraltype(:)%v0%poloidal (corefieldneutralv) (9.8.1.3.118)
value (3224)	coreneutrals%profiles(:)%neutraltype(:)%v0%poloidal%value (vecflt_type) (9.8.1.2.13)
boundary (3224)	coreneutrals%profiles(:)%neutraltype(:)%v0%poloidal%boundary (boundary_neutrals) (9.8.1.3.73)
value (3179)	coreneutrals%profiles(:)%neutraltype(:)%v0%poloidal%boundary%value (vecflt_type) (9.8.1.2.13)
type (3179)	coreneutrals%profiles(:)%neutraltype(:)%v0%poloidal%boundary%type (integer) (9.8.1.1.2)
rho_tor (3179)	coreneutrals%profiles(:)%neutraltype(:)%v0%poloidal%boundary%rho_tor (float) (9.8.1.1.1)
radial (3225)	coreneutrals%profiles(:)%neutraltype(:)%v0%radial (corefieldneutralv) (9.8.1.3.118)
value (3224)	coreneutrals%profiles(:)%neutraltype(:)%v0%radial%value (vecflt_type) (9.8.1.2.13)
boundary (3224)	coreneutrals%profiles(:)%neutraltype(:)%v0%radial%boundary (boundary_neutrals) (9.8.1.3.73)
value (3179)	coreneutrals%profiles(:)%neutraltype(:)%v0%radial%boundary%value (vecflt_type) (9.8.1.2.13)
type (3179)	coreneutrals%profiles(:)%neutraltype(:)%v0%radial%boundary%type (integer) (9.8.1.1.2)
rho_tor (3179)	coreneutrals%profiles(:)%neutraltype(:)%v0%radial%boundary%rho_tor (float) (9.8.1.1.1)
prad0 (3403)	coreneutrals%profiles(:)%prad0 (vecflt_type) (9.8.1.2.13)

ioncoeff (3118)	coreneutrals%ioncoeff(:) (coefficients_neutrals) (9.8.1.3.85)
recycling (3191)	coreneutrals%ioncoeff(:)%recycling (recycling_neutrals) (9.8.1.3.354)
particles (3460)	coreneutrals%ioncoeff(:)%recycling%particles (vecflt_type) (9.8.1.2.13)
energy (3460)	coreneutrals%ioncoeff(:)%recycling%energy (vecflt_type) (9.8.1.2.13)
sputtering (3191)	coreneutrals%ioncoeff(:)%sputtering (sputtering_neutrals) (9.8.1.3.422)
physical (3528)	coreneutrals%ioncoeff(:)%sputtering%physical (vecflt_type) (9.8.1.2.13)
chemical (3528)	coreneutrals%ioncoeff(:)%sputtering%chemical (vecflt_type) (9.8.1.2.13)
impcoeff (3118)	coreneutrals%impcoeff(:) (impcoeff) (9.8.1.3.243)
chargestate (3349)	coreneutrals%impcoeff(:)%chargestate(:) (coefficients_neutrals) (9.8.1.3.85)
recycling (3191)	coreneutrals%impcoeff(:)%chargestate(:)%recycling (recycling_neutrals) (9.8.1.3.354)
particles (3460)	coreneutrals%impcoeff(:)%chargestate(:)%recycling%particles (vecflt_type) (9.8.1.2.13)
energy (3460)	coreneutrals%impcoeff(:)%chargestate(:)%recycling%energy (vecflt_type) (9.8.1.2.13)
sputtering (3191)	coreneutrals%impcoeff(:)%chargestate(:)%sputtering (sputtering_neutrals) (9.8.1.3.422)
physical (3528)	coreneutrals%impcoeff(:)%chargestate(:)%sputtering%physical (vecflt_type) (9.8.1.2.13)
chemical (3528)	coreneutrals%impcoeff(:)%chargestate(:)%sputtering%chemical (vecflt_type) (9.8.1.2.13)
codeparam (3118)	coreneutrals%codeparam (codeparam) (9.8.1.3.84)
codename (3190)	coreneutrals%codeparam%codename (string) (9.8.1.1.3)
codeversion (3190)	coreneutrals%codeparam%codeversion (string) (9.8.1.1.3)
parameters (3190)	coreneutrals%codeparam%parameters (string) (9.8.1.1.3)
output_diag (3190)	coreneutrals%codeparam%output_diag (string) (9.8.1.1.3)
output_flag (3190)	coreneutrals%codeparam%output_flag (integer) (9.8.1.1.2)
time (3118)	coreneutrals%time (float) (9.8.1.1.1)

### 9.8.2.1.11 coreprof

datainfo (3119)	coreprof%datainfo (datainfo) (9.8.1.3.141)
dataprovider (3247)	coreprof%datainfo%dataprovider (string) (9.8.1.1.3)
putdate (3247)	coreprof%datainfo%putdate (string) (9.8.1.1.3)
source (3247)	coreprof%datainfo%source (string) (9.8.1.1.3)
comment (3247)	coreprof%datainfo%comment (string) (9.8.1.1.3)
cocos (3247)	coreprof%datainfo%cocos (integer) (9.8.1.1.2)
id (3247)	coreprof%datainfo%id (integer) (9.8.1.1.2)
isref (3247)	coreprof%datainfo%isref (integer) (9.8.1.1.2)
whatref (3247)	coreprof%datainfo%whatref (whatref) (9.8.1.3.513)
user (3619)	coreprof%datainfo%whatref%user (string) (9.8.1.1.3)
machine (3619)	coreprof%datainfo%whatref%machine (string) (9.8.1.1.3)
shot (3619)	coreprof%datainfo%whatref%shot (integer) (9.8.1.1.2)
run (3619)	coreprof%datainfo%whatref%run (integer) (9.8.1.1.2)
occurrence (3619)	coreprof%datainfo%whatref%occurrence (integer) (9.8.1.1.2)
putinfo (3247)	coreprof%datainfo%putinfo (putinfo) (9.8.1.3.349)
putmethod (3455)	coreprof%datainfo%putinfo%putmethod (string) (9.8.1.1.3)
putaccess (3455)	coreprof%datainfo%putinfo%putaccess (string) (9.8.1.1.3)
putlocation (3455)	coreprof%datainfo%putinfo%putlocation (string) (9.8.1.1.3)
rights (3455)	coreprof%datainfo%putinfo%rights (string) (9.8.1.1.3)
rho_tor_norm (3119)	coreprof%rho_tor_norm (vecflt_type) (9.8.1.2.13)
rho_tor (3119)	coreprof%rho_tor (vecflt_type) (9.8.1.2.13)
drho_dt (3119)	coreprof%drho_dt (vecflt_type) (9.8.1.2.13)
toroid_field (3119)	coreprof%toroid_field (toroid_field) (9.8.1.3.466)
b0 (3572)	coreprof%toroid_field%b0 (float) (9.8.1.1.1)
b0prime (3572)	coreprof%toroid_field%b0prime (float) (9.8.1.1.1)
r0 (3572)	coreprof%toroid_field%r0 (float) (9.8.1.1.1)
time (3572)	coreprof%toroid_field%time (float) (9.8.1.1.1)
composition (3119)	coreprof%composition (composition) (9.8.1.3.102)
amn (3208)	coreprof%composition%amn (vecflt_type) (9.8.1.2.13)
zn (3208)	coreprof%composition%zn (vecflt_type) (9.8.1.2.13)
zion (3208)	coreprof%composition%zion (vecflt_type) (9.8.1.2.13)
imp_flag (3208)	coreprof%composition%imp_flag (vecint_type) (9.8.1.2.14)
label (3208)	coreprof%composition%label (vecstring_type) (9.8.1.2.15)
desc_impur (3119)	coreprof%desc_impur (desc_impur) (9.8.1.3.143)
amn (3249)	coreprof%desc_impur%amn (vecflt_type) (9.8.1.2.13)
zn (3249)	coreprof%desc_impur%zn (vecint_type) (9.8.1.2.14)

i.ion (3249)	coreprof%desc_impur%i.ion (vecint_type) (9.8.1.2.14)
nzimp (3249)	coreprof%desc_impur%nzimp (vecint_type) (9.8.1.2.14)
zmin (3249)	coreprof%desc_impur%zmin (matint_type) (9.8.1.2.11)
zmax (3249)	coreprof%desc_impur%zmax (matint_type) (9.8.1.2.11)
label (3249)	coreprof%desc_impur%label (vecstring_type) (9.8.1.2.15)
compositions (3119)	coreprof%compositions (compositions_type) (9.8.1.3.106)
nuclei (3212)	coreprof%compositions%nuclei(:) (nuclei) (9.8.1.3.306)
zn (3412)	coreprof%compositions%nuclei(:)%zn (float) (9.8.1.1.1)
amn (3412)	coreprof%compositions%nuclei(:)%amn (float) (9.8.1.1.1)
label (3412)	coreprof%compositions%nuclei(:)%label (string) (9.8.1.1.3)
ions (3212)	coreprof%compositions%ions(:) (ions) (9.8.1.3.247)
nucindex (3353)	coreprof%compositions%ions(:)%nucindex (integer) (9.8.1.1.2)
zion (3353)	coreprof%compositions%ions(:)%zion (float) (9.8.1.1.1)
imp_flag (3353)	coreprof%compositions%ions(:)%imp_flag (integer) (9.8.1.1.2)
label (3353)	coreprof%compositions%ions(:)%label (string) (9.8.1.1.3)
impurities (3212)	coreprof%compositions%impurities(:) (impurities) (9.8.1.3.244)
nucindex (3350)	coreprof%compositions%impurities(:)%nucindex (integer) (9.8.1.1.2)
i.ion (3350)	coreprof%compositions%impurities(:)%i.ion (integer) (9.8.1.1.2)
nzimp (3350)	coreprof%compositions%impurities(:)%nzimp (integer) (9.8.1.1.2)
zmin (3350)	coreprof%compositions%impurities(:)%zmin (vecflt_type) (9.8.1.2.13)
zmax (3350)	coreprof%compositions%impurities(:)%zmax (vecflt_type) (9.8.1.2.13)
label (3350)	coreprof%compositions%impurities(:)%label (vecstring_type) (9.8.1.2.15)
neutralscomp (3212)	coreprof%compositions%neutralscomp(:) (composition_neutralscomp) (9.8.1.3.105)
neutcomp (3211)	coreprof%compositions%neutralscomp(:)%neutcomp(:) (composition_neutrals_neutcomp) (9.8.1.3.104)
nucindex (3210)	coreprof%compositions%neutralscomp(:)%neutcomp(:)%nucindex (integer) (9.8.1.1.2)
multiplicity (3210)	coreprof%compositions%neutralscomp(:)%neutcomp(:)%multiplicity (integer) (9.8.1.1.2)
type (3211)	coreprof%compositions%neutralscomp(:)%type(:) (identifier) (9.8.1.3.242)
id (3348)	coreprof%compositions%neutralscomp(:)%type(:)%id (string) (9.8.1.1.3)
flag (3348)	coreprof%compositions%neutralscomp(:)%type(:)%flag (integer) (9.8.1.1.2)
description (3348)	coreprof%compositions%neutralscomp(:)%type(:)%description (string) (9.8.1.1.3)
label (3211)	coreprof%compositions%neutralscomp(:)%label (string) (9.8.1.1.3)
edgespecies (3212)	coreprof%compositions%edgespecies(:) (edgespecies) (9.8.1.3.192)
nucindex (3298)	coreprof%compositions%edgespecies(:)%nucindex (integer) (9.8.1.1.2)
zmin (3298)	coreprof%compositions%edgespecies(:)%zmin (float) (9.8.1.1.1)
zmax (3298)	coreprof%compositions%edgespecies(:)%zmax (float) (9.8.1.1.1)
label (3298)	coreprof%compositions%edgespecies(:)%label (string) (9.8.1.1.3)
signature (3212)	coreprof%compositions%signature (identifier) (9.8.1.3.242)
id (3348)	coreprof%compositions%signature%id (string) (9.8.1.1.3)
flag (3348)	coreprof%compositions%signature%flag (integer) (9.8.1.1.2)
description (3348)	coreprof%compositions%signature%description (string) (9.8.1.1.3)
psi (3119)	coreprof%psi (psi) (9.8.1.3.348)
value (3454)	coreprof%psi%value (vecflt_type) (9.8.1.2.13)
ddrho (3454)	coreprof%psi%ddrho (vecflt_type) (9.8.1.2.13)
d2drho2 (3454)	coreprof%psi%d2drho2 (vecflt_type) (9.8.1.2.13)
ddt_rhotorn (3454)	coreprof%psi%ddt_rhotorn (vecflt_type) (9.8.1.2.13)
ddt_phi (3454)	coreprof%psi%ddt_phi (vecflt_type) (9.8.1.2.13)
source (3454)	coreprof%psi%source (string) (9.8.1.1.3)
flag (3454)	coreprof%psi%flag (integer) (9.8.1.1.2)
boundary (3454)	coreprof%psi%boundary (boundary) (9.8.1.3.72)
value (3178)	coreprof%psi%boundary%value (vecflt_type) (9.8.1.2.13)
source (3178)	coreprof%psi%boundary%source (string) (9.8.1.1.3)
type (3178)	coreprof%psi%boundary%type (integer) (9.8.1.1.2)
rho (3178)	coreprof%psi%boundary%rho (float) (9.8.1.1.1)
codeparam (3178)	coreprof%psi%boundary%codeparam (codeparam) (9.8.1.3.84)
codename (3190)	coreprof%psi%boundary%codeparam%codename (string) (9.8.1.1.3)
codeversion (3190)	coreprof%psi%boundary%codeparam%codeversion (string) (9.8.1.1.3)
parameters (3190)	coreprof%psi%boundary%codeparam%parameters (string) (9.8.1.1.3)
output_diag (3190)	coreprof%psi%boundary%codeparam%output_diag (string) (9.8.1.1.3)
output_flag (3190)	coreprof%psi%boundary%codeparam%output_flag (integer) (9.8.1.1.2)
jni (3454)	coreprof%psi%jni (jni) (9.8.1.3.249)
value (3355)	coreprof%psi%jni%value (vecflt_type) (9.8.1.2.13)

integral (3355)	coreprof%psi%jni%integral (vecflt_type) (9.8.1.2.13)
source (3355)	coreprof%psi%jni%source (string) (9.8.1.1.3)
sigma_par (3454)	coreprof%psi%sigma_par (coreprofile) (9.8.1.3.130)
value (3236)	coreprof%psi%sigma_par%value (vecflt_type) (9.8.1.2.13)
source (3236)	coreprof%psi%sigma_par%source (string) (9.8.1.1.3)
codeparam (3454)	coreprof%psi%codeparam (codeparam) (9.8.1.3.84)
codename (3190)	coreprof%psi%codeparam%codename (string) (9.8.1.1.3)
codeversion (3190)	coreprof%psi%codeparam%codeversion (string) (9.8.1.1.3)
parameters (3190)	coreprof%psi%codeparam%parameters (string) (9.8.1.1.3)
output_diag (3190)	coreprof%psi%codeparam%output_diag (string) (9.8.1.1.3)
output_flag (3190)	coreprof%psi%codeparam%output_flag (integer) (9.8.1.1.2)
te (3119)	coreprof%te (corefield) (9.8.1.3.114)
value (3220)	coreprof%te%value (vecflt_type) (9.8.1.2.13)
ddrho (3220)	coreprof%te%ddrho (vecflt_type) (9.8.1.2.13)
d2drho2 (3220)	coreprof%te%d2drho2 (vecflt_type) (9.8.1.2.13)
ddt (3220)	coreprof%te%ddt (vecflt_type) (9.8.1.2.13)
source (3220)	coreprof%te%source (string) (9.8.1.1.3)
flag (3220)	coreprof%te%flag (integer) (9.8.1.1.2)
boundary (3220)	coreprof%te%boundary (boundaryel) (9.8.1.3.74)
value (3180)	coreprof%te%boundary%value (vecflt_type) (9.8.1.2.13)
source (3180)	coreprof%te%boundary%source (string) (9.8.1.1.3)
type (3180)	coreprof%te%boundary%type (integer) (9.8.1.1.2)
rho_tor (3180)	coreprof%te%boundary%rho_tor (float) (9.8.1.1.1)
source_term (3220)	coreprof%te%source_term (sourceel) (9.8.1.3.414)
value (3520)	coreprof%te%source_term%value (vecflt_type) (9.8.1.2.13)
integral (3520)	coreprof%te%source_term%integral (vecflt_type) (9.8.1.2.13)
source (3520)	coreprof%te%source_term%source (string) (9.8.1.1.3)
transp_coef (3220)	coreprof%te%transp_coef (coretransel) (9.8.1.3.133)
diff (3239)	coreprof%te%transp_coef%diff (vecflt_type) (9.8.1.2.13)
vconv (3239)	coreprof%te%transp_coef%vconv (vecflt_type) (9.8.1.2.13)
source (3239)	coreprof%te%transp_coef%source (string) (9.8.1.1.3)
flux (3220)	coreprof%te%flux (fluxel) (9.8.1.3.212)
flux_dv (3318)	coreprof%te%flux%flux_dv (vecflt_type) (9.8.1.2.13)
flux_interp (3318)	coreprof%te%flux%flux_interp (vecflt_type) (9.8.1.2.13)
flux_dv_surf (3220)	coreprof%te%flux_dv_surf (vecflt_type) (9.8.1.2.13)
time_deriv (3220)	coreprof%te%time_deriv (vecflt_type) (9.8.1.2.13)
codeparam (3220)	coreprof%te%codeparam (codeparam) (9.8.1.3.84)
codename (3190)	coreprof%te%codeparam%codename (string) (9.8.1.1.3)
codeversion (3190)	coreprof%te%codeparam%codeversion (string) (9.8.1.1.3)
parameters (3190)	coreprof%te%codeparam%parameters (string) (9.8.1.1.3)
output_diag (3190)	coreprof%te%codeparam%output_diag (string) (9.8.1.1.3)
output_flag (3190)	coreprof%te%codeparam%output_flag (integer) (9.8.1.1.2)
ti (3119)	coreprof%ti (corefieldion) (9.8.1.3.115)
value (3221)	coreprof%ti%value (matflt_type) (9.8.1.2.10)
ddrho (3221)	coreprof%ti%ddrho (matflt_type) (9.8.1.2.10)
d2drho2 (3221)	coreprof%ti%d2drho2 (matflt_type) (9.8.1.2.10)
ddt (3221)	coreprof%ti%ddt (matflt_type) (9.8.1.2.10)
source (3221)	coreprof%ti%source (vecstring_type) (9.8.1.2.15)
flag (3221)	coreprof%ti%flag (vecint_type) (9.8.1.2.14)
boundary (3221)	coreprof%ti%boundary (boundaryion) (9.8.1.3.76)
value (3182)	coreprof%ti%boundary%value (matflt_type) (9.8.1.2.10)
source (3182)	coreprof%ti%boundary%source (vecstring_type) (9.8.1.2.15)
type (3182)	coreprof%ti%boundary%type (vecint_type) (9.8.1.2.14)
rho_tor (3182)	coreprof%ti%boundary%rho_tor (vecflt_type) (9.8.1.2.13)
source_term (3221)	coreprof%ti%source_term (sourceion) (9.8.1.3.416)
value (3522)	coreprof%ti%source_term%value (matflt_type) (9.8.1.2.10)
integral (3522)	coreprof%ti%source_term%integral (matflt_type) (9.8.1.2.10)
source (3522)	coreprof%ti%source_term%source (vecstring_type) (9.8.1.2.15)
transp_coef (3221)	coreprof%ti%transp_coef (coretransion) (9.8.1.3.135)
diff (3241)	coreprof%ti%transp_coef%diff (matflt_type) (9.8.1.2.10)
vconv (3241)	coreprof%ti%transp_coef%vconv (matflt_type) (9.8.1.2.10)

source (3241)	coreprof%ti%transp_coef%source (vecstring_type) (9.8.1.2.15)
flux (3221)	coreprof%ti%flux (fluxion) (9.8.1.3.214)
flux_dv (3320)	coreprof%ti%flux%flux_dv (matflt_type) (9.8.1.2.10)
flux_interp (3320)	coreprof%ti%flux%flux_interp (matflt_type) (9.8.1.2.10)
flux_dv_surf (3221)	coreprof%ti%flux_dv_surf (matflt_type) (9.8.1.2.10)
time_deriv (3221)	coreprof%ti%time_deriv (matflt_type) (9.8.1.2.10)
codeparam (3221)	coreprof%ti%codeparam (codeparam) (9.8.1.3.84)
codename (3190)	coreprof%ti%codeparam%codename (string) (9.8.1.1.3)
codeversion (3190)	coreprof%ti%codeparam%codeversion (string) (9.8.1.1.3)
parameters (3190)	coreprof%ti%codeparam%parameters (string) (9.8.1.1.3)
output_diag (3190)	coreprof%ti%codeparam%output_diag (string) (9.8.1.1.3)
output_flag (3190)	coreprof%ti%codeparam%output_flag (integer) (9.8.1.1.2)
ne (3119)	coreprof%ne (corefield) (9.8.1.3.114)
value (3220)	coreprof%ne%value (vecflt_type) (9.8.1.2.13)
ddrho (3220)	coreprof%ne%ddrho (vecflt_type) (9.8.1.2.13)
d2drho2 (3220)	coreprof%ne%d2drho2 (vecflt_type) (9.8.1.2.13)
ddt (3220)	coreprof%ne%ddt (vecflt_type) (9.8.1.2.13)
source (3220)	coreprof%ne%source (string) (9.8.1.1.3)
flag (3220)	coreprof%ne%flag (integer) (9.8.1.1.2)
boundary (3220)	coreprof%ne%boundary (boundaryel) (9.8.1.3.74)
value (3180)	coreprof%ne%boundary%value (vecflt_type) (9.8.1.2.13)
source (3180)	coreprof%ne%boundary%source (string) (9.8.1.1.3)
type (3180)	coreprof%ne%boundary%type (integer) (9.8.1.1.2)
rho_tor (3180)	coreprof%ne%boundary%rho_tor (float) (9.8.1.1.1)
source_term (3220)	coreprof%ne%source_term (sourceel) (9.8.1.3.414)
value (3520)	coreprof%ne%source_term%value (vecflt_type) (9.8.1.2.13)
integral (3520)	coreprof%ne%source_term%integral (vecflt_type) (9.8.1.2.13)
source (3520)	coreprof%ne%source_term%source (string) (9.8.1.1.3)
transp_coef (3220)	coreprof%ne%transp_coef (coretransel) (9.8.1.3.133)
diff (3239)	coreprof%ne%transp_coef%diff (vecflt_type) (9.8.1.2.13)
vconv (3239)	coreprof%ne%transp_coef%vconv (vecflt_type) (9.8.1.2.13)
source (3239)	coreprof%ne%transp_coef%source (string) (9.8.1.1.3)
flux (3220)	coreprof%ne%flux (fluxel) (9.8.1.3.212)
flux_dv (3318)	coreprof%ne%flux%flux_dv (vecflt_type) (9.8.1.2.13)
flux_interp (3318)	coreprof%ne%flux%flux_interp (vecflt_type) (9.8.1.2.13)
flux_dv_surf (3220)	coreprof%ne%flux_dv_surf (vecflt_type) (9.8.1.2.13)
time_deriv (3220)	coreprof%ne%time_deriv (vecflt_type) (9.8.1.2.13)
codeparam (3220)	coreprof%ne%codeparam (codeparam) (9.8.1.3.84)
codename (3190)	coreprof%ne%codeparam%codename (string) (9.8.1.1.3)
codeversion (3190)	coreprof%ne%codeparam%codeversion (string) (9.8.1.1.3)
parameters (3190)	coreprof%ne%codeparam%parameters (string) (9.8.1.1.3)
output_diag (3190)	coreprof%ne%codeparam%output_diag (string) (9.8.1.1.3)
output_flag (3190)	coreprof%ne%codeparam%output_flag (integer) (9.8.1.1.2)
ni (3119)	coreprof%ni (corefieldion) (9.8.1.3.115)
value (3221)	coreprof%ni%value (matflt_type) (9.8.1.2.10)
ddrho (3221)	coreprof%ni%ddrho (matflt_type) (9.8.1.2.10)
d2drho2 (3221)	coreprof%ni%d2drho2 (matflt_type) (9.8.1.2.10)
ddt (3221)	coreprof%ni%ddt (matflt_type) (9.8.1.2.10)
source (3221)	coreprof%ni%source (vecstring_type) (9.8.1.2.15)
flag (3221)	coreprof%ni%flag (vecint_type) (9.8.1.2.14)
boundary (3221)	coreprof%ni%boundary (boundaryion) (9.8.1.3.76)
value (3182)	coreprof%ni%boundary%value (matflt_type) (9.8.1.2.10)
source (3182)	coreprof%ni%boundary%source (vecstring_type) (9.8.1.2.15)
type (3182)	coreprof%ni%boundary%type (vecint_type) (9.8.1.2.14)
rho_tor (3182)	coreprof%ni%boundary%rho_tor (vecflt_type) (9.8.1.2.13)
source_term (3221)	coreprof%ni%source_term (sourceion) (9.8.1.3.416)
value (3522)	coreprof%ni%source_term%value (matflt_type) (9.8.1.2.10)
integral (3522)	coreprof%ni%source_term%integral (matflt_type) (9.8.1.2.10)
source (3522)	coreprof%ni%source_term%source (vecstring_type) (9.8.1.2.15)
transp_coef (3221)	coreprof%ni%transp_coef (coretransion) (9.8.1.3.135)
diff (3241)	coreprof%ni%transp_coef%diff (matflt_type) (9.8.1.2.10)



vconv (3241)	coreprof%ni%transp_coef%vconv (matflt.type) (9.8.1.2.10)
source (3241)	coreprof%ni%transp_coef%source (vecstring.type) (9.8.1.2.15)
flux (3221)	coreprof%ni%flux (fluxion) (9.8.1.3.214)
flux_dv (3320)	coreprof%ni%flux%flux_dv (matflt.type) (9.8.1.2.10)
flux_interp (3320)	coreprof%ni%flux%flux_interp (matflt.type) (9.8.1.2.10)
flux_dv_surf (3221)	coreprof%ni%flux_dv_surf (matflt.type) (9.8.1.2.10)
time_deriv (3221)	coreprof%ni%time_deriv (matflt.type) (9.8.1.2.10)
codeparam (3221)	coreprof%ni%codeparam (codeparam) (9.8.1.3.84)
codename (3190)	coreprof%ni%codeparam%codename (string) (9.8.1.1.3)
codeversion (3190)	coreprof%ni%codeparam%codeversion (string) (9.8.1.1.3)
parameters (3190)	coreprof%ni%codeparam%parameters (string) (9.8.1.1.3)
output_diag (3190)	coreprof%ni%codeparam%output_diag (string) (9.8.1.1.3)
output_flag (3190)	coreprof%ni%codeparam%output_flag (integer) (9.8.1.1.2)
vtor (3119)	coreprof%vtor (corefieldion) (9.8.1.3.115)
value (3221)	coreprof%vtor%value (matflt.type) (9.8.1.2.10)
ddrho (3221)	coreprof%vtor%ddrho (matflt.type) (9.8.1.2.10)
d2drho2 (3221)	coreprof%vtor%d2drho2 (matflt.type) (9.8.1.2.10)
ddt (3221)	coreprof%vtor%ddt (matflt.type) (9.8.1.2.10)
source (3221)	coreprof%vtor%source (vecstring.type) (9.8.1.2.15)
flag (3221)	coreprof%vtor%flag (vecint.type) (9.8.1.2.14)
boundary (3221)	coreprof%vtor%boundary (boundaryion) (9.8.1.3.76)
value (3182)	coreprof%vtor%boundary%value (matflt.type) (9.8.1.2.10)
source (3182)	coreprof%vtor%boundary%source (vecstring.type) (9.8.1.2.15)
type (3182)	coreprof%vtor%boundary%type (vecint.type) (9.8.1.2.14)
rho_tor (3182)	coreprof%vtor%boundary%rho_tor (vecflt.type) (9.8.1.2.13)
source_term (3221)	coreprof%vtor%source_term (sourceion) (9.8.1.3.416)
value (3522)	coreprof%vtor%source_term%value (matflt.type) (9.8.1.2.10)
integral (3522)	coreprof%vtor%source_term%integral (matflt.type) (9.8.1.2.10)
source (3522)	coreprof%vtor%source_term%source (vecstring.type) (9.8.1.2.15)
transp_coef (3221)	coreprof%vtor%transp_coef (coretransion) (9.8.1.3.135)
diff (3241)	coreprof%vtor%transp_coef%diff (matflt.type) (9.8.1.2.10)
vconv (3241)	coreprof%vtor%transp_coef%vconv (matflt.type) (9.8.1.2.10)
source (3241)	coreprof%vtor%transp_coef%source (vecstring.type) (9.8.1.2.15)
flux (3221)	coreprof%vtor%flux (fluxion) (9.8.1.3.214)
flux_dv (3320)	coreprof%vtor%flux%flux_dv (matflt.type) (9.8.1.2.10)
flux_interp (3320)	coreprof%vtor%flux%flux_interp (matflt.type) (9.8.1.2.10)
flux_dv_surf (3221)	coreprof%vtor%flux_dv_surf (matflt.type) (9.8.1.2.10)
time_deriv (3221)	coreprof%vtor%time_deriv (matflt.type) (9.8.1.2.10)
codeparam (3221)	coreprof%vtor%codeparam (codeparam) (9.8.1.3.84)
codename (3190)	coreprof%vtor%codeparam%codename (string) (9.8.1.1.3)
codeversion (3190)	coreprof%vtor%codeparam%codeversion (string) (9.8.1.1.3)
parameters (3190)	coreprof%vtor%codeparam%parameters (string) (9.8.1.1.3)
output_diag (3190)	coreprof%vtor%codeparam%output_diag (string) (9.8.1.1.3)
output_flag (3190)	coreprof%vtor%codeparam%output_flag (integer) (9.8.1.1.2)
profiles1d (3119)	coreprof%profiles1d (profiles1d) (9.8.1.3.346)
pe (3452)	coreprof%profiles1d%pe (coreprofile) (9.8.1.3.130)
value (3236)	coreprof%profiles1d%pe%value (vecflt.type) (9.8.1.2.13)
source (3236)	coreprof%profiles1d%pe%source (string) (9.8.1.1.3)
dpedt (3452)	coreprof%profiles1d%dpedt (coreprofile) (9.8.1.3.130)
value (3236)	coreprof%profiles1d%dpedt%value (vecflt.type) (9.8.1.2.13)
source (3236)	coreprof%profiles1d%dpedt%source (string) (9.8.1.1.3)
pi (3452)	coreprof%profiles1d%pi (corepfion) (9.8.1.3.131)
value (3237)	coreprof%profiles1d%pi%value (matflt.type) (9.8.1.2.10)
source (3237)	coreprof%profiles1d%pi%source (vecstring.type) (9.8.1.2.15)
pi_tot (3452)	coreprof%profiles1d%pi_tot (coreprofile) (9.8.1.3.130)
value (3236)	coreprof%profiles1d%pi_tot%value (vecflt.type) (9.8.1.2.13)
source (3236)	coreprof%profiles1d%pi_tot%source (string) (9.8.1.1.3)
dpi_totdt (3452)	coreprof%profiles1d%dpi_totdt (coreprofile) (9.8.1.3.130)
value (3236)	coreprof%profiles1d%dpi_totdt%value (vecflt.type) (9.8.1.2.13)
source (3236)	coreprof%profiles1d%dpi_totdt%source (string) (9.8.1.1.3)
pr_th (3452)	coreprof%profiles1d%pr_th (coreprofile) (9.8.1.3.130)



value (3236)	coreprof%profiles1d%pr.th%value (vecflt.type) (9.8.1.2.13)
source (3236)	coreprof%profiles1d%pr.th%source (string) (9.8.1.1.3)
pr_perp (3452)	coreprof%profiles1d%pr_perp (coreprofile) (9.8.1.3.130)
value (3236)	coreprof%profiles1d%pr_perp%value (vecflt.type) (9.8.1.2.13)
source (3236)	coreprof%profiles1d%pr_perp%source (string) (9.8.1.1.3)
pr_parallel (3452)	coreprof%profiles1d%pr_parallel (coreprofile) (9.8.1.3.130)
value (3236)	coreprof%profiles1d%pr_parallel%value (vecflt.type) (9.8.1.2.13)
source (3236)	coreprof%profiles1d%pr_parallel%source (string) (9.8.1.1.3)
jtot (3452)	coreprof%profiles1d%jtot (coreprofile) (9.8.1.3.130)
value (3236)	coreprof%profiles1d%jtot%value (vecflt.type) (9.8.1.2.13)
source (3236)	coreprof%profiles1d%jtot%source (string) (9.8.1.1.3)
jni (3452)	coreprof%profiles1d%jni (coreprofile) (9.8.1.3.130)
value (3236)	coreprof%profiles1d%jni%value (vecflt.type) (9.8.1.2.13)
source (3236)	coreprof%profiles1d%jni%source (string) (9.8.1.1.3)
jphi (3452)	coreprof%profiles1d%jphi (coreprofile) (9.8.1.3.130)
value (3236)	coreprof%profiles1d%jphi%value (vecflt.type) (9.8.1.2.13)
source (3236)	coreprof%profiles1d%jphi%source (string) (9.8.1.1.3)
joh (3452)	coreprof%profiles1d%joh (coreprofile) (9.8.1.3.130)
value (3236)	coreprof%profiles1d%joh%value (vecflt.type) (9.8.1.2.13)
source (3236)	coreprof%profiles1d%joh%source (string) (9.8.1.1.3)
vloop (3452)	coreprof%profiles1d%vloop (coreprofile) (9.8.1.3.130)
value (3236)	coreprof%profiles1d%vloop%value (vecflt.type) (9.8.1.2.13)
source (3236)	coreprof%profiles1d%vloop%source (string) (9.8.1.1.3)
sigmapar (3452)	coreprof%profiles1d%sigmapar (coreprofile) (9.8.1.3.130)
value (3236)	coreprof%profiles1d%sigmapar%value (vecflt.type) (9.8.1.2.13)
source (3236)	coreprof%profiles1d%sigmapar%source (string) (9.8.1.1.3)
qoh (3452)	coreprof%profiles1d%qoh (sourcecel) (9.8.1.3.414)
value (3520)	coreprof%profiles1d%qoh%value (vecflt.type) (9.8.1.2.13)
integral (3520)	coreprof%profiles1d%qoh%integral (vecflt.type) (9.8.1.2.13)
source (3520)	coreprof%profiles1d%qoh%source (string) (9.8.1.1.3)
qei (3452)	coreprof%profiles1d%qei (coreprofile) (9.8.1.3.130)
value (3236)	coreprof%profiles1d%qei%value (vecflt.type) (9.8.1.2.13)
source (3236)	coreprof%profiles1d%qei%source (string) (9.8.1.1.3)
eparallel (3452)	coreprof%profiles1d%eparallel (coreprofile) (9.8.1.3.130)
value (3236)	coreprof%profiles1d%eparallel%value (vecflt.type) (9.8.1.2.13)
source (3236)	coreprof%profiles1d%eparallel%source (string) (9.8.1.1.3)
e_b (3452)	coreprof%profiles1d%e_b (coreprofile) (9.8.1.3.130)
value (3236)	coreprof%profiles1d%e_b%value (vecflt.type) (9.8.1.2.13)
source (3236)	coreprof%profiles1d%e_b%source (string) (9.8.1.1.3)
q (3452)	coreprof%profiles1d%q (coreprofile) (9.8.1.3.130)
value (3236)	coreprof%profiles1d%q%value (vecflt.type) (9.8.1.2.13)
source (3236)	coreprof%profiles1d%q%source (string) (9.8.1.1.3)
shear (3452)	coreprof%profiles1d%shear (coreprofile) (9.8.1.3.130)
value (3236)	coreprof%profiles1d%shear%value (vecflt.type) (9.8.1.2.13)
source (3236)	coreprof%profiles1d%shear%source (string) (9.8.1.1.3)
ns (3452)	coreprof%profiles1d%ns (coreprofion) (9.8.1.3.131)
value (3237)	coreprof%profiles1d%ns%value (matflt.type) (9.8.1.2.10)
source (3237)	coreprof%profiles1d%ns%source (vecstring.type) (9.8.1.2.15)
mtor (3452)	coreprof%profiles1d%mtor (coreprofion) (9.8.1.3.131)
value (3237)	coreprof%profiles1d%mtor%value (matflt.type) (9.8.1.2.10)
source (3237)	coreprof%profiles1d%mtor%source (vecstring.type) (9.8.1.2.15)
wtor (3452)	coreprof%profiles1d%wtor (coreprofion) (9.8.1.3.131)
value (3237)	coreprof%profiles1d%wtor%value (matflt.type) (9.8.1.2.10)
source (3237)	coreprof%profiles1d%wtor%source (vecstring.type) (9.8.1.2.15)
vpol (3452)	coreprof%profiles1d%vpol (coreprofion) (9.8.1.3.131)
value (3237)	coreprof%profiles1d%vpol%value (matflt.type) (9.8.1.2.10)
source (3237)	coreprof%profiles1d%vpol%source (vecstring.type) (9.8.1.2.15)
zeff (3452)	coreprof%profiles1d%zeff (coreprofile) (9.8.1.3.130)
value (3236)	coreprof%profiles1d%zeff%value (vecflt.type) (9.8.1.2.13)
source (3236)	coreprof%profiles1d%zeff%source (string) (9.8.1.1.3)
bpol (3452)	coreprof%profiles1d%bpol (coreprofile) (9.8.1.3.130)

value (3236)	coreprof%profiles1d%bpol%value (vecflt.type) (9.8.1.2.13)
source (3236)	coreprof%profiles1d%bpol%source (string) (9.8.1.1.3)
dvprimedt (3452)	coreprof%profiles1d%dvprimedt (coreprofile) (9.8.1.3.130)
value (3236)	coreprof%profiles1d%dvprimedt%value (vecflt.type) (9.8.1.2.13)
source (3236)	coreprof%profiles1d%dvprimedt%source (string) (9.8.1.1.3)
globalparam (3119)	coreprof%globalparam (globalparam) (9.8.1.3.236)
current_tot (3342)	coreprof%globalparam%current_tot (float) (9.8.1.1.1)
current_bnd (3342)	coreprof%globalparam%current_bnd (float) (9.8.1.1.1)
current_ni (3342)	coreprof%globalparam%current_ni (float) (9.8.1.1.1)
vloop (3342)	coreprof%globalparam%vloop (float) (9.8.1.1.1)
li (3342)	coreprof%globalparam%li (float) (9.8.1.1.1)
beta_tor (3342)	coreprof%globalparam%beta_tor (float) (9.8.1.1.1)
beta_normal (3342)	coreprof%globalparam%beta_normal (float) (9.8.1.1.1)
beta_pol (3342)	coreprof%globalparam%beta_pol (float) (9.8.1.1.1)
w_dia (3342)	coreprof%globalparam%w_dia (float) (9.8.1.1.1)
geom_axis (3342)	coreprof%globalparam%geom_axis (rz0D) (9.8.1.3.365)
r (3471)	coreprof%globalparam%geom_axis%r (float) (9.8.1.1.1)
z (3471)	coreprof%globalparam%geom_axis%z (float) (9.8.1.1.1)
codeparam (3119)	coreprof%codeparam (codeparam) (9.8.1.3.84)
codename (3190)	coreprof%codeparam%codename (string) (9.8.1.1.3)
codeversion (3190)	coreprof%codeparam%codeversion (string) (9.8.1.1.3)
parameters (3190)	coreprof%codeparam%parameters (string) (9.8.1.1.3)
output_diag (3190)	coreprof%codeparam%output_diag (string) (9.8.1.1.3)
output_flag (3190)	coreprof%codeparam%output_flag (integer) (9.8.1.1.2)
time (3119)	coreprof%time (float) (9.8.1.1.1)

### 9.8.2.1.12 coresource

datainfo (3120)	coresource%datainfo (datainfo) (9.8.1.3.141)
dataprovider (3247)	coresource%datainfo%dataprovider (string) (9.8.1.1.3)
putdate (3247)	coresource%datainfo%putdate (string) (9.8.1.1.3)
source (3247)	coresource%datainfo%source (string) (9.8.1.1.3)
comment (3247)	coresource%datainfo%comment (string) (9.8.1.1.3)
cocos (3247)	coresource%datainfo%cocos (integer) (9.8.1.1.2)
id (3247)	coresource%datainfo%id (integer) (9.8.1.1.2)
isref (3247)	coresource%datainfo%isref (integer) (9.8.1.1.2)
whatref (3247)	coresource%datainfo%whatref (whatref) (9.8.1.3.513)
user (3619)	coresource%datainfo%whatref%user (string) (9.8.1.1.3)
machine (3619)	coresource%datainfo%whatref%machine (string) (9.8.1.1.3)
shot (3619)	coresource%datainfo%whatref%shot (integer) (9.8.1.1.2)
run (3619)	coresource%datainfo%whatref%run (integer) (9.8.1.1.2)
occurrence (3619)	coresource%datainfo%whatref%occurrence (integer) (9.8.1.1.2)
putinfo (3247)	coresource%datainfo%putinfo (putinfo) (9.8.1.3.349)
putmethod (3455)	coresource%datainfo%putinfo%putmethod (string) (9.8.1.1.3)
putaccess (3455)	coresource%datainfo%putinfo%putaccess (string) (9.8.1.1.3)
putlocation (3455)	coresource%datainfo%putinfo%putlocation (string) (9.8.1.1.3)
rights (3455)	coresource%datainfo%putinfo%rights (string) (9.8.1.1.3)
composition (3120)	coresource%composition (composition) (9.8.1.3.102)
amn (3208)	coresource%composition%amn (vecflt.type) (9.8.1.2.13)
zn (3208)	coresource%composition%zn (vecflt.type) (9.8.1.2.13)
zion (3208)	coresource%composition%zion (vecflt.type) (9.8.1.2.13)
imp_flag (3208)	coresource%composition%imp_flag (vecint.type) (9.8.1.2.14)
label (3208)	coresource%composition%label (vecstring.type) (9.8.1.2.15)
desc_impur (3120)	coresource%desc_impur (desc_impur) (9.8.1.3.143)
amn (3249)	coresource%desc_impur%amn (vecflt.type) (9.8.1.2.13)
zn (3249)	coresource%desc_impur%zn (vecint.type) (9.8.1.2.14)
i_ion (3249)	coresource%desc_impur%i_ion (vecint.type) (9.8.1.2.14)
nzimp (3249)	coresource%desc_impur%nzimp (vecint.type) (9.8.1.2.14)
zmin (3249)	coresource%desc_impur%zmin (matint.type) (9.8.1.2.11)
zmax (3249)	coresource%desc_impur%zmax (matint.type) (9.8.1.2.11)
label (3249)	coresource%desc_impur%label (vecstring.type) (9.8.1.2.15)

compositions (3120)	coresource%compositions (compositions_type) (9.8.1.3.106)
nuclei (3212)	coresource%compositions%nuclei(:) (nuclei) (9.8.1.3.306)
zn (3412)	coresource%compositions%nuclei(:)%zn (float) (9.8.1.1.1)
amn (3412)	coresource%compositions%nuclei(:)%amn (float) (9.8.1.1.1)
label (3412)	coresource%compositions%nuclei(:)%label (string) (9.8.1.1.3)
ions (3212)	coresource%compositions%ions(:) (ions) (9.8.1.3.247)
nucindex (3353)	coresource%compositions%ions(:)%nucindex (integer) (9.8.1.1.2)
zion (3353)	coresource%compositions%ions(:)%zion (float) (9.8.1.1.1)
imp_flag (3353)	coresource%compositions%ions(:)%imp_flag (integer) (9.8.1.1.2)
label (3353)	coresource%compositions%ions(:)%label (string) (9.8.1.1.3)
impurities (3212)	coresource%compositions%impurities(:) (impurities) (9.8.1.3.244)
nucindex (3350)	coresource%compositions%impurities(:)%nucindex (integer) (9.8.1.1.2)
i_ion (3350)	coresource%compositions%impurities(:)%i_ion (integer) (9.8.1.1.2)
nzimp (3350)	coresource%compositions%impurities(:)%nzimp (integer) (9.8.1.1.2)
zmin (3350)	coresource%compositions%impurities(:)%zmin (vecflt_type) (9.8.1.2.13)
zmax (3350)	coresource%compositions%impurities(:)%zmax (vecflt_type) (9.8.1.2.13)
label (3350)	coresource%compositions%impurities(:)%label (vecstring_type) (9.8.1.2.15)
neutralscomp (3212)	coresource%compositions%neutralscomp(:) (composition_neutralscomp) (9.8.1.3.105)
neutcomp (3211)	coresource%compositions%neutralscomp(:)%neutcomp(:) (composition_neutrals_neutcomp) (9.8.1.3.104)
nucindex (3210)	coresource%compositions%neutralscomp(:)%neutcomp(:)%nucindex (integer) (9.8.1.1.2)
multiplicity (3210)	coresource%compositions%neutralscomp(:)%neutcomp(:)%multiplicity (integer) (9.8.1.1.2)
type (3211)	coresource%compositions%neutralscomp(:)%type(:) (identifier) (9.8.1.3.242)
id (3348)	coresource%compositions%neutralscomp(:)%type(:)%id (string) (9.8.1.1.3)
flag (3348)	coresource%compositions%neutralscomp(:)%type(:)%flag (integer) (9.8.1.1.2)
description (3348)	coresource%compositions%neutralscomp(:)%type(:)%description (string) (9.8.1.1.3)
label (3211)	coresource%compositions%neutralscomp(:)%label (string) (9.8.1.1.3)
edgespecies (3212)	coresource%compositions%edgespecies(:) (edgespecies) (9.8.1.3.192)
nucindex (3298)	coresource%compositions%edgespecies(:)%nucindex (integer) (9.8.1.1.2)
zmin (3298)	coresource%compositions%edgespecies(:)%zmin (float) (9.8.1.1.1)
zmax (3298)	coresource%compositions%edgespecies(:)%zmax (float) (9.8.1.1.1)
label (3298)	coresource%compositions%edgespecies(:)%label (string) (9.8.1.1.3)
signature (3212)	coresource%compositions%signature (identifier) (9.8.1.3.242)
id (3348)	coresource%compositions%signature%id (string) (9.8.1.1.3)
flag (3348)	coresource%compositions%signature%flag (integer) (9.8.1.1.2)
description (3348)	coresource%compositions%signature%description (string) (9.8.1.1.3)
toroid_field (3120)	coresource%toroid_field (b0r0) (9.8.1.3.61)
r0 (3167)	coresource%toroid_field%r0 (float) (9.8.1.1.1)
b0 (3167)	coresource%toroid_field%b0 (float) (9.8.1.1.1)
values (3120)	coresource%values(:) (coresource_values) (9.8.1.3.132)
sourceid (3238)	coresource%values(:)%sourceid (identifier) (9.8.1.3.242)
id (3348)	coresource%values(:)%sourceid%id (string) (9.8.1.1.3)
flag (3348)	coresource%values(:)%sourceid%flag (integer) (9.8.1.1.2)
description (3348)	coresource%values(:)%sourceid%description (string) (9.8.1.1.3)
rho_tor (3238)	coresource%values(:)%rho_tor (vecflt_type) (9.8.1.2.13)
rho_tor_norm (3238)	coresource%values(:)%rho_tor_norm (vecflt_type) (9.8.1.2.13)
psi (3238)	coresource%values(:)%psi (vecflt_type) (9.8.1.2.13)
volume (3238)	coresource%values(:)%volume (vecflt_type) (9.8.1.2.13)
area (3238)	coresource%values(:)%area (vecflt_type) (9.8.1.2.13)
j (3238)	coresource%values(:)%j (vecflt_type) (9.8.1.2.13)
sigma (3238)	coresource%values(:)%sigma (vecflt_type) (9.8.1.2.13)
si (3238)	coresource%values(:)%si (source_ion) (9.8.1.3.411)
exp (3517)	coresource%values(:)%si%exp (matflt_type) (9.8.1.2.10)
imp (3517)	coresource%values(:)%si%imp (matflt_type) (9.8.1.2.10)
se (3238)	coresource%values(:)%se (source_vec) (9.8.1.3.413)
exp (3519)	coresource%values(:)%se%exp (vecflt_type) (9.8.1.2.13)
imp (3519)	coresource%values(:)%se%imp (vecflt_type) (9.8.1.2.13)
sz (3238)	coresource%values(:)%sz(:) (source_imp) (9.8.1.3.410)
exp (3516)	coresource%values(:)%sz(:)%exp (matflt_type) (9.8.1.2.10)
imp (3516)	coresource%values(:)%sz(:)%imp (matflt_type) (9.8.1.2.10)
qi (3238)	coresource%values(:)%qi (source_ion) (9.8.1.3.411)
exp (3517)	coresource%values(:)%qi%exp (matflt_type) (9.8.1.2.10)

imp (3517)	coresource%values(:)%qi%imp (matflt_type) (9.8.1.2.10)
qe (3238)	coresource%values(:)%qe (source_vec) (9.8.1.3.413)
exp (3519)	coresource%values(:)%qe%exp (vecflt_type) (9.8.1.2.13)
imp (3519)	coresource%values(:)%qe%imp (vecflt_type) (9.8.1.2.13)
qz (3238)	coresource%values(:)%qz(:) (source_imp) (9.8.1.3.410)
exp (3516)	coresource%values(:)%qz(:)%exp (matflt_type) (9.8.1.2.10)
imp (3516)	coresource%values(:)%qz(:)%imp (matflt_type) (9.8.1.2.10)
ui (3238)	coresource%values(:)%ui (source_ion) (9.8.1.3.411)
exp (3517)	coresource%values(:)%ui%exp (matflt_type) (9.8.1.2.10)
imp (3517)	coresource%values(:)%ui%imp (matflt_type) (9.8.1.2.10)
ujxb (3238)	coresource%values(:)%ujxb (source_vec) (9.8.1.3.413)
exp (3519)	coresource%values(:)%ujxb%exp (vecflt_type) (9.8.1.2.13)
imp (3519)	coresource%values(:)%ujxb%imp (vecflt_type) (9.8.1.2.13)
codeparam (3238)	coresource%values(:)%codeparam (codeparam) (9.8.1.3.84)
codename (3190)	coresource%values(:)%codeparam%codename (string) (9.8.1.1.3)
codeversion (3190)	coresource%values(:)%codeparam%codeversion (string) (9.8.1.1.3)
parameters (3190)	coresource%values(:)%codeparam%parameters (string) (9.8.1.1.3)
output_diag (3190)	coresource%values(:)%codeparam%output_diag (string) (9.8.1.1.3)
output_flag (3190)	coresource%values(:)%codeparam%output_flag (integer) (9.8.1.1.2)
codeparam (3120)	coresource%codeparam (codeparam) (9.8.1.3.84)
codename (3190)	coresource%codeparam%codename (string) (9.8.1.1.3)
codeversion (3190)	coresource%codeparam%codeversion (string) (9.8.1.1.3)
parameters (3190)	coresource%codeparam%parameters (string) (9.8.1.1.3)
output_diag (3190)	coresource%codeparam%output_diag (string) (9.8.1.1.3)
output_flag (3190)	coresource%codeparam%output_flag (integer) (9.8.1.1.2)
time (3120)	coresource%time (float) (9.8.1.1.1)

### 9.8.2.1.13 coretransp

datainfo (3121)	coretransp%datainfo (datainfo) (9.8.1.3.141)
dataprovider (3247)	coretransp%datainfo%dataprovider (string) (9.8.1.1.3)
putdate (3247)	coretransp%datainfo%putdate (string) (9.8.1.1.3)
source (3247)	coretransp%datainfo%source (string) (9.8.1.1.3)
comment (3247)	coretransp%datainfo%comment (string) (9.8.1.1.3)
cocos (3247)	coretransp%datainfo%cocos (integer) (9.8.1.1.2)
id (3247)	coretransp%datainfo%id (integer) (9.8.1.1.2)
isref (3247)	coretransp%datainfo%isref (integer) (9.8.1.1.2)
whatref (3247)	coretransp%datainfo%whatref (whatref) (9.8.1.3.513)
user (3619)	coretransp%datainfo%whatref%user (string) (9.8.1.1.3)
machine (3619)	coretransp%datainfo%whatref%machine (string) (9.8.1.1.3)
shot (3619)	coretransp%datainfo%whatref%shot (integer) (9.8.1.1.2)
run (3619)	coretransp%datainfo%whatref%run (integer) (9.8.1.1.2)
occurrence (3619)	coretransp%datainfo%whatref%occurrence (integer) (9.8.1.1.2)
putinfo (3247)	coretransp%datainfo%putinfo (putinfo) (9.8.1.3.349)
putmethod (3455)	coretransp%datainfo%putinfo%putmethod (string) (9.8.1.1.3)
putaccess (3455)	coretransp%datainfo%putinfo%putaccess (string) (9.8.1.1.3)
putlocation (3455)	coretransp%datainfo%putinfo%putlocation (string) (9.8.1.1.3)
rights (3455)	coretransp%datainfo%putinfo%rights (string) (9.8.1.1.3)
composition (3121)	coretransp%composition (composition) (9.8.1.3.102)
amn (3208)	coretransp%composition%amn (vecflt_type) (9.8.1.2.13)
zn (3208)	coretransp%composition%zn (vecflt_type) (9.8.1.2.13)
zion (3208)	coretransp%composition%zion (vecflt_type) (9.8.1.2.13)
imp_flag (3208)	coretransp%composition%imp_flag (vecint_type) (9.8.1.2.14)
label (3208)	coretransp%composition%label (vecstring_type) (9.8.1.2.15)
desc_impur (3121)	coretransp%desc_impur (desc_impur) (9.8.1.3.143)
amn (3249)	coretransp%desc_impur%amn (vecflt_type) (9.8.1.2.13)
zn (3249)	coretransp%desc_impur%zn (vecint_type) (9.8.1.2.14)
i_ion (3249)	coretransp%desc_impur%i_ion (vecint_type) (9.8.1.2.14)
nzimp (3249)	coretransp%desc_impur%nzimp (vecint_type) (9.8.1.2.14)
zmin (3249)	coretransp%desc_impur%zmin (matint_type) (9.8.1.2.11)
zmax (3249)	coretransp%desc_impur%zmax (matint_type) (9.8.1.2.11)

label (3249)	coretransp%desc_impur%label (vecstring_type) (9.8.1.2.15)
compositions (3121)	coretransp%compositions (compositions_type) (9.8.1.3.106)
nuclei (3212)	coretransp%compositions%nuclei(:) (nuclei) (9.8.1.3.306)
zn (3412)	coretransp%compositions%nuclei(:)%zn (float) (9.8.1.1.1)
amn (3412)	coretransp%compositions%nuclei(:)%amn (float) (9.8.1.1.1)
label (3412)	coretransp%compositions%nuclei(:)%label (string) (9.8.1.1.3)
ions (3212)	coretransp%compositions%ions(:) (ions) (9.8.1.3.247)
nucindex (3353)	coretransp%compositions%ions(:)%nucindex (integer) (9.8.1.1.2)
zion (3353)	coretransp%compositions%ions(:)%zion (float) (9.8.1.1.1)
imp_flag (3353)	coretransp%compositions%ions(:)%imp_flag (integer) (9.8.1.1.2)
label (3353)	coretransp%compositions%ions(:)%label (string) (9.8.1.1.3)
impurities (3212)	coretransp%compositions%impurities(:) (impurities) (9.8.1.3.244)
nucindex (3350)	coretransp%compositions%impurities(:)%nucindex (integer) (9.8.1.1.2)
i_ion (3350)	coretransp%compositions%impurities(:)%i_ion (integer) (9.8.1.1.2)
nzimp (3350)	coretransp%compositions%impurities(:)%nzimp (integer) (9.8.1.1.2)
zmin (3350)	coretransp%compositions%impurities(:)%zmin (vecflt_type) (9.8.1.2.13)
zmax (3350)	coretransp%compositions%impurities(:)%zmax (vecflt_type) (9.8.1.2.13)
label (3350)	coretransp%compositions%impurities(:)%label (vecstring_type) (9.8.1.2.15)
neutralscomp (3212)	coretransp%compositions%neutralscomp(:) (composition_neutralscomp) (9.8.1.3.105)
neutcomp (3211)	coretransp%compositions%neutralscomp(:)%neutcomp(:) (composition_neutrals_neutcomp) (9.8.1.3.104)
nucindex (3210)	coretransp%compositions%neutralscomp(:)%neutcomp(:)%nucindex (integer) (9.8.1.1.2)
multiplicity (3210)	coretransp%compositions%neutralscomp(:)%neutcomp(:)%multiplicity (integer) (9.8.1.1.2)
type (3211)	coretransp%compositions%neutralscomp(:)%type(:) (identifier) (9.8.1.3.242)
id (3348)	coretransp%compositions%neutralscomp(:)%type(:)%id (string) (9.8.1.1.3)
flag (3348)	coretransp%compositions%neutralscomp(:)%type(:)%flag (integer) (9.8.1.1.2)
description (3348)	coretransp%compositions%neutralscomp(:)%type(:)%description (string) (9.8.1.1.3)
label (3211)	coretransp%compositions%neutralscomp(:)%label (string) (9.8.1.1.3)
edgespecies (3212)	coretransp%compositions%edgespecies(:) (edgespecies) (9.8.1.3.192)
nucindex (3298)	coretransp%compositions%edgespecies(:)%nucindex (integer) (9.8.1.1.2)
zmin (3298)	coretransp%compositions%edgespecies(:)%zmin (float) (9.8.1.1.1)
zmax (3298)	coretransp%compositions%edgespecies(:)%zmax (float) (9.8.1.1.1)
label (3298)	coretransp%compositions%edgespecies(:)%label (string) (9.8.1.1.3)
signature (3212)	coretransp%compositions%signature (identifier) (9.8.1.3.242)
id (3348)	coretransp%compositions%signature%id (string) (9.8.1.1.3)
flag (3348)	coretransp%compositions%signature%flag (integer) (9.8.1.1.2)
description (3348)	coretransp%compositions%signature%description (string) (9.8.1.1.3)
values (3121)	coretransp%values(:) (coretransp_values) (9.8.1.3.136)
transportid (3242)	coretransp%values(:)%transportid (identifier) (9.8.1.3.242)
id (3348)	coretransp%values(:)%transportid%id (string) (9.8.1.1.3)
flag (3348)	coretransp%values(:)%transportid%flag (integer) (9.8.1.1.2)
description (3348)	coretransp%values(:)%transportid%description (string) (9.8.1.1.3)
rho_tor_norm (3242)	coretransp%values(:)%rho_tor_norm (vecflt_type) (9.8.1.2.13)
rho_tor (3242)	coretransp%values(:)%rho_tor (vecflt_type) (9.8.1.2.13)
psi (3242)	coretransp%values(:)%psi (vecflt_type) (9.8.1.2.13)
volume (3242)	coretransp%values(:)%volume (vecflt_type) (9.8.1.2.13)
area (3242)	coretransp%values(:)%area (vecflt_type) (9.8.1.2.13)
sigma (3242)	coretransp%values(:)%sigma (vecflt_type) (9.8.1.2.13)
ni_transp (3242)	coretransp%values(:)%ni_transp (ni_transp) (9.8.1.3.299)
diff_eff (3405)	coretransp%values(:)%ni_transp%diff_eff (array3dflt_type) (9.8.1.2.2)
vconv_eff (3405)	coretransp%values(:)%ni_transp%vconv_eff (array3dflt_type) (9.8.1.2.2)
flux (3405)	coretransp%values(:)%ni_transp%flux (matflt_type) (9.8.1.2.10)
off_diagonal (3405)	coretransp%values(:)%ni_transp%off_diagonal (offdiagon) (9.8.1.3.309)
d_ni (3415)	coretransp%values(:)%ni_transp%off_diagonal%d_ni (array3dflt_type) (9.8.1.2.2)
d_ti (3415)	coretransp%values(:)%ni_transp%off_diagonal%d_ti (array3dflt_type) (9.8.1.2.2)
d_ne (3415)	coretransp%values(:)%ni_transp%off_diagonal%d_ne (matflt_type) (9.8.1.2.10)
d_te (3415)	coretransp%values(:)%ni_transp%off_diagonal%d_te (matflt_type) (9.8.1.2.10)
d_epar (3415)	coretransp%values(:)%ni_transp%off_diagonal%d_epar (matflt_type) (9.8.1.2.10)
d_mtor (3415)	coretransp%values(:)%ni_transp%off_diagonal%d_mtor (matflt_type) (9.8.1.2.10)
flag (3405)	coretransp%values(:)%ni_transp%flag (integer) (9.8.1.1.2)
ne_transp (3242)	coretransp%values(:)%ne_transp (ne_transp) (9.8.1.3.294)
diff_eff (3400)	coretransp%values(:)%ne_transp%diff_eff (matflt_type) (9.8.1.2.10)

vconv_eff (3400)	coretransp%values(:)%ne_transp%vconv_eff (matflt_type) (9.8.1.2.10)
flux (3400)	coretransp%values(:)%ne_transp%flux (vecflt_type) (9.8.1.2.13)
off_diagonal (3400)	coretransp%values(:)%ne_transp%off_diagonal (offdiagonal) (9.8.1.3.308)
d_ni (3414)	coretransp%values(:)%ne_transp%off_diagonal%d_ni (matflt_type) (9.8.1.2.10)
d_ti (3414)	coretransp%values(:)%ne_transp%off_diagonal%d_ti (matflt_type) (9.8.1.2.10)
d_ne (3414)	coretransp%values(:)%ne_transp%off_diagonal%d_ne (vecflt_type) (9.8.1.2.13)
d_te (3414)	coretransp%values(:)%ne_transp%off_diagonal%d_te (vecflt_type) (9.8.1.2.13)
d_epar (3414)	coretransp%values(:)%ne_transp%off_diagonal%d_epar (vecflt_type) (9.8.1.2.13)
d_mtor (3414)	coretransp%values(:)%ne_transp%off_diagonal%d_mtor (vecflt_type) (9.8.1.2.13)
flag (3400)	coretransp%values(:)%ne_transp%flag (integer) (9.8.1.1.2)
nz_transp (3242)	coretransp%values(:)%nz_transp(:) (transcoefimp) (9.8.1.3.469)
diff_eff (3575)	coretransp%values(:)%nz_transp(:)%diff_eff (matflt_type) (9.8.1.2.10)
vconv_eff (3575)	coretransp%values(:)%nz_transp(:)%vconv_eff (matflt_type) (9.8.1.2.10)
exchange (3575)	coretransp%values(:)%nz_transp(:)%exchange (matflt_type) (9.8.1.2.10)
flux (3575)	coretransp%values(:)%nz_transp(:)%flux (matflt_type) (9.8.1.2.10)
flag (3575)	coretransp%values(:)%nz_transp(:)%flag (integer) (9.8.1.1.2)
ti_transp (3242)	coretransp%values(:)%ti_transp (transcoefion) (9.8.1.3.470)
diff_eff (3576)	coretransp%values(:)%ti_transp%diff_eff (matflt_type) (9.8.1.2.10)
vconv_eff (3576)	coretransp%values(:)%ti_transp%vconv_eff (matflt_type) (9.8.1.2.10)
exchange (3576)	coretransp%values(:)%ti_transp%exchange (matflt_type) (9.8.1.2.10)
qgi (3576)	coretransp%values(:)%ti_transp%qgi (matflt_type) (9.8.1.2.10)
flux (3576)	coretransp%values(:)%ti_transp%flux (matflt_type) (9.8.1.2.10)
off_diagonal (3576)	coretransp%values(:)%ti_transp%off_diagonal (offdiagonal) (9.8.1.3.309)
d_ni (3415)	coretransp%values(:)%ti_transp%off_diagonal%d_ni (array3dfilt_type) (9.8.1.2.2)
d_ti (3415)	coretransp%values(:)%ti_transp%off_diagonal%d_ti (array3dfilt_type) (9.8.1.2.2)
d_ne (3415)	coretransp%values(:)%ti_transp%off_diagonal%d_ne (matflt_type) (9.8.1.2.10)
d_te (3415)	coretransp%values(:)%ti_transp%off_diagonal%d_te (matflt_type) (9.8.1.2.10)
d_epar (3415)	coretransp%values(:)%ti_transp%off_diagonal%d_epar (matflt_type) (9.8.1.2.10)
d_mtor (3415)	coretransp%values(:)%ti_transp%off_diagonal%d_mtor (matflt_type) (9.8.1.2.10)
flag (3576)	coretransp%values(:)%ti_transp%flag (integer) (9.8.1.1.2)
te_transp (3242)	coretransp%values(:)%te_transp (transcoefel) (9.8.1.3.468)
diff_eff (3574)	coretransp%values(:)%te_transp%diff_eff (vecflt_type) (9.8.1.2.13)
vconv_eff (3574)	coretransp%values(:)%te_transp%vconv_eff (vecflt_type) (9.8.1.2.13)
flux (3574)	coretransp%values(:)%te_transp%flux (vecflt_type) (9.8.1.2.13)
off_diagonal (3574)	coretransp%values(:)%te_transp%off_diagonal (offdiagonal) (9.8.1.3.308)
d_ni (3414)	coretransp%values(:)%te_transp%off_diagonal%d_ni (matflt_type) (9.8.1.2.10)
d_ti (3414)	coretransp%values(:)%te_transp%off_diagonal%d_ti (matflt_type) (9.8.1.2.10)
d_ne (3414)	coretransp%values(:)%te_transp%off_diagonal%d_ne (vecflt_type) (9.8.1.2.13)
d_te (3414)	coretransp%values(:)%te_transp%off_diagonal%d_te (vecflt_type) (9.8.1.2.13)
d_epar (3414)	coretransp%values(:)%te_transp%off_diagonal%d_epar (vecflt_type) (9.8.1.2.13)
d_mtor (3414)	coretransp%values(:)%te_transp%off_diagonal%d_mtor (vecflt_type) (9.8.1.2.13)
flag (3574)	coretransp%values(:)%te_transp%flag (integer) (9.8.1.1.2)
tz_transp (3242)	coretransp%values(:)%tz_transp(:) (transcoefimp) (9.8.1.3.469)
diff_eff (3575)	coretransp%values(:)%tz_transp(:)%diff_eff (matflt_type) (9.8.1.2.10)
vconv_eff (3575)	coretransp%values(:)%tz_transp(:)%vconv_eff (matflt_type) (9.8.1.2.10)
exchange (3575)	coretransp%values(:)%tz_transp(:)%exchange (matflt_type) (9.8.1.2.10)
flux (3575)	coretransp%values(:)%tz_transp(:)%flux (matflt_type) (9.8.1.2.10)
flag (3575)	coretransp%values(:)%tz_transp(:)%flag (integer) (9.8.1.1.2)
vtor_transp (3242)	coretransp%values(:)%vtor_transp (transcoefvtor) (9.8.1.3.471)
diff_eff (3577)	coretransp%values(:)%vtor_transp%diff_eff (matflt_type) (9.8.1.2.10)
vconv_eff (3577)	coretransp%values(:)%vtor_transp%vconv_eff (matflt_type) (9.8.1.2.10)
flux (3577)	coretransp%values(:)%vtor_transp%flux (matflt_type) (9.8.1.2.10)
off_diagonal (3577)	coretransp%values(:)%vtor_transp%off_diagonal (offdiagonal) (9.8.1.3.309)
d_ni (3415)	coretransp%values(:)%vtor_transp%off_diagonal%d_ni (array3dfilt_type) (9.8.1.2.2)
d_ti (3415)	coretransp%values(:)%vtor_transp%off_diagonal%d_ti (array3dfilt_type) (9.8.1.2.2)
d_ne (3415)	coretransp%values(:)%vtor_transp%off_diagonal%d_ne (matflt_type) (9.8.1.2.10)
d_te (3415)	coretransp%values(:)%vtor_transp%off_diagonal%d_te (matflt_type) (9.8.1.2.10)
d_epar (3415)	coretransp%values(:)%vtor_transp%off_diagonal%d_epar (matflt_type) (9.8.1.2.10)
d_mtor (3415)	coretransp%values(:)%vtor_transp%off_diagonal%d_mtor (matflt_type) (9.8.1.2.10)
flag (3577)	coretransp%values(:)%vtor_transp%flag (integer) (9.8.1.1.2)
codeparam (3242)	coretransp%values(:)%codeparam (codeparam) (9.8.1.3.84)



codename (3190)	coretransp%values(:)%codeparam%codename (string) (9.8.1.1.3)
codeversion (3190)	coretransp%values(:)%codeparam%codeversion (string) (9.8.1.1.3)
parameters (3190)	coretransp%values(:)%codeparam%parameters (string) (9.8.1.1.3)
output_diag (3190)	coretransp%values(:)%codeparam%output_diag (string) (9.8.1.1.3)
output_flag (3190)	coretransp%values(:)%codeparam%output_flag (integer) (9.8.1.1.2)
codeparam (3121)	coretransp%codeparam (codeparam) (9.8.1.3.84)
codename (3190)	coretransp%codeparam%codename (string) (9.8.1.1.3)
codeversion (3190)	coretransp%codeparam%codeversion (string) (9.8.1.1.3)
parameters (3190)	coretransp%codeparam%parameters (string) (9.8.1.1.3)
output_diag (3190)	coretransp%codeparam%output_diag (string) (9.8.1.1.3)
output_flag (3190)	coretransp%codeparam%output_flag (integer) (9.8.1.1.2)
time (3121)	coretransp%time (float) (9.8.1.1.1)

### 9.8.2.1.14 cxdiag

datainfo (3122)	cxdiag%datainfo (datainfo) (9.8.1.3.141)
dataprovider (3247)	cxdiag%datainfo%dataprovider (string) (9.8.1.1.3)
putdate (3247)	cxdiag%datainfo%putdate (string) (9.8.1.1.3)
source (3247)	cxdiag%datainfo%source (string) (9.8.1.1.3)
comment (3247)	cxdiag%datainfo%comment (string) (9.8.1.1.3)
cocos (3247)	cxdiag%datainfo%cocos (integer) (9.8.1.1.2)
id (3247)	cxdiag%datainfo%id (integer) (9.8.1.1.2)
isref (3247)	cxdiag%datainfo%isref (integer) (9.8.1.1.2)
whatref (3247)	cxdiag%datainfo%whatref (whatref) (9.8.1.3.513)
user (3619)	cxdiag%datainfo%whatref%user (string) (9.8.1.1.3)
machine (3619)	cxdiag%datainfo%whatref%machine (string) (9.8.1.1.3)
shot (3619)	cxdiag%datainfo%whatref%shot (integer) (9.8.1.1.2)
run (3619)	cxdiag%datainfo%whatref%run (integer) (9.8.1.1.2)
occurrence (3619)	cxdiag%datainfo%whatref%occurrence (integer) (9.8.1.1.2)
putinfo (3247)	cxdiag%datainfo%putinfo (putinfo) (9.8.1.3.349)
putmethod (3455)	cxdiag%datainfo%putinfo%putmethod (string) (9.8.1.1.3)
putaccess (3455)	cxdiag%datainfo%putinfo%putaccess (string) (9.8.1.1.3)
putlocation (3455)	cxdiag%datainfo%putinfo%putlocation (string) (9.8.1.1.3)
rights (3455)	cxdiag%datainfo%putinfo%rights (string) (9.8.1.1.3)
setup (3122)	cxdiag%setup (cxsetup) (9.8.1.3.139)
amn (3245)	cxdiag%setup%amn (vecflt_type) (9.8.1.2.13)
zn (3245)	cxdiag%setup%zn (vecflt_type) (9.8.1.2.13)
position (3245)	cxdiag%setup%position (rzphiIDexp) (9.8.1.3.373)
r (3479)	cxdiag%setup%position%r (exp1D) (9.8.1.3.204)
value (3310)	cxdiag%setup%position%r%value (vecflt_type) (9.8.1.2.13)
abserror (3310)	cxdiag%setup%position%r%abserror (vecflt_type) (9.8.1.2.13)
releror (3310)	cxdiag%setup%position%r%releror (vecflt_type) (9.8.1.2.13)
z (3479)	cxdiag%setup%position%z (exp1D) (9.8.1.3.204)
value (3310)	cxdiag%setup%position%z%value (vecflt_type) (9.8.1.2.13)
abserror (3310)	cxdiag%setup%position%z%abserror (vecflt_type) (9.8.1.2.13)
releror (3310)	cxdiag%setup%position%z%releror (vecflt_type) (9.8.1.2.13)
phi (3479)	cxdiag%setup%position%phi (exp1D) (9.8.1.3.204)
value (3310)	cxdiag%setup%position%phi%value (vecflt_type) (9.8.1.2.13)
abserror (3310)	cxdiag%setup%position%phi%abserror (vecflt_type) (9.8.1.2.13)
releror (3310)	cxdiag%setup%position%phi%releror (vecflt_type) (9.8.1.2.13)
measure (3122)	cxdiag%measure (cxmeasure) (9.8.1.3.138)
ti (3244)	cxdiag%measure%ti (exp1D) (9.8.1.3.204)
value (3310)	cxdiag%measure%ti%value (vecflt_type) (9.8.1.2.13)
abserror (3310)	cxdiag%measure%ti%abserror (vecflt_type) (9.8.1.2.13)
releror (3310)	cxdiag%measure%ti%releror (vecflt_type) (9.8.1.2.13)
vtr (3244)	cxdiag%measure%vtr (exp1D) (9.8.1.3.204)
value (3310)	cxdiag%measure%vtr%value (vecflt_type) (9.8.1.2.13)
abserror (3310)	cxdiag%measure%vtr%abserror (vecflt_type) (9.8.1.2.13)
releror (3310)	cxdiag%measure%vtr%releror (vecflt_type) (9.8.1.2.13)
vppl (3244)	cxdiag%measure%vppl (exp1D) (9.8.1.3.204)
value (3310)	cxdiag%measure%vppl%value (vecflt_type) (9.8.1.2.13)



abserror (3310)	cxdiag%measure%vpol%abserror (vecflt.type) (9.8.1.2.13)
relerror (3310)	cxdiag%measure%vpol%relerror (vecflt.type) (9.8.1.2.13)
codeparam (3122)	cxdiag%codeparam (codeparam) (9.8.1.3.84)
codename (3190)	cxdiag%codeparam%codename (string) (9.8.1.1.3)
codeversion (3190)	cxdiag%codeparam%codeversion (string) (9.8.1.1.3)
parameters (3190)	cxdiag%codeparam%parameters (string) (9.8.1.1.3)
output_diag (3190)	cxdiag%codeparam%output_diag (string) (9.8.1.1.3)
output_flag (3190)	cxdiag%codeparam%output_flag (integer) (9.8.1.1.2)
time (3122)	cxdiag%time (float) (9.8.1.1.1)

### 9.8.2.1.15 distribution

datainfo (3123)	distribution%datainfo (datainfo) (9.8.1.3.141)
dataprovider (3247)	distribution%datainfo%dataprovider (string) (9.8.1.1.3)
putdate (3247)	distribution%datainfo%putdate (string) (9.8.1.1.3)
source (3247)	distribution%datainfo%source (string) (9.8.1.1.3)
comment (3247)	distribution%datainfo%comment (string) (9.8.1.1.3)
cocos (3247)	distribution%datainfo%cocos (integer) (9.8.1.1.2)
id (3247)	distribution%datainfo%id (integer) (9.8.1.1.2)
isref (3247)	distribution%datainfo%isref (integer) (9.8.1.1.2)
whatref (3247)	distribution%datainfo%whatref (whatref) (9.8.1.3.513)
user (3619)	distribution%datainfo%whatref%user (string) (9.8.1.1.3)
machine (3619)	distribution%datainfo%whatref%machine (string) (9.8.1.1.3)
shot (3619)	distribution%datainfo%whatref%shot (integer) (9.8.1.1.2)
run (3619)	distribution%datainfo%whatref%run (integer) (9.8.1.1.2)
occurrence (3619)	distribution%datainfo%whatref%occurrence (integer) (9.8.1.1.2)
putinfo (3247)	distribution%datainfo%putinfo (putinfo) (9.8.1.3.349)
putmethod (3455)	distribution%datainfo%putinfo%putmethod (string) (9.8.1.1.3)
putaccess (3455)	distribution%datainfo%putinfo%putaccess (string) (9.8.1.1.3)
putlocation (3455)	distribution%datainfo%putinfo%putlocation (string) (9.8.1.1.3)
rights (3455)	distribution%datainfo%putinfo%rights (string) (9.8.1.1.3)
composition (3123)	distribution%composition (composition) (9.8.1.3.102)
amn (3208)	distribution%composition%amn (vecflt.type) (9.8.1.2.13)
zn (3208)	distribution%composition%zn (vecflt.type) (9.8.1.2.13)
zion (3208)	distribution%composition%zion (vecflt.type) (9.8.1.2.13)
imp_flag (3208)	distribution%composition%imp_flag (vecint.type) (9.8.1.2.14)
label (3208)	distribution%composition%label (vecstring.type) (9.8.1.2.15)
compositions (3123)	distribution%compositions (compositions.type) (9.8.1.3.106)
nuclei (3212)	distribution%compositions%nuclei(:) (nuclei) (9.8.1.3.306)
zn (3412)	distribution%compositions%nuclei(:)%zn (float) (9.8.1.1.1)
amn (3412)	distribution%compositions%nuclei(:)%amn (float) (9.8.1.1.1)
label (3412)	distribution%compositions%nuclei(:)%label (string) (9.8.1.1.3)
ions (3212)	distribution%compositions%ions(:) (ions) (9.8.1.3.247)
nucindex (3353)	distribution%compositions%ions(:)%nucindex (integer) (9.8.1.1.2)
zion (3353)	distribution%compositions%ions(:)%zion (float) (9.8.1.1.1)
imp_flag (3353)	distribution%compositions%ions(:)%imp_flag (integer) (9.8.1.1.2)
label (3353)	distribution%compositions%ions(:)%label (string) (9.8.1.1.3)
impurities (3212)	distribution%compositions%impurities(:) (impurities) (9.8.1.3.244)
nucindex (3350)	distribution%compositions%impurities(:)%nucindex (integer) (9.8.1.1.2)
i_ion (3350)	distribution%compositions%impurities(:)%i_ion (integer) (9.8.1.1.2)
nzimp (3350)	distribution%compositions%impurities(:)%nzimp (integer) (9.8.1.1.2)
zmin (3350)	distribution%compositions%impurities(:)%zmin (vecflt.type) (9.8.1.2.13)
zmax (3350)	distribution%compositions%impurities(:)%zmax (vecflt.type) (9.8.1.2.13)
label (3350)	distribution%compositions%impurities(:)%label (vecstring.type) (9.8.1.2.15)
neutralscomp (3212)	distribution%compositions%neutralscomp(:) (composition.neutralscomp) (9.8.1.3.105)
neutcomp (3211)	distribution%compositions%neutralscomp(:)%neutcomp(:) (composition.neutrals_neutcomp) (9.8.1.3.104)
nucindex (3210)	distribution%compositions%neutralscomp(:)%neutcomp(:)%nucindex (integer) (9.8.1.1.2)
multiplicity (3210)	distribution%compositions%neutralscomp(:)%neutcomp(:)%multiplicity (integer) (9.8.1.1.2)
type (3211)	distribution%compositions%neutralscomp(:)%type(:) (identifier) (9.8.1.3.242)
id (3348)	distribution%compositions%neutralscomp(:)%type(:)%id (string) (9.8.1.1.3)
flag (3348)	distribution%compositions%neutralscomp(:)%type(:)%flag (integer) (9.8.1.1.2)

description (3348)	distribution%compositions%neutralscomp(:)%type(:)%description (string) (9.8.1.1.3)
label (3211)	distribution%compositions%neutralscomp(:)%label (string) (9.8.1.1.3)
edgespecies (3212)	distribution%compositions%edgespecies(:) (edgespecies) (9.8.1.3.192)
nucindex (3298)	distribution%compositions%edgespecies(:)%nucindex (integer) (9.8.1.1.2)
zmin (3298)	distribution%compositions%edgespecies(:)%zmin (float) (9.8.1.1.1)
zmax (3298)	distribution%compositions%edgespecies(:)%zmax (float) (9.8.1.1.1)
label (3298)	distribution%compositions%edgespecies(:)%label (string) (9.8.1.1.3)
signature (3212)	distribution%compositions%signature (identifier) (9.8.1.3.242)
id (3348)	distribution%compositions%signature%id (string) (9.8.1.1.3)
flag (3348)	distribution%compositions%signature%flag (integer) (9.8.1.1.2)
description (3348)	distribution%compositions%signature%description (string) (9.8.1.1.3)
distri_vec (3123)	distribution%distri_vec(:) (distri_vec) (9.8.1.3.173)
wave_id (3279)	distribution%distri_vec(:)%wave_id(:) (enum_instance) (9.8.1.3.195)
type (3301)	distribution%distri_vec(:)%wave_id(:)%type (identifier) (9.8.1.3.242)
id (3348)	distribution%distri_vec(:)%wave_id(:)%type%id (string) (9.8.1.1.3)
flag (3348)	distribution%distri_vec(:)%wave_id(:)%type%flag (integer) (9.8.1.1.2)
description (3348)	distribution%distri_vec(:)%wave_id(:)%type%description (string) (9.8.1.1.3)
name (3301)	distribution%distri_vec(:)%wave_id(:)%name (string) (9.8.1.1.3)
index (3301)	distribution%distri_vec(:)%wave_id(:)%index (integer) (9.8.1.1.2)
source_id (3279)	distribution%distri_vec(:)%source_id(:) (enum_instance) (9.8.1.3.195)
type (3301)	distribution%distri_vec(:)%source_id(:)%type (identifier) (9.8.1.3.242)
id (3348)	distribution%distri_vec(:)%source_id(:)%type%id (string) (9.8.1.1.3)
flag (3348)	distribution%distri_vec(:)%source_id(:)%type%flag (integer) (9.8.1.1.2)
description (3348)	distribution%distri_vec(:)%source_id(:)%type%description (string) (9.8.1.1.3)
name (3301)	distribution%distri_vec(:)%source_id(:)%name (string) (9.8.1.1.3)
index (3301)	distribution%distri_vec(:)%source_id(:)%index (integer) (9.8.1.1.2)
species (3279)	distribution%distri_vec(:)%species (species_reference) (9.8.1.3.418)
type (3524)	distribution%distri_vec(:)%species%type (identifier) (9.8.1.3.242)
id (3348)	distribution%distri_vec(:)%species%type%id (string) (9.8.1.1.3)
flag (3348)	distribution%distri_vec(:)%species%type%flag (integer) (9.8.1.1.2)
description (3348)	distribution%distri_vec(:)%species%type%description (string) (9.8.1.1.3)
index (3524)	distribution%distri_vec(:)%species%index (integer) (9.8.1.1.2)
gyro_type (3279)	distribution%distri_vec(:)%gyro_type (integer) (9.8.1.1.2)
fast_filter (3279)	distribution%distri_vec(:)%fast_filter (fast_thermal_separation_filter) (9.8.1.3.207)
method (3313)	distribution%distri_vec(:)%fast_filter%method (identifier) (9.8.1.3.242)
id (3348)	distribution%distri_vec(:)%fast_filter%method%id (string) (9.8.1.1.3)
flag (3348)	distribution%distri_vec(:)%fast_filter%method%flag (integer) (9.8.1.1.2)
description (3348)	distribution%distri_vec(:)%fast_filter%method%description (string) (9.8.1.1.3)
energy_sep (3313)	distribution%distri_vec(:)%fast_filter%energy_sep (vecflt_type) (9.8.1.2.13)
global_param (3279)	distribution%distri_vec(:)%global_param (dist_global_param) (9.8.1.3.157)
geometry (3263)	distribution%distri_vec(:)%global_param%geometry (dist_geometry_0d) (9.8.1.3.154)
mag_axis (3260)	distribution%distri_vec(:)%global_param%geometry%mag_axis (rz0D) (9.8.1.3.365)
r (3471)	distribution%distri_vec(:)%global_param%geometry%mag_axis%r (float) (9.8.1.1.1)
z (3471)	distribution%distri_vec(:)%global_param%geometry%mag_axis%z (float) (9.8.1.1.1)
toroid_field (3260)	distribution%distri_vec(:)%global_param%geometry%toroid_field (b0r0) (9.8.1.3.61)
r0 (3167)	distribution%distri_vec(:)%global_param%geometry%toroid_field%r0 (float) (9.8.1.1.1)
b0 (3167)	distribution%distri_vec(:)%global_param%geometry%toroid_field%b0 (float) (9.8.1.1.1)
state (3263)	distribution%distri_vec(:)%global_param%state (dist_state_0d) (9.8.1.3.169)
n_particles (3275)	distribution%distri_vec(:)%global_param%state%n_particles (float) (9.8.1.1.1)
n_part_fast (3275)	distribution%distri_vec(:)%global_param%state%n_part_fast (float) (9.8.1.1.1)
enrg (3275)	distribution%distri_vec(:)%global_param%state%enrg (float) (9.8.1.1.1)
enrg_fast (3275)	distribution%distri_vec(:)%global_param%state%enrg_fast (float) (9.8.1.1.1)
enrg_fast_pa (3275)	distribution%distri_vec(:)%global_param%state%enrg_fast_pa (float) (9.8.1.1.1)
momentm_fast (3275)	distribution%distri_vec(:)%global_param%state%momentm_fast (float) (9.8.1.1.1)
current_dr (3275)	distribution%distri_vec(:)%global_param%state%current_dr (float) (9.8.1.1.1)
torque_jrxb (3275)	distribution%distri_vec(:)%global_param%state%torque_jrxb (float) (9.8.1.1.1)
collisions_e (3263)	distribution%distri_vec(:)%global_param%collisions_e (dist_collisional_transfer_0d) (9.8.1.3.148)
power_th (3254)	distribution%distri_vec(:)%global_param%collisions_e%power_th (float) (9.8.1.1.1)
power_fast (3254)	distribution%distri_vec(:)%global_param%collisions_e%power_fast (float) (9.8.1.1.1)
torque_th (3254)	distribution%distri_vec(:)%global_param%collisions_e%torque_th (float) (9.8.1.1.1)
torque_fast (3254)	distribution%distri_vec(:)%global_param%collisions_e%torque_fast (float) (9.8.1.1.1)

collisions_i (3263)	distribution%distri_vec(:)%global_param%collisions_i(:) (dist_collisional_transfer_0d) (9.8.1.3.148)
power_th (3254)	distribution%distri_vec(:)%global_param%collisions_i(:)%power_th (float) (9.8.1.1.1)
power_fast (3254)	distribution%distri_vec(:)%global_param%collisions_i(:)%power_fast (float) (9.8.1.1.1)
torque_th (3254)	distribution%distri_vec(:)%global_param%collisions_i(:)%torque_th (float) (9.8.1.1.1)
torque_fast (3254)	distribution%distri_vec(:)%global_param%collisions_i(:)%torque_fast (float) (9.8.1.1.1)
collisions_z (3263)	distribution%distri_vec(:)%global_param%collisions_z(:) (dist_global_param_collisions_z) (9.8.1.3.158)
charge_state (3264)	distribution%distri_vec(:)%global_param%collisions_z(:)%charge_state(:) (dist_collisional_transfer_0d) (9.8.1.3.148)
power_th (3254)	distribution%distri_vec(:)%global_param%collisions_z(:)%charge_state(:)%power_th (float) (9.8.1.1.1)
power_fast (3254)	distribution%distri_vec(:)%global_param%collisions_z(:)%charge_state(:)%power_fast (float) (9.8.1.1.1)
torque_th (3254)	distribution%distri_vec(:)%global_param%collisions_z(:)%charge_state(:)%torque_th (float) (9.8.1.1.1)
torque_fast (3254)	distribution%distri_vec(:)%global_param%collisions_z(:)%charge_state(:)%torque_fast (float) (9.8.1.1.1)
sources (3263)	distribution%distri_vec(:)%global_param%sources(:) (dist_sources_0d) (9.8.1.3.166)
source_ref (3272)	distribution%distri_vec(:)%global_param%sources(:)%source_ref (dist_sources_reference) (9.8.1.3.168)
type (3274)	distribution%distri_vec(:)%global_param%sources(:)%source_ref%type (identifier) (9.8.1.3.242)
id (3348)	distribution%distri_vec(:)%global_param%sources(:)%source_ref%type%id (string) (9.8.1.1.3)
flag (3348)	distribution%distri_vec(:)%global_param%sources(:)%source_ref%type%flag (integer) (9.8.1.1.2)
description (3348)	distribution%distri_vec(:)%global_param%sources(:)%source_ref%type%description (string) (9.8.1.1.3)
index_waveid (3274)	distribution%distri_vec(:)%global_param%sources(:)%source_ref%index_waveid (vecint_type) (9.8.1.2.14)
index_srcid (3274)	distribution%distri_vec(:)%global_param%sources(:)%source_ref%index_srcid (vecint_type) (9.8.1.2.14)
particle (3272)	distribution%distri_vec(:)%global_param%sources(:)%particle (float) (9.8.1.1.1)
momentum (3272)	distribution%distri_vec(:)%global_param%sources(:)%momentum (float) (9.8.1.1.1)
energy (3272)	distribution%distri_vec(:)%global_param%sources(:)%energy (float) (9.8.1.1.1)
profiles_1d (3279)	distribution%distri_vec(:)%profiles_1d (dist_profiles_1d) (9.8.1.3.163)
geometry (3269)	distribution%distri_vec(:)%profiles_1d%geometry (dist_geometry_1d) (9.8.1.3.155)
rho_tor (3261)	distribution%distri_vec(:)%profiles_1d%geometry%rho_tor (vecflt_type) (9.8.1.2.13)
rho_tor_norm (3261)	distribution%distri_vec(:)%profiles_1d%geometry%rho_tor_norm (vecflt_type) (9.8.1.2.13)
psi (3261)	distribution%distri_vec(:)%profiles_1d%geometry%psi (vecflt_type) (9.8.1.2.13)
volume (3261)	distribution%distri_vec(:)%profiles_1d%geometry%volume (vecflt_type) (9.8.1.2.13)
area (3261)	distribution%distri_vec(:)%profiles_1d%geometry%area (vecflt_type) (9.8.1.2.13)
state (3269)	distribution%distri_vec(:)%profiles_1d%state (dist_state_1d) (9.8.1.3.170)
dens (3276)	distribution%distri_vec(:)%profiles_1d%state%dens (vecflt_type) (9.8.1.2.13)
dens_fast (3276)	distribution%distri_vec(:)%profiles_1d%state%dens_fast (vecflt_type) (9.8.1.2.13)
pres (3276)	distribution%distri_vec(:)%profiles_1d%state%pres (vecflt_type) (9.8.1.2.13)
pres_fast (3276)	distribution%distri_vec(:)%profiles_1d%state%pres_fast (vecflt_type) (9.8.1.2.13)
pres_fast_pa (3276)	distribution%distri_vec(:)%profiles_1d%state%pres_fast_pa (vecflt_type) (9.8.1.2.13)
momentm_fast (3276)	distribution%distri_vec(:)%profiles_1d%state%momentm_fast (vecflt_type) (9.8.1.2.13)
current (3276)	distribution%distri_vec(:)%profiles_1d%state%current (vecflt_type) (9.8.1.2.13)
current_fast (3276)	distribution%distri_vec(:)%profiles_1d%state%current_fast (vecflt_type) (9.8.1.2.13)
torque_jrxb (3276)	distribution%distri_vec(:)%profiles_1d%state%torque_jrxb (vecflt_type) (9.8.1.2.13)
collisions_e (3269)	distribution%distri_vec(:)%profiles_1d%collisions_e (dist_collisional_transfer_1d) (9.8.1.3.149)
power_th (3255)	distribution%distri_vec(:)%profiles_1d%collisions_e%power_th (vecflt_type) (9.8.1.2.13)
power_fast (3255)	distribution%distri_vec(:)%profiles_1d%collisions_e%power_fast (vecflt_type) (9.8.1.2.13)
torque_th (3255)	distribution%distri_vec(:)%profiles_1d%collisions_e%torque_th (vecflt_type) (9.8.1.2.13)
torque_fast (3255)	distribution%distri_vec(:)%profiles_1d%collisions_e%torque_fast (vecflt_type) (9.8.1.2.13)
collisions_i (3269)	distribution%distri_vec(:)%profiles_1d%collisions_i(:) (dist_collisional_transfer_1d) (9.8.1.3.149)
power_th (3255)	distribution%distri_vec(:)%profiles_1d%collisions_i(:)%power_th (vecflt_type) (9.8.1.2.13)
power_fast (3255)	distribution%distri_vec(:)%profiles_1d%collisions_i(:)%power_fast (vecflt_type) (9.8.1.2.13)
torque_th (3255)	distribution%distri_vec(:)%profiles_1d%collisions_i(:)%torque_th (vecflt_type) (9.8.1.2.13)
torque_fast (3255)	distribution%distri_vec(:)%profiles_1d%collisions_i(:)%torque_fast (vecflt_type) (9.8.1.2.13)
collisions_z (3269)	distribution%distri_vec(:)%profiles_1d%collisions_z(:) (dist_profiles_1d_collisions_z) (9.8.1.3.164)
charge_state (3270)	distribution%distri_vec(:)%profiles_1d%collisions_z(:)%charge_state(:) (dist_collisional_transfer_1d) (9.8.1.3.149)

power_th (3255)	distribution%distri_vec(:)%profiles_1d%collisions_z(:)%charge_state(:)%power_th (vecflt_type) (9.8.1.2.13)
power_fast (3255)	distribution%distri_vec(:)%profiles_1d%collisions_z(:)%charge_state(:)%power_fast (vecflt_type) (9.8.1.2.13)
torque_th (3255)	distribution%distri_vec(:)%profiles_1d%collisions_z(:)%charge_state(:)%torque_th (vecflt_type) (9.8.1.2.13)
torque_fast (3255)	distribution%distri_vec(:)%profiles_1d%collisions_z(:)%charge_state(:)%torque_fast (vecflt_type) (9.8.1.2.13)
thermalised (3269)	distribution%distri_vec(:)%profiles_1d%thermalised (dist_thermalised_1d) (9.8.1.3.172)
particle (3278)	distribution%distri_vec(:)%profiles_1d%thermalised%particle (vecflt_type) (9.8.1.2.13)
momentum (3278)	distribution%distri_vec(:)%profiles_1d%thermalised%momentum (vecflt_type) (9.8.1.2.13)
energy (3278)	distribution%distri_vec(:)%profiles_1d%thermalised%energy (vecflt_type) (9.8.1.2.13)
sources (3269)	distribution%distri_vec(:)%profiles_1d%sources(:) (dist_sources_1d) (9.8.1.3.167)
source_ref (3273)	distribution%distri_vec(:)%profiles_1d%sources(:)%source_ref (dist_sources_reference) (9.8.1.3.168)
type (3274)	distribution%distri_vec(:)%profiles_1d%sources(:)%source_ref%type (identifier) (9.8.1.3.242)
id (3348)	distribution%distri_vec(:)%profiles_1d%sources(:)%source_ref%type%id (string) (9.8.1.1.3)
flag (3348)	distribution%distri_vec(:)%profiles_1d%sources(:)%source_ref%type%flag (integer) (9.8.1.1.2)
description (3348)	distribution%distri_vec(:)%profiles_1d%sources(:)%source_ref%type%description (string) (9.8.1.1.3)
index_waveid (3274)	distribution%distri_vec(:)%profiles_1d%sources(:)%source_ref%index_waveid (vecint_type) (9.8.1.2.14)
index_srcid (3274)	distribution%distri_vec(:)%profiles_1d%sources(:)%source_ref%index_srcid (vecint_type) (9.8.1.2.14)
particle (3273)	distribution%distri_vec(:)%profiles_1d%sources(:)%particle (vecflt_type) (9.8.1.2.13)
momentum (3273)	distribution%distri_vec(:)%profiles_1d%sources(:)%momentum (vecflt_type) (9.8.1.2.13)
energy (3273)	distribution%distri_vec(:)%profiles_1d%sources(:)%energy (vecflt_type) (9.8.1.2.13)
trapped (3269)	distribution%distri_vec(:)%profiles_1d%trapped (dist_profile_values_1d) (9.8.1.3.160)
state (3266)	distribution%distri_vec(:)%profiles_1d%trapped%state (dist_state_1d) (9.8.1.3.170)
dens (3276)	distribution%distri_vec(:)%profiles_1d%trapped%state%dens (vecflt_type) (9.8.1.2.13)
dens_fast (3276)	distribution%distri_vec(:)%profiles_1d%trapped%state%dens_fast (vecflt_type) (9.8.1.2.13)
pres (3276)	distribution%distri_vec(:)%profiles_1d%trapped%state%pres (vecflt_type) (9.8.1.2.13)
pres_fast (3276)	distribution%distri_vec(:)%profiles_1d%trapped%state%pres_fast (vecflt_type) (9.8.1.2.13)
pres_fast_pa (3276)	distribution%distri_vec(:)%profiles_1d%trapped%state%pres_fast_pa (vecflt_type) (9.8.1.2.13)
momentm_fast (3276)	distribution%distri_vec(:)%profiles_1d%trapped%state%momentm_fast (vecflt_type) (9.8.1.2.13)
current (3276)	distribution%distri_vec(:)%profiles_1d%trapped%state%current (vecflt_type) (9.8.1.2.13)
current_fast (3276)	distribution%distri_vec(:)%profiles_1d%trapped%state%current_fast (vecflt_type) (9.8.1.2.13)
torque_jrxb (3276)	distribution%distri_vec(:)%profiles_1d%trapped%state%torque_jrxb (vecflt_type) (9.8.1.2.13)
collisions_e (3266)	distribution%distri_vec(:)%profiles_1d%trapped%collisions_e (dist_collisional_transfer_1d) (9.8.1.3.149)
power_th (3255)	distribution%distri_vec(:)%profiles_1d%trapped%collisions_e%power_th (vecflt_type) (9.8.1.2.13)
power_fast (3255)	distribution%distri_vec(:)%profiles_1d%trapped%collisions_e%power_fast (vecflt_type) (9.8.1.2.13)
torque_th (3255)	distribution%distri_vec(:)%profiles_1d%trapped%collisions_e%torque_th (vecflt_type) (9.8.1.2.13)
torque_fast (3255)	distribution%distri_vec(:)%profiles_1d%trapped%collisions_e%torque_fast (vecflt_type) (9.8.1.2.13)
collisions_i (3266)	distribution%distri_vec(:)%profiles_1d%trapped%collisions_i(:) (dist_collisional_transfer_1d) (9.8.1.3.149)
power_th (3255)	distribution%distri_vec(:)%profiles_1d%trapped%collisions_i(:)%power_th (vecflt_type) (9.8.1.2.13)
power_fast (3255)	distribution%distri_vec(:)%profiles_1d%trapped%collisions_i(:)%power_fast (vecflt_type) (9.8.1.2.13)
torque_th (3255)	distribution%distri_vec(:)%profiles_1d%trapped%collisions_i(:)%torque_th (vecflt_type) (9.8.1.2.13)
torque_fast (3255)	distribution%distri_vec(:)%profiles_1d%trapped%collisions_i(:)%torque_fast (vecflt_type) (9.8.1.2.13)
collisions_z (3266)	distribution%distri_vec(:)%profiles_1d%trapped%collisions_z(:) (dist_profiles_1d_collisions_z) (9.8.1.3.164)
charge_state (3270)	distribution%distri_vec(:)%profiles_1d%trapped%collisions_z(:)%charge_state(:) (dist_collisional_transfer_1d) (9.8.1.3.149)
power_th (3255)	distribution%distri_vec(:)%profiles_1d%trapped%collisions_z(:)%charge_state(:)%power_th (vecflt_type) (9.8.1.2.13)
power_fast (3255)	distribution%distri_vec(:)%profiles_1d%trapped%collisions_z(:)%charge_state(:)%power_fast (vecflt_type) (9.8.1.2.13)
torque_th (3255)	distribution%distri_vec(:)%profiles_1d%trapped%collisions_z(:)%charge_state(:)%torque_th (vecflt_type) (9.8.1.2.13)

torque_fast (3255)	distribution%distri_vec(:)%profiles_1d%trapped%collisions_z(:)%charge_state(:)%torque_fast (vecflt_type) (9.8.1.2.13)
sources (3266)	distribution%distri_vec(:)%profiles_1d%trapped%sources(:) (dist_sources_1d) (9.8.1.3.167)
source_ref (3273)	distribution%distri_vec(:)%profiles_1d%trapped%sources(:)%source_ref (dist_sources_reference) (9.8.1.3.168)
type (3274)	distribution%distri_vec(:)%profiles_1d%trapped%sources(:)%source_ref%type (identifier) (9.8.1.3.242)
id (3348)	distribution%distri_vec(:)%profiles_1d%trapped%sources(:)%source_ref%type%id (string) (9.8.1.1.3)
flag (3348)	distribution%distri_vec(:)%profiles_1d%trapped%sources(:)%source_ref%type%flag (integer) (9.8.1.1.2)
description (3348)	distribution%distri_vec(:)%profiles_1d%trapped%sources(:)%source_ref%type%description (string) (9.8.1.1.3)
index_waveid (3274)	distribution%distri_vec(:)%profiles_1d%trapped%sources(:)%source_ref%index_waveid (vecint_type) (9.8.1.2.14)
index_srcid (3274)	distribution%distri_vec(:)%profiles_1d%trapped%sources(:)%source_ref%index_srcid (vecint_type) (9.8.1.2.14)
particle (3273)	distribution%distri_vec(:)%profiles_1d%trapped%sources(:)%particle (vecflt_type) (9.8.1.2.13)
momentum (3273)	distribution%distri_vec(:)%profiles_1d%trapped%sources(:)%momentum (vecflt_type) (9.8.1.2.13)
energy (3273)	distribution%distri_vec(:)%profiles_1d%trapped%sources(:)%energy (vecflt_type) (9.8.1.2.13)
co_passing (3269)	distribution%distri_vec(:)%profiles_1d%co_passing (dist_profile_values_1d) (9.8.1.3.160)
state (3266)	distribution%distri_vec(:)%profiles_1d%co_passing%state (dist_state_1d) (9.8.1.3.170)
dens (3276)	distribution%distri_vec(:)%profiles_1d%co_passing%state%dens (vecflt_type) (9.8.1.2.13)
dens_fast (3276)	distribution%distri_vec(:)%profiles_1d%co_passing%state%dens_fast (vecflt_type) (9.8.1.2.13)
pres (3276)	distribution%distri_vec(:)%profiles_1d%co_passing%state%pres (vecflt_type) (9.8.1.2.13)
pres_fast (3276)	distribution%distri_vec(:)%profiles_1d%co_passing%state%pres_fast (vecflt_type) (9.8.1.2.13)
pres_fast_pa (3276)	distribution%distri_vec(:)%profiles_1d%co_passing%state%pres_fast_pa (vecflt_type) (9.8.1.2.13)
momentm_fast (3276)	distribution%distri_vec(:)%profiles_1d%co_passing%state%momentm_fast (vecflt_type) (9.8.1.2.13)
current (3276)	distribution%distri_vec(:)%profiles_1d%co_passing%state%current (vecflt_type) (9.8.1.2.13)
current_fast (3276)	distribution%distri_vec(:)%profiles_1d%co_passing%state%current_fast (vecflt_type) (9.8.1.2.13)
torque_jrxb (3276)	distribution%distri_vec(:)%profiles_1d%co_passing%state%torque_jrxb (vecflt_type) (9.8.1.2.13)
collisions_e (3266)	distribution%distri_vec(:)%profiles_1d%co_passing%collisions_e (dist_collisional_transfer_1d) (9.8.1.3.149)
power_th (3255)	distribution%distri_vec(:)%profiles_1d%co_passing%collisions_e%power_th (vecflt_type) (9.8.1.2.13)
power_fast (3255)	distribution%distri_vec(:)%profiles_1d%co_passing%collisions_e%power_fast (vecflt_type) (9.8.1.2.13)
torque_th (3255)	distribution%distri_vec(:)%profiles_1d%co_passing%collisions_e%torque_th (vecflt_type) (9.8.1.2.13)
torque_fast (3255)	distribution%distri_vec(:)%profiles_1d%co_passing%collisions_e%torque_fast (vecflt_type) (9.8.1.2.13)
collisions_i (3266)	distribution%distri_vec(:)%profiles_1d%co_passing%collisions_i(:) (dist_collisional_transfer_1d) (9.8.1.3.149)
power_th (3255)	distribution%distri_vec(:)%profiles_1d%co_passing%collisions_i(:)%power_th (vecflt_type) (9.8.1.2.13)
power_fast (3255)	distribution%distri_vec(:)%profiles_1d%co_passing%collisions_i(:)%power_fast (vecflt_type) (9.8.1.2.13)
torque_th (3255)	distribution%distri_vec(:)%profiles_1d%co_passing%collisions_i(:)%torque_th (vecflt_type) (9.8.1.2.13)
torque_fast (3255)	distribution%distri_vec(:)%profiles_1d%co_passing%collisions_i(:)%torque_fast (vecflt_type) (9.8.1.2.13)
collisions_z (3266)	distribution%distri_vec(:)%profiles_1d%co_passing%collisions_z(:) (dist_profiles_1d_collisions_z) (9.8.1.3.164)
charge_state (3270)	distribution%distri_vec(:)%profiles_1d%co_passing%collisions_z(:)%charge_state(:) (dist_collisional_transfer_1d) (9.8.1.3.149)
power_th (3255)	distribution%distri_vec(:)%profiles_1d%co_passing%collisions_z(:)%charge_state(:)%power_th (vecflt_type) (9.8.1.2.13)
power_fast (3255)	distribution%distri_vec(:)%profiles_1d%co_passing%collisions_z(:)%charge_state(:)%power_fast (vecflt_type) (9.8.1.2.13)
torque_th (3255)	distribution%distri_vec(:)%profiles_1d%co_passing%collisions_z(:)%charge_state(:)%torque_th (vecflt_type) (9.8.1.2.13)
torque_fast (3255)	distribution%distri_vec(:)%profiles_1d%co_passing%collisions_z(:)%charge_state(:)%torque_fast (vecflt_type) (9.8.1.2.13)
sources (3266)	distribution%distri_vec(:)%profiles_1d%co_passing%sources(:) (dist_sources_1d) (9.8.1.3.167)
source_ref (3273)	distribution%distri_vec(:)%profiles_1d%co_passing%sources(:)%source_ref (dist_sources_reference) (9.8.1.3.168)

type (3274)	distribution%distri_vec(:)%profiles_1d%co_passing%sources(:)%source_ref%type (identifier) (9.8.1.3.242)
id (3348)	distribution%distri_vec(:)%profiles_1d%co_passing%sources(:)%source_ref%type%id (string) (9.8.1.1.3)
flag (3348)	distribution%distri_vec(:)%profiles_1d%co_passing%sources(:)%source_ref%type%flag (integer) (9.8.1.1.2)
description (3348)	distribution%distri_vec(:)%profiles_1d%co_passing%sources(:)%source_ref%type%description (string) (9.8.1.1.3)
index_waveid (3274)	distribution%distri_vec(:)%profiles_1d%co_passing%sources(:)%source_ref%index_waveid (vecint.type) (9.8.1.2.14)
index_srcid (3274)	distribution%distri_vec(:)%profiles_1d%co_passing%sources(:)%source_ref%index_srcid (vecint.type) (9.8.1.2.14)
particle (3273)	distribution%distri_vec(:)%profiles_1d%co_passing%sources(:)%particle (vecflt.type) (9.8.1.2.13)
momentum (3273)	distribution%distri_vec(:)%profiles_1d%co_passing%sources(:)%momentum (vecflt.type) (9.8.1.2.13)
energy (3273)	distribution%distri_vec(:)%profiles_1d%co_passing%sources(:)%energy (vecflt.type) (9.8.1.2.13)
cntr_passing (3269)	distribution%distri_vec(:)%profiles_1d%cntr_passing (dist_profile_values_1d) (9.8.1.3.160)
state (3266)	distribution%distri_vec(:)%profiles_1d%cntr_passing%state (dist_state_1d) (9.8.1.3.170)
dens (3276)	distribution%distri_vec(:)%profiles_1d%cntr_passing%state%dens (vecflt.type) (9.8.1.2.13)
dens_fast (3276)	distribution%distri_vec(:)%profiles_1d%cntr_passing%state%dens_fast (vecflt.type) (9.8.1.2.13)
pres (3276)	distribution%distri_vec(:)%profiles_1d%cntr_passing%state%pres (vecflt.type) (9.8.1.2.13)
pres_fast (3276)	distribution%distri_vec(:)%profiles_1d%cntr_passing%state%pres_fast (vecflt.type) (9.8.1.2.13)
pres_fast_pa (3276)	distribution%distri_vec(:)%profiles_1d%cntr_passing%state%pres_fast_pa (vecflt.type) (9.8.1.2.13)
momentm_fast (3276)	distribution%distri_vec(:)%profiles_1d%cntr_passing%state%momentm_fast (vecflt.type) (9.8.1.2.13)
current (3276)	distribution%distri_vec(:)%profiles_1d%cntr_passing%state%current (vecflt.type) (9.8.1.2.13)
current_fast (3276)	distribution%distri_vec(:)%profiles_1d%cntr_passing%state%current_fast (vecflt.type) (9.8.1.2.13)
torque_jrxb (3276)	distribution%distri_vec(:)%profiles_1d%cntr_passing%state%torque_jrxb (vecflt.type) (9.8.1.2.13)
collisions_e (3266)	distribution%distri_vec(:)%profiles_1d%cntr_passing%collisions_e (dist_collisional_transfer_1d) (9.8.1.3.149)
power_th (3255)	distribution%distri_vec(:)%profiles_1d%cntr_passing%collisions_e%power_th (vecflt.type) (9.8.1.2.13)
power_fast (3255)	distribution%distri_vec(:)%profiles_1d%cntr_passing%collisions_e%power_fast (vecflt.type) (9.8.1.2.13)
torque_th (3255)	distribution%distri_vec(:)%profiles_1d%cntr_passing%collisions_e%torque_th (vecflt.type) (9.8.1.2.13)
torque_fast (3255)	distribution%distri_vec(:)%profiles_1d%cntr_passing%collisions_e%torque_fast (vecflt.type) (9.8.1.2.13)
collisions_i (3266)	distribution%distri_vec(:)%profiles_1d%cntr_passing%collisions_i(:) (dist_collisional_transfer_1d) (9.8.1.3.149)
power_th (3255)	distribution%distri_vec(:)%profiles_1d%cntr_passing%collisions_i(:)%power_th (vecflt.type) (9.8.1.2.13)
power_fast (3255)	distribution%distri_vec(:)%profiles_1d%cntr_passing%collisions_i(:)%power_fast (vecflt.type) (9.8.1.2.13)
torque_th (3255)	distribution%distri_vec(:)%profiles_1d%cntr_passing%collisions_i(:)%torque_th (vecflt.type) (9.8.1.2.13)
torque_fast (3255)	distribution%distri_vec(:)%profiles_1d%cntr_passing%collisions_i(:)%torque_fast (vecflt.type) (9.8.1.2.13)
collisions_z (3266)	distribution%distri_vec(:)%profiles_1d%cntr_passing%collisions_z(:) (dist_profiles_1d_collisions_z) (9.8.1.3.164)
charge_state (3270)	distribution%distri_vec(:)%profiles_1d%cntr_passing%collisions_z(:)%charge_state(:) (dist_collisional_transfer_1d) (9.8.1.3.149)
power_th (3255)	distribution%distri_vec(:)%profiles_1d%cntr_passing%collisions_z(:)%charge_state(:)%power_th (vecflt.type) (9.8.1.2.13)
power_fast (3255)	distribution%distri_vec(:)%profiles_1d%cntr_passing%collisions_z(:)%charge_state(:)%power_fast (vecflt.type) (9.8.1.2.13)
torque_th (3255)	distribution%distri_vec(:)%profiles_1d%cntr_passing%collisions_z(:)%charge_state(:)%torque_th (vecflt.type) (9.8.1.2.13)
torque_fast (3255)	distribution%distri_vec(:)%profiles_1d%cntr_passing%collisions_z(:)%charge_state(:)%torque_fast (vecflt.type) (9.8.1.2.13)
sources (3266)	distribution%distri_vec(:)%profiles_1d%cntr_passing%sources(:) (dist_sources_1d) (9.8.1.3.167)
source_ref (3273)	distribution%distri_vec(:)%profiles_1d%cntr_passing%sources(:)%source_ref (dist_sources_reference) (9.8.1.3.168)
type (3274)	distribution%distri_vec(:)%profiles_1d%cntr_passing%sources(:)%source_ref%type (identifier) (9.8.1.3.242)



id (3348)	distribution%distri_vec(:)%profiles_1d%cntr_passing%sources(:)%source_ref%type%id (string) (9.8.1.1.3)
flag (3348)	distribution%distri_vec(:)%profiles_1d%cntr_passing%sources(:)%source_ref%type%flag (integer) (9.8.1.1.2)
description (3348)	distribution%distri_vec(:)%profiles_1d%cntr_passing%sources(:)%source_ref%type%description (string) (9.8.1.1.3)
index_waveid (3274)	distribution%distri_vec(:)%profiles_1d%cntr_passing%sources(:)%source_ref%index_waveid (vecint_type) (9.8.1.2.14)
index_srcid (3274)	distribution%distri_vec(:)%profiles_1d%cntr_passing%sources(:)%source_ref%index_srcid (vecint_type) (9.8.1.2.14)
particle (3273)	distribution%distri_vec(:)%profiles_1d%cntr_passing%sources(:)%particle (vecflt_type) (9.8.1.2.13)
momentum (3273)	distribution%distri_vec(:)%profiles_1d%cntr_passing%sources(:)%momentum (vecflt_type) (9.8.1.2.13)
energy (3273)	distribution%distri_vec(:)%profiles_1d%cntr_passing%sources(:)%energy (vecflt_type) (9.8.1.2.13)
profiles_2d (3279)	distribution%distri_vec(:)%profiles_2d (dist_profiles_2d) (9.8.1.3.165)
geometry (3271)	distribution%distri_vec(:)%profiles_2d%geometry (dist_geometry_2d) (9.8.1.3.156)
coord_type (3262)	distribution%distri_vec(:)%profiles_2d%geometry%coord_type (integer) (9.8.1.1.2)
r (3262)	distribution%distri_vec(:)%profiles_2d%geometry%r (matflt_type) (9.8.1.2.10)
z (3262)	distribution%distri_vec(:)%profiles_2d%geometry%z (matflt_type) (9.8.1.2.10)
rho_tor (3262)	distribution%distri_vec(:)%profiles_2d%geometry%rho_tor (matflt_type) (9.8.1.2.10)
psi (3262)	distribution%distri_vec(:)%profiles_2d%geometry%psi (matflt_type) (9.8.1.2.10)
theta_geom (3262)	distribution%distri_vec(:)%profiles_2d%geometry%theta_geom (matflt_type) (9.8.1.2.10)
theta_strt (3262)	distribution%distri_vec(:)%profiles_2d%geometry%theta_strt (matflt_type) (9.8.1.2.10)
state (3271)	distribution%distri_vec(:)%profiles_2d%state (dist_state_2d) (9.8.1.3.171)
dens (3277)	distribution%distri_vec(:)%profiles_2d%state%dens (matflt_type) (9.8.1.2.10)
dens_fast (3277)	distribution%distri_vec(:)%profiles_2d%state%dens_fast (matflt_type) (9.8.1.2.10)
pres (3277)	distribution%distri_vec(:)%profiles_2d%state%pres (matflt_type) (9.8.1.2.10)
pres_fast (3277)	distribution%distri_vec(:)%profiles_2d%state%pres_fast (matflt_type) (9.8.1.2.10)
pres_fast_pa (3277)	distribution%distri_vec(:)%profiles_2d%state%pres_fast_pa (matflt_type) (9.8.1.2.10)
momentm_fast (3277)	distribution%distri_vec(:)%profiles_2d%state%momentm_fast (matflt_type) (9.8.1.2.10)
current (3277)	distribution%distri_vec(:)%profiles_2d%state%current (matflt_type) (9.8.1.2.10)
current_fast (3277)	distribution%distri_vec(:)%profiles_2d%state%current_fast (matflt_type) (9.8.1.2.10)
torque_jrxb (3277)	distribution%distri_vec(:)%profiles_2d%state%torque_jrxb (matflt_type) (9.8.1.2.10)
collisions_e (3271)	distribution%distri_vec(:)%profiles_2d%collisions_e (dist_collisional_transfer_2d) (9.8.1.3.150)
power_th (3256)	distribution%distri_vec(:)%profiles_2d%collisions_e%power_th (matflt_type) (9.8.1.2.10)
power_fast (3256)	distribution%distri_vec(:)%profiles_2d%collisions_e%power_fast (matflt_type) (9.8.1.2.10)
torque_th (3256)	distribution%distri_vec(:)%profiles_2d%collisions_e%torque_th (matflt_type) (9.8.1.2.10)
torque_fast (3256)	distribution%distri_vec(:)%profiles_2d%collisions_e%torque_fast (matflt_type) (9.8.1.2.10)
collisions_i (3271)	distribution%distri_vec(:)%profiles_2d%collisions_i(:) (dist_collisional_transfer_2d) (9.8.1.3.150)
power_th (3256)	distribution%distri_vec(:)%profiles_2d%collisions_i(:)%power_th (matflt_type) (9.8.1.2.10)
power_fast (3256)	distribution%distri_vec(:)%profiles_2d%collisions_i(:)%power_fast (matflt_type) (9.8.1.2.10)
torque_th (3256)	distribution%distri_vec(:)%profiles_2d%collisions_i(:)%torque_th (matflt_type) (9.8.1.2.10)
torque_fast (3256)	distribution%distri_vec(:)%profiles_2d%collisions_i(:)%torque_fast (matflt_type) (9.8.1.2.10)
collisions_z (3271)	distribution%distri_vec(:)%profiles_2d%collisions_z(:) (dist_profiles2d_collisions_z) (9.8.1.3.162)
charge_state (3268)	distribution%distri_vec(:)%profiles_2d%collisions_z(:)%charge_state(:) (dist_collisional_transfer_2d) (9.8.1.3.150)
power_th (3256)	distribution%distri_vec(:)%profiles_2d%collisions_z(:)%charge_state(:)%power_th (matflt_type) (9.8.1.2.10)
power_fast (3256)	distribution%distri_vec(:)%profiles_2d%collisions_z(:)%charge_state(:)%power_fast (matflt_type) (9.8.1.2.10)
torque_th (3256)	distribution%distri_vec(:)%profiles_2d%collisions_z(:)%charge_state(:)%torque_th (matflt_type) (9.8.1.2.10)
torque_fast (3256)	distribution%distri_vec(:)%profiles_2d%collisions_z(:)%charge_state(:)%torque_fast (matflt_type) (9.8.1.2.10)
trapped (3271)	distribution%distri_vec(:)%profiles_2d%trapped (dist_profile_values_2d) (9.8.1.3.161)
state (3267)	distribution%distri_vec(:)%profiles_2d%trapped%state (dist_state_2d) (9.8.1.3.171)
dens (3277)	distribution%distri_vec(:)%profiles_2d%trapped%state%dens (matflt_type) (9.8.1.2.10)
dens_fast (3277)	distribution%distri_vec(:)%profiles_2d%trapped%state%dens_fast (matflt_type) (9.8.1.2.10)
pres (3277)	distribution%distri_vec(:)%profiles_2d%trapped%state%pres (matflt_type) (9.8.1.2.10)
pres_fast (3277)	distribution%distri_vec(:)%profiles_2d%trapped%state%pres_fast (matflt_type) (9.8.1.2.10)
pres_fast_pa (3277)	distribution%distri_vec(:)%profiles_2d%trapped%state%pres_fast_pa (matflt_type) (9.8.1.2.10)
momentm_fast (3277)	distribution%distri_vec(:)%profiles_2d%trapped%state%momentm_fast (matflt_type) (9.8.1.2.10)



current (3277)	distribution%distri_vec(:)%profiles_2d%trapped%state%current (matflt_type) (9.8.1.2.10)
current_fast (3277)	distribution%distri_vec(:)%profiles_2d%trapped%state%current_fast (matflt_type) (9.8.1.2.10)
torque_jrxb (3277)	distribution%distri_vec(:)%profiles_2d%trapped%state%torque_jrxb (matflt_type) (9.8.1.2.10)
collisions_e (3267)	distribution%distri_vec(:)%profiles_2d%trapped%collisions_e (dist_collisional_transfer_2d) (9.8.1.3.150)
power_th (3256)	distribution%distri_vec(:)%profiles_2d%trapped%collisions_e%power_th (matflt_type) (9.8.1.2.10)
power_fast (3256)	distribution%distri_vec(:)%profiles_2d%trapped%collisions_e%power_fast (matflt_type) (9.8.1.2.10)
torque_th (3256)	distribution%distri_vec(:)%profiles_2d%trapped%collisions_e%torque_th (matflt_type) (9.8.1.2.10)
torque_fast (3256)	distribution%distri_vec(:)%profiles_2d%trapped%collisions_e%torque_fast (matflt_type) (9.8.1.2.10)
collisions_i (3267)	distribution%distri_vec(:)%profiles_2d%trapped%collisions_i(:) (dist_collisional_transfer_2d) (9.8.1.3.150)
power_th (3256)	distribution%distri_vec(:)%profiles_2d%trapped%collisions_i(:)%power_th (matflt_type) (9.8.1.2.10)
power_fast (3256)	distribution%distri_vec(:)%profiles_2d%trapped%collisions_i(:)%power_fast (matflt_type) (9.8.1.2.10)
torque_th (3256)	distribution%distri_vec(:)%profiles_2d%trapped%collisions_i(:)%torque_th (matflt_type) (9.8.1.2.10)
torque_fast (3256)	distribution%distri_vec(:)%profiles_2d%trapped%collisions_i(:)%torque_fast (matflt_type) (9.8.1.2.10)
collisions_z (3267)	distribution%distri_vec(:)%profiles_2d%trapped%collisions_z(:) (dist_profiles2d_collisions_z) (9.8.1.3.162)
charge_state (3268)	distribution%distri_vec(:)%profiles_2d%trapped%collisions_z(:)%charge_state(:) (dist_collisional_transfer_2d) (9.8.1.3.150)
power_th (3256)	distribution%distri_vec(:)%profiles_2d%trapped%collisions_z(:)%charge_state(:)%power_th (matflt_type) (9.8.1.2.10)
power_fast (3256)	distribution%distri_vec(:)%profiles_2d%trapped%collisions_z(:)%charge_state(:)%power_fast (matflt_type) (9.8.1.2.10)
torque_th (3256)	distribution%distri_vec(:)%profiles_2d%trapped%collisions_z(:)%charge_state(:)%torque_th (matflt_type) (9.8.1.2.10)
torque_fast (3256)	distribution%distri_vec(:)%profiles_2d%trapped%collisions_z(:)%charge_state(:)%torque_fast (matflt_type) (9.8.1.2.10)
co_passing (3271)	distribution%distri_vec(:)%profiles_2d%co_passing (dist_profile_values_2d) (9.8.1.3.161)
state (3267)	distribution%distri_vec(:)%profiles_2d%co_passing%state (dist_state_2d) (9.8.1.3.171)
dens (3277)	distribution%distri_vec(:)%profiles_2d%co_passing%state%dens (matflt_type) (9.8.1.2.10)
dens_fast (3277)	distribution%distri_vec(:)%profiles_2d%co_passing%state%dens_fast (matflt_type) (9.8.1.2.10)
pres (3277)	distribution%distri_vec(:)%profiles_2d%co_passing%state%pres (matflt_type) (9.8.1.2.10)
pres_fast (3277)	distribution%distri_vec(:)%profiles_2d%co_passing%state%pres_fast (matflt_type) (9.8.1.2.10)
pres_fast_pa (3277)	distribution%distri_vec(:)%profiles_2d%co_passing%state%pres_fast_pa (matflt_type) (9.8.1.2.10)
momentm_fast (3277)	distribution%distri_vec(:)%profiles_2d%co_passing%state%momentm_fast (matflt_type) (9.8.1.2.10)
current (3277)	distribution%distri_vec(:)%profiles_2d%co_passing%state%current (matflt_type) (9.8.1.2.10)
current_fast (3277)	distribution%distri_vec(:)%profiles_2d%co_passing%state%current_fast (matflt_type) (9.8.1.2.10)
torque_jrxb (3277)	distribution%distri_vec(:)%profiles_2d%co_passing%state%torque_jrxb (matflt_type) (9.8.1.2.10)
collisions_e (3267)	distribution%distri_vec(:)%profiles_2d%co_passing%collisions_e (dist_collisional_transfer_2d) (9.8.1.3.150)
power_th (3256)	distribution%distri_vec(:)%profiles_2d%co_passing%collisions_e%power_th (matflt_type) (9.8.1.2.10)
power_fast (3256)	distribution%distri_vec(:)%profiles_2d%co_passing%collisions_e%power_fast (matflt_type) (9.8.1.2.10)
torque_th (3256)	distribution%distri_vec(:)%profiles_2d%co_passing%collisions_e%torque_th (matflt_type) (9.8.1.2.10)
torque_fast (3256)	distribution%distri_vec(:)%profiles_2d%co_passing%collisions_e%torque_fast (matflt_type) (9.8.1.2.10)
collisions_i (3267)	distribution%distri_vec(:)%profiles_2d%co_passing%collisions_i(:) (dist_collisional_transfer_2d) (9.8.1.3.150)
power_th (3256)	distribution%distri_vec(:)%profiles_2d%co_passing%collisions_i(:)%power_th (matflt_type) (9.8.1.2.10)
power_fast (3256)	distribution%distri_vec(:)%profiles_2d%co_passing%collisions_i(:)%power_fast (matflt_type) (9.8.1.2.10)
torque_th (3256)	distribution%distri_vec(:)%profiles_2d%co_passing%collisions_i(:)%torque_th (matflt_type) (9.8.1.2.10)
torque_fast (3256)	distribution%distri_vec(:)%profiles_2d%co_passing%collisions_i(:)%torque_fast (matflt_type) (9.8.1.2.10)
collisions_z (3267)	distribution%distri_vec(:)%profiles_2d%co_passing%collisions_z(:) (dist_profiles2d_collisions_z) (9.8.1.3.162)

charge_state (3268)	distribution%distri_vec(:)%profiles_2d%co_passing%collisions_z(:)%charge_state(:) (dist_collisional_transfer_2d) (9.8.1.3.150)
power_th (3256)	distribution%distri_vec(:)%profiles_2d%co_passing%collisions_z(:)%charge_state(:)%power_th (matflt_type) (9.8.1.2.10)
power_fast (3256)	distribution%distri_vec(:)%profiles_2d%co_passing%collisions_z(:)%charge_state(:)%power_fast (matflt_type) (9.8.1.2.10)
torque_th (3256)	distribution%distri_vec(:)%profiles_2d%co_passing%collisions_z(:)%charge_state(:)%torque_th (matflt_type) (9.8.1.2.10)
torque_fast (3256)	distribution%distri_vec(:)%profiles_2d%co_passing%collisions_z(:)%charge_state(:)%torque_fast (matflt_type) (9.8.1.2.10)
cntr_passing (3271)	distribution%distri_vec(:)%profiles_2d%cntr_passing (dist_profile_values_2d) (9.8.1.3.161)
state (3267)	distribution%distri_vec(:)%profiles_2d%cntr_passing%state (dist_state_2d) (9.8.1.3.171)
dens (3277)	distribution%distri_vec(:)%profiles_2d%cntr_passing%state%dens (matflt_type) (9.8.1.2.10)
dens_fast (3277)	distribution%distri_vec(:)%profiles_2d%cntr_passing%state%dens_fast (matflt_type) (9.8.1.2.10)
pres (3277)	distribution%distri_vec(:)%profiles_2d%cntr_passing%state%pres (matflt_type) (9.8.1.2.10)
pres_fast (3277)	distribution%distri_vec(:)%profiles_2d%cntr_passing%state%pres_fast (matflt_type) (9.8.1.2.10)
pres_fast_pa (3277)	distribution%distri_vec(:)%profiles_2d%cntr_passing%state%pres_fast_pa (matflt_type) (9.8.1.2.10)
momentm_fast (3277)	distribution%distri_vec(:)%profiles_2d%cntr_passing%state%momentm_fast (matflt_type) (9.8.1.2.10)
current (3277)	distribution%distri_vec(:)%profiles_2d%cntr_passing%state%current (matflt_type) (9.8.1.2.10)
current_fast (3277)	distribution%distri_vec(:)%profiles_2d%cntr_passing%state%current_fast (matflt_type) (9.8.1.2.10)
torque_jrxb (3277)	distribution%distri_vec(:)%profiles_2d%cntr_passing%state%torque_jrxb (matflt_type) (9.8.1.2.10)
collisions_e (3267)	distribution%distri_vec(:)%profiles_2d%cntr_passing%collisions_e (dist_collisional_transfer_2d) (9.8.1.3.150)
power_th (3256)	distribution%distri_vec(:)%profiles_2d%cntr_passing%collisions_e%power_th (matflt_type) (9.8.1.2.10)
power_fast (3256)	distribution%distri_vec(:)%profiles_2d%cntr_passing%collisions_e%power_fast (matflt_type) (9.8.1.2.10)
torque_th (3256)	distribution%distri_vec(:)%profiles_2d%cntr_passing%collisions_e%torque_th (matflt_type) (9.8.1.2.10)
torque_fast (3256)	distribution%distri_vec(:)%profiles_2d%cntr_passing%collisions_e%torque_fast (matflt_type) (9.8.1.2.10)
collisions_i (3267)	distribution%distri_vec(:)%profiles_2d%cntr_passing%collisions_i(:) (dist_collisional_transfer_2d) (9.8.1.3.150)
power_th (3256)	distribution%distri_vec(:)%profiles_2d%cntr_passing%collisions_i(:)%power_th (matflt_type) (9.8.1.2.10)
power_fast (3256)	distribution%distri_vec(:)%profiles_2d%cntr_passing%collisions_i(:)%power_fast (mat- flt_type) (9.8.1.2.10)
torque_th (3256)	distribution%distri_vec(:)%profiles_2d%cntr_passing%collisions_i(:)%torque_th (matflt_type) (9.8.1.2.10)
torque_fast (3256)	distribution%distri_vec(:)%profiles_2d%cntr_passing%collisions_i(:)%torque_fast (mat- flt_type) (9.8.1.2.10)
collisions_z (3267)	distribution%distri_vec(:)%profiles_2d%cntr_passing%collisions_z(:) (dist_profiles2d_collisions_z) (9.8.1.3.162)
charge_state (3268)	distribution%distri_vec(:)%profiles_2d%cntr_passing%collisions_z(:)%charge_state(:) (dist_collisional_transfer_2d) (9.8.1.3.150)
power_th (3256)	distribution%distri_vec(:)%profiles_2d%cntr_passing%collisions_z(:)%charge_state(:)%power_th (matflt_type) (9.8.1.2.10)
power_fast (3256)	distribution%distri_vec(:)%profiles_2d%cntr_passing%collisions_z(:)%charge_state(:)%power_fast (matflt_type) (9.8.1.2.10)
torque_th (3256)	distribution%distri_vec(:)%profiles_2d%cntr_passing%collisions_z(:)%charge_state(:)%torque_th (matflt_type) (9.8.1.2.10)
torque_fast (3256)	distribution%distri_vec(:)%profiles_2d%cntr_passing%collisions_z(:)%charge_state(:)%torque_fast (matflt_type) (9.8.1.2.10)
dist_func (3279)	distribution%distri_vec(:)%dist_func (dist_func) (9.8.1.3.153)
is_delta_f (3259)	distribution%distri_vec(:)%dist_func%is_delta_f (integer) (9.8.1.1.2)
markers (3259)	distribution%distri_vec(:)%dist_func%markers (weighted_markers) (9.8.1.3.512)
variable_ids (3618)	distribution%distri_vec(:)%dist_func%markers%variable_ids(:) (identifier) (9.8.1.3.242)
id (3348)	distribution%distri_vec(:)%dist_func%markers%variable_ids(:)%id (string) (9.8.1.1.3)
flag (3348)	distribution%distri_vec(:)%dist_func%markers%variable_ids(:)%flag (integer) (9.8.1.1.2)
description (3348)	distribution%distri_vec(:)%dist_func%markers%variable_ids(:)%description (string) (9.8.1.1.3)
coord (3618)	distribution%distri_vec(:)%dist_func%markers%coord (matflt_type) (9.8.1.2.10)
weight (3618)	distribution%distri_vec(:)%dist_func%markers%weight (vecflt_type) (9.8.1.2.13)
f_expan_topo (3259)	distribution%distri_vec(:)%dist_func%f_expan_topo(:) (dist_ff) (9.8.1.3.152)
grid_info (3258)	distribution%distri_vec(:)%dist_func%f_expan_topo(:)%grid_info (dist_grid_info) (9.8.1.3.159)

grid_type (3265)	distribution%distri_vec(:)%dist_func%of_expan_topo(:)%grid_info%grid_type (integer) (9.8.1.1.2)
ngriddim (3265)	distribution%distri_vec(:)%dist_func%of_expan_topo(:)%grid_info%ngriddim (integer) (9.8.1.1.2)
grid_coord (3265)	distribution%distri_vec(:)%dist_func%of_expan_topo(:)%grid_info%grid_coord (vecint_type) (9.8.1.2.14)
thin_orbits (3265)	distribution%distri_vec(:)%dist_func%of_expan_topo(:)%grid_info%thin_orbits (integer) (9.8.1.1.2)
topology (3265)	distribution%distri_vec(:)%dist_func%of_expan_topo(:)%grid_info%topology (string) (9.8.1.1.3)
omnigen_surf (3265)	distribution%distri_vec(:)%dist_func%of_expan_topo(:)%grid_info%omnigen_surf(:) (omnigen_surf) (9.8.1.3.310)
rz (3416)	distribution%distri_vec(:)%dist_func%of_expan_topo(:)%grid_info%omnigen_surf(:)%rz (rz1D) (9.8.1.3.366)
r (3472)	distribution%distri_vec(:)%dist_func%of_expan_topo(:)%grid_info%omnigen_surf(:)%rz%r (vecflt_type) (9.8.1.2.13)
z (3472)	distribution%distri_vec(:)%dist_func%of_expan_topo(:)%grid_info%omnigen_surf(:)%rz%z (vecflt_type) (9.8.1.2.13)
s (3416)	distribution%distri_vec(:)%dist_func%of_expan_topo(:)%grid_info%omnigen_surf(:)%s (vecflt_type) (9.8.1.2.13)
topo_regions (3258)	distribution%distri_vec(:)%dist_func%of_expan_topo(:)%topo_regions(:) (topo_regions) (9.8.1.3.465)
ind_omnigen (3571)	distribution%distri_vec(:)%dist_func%of_expan_topo(:)%topo_regions(:)%ind_omnigen (integer) (9.8.1.1.2)
dim1 (3571)	distribution%distri_vec(:)%dist_func%of_expan_topo(:)%topo_regions(:)%dim1 (array6dflt_type) (9.8.1.2.6)
dim2 (3571)	distribution%distri_vec(:)%dist_func%of_expan_topo(:)%topo_regions(:)%dim2 (array6dflt_type) (9.8.1.2.6)
dim3 (3571)	distribution%distri_vec(:)%dist_func%of_expan_topo(:)%topo_regions(:)%dim3 (array6dflt_type) (9.8.1.2.6)
dim4 (3571)	distribution%distri_vec(:)%dist_func%of_expan_topo(:)%topo_regions(:)%dim4 (array6dflt_type) (9.8.1.2.6)
dim5 (3571)	distribution%distri_vec(:)%dist_func%of_expan_topo(:)%topo_regions(:)%dim5 (array6dflt_type) (9.8.1.2.6)
dim6 (3571)	distribution%distri_vec(:)%dist_func%of_expan_topo(:)%topo_regions(:)%dim6 (array6dflt_type) (9.8.1.2.6)
jacobian (3571)	distribution%distri_vec(:)%dist_func%of_expan_topo(:)%topo_regions(:)%jacobian (array6dflt_type) (9.8.1.2.6)
distfunc (3571)	distribution%distri_vec(:)%dist_func%of_expan_topo(:)%topo_regions(:)%distfunc (array6dflt_type) (9.8.1.2.6)
f_expansion (3259)	distribution%distri_vec(:)%dist_func%of_expansion(:) (f_expansion) (9.8.1.3.206)
grid (3312)	distribution%distri_vec(:)%dist_func%of_expansion(:)%grid (complexgrid) (9.8.1.3.89)
uid (3195)	distribution%distri_vec(:)%dist_func%of_expansion(:)%grid%uid (integer) (9.8.1.1.2)
id (3195)	distribution%distri_vec(:)%dist_func%of_expansion(:)%grid%id (string) (9.8.1.1.3)
spaces (3195)	distribution%distri_vec(:)%dist_func%of_expansion(:)%grid%spaces(:) (complexgrid_space) (9.8.1.3.98)
geotype (3204)	distribution%distri_vec(:)%dist_func%of_expansion(:)%grid%spaces(:)%geotype (vecint_type) (9.8.1.2.14)
geotypeid (3204)	distribution%distri_vec(:)%dist_func%of_expansion(:)%grid%spaces(:)%geotypeid (vecstring_type) (9.8.1.2.15)
coordtype (3204)	distribution%distri_vec(:)%dist_func%of_expansion(:)%grid%spaces(:)%coordtype (matint_type) (9.8.1.2.11)
objects (3204)	distribution%distri_vec(:)%dist_func%of_expansion(:)%grid%spaces(:)%objects(:) (objects) (9.8.1.3.307)
boundary (3413)	distribution%distri_vec(:)%dist_func%of_expansion(:)%grid%spaces(:)%objects(:)%boundary (matint_type) (9.8.1.2.11)
neighbour (3413)	distribution%distri_vec(:)%dist_func%of_expansion(:)%grid%spaces(:)%objects(:)%neighbour (array3dint_type) (9.8.1.2.3)
geo (3413)	distribution%distri_vec(:)%dist_func%of_expansion(:)%grid%spaces(:)%objects(:)%geo (array4dflt_type) (9.8.1.2.4)
measure (3413)	distribution%distri_vec(:)%dist_func%of_expansion(:)%grid%spaces(:)%objects(:)%measure (matflt_type) (9.8.1.2.10)
xpoints (3204)	distribution%distri_vec(:)%dist_func%of_expansion(:)%grid%spaces(:)%xpoints (vecint_type) (9.8.1.2.14)
subgrids (3195)	distribution%distri_vec(:)%dist_func%of_expansion(:)%grid%subgrids(:) (complexgrid_subgrid) (9.8.1.3.99)
id (3205)	distribution%distri_vec(:)%dist_func%of_expansion(:)%grid%subgrids(:)%id (string) (9.8.1.1.3)
list (3205)	distribution%distri_vec(:)%dist_func%of_expansion(:)%grid%subgrids(:)%list(:) (complexgrid_objectlist) (9.8.1.3.93)
cls (3199)	distribution%distri_vec(:)%dist_func%of_expansion(:)%grid%subgrids(:)%list(:)%cls (vecint_type) (9.8.1.2.14)
indset (3199)	distribution%distri_vec(:)%dist_func%of_expansion(:)%grid%subgrids(:)%list(:)%indset(:) (complexgrid_indexlist) (9.8.1.3.91)



scalar (3200)	distribution%distri_vec(:)%dist_func%of_expansion(:)%grid%metric%g23(:)%scalar (vecflt_type) (9.8.1.2.13)
vector (3200)	distribution%distri_vec(:)%dist_func%of_expansion(:)%grid%metric%g23(:)%vector (matflt_type) (9.8.1.2.10)
matrix (3200)	distribution%distri_vec(:)%dist_func%of_expansion(:)%grid%metric%g23(:)%matrix (array3dflt_type) (9.8.1.2.2)
g33 (3198)	distribution%distri_vec(:)%dist_func%of_expansion(:)%grid%metric%g33(:) (complex-grid_scalar) (9.8.1.3.94)
griduid (3200)	distribution%distri_vec(:)%dist_func%of_expansion(:)%grid%metric%g33(:)%griduid (integer) (9.8.1.1.2)
subgrid (3200)	distribution%distri_vec(:)%dist_func%of_expansion(:)%grid%metric%g33(:)%subgrid (integer) (9.8.1.1.2)
scalar (3200)	distribution%distri_vec(:)%dist_func%of_expansion(:)%grid%metric%g33(:)%scalar (vecflt_type) (9.8.1.2.13)
vector (3200)	distribution%distri_vec(:)%dist_func%of_expansion(:)%grid%metric%g33(:)%vector (matflt_type) (9.8.1.2.10)
matrix (3200)	distribution%distri_vec(:)%dist_func%of_expansion(:)%grid%metric%g33(:)%matrix (array3dflt_type) (9.8.1.2.2)
jacobian (3198)	distribution%distri_vec(:)%dist_func%of_expansion(:)%grid%metric%jacobian(:) (complex-grid_scalar) (9.8.1.3.94)
griduid (3200)	distribution%distri_vec(:)%dist_func%of_expansion(:)%grid%metric%jacobian(:)%griduid (integer) (9.8.1.1.2)
subgrid (3200)	distribution%distri_vec(:)%dist_func%of_expansion(:)%grid%metric%jacobian(:)%subgrid (integer) (9.8.1.1.2)
scalar (3200)	distribution%distri_vec(:)%dist_func%of_expansion(:)%grid%metric%jacobian(:)%scalar (vecflt_type) (9.8.1.2.13)
vector (3200)	distribution%distri_vec(:)%dist_func%of_expansion(:)%grid%metric%jacobian(:)%vector (matflt_type) (9.8.1.2.10)
matrix (3200)	distribution%distri_vec(:)%dist_func%of_expansion(:)%grid%metric%jacobian(:)%matrix (array3dflt_type) (9.8.1.2.2)
geo (3195)	distribution%distri_vec(:)%dist_func%of_expansion(:)%grid%geo(:) (complexgrid_geo_global) (9.8.1.3.90)
geotype (3196)	distribution%distri_vec(:)%dist_func%of_expansion(:)%grid%geo(:)%geotype (integer) (9.8.1.1.2)
geotypeid (3196)	distribution%distri_vec(:)%dist_func%of_expansion(:)%grid%geo(:)%geotypeid (string) (9.8.1.1.3)
coordtype (3196)	distribution%distri_vec(:)%dist_func%of_expansion(:)%grid%geo(:)%coordtype (vecint_type) (9.8.1.2.14)
geo_matrix (3196)	distribution%distri_vec(:)%dist_func%of_expansion(:)%grid%geo(:)%geo_matrix(:) (complex-grid_scalar) (9.8.1.3.94)
griduid (3200)	distribution%distri_vec(:)%dist_func%of_expansion(:)%grid%geo(:)%geo_matrix(:)%griduid (integer) (9.8.1.1.2)
subgrid (3200)	distribution%distri_vec(:)%dist_func%of_expansion(:)%grid%geo(:)%geo_matrix(:)%subgrid (integer) (9.8.1.1.2)
scalar (3200)	distribution%distri_vec(:)%dist_func%of_expansion(:)%grid%geo(:)%geo_matrix(:)%scalar (vecflt_type) (9.8.1.2.13)
vector (3200)	distribution%distri_vec(:)%dist_func%of_expansion(:)%grid%geo(:)%geo_matrix(:)%vector (matflt_type) (9.8.1.2.10)
matrix (3200)	distribution%distri_vec(:)%dist_func%of_expansion(:)%grid%geo(:)%geo_matrix(:)%matrix (array3dflt_type) (9.8.1.2.2)
measure (3196)	distribution%distri_vec(:)%dist_func%of_expansion(:)%grid%geo(:)%measure(:) (complex-grid_scalar) (9.8.1.3.94)
griduid (3200)	distribution%distri_vec(:)%dist_func%of_expansion(:)%grid%geo(:)%measure(:)%griduid (integer) (9.8.1.1.2)
subgrid (3200)	distribution%distri_vec(:)%dist_func%of_expansion(:)%grid%geo(:)%measure(:)%subgrid (integer) (9.8.1.1.2)
scalar (3200)	distribution%distri_vec(:)%dist_func%of_expansion(:)%grid%geo(:)%measure(:)%scalar (vecflt_type) (9.8.1.2.13)
vector (3200)	distribution%distri_vec(:)%dist_func%of_expansion(:)%grid%geo(:)%measure(:)%vector (matflt_type) (9.8.1.2.10)
matrix (3200)	distribution%distri_vec(:)%dist_func%of_expansion(:)%grid%geo(:)%measure(:)%matrix (array3dflt_type) (9.8.1.2.2)
bases (3195)	distribution%distri_vec(:)%dist_func%of_expansion(:)%grid%bases(:) (complexgrid_vector) (9.8.1.3.100)
griduid (3206)	distribution%distri_vec(:)%dist_func%of_expansion(:)%grid%bases(:)%griduid (integer) (9.8.1.1.2)
label (3206)	distribution%distri_vec(:)%dist_func%of_expansion(:)%grid%bases(:)%label (string) (9.8.1.1.3)
comp (3206)	distribution%distri_vec(:)%dist_func%of_expansion(:)%grid%bases(:)%comp(:) (complex-grid_scalar) (9.8.1.3.94)
griduid (3200)	distribution%distri_vec(:)%dist_func%of_expansion(:)%grid%bases(:)%comp(:)%griduid (integer) (9.8.1.1.2)
subgrid (3200)	distribution%distri_vec(:)%dist_func%of_expansion(:)%grid%bases(:)%comp(:)%subgrid (integer) (9.8.1.1.2)

scalar (3200)	distribution%distri_vec(:)%dist_func%of_expansion(:)%grid%bases(:)%comp(:)%scalar (vecflt_type) (9.8.1.2.13)
vector (3200)	distribution%distri_vec(:)%dist_func%of_expansion(:)%grid%bases(:)%comp(:)%vector (matflt_type) (9.8.1.2.10)
matrix (3200)	distribution%distri_vec(:)%dist_func%of_expansion(:)%grid%bases(:)%comp(:)%matrix (array3dflt_type) (9.8.1.2.2)
align (3206)	distribution%distri_vec(:)%dist_func%of_expansion(:)%grid%bases(:)%align (vecint_type) (9.8.1.2.14)
alignid (3206)	distribution%distri_vec(:)%dist_func%of_expansion(:)%grid%bases(:)%alignid (vecstring_type) (9.8.1.2.15)
basis (3206)	distribution%distri_vec(:)%dist_func%of_expansion(:)%grid%bases(:)%basis (integer) (9.8.1.1.2)
values (3312)	distribution%distri_vec(:)%dist_func%of_expansion(:)%values (complexgrid_scalar) (9.8.1.3.94)
griduid (3200)	distribution%distri_vec(:)%dist_func%of_expansion(:)%values%griduid (integer) (9.8.1.1.2)
subgrid (3200)	distribution%distri_vec(:)%dist_func%of_expansion(:)%values%subgrid (integer) (9.8.1.1.2)
scalar (3200)	distribution%distri_vec(:)%dist_func%of_expansion(:)%values%scalar (vecflt_type) (9.8.1.2.13)
vector (3200)	distribution%distri_vec(:)%dist_func%of_expansion(:)%values%vector (matflt_type) (9.8.1.2.10)
matrix (3200)	distribution%distri_vec(:)%dist_func%of_expansion(:)%values%matrix (array3dflt_type) (9.8.1.2.2)
parameters (3312)	distribution%distri_vec(:)%dist_func%of_expansion(:)%parameters (dist.distribvec.distfunc.fexp_param) (9.8.1.3.151)
equatorial (3257)	distribution%distri_vec(:)%dist_func%of_expansion(:)%parameters%equatorial (equatorial_plane) (9.8.1.3.200)
r (3306)	distribution%distri_vec(:)%dist_func%of_expansion(:)%parameters%equatorial%r (vecflt_type) (9.8.1.2.13)
z (3306)	distribution%distri_vec(:)%dist_func%of_expansion(:)%parameters%equatorial%z (vecflt_type) (9.8.1.2.13)
s (3306)	distribution%distri_vec(:)%dist_func%of_expansion(:)%parameters%equatorial%s (vecflt_type) (9.8.1.2.13)
rho_tor (3306)	distribution%distri_vec(:)%dist_func%of_expansion(:)%parameters%equatorial%rho_tor (vecflt_type) (9.8.1.2.13)
psi (3306)	distribution%distri_vec(:)%dist_func%of_expansion(:)%parameters%equatorial%psi (vecflt_type) (9.8.1.2.13)
b_mod (3306)	distribution%distri_vec(:)%dist_func%of_expansion(:)%parameters%equatorial%b_mod (vecflt_type) (9.8.1.2.13)
temperature (3257)	distribution%distri_vec(:)%dist_func%of_expansion(:)%parameters%temperature (vecflt_type) (9.8.1.2.13)
codeparam (3279)	distribution%distri_vec(:)%codeparam (codeparam) (9.8.1.3.84)
codename (3190)	distribution%distri_vec(:)%codeparam%codename (string) (9.8.1.1.3)
codeversion (3190)	distribution%distri_vec(:)%codeparam%codeversion (string) (9.8.1.1.3)
parameters (3190)	distribution%distri_vec(:)%codeparam%parameters (string) (9.8.1.1.3)
output_diag (3190)	distribution%distri_vec(:)%codeparam%output_diag (string) (9.8.1.1.3)
output_flag (3190)	distribution%distri_vec(:)%codeparam%output_flag (integer) (9.8.1.1.2)
codeparam (3123)	distribution%codeparam (codeparam) (9.8.1.3.84)
codename (3190)	distribution%codeparam%codename (string) (9.8.1.1.3)
codeversion (3190)	distribution%codeparam%codeversion (string) (9.8.1.1.3)
parameters (3190)	distribution%codeparam%parameters (string) (9.8.1.1.3)
output_diag (3190)	distribution%codeparam%output_diag (string) (9.8.1.1.3)
output_flag (3190)	distribution%codeparam%output_flag (integer) (9.8.1.1.2)
time (3123)	distribution%time (float) (9.8.1.1.1)

### 9.8.2.1.16 distsource

datainfo (3124)	distsource%datainfo (datainfo) (9.8.1.3.141)
dataprovider (3247)	distsource%datainfo%dataprovider (string) (9.8.1.1.3)
putdate (3247)	distsource%datainfo%putdate (string) (9.8.1.1.3)
source (3247)	distsource%datainfo%source (string) (9.8.1.1.3)
comment (3247)	distsource%datainfo%comment (string) (9.8.1.1.3)
cocos (3247)	distsource%datainfo%cocos (integer) (9.8.1.1.2)
id (3247)	distsource%datainfo%id (integer) (9.8.1.1.2)
isref (3247)	distsource%datainfo%isref (integer) (9.8.1.1.2)
whatref (3247)	distsource%datainfo%whatref (whatref) (9.8.1.3.513)
user (3619)	distsource%datainfo%whatref%user (string) (9.8.1.1.3)
machine (3619)	distsource%datainfo%whatref%machine (string) (9.8.1.1.3)
shot (3619)	distsource%datainfo%whatref%shot (integer) (9.8.1.1.2)
run (3619)	distsource%datainfo%whatref%run (integer) (9.8.1.1.2)



occurrence (3619)	distsource%datainfo%whatref%occurrence (integer) (9.8.1.1.2)
putinfo (3247)	distsource%datainfo%putinfo (putinfo) (9.8.1.3.349)
putmethod (3455)	distsource%datainfo%putinfo%putmethod (string) (9.8.1.1.3)
putaccess (3455)	distsource%datainfo%putinfo%putaccess (string) (9.8.1.1.3)
putlocation (3455)	distsource%datainfo%putinfo%putlocation (string) (9.8.1.1.3)
rights (3455)	distsource%datainfo%putinfo%rights (string) (9.8.1.1.3)
composition (3124)	distsource%composition (composition) (9.8.1.3.102)
amn (3208)	distsource%composition%amn (vecflt_type) (9.8.1.2.13)
zn (3208)	distsource%composition%zn (vecflt_type) (9.8.1.2.13)
zion (3208)	distsource%composition%zion (vecflt_type) (9.8.1.2.13)
imp_flag (3208)	distsource%composition%imp_flag (vecint_type) (9.8.1.2.14)
label (3208)	distsource%composition%label (vecstring_type) (9.8.1.2.15)
compositions (3124)	distsource%compositions (compositions_type) (9.8.1.3.106)
nuclei (3212)	distsource%compositions%nuclei(:) (nuclei) (9.8.1.3.306)
zn (3412)	distsource%compositions%nuclei(:)%zn (float) (9.8.1.1.1)
amn (3412)	distsource%compositions%nuclei(:)%amn (float) (9.8.1.1.1)
label (3412)	distsource%compositions%nuclei(:)%label (string) (9.8.1.1.3)
ions (3212)	distsource%compositions%ions(:) (ions) (9.8.1.3.247)
nucindex (3353)	distsource%compositions%ions(:)%nucindex (integer) (9.8.1.1.2)
zion (3353)	distsource%compositions%ions(:)%zion (float) (9.8.1.1.1)
imp_flag (3353)	distsource%compositions%ions(:)%imp_flag (integer) (9.8.1.1.2)
label (3353)	distsource%compositions%ions(:)%label (string) (9.8.1.1.3)
impurities (3212)	distsource%compositions%impurities(:) (impurities) (9.8.1.3.244)
nucindex (3350)	distsource%compositions%impurities(:)%nucindex (integer) (9.8.1.1.2)
i_ion (3350)	distsource%compositions%impurities(:)%i_ion (integer) (9.8.1.1.2)
nzimp (3350)	distsource%compositions%impurities(:)%nzimp (integer) (9.8.1.1.2)
zmin (3350)	distsource%compositions%impurities(:)%zmin (vecflt_type) (9.8.1.2.13)
zmax (3350)	distsource%compositions%impurities(:)%zmax (vecflt_type) (9.8.1.2.13)
label (3350)	distsource%compositions%impurities(:)%label (vecstring_type) (9.8.1.2.15)
neutralscomp (3212)	distsource%compositions%neutralscomp(:) (composition_neutralscomp) (9.8.1.3.105)
neutcomp (3211)	distsource%compositions%neutralscomp(:)%neutcomp(:) (composition_neutrals_neutcomp) (9.8.1.3.104)
nucindex (3210)	distsource%compositions%neutralscomp(:)%neutcomp(:)%nucindex (integer) (9.8.1.1.2)
multiplicity (3210)	distsource%compositions%neutralscomp(:)%neutcomp(:)%multiplicity (integer) (9.8.1.1.2)
type (3211)	distsource%compositions%neutralscomp(:)%type(:) (identifier) (9.8.1.3.242)
id (3348)	distsource%compositions%neutralscomp(:)%type(:)%id (string) (9.8.1.1.3)
flag (3348)	distsource%compositions%neutralscomp(:)%type(:)%flag (integer) (9.8.1.1.2)
description (3348)	distsource%compositions%neutralscomp(:)%type(:)%description (string) (9.8.1.1.3)
label (3211)	distsource%compositions%neutralscomp(:)%label (string) (9.8.1.1.3)
edgespecies (3212)	distsource%compositions%edgespecies(:) (edgespecies) (9.8.1.3.192)
nucindex (3298)	distsource%compositions%edgespecies(:)%nucindex (integer) (9.8.1.1.2)
zmin (3298)	distsource%compositions%edgespecies(:)%zmin (float) (9.8.1.1.1)
zmax (3298)	distsource%compositions%edgespecies(:)%zmax (float) (9.8.1.1.1)
label (3298)	distsource%compositions%edgespecies(:)%label (string) (9.8.1.1.3)
signature (3212)	distsource%compositions%signature (identifier) (9.8.1.3.242)
id (3348)	distsource%compositions%signature%id (string) (9.8.1.1.3)
flag (3348)	distsource%compositions%signature%flag (integer) (9.8.1.1.2)
description (3348)	distsource%compositions%signature%description (string) (9.8.1.1.3)
source (3124)	distsource%source(:) (distsource_source) (9.8.1.3.178)
source_id (3284)	distsource%source(:)%source_id(:) (enum_instance) (9.8.1.3.195)
type (3301)	distsource%source(:)%source_id(:)%type (identifier) (9.8.1.3.242)
id (3348)	distsource%source(:)%source_id(:)%type%id (string) (9.8.1.1.3)
flag (3348)	distsource%source(:)%source_id(:)%type%flag (integer) (9.8.1.1.2)
description (3348)	distsource%source(:)%source_id(:)%type%description (string) (9.8.1.1.3)
name (3301)	distsource%source(:)%source_id(:)%name (string) (9.8.1.1.3)
index (3301)	distsource%source(:)%source_id(:)%index (integer) (9.8.1.1.2)
species (3284)	distsource%source(:)%species (species_reference) (9.8.1.3.418)
type (3524)	distsource%source(:)%species%type (identifier) (9.8.1.3.242)
id (3348)	distsource%source(:)%species%type%id (string) (9.8.1.1.3)
flag (3348)	distsource%source(:)%species%type%flag (integer) (9.8.1.1.2)
description (3348)	distsource%source(:)%species%type%description (string) (9.8.1.1.3)
index (3524)	distsource%source(:)%species%index (integer) (9.8.1.1.2)



gyro_type (3284)	distsource%source(%)gyro_type (integer) (9.8.1.1.2)
global_param (3284)	distsource%source(%)global_param (distsource_global_param) (9.8.1.3.174)
src_pow (3280)	distsource%source(%)global_param%src_pow (exp0D) (9.8.1.3.203)
value (3309)	distsource%source(%)global_param%src_pow%value (float) (9.8.1.1.1)
abserror (3309)	distsource%source(%)global_param%src_pow%abserror (float) (9.8.1.1.1)
releror (3309)	distsource%source(%)global_param%src_pow%releror (float) (9.8.1.1.1)
src_rate (3280)	distsource%source(%)global_param%src_rate (exp0D) (9.8.1.3.203)
value (3309)	distsource%source(%)global_param%src_rate%value (float) (9.8.1.1.1)
abserror (3309)	distsource%source(%)global_param%src_rate%abserror (float) (9.8.1.1.1)
releror (3309)	distsource%source(%)global_param%src_rate%releror (float) (9.8.1.1.1)
mag_axis (3280)	distsource%source(%)global_param%mag_axis (rz0D) (9.8.1.3.365)
r (3471)	distsource%source(%)global_param%mag_axis%r (float) (9.8.1.1.1)
z (3471)	distsource%source(%)global_param%mag_axis%z (float) (9.8.1.1.1)
toroid_field (3280)	distsource%source(%)global_param%toroid_field (b0r0) (9.8.1.3.61)
r0 (3167)	distsource%source(%)global_param%toroid_field%r0 (float) (9.8.1.1.1)
b0 (3167)	distsource%source(%)global_param%toroid_field%b0 (float) (9.8.1.1.1)
profiles_1d (3284)	distsource%source(%)profiles_1d (distsource_profiles_1d) (9.8.1.3.176)
rho_tor (3282)	distsource%source(%)profiles_1d%rho_tor (vecflt_type) (9.8.1.2.13)
rho_tor_norm (3282)	distsource%source(%)profiles_1d%rho_tor_norm (vecflt_type) (9.8.1.2.13)
psi (3282)	distsource%source(%)profiles_1d%psi (vecflt_type) (9.8.1.2.13)
volume (3282)	distsource%source(%)profiles_1d%volume (vecflt_type) (9.8.1.2.13)
area (3282)	distsource%source(%)profiles_1d%area (vecflt_type) (9.8.1.2.13)
pow_den (3282)	distsource%source(%)profiles_1d%pow_den (exp1D) (9.8.1.3.204)
value (3310)	distsource%source(%)profiles_1d%pow_den%value (vecflt_type) (9.8.1.2.13)
abserror (3310)	distsource%source(%)profiles_1d%pow_den%abserror (vecflt_type) (9.8.1.2.13)
releror (3310)	distsource%source(%)profiles_1d%pow_den%releror (vecflt_type) (9.8.1.2.13)
trq_den (3282)	distsource%source(%)profiles_1d%trq_den (exp1D) (9.8.1.3.204)
value (3310)	distsource%source(%)profiles_1d%trq_den%value (vecflt_type) (9.8.1.2.13)
abserror (3310)	distsource%source(%)profiles_1d%trq_den%abserror (vecflt_type) (9.8.1.2.13)
releror (3310)	distsource%source(%)profiles_1d%trq_den%releror (vecflt_type) (9.8.1.2.13)
src_rate (3282)	distsource%source(%)profiles_1d%src_rate (exp1D) (9.8.1.3.204)
value (3310)	distsource%source(%)profiles_1d%src_rate%value (vecflt_type) (9.8.1.2.13)
abserror (3310)	distsource%source(%)profiles_1d%src_rate%abserror (vecflt_type) (9.8.1.2.13)
releror (3310)	distsource%source(%)profiles_1d%src_rate%releror (vecflt_type) (9.8.1.2.13)
profiles_2d (3284)	distsource%source(%)profiles_2d (distsource_profiles_2d) (9.8.1.3.177)
grid.coord (3283)	distsource%source(%)profiles_2d%grid.coord (vecint_type) (9.8.1.2.14)
dim1 (3283)	distsource%source(%)profiles_2d%dim1 (matflt_type) (9.8.1.2.10)
dim2 (3283)	distsource%source(%)profiles_2d%dim2 (matflt_type) (9.8.1.2.10)
g11 (3283)	distsource%source(%)profiles_2d%g11 (matflt_type) (9.8.1.2.10)
g12 (3283)	distsource%source(%)profiles_2d%g12 (matflt_type) (9.8.1.2.10)
g21 (3283)	distsource%source(%)profiles_2d%g21 (matflt_type) (9.8.1.2.10)
g22 (3283)	distsource%source(%)profiles_2d%g22 (matflt_type) (9.8.1.2.10)
pow_den (3283)	distsource%source(%)profiles_2d%pow_den (exp2D) (9.8.1.3.205)
value (3311)	distsource%source(%)profiles_2d%pow_den%value (matflt_type) (9.8.1.2.10)
abserror (3311)	distsource%source(%)profiles_2d%pow_den%abserror (matflt_type) (9.8.1.2.10)
releror (3311)	distsource%source(%)profiles_2d%pow_den%releror (matflt_type) (9.8.1.2.10)
src_rate (3283)	distsource%source(%)profiles_2d%src_rate (exp2D) (9.8.1.3.205)
value (3311)	distsource%source(%)profiles_2d%src_rate%value (matflt_type) (9.8.1.2.10)
abserror (3311)	distsource%source(%)profiles_2d%src_rate%abserror (matflt_type) (9.8.1.2.10)
releror (3311)	distsource%source(%)profiles_2d%src_rate%releror (matflt_type) (9.8.1.2.10)
line_srcprof (3284)	distsource%source(%)line_srcprof(%) (distsource_line_src_prof) (9.8.1.3.175)
rho_tor (3281)	distsource%source(%)line_srcprof(%)rho_tor (vecflt_type) (9.8.1.2.13)
rho_tor_norm (3281)	distsource%source(%)line_srcprof(%)rho_tor_norm (vecflt_type) (9.8.1.2.13)
psi (3281)	distsource%source(%)line_srcprof(%)psi (vecflt_type) (9.8.1.2.13)
R (3281)	distsource%source(%)line_srcprof(%)R (vecflt_type) (9.8.1.2.13)
Z (3281)	distsource%source(%)line_srcprof(%)Z (vecflt_type) (9.8.1.2.13)
theta (3281)	distsource%source(%)line_srcprof(%)theta (vecflt_type) (9.8.1.2.13)
theta_id (3281)	distsource%source(%)line_srcprof(%)theta_id (vecflt_type) (9.8.1.2.13)
th2th_pol (3281)	distsource%source(%)line_srcprof(%)th2th_pol (matflt_type) (9.8.1.2.10)
pitch (3281)	distsource%source(%)line_srcprof(%)pitch (vecflt_type) (9.8.1.2.13)
energy (3281)	distsource%source(%)line_srcprof(%)energy (vecflt_type) (9.8.1.2.13)

ang_momentum (3281)	distsource%source(:)%line_srcprof(:)%ang_momentum (vecflt_type) (9.8.1.2.13)
src_rate (3281)	distsource%source(:)%line_srcprof(:)%src_rate (vecflt_type) (9.8.1.2.13)
source_rate (3284)	distsource%source(:)%source_rate (source_rate) (9.8.1.3.412)
grid (3518)	distsource%source(:)%source_rate%grid (complexgrid) (9.8.1.3.89)
uid (3195)	distsource%source(:)%source_rate%grid%uid (integer) (9.8.1.1.2)
id (3195)	distsource%source(:)%source_rate%grid%id (string) (9.8.1.1.3)
spaces (3195)	distsource%source(:)%source_rate%grid%spaces(:) (complexgrid_space) (9.8.1.3.98)
geotype (3204)	distsource%source(:)%source_rate%grid%spaces(:)%geotype (vecint_type) (9.8.1.2.14)
geotypeid (3204)	distsource%source(:)%source_rate%grid%spaces(:)%geotypeid (vecstring_type) (9.8.1.2.15)
coordtype (3204)	distsource%source(:)%source_rate%grid%spaces(:)%coordtype (matint_type) (9.8.1.2.11)
objects (3204)	distsource%source(:)%source_rate%grid%spaces(:)%objects(:) (objects) (9.8.1.3.307)
boundary (3413)	distsource%source(:)%source_rate%grid%spaces(:)%objects(:)%boundary (matint_type) (9.8.1.2.11)
neighbour (3413)	distsource%source(:)%source_rate%grid%spaces(:)%objects(:)%neighbour (array3dint_type) (9.8.1.2.3)
geo (3413)	distsource%source(:)%source_rate%grid%spaces(:)%objects(:)%geo (array4dflt_type) (9.8.1.2.4)
measure (3413)	distsource%source(:)%source_rate%grid%spaces(:)%objects(:)%measure (matflt_type) (9.8.1.2.10)
xpoints (3204)	distsource%source(:)%source_rate%grid%spaces(:)%xpoints (vecint_type) (9.8.1.2.14)
subgrids (3195)	distsource%source(:)%source_rate%grid%subgrids(:) (complexgrid_subgrid) (9.8.1.3.99)
id (3205)	distsource%source(:)%source_rate%grid%subgrids(:)%id (string) (9.8.1.1.3)
list (3205)	distsource%source(:)%source_rate%grid%subgrids(:)%list(:) (complexgrid_objectlist) (9.8.1.3.93)
cls (3199)	distsource%source(:)%source_rate%grid%subgrids(:)%list(:)%cls (vecint_type) (9.8.1.2.14)
indset (3199)	distsource%source(:)%source_rate%grid%subgrids(:)%list(:)%indset(:) (complex_grid_indexlist) (9.8.1.3.91)
range (3197)	distsource%source(:)%source_rate%grid%subgrids(:)%list(:)%indset(:)%range (vecint_type) (9.8.1.2.14)
ind (3197)	distsource%source(:)%source_rate%grid%subgrids(:)%list(:)%indset(:)%ind (vecint_type) (9.8.1.2.14)
ind (3199)	distsource%source(:)%source_rate%grid%subgrids(:)%list(:)%ind (matint_type) (9.8.1.2.11)
metric (3195)	distsource%source(:)%source_rate%grid%metric (complexgrid_metric) (9.8.1.3.92)
measure (3198)	distsource%source(:)%source_rate%grid%metric%measure(:) (complexgrid_scalar) (9.8.1.3.94)
griduid (3200)	distsource%source(:)%source_rate%grid%metric%measure(:)%griduid (integer) (9.8.1.1.2)
subgrid (3200)	distsource%source(:)%source_rate%grid%metric%measure(:)%subgrid (integer) (9.8.1.1.2)
scalar (3200)	distsource%source(:)%source_rate%grid%metric%measure(:)%scalar (vecflt_type) (9.8.1.2.13)
vector (3200)	distsource%source(:)%source_rate%grid%metric%measure(:)%vector (matflt_type) (9.8.1.2.10)
matrix (3200)	distsource%source(:)%source_rate%grid%metric%measure(:)%matrix (array3dflt_type) (9.8.1.2.2)
g11 (3198)	distsource%source(:)%source_rate%grid%metric%g11(:) (complexgrid_scalar) (9.8.1.3.94)
griduid (3200)	distsource%source(:)%source_rate%grid%metric%g11(:)%griduid (integer) (9.8.1.1.2)
subgrid (3200)	distsource%source(:)%source_rate%grid%metric%g11(:)%subgrid (integer) (9.8.1.1.2)
scalar (3200)	distsource%source(:)%source_rate%grid%metric%g11(:)%scalar (vecflt_type) (9.8.1.2.13)
vector (3200)	distsource%source(:)%source_rate%grid%metric%g11(:)%vector (matflt_type) (9.8.1.2.10)
matrix (3200)	distsource%source(:)%source_rate%grid%metric%g11(:)%matrix (array3dflt_type) (9.8.1.2.2)
g12 (3198)	distsource%source(:)%source_rate%grid%metric%g12(:) (complexgrid_scalar) (9.8.1.3.94)
griduid (3200)	distsource%source(:)%source_rate%grid%metric%g12(:)%griduid (integer) (9.8.1.1.2)
subgrid (3200)	distsource%source(:)%source_rate%grid%metric%g12(:)%subgrid (integer) (9.8.1.1.2)
scalar (3200)	distsource%source(:)%source_rate%grid%metric%g12(:)%scalar (vecflt_type) (9.8.1.2.13)
vector (3200)	distsource%source(:)%source_rate%grid%metric%g12(:)%vector (matflt_type) (9.8.1.2.10)
matrix (3200)	distsource%source(:)%source_rate%grid%metric%g12(:)%matrix (array3dflt_type) (9.8.1.2.2)
g13 (3198)	distsource%source(:)%source_rate%grid%metric%g13(:) (complexgrid_scalar) (9.8.1.3.94)
griduid (3200)	distsource%source(:)%source_rate%grid%metric%g13(:)%griduid (integer) (9.8.1.1.2)
subgrid (3200)	distsource%source(:)%source_rate%grid%metric%g13(:)%subgrid (integer) (9.8.1.1.2)
scalar (3200)	distsource%source(:)%source_rate%grid%metric%g13(:)%scalar (vecflt_type) (9.8.1.2.13)
vector (3200)	distsource%source(:)%source_rate%grid%metric%g13(:)%vector (matflt_type) (9.8.1.2.10)
matrix (3200)	distsource%source(:)%source_rate%grid%metric%g13(:)%matrix (array3dflt_type) (9.8.1.2.2)
g22 (3198)	distsource%source(:)%source_rate%grid%metric%g22(:) (complexgrid_scalar) (9.8.1.3.94)
griduid (3200)	distsource%source(:)%source_rate%grid%metric%g22(:)%griduid (integer) (9.8.1.1.2)
subgrid (3200)	distsource%source(:)%source_rate%grid%metric%g22(:)%subgrid (integer) (9.8.1.1.2)
scalar (3200)	distsource%source(:)%source_rate%grid%metric%g22(:)%scalar (vecflt_type) (9.8.1.2.13)
vector (3200)	distsource%source(:)%source_rate%grid%metric%g22(:)%vector (matflt_type) (9.8.1.2.10)
matrix (3200)	distsource%source(:)%source_rate%grid%metric%g22(:)%matrix (array3dflt_type) (9.8.1.2.2)

g23 (3198)	distsource%source(:)%source_rate%grid%metric%g23(:) (complexgrid_scalar) (9.8.1.3.94)
griduid (3200)	distsource%source(:)%source_rate%grid%metric%g23(:)%griduid (integer) (9.8.1.1.2)
subgrid (3200)	distsource%source(:)%source_rate%grid%metric%g23(:)%subgrid (integer) (9.8.1.1.2)
scalar (3200)	distsource%source(:)%source_rate%grid%metric%g23(:)%scalar (vecflt_type) (9.8.1.2.13)
vector (3200)	distsource%source(:)%source_rate%grid%metric%g23(:)%vector (matflt_type) (9.8.1.2.10)
matrix (3200)	distsource%source(:)%source_rate%grid%metric%g23(:)%matrix (array3dflt_type) (9.8.1.2.2)
g33 (3198)	distsource%source(:)%source_rate%grid%metric%g33(:) (complexgrid_scalar) (9.8.1.3.94)
griduid (3200)	distsource%source(:)%source_rate%grid%metric%g33(:)%griduid (integer) (9.8.1.1.2)
subgrid (3200)	distsource%source(:)%source_rate%grid%metric%g33(:)%subgrid (integer) (9.8.1.1.2)
scalar (3200)	distsource%source(:)%source_rate%grid%metric%g33(:)%scalar (vecflt_type) (9.8.1.2.13)
vector (3200)	distsource%source(:)%source_rate%grid%metric%g33(:)%vector (matflt_type) (9.8.1.2.10)
matrix (3200)	distsource%source(:)%source_rate%grid%metric%g33(:)%matrix (array3dflt_type) (9.8.1.2.2)
jacobian (3198)	distsource%source(:)%source_rate%grid%metric%jacobian(:) (complexgrid_scalar) (9.8.1.3.94)
griduid (3200)	distsource%source(:)%source_rate%grid%metric%jacobian(:)%griduid (integer) (9.8.1.1.2)
subgrid (3200)	distsource%source(:)%source_rate%grid%metric%jacobian(:)%subgrid (integer) (9.8.1.1.2)
scalar (3200)	distsource%source(:)%source_rate%grid%metric%jacobian(:)%scalar (vecflt_type) (9.8.1.2.13)
vector (3200)	distsource%source(:)%source_rate%grid%metric%jacobian(:)%vector (matflt_type) (9.8.1.2.10)
matrix (3200)	distsource%source(:)%source_rate%grid%metric%jacobian(:)%matrix (array3dflt_type) (9.8.1.2.2)
geo (3195)	distsource%source(:)%source_rate%grid%geo(:) (complexgrid_geo_global) (9.8.1.3.90)
geotype (3196)	distsource%source(:)%source_rate%grid%geo(:)%geotype (integer) (9.8.1.1.2)
geotypeid (3196)	distsource%source(:)%source_rate%grid%geo(:)%geotypeid (string) (9.8.1.1.3)
coordtype (3196)	distsource%source(:)%source_rate%grid%geo(:)%coordtype (vecint_type) (9.8.1.2.14)
geo_matrix (3196)	distsource%source(:)%source_rate%grid%geo(:)%geo_matrix(:) (complexgrid_scalar) (9.8.1.3.94)
griduid (3200)	distsource%source(:)%source_rate%grid%geo(:)%geo_matrix(:)%griduid (integer) (9.8.1.1.2)
subgrid (3200)	distsource%source(:)%source_rate%grid%geo(:)%geo_matrix(:)%subgrid (integer) (9.8.1.1.2)
scalar (3200)	distsource%source(:)%source_rate%grid%geo(:)%geo_matrix(:)%scalar (vecflt_type) (9.8.1.2.13)
vector (3200)	distsource%source(:)%source_rate%grid%geo(:)%geo_matrix(:)%vector (matflt_type) (9.8.1.2.10)
matrix (3200)	distsource%source(:)%source_rate%grid%geo(:)%geo_matrix(:)%matrix (array3dflt_type) (9.8.1.2.2)
measure (3196)	distsource%source(:)%source_rate%grid%geo(:)%measure(:) (complexgrid_scalar) (9.8.1.3.94)
griduid (3200)	distsource%source(:)%source_rate%grid%geo(:)%measure(:)%griduid (integer) (9.8.1.1.2)
subgrid (3200)	distsource%source(:)%source_rate%grid%geo(:)%measure(:)%subgrid (integer) (9.8.1.1.2)
scalar (3200)	distsource%source(:)%source_rate%grid%geo(:)%measure(:)%scalar (vecflt_type) (9.8.1.2.13)
vector (3200)	distsource%source(:)%source_rate%grid%geo(:)%measure(:)%vector (matflt_type) (9.8.1.2.10)
matrix (3200)	distsource%source(:)%source_rate%grid%geo(:)%measure(:)%matrix (array3dflt_type) (9.8.1.2.2)
bases (3195)	distsource%source(:)%source_rate%grid%bases(:) (complexgrid_vector) (9.8.1.3.100)
griduid (3206)	distsource%source(:)%source_rate%grid%bases(:)%griduid (integer) (9.8.1.1.2)
label (3206)	distsource%source(:)%source_rate%grid%bases(:)%label (string) (9.8.1.1.3)
comp (3206)	distsource%source(:)%source_rate%grid%bases(:)%comp(:) (complexgrid_scalar) (9.8.1.3.94)
griduid (3200)	distsource%source(:)%source_rate%grid%bases(:)%comp(:)%griduid (integer) (9.8.1.1.2)
subgrid (3200)	distsource%source(:)%source_rate%grid%bases(:)%comp(:)%subgrid (integer) (9.8.1.1.2)
scalar (3200)	distsource%source(:)%source_rate%grid%bases(:)%comp(:)%scalar (vecflt_type) (9.8.1.2.13)
vector (3200)	distsource%source(:)%source_rate%grid%bases(:)%comp(:)%vector (matflt_type) (9.8.1.2.10)
matrix (3200)	distsource%source(:)%source_rate%grid%bases(:)%comp(:)%matrix (array3dflt_type) (9.8.1.2.2)
align (3206)	distsource%source(:)%source_rate%grid%bases(:)%align (vecint_type) (9.8.1.2.14)
alignid (3206)	distsource%source(:)%source_rate%grid%bases(:)%alignid (vecstring_type) (9.8.1.2.15)
basis (3206)	distsource%source(:)%source_rate%grid%bases(:)%basis (integer) (9.8.1.1.2)
value (3518)	distsource%source(:)%source_rate%value (complexgrid_scalar) (9.8.1.3.94)
griduid (3200)	distsource%source(:)%source_rate%value%griduid (integer) (9.8.1.1.2)
subgrid (3200)	distsource%source(:)%source_rate%value%subgrid (integer) (9.8.1.1.2)
scalar (3200)	distsource%source(:)%source_rate%value%scalar (vecflt_type) (9.8.1.2.13)
vector (3200)	distsource%source(:)%source_rate%value%vector (matflt_type) (9.8.1.2.10)
matrix (3200)	distsource%source(:)%source_rate%value%matrix (array3dflt_type) (9.8.1.2.2)
discrete (3518)	distsource%source(:)%source_rate%discrete (vecint_type) (9.8.1.2.14)
parameters (3518)	distsource%source(:)%source_rate%parameters (parameters) (9.8.1.3.318)
equatorial (3424)	distsource%source(:)%source_rate%parameters%equatorial (equatorial_plane) (9.8.1.3.200)
r (3306)	distsource%source(:)%source_rate%parameters%equatorial%r (vecflt_type) (9.8.1.2.13)
z (3306)	distsource%source(:)%source_rate%parameters%equatorial%z (vecflt_type) (9.8.1.2.13)

s (3306)	distsource%source(:)%source_rate%parameters%equatorial% <i>s</i> (vecflt.type) (9.8.1.2.13)
rho_tor (3306)	distsource%source(:)%source_rate%parameters%equatorial%rho_tor (vecflt.type) (9.8.1.2.13)
psi (3306)	distsource%source(:)%source_rate%parameters%equatorial%psi (vecflt.type) (9.8.1.2.13)
b_mod (3306)	distsource%source(:)%source_rate%parameters%equatorial%b_mod (vecflt.type) (9.8.1.2.13)
markers (3284)	distsource%source(:)%markers (weighted_markers) (9.8.1.3.512)
variable_ids (3618)	distsource%source(:)%markers%variable_ids(:) (identifier) (9.8.1.3.242)
id (3348)	distsource%source(:)%markers%variable_ids(:)%id (string) (9.8.1.1.3)
flag (3348)	distsource%source(:)%markers%variable_ids(:)%flag (integer) (9.8.1.1.2)
description (3348)	distsource%source(:)%markers%variable_ids(:)%description (string) (9.8.1.1.3)
coord (3618)	distsource%source(:)%markers%coord (matflt.type) (9.8.1.2.10)
weight (3618)	distsource%source(:)%markers%weight (vecflt.type) (9.8.1.2.13)
codeparam (3284)	distsource%source(:)%codeparam (codeparam) (9.8.1.3.84)
codename (3190)	distsource%source(:)%codeparam%codename (string) (9.8.1.1.3)
codeversion (3190)	distsource%source(:)%codeparam%codeversion (string) (9.8.1.1.3)
parameters (3190)	distsource%source(:)%codeparam%parameters (string) (9.8.1.1.3)
output_diag (3190)	distsource%source(:)%codeparam%output_diag (string) (9.8.1.1.3)
output_flag (3190)	distsource%source(:)%codeparam%output_flag (integer) (9.8.1.1.2)
codeparam (3124)	distsource%codeparam (codeparam) (9.8.1.3.84)
codename (3190)	distsource%codeparam%codename (string) (9.8.1.1.3)
codeversion (3190)	distsource%codeparam%codeversion (string) (9.8.1.1.3)
parameters (3190)	distsource%codeparam%parameters (string) (9.8.1.1.3)
output_diag (3190)	distsource%codeparam%output_diag (string) (9.8.1.1.3)
output_flag (3190)	distsource%codeparam%output_flag (integer) (9.8.1.1.2)
time (3124)	distsource%time (float) (9.8.1.1.1)

### 9.8.2.1.17 ecediag

datainfo (3125)	ecediag%datainfo (datainfo) (9.8.1.3.141)
dataprovider (3247)	ecediag%datainfo%dataprovider (string) (9.8.1.1.3)
putdate (3247)	ecediag%datainfo%putdate (string) (9.8.1.1.3)
source (3247)	ecediag%datainfo%source (string) (9.8.1.1.3)
comment (3247)	ecediag%datainfo%comment (string) (9.8.1.1.3)
cocos (3247)	ecediag%datainfo%cocos (integer) (9.8.1.1.2)
id (3247)	ecediag%datainfo%id (integer) (9.8.1.1.2)
isref (3247)	ecediag%datainfo%isref (integer) (9.8.1.1.2)
whatref (3247)	ecediag%datainfo%whatref (whatref) (9.8.1.3.513)
user (3619)	ecediag%datainfo%whatref%user (string) (9.8.1.1.3)
machine (3619)	ecediag%datainfo%whatref%machine (string) (9.8.1.1.3)
shot (3619)	ecediag%datainfo%whatref%shot (integer) (9.8.1.1.2)
run (3619)	ecediag%datainfo%whatref%run (integer) (9.8.1.1.2)
occurrence (3619)	ecediag%datainfo%whatref%occurrence (integer) (9.8.1.1.2)
putinfo (3247)	ecediag%datainfo%putinfo (putinfo) (9.8.1.3.349)
putmethod (3455)	ecediag%datainfo%putinfo%putmethod (string) (9.8.1.1.3)
putaccess (3455)	ecediag%datainfo%putinfo%putaccess (string) (9.8.1.1.3)
putlocation (3455)	ecediag%datainfo%putinfo%putlocation (string) (9.8.1.1.3)
rights (3455)	ecediag%datainfo%putinfo%rights (string) (9.8.1.1.3)
setup (3125)	ecediag%setup (ecesetup) (9.8.1.3.182)
frequency (3288)	ecediag%setup%frequency (vecflt.type) (9.8.1.2.13)
los (3288)	ecediag%setup%los (setup_line_exp) (9.8.1.3.404)
pivot_point (3510)	ecediag%setup%los%pivot_point (rzphi1Dexperimental) (9.8.1.3.374)
r (3480)	ecediag%setup%los%pivot_point%r (vecflt.type) (9.8.1.2.13)
z (3480)	ecediag%setup%los%pivot_point%z (vecflt.type) (9.8.1.2.13)
phi (3480)	ecediag%setup%los%pivot_point%phi (vecflt.type) (9.8.1.2.13)
horchordang1 (3510)	ecediag%setup%los%horchordang1 (vecflt.type) (9.8.1.2.13)
verchordang1 (3510)	ecediag%setup%los%verchordang1 (vecflt.type) (9.8.1.2.13)
width (3510)	ecediag%setup%los%width (vecflt.type) (9.8.1.2.13)
second_point (3510)	ecediag%setup%los%second_point (rzphi1Dexperimental) (9.8.1.3.374)
r (3480)	ecediag%setup%los%second_point%r (vecflt.type) (9.8.1.2.13)
z (3480)	ecediag%setup%los%second_point%z (vecflt.type) (9.8.1.2.13)
phi (3480)	ecediag%setup%los%second_point%phi (vecflt.type) (9.8.1.2.13)
horchordang2 (3510)	ecediag%setup%los%horchordang2 (vecflt.type) (9.8.1.2.13)

verchordang2 (3510)	ecediag%setup%los%verchordang2 (vecflt_type) (9.8.1.2.13)
third_point (3510)	ecediag%setup%los%third_point (rzphi1DExperimental) (9.8.1.3.374)
r (3480)	ecediag%setup%los%third_point%r (vecflt_type) (9.8.1.2.13)
z (3480)	ecediag%setup%los%third_point%z (vecflt_type) (9.8.1.2.13)
phi (3480)	ecediag%setup%los%third_point%phi (vecflt_type) (9.8.1.2.13)
nchordpoints (3510)	ecediag%setup%los%nchordpoints (integer) (9.8.1.1.2)
measure (3125)	ecediag%measure (ecemeasure) (9.8.1.3.181)
harmonic (3287)	ecediag%measure%harmonic (integer) (9.8.1.1.2)
position (3287)	ecediag%measure%position (rzphi1Dexp) (9.8.1.3.373)
r (3479)	ecediag%measure%position%r (exp1D) (9.8.1.3.204)
value (3310)	ecediag%measure%position%r%value (vecflt_type) (9.8.1.2.13)
abserror (3310)	ecediag%measure%position%r%abserror (vecflt_type) (9.8.1.2.13)
relerror (3310)	ecediag%measure%position%r%relerror (vecflt_type) (9.8.1.2.13)
z (3479)	ecediag%measure%position%z (exp1D) (9.8.1.3.204)
value (3310)	ecediag%measure%position%z%value (vecflt_type) (9.8.1.2.13)
abserror (3310)	ecediag%measure%position%z%abserror (vecflt_type) (9.8.1.2.13)
relerror (3310)	ecediag%measure%position%z%relerror (vecflt_type) (9.8.1.2.13)
phi (3479)	ecediag%measure%position%phi (exp1D) (9.8.1.3.204)
value (3310)	ecediag%measure%position%phi%value (vecflt_type) (9.8.1.2.13)
abserror (3310)	ecediag%measure%position%phi%abserror (vecflt_type) (9.8.1.2.13)
relerror (3310)	ecediag%measure%position%phi%relerror (vecflt_type) (9.8.1.2.13)
te (3287)	ecediag%measure%te (exp1D) (9.8.1.3.204)
value (3310)	ecediag%measure%te%value (vecflt_type) (9.8.1.2.13)
abserror (3310)	ecediag%measure%te%abserror (vecflt_type) (9.8.1.2.13)
relerror (3310)	ecediag%measure%te%relerror (vecflt_type) (9.8.1.2.13)
codeparam (3125)	ecediag%codeparam (codeparam) (9.8.1.3.84)
codename (3190)	ecediag%codeparam%codename (string) (9.8.1.1.3)
codeversion (3190)	ecediag%codeparam%codeversion (string) (9.8.1.1.3)
parameters (3190)	ecediag%codeparam%parameters (string) (9.8.1.1.3)
output_diag (3190)	ecediag%codeparam%output_diag (string) (9.8.1.1.3)
output_flag (3190)	ecediag%codeparam%output_flag (integer) (9.8.1.1.2)
time (3125)	ecediag%time (float) (9.8.1.1.1)

### 9.8.2.1.18 edge

datainfo (3126)	edge%datainfo (datainfo) (9.8.1.3.141)
dataprovider (3247)	edge%datainfo%dataprovider (string) (9.8.1.1.3)
putdate (3247)	edge%datainfo%putdate (string) (9.8.1.1.3)
source (3247)	edge%datainfo%source (string) (9.8.1.1.3)
comment (3247)	edge%datainfo%comment (string) (9.8.1.1.3)
cocos (3247)	edge%datainfo%cocos (integer) (9.8.1.1.2)
id (3247)	edge%datainfo%id (integer) (9.8.1.1.2)
isref (3247)	edge%datainfo%isref (integer) (9.8.1.1.2)
whatref (3247)	edge%datainfo%whatref (whatref) (9.8.1.3.513)
user (3619)	edge%datainfo%whatref%user (string) (9.8.1.1.3)
machine (3619)	edge%datainfo%whatref%machine (string) (9.8.1.1.3)
shot (3619)	edge%datainfo%whatref%shot (integer) (9.8.1.1.2)
run (3619)	edge%datainfo%whatref%run (integer) (9.8.1.1.2)
occurrence (3619)	edge%datainfo%whatref%occurrence (integer) (9.8.1.1.2)
putinfo (3247)	edge%datainfo%putinfo (putinfo) (9.8.1.3.349)
putmethod (3455)	edge%datainfo%putinfo%putmethod (string) (9.8.1.1.3)
putaccess (3455)	edge%datainfo%putinfo%putaccess (string) (9.8.1.1.3)
putlocation (3455)	edge%datainfo%putinfo%putlocation (string) (9.8.1.1.3)
rights (3455)	edge%datainfo%putinfo%rights (string) (9.8.1.1.3)
grid (3126)	edge%grid (complexgrid) (9.8.1.3.89)
uid (3195)	edge%grid%uid (integer) (9.8.1.1.2)
id (3195)	edge%grid%id (string) (9.8.1.1.3)
spaces (3195)	edge%grid%spaces(:) (complexgrid_space) (9.8.1.3.98)
geotype (3204)	edge%grid%spaces(:)%geotype (vecint_type) (9.8.1.2.14)
geotypeid (3204)	edge%grid%spaces(:)%geotypeid (vecstring_type) (9.8.1.2.15)
coordtype (3204)	edge%grid%spaces(:)%coordtype (matint_type) (9.8.1.2.11)

objects (3204)	edge%grid%spaces(:)%objects(:) (objects) (9.8.1.3.307)
boundary (3413)	edge%grid%spaces(:)%objects(:)%boundary (matint_type) (9.8.1.2.11)
neighbour (3413)	edge%grid%spaces(:)%objects(:)%neighbour (array3dint_type) (9.8.1.2.3)
geo (3413)	edge%grid%spaces(:)%objects(:)%geo (array4dflt_type) (9.8.1.2.4)
measure (3413)	edge%grid%spaces(:)%objects(:)%measure (matflt_type) (9.8.1.2.10)
xpoints (3204)	edge%grid%spaces(:)%xpoints (vecint_type) (9.8.1.2.14)
subgrids (3195)	edge%grid%subgrids(:) (complexgrid_subgrid) (9.8.1.3.99)
id (3205)	edge%grid%subgrids(:)%id (string) (9.8.1.1.3)
list (3205)	edge%grid%subgrids(:)%list(:) (complexgrid_objectlist) (9.8.1.3.93)
cls (3199)	edge%grid%subgrids(:)%list(:)%cls (vecint_type) (9.8.1.2.14)
indset (3199)	edge%grid%subgrids(:)%list(:)%indset(:) (complexgrid_indexlist) (9.8.1.3.91)
range (3197)	edge%grid%subgrids(:)%list(:)%indset(:)%range (vecint_type) (9.8.1.2.14)
ind (3197)	edge%grid%subgrids(:)%list(:)%indset(:)%ind (vecint_type) (9.8.1.2.14)
ind (3199)	edge%grid%subgrids(:)%list(:)%ind (matint_type) (9.8.1.2.11)
metric (3195)	edge%grid%metric (complexgrid_metric) (9.8.1.3.92)
measure (3198)	edge%grid%metric%measure(:) (complexgrid_scalar) (9.8.1.3.94)
griduid (3200)	edge%grid%metric%measure(:)%griduid (integer) (9.8.1.1.2)
subgrid (3200)	edge%grid%metric%measure(:)%subgrid (integer) (9.8.1.1.2)
scalar (3200)	edge%grid%metric%measure(:)%scalar (vecflt_type) (9.8.1.2.13)
vector (3200)	edge%grid%metric%measure(:)%vector (matflt_type) (9.8.1.2.10)
matrix (3200)	edge%grid%metric%measure(:)%matrix (array3dflt_type) (9.8.1.2.2)
g11 (3198)	edge%grid%metric%g11(:) (complexgrid_scalar) (9.8.1.3.94)
griduid (3200)	edge%grid%metric%g11(:)%griduid (integer) (9.8.1.1.2)
subgrid (3200)	edge%grid%metric%g11(:)%subgrid (integer) (9.8.1.1.2)
scalar (3200)	edge%grid%metric%g11(:)%scalar (vecflt_type) (9.8.1.2.13)
vector (3200)	edge%grid%metric%g11(:)%vector (matflt_type) (9.8.1.2.10)
matrix (3200)	edge%grid%metric%g11(:)%matrix (array3dflt_type) (9.8.1.2.2)
g12 (3198)	edge%grid%metric%g12(:) (complexgrid_scalar) (9.8.1.3.94)
griduid (3200)	edge%grid%metric%g12(:)%griduid (integer) (9.8.1.1.2)
subgrid (3200)	edge%grid%metric%g12(:)%subgrid (integer) (9.8.1.1.2)
scalar (3200)	edge%grid%metric%g12(:)%scalar (vecflt_type) (9.8.1.2.13)
vector (3200)	edge%grid%metric%g12(:)%vector (matflt_type) (9.8.1.2.10)
matrix (3200)	edge%grid%metric%g12(:)%matrix (array3dflt_type) (9.8.1.2.2)
g13 (3198)	edge%grid%metric%g13(:) (complexgrid_scalar) (9.8.1.3.94)
griduid (3200)	edge%grid%metric%g13(:)%griduid (integer) (9.8.1.1.2)
subgrid (3200)	edge%grid%metric%g13(:)%subgrid (integer) (9.8.1.1.2)
scalar (3200)	edge%grid%metric%g13(:)%scalar (vecflt_type) (9.8.1.2.13)
vector (3200)	edge%grid%metric%g13(:)%vector (matflt_type) (9.8.1.2.10)
matrix (3200)	edge%grid%metric%g13(:)%matrix (array3dflt_type) (9.8.1.2.2)
g22 (3198)	edge%grid%metric%g22(:) (complexgrid_scalar) (9.8.1.3.94)
griduid (3200)	edge%grid%metric%g22(:)%griduid (integer) (9.8.1.1.2)
subgrid (3200)	edge%grid%metric%g22(:)%subgrid (integer) (9.8.1.1.2)
scalar (3200)	edge%grid%metric%g22(:)%scalar (vecflt_type) (9.8.1.2.13)
vector (3200)	edge%grid%metric%g22(:)%vector (matflt_type) (9.8.1.2.10)
matrix (3200)	edge%grid%metric%g22(:)%matrix (array3dflt_type) (9.8.1.2.2)
g23 (3198)	edge%grid%metric%g23(:) (complexgrid_scalar) (9.8.1.3.94)
griduid (3200)	edge%grid%metric%g23(:)%griduid (integer) (9.8.1.1.2)
subgrid (3200)	edge%grid%metric%g23(:)%subgrid (integer) (9.8.1.1.2)
scalar (3200)	edge%grid%metric%g23(:)%scalar (vecflt_type) (9.8.1.2.13)
vector (3200)	edge%grid%metric%g23(:)%vector (matflt_type) (9.8.1.2.10)
matrix (3200)	edge%grid%metric%g23(:)%matrix (array3dflt_type) (9.8.1.2.2)
g33 (3198)	edge%grid%metric%g33(:) (complexgrid_scalar) (9.8.1.3.94)
griduid (3200)	edge%grid%metric%g33(:)%griduid (integer) (9.8.1.1.2)
subgrid (3200)	edge%grid%metric%g33(:)%subgrid (integer) (9.8.1.1.2)
scalar (3200)	edge%grid%metric%g33(:)%scalar (vecflt_type) (9.8.1.2.13)
vector (3200)	edge%grid%metric%g33(:)%vector (matflt_type) (9.8.1.2.10)
matrix (3200)	edge%grid%metric%g33(:)%matrix (array3dflt_type) (9.8.1.2.2)
jacobian (3198)	edge%grid%metric%jacobian(:) (complexgrid_scalar) (9.8.1.3.94)
griduid (3200)	edge%grid%metric%jacobian(:)%griduid (integer) (9.8.1.1.2)
subgrid (3200)	edge%grid%metric%jacobian(:)%subgrid (integer) (9.8.1.1.2)
scalar (3200)	edge%grid%metric%jacobian(:)%scalar (vecflt_type) (9.8.1.2.13)



vector (3200)	edge%grid%metric%jacobian(:)%vector (matflt.type) (9.8.1.2.10)
matrix (3200)	edge%grid%metric%jacobian(:)%matrix (array3dflt.type) (9.8.1.2.2)
geo (3195)	edge%grid%geo(:) (complexgrid_geo_global) (9.8.1.3.90)
geotype (3196)	edge%grid%geo(:)%geotype (integer) (9.8.1.1.2)
geotypeid (3196)	edge%grid%geo(:)%geotypeid (string) (9.8.1.1.3)
coordtype (3196)	edge%grid%geo(:)%coordtype (vecint.type) (9.8.1.2.14)
geo_matrix (3196)	edge%grid%geo(:)%geo_matrix(:) (complexgrid_scalar) (9.8.1.3.94)
griduid (3200)	edge%grid%geo(:)%geo_matrix(:)%griduid (integer) (9.8.1.1.2)
subgrid (3200)	edge%grid%geo(:)%geo_matrix(:)%subgrid (integer) (9.8.1.1.2)
scalar (3200)	edge%grid%geo(:)%geo_matrix(:)%scalar (vecflt.type) (9.8.1.2.13)
vector (3200)	edge%grid%geo(:)%geo_matrix(:)%vector (matflt.type) (9.8.1.2.10)
matrix (3200)	edge%grid%geo(:)%geo_matrix(:)%matrix (array3dflt.type) (9.8.1.2.2)
measure (3196)	edge%grid%geo(:)%measure(:) (complexgrid_scalar) (9.8.1.3.94)
griduid (3200)	edge%grid%geo(:)%measure(:)%griduid (integer) (9.8.1.1.2)
subgrid (3200)	edge%grid%geo(:)%measure(:)%subgrid (integer) (9.8.1.1.2)
scalar (3200)	edge%grid%geo(:)%measure(:)%scalar (vecflt.type) (9.8.1.2.13)
vector (3200)	edge%grid%geo(:)%measure(:)%vector (matflt.type) (9.8.1.2.10)
matrix (3200)	edge%grid%geo(:)%measure(:)%matrix (array3dflt.type) (9.8.1.2.2)
bases (3195)	edge%grid%bases(:) (complexgrid_vector) (9.8.1.3.100)
griduid (3206)	edge%grid%bases(:)%griduid (integer) (9.8.1.1.2)
label (3206)	edge%grid%bases(:)%label (string) (9.8.1.1.3)
comp (3206)	edge%grid%bases(:)%comp(:) (complexgrid_scalar) (9.8.1.3.94)
griduid (3200)	edge%grid%bases(:)%comp(:)%griduid (integer) (9.8.1.1.2)
subgrid (3200)	edge%grid%bases(:)%comp(:)%subgrid (integer) (9.8.1.1.2)
scalar (3200)	edge%grid%bases(:)%comp(:)%scalar (vecflt.type) (9.8.1.2.13)
vector (3200)	edge%grid%bases(:)%comp(:)%vector (matflt.type) (9.8.1.2.10)
matrix (3200)	edge%grid%bases(:)%comp(:)%matrix (array3dflt.type) (9.8.1.2.2)
align (3206)	edge%grid%bases(:)%align (vecint.type) (9.8.1.2.14)
alignid (3206)	edge%grid%bases(:)%alignid (vecstring.type) (9.8.1.2.15)
basis (3206)	edge%grid%bases(:)%basis (integer) (9.8.1.1.2)
species (3126)	edge%species(:) (species_desc) (9.8.1.3.417)
label (3523)	edge%species(:)%label (string) (9.8.1.1.3)
amn (3523)	edge%species(:)%amn (float) (9.8.1.1.1)
zn (3523)	edge%species(:)%zn (float) (9.8.1.1.1)
zmin (3523)	edge%species(:)%zmin (float) (9.8.1.1.1)
zmax (3523)	edge%species(:)%zmax (float) (9.8.1.1.1)
compositions (3126)	edge%compositions (compositions.type) (9.8.1.3.106)
nuclei (3212)	edge%compositions%nuclei(:) (nuclei) (9.8.1.3.306)
zn (3412)	edge%compositions%nuclei(:)%zn (float) (9.8.1.1.1)
amn (3412)	edge%compositions%nuclei(:)%amn (float) (9.8.1.1.1)
label (3412)	edge%compositions%nuclei(:)%label (string) (9.8.1.1.3)
ions (3212)	edge%compositions%ions(:) (ions) (9.8.1.3.247)
nucindex (3353)	edge%compositions%ions(:)%nucindex (integer) (9.8.1.1.2)
zion (3353)	edge%compositions%ions(:)%zion (float) (9.8.1.1.1)
imp_flag (3353)	edge%compositions%ions(:)%imp_flag (integer) (9.8.1.1.2)
label (3353)	edge%compositions%ions(:)%label (string) (9.8.1.1.3)
impurities (3212)	edge%compositions%impurities(:) (impurities) (9.8.1.3.244)
nucindex (3350)	edge%compositions%impurities(:)%nucindex (integer) (9.8.1.1.2)
i_ion (3350)	edge%compositions%impurities(:)%i_ion (integer) (9.8.1.1.2)
nzimp (3350)	edge%compositions%impurities(:)%nzimp (integer) (9.8.1.1.2)
zmin (3350)	edge%compositions%impurities(:)%zmin (vecflt.type) (9.8.1.2.13)
zmax (3350)	edge%compositions%impurities(:)%zmax (vecflt.type) (9.8.1.2.13)
label (3350)	edge%compositions%impurities(:)%label (vecstring.type) (9.8.1.2.15)
neutralscomp (3212)	edge%compositions%neutralscomp(:) (composition_neutralscomp) (9.8.1.3.105)
neutcomp (3211)	edge%compositions%neutralscomp(:)%neutcomp(:) (composition_neutrals_neutcomp) (9.8.1.3.104)
nucindex (3210)	edge%compositions%neutralscomp(:)%neutcomp(:)%nucindex (integer) (9.8.1.1.2)
multiplicity (3210)	edge%compositions%neutralscomp(:)%neutcomp(:)%multiplicity (integer) (9.8.1.1.2)
type (3211)	edge%compositions%neutralscomp(:)%type(:) (identifier) (9.8.1.3.242)
id (3348)	edge%compositions%neutralscomp(:)%type(:)%id (string) (9.8.1.1.3)
flag (3348)	edge%compositions%neutralscomp(:)%type(:)%flag (integer) (9.8.1.1.2)
description (3348)	edge%compositions%neutralscomp(:)%type(:)%description (string) (9.8.1.1.3)



label (3211)	edge%compositions%neutralscomp(:)%label (string) (9.8.1.1.3)
edgespecies (3212)	edge%compositions%edgespecies(:) (edgespecies) (9.8.1.3.192)
nucindex (3298)	edge%compositions%edgespecies(:)%nucindex (integer) (9.8.1.1.2)
zmin (3298)	edge%compositions%edgespecies(:)%zmin (float) (9.8.1.1.1)
zmax (3298)	edge%compositions%edgespecies(:)%zmax (float) (9.8.1.1.1)
label (3298)	edge%compositions%edgespecies(:)%label (string) (9.8.1.1.3)
signature (3212)	edge%compositions%signature (identifier) (9.8.1.3.242)
id (3348)	edge%compositions%signature%id (string) (9.8.1.1.3)
flag (3348)	edge%compositions%signature%flag (integer) (9.8.1.1.2)
description (3348)	edge%compositions%signature%description (string) (9.8.1.1.3)
fluid (3126)	edge%fluid (edge_fluid) (9.8.1.3.183)
ne (3289)	edge%fluid%ne (edge_fluid_scalar_simplestruct) (9.8.1.3.185)
value (3291)	edge%fluid%ne%value(:) (complexgrid_scalar) (9.8.1.3.94)
griduid (3200)	edge%fluid%ne%value(:)%griduid (integer) (9.8.1.1.2)
subgrid (3200)	edge%fluid%ne%value(:)%subgrid (integer) (9.8.1.1.2)
scalar (3200)	edge%fluid%ne%value(:)%scalar (vecflt_type) (9.8.1.2.13)
vector (3200)	edge%fluid%ne%value(:)%vector (matflt_type) (9.8.1.2.10)
matrix (3200)	edge%fluid%ne%value(:)%matrix (array3dflt_type) (9.8.1.2.2)
bndvalue (3291)	edge%fluid%ne%bndvalue(:) (complexgrid_scalar) (9.8.1.3.94)
griduid (3200)	edge%fluid%ne%bndvalue(:)%griduid (integer) (9.8.1.1.2)
subgrid (3200)	edge%fluid%ne%bndvalue(:)%subgrid (integer) (9.8.1.1.2)
scalar (3200)	edge%fluid%ne%bndvalue(:)%scalar (vecflt_type) (9.8.1.2.13)
vector (3200)	edge%fluid%ne%bndvalue(:)%vector (matflt_type) (9.8.1.2.10)
matrix (3200)	edge%fluid%ne%bndvalue(:)%matrix (array3dflt_type) (9.8.1.2.2)
flux (3291)	edge%fluid%ne%flux(:) (complexgrid_vector) (9.8.1.3.100)
griduid (3206)	edge%fluid%ne%flux(:)%griduid (integer) (9.8.1.1.2)
label (3206)	edge%fluid%ne%flux(:)%label (string) (9.8.1.1.3)
comp (3206)	edge%fluid%ne%flux(:)%comp(:) (complexgrid_scalar) (9.8.1.3.94)
griduid (3200)	edge%fluid%ne%flux(:)%comp(:)%griduid (integer) (9.8.1.1.2)
subgrid (3200)	edge%fluid%ne%flux(:)%comp(:)%subgrid (integer) (9.8.1.1.2)
scalar (3200)	edge%fluid%ne%flux(:)%comp(:)%scalar (vecflt_type) (9.8.1.2.13)
vector (3200)	edge%fluid%ne%flux(:)%comp(:)%vector (matflt_type) (9.8.1.2.10)
matrix (3200)	edge%fluid%ne%flux(:)%comp(:)%matrix (array3dflt_type) (9.8.1.2.2)
align (3206)	edge%fluid%ne%flux(:)%align (vecint_type) (9.8.1.2.14)
alignid (3206)	edge%fluid%ne%flux(:)%alignid (vecstring_type) (9.8.1.2.15)
basis (3206)	edge%fluid%ne%flux(:)%basis (integer) (9.8.1.1.2)
bndflux (3291)	edge%fluid%ne%bndflux(:) (complexgrid_vector) (9.8.1.3.100)
griduid (3206)	edge%fluid%ne%bndflux(:)%griduid (integer) (9.8.1.1.2)
label (3206)	edge%fluid%ne%bndflux(:)%label (string) (9.8.1.1.3)
comp (3206)	edge%fluid%ne%bndflux(:)%comp(:) (complexgrid_scalar) (9.8.1.3.94)
griduid (3200)	edge%fluid%ne%bndflux(:)%comp(:)%griduid (integer) (9.8.1.1.2)
subgrid (3200)	edge%fluid%ne%bndflux(:)%comp(:)%subgrid (integer) (9.8.1.1.2)
scalar (3200)	edge%fluid%ne%bndflux(:)%comp(:)%scalar (vecflt_type) (9.8.1.2.13)
vector (3200)	edge%fluid%ne%bndflux(:)%comp(:)%vector (matflt_type) (9.8.1.2.10)
matrix (3200)	edge%fluid%ne%bndflux(:)%comp(:)%matrix (array3dflt_type) (9.8.1.2.2)
align (3206)	edge%fluid%ne%bndflux(:)%align (vecint_type) (9.8.1.2.14)
alignid (3206)	edge%fluid%ne%bndflux(:)%alignid (vecstring_type) (9.8.1.2.15)
basis (3206)	edge%fluid%ne%bndflux(:)%basis (integer) (9.8.1.1.2)
transpcoeff (3291)	edge%fluid%ne%transpcoeff(:) (edge_fluid_scalar_transpcoeff) (9.8.1.3.186)
d (3292)	edge%fluid%ne%transpcoeff(:)%d (complexgrid_vector_simplestruct) (9.8.1.3.101)
label (3207)	edge%fluid%ne%transpcoeff(:)%d%label (string) (9.8.1.1.3)
comp (3207)	edge%fluid%ne%transpcoeff(:)%d%comp(:) (complexgrid_scalar) (9.8.1.3.94)
griduid (3200)	edge%fluid%ne%transpcoeff(:)%d%comp(:)%griduid (integer) (9.8.1.1.2)
subgrid (3200)	edge%fluid%ne%transpcoeff(:)%d%comp(:)%subgrid (integer) (9.8.1.1.2)
scalar (3200)	edge%fluid%ne%transpcoeff(:)%d%comp(:)%scalar (vecflt_type) (9.8.1.2.13)
vector (3200)	edge%fluid%ne%transpcoeff(:)%d%comp(:)%vector (matflt_type) (9.8.1.2.10)
matrix (3200)	edge%fluid%ne%transpcoeff(:)%d%comp(:)%matrix (array3dflt_type) (9.8.1.2.2)
align (3207)	edge%fluid%ne%transpcoeff(:)%d%align (vecint_type) (9.8.1.2.14)
alignid (3207)	edge%fluid%ne%transpcoeff(:)%d%alignid (vecstring_type) (9.8.1.2.15)
v (3292)	edge%fluid%ne%transpcoeff(:)%v (complexgrid_vector_simplestruct) (9.8.1.3.101)
label (3207)	edge%fluid%ne%transpcoeff(:)%v%label (string) (9.8.1.1.3)

comp (3207)	edge%fluid%ne%transpcoeff(:)%v%comp(:) (complexgrid_scalar) (9.8.1.3.94)
griduid (3200)	edge%fluid%ne%transpcoeff(:)%v%comp(:)%griduid (integer) (9.8.1.1.2)
subgrid (3200)	edge%fluid%ne%transpcoeff(:)%v%comp(:)%subgrid (integer) (9.8.1.1.2)
scalar (3200)	edge%fluid%ne%transpcoeff(:)%v%comp(:)%scalar (vecflt_type) (9.8.1.2.13)
vector (3200)	edge%fluid%ne%transpcoeff(:)%v%comp(:)%vector (matflt_type) (9.8.1.2.10)
matrix (3200)	edge%fluid%ne%transpcoeff(:)%v%comp(:)%matrix (array3dflt_type) (9.8.1.2.2)
align (3207)	edge%fluid%ne%transpcoeff(:)%v%align (vecint_type) (9.8.1.2.14)
alignid (3207)	edge%fluid%ne%transpcoeff(:)%v%alignid (vecstring_type) (9.8.1.2.15)
source (3291)	edge%fluid%ne%source(:) (complexgrid_scalar) (9.8.1.3.94)
griduid (3200)	edge%fluid%ne%source(:)%griduid (integer) (9.8.1.1.2)
subgrid (3200)	edge%fluid%ne%source(:)%subgrid (integer) (9.8.1.1.2)
scalar (3200)	edge%fluid%ne%source(:)%scalar (vecflt_type) (9.8.1.2.13)
vector (3200)	edge%fluid%ne%source(:)%vector (matflt_type) (9.8.1.2.10)
matrix (3200)	edge%fluid%ne%source(:)%matrix (array3dflt_type) (9.8.1.2.2)
ni (3289)	edge%fluid%ni(:) (edge_fluid_scalar) (9.8.1.3.184)
value (3290)	edge%fluid%ni(:)%value(:) (complexgrid_scalar) (9.8.1.3.94)
griduid (3200)	edge%fluid%ni(:)%value(:)%griduid (integer) (9.8.1.1.2)
subgrid (3200)	edge%fluid%ni(:)%value(:)%subgrid (integer) (9.8.1.1.2)
scalar (3200)	edge%fluid%ni(:)%value(:)%scalar (vecflt_type) (9.8.1.2.13)
vector (3200)	edge%fluid%ni(:)%value(:)%vector (matflt_type) (9.8.1.2.10)
matrix (3200)	edge%fluid%ni(:)%value(:)%matrix (array3dflt_type) (9.8.1.2.2)
bndvalue (3290)	edge%fluid%ni(:)%bndvalue(:) (complexgrid_scalar) (9.8.1.3.94)
griduid (3200)	edge%fluid%ni(:)%bndvalue(:)%griduid (integer) (9.8.1.1.2)
subgrid (3200)	edge%fluid%ni(:)%bndvalue(:)%subgrid (integer) (9.8.1.1.2)
scalar (3200)	edge%fluid%ni(:)%bndvalue(:)%scalar (vecflt_type) (9.8.1.2.13)
vector (3200)	edge%fluid%ni(:)%bndvalue(:)%vector (matflt_type) (9.8.1.2.10)
matrix (3200)	edge%fluid%ni(:)%bndvalue(:)%matrix (array3dflt_type) (9.8.1.2.2)
flux (3290)	edge%fluid%ni(:)%flux(:) (complexgrid_vector) (9.8.1.3.100)
griduid (3206)	edge%fluid%ni(:)%flux(:)%griduid (integer) (9.8.1.1.2)
label (3206)	edge%fluid%ni(:)%flux(:)%label (string) (9.8.1.1.3)
comp (3206)	edge%fluid%ni(:)%flux(:)%comp(:) (complexgrid_scalar) (9.8.1.3.94)
griduid (3200)	edge%fluid%ni(:)%flux(:)%comp(:)%griduid (integer) (9.8.1.1.2)
subgrid (3200)	edge%fluid%ni(:)%flux(:)%comp(:)%subgrid (integer) (9.8.1.1.2)
scalar (3200)	edge%fluid%ni(:)%flux(:)%comp(:)%scalar (vecflt_type) (9.8.1.2.13)
vector (3200)	edge%fluid%ni(:)%flux(:)%comp(:)%vector (matflt_type) (9.8.1.2.10)
matrix (3200)	edge%fluid%ni(:)%flux(:)%comp(:)%matrix (array3dflt_type) (9.8.1.2.2)
align (3206)	edge%fluid%ni(:)%flux(:)%align (vecint_type) (9.8.1.2.14)
alignid (3206)	edge%fluid%ni(:)%flux(:)%alignid (vecstring_type) (9.8.1.2.15)
basis (3206)	edge%fluid%ni(:)%flux(:)%basis (integer) (9.8.1.1.2)
bndflux (3290)	edge%fluid%ni(:)%bndflux(:) (complexgrid_vector) (9.8.1.3.100)
griduid (3206)	edge%fluid%ni(:)%bndflux(:)%griduid (integer) (9.8.1.1.2)
label (3206)	edge%fluid%ni(:)%bndflux(:)%label (string) (9.8.1.1.3)
comp (3206)	edge%fluid%ni(:)%bndflux(:)%comp(:) (complexgrid_scalar) (9.8.1.3.94)
griduid (3200)	edge%fluid%ni(:)%bndflux(:)%comp(:)%griduid (integer) (9.8.1.1.2)
subgrid (3200)	edge%fluid%ni(:)%bndflux(:)%comp(:)%subgrid (integer) (9.8.1.1.2)
scalar (3200)	edge%fluid%ni(:)%bndflux(:)%comp(:)%scalar (vecflt_type) (9.8.1.2.13)
vector (3200)	edge%fluid%ni(:)%bndflux(:)%comp(:)%vector (matflt_type) (9.8.1.2.10)
matrix (3200)	edge%fluid%ni(:)%bndflux(:)%comp(:)%matrix (array3dflt_type) (9.8.1.2.2)
align (3206)	edge%fluid%ni(:)%bndflux(:)%align (vecint_type) (9.8.1.2.14)
alignid (3206)	edge%fluid%ni(:)%bndflux(:)%alignid (vecstring_type) (9.8.1.2.15)
basis (3206)	edge%fluid%ni(:)%bndflux(:)%basis (integer) (9.8.1.1.2)
transpcoeff (3290)	edge%fluid%ni(:)%transpcoeff(:) (edge_fluid_scalar_transpcoeff) (9.8.1.3.186)
d (3292)	edge%fluid%ni(:)%transpcoeff(:)%d (complexgrid_vector_simplestruct) (9.8.1.3.101)
label (3207)	edge%fluid%ni(:)%transpcoeff(:)%d%label (string) (9.8.1.1.3)
comp (3207)	edge%fluid%ni(:)%transpcoeff(:)%d%comp(:) (complexgrid_scalar) (9.8.1.3.94)
griduid (3200)	edge%fluid%ni(:)%transpcoeff(:)%d%comp(:)%griduid (integer) (9.8.1.1.2)
subgrid (3200)	edge%fluid%ni(:)%transpcoeff(:)%d%comp(:)%subgrid (integer) (9.8.1.1.2)
scalar (3200)	edge%fluid%ni(:)%transpcoeff(:)%d%comp(:)%scalar (vecflt_type) (9.8.1.2.13)
vector (3200)	edge%fluid%ni(:)%transpcoeff(:)%d%comp(:)%vector (matflt_type) (9.8.1.2.10)
matrix (3200)	edge%fluid%ni(:)%transpcoeff(:)%d%comp(:)%matrix (array3dflt_type) (9.8.1.2.2)
align (3207)	edge%fluid%ni(:)%transpcoeff(:)%d%align (vecint_type) (9.8.1.2.14)

alignid (3207)	edge%fluid%ni(:)%transpcoeff(:)%d%alignid (vecstring_type) (9.8.1.2.15)
v (3292)	edge%fluid%ni(:)%transpcoeff(:)%v (complexgrid_vector_simplestruct) (9.8.1.3.101)
label (3207)	edge%fluid%ni(:)%transpcoeff(:)%v%label (string) (9.8.1.1.3)
comp (3207)	edge%fluid%ni(:)%transpcoeff(:)%v%comp(:) (complexgrid_scalar) (9.8.1.3.94)
griduid (3200)	edge%fluid%ni(:)%transpcoeff(:)%v%comp(:)%griduid (integer) (9.8.1.1.2)
subgrid (3200)	edge%fluid%ni(:)%transpcoeff(:)%v%comp(:)%subgrid (integer) (9.8.1.1.2)
scalar (3200)	edge%fluid%ni(:)%transpcoeff(:)%v%comp(:)%scalar (vecflt_type) (9.8.1.2.13)
vector (3200)	edge%fluid%ni(:)%transpcoeff(:)%v%comp(:)%vector (matflt_type) (9.8.1.2.10)
matrix (3200)	edge%fluid%ni(:)%transpcoeff(:)%v%comp(:)%matrix (array3dflt_type) (9.8.1.2.2)
align (3207)	edge%fluid%ni(:)%transpcoeff(:)%v%align (vecint_type) (9.8.1.2.14)
alignid (3207)	edge%fluid%ni(:)%transpcoeff(:)%v%alignid (vecstring_type) (9.8.1.2.15)
source (3290)	edge%fluid%ni(:)%source(:) (complexgrid_scalar) (9.8.1.3.94)
griduid (3200)	edge%fluid%ni(:)%source(:)%griduid (integer) (9.8.1.1.2)
subgrid (3200)	edge%fluid%ni(:)%source(:)%subgrid (integer) (9.8.1.1.2)
scalar (3200)	edge%fluid%ni(:)%source(:)%scalar (vecflt_type) (9.8.1.2.13)
vector (3200)	edge%fluid%ni(:)%source(:)%vector (matflt_type) (9.8.1.2.10)
matrix (3200)	edge%fluid%ni(:)%source(:)%matrix (array3dflt_type) (9.8.1.2.2)
ve (3289)	edge%fluid%ve (edge_fluid_vector_simplestruct) (9.8.1.3.188)
griduid (3294)	edge%fluid%ve%griduid (integer) (9.8.1.1.2)
basis (3294)	edge%fluid%ve%basis (integer) (9.8.1.1.2)
comps (3294)	edge%fluid%ve%comps(:) (edge_fluid_scalar) (9.8.1.3.184)
value (3290)	edge%fluid%ve%comps(:)%value(:) (complexgrid_scalar) (9.8.1.3.94)
griduid (3200)	edge%fluid%ve%comps(:)%value(:)%griduid (integer) (9.8.1.1.2)
subgrid (3200)	edge%fluid%ve%comps(:)%value(:)%subgrid (integer) (9.8.1.1.2)
scalar (3200)	edge%fluid%ve%comps(:)%value(:)%scalar (vecflt_type) (9.8.1.2.13)
vector (3200)	edge%fluid%ve%comps(:)%value(:)%vector (matflt_type) (9.8.1.2.10)
matrix (3200)	edge%fluid%ve%comps(:)%value(:)%matrix (array3dflt_type) (9.8.1.2.2)
bndvalue (3290)	edge%fluid%ve%comps(:)%bndvalue(:) (complexgrid_scalar) (9.8.1.3.94)
griduid (3200)	edge%fluid%ve%comps(:)%bndvalue(:)%griduid (integer) (9.8.1.1.2)
subgrid (3200)	edge%fluid%ve%comps(:)%bndvalue(:)%subgrid (integer) (9.8.1.1.2)
scalar (3200)	edge%fluid%ve%comps(:)%bndvalue(:)%scalar (vecflt_type) (9.8.1.2.13)
vector (3200)	edge%fluid%ve%comps(:)%bndvalue(:)%vector (matflt_type) (9.8.1.2.10)
matrix (3200)	edge%fluid%ve%comps(:)%bndvalue(:)%matrix (array3dflt_type) (9.8.1.2.2)
flux (3290)	edge%fluid%ve%comps(:)%flux(:) (complexgrid_vector) (9.8.1.3.100)
griduid (3206)	edge%fluid%ve%comps(:)%flux(:)%griduid (integer) (9.8.1.1.2)
label (3206)	edge%fluid%ve%comps(:)%flux(:)%label (string) (9.8.1.1.3)
comp (3206)	edge%fluid%ve%comps(:)%flux(:)%comp(:) (complexgrid_scalar) (9.8.1.3.94)
griduid (3200)	edge%fluid%ve%comps(:)%flux(:)%comp(:)%griduid (integer) (9.8.1.1.2)
subgrid (3200)	edge%fluid%ve%comps(:)%flux(:)%comp(:)%subgrid (integer) (9.8.1.1.2)
scalar (3200)	edge%fluid%ve%comps(:)%flux(:)%comp(:)%scalar (vecflt_type) (9.8.1.2.13)
vector (3200)	edge%fluid%ve%comps(:)%flux(:)%comp(:)%vector (matflt_type) (9.8.1.2.10)
matrix (3200)	edge%fluid%ve%comps(:)%flux(:)%comp(:)%matrix (array3dflt_type) (9.8.1.2.2)
align (3206)	edge%fluid%ve%comps(:)%flux(:)%align (vecint_type) (9.8.1.2.14)
alignid (3206)	edge%fluid%ve%comps(:)%flux(:)%alignid (vecstring_type) (9.8.1.2.15)
basis (3206)	edge%fluid%ve%comps(:)%flux(:)%basis (integer) (9.8.1.1.2)
bndflux (3290)	edge%fluid%ve%comps(:)%bndflux(:) (complexgrid_vector) (9.8.1.3.100)
griduid (3206)	edge%fluid%ve%comps(:)%bndflux(:)%griduid (integer) (9.8.1.1.2)
label (3206)	edge%fluid%ve%comps(:)%bndflux(:)%label (string) (9.8.1.1.3)
comp (3206)	edge%fluid%ve%comps(:)%bndflux(:)%comp(:) (complexgrid_scalar) (9.8.1.3.94)
griduid (3200)	edge%fluid%ve%comps(:)%bndflux(:)%comp(:)%griduid (integer) (9.8.1.1.2)
subgrid (3200)	edge%fluid%ve%comps(:)%bndflux(:)%comp(:)%subgrid (integer) (9.8.1.1.2)
scalar (3200)	edge%fluid%ve%comps(:)%bndflux(:)%comp(:)%scalar (vecflt_type) (9.8.1.2.13)
vector (3200)	edge%fluid%ve%comps(:)%bndflux(:)%comp(:)%vector (matflt_type) (9.8.1.2.10)
matrix (3200)	edge%fluid%ve%comps(:)%bndflux(:)%comp(:)%matrix (array3dflt_type) (9.8.1.2.2)
align (3206)	edge%fluid%ve%comps(:)%bndflux(:)%align (vecint_type) (9.8.1.2.14)
alignid (3206)	edge%fluid%ve%comps(:)%bndflux(:)%alignid (vecstring_type) (9.8.1.2.15)
basis (3206)	edge%fluid%ve%comps(:)%bndflux(:)%basis (integer) (9.8.1.1.2)
transpcoeff (3290)	edge%fluid%ve%comps(:)%transpcoeff(:) (edge_fluid_scalar_transpcoeff) (9.8.1.3.186)
d (3292)	edge%fluid%ve%comps(:)%transpcoeff(:)%d (complexgrid_vector_simplestruct) (9.8.1.3.101)
label (3207)	edge%fluid%ve%comps(:)%transpcoeff(:)%d%label (string) (9.8.1.1.3)
comp (3207)	edge%fluid%ve%comps(:)%transpcoeff(:)%d%comp(:) (complexgrid_scalar) (9.8.1.3.94)

griduid (3200)	edge%fluid%ve%comps(:)%transpcoeff(:)%d%comp(:)%griduid (integer) (9.8.1.1.2)
subgrid (3200)	edge%fluid%ve%comps(:)%transpcoeff(:)%d%comp(:)%subgrid (integer) (9.8.1.1.2)
scalar (3200)	edge%fluid%ve%comps(:)%transpcoeff(:)%d%comp(:)%scalar (vecflt_type) (9.8.1.2.13)
vector (3200)	edge%fluid%ve%comps(:)%transpcoeff(:)%d%comp(:)%vector (matflt_type) (9.8.1.2.10)
matrix (3200)	edge%fluid%ve%comps(:)%transpcoeff(:)%d%comp(:)%matrix (array3dflt_type) (9.8.1.2.2)
align (3207)	edge%fluid%ve%comps(:)%transpcoeff(:)%d%align (vecint_type) (9.8.1.2.14)
alignid (3207)	edge%fluid%ve%comps(:)%transpcoeff(:)%d%alignid (vecstring_type) (9.8.1.2.15)
v (3292)	edge%fluid%ve%comps(:)%transpcoeff(:)%v (complexgrid_vector_simplestruct) (9.8.1.3.101)
label (3207)	edge%fluid%ve%comps(:)%transpcoeff(:)%v%label (string) (9.8.1.1.3)
comp (3207)	edge%fluid%ve%comps(:)%transpcoeff(:)%v%comp(:) (complexgrid_scalar) (9.8.1.3.94)
griduid (3200)	edge%fluid%ve%comps(:)%transpcoeff(:)%v%comp(:)%griduid (integer) (9.8.1.1.2)
subgrid (3200)	edge%fluid%ve%comps(:)%transpcoeff(:)%v%comp(:)%subgrid (integer) (9.8.1.1.2)
scalar (3200)	edge%fluid%ve%comps(:)%transpcoeff(:)%v%comp(:)%scalar (vecflt_type) (9.8.1.2.13)
vector (3200)	edge%fluid%ve%comps(:)%transpcoeff(:)%v%comp(:)%vector (matflt_type) (9.8.1.2.10)
matrix (3200)	edge%fluid%ve%comps(:)%transpcoeff(:)%v%comp(:)%matrix (array3dflt_type) (9.8.1.2.2)
align (3207)	edge%fluid%ve%comps(:)%transpcoeff(:)%v%align (vecint_type) (9.8.1.2.14)
alignid (3207)	edge%fluid%ve%comps(:)%transpcoeff(:)%v%alignid (vecstring_type) (9.8.1.2.15)
source (3290)	edge%fluid%ve%comps(:)%source(:) (complexgrid_scalar) (9.8.1.3.94)
griduid (3200)	edge%fluid%ve%comps(:)%source(:)%griduid (integer) (9.8.1.1.2)
subgrid (3200)	edge%fluid%ve%comps(:)%source(:)%subgrid (integer) (9.8.1.1.2)
scalar (3200)	edge%fluid%ve%comps(:)%source(:)%scalar (vecflt_type) (9.8.1.2.13)
vector (3200)	edge%fluid%ve%comps(:)%source(:)%vector (matflt_type) (9.8.1.2.10)
matrix (3200)	edge%fluid%ve%comps(:)%source(:)%matrix (array3dflt_type) (9.8.1.2.2)
align (3294)	edge%fluid%ve%align (vecint_type) (9.8.1.2.14)
alignid (3294)	edge%fluid%ve%alignid (vecstring_type) (9.8.1.2.15)
vi (3289)	edge%fluid%vi(:) (edge_fluid_vector) (9.8.1.3.187)
griduid (3293)	edge%fluid%vi(:)%griduid (integer) (9.8.1.1.2)
basis (3293)	edge%fluid%vi(:)%basis (integer) (9.8.1.1.2)
align (3293)	edge%fluid%vi(:)%align (vecint_type) (9.8.1.2.14)
alignid (3293)	edge%fluid%vi(:)%alignid (vecstring_type) (9.8.1.2.15)
comps (3293)	edge%fluid%vi(:)%comps(:) (edge_fluid_scalar) (9.8.1.3.184)
value (3290)	edge%fluid%vi(:)%comps(:)%value(:) (complexgrid_scalar) (9.8.1.3.94)
griduid (3200)	edge%fluid%vi(:)%comps(:)%value(:)%griduid (integer) (9.8.1.1.2)
subgrid (3200)	edge%fluid%vi(:)%comps(:)%value(:)%subgrid (integer) (9.8.1.1.2)
scalar (3200)	edge%fluid%vi(:)%comps(:)%value(:)%scalar (vecflt_type) (9.8.1.2.13)
vector (3200)	edge%fluid%vi(:)%comps(:)%value(:)%vector (matflt_type) (9.8.1.2.10)
matrix (3200)	edge%fluid%vi(:)%comps(:)%value(:)%matrix (array3dflt_type) (9.8.1.2.2)
bndvalue (3290)	edge%fluid%vi(:)%comps(:)%bndvalue(:) (complexgrid_scalar) (9.8.1.3.94)
griduid (3200)	edge%fluid%vi(:)%comps(:)%bndvalue(:)%griduid (integer) (9.8.1.1.2)
subgrid (3200)	edge%fluid%vi(:)%comps(:)%bndvalue(:)%subgrid (integer) (9.8.1.1.2)
scalar (3200)	edge%fluid%vi(:)%comps(:)%bndvalue(:)%scalar (vecflt_type) (9.8.1.2.13)
vector (3200)	edge%fluid%vi(:)%comps(:)%bndvalue(:)%vector (matflt_type) (9.8.1.2.10)
matrix (3200)	edge%fluid%vi(:)%comps(:)%bndvalue(:)%matrix (array3dflt_type) (9.8.1.2.2)
flux (3290)	edge%fluid%vi(:)%comps(:)%flux(:) (complexgrid_vector) (9.8.1.3.100)
griduid (3206)	edge%fluid%vi(:)%comps(:)%flux(:)%griduid (integer) (9.8.1.1.2)
label (3206)	edge%fluid%vi(:)%comps(:)%flux(:)%label (string) (9.8.1.1.3)
comp (3206)	edge%fluid%vi(:)%comps(:)%flux(:)%comp(:) (complexgrid_scalar) (9.8.1.3.94)
griduid (3200)	edge%fluid%vi(:)%comps(:)%flux(:)%comp(:)%griduid (integer) (9.8.1.1.2)
subgrid (3200)	edge%fluid%vi(:)%comps(:)%flux(:)%comp(:)%subgrid (integer) (9.8.1.1.2)
scalar (3200)	edge%fluid%vi(:)%comps(:)%flux(:)%comp(:)%scalar (vecflt_type) (9.8.1.2.13)
vector (3200)	edge%fluid%vi(:)%comps(:)%flux(:)%comp(:)%vector (matflt_type) (9.8.1.2.10)
matrix (3200)	edge%fluid%vi(:)%comps(:)%flux(:)%comp(:)%matrix (array3dflt_type) (9.8.1.2.2)
align (3206)	edge%fluid%vi(:)%comps(:)%flux(:)%align (vecint_type) (9.8.1.2.14)
alignid (3206)	edge%fluid%vi(:)%comps(:)%flux(:)%alignid (vecstring_type) (9.8.1.2.15)
basis (3206)	edge%fluid%vi(:)%comps(:)%flux(:)%basis (integer) (9.8.1.1.2)
bndflux (3290)	edge%fluid%vi(:)%comps(:)%bndflux(:) (complexgrid_vector) (9.8.1.3.100)
griduid (3206)	edge%fluid%vi(:)%comps(:)%bndflux(:)%griduid (integer) (9.8.1.1.2)
label (3206)	edge%fluid%vi(:)%comps(:)%bndflux(:)%label (string) (9.8.1.1.3)
comp (3206)	edge%fluid%vi(:)%comps(:)%bndflux(:)%comp(:) (complexgrid_scalar) (9.8.1.3.94)
griduid (3200)	edge%fluid%vi(:)%comps(:)%bndflux(:)%comp(:)%griduid (integer) (9.8.1.1.2)
subgrid (3200)	edge%fluid%vi(:)%comps(:)%bndflux(:)%comp(:)%subgrid (integer) (9.8.1.1.2)

scalar (3200)	edge%fluid%vi(:)%comps(:)%bndflux(:)%comp(:)%scalar (vecflt_type) (9.8.1.2.13)
vector (3200)	edge%fluid%vi(:)%comps(:)%bndflux(:)%comp(:)%vector (matflt_type) (9.8.1.2.10)
matrix (3200)	edge%fluid%vi(:)%comps(:)%bndflux(:)%comp(:)%matrix (array3dflt_type) (9.8.1.2.2)
align (3206)	edge%fluid%vi(:)%comps(:)%bndflux(:)%align (vecint_type) (9.8.1.2.14)
alignid (3206)	edge%fluid%vi(:)%comps(:)%bndflux(:)%alignid (vecstring_type) (9.8.1.2.15)
basis (3206)	edge%fluid%vi(:)%comps(:)%bndflux(:)%basis (integer) (9.8.1.1.2)
transpcoeff (3290)	edge%fluid%vi(:)%comps(:)%transpcoeff(:) (edge_fluid_scalar_transpcoeff) (9.8.1.3.186)
d (3292)	edge%fluid%vi(:)%comps(:)%transpcoeff(:)%d (complexgrid_vector_simplestruct) (9.8.1.3.101)
label (3207)	edge%fluid%vi(:)%comps(:)%transpcoeff(:)%d%label (string) (9.8.1.1.3)
comp (3207)	edge%fluid%vi(:)%comps(:)%transpcoeff(:)%d%comp(:) (complexgrid_scalar) (9.8.1.3.94)
griduid (3200)	edge%fluid%vi(:)%comps(:)%transpcoeff(:)%d%comp(:)%griduid (integer) (9.8.1.1.2)
subgrid (3200)	edge%fluid%vi(:)%comps(:)%transpcoeff(:)%d%comp(:)%subgrid (integer) (9.8.1.1.2)
scalar (3200)	edge%fluid%vi(:)%comps(:)%transpcoeff(:)%d%comp(:)%scalar (vecflt_type) (9.8.1.2.13)
vector (3200)	edge%fluid%vi(:)%comps(:)%transpcoeff(:)%d%comp(:)%vector (matflt_type) (9.8.1.2.10)
matrix (3200)	edge%fluid%vi(:)%comps(:)%transpcoeff(:)%d%comp(:)%matrix (array3dflt_type) (9.8.1.2.2)
align (3207)	edge%fluid%vi(:)%comps(:)%transpcoeff(:)%d%align (vecint_type) (9.8.1.2.14)
alignid (3207)	edge%fluid%vi(:)%comps(:)%transpcoeff(:)%d%alignid (vecstring_type) (9.8.1.2.15)
v (3292)	edge%fluid%vi(:)%comps(:)%transpcoeff(:)%v (complexgrid_vector_simplestruct) (9.8.1.3.101)
label (3207)	edge%fluid%vi(:)%comps(:)%transpcoeff(:)%v%label (string) (9.8.1.1.3)
comp (3207)	edge%fluid%vi(:)%comps(:)%transpcoeff(:)%v%comp(:) (complexgrid_scalar) (9.8.1.3.94)
griduid (3200)	edge%fluid%vi(:)%comps(:)%transpcoeff(:)%v%comp(:)%griduid (integer) (9.8.1.1.2)
subgrid (3200)	edge%fluid%vi(:)%comps(:)%transpcoeff(:)%v%comp(:)%subgrid (integer) (9.8.1.1.2)
scalar (3200)	edge%fluid%vi(:)%comps(:)%transpcoeff(:)%v%comp(:)%scalar (vecflt_type) (9.8.1.2.13)
vector (3200)	edge%fluid%vi(:)%comps(:)%transpcoeff(:)%v%comp(:)%vector (matflt_type) (9.8.1.2.10)
matrix (3200)	edge%fluid%vi(:)%comps(:)%transpcoeff(:)%v%comp(:)%matrix (array3dflt_type) (9.8.1.2.2)
align (3207)	edge%fluid%vi(:)%comps(:)%transpcoeff(:)%v%align (vecint_type) (9.8.1.2.14)
alignid (3207)	edge%fluid%vi(:)%comps(:)%transpcoeff(:)%v%alignid (vecstring_type) (9.8.1.2.15)
source (3290)	edge%fluid%vi(:)%comps(:)%source(:) (complexgrid_scalar) (9.8.1.3.94)
griduid (3200)	edge%fluid%vi(:)%comps(:)%source(:)%griduid (integer) (9.8.1.1.2)
subgrid (3200)	edge%fluid%vi(:)%comps(:)%source(:)%subgrid (integer) (9.8.1.1.2)
scalar (3200)	edge%fluid%vi(:)%comps(:)%source(:)%scalar (vecflt_type) (9.8.1.2.13)
vector (3200)	edge%fluid%vi(:)%comps(:)%source(:)%vector (matflt_type) (9.8.1.2.10)
matrix (3200)	edge%fluid%vi(:)%comps(:)%source(:)%matrix (array3dflt_type) (9.8.1.2.2)
te (3289)	edge%fluid%te (edge_fluid_scalar_simplestruct) (9.8.1.3.185)
value (3291)	edge%fluid%te%value(:) (complexgrid_scalar) (9.8.1.3.94)
griduid (3200)	edge%fluid%te%value(:)%griduid (integer) (9.8.1.1.2)
subgrid (3200)	edge%fluid%te%value(:)%subgrid (integer) (9.8.1.1.2)
scalar (3200)	edge%fluid%te%value(:)%scalar (vecflt_type) (9.8.1.2.13)
vector (3200)	edge%fluid%te%value(:)%vector (matflt_type) (9.8.1.2.10)
matrix (3200)	edge%fluid%te%value(:)%matrix (array3dflt_type) (9.8.1.2.2)
bndvalue (3291)	edge%fluid%te%bndvalue(:) (complexgrid_scalar) (9.8.1.3.94)
griduid (3200)	edge%fluid%te%bndvalue(:)%griduid (integer) (9.8.1.1.2)
subgrid (3200)	edge%fluid%te%bndvalue(:)%subgrid (integer) (9.8.1.1.2)
scalar (3200)	edge%fluid%te%bndvalue(:)%scalar (vecflt_type) (9.8.1.2.13)
vector (3200)	edge%fluid%te%bndvalue(:)%vector (matflt_type) (9.8.1.2.10)
matrix (3200)	edge%fluid%te%bndvalue(:)%matrix (array3dflt_type) (9.8.1.2.2)
flux (3291)	edge%fluid%te%flux(:) (complexgrid_vector) (9.8.1.3.100)
griduid (3206)	edge%fluid%te%flux(:)%griduid (integer) (9.8.1.1.2)
label (3206)	edge%fluid%te%flux(:)%label (string) (9.8.1.1.3)
comp (3206)	edge%fluid%te%flux(:)%comp(:) (complexgrid_scalar) (9.8.1.3.94)
griduid (3200)	edge%fluid%te%flux(:)%comp(:)%griduid (integer) (9.8.1.1.2)
subgrid (3200)	edge%fluid%te%flux(:)%comp(:)%subgrid (integer) (9.8.1.1.2)
scalar (3200)	edge%fluid%te%flux(:)%comp(:)%scalar (vecflt_type) (9.8.1.2.13)
vector (3200)	edge%fluid%te%flux(:)%comp(:)%vector (matflt_type) (9.8.1.2.10)
matrix (3200)	edge%fluid%te%flux(:)%comp(:)%matrix (array3dflt_type) (9.8.1.2.2)
align (3206)	edge%fluid%te%flux(:)%align (vecint_type) (9.8.1.2.14)
alignid (3206)	edge%fluid%te%flux(:)%alignid (vecstring_type) (9.8.1.2.15)
basis (3206)	edge%fluid%te%flux(:)%basis (integer) (9.8.1.1.2)
bndflux (3291)	edge%fluid%te%bndflux(:) (complexgrid_vector) (9.8.1.3.100)
griduid (3206)	edge%fluid%te%bndflux(:)%griduid (integer) (9.8.1.1.2)



label (3206)	edge%fluid%te%bndflux(:)%label (string) (9.8.1.1.3)
comp (3206)	edge%fluid%te%bndflux(:)%comp(:) (complexgrid_scalar) (9.8.1.3.94)
griduid (3200)	edge%fluid%te%bndflux(:)%comp(:)%griduid (integer) (9.8.1.1.2)
subgrid (3200)	edge%fluid%te%bndflux(:)%comp(:)%subgrid (integer) (9.8.1.1.2)
scalar (3200)	edge%fluid%te%bndflux(:)%comp(:)%scalar (vecflt_type) (9.8.1.2.13)
vector (3200)	edge%fluid%te%bndflux(:)%comp(:)%vector (matflt_type) (9.8.1.2.10)
matrix (3200)	edge%fluid%te%bndflux(:)%comp(:)%matrix (array3dflt_type) (9.8.1.2.2)
align (3206)	edge%fluid%te%bndflux(:)%align (vecint_type) (9.8.1.2.14)
alignid (3206)	edge%fluid%te%bndflux(:)%alignid (vecstring_type) (9.8.1.2.15)
basis (3206)	edge%fluid%te%bndflux(:)%basis (integer) (9.8.1.1.2)
transpcoeff (3291)	edge%fluid%te%transpcoeff(:) (edge_fluid_scalar_transpcoeff) (9.8.1.3.186)
d (3292)	edge%fluid%te%transpcoeff(:)%d (complexgrid_vector_simplestruct) (9.8.1.3.101)
label (3207)	edge%fluid%te%transpcoeff(:)%d%label (string) (9.8.1.1.3)
comp (3207)	edge%fluid%te%transpcoeff(:)%d%comp(:) (complexgrid_scalar) (9.8.1.3.94)
griduid (3200)	edge%fluid%te%transpcoeff(:)%d%comp(:)%griduid (integer) (9.8.1.1.2)
subgrid (3200)	edge%fluid%te%transpcoeff(:)%d%comp(:)%subgrid (integer) (9.8.1.1.2)
scalar (3200)	edge%fluid%te%transpcoeff(:)%d%comp(:)%scalar (vecflt_type) (9.8.1.2.13)
vector (3200)	edge%fluid%te%transpcoeff(:)%d%comp(:)%vector (matflt_type) (9.8.1.2.10)
matrix (3200)	edge%fluid%te%transpcoeff(:)%d%comp(:)%matrix (array3dflt_type) (9.8.1.2.2)
align (3207)	edge%fluid%te%transpcoeff(:)%d%align (vecint_type) (9.8.1.2.14)
alignid (3207)	edge%fluid%te%transpcoeff(:)%d%alignid (vecstring_type) (9.8.1.2.15)
v (3292)	edge%fluid%te%transpcoeff(:)%v (complexgrid_vector_simplestruct) (9.8.1.3.101)
label (3207)	edge%fluid%te%transpcoeff(:)%v%label (string) (9.8.1.1.3)
comp (3207)	edge%fluid%te%transpcoeff(:)%v%comp(:) (complexgrid_scalar) (9.8.1.3.94)
griduid (3200)	edge%fluid%te%transpcoeff(:)%v%comp(:)%griduid (integer) (9.8.1.1.2)
subgrid (3200)	edge%fluid%te%transpcoeff(:)%v%comp(:)%subgrid (integer) (9.8.1.1.2)
scalar (3200)	edge%fluid%te%transpcoeff(:)%v%comp(:)%scalar (vecflt_type) (9.8.1.2.13)
vector (3200)	edge%fluid%te%transpcoeff(:)%v%comp(:)%vector (matflt_type) (9.8.1.2.10)
matrix (3200)	edge%fluid%te%transpcoeff(:)%v%comp(:)%matrix (array3dflt_type) (9.8.1.2.2)
align (3207)	edge%fluid%te%transpcoeff(:)%v%align (vecint_type) (9.8.1.2.14)
alignid (3207)	edge%fluid%te%transpcoeff(:)%v%alignid (vecstring_type) (9.8.1.2.15)
source (3291)	edge%fluid%te%source(:) (complexgrid_scalar) (9.8.1.3.94)
griduid (3200)	edge%fluid%te%source(:)%griduid (integer) (9.8.1.1.2)
subgrid (3200)	edge%fluid%te%source(:)%subgrid (integer) (9.8.1.1.2)
scalar (3200)	edge%fluid%te%source(:)%scalar (vecflt_type) (9.8.1.2.13)
vector (3200)	edge%fluid%te%source(:)%vector (matflt_type) (9.8.1.2.10)
matrix (3200)	edge%fluid%te%source(:)%matrix (array3dflt_type) (9.8.1.2.2)
ti (3289)	edge%fluid%ti(:) (edge_fluid_scalar) (9.8.1.3.184)
value (3290)	edge%fluid%ti(:)%value(:) (complexgrid_scalar) (9.8.1.3.94)
griduid (3200)	edge%fluid%ti(:)%value(:)%griduid (integer) (9.8.1.1.2)
subgrid (3200)	edge%fluid%ti(:)%value(:)%subgrid (integer) (9.8.1.1.2)
scalar (3200)	edge%fluid%ti(:)%value(:)%scalar (vecflt_type) (9.8.1.2.13)
vector (3200)	edge%fluid%ti(:)%value(:)%vector (matflt_type) (9.8.1.2.10)
matrix (3200)	edge%fluid%ti(:)%value(:)%matrix (array3dflt_type) (9.8.1.2.2)
bndvalue (3290)	edge%fluid%ti(:)%bndvalue(:) (complexgrid_scalar) (9.8.1.3.94)
griduid (3200)	edge%fluid%ti(:)%bndvalue(:)%griduid (integer) (9.8.1.1.2)
subgrid (3200)	edge%fluid%ti(:)%bndvalue(:)%subgrid (integer) (9.8.1.1.2)
scalar (3200)	edge%fluid%ti(:)%bndvalue(:)%scalar (vecflt_type) (9.8.1.2.13)
vector (3200)	edge%fluid%ti(:)%bndvalue(:)%vector (matflt_type) (9.8.1.2.10)
matrix (3200)	edge%fluid%ti(:)%bndvalue(:)%matrix (array3dflt_type) (9.8.1.2.2)
flux (3290)	edge%fluid%ti(:)%flux(:) (complexgrid_vector) (9.8.1.3.100)
griduid (3206)	edge%fluid%ti(:)%flux(:)%griduid (integer) (9.8.1.1.2)
label (3206)	edge%fluid%ti(:)%flux(:)%label (string) (9.8.1.1.3)
comp (3206)	edge%fluid%ti(:)%flux(:)%comp(:) (complexgrid_scalar) (9.8.1.3.94)
griduid (3200)	edge%fluid%ti(:)%flux(:)%comp(:)%griduid (integer) (9.8.1.1.2)
subgrid (3200)	edge%fluid%ti(:)%flux(:)%comp(:)%subgrid (integer) (9.8.1.1.2)
scalar (3200)	edge%fluid%ti(:)%flux(:)%comp(:)%scalar (vecflt_type) (9.8.1.2.13)
vector (3200)	edge%fluid%ti(:)%flux(:)%comp(:)%vector (matflt_type) (9.8.1.2.10)
matrix (3200)	edge%fluid%ti(:)%flux(:)%comp(:)%matrix (array3dflt_type) (9.8.1.2.2)
align (3206)	edge%fluid%ti(:)%flux(:)%align (vecint_type) (9.8.1.2.14)
alignid (3206)	edge%fluid%ti(:)%flux(:)%alignid (vecstring_type) (9.8.1.2.15)

basis (3206)	edge%fluid%ti(:)%flux(:)%basis (integer) (9.8.1.1.2)
bndflux (3290)	edge%fluid%ti(:)%bndflux(:) (complexgrid_vector) (9.8.1.3.100)
griduid (3206)	edge%fluid%ti(:)%bndflux(:)%griduid (integer) (9.8.1.1.2)
label (3206)	edge%fluid%ti(:)%bndflux(:)%label (string) (9.8.1.1.3)
comp (3206)	edge%fluid%ti(:)%bndflux(:)%comp(:) (complexgrid_scalar) (9.8.1.3.94)
griduid (3200)	edge%fluid%ti(:)%bndflux(:)%comp(:)%griduid (integer) (9.8.1.1.2)
subgrid (3200)	edge%fluid%ti(:)%bndflux(:)%comp(:)%subgrid (integer) (9.8.1.1.2)
scalar (3200)	edge%fluid%ti(:)%bndflux(:)%comp(:)%scalar (vecflt_type) (9.8.1.2.13)
vector (3200)	edge%fluid%ti(:)%bndflux(:)%comp(:)%vector (matflt_type) (9.8.1.2.10)
matrix (3200)	edge%fluid%ti(:)%bndflux(:)%comp(:)%matrix (array3dflt_type) (9.8.1.2.2)
align (3206)	edge%fluid%ti(:)%bndflux(:)%align (vecint_type) (9.8.1.2.14)
alignid (3206)	edge%fluid%ti(:)%bndflux(:)%alignid (vecstring_type) (9.8.1.2.15)
basis (3206)	edge%fluid%ti(:)%bndflux(:)%basis (integer) (9.8.1.1.2)
transpcoeff (3290)	edge%fluid%ti(:)%transpcoeff(:) (edge_fluid_scalar_transpcoeff) (9.8.1.3.186)
d (3292)	edge%fluid%ti(:)%transpcoeff(:)%d (complexgrid_vector_simplestruct) (9.8.1.3.101)
label (3207)	edge%fluid%ti(:)%transpcoeff(:)%d%label (string) (9.8.1.1.3)
comp (3207)	edge%fluid%ti(:)%transpcoeff(:)%d%comp(:) (complexgrid_scalar) (9.8.1.3.94)
griduid (3200)	edge%fluid%ti(:)%transpcoeff(:)%d%comp(:)%griduid (integer) (9.8.1.1.2)
subgrid (3200)	edge%fluid%ti(:)%transpcoeff(:)%d%comp(:)%subgrid (integer) (9.8.1.1.2)
scalar (3200)	edge%fluid%ti(:)%transpcoeff(:)%d%comp(:)%scalar (vecflt_type) (9.8.1.2.13)
vector (3200)	edge%fluid%ti(:)%transpcoeff(:)%d%comp(:)%vector (matflt_type) (9.8.1.2.10)
matrix (3200)	edge%fluid%ti(:)%transpcoeff(:)%d%comp(:)%matrix (array3dflt_type) (9.8.1.2.2)
align (3207)	edge%fluid%ti(:)%transpcoeff(:)%d%align (vecint_type) (9.8.1.2.14)
alignid (3207)	edge%fluid%ti(:)%transpcoeff(:)%d%alignid (vecstring_type) (9.8.1.2.15)
v (3292)	edge%fluid%ti(:)%transpcoeff(:)%v (complexgrid_vector_simplestruct) (9.8.1.3.101)
label (3207)	edge%fluid%ti(:)%transpcoeff(:)%v%label (string) (9.8.1.1.3)
comp (3207)	edge%fluid%ti(:)%transpcoeff(:)%v%comp(:) (complexgrid_scalar) (9.8.1.3.94)
griduid (3200)	edge%fluid%ti(:)%transpcoeff(:)%v%comp(:)%griduid (integer) (9.8.1.1.2)
subgrid (3200)	edge%fluid%ti(:)%transpcoeff(:)%v%comp(:)%subgrid (integer) (9.8.1.1.2)
scalar (3200)	edge%fluid%ti(:)%transpcoeff(:)%v%comp(:)%scalar (vecflt_type) (9.8.1.2.13)
vector (3200)	edge%fluid%ti(:)%transpcoeff(:)%v%comp(:)%vector (matflt_type) (9.8.1.2.10)
matrix (3200)	edge%fluid%ti(:)%transpcoeff(:)%v%comp(:)%matrix (array3dflt_type) (9.8.1.2.2)
align (3207)	edge%fluid%ti(:)%transpcoeff(:)%v%align (vecint_type) (9.8.1.2.14)
alignid (3207)	edge%fluid%ti(:)%transpcoeff(:)%v%alignid (vecstring_type) (9.8.1.2.15)
source (3290)	edge%fluid%ti(:)%source(:) (complexgrid_scalar) (9.8.1.3.94)
griduid (3200)	edge%fluid%ti(:)%source(:)%griduid (integer) (9.8.1.1.2)
subgrid (3200)	edge%fluid%ti(:)%source(:)%subgrid (integer) (9.8.1.1.2)
scalar (3200)	edge%fluid%ti(:)%source(:)%scalar (vecflt_type) (9.8.1.2.13)
vector (3200)	edge%fluid%ti(:)%source(:)%vector (matflt_type) (9.8.1.2.10)
matrix (3200)	edge%fluid%ti(:)%source(:)%matrix (array3dflt_type) (9.8.1.2.2)
te_aniso (3289)	edge%fluid%te_aniso (edge_fluid_vector_simplestruct) (9.8.1.3.188)
griduid (3294)	edge%fluid%te_aniso%griduid (integer) (9.8.1.1.2)
basis (3294)	edge%fluid%te_aniso%basis (integer) (9.8.1.1.2)
comps (3294)	edge%fluid%te_aniso%comps(:) (edge_fluid_scalar) (9.8.1.3.184)
value (3290)	edge%fluid%te_aniso%comps(:)%value(:) (complexgrid_scalar) (9.8.1.3.94)
griduid (3200)	edge%fluid%te_aniso%comps(:)%value(:)%griduid (integer) (9.8.1.1.2)
subgrid (3200)	edge%fluid%te_aniso%comps(:)%value(:)%subgrid (integer) (9.8.1.1.2)
scalar (3200)	edge%fluid%te_aniso%comps(:)%value(:)%scalar (vecflt_type) (9.8.1.2.13)
vector (3200)	edge%fluid%te_aniso%comps(:)%value(:)%vector (matflt_type) (9.8.1.2.10)
matrix (3200)	edge%fluid%te_aniso%comps(:)%value(:)%matrix (array3dflt_type) (9.8.1.2.2)
bndvalue (3290)	edge%fluid%te_aniso%comps(:)%bndvalue(:) (complexgrid_scalar) (9.8.1.3.94)
griduid (3200)	edge%fluid%te_aniso%comps(:)%bndvalue(:)%griduid (integer) (9.8.1.1.2)
subgrid (3200)	edge%fluid%te_aniso%comps(:)%bndvalue(:)%subgrid (integer) (9.8.1.1.2)
scalar (3200)	edge%fluid%te_aniso%comps(:)%bndvalue(:)%scalar (vecflt_type) (9.8.1.2.13)
vector (3200)	edge%fluid%te_aniso%comps(:)%bndvalue(:)%vector (matflt_type) (9.8.1.2.10)
matrix (3200)	edge%fluid%te_aniso%comps(:)%bndvalue(:)%matrix (array3dflt_type) (9.8.1.2.2)
flux (3290)	edge%fluid%te_aniso%comps(:)%flux(:) (complexgrid_vector) (9.8.1.3.100)
griduid (3206)	edge%fluid%te_aniso%comps(:)%flux(:)%griduid (integer) (9.8.1.1.2)
label (3206)	edge%fluid%te_aniso%comps(:)%flux(:)%label (string) (9.8.1.1.3)
comp (3206)	edge%fluid%te_aniso%comps(:)%flux(:)%comp(:) (complexgrid_scalar) (9.8.1.3.94)
griduid (3200)	edge%fluid%te_aniso%comps(:)%flux(:)%comp(:)%griduid (integer) (9.8.1.1.2)



subgrid (3200)	edge%fluid%te_aniso%comps(:)%flux(:)%comp(:)%subgrid (integer) (9.8.1.1.2)
scalar (3200)	edge%fluid%te_aniso%comps(:)%flux(:)%comp(:)%scalar (vecflt_type) (9.8.1.2.13)
vector (3200)	edge%fluid%te_aniso%comps(:)%flux(:)%comp(:)%vector (matflt_type) (9.8.1.2.10)
matrix (3200)	edge%fluid%te_aniso%comps(:)%flux(:)%comp(:)%matrix (array3dflt_type) (9.8.1.2.2)
align (3206)	edge%fluid%te_aniso%comps(:)%flux(:)%align (vecint_type) (9.8.1.2.14)
alignid (3206)	edge%fluid%te_aniso%comps(:)%flux(:)%alignid (vecstring_type) (9.8.1.2.15)
basis (3206)	edge%fluid%te_aniso%comps(:)%flux(:)%basis (integer) (9.8.1.1.2)
bndflux (3290)	edge%fluid%te_aniso%comps(:)%bndflux(:) (complexgrid_vector) (9.8.1.3.100)
griduid (3206)	edge%fluid%te_aniso%comps(:)%bndflux(:)%griduid (integer) (9.8.1.1.2)
label (3206)	edge%fluid%te_aniso%comps(:)%bndflux(:)%label (string) (9.8.1.1.3)
comp (3206)	edge%fluid%te_aniso%comps(:)%bndflux(:)%comp(:) (complexgrid_scalar) (9.8.1.3.94)
griduid (3200)	edge%fluid%te_aniso%comps(:)%bndflux(:)%comp(:)%griduid (integer) (9.8.1.1.2)
subgrid (3200)	edge%fluid%te_aniso%comps(:)%bndflux(:)%comp(:)%subgrid (integer) (9.8.1.1.2)
scalar (3200)	edge%fluid%te_aniso%comps(:)%bndflux(:)%comp(:)%scalar (vecflt_type) (9.8.1.2.13)
vector (3200)	edge%fluid%te_aniso%comps(:)%bndflux(:)%comp(:)%vector (matflt_type) (9.8.1.2.10)
matrix (3200)	edge%fluid%te_aniso%comps(:)%bndflux(:)%comp(:)%matrix (array3dflt_type) (9.8.1.2.2)
align (3206)	edge%fluid%te_aniso%comps(:)%bndflux(:)%align (vecint_type) (9.8.1.2.14)
alignid (3206)	edge%fluid%te_aniso%comps(:)%bndflux(:)%alignid (vecstring_type) (9.8.1.2.15)
basis (3206)	edge%fluid%te_aniso%comps(:)%bndflux(:)%basis (integer) (9.8.1.1.2)
transpcoeff (3290)	edge%fluid%te_aniso%comps(:)%transpcoeff(:) (edge_fluid_scalar_transpcoeff) (9.8.1.3.186)
d (3292)	edge%fluid%te_aniso%comps(:)%transpcoeff(:)%d (complexgrid_vector_simplestruct) (9.8.1.3.101)
label (3207)	edge%fluid%te_aniso%comps(:)%transpcoeff(:)%d%label (string) (9.8.1.1.3)
comp (3207)	edge%fluid%te_aniso%comps(:)%transpcoeff(:)%d%comp(:) (complexgrid_scalar) (9.8.1.3.94)
griduid (3200)	edge%fluid%te_aniso%comps(:)%transpcoeff(:)%d%comp(:)%griduid (integer) (9.8.1.1.2)
subgrid (3200)	edge%fluid%te_aniso%comps(:)%transpcoeff(:)%d%comp(:)%subgrid (integer) (9.8.1.1.2)
scalar (3200)	edge%fluid%te_aniso%comps(:)%transpcoeff(:)%d%comp(:)%scalar (vecflt_type) (9.8.1.2.13)
vector (3200)	edge%fluid%te_aniso%comps(:)%transpcoeff(:)%d%comp(:)%vector (matflt_type) (9.8.1.2.10)
matrix (3200)	edge%fluid%te_aniso%comps(:)%transpcoeff(:)%d%comp(:)%matrix (array3dflt_type) (9.8.1.2.2)
align (3207)	edge%fluid%te_aniso%comps(:)%transpcoeff(:)%d%align (vecint_type) (9.8.1.2.14)
alignid (3207)	edge%fluid%te_aniso%comps(:)%transpcoeff(:)%d%alignid (vecstring_type) (9.8.1.2.15)
v (3292)	edge%fluid%te_aniso%comps(:)%transpcoeff(:)%v (complexgrid_vector_simplestruct) (9.8.1.3.101)
label (3207)	edge%fluid%te_aniso%comps(:)%transpcoeff(:)%v%label (string) (9.8.1.1.3)
comp (3207)	edge%fluid%te_aniso%comps(:)%transpcoeff(:)%v%comp(:) (complexgrid_scalar) (9.8.1.3.94)
griduid (3200)	edge%fluid%te_aniso%comps(:)%transpcoeff(:)%v%comp(:)%griduid (integer) (9.8.1.1.2)
subgrid (3200)	edge%fluid%te_aniso%comps(:)%transpcoeff(:)%v%comp(:)%subgrid (integer) (9.8.1.1.2)
scalar (3200)	edge%fluid%te_aniso%comps(:)%transpcoeff(:)%v%comp(:)%scalar (vecflt_type) (9.8.1.2.13)
vector (3200)	edge%fluid%te_aniso%comps(:)%transpcoeff(:)%v%comp(:)%vector (matflt_type) (9.8.1.2.10)
matrix (3200)	edge%fluid%te_aniso%comps(:)%transpcoeff(:)%v%comp(:)%matrix (array3dflt_type) (9.8.1.2.2)
align (3207)	edge%fluid%te_aniso%comps(:)%transpcoeff(:)%v%align (vecint_type) (9.8.1.2.14)
alignid (3207)	edge%fluid%te_aniso%comps(:)%transpcoeff(:)%v%alignid (vecstring_type) (9.8.1.2.15)
source (3290)	edge%fluid%te_aniso%comps(:)%source(:) (complexgrid_scalar) (9.8.1.3.94)
griduid (3200)	edge%fluid%te_aniso%comps(:)%source(:)%griduid (integer) (9.8.1.1.2)
subgrid (3200)	edge%fluid%te_aniso%comps(:)%source(:)%subgrid (integer) (9.8.1.1.2)
scalar (3200)	edge%fluid%te_aniso%comps(:)%source(:)%scalar (vecflt_type) (9.8.1.2.13)
vector (3200)	edge%fluid%te_aniso%comps(:)%source(:)%vector (matflt_type) (9.8.1.2.10)
matrix (3200)	edge%fluid%te_aniso%comps(:)%source(:)%matrix (array3dflt_type) (9.8.1.2.2)
align (3294)	edge%fluid%te_aniso%align (vecint_type) (9.8.1.2.14)
alignid (3294)	edge%fluid%te_aniso%alignid (vecstring_type) (9.8.1.2.15)
ti_aniso (3289)	edge%fluid%ti_aniso(:) (edge_fluid_vector) (9.8.1.3.187)
griduid (3293)	edge%fluid%ti_aniso(:)%griduid (integer) (9.8.1.1.2)
basis (3293)	edge%fluid%ti_aniso(:)%basis (integer) (9.8.1.1.2)
align (3293)	edge%fluid%ti_aniso(:)%align (vecint_type) (9.8.1.2.14)
alignid (3293)	edge%fluid%ti_aniso(:)%alignid (vecstring_type) (9.8.1.2.15)
comps (3293)	edge%fluid%ti_aniso(:)%comps(:) (edge_fluid_scalar) (9.8.1.3.184)
value (3290)	edge%fluid%ti_aniso(:)%comps(:)%value(:) (complexgrid_scalar) (9.8.1.3.94)
griduid (3200)	edge%fluid%ti_aniso(:)%comps(:)%value(:)%griduid (integer) (9.8.1.1.2)
subgrid (3200)	edge%fluid%ti_aniso(:)%comps(:)%value(:)%subgrid (integer) (9.8.1.1.2)
scalar (3200)	edge%fluid%ti_aniso(:)%comps(:)%value(:)%scalar (vecflt_type) (9.8.1.2.13)
vector (3200)	edge%fluid%ti_aniso(:)%comps(:)%value(:)%vector (matflt_type) (9.8.1.2.10)

matrix (3200)	edge%fluid%ti_aniso(:)%comps(:)%value(:)%matrix (array3dflt_type) (9.8.1.2.2)
bndvalue (3290)	edge%fluid%ti_aniso(:)%comps(:)%bndvalue(:) (complexgrid_scalar) (9.8.1.3.94)
griduid (3200)	edge%fluid%ti_aniso(:)%comps(:)%bndvalue(:)%griduid (integer) (9.8.1.1.2)
subgrid (3200)	edge%fluid%ti_aniso(:)%comps(:)%bndvalue(:)%subgrid (integer) (9.8.1.1.2)
scalar (3200)	edge%fluid%ti_aniso(:)%comps(:)%bndvalue(:)%scalar (vecflt_type) (9.8.1.2.13)
vector (3200)	edge%fluid%ti_aniso(:)%comps(:)%bndvalue(:)%vector (matflt_type) (9.8.1.2.10)
matrix (3200)	edge%fluid%ti_aniso(:)%comps(:)%bndvalue(:)%matrix (array3dflt_type) (9.8.1.2.2)
flux (3290)	edge%fluid%ti_aniso(:)%comps(:)%flux(:) (complexgrid_vector) (9.8.1.3.100)
griduid (3206)	edge%fluid%ti_aniso(:)%comps(:)%flux(:)%griduid (integer) (9.8.1.1.2)
label (3206)	edge%fluid%ti_aniso(:)%comps(:)%flux(:)%label (string) (9.8.1.1.3)
comp (3206)	edge%fluid%ti_aniso(:)%comps(:)%flux(:)%comp(:) (complexgrid_scalar) (9.8.1.3.94)
griduid (3200)	edge%fluid%ti_aniso(:)%comps(:)%flux(:)%comp(:)%griduid (integer) (9.8.1.1.2)
subgrid (3200)	edge%fluid%ti_aniso(:)%comps(:)%flux(:)%comp(:)%subgrid (integer) (9.8.1.1.2)
scalar (3200)	edge%fluid%ti_aniso(:)%comps(:)%flux(:)%comp(:)%scalar (vecflt_type) (9.8.1.2.13)
vector (3200)	edge%fluid%ti_aniso(:)%comps(:)%flux(:)%comp(:)%vector (matflt_type) (9.8.1.2.10)
matrix (3200)	edge%fluid%ti_aniso(:)%comps(:)%flux(:)%comp(:)%matrix (array3dflt_type) (9.8.1.2.2)
align (3206)	edge%fluid%ti_aniso(:)%comps(:)%flux(:)%align (vecint_type) (9.8.1.2.14)
alignid (3206)	edge%fluid%ti_aniso(:)%comps(:)%flux(:)%alignid (vecstring_type) (9.8.1.2.15)
basis (3206)	edge%fluid%ti_aniso(:)%comps(:)%flux(:)%basis (integer) (9.8.1.1.2)
bndflux (3290)	edge%fluid%ti_aniso(:)%comps(:)%bndflux(:) (complexgrid_vector) (9.8.1.3.100)
griduid (3206)	edge%fluid%ti_aniso(:)%comps(:)%bndflux(:)%griduid (integer) (9.8.1.1.2)
label (3206)	edge%fluid%ti_aniso(:)%comps(:)%bndflux(:)%label (string) (9.8.1.1.3)
comp (3206)	edge%fluid%ti_aniso(:)%comps(:)%bndflux(:)%comp(:) (complexgrid_scalar) (9.8.1.3.94)
griduid (3200)	edge%fluid%ti_aniso(:)%comps(:)%bndflux(:)%comp(:)%griduid (integer) (9.8.1.1.2)
subgrid (3200)	edge%fluid%ti_aniso(:)%comps(:)%bndflux(:)%comp(:)%subgrid (integer) (9.8.1.1.2)
scalar (3200)	edge%fluid%ti_aniso(:)%comps(:)%bndflux(:)%comp(:)%scalar (vecflt_type) (9.8.1.2.13)
vector (3200)	edge%fluid%ti_aniso(:)%comps(:)%bndflux(:)%comp(:)%vector (matflt_type) (9.8.1.2.10)
matrix (3200)	edge%fluid%ti_aniso(:)%comps(:)%bndflux(:)%comp(:)%matrix (array3dflt_type) (9.8.1.2.2)
align (3206)	edge%fluid%ti_aniso(:)%comps(:)%bndflux(:)%align (vecint_type) (9.8.1.2.14)
alignid (3206)	edge%fluid%ti_aniso(:)%comps(:)%bndflux(:)%alignid (vecstring_type) (9.8.1.2.15)
basis (3206)	edge%fluid%ti_aniso(:)%comps(:)%bndflux(:)%basis (integer) (9.8.1.1.2)
transpcoeff (3290)	edge%fluid%ti_aniso(:)%comps(:)%transpcoeff(:) (edge_fluid_scalar_transpcoeff) (9.8.1.3.186)
d (3292)	edge%fluid%ti_aniso(:)%comps(:)%transpcoeff(:)%d (complexgrid_vector_simplestruct) (9.8.1.3.101)
label (3207)	edge%fluid%ti_aniso(:)%comps(:)%transpcoeff(:)%d%label (string) (9.8.1.1.3)
comp (3207)	edge%fluid%ti_aniso(:)%comps(:)%transpcoeff(:)%d%comp(:) (complexgrid_scalar) (9.8.1.3.94)
griduid (3200)	edge%fluid%ti_aniso(:)%comps(:)%transpcoeff(:)%d%comp(:)%griduid (integer) (9.8.1.1.2)
subgrid (3200)	edge%fluid%ti_aniso(:)%comps(:)%transpcoeff(:)%d%comp(:)%subgrid (integer) (9.8.1.1.2)
scalar (3200)	edge%fluid%ti_aniso(:)%comps(:)%transpcoeff(:)%d%comp(:)%scalar (vecflt_type) (9.8.1.2.13)
vector (3200)	edge%fluid%ti_aniso(:)%comps(:)%transpcoeff(:)%d%comp(:)%vector (matflt_type) (9.8.1.2.10)
matrix (3200)	edge%fluid%ti_aniso(:)%comps(:)%transpcoeff(:)%d%comp(:)%matrix (array3dflt_type) (9.8.1.2.2)
align (3207)	edge%fluid%ti_aniso(:)%comps(:)%transpcoeff(:)%d%align (vecint_type) (9.8.1.2.14)
alignid (3207)	edge%fluid%ti_aniso(:)%comps(:)%transpcoeff(:)%d%alignid (vecstring_type) (9.8.1.2.15)
v (3292)	edge%fluid%ti_aniso(:)%comps(:)%transpcoeff(:)%v (complexgrid_vector_simplestruct) (9.8.1.3.101)
label (3207)	edge%fluid%ti_aniso(:)%comps(:)%transpcoeff(:)%v%label (string) (9.8.1.1.3)
comp (3207)	edge%fluid%ti_aniso(:)%comps(:)%transpcoeff(:)%v%comp(:) (complexgrid_scalar) (9.8.1.3.94)
griduid (3200)	edge%fluid%ti_aniso(:)%comps(:)%transpcoeff(:)%v%comp(:)%griduid (integer) (9.8.1.1.2)
subgrid (3200)	edge%fluid%ti_aniso(:)%comps(:)%transpcoeff(:)%v%comp(:)%subgrid (integer) (9.8.1.1.2)
scalar (3200)	edge%fluid%ti_aniso(:)%comps(:)%transpcoeff(:)%v%comp(:)%scalar (vecflt_type) (9.8.1.2.13)
vector (3200)	edge%fluid%ti_aniso(:)%comps(:)%transpcoeff(:)%v%comp(:)%vector (matflt_type) (9.8.1.2.10)
matrix (3200)	edge%fluid%ti_aniso(:)%comps(:)%transpcoeff(:)%v%comp(:)%matrix (array3dflt_type) (9.8.1.2.2)
align (3207)	edge%fluid%ti_aniso(:)%comps(:)%transpcoeff(:)%v%align (vecint_type) (9.8.1.2.14)
alignid (3207)	edge%fluid%ti_aniso(:)%comps(:)%transpcoeff(:)%v%alignid (vecstring_type) (9.8.1.2.15)
source (3290)	edge%fluid%ti_aniso(:)%comps(:)%source(:) (complexgrid_scalar) (9.8.1.3.94)
griduid (3200)	edge%fluid%ti_aniso(:)%comps(:)%source(:)%griduid (integer) (9.8.1.1.2)
subgrid (3200)	edge%fluid%ti_aniso(:)%comps(:)%source(:)%subgrid (integer) (9.8.1.1.2)
scalar (3200)	edge%fluid%ti_aniso(:)%comps(:)%source(:)%scalar (vecflt_type) (9.8.1.2.13)

vector (3200)	edge%fluid%ti.aniso(:)%comps(:)%source(:)%vector (matflt_type) (9.8.1.2.10)
matrix (3200)	edge%fluid%ti.aniso(:)%comps(:)%source(:)%matrix (array3dflt_type) (9.8.1.2.2)
po (3289)	edge%fluid%po (edge_fluid_scalar_simplestruct) (9.8.1.3.185)
value (3291)	edge%fluid%po%value(:) (complexgrid_scalar) (9.8.1.3.94)
griduid (3200)	edge%fluid%po%value(:)%griduid (integer) (9.8.1.1.2)
subgrid (3200)	edge%fluid%po%value(:)%subgrid (integer) (9.8.1.1.2)
scalar (3200)	edge%fluid%po%value(:)%scalar (vecflt_type) (9.8.1.2.13)
vector (3200)	edge%fluid%po%value(:)%vector (matflt_type) (9.8.1.2.10)
matrix (3200)	edge%fluid%po%value(:)%matrix (array3dflt_type) (9.8.1.2.2)
bndvalue (3291)	edge%fluid%po%bndvalue(:) (complexgrid_scalar) (9.8.1.3.94)
griduid (3200)	edge%fluid%po%bndvalue(:)%griduid (integer) (9.8.1.1.2)
subgrid (3200)	edge%fluid%po%bndvalue(:)%subgrid (integer) (9.8.1.1.2)
scalar (3200)	edge%fluid%po%bndvalue(:)%scalar (vecflt_type) (9.8.1.2.13)
vector (3200)	edge%fluid%po%bndvalue(:)%vector (matflt_type) (9.8.1.2.10)
matrix (3200)	edge%fluid%po%bndvalue(:)%matrix (array3dflt_type) (9.8.1.2.2)
flux (3291)	edge%fluid%po%flux(:) (complexgrid_vector) (9.8.1.3.100)
griduid (3206)	edge%fluid%po%flux(:)%griduid (integer) (9.8.1.1.2)
label (3206)	edge%fluid%po%flux(:)%label (string) (9.8.1.1.3)
comp (3206)	edge%fluid%po%flux(:)%comp(:) (complexgrid_scalar) (9.8.1.3.94)
griduid (3200)	edge%fluid%po%flux(:)%comp(:)%griduid (integer) (9.8.1.1.2)
subgrid (3200)	edge%fluid%po%flux(:)%comp(:)%subgrid (integer) (9.8.1.1.2)
scalar (3200)	edge%fluid%po%flux(:)%comp(:)%scalar (vecflt_type) (9.8.1.2.13)
vector (3200)	edge%fluid%po%flux(:)%comp(:)%vector (matflt_type) (9.8.1.2.10)
matrix (3200)	edge%fluid%po%flux(:)%comp(:)%matrix (array3dflt_type) (9.8.1.2.2)
align (3206)	edge%fluid%po%flux(:)%align (vecint_type) (9.8.1.2.14)
alignid (3206)	edge%fluid%po%flux(:)%alignid (vecstring_type) (9.8.1.2.15)
basis (3206)	edge%fluid%po%flux(:)%basis (integer) (9.8.1.1.2)
bndflux (3291)	edge%fluid%po%bndflux(:) (complexgrid_vector) (9.8.1.3.100)
griduid (3206)	edge%fluid%po%bndflux(:)%griduid (integer) (9.8.1.1.2)
label (3206)	edge%fluid%po%bndflux(:)%label (string) (9.8.1.1.3)
comp (3206)	edge%fluid%po%bndflux(:)%comp(:) (complexgrid_scalar) (9.8.1.3.94)
griduid (3200)	edge%fluid%po%bndflux(:)%comp(:)%griduid (integer) (9.8.1.1.2)
subgrid (3200)	edge%fluid%po%bndflux(:)%comp(:)%subgrid (integer) (9.8.1.1.2)
scalar (3200)	edge%fluid%po%bndflux(:)%comp(:)%scalar (vecflt_type) (9.8.1.2.13)
vector (3200)	edge%fluid%po%bndflux(:)%comp(:)%vector (matflt_type) (9.8.1.2.10)
matrix (3200)	edge%fluid%po%bndflux(:)%comp(:)%matrix (array3dflt_type) (9.8.1.2.2)
align (3206)	edge%fluid%po%bndflux(:)%align (vecint_type) (9.8.1.2.14)
alignid (3206)	edge%fluid%po%bndflux(:)%alignid (vecstring_type) (9.8.1.2.15)
basis (3206)	edge%fluid%po%bndflux(:)%basis (integer) (9.8.1.1.2)
transpcoeff (3291)	edge%fluid%po%transpcoeff(:) (edge_fluid_scalar_transpcoeff) (9.8.1.3.186)
d (3292)	edge%fluid%po%transpcoeff(:)%d (complexgrid_vector_simplestruct) (9.8.1.3.101)
label (3207)	edge%fluid%po%transpcoeff(:)%d%label (string) (9.8.1.1.3)
comp (3207)	edge%fluid%po%transpcoeff(:)%d%comp(:) (complexgrid_scalar) (9.8.1.3.94)
griduid (3200)	edge%fluid%po%transpcoeff(:)%d%comp(:)%griduid (integer) (9.8.1.1.2)
subgrid (3200)	edge%fluid%po%transpcoeff(:)%d%comp(:)%subgrid (integer) (9.8.1.1.2)
scalar (3200)	edge%fluid%po%transpcoeff(:)%d%comp(:)%scalar (vecflt_type) (9.8.1.2.13)
vector (3200)	edge%fluid%po%transpcoeff(:)%d%comp(:)%vector (matflt_type) (9.8.1.2.10)
matrix (3200)	edge%fluid%po%transpcoeff(:)%d%comp(:)%matrix (array3dflt_type) (9.8.1.2.2)
align (3207)	edge%fluid%po%transpcoeff(:)%d%align (vecint_type) (9.8.1.2.14)
alignid (3207)	edge%fluid%po%transpcoeff(:)%d%alignid (vecstring_type) (9.8.1.2.15)
v (3292)	edge%fluid%po%transpcoeff(:)%v (complexgrid_vector_simplestruct) (9.8.1.3.101)
label (3207)	edge%fluid%po%transpcoeff(:)%v%label (string) (9.8.1.1.3)
comp (3207)	edge%fluid%po%transpcoeff(:)%v%comp(:) (complexgrid_scalar) (9.8.1.3.94)
griduid (3200)	edge%fluid%po%transpcoeff(:)%v%comp(:)%griduid (integer) (9.8.1.1.2)
subgrid (3200)	edge%fluid%po%transpcoeff(:)%v%comp(:)%subgrid (integer) (9.8.1.1.2)
scalar (3200)	edge%fluid%po%transpcoeff(:)%v%comp(:)%scalar (vecflt_type) (9.8.1.2.13)
vector (3200)	edge%fluid%po%transpcoeff(:)%v%comp(:)%vector (matflt_type) (9.8.1.2.10)
matrix (3200)	edge%fluid%po%transpcoeff(:)%v%comp(:)%matrix (array3dflt_type) (9.8.1.2.2)
align (3207)	edge%fluid%po%transpcoeff(:)%v%align (vecint_type) (9.8.1.2.14)
alignid (3207)	edge%fluid%po%transpcoeff(:)%v%alignid (vecstring_type) (9.8.1.2.15)
source (3291)	edge%fluid%po%source(:) (complexgrid_scalar) (9.8.1.3.94)

griduid (3200)	edge%fluid%po%source(:)%griduid (integer) (9.8.1.1.2)
subgrid (3200)	edge%fluid%po%source(:)%subgrid (integer) (9.8.1.1.2)
scalar (3200)	edge%fluid%po%source(:)%scalar (vecflt_type) (9.8.1.2.13)
vector (3200)	edge%fluid%po%source(:)%vector (matflt_type) (9.8.1.2.10)
matrix (3200)	edge%fluid%po%source(:)%matrix (array3dflt_type) (9.8.1.2.2)
j (3289)	edge%fluid%j (edge_fluid_vector_simplestruct) (9.8.1.3.188)
griduid (3294)	edge%fluid%j%griduid (integer) (9.8.1.1.2)
basis (3294)	edge%fluid%j%basis (integer) (9.8.1.1.2)
comps (3294)	edge%fluid%j%comps(:) (edge_fluid_scalar) (9.8.1.3.184)
value (3290)	edge%fluid%j%comps(:)%value(:) (complexgrid_scalar) (9.8.1.3.94)
griduid (3200)	edge%fluid%j%comps(:)%value(:)%griduid (integer) (9.8.1.1.2)
subgrid (3200)	edge%fluid%j%comps(:)%value(:)%subgrid (integer) (9.8.1.1.2)
scalar (3200)	edge%fluid%j%comps(:)%value(:)%scalar (vecflt_type) (9.8.1.2.13)
vector (3200)	edge%fluid%j%comps(:)%value(:)%vector (matflt_type) (9.8.1.2.10)
matrix (3200)	edge%fluid%j%comps(:)%value(:)%matrix (array3dflt_type) (9.8.1.2.2)
bndvalue (3290)	edge%fluid%j%comps(:)%bndvalue(:) (complexgrid_scalar) (9.8.1.3.94)
griduid (3200)	edge%fluid%j%comps(:)%bndvalue(:)%griduid (integer) (9.8.1.1.2)
subgrid (3200)	edge%fluid%j%comps(:)%bndvalue(:)%subgrid (integer) (9.8.1.1.2)
scalar (3200)	edge%fluid%j%comps(:)%bndvalue(:)%scalar (vecflt_type) (9.8.1.2.13)
vector (3200)	edge%fluid%j%comps(:)%bndvalue(:)%vector (matflt_type) (9.8.1.2.10)
matrix (3200)	edge%fluid%j%comps(:)%bndvalue(:)%matrix (array3dflt_type) (9.8.1.2.2)
flux (3290)	edge%fluid%j%comps(:)%flux(:) (complexgrid_vector) (9.8.1.3.100)
griduid (3206)	edge%fluid%j%comps(:)%flux(:)%griduid (integer) (9.8.1.1.2)
label (3206)	edge%fluid%j%comps(:)%flux(:)%label (string) (9.8.1.1.3)
comp (3206)	edge%fluid%j%comps(:)%flux(:)%comp(:) (complexgrid_scalar) (9.8.1.3.94)
griduid (3200)	edge%fluid%j%comps(:)%flux(:)%comp(:)%griduid (integer) (9.8.1.1.2)
subgrid (3200)	edge%fluid%j%comps(:)%flux(:)%comp(:)%subgrid (integer) (9.8.1.1.2)
scalar (3200)	edge%fluid%j%comps(:)%flux(:)%comp(:)%scalar (vecflt_type) (9.8.1.2.13)
vector (3200)	edge%fluid%j%comps(:)%flux(:)%comp(:)%vector (matflt_type) (9.8.1.2.10)
matrix (3200)	edge%fluid%j%comps(:)%flux(:)%comp(:)%matrix (array3dflt_type) (9.8.1.2.2)
align (3206)	edge%fluid%j%comps(:)%flux(:)%align (vecint_type) (9.8.1.2.14)
alignid (3206)	edge%fluid%j%comps(:)%flux(:)%alignid (vecstring_type) (9.8.1.2.15)
basis (3206)	edge%fluid%j%comps(:)%flux(:)%basis (integer) (9.8.1.1.2)
bndflux (3290)	edge%fluid%j%comps(:)%bndflux(:) (complexgrid_vector) (9.8.1.3.100)
griduid (3206)	edge%fluid%j%comps(:)%bndflux(:)%griduid (integer) (9.8.1.1.2)
label (3206)	edge%fluid%j%comps(:)%bndflux(:)%label (string) (9.8.1.1.3)
comp (3206)	edge%fluid%j%comps(:)%bndflux(:)%comp(:) (complexgrid_scalar) (9.8.1.3.94)
griduid (3200)	edge%fluid%j%comps(:)%bndflux(:)%comp(:)%griduid (integer) (9.8.1.1.2)
subgrid (3200)	edge%fluid%j%comps(:)%bndflux(:)%comp(:)%subgrid (integer) (9.8.1.1.2)
scalar (3200)	edge%fluid%j%comps(:)%bndflux(:)%comp(:)%scalar (vecflt_type) (9.8.1.2.13)
vector (3200)	edge%fluid%j%comps(:)%bndflux(:)%comp(:)%vector (matflt_type) (9.8.1.2.10)
matrix (3200)	edge%fluid%j%comps(:)%bndflux(:)%comp(:)%matrix (array3dflt_type) (9.8.1.2.2)
align (3206)	edge%fluid%j%comps(:)%bndflux(:)%align (vecint_type) (9.8.1.2.14)
alignid (3206)	edge%fluid%j%comps(:)%bndflux(:)%alignid (vecstring_type) (9.8.1.2.15)
basis (3206)	edge%fluid%j%comps(:)%bndflux(:)%basis (integer) (9.8.1.1.2)
transpcoeff (3290)	edge%fluid%j%comps(:)%transpcoeff(:) (edge_fluid_scalar_transpcoeff) (9.8.1.3.186)
d (3292)	edge%fluid%j%comps(:)%transpcoeff(:)%d (complexgrid_vector_simplestruct) (9.8.1.3.101)
label (3207)	edge%fluid%j%comps(:)%transpcoeff(:)%d%label (string) (9.8.1.1.3)
comp (3207)	edge%fluid%j%comps(:)%transpcoeff(:)%d%comp(:) (complexgrid_scalar) (9.8.1.3.94)
griduid (3200)	edge%fluid%j%comps(:)%transpcoeff(:)%d%comp(:)%griduid (integer) (9.8.1.1.2)
subgrid (3200)	edge%fluid%j%comps(:)%transpcoeff(:)%d%comp(:)%subgrid (integer) (9.8.1.1.2)
scalar (3200)	edge%fluid%j%comps(:)%transpcoeff(:)%d%comp(:)%scalar (vecflt_type) (9.8.1.2.13)
vector (3200)	edge%fluid%j%comps(:)%transpcoeff(:)%d%comp(:)%vector (matflt_type) (9.8.1.2.10)
matrix (3200)	edge%fluid%j%comps(:)%transpcoeff(:)%d%comp(:)%matrix (array3dflt_type) (9.8.1.2.2)
align (3207)	edge%fluid%j%comps(:)%transpcoeff(:)%d%align (vecint_type) (9.8.1.2.14)
alignid (3207)	edge%fluid%j%comps(:)%transpcoeff(:)%d%alignid (vecstring_type) (9.8.1.2.15)
v (3292)	edge%fluid%j%comps(:)%transpcoeff(:)%v (complexgrid_vector_simplestruct) (9.8.1.3.101)
label (3207)	edge%fluid%j%comps(:)%transpcoeff(:)%v%label (string) (9.8.1.1.3)
comp (3207)	edge%fluid%j%comps(:)%transpcoeff(:)%v%comp(:) (complexgrid_scalar) (9.8.1.3.94)
griduid (3200)	edge%fluid%j%comps(:)%transpcoeff(:)%v%comp(:)%griduid (integer) (9.8.1.1.2)
subgrid (3200)	edge%fluid%j%comps(:)%transpcoeff(:)%v%comp(:)%subgrid (integer) (9.8.1.1.2)

scalar (3200)	edge%fluid%j%comps(:)%transpcoeff(:)%v%comp(:)%scalar (vecflt_type) (9.8.1.2.13)
vector (3200)	edge%fluid%j%comps(:)%transpcoeff(:)%v%comp(:)%vector (matflt_type) (9.8.1.2.10)
matrix (3200)	edge%fluid%j%comps(:)%transpcoeff(:)%v%comp(:)%matrix (array3dflt_type) (9.8.1.2.2)
align (3207)	edge%fluid%j%comps(:)%transpcoeff(:)%v%align (vecint_type) (9.8.1.2.14)
alignid (3207)	edge%fluid%j%comps(:)%transpcoeff(:)%v%alignid (vecstring_type) (9.8.1.2.15)
source (3290)	edge%fluid%j%comps(:)%source(:) (complexgrid_scalar) (9.8.1.3.94)
griduid (3200)	edge%fluid%j%comps(:)%source(:)%griduid (integer) (9.8.1.1.2)
subgrid (3200)	edge%fluid%j%comps(:)%source(:)%subgrid (integer) (9.8.1.1.2)
scalar (3200)	edge%fluid%j%comps(:)%source(:)%scalar (vecflt_type) (9.8.1.2.13)
vector (3200)	edge%fluid%j%comps(:)%source(:)%vector (matflt_type) (9.8.1.2.10)
matrix (3200)	edge%fluid%j%comps(:)%source(:)%matrix (array3dflt_type) (9.8.1.2.2)
align (3294)	edge%fluid%j%align (vecint_type) (9.8.1.2.14)
alignid (3294)	edge%fluid%j%alignid (vecstring_type) (9.8.1.2.15)
b (3289)	edge%fluid%b(:) (complexgrid_vector) (9.8.1.3.100)
griduid (3206)	edge%fluid%b(:)%griduid (integer) (9.8.1.1.2)
label (3206)	edge%fluid%b(:)%label (string) (9.8.1.1.3)
comp (3206)	edge%fluid%b(:)%comp(:) (complexgrid_scalar) (9.8.1.3.94)
griduid (3200)	edge%fluid%b(:)%comp(:)%griduid (integer) (9.8.1.1.2)
subgrid (3200)	edge%fluid%b(:)%comp(:)%subgrid (integer) (9.8.1.1.2)
scalar (3200)	edge%fluid%b(:)%comp(:)%scalar (vecflt_type) (9.8.1.2.13)
vector (3200)	edge%fluid%b(:)%comp(:)%vector (matflt_type) (9.8.1.2.10)
matrix (3200)	edge%fluid%b(:)%comp(:)%matrix (array3dflt_type) (9.8.1.2.2)
align (3206)	edge%fluid%b(:)%align (vecint_type) (9.8.1.2.14)
alignid (3206)	edge%fluid%b(:)%alignid (vecstring_type) (9.8.1.2.15)
basis (3206)	edge%fluid%b(:)%basis (integer) (9.8.1.1.2)
kinetic (3126)	edge%kinetic (edge_kinetic) (9.8.1.3.189)
f (3295)	edge%kinetic%f(:) (edge_kinetic_distribution) (9.8.1.3.190)
value (3296)	edge%kinetic%f(:)%value(:) (complexgrid_scalar) (9.8.1.3.94)
griduid (3200)	edge%kinetic%f(:)%value(:)%griduid (integer) (9.8.1.1.2)
subgrid (3200)	edge%kinetic%f(:)%value(:)%subgrid (integer) (9.8.1.1.2)
scalar (3200)	edge%kinetic%f(:)%value(:)%scalar (vecflt_type) (9.8.1.2.13)
vector (3200)	edge%kinetic%f(:)%value(:)%vector (matflt_type) (9.8.1.2.10)
matrix (3200)	edge%kinetic%f(:)%value(:)%matrix (array3dflt_type) (9.8.1.2.2)
bndvalue (3296)	edge%kinetic%f(:)%bndvalue(:) (complexgrid_scalar) (9.8.1.3.94)
griduid (3200)	edge%kinetic%f(:)%bndvalue(:)%griduid (integer) (9.8.1.1.2)
subgrid (3200)	edge%kinetic%f(:)%bndvalue(:)%subgrid (integer) (9.8.1.1.2)
scalar (3200)	edge%kinetic%f(:)%bndvalue(:)%scalar (vecflt_type) (9.8.1.2.13)
vector (3200)	edge%kinetic%f(:)%bndvalue(:)%vector (matflt_type) (9.8.1.2.10)
matrix (3200)	edge%kinetic%f(:)%bndvalue(:)%matrix (array3dflt_type) (9.8.1.2.2)
fluxes (3296)	edge%kinetic%f(:)%fluxes(:) (complexgrid_vector) (9.8.1.3.100)
griduid (3206)	edge%kinetic%f(:)%fluxes(:)%griduid (integer) (9.8.1.1.2)
label (3206)	edge%kinetic%f(:)%fluxes(:)%label (string) (9.8.1.1.3)
comp (3206)	edge%kinetic%f(:)%fluxes(:)%comp(:) (complexgrid_scalar) (9.8.1.3.94)
griduid (3200)	edge%kinetic%f(:)%fluxes(:)%comp(:)%griduid (integer) (9.8.1.1.2)
subgrid (3200)	edge%kinetic%f(:)%fluxes(:)%comp(:)%subgrid (integer) (9.8.1.1.2)
scalar (3200)	edge%kinetic%f(:)%fluxes(:)%comp(:)%scalar (vecflt_type) (9.8.1.2.13)
vector (3200)	edge%kinetic%f(:)%fluxes(:)%comp(:)%vector (matflt_type) (9.8.1.2.10)
matrix (3200)	edge%kinetic%f(:)%fluxes(:)%comp(:)%matrix (array3dflt_type) (9.8.1.2.2)
align (3206)	edge%kinetic%f(:)%fluxes(:)%align (vecint_type) (9.8.1.2.14)
alignid (3206)	edge%kinetic%f(:)%fluxes(:)%alignid (vecstring_type) (9.8.1.2.15)
basis (3206)	edge%kinetic%f(:)%fluxes(:)%basis (integer) (9.8.1.1.2)
source (3296)	edge%kinetic%f(:)%source(:) (complexgrid_scalar) (9.8.1.3.94)
griduid (3200)	edge%kinetic%f(:)%source(:)%griduid (integer) (9.8.1.1.2)
subgrid (3200)	edge%kinetic%f(:)%source(:)%subgrid (integer) (9.8.1.1.2)
scalar (3200)	edge%kinetic%f(:)%source(:)%scalar (vecflt_type) (9.8.1.2.13)
vector (3200)	edge%kinetic%f(:)%source(:)%vector (matflt_type) (9.8.1.2.10)
matrix (3200)	edge%kinetic%f(:)%source(:)%matrix (array3dflt_type) (9.8.1.2.2)
codeparam (3126)	edge%codeparam (codeparam) (9.8.1.3.84)
codename (3190)	edge%codeparam%codename (string) (9.8.1.1.3)
codeversion (3190)	edge%codeparam%codeversion (string) (9.8.1.1.3)
parameters (3190)	edge%codeparam%parameters (string) (9.8.1.1.3)



output_diag (3190)	edge%codeparam%output_diag (string) (9.8.1.1.3)
output_flag (3190)	edge%codeparam%output_flag (integer) (9.8.1.1.2)
time (3126)	edge%time (float) (9.8.1.1.1)

### 9.8.2.1.19 efcc

datainfo (3127)	efcc%datainfo (datainfo) (9.8.1.3.141)
dataprovider (3247)	efcc%datainfo%dataprovider (string) (9.8.1.1.3)
putdate (3247)	efcc%datainfo%putdate (string) (9.8.1.1.3)
source (3247)	efcc%datainfo%source (string) (9.8.1.1.3)
comment (3247)	efcc%datainfo%comment (string) (9.8.1.1.3)
cocos (3247)	efcc%datainfo%cocos (integer) (9.8.1.1.2)
id (3247)	efcc%datainfo%id (integer) (9.8.1.1.2)
isref (3247)	efcc%datainfo%isref (integer) (9.8.1.1.2)
whatref (3247)	efcc%datainfo%whatref (whatref) (9.8.1.3.513)
user (3619)	efcc%datainfo%whatref%user (string) (9.8.1.1.3)
machine (3619)	efcc%datainfo%whatref%machine (string) (9.8.1.1.3)
shot (3619)	efcc%datainfo%whatref%shot (integer) (9.8.1.1.2)
run (3619)	efcc%datainfo%whatref%run (integer) (9.8.1.1.2)
occurrence (3619)	efcc%datainfo%whatref%occurrence (integer) (9.8.1.1.2)
putinfo (3247)	efcc%datainfo%putinfo (putinfo) (9.8.1.3.349)
putmethod (3455)	efcc%datainfo%putinfo%putmethod (string) (9.8.1.1.3)
putaccess (3455)	efcc%datainfo%putinfo%putaccess (string) (9.8.1.1.3)
putlocation (3455)	efcc%datainfo%putinfo%putlocation (string) (9.8.1.1.3)
rights (3455)	efcc%datainfo%putinfo%rights (string) (9.8.1.1.3)
coil (3127)	efcc%coil(:) (coil) (9.8.1.3.87)
desc_coils (3193)	efcc%coil(:)%desc_coils (desc_coils) (9.8.1.3.142)
name (3248)	efcc%coil(:)%desc_coils%name (string) (9.8.1.1.3)
res (3248)	efcc%coil(:)%desc_coils%res (float) (9.8.1.1.1)
nturns (3248)	efcc%coil(:)%desc_coils%nturns (integer) (9.8.1.1.2)
closed (3248)	efcc%coil(:)%desc_coils%closed (string) (9.8.1.1.3)
edges (3248)	efcc%coil(:)%desc_coils%edges(:) (edges) (9.8.1.3.191)
edge_rzphi (3297)	efcc%coil(:)%desc_coils%edges(:)%edge_rzphi (rzphi1D) (9.8.1.3.372)
r (3478)	efcc%coil(:)%desc_coils%edges(:)%edge_rzphi%r (vecflt.type) (9.8.1.2.13)
z (3478)	efcc%coil(:)%desc_coils%edges(:)%edge_rzphi%z (vecflt.type) (9.8.1.2.13)
phi (3478)	efcc%coil(:)%desc_coils%edges(:)%edge_rzphi%phi (vecflt.type) (9.8.1.2.13)
coilcurrent (3193)	efcc%coil(:)%coilcurrent (exp1D) (9.8.1.3.204)
value (3310)	efcc%coil(:)%coilcurrent%value (vecflt.type) (9.8.1.2.13)
abserror (3310)	efcc%coil(:)%coilcurrent%abserror (vecflt.type) (9.8.1.2.13)
releror (3310)	efcc%coil(:)%coilcurrent%releror (vecflt.type) (9.8.1.2.13)
coilvoltage (3193)	efcc%coil(:)%coilvoltage (exp1D) (9.8.1.3.204)
value (3310)	efcc%coil(:)%coilvoltage%value (vecflt.type) (9.8.1.2.13)
abserror (3310)	efcc%coil(:)%coilvoltage%abserror (vecflt.type) (9.8.1.2.13)
releror (3310)	efcc%coil(:)%coilvoltage%releror (vecflt.type) (9.8.1.2.13)
time (3127)	efcc%time (float) (9.8.1.1.1)
codeparam (3127)	efcc%codeparam (codeparam) (9.8.1.3.84)
codename (3190)	efcc%codeparam%codename (string) (9.8.1.1.3)
codeversion (3190)	efcc%codeparam%codeversion (string) (9.8.1.1.3)
parameters (3190)	efcc%codeparam%parameters (string) (9.8.1.1.3)
output_diag (3190)	efcc%codeparam%output_diag (string) (9.8.1.1.3)
output_flag (3190)	efcc%codeparam%output_flag (integer) (9.8.1.1.2)

### 9.8.2.1.20 equilibrium

datainfo (3128)	equilibrium%datainfo (datainfo) (9.8.1.3.141)
dataprovider (3247)	equilibrium%datainfo%dataprovider (string) (9.8.1.1.3)
putdate (3247)	equilibrium%datainfo%putdate (string) (9.8.1.1.3)
source (3247)	equilibrium%datainfo%source (string) (9.8.1.1.3)
comment (3247)	equilibrium%datainfo%comment (string) (9.8.1.1.3)
cocos (3247)	equilibrium%datainfo%cocos (integer) (9.8.1.1.2)
id (3247)	equilibrium%datainfo%id (integer) (9.8.1.1.2)

isref (3247)  
 whatref (3247)  
   user (3619)  
   machine (3619)  
   shot (3619)  
   run (3619)  
   occurrence (3619)  
 putinfo (3247)  
   putmethod (3455)  
   putaccess (3455)  
   putlocation (3455)  
   rights (3455)  
 eqconstraint (3128)  
   bpol (3302)  
     measured (3305)  
     source (3305)  
     time (3305)  
     exact (3305)  
     weight (3305)  
     sigma (3305)  
     calculated (3305)  
     chi2 (3305)  
   bvac\_r (3302)  
     measured (3304)  
     source (3304)  
     time (3304)  
     exact (3304)  
     weight (3304)  
     sigma (3304)  
     calculated (3304)  
     chi2 (3304)  
   diamagflux (3302)  
     measured (3304)  
     source (3304)  
     time (3304)  
     exact (3304)  
     weight (3304)  
     sigma (3304)  
     calculated (3304)  
     chi2 (3304)  
   faraday (3302)  
     measured (3305)  
     source (3305)  
     time (3305)  
     exact (3305)  
     weight (3305)  
     sigma (3305)  
     calculated (3305)  
     chi2 (3305)  
   flux (3302)  
     measured (3305)  
     source (3305)  
     time (3305)  
     exact (3305)  
     weight (3305)  
     sigma (3305)  
     calculated (3305)  
     chi2 (3305)  
   i\_plasma (3302)  
     measured (3304)  
     source (3304)  
   equilibrium%datainfo%isref (integer) (9.8.1.1.2)  
   equilibrium%datainfo%whatref (whatref) (9.8.1.3.513)  
   equilibrium%datainfo%whatref%user (string) (9.8.1.1.3)  
   equilibrium%datainfo%whatref%machine (string) (9.8.1.1.3)  
   equilibrium%datainfo%whatref%shot (integer) (9.8.1.1.2)  
   equilibrium%datainfo%whatref%run (integer) (9.8.1.1.2)  
   equilibrium%datainfo%whatref%occurrence (integer) (9.8.1.1.2)  
   equilibrium%datainfo%putinfo (putinfo) (9.8.1.3.349)  
   equilibrium%datainfo%putinfo%putmethod (string) (9.8.1.1.3)  
   equilibrium%datainfo%putinfo%putaccess (string) (9.8.1.1.3)  
   equilibrium%datainfo%putinfo%putlocation (string) (9.8.1.1.3)  
   equilibrium%datainfo%putinfo%rights (string) (9.8.1.1.3)  
   equilibrium%eqconstraint (eqconstraint) (9.8.1.3.196)  
   equilibrium%eqconstraint%bpol (eqmes1D) (9.8.1.3.199)  
   equilibrium%eqconstraint%bpol%measured (vecflt.type) (9.8.1.2.13)  
   equilibrium%eqconstraint%bpol%source (string) (9.8.1.1.3)  
   equilibrium%eqconstraint%bpol%time (float) (9.8.1.1.1)  
   equilibrium%eqconstraint%bpol%exact (vecint.type) (9.8.1.2.14)  
   equilibrium%eqconstraint%bpol%weight (vecflt.type) (9.8.1.2.13)  
   equilibrium%eqconstraint%bpol%sigma (vecflt.type) (9.8.1.2.13)  
   equilibrium%eqconstraint%bpol%calculated (vecflt.type) (9.8.1.2.13)  
   equilibrium%eqconstraint%bpol%chi2 (vecflt.type) (9.8.1.2.13)  
   equilibrium%eqconstraint%bvac\_r (eqmes0D) (9.8.1.3.198)  
   equilibrium%eqconstraint%bvac\_r%measured (float) (9.8.1.1.1)  
   equilibrium%eqconstraint%bvac\_r%source (string) (9.8.1.1.3)  
   equilibrium%eqconstraint%bvac\_r%time (float) (9.8.1.1.1)  
   equilibrium%eqconstraint%bvac\_r%exact (integer) (9.8.1.1.2)  
   equilibrium%eqconstraint%bvac\_r%weight (float) (9.8.1.1.1)  
   equilibrium%eqconstraint%bvac\_r%sigma (float) (9.8.1.1.1)  
   equilibrium%eqconstraint%bvac\_r%calculated (float) (9.8.1.1.1)  
   equilibrium%eqconstraint%bvac\_r%chi2 (float) (9.8.1.1.1)  
   equilibrium%eqconstraint%diamagflux (eqmes0D) (9.8.1.3.198)  
   equilibrium%eqconstraint%diamagflux%measured (float) (9.8.1.1.1)  
   equilibrium%eqconstraint%diamagflux%source (string) (9.8.1.1.3)  
   equilibrium%eqconstraint%diamagflux%time (float) (9.8.1.1.1)  
   equilibrium%eqconstraint%diamagflux%exact (integer) (9.8.1.1.2)  
   equilibrium%eqconstraint%diamagflux%weight (float) (9.8.1.1.1)  
   equilibrium%eqconstraint%diamagflux%sigma (float) (9.8.1.1.1)  
   equilibrium%eqconstraint%diamagflux%calculated (float) (9.8.1.1.1)  
   equilibrium%eqconstraint%diamagflux%chi2 (float) (9.8.1.1.1)  
   equilibrium%eqconstraint%faraday (eqmes1D) (9.8.1.3.199)  
   equilibrium%eqconstraint%faraday%measured (vecflt.type) (9.8.1.2.13)  
   equilibrium%eqconstraint%faraday%source (string) (9.8.1.1.3)  
   equilibrium%eqconstraint%faraday%time (float) (9.8.1.1.1)  
   equilibrium%eqconstraint%faraday%exact (vecint.type) (9.8.1.2.14)  
   equilibrium%eqconstraint%faraday%weight (vecflt.type) (9.8.1.2.13)  
   equilibrium%eqconstraint%faraday%sigma (vecflt.type) (9.8.1.2.13)  
   equilibrium%eqconstraint%faraday%calculated (vecflt.type) (9.8.1.2.13)  
   equilibrium%eqconstraint%faraday%chi2 (vecflt.type) (9.8.1.2.13)  
   equilibrium%eqconstraint%flux (eqmes1D) (9.8.1.3.199)  
   equilibrium%eqconstraint%flux%measured (vecflt.type) (9.8.1.2.13)  
   equilibrium%eqconstraint%flux%source (string) (9.8.1.1.3)  
   equilibrium%eqconstraint%flux%time (float) (9.8.1.1.1)  
   equilibrium%eqconstraint%flux%exact (vecint.type) (9.8.1.2.14)  
   equilibrium%eqconstraint%flux%weight (vecflt.type) (9.8.1.2.13)  
   equilibrium%eqconstraint%flux%sigma (vecflt.type) (9.8.1.2.13)  
   equilibrium%eqconstraint%flux%calculated (vecflt.type) (9.8.1.2.13)  
   equilibrium%eqconstraint%flux%chi2 (vecflt.type) (9.8.1.2.13)  
   equilibrium%eqconstraint%i\_plasma (eqmes0D) (9.8.1.3.198)  
   equilibrium%eqconstraint%i\_plasma%measured (float) (9.8.1.1.1)  
   equilibrium%eqconstraint%i\_plasma%source (string) (9.8.1.1.3)



time (3304)	equilibrium%eqconstraint%i_plasma%time (float) (9.8.1.1.1)
exact (3304)	equilibrium%eqconstraint%i_plasma%exact (integer) (9.8.1.1.2)
weight (3304)	equilibrium%eqconstraint%i_plasma%weight (float) (9.8.1.1.1)
sigma (3304)	equilibrium%eqconstraint%i_plasma%sigma (float) (9.8.1.1.1)
calculated (3304)	equilibrium%eqconstraint%i_plasma%calculated (float) (9.8.1.1.1)
chi2 (3304)	equilibrium%eqconstraint%i_plasma%chi2 (float) (9.8.1.1.1)
isoflux (3302)	equilibrium%eqconstraint%isoflux (isoflux) (9.8.1.3.248)
position (3354)	equilibrium%eqconstraint%isoflux%position (rz1D) (9.8.1.3.366)
r (3472)	equilibrium%eqconstraint%isoflux%position%r (vecflt.type) (9.8.1.2.13)
z (3472)	equilibrium%eqconstraint%isoflux%position%z (vecflt.type) (9.8.1.2.13)
source (3354)	equilibrium%eqconstraint%isoflux%source (string) (9.8.1.1.3)
weight (3354)	equilibrium%eqconstraint%isoflux%weight (vecflt.type) (9.8.1.2.13)
sigma (3354)	equilibrium%eqconstraint%isoflux%sigma (vecflt.type) (9.8.1.2.13)
calculated (3354)	equilibrium%eqconstraint%isoflux%calculated (vecflt.type) (9.8.1.2.13)
chi2 (3354)	equilibrium%eqconstraint%isoflux%chi2 (vecflt.type) (9.8.1.2.13)
jsurf (3302)	equilibrium%eqconstraint%jsurf (eqmes1D) (9.8.1.3.199)
measured (3305)	equilibrium%eqconstraint%jsurf%measured (vecflt.type) (9.8.1.2.13)
source (3305)	equilibrium%eqconstraint%jsurf%source (string) (9.8.1.1.3)
time (3305)	equilibrium%eqconstraint%jsurf%time (float) (9.8.1.1.1)
exact (3305)	equilibrium%eqconstraint%jsurf%exact (vecint.type) (9.8.1.2.14)
weight (3305)	equilibrium%eqconstraint%jsurf%weight (vecflt.type) (9.8.1.2.13)
sigma (3305)	equilibrium%eqconstraint%jsurf%sigma (vecflt.type) (9.8.1.2.13)
calculated (3305)	equilibrium%eqconstraint%jsurf%calculated (vecflt.type) (9.8.1.2.13)
chi2 (3305)	equilibrium%eqconstraint%jsurf%chi2 (vecflt.type) (9.8.1.2.13)
magnet_iron (3302)	equilibrium%eqconstraint%magnet_iron (magnet_iron) (9.8.1.3.266)
mr (3372)	equilibrium%eqconstraint%magnet_iron%mr (eqmes1D) (9.8.1.3.199)
measured (3305)	equilibrium%eqconstraint%magnet_iron%mr%measured (vecflt.type) (9.8.1.2.13)
source (3305)	equilibrium%eqconstraint%magnet_iron%mr%source (string) (9.8.1.1.3)
time (3305)	equilibrium%eqconstraint%magnet_iron%mr%time (float) (9.8.1.1.1)
exact (3305)	equilibrium%eqconstraint%magnet_iron%mr%exact (vecint.type) (9.8.1.2.14)
weight (3305)	equilibrium%eqconstraint%magnet_iron%mr%weight (vecflt.type) (9.8.1.2.13)
sigma (3305)	equilibrium%eqconstraint%magnet_iron%mr%sigma (vecflt.type) (9.8.1.2.13)
calculated (3305)	equilibrium%eqconstraint%magnet_iron%mr%calculated (vecflt.type) (9.8.1.2.13)
chi2 (3305)	equilibrium%eqconstraint%magnet_iron%mr%chi2 (vecflt.type) (9.8.1.2.13)
mz (3372)	equilibrium%eqconstraint%magnet_iron%mz (eqmes1D) (9.8.1.3.199)
measured (3305)	equilibrium%eqconstraint%magnet_iron%mz%measured (vecflt.type) (9.8.1.2.13)
source (3305)	equilibrium%eqconstraint%magnet_iron%mz%source (string) (9.8.1.1.3)
time (3305)	equilibrium%eqconstraint%magnet_iron%mz%time (float) (9.8.1.1.1)
exact (3305)	equilibrium%eqconstraint%magnet_iron%mz%exact (vecint.type) (9.8.1.2.14)
weight (3305)	equilibrium%eqconstraint%magnet_iron%mz%weight (vecflt.type) (9.8.1.2.13)
sigma (3305)	equilibrium%eqconstraint%magnet_iron%mz%sigma (vecflt.type) (9.8.1.2.13)
calculated (3305)	equilibrium%eqconstraint%magnet_iron%mz%calculated (vecflt.type) (9.8.1.2.13)
chi2 (3305)	equilibrium%eqconstraint%magnet_iron%mz%chi2 (vecflt.type) (9.8.1.2.13)
mse (3302)	equilibrium%eqconstraint%mse (eqmes1D) (9.8.1.3.199)
measured (3305)	equilibrium%eqconstraint%mse%measured (vecflt.type) (9.8.1.2.13)
source (3305)	equilibrium%eqconstraint%mse%source (string) (9.8.1.1.3)
time (3305)	equilibrium%eqconstraint%mse%time (float) (9.8.1.1.1)
exact (3305)	equilibrium%eqconstraint%mse%exact (vecint.type) (9.8.1.2.14)
weight (3305)	equilibrium%eqconstraint%mse%weight (vecflt.type) (9.8.1.2.13)
sigma (3305)	equilibrium%eqconstraint%mse%sigma (vecflt.type) (9.8.1.2.13)
calculated (3305)	equilibrium%eqconstraint%mse%calculated (vecflt.type) (9.8.1.2.13)
chi2 (3305)	equilibrium%eqconstraint%mse%chi2 (vecflt.type) (9.8.1.2.13)
ne (3302)	equilibrium%eqconstraint%ne (eqmes1D) (9.8.1.3.199)
measured (3305)	equilibrium%eqconstraint%ne%measured (vecflt.type) (9.8.1.2.13)
source (3305)	equilibrium%eqconstraint%ne%source (string) (9.8.1.1.3)
time (3305)	equilibrium%eqconstraint%ne%time (float) (9.8.1.1.1)
exact (3305)	equilibrium%eqconstraint%ne%exact (vecint.type) (9.8.1.2.14)
weight (3305)	equilibrium%eqconstraint%ne%weight (vecflt.type) (9.8.1.2.13)
sigma (3305)	equilibrium%eqconstraint%ne%sigma (vecflt.type) (9.8.1.2.13)
calculated (3305)	equilibrium%eqconstraint%ne%calculated (vecflt.type) (9.8.1.2.13)
chi2 (3305)	equilibrium%eqconstraint%ne%chi2 (vecflt.type) (9.8.1.2.13)

pfcurent (3302)  
   measured (3305)  
   source (3305)  
   time (3305)  
   exact (3305)  
   weight (3305)  
   sigma (3305)  
   calculated (3305)  
   chi2 (3305)  
 pressure (3302)  
   measured (3305)  
   source (3305)  
   time (3305)  
   exact (3305)  
   weight (3305)  
   sigma (3305)  
   calculated (3305)  
   chi2 (3305)  
 q (3302)  
   qvalue (3456)  
   position (3456)  
     r (3472)  
     z (3472)  
   source (3456)  
   exact (3456)  
   weight (3456)  
   sigma (3456)  
   calculated (3456)  
   chi2 (3456)  
 xpts (3302)  
   position (3621)  
     r (3472)  
     z (3472)  
   source (3621)  
   weight (3621)  
   sigma (3621)  
   calculated (3621)  
   chi2 (3621)  
 eqgeometry (3128)  
   source (3303)  
   boundarytype (3303)  
   boundary (3303)  
     r (3474)  
     z (3474)  
   geom\_axis (3303)  
     r (3471)  
     z (3471)  
   a\_minor (3303)  
   elongation (3303)  
   elong\_upper (3303)  
   elong\_lower (3303)  
   tria\_upper (3303)  
   tria\_lower (3303)  
   xpts (3303)  
     r (3474)  
     z (3474)  
   left\_low\_st (3303)  
     r (3471)  
     z (3471)  
   right\_low\_st (3303)  
     r (3471)

equilibrium%eqconstraint%pfcurent (eqmes1D) (9.8.1.3.199)  
 equilibrium%eqconstraint%pfcurent%measured (vecflt.type) (9.8.1.2.13)  
 equilibrium%eqconstraint%pfcurent%source (string) (9.8.1.1.3)  
 equilibrium%eqconstraint%pfcurent%time (float) (9.8.1.1.1)  
 equilibrium%eqconstraint%pfcurent%exact (vecint.type) (9.8.1.2.14)  
 equilibrium%eqconstraint%pfcurent%weight (vecflt.type) (9.8.1.2.13)  
 equilibrium%eqconstraint%pfcurent%sigma (vecflt.type) (9.8.1.2.13)  
 equilibrium%eqconstraint%pfcurent%calculated (vecflt.type) (9.8.1.2.13)  
 equilibrium%eqconstraint%pfcurent%chi2 (vecflt.type) (9.8.1.2.13)  
 equilibrium%eqconstraint%pressure (eqmes1D) (9.8.1.3.199)  
 equilibrium%eqconstraint%pressure%measured (vecflt.type) (9.8.1.2.13)  
 equilibrium%eqconstraint%pressure%source (string) (9.8.1.1.3)  
 equilibrium%eqconstraint%pressure%time (float) (9.8.1.1.1)  
 equilibrium%eqconstraint%pressure%exact (vecint.type) (9.8.1.2.14)  
 equilibrium%eqconstraint%pressure%weight (vecflt.type) (9.8.1.2.13)  
 equilibrium%eqconstraint%pressure%sigma (vecflt.type) (9.8.1.2.13)  
 equilibrium%eqconstraint%pressure%calculated (vecflt.type) (9.8.1.2.13)  
 equilibrium%eqconstraint%pressure%chi2 (vecflt.type) (9.8.1.2.13)  
 equilibrium%eqconstraint%q (q) (9.8.1.3.350)  
 equilibrium%eqconstraint%q%qvalue (vecflt.type) (9.8.1.2.13)  
 equilibrium%eqconstraint%q%position (rz1D) (9.8.1.3.366)  
 equilibrium%eqconstraint%q%position%r (vecflt.type) (9.8.1.2.13)  
 equilibrium%eqconstraint%q%position%z (vecflt.type) (9.8.1.2.13)  
 equilibrium%eqconstraint%q%source (string) (9.8.1.1.3)  
 equilibrium%eqconstraint%q%exact (integer) (9.8.1.1.2)  
 equilibrium%eqconstraint%q%weight (vecflt.type) (9.8.1.2.13)  
 equilibrium%eqconstraint%q%sigma (vecflt.type) (9.8.1.2.13)  
 equilibrium%eqconstraint%q%calculated (vecflt.type) (9.8.1.2.13)  
 equilibrium%eqconstraint%q%chi2 (vecflt.type) (9.8.1.2.13)  
 equilibrium%eqconstraint%xpts (xpts) (9.8.1.3.515)  
 equilibrium%eqconstraint%xpts%position (rz1D) (9.8.1.3.366)  
 equilibrium%eqconstraint%xpts%position%r (vecflt.type) (9.8.1.2.13)  
 equilibrium%eqconstraint%xpts%position%z (vecflt.type) (9.8.1.2.13)  
 equilibrium%eqconstraint%xpts%source (string) (9.8.1.1.3)  
 equilibrium%eqconstraint%xpts%weight (vecflt.type) (9.8.1.2.13)  
 equilibrium%eqconstraint%xpts%sigma (vecflt.type) (9.8.1.2.13)  
 equilibrium%eqconstraint%xpts%calculated (vecflt.type) (9.8.1.2.13)  
 equilibrium%eqconstraint%xpts%chi2 (vecflt.type) (9.8.1.2.13)  
 equilibrium%eqgeometry (eqgeometry) (9.8.1.3.197)  
 equilibrium%eqgeometry%source (string) (9.8.1.1.3)  
 equilibrium%eqgeometry%boundarytype (integer) (9.8.1.1.2)  
 equilibrium%eqgeometry%boundary(:) (rz1Dexp) (9.8.1.3.368)  
 equilibrium%eqgeometry%boundary(:)%r (vecflt.type) (9.8.1.2.13)  
 equilibrium%eqgeometry%boundary(:)%z (vecflt.type) (9.8.1.2.13)  
 equilibrium%eqgeometry%geom\_axis (rz0D) (9.8.1.3.365)  
 equilibrium%eqgeometry%geom\_axis%r (float) (9.8.1.1.1)  
 equilibrium%eqgeometry%geom\_axis%z (float) (9.8.1.1.1)  
 equilibrium%eqgeometry%a\_minor (float) (9.8.1.1.1)  
 equilibrium%eqgeometry%elongation (float) (9.8.1.1.1)  
 equilibrium%eqgeometry%elong\_upper (float) (9.8.1.1.1)  
 equilibrium%eqgeometry%elong\_lower (float) (9.8.1.1.1)  
 equilibrium%eqgeometry%tria\_upper (float) (9.8.1.1.1)  
 equilibrium%eqgeometry%tria\_lower (float) (9.8.1.1.1)  
 equilibrium%eqgeometry%xpts(:) (rz1Dexp) (9.8.1.3.368)  
 equilibrium%eqgeometry%xpts(:)%r (vecflt.type) (9.8.1.2.13)  
 equilibrium%eqgeometry%xpts(:)%z (vecflt.type) (9.8.1.2.13)  
 equilibrium%eqgeometry%left\_low\_st (rz0D) (9.8.1.3.365)  
 equilibrium%eqgeometry%left\_low\_st%r (float) (9.8.1.1.1)  
 equilibrium%eqgeometry%left\_low\_st%z (float) (9.8.1.1.1)  
 equilibrium%eqgeometry%right\_low\_st (rz0D) (9.8.1.3.365)  
 equilibrium%eqgeometry%right\_low\_st%r (float) (9.8.1.1.1)

z (3471)	equilibrium%eqgeometry%right_low_st%z (float) (9.8.1.1.1)
left_up_st (3303)	equilibrium%eqgeometry%left_up_st (rz0D) (9.8.1.3.365)
r (3471)	equilibrium%eqgeometry%left_up_st%r (float) (9.8.1.1.1)
z (3471)	equilibrium%eqgeometry%left_up_st%z (float) (9.8.1.1.1)
right_up_st (3303)	equilibrium%eqgeometry%right_up_st (rz0D) (9.8.1.3.365)
r (3471)	equilibrium%eqgeometry%right_up_st%r (float) (9.8.1.1.1)
z (3471)	equilibrium%eqgeometry%right_up_st%z (float) (9.8.1.1.1)
active_limit (3303)	equilibrium%eqgeometry%active_limit (rz0D) (9.8.1.3.365)
r (3471)	equilibrium%eqgeometry%active_limit%r (float) (9.8.1.1.1)
z (3471)	equilibrium%eqgeometry%active_limit%z (float) (9.8.1.1.1)
ang_lcms_upo (3303)	equilibrium%eqgeometry%ang_lcms_upo (float) (9.8.1.1.1)
ang_lcms_upi (3303)	equilibrium%eqgeometry%ang_lcms_upi (float) (9.8.1.1.1)
ang_lcms_lwo (3303)	equilibrium%eqgeometry%ang_lcms_lwo (float) (9.8.1.1.1)
ang_lcms_lwi (3303)	equilibrium%eqgeometry%ang_lcms_lwi (float) (9.8.1.1.1)
flush (3128)	equilibrium%flush (flush) (9.8.1.3.210)
datainfo (3316)	equilibrium%flush%datainfo (datainfo) (9.8.1.3.141)
dataprovider (3247)	equilibrium%flush%datainfo%dataprovider (string) (9.8.1.1.3)
putdate (3247)	equilibrium%flush%datainfo%putdate (string) (9.8.1.1.3)
source (3247)	equilibrium%flush%datainfo%source (string) (9.8.1.1.3)
comment (3247)	equilibrium%flush%datainfo%comment (string) (9.8.1.1.3)
cocos (3247)	equilibrium%flush%datainfo%cocos (integer) (9.8.1.1.2)
id (3247)	equilibrium%flush%datainfo%id (integer) (9.8.1.1.2)
isref (3247)	equilibrium%flush%datainfo%isref (integer) (9.8.1.1.2)
whatref (3247)	equilibrium%flush%datainfo%whatref (whatref) (9.8.1.3.513)
user (3619)	equilibrium%flush%datainfo%whatref%user (string) (9.8.1.1.3)
machine (3619)	equilibrium%flush%datainfo%whatref%machine (string) (9.8.1.1.3)
shot (3619)	equilibrium%flush%datainfo%whatref%shot (integer) (9.8.1.1.2)
run (3619)	equilibrium%flush%datainfo%whatref%run (integer) (9.8.1.1.2)
occurrence (3619)	equilibrium%flush%datainfo%whatref%occurrence (integer) (9.8.1.1.2)
putinfo (3247)	equilibrium%flush%datainfo%putinfo (putinfo) (9.8.1.3.349)
putmethod (3455)	equilibrium%flush%datainfo%putinfo%putmethod (string) (9.8.1.1.3)
putaccess (3455)	equilibrium%flush%datainfo%putinfo%putaccess (string) (9.8.1.1.3)
putlocation (3455)	equilibrium%flush%datainfo%putinfo%putlocation (string) (9.8.1.1.3)
rights (3455)	equilibrium%flush%datainfo%putinfo%rights (string) (9.8.1.1.3)
position (3316)	equilibrium%flush%position (rz1D) (9.8.1.3.366)
r (3472)	equilibrium%flush%position%r (vecflt_type) (9.8.1.2.13)
z (3472)	equilibrium%flush%position%z (vecflt_type) (9.8.1.2.13)
coef (3316)	equilibrium%flush%coef (matflt_type) (9.8.1.2.10)
codeparam (3316)	equilibrium%flush%codeparam (codeparam) (9.8.1.3.84)
codename (3190)	equilibrium%flush%codeparam%codename (string) (9.8.1.1.3)
codeversion (3190)	equilibrium%flush%codeparam%codeversion (string) (9.8.1.1.3)
parameters (3190)	equilibrium%flush%codeparam%parameters (string) (9.8.1.1.3)
output_diag (3190)	equilibrium%flush%codeparam%output_diag (string) (9.8.1.1.3)
output_flag (3190)	equilibrium%flush%codeparam%output_flag (integer) (9.8.1.1.2)
global_param (3128)	equilibrium%global_param (global_param) (9.8.1.3.235)
beta_pol (3341)	equilibrium%global_param%beta_pol (float) (9.8.1.1.1)
beta_tor (3341)	equilibrium%global_param%beta_tor (float) (9.8.1.1.1)
beta_normal (3341)	equilibrium%global_param%beta_normal (float) (9.8.1.1.1)
i_plasma (3341)	equilibrium%global_param%i_plasma (float) (9.8.1.1.1)
li (3341)	equilibrium%global_param%li (float) (9.8.1.1.1)
volume (3341)	equilibrium%global_param%volume (float) (9.8.1.1.1)
area (3341)	equilibrium%global_param%area (float) (9.8.1.1.1)
psi_ax (3341)	equilibrium%global_param%psi_ax (float) (9.8.1.1.1)
psi_bound (3341)	equilibrium%global_param%psi_bound (float) (9.8.1.1.1)
mag_axis (3341)	equilibrium%global_param%mag_axis (mag_axis) (9.8.1.3.265)
position (3371)	equilibrium%global_param%mag_axis%position (rz0D) (9.8.1.3.365)
r (3471)	equilibrium%global_param%mag_axis%position%r (float) (9.8.1.1.1)
z (3471)	equilibrium%global_param%mag_axis%position%z (float) (9.8.1.1.1)
bphi (3371)	equilibrium%global_param%mag_axis%bphi (float) (9.8.1.1.1)
q (3371)	equilibrium%global_param%mag_axis%q (float) (9.8.1.1.1)
q_95 (3341)	equilibrium%global_param%q_95 (float) (9.8.1.1.1)

q_min (3341)	equilibrium%global_param%q_min (float) (9.8.1.1.1)
toroid_field (3341)	equilibrium%global_param%toroid_field (b0r0) (9.8.1.3.61)
r0 (3167)	equilibrium%global_param%toroid_field%r0 (float) (9.8.1.1.1)
b0 (3167)	equilibrium%global_param%toroid_field%b0 (float) (9.8.1.1.1)
w_mhd (3341)	equilibrium%global_param%w_mhd (float) (9.8.1.1.1)
gamma (3341)	equilibrium%global_param%gamma (float) (9.8.1.1.1)
profiles_1d (3128)	equilibrium%profiles_1d (profiles_1d) (9.8.1.3.347)
psi (3453)	equilibrium%profiles_1d%psi (vecflt.type) (9.8.1.2.13)
phi (3453)	equilibrium%profiles_1d%phi (vecflt.type) (9.8.1.2.13)
pressure (3453)	equilibrium%profiles_1d%pressure (vecflt.type) (9.8.1.2.13)
F_dia (3453)	equilibrium%profiles_1d%F_dia (vecflt.type) (9.8.1.2.13)
pprime (3453)	equilibrium%profiles_1d%pprime (vecflt.type) (9.8.1.2.13)
ffprime (3453)	equilibrium%profiles_1d%ffprime (vecflt.type) (9.8.1.2.13)
jphi (3453)	equilibrium%profiles_1d%jphi (vecflt.type) (9.8.1.2.13)
jparallel (3453)	equilibrium%profiles_1d%jparallel (vecflt.type) (9.8.1.2.13)
q (3453)	equilibrium%profiles_1d%q (vecflt.type) (9.8.1.2.13)
shear (3453)	equilibrium%profiles_1d%shear (vecflt.type) (9.8.1.2.13)
r_inboard (3453)	equilibrium%profiles_1d%r_inboard (vecflt.type) (9.8.1.2.13)
r_outboard (3453)	equilibrium%profiles_1d%r_outboard (vecflt.type) (9.8.1.2.13)
rho_tor (3453)	equilibrium%profiles_1d%rho_tor (vecflt.type) (9.8.1.2.13)
dpsidrho_tor (3453)	equilibrium%profiles_1d%dpsidrho_tor (vecflt.type) (9.8.1.2.13)
rho_vol (3453)	equilibrium%profiles_1d%rho_vol (vecflt.type) (9.8.1.2.13)
beta_pol (3453)	equilibrium%profiles_1d%beta_pol (vecflt.type) (9.8.1.2.13)
li (3453)	equilibrium%profiles_1d%li (vecflt.type) (9.8.1.2.13)
elongation (3453)	equilibrium%profiles_1d%elongation (vecflt.type) (9.8.1.2.13)
tria_upper (3453)	equilibrium%profiles_1d%tria_upper (vecflt.type) (9.8.1.2.13)
tria_lower (3453)	equilibrium%profiles_1d%tria_lower (vecflt.type) (9.8.1.2.13)
volume (3453)	equilibrium%profiles_1d%volume (vecflt.type) (9.8.1.2.13)
vprime (3453)	equilibrium%profiles_1d%vprime (vecflt.type) (9.8.1.2.13)
dvdrho (3453)	equilibrium%profiles_1d%dvdrho (vecflt.type) (9.8.1.2.13)
area (3453)	equilibrium%profiles_1d%area (vecflt.type) (9.8.1.2.13)
aprime (3453)	equilibrium%profiles_1d%aprime (vecflt.type) (9.8.1.2.13)
surface (3453)	equilibrium%profiles_1d%surface (vecflt.type) (9.8.1.2.13)
ftrap (3453)	equilibrium%profiles_1d%ftrap (vecflt.type) (9.8.1.2.13)
gm1 (3453)	equilibrium%profiles_1d%gm1 (vecflt.type) (9.8.1.2.13)
gm2 (3453)	equilibrium%profiles_1d%gm2 (vecflt.type) (9.8.1.2.13)
gm3 (3453)	equilibrium%profiles_1d%gm3 (vecflt.type) (9.8.1.2.13)
gm4 (3453)	equilibrium%profiles_1d%gm4 (vecflt.type) (9.8.1.2.13)
gm5 (3453)	equilibrium%profiles_1d%gm5 (vecflt.type) (9.8.1.2.13)
gm6 (3453)	equilibrium%profiles_1d%gm6 (vecflt.type) (9.8.1.2.13)
gm7 (3453)	equilibrium%profiles_1d%gm7 (vecflt.type) (9.8.1.2.13)
gm8 (3453)	equilibrium%profiles_1d%gm8 (vecflt.type) (9.8.1.2.13)
gm9 (3453)	equilibrium%profiles_1d%gm9 (vecflt.type) (9.8.1.2.13)
b_av (3453)	equilibrium%profiles_1d%b_av (vecflt.type) (9.8.1.2.13)
b_min (3453)	equilibrium%profiles_1d%b_min (vecflt.type) (9.8.1.2.13)
b_max (3453)	equilibrium%profiles_1d%b_max (vecflt.type) (9.8.1.2.13)
omega (3453)	equilibrium%profiles_1d%omega (vecflt.type) (9.8.1.2.13)
omegaprime (3453)	equilibrium%profiles_1d%omegaprime (vecflt.type) (9.8.1.2.13)
mach_a (3453)	equilibrium%profiles_1d%mach_a (vecflt.type) (9.8.1.2.13)
phi_flow (3453)	equilibrium%profiles_1d%phi_flow (vecflt.type) (9.8.1.2.13)
s_flow (3453)	equilibrium%profiles_1d%s_flow (vecflt.type) (9.8.1.2.13)
h_flow (3453)	equilibrium%profiles_1d%h_flow (vecflt.type) (9.8.1.2.13)
rho_mass (3453)	equilibrium%profiles_1d%rho_mass (vecflt.type) (9.8.1.2.13)
profiles_2d (3128)	equilibrium%profiles_2d(:) (equilibrium_profiles_2d) (9.8.1.3.202)
grid_type (3308)	equilibrium%profiles_2d(:)%grid_type (vecstring.type) (9.8.1.2.15)
grid (3308)	equilibrium%profiles_2d(:)%grid (equilibrium_profiles2d_grid) (9.8.1.3.201)
dim1 (3307)	equilibrium%profiles_2d(:)%grid%dim1 (vecflt.type) (9.8.1.2.13)
dim2 (3307)	equilibrium%profiles_2d(:)%grid%dim2 (vecflt.type) (9.8.1.2.13)
connect (3307)	equilibrium%profiles_2d(:)%grid%connect (matint.type) (9.8.1.2.11)
r (3308)	equilibrium%profiles_2d(:)%r (matflt.type) (9.8.1.2.10)
z (3308)	equilibrium%profiles_2d(:)%z (matflt.type) (9.8.1.2.10)

psi (3308)	equilibrium%profiles_2d(:)%psi (matflt_type) (9.8.1.2.10)
theta (3308)	equilibrium%profiles_2d(:)%theta (matflt_type) (9.8.1.2.10)
phi (3308)	equilibrium%profiles_2d(:)%phi (matflt_type) (9.8.1.2.10)
jphi (3308)	equilibrium%profiles_2d(:)%jphi (matflt_type) (9.8.1.2.10)
jpar (3308)	equilibrium%profiles_2d(:)%jpar (matflt_type) (9.8.1.2.10)
br (3308)	equilibrium%profiles_2d(:)%br (matflt_type) (9.8.1.2.10)
bz (3308)	equilibrium%profiles_2d(:)%bz (matflt_type) (9.8.1.2.10)
bphi (3308)	equilibrium%profiles_2d(:)%bphi (matflt_type) (9.8.1.2.10)
vphi (3308)	equilibrium%profiles_2d(:)%vphi (matflt_type) (9.8.1.2.10)
vtheta (3308)	equilibrium%profiles_2d(:)%vtheta (matflt_type) (9.8.1.2.10)
rho.mass (3308)	equilibrium%profiles_2d(:)%rho.mass (matflt_type) (9.8.1.2.10)
pressure (3308)	equilibrium%profiles_2d(:)%pressure (matflt_type) (9.8.1.2.10)
temperature (3308)	equilibrium%profiles_2d(:)%temperature (matflt_type) (9.8.1.2.10)
coord_sys (3128)	equilibrium%coord_sys (coord_sys) (9.8.1.3.108)
grid_type (3214)	equilibrium%coord_sys%grid_type (string) (9.8.1.1.3)
grid (3214)	equilibrium%coord_sys%grid (reggrid) (9.8.1.3.361)
dim1 (3467)	equilibrium%coord_sys%grid%dim1 (vecflt_type) (9.8.1.2.13)
dim2 (3467)	equilibrium%coord_sys%grid%dim2 (vecflt_type) (9.8.1.2.13)
jacobian (3214)	equilibrium%coord_sys%jacobian (matflt_type) (9.8.1.2.10)
g_11 (3214)	equilibrium%coord_sys%g_11 (matflt_type) (9.8.1.2.10)
g_12 (3214)	equilibrium%coord_sys%g_12 (matflt_type) (9.8.1.2.10)
g_13 (3214)	equilibrium%coord_sys%g_13 (matflt_type) (9.8.1.2.10)
g_22 (3214)	equilibrium%coord_sys%g_22 (matflt_type) (9.8.1.2.10)
g_23 (3214)	equilibrium%coord_sys%g_23 (matflt_type) (9.8.1.2.10)
g_33 (3214)	equilibrium%coord_sys%g_33 (matflt_type) (9.8.1.2.10)
position (3214)	equilibrium%coord_sys%position (rz2D) (9.8.1.3.369)
r (3475)	equilibrium%coord_sys%position%r (matflt_type) (9.8.1.2.10)
z (3475)	equilibrium%coord_sys%position%z (matflt_type) (9.8.1.2.10)
time (3128)	equilibrium%time (float) (9.8.1.1.1)
codeparam (3128)	equilibrium%codeparam (codeparam) (9.8.1.3.84)
codename (3190)	equilibrium%codeparam%codename (string) (9.8.1.1.3)
codeversion (3190)	equilibrium%codeparam%codeversion (string) (9.8.1.1.3)
parameters (3190)	equilibrium%codeparam%parameters (string) (9.8.1.1.3)
output_diag (3190)	equilibrium%codeparam%output_diag (string) (9.8.1.1.3)
output_flag (3190)	equilibrium%codeparam%output_flag (integer) (9.8.1.1.2)

### 9.8.2.1.21 fusiondiag

datainfo (3129)	fusiondiag%datainfo (datainfo) (9.8.1.3.141)
dataprovider (3247)	fusiondiag%datainfo%dataprovider (string) (9.8.1.1.3)
putdate (3247)	fusiondiag%datainfo%putdate (string) (9.8.1.1.3)
source (3247)	fusiondiag%datainfo%source (string) (9.8.1.1.3)
comment (3247)	fusiondiag%datainfo%comment (string) (9.8.1.1.3)
cocos (3247)	fusiondiag%datainfo%cocos (integer) (9.8.1.1.2)
id (3247)	fusiondiag%datainfo%id (integer) (9.8.1.1.2)
isref (3247)	fusiondiag%datainfo%isref (integer) (9.8.1.1.2)
whatref (3247)	fusiondiag%datainfo%whatref (whatref) (9.8.1.3.513)
user (3619)	fusiondiag%datainfo%whatref%user (string) (9.8.1.1.3)
machine (3619)	fusiondiag%datainfo%whatref%machine (string) (9.8.1.1.3)
shot (3619)	fusiondiag%datainfo%whatref%shot (integer) (9.8.1.1.2)
run (3619)	fusiondiag%datainfo%whatref%run (integer) (9.8.1.1.2)
occurrence (3619)	fusiondiag%datainfo%whatref%occurrence (integer) (9.8.1.1.2)
putinfo (3247)	fusiondiag%datainfo%putinfo (putinfo) (9.8.1.3.349)
putmethod (3455)	fusiondiag%datainfo%putinfo%putmethod (string) (9.8.1.1.3)
putaccess (3455)	fusiondiag%datainfo%putinfo%putaccess (string) (9.8.1.1.3)
putlocation (3455)	fusiondiag%datainfo%putinfo%putlocation (string) (9.8.1.1.3)
rights (3455)	fusiondiag%datainfo%putinfo%rights (string) (9.8.1.1.3)
fus_product (3129)	fusiondiag%fus_product(:) (fusiondiag_fus_product) (9.8.1.3.229)
product (3335)	fusiondiag%fus_product(:)%product (string) (9.8.1.1.3)
reaction (3335)	fusiondiag%fus_product(:)%reaction (string) (9.8.1.1.3)
collimator (3335)	fusiondiag%fus_product(:)%collimator (fusiondiag_collimator) (9.8.1.3.220)

colli_circ (3326)	fusiondiag%fus_product(:)%collimator%colli_circ(:) (fusiondiag_colli_circ) (9.8.1.3.218)
name (3324)	fusiondiag%fus_product(:)%collimator%colli_circ(:)%name (string) (9.8.1.1.3)
setup_line (3324)	fusiondiag%fus_product(:)%collimator%colli_circ(:)%setup_line (setup_line) (9.8.1.3.403)
pivot_point (3509)	fusiondiag%fus_product(:)%collimator%colli_circ(:)%setup_line%pivot_point (rzphi1D) (9.8.1.3.372)
r (3478)	fusiondiag%fus_product(:)%collimator%colli_circ(:)%setup_line%pivot_point%r (vecflt.type) (9.8.1.2.13)
z (3478)	fusiondiag%fus_product(:)%collimator%colli_circ(:)%setup_line%pivot_point%z (vecflt.type) (9.8.1.2.13)
phi (3478)	fusiondiag%fus_product(:)%collimator%colli_circ(:)%setup_line%pivot_point%phi (vecflt.type) (9.8.1.2.13)
horchordang1 (3509)	fusiondiag%fus_product(:)%collimator%colli_circ(:)%setup_line%horchordang1 (vecflt.type) (9.8.1.2.13)
verchordang1 (3509)	fusiondiag%fus_product(:)%collimator%colli_circ(:)%setup_line%verchordang1 (vecflt.type) (9.8.1.2.13)
width (3509)	fusiondiag%fus_product(:)%collimator%colli_circ(:)%setup_line%width (vecflt.type) (9.8.1.2.13)
second_point (3509)	fusiondiag%fus_product(:)%collimator%colli_circ(:)%setup_line%second_point (rzphi1D) (9.8.1.3.372)
r (3478)	fusiondiag%fus_product(:)%collimator%colli_circ(:)%setup_line%second_point%r (vecflt.type) (9.8.1.2.13)
z (3478)	fusiondiag%fus_product(:)%collimator%colli_circ(:)%setup_line%second_point%z (vecflt.type) (9.8.1.2.13)
phi (3478)	fusiondiag%fus_product(:)%collimator%colli_circ(:)%setup_line%second_point%phi (vecflt.type) (9.8.1.2.13)
horchordang2 (3509)	fusiondiag%fus_product(:)%collimator%colli_circ(:)%setup_line%horchordang2 (vecflt.type) (9.8.1.2.13)
verchordang2 (3509)	fusiondiag%fus_product(:)%collimator%colli_circ(:)%setup_line%verchordang2 (vecflt.type) (9.8.1.2.13)
third_point (3509)	fusiondiag%fus_product(:)%collimator%colli_circ(:)%setup_line%third_point (rzphi1D) (9.8.1.3.372)
r (3478)	fusiondiag%fus_product(:)%collimator%colli_circ(:)%setup_line%third_point%r (vecflt.type) (9.8.1.2.13)
z (3478)	fusiondiag%fus_product(:)%collimator%colli_circ(:)%setup_line%third_point%z (vecflt.type) (9.8.1.2.13)
phi (3478)	fusiondiag%fus_product(:)%collimator%colli_circ(:)%setup_line%third_point%phi (vecflt.type) (9.8.1.2.13)
nchordpoints (3509)	fusiondiag%fus_product(:)%collimator%colli_circ(:)%setup_line%nchordpoints (integer) (9.8.1.1.2)
colliunit (3324)	fusiondiag%fus_product(:)%collimator%colli_circ(:)%colliunit(:) (fusiondiag_colliunit_circ) (9.8.1.3.221)
radius (3327)	fusiondiag%fus_product(:)%collimator%colli_circ(:)%colliunit(:)%radius (vecflt.type) (9.8.1.2.13)
centre (3327)	fusiondiag%fus_product(:)%collimator%colli_circ(:)%colliunit(:)%centre (rzphi1D) (9.8.1.3.372)
r (3478)	fusiondiag%fus_product(:)%collimator%colli_circ(:)%colliunit(:)%centre%r (vecflt.type) (9.8.1.2.13)
z (3478)	fusiondiag%fus_product(:)%collimator%colli_circ(:)%colliunit(:)%centre%z (vecflt.type) (9.8.1.2.13)
phi (3478)	fusiondiag%fus_product(:)%collimator%colli_circ(:)%colliunit(:)%centre%phi (vecflt.type) (9.8.1.2.13)
colli_poly (3326)	fusiondiag%fus_product(:)%collimator%colli_poly(:) (fusiondiag_colli_poly) (9.8.1.3.219)
name (3325)	fusiondiag%fus_product(:)%collimator%colli_poly(:)%name (string) (9.8.1.1.3)
setup_line (3325)	fusiondiag%fus_product(:)%collimator%colli_poly(:)%setup_line (setup_line) (9.8.1.3.403)
pivot_point (3509)	fusiondiag%fus_product(:)%collimator%colli_poly(:)%setup_line%pivot_point (rzphi1D) (9.8.1.3.372)
r (3478)	fusiondiag%fus_product(:)%collimator%colli_poly(:)%setup_line%pivot_point%r (vecflt.type) (9.8.1.2.13)
z (3478)	fusiondiag%fus_product(:)%collimator%colli_poly(:)%setup_line%pivot_point%z (vecflt.type) (9.8.1.2.13)
phi (3478)	fusiondiag%fus_product(:)%collimator%colli_poly(:)%setup_line%pivot_point%phi (vecflt.type) (9.8.1.2.13)
horchordang1 (3509)	fusiondiag%fus_product(:)%collimator%colli_poly(:)%setup_line%horchordang1 (vecflt.type) (9.8.1.2.13)
verchordang1 (3509)	fusiondiag%fus_product(:)%collimator%colli_poly(:)%setup_line%verchordang1 (vecflt.type) (9.8.1.2.13)
width (3509)	fusiondiag%fus_product(:)%collimator%colli_poly(:)%setup_line%width (vecflt.type) (9.8.1.2.13)
second_point (3509)	fusiondiag%fus_product(:)%collimator%colli_poly(:)%setup_line%second_point (rzphi1D) (9.8.1.3.372)
r (3478)	fusiondiag%fus_product(:)%collimator%colli_poly(:)%setup_line%second_point%r (vecflt.type) (9.8.1.2.13)



z (3478)	fusiondiag%fus_product(:)%collimator%colli_poly(:)%setup_line%second_point%z (vecflt_type) (9.8.1.2.13)
phi (3478)	fusiondiag%fus_product(:)%collimator%colli_poly(:)%setup_line%second_point%phi (vecflt_type) (9.8.1.2.13)
horchordang2 (3509)	fusiondiag%fus_product(:)%collimator%colli_poly(:)%setup_line%horchordang2 (vecflt_type) (9.8.1.2.13)
verchordang2 (3509)	fusiondiag%fus_product(:)%collimator%colli_poly(:)%setup_line%verchordang2 (vecflt_type) (9.8.1.2.13)
third_point (3509)	fusiondiag%fus_product(:)%collimator%colli_poly(:)%setup_line%third_point (rzphi1D) (9.8.1.3.372)
r (3478)	fusiondiag%fus_product(:)%collimator%colli_poly(:)%setup_line%third_point%r (vecflt_type) (9.8.1.2.13)
z (3478)	fusiondiag%fus_product(:)%collimator%colli_poly(:)%setup_line%third_point%z (vecflt_type) (9.8.1.2.13)
phi (3478)	fusiondiag%fus_product(:)%collimator%colli_poly(:)%setup_line%third_point%phi (vecflt_type) (9.8.1.2.13)
nchordpoints (3509)	fusiondiag%fus_product(:)%collimator%colli_poly(:)%setup_line%nchordpoints (integer) (9.8.1.1.2)
colliunit (3325)	fusiondiag%fus_product(:)%collimator%colli_poly(:)%colliunit(:) (fusiondiag_colliunit_poly) (9.8.1.3.222)
dimension (3328)	fusiondiag%fus_product(:)%collimator%colli_poly(:)%colliunit(:)%dimension (float) (9.8.1.1.1)
nodes (3328)	fusiondiag%fus_product(:)%collimator%colli_poly(:)%colliunit(:)%nodes (rzphi2D) (9.8.1.3.375)
r (3481)	fusiondiag%fus_product(:)%collimator%colli_poly(:)%colliunit(:)%nodes%r (matflt_type) (9.8.1.2.10)
z (3481)	fusiondiag%fus_product(:)%collimator%colli_poly(:)%colliunit(:)%nodes%z (matflt_type) (9.8.1.2.10)
phi (3481)	fusiondiag%fus_product(:)%collimator%colli_poly(:)%colliunit(:)%nodes%phi (matflt_type) (9.8.1.2.10)
colli_3d (3326)	fusiondiag%fus_product(:)%collimator%colli_3d(:) (fusiondiag_colli_3d) (9.8.1.3.217)
name (3323)	fusiondiag%fus_product(:)%collimator%colli_3d(:)%name (string) (9.8.1.1.3)
voxels (3323)	fusiondiag%fus_product(:)%collimator%colli_3d(:)%voxels(:) (fusiondiag_voxels) (9.8.1.3.232)
centre (3338)	fusiondiag%fus_product(:)%collimator%colli_3d(:)%voxels(:)%centre (rzphi0D) (9.8.1.3.371)
r (3477)	fusiondiag%fus_product(:)%collimator%colli_3d(:)%voxels(:)%centre%r (float) (9.8.1.1.1)
z (3477)	fusiondiag%fus_product(:)%collimator%colli_3d(:)%voxels(:)%centre%z (float) (9.8.1.1.1)
phi (3477)	fusiondiag%fus_product(:)%collimator%colli_3d(:)%voxels(:)%centre%phi (float) (9.8.1.1.1)
direction (3338)	fusiondiag%fus_product(:)%collimator%colli_3d(:)%voxels(:)%direction (rzphi0D) (9.8.1.3.371)
r (3477)	fusiondiag%fus_product(:)%collimator%colli_3d(:)%voxels(:)%direction%r (float) (9.8.1.1.1)
z (3477)	fusiondiag%fus_product(:)%collimator%colli_3d(:)%voxels(:)%direction%z (float) (9.8.1.1.1)
phi (3477)	fusiondiag%fus_product(:)%collimator%colli_3d(:)%voxels(:)%direction%phi (float) (9.8.1.1.1)
volume (3338)	fusiondiag%fus_product(:)%collimator%colli_3d(:)%voxels(:)%volume (float) (9.8.1.1.1)
solid_angle (3338)	fusiondiag%fus_product(:)%collimator%colli_3d(:)%voxels(:)%solid_angle (float) (9.8.1.1.1)
counts (3335)	fusiondiag%fus_product(:)%counts (fusiondiag_counts) (9.8.1.3.223)
units (3329)	fusiondiag%fus_product(:)%counts%units (string) (9.8.1.1.3)
ct_chords (3329)	fusiondiag%fus_product(:)%counts%ct_chords(:) (fusiondiag_ct_chords) (9.8.1.3.224)
name (3330)	fusiondiag%fus_product(:)%counts%ct_chords(:)%name (vecstring_type) (9.8.1.2.15)
energy (3330)	fusiondiag%fus_product(:)%counts%ct_chords(:)%energy (exp0D) (9.8.1.3.203)
value (3309)	fusiondiag%fus_product(:)%counts%ct_chords(:)%energy%value (float) (9.8.1.1.1)
abserror (3309)	fusiondiag%fus_product(:)%counts%ct_chords(:)%energy%abserror (float) (9.8.1.1.1)
relerror (3309)	fusiondiag%fus_product(:)%counts%ct_chords(:)%energy%relerror (float) (9.8.1.1.1)
measure (3330)	fusiondiag%fus_product(:)%counts%ct_chords(:)%measure (exp1D) (9.8.1.3.204)
value (3310)	fusiondiag%fus_product(:)%counts%ct_chords(:)%measure%value (vecflt_type) (9.8.1.2.13)
abserror (3310)	fusiondiag%fus_product(:)%counts%ct_chords(:)%measure%abserror (vecflt_type) (9.8.1.2.13)
relerror (3310)	fusiondiag%fus_product(:)%counts%ct_chords(:)%measure%relerror (vecflt_type) (9.8.1.2.13)
ct_energy (3329)	fusiondiag%fus_product(:)%counts%ct_energy(:) (fusiondiag_ct_energy) (9.8.1.3.225)
energy (3331)	fusiondiag%fus_product(:)%counts%ct_energy(:)%energy (exp1D) (9.8.1.3.204)
value (3310)	fusiondiag%fus_product(:)%counts%ct_energy(:)%energy%value (vecflt_type) (9.8.1.2.13)
abserror (3310)	fusiondiag%fus_product(:)%counts%ct_energy(:)%energy%abserror (vecflt_type) (9.8.1.2.13)
relerror (3310)	fusiondiag%fus_product(:)%counts%ct_energy(:)%energy%relerror (vecflt_type) (9.8.1.2.13)
measure (3331)	fusiondiag%fus_product(:)%counts%ct_energy(:)%measure (exp1D) (9.8.1.3.204)
value (3310)	fusiondiag%fus_product(:)%counts%ct_energy(:)%measure%value (vecflt_type) (9.8.1.2.13)
abserror (3310)	fusiondiag%fus_product(:)%counts%ct_energy(:)%measure%abserror (vecflt_type) (9.8.1.2.13)
relerror (3310)	fusiondiag%fus_product(:)%counts%ct_energy(:)%measure%relerror (vecflt_type) (9.8.1.2.13)
detect_ct (3329)	fusiondiag%fus_product(:)%counts%detect_ct(:) (fusiondiag_detect_ct_energy) (9.8.1.3.226)
energy (3332)	fusiondiag%fus_product(:)%counts%detect_ct(:)%energy (exp1D) (9.8.1.3.204)



value (3310)	fusiondiag%fus_product(:)%counts%detect.ct(:)%energy%value (vecflt.type) (9.8.1.2.13)
abserror (3310)	fusiondiag%fus_product(:)%counts%detect.ct(:)%energy%abserror (vecflt.type) (9.8.1.2.13)
releror (3310)	fusiondiag%fus_product(:)%counts%detect.ct(:)%energy%releror (vecflt.type) (9.8.1.2.13)
measure (3332)	fusiondiag%fus_product(:)%counts%detect.ct(:)%measure (exp1D) (9.8.1.3.204)
value (3310)	fusiondiag%fus_product(:)%counts%detect.ct(:)%measure%value (vecflt.type) (9.8.1.2.13)
abserror (3310)	fusiondiag%fus_product(:)%counts%detect.ct(:)%measure%abserror (vecflt.type) (9.8.1.2.13)
releror (3310)	fusiondiag%fus_product(:)%counts%detect.ct(:)%measure%releror (vecflt.type) (9.8.1.2.13)
diag_func (3332)	fusiondiag%fus_product(:)%counts%detect.ct(:)%diag_func (diag_func) (9.8.1.3.147)
description (3253)	fusiondiag%fus_product(:)%counts%detect.ct(:)%diag_func%description (string) (9.8.1.1.3)
transf_mat (3253)	fusiondiag%fus_product(:)%counts%detect.ct(:)%diag_func%transf_mat (matflt.type) (9.8.1.2.10)
emissivity1d (3335)	fusiondiag%fus_product(:)%emissivity1d (fusiondiag_emissivity1d) (9.8.1.3.227)
units (3333)	fusiondiag%fus_product(:)%emissivity1d%units (string) (9.8.1.1.3)
r (3333)	fusiondiag%fus_product(:)%emissivity1d%r (exp1D) (9.8.1.3.204)
value (3310)	fusiondiag%fus_product(:)%emissivity1d%r%value (vecflt.type) (9.8.1.2.13)
abserror (3310)	fusiondiag%fus_product(:)%emissivity1d%r%abserror (vecflt.type) (9.8.1.2.13)
releror (3310)	fusiondiag%fus_product(:)%emissivity1d%r%releror (vecflt.type) (9.8.1.2.13)
z (3333)	fusiondiag%fus_product(:)%emissivity1d%z (exp1D) (9.8.1.3.204)
value (3310)	fusiondiag%fus_product(:)%emissivity1d%z%value (vecflt.type) (9.8.1.2.13)
abserror (3310)	fusiondiag%fus_product(:)%emissivity1d%z%abserror (vecflt.type) (9.8.1.2.13)
releror (3310)	fusiondiag%fus_product(:)%emissivity1d%z%releror (vecflt.type) (9.8.1.2.13)
spec1d (3333)	fusiondiag%fus_product(:)%emissivity1d%spec1d(:) (fusiondiag_spec1d) (9.8.1.3.230)
energy (3336)	fusiondiag%fus_product(:)%emissivity1d%spec1d(:)%energy (exp0D) (9.8.1.3.203)
value (3309)	fusiondiag%fus_product(:)%emissivity1d%spec1d(:)%energy%value (float) (9.8.1.1.1)
abserror (3309)	fusiondiag%fus_product(:)%emissivity1d%spec1d(:)%energy%abserror (float) (9.8.1.1.1)
releror (3309)	fusiondiag%fus_product(:)%emissivity1d%spec1d(:)%energy%releror (float) (9.8.1.1.1)
measure (3336)	fusiondiag%fus_product(:)%emissivity1d%spec1d(:)%measure (exp1D) (9.8.1.3.204)
value (3310)	fusiondiag%fus_product(:)%emissivity1d%spec1d(:)%measure%value (vecflt.type) (9.8.1.2.13)
abserror (3310)	fusiondiag%fus_product(:)%emissivity1d%spec1d(:)%measure%abserror (vecflt.type) (9.8.1.2.13)
releror (3310)	fusiondiag%fus_product(:)%emissivity1d%spec1d(:)%measure%releror (vecflt.type) (9.8.1.2.13)
emissivity2d (3335)	fusiondiag%fus_product(:)%emissivity2d (fusiondiag_emissivity2d) (9.8.1.3.228)
units (3334)	fusiondiag%fus_product(:)%emissivity2d%units (string) (9.8.1.1.3)
r (3334)	fusiondiag%fus_product(:)%emissivity2d%r (exp2D) (9.8.1.3.205)
value (3311)	fusiondiag%fus_product(:)%emissivity2d%r%value (matflt.type) (9.8.1.2.10)
abserror (3311)	fusiondiag%fus_product(:)%emissivity2d%r%abserror (matflt.type) (9.8.1.2.10)
releror (3311)	fusiondiag%fus_product(:)%emissivity2d%r%releror (matflt.type) (9.8.1.2.10)
z (3334)	fusiondiag%fus_product(:)%emissivity2d%z (exp2D) (9.8.1.3.205)
value (3311)	fusiondiag%fus_product(:)%emissivity2d%z%value (matflt.type) (9.8.1.2.10)
abserror (3311)	fusiondiag%fus_product(:)%emissivity2d%z%abserror (matflt.type) (9.8.1.2.10)
releror (3311)	fusiondiag%fus_product(:)%emissivity2d%z%releror (matflt.type) (9.8.1.2.10)
spec2d (3334)	fusiondiag%fus_product(:)%emissivity2d%spec2d(:) (fusiondiag_spec2d) (9.8.1.3.231)
energy (3337)	fusiondiag%fus_product(:)%emissivity2d%spec2d(:)%energy (exp0D) (9.8.1.3.203)
value (3309)	fusiondiag%fus_product(:)%emissivity2d%spec2d(:)%energy%value (float) (9.8.1.1.1)
abserror (3309)	fusiondiag%fus_product(:)%emissivity2d%spec2d(:)%energy%abserror (float) (9.8.1.1.1)
releror (3309)	fusiondiag%fus_product(:)%emissivity2d%spec2d(:)%energy%releror (float) (9.8.1.1.1)
measure (3337)	fusiondiag%fus_product(:)%emissivity2d%spec2d(:)%measure (exp2D) (9.8.1.3.205)
value (3311)	fusiondiag%fus_product(:)%emissivity2d%spec2d(:)%measure%value (matflt.type) (9.8.1.2.10)
abserror (3311)	fusiondiag%fus_product(:)%emissivity2d%spec2d(:)%measure%abserror (matflt.type) (9.8.1.2.10)
releror (3311)	fusiondiag%fus_product(:)%emissivity2d%spec2d(:)%measure%releror (matflt.type) (9.8.1.2.10)
codeparam (3335)	fusiondiag%fus_product(:)%codeparam (codeparam) (9.8.1.3.84)
codename (3190)	fusiondiag%fus_product(:)%codeparam%codename (string) (9.8.1.1.3)
codeversion (3190)	fusiondiag%fus_product(:)%codeparam%codeversion (string) (9.8.1.1.3)
parameters (3190)	fusiondiag%fus_product(:)%codeparam%parameters (string) (9.8.1.1.3)
output_diag (3190)	fusiondiag%fus_product(:)%codeparam%output_diag (string) (9.8.1.1.3)
output_flag (3190)	fusiondiag%fus_product(:)%codeparam%output_flag (integer) (9.8.1.1.2)
codeparam (3129)	fusiondiag%codeparam (codeparam) (9.8.1.3.84)
codename (3190)	fusiondiag%codeparam%codename (string) (9.8.1.1.3)
codeversion (3190)	fusiondiag%codeparam%codeversion (string) (9.8.1.1.3)

parameters (3190)	fusiondiag%codeparam%parameters (string) (9.8.1.1.3)
output_diag (3190)	fusiondiag%codeparam%output_diag (string) (9.8.1.1.3)
output_flag (3190)	fusiondiag%codeparam%output_flag (integer) (9.8.1.1.2)
time (3129)	fusiondiag%time (float) (9.8.1.1.1)

### 9.8.2.1.22 halphadiag

datainfo (3130)	halphadiag%datainfo (datainfo) (9.8.1.3.141)
dataprovider (3247)	halphadiag%datainfo%dataprovider (string) (9.8.1.1.3)
putdate (3247)	halphadiag%datainfo%putdate (string) (9.8.1.1.3)
source (3247)	halphadiag%datainfo%source (string) (9.8.1.1.3)
comment (3247)	halphadiag%datainfo%comment (string) (9.8.1.1.3)
cocos (3247)	halphadiag%datainfo%cocos (integer) (9.8.1.1.2)
id (3247)	halphadiag%datainfo%id (integer) (9.8.1.1.2)
isref (3247)	halphadiag%datainfo%isref (integer) (9.8.1.1.2)
whatref (3247)	halphadiag%datainfo%whatref (whatref) (9.8.1.3.513)
user (3619)	halphadiag%datainfo%whatref%user (string) (9.8.1.1.3)
machine (3619)	halphadiag%datainfo%whatref%machine (string) (9.8.1.1.3)
shot (3619)	halphadiag%datainfo%whatref%shot (integer) (9.8.1.1.2)
run (3619)	halphadiag%datainfo%whatref%run (integer) (9.8.1.1.2)
occurrence (3619)	halphadiag%datainfo%whatref%occurrence (integer) (9.8.1.1.2)
putinfo (3247)	halphadiag%datainfo%putinfo (putinfo) (9.8.1.3.349)
putmethod (3455)	halphadiag%datainfo%putinfo%putmethod (string) (9.8.1.1.3)
putaccess (3455)	halphadiag%datainfo%putinfo%putaccess (string) (9.8.1.1.3)
putlocation (3455)	halphadiag%datainfo%putinfo%putlocation (string) (9.8.1.1.3)
rights (3455)	halphadiag%datainfo%putinfo%rights (string) (9.8.1.1.3)
setup (3130)	halphadiag%setup (halphadiag%setup) (9.8.1.3.237)
name (3343)	halphadiag%setup%name (vecstring_type) (9.8.1.2.15)
pivot_point (3343)	halphadiag%setup%pivot_point (rzphiID) (9.8.1.3.372)
r (3478)	halphadiag%setup%pivot_point%r (vecflt_type) (9.8.1.2.13)
z (3478)	halphadiag%setup%pivot_point%z (vecflt_type) (9.8.1.2.13)
phi (3478)	halphadiag%setup%pivot_point%phi (vecflt_type) (9.8.1.2.13)
horchordang (3343)	halphadiag%setup%horchordang (vecflt_type) (9.8.1.2.13)
verchordang (3343)	halphadiag%setup%verchordang (vecflt_type) (9.8.1.2.13)
second_point (3343)	halphadiag%setup%second_point (rzphiID) (9.8.1.3.372)
r (3478)	halphadiag%setup%second_point%r (vecflt_type) (9.8.1.2.13)
z (3478)	halphadiag%setup%second_point%z (vecflt_type) (9.8.1.2.13)
phi (3478)	halphadiag%setup%second_point%phi (vecflt_type) (9.8.1.2.13)
solidangle (3343)	halphadiag%setup%solidangle (expID) (9.8.1.3.204)
value (3310)	halphadiag%setup%solidangle%value (vecflt_type) (9.8.1.2.13)
abserror (3310)	halphadiag%setup%solidangle%abserror (vecflt_type) (9.8.1.2.13)
relerror (3310)	halphadiag%setup%solidangle%relerror (vecflt_type) (9.8.1.2.13)
intensity (3130)	halphadiag%intensity (expID) (9.8.1.3.204)
value (3310)	halphadiag%intensity%value (vecflt_type) (9.8.1.2.13)
abserror (3310)	halphadiag%intensity%abserror (vecflt_type) (9.8.1.2.13)
relerror (3310)	halphadiag%intensity%relerror (vecflt_type) (9.8.1.2.13)
codeparam (3130)	halphadiag%codeparam (codeparam) (9.8.1.3.84)
codename (3190)	halphadiag%codeparam%codename (string) (9.8.1.1.3)
codeversion (3190)	halphadiag%codeparam%codeversion (string) (9.8.1.1.3)
parameters (3190)	halphadiag%codeparam%parameters (string) (9.8.1.1.3)
output_diag (3190)	halphadiag%codeparam%output_diag (string) (9.8.1.1.3)
output_flag (3190)	halphadiag%codeparam%output_flag (integer) (9.8.1.1.2)
time (3130)	halphadiag%time (float) (9.8.1.1.1)

### 9.8.2.1.23 heat\_sources

datainfo (3131)	heat_sources%datainfo (datainfo) (9.8.1.3.141)
dataprovider (3247)	heat_sources%datainfo%dataprovider (string) (9.8.1.1.3)
putdate (3247)	heat_sources%datainfo%putdate (string) (9.8.1.1.3)
source (3247)	heat_sources%datainfo%source (string) (9.8.1.1.3)
comment (3247)	heat_sources%datainfo%comment (string) (9.8.1.1.3)

cocos (3247)	heat_sources%datainfo%cocos (integer) (9.8.1.1.2)
id (3247)	heat_sources%datainfo%id (integer) (9.8.1.1.2)
isref (3247)	heat_sources%datainfo%isref (integer) (9.8.1.1.2)
whatref (3247)	heat_sources%datainfo%whatref (whatref) (9.8.1.3.513)
user (3619)	heat_sources%datainfo%whatref%user (string) (9.8.1.1.3)
machine (3619)	heat_sources%datainfo%whatref%machine (string) (9.8.1.1.3)
shot (3619)	heat_sources%datainfo%whatref%shot (integer) (9.8.1.1.2)
run (3619)	heat_sources%datainfo%whatref%run (integer) (9.8.1.1.2)
occurrence (3619)	heat_sources%datainfo%whatref%occurrence (integer) (9.8.1.1.2)
putinfo (3247)	heat_sources%datainfo%putinfo (putinfo) (9.8.1.3.349)
putmethod (3455)	heat_sources%datainfo%putinfo%putmethod (string) (9.8.1.1.3)
putaccess (3455)	heat_sources%datainfo%putinfo%putaccess (string) (9.8.1.1.3)
putlocation (3455)	heat_sources%datainfo%putinfo%putlocation (string) (9.8.1.1.3)
rights (3455)	heat_sources%datainfo%putinfo%rights (string) (9.8.1.1.3)
sources (3131)	heat_sources%sources(:) (calorimetry_heat_source) (9.8.1.3.80)
name (3186)	heat_sources%sources(:)%name (string) (9.8.1.1.3)
temp_in (3186)	heat_sources%sources(:)%temp_in (float) (9.8.1.1.1)
temp_out (3186)	heat_sources%sources(:)%temp_out (float) (9.8.1.1.1)
press_in (3186)	heat_sources%sources(:)%press_in (float) (9.8.1.1.1)
press_out (3186)	heat_sources%sources(:)%press_out (float) (9.8.1.1.1)
flow (3186)	heat_sources%sources(:)%flow (float) (9.8.1.1.1)
power (3186)	heat_sources%sources(:)%power (float) (9.8.1.1.1)
sinks (3131)	heat_sources%sinks(:) (calorimetry_heat_source) (9.8.1.3.80)
name (3186)	heat_sources%sinks(:)%name (string) (9.8.1.1.3)
temp_in (3186)	heat_sources%sinks(:)%temp_in (float) (9.8.1.1.1)
temp_out (3186)	heat_sources%sinks(:)%temp_out (float) (9.8.1.1.1)
press_in (3186)	heat_sources%sinks(:)%press_in (float) (9.8.1.1.1)
press_out (3186)	heat_sources%sinks(:)%press_out (float) (9.8.1.1.1)
flow (3186)	heat_sources%sinks(:)%flow (float) (9.8.1.1.1)
power (3186)	heat_sources%sinks(:)%power (float) (9.8.1.1.1)
codeparam (3131)	heat_sources%codeparam (codeparam) (9.8.1.3.84)
codename (3190)	heat_sources%codeparam%codename (string) (9.8.1.1.3)
codeversion (3190)	heat_sources%codeparam%codeversion (string) (9.8.1.1.3)
parameters (3190)	heat_sources%codeparam%parameters (string) (9.8.1.1.3)
output_diag (3190)	heat_sources%codeparam%output_diag (string) (9.8.1.1.3)
output_flag (3190)	heat_sources%codeparam%output_flag (integer) (9.8.1.1.2)
time (3131)	heat_sources%time (float) (9.8.1.1.1)

### 9.8.2.1.24 interfdiag

datainfo (3367)	lineintegraldiag%datainfo (datainfo) (9.8.1.3.141)
dataprovider (3247)	lineintegraldiag%datainfo%dataprovider (string) (9.8.1.1.3)
putdate (3247)	lineintegraldiag%datainfo%putdate (string) (9.8.1.1.3)
source (3247)	lineintegraldiag%datainfo%source (string) (9.8.1.1.3)
comment (3247)	lineintegraldiag%datainfo%comment (string) (9.8.1.1.3)
cocos (3247)	lineintegraldiag%datainfo%cocos (integer) (9.8.1.1.2)
id (3247)	lineintegraldiag%datainfo%id (integer) (9.8.1.1.2)
isref (3247)	lineintegraldiag%datainfo%isref (integer) (9.8.1.1.2)
whatref (3247)	lineintegraldiag%datainfo%whatref (whatref) (9.8.1.3.513)
user (3619)	lineintegraldiag%datainfo%whatref%user (string) (9.8.1.1.3)
machine (3619)	lineintegraldiag%datainfo%whatref%machine (string) (9.8.1.1.3)
shot (3619)	lineintegraldiag%datainfo%whatref%shot (integer) (9.8.1.1.2)
run (3619)	lineintegraldiag%datainfo%whatref%run (integer) (9.8.1.1.2)
occurrence (3619)	lineintegraldiag%datainfo%whatref%occurrence (integer) (9.8.1.1.2)
putinfo (3247)	lineintegraldiag%datainfo%putinfo (putinfo) (9.8.1.3.349)
putmethod (3455)	lineintegraldiag%datainfo%putinfo%putmethod (string) (9.8.1.1.3)
putaccess (3455)	lineintegraldiag%datainfo%putinfo%putaccess (string) (9.8.1.1.3)
putlocation (3455)	lineintegraldiag%datainfo%putinfo%putlocation (string) (9.8.1.1.3)
rights (3455)	lineintegraldiag%datainfo%putinfo%rights (string) (9.8.1.1.3)
expression (3367)	lineintegraldiag%expression (string) (9.8.1.1.3)
setup_line (3367)	lineintegraldiag%setup_line (setup_line) (9.8.1.3.403)

pivot_point (3509)	lineintegraldiag%setup_line%pivot_point (rzphi1D) (9.8.1.3.372)
r (3478)	lineintegraldiag%setup_line%pivot_point%r (vecflt.type) (9.8.1.2.13)
z (3478)	lineintegraldiag%setup_line%pivot_point%z (vecflt.type) (9.8.1.2.13)
phi (3478)	lineintegraldiag%setup_line%pivot_point%phi (vecflt.type) (9.8.1.2.13)
horchordang1 (3509)	lineintegraldiag%setup_line%horchordang1 (vecflt.type) (9.8.1.2.13)
verchordang1 (3509)	lineintegraldiag%setup_line%verchordang1 (vecflt.type) (9.8.1.2.13)
width (3509)	lineintegraldiag%setup_line%width (vecflt.type) (9.8.1.2.13)
second_point (3509)	lineintegraldiag%setup_line%second_point (rzphi1D) (9.8.1.3.372)
r (3478)	lineintegraldiag%setup_line%second_point%r (vecflt.type) (9.8.1.2.13)
z (3478)	lineintegraldiag%setup_line%second_point%z (vecflt.type) (9.8.1.2.13)
phi (3478)	lineintegraldiag%setup_line%second_point%phi (vecflt.type) (9.8.1.2.13)
horchordang2 (3509)	lineintegraldiag%setup_line%horchordang2 (vecflt.type) (9.8.1.2.13)
verchordang2 (3509)	lineintegraldiag%setup_line%verchordang2 (vecflt.type) (9.8.1.2.13)
third_point (3509)	lineintegraldiag%setup_line%third_point (rzphi1D) (9.8.1.3.372)
r (3478)	lineintegraldiag%setup_line%third_point%r (vecflt.type) (9.8.1.2.13)
z (3478)	lineintegraldiag%setup_line%third_point%z (vecflt.type) (9.8.1.2.13)
phi (3478)	lineintegraldiag%setup_line%third_point%phi (vecflt.type) (9.8.1.2.13)
nchordpoints (3509)	lineintegraldiag%setup_line%nchordpoints (integer) (9.8.1.1.2)
measure (3367)	lineintegraldiag%measure (exp1D) (9.8.1.3.204)
value (3310)	lineintegraldiag%measure%value (vecflt.type) (9.8.1.2.13)
abserror (3310)	lineintegraldiag%measure%abserror (vecflt.type) (9.8.1.2.13)
releror (3310)	lineintegraldiag%measure%releror (vecflt.type) (9.8.1.2.13)
codeparam (3367)	lineintegraldiag%codeparam (codeparam) (9.8.1.3.84)
codename (3190)	lineintegraldiag%codeparam%codename (string) (9.8.1.1.3)
codeversion (3190)	lineintegraldiag%codeparam%codeversion (string) (9.8.1.1.3)
parameters (3190)	lineintegraldiag%codeparam%parameters (string) (9.8.1.1.3)
output_diag (3190)	lineintegraldiag%codeparam%output_diag (string) (9.8.1.1.3)
output_flag (3190)	lineintegraldiag%codeparam%output_flag (integer) (9.8.1.1.2)
time (3367)	lineintegraldiag%time (float) (9.8.1.1.1)

### 9.8.2.1.25 ironmodel

datainfo (3133)	ironmodel%datainfo (datainfo) (9.8.1.3.141)
dataprovider (3247)	ironmodel%datainfo%dataprovider (string) (9.8.1.1.3)
putdate (3247)	ironmodel%datainfo%putdate (string) (9.8.1.1.3)
source (3247)	ironmodel%datainfo%source (string) (9.8.1.1.3)
comment (3247)	ironmodel%datainfo%comment (string) (9.8.1.1.3)
cocos (3247)	ironmodel%datainfo%cocos (integer) (9.8.1.1.2)
id (3247)	ironmodel%datainfo%id (integer) (9.8.1.1.2)
isref (3247)	ironmodel%datainfo%isref (integer) (9.8.1.1.2)
whatref (3247)	ironmodel%datainfo%whatref (whatref) (9.8.1.3.513)
user (3619)	ironmodel%datainfo%whatref%user (string) (9.8.1.1.3)
machine (3619)	ironmodel%datainfo%whatref%machine (string) (9.8.1.1.3)
shot (3619)	ironmodel%datainfo%whatref%shot (integer) (9.8.1.1.2)
run (3619)	ironmodel%datainfo%whatref%run (integer) (9.8.1.1.2)
occurrence (3619)	ironmodel%datainfo%whatref%occurrence (integer) (9.8.1.1.2)
putinfo (3247)	ironmodel%datainfo%putinfo (putinfo) (9.8.1.3.349)
putmethod (3455)	ironmodel%datainfo%putinfo%putmethod (string) (9.8.1.1.3)
putaccess (3455)	ironmodel%datainfo%putinfo%putaccess (string) (9.8.1.1.3)
putlocation (3455)	ironmodel%datainfo%putinfo%putlocation (string) (9.8.1.1.3)
rights (3455)	ironmodel%datainfo%putinfo%rights (string) (9.8.1.1.3)
desc_iron (3133)	ironmodel%desc_iron (desc_iron) (9.8.1.3.144)
name (3250)	ironmodel%desc_iron%name (vecstring.type) (9.8.1.2.15)
id (3250)	ironmodel%desc_iron%id (vecstring.type) (9.8.1.2.15)
permeability (3250)	ironmodel%desc_iron%permeability (permeability) (9.8.1.3.327)
b (3433)	ironmodel%desc_iron%permeability%b (matflt.type) (9.8.1.2.10)
mur (3433)	ironmodel%desc_iron%permeability%mur (matflt.type) (9.8.1.2.10)
geom_iron (3250)	ironmodel%desc_iron%geom_iron (geom_iron) (9.8.1.3.234)
npoints (3340)	ironmodel%desc_iron%geom_iron%npoints (vecint.type) (9.8.1.2.14)
rzcoordinate (3340)	ironmodel%desc_iron%geom_iron%rzcoordinate (rz2D) (9.8.1.3.369)
r (3475)	ironmodel%desc_iron%geom_iron%rzcoordinate%r (matflt.type) (9.8.1.2.10)

z (3475)	ironmodel%desc_iron%geom_iron%rzcoordinate%z (matflt.type) (9.8.1.2.10)
magnetise (3133)	ironmodel%magnetise (magnetise) (9.8.1.3.267)
mr (3373)	ironmodel%magnetise%mr (exp1D) (9.8.1.3.204)
value (3310)	ironmodel%magnetise%mr%value (vecflt.type) (9.8.1.2.13)
abserror (3310)	ironmodel%magnetise%mr%abserror (vecflt.type) (9.8.1.2.13)
relerror (3310)	ironmodel%magnetise%mr%relerror (vecflt.type) (9.8.1.2.13)
mz (3373)	ironmodel%magnetise%mz (exp1D) (9.8.1.3.204)
value (3310)	ironmodel%magnetise%mz%value (vecflt.type) (9.8.1.2.13)
abserror (3310)	ironmodel%magnetise%mz%abserror (vecflt.type) (9.8.1.2.13)
relerror (3310)	ironmodel%magnetise%mz%relerror (vecflt.type) (9.8.1.2.13)
codeparam (3133)	ironmodel%codeparam (codeparam) (9.8.1.3.84)
codename (3190)	ironmodel%codeparam%codename (string) (9.8.1.1.3)
codeversion (3190)	ironmodel%codeparam%codeversion (string) (9.8.1.1.3)
parameters (3190)	ironmodel%codeparam%parameters (string) (9.8.1.1.3)
output_diag (3190)	ironmodel%codeparam%output_diag (string) (9.8.1.1.3)
output_flag (3190)	ironmodel%codeparam%output_flag (integer) (9.8.1.1.2)
time (3133)	ironmodel%time (float) (9.8.1.1.1)

### 9.8.2.1.26 langmuirdiag

datainfo (3134)	langmuirdiag%datainfo (datainfo) (9.8.1.3.141)
dataproducer (3247)	langmuirdiag%datainfo%dataproducer (string) (9.8.1.1.3)
putdate (3247)	langmuirdiag%datainfo%putdate (string) (9.8.1.1.3)
source (3247)	langmuirdiag%datainfo%source (string) (9.8.1.1.3)
comment (3247)	langmuirdiag%datainfo%comment (string) (9.8.1.1.3)
cocos (3247)	langmuirdiag%datainfo%cocos (integer) (9.8.1.1.2)
id (3247)	langmuirdiag%datainfo%id (integer) (9.8.1.1.2)
isref (3247)	langmuirdiag%datainfo%isref (integer) (9.8.1.1.2)
whatref (3247)	langmuirdiag%datainfo%whatref (whatref) (9.8.1.3.513)
user (3619)	langmuirdiag%datainfo%whatref%user (string) (9.8.1.1.3)
machine (3619)	langmuirdiag%datainfo%whatref%machine (string) (9.8.1.1.3)
shot (3619)	langmuirdiag%datainfo%whatref%shot (integer) (9.8.1.1.2)
run (3619)	langmuirdiag%datainfo%whatref%run (integer) (9.8.1.1.2)
occurrence (3619)	langmuirdiag%datainfo%whatref%occurrence (integer) (9.8.1.1.2)
putinfo (3247)	langmuirdiag%datainfo%putinfo (putinfo) (9.8.1.3.349)
putmethod (3455)	langmuirdiag%datainfo%putinfo%putmethod (string) (9.8.1.1.3)
putaccess (3455)	langmuirdiag%datainfo%putinfo%putaccess (string) (9.8.1.1.3)
putlocation (3455)	langmuirdiag%datainfo%putinfo%putlocation (string) (9.8.1.1.3)
rights (3455)	langmuirdiag%datainfo%putinfo%rights (string) (9.8.1.1.3)
potential (3134)	langmuirdiag%potential (lang_measure) (9.8.1.3.251)
name (3357)	langmuirdiag%potential%name (vecstring.type) (9.8.1.2.15)
direction (3357)	langmuirdiag%potential%direction (vecstring.type) (9.8.1.2.15)
area (3357)	langmuirdiag%potential%area (exp1D) (9.8.1.3.204)
value (3310)	langmuirdiag%potential%area%value (vecflt.type) (9.8.1.2.13)
abserror (3310)	langmuirdiag%potential%area%abserror (vecflt.type) (9.8.1.2.13)
relerror (3310)	langmuirdiag%potential%area%relerror (vecflt.type) (9.8.1.2.13)
position (3357)	langmuirdiag%potential%position (rzphi1Dexp) (9.8.1.3.373)
r (3479)	langmuirdiag%potential%position%r (exp1D) (9.8.1.3.204)
value (3310)	langmuirdiag%potential%position%r%value (vecflt.type) (9.8.1.2.13)
abserror (3310)	langmuirdiag%potential%position%r%abserror (vecflt.type) (9.8.1.2.13)
relerror (3310)	langmuirdiag%potential%position%r%relerror (vecflt.type) (9.8.1.2.13)
z (3479)	langmuirdiag%potential%position%z (exp1D) (9.8.1.3.204)
value (3310)	langmuirdiag%potential%position%z%value (vecflt.type) (9.8.1.2.13)
abserror (3310)	langmuirdiag%potential%position%z%abserror (vecflt.type) (9.8.1.2.13)
relerror (3310)	langmuirdiag%potential%position%z%relerror (vecflt.type) (9.8.1.2.13)
phi (3479)	langmuirdiag%potential%position%phi (exp1D) (9.8.1.3.204)
value (3310)	langmuirdiag%potential%position%phi%value (vecflt.type) (9.8.1.2.13)
abserror (3310)	langmuirdiag%potential%position%phi%abserror (vecflt.type) (9.8.1.2.13)
relerror (3310)	langmuirdiag%potential%position%phi%relerror (vecflt.type) (9.8.1.2.13)
measure (3357)	langmuirdiag%potential%measure (exp1D) (9.8.1.3.204)
value (3310)	langmuirdiag%potential%measure%value (vecflt.type) (9.8.1.2.13)

abserror (3310)	langmuirdiag%potential%measure%abserror (vecflt_type) (9.8.1.2.13)
relerror (3310)	langmuirdiag%potential%measure%relerror (vecflt_type) (9.8.1.2.13)
bias (3134)	langmuirdiag%bias (lang_measure) (9.8.1.3.251)
name (3357)	langmuirdiag%bias%name (vecstring_type) (9.8.1.2.15)
direction (3357)	langmuirdiag%bias%direction (vecstring_type) (9.8.1.2.15)
area (3357)	langmuirdiag%bias%area (exp1D) (9.8.1.3.204)
value (3310)	langmuirdiag%bias%area%value (vecflt_type) (9.8.1.2.13)
abserror (3310)	langmuirdiag%bias%area%abserror (vecflt_type) (9.8.1.2.13)
relerror (3310)	langmuirdiag%bias%area%relerror (vecflt_type) (9.8.1.2.13)
position (3357)	langmuirdiag%bias%position (rzphi1Dexp) (9.8.1.3.373)
r (3479)	langmuirdiag%bias%position%r (exp1D) (9.8.1.3.204)
value (3310)	langmuirdiag%bias%position%r%value (vecflt_type) (9.8.1.2.13)
abserror (3310)	langmuirdiag%bias%position%r%abserror (vecflt_type) (9.8.1.2.13)
relerror (3310)	langmuirdiag%bias%position%r%relerror (vecflt_type) (9.8.1.2.13)
z (3479)	langmuirdiag%bias%position%z (exp1D) (9.8.1.3.204)
value (3310)	langmuirdiag%bias%position%z%value (vecflt_type) (9.8.1.2.13)
abserror (3310)	langmuirdiag%bias%position%z%abserror (vecflt_type) (9.8.1.2.13)
relerror (3310)	langmuirdiag%bias%position%z%relerror (vecflt_type) (9.8.1.2.13)
phi (3479)	langmuirdiag%bias%position%phi (exp1D) (9.8.1.3.204)
value (3310)	langmuirdiag%bias%position%phi%value (vecflt_type) (9.8.1.2.13)
abserror (3310)	langmuirdiag%bias%position%phi%abserror (vecflt_type) (9.8.1.2.13)
relerror (3310)	langmuirdiag%bias%position%phi%relerror (vecflt_type) (9.8.1.2.13)
measure (3357)	langmuirdiag%bias%measure (exp1D) (9.8.1.3.204)
value (3310)	langmuirdiag%bias%measure%value (vecflt_type) (9.8.1.2.13)
abserror (3310)	langmuirdiag%bias%measure%abserror (vecflt_type) (9.8.1.2.13)
relerror (3310)	langmuirdiag%bias%measure%relerror (vecflt_type) (9.8.1.2.13)
jsat (3134)	langmuirdiag%jsat (lang_measure) (9.8.1.3.251)
name (3357)	langmuirdiag%jsat%name (vecstring_type) (9.8.1.2.15)
direction (3357)	langmuirdiag%jsat%direction (vecstring_type) (9.8.1.2.15)
area (3357)	langmuirdiag%jsat%area (exp1D) (9.8.1.3.204)
value (3310)	langmuirdiag%jsat%area%value (vecflt_type) (9.8.1.2.13)
abserror (3310)	langmuirdiag%jsat%area%abserror (vecflt_type) (9.8.1.2.13)
relerror (3310)	langmuirdiag%jsat%area%relerror (vecflt_type) (9.8.1.2.13)
position (3357)	langmuirdiag%jsat%position (rzphi1Dexp) (9.8.1.3.373)
r (3479)	langmuirdiag%jsat%position%r (exp1D) (9.8.1.3.204)
value (3310)	langmuirdiag%jsat%position%r%value (vecflt_type) (9.8.1.2.13)
abserror (3310)	langmuirdiag%jsat%position%r%abserror (vecflt_type) (9.8.1.2.13)
relerror (3310)	langmuirdiag%jsat%position%r%relerror (vecflt_type) (9.8.1.2.13)
z (3479)	langmuirdiag%jsat%position%z (exp1D) (9.8.1.3.204)
value (3310)	langmuirdiag%jsat%position%z%value (vecflt_type) (9.8.1.2.13)
abserror (3310)	langmuirdiag%jsat%position%z%abserror (vecflt_type) (9.8.1.2.13)
relerror (3310)	langmuirdiag%jsat%position%z%relerror (vecflt_type) (9.8.1.2.13)
phi (3479)	langmuirdiag%jsat%position%phi (exp1D) (9.8.1.3.204)
value (3310)	langmuirdiag%jsat%position%phi%value (vecflt_type) (9.8.1.2.13)
abserror (3310)	langmuirdiag%jsat%position%phi%abserror (vecflt_type) (9.8.1.2.13)
relerror (3310)	langmuirdiag%jsat%position%phi%relerror (vecflt_type) (9.8.1.2.13)
measure (3357)	langmuirdiag%jsat%measure (exp1D) (9.8.1.3.204)
value (3310)	langmuirdiag%jsat%measure%value (vecflt_type) (9.8.1.2.13)
abserror (3310)	langmuirdiag%jsat%measure%abserror (vecflt_type) (9.8.1.2.13)
relerror (3310)	langmuirdiag%jsat%measure%relerror (vecflt_type) (9.8.1.2.13)
ne (3134)	langmuirdiag%ne (lang_derived) (9.8.1.3.250)
source (3356)	langmuirdiag%ne%source (vecstring_type) (9.8.1.2.15)
position (3356)	langmuirdiag%ne%position (rzphi1Dexp) (9.8.1.3.373)
r (3479)	langmuirdiag%ne%position%r (exp1D) (9.8.1.3.204)
value (3310)	langmuirdiag%ne%position%r%value (vecflt_type) (9.8.1.2.13)
abserror (3310)	langmuirdiag%ne%position%r%abserror (vecflt_type) (9.8.1.2.13)
relerror (3310)	langmuirdiag%ne%position%r%relerror (vecflt_type) (9.8.1.2.13)
z (3479)	langmuirdiag%ne%position%z (exp1D) (9.8.1.3.204)
value (3310)	langmuirdiag%ne%position%z%value (vecflt_type) (9.8.1.2.13)
abserror (3310)	langmuirdiag%ne%position%z%abserror (vecflt_type) (9.8.1.2.13)
relerror (3310)	langmuirdiag%ne%position%z%relerror (vecflt_type) (9.8.1.2.13)



phi (3479)	langmuirdiag%ne%position%phi (exp1D) (9.8.1.3.204)
value (3310)	langmuirdiag%ne%position%phi%value (vecflt.type) (9.8.1.2.13)
abserror (3310)	langmuirdiag%ne%position%phi%abserror (vecflt.type) (9.8.1.2.13)
releror (3310)	langmuirdiag%ne%position%phi%releror (vecflt.type) (9.8.1.2.13)
measure (3356)	langmuirdiag%ne%measure (exp1D) (9.8.1.3.204)
value (3310)	langmuirdiag%ne%measure%value (vecflt.type) (9.8.1.2.13)
abserror (3310)	langmuirdiag%ne%measure%abserror (vecflt.type) (9.8.1.2.13)
releror (3310)	langmuirdiag%ne%measure%releror (vecflt.type) (9.8.1.2.13)
te (3134)	langmuirdiag%te (lang_derived) (9.8.1.3.250)
source (3356)	langmuirdiag%te%source (vecstring.type) (9.8.1.2.15)
position (3356)	langmuirdiag%te%position (rzphi1Dexp) (9.8.1.3.373)
r (3479)	langmuirdiag%te%position%r (exp1D) (9.8.1.3.204)
value (3310)	langmuirdiag%te%position%r%value (vecflt.type) (9.8.1.2.13)
abserror (3310)	langmuirdiag%te%position%r%abserror (vecflt.type) (9.8.1.2.13)
releror (3310)	langmuirdiag%te%position%r%releror (vecflt.type) (9.8.1.2.13)
z (3479)	langmuirdiag%te%position%z (exp1D) (9.8.1.3.204)
value (3310)	langmuirdiag%te%position%z%value (vecflt.type) (9.8.1.2.13)
abserror (3310)	langmuirdiag%te%position%z%abserror (vecflt.type) (9.8.1.2.13)
releror (3310)	langmuirdiag%te%position%z%releror (vecflt.type) (9.8.1.2.13)
phi (3479)	langmuirdiag%te%position%phi (exp1D) (9.8.1.3.204)
value (3310)	langmuirdiag%te%position%phi%value (vecflt.type) (9.8.1.2.13)
abserror (3310)	langmuirdiag%te%position%phi%abserror (vecflt.type) (9.8.1.2.13)
releror (3310)	langmuirdiag%te%position%phi%releror (vecflt.type) (9.8.1.2.13)
measure (3356)	langmuirdiag%te%measure (exp1D) (9.8.1.3.204)
value (3310)	langmuirdiag%te%measure%value (vecflt.type) (9.8.1.2.13)
abserror (3310)	langmuirdiag%te%measure%abserror (vecflt.type) (9.8.1.2.13)
releror (3310)	langmuirdiag%te%measure%releror (vecflt.type) (9.8.1.2.13)
machpar (3134)	langmuirdiag%machpar (lang_derived) (9.8.1.3.250)
source (3356)	langmuirdiag%machpar%source (vecstring.type) (9.8.1.2.15)
position (3356)	langmuirdiag%machpar%position (rzphi1Dexp) (9.8.1.3.373)
r (3479)	langmuirdiag%machpar%position%r (exp1D) (9.8.1.3.204)
value (3310)	langmuirdiag%machpar%position%r%value (vecflt.type) (9.8.1.2.13)
abserror (3310)	langmuirdiag%machpar%position%r%abserror (vecflt.type) (9.8.1.2.13)
releror (3310)	langmuirdiag%machpar%position%r%releror (vecflt.type) (9.8.1.2.13)
z (3479)	langmuirdiag%machpar%position%z (exp1D) (9.8.1.3.204)
value (3310)	langmuirdiag%machpar%position%z%value (vecflt.type) (9.8.1.2.13)
abserror (3310)	langmuirdiag%machpar%position%z%abserror (vecflt.type) (9.8.1.2.13)
releror (3310)	langmuirdiag%machpar%position%z%releror (vecflt.type) (9.8.1.2.13)
phi (3479)	langmuirdiag%machpar%position%phi (exp1D) (9.8.1.3.204)
value (3310)	langmuirdiag%machpar%position%phi%value (vecflt.type) (9.8.1.2.13)
abserror (3310)	langmuirdiag%machpar%position%phi%abserror (vecflt.type) (9.8.1.2.13)
releror (3310)	langmuirdiag%machpar%position%phi%releror (vecflt.type) (9.8.1.2.13)
measure (3356)	langmuirdiag%machpar%measure (exp1D) (9.8.1.3.204)
value (3310)	langmuirdiag%machpar%measure%value (vecflt.type) (9.8.1.2.13)
abserror (3310)	langmuirdiag%machpar%measure%abserror (vecflt.type) (9.8.1.2.13)
releror (3310)	langmuirdiag%machpar%measure%releror (vecflt.type) (9.8.1.2.13)
codeparam (3134)	langmuirdiag%codeparam (codeparam) (9.8.1.3.84)
codename (3190)	langmuirdiag%codeparam%codename (string) (9.8.1.1.3)
codeversion (3190)	langmuirdiag%codeparam%codeversion (string) (9.8.1.1.3)
parameters (3190)	langmuirdiag%codeparam%parameters (string) (9.8.1.1.3)
output_diag (3190)	langmuirdiag%codeparam%output_diag (string) (9.8.1.1.3)
output_flag (3190)	langmuirdiag%codeparam%output_flag (integer) (9.8.1.1.2)
time (3134)	langmuirdiag%time (float) (9.8.1.1.1)

### 9.8.2.1.27 launches

datainfo (3135)	launchs%datainfo (datainfo) (9.8.1.3.141)
dataproducer (3247)	launchs%datainfo%dataproducer (string) (9.8.1.1.3)
putdate (3247)	launchs%datainfo%putdate (string) (9.8.1.1.3)
source (3247)	launchs%datainfo%source (string) (9.8.1.1.3)
comment (3247)	launchs%datainfo%comment (string) (9.8.1.1.3)



cocos (3247)	launchs%datainfo%cocos (integer) (9.8.1.1.2)
id (3247)	launchs%datainfo%id (integer) (9.8.1.1.2)
isref (3247)	launchs%datainfo%isref (integer) (9.8.1.1.2)
whatref (3247)	launchs%datainfo%whatref (whatref) (9.8.1.3.513)
user (3619)	launchs%datainfo%whatref%user (string) (9.8.1.1.3)
machine (3619)	launchs%datainfo%whatref%machine (string) (9.8.1.1.3)
shot (3619)	launchs%datainfo%whatref%shot (integer) (9.8.1.1.2)
run (3619)	launchs%datainfo%whatref%run (integer) (9.8.1.1.2)
occurrence (3619)	launchs%datainfo%whatref%occurrence (integer) (9.8.1.1.2)
putinfo (3247)	launchs%datainfo%putinfo (putinfo) (9.8.1.3.349)
putmethod (3455)	launchs%datainfo%putinfo%putmethod (string) (9.8.1.1.3)
putaccess (3455)	launchs%datainfo%putinfo%putaccess (string) (9.8.1.1.3)
putlocation (3455)	launchs%datainfo%putinfo%putlocation (string) (9.8.1.1.3)
rights (3455)	launchs%datainfo%putinfo%rights (string) (9.8.1.1.3)
name (3135)	launchs%name (vecstring_type) (9.8.1.2.15)
type (3135)	launchs%type (vecstring_type) (9.8.1.2.15)
frequency (3135)	launchs%frequency (vecflt_type) (9.8.1.2.13)
mode (3135)	launchs%mode (vecint_type) (9.8.1.2.14)
position (3135)	launchs%position (rzphi1D) (9.8.1.3.372)
r (3478)	launchs%position%r (vecflt_type) (9.8.1.2.13)
z (3478)	launchs%position%z (vecflt_type) (9.8.1.2.13)
phi (3478)	launchs%position%phi (vecflt_type) (9.8.1.2.13)
spectrum (3135)	launchs%spectrum (spectrum) (9.8.1.3.420)
phi_theta (3526)	launchs%spectrum%phi_theta (launchs_phi_theta) (9.8.1.3.254)
nn_phi (3360)	launchs%spectrum%phi_theta%nn_phi (vecint_type) (9.8.1.2.14)
nn_theta (3360)	launchs%spectrum%phi_theta%nn_theta (vecint_type) (9.8.1.2.14)
n_phi (3360)	launchs%spectrum%phi_theta%n_phi (matflt_type) (9.8.1.2.10)
n_theta (3360)	launchs%spectrum%phi_theta%n_theta (matflt_type) (9.8.1.2.10)
power (3360)	launchs%spectrum%phi_theta%power (array3dflt_type) (9.8.1.2.2)
parallel (3526)	launchs%spectrum%parallel (launchs_parallel) (9.8.1.3.253)
nn_par (3359)	launchs%spectrum%parallel%nn_par (vecint_type) (9.8.1.2.14)
n_par (3359)	launchs%spectrum%parallel%n_par (matflt_type) (9.8.1.2.10)
power (3359)	launchs%spectrum%parallel%power (vecflt_type) (9.8.1.2.13)
beam (3135)	launchs%beam (launchs_rfbeam) (9.8.1.3.255)
spot (3361)	launchs%beam%spot (launchs_rfbeam_spot) (9.8.1.3.257)
waist (3363)	launchs%beam%spot%waist (matflt_type) (9.8.1.2.10)
angle (3363)	launchs%beam%spot%angle (vecflt_type) (9.8.1.2.13)
phaseellipse (3361)	launchs%beam%phaseellipse (launchs_rfbeam_phaseellipse) (9.8.1.3.256)
incurvrad (3362)	launchs%beam%phaseellipse%incurvrad (matflt_type) (9.8.1.2.10)
angle (3362)	launchs%beam%phaseellipse%angle (vecflt_type) (9.8.1.2.13)
codeparam (3135)	launchs%codeparam (codeparam) (9.8.1.3.84)
codename (3190)	launchs%codeparam%codename (string) (9.8.1.1.3)
codeversion (3190)	launchs%codeparam%codeversion (string) (9.8.1.1.3)
parameters (3190)	launchs%codeparam%parameters (string) (9.8.1.1.3)
output_diag (3190)	launchs%codeparam%output_diag (string) (9.8.1.1.3)
output_flag (3190)	launchs%codeparam%output_flag (integer) (9.8.1.1.2)
time (3135)	launchs%time (float) (9.8.1.1.1)

### 9.8.2.1.28 lithiumdiag

datainfo (3136)	lithiumdiag%datainfo (datainfo) (9.8.1.3.141)
dataprovider (3247)	lithiumdiag%datainfo%dataprovider (string) (9.8.1.1.3)
putdate (3247)	lithiumdiag%datainfo%putdate (string) (9.8.1.1.3)
source (3247)	lithiumdiag%datainfo%source (string) (9.8.1.1.3)
comment (3247)	lithiumdiag%datainfo%comment (string) (9.8.1.1.3)
cocos (3247)	lithiumdiag%datainfo%cocos (integer) (9.8.1.1.2)
id (3247)	lithiumdiag%datainfo%id (integer) (9.8.1.1.2)
isref (3247)	lithiumdiag%datainfo%isref (integer) (9.8.1.1.2)
whatref (3247)	lithiumdiag%datainfo%whatref (whatref) (9.8.1.3.513)
user (3619)	lithiumdiag%datainfo%whatref%user (string) (9.8.1.1.3)
machine (3619)	lithiumdiag%datainfo%whatref%machine (string) (9.8.1.1.3)

shot (3619)	lithiumdiag%datainfo%whatref%shot (integer) (9.8.1.1.2)
run (3619)	lithiumdiag%datainfo%whatref%run (integer) (9.8.1.1.2)
occurrence (3619)	lithiumdiag%datainfo%whatref%occurrence (integer) (9.8.1.1.2)
putinfo (3247)	lithiumdiag%datainfo%putinfo (putinfo) (9.8.1.3.349)
putmethod (3455)	lithiumdiag%datainfo%putinfo%putmethod (string) (9.8.1.1.3)
putaccess (3455)	lithiumdiag%datainfo%putinfo%putaccess (string) (9.8.1.1.3)
putlocation (3455)	lithiumdiag%datainfo%putinfo%putlocation (string) (9.8.1.1.3)
rights (3455)	lithiumdiag%datainfo%putinfo%rights (string) (9.8.1.1.3)
setup (3136)	lithiumdiag%setup (lithsetup) (9.8.1.3.263)
position (3369)	lithiumdiag%setup%position (rzphiID) (9.8.1.3.372)
r (3478)	lithiumdiag%setup%position%r (vecflt.type) (9.8.1.2.13)
z (3478)	lithiumdiag%setup%position%z (vecflt.type) (9.8.1.2.13)
phi (3478)	lithiumdiag%setup%position%phi (vecflt.type) (9.8.1.2.13)
measure (3136)	lithiumdiag%measure (lithmeasure) (9.8.1.3.262)
ne (3368)	lithiumdiag%measure%ne (expID) (9.8.1.3.204)
value (3310)	lithiumdiag%measure%ne%value (vecflt.type) (9.8.1.2.13)
abserror (3310)	lithiumdiag%measure%ne%abserror (vecflt.type) (9.8.1.2.13)
releror (3310)	lithiumdiag%measure%ne%releror (vecflt.type) (9.8.1.2.13)
codeparam (3136)	lithiumdiag%codeparam (codeparam) (9.8.1.3.84)
codename (3190)	lithiumdiag%codeparam%codename (string) (9.8.1.1.3)
codeversion (3190)	lithiumdiag%codeparam%codeversion (string) (9.8.1.1.3)
parameters (3190)	lithiumdiag%codeparam%parameters (string) (9.8.1.1.3)
output_diag (3190)	lithiumdiag%codeparam%output_diag (string) (9.8.1.1.3)
output_flag (3190)	lithiumdiag%codeparam%output_flag (integer) (9.8.1.1.2)
time (3136)	lithiumdiag%time (float) (9.8.1.1.1)

### 9.8.2.1.29 magdiag

datainfo (3137)	magdiag%datainfo (datainfo) (9.8.1.3.141)
dataprovider (3247)	magdiag%datainfo%dataprovider (string) (9.8.1.1.3)
putdate (3247)	magdiag%datainfo%putdate (string) (9.8.1.1.3)
source (3247)	magdiag%datainfo%source (string) (9.8.1.1.3)
comment (3247)	magdiag%datainfo%comment (string) (9.8.1.1.3)
cocos (3247)	magdiag%datainfo%cocos (integer) (9.8.1.1.2)
id (3247)	magdiag%datainfo%id (integer) (9.8.1.1.2)
isref (3247)	magdiag%datainfo%isref (integer) (9.8.1.1.2)
whatref (3247)	magdiag%datainfo%whatref (whatref) (9.8.1.3.513)
user (3619)	magdiag%datainfo%whatref%user (string) (9.8.1.1.3)
machine (3619)	magdiag%datainfo%whatref%machine (string) (9.8.1.1.3)
shot (3619)	magdiag%datainfo%whatref%shot (integer) (9.8.1.1.2)
run (3619)	magdiag%datainfo%whatref%run (integer) (9.8.1.1.2)
occurrence (3619)	magdiag%datainfo%whatref%occurrence (integer) (9.8.1.1.2)
putinfo (3247)	magdiag%datainfo%putinfo (putinfo) (9.8.1.3.349)
putmethod (3455)	magdiag%datainfo%putinfo%putmethod (string) (9.8.1.1.3)
putaccess (3455)	magdiag%datainfo%putinfo%putaccess (string) (9.8.1.1.3)
putlocation (3455)	magdiag%datainfo%putinfo%putlocation (string) (9.8.1.1.3)
rights (3455)	magdiag%datainfo%putinfo%rights (string) (9.8.1.1.3)
ip (3137)	magdiag%ip (exp0D) (9.8.1.3.203)
value (3309)	magdiag%ip%value (float) (9.8.1.1.1)
abserror (3309)	magdiag%ip%abserror (float) (9.8.1.1.1)
releror (3309)	magdiag%ip%releror (float) (9.8.1.1.1)
diamagflux (3137)	magdiag%diamagflux (exp0D) (9.8.1.3.203)
value (3309)	magdiag%diamagflux%value (float) (9.8.1.1.1)
abserror (3309)	magdiag%diamagflux%abserror (float) (9.8.1.1.1)
releror (3309)	magdiag%diamagflux%releror (float) (9.8.1.1.1)
diamagener (3137)	magdiag%diamagener (exp0D) (9.8.1.3.203)
value (3309)	magdiag%diamagener%value (float) (9.8.1.1.1)
abserror (3309)	magdiag%diamagener%abserror (float) (9.8.1.1.1)
releror (3309)	magdiag%diamagener%releror (float) (9.8.1.1.1)
flux_loops (3137)	magdiag%flux_loops (flux_loops) (9.8.1.3.211)
setup_loops (3317)	magdiag%flux_loops%setup_loops (setup_loops) (9.8.1.3.402)

name (3508)	magdiag%flux_loops%setup_floops%name (vecstring_type) (9.8.1.2.15)
id (3508)	magdiag%flux_loops%setup_floops%id (vecstring_type) (9.8.1.2.15)
position (3508)	magdiag%flux_loops%setup_floops%position (rzphi2D) (9.8.1.3.375)
r (3481)	magdiag%flux_loops%setup_floops%position%r (matflt_type) (9.8.1.2.10)
z (3481)	magdiag%flux_loops%setup_floops%position%z (matflt_type) (9.8.1.2.10)
phi (3481)	magdiag%flux_loops%setup_floops%position%phi (matflt_type) (9.8.1.2.10)
npoints (3508)	magdiag%flux_loops%setup_floops%npoints (vecint_type) (9.8.1.2.14)
measure (3317)	magdiag%flux_loops%measure (exp1D) (9.8.1.3.204)
value (3310)	magdiag%flux_loops%measure%value (vecflt_type) (9.8.1.2.13)
abserror (3310)	magdiag%flux_loops%measure%abserror (vecflt_type) (9.8.1.2.13)
releror (3310)	magdiag%flux_loops%measure%releror (vecflt_type) (9.8.1.2.13)
bpol_probes (3137)	magdiag%bpol_probes (bpol_probes) (9.8.1.3.77)
setup_bprobe (3183)	magdiag%bpol_probes%setup_bprobe (setup_bprobe) (9.8.1.3.401)
name (3507)	magdiag%bpol_probes%setup_bprobe%name (vecstring_type) (9.8.1.2.15)
id (3507)	magdiag%bpol_probes%setup_bprobe%id (vecstring_type) (9.8.1.2.15)
position (3507)	magdiag%bpol_probes%setup_bprobe%position (rz1D) (9.8.1.3.366)
r (3472)	magdiag%bpol_probes%setup_bprobe%position%r (vecflt_type) (9.8.1.2.13)
z (3472)	magdiag%bpol_probes%setup_bprobe%position%z (vecflt_type) (9.8.1.2.13)
polangle (3507)	magdiag%bpol_probes%setup_bprobe%polangle (vecflt_type) (9.8.1.2.13)
torangle (3507)	magdiag%bpol_probes%setup_bprobe%torangle (vecflt_type) (9.8.1.2.13)
area (3507)	magdiag%bpol_probes%setup_bprobe%area (vecflt_type) (9.8.1.2.13)
length (3507)	magdiag%bpol_probes%setup_bprobe%length (vecflt_type) (9.8.1.2.13)
turns (3507)	magdiag%bpol_probes%setup_bprobe%turns (vecint_type) (9.8.1.2.14)
measure (3183)	magdiag%bpol_probes%measure (exp1D) (9.8.1.3.204)
value (3310)	magdiag%bpol_probes%measure%value (vecflt_type) (9.8.1.2.13)
abserror (3310)	magdiag%bpol_probes%measure%abserror (vecflt_type) (9.8.1.2.13)
releror (3310)	magdiag%bpol_probes%measure%releror (vecflt_type) (9.8.1.2.13)
codeparam (3137)	magdiag%codeparam (codeparam) (9.8.1.3.84)
codename (3190)	magdiag%codeparam%codename (string) (9.8.1.1.3)
codeversion (3190)	magdiag%codeparam%codeversion (string) (9.8.1.1.3)
parameters (3190)	magdiag%codeparam%parameters (string) (9.8.1.1.3)
output_diag (3190)	magdiag%codeparam%output_diag (string) (9.8.1.1.3)
output_flag (3190)	magdiag%codeparam%output_flag (integer) (9.8.1.1.2)
time (3137)	magdiag%time (float) (9.8.1.1.1)

### 9.8.2.1.30 mhd

datainfo (3138)	mhd%datainfo (datainfo) (9.8.1.3.141)
dataprovider (3247)	mhd%datainfo%dataprovider (string) (9.8.1.1.3)
putdate (3247)	mhd%datainfo%putdate (string) (9.8.1.1.3)
source (3247)	mhd%datainfo%source (string) (9.8.1.1.3)
comment (3247)	mhd%datainfo%comment (string) (9.8.1.1.3)
cocos (3247)	mhd%datainfo%cocos (integer) (9.8.1.1.2)
id (3247)	mhd%datainfo%id (integer) (9.8.1.1.2)
isref (3247)	mhd%datainfo%isref (integer) (9.8.1.1.2)
whatref (3247)	mhd%datainfo%whatref (whatref) (9.8.1.3.513)
user (3619)	mhd%datainfo%whatref%user (string) (9.8.1.1.3)
machine (3619)	mhd%datainfo%whatref%machine (string) (9.8.1.1.3)
shot (3619)	mhd%datainfo%whatref%shot (integer) (9.8.1.1.2)
run (3619)	mhd%datainfo%whatref%run (integer) (9.8.1.1.2)
occurrence (3619)	mhd%datainfo%whatref%occurrence (integer) (9.8.1.1.2)
putinfo (3247)	mhd%datainfo%putinfo (putinfo) (9.8.1.3.349)
putmethod (3455)	mhd%datainfo%putinfo%putmethod (string) (9.8.1.1.3)
putaccess (3455)	mhd%datainfo%putinfo%putaccess (string) (9.8.1.1.3)
putlocation (3455)	mhd%datainfo%putinfo%putlocation (string) (9.8.1.1.3)
rights (3455)	mhd%datainfo%putinfo%rights (string) (9.8.1.1.3)
toroid_field (3138)	mhd%toroid_field (b0r0) (9.8.1.3.61)
r0 (3167)	mhd%toroid_field%r0 (float) (9.8.1.1.1)
b0 (3167)	mhd%toroid_field%b0 (float) (9.8.1.1.1)
n (3138)	mhd%n(:) (mhd_mode) (9.8.1.3.271)
modenum (3377)	mhd%n(:)%modenum (integer) (9.8.1.1.2)

growthrate (3377)  
 frequency (3377)  
 plasma (3377)  
   psi (3378)  
   rho\_tor\_norm (3378)  
   rho\_tor (3378)  
   m (3378)  
   disp\_perp (3378)  
   disp\_par (3378)  
   tau\_alfven (3378)  
   tau\_res (3378)  
   coord\_sys (3378)  
     grid\_type (3214)  
     grid (3214)  
       dim1 (3467)  
       dim2 (3467)  
     jacobian (3214)  
     g\_11 (3214)  
     g\_12 (3214)  
     g\_13 (3214)  
     g\_22 (3214)  
     g\_23 (3214)  
     g\_33 (3214)  
     position (3214)  
       r (3475)  
       z (3475)  
   a\_pert (3378)  
     coord1 (3381)  
     coord2 (3381)  
     coord3 (3381)  
   b\_pert (3378)  
     coord1 (3381)  
     coord2 (3381)  
     coord3 (3381)  
   v\_pert (3378)  
     coord1 (3381)  
     coord2 (3381)  
     coord3 (3381)  
   p\_pert (3378)  
   rho\_mass\_per (3378)  
   temp\_per (3378)  
 vacuum (3377)  
   m (3380)  
   coord\_sys (3380)  
     grid\_type (3214)  
     grid (3214)  
       dim1 (3467)  
       dim2 (3467)  
     jacobian (3214)  
     g\_11 (3214)  
     g\_12 (3214)  
     g\_13 (3214)  
     g\_22 (3214)  
     g\_23 (3214)  
     g\_33 (3214)  
     position (3214)  
       r (3475)  
       z (3475)  
   a\_pert (3380)  
     coord1 (3381)  
     coord2 (3381)  
   mhd%n(:)%growthrate (float) (9.8.1.1.1)  
   mhd%n(:)%frequency (float) (9.8.1.1.1)  
   mhd%n(:)%plasma (mhd\_plasma) (9.8.1.3.272)  
   mhd%n(:)%plasma%psi (vecflt\_type) (9.8.1.2.13)  
   mhd%n(:)%plasma%rho\_tor\_norm (vecflt\_type) (9.8.1.2.13)  
   mhd%n(:)%plasma%rho\_tor (vecflt\_type) (9.8.1.2.13)  
   mhd%n(:)%plasma%m (matflt\_type) (9.8.1.2.10)  
   mhd%n(:)%plasma%disp\_perp (matcplx\_type) (9.8.1.2.9)  
   mhd%n(:)%plasma%disp\_par (matcplx\_type) (9.8.1.2.9)  
   mhd%n(:)%plasma%tau\_alfven (vecflt\_type) (9.8.1.2.13)  
   mhd%n(:)%plasma%tau\_res (vecflt\_type) (9.8.1.2.13)  
   mhd%n(:)%plasma%coord\_sys (coord\_sys) (9.8.1.3.108)  
   mhd%n(:)%plasma%coord\_sys%grid\_type (string) (9.8.1.1.3)  
   mhd%n(:)%plasma%coord\_sys%grid (reggrid) (9.8.1.3.361)  
   mhd%n(:)%plasma%coord\_sys%grid%dim1 (vecflt\_type) (9.8.1.2.13)  
   mhd%n(:)%plasma%coord\_sys%grid%dim2 (vecflt\_type) (9.8.1.2.13)  
   mhd%n(:)%plasma%coord\_sys%jacobian (matflt\_type) (9.8.1.2.10)  
   mhd%n(:)%plasma%coord\_sys%g\_11 (matflt\_type) (9.8.1.2.10)  
   mhd%n(:)%plasma%coord\_sys%g\_12 (matflt\_type) (9.8.1.2.10)  
   mhd%n(:)%plasma%coord\_sys%g\_13 (matflt\_type) (9.8.1.2.10)  
   mhd%n(:)%plasma%coord\_sys%g\_22 (matflt\_type) (9.8.1.2.10)  
   mhd%n(:)%plasma%coord\_sys%g\_23 (matflt\_type) (9.8.1.2.10)  
   mhd%n(:)%plasma%coord\_sys%g\_33 (matflt\_type) (9.8.1.2.10)  
   mhd%n(:)%plasma%coord\_sys%position (rz2D) (9.8.1.3.369)  
   mhd%n(:)%plasma%coord\_sys%position%r (matflt\_type) (9.8.1.2.10)  
   mhd%n(:)%plasma%coord\_sys%position%z (matflt\_type) (9.8.1.2.10)  
   mhd%n(:)%plasma%a\_pert (mhd\_vector) (9.8.1.3.275)  
   mhd%n(:)%plasma%a\_pert%coord1 (matcplx\_type) (9.8.1.2.9)  
   mhd%n(:)%plasma%a\_pert%coord2 (matcplx\_type) (9.8.1.2.9)  
   mhd%n(:)%plasma%a\_pert%coord3 (matcplx\_type) (9.8.1.2.9)  
   mhd%n(:)%plasma%b\_pert (mhd\_vector) (9.8.1.3.275)  
   mhd%n(:)%plasma%b\_pert%coord1 (matcplx\_type) (9.8.1.2.9)  
   mhd%n(:)%plasma%b\_pert%coord2 (matcplx\_type) (9.8.1.2.9)  
   mhd%n(:)%plasma%b\_pert%coord3 (matcplx\_type) (9.8.1.2.9)  
   mhd%n(:)%plasma%v\_pert (mhd\_vector) (9.8.1.3.275)  
   mhd%n(:)%plasma%v\_pert%coord1 (matcplx\_type) (9.8.1.2.9)  
   mhd%n(:)%plasma%v\_pert%coord2 (matcplx\_type) (9.8.1.2.9)  
   mhd%n(:)%plasma%v\_pert%coord3 (matcplx\_type) (9.8.1.2.9)  
   mhd%n(:)%plasma%p\_pert (matcplx\_type) (9.8.1.2.9)  
   mhd%n(:)%plasma%rho\_mass\_per (matcplx\_type) (9.8.1.2.9)  
   mhd%n(:)%plasma%temp\_per (matcplx\_type) (9.8.1.2.9)  
   mhd%n(:)%vacuum (mhd\_vacuum) (9.8.1.3.274)  
   mhd%n(:)%vacuum%m (matflt\_type) (9.8.1.2.10)  
   mhd%n(:)%vacuum%coord\_sys (coord\_sys) (9.8.1.3.108)  
   mhd%n(:)%vacuum%coord\_sys%grid\_type (string) (9.8.1.1.3)  
   mhd%n(:)%vacuum%coord\_sys%grid (reggrid) (9.8.1.3.361)  
   mhd%n(:)%vacuum%coord\_sys%grid%dim1 (vecflt\_type) (9.8.1.2.13)  
   mhd%n(:)%vacuum%coord\_sys%grid%dim2 (vecflt\_type) (9.8.1.2.13)  
   mhd%n(:)%vacuum%coord\_sys%jacobian (matflt\_type) (9.8.1.2.10)  
   mhd%n(:)%vacuum%coord\_sys%g\_11 (matflt\_type) (9.8.1.2.10)  
   mhd%n(:)%vacuum%coord\_sys%g\_12 (matflt\_type) (9.8.1.2.10)  
   mhd%n(:)%vacuum%coord\_sys%g\_13 (matflt\_type) (9.8.1.2.10)  
   mhd%n(:)%vacuum%coord\_sys%g\_22 (matflt\_type) (9.8.1.2.10)  
   mhd%n(:)%vacuum%coord\_sys%g\_23 (matflt\_type) (9.8.1.2.10)  
   mhd%n(:)%vacuum%coord\_sys%g\_33 (matflt\_type) (9.8.1.2.10)  
   mhd%n(:)%vacuum%coord\_sys%position (rz2D) (9.8.1.3.369)  
   mhd%n(:)%vacuum%coord\_sys%position%r (matflt\_type) (9.8.1.2.10)  
   mhd%n(:)%vacuum%coord\_sys%position%z (matflt\_type) (9.8.1.2.10)  
   mhd%n(:)%vacuum%a\_pert (mhd\_vector) (9.8.1.3.275)  
   mhd%n(:)%vacuum%a\_pert%coord1 (matcplx\_type) (9.8.1.2.9)  
   mhd%n(:)%vacuum%a\_pert%coord2 (matcplx\_type) (9.8.1.2.9)

coord3 (3381)	mhd%n(:)%vacuum%a_pert%coord3 (matcplx_type) (9.8.1.2.9)
b_pert (3380)	mhd%n(:)%vacuum%b_pert (mhd_vector) (9.8.1.3.275)
coord1 (3381)	mhd%n(:)%vacuum%b_pert%coord1 (matcplx_type) (9.8.1.2.9)
coord2 (3381)	mhd%n(:)%vacuum%b_pert%coord2 (matcplx_type) (9.8.1.2.9)
coord3 (3381)	mhd%n(:)%vacuum%b_pert%coord3 (matcplx_type) (9.8.1.2.9)
time (3138)	mhd%time (float) (9.8.1.1.1)
codeparam (3138)	mhd%codeparam (codeparam) (9.8.1.3.84)
codename (3190)	mhd%codeparam%codename (string) (9.8.1.1.3)
codeversion (3190)	mhd%codeparam%codeversion (string) (9.8.1.1.3)
parameters (3190)	mhd%codeparam%parameters (string) (9.8.1.1.3)
output_diag (3190)	mhd%codeparam%output_diag (string) (9.8.1.1.3)
output_flag (3190)	mhd%codeparam%output_flag (integer) (9.8.1.1.2)

### 9.8.2.1.31 msediag

datainfo (3139)	msediag%datainfo (datainfo) (9.8.1.3.141)
dataprovider (3247)	msediag%datainfo%dataprovider (string) (9.8.1.1.3)
putdate (3247)	msediag%datainfo%putdate (string) (9.8.1.1.3)
source (3247)	msediag%datainfo%source (string) (9.8.1.1.3)
comment (3247)	msediag%datainfo%comment (string) (9.8.1.1.3)
cocos (3247)	msediag%datainfo%cocos (integer) (9.8.1.1.2)
id (3247)	msediag%datainfo%id (integer) (9.8.1.1.2)
isref (3247)	msediag%datainfo%isref (integer) (9.8.1.1.2)
whatref (3247)	msediag%datainfo%whatref (whatref) (9.8.1.3.513)
user (3619)	msediag%datainfo%whatref%user (string) (9.8.1.1.3)
machine (3619)	msediag%datainfo%whatref%machine (string) (9.8.1.1.3)
shot (3619)	msediag%datainfo%whatref%shot (integer) (9.8.1.1.2)
run (3619)	msediag%datainfo%whatref%run (integer) (9.8.1.1.2)
occurrence (3619)	msediag%datainfo%whatref%occurrence (integer) (9.8.1.1.2)
putinfo (3247)	msediag%datainfo%putinfo (putinfo) (9.8.1.3.349)
putmethod (3455)	msediag%datainfo%putinfo%putmethod (string) (9.8.1.1.3)
putaccess (3455)	msediag%datainfo%putinfo%putaccess (string) (9.8.1.1.3)
putlocation (3455)	msediag%datainfo%putinfo%putlocation (string) (9.8.1.1.3)
rights (3455)	msediag%datainfo%putinfo%rights (string) (9.8.1.1.3)
polarimetry (3139)	msediag%polarimetry (polarimetry) (9.8.1.3.341)
setup (3447)	msediag%polarimetry%setup (msediag_setup_polarimetry) (9.8.1.3.289)
rzgamma (3395)	msediag%polarimetry%setup%rzgamma (rzphidrdzdphiID) (9.8.1.3.377)
r (3483)	msediag%polarimetry%setup%rzgamma%r (vecflt_type) (9.8.1.2.13)
z (3483)	msediag%polarimetry%setup%rzgamma%z (vecflt_type) (9.8.1.2.13)
phi (3483)	msediag%polarimetry%setup%rzgamma%phi (vecflt_type) (9.8.1.2.13)
dr (3483)	msediag%polarimetry%setup%rzgamma%dr (vecflt_type) (9.8.1.2.13)
dz (3483)	msediag%polarimetry%setup%rzgamma%dz (vecflt_type) (9.8.1.2.13)
dphi (3483)	msediag%polarimetry%setup%rzgamma%dphi (vecflt_type) (9.8.1.2.13)
geom_coef (3395)	msediag%polarimetry%setup%geom_coef (matflt_type) (9.8.1.2.10)
measure (3447)	msediag%polarimetry%measure (expID) (9.8.1.3.204)
value (3310)	msediag%polarimetry%measure%value (vecflt_type) (9.8.1.2.13)
abserror (3310)	msediag%polarimetry%measure%abserror (vecflt_type) (9.8.1.2.13)
relerror (3310)	msediag%polarimetry%measure%relerror (vecflt_type) (9.8.1.2.13)
spectral (3139)	msediag%spectral (spectral) (9.8.1.3.419)
emissivity (3525)	msediag%spectral%emissivity (msediag_emissivity) (9.8.1.3.284)
wavelength (3390)	msediag%spectral%emissivity%wavelength (vecflt_type) (9.8.1.2.13)
emiss_chord (3390)	msediag%spectral%emissivity%emiss_chord(:) (msediag_emiss_chord) (9.8.1.3.283)
volume (3389)	msediag%spectral%emissivity%emiss_chord(:)%volume (float) (9.8.1.1.1)
setup (3389)	msediag%spectral%emissivity%emiss_chord(:)%setup (rzphiID) (9.8.1.3.372)
r (3478)	msediag%spectral%emissivity%emiss_chord(:)%setup%r (vecflt_type) (9.8.1.2.13)
z (3478)	msediag%spectral%emissivity%emiss_chord(:)%setup%z (vecflt_type) (9.8.1.2.13)
phi (3478)	msediag%spectral%emissivity%emiss_chord(:)%setup%phi (vecflt_type) (9.8.1.2.13)
polarization (3389)	msediag%spectral%emissivity%emiss_chord(:)%polarization(:) (msediag_polarization) (9.8.1.3.285)
type (3391)	msediag%spectral%emissivity%emiss_chord(:)%polarization(:)%type (identifier) (9.8.1.3.242)
id (3348)	msediag%spectral%emissivity%emiss_chord(:)%polarization(:)%type%id (string) (9.8.1.1.3)

flag (3348)	msediag%spectral%emissivity%emiss_chord(:)%polarization(:)%type%flag (integer) (9.8.1.1.2)
description (3348)	msediag%spectral%emissivity%emiss_chord(:)%polarization(:)%type%description (string) (9.8.1.1.3)
spec_emiss (3391)	msediag%spectral%emissivity%emiss_chord(:)%polarization(:)%spec_emiss (matflt_type) (9.8.1.2.10)
quantiaxis (3389)	msediag%spectral%emissivity%emiss_chord(:)%quantiaxis (vecflt_type) (9.8.1.2.13)
radiance (3525)	msediag%spectral%radiance (msediag_radiance) (9.8.1.3.287)
wavelength (3393)	msediag%spectral%radiance%wavelength (exp1D) (9.8.1.3.204)
value (3310)	msediag%spectral%radiance%wavelength%value (vecflt_type) (9.8.1.2.13)
abserror (3310)	msediag%spectral%radiance%wavelength%abserror (vecflt_type) (9.8.1.2.13)
releror (3310)	msediag%spectral%radiance%wavelength%releror (vecflt_type) (9.8.1.2.13)
radia_chord (3393)	msediag%spectral%radiance%radia_chord(:) (msediag_radia_chord) (9.8.1.3.286)
setup (3392)	msediag%spectral%radiance%radia_chord(:)%setup (msediag_setup) (9.8.1.3.288)
pivot_point (3394)	msediag%spectral%radiance%radia_chord(:)%setup%pivot_point (rzphi0D) (9.8.1.3.371)
r (3477)	msediag%spectral%radiance%radia_chord(:)%setup%pivot_point%r (float) (9.8.1.1.1)
z (3477)	msediag%spectral%radiance%radia_chord(:)%setup%pivot_point%z (float) (9.8.1.1.1)
phi (3477)	msediag%spectral%radiance%radia_chord(:)%setup%pivot_point%phi (float) (9.8.1.1.1)
horchordang (3394)	msediag%spectral%radiance%radia_chord(:)%setup%horchordang (float) (9.8.1.1.1)
verchordang (3394)	msediag%spectral%radiance%radia_chord(:)%setup%verchordang (float) (9.8.1.1.1)
second_point (3394)	msediag%spectral%radiance%radia_chord(:)%setup%second_point (rzphi0D) (9.8.1.3.371)
r (3477)	msediag%spectral%radiance%radia_chord(:)%setup%second_point%r (float) (9.8.1.1.1)
z (3477)	msediag%spectral%radiance%radia_chord(:)%setup%second_point%z (float) (9.8.1.1.1)
phi (3477)	msediag%spectral%radiance%radia_chord(:)%setup%second_point%phi (float) (9.8.1.1.1)
stokes (3392)	msediag%spectral%radiance%radia_chord(:)%stokes(:) (msediag_stokes) (9.8.1.3.290)
type (3396)	msediag%spectral%radiance%radia_chord(:)%stokes(:)%type (identifier) (9.8.1.3.242)
id (3348)	msediag%spectral%radiance%radia_chord(:)%stokes(:)%type%id (string) (9.8.1.1.3)
flag (3348)	msediag%spectral%radiance%radia_chord(:)%stokes(:)%type%flag (integer) (9.8.1.1.2)
description (3348)	msediag%spectral%radiance%radia_chord(:)%stokes(:)%type%description (string) (9.8.1.1.3)
vector (3396)	msediag%spectral%radiance%radia_chord(:)%stokes(:)%vector (matflt_type) (9.8.1.2.10)
totradiance (3392)	msediag%spectral%radiance%radia_chord(:)%totradiance (exp1D) (9.8.1.3.204)
value (3310)	msediag%spectral%radiance%radia_chord(:)%totradiance%value (vecflt_type) (9.8.1.2.13)
abserror (3310)	msediag%spectral%radiance%radia_chord(:)%totradiance%abserror (vecflt_type) (9.8.1.2.13)
releror (3310)	msediag%spectral%radiance%radia_chord(:)%totradiance%releror (vecflt_type) (9.8.1.2.13)
codeparam (3525)	msediag%spectral%codeparam (codeparam) (9.8.1.3.84)
codename (3190)	msediag%spectral%codeparam%codename (string) (9.8.1.1.3)
codeversion (3190)	msediag%spectral%codeparam%codeversion (string) (9.8.1.1.3)
parameters (3190)	msediag%spectral%codeparam%parameters (string) (9.8.1.1.3)
output_diag (3190)	msediag%spectral%codeparam%output_diag (string) (9.8.1.1.3)
output_flag (3190)	msediag%spectral%codeparam%output_flag (integer) (9.8.1.1.2)
codeparam (3139)	msediag%codeparam (codeparam) (9.8.1.3.84)
codename (3190)	msediag%codeparam%codename (string) (9.8.1.1.3)
codeversion (3190)	msediag%codeparam%codeversion (string) (9.8.1.1.3)
parameters (3190)	msediag%codeparam%parameters (string) (9.8.1.1.3)
output_diag (3190)	msediag%codeparam%output_diag (string) (9.8.1.1.3)
output_flag (3190)	msediag%codeparam%output_flag (integer) (9.8.1.1.2)
time (3139)	msediag%time (float) (9.8.1.1.1)

### 9.8.2.1.32 nbi

datainfo (3140)	nbi%datainfo (datainfo) (9.8.1.3.141)
dataprovider (3247)	nbi%datainfo%dataprovider (string) (9.8.1.1.3)
putdate (3247)	nbi%datainfo%putdate (string) (9.8.1.1.3)
source (3247)	nbi%datainfo%source (string) (9.8.1.1.3)
comment (3247)	nbi%datainfo%comment (string) (9.8.1.1.3)
cocos (3247)	nbi%datainfo%cocos (integer) (9.8.1.1.2)
id (3247)	nbi%datainfo%id (integer) (9.8.1.1.2)
isref (3247)	nbi%datainfo%isref (integer) (9.8.1.1.2)
whatref (3247)	nbi%datainfo%whatref (whatref) (9.8.1.3.513)
user (3619)	nbi%datainfo%whatref%user (string) (9.8.1.1.3)
machine (3619)	nbi%datainfo%whatref%machine (string) (9.8.1.1.3)
shot (3619)	nbi%datainfo%whatref%shot (integer) (9.8.1.1.2)



run (3619)	nbi%datainfo%whatref%run (integer) (9.8.1.1.2)
occurrence (3619)	nbi%datainfo%whatref%occurrence (integer) (9.8.1.1.2)
putinfo (3247)	nbi%datainfo%putinfo (putinfo) (9.8.1.3.349)
putmethod (3455)	nbi%datainfo%putinfo%putmethod (string) (9.8.1.1.3)
putaccess (3455)	nbi%datainfo%putinfo%putaccess (string) (9.8.1.1.3)
putlocation (3455)	nbi%datainfo%putinfo%putlocation (string) (9.8.1.1.3)
rights (3455)	nbi%datainfo%putinfo%rights (string) (9.8.1.1.3)
nbi_unit (3140)	nbi%nbi_unit(:) (nbi_unit) (9.8.1.3.293)
name (3399)	nbi%nbi_unit(:)%name (string) (9.8.1.1.3)
inj_spec (3399)	nbi%nbi_unit(:)%inj_spec (inj_spec) (9.8.1.3.246)
amn (3352)	nbi%nbi_unit(:)%inj_spec%amn (float) (9.8.1.1.1)
zn (3352)	nbi%nbi_unit(:)%inj_spec%zn (float) (9.8.1.1.1)
pow_unit (3399)	nbi%nbi_unit(:)%pow_unit (exp0D) (9.8.1.3.203)
value (3309)	nbi%nbi_unit(:)%pow_unit%value (float) (9.8.1.1.1)
abserror (3309)	nbi%nbi_unit(:)%pow_unit%abserror (float) (9.8.1.1.1)
releror (3309)	nbi%nbi_unit(:)%pow_unit%releror (float) (9.8.1.1.1)
inj_eng_unit (3399)	nbi%nbi_unit(:)%inj_eng_unit (exp0D) (9.8.1.3.203)
value (3309)	nbi%nbi_unit(:)%inj_eng_unit%value (float) (9.8.1.1.1)
abserror (3309)	nbi%nbi_unit(:)%inj_eng_unit%abserror (float) (9.8.1.1.1)
releror (3309)	nbi%nbi_unit(:)%inj_eng_unit%releror (float) (9.8.1.1.1)
beamcurfrac (3399)	nbi%nbi_unit(:)%beamcurfrac (exp1D) (9.8.1.3.204)
value (3310)	nbi%nbi_unit(:)%beamcurfrac%value (vecflt.type) (9.8.1.2.13)
abserror (3310)	nbi%nbi_unit(:)%beamcurfrac%abserror (vecflt.type) (9.8.1.2.13)
releror (3310)	nbi%nbi_unit(:)%beamcurfrac%releror (vecflt.type) (9.8.1.2.13)
beampowfrac (3399)	nbi%nbi_unit(:)%beampowfrac (exp1D) (9.8.1.3.204)
value (3310)	nbi%nbi_unit(:)%beampowfrac%value (vecflt.type) (9.8.1.2.13)
abserror (3310)	nbi%nbi_unit(:)%beampowfrac%abserror (vecflt.type) (9.8.1.2.13)
releror (3310)	nbi%nbi_unit(:)%beampowfrac%releror (vecflt.type) (9.8.1.2.13)
beamletgroup (3399)	nbi%nbi_unit(:)%beamletgroup(:) (beamletgroup) (9.8.1.3.66)
position (3172)	nbi%nbi_unit(:)%beamletgroup(:)%position (rzphi0D) (9.8.1.3.371)
r (3477)	nbi%nbi_unit(:)%beamletgroup(:)%position%r (float) (9.8.1.1.1)
z (3477)	nbi%nbi_unit(:)%beamletgroup(:)%position%z (float) (9.8.1.1.1)
phi (3477)	nbi%nbi_unit(:)%beamletgroup(:)%position%phi (float) (9.8.1.1.1)
tang_rad (3172)	nbi%nbi_unit(:)%beamletgroup(:)%tang_rad (float) (9.8.1.1.1)
angle (3172)	nbi%nbi_unit(:)%beamletgroup(:)%angle (float) (9.8.1.1.1)
direction (3172)	nbi%nbi_unit(:)%beamletgroup(:)%direction (integer) (9.8.1.1.2)
width_horiz (3172)	nbi%nbi_unit(:)%beamletgroup(:)%width_horiz (float) (9.8.1.1.1)
width_vert (3172)	nbi%nbi_unit(:)%beamletgroup(:)%width_vert (float) (9.8.1.1.1)
focussing (3172)	nbi%nbi_unit(:)%beamletgroup(:)%focussing (focussing) (9.8.1.3.215)
focal_len_hz (3321)	nbi%nbi_unit(:)%beamletgroup(:)%focussing%focal_len_hz (float) (9.8.1.1.1)
focal_len_vc (3321)	nbi%nbi_unit(:)%beamletgroup(:)%focussing%focal_len_vc (float) (9.8.1.1.1)
width_min_hz (3321)	nbi%nbi_unit(:)%beamletgroup(:)%focussing%width_min_hz (float) (9.8.1.1.1)
width_min_vc (3321)	nbi%nbi_unit(:)%beamletgroup(:)%focussing%width_min_vc (float) (9.8.1.1.1)
divergence (3172)	nbi%nbi_unit(:)%beamletgroup(:)%divergence (divergence) (9.8.1.3.179)
frac_divcomp (3285)	nbi%nbi_unit(:)%beamletgroup(:)%divergence%frac_divcomp (vecflt.type) (9.8.1.2.13)
div_vert (3285)	nbi%nbi_unit(:)%beamletgroup(:)%divergence%div_vert (vecflt.type) (9.8.1.2.13)
div_horiz (3285)	nbi%nbi_unit(:)%beamletgroup(:)%divergence%div_horiz (vecflt.type) (9.8.1.2.13)
beamlets (3172)	nbi%nbi_unit(:)%beamletgroup(:)%beamlets (beamlets) (9.8.1.3.67)
position (3173)	nbi%nbi_unit(:)%beamletgroup(:)%beamlets%position (rzphi1D) (9.8.1.3.372)
r (3478)	nbi%nbi_unit(:)%beamletgroup(:)%beamlets%position%r (vecflt.type) (9.8.1.2.13)
z (3478)	nbi%nbi_unit(:)%beamletgroup(:)%beamlets%position%z (vecflt.type) (9.8.1.2.13)
phi (3478)	nbi%nbi_unit(:)%beamletgroup(:)%beamlets%position%phi (vecflt.type) (9.8.1.2.13)
tang_rad_blt (3173)	nbi%nbi_unit(:)%beamletgroup(:)%beamlets%tang_rad_blt (vecflt.type) (9.8.1.2.13)
angle_blt (3173)	nbi%nbi_unit(:)%beamletgroup(:)%beamlets%angle_blt (vecflt.type) (9.8.1.2.13)
pow_frc_blt (3173)	nbi%nbi_unit(:)%beamletgroup(:)%beamlets%pow_frc_blt (vecflt.type) (9.8.1.2.13)
wall (3399)	nbi%nbi_unit(:)%wall (nbi_nbi_unit_wall) (9.8.1.3.291)
surface (3397)	nbi%nbi_unit(:)%wall%surface (nbi_nbi_unit_wall_surface) (9.8.1.3.292)
triangle (3398)	nbi%nbi_unit(:)%wall%surface%triangle(:) (trianglexyz) (9.8.1.3.473)
point1 (3579)	nbi%nbi_unit(:)%wall%surface%triangle(:)%point1 (xyz0D) (9.8.1.3.516)
x (3622)	nbi%nbi_unit(:)%wall%surface%triangle(:)%point1%x (float) (9.8.1.1.1)
y (3622)	nbi%nbi_unit(:)%wall%surface%triangle(:)%point1%y (float) (9.8.1.1.1)



z (3622)	nbi%nbi_unit(:)%wall%surface%triangle(:)%point1%z (float) (9.8.1.1.1)
point2 (3579)	nbi%nbi_unit(:)%wall%surface%triangle(:)%point2 (xyz0D) (9.8.1.3.516)
x (3622)	nbi%nbi_unit(:)%wall%surface%triangle(:)%point2%x (float) (9.8.1.1.1)
y (3622)	nbi%nbi_unit(:)%wall%surface%triangle(:)%point2%y (float) (9.8.1.1.1)
z (3622)	nbi%nbi_unit(:)%wall%surface%triangle(:)%point2%z (float) (9.8.1.1.1)
point3 (3579)	nbi%nbi_unit(:)%wall%surface%triangle(:)%point3 (xyz0D) (9.8.1.3.516)
x (3622)	nbi%nbi_unit(:)%wall%surface%triangle(:)%point3%x (float) (9.8.1.1.1)
y (3622)	nbi%nbi_unit(:)%wall%surface%triangle(:)%point3%y (float) (9.8.1.1.1)
z (3622)	nbi%nbi_unit(:)%wall%surface%triangle(:)%point3%z (float) (9.8.1.1.1)
rectangle (3398)	nbi%nbi_unit(:)%wall%surface%rectangle(:) (rectanglexyz) (9.8.1.3.353)
point01 (3459)	nbi%nbi_unit(:)%wall%surface%rectangle(:)%point01 (xyz0D) (9.8.1.3.516)
x (3622)	nbi%nbi_unit(:)%wall%surface%rectangle(:)%point01%x (float) (9.8.1.1.1)
y (3622)	nbi%nbi_unit(:)%wall%surface%rectangle(:)%point01%y (float) (9.8.1.1.1)
z (3622)	nbi%nbi_unit(:)%wall%surface%rectangle(:)%point01%z (float) (9.8.1.1.1)
point11 (3459)	nbi%nbi_unit(:)%wall%surface%rectangle(:)%point11 (xyz0D) (9.8.1.3.516)
x (3622)	nbi%nbi_unit(:)%wall%surface%rectangle(:)%point11%x (float) (9.8.1.1.1)
y (3622)	nbi%nbi_unit(:)%wall%surface%rectangle(:)%point11%y (float) (9.8.1.1.1)
z (3622)	nbi%nbi_unit(:)%wall%surface%rectangle(:)%point11%z (float) (9.8.1.1.1)
point10 (3459)	nbi%nbi_unit(:)%wall%surface%rectangle(:)%point10 (xyz0D) (9.8.1.3.516)
x (3622)	nbi%nbi_unit(:)%wall%surface%rectangle(:)%point10%x (float) (9.8.1.1.1)
y (3622)	nbi%nbi_unit(:)%wall%surface%rectangle(:)%point10%y (float) (9.8.1.1.1)
z (3622)	nbi%nbi_unit(:)%wall%surface%rectangle(:)%point10%z (float) (9.8.1.1.1)
collimator (3397)	nbi%nbi_unit(:)%wall%collimator(:) (flat_polygon) (9.8.1.3.209)
origin (3315)	nbi%nbi_unit(:)%wall%collimator(:)%origin (xyz0D) (9.8.1.3.516)
x (3622)	nbi%nbi_unit(:)%wall%collimator(:)%origin%x (float) (9.8.1.1.1)
y (3622)	nbi%nbi_unit(:)%wall%collimator(:)%origin%y (float) (9.8.1.1.1)
z (3622)	nbi%nbi_unit(:)%wall%collimator(:)%origin%z (float) (9.8.1.1.1)
basis1 (3315)	nbi%nbi_unit(:)%wall%collimator(:)%basis1 (xyz0D) (9.8.1.3.516)
x (3622)	nbi%nbi_unit(:)%wall%collimator(:)%basis1%x (float) (9.8.1.1.1)
y (3622)	nbi%nbi_unit(:)%wall%collimator(:)%basis1%y (float) (9.8.1.1.1)
z (3622)	nbi%nbi_unit(:)%wall%collimator(:)%basis1%z (float) (9.8.1.1.1)
basis2 (3315)	nbi%nbi_unit(:)%wall%collimator(:)%basis2 (xyz0D) (9.8.1.3.516)
x (3622)	nbi%nbi_unit(:)%wall%collimator(:)%basis2%x (float) (9.8.1.1.1)
y (3622)	nbi%nbi_unit(:)%wall%collimator(:)%basis2%y (float) (9.8.1.1.1)
z (3622)	nbi%nbi_unit(:)%wall%collimator(:)%basis2%z (float) (9.8.1.1.1)
coord1 (3315)	nbi%nbi_unit(:)%wall%collimator(:)%coord1 (vecflt_type) (9.8.1.2.13)
coord2 (3315)	nbi%nbi_unit(:)%wall%collimator(:)%coord2 (vecflt_type) (9.8.1.2.13)
codeparam (3399)	nbi%nbi_unit(:)%codeparam (codeparam) (9.8.1.3.84)
codename (3190)	nbi%nbi_unit(:)%codeparam%codename (string) (9.8.1.1.3)
codeversion (3190)	nbi%nbi_unit(:)%codeparam%codeversion (string) (9.8.1.1.3)
parameters (3190)	nbi%nbi_unit(:)%codeparam%parameters (string) (9.8.1.1.3)
output_diag (3190)	nbi%nbi_unit(:)%codeparam%output_diag (string) (9.8.1.1.3)
output_flag (3190)	nbi%nbi_unit(:)%codeparam%output_flag (integer) (9.8.1.1.2)
codeparam (3140)	nbi%codeparam (codeparam) (9.8.1.3.84)
codename (3190)	nbi%codeparam%codename (string) (9.8.1.1.3)
codeversion (3190)	nbi%codeparam%codeversion (string) (9.8.1.1.3)
parameters (3190)	nbi%codeparam%parameters (string) (9.8.1.1.3)
output_diag (3190)	nbi%codeparam%output_diag (string) (9.8.1.1.3)
output_flag (3190)	nbi%codeparam%output_flag (integer) (9.8.1.1.2)
time (3140)	nbi%time (float) (9.8.1.1.1)

### 9.8.2.1.33 neoclassic

datainfo (3141)	neoclassic%datainfo (datainfo) (9.8.1.3.141)
dataprovider (3247)	neoclassic%datainfo%dataprovider (string) (9.8.1.1.3)
putdate (3247)	neoclassic%datainfo%putdate (string) (9.8.1.1.3)
source (3247)	neoclassic%datainfo%source (string) (9.8.1.1.3)
comment (3247)	neoclassic%datainfo%comment (string) (9.8.1.1.3)
cocos (3247)	neoclassic%datainfo%cocos (integer) (9.8.1.1.2)
id (3247)	neoclassic%datainfo%id (integer) (9.8.1.1.2)
isref (3247)	neoclassic%datainfo%isref (integer) (9.8.1.1.2)

whatref (3247)	neoclassic%datainfo%whatref (whatref) (9.8.1.3.513)
user (3619)	neoclassic%datainfo%whatref%user (string) (9.8.1.1.3)
machine (3619)	neoclassic%datainfo%whatref%machine (string) (9.8.1.1.3)
shot (3619)	neoclassic%datainfo%whatref%shot (integer) (9.8.1.1.2)
run (3619)	neoclassic%datainfo%whatref%run (integer) (9.8.1.1.2)
occurrence (3619)	neoclassic%datainfo%whatref%occurrence (integer) (9.8.1.1.2)
putinfo (3247)	neoclassic%datainfo%putinfo (putinfo) (9.8.1.3.349)
putmethod (3455)	neoclassic%datainfo%putinfo%putmethod (string) (9.8.1.1.3)
putaccess (3455)	neoclassic%datainfo%putinfo%putaccess (string) (9.8.1.1.3)
putlocation (3455)	neoclassic%datainfo%putinfo%putlocation (string) (9.8.1.1.3)
rights (3455)	neoclassic%datainfo%putinfo%rights (string) (9.8.1.1.3)
rho_tor_norm (3141)	neoclassic%rho_tor_norm (vecflt_type) (9.8.1.2.13)
rho_tor (3141)	neoclassic%rho_tor (vecflt_type) (9.8.1.2.13)
composition (3141)	neoclassic%composition (composition) (9.8.1.3.102)
amn (3208)	neoclassic%composition%amn (vecflt_type) (9.8.1.2.13)
zn (3208)	neoclassic%composition%zn (vecflt_type) (9.8.1.2.13)
zion (3208)	neoclassic%composition%zion (vecflt_type) (9.8.1.2.13)
imp_flag (3208)	neoclassic%composition%imp_flag (vecint_type) (9.8.1.2.14)
label (3208)	neoclassic%composition%label (vecstring_type) (9.8.1.2.15)
desc_impur (3141)	neoclassic%desc_impur (desc_impur) (9.8.1.3.143)
amn (3249)	neoclassic%desc_impur%amn (vecflt_type) (9.8.1.2.13)
zn (3249)	neoclassic%desc_impur%zn (vecint_type) (9.8.1.2.14)
i_ion (3249)	neoclassic%desc_impur%i_ion (vecint_type) (9.8.1.2.14)
nzimp (3249)	neoclassic%desc_impur%nzimp (vecint_type) (9.8.1.2.14)
zmin (3249)	neoclassic%desc_impur%zmin (matint_type) (9.8.1.2.11)
zmax (3249)	neoclassic%desc_impur%zmax (matint_type) (9.8.1.2.11)
label (3249)	neoclassic%desc_impur%label (vecstring_type) (9.8.1.2.15)
compositions (3141)	neoclassic%compositions (compositions_type) (9.8.1.3.106)
nuclei (3212)	neoclassic%compositions%nuclei(:) (nuclei) (9.8.1.3.306)
zn (3412)	neoclassic%compositions%nuclei(:)%zn (float) (9.8.1.1.1)
amn (3412)	neoclassic%compositions%nuclei(:)%amn (float) (9.8.1.1.1)
label (3412)	neoclassic%compositions%nuclei(:)%label (string) (9.8.1.1.3)
ions (3212)	neoclassic%compositions%ions(:) (ions) (9.8.1.3.247)
nucindex (3353)	neoclassic%compositions%ions(:)%nucindex (integer) (9.8.1.1.2)
zion (3353)	neoclassic%compositions%ions(:)%zion (float) (9.8.1.1.1)
imp_flag (3353)	neoclassic%compositions%ions(:)%imp_flag (integer) (9.8.1.1.2)
label (3353)	neoclassic%compositions%ions(:)%label (string) (9.8.1.1.3)
impurities (3212)	neoclassic%compositions%impurities(:) (impurities) (9.8.1.3.244)
nucindex (3350)	neoclassic%compositions%impurities(:)%nucindex (integer) (9.8.1.1.2)
i_ion (3350)	neoclassic%compositions%impurities(:)%i_ion (integer) (9.8.1.1.2)
nzimp (3350)	neoclassic%compositions%impurities(:)%nzimp (integer) (9.8.1.1.2)
zmin (3350)	neoclassic%compositions%impurities(:)%zmin (vecflt_type) (9.8.1.2.13)
zmax (3350)	neoclassic%compositions%impurities(:)%zmax (vecflt_type) (9.8.1.2.13)
label (3350)	neoclassic%compositions%impurities(:)%label (vecstring_type) (9.8.1.2.15)
neutralscomp (3212)	neoclassic%compositions%neutralscomp(:) (composition_neutralscomp) (9.8.1.3.105)
neutcomp (3211)	neoclassic%compositions%neutralscomp(:)%neutcomp(:) (composition_neutrals_neutcomp) (9.8.1.3.104)
nucindex (3210)	neoclassic%compositions%neutralscomp(:)%neutcomp(:)%nucindex (integer) (9.8.1.1.2)
multiplicity (3210)	neoclassic%compositions%neutralscomp(:)%neutcomp(:)%multiplicity (integer) (9.8.1.1.2)
type (3211)	neoclassic%compositions%neutralscomp(:)%type(:) (identifier) (9.8.1.3.242)
id (3348)	neoclassic%compositions%neutralscomp(:)%type(:)%id (string) (9.8.1.1.3)
flag (3348)	neoclassic%compositions%neutralscomp(:)%type(:)%flag (integer) (9.8.1.1.2)
description (3348)	neoclassic%compositions%neutralscomp(:)%type(:)%description (string) (9.8.1.1.3)
label (3211)	neoclassic%compositions%neutralscomp(:)%label (string) (9.8.1.1.3)
edgespecies (3212)	neoclassic%compositions%edgespecies(:) (edgespecies) (9.8.1.3.192)
nucindex (3298)	neoclassic%compositions%edgespecies(:)%nucindex (integer) (9.8.1.1.2)
zmin (3298)	neoclassic%compositions%edgespecies(:)%zmin (float) (9.8.1.1.1)
zmax (3298)	neoclassic%compositions%edgespecies(:)%zmax (float) (9.8.1.1.1)
label (3298)	neoclassic%compositions%edgespecies(:)%label (string) (9.8.1.1.3)
signature (3212)	neoclassic%compositions%signature (identifier) (9.8.1.3.242)
id (3348)	neoclassic%compositions%signature%id (string) (9.8.1.1.3)
flag (3348)	neoclassic%compositions%signature%flag (integer) (9.8.1.1.2)

description (3348)	neoclassic%compositions%signature%description (string) (9.8.1.1.3)
ni_neo (3141)	neoclassic%ni_neo (transcoefion) (9.8.1.3.470)
diff_eff (3576)	neoclassic%ni_neo%diff_eff (matflt_type) (9.8.1.2.10)
vconv_eff (3576)	neoclassic%ni_neo%vconv_eff (matflt_type) (9.8.1.2.10)
exchange (3576)	neoclassic%ni_neo%exchange (matflt_type) (9.8.1.2.10)
qgi (3576)	neoclassic%ni_neo%qgi (matflt_type) (9.8.1.2.10)
flux (3576)	neoclassic%ni_neo%flux (matflt_type) (9.8.1.2.10)
off_diagonal (3576)	neoclassic%ni_neo%off_diagonal (offdiagion) (9.8.1.3.309)
d_ni (3415)	neoclassic%ni_neo%off_diagonal%d_ni (array3dflt_type) (9.8.1.2.2)
d_ti (3415)	neoclassic%ni_neo%off_diagonal%d_ti (array3dflt_type) (9.8.1.2.2)
d_ne (3415)	neoclassic%ni_neo%off_diagonal%d_ne (matflt_type) (9.8.1.2.10)
d_te (3415)	neoclassic%ni_neo%off_diagonal%d_te (matflt_type) (9.8.1.2.10)
d_epar (3415)	neoclassic%ni_neo%off_diagonal%d_epar (matflt_type) (9.8.1.2.10)
d_mtor (3415)	neoclassic%ni_neo%off_diagonal%d_mtor (matflt_type) (9.8.1.2.10)
flag (3576)	neoclassic%ni_neo%flag (integer) (9.8.1.1.2)
ne_neo (3141)	neoclassic%ne_neo (transcoefel) (9.8.1.3.468)
diff_eff (3574)	neoclassic%ne_neo%diff_eff (vecflt_type) (9.8.1.2.13)
vconv_eff (3574)	neoclassic%ne_neo%vconv_eff (vecflt_type) (9.8.1.2.13)
flux (3574)	neoclassic%ne_neo%flux (vecflt_type) (9.8.1.2.13)
off_diagonal (3574)	neoclassic%ne_neo%off_diagonal (offdiagel) (9.8.1.3.308)
d_ni (3414)	neoclassic%ne_neo%off_diagonal%d_ni (matflt_type) (9.8.1.2.10)
d_ti (3414)	neoclassic%ne_neo%off_diagonal%d_ti (matflt_type) (9.8.1.2.10)
d_ne (3414)	neoclassic%ne_neo%off_diagonal%d_ne (vecflt_type) (9.8.1.2.13)
d_te (3414)	neoclassic%ne_neo%off_diagonal%d_te (vecflt_type) (9.8.1.2.13)
d_epar (3414)	neoclassic%ne_neo%off_diagonal%d_epar (vecflt_type) (9.8.1.2.13)
d_mtor (3414)	neoclassic%ne_neo%off_diagonal%d_mtor (vecflt_type) (9.8.1.2.13)
flag (3574)	neoclassic%ne_neo%flag (integer) (9.8.1.1.2)
nz_neo (3141)	neoclassic%nz_neo(:) (transcoefimp) (9.8.1.3.469)
diff_eff (3575)	neoclassic%nz_neo(:)%diff_eff (matflt_type) (9.8.1.2.10)
vconv_eff (3575)	neoclassic%nz_neo(:)%vconv_eff (matflt_type) (9.8.1.2.10)
exchange (3575)	neoclassic%nz_neo(:)%exchange (matflt_type) (9.8.1.2.10)
flux (3575)	neoclassic%nz_neo(:)%flux (matflt_type) (9.8.1.2.10)
flag (3575)	neoclassic%nz_neo(:)%flag (integer) (9.8.1.1.2)
ti_neo (3141)	neoclassic%ti_neo (transcoefion) (9.8.1.3.470)
diff_eff (3576)	neoclassic%ti_neo%diff_eff (matflt_type) (9.8.1.2.10)
vconv_eff (3576)	neoclassic%ti_neo%vconv_eff (matflt_type) (9.8.1.2.10)
exchange (3576)	neoclassic%ti_neo%exchange (matflt_type) (9.8.1.2.10)
qgi (3576)	neoclassic%ti_neo%qgi (matflt_type) (9.8.1.2.10)
flux (3576)	neoclassic%ti_neo%flux (matflt_type) (9.8.1.2.10)
off_diagonal (3576)	neoclassic%ti_neo%off_diagonal (offdiagion) (9.8.1.3.309)
d_ni (3415)	neoclassic%ti_neo%off_diagonal%d_ni (array3dflt_type) (9.8.1.2.2)
d_ti (3415)	neoclassic%ti_neo%off_diagonal%d_ti (array3dflt_type) (9.8.1.2.2)
d_ne (3415)	neoclassic%ti_neo%off_diagonal%d_ne (matflt_type) (9.8.1.2.10)
d_te (3415)	neoclassic%ti_neo%off_diagonal%d_te (matflt_type) (9.8.1.2.10)
d_epar (3415)	neoclassic%ti_neo%off_diagonal%d_epar (matflt_type) (9.8.1.2.10)
d_mtor (3415)	neoclassic%ti_neo%off_diagonal%d_mtor (matflt_type) (9.8.1.2.10)
flag (3576)	neoclassic%ti_neo%flag (integer) (9.8.1.1.2)
te_neo (3141)	neoclassic%te_neo (transcoefel) (9.8.1.3.468)
diff_eff (3574)	neoclassic%te_neo%diff_eff (vecflt_type) (9.8.1.2.13)
vconv_eff (3574)	neoclassic%te_neo%vconv_eff (vecflt_type) (9.8.1.2.13)
flux (3574)	neoclassic%te_neo%flux (vecflt_type) (9.8.1.2.13)
off_diagonal (3574)	neoclassic%te_neo%off_diagonal (offdiagel) (9.8.1.3.308)
d_ni (3414)	neoclassic%te_neo%off_diagonal%d_ni (matflt_type) (9.8.1.2.10)
d_ti (3414)	neoclassic%te_neo%off_diagonal%d_ti (matflt_type) (9.8.1.2.10)
d_ne (3414)	neoclassic%te_neo%off_diagonal%d_ne (vecflt_type) (9.8.1.2.13)
d_te (3414)	neoclassic%te_neo%off_diagonal%d_te (vecflt_type) (9.8.1.2.13)
d_epar (3414)	neoclassic%te_neo%off_diagonal%d_epar (vecflt_type) (9.8.1.2.13)
d_mtor (3414)	neoclassic%te_neo%off_diagonal%d_mtor (vecflt_type) (9.8.1.2.13)
flag (3574)	neoclassic%te_neo%flag (integer) (9.8.1.1.2)
tz_neo (3141)	neoclassic%tz_neo(:) (transcoefimp) (9.8.1.3.469)
diff_eff (3575)	neoclassic%tz_neo(:)%diff_eff (matflt_type) (9.8.1.2.10)

vconv_eff (3575)	neoclassic%tz.neo(:)%vconv_eff (matflt.type) (9.8.1.2.10)
exchange (3575)	neoclassic%tz.neo(:)%exchange (matflt.type) (9.8.1.2.10)
flux (3575)	neoclassic%tz.neo(:)%flux (matflt.type) (9.8.1.2.10)
flag (3575)	neoclassic%tz.neo(:)%flag (integer) (9.8.1.1.2)
mtor_neo (3141)	neoclassic%mtor_neo (transcoefel) (9.8.1.3.468)
diff_eff (3574)	neoclassic%mtor_neo%diff_eff (vecflt.type) (9.8.1.2.13)
vconv_eff (3574)	neoclassic%mtor_neo%vconv_eff (vecflt.type) (9.8.1.2.13)
flux (3574)	neoclassic%mtor_neo%flux (vecflt.type) (9.8.1.2.13)
off_diagonal (3574)	neoclassic%mtor_neo%off_diagonal (offdiagel) (9.8.1.3.308)
d_ni (3414)	neoclassic%mtor_neo%off_diagonal%d_ni (matflt.type) (9.8.1.2.10)
d_ti (3414)	neoclassic%mtor_neo%off_diagonal%d_ti (matflt.type) (9.8.1.2.10)
d_ne (3414)	neoclassic%mtor_neo%off_diagonal%d_ne (vecflt.type) (9.8.1.2.13)
d_te (3414)	neoclassic%mtor_neo%off_diagonal%d_te (vecflt.type) (9.8.1.2.13)
d_epar (3414)	neoclassic%mtor_neo%off_diagonal%d_epar (vecflt.type) (9.8.1.2.13)
d_mtor (3414)	neoclassic%mtor_neo%off_diagonal%d_mtor (vecflt.type) (9.8.1.2.13)
flag (3574)	neoclassic%mtor_neo%flag (integer) (9.8.1.1.2)
sigma (3141)	neoclassic%sigma (vecflt.type) (9.8.1.2.13)
jboot (3141)	neoclassic%jboot (vecflt.type) (9.8.1.2.13)
er (3141)	neoclassic%er (vecflt.type) (9.8.1.2.13)
vpol (3141)	neoclassic%vpol (matflt.type) (9.8.1.2.10)
vtor (3141)	neoclassic%vtor (matflt.type) (9.8.1.2.10)
mach (3141)	neoclassic%mach (matflt.type) (9.8.1.2.10)
utheta_e (3141)	neoclassic%utheta_e (vecflt.type) (9.8.1.2.13)
utheta_i (3141)	neoclassic%utheta_i (matflt.type) (9.8.1.2.10)
viscosity_par (3141)	neoclassic%viscosity_par (matflt.type) (9.8.1.2.10)
impurity (3141)	neoclassic%impurity(:) (neoclassic_impurity) (9.8.1.3.295)
utheta_z (3401)	neoclassic%impurity(:)%utheta_z (matflt.type) (9.8.1.2.10)
fext (3141)	neoclassic%fext (array3dflt.type) (9.8.1.2.2)
jext (3141)	neoclassic%jext (vecflt.type) (9.8.1.2.13)
time (3141)	neoclassic%time (float) (9.8.1.1.1)
codeparam (3141)	neoclassic%codeparam (codeparam) (9.8.1.3.84)
codename (3190)	neoclassic%codeparam%codename (string) (9.8.1.1.3)
codeversion (3190)	neoclassic%codeparam%codeversion (string) (9.8.1.1.3)
parameters (3190)	neoclassic%codeparam%parameters (string) (9.8.1.1.3)
output_diag (3190)	neoclassic%codeparam%output_diag (string) (9.8.1.1.3)
output_flag (3190)	neoclassic%codeparam%output_flag (integer) (9.8.1.1.2)

### 9.8.2.1.34 ntm

datainfo (3142)	ntm%datainfo (datainfo) (9.8.1.3.141)
dataprovider (3247)	ntm%datainfo%dataprovider (string) (9.8.1.1.3)
putdate (3247)	ntm%datainfo%putdate (string) (9.8.1.1.3)
source (3247)	ntm%datainfo%source (string) (9.8.1.1.3)
comment (3247)	ntm%datainfo%comment (string) (9.8.1.1.3)
cocos (3247)	ntm%datainfo%cocos (integer) (9.8.1.1.2)
id (3247)	ntm%datainfo%id (integer) (9.8.1.1.2)
isref (3247)	ntm%datainfo%isref (integer) (9.8.1.1.2)
whatref (3247)	ntm%datainfo%whatref (whatref) (9.8.1.3.513)
user (3619)	ntm%datainfo%whatref%user (string) (9.8.1.1.3)
machine (3619)	ntm%datainfo%whatref%machine (string) (9.8.1.1.3)
shot (3619)	ntm%datainfo%whatref%shot (integer) (9.8.1.1.2)
run (3619)	ntm%datainfo%whatref%run (integer) (9.8.1.1.2)
occurrence (3619)	ntm%datainfo%whatref%occurrence (integer) (9.8.1.1.2)
putinfo (3247)	ntm%datainfo%putinfo (putinfo) (9.8.1.3.349)
putmethod (3455)	ntm%datainfo%putinfo%putmethod (string) (9.8.1.1.3)
putaccess (3455)	ntm%datainfo%putinfo%putaccess (string) (9.8.1.1.3)
putlocation (3455)	ntm%datainfo%putinfo%putlocation (string) (9.8.1.1.3)
rights (3455)	ntm%datainfo%putinfo%rights (string) (9.8.1.1.3)
mode (3142)	ntm%mode(:) (ntm_mode) (9.8.1.3.300)
m (3406)	ntm%mode(:)%m (integer) (9.8.1.1.2)
n (3406)	ntm%mode(:)%n (integer) (9.8.1.1.2)

onset (3406)	ntm%mode(:)%onset(:) (ntm_mode_onset) (9.8.1.3.305)
w_seed (3411)	ntm%mode(:)%onset(:)%w_seed (float) (9.8.1.1.1)
time_onset (3411)	ntm%mode(:)%onset(:)%time_onset (float) (9.8.1.1.1)
time_offset (3411)	ntm%mode(:)%onset(:)%time_offset (float) (9.8.1.1.1)
phase (3411)	ntm%mode(:)%onset(:)%phase (float) (9.8.1.1.1)
description (3411)	ntm%mode(:)%onset(:)%description (string) (9.8.1.1.3)
full_evolution (3406)	ntm%mode(:)%full_evolution(:) (ntm_mode_full_evolution) (9.8.1.3.303)
time_evolution (3409)	ntm%mode(:)%full_evolution(:)%time_evolution (vecflt_type) (9.8.1.2.13)
w (3409)	ntm%mode(:)%full_evolution(:)%w (vecflt_type) (9.8.1.2.13)
dwdt (3409)	ntm%mode(:)%full_evolution(:)%dwdt (vecflt_type) (9.8.1.2.13)
phase (3409)	ntm%mode(:)%full_evolution(:)%phase (vecflt_type) (9.8.1.2.13)
dphasedt (3409)	ntm%mode(:)%full_evolution(:)%dphasedt (vecflt_type) (9.8.1.2.13)
frequency (3409)	ntm%mode(:)%full_evolution(:)%frequency (vecflt_type) (9.8.1.2.13)
dfrequencydt (3409)	ntm%mode(:)%full_evolution(:)%dfrequencydt (vecflt_type) (9.8.1.2.13)
island (3409)	ntm%mode(:)%full_evolution(:)%island (ntm_mode_full_evolution_island) (9.8.1.3.304)
geometry (3410)	ntm%mode(:)%full_evolution(:)%island%geometry (matflt_type) (9.8.1.2.10)
coord_values (3410)	ntm%mode(:)%full_evolution(:)%island%coord_values (matflt_type) (9.8.1.2.10)
coord_desc (3410)	ntm%mode(:)%full_evolution(:)%island%coord_desc (string) (9.8.1.1.3)
deltaw_value (3409)	ntm%mode(:)%full_evolution(:)%deltaw_value (matflt_type) (9.8.1.2.10)
deltaw_name (3409)	ntm%mode(:)%full_evolution(:)%deltaw_name (vecstring_type) (9.8.1.2.15)
torque_value (3409)	ntm%mode(:)%full_evolution(:)%torque_value (matflt_type) (9.8.1.2.10)
torque_name (3409)	ntm%mode(:)%full_evolution(:)%torque_name (vecstring_type) (9.8.1.2.15)
delta_diff (3409)	ntm%mode(:)%full_evolution(:)%delta_diff (matflt_type) (9.8.1.2.10)
description (3409)	ntm%mode(:)%full_evolution(:)%description (string) (9.8.1.1.3)
rho_tor (3409)	ntm%mode(:)%full_evolution(:)%rho_tor (vecflt_type) (9.8.1.2.13)
evolution (3406)	ntm%mode(:)%evolution (ntm_mode_evolution) (9.8.1.3.301)
w (3407)	ntm%mode(:)%evolution%w (float) (9.8.1.1.1)
dwdt (3407)	ntm%mode(:)%evolution%dwdt (float) (9.8.1.1.1)
phase (3407)	ntm%mode(:)%evolution%phase (float) (9.8.1.1.1)
dphasedt (3407)	ntm%mode(:)%evolution%dphasedt (float) (9.8.1.1.1)
frequency (3407)	ntm%mode(:)%evolution%frequency (float) (9.8.1.1.1)
dfrequencydt (3407)	ntm%mode(:)%evolution%dfrequencydt (float) (9.8.1.1.1)
island (3407)	ntm%mode(:)%evolution%island (ntm_mode_evolution_island) (9.8.1.3.302)
geometry (3408)	ntm%mode(:)%evolution%island%geometry (vecflt_type) (9.8.1.2.13)
coord_values (3408)	ntm%mode(:)%evolution%island%coord_values (vecflt_type) (9.8.1.2.13)
coord_desc (3408)	ntm%mode(:)%evolution%island%coord_desc (string) (9.8.1.1.3)
deltaw_value (3407)	ntm%mode(:)%evolution%deltaw_value (vecflt_type) (9.8.1.2.13)
deltaw_name (3407)	ntm%mode(:)%evolution%deltaw_name (vecstring_type) (9.8.1.2.15)
torque_value (3407)	ntm%mode(:)%evolution%torque_value (vecflt_type) (9.8.1.2.13)
torque_name (3407)	ntm%mode(:)%evolution%torque_name (vecstring_type) (9.8.1.2.15)
delta_diff (3407)	ntm%mode(:)%evolution%delta_diff (vecflt_type) (9.8.1.2.13)
description (3407)	ntm%mode(:)%evolution%description (string) (9.8.1.1.3)
rho_tor (3407)	ntm%mode(:)%evolution%rho_tor (float) (9.8.1.1.1)
time (3142)	ntm%time (float) (9.8.1.1.1)
codeparam (3142)	ntm%codeparam (codeparam) (9.8.1.3.84)
codename (3190)	ntm%codeparam%codename (string) (9.8.1.1.3)
codeversion (3190)	ntm%codeparam%codeversion (string) (9.8.1.1.3)
parameters (3190)	ntm%codeparam%parameters (string) (9.8.1.1.3)
output_diag (3190)	ntm%codeparam%output_diag (string) (9.8.1.1.3)
output_flag (3190)	ntm%codeparam%output_flag (integer) (9.8.1.1.2)

### 9.8.2.1.35 orbit

datainfo (3143)	orbit%datainfo (datainfo) (9.8.1.3.141)
dataprovider (3247)	orbit%datainfo%dataprovider (string) (9.8.1.1.3)
putdate (3247)	orbit%datainfo%putdate (string) (9.8.1.1.3)
source (3247)	orbit%datainfo%source (string) (9.8.1.1.3)
comment (3247)	orbit%datainfo%comment (string) (9.8.1.1.3)
cocos (3247)	orbit%datainfo%cocos (integer) (9.8.1.1.2)
id (3247)	orbit%datainfo%id (integer) (9.8.1.1.2)
isref (3247)	orbit%datainfo%isref (integer) (9.8.1.1.2)

whatref (3247)  
   user (3619)  
   machine (3619)  
   shot (3619)  
   run (3619)  
   occurrence (3619)  
 putinfo (3247)  
   putmethod (3455)  
   putaccess (3455)  
   putlocation (3455)  
   rights (3455)  
 com (3143)  
   amn (3194)  
   zion (3194)  
   energy (3194)  
   magn\_mom (3194)  
   p\_phi (3194)  
   sigma (3194)  
 trace (3143)  
   time\_orb (3573)  
   ntorb (3573)  
   r (3573)  
   z (3573)  
   phi (3573)  
   psi (3573)  
   theta\_b (3573)  
   v\_parallel (3573)  
   v\_perp (3573)  
 global\_param (3143)  
   orbit\_type (3417)  
   omega\_b (3417)  
   omega\_phi (3417)  
   omega\_c\_av (3417)  
   special\_pos (3417)  
     midplane (3420)  
       outer (3418)  
         r (3419)  
         z (3419)  
         phi (3419)  
         psi (3419)  
         theta\_b (3419)  
       inner (3418)  
         r (3419)  
         z (3419)  
         phi (3419)  
         psi (3419)  
         theta\_b (3419)  
     turning\_pts (3420)  
       upper (3421)  
         r (3419)  
         z (3419)  
         phi (3419)  
         psi (3419)  
         theta\_b (3419)  
       lower (3421)  
         r (3419)  
         z (3419)  
         phi (3419)  
         psi (3419)  
         theta\_b (3419)  
   codeparam (3143)  
     orbit%datainfo%whatref (whatref) (9.8.1.3.513)  
     orbit%datainfo%whatref%user (string) (9.8.1.1.3)  
     orbit%datainfo%whatref%machine (string) (9.8.1.1.3)  
     orbit%datainfo%whatref%shot (integer) (9.8.1.1.2)  
     orbit%datainfo%whatref%run (integer) (9.8.1.1.2)  
     orbit%datainfo%whatref%occurrence (integer) (9.8.1.1.2)  
     orbit%datainfo%putinfo (putinfo) (9.8.1.3.349)  
     orbit%datainfo%putinfo%putmethod (string) (9.8.1.1.3)  
     orbit%datainfo%putinfo%putaccess (string) (9.8.1.1.3)  
     orbit%datainfo%putinfo%putlocation (string) (9.8.1.1.3)  
     orbit%datainfo%putinfo%rights (string) (9.8.1.1.3)  
     orbit%com (com) (9.8.1.3.88)  
     orbit%com%amn (float) (9.8.1.1.1)  
     orbit%com%zion (float) (9.8.1.1.1)  
     orbit%com%energy (vecflt.type) (9.8.1.2.13)  
     orbit%com%magn\_mom (vecflt.type) (9.8.1.2.13)  
     orbit%com%p\_phi (vecflt.type) (9.8.1.2.13)  
     orbit%com%sigma (vecint.type) (9.8.1.2.14)  
     orbit%trace (trace) (9.8.1.3.467)  
     orbit%trace%time\_orb (matflt.type) (9.8.1.2.10)  
     orbit%trace%ntorb (vecint.type) (9.8.1.2.14)  
     orbit%trace%r (matflt.type) (9.8.1.2.10)  
     orbit%trace%z (matflt.type) (9.8.1.2.10)  
     orbit%trace%phi (matflt.type) (9.8.1.2.10)  
     orbit%trace%psi (matflt.type) (9.8.1.2.10)  
     orbit%trace%theta\_b (matflt.type) (9.8.1.2.10)  
     orbit%trace%v\_parallel (matflt.type) (9.8.1.2.10)  
     orbit%trace%v\_perp (matflt.type) (9.8.1.2.10)  
     orbit%global\_param (orbit\_global\_param) (9.8.1.3.311)  
     orbit%global\_param%orbit\_type (vecint.type) (9.8.1.2.14)  
     orbit%global\_param%omega\_b (vecflt.type) (9.8.1.2.13)  
     orbit%global\_param%omega\_phi (vecflt.type) (9.8.1.2.13)  
     orbit%global\_param%omega\_c\_av (vecflt.type) (9.8.1.2.13)  
     orbit%global\_param%special\_pos (orbit\_special\_pos) (9.8.1.3.314)  
     orbit%global\_param%special\_pos%midplane (orbit\_midplane) (9.8.1.3.312)  
     orbit%global\_param%special\_pos%midplane%outer (orbit\_pos) (9.8.1.3.313)  
     orbit%global\_param%special\_pos%midplane%outer%r (vecflt.type) (9.8.1.2.13)  
     orbit%global\_param%special\_pos%midplane%outer%z (vecflt.type) (9.8.1.2.13)  
     orbit%global\_param%special\_pos%midplane%outer%phi (vecflt.type) (9.8.1.2.13)  
     orbit%global\_param%special\_pos%midplane%outer%psi (vecflt.type) (9.8.1.2.13)  
     orbit%global\_param%special\_pos%midplane%outer%theta\_b (vecflt.type) (9.8.1.2.13)  
     orbit%global\_param%special\_pos%midplane%inner (orbit\_pos) (9.8.1.3.313)  
     orbit%global\_param%special\_pos%midplane%inner%r (vecflt.type) (9.8.1.2.13)  
     orbit%global\_param%special\_pos%midplane%inner%z (vecflt.type) (9.8.1.2.13)  
     orbit%global\_param%special\_pos%midplane%inner%phi (vecflt.type) (9.8.1.2.13)  
     orbit%global\_param%special\_pos%midplane%inner%psi (vecflt.type) (9.8.1.2.13)  
     orbit%global\_param%special\_pos%midplane%inner%theta\_b (vecflt.type) (9.8.1.2.13)  
     orbit%global\_param%special\_pos%turning\_pts (orbit\_turning\_pts) (9.8.1.3.315)  
     orbit%global\_param%special\_pos%turning\_pts%upper (orbit\_pos) (9.8.1.3.313)  
     orbit%global\_param%special\_pos%turning\_pts%upper%r (vecflt.type) (9.8.1.2.13)  
     orbit%global\_param%special\_pos%turning\_pts%upper%z (vecflt.type) (9.8.1.2.13)  
     orbit%global\_param%special\_pos%turning\_pts%upper%phi (vecflt.type) (9.8.1.2.13)  
     orbit%global\_param%special\_pos%turning\_pts%upper%psi (vecflt.type) (9.8.1.2.13)  
     orbit%global\_param%special\_pos%turning\_pts%upper%theta\_b (vecflt.type) (9.8.1.2.13)  
     orbit%global\_param%special\_pos%turning\_pts%lower (orbit\_pos) (9.8.1.3.313)  
     orbit%global\_param%special\_pos%turning\_pts%lower%r (vecflt.type) (9.8.1.2.13)  
     orbit%global\_param%special\_pos%turning\_pts%lower%z (vecflt.type) (9.8.1.2.13)  
     orbit%global\_param%special\_pos%turning\_pts%lower%phi (vecflt.type) (9.8.1.2.13)  
     orbit%global\_param%special\_pos%turning\_pts%lower%psi (vecflt.type) (9.8.1.2.13)  
     orbit%global\_param%special\_pos%turning\_pts%lower%theta\_b (vecflt.type) (9.8.1.2.13)  
     orbit%codeparam (codeparam) (9.8.1.3.84)



codename (3190)	orbit%codeparam%codename (string) (9.8.1.1.3)
codeversion (3190)	orbit%codeparam%codeversion (string) (9.8.1.1.3)
parameters (3190)	orbit%codeparam%parameters (string) (9.8.1.1.3)
output_diag (3190)	orbit%codeparam%output_diag (string) (9.8.1.1.3)
output_flag (3190)	orbit%codeparam%output_flag (integer) (9.8.1.1.2)
time (3143)	orbit%time (float) (9.8.1.1.1)

### 9.8.2.1.36 pellets

datainfo (3144)	pellets%datainfo (datainfo) (9.8.1.3.141)
dataprovider (3247)	pellets%datainfo%dataprovider (string) (9.8.1.1.3)
putdate (3247)	pellets%datainfo%putdate (string) (9.8.1.1.3)
source (3247)	pellets%datainfo%source (string) (9.8.1.1.3)
comment (3247)	pellets%datainfo%comment (string) (9.8.1.1.3)
cocos (3247)	pellets%datainfo%cocos (integer) (9.8.1.1.2)
id (3247)	pellets%datainfo%id (integer) (9.8.1.1.2)
isref (3247)	pellets%datainfo%isref (integer) (9.8.1.1.2)
whatref (3247)	pellets%datainfo%whatref (whatref) (9.8.1.3.513)
user (3619)	pellets%datainfo%whatref%user (string) (9.8.1.1.3)
machine (3619)	pellets%datainfo%whatref%machine (string) (9.8.1.1.3)
shot (3619)	pellets%datainfo%whatref%shot (integer) (9.8.1.1.2)
run (3619)	pellets%datainfo%whatref%run (integer) (9.8.1.1.2)
occurrence (3619)	pellets%datainfo%whatref%occurrence (integer) (9.8.1.1.2)
putinfo (3247)	pellets%datainfo%putinfo (putinfo) (9.8.1.3.349)
putmethod (3455)	pellets%datainfo%putinfo%putmethod (string) (9.8.1.1.3)
putaccess (3455)	pellets%datainfo%putinfo%putaccess (string) (9.8.1.1.3)
putlocation (3455)	pellets%datainfo%putinfo%putlocation (string) (9.8.1.1.3)
rights (3455)	pellets%datainfo%putinfo%rights (string) (9.8.1.1.3)
compositions (3144)	pellets%compositions (compositions_type) (9.8.1.3.106)
nuclei (3212)	pellets%compositions%nuclei(:) (nuclei) (9.8.1.3.306)
zn (3412)	pellets%compositions%nuclei(:)%zn (float) (9.8.1.1.1)
amn (3412)	pellets%compositions%nuclei(:)%amn (float) (9.8.1.1.1)
label (3412)	pellets%compositions%nuclei(:)%label (string) (9.8.1.1.3)
ions (3212)	pellets%compositions%ions(:) (ions) (9.8.1.3.247)
nucindex (3353)	pellets%compositions%ions(:)%nucindex (integer) (9.8.1.1.2)
zion (3353)	pellets%compositions%ions(:)%zion (float) (9.8.1.1.1)
imp_flag (3353)	pellets%compositions%ions(:)%imp_flag (integer) (9.8.1.1.2)
label (3353)	pellets%compositions%ions(:)%label (string) (9.8.1.1.3)
impurities (3212)	pellets%compositions%impurities(:) (impurities) (9.8.1.3.244)
nucindex (3350)	pellets%compositions%impurities(:)%nucindex (integer) (9.8.1.1.2)
i_ion (3350)	pellets%compositions%impurities(:)%i_ion (integer) (9.8.1.1.2)
nzimp (3350)	pellets%compositions%impurities(:)%nzimp (integer) (9.8.1.1.2)
zmin (3350)	pellets%compositions%impurities(:)%zmin (vecflt_type) (9.8.1.2.13)
zmax (3350)	pellets%compositions%impurities(:)%zmax (vecflt_type) (9.8.1.2.13)
label (3350)	pellets%compositions%impurities(:)%label (vecstring_type) (9.8.1.2.15)
neutralscomp (3212)	pellets%compositions%neutralscomp(:) (composition_neutralscomp) (9.8.1.3.105)
neutcomp (3211)	pellets%compositions%neutralscomp(:)%neutcomp(:) (composition_neutrals_neutcomp) (9.8.1.3.104)
nucindex (3210)	pellets%compositions%neutralscomp(:)%neutcomp(:)%nucindex (integer) (9.8.1.1.2)
multiplicity (3210)	pellets%compositions%neutralscomp(:)%neutcomp(:)%multiplicity (integer) (9.8.1.1.2)
type (3211)	pellets%compositions%neutralscomp(:)%type(:) (identifier) (9.8.1.3.242)
id (3348)	pellets%compositions%neutralscomp(:)%type(:)%id (string) (9.8.1.1.3)
flag (3348)	pellets%compositions%neutralscomp(:)%type(:)%flag (integer) (9.8.1.1.2)
description (3348)	pellets%compositions%neutralscomp(:)%type(:)%description (string) (9.8.1.1.3)
label (3211)	pellets%compositions%neutralscomp(:)%label (string) (9.8.1.1.3)
edgespecies (3212)	pellets%compositions%edgespecies(:) (edgespecies) (9.8.1.3.192)
nucindex (3298)	pellets%compositions%edgespecies(:)%nucindex (integer) (9.8.1.1.2)
zmin (3298)	pellets%compositions%edgespecies(:)%zmin (float) (9.8.1.1.1)
zmax (3298)	pellets%compositions%edgespecies(:)%zmax (float) (9.8.1.1.1)
label (3298)	pellets%compositions%edgespecies(:)%label (string) (9.8.1.1.3)
signature (3212)	pellets%compositions%signature (identifier) (9.8.1.3.242)



id (3348)	pellets%compositions%signature%id (string) (9.8.1.1.3)
flag (3348)	pellets%compositions%signature%flag (integer) (9.8.1.1.2)
description (3348)	pellets%compositions%signature%description (string) (9.8.1.1.3)
pellet (3144)	pellets%pellet(:) (pellet) (9.8.1.3.319)
shape (3425)	pellets%pellet(:)%shape (pellet_shape) (9.8.1.3.326)
type (3432)	pellets%pellet(:)%shape%type (identifier) (9.8.1.3.242)
id (3348)	pellets%pellet(:)%shape%type%id (string) (9.8.1.1.3)
flag (3348)	pellets%pellet(:)%shape%type%flag (integer) (9.8.1.1.2)
description (3348)	pellets%pellet(:)%shape%type%description (string) (9.8.1.1.3)
dimensions (3432)	pellets%pellet(:)%shape%dimensions (vecflt_type) (9.8.1.2.13)
elements (3425)	pellets%pellet(:)%elements (pellet_elements) (9.8.1.3.322)
nucindex (3428)	pellets%pellet(:)%elements%nucindex (vecint_type) (9.8.1.2.14)
density (3428)	pellets%pellet(:)%elements%density (vecflt_type) (9.8.1.2.13)
fraction (3428)	pellets%pellet(:)%elements%fraction (vecflt_type) (9.8.1.2.13)
subl.energy (3428)	pellets%pellet(:)%elements%subl_energy (vecflt_type) (9.8.1.2.13)
geometry (3425)	pellets%pellet(:)%geometry (pellet_geometry) (9.8.1.3.323)
pivot_point (3429)	pellets%pellet(:)%geometry%pivot_point (rzphi0D) (9.8.1.3.371)
r (3477)	pellets%pellet(:)%geometry%pivot_point%r (float) (9.8.1.1.1)
z (3477)	pellets%pellet(:)%geometry%pivot_point%z (float) (9.8.1.1.1)
phi (3477)	pellets%pellet(:)%geometry%pivot_point%phi (float) (9.8.1.1.1)
second_point (3429)	pellets%pellet(:)%geometry%second_point (rzphi0D) (9.8.1.3.371)
r (3477)	pellets%pellet(:)%geometry%second_point%r (float) (9.8.1.1.1)
z (3477)	pellets%pellet(:)%geometry%second_point%z (float) (9.8.1.1.1)
phi (3477)	pellets%pellet(:)%geometry%second_point%phi (float) (9.8.1.1.1)
velocity (3429)	pellets%pellet(:)%geometry%velocity (float) (9.8.1.1.1)
angles (3429)	pellets%pellet(:)%geometry%angles (pellet_angles) (9.8.1.3.320)
horizontal (3426)	pellets%pellet(:)%geometry%angles%horizontal (float) (9.8.1.1.1)
vertical (3426)	pellets%pellet(:)%geometry%angles%vertical (float) (9.8.1.1.1)
pathprofiles (3425)	pellets%pellet(:)%pathprofiles (pellet_pathprofiles) (9.8.1.3.325)
distance (3431)	pellets%pellet(:)%pathprofiles%distance (vecflt_type) (9.8.1.2.13)
rho_tor (3431)	pellets%pellet(:)%pathprofiles%rho_tor (vecflt_type) (9.8.1.2.13)
rho_pol (3431)	pellets%pellet(:)%pathprofiles%rho_pol (vecflt_type) (9.8.1.2.13)
velocity (3431)	pellets%pellet(:)%pathprofiles%velocity (vecflt_type) (9.8.1.2.13)
ne (3431)	pellets%pellet(:)%pathprofiles%ne (vecflt_type) (9.8.1.2.13)
te (3431)	pellets%pellet(:)%pathprofiles%te (vecflt_type) (9.8.1.2.13)
abl_rate (3431)	pellets%pellet(:)%pathprofiles%abl_rate (vecflt_type) (9.8.1.2.13)
abl_particles (3431)	pellets%pellet(:)%pathprofiles%abl_particles (vecflt_type) (9.8.1.2.13)
delta_drift (3431)	pellets%pellet(:)%pathprofiles%delta_drift (vecflt_type) (9.8.1.2.13)
position (3431)	pellets%pellet(:)%pathprofiles%position (rzphi1D) (9.8.1.3.372)
r (3478)	pellets%pellet(:)%pathprofiles%position%r (vecflt_type) (9.8.1.2.13)
z (3478)	pellets%pellet(:)%pathprofiles%position%z (vecflt_type) (9.8.1.2.13)
phi (3478)	pellets%pellet(:)%pathprofiles%position%phi (vecflt_type) (9.8.1.2.13)
deposition (3425)	pellets%pellet(:)%deposition (pellet_deposition) (9.8.1.3.321)
rho_tor (3427)	pellets%pellet(:)%deposition%rho_tor (vecflt_type) (9.8.1.2.13)
rho_pol (3427)	pellets%pellet(:)%deposition%rho_pol (vecflt_type) (9.8.1.2.13)
delta_ne (3427)	pellets%pellet(:)%deposition%delta_ne (vecflt_type) (9.8.1.2.13)
delta_te (3427)	pellets%pellet(:)%deposition%delta_te (vecflt_type) (9.8.1.2.13)
delta_ni (3427)	pellets%pellet(:)%deposition%delta_ni (matflt_type) (9.8.1.2.10)
delta_ti (3427)	pellets%pellet(:)%deposition%delta_ti (matflt_type) (9.8.1.2.10)
delta_vtor (3427)	pellets%pellet(:)%deposition%delta_vtor (matflt_type) (9.8.1.2.10)
impurity (3427)	pellets%pellet(:)%deposition%impurity(:) (pellet_impurity) (9.8.1.3.324)
delta_nz (3430)	pellets%pellet(:)%deposition%impurity(:)%delta_nz (matflt_type) (9.8.1.2.10)
codeparam (3144)	pellets%codeparam (codeparam) (9.8.1.3.84)
codename (3190)	pellets%codeparam%codename (string) (9.8.1.1.3)
codeversion (3190)	pellets%codeparam%codeversion (string) (9.8.1.1.3)
parameters (3190)	pellets%codeparam%parameters (string) (9.8.1.1.3)
output_diag (3190)	pellets%codeparam%output_diag (string) (9.8.1.1.3)
output_flag (3190)	pellets%codeparam%output_flag (integer) (9.8.1.1.2)
time (3144)	pellets%time (float) (9.8.1.1.1)

### 9.8.2.1.37 pfsystems

datainfo (3145)	pfsystems%datainfo (datainfo) (9.8.1.3.141)
dataprovider (3247)	pfsystems%datainfo%dataprovider (string) (9.8.1.1.3)
putdate (3247)	pfsystems%datainfo%putdate (string) (9.8.1.1.3)
source (3247)	pfsystems%datainfo%source (string) (9.8.1.1.3)
comment (3247)	pfsystems%datainfo%comment (string) (9.8.1.1.3)
cocos (3247)	pfsystems%datainfo%cocos (integer) (9.8.1.1.2)
id (3247)	pfsystems%datainfo%id (integer) (9.8.1.1.2)
isref (3247)	pfsystems%datainfo%isref (integer) (9.8.1.1.2)
whatref (3247)	pfsystems%datainfo%whatref (whatref) (9.8.1.3.513)
user (3619)	pfsystems%datainfo%whatref%user (string) (9.8.1.1.3)
machine (3619)	pfsystems%datainfo%whatref%machine (string) (9.8.1.1.3)
shot (3619)	pfsystems%datainfo%whatref%shot (integer) (9.8.1.1.2)
run (3619)	pfsystems%datainfo%whatref%run (integer) (9.8.1.1.2)
occurrence (3619)	pfsystems%datainfo%whatref%occurrence (integer) (9.8.1.1.2)
putinfo (3247)	pfsystems%datainfo%putinfo (putinfo) (9.8.1.3.349)
putmethod (3455)	pfsystems%datainfo%putinfo%putmethod (string) (9.8.1.1.3)
putaccess (3455)	pfsystems%datainfo%putinfo%putaccess (string) (9.8.1.1.3)
putlocation (3455)	pfsystems%datainfo%putinfo%putlocation (string) (9.8.1.1.3)
rights (3455)	pfsystems%datainfo%putinfo%rights (string) (9.8.1.1.3)
pfcoils (3145)	pfsystems%pfcoils (pfcoils) (9.8.1.3.329)
desc_pfcoils (3435)	pfsystems%pfcoils%desc_pfcoils (desc_pfcoils) (9.8.1.3.145)
name (3251)	pfsystems%pfcoils%desc_pfcoils%name (vecstring_type) (9.8.1.2.15)
id (3251)	pfsystems%pfcoils%desc_pfcoils%id (vecstring_type) (9.8.1.2.15)
res (3251)	pfsystems%pfcoils%desc_pfcoils%res (vecflt_type) (9.8.1.2.13)
emax (3251)	pfsystems%pfcoils%desc_pfcoils%emax (vecflt_type) (9.8.1.2.13)
structure_cs (3251)	pfsystems%pfcoils%desc_pfcoils%structure_cs (structure_cs) (9.8.1.3.424)
gaptf (3530)	pfsystems%pfcoils%desc_pfcoils%structure_cs%gaptf (float) (9.8.1.1.1)
ri (3530)	pfsystems%pfcoils%desc_pfcoils%structure_cs%ri (float) (9.8.1.1.1)
re (3530)	pfsystems%pfcoils%desc_pfcoils%structure_cs%re (float) (9.8.1.1.1)
jcable (3530)	pfsystems%pfcoils%desc_pfcoils%structure_cs%jcable (float) (9.8.1.1.1)
current_nom (3530)	pfsystems%pfcoils%desc_pfcoils%structure_cs%current_nom (float) (9.8.1.1.1)
sigma (3530)	pfsystems%pfcoils%desc_pfcoils%structure_cs%sigma (float) (9.8.1.1.1)
tiso (3530)	pfsystems%pfcoils%desc_pfcoils%structure_cs%tiso (float) (9.8.1.1.1)
nlay (3530)	pfsystems%pfcoils%desc_pfcoils%structure_cs%nlay (float) (9.8.1.1.1)
pol_flux_cs (3251)	pfsystems%pfcoils%desc_pfcoils%pol_flux_cs (float) (9.8.1.1.1)
nelement (3251)	pfsystems%pfcoils%desc_pfcoils%nelement (vecint_type) (9.8.1.2.14)
pfelement (3251)	pfsystems%pfcoils%desc_pfcoils%pfelement (pfelement) (9.8.1.3.330)
name (3436)	pfsystems%pfcoils%desc_pfcoils%pfelement%name (vecstring_type) (9.8.1.2.15)
id (3436)	pfsystems%pfcoils%desc_pfcoils%pfelement%id (vecstring_type) (9.8.1.2.15)
turnsign (3436)	pfsystems%pfcoils%desc_pfcoils%pfelement%turnsign (matflt_type) (9.8.1.2.10)
area (3436)	pfsystems%pfcoils%desc_pfcoils%pfelement%area (matflt_type) (9.8.1.2.10)
pfgometry (3436)	pfsystems%pfcoils%desc_pfcoils%pfelement%pfgometry (pfgometry) (9.8.1.3.331)
type (3437)	pfsystems%pfcoils%desc_pfcoils%pfelement%pfgometry%type (matint_type) (9.8.1.2.11)
npoints (3437)	pfsystems%pfcoils%desc_pfcoils%pfelement%pfgometry%npoints (matint_type) (9.8.1.2.11)
rzcoordinate (3437)	pfsystems%pfcoils%desc_pfcoils%pfelement%pfgometry%rzcoordinate (rz3D) (9.8.1.3.370)
r (3476)	pfsystems%pfcoils%desc_pfcoils%pfelement%pfgometry%rzcoordinate%r (array3dflt_type) (9.8.1.2.2)
z (3476)	pfsystems%pfcoils%desc_pfcoils%pfelement%pfgometry%rzcoordinate%z (array3dflt_type) (9.8.1.2.2)
rzdrdz (3437)	pfsystems%pfcoils%desc_pfcoils%pfelement%pfgometry%rzdrdz (array3dflt_type) (9.8.1.2.2)
coilcurrent (3435)	pfsystems%pfcoils%coilcurrent (exp1D) (9.8.1.3.204)
value (3310)	pfsystems%pfcoils%coilcurrent%value (vecflt_type) (9.8.1.2.13)
abserror (3310)	pfsystems%pfcoils%coilcurrent%abserror (vecflt_type) (9.8.1.2.13)
relerror (3310)	pfsystems%pfcoils%coilcurrent%relerror (vecflt_type) (9.8.1.2.13)
coilvoltage (3435)	pfsystems%pfcoils%coilvoltage (exp1D) (9.8.1.3.204)
value (3310)	pfsystems%pfcoils%coilvoltage%value (vecflt_type) (9.8.1.2.13)
abserror (3310)	pfsystems%pfcoils%coilvoltage%abserror (vecflt_type) (9.8.1.2.13)
relerror (3310)	pfsystems%pfcoils%coilvoltage%relerror (vecflt_type) (9.8.1.2.13)
p_cryo (3435)	pfsystems%pfcoils%p_cryo (float) (9.8.1.1.1)
p_nh (3435)	pfsystems%pfcoils%p_nh (vecflt_type) (9.8.1.2.13)
pfpassive (3145)	pfsystems%pfpassive (pfpassive) (9.8.1.3.333)

name (3439)	pfsystems%pfpassive%name (vecstring_type) (9.8.1.2.15)
area (3439)	pfsystems%pfpassive%area (vecflt_type) (9.8.1.2.13)
res (3439)	pfsystems%pfpassive%res (vecflt_type) (9.8.1.2.13)
eta (3439)	pfsystems%pfpassive%eta (vecflt_type) (9.8.1.2.13)
current (3439)	pfsystems%pfpassive%current (pfpassive_current) (9.8.1.3.334)
toroidal (3440)	pfsystems%pfpassive%current%toroidal (exp1D) (9.8.1.3.204)
value (3310)	pfsystems%pfpassive%current%toroidal%value (vecflt_type) (9.8.1.2.13)
abserror (3310)	pfsystems%pfpassive%current%toroidal%abserror (vecflt_type) (9.8.1.2.13)
relerror (3310)	pfsystems%pfpassive%current%toroidal%relerror (vecflt_type) (9.8.1.2.13)
poloidal (3440)	pfsystems%pfpassive%current%poloidal (exp1D) (9.8.1.3.204)
value (3310)	pfsystems%pfpassive%current%poloidal%value (vecflt_type) (9.8.1.2.13)
abserror (3310)	pfsystems%pfpassive%current%poloidal%abserror (vecflt_type) (9.8.1.2.13)
relerror (3310)	pfsystems%pfpassive%current%poloidal%relerror (vecflt_type) (9.8.1.2.13)
pfpageometry (3439)	pfsystems%pfpassive%pfpageometry (pfpageometry) (9.8.1.3.332)
type (3438)	pfsystems%pfpassive%pfpageometry%type (vecint_type) (9.8.1.2.14)
npoints (3438)	pfsystems%pfpassive%pfpageometry%npoints (vecint_type) (9.8.1.2.14)
rzcoordinate (3438)	pfsystems%pfpassive%pfpageometry%rzcoordinate (rz2D) (9.8.1.3.369)
r (3475)	pfsystems%pfpassive%pfpageometry%rzcoordinate%r (matflt_type) (9.8.1.2.10)
z (3475)	pfsystems%pfpassive%pfpageometry%rzcoordinate%z (matflt_type) (9.8.1.2.10)
rzdrdz (3438)	pfsystems%pfpassive%pfpageometry%rzdrdz (matflt_type) (9.8.1.2.10)
pfcircuits (3145)	pfsystems%pfcircuits (pfcircuits) (9.8.1.3.328)
name (3434)	pfsystems%pfcircuits%name (vecstring_type) (9.8.1.2.15)
id (3434)	pfsystems%pfcircuits%id (vecstring_type) (9.8.1.2.15)
type (3434)	pfsystems%pfcircuits%type (vecstring_type) (9.8.1.2.15)
nnodes (3434)	pfsystems%pfcircuits%nnodes (vecint_type) (9.8.1.2.14)
connections (3434)	pfsystems%pfcircuits%connections (array3dint_type) (9.8.1.2.3)
pfsupplies (3145)	pfsystems%pfsupplies (pfsupplies) (9.8.1.3.335)
desc_supply (3441)	pfsystems%pfsupplies%desc_supply (desc_supply) (9.8.1.3.146)
name (3252)	pfsystems%pfsupplies%desc_supply%name (vecstring_type) (9.8.1.2.15)
id (3252)	pfsystems%pfsupplies%desc_supply%id (vecstring_type) (9.8.1.2.15)
type (3252)	pfsystems%pfsupplies%desc_supply%type (vecstring_type) (9.8.1.2.15)
delay (3252)	pfsystems%pfsupplies%desc_supply%delay (vecflt_type) (9.8.1.2.13)
filter (3252)	pfsystems%pfsupplies%desc_supply%filter (filter) (9.8.1.3.208)
num (3314)	pfsystems%pfsupplies%desc_supply%filter%num (matflt_type) (9.8.1.2.10)
den (3314)	pfsystems%pfsupplies%desc_supply%filter%den (matflt_type) (9.8.1.2.10)
imin (3252)	pfsystems%pfsupplies%desc_supply%imin (vecflt_type) (9.8.1.2.13)
imax (3252)	pfsystems%pfsupplies%desc_supply%imax (vecflt_type) (9.8.1.2.13)
res (3252)	pfsystems%pfsupplies%desc_supply%res (vecflt_type) (9.8.1.2.13)
umin (3252)	pfsystems%pfsupplies%desc_supply%umin (vecflt_type) (9.8.1.2.13)
umax (3252)	pfsystems%pfsupplies%desc_supply%umax (vecflt_type) (9.8.1.2.13)
emax (3252)	pfsystems%pfsupplies%desc_supply%emax (vecflt_type) (9.8.1.2.13)
voltage (3441)	pfsystems%pfsupplies%voltage (exp1D) (9.8.1.3.204)
value (3310)	pfsystems%pfsupplies%voltage%value (vecflt_type) (9.8.1.2.13)
abserror (3310)	pfsystems%pfsupplies%voltage%abserror (vecflt_type) (9.8.1.2.13)
relerror (3310)	pfsystems%pfsupplies%voltage%relerror (vecflt_type) (9.8.1.2.13)
current (3441)	pfsystems%pfsupplies%current (exp1D) (9.8.1.3.204)
value (3310)	pfsystems%pfsupplies%current%value (vecflt_type) (9.8.1.2.13)
abserror (3310)	pfsystems%pfsupplies%current%abserror (vecflt_type) (9.8.1.2.13)
relerror (3310)	pfsystems%pfsupplies%current%relerror (vecflt_type) (9.8.1.2.13)
codeparam (3145)	pfsystems%codeparam (codeparam) (9.8.1.3.84)
codename (3190)	pfsystems%codeparam%codename (string) (9.8.1.1.3)
codeversion (3190)	pfsystems%codeparam%codeversion (string) (9.8.1.1.3)
parameters (3190)	pfsystems%codeparam%parameters (string) (9.8.1.1.3)
output_diag (3190)	pfsystems%codeparam%output_diag (string) (9.8.1.1.3)
output_flag (3190)	pfsystems%codeparam%output_flag (integer) (9.8.1.1.2)
time (3145)	pfsystems%time (float) (9.8.1.1.1)

### 9.8.2.1.38 polardiag

datainfo (3367)	lineintegraldiag%datainfo (datainfo) (9.8.1.3.141)
dataproducer (3247)	lineintegraldiag%datainfo%dataproducer (string) (9.8.1.1.3)

putdate (3247)	lineintegraldiag%datainfo%putdate (string) (9.8.1.1.3)
source (3247)	lineintegraldiag%datainfo%source (string) (9.8.1.1.3)
comment (3247)	lineintegraldiag%datainfo%comment (string) (9.8.1.1.3)
cocos (3247)	lineintegraldiag%datainfo%cocos (integer) (9.8.1.1.2)
id (3247)	lineintegraldiag%datainfo%id (integer) (9.8.1.1.2)
isref (3247)	lineintegraldiag%datainfo%isref (integer) (9.8.1.1.2)
whatref (3247)	lineintegraldiag%datainfo%whatref (whatref) (9.8.1.3.513)
user (3619)	lineintegraldiag%datainfo%whatref%user (string) (9.8.1.1.3)
machine (3619)	lineintegraldiag%datainfo%whatref%machine (string) (9.8.1.1.3)
shot (3619)	lineintegraldiag%datainfo%whatref%shot (integer) (9.8.1.1.2)
run (3619)	lineintegraldiag%datainfo%whatref%run (integer) (9.8.1.1.2)
occurrence (3619)	lineintegraldiag%datainfo%whatref%occurrence (integer) (9.8.1.1.2)
putinfo (3247)	lineintegraldiag%datainfo%putinfo (putinfo) (9.8.1.3.349)
putmethod (3455)	lineintegraldiag%datainfo%putinfo%putmethod (string) (9.8.1.1.3)
putaccess (3455)	lineintegraldiag%datainfo%putinfo%putaccess (string) (9.8.1.1.3)
putlocation (3455)	lineintegraldiag%datainfo%putinfo%putlocation (string) (9.8.1.1.3)
rights (3455)	lineintegraldiag%datainfo%putinfo%rights (string) (9.8.1.1.3)
expression (3367)	lineintegraldiag%expression (string) (9.8.1.1.3)
setup_line (3367)	lineintegraldiag%setup_line (setup_line) (9.8.1.3.403)
pivot_point (3509)	lineintegraldiag%setup_line%pivot_point (rzphi1D) (9.8.1.3.372)
r (3478)	lineintegraldiag%setup_line%pivot_point%r (vecflt.type) (9.8.1.2.13)
z (3478)	lineintegraldiag%setup_line%pivot_point%z (vecflt.type) (9.8.1.2.13)
phi (3478)	lineintegraldiag%setup_line%pivot_point%phi (vecflt.type) (9.8.1.2.13)
horchordang1 (3509)	lineintegraldiag%setup_line%horchordang1 (vecflt.type) (9.8.1.2.13)
verchordang1 (3509)	lineintegraldiag%setup_line%verchordang1 (vecflt.type) (9.8.1.2.13)
width (3509)	lineintegraldiag%setup_line%width (vecflt.type) (9.8.1.2.13)
second_point (3509)	lineintegraldiag%setup_line%second_point (rzphi1D) (9.8.1.3.372)
r (3478)	lineintegraldiag%setup_line%second_point%r (vecflt.type) (9.8.1.2.13)
z (3478)	lineintegraldiag%setup_line%second_point%z (vecflt.type) (9.8.1.2.13)
phi (3478)	lineintegraldiag%setup_line%second_point%phi (vecflt.type) (9.8.1.2.13)
horchordang2 (3509)	lineintegraldiag%setup_line%horchordang2 (vecflt.type) (9.8.1.2.13)
verchordang2 (3509)	lineintegraldiag%setup_line%verchordang2 (vecflt.type) (9.8.1.2.13)
third_point (3509)	lineintegraldiag%setup_line%third_point (rzphi1D) (9.8.1.3.372)
r (3478)	lineintegraldiag%setup_line%third_point%r (vecflt.type) (9.8.1.2.13)
z (3478)	lineintegraldiag%setup_line%third_point%z (vecflt.type) (9.8.1.2.13)
phi (3478)	lineintegraldiag%setup_line%third_point%phi (vecflt.type) (9.8.1.2.13)
nchordpoints (3509)	lineintegraldiag%setup_line%nchordpoints (integer) (9.8.1.1.2)
measure (3367)	lineintegraldiag%measure (exp1D) (9.8.1.3.204)
value (3310)	lineintegraldiag%measure%value (vecflt.type) (9.8.1.2.13)
abserror (3310)	lineintegraldiag%measure%abserror (vecflt.type) (9.8.1.2.13)
relerror (3310)	lineintegraldiag%measure%relerror (vecflt.type) (9.8.1.2.13)
codeparam (3367)	lineintegraldiag%codeparam (codeparam) (9.8.1.3.84)
codename (3190)	lineintegraldiag%codeparam%codename (string) (9.8.1.1.3)
codeversion (3190)	lineintegraldiag%codeparam%codeversion (string) (9.8.1.1.3)
parameters (3190)	lineintegraldiag%codeparam%parameters (string) (9.8.1.1.3)
output_diag (3190)	lineintegraldiag%codeparam%output_diag (string) (9.8.1.1.3)
output_flag (3190)	lineintegraldiag%codeparam%output_flag (integer) (9.8.1.1.2)
time (3367)	lineintegraldiag%time (float) (9.8.1.1.1)

### 9.8.2.1.39 power\_conv

datainfo (3147)	power_conv%datainfo (datainfo) (9.8.1.3.141)
dataprovider (3247)	power_conv%datainfo%dataprovider (string) (9.8.1.1.3)
putdate (3247)	power_conv%datainfo%putdate (string) (9.8.1.1.3)
source (3247)	power_conv%datainfo%source (string) (9.8.1.1.3)
comment (3247)	power_conv%datainfo%comment (string) (9.8.1.1.3)
cocos (3247)	power_conv%datainfo%cocos (integer) (9.8.1.1.2)
id (3247)	power_conv%datainfo%id (integer) (9.8.1.1.2)
isref (3247)	power_conv%datainfo%isref (integer) (9.8.1.1.2)
whatref (3247)	power_conv%datainfo%whatref (whatref) (9.8.1.3.513)
user (3619)	power_conv%datainfo%whatref%user (string) (9.8.1.1.3)

machine (3619)	power_conv%datainfo%whatref%machine (string) (9.8.1.1.3)
shot (3619)	power_conv%datainfo%whatref%shot (integer) (9.8.1.1.2)
run (3619)	power_conv%datainfo%whatref%run (integer) (9.8.1.1.2)
occurrence (3619)	power_conv%datainfo%whatref%occurrence (integer) (9.8.1.1.2)
putinfo (3247)	power_conv%datainfo%putinfo (putinfo) (9.8.1.3.349)
putmethod (3455)	power_conv%datainfo%putinfo%putmethod (string) (9.8.1.1.3)
putaccess (3455)	power_conv%datainfo%putinfo%putaccess (string) (9.8.1.1.3)
putlocation (3455)	power_conv%datainfo%putinfo%putlocation (string) (9.8.1.1.3)
rights (3455)	power_conv%datainfo%putinfo%rights (string) (9.8.1.1.3)
cycle_type (3147)	power_conv%cycle_type (string) (9.8.1.1.3)
circuits (3147)	power_conv%circuits(:) (circuits) (9.8.1.3.81)
component (3187)	power_conv%circuits(:)%component(:) (power_conv_component) (9.8.1.3.343)
name (3449)	power_conv%circuits(:)%component(:)%name (string) (9.8.1.1.3)
temp_in (3449)	power_conv%circuits(:)%component(:)%temp_in (float) (9.8.1.1.1)
temp_out (3449)	power_conv%circuits(:)%component(:)%temp_out (float) (9.8.1.1.1)
press_in (3449)	power_conv%circuits(:)%component(:)%press_in (float) (9.8.1.1.1)
press_out (3449)	power_conv%circuits(:)%component(:)%press_out (float) (9.8.1.1.1)
power (3449)	power_conv%circuits(:)%component(:)%power (float) (9.8.1.1.1)
flow (3449)	power_conv%circuits(:)%component(:)%flow (float) (9.8.1.1.1)
power_net (3187)	power_conv%circuits(:)%power_net (float) (9.8.1.1.1)
power_int (3187)	power_conv%circuits(:)%power_int (float) (9.8.1.1.1)
efficiency (3187)	power_conv%circuits(:)%efficiency (float) (9.8.1.1.1)
power_recirc (3147)	power_conv%power_recirc (float) (9.8.1.1.1)
power_net (3147)	power_conv%power_net (float) (9.8.1.1.1)
power_int (3147)	power_conv%power_int (float) (9.8.1.1.1)
efficiency (3147)	power_conv%efficiency (float) (9.8.1.1.1)
codeparam (3147)	power_conv%codeparam (codeparam) (9.8.1.3.84)
codename (3190)	power_conv%codeparam%codename (string) (9.8.1.1.3)
codeversion (3190)	power_conv%codeparam%codeversion (string) (9.8.1.1.3)
parameters (3190)	power_conv%codeparam%parameters (string) (9.8.1.1.3)
output_diag (3190)	power_conv%codeparam%output_diag (string) (9.8.1.1.3)
output_flag (3190)	power_conv%codeparam%output_flag (integer) (9.8.1.1.2)
time (3147)	power_conv%time (float) (9.8.1.1.1)

### 9.8.2.1.40 reflectomet

datainfo (3148)	reflectomet%datainfo (datainfo) (9.8.1.3.141)
dataprovider (3247)	reflectomet%datainfo%dataprovider (string) (9.8.1.1.3)
putdate (3247)	reflectomet%datainfo%putdate (string) (9.8.1.1.3)
source (3247)	reflectomet%datainfo%source (string) (9.8.1.1.3)
comment (3247)	reflectomet%datainfo%comment (string) (9.8.1.1.3)
cocos (3247)	reflectomet%datainfo%cocos (integer) (9.8.1.1.2)
id (3247)	reflectomet%datainfo%id (integer) (9.8.1.1.2)
isref (3247)	reflectomet%datainfo%isref (integer) (9.8.1.1.2)
whatref (3247)	reflectomet%datainfo%whatref (whatref) (9.8.1.3.513)
user (3619)	reflectomet%datainfo%whatref%user (string) (9.8.1.1.3)
machine (3619)	reflectomet%datainfo%whatref%machine (string) (9.8.1.1.3)
shot (3619)	reflectomet%datainfo%whatref%shot (integer) (9.8.1.1.2)
run (3619)	reflectomet%datainfo%whatref%run (integer) (9.8.1.1.2)
occurrence (3619)	reflectomet%datainfo%whatref%occurrence (integer) (9.8.1.1.2)
putinfo (3247)	reflectomet%datainfo%putinfo (putinfo) (9.8.1.3.349)
putmethod (3455)	reflectomet%datainfo%putinfo%putmethod (string) (9.8.1.1.3)
putaccess (3455)	reflectomet%datainfo%putinfo%putaccess (string) (9.8.1.1.3)
putlocation (3455)	reflectomet%datainfo%putinfo%putlocation (string) (9.8.1.1.3)
rights (3455)	reflectomet%datainfo%putinfo%rights (string) (9.8.1.1.3)
refl_receive (3148)	reflectomet%refl_receive(:) (refl_receive) (9.8.1.3.356)
name (3462)	reflectomet%refl_receive(:)%name (string) (9.8.1.1.3)
raw_signal (3462)	reflectomet%refl_receive(:)%raw_signal (t.series_real) (9.8.1.3.426)
time_wind (3532)	reflectomet%refl_receive(:)%raw_signal%time_wind (vecflt_type) (9.8.1.2.13)
values (3532)	reflectomet%refl_receive(:)%raw_signal%values (vecflt_type) (9.8.1.2.13)
io_signal (3462)	reflectomet%refl_receive(:)%io_signal (t.series_real) (9.8.1.3.426)

time_wind (3532)	reflectomet%refl_receive(:)%io_signal%time_wind (vecflt_type) (9.8.1.2.13)
values (3532)	reflectomet%refl_receive(:)%io_signal%values (vecflt_type) (9.8.1.2.13)
iq_receiver (3462)	reflectomet%refl_receive(:)%iq_receiver (t_series_cplx) (9.8.1.3.425)
time_wind (3531)	reflectomet%refl_receive(:)%iq_receiver%time_wind (vecflt_type) (9.8.1.2.13)
values_re (3531)	reflectomet%refl_receive(:)%iq_receiver%values_re (vecflt_type) (9.8.1.2.13)
values_im (3531)	reflectomet%refl_receive(:)%iq_receiver%values_im (vecflt_type) (9.8.1.2.13)
antenna_ind (3462)	reflectomet%refl_receive(:)%antenna_ind (integer) (9.8.1.1.2)
antennas (3148)	reflectomet%antennas(:) (reflectometry_antennas) (9.8.1.3.357)
name (3463)	reflectomet%antennas(:)%name (string) (9.8.1.1.3)
type (3463)	reflectomet%antennas(:)%type (identifier) (9.8.1.3.242)
id (3348)	reflectomet%antennas(:)%type%id (string) (9.8.1.1.3)
flag (3348)	reflectomet%antennas(:)%type%flag (integer) (9.8.1.1.2)
description (3348)	reflectomet%antennas(:)%type%description (string) (9.8.1.1.3)
origin (3463)	reflectomet%antennas(:)%origin (origin) (9.8.1.3.316)
refpos (3422)	reflectomet%antennas(:)%origin%refpos (rzphi0D) (9.8.1.3.371)
r (3477)	reflectomet%antennas(:)%origin%refpos%r (float) (9.8.1.1.1)
z (3477)	reflectomet%antennas(:)%origin%refpos%z (float) (9.8.1.1.1)
phi (3477)	reflectomet%antennas(:)%origin%refpos%phi (float) (9.8.1.1.1)
alpha (3422)	reflectomet%antennas(:)%origin%alpha (float) (9.8.1.1.1)
beta (3422)	reflectomet%antennas(:)%origin%beta (float) (9.8.1.1.1)
gamma (3422)	reflectomet%antennas(:)%origin%gamma (float) (9.8.1.1.1)
radfield (3463)	reflectomet%antennas(:)%radfield (reflectometry_radfield) (9.8.1.3.358)
type (3464)	reflectomet%antennas(:)%radfield%type (identifier) (9.8.1.3.242)
id (3348)	reflectomet%antennas(:)%radfield%type%id (string) (9.8.1.1.3)
flag (3348)	reflectomet%antennas(:)%radfield%type%flag (integer) (9.8.1.1.2)
description (3348)	reflectomet%antennas(:)%radfield%type%description (string) (9.8.1.1.3)
position (3464)	reflectomet%antennas(:)%radfield%position (vecflt_type) (9.8.1.2.13)
gaussian (3464)	reflectomet%antennas(:)%radfield%gaussian(:) (reflectometry_radfield_gaussian) (9.8.1.3.359)
aperture (3465)	reflectomet%antennas(:)%radfield%gaussian(:)%aperture (simp_apert) (9.8.1.3.407)
type (3513)	reflectomet%antennas(:)%radfield%gaussian(:)%aperture%type (identifier) (9.8.1.3.242)
id (3348)	reflectomet%antennas(:)%radfield%gaussian(:)%aperture%type%id (string) (9.8.1.1.3)
flag (3348)	reflectomet%antennas(:)%radfield%gaussian(:)%aperture%type%flag (integer) (9.8.1.1.2)
description (3348)	reflectomet%antennas(:)%radfield%gaussian(:)%aperture%type%description (string) (9.8.1.1.3)
sizes (3513)	reflectomet%antennas(:)%radfield%gaussian(:)%aperture%sizes (vecflt_type) (9.8.1.2.13)
angle (3513)	reflectomet%antennas(:)%radfield%gaussian(:)%aperture%angle (float) (9.8.1.1.1)
waistsize (3465)	reflectomet%antennas(:)%radfield%gaussian(:)%waistsize (vecflt_type) (9.8.1.2.13)
waistzpos (3465)	reflectomet%antennas(:)%radfield%gaussian(:)%waistzpos (vecflt_type) (9.8.1.2.13)
tiltangle (3465)	reflectomet%antennas(:)%radfield%gaussian(:)%tiltangle (vecflt_type) (9.8.1.2.13)
polar_angle (3465)	reflectomet%antennas(:)%radfield%gaussian(:)%polar_angle (vecflt_type) (9.8.1.2.13)
frequency (3465)	reflectomet%antennas(:)%radfield%gaussian(:)%frequency (float) (9.8.1.1.1)
efield (3464)	reflectomet%antennas(:)%radfield%efield(:) (reflectometry_radfield_efield) (9.8.1.3.360)
grid2d (3466)	reflectomet%antennas(:)%radfield%efield(:)%grid2d (reggrid) (9.8.1.3.361)
dim1 (3467)	reflectomet%antennas(:)%radfield%efield(:)%grid2d%dim1 (vecflt_type) (9.8.1.2.13)
dim2 (3467)	reflectomet%antennas(:)%radfield%efield(:)%grid2d%dim2 (vecflt_type) (9.8.1.2.13)
e1 (3466)	reflectomet%antennas(:)%radfield%efield(:)%e1 (matcplx_type) (9.8.1.2.9)
e2 (3466)	reflectomet%antennas(:)%radfield%efield(:)%e2 (matcplx_type) (9.8.1.2.9)
frequency (3466)	reflectomet%antennas(:)%radfield%efield(:)%frequency (float) (9.8.1.1.1)
geometry (3463)	reflectomet%antennas(:)%geometry (float) (9.8.1.1.1)
launchsignal (3463)	reflectomet%antennas(:)%launchsignal (launchsignal) (9.8.1.3.258)
time_launch (3364)	reflectomet%antennas(:)%launchsignal%time_launch (vecflt_type) (9.8.1.2.13)
freq (3364)	reflectomet%antennas(:)%launchsignal%freq (vecflt_type) (9.8.1.2.13)
amplitude (3364)	reflectomet%antennas(:)%launchsignal%amplitude (vecflt_type) (9.8.1.2.13)
phase (3364)	reflectomet%antennas(:)%launchsignal%phase (vecflt_type) (9.8.1.2.13)
codeparam (3148)	reflectomet%codeparam (codeparam) (9.8.1.3.84)
codename (3190)	reflectomet%codeparam%codename (string) (9.8.1.1.3)
codeversion (3190)	reflectomet%codeparam%codeversion (string) (9.8.1.1.3)
parameters (3190)	reflectomet%codeparam%parameters (string) (9.8.1.1.3)
output_diag (3190)	reflectomet%codeparam%output_diag (string) (9.8.1.1.3)
output_flag (3190)	reflectomet%codeparam%output_flag (integer) (9.8.1.1.2)
time (3148)	reflectomet%time (float) (9.8.1.1.1)



### 9.8.2.1.41 rfadiag

datainfo (3149)	rfadiag%datainfo (datainfo) (9.8.1.3.141)
dataproducer (3247)	rfadiag%datainfo%dataproducer (string) (9.8.1.1.3)
putdate (3247)	rfadiag%datainfo%putdate (string) (9.8.1.1.3)
source (3247)	rfadiag%datainfo%source (string) (9.8.1.1.3)
comment (3247)	rfadiag%datainfo%comment (string) (9.8.1.1.3)
cocos (3247)	rfadiag%datainfo%cocos (integer) (9.8.1.1.2)
id (3247)	rfadiag%datainfo%id (integer) (9.8.1.1.2)
isref (3247)	rfadiag%datainfo%isref (integer) (9.8.1.1.2)
whatref (3247)	rfadiag%datainfo%whatref (whatref) (9.8.1.3.513)
user (3619)	rfadiag%datainfo%whatref%user (string) (9.8.1.1.3)
machine (3619)	rfadiag%datainfo%whatref%machine (string) (9.8.1.1.3)
shot (3619)	rfadiag%datainfo%whatref%shot (integer) (9.8.1.1.2)
run (3619)	rfadiag%datainfo%whatref%run (integer) (9.8.1.1.2)
occurrence (3619)	rfadiag%datainfo%whatref%occurrence (integer) (9.8.1.1.2)
putinfo (3247)	rfadiag%datainfo%putinfo (putinfo) (9.8.1.3.349)
putmethod (3455)	rfadiag%datainfo%putinfo%putmethod (string) (9.8.1.1.3)
putaccess (3455)	rfadiag%datainfo%putinfo%putaccess (string) (9.8.1.1.3)
putlocation (3455)	rfadiag%datainfo%putinfo%putlocation (string) (9.8.1.1.3)
rights (3455)	rfadiag%datainfo%putinfo%rights (string) (9.8.1.1.3)
setup (3149)	rfadiag%setup (rfsetup) (9.8.1.3.363)
position (3469)	rfadiag%setup%position (rzphiIDexp) (9.8.1.3.373)
r (3479)	rfadiag%setup%position%r (exp1D) (9.8.1.3.204)
value (3310)	rfadiag%setup%position%r%value (vecflt.type) (9.8.1.2.13)
abserror (3310)	rfadiag%setup%position%r%abserror (vecflt.type) (9.8.1.2.13)
releror (3310)	rfadiag%setup%position%r%releror (vecflt.type) (9.8.1.2.13)
z (3479)	rfadiag%setup%position%z (exp1D) (9.8.1.3.204)
value (3310)	rfadiag%setup%position%z%value (vecflt.type) (9.8.1.2.13)
abserror (3310)	rfadiag%setup%position%z%abserror (vecflt.type) (9.8.1.2.13)
releror (3310)	rfadiag%setup%position%z%releror (vecflt.type) (9.8.1.2.13)
phi (3479)	rfadiag%setup%position%phi (exp1D) (9.8.1.3.204)
value (3310)	rfadiag%setup%position%phi%value (vecflt.type) (9.8.1.2.13)
abserror (3310)	rfadiag%setup%position%phi%abserror (vecflt.type) (9.8.1.2.13)
releror (3310)	rfadiag%setup%position%phi%releror (vecflt.type) (9.8.1.2.13)
measure (3149)	rfadiag%measure (rfameasure) (9.8.1.3.362)
ti (3468)	rfadiag%measure%ti (exp1D) (9.8.1.3.204)
value (3310)	rfadiag%measure%ti%value (vecflt.type) (9.8.1.2.13)
abserror (3310)	rfadiag%measure%ti%abserror (vecflt.type) (9.8.1.2.13)
releror (3310)	rfadiag%measure%ti%releror (vecflt.type) (9.8.1.2.13)
codeparam (3149)	rfadiag%codeparam (codeparam) (9.8.1.3.84)
codename (3190)	rfadiag%codeparam%codename (string) (9.8.1.1.3)
codeversion (3190)	rfadiag%codeparam%codeversion (string) (9.8.1.1.3)
parameters (3190)	rfadiag%codeparam%parameters (string) (9.8.1.1.3)
output_diag (3190)	rfadiag%codeparam%output_diag (string) (9.8.1.1.3)
output_flag (3190)	rfadiag%codeparam%output_flag (integer) (9.8.1.1.2)
time (3149)	rfadiag%time (float) (9.8.1.1.1)

### 9.8.2.1.42 sawteeth

datainfo (3150)	sawteeth%datainfo (datainfo) (9.8.1.3.141)
dataproducer (3247)	sawteeth%datainfo%dataproducer (string) (9.8.1.1.3)
putdate (3247)	sawteeth%datainfo%putdate (string) (9.8.1.1.3)
source (3247)	sawteeth%datainfo%source (string) (9.8.1.1.3)
comment (3247)	sawteeth%datainfo%comment (string) (9.8.1.1.3)
cocos (3247)	sawteeth%datainfo%cocos (integer) (9.8.1.1.2)
id (3247)	sawteeth%datainfo%id (integer) (9.8.1.1.2)
isref (3247)	sawteeth%datainfo%isref (integer) (9.8.1.1.2)
whatref (3247)	sawteeth%datainfo%whatref (whatref) (9.8.1.3.513)
user (3619)	sawteeth%datainfo%whatref%user (string) (9.8.1.1.3)
machine (3619)	sawteeth%datainfo%whatref%machine (string) (9.8.1.1.3)



shot (3619)	sawteeth%datainfo%whatref%shot (integer) (9.8.1.1.2)
run (3619)	sawteeth%datainfo%whatref%run (integer) (9.8.1.1.2)
occurrence (3619)	sawteeth%datainfo%whatref%occurrence (integer) (9.8.1.1.2)
putinfo (3247)	sawteeth%datainfo%putinfo (putinfo) (9.8.1.3.349)
putmethod (3455)	sawteeth%datainfo%putinfo%putmethod (string) (9.8.1.1.3)
putaccess (3455)	sawteeth%datainfo%putinfo%putaccess (string) (9.8.1.1.3)
putlocation (3455)	sawteeth%datainfo%putinfo%putlocation (string) (9.8.1.1.3)
rights (3455)	sawteeth%datainfo%putinfo%rights (string) (9.8.1.1.3)
crash_trig (3150)	sawteeth%crash_trig (integer) (9.8.1.1.2)
composition (3150)	sawteeth%composition (composition) (9.8.1.3.102)
amn (3208)	sawteeth%composition%amn (vecflt_type) (9.8.1.2.13)
zn (3208)	sawteeth%composition%zn (vecflt_type) (9.8.1.2.13)
zion (3208)	sawteeth%composition%zion (vecflt_type) (9.8.1.2.13)
imp_flag (3208)	sawteeth%composition%imp_flag (vecint_type) (9.8.1.2.14)
label (3208)	sawteeth%composition%label (vecstring_type) (9.8.1.2.15)
rho_tor_norm (3150)	sawteeth%rho_tor_norm (vecflt_type) (9.8.1.2.13)
rho_tor (3150)	sawteeth%rho_tor (vecflt_type) (9.8.1.2.13)
profiles1d (3150)	sawteeth%profiles1d (sawteeth_profiles1d) (9.8.1.3.379)
psi (3485)	sawteeth%profiles1d%psi (vecflt_type) (9.8.1.2.13)
psistar (3485)	sawteeth%profiles1d%psistar (vecflt_type) (9.8.1.2.13)
q (3485)	sawteeth%profiles1d%q (vecflt_type) (9.8.1.2.13)
diags (3150)	sawteeth%diags (sawteeth_diags) (9.8.1.3.378)
shear1 (3484)	sawteeth%diags%shear1 (float) (9.8.1.1.1)
rhotorn_q1 (3484)	sawteeth%diags%rhotorn_q1 (float) (9.8.1.1.1)
rhotorn_inv (3484)	sawteeth%diags%rhotorn_inv (float) (9.8.1.1.1)
rhotorn_mix (3484)	sawteeth%diags%rhotorn_mix (float) (9.8.1.1.1)
pr_crash_trig (3484)	sawteeth%diags%pr_crash_trig (integer) (9.8.1.1.2)
pr_crash_time (3484)	sawteeth%diags%pr_crash_time (float) (9.8.1.1.1)
pr_st_period (3484)	sawteeth%diags%pr_st_period (float) (9.8.1.1.1)
codeparam (3150)	sawteeth%codeparam (codeparam) (9.8.1.3.84)
codename (3190)	sawteeth%codeparam%codename (string) (9.8.1.1.3)
codeversion (3190)	sawteeth%codeparam%codeversion (string) (9.8.1.1.3)
parameters (3190)	sawteeth%codeparam%parameters (string) (9.8.1.1.3)
output_diag (3190)	sawteeth%codeparam%output_diag (string) (9.8.1.1.3)
output_flag (3190)	sawteeth%codeparam%output_flag (integer) (9.8.1.1.2)
time (3150)	sawteeth%time (float) (9.8.1.1.1)

### 9.8.2.1.43 scenario

datainfo (3151)	scenario%datainfo (datainfo) (9.8.1.3.141)
dataprovider (3247)	scenario%datainfo%dataprovider (string) (9.8.1.1.3)
putdate (3247)	scenario%datainfo%putdate (string) (9.8.1.1.3)
source (3247)	scenario%datainfo%source (string) (9.8.1.1.3)
comment (3247)	scenario%datainfo%comment (string) (9.8.1.1.3)
cocos (3247)	scenario%datainfo%cocos (integer) (9.8.1.1.2)
id (3247)	scenario%datainfo%id (integer) (9.8.1.1.2)
isref (3247)	scenario%datainfo%isref (integer) (9.8.1.1.2)
whatref (3247)	scenario%datainfo%whatref (whatref) (9.8.1.3.513)
user (3619)	scenario%datainfo%whatref%user (string) (9.8.1.1.3)
machine (3619)	scenario%datainfo%whatref%machine (string) (9.8.1.1.3)
shot (3619)	scenario%datainfo%whatref%shot (integer) (9.8.1.1.2)
run (3619)	scenario%datainfo%whatref%run (integer) (9.8.1.1.2)
occurrence (3619)	scenario%datainfo%whatref%occurrence (integer) (9.8.1.1.2)
putinfo (3247)	scenario%datainfo%putinfo (putinfo) (9.8.1.3.349)
putmethod (3455)	scenario%datainfo%putinfo%putmethod (string) (9.8.1.1.3)
putaccess (3455)	scenario%datainfo%putinfo%putaccess (string) (9.8.1.1.3)
putlocation (3455)	scenario%datainfo%putinfo%putlocation (string) (9.8.1.1.3)
rights (3455)	scenario%datainfo%putinfo%rights (string) (9.8.1.1.3)
centre (3151)	scenario%centre (scenario_centre) (9.8.1.3.380)
te0 (3486)	scenario%centre%te0 (scenario_ref) (9.8.1.3.397)
value (3503)	scenario%centre%te0%value (float) (9.8.1.1.1)

source (3503)	scenario%centre%te0%source (string) (9.8.1.1.3)
ti0 (3486)	scenario%centre%ti0 (scenario_ref) (9.8.1.3.397)
value (3503)	scenario%centre%ti0%value (float) (9.8.1.1.1)
source (3503)	scenario%centre%ti0%source (string) (9.8.1.1.3)
ne0 (3486)	scenario%centre%ne0 (scenario_ref) (9.8.1.3.397)
value (3503)	scenario%centre%ne0%value (float) (9.8.1.1.1)
source (3503)	scenario%centre%ne0%source (string) (9.8.1.1.3)
ni0 (3486)	scenario%centre%ni0 (scenario_ref) (9.8.1.3.397)
value (3503)	scenario%centre%ni0%value (float) (9.8.1.1.1)
source (3503)	scenario%centre%ni0%source (string) (9.8.1.1.3)
shift0 (3486)	scenario%centre%shift0 (scenario_ref) (9.8.1.3.397)
value (3503)	scenario%centre%shift0%value (float) (9.8.1.1.1)
source (3503)	scenario%centre%shift0%source (string) (9.8.1.1.3)
psi0 (3486)	scenario%centre%psi0 (scenario_ref) (9.8.1.3.397)
value (3503)	scenario%centre%psi0%value (float) (9.8.1.1.1)
source (3503)	scenario%centre%psi0%source (string) (9.8.1.1.3)
phi0 (3486)	scenario%centre%phi0 (scenario_ref) (9.8.1.3.397)
value (3503)	scenario%centre%phi0%value (float) (9.8.1.1.1)
source (3503)	scenario%centre%phi0%source (string) (9.8.1.1.3)
q0 (3486)	scenario%centre%q0 (scenario_ref) (9.8.1.3.397)
value (3503)	scenario%centre%q0%value (float) (9.8.1.1.1)
source (3503)	scenario%centre%q0%source (string) (9.8.1.1.3)
Rmag (3486)	scenario%centre%Rmag (scenario_ref) (9.8.1.3.397)
value (3503)	scenario%centre%Rmag%value (float) (9.8.1.1.1)
source (3503)	scenario%centre%Rmag%source (string) (9.8.1.1.3)
Zmag (3486)	scenario%centre%Zmag (scenario_ref) (9.8.1.3.397)
value (3503)	scenario%centre%Zmag%value (float) (9.8.1.1.1)
source (3503)	scenario%centre%Zmag%source (string) (9.8.1.1.3)
vtor.0 (3486)	scenario%centre%vtor.0 (scenario_ref) (9.8.1.3.397)
value (3503)	scenario%centre%vtor.0%value (float) (9.8.1.1.1)
source (3503)	scenario%centre%vtor.0%source (string) (9.8.1.1.3)
composition (3151)	scenario%composition (scenario_composition) (9.8.1.3.381)
amn (3487)	scenario%composition%amn (vecflt_type) (9.8.1.2.13)
zn (3487)	scenario%composition%zn (vecflt_type) (9.8.1.2.13)
zion (3487)	scenario%composition%zion (vecflt_type) (9.8.1.2.13)
imp_flag (3487)	scenario%composition%imp_flag (vecint_type) (9.8.1.2.14)
rot_imp_flag (3487)	scenario%composition%rot_imp_flag (vecint_type) (9.8.1.2.14)
pellet.amn (3487)	scenario%composition%pellet.amn (vecflt_type) (9.8.1.2.13)
pellet.zn (3487)	scenario%composition%pellet.zn (vecflt_type) (9.8.1.2.13)
nbi.amn (3487)	scenario%composition%nbi.amn (vecflt_type) (9.8.1.2.13)
nbi.zn (3487)	scenario%composition%nbi.zn (vecflt_type) (9.8.1.2.13)
configs (3151)	scenario%configs (scenario_configuration) (9.8.1.3.382)
config (3488)	scenario%configs%config (scenario_int) (9.8.1.3.389)
value (3495)	scenario%configs%config%value (integer) (9.8.1.1.2)
source (3495)	scenario%configs%config%source (string) (9.8.1.1.3)
lmode.sc (3488)	scenario%configs%lmode.sc (string) (9.8.1.1.3)
hmode.sc (3488)	scenario%configs%hmode.sc (string) (9.8.1.1.3)
core.sc (3488)	scenario%configs%core.sc (string) (9.8.1.1.3)
pedestal.sc (3488)	scenario%configs%pedestal.sc (string) (9.8.1.1.3)
helium.sc (3488)	scenario%configs%helium.sc (string) (9.8.1.1.3)
impurity.sc (3488)	scenario%configs%impurity.sc (string) (9.8.1.1.3)
l2h.sc (3488)	scenario%configs%l2h.sc (string) (9.8.1.1.3)
tor_rot.sc (3488)	scenario%configs%tor_rot.sc (string) (9.8.1.1.3)
wall.mat (3488)	scenario%configs%wall.mat (string) (9.8.1.1.3)
evap.mat (3488)	scenario%configs%evap.mat (string) (9.8.1.1.3)
lim.mat (3488)	scenario%configs%lim.mat (string) (9.8.1.1.3)
div.mat (3488)	scenario%configs%div.mat (string) (9.8.1.1.3)
coordinate (3488)	scenario%configs%coordinate (string) (9.8.1.1.3)
ecrh_freq (3488)	scenario%configs%ecrh_freq (scenario_ref) (9.8.1.3.397)
value (3503)	scenario%configs%ecrh_freq%value (float) (9.8.1.1.1)
source (3503)	scenario%configs%ecrh_freq%source (string) (9.8.1.1.3)

ecrh_loc (3488)	scenario%configs%ecrh_loc (scenario_ref) (9.8.1.3.397)
value (3503)	scenario%configs%ecrh_loc%value (float) (9.8.1.1.1)
source (3503)	scenario%configs%ecrh_loc%source (string) (9.8.1.1.3)
ecrh_mode (3488)	scenario%configs%ecrh_mode (scenario_int) (9.8.1.3.389)
value (3495)	scenario%configs%ecrh_mode%value (integer) (9.8.1.1.2)
source (3495)	scenario%configs%ecrh_mode%source (string) (9.8.1.1.3)
ecrh_tor_ang (3488)	scenario%configs%ecrh_tor_ang (scenario_ref) (9.8.1.3.397)
value (3503)	scenario%configs%ecrh_tor_ang%value (float) (9.8.1.1.1)
source (3503)	scenario%configs%ecrh_tor_ang%source (string) (9.8.1.1.3)
ecrh_pol_ang (3488)	scenario%configs%ecrh_pol_ang (scenario_ref) (9.8.1.3.397)
value (3503)	scenario%configs%ecrh_pol_ang%value (float) (9.8.1.1.1)
source (3503)	scenario%configs%ecrh_pol_ang%source (string) (9.8.1.1.3)
ecrh_harm (3488)	scenario%configs%ecrh_harm (scenario_int) (9.8.1.3.389)
value (3495)	scenario%configs%ecrh_harm%value (integer) (9.8.1.1.2)
source (3495)	scenario%configs%ecrh_harm%source (string) (9.8.1.1.3)
enbi (3488)	scenario%configs%enbi (scenario_ref) (9.8.1.3.397)
value (3503)	scenario%configs%enbi%value (float) (9.8.1.1.1)
source (3503)	scenario%configs%enbi%source (string) (9.8.1.1.3)
r_nbi (3488)	scenario%configs%r_nbi (scenario_ref) (9.8.1.3.397)
value (3503)	scenario%configs%r_nbi%value (float) (9.8.1.1.1)
source (3503)	scenario%configs%r_nbi%source (string) (9.8.1.1.3)
grad_b_drift (3488)	scenario%configs%grad_b_drift (scenario_int) (9.8.1.3.389)
value (3495)	scenario%configs%grad_b_drift%value (integer) (9.8.1.1.2)
source (3495)	scenario%configs%grad_b_drift%source (string) (9.8.1.1.3)
icrh_freq (3488)	scenario%configs%icrh_freq (scenario_ref) (9.8.1.3.397)
value (3503)	scenario%configs%icrh_freq%value (float) (9.8.1.1.1)
source (3503)	scenario%configs%icrh_freq%source (string) (9.8.1.1.3)
icrh_scheme (3488)	scenario%configs%icrh_scheme (string) (9.8.1.1.3)
icrh_phase (3488)	scenario%configs%icrh_phase (scenario_ref) (9.8.1.3.397)
value (3503)	scenario%configs%icrh_phase%value (float) (9.8.1.1.1)
source (3503)	scenario%configs%icrh_phase%source (string) (9.8.1.1.3)
LH_freq (3488)	scenario%configs%LH_freq (scenario_ref) (9.8.1.3.397)
value (3503)	scenario%configs%LH_freq%value (float) (9.8.1.1.1)
source (3503)	scenario%configs%LH_freq%source (string) (9.8.1.1.3)
LH_npar (3488)	scenario%configs%LH_npar (scenario_ref) (9.8.1.3.397)
value (3503)	scenario%configs%LH_npar%value (float) (9.8.1.1.1)
source (3503)	scenario%configs%LH_npar%source (string) (9.8.1.1.3)
pellet_ang (3488)	scenario%configs%pellet_ang (scenario_ref) (9.8.1.3.397)
value (3503)	scenario%configs%pellet_ang%value (float) (9.8.1.1.1)
source (3503)	scenario%configs%pellet_ang%source (string) (9.8.1.1.3)
pellet_v (3488)	scenario%configs%pellet_v (scenario_ref) (9.8.1.3.397)
value (3503)	scenario%configs%pellet_v%value (float) (9.8.1.1.1)
source (3503)	scenario%configs%pellet_v%source (string) (9.8.1.1.3)
pellet_nba (3488)	scenario%configs%pellet_nba (scenario_ref) (9.8.1.3.397)
value (3503)	scenario%configs%pellet_nba%value (float) (9.8.1.1.1)
source (3503)	scenario%configs%pellet_nba%source (string) (9.8.1.1.3)
confinement (3151)	scenario%confinement (scenario_confinement) (9.8.1.3.383)
tau_e (3489)	scenario%confinement%tau_e (scenario_ref) (9.8.1.3.397)
value (3503)	scenario%confinement%tau_e%value (float) (9.8.1.1.1)
source (3503)	scenario%confinement%tau_e%source (string) (9.8.1.1.3)
tau_l_sc (3489)	scenario%confinement%tau_l_sc (scenario_ref) (9.8.1.3.397)
value (3503)	scenario%confinement%tau_l_sc%value (float) (9.8.1.1.1)
source (3503)	scenario%confinement%tau_l_sc%source (string) (9.8.1.1.3)
tau_h_sc (3489)	scenario%confinement%tau_h_sc (scenario_ref) (9.8.1.3.397)
value (3503)	scenario%confinement%tau_h_sc%value (float) (9.8.1.1.1)
source (3503)	scenario%confinement%tau_h_sc%source (string) (9.8.1.1.3)
tau_he (3489)	scenario%confinement%tau_he (scenario_ref) (9.8.1.3.397)
value (3503)	scenario%confinement%tau_he%value (float) (9.8.1.1.1)
source (3503)	scenario%confinement%tau_he%source (string) (9.8.1.1.3)
tau_e_ee (3489)	scenario%confinement%tau_e_ee (scenario_ref) (9.8.1.3.397)
value (3503)	scenario%confinement%tau_e_ee%value (float) (9.8.1.1.1)

source (3503)	scenario%confinement%tau.e.ee%source (string) (9.8.1.1.3)
tau.e.ii (3489)	scenario%confinement%tau.e.ii (scenario_ref) (9.8.1.3.397)
value (3503)	scenario%confinement%tau.e.ii%value (float) (9.8.1.1.1)
source (3503)	scenario%confinement%tau.e.ii%source (string) (9.8.1.1.3)
tau.e.ei (3489)	scenario%confinement%tau.e.ei (scenario_ref) (9.8.1.3.397)
value (3503)	scenario%confinement%tau.e.ei%value (float) (9.8.1.1.1)
source (3503)	scenario%confinement%tau.e.ei%source (string) (9.8.1.1.3)
tau.cur.diff (3489)	scenario%confinement%tau.cur.diff (scenario_ref) (9.8.1.3.397)
value (3503)	scenario%confinement%tau.cur.diff%value (float) (9.8.1.1.1)
source (3503)	scenario%confinement%tau.cur.diff%source (string) (9.8.1.1.3)
tau.i.rol (3489)	scenario%confinement%tau.i.rol (scenario_ref) (9.8.1.3.397)
value (3503)	scenario%confinement%tau.i.rol%value (float) (9.8.1.1.1)
source (3503)	scenario%confinement%tau.i.rol%source (string) (9.8.1.1.3)
currents (3151)	scenario%currents (scenario_currents) (9.8.1.3.384)
RR (3490)	scenario%currents%RR (scenario_ref) (9.8.1.3.397)
value (3503)	scenario%currents%RR%value (float) (9.8.1.1.1)
source (3503)	scenario%currents%RR%source (string) (9.8.1.1.3)
i.align (3490)	scenario%currents%i.align (scenario_ref) (9.8.1.3.397)
value (3503)	scenario%currents%i.align%value (float) (9.8.1.1.1)
source (3503)	scenario%currents%i.align%source (string) (9.8.1.1.3)
i.boot (3490)	scenario%currents%i.boot (scenario_ref) (9.8.1.3.397)
value (3503)	scenario%currents%i.boot%value (float) (9.8.1.1.1)
source (3503)	scenario%currents%i.boot%source (string) (9.8.1.1.3)
i.cd.tot (3490)	scenario%currents%i.cd.tot (scenario_ref) (9.8.1.3.397)
value (3503)	scenario%currents%i.cd.tot%value (float) (9.8.1.1.1)
source (3503)	scenario%currents%i.cd.tot%source (string) (9.8.1.1.3)
i.eccd (3490)	scenario%currents%i.eccd (scenario_ref) (9.8.1.3.397)
value (3503)	scenario%currents%i.eccd%value (float) (9.8.1.1.1)
source (3503)	scenario%currents%i.eccd%source (string) (9.8.1.1.3)
i.fast.ion (3490)	scenario%currents%i.fast.ion (scenario_ref) (9.8.1.3.397)
value (3503)	scenario%currents%i.fast.ion%value (float) (9.8.1.1.1)
source (3503)	scenario%currents%i.fast.ion%source (string) (9.8.1.1.3)
i.fwcd (3490)	scenario%currents%i.fwcd (scenario_ref) (9.8.1.3.397)
value (3503)	scenario%currents%i.fwcd%value (float) (9.8.1.1.1)
source (3503)	scenario%currents%i.fwcd%source (string) (9.8.1.1.3)
i.lhcd (3490)	scenario%currents%i.lhcd (scenario_ref) (9.8.1.3.397)
value (3503)	scenario%currents%i.lhcd%value (float) (9.8.1.1.1)
source (3503)	scenario%currents%i.lhcd%source (string) (9.8.1.1.3)
i.nbicd (3490)	scenario%currents%i.nbicd (scenario_ref) (9.8.1.3.397)
value (3503)	scenario%currents%i.nbicd%value (float) (9.8.1.1.1)
source (3503)	scenario%currents%i.nbicd%source (string) (9.8.1.1.3)
i.ni.tot (3490)	scenario%currents%i.ni.tot (scenario_ref) (9.8.1.3.397)
value (3503)	scenario%currents%i.ni.tot%value (float) (9.8.1.1.1)
source (3503)	scenario%currents%i.ni.tot%source (string) (9.8.1.1.3)
i.ohm (3490)	scenario%currents%i.ohm (scenario_ref) (9.8.1.3.397)
value (3503)	scenario%currents%i.ohm%value (float) (9.8.1.1.1)
source (3503)	scenario%currents%i.ohm%source (string) (9.8.1.1.3)
i.par (3490)	scenario%currents%i.par (scenario_ref) (9.8.1.3.397)
value (3503)	scenario%currents%i.par%value (float) (9.8.1.1.1)
source (3503)	scenario%currents%i.par%source (string) (9.8.1.1.3)
i.runaway (3490)	scenario%currents%i.runaway (scenario_ref) (9.8.1.3.397)
value (3503)	scenario%currents%i.runaway%value (float) (9.8.1.1.1)
source (3503)	scenario%currents%i.runaway%source (string) (9.8.1.1.3)
v.loop (3490)	scenario%currents%v.loop (scenario_ref) (9.8.1.3.397)
value (3503)	scenario%currents%v.loop%value (float) (9.8.1.1.1)
source (3503)	scenario%currents%v.loop%source (string) (9.8.1.1.3)
v.meas (3490)	scenario%currents%v.meas (scenario_ref) (9.8.1.3.397)
value (3503)	scenario%currents%v.meas%value (float) (9.8.1.1.1)
source (3503)	scenario%currents%v.meas%source (string) (9.8.1.1.3)
edge (3151)	scenario%edge (scenario_edge) (9.8.1.3.385)
te.edge (3491)	scenario%edge%te.edge (scenario_ref) (9.8.1.3.397)

value (3503)	scenario%edge%te_edge%value (float) (9.8.1.1.1)
source (3503)	scenario%edge%te_edge%source (string) (9.8.1.1.3)
ti_edge (3491)	scenario%edge%ti_edge (scenario_ref) (9.8.1.3.397)
value (3503)	scenario%edge%ti_edge%value (float) (9.8.1.1.1)
source (3503)	scenario%edge%ti_edge%source (string) (9.8.1.1.3)
ne_edge (3491)	scenario%edge%ne_edge (scenario_ref) (9.8.1.3.397)
value (3503)	scenario%edge%ne_edge%value (float) (9.8.1.1.1)
source (3503)	scenario%edge%ne_edge%source (string) (9.8.1.1.3)
ni_edge (3491)	scenario%edge%ni_edge (scenario_ref) (9.8.1.3.397)
value (3503)	scenario%edge%ni_edge%value (float) (9.8.1.1.1)
source (3503)	scenario%edge%ni_edge%source (string) (9.8.1.1.3)
psi_edge (3491)	scenario%edge%psi_edge (scenario_ref) (9.8.1.3.397)
value (3503)	scenario%edge%psi_edge%value (float) (9.8.1.1.1)
source (3503)	scenario%edge%psi_edge%source (string) (9.8.1.1.3)
phi_edge (3491)	scenario%edge%phi_edge (scenario_ref) (9.8.1.3.397)
value (3503)	scenario%edge%phi_edge%value (float) (9.8.1.1.1)
source (3503)	scenario%edge%phi_edge%source (string) (9.8.1.1.3)
rho_edge (3491)	scenario%edge%rho_edge (scenario_ref) (9.8.1.3.397)
value (3503)	scenario%edge%rho_edge%value (float) (9.8.1.1.1)
source (3503)	scenario%edge%rho_edge%source (string) (9.8.1.1.3)
drho_edge_dt (3491)	scenario%edge%drho_edge_dt (scenario_ref) (9.8.1.3.397)
value (3503)	scenario%edge%drho_edge_dt%value (float) (9.8.1.1.1)
source (3503)	scenario%edge%drho_edge_dt%source (string) (9.8.1.1.3)
q_edge (3491)	scenario%edge%q_edge (scenario_ref) (9.8.1.3.397)
value (3503)	scenario%edge%q_edge%value (float) (9.8.1.1.1)
source (3503)	scenario%edge%q_edge%source (string) (9.8.1.1.3)
neutral_flux (3491)	scenario%edge%neutral_flux (scenario_ref) (9.8.1.3.397)
value (3503)	scenario%edge%neutral_flux%value (float) (9.8.1.1.1)
source (3503)	scenario%edge%neutral_flux%source (string) (9.8.1.1.3)
phi_plasma (3491)	scenario%edge%phi_plasma (scenario_ref) (9.8.1.3.397)
value (3503)	scenario%edge%phi_plasma%value (float) (9.8.1.1.1)
source (3503)	scenario%edge%phi_plasma%source (string) (9.8.1.1.3)
vtor_edge (3491)	scenario%edge%vtor_edge (scenario_ref) (9.8.1.3.397)
value (3503)	scenario%edge%vtor_edge%value (float) (9.8.1.1.1)
source (3503)	scenario%edge%vtor_edge%source (string) (9.8.1.1.3)
energy (3151)	scenario%energy (scenario_energy) (9.8.1.3.386)
w_tot (3492)	scenario%energy%w_tot (scenario_ref) (9.8.1.3.397)
value (3503)	scenario%energy%w_tot%value (float) (9.8.1.1.1)
source (3503)	scenario%energy%w_tot%source (string) (9.8.1.1.3)
w_b_pol (3492)	scenario%energy%w_b_pol (scenario_ref) (9.8.1.3.397)
value (3503)	scenario%energy%w_b_pol%value (float) (9.8.1.1.1)
source (3503)	scenario%energy%w_b_pol%source (string) (9.8.1.1.3)
w_dia (3492)	scenario%energy%w_dia (scenario_ref) (9.8.1.3.397)
value (3503)	scenario%energy%w_dia%value (float) (9.8.1.1.1)
source (3503)	scenario%energy%w_dia%source (string) (9.8.1.1.3)
dwdia_dt (3492)	scenario%energy%dwdia_dt (scenario_ref) (9.8.1.3.397)
value (3503)	scenario%energy%dwdia_dt%value (float) (9.8.1.1.1)
source (3503)	scenario%energy%dwdia_dt%source (string) (9.8.1.1.3)
w_b_tor_pla (3492)	scenario%energy%w_b_tor_pla (scenario_ref) (9.8.1.3.397)
value (3503)	scenario%energy%w_b_tor_pla%value (float) (9.8.1.1.1)
source (3503)	scenario%energy%w_b_tor_pla%source (string) (9.8.1.1.3)
w_th (3492)	scenario%energy%w_th (scenario_ref) (9.8.1.3.397)
value (3503)	scenario%energy%w_th%value (float) (9.8.1.1.1)
source (3503)	scenario%energy%w_th%source (string) (9.8.1.1.3)
dwtot_dt (3492)	scenario%energy%dwtot_dt (scenario_ref) (9.8.1.3.397)
value (3503)	scenario%energy%dwtot_dt%value (float) (9.8.1.1.1)
source (3503)	scenario%energy%dwtot_dt%source (string) (9.8.1.1.3)
dwbpol_dt (3492)	scenario%energy%dwbpol_dt (scenario_ref) (9.8.1.3.397)
value (3503)	scenario%energy%dwbpol_dt%value (float) (9.8.1.1.1)
source (3503)	scenario%energy%dwbpol_dt%source (string) (9.8.1.1.3)
dwbtorpla_dt (3492)	scenario%energy%dwbtorpla_dt (scenario_ref) (9.8.1.3.397)

value (3503)	scenario%energy%dwbtorpla.dt%value (float) (9.8.1.1.1)
source (3503)	scenario%energy%dwbtorpla.dt%source (string) (9.8.1.1.3)
dwth.dt (3492)	scenario%energy%dwth.dt (scenario_ref) (9.8.1.3.397)
value (3503)	scenario%energy%dwth.dt%value (float) (9.8.1.1.1)
source (3503)	scenario%energy%dwth.dt%source (string) (9.8.1.1.3)
esup_ichrtot (3492)	scenario%energy%esup_ichrtot (scenario_ref) (9.8.1.3.397)
value (3503)	scenario%energy%esup_ichrtot%value (float) (9.8.1.1.1)
source (3503)	scenario%energy%esup_ichrtot%source (string) (9.8.1.1.3)
esup_ichrper (3492)	scenario%energy%esup_ichrper (scenario_ref) (9.8.1.3.397)
value (3503)	scenario%energy%esup_ichrper%value (float) (9.8.1.1.1)
source (3503)	scenario%energy%esup_ichrper%source (string) (9.8.1.1.3)
esup_nbitot (3492)	scenario%energy%esup_nbitot (scenario_ref) (9.8.1.3.397)
value (3503)	scenario%energy%esup_nbitot%value (float) (9.8.1.1.1)
source (3503)	scenario%energy%esup_nbitot%source (string) (9.8.1.1.3)
esup_nbiperp (3492)	scenario%energy%esup_nbiperp (scenario_ref) (9.8.1.3.397)
value (3503)	scenario%energy%esup_nbiperp%value (float) (9.8.1.1.1)
source (3503)	scenario%energy%esup_nbiperp%source (string) (9.8.1.1.3)
esup_lhcd (3492)	scenario%energy%esup_lhcd (scenario_ref) (9.8.1.3.397)
value (3503)	scenario%energy%esup_lhcd%value (float) (9.8.1.1.1)
source (3503)	scenario%energy%esup_lhcd%source (string) (9.8.1.1.3)
esup_alpha (3492)	scenario%energy%esup_alpha (scenario_ref) (9.8.1.3.397)
value (3503)	scenario%energy%esup_alpha%value (float) (9.8.1.1.1)
source (3503)	scenario%energy%esup_alpha%source (string) (9.8.1.1.3)
eqgeometry (3151)	scenario%eqgeometry (eqgeometry) (9.8.1.3.197)
source (3303)	scenario%eqgeometry%source (string) (9.8.1.1.3)
boundarytype (3303)	scenario%eqgeometry%boundarytype (integer) (9.8.1.1.2)
boundary (3303)	scenario%eqgeometry%boundary(:) (rz1Dexp) (9.8.1.3.368)
r (3474)	scenario%eqgeometry%boundary(:)%r (vecflt.type) (9.8.1.2.13)
z (3474)	scenario%eqgeometry%boundary(:)%z (vecflt.type) (9.8.1.2.13)
geom.axis (3303)	scenario%eqgeometry%geom.axis (rz0D) (9.8.1.3.365)
r (3471)	scenario%eqgeometry%geom.axis%r (float) (9.8.1.1.1)
z (3471)	scenario%eqgeometry%geom.axis%z (float) (9.8.1.1.1)
a_minor (3303)	scenario%eqgeometry%a_minor (float) (9.8.1.1.1)
elongation (3303)	scenario%eqgeometry%elongation (float) (9.8.1.1.1)
elong_upper (3303)	scenario%eqgeometry%elong_upper (float) (9.8.1.1.1)
elong_lower (3303)	scenario%eqgeometry%elong_lower (float) (9.8.1.1.1)
tria_upper (3303)	scenario%eqgeometry%tria_upper (float) (9.8.1.1.1)
tria_lower (3303)	scenario%eqgeometry%tria_lower (float) (9.8.1.1.1)
xpts (3303)	scenario%eqgeometry%xpts(:) (rz1Dexp) (9.8.1.3.368)
r (3474)	scenario%eqgeometry%xpts(:)%r (vecflt.type) (9.8.1.2.13)
z (3474)	scenario%eqgeometry%xpts(:)%z (vecflt.type) (9.8.1.2.13)
left_low_st (3303)	scenario%eqgeometry%left_low_st (rz0D) (9.8.1.3.365)
r (3471)	scenario%eqgeometry%left_low_st%r (float) (9.8.1.1.1)
z (3471)	scenario%eqgeometry%left_low_st%z (float) (9.8.1.1.1)
right_low_st (3303)	scenario%eqgeometry%right_low_st (rz0D) (9.8.1.3.365)
r (3471)	scenario%eqgeometry%right_low_st%r (float) (9.8.1.1.1)
z (3471)	scenario%eqgeometry%right_low_st%z (float) (9.8.1.1.1)
left_up_st (3303)	scenario%eqgeometry%left_up_st (rz0D) (9.8.1.3.365)
r (3471)	scenario%eqgeometry%left_up_st%r (float) (9.8.1.1.1)
z (3471)	scenario%eqgeometry%left_up_st%z (float) (9.8.1.1.1)
right_up_st (3303)	scenario%eqgeometry%right_up_st (rz0D) (9.8.1.3.365)
r (3471)	scenario%eqgeometry%right_up_st%r (float) (9.8.1.1.1)
z (3471)	scenario%eqgeometry%right_up_st%z (float) (9.8.1.1.1)
active_limit (3303)	scenario%eqgeometry%active_limit (rz0D) (9.8.1.3.365)
r (3471)	scenario%eqgeometry%active_limit%r (float) (9.8.1.1.1)
z (3471)	scenario%eqgeometry%active_limit%z (float) (9.8.1.1.1)
ang_lcms.upo (3303)	scenario%eqgeometry%ang_lcms.upo (float) (9.8.1.1.1)
ang_lcms.upi (3303)	scenario%eqgeometry%ang_lcms.upi (float) (9.8.1.1.1)
ang_lcms.lwo (3303)	scenario%eqgeometry%ang_lcms.lwo (float) (9.8.1.1.1)
ang_lcms.lwi (3303)	scenario%eqgeometry%ang_lcms.lwi (float) (9.8.1.1.1)
global_param (3151)	scenario%global_param (scenario_global) (9.8.1.3.387)



ip (3493)	scenario%global_param%ip (scenario_ref) (9.8.1.3.397)
value (3503)	scenario%global_param%ip%value (float) (9.8.1.1.1)
source (3503)	scenario%global_param%ip%source (string) (9.8.1.1.3)
dip_dt (3493)	scenario%global_param%dip_dt (scenario_ref) (9.8.1.3.397)
value (3503)	scenario%global_param%dip_dt%value (float) (9.8.1.1.1)
source (3503)	scenario%global_param%dip_dt%source (string) (9.8.1.1.3)
beta_pol (3493)	scenario%global_param%beta_pol (scenario_ref) (9.8.1.3.397)
value (3503)	scenario%global_param%beta_pol%value (float) (9.8.1.1.1)
source (3503)	scenario%global_param%beta_pol%source (string) (9.8.1.1.3)
beta_tor (3493)	scenario%global_param%beta_tor (scenario_ref) (9.8.1.3.397)
value (3503)	scenario%global_param%beta_tor%value (float) (9.8.1.1.1)
source (3503)	scenario%global_param%beta_tor%source (string) (9.8.1.1.3)
beta_normal (3493)	scenario%global_param%beta_normal (scenario_ref) (9.8.1.3.397)
value (3503)	scenario%global_param%beta_normal%value (float) (9.8.1.1.1)
source (3503)	scenario%global_param%beta_normal%source (string) (9.8.1.1.3)
li (3493)	scenario%global_param%li (scenario_ref) (9.8.1.3.397)
value (3503)	scenario%global_param%li%value (float) (9.8.1.1.1)
source (3503)	scenario%global_param%li%source (string) (9.8.1.1.3)
volume (3493)	scenario%global_param%volume (scenario_ref) (9.8.1.3.397)
value (3503)	scenario%global_param%volume%value (float) (9.8.1.1.1)
source (3503)	scenario%global_param%volume%source (string) (9.8.1.1.3)
area_pol (3493)	scenario%global_param%area_pol (scenario_ref) (9.8.1.3.397)
value (3503)	scenario%global_param%area_pol%value (float) (9.8.1.1.1)
source (3503)	scenario%global_param%area_pol%source (string) (9.8.1.1.3)
area_ext (3493)	scenario%global_param%area_ext (scenario_ref) (9.8.1.3.397)
value (3503)	scenario%global_param%area_ext%value (float) (9.8.1.1.1)
source (3503)	scenario%global_param%area_ext%source (string) (9.8.1.1.3)
len_sepa (3493)	scenario%global_param%len_sepa (scenario_ref) (9.8.1.3.397)
value (3503)	scenario%global_param%len_sepa%value (float) (9.8.1.1.1)
source (3503)	scenario%global_param%len_sepa%source (string) (9.8.1.1.3)
beta_pol.th (3493)	scenario%global_param%beta_pol.th (scenario_ref) (9.8.1.3.397)
value (3503)	scenario%global_param%beta_pol.th%value (float) (9.8.1.1.1)
source (3503)	scenario%global_param%beta_pol.th%source (string) (9.8.1.1.3)
beta_tor.th (3493)	scenario%global_param%beta_tor.th (scenario_ref) (9.8.1.3.397)
value (3503)	scenario%global_param%beta_tor.th%value (float) (9.8.1.1.1)
source (3503)	scenario%global_param%beta_tor.th%source (string) (9.8.1.1.3)
beta_n.th (3493)	scenario%global_param%beta_n.th (scenario_ref) (9.8.1.3.397)
value (3503)	scenario%global_param%beta_n.th%value (float) (9.8.1.1.1)
source (3503)	scenario%global_param%beta_n.th%source (string) (9.8.1.1.3)
disruption (3493)	scenario%global_param%disruption (scenario_ref) (9.8.1.3.397)
value (3503)	scenario%global_param%disruption%value (float) (9.8.1.1.1)
source (3503)	scenario%global_param%disruption%source (string) (9.8.1.1.3)
mode_h (3493)	scenario%global_param%mode_h (scenario_ref) (9.8.1.3.397)
value (3503)	scenario%global_param%mode_h%value (float) (9.8.1.1.1)
source (3503)	scenario%global_param%mode_h%source (string) (9.8.1.1.3)
s.alpha (3493)	scenario%global_param%s.alpha (scenario_ref) (9.8.1.3.397)
value (3503)	scenario%global_param%s.alpha%value (float) (9.8.1.1.1)
source (3503)	scenario%global_param%s.alpha%source (string) (9.8.1.1.3)
heat.power (3151)	scenario%heat.power (scenario_heat.power) (9.8.1.3.388)
plh (3494)	scenario%heat.power%plh (scenario_ref) (9.8.1.3.397)
value (3503)	scenario%heat.power%plh%value (float) (9.8.1.1.1)
source (3503)	scenario%heat.power%plh%source (string) (9.8.1.1.3)
pohmic (3494)	scenario%heat.power%pohmic (scenario_ref) (9.8.1.3.397)
value (3503)	scenario%heat.power%pohmic%value (float) (9.8.1.1.1)
source (3503)	scenario%heat.power%pohmic%source (string) (9.8.1.1.3)
picrh (3494)	scenario%heat.power%picrh (scenario_ref) (9.8.1.3.397)
value (3503)	scenario%heat.power%picrh%value (float) (9.8.1.1.1)
source (3503)	scenario%heat.power%picrh%source (string) (9.8.1.1.3)
pecrh (3494)	scenario%heat.power%pecrh (scenario_ref) (9.8.1.3.397)
value (3503)	scenario%heat.power%pecrh%value (float) (9.8.1.1.1)
source (3503)	scenario%heat.power%pecrh%source (string) (9.8.1.1.3)



pnbi (3494)	scenario%heat_power%pnbi (scenario_ref) (9.8.1.3.397)
value (3503)	scenario%heat_power%pnbi%value (float) (9.8.1.1.1)
source (3503)	scenario%heat_power%pnbi%source (string) (9.8.1.1.3)
pnbi_co_cur (3494)	scenario%heat_power%pnbi_co_cur (scenario_ref) (9.8.1.3.397)
value (3503)	scenario%heat_power%pnbi_co_cur%value (float) (9.8.1.1.1)
source (3503)	scenario%heat_power%pnbi_co_cur%source (string) (9.8.1.1.3)
pnbi_counter (3494)	scenario%heat_power%pnbi_counter (scenario_ref) (9.8.1.3.397)
value (3503)	scenario%heat_power%pnbi_counter%value (float) (9.8.1.1.1)
source (3503)	scenario%heat_power%pnbi_counter%source (string) (9.8.1.1.3)
plh_th (3494)	scenario%heat_power%plh_th (scenario_ref) (9.8.1.3.397)
value (3503)	scenario%heat_power%plh_th%value (float) (9.8.1.1.1)
source (3503)	scenario%heat_power%plh_th%source (string) (9.8.1.1.3)
picrh_th (3494)	scenario%heat_power%picrh_th (scenario_ref) (9.8.1.3.397)
value (3503)	scenario%heat_power%picrh_th%value (float) (9.8.1.1.1)
source (3503)	scenario%heat_power%picrh_th%source (string) (9.8.1.1.3)
pecrh_th (3494)	scenario%heat_power%pecrh_th (scenario_ref) (9.8.1.3.397)
value (3503)	scenario%heat_power%pecrh_th%value (float) (9.8.1.1.1)
source (3503)	scenario%heat_power%pecrh_th%source (string) (9.8.1.1.3)
pnbi_th (3494)	scenario%heat_power%pnbi_th (scenario_ref) (9.8.1.3.397)
value (3503)	scenario%heat_power%pnbi_th%value (float) (9.8.1.1.1)
source (3503)	scenario%heat_power%pnbi_th%source (string) (9.8.1.1.3)
ploss_icrh (3494)	scenario%heat_power%ploss_icrh (scenario_ref) (9.8.1.3.397)
value (3503)	scenario%heat_power%ploss_icrh%value (float) (9.8.1.1.1)
source (3503)	scenario%heat_power%ploss_icrh%source (string) (9.8.1.1.3)
ploss_nbi (3494)	scenario%heat_power%ploss_nbi (scenario_ref) (9.8.1.3.397)
value (3503)	scenario%heat_power%ploss_nbi%value (float) (9.8.1.1.1)
source (3503)	scenario%heat_power%ploss_nbi%source (string) (9.8.1.1.3)
pbrem (3494)	scenario%heat_power%pbrem (scenario_ref) (9.8.1.3.397)
value (3503)	scenario%heat_power%pbrem%value (float) (9.8.1.1.1)
source (3503)	scenario%heat_power%pbrem%source (string) (9.8.1.1.3)
pcyclo (3494)	scenario%heat_power%pcyclo (scenario_ref) (9.8.1.3.397)
value (3503)	scenario%heat_power%pcyclo%value (float) (9.8.1.1.1)
source (3503)	scenario%heat_power%pcyclo%source (string) (9.8.1.1.3)
prad (3494)	scenario%heat_power%prad (scenario_ref) (9.8.1.3.397)
value (3503)	scenario%heat_power%prad%value (float) (9.8.1.1.1)
source (3503)	scenario%heat_power%prad%source (string) (9.8.1.1.3)
pdd_fus (3494)	scenario%heat_power%pdd_fus (scenario_ref) (9.8.1.3.397)
value (3503)	scenario%heat_power%pdd_fus%value (float) (9.8.1.1.1)
source (3503)	scenario%heat_power%pdd_fus%source (string) (9.8.1.1.3)
pei (3494)	scenario%heat_power%pei (scenario_ref) (9.8.1.3.397)
value (3503)	scenario%heat_power%pei%value (float) (9.8.1.1.1)
source (3503)	scenario%heat_power%pei%source (string) (9.8.1.1.3)
pel_tot (3494)	scenario%heat_power%pel_tot (scenario_ref) (9.8.1.3.397)
value (3503)	scenario%heat_power%pel_tot%value (float) (9.8.1.1.1)
source (3503)	scenario%heat_power%pel_tot%source (string) (9.8.1.1.3)
pel_fus (3494)	scenario%heat_power%pel_fus (scenario_ref) (9.8.1.3.397)
value (3503)	scenario%heat_power%pel_fus%value (float) (9.8.1.1.1)
source (3503)	scenario%heat_power%pel_fus%source (string) (9.8.1.1.3)
pel_icrh (3494)	scenario%heat_power%pel_icrh (scenario_ref) (9.8.1.3.397)
value (3503)	scenario%heat_power%pel_icrh%value (float) (9.8.1.1.1)
source (3503)	scenario%heat_power%pel_icrh%source (string) (9.8.1.1.3)
pel_nbi (3494)	scenario%heat_power%pel_nbi (scenario_ref) (9.8.1.3.397)
value (3503)	scenario%heat_power%pel_nbi%value (float) (9.8.1.1.1)
source (3503)	scenario%heat_power%pel_nbi%source (string) (9.8.1.1.3)
pfus_dt (3494)	scenario%heat_power%pfus_dt (scenario_ref) (9.8.1.3.397)
value (3503)	scenario%heat_power%pfus_dt%value (float) (9.8.1.1.1)
source (3503)	scenario%heat_power%pfus_dt%source (string) (9.8.1.1.3)
ploss_fus (3494)	scenario%heat_power%ploss_fus (scenario_ref) (9.8.1.3.397)
value (3503)	scenario%heat_power%ploss_fus%value (float) (9.8.1.1.1)
source (3503)	scenario%heat_power%ploss_fus%source (string) (9.8.1.1.3)
pfus_nbi (3494)	scenario%heat_power%pfus_nbi (scenario_ref) (9.8.1.3.397)

value (3503)	scenario%heat_power%pfus_nbi%value (float) (9.8.1.1.1)
source (3503)	scenario%heat_power%pfus_nbi%source (string) (9.8.1.1.3)
pfus_th (3494)	scenario%heat_power%pfus_th (scenario_ref) (9.8.1.3.397)
value (3503)	scenario%heat_power%pfus_th%value (float) (9.8.1.1.1)
source (3503)	scenario%heat_power%pfus_th%source (string) (9.8.1.1.3)
padd_tot (3494)	scenario%heat_power%padd_tot (scenario_ref) (9.8.1.3.397)
value (3503)	scenario%heat_power%padd_tot%value (float) (9.8.1.1.1)
source (3503)	scenario%heat_power%padd_tot%source (string) (9.8.1.1.3)
pion_tot (3494)	scenario%heat_power%pion_tot (scenario_ref) (9.8.1.3.397)
value (3503)	scenario%heat_power%pion_tot%value (float) (9.8.1.1.1)
source (3503)	scenario%heat_power%pion_tot%source (string) (9.8.1.1.3)
pion_fus (3494)	scenario%heat_power%pion_fus (scenario_ref) (9.8.1.3.397)
value (3503)	scenario%heat_power%pion_fus%value (float) (9.8.1.1.1)
source (3503)	scenario%heat_power%pion_fus%source (string) (9.8.1.1.3)
pion_icrh (3494)	scenario%heat_power%pion_icrh (scenario_ref) (9.8.1.3.397)
value (3503)	scenario%heat_power%pion_icrh%value (float) (9.8.1.1.1)
source (3503)	scenario%heat_power%pion_icrh%source (string) (9.8.1.1.3)
pion_nbi (3494)	scenario%heat_power%pion_nbi (scenario_ref) (9.8.1.3.397)
value (3503)	scenario%heat_power%pion_nbi%value (float) (9.8.1.1.1)
source (3503)	scenario%heat_power%pion_nbi%source (string) (9.8.1.1.3)
pioniz (3494)	scenario%heat_power%pioniz (scenario_ref) (9.8.1.3.397)
value (3503)	scenario%heat_power%pioniz%value (float) (9.8.1.1.1)
source (3503)	scenario%heat_power%pioniz%source (string) (9.8.1.1.3)
ploss (3494)	scenario%heat_power%ploss (scenario_ref) (9.8.1.3.397)
value (3503)	scenario%heat_power%ploss%value (float) (9.8.1.1.1)
source (3503)	scenario%heat_power%ploss%source (string) (9.8.1.1.3)
p_wth (3494)	scenario%heat_power%p_wth (scenario_ref) (9.8.1.3.397)
value (3503)	scenario%heat_power%p_wth%value (float) (9.8.1.1.1)
source (3503)	scenario%heat_power%p_wth%source (string) (9.8.1.1.3)
p_w (3494)	scenario%heat_power%p_w (scenario_ref) (9.8.1.3.397)
value (3503)	scenario%heat_power%p_w%value (float) (9.8.1.1.1)
source (3503)	scenario%heat_power%p_w%source (string) (9.8.1.1.3)
p_l2h_thr (3494)	scenario%heat_power%p_l2h_thr (scenario_ref) (9.8.1.3.397)
value (3503)	scenario%heat_power%p_l2h_thr%value (float) (9.8.1.1.1)
source (3503)	scenario%heat_power%p_l2h_thr%source (string) (9.8.1.1.3)
p_l2h_sc (3494)	scenario%heat_power%p_l2h_sc (scenario_ref) (9.8.1.3.397)
value (3503)	scenario%heat_power%p_l2h_sc%value (float) (9.8.1.1.1)
source (3503)	scenario%heat_power%p_l2h_sc%source (string) (9.8.1.1.3)
p_nbi_icrh (3494)	scenario%heat_power%p_nbi_icrh (scenario_ref) (9.8.1.3.397)
value (3503)	scenario%heat_power%p_nbi_icrh%value (float) (9.8.1.1.1)
source (3503)	scenario%heat_power%p_nbi_icrh%source (string) (9.8.1.1.3)
itb (3151)	scenario%itb (scenario_itb) (9.8.1.3.390)
q_min (3496)	scenario%itb%q_min (scenario_ref) (9.8.1.3.397)
value (3503)	scenario%itb%q_min%value (float) (9.8.1.1.1)
source (3503)	scenario%itb%q_min%source (string) (9.8.1.1.3)
te_itb (3496)	scenario%itb%te_itb (scenario_ref) (9.8.1.3.397)
value (3503)	scenario%itb%te_itb%value (float) (9.8.1.1.1)
source (3503)	scenario%itb%te_itb%source (string) (9.8.1.1.3)
ti_itb (3496)	scenario%itb%ti_itb (scenario_ref) (9.8.1.3.397)
value (3503)	scenario%itb%ti_itb%value (float) (9.8.1.1.1)
source (3503)	scenario%itb%ti_itb%source (string) (9.8.1.1.3)
ne_itb (3496)	scenario%itb%ne_itb (scenario_ref) (9.8.1.3.397)
value (3503)	scenario%itb%ne_itb%value (float) (9.8.1.1.1)
source (3503)	scenario%itb%ne_itb%source (string) (9.8.1.1.3)
ni_itb (3496)	scenario%itb%ni_itb (scenario_ref) (9.8.1.3.397)
value (3503)	scenario%itb%ni_itb%value (float) (9.8.1.1.1)
source (3503)	scenario%itb%ni_itb%source (string) (9.8.1.1.3)
psi_itb (3496)	scenario%itb%psi_itb (scenario_ref) (9.8.1.3.397)
value (3503)	scenario%itb%psi_itb%value (float) (9.8.1.1.1)
source (3503)	scenario%itb%psi_itb%source (string) (9.8.1.1.3)
phi_itb (3496)	scenario%itb%phi_itb (scenario_ref) (9.8.1.3.397)

value (3503)	scenario%itb%phi_itb%value (float) (9.8.1.1.1)
source (3503)	scenario%itb%phi_itb%source (string) (9.8.1.1.3)
rho_itb (3496)	scenario%itb%rho_itb (scenario_ref) (9.8.1.3.397)
value (3503)	scenario%itb%rho_itb%value (float) (9.8.1.1.1)
source (3503)	scenario%itb%rho_itb%source (string) (9.8.1.1.3)
h_itb (3496)	scenario%itb%h_itb (scenario_ref) (9.8.1.3.397)
value (3503)	scenario%itb%h_itb%value (float) (9.8.1.1.1)
source (3503)	scenario%itb%h_itb%source (string) (9.8.1.1.3)
width_itb (3496)	scenario%itb%width_itb (scenario_ref) (9.8.1.3.397)
value (3503)	scenario%itb%width_itb%value (float) (9.8.1.1.1)
source (3503)	scenario%itb%width_itb%source (string) (9.8.1.1.3)
vtor_itb (3496)	scenario%itb%vtor_itb (scenario_ref) (9.8.1.3.397)
value (3503)	scenario%itb%vtor_itb%value (float) (9.8.1.1.1)
source (3503)	scenario%itb%vtor_itb%source (string) (9.8.1.1.3)
itb_type (3496)	scenario%itb%itb_type (scenario_int) (9.8.1.3.389)
value (3495)	scenario%itb%itb_type%value (integer) (9.8.1.1.2)
source (3495)	scenario%itb%itb_type%source (string) (9.8.1.1.3)
lim_div_wall (3151)	scenario%lim_div_wall (scenario_lim_div_wall) (9.8.1.3.391)
te_lim_div (3497)	scenario%lim_div_wall%te_lim_div (scenario_ref) (9.8.1.3.397)
value (3503)	scenario%lim_div_wall%te_lim_div%value (float) (9.8.1.1.1)
source (3503)	scenario%lim_div_wall%te_lim_div%source (string) (9.8.1.1.3)
ti_lim_div (3497)	scenario%lim_div_wall%ti_lim_div (scenario_ref) (9.8.1.3.397)
value (3503)	scenario%lim_div_wall%ti_lim_div%value (float) (9.8.1.1.1)
source (3503)	scenario%lim_div_wall%ti_lim_div%source (string) (9.8.1.1.3)
ne_lim_div (3497)	scenario%lim_div_wall%ne_lim_div (scenario_ref) (9.8.1.3.397)
value (3503)	scenario%lim_div_wall%ne_lim_div%value (float) (9.8.1.1.1)
source (3503)	scenario%lim_div_wall%ne_lim_div%source (string) (9.8.1.1.3)
ni_lim_div (3497)	scenario%lim_div_wall%ni_lim_div (scenario_ref) (9.8.1.3.397)
value (3503)	scenario%lim_div_wall%ni_lim_div%value (float) (9.8.1.1.1)
source (3503)	scenario%lim_div_wall%ni_lim_div%source (string) (9.8.1.1.3)
q_peak_div (3497)	scenario%lim_div_wall%q_peak_div (scenario_ref) (9.8.1.3.397)
value (3503)	scenario%lim_div_wall%q_peak_div%value (float) (9.8.1.1.1)
source (3503)	scenario%lim_div_wall%q_peak_div%source (string) (9.8.1.1.3)
q_peak_wall (3497)	scenario%lim_div_wall%q_peak_wall (scenario_ref) (9.8.1.3.397)
value (3503)	scenario%lim_div_wall%q_peak_wall%value (float) (9.8.1.1.1)
source (3503)	scenario%lim_div_wall%q_peak_wall%source (string) (9.8.1.1.3)
surf_temp (3497)	scenario%lim_div_wall%surf_temp (scenario_ref) (9.8.1.3.397)
value (3503)	scenario%lim_div_wall%surf_temp%value (float) (9.8.1.1.1)
source (3503)	scenario%lim_div_wall%surf_temp%source (string) (9.8.1.1.3)
p_lim_div (3497)	scenario%lim_div_wall%p_lim_div (scenario_ref) (9.8.1.3.397)
value (3503)	scenario%lim_div_wall%p_lim_div%value (float) (9.8.1.1.1)
source (3503)	scenario%lim_div_wall%p_lim_div%source (string) (9.8.1.1.3)
p_rad_div (3497)	scenario%lim_div_wall%p_rad_div (scenario_ref) (9.8.1.3.397)
value (3503)	scenario%lim_div_wall%p_rad_div%value (float) (9.8.1.1.1)
source (3503)	scenario%lim_div_wall%p_rad_div%source (string) (9.8.1.1.3)
p_neut_div (3497)	scenario%lim_div_wall%p_neut_div (scenario_ref) (9.8.1.3.397)
value (3503)	scenario%lim_div_wall%p_neut_div%value (float) (9.8.1.1.1)
source (3503)	scenario%lim_div_wall%p_neut_div%source (string) (9.8.1.1.3)
p_wall (3497)	scenario%lim_div_wall%p_wall (scenario_ref) (9.8.1.3.397)
value (3503)	scenario%lim_div_wall%p_wall%value (float) (9.8.1.1.1)
source (3503)	scenario%lim_div_wall%p_wall%source (string) (9.8.1.1.3)
wall_temp (3497)	scenario%lim_div_wall%wall_temp (scenario_ref) (9.8.1.3.397)
value (3503)	scenario%lim_div_wall%wall_temp%value (float) (9.8.1.1.1)
source (3503)	scenario%lim_div_wall%wall_temp%source (string) (9.8.1.1.3)
wall_state (3497)	scenario%lim_div_wall%wall_state (scenario_ref) (9.8.1.3.397)
value (3503)	scenario%lim_div_wall%wall_state%value (float) (9.8.1.1.1)
source (3503)	scenario%lim_div_wall%wall_state%source (string) (9.8.1.1.3)
detach_state (3497)	scenario%lim_div_wall%detach_state (scenario_ref) (9.8.1.3.397)
value (3503)	scenario%lim_div_wall%detach_state%value (float) (9.8.1.1.1)
source (3503)	scenario%lim_div_wall%detach_state%source (string) (9.8.1.1.3)
pump_flux (3497)	scenario%lim_div_wall%pump_flux (scenario_ref) (9.8.1.3.397)

value (3503)	scenario%lim_div_wall%pump_flux%value (float) (9.8.1.1.1)
source (3503)	scenario%lim_div_wall%pump_flux%source (string) (9.8.1.1.3)
p_rad_fw (3497)	scenario%lim_div_wall%p_rad_fw (scenario_ref) (9.8.1.3.397)
value (3503)	scenario%lim_div_wall%p_rad_fw%value (float) (9.8.1.1.1)
source (3503)	scenario%lim_div_wall%p_rad_fw%source (string) (9.8.1.1.3)
p_cond_fw (3497)	scenario%lim_div_wall%p_cond_fw (scenario_ref) (9.8.1.3.397)
value (3503)	scenario%lim_div_wall%p_cond_fw%value (float) (9.8.1.1.1)
source (3503)	scenario%lim_div_wall%p_cond_fw%source (string) (9.8.1.1.3)
div_wetted (3497)	scenario%lim_div_wall%div_wetted (scenario_ref) (9.8.1.3.397)
value (3503)	scenario%lim_div_wall%div_wetted%value (float) (9.8.1.1.1)
source (3503)	scenario%lim_div_wall%div_wetted%source (string) (9.8.1.1.3)
gas_puff (3497)	scenario%lim_div_wall%gas_puff (scenario_ref) (9.8.1.3.397)
value (3503)	scenario%lim_div_wall%gas_puff%value (float) (9.8.1.1.1)
source (3503)	scenario%lim_div_wall%gas_puff%source (string) (9.8.1.1.3)
ar_concentr (3497)	scenario%lim_div_wall%ar_concentr (scenario_ref) (9.8.1.3.397)
value (3503)	scenario%lim_div_wall%ar_concentr%value (float) (9.8.1.1.1)
source (3503)	scenario%lim_div_wall%ar_concentr%source (string) (9.8.1.1.3)
part_exhaust (3497)	scenario%lim_div_wall%part_exhaust (scenario_ref) (9.8.1.3.397)
value (3503)	scenario%lim_div_wall%part_exhaust%value (float) (9.8.1.1.1)
source (3503)	scenario%lim_div_wall%part_exhaust%source (string) (9.8.1.1.3)
f_inner (3497)	scenario%lim_div_wall%f_inner (scenario_ref) (9.8.1.3.397)
value (3503)	scenario%lim_div_wall%f_inner%value (float) (9.8.1.1.1)
source (3503)	scenario%lim_div_wall%f_inner%source (string) (9.8.1.1.3)
f_outer (3497)	scenario%lim_div_wall%f_outer (scenario_ref) (9.8.1.3.397)
value (3503)	scenario%lim_div_wall%f_outer%value (float) (9.8.1.1.1)
source (3503)	scenario%lim_div_wall%f_outer%source (string) (9.8.1.1.3)
f_pfr (3497)	scenario%lim_div_wall%f_pfr (scenario_ref) (9.8.1.3.397)
value (3503)	scenario%lim_div_wall%f_pfr%value (float) (9.8.1.1.1)
source (3503)	scenario%lim_div_wall%f_pfr%source (string) (9.8.1.1.3)
f_rad_fw (3497)	scenario%lim_div_wall%f_rad_fw (scenario_ref) (9.8.1.3.397)
value (3503)	scenario%lim_div_wall%f_rad_fw%value (float) (9.8.1.1.1)
source (3503)	scenario%lim_div_wall%f_rad_fw%source (string) (9.8.1.1.3)
q_div (3497)	scenario%lim_div_wall%q_div (vecflt_type) (9.8.1.2.13)
p_cond_div (3497)	scenario%lim_div_wall%p_cond_div (scenario_ref) (9.8.1.3.397)
value (3503)	scenario%lim_div_wall%p_cond_div%value (float) (9.8.1.1.1)
source (3503)	scenario%lim_div_wall%p_cond_div%source (string) (9.8.1.1.3)
pol_ext (3497)	scenario%lim_div_wall%pol_ext (float) (9.8.1.1.1)
flux_exp (3497)	scenario%lim_div_wall%flux_exp (float) (9.8.1.1.1)
tilt_angle (3497)	scenario%lim_div_wall%tilt_angle (float) (9.8.1.1.1)
n_div (3497)	scenario%lim_div_wall%n_div (float) (9.8.1.1.1)
div_dz (3497)	scenario%lim_div_wall%div_dz (float) (9.8.1.1.1)
div_dro (3497)	scenario%lim_div_wall%div_dro (float) (9.8.1.1.1)
div_dri (3497)	scenario%lim_div_wall%div_dri (float) (9.8.1.1.1)
p_nh_div (3497)	scenario%lim_div_wall%p_nh_div (scenario_ref) (9.8.1.3.397)
value (3503)	scenario%lim_div_wall%p_nh_div%value (float) (9.8.1.1.1)
source (3503)	scenario%lim_div_wall%p_nh_div%source (string) (9.8.1.1.3)
line_ave (3151)	scenario%line_ave (scenario_line_ave) (9.8.1.3.392)
ne_line (3498)	scenario%line_ave%ne_line (scenario_ref) (9.8.1.3.397)
value (3503)	scenario%line_ave%ne_line%value (float) (9.8.1.1.1)
source (3503)	scenario%line_ave%ne_line%source (string) (9.8.1.1.3)
zeff_line (3498)	scenario%line_ave%zeff_line (scenario_ref) (9.8.1.3.397)
value (3503)	scenario%line_ave%zeff_line%value (float) (9.8.1.1.1)
source (3503)	scenario%line_ave%zeff_line%source (string) (9.8.1.1.3)
ne_zeff_line (3498)	scenario%line_ave%ne_zeff_line (scenario_ref) (9.8.1.3.397)
value (3503)	scenario%line_ave%ne_zeff_line%value (float) (9.8.1.1.1)
source (3503)	scenario%line_ave%ne_zeff_line%source (string) (9.8.1.1.3)
dne_line_dt (3498)	scenario%line_ave%dne_line_dt (scenario_ref) (9.8.1.3.397)
value (3503)	scenario%line_ave%dne_line_dt%value (float) (9.8.1.1.1)
source (3503)	scenario%line_ave%dne_line_dt%source (string) (9.8.1.1.3)
neutron (3151)	scenario%neutron (scenario_neutron) (9.8.1.3.393)
ndd_tot (3499)	scenario%neutron%ndd_tot (scenario_ref) (9.8.1.3.397)

value (3503)	scenario%neutron%ndd_tot%value (float) (9.8.1.1.1)
source (3503)	scenario%neutron%ndd_tot%source (string) (9.8.1.1.3)
ndd.th (3499)	scenario%neutron%ndd.th (scenario_ref) (9.8.1.3.397)
value (3503)	scenario%neutron%ndd.th%value (float) (9.8.1.1.1)
source (3503)	scenario%neutron%ndd.th%source (string) (9.8.1.1.3)
ndd_nbi.th (3499)	scenario%neutron%ndd_nbi.th (scenario_ref) (9.8.1.3.397)
value (3503)	scenario%neutron%ndd_nbi.th%value (float) (9.8.1.1.1)
source (3503)	scenario%neutron%ndd_nbi.th%source (string) (9.8.1.1.3)
ndd_nbi_nbi (3499)	scenario%neutron%ndd_nbi_nbi (scenario_ref) (9.8.1.3.397)
value (3503)	scenario%neutron%ndd_nbi_nbi%value (float) (9.8.1.1.1)
source (3503)	scenario%neutron%ndd_nbi_nbi%source (string) (9.8.1.1.3)
ndt_tot (3499)	scenario%neutron%ndt_tot (scenario_ref) (9.8.1.3.397)
value (3503)	scenario%neutron%ndt_tot%value (float) (9.8.1.1.1)
source (3503)	scenario%neutron%ndt_tot%source (string) (9.8.1.1.3)
ndt.th (3499)	scenario%neutron%ndt.th (scenario_ref) (9.8.1.3.397)
value (3503)	scenario%neutron%ndt.th%value (float) (9.8.1.1.1)
source (3503)	scenario%neutron%ndt.th%source (string) (9.8.1.1.3)
ninety_five (3151)	scenario%ninety_five (scenario_ninety_five) (9.8.1.3.394)
q_95 (3500)	scenario%ninety_five%q_95 (scenario_ref) (9.8.1.3.397)
value (3503)	scenario%ninety_five%q_95%value (float) (9.8.1.1.1)
source (3503)	scenario%ninety_five%q_95%source (string) (9.8.1.1.3)
elong_95 (3500)	scenario%ninety_five%elong_95 (scenario_ref) (9.8.1.3.397)
value (3503)	scenario%ninety_five%elong_95%value (float) (9.8.1.1.1)
source (3503)	scenario%ninety_five%elong_95%source (string) (9.8.1.1.3)
tria_95 (3500)	scenario%ninety_five%tria_95 (scenario_ref) (9.8.1.3.397)
value (3503)	scenario%ninety_five%tria_95%value (float) (9.8.1.1.1)
source (3503)	scenario%ninety_five%tria_95%source (string) (9.8.1.1.3)
tria_up_95 (3500)	scenario%ninety_five%tria_up_95 (scenario_ref) (9.8.1.3.397)
value (3503)	scenario%ninety_five%tria_up_95%value (float) (9.8.1.1.1)
source (3503)	scenario%ninety_five%tria_up_95%source (string) (9.8.1.1.3)
tria_lo_95 (3500)	scenario%ninety_five%tria_lo_95 (scenario_ref) (9.8.1.3.397)
value (3503)	scenario%ninety_five%tria_lo_95%value (float) (9.8.1.1.1)
source (3503)	scenario%ninety_five%tria_lo_95%source (string) (9.8.1.1.3)
te_95 (3500)	scenario%ninety_five%te_95 (scenario_ref) (9.8.1.3.397)
value (3503)	scenario%ninety_five%te_95%value (float) (9.8.1.1.1)
source (3503)	scenario%ninety_five%te_95%source (string) (9.8.1.1.3)
ti_95 (3500)	scenario%ninety_five%ti_95 (scenario_ref) (9.8.1.3.397)
value (3503)	scenario%ninety_five%ti_95%value (float) (9.8.1.1.1)
source (3503)	scenario%ninety_five%ti_95%source (string) (9.8.1.1.3)
ne_95 (3500)	scenario%ninety_five%ne_95 (scenario_ref) (9.8.1.3.397)
value (3503)	scenario%ninety_five%ne_95%value (float) (9.8.1.1.1)
source (3503)	scenario%ninety_five%ne_95%source (string) (9.8.1.1.3)
ni_95 (3500)	scenario%ninety_five%ni_95 (scenario_ref) (9.8.1.3.397)
value (3503)	scenario%ninety_five%ni_95%value (float) (9.8.1.1.1)
source (3503)	scenario%ninety_five%ni_95%source (string) (9.8.1.1.3)
phi_95 (3500)	scenario%ninety_five%phi_95 (scenario_ref) (9.8.1.3.397)
value (3503)	scenario%ninety_five%phi_95%value (float) (9.8.1.1.1)
source (3503)	scenario%ninety_five%phi_95%source (string) (9.8.1.1.3)
rho_95 (3500)	scenario%ninety_five%rho_95 (scenario_ref) (9.8.1.3.397)
value (3503)	scenario%ninety_five%rho_95%value (float) (9.8.1.1.1)
source (3503)	scenario%ninety_five%rho_95%source (string) (9.8.1.1.3)
vtor_95 (3500)	scenario%ninety_five%vtor_95 (scenario_ref) (9.8.1.3.397)
value (3503)	scenario%ninety_five%vtor_95%value (float) (9.8.1.1.1)
source (3503)	scenario%ninety_five%vtor_95%source (string) (9.8.1.1.3)
pedestal (3151)	scenario%pedestal (scenario_pedestal) (9.8.1.3.395)
te_ped (3501)	scenario%pedestal%te_ped (scenario_ref) (9.8.1.3.397)
value (3503)	scenario%pedestal%te_ped%value (float) (9.8.1.1.1)
source (3503)	scenario%pedestal%te_ped%source (string) (9.8.1.1.3)
ti_ped (3501)	scenario%pedestal%ti_ped (scenario_ref) (9.8.1.3.397)
value (3503)	scenario%pedestal%ti_ped%value (float) (9.8.1.1.1)
source (3503)	scenario%pedestal%ti_ped%source (string) (9.8.1.1.3)

ne_ped (3501)	scenario%pedestal%ne_ped (scenario_ref) (9.8.1.3.397)
value (3503)	scenario%pedestal%ne_ped%value (float) (9.8.1.1.1)
source (3503)	scenario%pedestal%ne_ped%source (string) (9.8.1.1.3)
ni_ped (3501)	scenario%pedestal%ni_ped (scenario_ref) (9.8.1.3.397)
value (3503)	scenario%pedestal%ni_ped%value (float) (9.8.1.1.1)
source (3503)	scenario%pedestal%ni_ped%source (string) (9.8.1.1.3)
psi_ped (3501)	scenario%pedestal%psi_ped (scenario_ref) (9.8.1.3.397)
value (3503)	scenario%pedestal%psi_ped%value (float) (9.8.1.1.1)
source (3503)	scenario%pedestal%psi_ped%source (string) (9.8.1.1.3)
phi_ped (3501)	scenario%pedestal%phi_ped (scenario_ref) (9.8.1.3.397)
value (3503)	scenario%pedestal%phi_ped%value (float) (9.8.1.1.1)
source (3503)	scenario%pedestal%phi_ped%source (string) (9.8.1.1.3)
rho_ped (3501)	scenario%pedestal%rho_ped (scenario_ref) (9.8.1.3.397)
value (3503)	scenario%pedestal%rho_ped%value (float) (9.8.1.1.1)
source (3503)	scenario%pedestal%rho_ped%source (string) (9.8.1.1.3)
q_ped (3501)	scenario%pedestal%q_ped (scenario_ref) (9.8.1.3.397)
value (3503)	scenario%pedestal%q_ped%value (float) (9.8.1.1.1)
source (3503)	scenario%pedestal%q_ped%source (string) (9.8.1.1.3)
pressure_ped (3501)	scenario%pedestal%pressure_ped (scenario_ref) (9.8.1.3.397)
value (3503)	scenario%pedestal%pressure_ped%value (float) (9.8.1.1.1)
source (3503)	scenario%pedestal%pressure_ped%source (string) (9.8.1.1.3)
vtor_ped (3501)	scenario%pedestal%vtor_ped (scenario_ref) (9.8.1.3.397)
value (3503)	scenario%pedestal%vtor_ped%value (float) (9.8.1.1.1)
source (3503)	scenario%pedestal%vtor_ped%source (string) (9.8.1.1.3)
references (3151)	scenario%references (scenario_references) (9.8.1.3.398)
plh (3504)	scenario%references%plh (scenario_ref) (9.8.1.3.397)
value (3503)	scenario%references%plh%value (float) (9.8.1.1.1)
source (3503)	scenario%references%plh%source (string) (9.8.1.1.3)
picrh (3504)	scenario%references%picrh (scenario_ref) (9.8.1.3.397)
value (3503)	scenario%references%picrh%value (float) (9.8.1.1.1)
source (3503)	scenario%references%picrh%source (string) (9.8.1.1.3)
pecrh (3504)	scenario%references%pecrh (scenario_ref) (9.8.1.3.397)
value (3503)	scenario%references%pecrh%value (float) (9.8.1.1.1)
source (3503)	scenario%references%pecrh%source (string) (9.8.1.1.3)
pnbi (3504)	scenario%references%pnbi (scenario_ref) (9.8.1.3.397)
value (3503)	scenario%references%pnbi%value (float) (9.8.1.1.1)
source (3503)	scenario%references%pnbi%source (string) (9.8.1.1.3)
ip (3504)	scenario%references%ip (scenario_ref) (9.8.1.3.397)
value (3503)	scenario%references%ip%value (float) (9.8.1.1.1)
source (3503)	scenario%references%ip%source (string) (9.8.1.1.3)
bvac_r (3504)	scenario%references%bvac_r (scenario_ref) (9.8.1.3.397)
value (3503)	scenario%references%bvac_r%value (float) (9.8.1.1.1)
source (3503)	scenario%references%bvac_r%source (string) (9.8.1.1.3)
zeffl (3504)	scenario%references%zeffl (scenario_ref) (9.8.1.3.397)
value (3503)	scenario%references%zeffl%value (float) (9.8.1.1.1)
source (3503)	scenario%references%zeffl%source (string) (9.8.1.1.3)
nbar (3504)	scenario%references%nbar (scenario_ref) (9.8.1.3.397)
value (3503)	scenario%references%nbar%value (float) (9.8.1.1.1)
source (3503)	scenario%references%nbar%source (string) (9.8.1.1.3)
xecrh (3504)	scenario%references%xecrh (scenario_ref) (9.8.1.3.397)
value (3503)	scenario%references%xecrh%value (float) (9.8.1.1.1)
source (3503)	scenario%references%xecrh%source (string) (9.8.1.1.3)
pol_flux (3504)	scenario%references%pol_flux (scenario_ref) (9.8.1.3.397)
value (3503)	scenario%references%pol_flux%value (float) (9.8.1.1.1)
source (3503)	scenario%references%pol_flux%source (string) (9.8.1.1.3)
enhancement (3504)	scenario%references%enhancement (scenario_ref) (9.8.1.3.397)
value (3503)	scenario%references%enhancement%value (float) (9.8.1.1.1)
source (3503)	scenario%references%enhancement%source (string) (9.8.1.1.3)
isotopic (3504)	scenario%references%isotopic (scenario_ref) (9.8.1.3.397)
value (3503)	scenario%references%isotopic%value (float) (9.8.1.1.1)
source (3503)	scenario%references%isotopic%source (string) (9.8.1.1.3)



nbi_td_ratio (3504)	scenario%references%nbi_td_ratio (scenario_ref) (9.8.1.3.397)
value (3503)	scenario%references%nbi_td_ratio%value (float) (9.8.1.1.1)
source (3503)	scenario%references%nbi_td_ratio%source (string) (9.8.1.1.3)
gas_puff (3504)	scenario%references%gas_puff (scenario_ref) (9.8.1.3.397)
value (3503)	scenario%references%gas_puff%value (float) (9.8.1.1.1)
source (3503)	scenario%references%gas_puff%source (string) (9.8.1.1.3)
reactor (3151)	scenario%reactor (scenario_reactor) (9.8.1.3.396)
pnetwork (3502)	scenario%reactor%pnetwork (float) (9.8.1.1.1)
sol (3151)	scenario%sol (scenario_sol) (9.8.1.3.399)
l.te_sol (3505)	scenario%sol%l.te_sol (scenario_ref) (9.8.1.3.397)
value (3503)	scenario%sol%l.te_sol%value (float) (9.8.1.1.1)
source (3503)	scenario%sol%l.te_sol%source (string) (9.8.1.1.3)
l.ti_sol (3505)	scenario%sol%l.ti_sol (scenario_ref) (9.8.1.3.397)
value (3503)	scenario%sol%l.ti_sol%value (float) (9.8.1.1.1)
source (3503)	scenario%sol%l.ti_sol%source (string) (9.8.1.1.3)
l.ne_sol (3505)	scenario%sol%l.ne_sol (scenario_ref) (9.8.1.3.397)
value (3503)	scenario%sol%l.ne_sol%value (float) (9.8.1.1.1)
source (3503)	scenario%sol%l.ne_sol%source (string) (9.8.1.1.3)
l.ni_sol (3505)	scenario%sol%l.ni_sol (scenario_ref) (9.8.1.3.397)
value (3503)	scenario%sol%l.ni_sol%value (float) (9.8.1.1.1)
source (3503)	scenario%sol%l.ni_sol%source (string) (9.8.1.1.3)
l.qe_sol (3505)	scenario%sol%l.qe_sol (scenario_ref) (9.8.1.3.397)
value (3503)	scenario%sol%l.qe_sol%value (float) (9.8.1.1.1)
source (3503)	scenario%sol%l.qe_sol%source (string) (9.8.1.1.3)
l.qi_sol (3505)	scenario%sol%l.qi_sol (scenario_ref) (9.8.1.3.397)
value (3503)	scenario%sol%l.qi_sol%value (float) (9.8.1.1.1)
source (3503)	scenario%sol%l.qi_sol%source (string) (9.8.1.1.3)
p_rad_sol (3505)	scenario%sol%p_rad_sol (scenario_ref) (9.8.1.3.397)
value (3503)	scenario%sol%p_rad_sol%value (float) (9.8.1.1.1)
source (3503)	scenario%sol%p_rad_sol%source (string) (9.8.1.1.3)
p_neut (3505)	scenario%sol%p_neut (float) (9.8.1.1.1)
gas_puff (3505)	scenario%sol%gas_puff (scenario_ref) (9.8.1.3.397)
value (3503)	scenario%sol%gas_puff%value (float) (9.8.1.1.1)
source (3503)	scenario%sol%gas_puff%source (string) (9.8.1.1.3)
delta_r_in (3505)	scenario%sol%delta_r_in (float) (9.8.1.1.1)
delta_r_out (3505)	scenario%sol%delta_r_out (float) (9.8.1.1.1)
r_in (3505)	scenario%sol%r_in (float) (9.8.1.1.1)
r_out (3505)	scenario%sol%r_out (float) (9.8.1.1.1)
sol_width (3505)	scenario%sol%sol_width (float) (9.8.1.1.1)
vol_ave (3151)	scenario%vol_ave (scenario_vol_ave) (9.8.1.3.400)
te_ave (3506)	scenario%vol_ave%te_ave (scenario_ref) (9.8.1.3.397)
value (3503)	scenario%vol_ave%te_ave%value (float) (9.8.1.1.1)
source (3503)	scenario%vol_ave%te_ave%source (string) (9.8.1.1.3)
ti_ave (3506)	scenario%vol_ave%ti_ave (scenario_ref) (9.8.1.3.397)
value (3503)	scenario%vol_ave%ti_ave%value (float) (9.8.1.1.1)
source (3503)	scenario%vol_ave%ti_ave%source (string) (9.8.1.1.3)
ne_ave (3506)	scenario%vol_ave%ne_ave (scenario_ref) (9.8.1.3.397)
value (3503)	scenario%vol_ave%ne_ave%value (float) (9.8.1.1.1)
source (3503)	scenario%vol_ave%ne_ave%source (string) (9.8.1.1.3)
dne_ave_dt (3506)	scenario%vol_ave%dne_ave_dt (scenario_ref) (9.8.1.3.397)
value (3503)	scenario%vol_ave%dne_ave_dt%value (float) (9.8.1.1.1)
source (3503)	scenario%vol_ave%dne_ave_dt%source (string) (9.8.1.1.3)
ni_ave (3506)	scenario%vol_ave%ni_ave (scenario_ref) (9.8.1.3.397)
value (3503)	scenario%vol_ave%ni_ave%value (float) (9.8.1.1.1)
source (3503)	scenario%vol_ave%ni_ave%source (string) (9.8.1.1.3)
zeff_ave (3506)	scenario%vol_ave%zeff_ave (scenario_ref) (9.8.1.3.397)
value (3503)	scenario%vol_ave%zeff_ave%value (float) (9.8.1.1.1)
source (3503)	scenario%vol_ave%zeff_ave%source (string) (9.8.1.1.3)
ti_o.te_ave (3506)	scenario%vol_ave%ti_o.te_ave (scenario_ref) (9.8.1.3.397)
value (3503)	scenario%vol_ave%ti_o.te_ave%value (float) (9.8.1.1.1)
source (3503)	scenario%vol_ave%ti_o.te_ave%source (string) (9.8.1.1.3)



meff_ave (3506)	scenario%vol_ave%meff_ave (scenario_ref) (9.8.1.3.397)
value (3503)	scenario%vol_ave%meff_ave%value (float) (9.8.1.1.1)
source (3503)	scenario%vol_ave%meff_ave%source (string) (9.8.1.1.3)
pellet_flux (3506)	scenario%vol_ave%pellet_flux (scenario_ref) (9.8.1.3.397)
value (3503)	scenario%vol_ave%pellet_flux%value (float) (9.8.1.1.1)
source (3503)	scenario%vol_ave%pellet_flux%source (string) (9.8.1.1.3)
nions_ave (3506)	scenario%vol_ave%nions_ave (vecflt.type) (9.8.1.2.13)
omega_ave (3506)	scenario%vol_ave%omega_ave (scenario_ref) (9.8.1.3.397)
value (3503)	scenario%vol_ave%omega_ave%value (float) (9.8.1.1.1)
source (3503)	scenario%vol_ave%omega_ave%source (string) (9.8.1.1.3)
codeparam (3151)	scenario%codeparam (codeparam) (9.8.1.3.84)
codename (3190)	scenario%codeparam%codename (string) (9.8.1.1.3)
codeversion (3190)	scenario%codeparam%codeversion (string) (9.8.1.1.3)
parameters (3190)	scenario%codeparam%parameters (string) (9.8.1.1.3)
output_diag (3190)	scenario%codeparam%output_diag (string) (9.8.1.1.3)
output_flag (3190)	scenario%codeparam%output_flag (integer) (9.8.1.1.2)
time (3151)	scenario%time (float) (9.8.1.1.1)

### 9.8.2.1.44 solcurdiag

datainfo (3152)	solcurdiag%datainfo (datainfo) (9.8.1.3.141)
dataprovider (3247)	solcurdiag%datainfo%dataprovider (string) (9.8.1.1.3)
putdate (3247)	solcurdiag%datainfo%putdate (string) (9.8.1.1.3)
source (3247)	solcurdiag%datainfo%source (string) (9.8.1.1.3)
comment (3247)	solcurdiag%datainfo%comment (string) (9.8.1.1.3)
cocos (3247)	solcurdiag%datainfo%cocos (integer) (9.8.1.1.2)
id (3247)	solcurdiag%datainfo%id (integer) (9.8.1.1.2)
isref (3247)	solcurdiag%datainfo%isref (integer) (9.8.1.1.2)
whatref (3247)	solcurdiag%datainfo%whatref (whatref) (9.8.1.3.513)
user (3619)	solcurdiag%datainfo%whatref%user (string) (9.8.1.1.3)
machine (3619)	solcurdiag%datainfo%whatref%machine (string) (9.8.1.1.3)
shot (3619)	solcurdiag%datainfo%whatref%shot (integer) (9.8.1.1.2)
run (3619)	solcurdiag%datainfo%whatref%run (integer) (9.8.1.1.2)
occurrence (3619)	solcurdiag%datainfo%whatref%occurrence (integer) (9.8.1.1.2)
putinfo (3247)	solcurdiag%datainfo%putinfo (putinfo) (9.8.1.3.349)
putmethod (3455)	solcurdiag%datainfo%putinfo%putmethod (string) (9.8.1.1.3)
putaccess (3455)	solcurdiag%datainfo%putinfo%putaccess (string) (9.8.1.1.3)
putlocation (3455)	solcurdiag%datainfo%putinfo%putlocation (string) (9.8.1.1.3)
rights (3455)	solcurdiag%datainfo%putinfo%rights (string) (9.8.1.1.3)
sol_current (3152)	solcurdiag%sol_current(:) (solcurdiag_sol_current) (9.8.1.3.408)
setup (3514)	solcurdiag%sol_current(:)%setup (solcurdiag_sol_current_setup) (9.8.1.3.409)
name (3515)	solcurdiag%sol_current(:)%setup%name (string) (9.8.1.1.3)
id (3515)	solcurdiag%sol_current(:)%setup%id (integer) (9.8.1.1.2)
position (3515)	solcurdiag%sol_current(:)%setup%position (rz1D) (9.8.1.3.366)
r (3472)	solcurdiag%sol_current(:)%setup%position%r (vecflt.type) (9.8.1.2.13)
z (3472)	solcurdiag%sol_current(:)%setup%position%z (vecflt.type) (9.8.1.2.13)
tiles_turn (3515)	solcurdiag%sol_current(:)%setup%tiles_turn (integer) (9.8.1.1.2)
measure (3514)	solcurdiag%sol_current(:)%measure (exp0D) (9.8.1.3.203)
value (3309)	solcurdiag%sol_current(:)%measure%value (float) (9.8.1.1.1)
abserror (3309)	solcurdiag%sol_current(:)%measure%abserror (float) (9.8.1.1.1)
relerror (3309)	solcurdiag%sol_current(:)%measure%relerror (float) (9.8.1.1.1)
clusters (3152)	solcurdiag%clusters(:) (clusters) (9.8.1.3.83)
name (3189)	solcurdiag%clusters(:)%name (string) (9.8.1.1.3)
start (3189)	solcurdiag%clusters(:)%start (integer) (9.8.1.1.2)
finish (3189)	solcurdiag%clusters(:)%finish (integer) (9.8.1.1.2)
time (3152)	solcurdiag%time (float) (9.8.1.1.1)
codeparam (3152)	solcurdiag%codeparam (codeparam) (9.8.1.3.84)
codename (3190)	solcurdiag%codeparam%codename (string) (9.8.1.1.3)
codeversion (3190)	solcurdiag%codeparam%codeversion (string) (9.8.1.1.3)
parameters (3190)	solcurdiag%codeparam%parameters (string) (9.8.1.1.3)
output_diag (3190)	solcurdiag%codeparam%output_diag (string) (9.8.1.1.3)

## 9.8.2.1.45 temporary

datainfo (3153)	temporary%datainfo (datainfo) (9.8.1.3.141)
dataprovder (3247)	temporary%datainfo%dataprovder (string) (9.8.1.1.3)
putdate (3247)	temporary%datainfo%putdate (string) (9.8.1.1.3)
source (3247)	temporary%datainfo%source (string) (9.8.1.1.3)
comment (3247)	temporary%datainfo%comment (string) (9.8.1.1.3)
cocos (3247)	temporary%datainfo%cocos (integer) (9.8.1.1.2)
id (3247)	temporary%datainfo%id (integer) (9.8.1.1.2)
isref (3247)	temporary%datainfo%isref (integer) (9.8.1.1.2)
whatref (3247)	temporary%datainfo%whatref (whatref) (9.8.1.3.513)
user (3619)	temporary%datainfo%whatref%user (string) (9.8.1.1.3)
machine (3619)	temporary%datainfo%whatref%machine (string) (9.8.1.1.3)
shot (3619)	temporary%datainfo%whatref%shot (integer) (9.8.1.1.2)
run (3619)	temporary%datainfo%whatref%run (integer) (9.8.1.1.2)
occurrence (3619)	temporary%datainfo%whatref%occurrence (integer) (9.8.1.1.2)
putinfo (3247)	temporary%datainfo%putinfo (putinfo) (9.8.1.3.349)
putmethod (3455)	temporary%datainfo%putinfo%putmethod (string) (9.8.1.1.3)
putaccess (3455)	temporary%datainfo%putinfo%putaccess (string) (9.8.1.1.3)
putlocation (3455)	temporary%datainfo%putinfo%putlocation (string) (9.8.1.1.3)
rights (3455)	temporary%datainfo%putinfo%rights (string) (9.8.1.1.3)
non_timed (3153)	temporary%non_timed (temporary_nt) (9.8.1.3.430)
float0d (3536)	temporary%non_timed%float0d(:) (temporary_nt_0dr) (9.8.1.3.433)
identifier (3539)	temporary%non_timed%float0d(:)%identifier (identifier) (9.8.1.3.242)
id (3348)	temporary%non_timed%float0d(:)%identifier%id (string) (9.8.1.1.3)
flag (3348)	temporary%non_timed%float0d(:)%identifier%flag (integer) (9.8.1.1.2)
description (3348)	temporary%non_timed%float0d(:)%identifier%description (string) (9.8.1.1.3)
value (3539)	temporary%non_timed%float0d(:)%value (float) (9.8.1.1.1)
integer0d (3536)	temporary%non_timed%integer0d(:) (temporary_nt_0di) (9.8.1.3.432)
identifier (3538)	temporary%non_timed%integer0d(:)%identifier (identifier) (9.8.1.3.242)
id (3348)	temporary%non_timed%integer0d(:)%identifier%id (string) (9.8.1.1.3)
flag (3348)	temporary%non_timed%integer0d(:)%identifier%flag (integer) (9.8.1.1.2)
description (3348)	temporary%non_timed%integer0d(:)%identifier%description (string) (9.8.1.1.3)
value (3538)	temporary%non_timed%integer0d(:)%value (integer) (9.8.1.1.2)
complex0d (3536)	temporary%non_timed%complex0d(:) (temporary_nt_0dc) (9.8.1.3.431)
identifier (3537)	temporary%non_timed%complex0d(:)%identifier (identifier) (9.8.1.3.242)
id (3348)	temporary%non_timed%complex0d(:)%identifier%id (string) (9.8.1.1.3)
flag (3348)	temporary%non_timed%complex0d(:)%identifier%flag (integer) (9.8.1.1.2)
description (3348)	temporary%non_timed%complex0d(:)%identifier%description (string) (9.8.1.1.3)
value (3537)	temporary%non_timed%complex0d(:)%value (cplx_type) (9.8.1.2.8)
string0d (3536)	temporary%non_timed%string0d(:) (temporary_nt_0ds) (9.8.1.3.434)
identifier (3540)	temporary%non_timed%string0d(:)%identifier (identifier) (9.8.1.3.242)
id (3348)	temporary%non_timed%string0d(:)%identifier%id (string) (9.8.1.1.3)
flag (3348)	temporary%non_timed%string0d(:)%identifier%flag (integer) (9.8.1.1.2)
description (3348)	temporary%non_timed%string0d(:)%identifier%description (string) (9.8.1.1.3)
value (3540)	temporary%non_timed%string0d(:)%value (string) (9.8.1.1.3)
float1d (3536)	temporary%non_timed%float1d(:) (temporary_nt_1dr) (9.8.1.3.437)
identifier (3543)	temporary%non_timed%float1d(:)%identifier (identifier) (9.8.1.3.242)
id (3348)	temporary%non_timed%float1d(:)%identifier%id (string) (9.8.1.1.3)
flag (3348)	temporary%non_timed%float1d(:)%identifier%flag (integer) (9.8.1.1.2)
description (3348)	temporary%non_timed%float1d(:)%identifier%description (string) (9.8.1.1.3)
value (3543)	temporary%non_timed%float1d(:)%value (vecflt_type) (9.8.1.2.13)
integer1d (3536)	temporary%non_timed%integer1d(:) (temporary_nt_1di) (9.8.1.3.436)
identifier (3542)	temporary%non_timed%integer1d(:)%identifier (identifier) (9.8.1.3.242)
id (3348)	temporary%non_timed%integer1d(:)%identifier%id (string) (9.8.1.1.3)
flag (3348)	temporary%non_timed%integer1d(:)%identifier%flag (integer) (9.8.1.1.2)
description (3348)	temporary%non_timed%integer1d(:)%identifier%description (string) (9.8.1.1.3)
value (3542)	temporary%non_timed%integer1d(:)%value (vecint_type) (9.8.1.2.14)
string1d (3536)	temporary%non_timed%string1d(:) (temporary_nt_1dr) (9.8.1.3.437)

identifier (3543)	temporary%non.timed%string1d(:)%identifier (identifier) (9.8.1.3.242)
id (3348)	temporary%non.timed%string1d(:)%identifier%id (string) (9.8.1.1.3)
flag (3348)	temporary%non.timed%string1d(:)%identifier%flag (integer) (9.8.1.1.2)
description (3348)	temporary%non.timed%string1d(:)%identifier%description (string) (9.8.1.1.3)
value (3543)	temporary%non.timed%string1d(:)%value (vecflt.type) (9.8.1.2.13)
complex1d (3536)	temporary%non.timed%complex1d(:) (temporary_nt_1dc) (9.8.1.3.435)
identifier (3541)	temporary%non.timed%complex1d(:)%identifier (identifier) (9.8.1.3.242)
id (3348)	temporary%non.timed%complex1d(:)%identifier%id (string) (9.8.1.1.3)
flag (3348)	temporary%non.timed%complex1d(:)%identifier%flag (integer) (9.8.1.1.2)
description (3348)	temporary%non.timed%complex1d(:)%identifier%description (string) (9.8.1.1.3)
value (3541)	temporary%non.timed%complex1d(:)%value (vecplx.type) (9.8.1.2.12)
float2d (3536)	temporary%non.timed%float2d(:) (temporary_nt_2dr) (9.8.1.3.441)
identifier (3547)	temporary%non.timed%float2d(:)%identifier (identifier) (9.8.1.3.242)
id (3348)	temporary%non.timed%float2d(:)%identifier%id (string) (9.8.1.1.3)
flag (3348)	temporary%non.timed%float2d(:)%identifier%flag (integer) (9.8.1.1.2)
description (3348)	temporary%non.timed%float2d(:)%identifier%description (string) (9.8.1.1.3)
value (3547)	temporary%non.timed%float2d(:)%value (matflt.type) (9.8.1.2.10)
integer2d (3536)	temporary%non.timed%integer2d(:) (temporary_nt_2di) (9.8.1.3.440)
identifier (3546)	temporary%non.timed%integer2d(:)%identifier (identifier) (9.8.1.3.242)
id (3348)	temporary%non.timed%integer2d(:)%identifier%id (string) (9.8.1.1.3)
flag (3348)	temporary%non.timed%integer2d(:)%identifier%flag (integer) (9.8.1.1.2)
description (3348)	temporary%non.timed%integer2d(:)%identifier%description (string) (9.8.1.1.3)
value (3546)	temporary%non.timed%integer2d(:)%value (matint.type) (9.8.1.2.11)
complex2d (3536)	temporary%non.timed%complex2d(:) (temporary_nt_2dc) (9.8.1.3.439)
identifier (3545)	temporary%non.timed%complex2d(:)%identifier (identifier) (9.8.1.3.242)
id (3348)	temporary%non.timed%complex2d(:)%identifier%id (string) (9.8.1.1.3)
flag (3348)	temporary%non.timed%complex2d(:)%identifier%flag (integer) (9.8.1.1.2)
description (3348)	temporary%non.timed%complex2d(:)%identifier%description (string) (9.8.1.1.3)
value (3545)	temporary%non.timed%complex2d(:)%value (matcplx.type) (9.8.1.2.9)
float3d (3536)	temporary%non.timed%float3d(:) (temporary_nt_3dr) (9.8.1.3.444)
identifier (3550)	temporary%non.timed%float3d(:)%identifier (identifier) (9.8.1.3.242)
id (3348)	temporary%non.timed%float3d(:)%identifier%id (string) (9.8.1.1.3)
flag (3348)	temporary%non.timed%float3d(:)%identifier%flag (integer) (9.8.1.1.2)
description (3348)	temporary%non.timed%float3d(:)%identifier%description (string) (9.8.1.1.3)
value (3550)	temporary%non.timed%float3d(:)%value (array3dflt.type) (9.8.1.2.2)
integer3d (3536)	temporary%non.timed%integer3d(:) (temporary_nt_3di) (9.8.1.3.443)
identifier (3549)	temporary%non.timed%integer3d(:)%identifier (identifier) (9.8.1.3.242)
id (3348)	temporary%non.timed%integer3d(:)%identifier%id (string) (9.8.1.1.3)
flag (3348)	temporary%non.timed%integer3d(:)%identifier%flag (integer) (9.8.1.1.2)
description (3348)	temporary%non.timed%integer3d(:)%identifier%description (string) (9.8.1.1.3)
value (3549)	temporary%non.timed%integer3d(:)%value (array3dint.type) (9.8.1.2.3)
complex3d (3536)	temporary%non.timed%complex3d(:) (temporary_nt_3dc) (9.8.1.3.442)
identifier (3548)	temporary%non.timed%complex3d(:)%identifier (identifier) (9.8.1.3.242)
id (3348)	temporary%non.timed%complex3d(:)%identifier%id (string) (9.8.1.1.3)
flag (3348)	temporary%non.timed%complex3d(:)%identifier%flag (integer) (9.8.1.1.2)
description (3348)	temporary%non.timed%complex3d(:)%identifier%description (string) (9.8.1.1.3)
value (3548)	temporary%non.timed%complex3d(:)%value (array3dcplx.type) (9.8.1.2.1)
float4d (3536)	temporary%non.timed%float4d(:) (temporary_nt_4dr) (9.8.1.3.445)
identifier (3551)	temporary%non.timed%float4d(:)%identifier (identifier) (9.8.1.3.242)
id (3348)	temporary%non.timed%float4d(:)%identifier%id (string) (9.8.1.1.3)
flag (3348)	temporary%non.timed%float4d(:)%identifier%flag (integer) (9.8.1.1.2)
description (3348)	temporary%non.timed%float4d(:)%identifier%description (string) (9.8.1.1.3)
value (3551)	temporary%non.timed%float4d(:)%value (array4dflt.type) (9.8.1.2.4)
timed (3153)	temporary%timed (temporary_t) (9.8.1.3.446)
float0d (3552)	temporary%timed%float0d(:) (temporary_t_0dr) (9.8.1.3.449)
identifier (3555)	temporary%timed%float0d(:)%identifier (identifier) (9.8.1.3.242)
id (3348)	temporary%timed%float0d(:)%identifier%id (string) (9.8.1.1.3)
flag (3348)	temporary%timed%float0d(:)%identifier%flag (integer) (9.8.1.1.2)
description (3348)	temporary%timed%float0d(:)%identifier%description (string) (9.8.1.1.3)
value (3555)	temporary%timed%float0d(:)%value (float) (9.8.1.1.1)
integer0d (3552)	temporary%timed%integer0d(:) (temporary_t_0di) (9.8.1.3.448)

identifier (3554)	temporary%timed%integer0d(:)%identifier (identifier) (9.8.1.3.242)
id (3348)	temporary%timed%integer0d(:)%identifier%id (string) (9.8.1.1.3)
flag (3348)	temporary%timed%integer0d(:)%identifier%flag (integer) (9.8.1.1.2)
description (3348)	temporary%timed%integer0d(:)%identifier%description (string) (9.8.1.1.3)
value (3554)	temporary%timed%integer0d(:)%value (integer) (9.8.1.1.2)
complex0d (3552)	temporary%timed%complex0d(:) (temporary_t.0dc) (9.8.1.3.447)
identifier (3553)	temporary%timed%complex0d(:)%identifier (identifier) (9.8.1.3.242)
id (3348)	temporary%timed%complex0d(:)%identifier%id (string) (9.8.1.1.3)
flag (3348)	temporary%timed%complex0d(:)%identifier%flag (integer) (9.8.1.1.2)
description (3348)	temporary%timed%complex0d(:)%identifier%description (string) (9.8.1.1.3)
value (3553)	temporary%timed%complex0d(:)%value (cplx_type) (9.8.1.2.8)
string0d (3552)	temporary%timed%string0d(:) (temporary_t.0ds) (9.8.1.3.450)
identifier (3556)	temporary%timed%string0d(:)%identifier (identifier) (9.8.1.3.242)
id (3348)	temporary%timed%string0d(:)%identifier%id (string) (9.8.1.1.3)
flag (3348)	temporary%timed%string0d(:)%identifier%flag (integer) (9.8.1.1.2)
description (3348)	temporary%timed%string0d(:)%identifier%description (string) (9.8.1.1.3)
value (3556)	temporary%timed%string0d(:)%value (string) (9.8.1.1.3)
float1d (3552)	temporary%timed%float1d(:) (temporary_t.1dr) (9.8.1.3.453)
identifier (3559)	temporary%timed%float1d(:)%identifier (identifier) (9.8.1.3.242)
id (3348)	temporary%timed%float1d(:)%identifier%id (string) (9.8.1.1.3)
flag (3348)	temporary%timed%float1d(:)%identifier%flag (integer) (9.8.1.1.2)
description (3348)	temporary%timed%float1d(:)%identifier%description (string) (9.8.1.1.3)
value (3559)	temporary%timed%float1d(:)%value (vecflt_type) (9.8.1.2.13)
integer1d (3552)	temporary%timed%integer1d(:) (temporary_t.1di) (9.8.1.3.452)
identifier (3558)	temporary%timed%integer1d(:)%identifier (identifier) (9.8.1.3.242)
id (3348)	temporary%timed%integer1d(:)%identifier%id (string) (9.8.1.1.3)
flag (3348)	temporary%timed%integer1d(:)%identifier%flag (integer) (9.8.1.1.2)
description (3348)	temporary%timed%integer1d(:)%identifier%description (string) (9.8.1.1.3)
value (3558)	temporary%timed%integer1d(:)%value (vecint_type) (9.8.1.2.14)
complex1d (3552)	temporary%timed%complex1d(:) (temporary_t.1dc) (9.8.1.3.451)
identifier (3557)	temporary%timed%complex1d(:)%identifier (identifier) (9.8.1.3.242)
id (3348)	temporary%timed%complex1d(:)%identifier%id (string) (9.8.1.1.3)
flag (3348)	temporary%timed%complex1d(:)%identifier%flag (integer) (9.8.1.1.2)
description (3348)	temporary%timed%complex1d(:)%identifier%description (string) (9.8.1.1.3)
value (3557)	temporary%timed%complex1d(:)%value (vecplx_type) (9.8.1.2.12)
float2d (3552)	temporary%timed%float2d(:) (temporary_t.2dr) (9.8.1.3.456)
identifier (3562)	temporary%timed%float2d(:)%identifier (identifier) (9.8.1.3.242)
id (3348)	temporary%timed%float2d(:)%identifier%id (string) (9.8.1.1.3)
flag (3348)	temporary%timed%float2d(:)%identifier%flag (integer) (9.8.1.1.2)
description (3348)	temporary%timed%float2d(:)%identifier%description (string) (9.8.1.1.3)
value (3562)	temporary%timed%float2d(:)%value (matflt_type) (9.8.1.2.10)
integer2d (3552)	temporary%timed%integer2d(:) (temporary_t.2di) (9.8.1.3.455)
identifier (3561)	temporary%timed%integer2d(:)%identifier (identifier) (9.8.1.3.242)
id (3348)	temporary%timed%integer2d(:)%identifier%id (string) (9.8.1.1.3)
flag (3348)	temporary%timed%integer2d(:)%identifier%flag (integer) (9.8.1.1.2)
description (3348)	temporary%timed%integer2d(:)%identifier%description (string) (9.8.1.1.3)
value (3561)	temporary%timed%integer2d(:)%value (matint_type) (9.8.1.2.11)
complex2d (3552)	temporary%timed%complex2d(:) (temporary_t.2dc) (9.8.1.3.454)
identifier (3560)	temporary%timed%complex2d(:)%identifier (identifier) (9.8.1.3.242)
id (3348)	temporary%timed%complex2d(:)%identifier%id (string) (9.8.1.1.3)
flag (3348)	temporary%timed%complex2d(:)%identifier%flag (integer) (9.8.1.1.2)
description (3348)	temporary%timed%complex2d(:)%identifier%description (string) (9.8.1.1.3)
value (3560)	temporary%timed%complex2d(:)%value (matcplx_type) (9.8.1.2.9)
float3d (3552)	temporary%timed%float3d(:) (temporary_t.3dr) (9.8.1.3.459)
identifier (3565)	temporary%timed%float3d(:)%identifier (identifier) (9.8.1.3.242)
id (3348)	temporary%timed%float3d(:)%identifier%id (string) (9.8.1.1.3)
flag (3348)	temporary%timed%float3d(:)%identifier%flag (integer) (9.8.1.1.2)
description (3348)	temporary%timed%float3d(:)%identifier%description (string) (9.8.1.1.3)
value (3565)	temporary%timed%float3d(:)%value (array3dflt_type) (9.8.1.2.2)
integer3d (3552)	temporary%timed%integer3d(:) (temporary_t.3di) (9.8.1.3.458)
identifier (3564)	temporary%timed%integer3d(:)%identifier (identifier) (9.8.1.3.242)

id (3348)	temporary%timed%integer3d(:)%identifier%id (string) (9.8.1.1.3)
flag (3348)	temporary%timed%integer3d(:)%identifier%flag (integer) (9.8.1.1.2)
description (3348)	temporary%timed%integer3d(:)%identifier%description (string) (9.8.1.1.3)
value (3564)	temporary%timed%integer3d(:)%value (array3dint_type) (9.8.1.2.3)
complex3d (3552)	temporary%timed%complex3d(:) (temporary_t_3dc) (9.8.1.3.457)
identifier (3563)	temporary%timed%complex3d(:)%identifier (identifier) (9.8.1.3.242)
id (3348)	temporary%timed%complex3d(:)%identifier%id (string) (9.8.1.1.3)
flag (3348)	temporary%timed%complex3d(:)%identifier%flag (integer) (9.8.1.1.2)
description (3348)	temporary%timed%complex3d(:)%identifier%description (string) (9.8.1.1.3)
value (3563)	temporary%timed%complex3d(:)%value (array3dcplx_type) (9.8.1.2.1)
float4d (3552)	temporary%timed%float4d(:) (temporary_t_4dr) (9.8.1.3.460)
identifier (3566)	temporary%timed%float4d(:)%identifier (identifier) (9.8.1.3.242)
id (3348)	temporary%timed%float4d(:)%identifier%id (string) (9.8.1.1.3)
flag (3348)	temporary%timed%float4d(:)%identifier%flag (integer) (9.8.1.1.2)
description (3348)	temporary%timed%float4d(:)%identifier%description (string) (9.8.1.1.3)
value (3566)	temporary%timed%float4d(:)%value (array4dflt_type) (9.8.1.2.4)
codeparam (3153)	temporary%codeparam (codeparam) (9.8.1.3.84)
codename (3190)	temporary%codeparam%codename (string) (9.8.1.1.3)
codeversion (3190)	temporary%codeparam%codeversion (string) (9.8.1.1.3)
parameters (3190)	temporary%codeparam%parameters (string) (9.8.1.1.3)
output_diag (3190)	temporary%codeparam%output_diag (string) (9.8.1.1.3)
output_flag (3190)	temporary%codeparam%output_flag (integer) (9.8.1.1.2)
time (3153)	temporary%time (float) (9.8.1.1.1)

### 9.8.2.1.46 topinfo

dataprovider (3154)	topinfo%dataprovider (string) (9.8.1.1.3)
description (3154)	topinfo%description (string) (9.8.1.1.3)
firstputdate (3154)	topinfo%firstputdate (string) (9.8.1.1.3)
lastupdate (3154)	topinfo%lastupdate (string) (9.8.1.1.3)
source (3154)	topinfo%source (string) (9.8.1.1.3)
comment (3154)	topinfo%comment (string) (9.8.1.1.3)
dataversion (3154)	topinfo%dataversion (string) (9.8.1.1.3)
workflow (3154)	topinfo%workflow (string) (9.8.1.1.3)
entry (3154)	topinfo%entry (entry_def) (9.8.1.3.194)
user (3300)	topinfo%entry%user (string) (9.8.1.1.3)
machine (3300)	topinfo%entry%machine (string) (9.8.1.1.3)
shot (3300)	topinfo%entry%shot (integer) (9.8.1.1.2)
run (3300)	topinfo%entry%run (integer) (9.8.1.1.2)
parent_entry (3154)	topinfo%parent_entry (entry_def) (9.8.1.3.194)
user (3300)	topinfo%parent_entry%user (string) (9.8.1.1.3)
machine (3300)	topinfo%parent_entry%machine (string) (9.8.1.1.3)
shot (3300)	topinfo%parent_entry%shot (integer) (9.8.1.1.2)
run (3300)	topinfo%parent_entry%run (integer) (9.8.1.1.2)
mdinfo (3154)	topinfo%mdinfo (mdinfo) (9.8.1.3.269)
shot_min (3375)	topinfo%mdinfo%shot_min (integer) (9.8.1.1.2)
shot_max (3375)	topinfo%mdinfo%shot_max (integer) (9.8.1.1.2)
md_entry (3375)	topinfo%mdinfo%md_entry (entry_def) (9.8.1.3.194)
user (3300)	topinfo%mdinfo%md_entry%user (string) (9.8.1.1.3)
machine (3300)	topinfo%mdinfo%md_entry%machine (string) (9.8.1.1.3)
shot (3300)	topinfo%mdinfo%md_entry%shot (integer) (9.8.1.1.2)
run (3300)	topinfo%mdinfo%md_entry%run (integer) (9.8.1.1.2)

### 9.8.2.1.47 toroidfield

datainfo (3155)	toroidfield%datainfo (datainfo) (9.8.1.3.141)
dataprovider (3247)	toroidfield%datainfo%dataprovider (string) (9.8.1.1.3)
putdate (3247)	toroidfield%datainfo%putdate (string) (9.8.1.1.3)
source (3247)	toroidfield%datainfo%source (string) (9.8.1.1.3)
comment (3247)	toroidfield%datainfo%comment (string) (9.8.1.1.3)
cocos (3247)	toroidfield%datainfo%cocos (integer) (9.8.1.1.2)

id (3247)	toroidfield%datainfo%id (integer) (9.8.1.1.2)
isref (3247)	toroidfield%datainfo%isref (integer) (9.8.1.1.2)
whatref (3247)	toroidfield%datainfo%whatref (whatref) (9.8.1.3.513)
user (3619)	toroidfield%datainfo%whatref%user (string) (9.8.1.1.3)
machine (3619)	toroidfield%datainfo%whatref%machine (string) (9.8.1.1.3)
shot (3619)	toroidfield%datainfo%whatref%shot (integer) (9.8.1.1.2)
run (3619)	toroidfield%datainfo%whatref%run (integer) (9.8.1.1.2)
occurrence (3619)	toroidfield%datainfo%whatref%occurrence (integer) (9.8.1.1.2)
putinfo (3247)	toroidfield%datainfo%putinfo (putinfo) (9.8.1.3.349)
putmethod (3455)	toroidfield%datainfo%putinfo%putmethod (string) (9.8.1.1.3)
putaccess (3455)	toroidfield%datainfo%putinfo%putaccess (string) (9.8.1.1.3)
putlocation (3455)	toroidfield%datainfo%putinfo%putlocation (string) (9.8.1.1.3)
rights (3455)	toroidfield%datainfo%putinfo%rights (string) (9.8.1.1.3)
desc_tfcoils (3155)	toroidfield%desc_tfcoils (tf_desc_tfcoils) (9.8.1.3.461)
type (3567)	toroidfield%desc_tfcoils%type (integer) (9.8.1.1.2)
phi (3567)	toroidfield%desc_tfcoils%phi (float) (9.8.1.1.1)
circularcoil (3567)	toroidfield%desc_tfcoils%circularcoil (circularcoil) (9.8.1.3.82)
centre (3188)	toroidfield%desc_tfcoils%circularcoil%centre (rz0D) (9.8.1.3.365)
r (3471)	toroidfield%desc_tfcoils%circularcoil%centre%r (float) (9.8.1.1.1)
z (3471)	toroidfield%desc_tfcoils%circularcoil%centre%z (float) (9.8.1.1.1)
hlength (3188)	toroidfield%desc_tfcoils%circularcoil%hlength (float) (9.8.1.1.1)
radialwidth (3188)	toroidfield%desc_tfcoils%circularcoil%radialwidth (float) (9.8.1.1.1)
planecoil (3567)	toroidfield%desc_tfcoils%planecoil (planecoil) (9.8.1.3.337)
coordinates (3443)	toroidfield%desc_tfcoils%planecoil%coordinates (rz1D) (9.8.1.3.366)
r (3472)	toroidfield%desc_tfcoils%planecoil%coordinates%r (vecflt_type) (9.8.1.2.13)
z (3472)	toroidfield%desc_tfcoils%planecoil%coordinates%z (vecflt_type) (9.8.1.2.13)
hlength (3443)	toroidfield%desc_tfcoils%planecoil%hlength (vecflt_type) (9.8.1.2.13)
radialwidth (3443)	toroidfield%desc_tfcoils%planecoil%radialwidth (vecflt_type) (9.8.1.2.13)
inboard (3567)	toroidfield%desc_tfcoils%inboard (tf_structure) (9.8.1.3.463)
jcable (3569)	toroidfield%desc_tfcoils%inboard%jcable (float) (9.8.1.1.1)
tisotf (3569)	toroidfield%desc_tfcoils%inboard%tisotf (float) (9.8.1.1.1)
efcasing (3569)	toroidfield%desc_tfcoils%inboard%efcasing (float) (9.8.1.1.1)
escasing (3569)	toroidfield%desc_tfcoils%inboard%escasing (float) (9.8.1.1.1)
sigjackettf (3569)	toroidfield%desc_tfcoils%inboard%sigjackettf (float) (9.8.1.1.1)
sigvaulttf (3569)	toroidfield%desc_tfcoils%inboard%sigvaulttf (float) (9.8.1.1.1)
ktf (3569)	toroidfield%desc_tfcoils%inboard%ktf (float) (9.8.1.1.1)
ritf (3569)	toroidfield%desc_tfcoils%inboard%ritf (float) (9.8.1.1.1)
riitf (3569)	toroidfield%desc_tfcoils%inboard%riitf (float) (9.8.1.1.1)
retf (3569)	toroidfield%desc_tfcoils%inboard%retf (float) (9.8.1.1.1)
he_fraction (3569)	toroidfield%desc_tfcoils%inboard%he_fraction (float) (9.8.1.1.1)
ss_fraction (3569)	toroidfield%desc_tfcoils%inboard%ss_fraction (float) (9.8.1.1.1)
pow_dens_wp (3569)	toroidfield%desc_tfcoils%inboard%pow_dens_wp (float) (9.8.1.1.1)
outboard (3567)	toroidfield%desc_tfcoils%outboard (tf_structure) (9.8.1.3.463)
jcable (3569)	toroidfield%desc_tfcoils%outboard%jcable (float) (9.8.1.1.1)
tisotf (3569)	toroidfield%desc_tfcoils%outboard%tisotf (float) (9.8.1.1.1)
efcasing (3569)	toroidfield%desc_tfcoils%outboard%efcasing (float) (9.8.1.1.1)
escasing (3569)	toroidfield%desc_tfcoils%outboard%escasing (float) (9.8.1.1.1)
sigjackettf (3569)	toroidfield%desc_tfcoils%outboard%sigjackettf (float) (9.8.1.1.1)
sigvaulttf (3569)	toroidfield%desc_tfcoils%outboard%sigvaulttf (float) (9.8.1.1.1)
ktf (3569)	toroidfield%desc_tfcoils%outboard%ktf (float) (9.8.1.1.1)
ritf (3569)	toroidfield%desc_tfcoils%outboard%ritf (float) (9.8.1.1.1)
riitf (3569)	toroidfield%desc_tfcoils%outboard%riitf (float) (9.8.1.1.1)
retf (3569)	toroidfield%desc_tfcoils%outboard%retf (float) (9.8.1.1.1)
he_fraction (3569)	toroidfield%desc_tfcoils%outboard%he_fraction (float) (9.8.1.1.1)
ss_fraction (3569)	toroidfield%desc_tfcoils%outboard%ss_fraction (float) (9.8.1.1.1)
pow_dens_wp (3569)	toroidfield%desc_tfcoils%outboard%pow_dens_wp (float) (9.8.1.1.1)
nturns (3155)	toroidfield%nturns (integer) (9.8.1.1.2)
ncoils (3155)	toroidfield%ncoils (integer) (9.8.1.1.2)
current (3155)	toroidfield%current (exp0D) (9.8.1.3.203)
value (3309)	toroidfield%current%value (float) (9.8.1.1.1)
abserror (3309)	toroidfield%current%abserror (float) (9.8.1.1.1)



relerorr (3309)	toroidfield%current%relerorr (float) (9.8.1.1.1)
bvac.r (3155)	toroidfield%bvac.r (exp0D) (9.8.1.3.203)
value (3309)	toroidfield%bvac.r%value (float) (9.8.1.1.1)
abserror (3309)	toroidfield%bvac.r%abserror (float) (9.8.1.1.1)
relerorr (3309)	toroidfield%bvac.r%relerorr (float) (9.8.1.1.1)
r0 (3155)	toroidfield%r0 (float) (9.8.1.1.1)
p.cryo (3155)	toroidfield%p.cryo (float) (9.8.1.1.1)
wp.nh.max (3155)	toroidfield%wp.nh.max (float) (9.8.1.1.1)
tfc.nh (3155)	toroidfield%tfc.nh (float) (9.8.1.1.1)
neut.flux.inb (3155)	toroidfield%neut.flux.inb (float) (9.8.1.1.1)
neut.flux.outb (3155)	toroidfield%neut.flux.outb (float) (9.8.1.1.1)
codeparam (3155)	toroidfield%codeparam (codeparam) (9.8.1.3.84)
codename (3190)	toroidfield%codeparam%codename (string) (9.8.1.1.3)
codeversion (3190)	toroidfield%codeparam%codeversion (string) (9.8.1.1.3)
parameters (3190)	toroidfield%codeparam%parameters (string) (9.8.1.1.3)
output.diag (3190)	toroidfield%codeparam%output.diag (string) (9.8.1.1.3)
output.flag (3190)	toroidfield%codeparam%output.flag (integer) (9.8.1.1.2)
time (3155)	toroidfield%time (float) (9.8.1.1.1)

### 9.8.2.1.48 tsdiag

datainfo (3156)	tsdiag%datainfo (datainfo) (9.8.1.3.141)
dataprovider (3247)	tsdiag%datainfo%dataprovider (string) (9.8.1.1.3)
putdate (3247)	tsdiag%datainfo%putdate (string) (9.8.1.1.3)
source (3247)	tsdiag%datainfo%source (string) (9.8.1.1.3)
comment (3247)	tsdiag%datainfo%comment (string) (9.8.1.1.3)
cocos (3247)	tsdiag%datainfo%cocos (integer) (9.8.1.1.2)
id (3247)	tsdiag%datainfo%id (integer) (9.8.1.1.2)
isref (3247)	tsdiag%datainfo%isref (integer) (9.8.1.1.2)
whatref (3247)	tsdiag%datainfo%whatref (whatref) (9.8.1.3.513)
user (3619)	tsdiag%datainfo%whatref%user (string) (9.8.1.1.3)
machine (3619)	tsdiag%datainfo%whatref%machine (string) (9.8.1.1.3)
shot (3619)	tsdiag%datainfo%whatref%shot (integer) (9.8.1.1.2)
run (3619)	tsdiag%datainfo%whatref%run (integer) (9.8.1.1.2)
occurrence (3619)	tsdiag%datainfo%whatref%occurrence (integer) (9.8.1.1.2)
putinfo (3247)	tsdiag%datainfo%putinfo (putinfo) (9.8.1.3.349)
putmethod (3455)	tsdiag%datainfo%putinfo%putmethod (string) (9.8.1.1.3)
putaccess (3455)	tsdiag%datainfo%putinfo%putaccess (string) (9.8.1.1.3)
putlocation (3455)	tsdiag%datainfo%putinfo%putlocation (string) (9.8.1.1.3)
rights (3455)	tsdiag%datainfo%putinfo%rights (string) (9.8.1.1.3)
setup (3156)	tsdiag%setup (tsetup) (9.8.1.3.475)
position (3581)	tsdiag%setup%position (rzphi1D) (9.8.1.3.372)
r (3478)	tsdiag%setup%position%r (vecflt.type) (9.8.1.2.13)
z (3478)	tsdiag%setup%position%z (vecflt.type) (9.8.1.2.13)
phi (3478)	tsdiag%setup%position%phi (vecflt.type) (9.8.1.2.13)
measure (3156)	tsdiag%measure (tsmeasure) (9.8.1.3.474)
te (3580)	tsdiag%measure%te (exp1D) (9.8.1.3.204)
value (3310)	tsdiag%measure%te%value (vecflt.type) (9.8.1.2.13)
abserror (3310)	tsdiag%measure%te%abserror (vecflt.type) (9.8.1.2.13)
relerorr (3310)	tsdiag%measure%te%relerorr (vecflt.type) (9.8.1.2.13)
ne (3580)	tsdiag%measure%ne (exp1D) (9.8.1.3.204)
value (3310)	tsdiag%measure%ne%value (vecflt.type) (9.8.1.2.13)
abserror (3310)	tsdiag%measure%ne%abserror (vecflt.type) (9.8.1.2.13)
relerorr (3310)	tsdiag%measure%ne%relerorr (vecflt.type) (9.8.1.2.13)
codeparam (3156)	tsdiag%codeparam (codeparam) (9.8.1.3.84)
codename (3190)	tsdiag%codeparam%codename (string) (9.8.1.1.3)
codeversion (3190)	tsdiag%codeparam%codeversion (string) (9.8.1.1.3)
parameters (3190)	tsdiag%codeparam%parameters (string) (9.8.1.1.3)
output.diag (3190)	tsdiag%codeparam%output.diag (string) (9.8.1.1.3)
output.flag (3190)	tsdiag%codeparam%output.flag (integer) (9.8.1.1.2)
time (3156)	tsdiag%time (float) (9.8.1.1.1)



## 9.8.2.1.49 turbulence

<a href="#">datainfo (3157)</a>	<a href="#">turbulence%datainfo (datainfo) (9.8.1.3.141)</a>
<a href="#">dataproducer (3247)</a>	<a href="#">turbulence%datainfo%dataproducer (string) (9.8.1.1.3)</a>
<a href="#">putdate (3247)</a>	<a href="#">turbulence%datainfo%putdate (string) (9.8.1.1.3)</a>
<a href="#">source (3247)</a>	<a href="#">turbulence%datainfo%source (string) (9.8.1.1.3)</a>
<a href="#">comment (3247)</a>	<a href="#">turbulence%datainfo%comment (string) (9.8.1.1.3)</a>
<a href="#">cocos (3247)</a>	<a href="#">turbulence%datainfo%cocos (integer) (9.8.1.1.2)</a>
<a href="#">id (3247)</a>	<a href="#">turbulence%datainfo%id (integer) (9.8.1.1.2)</a>
<a href="#">isref (3247)</a>	<a href="#">turbulence%datainfo%isref (integer) (9.8.1.1.2)</a>
<a href="#">whatref (3247)</a>	<a href="#">turbulence%datainfo%whatref (whatref) (9.8.1.3.513)</a>
<a href="#">user (3619)</a>	<a href="#">turbulence%datainfo%whatref%user (string) (9.8.1.1.3)</a>
<a href="#">machine (3619)</a>	<a href="#">turbulence%datainfo%whatref%machine (string) (9.8.1.1.3)</a>
<a href="#">shot (3619)</a>	<a href="#">turbulence%datainfo%whatref%shot (integer) (9.8.1.1.2)</a>
<a href="#">run (3619)</a>	<a href="#">turbulence%datainfo%whatref%run (integer) (9.8.1.1.2)</a>
<a href="#">occurrence (3619)</a>	<a href="#">turbulence%datainfo%whatref%occurrence (integer) (9.8.1.1.2)</a>
<a href="#">putinfo (3247)</a>	<a href="#">turbulence%datainfo%putinfo (putinfo) (9.8.1.3.349)</a>
<a href="#">putmethod (3455)</a>	<a href="#">turbulence%datainfo%putinfo%putmethod (string) (9.8.1.1.3)</a>
<a href="#">putaccess (3455)</a>	<a href="#">turbulence%datainfo%putinfo%putaccess (string) (9.8.1.1.3)</a>
<a href="#">putlocation (3455)</a>	<a href="#">turbulence%datainfo%putinfo%putlocation (string) (9.8.1.1.3)</a>
<a href="#">rights (3455)</a>	<a href="#">turbulence%datainfo%putinfo%rights (string) (9.8.1.1.3)</a>
<a href="#">composition (3157)</a>	<a href="#">turbulence%composition (turbcomposition) (9.8.1.3.476)</a>
<a href="#">amn (3582)</a>	<a href="#">turbulence%composition%amn (vecflt_type) (9.8.1.2.13)</a>
<a href="#">zn (3582)</a>	<a href="#">turbulence%composition%zn (vecflt_type) (9.8.1.2.13)</a>
<a href="#">zion (3582)</a>	<a href="#">turbulence%composition%zion (vecflt_type) (9.8.1.2.13)</a>
<a href="#">ie_mass (3582)</a>	<a href="#">turbulence%composition%ie_mass (vecflt_type) (9.8.1.2.13)</a>
<a href="#">coordsys (3157)</a>	<a href="#">turbulence%coordsys (turbcoordsys) (9.8.1.3.477)</a>
<a href="#">grid_type (3583)</a>	<a href="#">turbulence%coordsys%grid_type (string) (9.8.1.1.3)</a>
<a href="#">turbgrid (3583)</a>	<a href="#">turbulence%coordsys%turbgrid (turbgrid) (9.8.1.3.479)</a>
<a href="#">dim1 (3585)</a>	<a href="#">turbulence%coordsys%turbgrid%dim1 (vecflt_type) (9.8.1.2.13)</a>
<a href="#">dim2 (3585)</a>	<a href="#">turbulence%coordsys%turbgrid%dim2 (vecflt_type) (9.8.1.2.13)</a>
<a href="#">dim3 (3585)</a>	<a href="#">turbulence%coordsys%turbgrid%dim3 (vecflt_type) (9.8.1.2.13)</a>
<a href="#">dim_v1 (3585)</a>	<a href="#">turbulence%coordsys%turbgrid%dim_v1 (vecflt_type) (9.8.1.2.13)</a>
<a href="#">dim_v2 (3585)</a>	<a href="#">turbulence%coordsys%turbgrid%dim_v2 (vecflt_type) (9.8.1.2.13)</a>
<a href="#">jacobian (3583)</a>	<a href="#">turbulence%coordsys%jacobian (matflt_type) (9.8.1.2.10)</a>
<a href="#">g_11 (3583)</a>	<a href="#">turbulence%coordsys%g_11 (matflt_type) (9.8.1.2.10)</a>
<a href="#">g_12 (3583)</a>	<a href="#">turbulence%coordsys%g_12 (matflt_type) (9.8.1.2.10)</a>
<a href="#">g_13 (3583)</a>	<a href="#">turbulence%coordsys%g_13 (matflt_type) (9.8.1.2.10)</a>
<a href="#">g_22 (3583)</a>	<a href="#">turbulence%coordsys%g_22 (matflt_type) (9.8.1.2.10)</a>
<a href="#">g_23 (3583)</a>	<a href="#">turbulence%coordsys%g_23 (matflt_type) (9.8.1.2.10)</a>
<a href="#">g_33 (3583)</a>	<a href="#">turbulence%coordsys%g_33 (matflt_type) (9.8.1.2.10)</a>
<a href="#">position (3583)</a>	<a href="#">turbulence%coordsys%position (rzphi3D) (9.8.1.3.376)</a>
<a href="#">r (3482)</a>	<a href="#">turbulence%coordsys%position%r (array3dflt_type) (9.8.1.2.2)</a>
<a href="#">z (3482)</a>	<a href="#">turbulence%coordsys%position%z (array3dflt_type) (9.8.1.2.2)</a>
<a href="#">phi (3482)</a>	<a href="#">turbulence%coordsys%position%phi (array3dflt_type) (9.8.1.2.2)</a>
<a href="#">var0d (3157)</a>	<a href="#">turbulence%var0d (turbvar0d) (9.8.1.3.481)</a>
<a href="#">dtime_type (3587)</a>	<a href="#">turbulence%var0d%dtime_type (string) (9.8.1.1.3)</a>
<a href="#">dtime (3587)</a>	<a href="#">turbulence%var0d%dtime (vecflt_type) (9.8.1.2.13)</a>
<a href="#">en_exb (3587)</a>	<a href="#">turbulence%var0d%en_exb (vecflt_type) (9.8.1.2.13)</a>
<a href="#">en_mag (3587)</a>	<a href="#">turbulence%var0d%en_mag (vecflt_type) (9.8.1.2.13)</a>
<a href="#">en_el_th (3587)</a>	<a href="#">turbulence%var0d%en_el_th (vecflt_type) (9.8.1.2.13)</a>
<a href="#">en_ion_th (3587)</a>	<a href="#">turbulence%var0d%en_ion_th (matflt_type) (9.8.1.2.10)</a>
<a href="#">en_el_par (3587)</a>	<a href="#">turbulence%var0d%en_el_par (vecflt_type) (9.8.1.2.13)</a>
<a href="#">en_ion_par (3587)</a>	<a href="#">turbulence%var0d%en_ion_par (matflt_type) (9.8.1.2.10)</a>
<a href="#">en_tot (3587)</a>	<a href="#">turbulence%var0d%en_tot (vecflt_type) (9.8.1.2.13)</a>
<a href="#">fl_el (3587)</a>	<a href="#">turbulence%var0d%fl_el (vecflt_type) (9.8.1.2.13)</a>
<a href="#">fl_heatel (3587)</a>	<a href="#">turbulence%var0d%fl_heatel (vecflt_type) (9.8.1.2.13)</a>
<a href="#">fl_ion (3587)</a>	<a href="#">turbulence%var0d%fl_ion (matflt_type) (9.8.1.2.10)</a>
<a href="#">fl_heation (3587)</a>	<a href="#">turbulence%var0d%fl_heation (matflt_type) (9.8.1.2.10)</a>
<a href="#">fl_magel (3587)</a>	<a href="#">turbulence%var0d%fl_magel (vecflt_type) (9.8.1.2.13)</a>
<a href="#">fl_magheatel (3587)</a>	<a href="#">turbulence%var0d%fl_magheatel (vecflt_type) (9.8.1.2.13)</a>
<a href="#">fl_magion (3587)</a>	<a href="#">turbulence%var0d%fl_magion (matflt_type) (9.8.1.2.10)</a>

flmagheation (3587)	turbulence%var0d%flmagheation (matflt.type) (9.8.1.2.10)
var1d (3157)	turbulence%var1d (turbvar1d) (9.8.1.3.482)
rho.tor.norm (3588)	turbulence%var1d%rho.tor.norm (vecflt.type) (9.8.1.2.13)
phi (3588)	turbulence%var1d%phi (vecflt.type) (9.8.1.2.13)
er (3588)	turbulence%var1d%er (vecflt.type) (9.8.1.2.13)
vor (3588)	turbulence%var1d%vor (vecflt.type) (9.8.1.2.13)
apl (3588)	turbulence%var1d%apl (vecflt.type) (9.8.1.2.13)
jpl (3588)	turbulence%var1d%jpl (vecflt.type) (9.8.1.2.13)
ne (3588)	turbulence%var1d%ne (vecflt.type) (9.8.1.2.13)
te (3588)	turbulence%var1d%te (vecflt.type) (9.8.1.2.13)
ni (3588)	turbulence%var1d%ni (matflt.type) (9.8.1.2.10)
ti (3588)	turbulence%var1d%ti (matflt.type) (9.8.1.2.10)
ui (3588)	turbulence%var1d%ui (matflt.type) (9.8.1.2.10)
var2d (3157)	turbulence%var2d (turbvar2d) (9.8.1.3.483)
rho.tor.norm (3589)	turbulence%var2d%rho.tor.norm (vecflt.type) (9.8.1.2.13)
theta (3589)	turbulence%var2d%theta (vecflt.type) (9.8.1.2.13)
phi (3589)	turbulence%var2d%phi (matflt.type) (9.8.1.2.10)
apl (3589)	turbulence%var2d%apl (matflt.type) (9.8.1.2.10)
jpl (3589)	turbulence%var2d%jpl (matflt.type) (9.8.1.2.10)
vor (3589)	turbulence%var2d%vor (matflt.type) (9.8.1.2.10)
ne (3589)	turbulence%var2d%ne (matflt.type) (9.8.1.2.10)
te (3589)	turbulence%var2d%te (matflt.type) (9.8.1.2.10)
ni (3589)	turbulence%var2d%ni (array3dflt.type) (9.8.1.2.2)
ti (3589)	turbulence%var2d%ti (array3dflt.type) (9.8.1.2.2)
ui (3589)	turbulence%var2d%ui (array3dflt.type) (9.8.1.2.2)
var3d (3157)	turbulence%var3d (turbvar3d) (9.8.1.3.484)
phi (3590)	turbulence%var3d%phi (array3dflt.type) (9.8.1.2.2)
vor (3590)	turbulence%var3d%vor (array3dflt.type) (9.8.1.2.2)
jpl (3590)	turbulence%var3d%jpl (array3dflt.type) (9.8.1.2.2)
ne (3590)	turbulence%var3d%ne (array3dflt.type) (9.8.1.2.2)
var4d (3157)	turbulence%var4d (turbvar4d) (9.8.1.3.485)
fe (3591)	turbulence%var4d%fe (array4dflt.type) (9.8.1.2.4)
fi (3591)	turbulence%var4d%fi (array5dflt.type) (9.8.1.2.5)
var5d (3157)	turbulence%var5d (turbvar5d) (9.8.1.3.486)
fe (3592)	turbulence%var5d%fe (array5dflt.type) (9.8.1.2.5)
fi (3592)	turbulence%var5d%fi (array6dflt.type) (9.8.1.2.6)
spec1d (3157)	turbulence%spec1d (turbspec1d) (9.8.1.3.480)
kperp (3586)	turbulence%spec1d%kperp (vecflt.type) (9.8.1.2.13)
phi (3586)	turbulence%spec1d%phi (vecflt.type) (9.8.1.2.13)
vor (3586)	turbulence%spec1d%vor (vecflt.type) (9.8.1.2.13)
b (3586)	turbulence%spec1d%b (vecflt.type) (9.8.1.2.13)
jpl (3586)	turbulence%spec1d%jpl (vecflt.type) (9.8.1.2.13)
ne (3586)	turbulence%spec1d%ne (vecflt.type) (9.8.1.2.13)
te (3586)	turbulence%spec1d%te (vecflt.type) (9.8.1.2.13)
ti (3586)	turbulence%spec1d%ti (matflt.type) (9.8.1.2.10)
fe (3586)	turbulence%spec1d%fe (vecflt.type) (9.8.1.2.13)
qe (3586)	turbulence%spec1d%qe (vecflt.type) (9.8.1.2.13)
qi (3586)	turbulence%spec1d%qi (matflt.type) (9.8.1.2.10)
me (3586)	turbulence%spec1d%me (vecflt.type) (9.8.1.2.13)
mi (3586)	turbulence%spec1d%mi (matflt.type) (9.8.1.2.10)
env1d (3157)	turbulence%env1d (turbenv1d) (9.8.1.3.478)
theta (3584)	turbulence%env1d%theta (vecflt.type) (9.8.1.2.13)
phi (3584)	turbulence%env1d%phi (vecflt.type) (9.8.1.2.13)
vor (3584)	turbulence%env1d%vor (vecflt.type) (9.8.1.2.13)
jpl (3584)	turbulence%env1d%jpl (vecflt.type) (9.8.1.2.13)
ne (3584)	turbulence%env1d%ne (vecflt.type) (9.8.1.2.13)
he (3584)	turbulence%env1d%he (vecflt.type) (9.8.1.2.13)
te (3584)	turbulence%env1d%te (vecflt.type) (9.8.1.2.13)
ni (3584)	turbulence%env1d%ni (matflt.type) (9.8.1.2.10)
ti (3584)	turbulence%env1d%ti (matflt.type) (9.8.1.2.10)
ui (3584)	turbulence%env1d%ui (matflt.type) (9.8.1.2.10)

fe (3584)	turbulence%env1d%fe (vecflt_type) (9.8.1.2.13)
qe (3584)	turbulence%env1d%qe (vecflt_type) (9.8.1.2.13)
qi (3584)	turbulence%env1d%qi (matflt_type) (9.8.1.2.10)
me (3584)	turbulence%env1d%me (vecflt_type) (9.8.1.2.13)
mi (3584)	turbulence%env1d%mi (matflt_type) (9.8.1.2.10)
codeparam (3157)	turbulence%codeparam (codeparam) (9.8.1.3.84)
codename (3190)	turbulence%codeparam%codename (string) (9.8.1.1.3)
codeversion (3190)	turbulence%codeparam%codeversion (string) (9.8.1.1.3)
parameters (3190)	turbulence%codeparam%parameters (string) (9.8.1.1.3)
output_diag (3190)	turbulence%codeparam%output_diag (string) (9.8.1.1.3)
output_flag (3190)	turbulence%codeparam%output_flag (integer) (9.8.1.1.2)
time (3157)	turbulence%time (float) (9.8.1.1.1)

### 9.8.2.1.50 wall

datainfo (3158)	wall%datainfo (datainfo) (9.8.1.3.141)
dataproducer (3247)	wall%datainfo%dataproducer (string) (9.8.1.1.3)
putdate (3247)	wall%datainfo%putdate (string) (9.8.1.1.3)
source (3247)	wall%datainfo%source (string) (9.8.1.1.3)
comment (3247)	wall%datainfo%comment (string) (9.8.1.1.3)
cocos (3247)	wall%datainfo%cocos (integer) (9.8.1.1.2)
id (3247)	wall%datainfo%id (integer) (9.8.1.1.2)
isref (3247)	wall%datainfo%isref (integer) (9.8.1.1.2)
whatref (3247)	wall%datainfo%whatref (whatref) (9.8.1.3.513)
user (3619)	wall%datainfo%whatref%user (string) (9.8.1.1.3)
machine (3619)	wall%datainfo%whatref%machine (string) (9.8.1.1.3)
shot (3619)	wall%datainfo%whatref%shot (integer) (9.8.1.1.2)
run (3619)	wall%datainfo%whatref%run (integer) (9.8.1.1.2)
occurrence (3619)	wall%datainfo%whatref%occurrence (integer) (9.8.1.1.2)
putinfo (3247)	wall%datainfo%putinfo (putinfo) (9.8.1.3.349)
putmethod (3455)	wall%datainfo%putinfo%putmethod (string) (9.8.1.1.3)
putaccess (3455)	wall%datainfo%putinfo%putaccess (string) (9.8.1.1.3)
putlocation (3455)	wall%datainfo%putinfo%putlocation (string) (9.8.1.1.3)
rights (3455)	wall%datainfo%putinfo%rights (string) (9.8.1.1.3)
wall0d (3158)	wall%wall0d (wall_wall0d) (9.8.1.3.501)
pumping_speed (3607)	wall%wall0d%pumping_speed (vecflt_type) (9.8.1.2.13)
gas_puff (3607)	wall%wall0d%gas_puff (vecflt_type) (9.8.1.2.13)
wall_inventory (3607)	wall%wall0d%wall_inventory (vecflt_type) (9.8.1.2.13)
recycling_coefficient (3607)	wall%wall0d%recycling_coefficient (vecflt_type) (9.8.1.2.13)
wall_temperature (3607)	wall%wall0d%wall_temperature (float) (9.8.1.1.1)
power_from_plasma (3607)	wall%wall0d%power_from_plasma (float) (9.8.1.1.1)
power_to_cooling (3607)	wall%wall0d%power_to_cooling (float) (9.8.1.1.1)
plasma (3607)	wall%wall0d%plasma (wall_wall0d_plasma) (9.8.1.3.502)
species_index (3608)	wall%wall0d%plasma%species_index (matint_type) (9.8.1.2.11)
flux (3608)	wall%wall0d%plasma%flux (vecflt_type) (9.8.1.2.13)
energy (3608)	wall%wall0d%plasma%energy (vecflt_type) (9.8.1.2.13)
wall2d_mhd (3158)	wall%wall2d_mhd (wall2d_mhd) (9.8.1.3.489)
res_wall (3595)	wall%wall2d_mhd%res_wall(:) (mhd_res_wall2d) (9.8.1.3.273)
walltype (3379)	wall%wall2d_mhd%res_wall(:)%walltype (identifier) (9.8.1.3.242)
id (3348)	wall%wall2d_mhd%res_wall(:)%walltype%id (string) (9.8.1.1.3)
flag (3348)	wall%wall2d_mhd%res_wall(:)%walltype%flag (integer) (9.8.1.1.2)
description (3348)	wall%wall2d_mhd%res_wall(:)%walltype%description (string) (9.8.1.1.3)
delta (3379)	wall%wall2d_mhd%res_wall(:)%delta (float) (9.8.1.1.1)
eta (3379)	wall%wall2d_mhd%res_wall(:)%eta (float) (9.8.1.1.1)
npoloidal (3379)	wall%wall2d_mhd%res_wall(:)%npoloidal (integer) (9.8.1.1.2)
position (3379)	wall%wall2d_mhd%res_wall(:)%position (rz1D) (9.8.1.3.366)
r (3472)	wall%wall2d_mhd%res_wall(:)%position%r (vecflt_type) (9.8.1.2.13)
z (3472)	wall%wall2d_mhd%res_wall(:)%position%z (vecflt_type) (9.8.1.2.13)
holes (3379)	wall%wall2d_mhd%res_wall(:)%holes (holes) (9.8.1.3.241)
n_holes (3347)	wall%wall2d_mhd%res_wall(:)%holes%n_holes (integer) (9.8.1.1.2)
coordinates (3347)	wall%wall2d_mhd%res_wall(:)%holes%coordinates (coordinates) (9.8.1.3.109)

theta (3215)	wall%wall2d_mhd%res_wall(:)%holes%coordinates%theta (vecflt_type) (9.8.1.2.13)
phi (3215)	wall%wall2d_mhd%res_wall(:)%holes%coordinates%phi (vecflt_type) (9.8.1.2.13)
width (3347)	wall%wall2d_mhd%res_wall(:)%holes%width (width) (9.8.1.3.514)
dtheta (3620)	wall%wall2d_mhd%res_wall(:)%holes%width%dtheta (vecflt_type) (9.8.1.2.13)
phi (3620)	wall%wall2d_mhd%res_wall(:)%holes%width%phi (vecflt_type) (9.8.1.2.13)
eta (3347)	wall%wall2d_mhd%res_wall(:)%holes%eta (vecflt_type) (9.8.1.2.13)
ideal_wall (3595)	wall%wall2d_mhd%ideal_wall (mhd_ideal_wall2d) (9.8.1.3.270)
walltype (3376)	wall%wall2d_mhd%ideal_wall%walltype (identifier) (9.8.1.3.242)
id (3348)	wall%wall2d_mhd%ideal_wall%walltype%id (string) (9.8.1.1.3)
flag (3348)	wall%wall2d_mhd%ideal_wall%walltype%flag (integer) (9.8.1.1.2)
description (3348)	wall%wall2d_mhd%ideal_wall%walltype%description (string) (9.8.1.1.3)
position (3376)	wall%wall2d_mhd%ideal_wall%position (rz1D) (9.8.1.3.366)
r (3472)	wall%wall2d_mhd%ideal_wall%position%r (vecflt_type) (9.8.1.2.13)
z (3472)	wall%wall2d_mhd%ideal_wall%position%z (vecflt_type) (9.8.1.2.13)
wall2d (3158)	wall%wall2d(:) (wall2d) (9.8.1.3.488)
wall_id (3594)	wall%wall2d(:)%wall_id (identifier) (9.8.1.3.242)
id (3348)	wall%wall2d(:)%wall_id%id (string) (9.8.1.1.3)
flag (3348)	wall%wall2d(:)%wall_id%flag (integer) (9.8.1.1.2)
description (3348)	wall%wall2d(:)%wall_id%description (string) (9.8.1.1.3)
limiter (3594)	wall%wall2d(:)%limiter (wall_limiter) (9.8.1.3.493)
limiter_id (3599)	wall%wall2d(:)%limiter%limiter_id (identifier) (9.8.1.3.242)
id (3348)	wall%wall2d(:)%limiter%limiter_id%id (string) (9.8.1.1.3)
flag (3348)	wall%wall2d(:)%limiter%limiter_id%flag (integer) (9.8.1.1.2)
description (3348)	wall%wall2d(:)%limiter%limiter_id%description (string) (9.8.1.1.3)
limiter_unit (3599)	wall%wall2d(:)%limiter%limiter_unit(:) (limiter_unit) (9.8.1.3.259)
name (3365)	wall%wall2d(:)%limiter%limiter_unit(:)%name (string) (9.8.1.1.3)
closed (3365)	wall%wall2d(:)%limiter%limiter_unit(:)%closed (string) (9.8.1.1.3)
position (3365)	wall%wall2d(:)%limiter%limiter_unit(:)%position (rz1D) (9.8.1.3.366)
r (3472)	wall%wall2d(:)%limiter%limiter_unit(:)%position%r (vecflt_type) (9.8.1.2.13)
z (3472)	wall%wall2d(:)%limiter%limiter_unit(:)%position%z (vecflt_type) (9.8.1.2.13)
eta (3365)	wall%wall2d(:)%limiter%limiter_unit(:)%eta (float) (9.8.1.1.1)
delta (3365)	wall%wall2d(:)%limiter%limiter_unit(:)%delta (float) (9.8.1.1.1)
permeability (3365)	wall%wall2d(:)%limiter%limiter_unit(:)%permeability (float) (9.8.1.1.1)
vessel (3594)	wall%wall2d(:)%vessel (wall_vessel) (9.8.1.3.498)
vessel_id (3604)	wall%wall2d(:)%vessel%vessel_id (identifier) (9.8.1.3.242)
id (3348)	wall%wall2d(:)%vessel%vessel_id%id (string) (9.8.1.1.3)
flag (3348)	wall%wall2d(:)%vessel%vessel_id%flag (integer) (9.8.1.1.2)
description (3348)	wall%wall2d(:)%vessel%vessel_id%description (string) (9.8.1.1.3)
vessel_unit (3604)	wall%wall2d(:)%vessel%vessel_unit(:) (wall_vessel_unit) (9.8.1.3.500)
annular (3606)	wall%wall2d(:)%vessel%vessel_unit(:)%annular (wall_vessel_annular) (9.8.1.3.499)
name (3605)	wall%wall2d(:)%vessel%vessel_unit(:)%annular%name (string) (9.8.1.1.3)
inside (3605)	wall%wall2d(:)%vessel%vessel_unit(:)%annular%inside (rz1D) (9.8.1.3.366)
r (3472)	wall%wall2d(:)%vessel%vessel_unit(:)%annular%inside%r (vecflt_type) (9.8.1.2.13)
z (3472)	wall%wall2d(:)%vessel%vessel_unit(:)%annular%inside%z (vecflt_type) (9.8.1.2.13)
outside (3605)	wall%wall2d(:)%vessel%vessel_unit(:)%annular%outside (rz1D) (9.8.1.3.366)
r (3472)	wall%wall2d(:)%vessel%vessel_unit(:)%annular%outside%r (vecflt_type) (9.8.1.2.13)
z (3472)	wall%wall2d(:)%vessel%vessel_unit(:)%annular%outside%z (vecflt_type) (9.8.1.2.13)
eta (3605)	wall%wall2d(:)%vessel%vessel_unit(:)%annular%eta (float) (9.8.1.1.1)
permeability (3605)	wall%wall2d(:)%vessel%vessel_unit(:)%annular%permeability (float) (9.8.1.1.1)
blocks (3606)	wall%wall2d(:)%vessel%vessel_unit(:)%blocks (wall_blocks) (9.8.1.3.491)
blocks_unit (3597)	wall%wall2d(:)%vessel%vessel_unit(:)%blocks%blocks_unit(:) (wall_blocks_unit) (9.8.1.3.492)
name (3598)	wall%wall2d(:)%vessel%vessel_unit(:)%blocks%blocks_unit(:)%name (string) (9.8.1.1.3)
position (3598)	wall%wall2d(:)%vessel%vessel_unit(:)%blocks%blocks_unit(:)%position (rz1D) (9.8.1.3.366)
r (3472)	wall%wall2d(:)%vessel%vessel_unit(:)%blocks%blocks_unit(:)%position%r (vecflt_type) (9.8.1.2.13)
z (3472)	wall%wall2d(:)%vessel%vessel_unit(:)%blocks%blocks_unit(:)%position%z (vecflt_type) (9.8.1.2.13)
eta (3598)	wall%wall2d(:)%vessel%vessel_unit(:)%blocks%blocks_unit(:)%eta (float) (9.8.1.1.1)
permeability (3598)	wall%wall2d(:)%vessel%vessel_unit(:)%blocks%blocks_unit(:)%permeability (float) (9.8.1.1.1)
j_phi (3598)	wall%wall2d(:)%vessel%vessel_unit(:)%blocks%blocks_unit(:)%j_phi (float) (9.8.1.1.1)
resistance (3598)	wall%wall2d(:)%vessel%vessel_unit(:)%blocks%blocks_unit(:)%resistance (float) (9.8.1.1.1)
radial_build (3606)	wall%wall2d(:)%vessel%vessel_unit(:)%radial_build (wall_wall2d_vessel_radial_build) (9.8.1.3.503)

r1_inb (3609)	wall%wall2d(:)%vessel%vessel_unit(:)%radial_build%r1_inb (float) (9.8.1.1.1)
r2_inb (3609)	wall%wall2d(:)%vessel%vessel_unit(:)%radial_build%r2_inb (float) (9.8.1.1.1)
r1_outb (3609)	wall%wall2d(:)%vessel%vessel_unit(:)%radial_build%r1_outb (float) (9.8.1.1.1)
r2_outb (3609)	wall%wall2d(:)%vessel%vessel_unit(:)%radial_build%r2_outb (float) (9.8.1.1.1)
raddim (3609)	wall%wall2d(:)%vessel%vessel_unit(:)%radial_build%raddim (float) (9.8.1.1.1)
nmat (3609)	wall%wall2d(:)%vessel%vessel_unit(:)%radial_build%nmat (float) (9.8.1.1.1)
composition (3609)	wall%wall2d(:)%vessel%vessel_unit(:)%radial_build%composition (vecflt_type) (9.8.1.2.13)
pow_dens_inb (3609)	wall%wall2d(:)%vessel%vessel_unit(:)%radial_build%pow_dens_inb (float) (9.8.1.1.1)
pow_dens_outb (3609)	wall%wall2d(:)%vessel%vessel_unit(:)%radial_build%pow_dens_outb (float) (9.8.1.1.1)
fn_flux_inb (3609)	wall%wall2d(:)%vessel%vessel_unit(:)%radial_build%fn_flux_inb (float) (9.8.1.1.1)
fn_flux_outb (3609)	wall%wall2d(:)%vessel%vessel_unit(:)%radial_build%fn_flux_outb (float) (9.8.1.1.1)
plasma (3594)	wall%wall2d(:)%plasma(:) (plasmaComplexType) (9.8.1.3.338)
species (3444)	wall%wall2d(:)%plasma(:)%species (vecint_type) (9.8.1.2.14)
flux (3444)	wall%wall2d(:)%plasma(:)%flux (matflt_type) (9.8.1.2.10)
b (3444)	wall%wall2d(:)%plasma(:)%b (matflt_type) (9.8.1.2.10)
energy (3444)	wall%wall2d(:)%plasma(:)%energy (matflt_type) (9.8.1.2.10)
wall_state (3594)	wall%wall2d(:)%wall_state(:) (wall_unitsComplexType) (9.8.1.3.496)
wall_type (3602)	wall%wall2d(:)%wall_state(:)%wall_type (integer) (9.8.1.1.2)
n_depo_layer (3602)	wall%wall2d(:)%wall_state(:)%n_depo_layer (integer) (9.8.1.1.2)
layers (3602)	wall%wall2d(:)%wall_state(:)%layers(:) (wall_unitsComplexType.layers) (9.8.1.3.497)
elements (3603)	wall%wall2d(:)%wall_state(:)%layers(:)%elements (vecint_type) (9.8.1.2.14)
gases (3603)	wall%wall2d(:)%wall_state(:)%layers(:)%gases (vecint_type) (9.8.1.2.14)
compounds (3603)	wall%wall2d(:)%wall_state(:)%layers(:)%compounds (vecint_type) (9.8.1.2.14)
density (3603)	wall%wall2d(:)%wall_state(:)%layers(:)%density (matflt_type) (9.8.1.2.10)
dx (3603)	wall%wall2d(:)%wall_state(:)%layers(:)%dx (matflt_type) (9.8.1.2.10)
thickness (3603)	wall%wall2d(:)%wall_state(:)%layers(:)%thickness (vecflt_type) (9.8.1.2.13)
roughness (3603)	wall%wall2d(:)%wall_state(:)%layers(:)%roughness (array3dflt_type) (9.8.1.2.2)
porosity (3603)	wall%wall2d(:)%wall_state(:)%layers(:)%porosity (array3dflt_type) (9.8.1.2.2)
dpa (3603)	wall%wall2d(:)%wall_state(:)%layers(:)%dpa (matflt_type) (9.8.1.2.10)
temperature (3603)	wall%wall2d(:)%wall_state(:)%layers(:)%temperature (matflt_type) (9.8.1.2.10)
element_frac (3603)	wall%wall2d(:)%wall_state(:)%layers(:)%element_frac (array3dflt_type) (9.8.1.2.2)
chem_comp (3603)	wall%wall2d(:)%wall_state(:)%layers(:)%chem_comp (array3dflt_type) (9.8.1.2.2)
bulk_D (3603)	wall%wall2d(:)%wall_state(:)%layers(:)%bulk_D (array4dflt_type) (9.8.1.2.4)
surface_D (3603)	wall%wall2d(:)%wall_state(:)%layers(:)%surface_D (array4dflt_type) (9.8.1.2.4)
bulk_solute (3603)	wall%wall2d(:)%wall_state(:)%layers(:)%bulk_solute (array4dflt_type) (9.8.1.2.4)
surf_solute (3603)	wall%wall2d(:)%wall_state(:)%layers(:)%surf_solute (array4dflt_type) (9.8.1.2.4)
pore_content (3603)	wall%wall2d(:)%wall_state(:)%layers(:)%pore_content (array3dflt_type) (9.8.1.2.2)
trap_type (3603)	wall%wall2d(:)%wall_state(:)%layers(:)%trap_type(:) (trap_type) (9.8.1.3.472)
trap_id (3578)	wall%wall2d(:)%wall_state(:)%layers(:)%trap_type(:)%trap_id (identifier) (9.8.1.3.242)
id (3348)	wall%wall2d(:)%wall_state(:)%layers(:)%trap_type(:)%trap_id%id (string) (9.8.1.1.3)
flag (3348)	wall%wall2d(:)%wall_state(:)%layers(:)%trap_type(:)%trap_id%flag (integer) (9.8.1.1.2)
description (3348)	wall%wall2d(:)%wall_state(:)%layers(:)%trap_type(:)%trap_id%description (string) (9.8.1.1.3)
compound (3578)	wall%wall2d(:)%wall_state(:)%layers(:)%trap_type(:)%compound (integer) (9.8.1.1.2)
gas_species (3578)	wall%wall2d(:)%wall_state(:)%layers(:)%trap_type(:)%gas_species (integer) (9.8.1.1.2)
energy (3578)	wall%wall2d(:)%wall_state(:)%layers(:)%trap_type(:)%energy (float) (9.8.1.1.1)
fill_factor (3578)	wall%wall2d(:)%wall_state(:)%layers(:)%trap_type(:)%fill_factor (matflt_type) (9.8.1.2.10)
density (3578)	wall%wall2d(:)%wall_state(:)%layers(:)%trap_type(:)%density (matflt_type) (9.8.1.2.10)
eta (3602)	wall%wall2d(:)%wall_state(:)%eta (complexgrid_scalar) (9.8.1.3.94)
griduid (3200)	wall%wall2d(:)%wall_state(:)%eta%griduid (integer) (9.8.1.1.2)
subgrid (3200)	wall%wall2d(:)%wall_state(:)%eta%subgrid (integer) (9.8.1.1.2)
scalar (3200)	wall%wall2d(:)%wall_state(:)%eta%scalar (vecflt_type) (9.8.1.2.13)
vector (3200)	wall%wall2d(:)%wall_state(:)%eta%vector (matflt_type) (9.8.1.2.10)
matrix (3200)	wall%wall2d(:)%wall_state(:)%eta%matrix (array3dflt_type) (9.8.1.2.2)
permeability (3602)	wall%wall2d(:)%wall_state(:)%permeability (complexgrid_scalar) (9.8.1.3.94)
griduid (3200)	wall%wall2d(:)%wall_state(:)%permeability%griduid (integer) (9.8.1.1.2)
subgrid (3200)	wall%wall2d(:)%wall_state(:)%permeability%subgrid (integer) (9.8.1.1.2)
scalar (3200)	wall%wall2d(:)%wall_state(:)%permeability%scalar (vecflt_type) (9.8.1.2.13)
vector (3200)	wall%wall2d(:)%wall_state(:)%permeability%vector (matflt_type) (9.8.1.2.10)
matrix (3200)	wall%wall2d(:)%wall_state(:)%permeability%matrix (array3dflt_type) (9.8.1.2.2)
j (3602)	wall%wall2d(:)%wall_state(:)%j (complexgrid_vector) (9.8.1.3.100)
griduid (3206)	wall%wall2d(:)%wall_state(:)%j%griduid (integer) (9.8.1.1.2)

label (3206)	wall%wall2d(:)%wall_state(:)%j%label (string) (9.8.1.1.3)
comp (3206)	wall%wall2d(:)%wall_state(:)%j%comp(:) (complexgrid_scalar) (9.8.1.3.94)
griduid (3200)	wall%wall2d(:)%wall_state(:)%j%comp(:)%griduid (integer) (9.8.1.1.2)
subgrid (3200)	wall%wall2d(:)%wall_state(:)%j%comp(:)%subgrid (integer) (9.8.1.1.2)
scalar (3200)	wall%wall2d(:)%wall_state(:)%j%comp(:)%scalar (vecflt_type) (9.8.1.2.13)
vector (3200)	wall%wall2d(:)%wall_state(:)%j%comp(:)%vector (matflt_type) (9.8.1.2.10)
matrix (3200)	wall%wall2d(:)%wall_state(:)%j%comp(:)%matrix (array3dflt_type) (9.8.1.2.2)
align (3206)	wall%wall2d(:)%wall_state(:)%j%align (vecint_type) (9.8.1.2.14)
alignid (3206)	wall%wall2d(:)%wall_state(:)%j%alignid (vecstring_type) (9.8.1.2.15)
basis (3206)	wall%wall2d(:)%wall_state(:)%j%basis (integer) (9.8.1.1.2)
wall3d (3158)	wall%wall3d(:) (wall3d) (9.8.1.3.490)
wall_id (3596)	wall%wall3d(:)%wall_id (identifier) (9.8.1.3.242)
id (3348)	wall%wall3d(:)%wall_id%id (string) (9.8.1.1.3)
flag (3348)	wall%wall3d(:)%wall_id%flag (integer) (9.8.1.1.2)
description (3348)	wall%wall3d(:)%wall_id%description (string) (9.8.1.1.3)
grid (3596)	wall%wall3d(:)%grid (complexgrid) (9.8.1.3.89)
uid (3195)	wall%wall3d(:)%grid%uid (integer) (9.8.1.1.2)
id (3195)	wall%wall3d(:)%grid%id (string) (9.8.1.1.3)
spaces (3195)	wall%wall3d(:)%grid%spaces(:) (complexgrid_space) (9.8.1.3.98)
geotype (3204)	wall%wall3d(:)%grid%spaces(:)%geotype (vecint_type) (9.8.1.2.14)
geotypeid (3204)	wall%wall3d(:)%grid%spaces(:)%geotypeid (vecstring_type) (9.8.1.2.15)
coordtype (3204)	wall%wall3d(:)%grid%spaces(:)%coordtype (matint_type) (9.8.1.2.11)
objects (3204)	wall%wall3d(:)%grid%spaces(:)%objects(:) (objects) (9.8.1.3.307)
boundary (3413)	wall%wall3d(:)%grid%spaces(:)%objects(:)%boundary (matint_type) (9.8.1.2.11)
neighbour (3413)	wall%wall3d(:)%grid%spaces(:)%objects(:)%neighbour (array3dint_type) (9.8.1.2.3)
geo (3413)	wall%wall3d(:)%grid%spaces(:)%objects(:)%geo (array4dflt_type) (9.8.1.2.4)
measure (3413)	wall%wall3d(:)%grid%spaces(:)%objects(:)%measure (matflt_type) (9.8.1.2.10)
xpoints (3204)	wall%wall3d(:)%grid%spaces(:)%xpoints (vecint_type) (9.8.1.2.14)
subgrids (3195)	wall%wall3d(:)%grid%subgrids(:) (complexgrid_subgrid) (9.8.1.3.99)
id (3205)	wall%wall3d(:)%grid%subgrids(:)%id (string) (9.8.1.1.3)
list (3205)	wall%wall3d(:)%grid%subgrids(:)%list(:) (complexgrid_objectlist) (9.8.1.3.93)
cls (3199)	wall%wall3d(:)%grid%subgrids(:)%list(:)%cls (vecint_type) (9.8.1.2.14)
indset (3199)	wall%wall3d(:)%grid%subgrids(:)%list(:)%indset(:) (complexgrid_indexlist) (9.8.1.3.91)
range (3197)	wall%wall3d(:)%grid%subgrids(:)%list(:)%indset(:)%range (vecint_type) (9.8.1.2.14)
ind (3197)	wall%wall3d(:)%grid%subgrids(:)%list(:)%indset(:)%ind (vecint_type) (9.8.1.2.14)
ind (3199)	wall%wall3d(:)%grid%subgrids(:)%list(:)%ind (matint_type) (9.8.1.2.11)
metric (3195)	wall%wall3d(:)%grid%metric (complexgrid_metric) (9.8.1.3.92)
measure (3198)	wall%wall3d(:)%grid%metric%measure(:) (complexgrid_scalar) (9.8.1.3.94)
griduid (3200)	wall%wall3d(:)%grid%metric%measure(:)%griduid (integer) (9.8.1.1.2)
subgrid (3200)	wall%wall3d(:)%grid%metric%measure(:)%subgrid (integer) (9.8.1.1.2)
scalar (3200)	wall%wall3d(:)%grid%metric%measure(:)%scalar (vecflt_type) (9.8.1.2.13)
vector (3200)	wall%wall3d(:)%grid%metric%measure(:)%vector (matflt_type) (9.8.1.2.10)
matrix (3200)	wall%wall3d(:)%grid%metric%measure(:)%matrix (array3dflt_type) (9.8.1.2.2)
g11 (3198)	wall%wall3d(:)%grid%metric%g11(:) (complexgrid_scalar) (9.8.1.3.94)
griduid (3200)	wall%wall3d(:)%grid%metric%g11(:)%griduid (integer) (9.8.1.1.2)
subgrid (3200)	wall%wall3d(:)%grid%metric%g11(:)%subgrid (integer) (9.8.1.1.2)
scalar (3200)	wall%wall3d(:)%grid%metric%g11(:)%scalar (vecflt_type) (9.8.1.2.13)
vector (3200)	wall%wall3d(:)%grid%metric%g11(:)%vector (matflt_type) (9.8.1.2.10)
matrix (3200)	wall%wall3d(:)%grid%metric%g11(:)%matrix (array3dflt_type) (9.8.1.2.2)
g12 (3198)	wall%wall3d(:)%grid%metric%g12(:) (complexgrid_scalar) (9.8.1.3.94)
griduid (3200)	wall%wall3d(:)%grid%metric%g12(:)%griduid (integer) (9.8.1.1.2)
subgrid (3200)	wall%wall3d(:)%grid%metric%g12(:)%subgrid (integer) (9.8.1.1.2)
scalar (3200)	wall%wall3d(:)%grid%metric%g12(:)%scalar (vecflt_type) (9.8.1.2.13)
vector (3200)	wall%wall3d(:)%grid%metric%g12(:)%vector (matflt_type) (9.8.1.2.10)
matrix (3200)	wall%wall3d(:)%grid%metric%g12(:)%matrix (array3dflt_type) (9.8.1.2.2)
g13 (3198)	wall%wall3d(:)%grid%metric%g13(:) (complexgrid_scalar) (9.8.1.3.94)
griduid (3200)	wall%wall3d(:)%grid%metric%g13(:)%griduid (integer) (9.8.1.1.2)
subgrid (3200)	wall%wall3d(:)%grid%metric%g13(:)%subgrid (integer) (9.8.1.1.2)
scalar (3200)	wall%wall3d(:)%grid%metric%g13(:)%scalar (vecflt_type) (9.8.1.2.13)
vector (3200)	wall%wall3d(:)%grid%metric%g13(:)%vector (matflt_type) (9.8.1.2.10)
matrix (3200)	wall%wall3d(:)%grid%metric%g13(:)%matrix (array3dflt_type) (9.8.1.2.2)



g22 (3198)	wall%wall3d(:)%grid%metric%g22(:) (complexgrid_scalar) (9.8.1.3.94)
griduid (3200)	wall%wall3d(:)%grid%metric%g22(:)%griduid (integer) (9.8.1.1.2)
subgrid (3200)	wall%wall3d(:)%grid%metric%g22(:)%subgrid (integer) (9.8.1.1.2)
scalar (3200)	wall%wall3d(:)%grid%metric%g22(:)%scalar (vecflt_type) (9.8.1.2.13)
vector (3200)	wall%wall3d(:)%grid%metric%g22(:)%vector (matflt_type) (9.8.1.2.10)
matrix (3200)	wall%wall3d(:)%grid%metric%g22(:)%matrix (array3dflt_type) (9.8.1.2.2)
g23 (3198)	wall%wall3d(:)%grid%metric%g23(:) (complexgrid_scalar) (9.8.1.3.94)
griduid (3200)	wall%wall3d(:)%grid%metric%g23(:)%griduid (integer) (9.8.1.1.2)
subgrid (3200)	wall%wall3d(:)%grid%metric%g23(:)%subgrid (integer) (9.8.1.1.2)
scalar (3200)	wall%wall3d(:)%grid%metric%g23(:)%scalar (vecflt_type) (9.8.1.2.13)
vector (3200)	wall%wall3d(:)%grid%metric%g23(:)%vector (matflt_type) (9.8.1.2.10)
matrix (3200)	wall%wall3d(:)%grid%metric%g23(:)%matrix (array3dflt_type) (9.8.1.2.2)
g33 (3198)	wall%wall3d(:)%grid%metric%g33(:) (complexgrid_scalar) (9.8.1.3.94)
griduid (3200)	wall%wall3d(:)%grid%metric%g33(:)%griduid (integer) (9.8.1.1.2)
subgrid (3200)	wall%wall3d(:)%grid%metric%g33(:)%subgrid (integer) (9.8.1.1.2)
scalar (3200)	wall%wall3d(:)%grid%metric%g33(:)%scalar (vecflt_type) (9.8.1.2.13)
vector (3200)	wall%wall3d(:)%grid%metric%g33(:)%vector (matflt_type) (9.8.1.2.10)
matrix (3200)	wall%wall3d(:)%grid%metric%g33(:)%matrix (array3dflt_type) (9.8.1.2.2)
jacobian (3198)	wall%wall3d(:)%grid%metric%jacobian(:) (complexgrid_scalar) (9.8.1.3.94)
griduid (3200)	wall%wall3d(:)%grid%metric%jacobian(:)%griduid (integer) (9.8.1.1.2)
subgrid (3200)	wall%wall3d(:)%grid%metric%jacobian(:)%subgrid (integer) (9.8.1.1.2)
scalar (3200)	wall%wall3d(:)%grid%metric%jacobian(:)%scalar (vecflt_type) (9.8.1.2.13)
vector (3200)	wall%wall3d(:)%grid%metric%jacobian(:)%vector (matflt_type) (9.8.1.2.10)
matrix (3200)	wall%wall3d(:)%grid%metric%jacobian(:)%matrix (array3dflt_type) (9.8.1.2.2)
geo (3195)	wall%wall3d(:)%grid%geo(:) (complexgrid_geo_global) (9.8.1.3.90)
geotype (3196)	wall%wall3d(:)%grid%geo(:)%geotype (integer) (9.8.1.1.2)
geotypeid (3196)	wall%wall3d(:)%grid%geo(:)%geotypeid (string) (9.8.1.1.3)
coordtype (3196)	wall%wall3d(:)%grid%geo(:)%coordtype (vecint_type) (9.8.1.2.14)
geo_matrix (3196)	wall%wall3d(:)%grid%geo(:)%geo_matrix(:) (complexgrid_scalar) (9.8.1.3.94)
griduid (3200)	wall%wall3d(:)%grid%geo(:)%geo_matrix(:)%griduid (integer) (9.8.1.1.2)
subgrid (3200)	wall%wall3d(:)%grid%geo(:)%geo_matrix(:)%subgrid (integer) (9.8.1.1.2)
scalar (3200)	wall%wall3d(:)%grid%geo(:)%geo_matrix(:)%scalar (vecflt_type) (9.8.1.2.13)
vector (3200)	wall%wall3d(:)%grid%geo(:)%geo_matrix(:)%vector (matflt_type) (9.8.1.2.10)
matrix (3200)	wall%wall3d(:)%grid%geo(:)%geo_matrix(:)%matrix (array3dflt_type) (9.8.1.2.2)
measure (3196)	wall%wall3d(:)%grid%geo(:)%measure(:) (complexgrid_scalar) (9.8.1.3.94)
griduid (3200)	wall%wall3d(:)%grid%geo(:)%measure(:)%griduid (integer) (9.8.1.1.2)
subgrid (3200)	wall%wall3d(:)%grid%geo(:)%measure(:)%subgrid (integer) (9.8.1.1.2)
scalar (3200)	wall%wall3d(:)%grid%geo(:)%measure(:)%scalar (vecflt_type) (9.8.1.2.13)
vector (3200)	wall%wall3d(:)%grid%geo(:)%measure(:)%vector (matflt_type) (9.8.1.2.10)
matrix (3200)	wall%wall3d(:)%grid%geo(:)%measure(:)%matrix (array3dflt_type) (9.8.1.2.2)
bases (3195)	wall%wall3d(:)%grid%bases(:) (complexgrid_vector) (9.8.1.3.100)
griduid (3206)	wall%wall3d(:)%grid%bases(:)%griduid (integer) (9.8.1.1.2)
label (3206)	wall%wall3d(:)%grid%bases(:)%label (string) (9.8.1.1.3)
comp (3206)	wall%wall3d(:)%grid%bases(:)%comp(:) (complexgrid_scalar) (9.8.1.3.94)
griduid (3200)	wall%wall3d(:)%grid%bases(:)%comp(:)%griduid (integer) (9.8.1.1.2)
subgrid (3200)	wall%wall3d(:)%grid%bases(:)%comp(:)%subgrid (integer) (9.8.1.1.2)
scalar (3200)	wall%wall3d(:)%grid%bases(:)%comp(:)%scalar (vecflt_type) (9.8.1.2.13)
vector (3200)	wall%wall3d(:)%grid%bases(:)%comp(:)%vector (matflt_type) (9.8.1.2.10)
matrix (3200)	wall%wall3d(:)%grid%bases(:)%comp(:)%matrix (array3dflt_type) (9.8.1.2.2)
align (3206)	wall%wall3d(:)%grid%bases(:)%align (vecint_type) (9.8.1.2.14)
alignid (3206)	wall%wall3d(:)%grid%bases(:)%alignid (vecstring_type) (9.8.1.2.15)
basis (3206)	wall%wall3d(:)%grid%bases(:)%basis (integer) (9.8.1.1.2)
plasma (3596)	wall%wall3d(:)%plasma(:) (plasmaComplexType) (9.8.1.3.338)
species (3444)	wall%wall3d(:)%plasma(:)%species (vecint_type) (9.8.1.2.14)
flux (3444)	wall%wall3d(:)%plasma(:)%flux (matflt_type) (9.8.1.2.10)
b (3444)	wall%wall3d(:)%plasma(:)%b (matflt_type) (9.8.1.2.10)
energy (3444)	wall%wall3d(:)%plasma(:)%energy (matflt_type) (9.8.1.2.10)
wall_state (3596)	wall%wall3d(:)%wall_state(:) (wall_unitsComplexType) (9.8.1.3.496)
wall_type (3602)	wall%wall3d(:)%wall_state(:)%wall_type (integer) (9.8.1.1.2)
n_depo_layer (3602)	wall%wall3d(:)%wall_state(:)%n_depo_layer (integer) (9.8.1.1.2)
layers (3602)	wall%wall3d(:)%wall_state(:)%layers(:) (wall_unitsComplexType_layers) (9.8.1.3.497)



elements (3603)	wall%wall3d(:)%wall_state(:)%layers(:)%elements (vecint.type) (9.8.1.2.14)
gases (3603)	wall%wall3d(:)%wall_state(:)%layers(:)%gases (vecint.type) (9.8.1.2.14)
compounds (3603)	wall%wall3d(:)%wall_state(:)%layers(:)%compounds (vecint.type) (9.8.1.2.14)
density (3603)	wall%wall3d(:)%wall_state(:)%layers(:)%density (matflt.type) (9.8.1.2.10)
dx (3603)	wall%wall3d(:)%wall_state(:)%layers(:)%dx (matflt.type) (9.8.1.2.10)
thickness (3603)	wall%wall3d(:)%wall_state(:)%layers(:)%thickness (vecflt.type) (9.8.1.2.13)
roughness (3603)	wall%wall3d(:)%wall_state(:)%layers(:)%roughness (array3dflt.type) (9.8.1.2.2)
porosity (3603)	wall%wall3d(:)%wall_state(:)%layers(:)%porosity (array3dflt.type) (9.8.1.2.2)
dpa (3603)	wall%wall3d(:)%wall_state(:)%layers(:)%dpa (matflt.type) (9.8.1.2.10)
temperature (3603)	wall%wall3d(:)%wall_state(:)%layers(:)%temperature (matflt.type) (9.8.1.2.10)
element_frac (3603)	wall%wall3d(:)%wall_state(:)%layers(:)%element_frac (array3dflt.type) (9.8.1.2.2)
chem_comp (3603)	wall%wall3d(:)%wall_state(:)%layers(:)%chem_comp (array3dflt.type) (9.8.1.2.2)
bulk_D (3603)	wall%wall3d(:)%wall_state(:)%layers(:)%bulk_D (array4dflt.type) (9.8.1.2.4)
surface_D (3603)	wall%wall3d(:)%wall_state(:)%layers(:)%surface_D (array4dflt.type) (9.8.1.2.4)
bulk_solute (3603)	wall%wall3d(:)%wall_state(:)%layers(:)%bulk_solute (array4dflt.type) (9.8.1.2.4)
surf_solute (3603)	wall%wall3d(:)%wall_state(:)%layers(:)%surf_solute (array4dflt.type) (9.8.1.2.4)
pore_content (3603)	wall%wall3d(:)%wall_state(:)%layers(:)%pore_content (array3dflt.type) (9.8.1.2.2)
trap_type (3603)	wall%wall3d(:)%wall_state(:)%layers(:)%trap_type(:) (trap_type) (9.8.1.3.472)
trap_id (3578)	wall%wall3d(:)%wall_state(:)%layers(:)%trap_type(:)%trap_id (identifier) (9.8.1.3.242)
id (3348)	wall%wall3d(:)%wall_state(:)%layers(:)%trap_type(:)%trap_id%id (string) (9.8.1.1.3)
flag (3348)	wall%wall3d(:)%wall_state(:)%layers(:)%trap_type(:)%trap_id%flag (integer) (9.8.1.1.2)
description (3348)	wall%wall3d(:)%wall_state(:)%layers(:)%trap_type(:)%trap_id%description (string) (9.8.1.1.3)
compound (3578)	wall%wall3d(:)%wall_state(:)%layers(:)%trap_type(:)%compound (integer) (9.8.1.1.2)
gas_species (3578)	wall%wall3d(:)%wall_state(:)%layers(:)%trap_type(:)%gas_species (integer) (9.8.1.1.2)
energy (3578)	wall%wall3d(:)%wall_state(:)%layers(:)%trap_type(:)%energy (float) (9.8.1.1.1)
fill_factor (3578)	wall%wall3d(:)%wall_state(:)%layers(:)%trap_type(:)%fill_factor (matflt.type) (9.8.1.2.10)
density (3578)	wall%wall3d(:)%wall_state(:)%layers(:)%trap_type(:)%density (matflt.type) (9.8.1.2.10)
eta (3602)	wall%wall3d(:)%wall_state(:)%eta (complexgrid_scalar) (9.8.1.3.94)
griduid (3200)	wall%wall3d(:)%wall_state(:)%eta%griduid (integer) (9.8.1.1.2)
subgrid (3200)	wall%wall3d(:)%wall_state(:)%eta%subgrid (integer) (9.8.1.1.2)
scalar (3200)	wall%wall3d(:)%wall_state(:)%eta%scalar (vecflt.type) (9.8.1.2.13)
vector (3200)	wall%wall3d(:)%wall_state(:)%eta%vector (matflt.type) (9.8.1.2.10)
matrix (3200)	wall%wall3d(:)%wall_state(:)%eta%matrix (array3dflt.type) (9.8.1.2.2)
permeability (3602)	wall%wall3d(:)%wall_state(:)%permeability (complexgrid_scalar) (9.8.1.3.94)
griduid (3200)	wall%wall3d(:)%wall_state(:)%permeability%griduid (integer) (9.8.1.1.2)
subgrid (3200)	wall%wall3d(:)%wall_state(:)%permeability%subgrid (integer) (9.8.1.1.2)
scalar (3200)	wall%wall3d(:)%wall_state(:)%permeability%scalar (vecflt.type) (9.8.1.2.13)
vector (3200)	wall%wall3d(:)%wall_state(:)%permeability%vector (matflt.type) (9.8.1.2.10)
matrix (3200)	wall%wall3d(:)%wall_state(:)%permeability%matrix (array3dflt.type) (9.8.1.2.2)
j (3602)	wall%wall3d(:)%wall_state(:)%j (complexgrid_vector) (9.8.1.3.100)
griduid (3206)	wall%wall3d(:)%wall_state(:)%j%griduid (integer) (9.8.1.1.2)
label (3206)	wall%wall3d(:)%wall_state(:)%j%label (string) (9.8.1.1.3)
comp (3206)	wall%wall3d(:)%wall_state(:)%j%comp(:) (complexgrid_scalar) (9.8.1.3.94)
griduid (3200)	wall%wall3d(:)%wall_state(:)%j%comp(:)%griduid (integer) (9.8.1.1.2)
subgrid (3200)	wall%wall3d(:)%wall_state(:)%j%comp(:)%subgrid (integer) (9.8.1.1.2)
scalar (3200)	wall%wall3d(:)%wall_state(:)%j%comp(:)%scalar (vecflt.type) (9.8.1.2.13)
vector (3200)	wall%wall3d(:)%wall_state(:)%j%comp(:)%vector (matflt.type) (9.8.1.2.10)
matrix (3200)	wall%wall3d(:)%wall_state(:)%j%comp(:)%matrix (array3dflt.type) (9.8.1.2.2)
align (3206)	wall%wall3d(:)%wall_state(:)%j%align (vecint.type) (9.8.1.2.14)
alignid (3206)	wall%wall3d(:)%wall_state(:)%j%alignid (vecstring.type) (9.8.1.2.15)
basis (3206)	wall%wall3d(:)%wall_state(:)%j%basis (integer) (9.8.1.1.2)
basis_index (3596)	wall%wall3d(:)%basis_index (integer) (9.8.1.1.2)
wall_types (3158)	wall%wall_types(:) (wall_types) (9.8.1.3.494)
label (3600)	wall%wall_types(:)%label (string) (9.8.1.1.3)
layers (3600)	wall%wall_types(:)%layers(:) (wall_types_layers) (9.8.1.3.495)
thickness (3601)	wall%wall_types(:)%layers(:)%thickness (float) (9.8.1.1.1)
chem_comp (3601)	wall%wall_types(:)%layers(:)%chem_comp (vecflt.type) (9.8.1.2.13)
compounds (3158)	wall%compounds(:) (compound_desc) (9.8.1.3.107)
label (3213)	wall%compounds(:)%label (string) (9.8.1.1.3)
stoichiometry (3213)	wall%compounds(:)%stoichiometry (vecflt.type) (9.8.1.2.13)
density (3213)	wall%compounds(:)%density (float) (9.8.1.1.1)

heat_cap (3213)	wall%compounds(:)%heat_cap (float) (9.8.1.1.1)
heat_cond (3213)	wall%compounds(:)%heat_cond (vecflt_type) (9.8.1.2.13)
surf_recrate (3213)	wall%compounds(:)%surf_recrate (matflt_type) (9.8.1.2.10)
elements (3158)	wall%elements(:) (element_desc) (9.8.1.3.193)
nucindex (3299)	wall%elements(:)%nucindex (integer) (9.8.1.1.2)
label (3299)	wall%elements(:)%label (string) (9.8.1.1.3)
zn (3299)	wall%elements(:)%zn (float) (9.8.1.1.1)
amn (3299)	wall%elements(:)%amn (float) (9.8.1.1.1)
compositions (3158)	wall%compositions (compositions_type) (9.8.1.3.106)
nuclei (3212)	wall%compositions%nuclei(:) (nuclei) (9.8.1.3.306)
zn (3412)	wall%compositions%nuclei(:)%zn (float) (9.8.1.1.1)
amn (3412)	wall%compositions%nuclei(:)%amn (float) (9.8.1.1.1)
label (3412)	wall%compositions%nuclei(:)%label (string) (9.8.1.1.3)
ions (3212)	wall%compositions%ions(:) (ions) (9.8.1.3.247)
nucindex (3353)	wall%compositions%ions(:)%nucindex (integer) (9.8.1.1.2)
zion (3353)	wall%compositions%ions(:)%zion (float) (9.8.1.1.1)
imp_flag (3353)	wall%compositions%ions(:)%imp_flag (integer) (9.8.1.1.2)
label (3353)	wall%compositions%ions(:)%label (string) (9.8.1.1.3)
impurities (3212)	wall%compositions%impurities(:) (impurities) (9.8.1.3.244)
nucindex (3350)	wall%compositions%impurities(:)%nucindex (integer) (9.8.1.1.2)
i_ion (3350)	wall%compositions%impurities(:)%i_ion (integer) (9.8.1.1.2)
nzimp (3350)	wall%compositions%impurities(:)%nzimp (integer) (9.8.1.1.2)
zmin (3350)	wall%compositions%impurities(:)%zmin (vecflt_type) (9.8.1.2.13)
zmax (3350)	wall%compositions%impurities(:)%zmax (vecflt_type) (9.8.1.2.13)
label (3350)	wall%compositions%impurities(:)%label (vecstring_type) (9.8.1.2.15)
neutralscomp (3212)	wall%compositions%neutralscomp(:) (composition_neutralscomp) (9.8.1.3.105)
neutcomp (3211)	wall%compositions%neutralscomp(:)%neutcomp(:) (composition_neutrals_neutcomp) (9.8.1.3.104)
nucindex (3210)	wall%compositions%neutralscomp(:)%neutcomp(:)%nucindex (integer) (9.8.1.1.2)
multiplicity (3210)	wall%compositions%neutralscomp(:)%neutcomp(:)%multiplicity (integer) (9.8.1.1.2)
type (3211)	wall%compositions%neutralscomp(:)%type(:) (identifier) (9.8.1.3.242)
id (3348)	wall%compositions%neutralscomp(:)%type(:)%id (string) (9.8.1.1.3)
flag (3348)	wall%compositions%neutralscomp(:)%type(:)%flag (integer) (9.8.1.1.2)
description (3348)	wall%compositions%neutralscomp(:)%type(:)%description (string) (9.8.1.1.3)
label (3211)	wall%compositions%neutralscomp(:)%label (string) (9.8.1.1.3)
edgespecies (3212)	wall%compositions%edgespecies(:) (edgespecies) (9.8.1.3.192)
nucindex (3298)	wall%compositions%edgespecies(:)%nucindex (integer) (9.8.1.1.2)
zmin (3298)	wall%compositions%edgespecies(:)%zmin (float) (9.8.1.1.1)
zmax (3298)	wall%compositions%edgespecies(:)%zmax (float) (9.8.1.1.1)
label (3298)	wall%compositions%edgespecies(:)%label (string) (9.8.1.1.3)
signature (3212)	wall%compositions%signature (identifier) (9.8.1.3.242)
id (3348)	wall%compositions%signature%id (string) (9.8.1.1.3)
flag (3348)	wall%compositions%signature%flag (integer) (9.8.1.1.2)
description (3348)	wall%compositions%signature%description (string) (9.8.1.1.3)
codeparam (3158)	wall%codeparam (codeparam) (9.8.1.3.84)
codename (3190)	wall%codeparam%codename (string) (9.8.1.1.3)
codeversion (3190)	wall%codeparam%codeversion (string) (9.8.1.1.3)
parameters (3190)	wall%codeparam%parameters (string) (9.8.1.1.3)
output_diag (3190)	wall%codeparam%output_diag (string) (9.8.1.1.3)
output_flag (3190)	wall%codeparam%output_flag (integer) (9.8.1.1.2)
time (3158)	wall%time (float) (9.8.1.1.1)

### 9.8.2.1.51 waves

datainfo (3159)	waves%datainfo (datainfo) (9.8.1.3.141)
dataprovider (3247)	waves%datainfo%dataprovider (string) (9.8.1.1.3)
putdate (3247)	waves%datainfo%putdate (string) (9.8.1.1.3)
source (3247)	waves%datainfo%source (string) (9.8.1.1.3)
comment (3247)	waves%datainfo%comment (string) (9.8.1.1.3)
cocos (3247)	waves%datainfo%cocos (integer) (9.8.1.1.2)
id (3247)	waves%datainfo%id (integer) (9.8.1.1.2)

isref (3247)	waves%datainfo%isref (integer) (9.8.1.1.2)
whatref (3247)	waves%datainfo%whatref (whatref) (9.8.1.3.513)
user (3619)	waves%datainfo%whatref%user (string) (9.8.1.1.3)
machine (3619)	waves%datainfo%whatref%machine (string) (9.8.1.1.3)
shot (3619)	waves%datainfo%whatref%shot (integer) (9.8.1.1.2)
run (3619)	waves%datainfo%whatref%run (integer) (9.8.1.1.2)
occurrence (3619)	waves%datainfo%whatref%occurrence (integer) (9.8.1.1.2)
putinfo (3247)	waves%datainfo%putinfo (putinfo) (9.8.1.3.349)
putmethod (3455)	waves%datainfo%putinfo%putmethod (string) (9.8.1.1.3)
putaccess (3455)	waves%datainfo%putinfo%putaccess (string) (9.8.1.1.3)
putlocation (3455)	waves%datainfo%putinfo%putlocation (string) (9.8.1.1.3)
rights (3455)	waves%datainfo%putinfo%rights (string) (9.8.1.1.3)
coherentwave (3159)	waves%coherentwave(:) (coherentwave) (9.8.1.3.86)
wave_id (3192)	waves%coherentwave(:)%wave_id (enum_instance) (9.8.1.3.195)
type (3301)	waves%coherentwave(:)%wave_id%type (identifier) (9.8.1.3.242)
id (3348)	waves%coherentwave(:)%wave_id%type%id (string) (9.8.1.1.3)
flag (3348)	waves%coherentwave(:)%wave_id%type%flag (integer) (9.8.1.1.2)
description (3348)	waves%coherentwave(:)%wave_id%type%description (string) (9.8.1.1.3)
name (3301)	waves%coherentwave(:)%wave_id%name (string) (9.8.1.1.3)
index (3301)	waves%coherentwave(:)%wave_id%index (integer) (9.8.1.1.2)
composition (3192)	waves%coherentwave(:)%composition (composition) (9.8.1.3.102)
amn (3208)	waves%coherentwave(:)%composition%amn (vecflt_type) (9.8.1.2.13)
zn (3208)	waves%coherentwave(:)%composition%zn (vecflt_type) (9.8.1.2.13)
zion (3208)	waves%coherentwave(:)%composition%zion (vecflt_type) (9.8.1.2.13)
imp_flag (3208)	waves%coherentwave(:)%composition%imp_flag (vecint_type) (9.8.1.2.14)
label (3208)	waves%coherentwave(:)%composition%label (vecstring_type) (9.8.1.2.15)
compositions (3192)	waves%coherentwave(:)%compositions (compositions_type) (9.8.1.3.106)
nuclei (3212)	waves%coherentwave(:)%compositions%nuclei(:) (nuclei) (9.8.1.3.306)
zn (3412)	waves%coherentwave(:)%compositions%nuclei(:)%zn (float) (9.8.1.1.1)
amn (3412)	waves%coherentwave(:)%compositions%nuclei(:)%amn (float) (9.8.1.1.1)
label (3412)	waves%coherentwave(:)%compositions%nuclei(:)%label (string) (9.8.1.1.3)
ions (3212)	waves%coherentwave(:)%compositions%ions(:) (ions) (9.8.1.3.247)
nucindex (3353)	waves%coherentwave(:)%compositions%ions(:)%nucindex (integer) (9.8.1.1.2)
zion (3353)	waves%coherentwave(:)%compositions%ions(:)%zion (float) (9.8.1.1.1)
imp_flag (3353)	waves%coherentwave(:)%compositions%ions(:)%imp_flag (integer) (9.8.1.1.2)
label (3353)	waves%coherentwave(:)%compositions%ions(:)%label (string) (9.8.1.1.3)
impurities (3212)	waves%coherentwave(:)%compositions%impurities(:) (impurities) (9.8.1.3.244)
nucindex (3350)	waves%coherentwave(:)%compositions%impurities(:)%nucindex (integer) (9.8.1.1.2)
i_ion (3350)	waves%coherentwave(:)%compositions%impurities(:)%i_ion (integer) (9.8.1.1.2)
nzimp (3350)	waves%coherentwave(:)%compositions%impurities(:)%nzimp (integer) (9.8.1.1.2)
zmin (3350)	waves%coherentwave(:)%compositions%impurities(:)%zmin (vecflt_type) (9.8.1.2.13)
zmax (3350)	waves%coherentwave(:)%compositions%impurities(:)%zmax (vecflt_type) (9.8.1.2.13)
label (3350)	waves%coherentwave(:)%compositions%impurities(:)%label (vecstring_type) (9.8.1.2.15)
neutralscomp (3212)	waves%coherentwave(:)%compositions%neutralscomp(:) (composition_neutralscomp) (9.8.1.3.105)
neutcomp (3211)	waves%coherentwave(:)%compositions%neutralscomp(:)%neutcomp(:) (composition_neutrals_neutcomp) (9.8.1.3.104)
nucindex (3210)	waves%coherentwave(:)%compositions%neutralscomp(:)%neutcomp(:)%nucindex (integer) (9.8.1.1.2)
multiplicity (3210)	waves%coherentwave(:)%compositions%neutralscomp(:)%neutcomp(:)%multiplicity (integer) (9.8.1.1.2)
type (3211)	waves%coherentwave(:)%compositions%neutralscomp(:)%type(:) (identifier) (9.8.1.3.242)
id (3348)	waves%coherentwave(:)%compositions%neutralscomp(:)%type(:)%id (string) (9.8.1.1.3)
flag (3348)	waves%coherentwave(:)%compositions%neutralscomp(:)%type(:)%flag (integer) (9.8.1.1.2)
description (3348)	waves%coherentwave(:)%compositions%neutralscomp(:)%type(:)%description (string) (9.8.1.1.3)
label (3211)	waves%coherentwave(:)%compositions%neutralscomp(:)%label (string) (9.8.1.1.3)
edgespecies (3212)	waves%coherentwave(:)%compositions%edgespecies(:) (edgespecies) (9.8.1.3.192)
nucindex (3298)	waves%coherentwave(:)%compositions%edgespecies(:)%nucindex (integer) (9.8.1.1.2)
zmin (3298)	waves%coherentwave(:)%compositions%edgespecies(:)%zmin (float) (9.8.1.1.1)
zmax (3298)	waves%coherentwave(:)%compositions%edgespecies(:)%zmax (float) (9.8.1.1.1)
label (3298)	waves%coherentwave(:)%compositions%edgespecies(:)%label (string) (9.8.1.1.3)
signature (3212)	waves%coherentwave(:)%compositions%signature (identifier) (9.8.1.3.242)

id (3348)	waves%coherentwave(:)%compositions%signature%id (string) (9.8.1.1.3)
flag (3348)	waves%coherentwave(:)%compositions%signature%flag (integer) (9.8.1.1.2)
description (3348)	waves%coherentwave(:)%compositions%signature%description (string) (9.8.1.1.3)
global_param (3192)	waves%coherentwave(:)%global_param (waves_global_param) (9.8.1.3.505)
name (3611)	waves%coherentwave(:)%global_param%name (string) (9.8.1.1.3)
type (3611)	waves%coherentwave(:)%global_param%type (string) (9.8.1.1.3)
f_assumption (3611)	waves%coherentwave(:)%global_param%f_assumption (vecint.type) (9.8.1.2.14)
code_type (3611)	waves%coherentwave(:)%global_param%code_type (integer) (9.8.1.1.2)
frequency (3611)	waves%coherentwave(:)%global_param%frequency (float) (9.8.1.1.1)
ntor (3611)	waves%coherentwave(:)%global_param%ntor (vecint.type) (9.8.1.2.14)
power_tot (3611)	waves%coherentwave(:)%global_param%power_tot (float) (9.8.1.1.1)
p_frac_ntor (3611)	waves%coherentwave(:)%global_param%p_frac_ntor (vecflt.type) (9.8.1.2.13)
pow_e (3611)	waves%coherentwave(:)%global_param%pow_e (float) (9.8.1.1.1)
pow_i (3611)	waves%coherentwave(:)%global_param%pow_i (vecflt.type) (9.8.1.2.13)
pow_z (3611)	waves%coherentwave(:)%global_param%pow_z (matflt.type) (9.8.1.2.10)
pow_fe (3611)	waves%coherentwave(:)%global_param%pow_fe (float) (9.8.1.1.1)
pow_fi (3611)	waves%coherentwave(:)%global_param%pow_fi (vecflt.type) (9.8.1.2.13)
pow_fz (3611)	waves%coherentwave(:)%global_param%pow_fz (matflt.type) (9.8.1.2.10)
pow_ntor_e (3611)	waves%coherentwave(:)%global_param%pow_ntor_e (vecflt.type) (9.8.1.2.13)
pow_ntor_i (3611)	waves%coherentwave(:)%global_param%pow_ntor_i (matflt.type) (9.8.1.2.10)
pow_ntor_z (3611)	waves%coherentwave(:)%global_param%pow_ntor_z (array3dflt.type) (9.8.1.2.2)
pow_ntor_fe (3611)	waves%coherentwave(:)%global_param%pow_ntor_fe (vecflt.type) (9.8.1.2.13)
pow_ntor_fi (3611)	waves%coherentwave(:)%global_param%pow_ntor_fi (matflt.type) (9.8.1.2.10)
pow_ntor_fz (3611)	waves%coherentwave(:)%global_param%pow_ntor_fz (array3dflt.type) (9.8.1.2.2)
cur_tor (3611)	waves%coherentwave(:)%global_param%cur_tor (float) (9.8.1.1.1)
cur_tor_ntor (3611)	waves%coherentwave(:)%global_param%cur_tor_ntor (vecflt.type) (9.8.1.2.13)
mag_axis (3611)	waves%coherentwave(:)%global_param%mag_axis (rz0D) (9.8.1.3.365)
r (3471)	waves%coherentwave(:)%global_param%mag_axis%r (float) (9.8.1.1.1)
z (3471)	waves%coherentwave(:)%global_param%mag_axis%z (float) (9.8.1.1.1)
toroid_field (3611)	waves%coherentwave(:)%global_param%toroid_field (b0r0) (9.8.1.3.61)
r0 (3167)	waves%coherentwave(:)%global_param%toroid_field%r0 (float) (9.8.1.1.1)
b0 (3167)	waves%coherentwave(:)%global_param%toroid_field%b0 (float) (9.8.1.1.1)
grid_1d (3192)	waves%coherentwave(:)%grid_1d (waves_grid_1d) (9.8.1.3.506)
rho_tor (3612)	waves%coherentwave(:)%grid_1d%rho_tor (vecflt.type) (9.8.1.2.13)
rho_tor_norm (3612)	waves%coherentwave(:)%grid_1d%rho_tor_norm (vecflt.type) (9.8.1.2.13)
psi (3612)	waves%coherentwave(:)%grid_1d%psi (vecflt.type) (9.8.1.2.13)
volume (3612)	waves%coherentwave(:)%grid_1d%volume (vecflt.type) (9.8.1.2.13)
area (3612)	waves%coherentwave(:)%grid_1d%area (vecflt.type) (9.8.1.2.13)
grid_2d (3192)	waves%coherentwave(:)%grid_2d (waves_grid_2d) (9.8.1.3.507)
grid_type (3613)	waves%coherentwave(:)%grid_2d%grid_type (integer) (9.8.1.1.2)
rho_tor_norm (3613)	waves%coherentwave(:)%grid_2d%rho_tor_norm (matflt.type) (9.8.1.2.10)
rho_tor (3613)	waves%coherentwave(:)%grid_2d%rho_tor (matflt.type) (9.8.1.2.10)
psi (3613)	waves%coherentwave(:)%grid_2d%psi (matflt.type) (9.8.1.2.10)
theta (3613)	waves%coherentwave(:)%grid_2d%theta (matflt.type) (9.8.1.2.10)
r (3613)	waves%coherentwave(:)%grid_2d%r (matflt.type) (9.8.1.2.10)
z (3613)	waves%coherentwave(:)%grid_2d%z (matflt.type) (9.8.1.2.10)
theta_info (3613)	waves%coherentwave(:)%grid_2d%theta_info (theta_info) (9.8.1.3.464)
angl_type (3570)	waves%coherentwave(:)%grid_2d%theta_info%angl_type (integer) (9.8.1.1.2)
th2th_pol (3570)	waves%coherentwave(:)%grid_2d%theta_info%th2th_pol (matflt.type) (9.8.1.2.10)
profiles_1d (3192)	waves%coherentwave(:)%profiles_1d (waves_profiles_1d) (9.8.1.3.508)
powd_tot (3614)	waves%coherentwave(:)%profiles_1d%powd_tot (vecflt.type) (9.8.1.2.13)
powd_e (3614)	waves%coherentwave(:)%profiles_1d%powd_e (vecflt.type) (9.8.1.2.13)
powd_i (3614)	waves%coherentwave(:)%profiles_1d%powd_i (matflt.type) (9.8.1.2.10)
powd_z (3614)	waves%coherentwave(:)%profiles_1d%powd_z (array3dflt.type) (9.8.1.2.2)
powd_fe (3614)	waves%coherentwave(:)%profiles_1d%powd_fe (vecflt.type) (9.8.1.2.13)
powd_fi (3614)	waves%coherentwave(:)%profiles_1d%powd_fi (matflt.type) (9.8.1.2.10)
powd_fz (3614)	waves%coherentwave(:)%profiles_1d%powd_fz (array3dflt.type) (9.8.1.2.2)
powd_ntor (3614)	waves%coherentwave(:)%profiles_1d%powd_ntor (matflt.type) (9.8.1.2.10)
powd_ntor_e (3614)	waves%coherentwave(:)%profiles_1d%powd_ntor_e (matflt.type) (9.8.1.2.10)
powd_ntor_i (3614)	waves%coherentwave(:)%profiles_1d%powd_ntor_i (array3dflt.type) (9.8.1.2.2)
powd_ntor_z (3614)	waves%coherentwave(:)%profiles_1d%powd_ntor_z (array4dflt.type) (9.8.1.2.4)

powd_ntor_fe (3614)	waves%coherentwave(:)%profiles.1d%powd_ntor_fe (matflt_type) (9.8.1.2.10)
powd_ntor_fi (3614)	waves%coherentwave(:)%profiles.1d%powd_ntor_fi (array3dflt_type) (9.8.1.2.2)
powd_ntor_fz (3614)	waves%coherentwave(:)%profiles.1d%powd_ntor_fz (array4dflt_type) (9.8.1.2.4)
curd_tor (3614)	waves%coherentwave(:)%profiles.1d%curd_tor (vecflt_type) (9.8.1.2.13)
curd_torntor (3614)	waves%coherentwave(:)%profiles.1d%curd_torntor (matflt_type) (9.8.1.2.10)
pow_tot (3614)	waves%coherentwave(:)%profiles.1d%pow_tot (vecflt_type) (9.8.1.2.13)
pow_e (3614)	waves%coherentwave(:)%profiles.1d%pow_e (vecflt_type) (9.8.1.2.13)
pow_i (3614)	waves%coherentwave(:)%profiles.1d%pow_i (matflt_type) (9.8.1.2.10)
pow_z (3614)	waves%coherentwave(:)%profiles.1d%pow_z (array3dflt_type) (9.8.1.2.2)
pow_fe (3614)	waves%coherentwave(:)%profiles.1d%pow_fe (vecflt_type) (9.8.1.2.13)
pow_fi (3614)	waves%coherentwave(:)%profiles.1d%pow_fi (matflt_type) (9.8.1.2.10)
pow_fz (3614)	waves%coherentwave(:)%profiles.1d%pow_fz (array3dflt_type) (9.8.1.2.2)
pow_ntor (3614)	waves%coherentwave(:)%profiles.1d%pow_ntor (matflt_type) (9.8.1.2.10)
pow_ntor_e (3614)	waves%coherentwave(:)%profiles.1d%pow_ntor_e (matflt_type) (9.8.1.2.10)
pow_ntor_i (3614)	waves%coherentwave(:)%profiles.1d%pow_ntor_i (array3dflt_type) (9.8.1.2.2)
pow_ntor_z (3614)	waves%coherentwave(:)%profiles.1d%pow_ntor_z (array3dflt_type) (9.8.1.2.2)
pow_ntor_fe (3614)	waves%coherentwave(:)%profiles.1d%pow_ntor_fe (matflt_type) (9.8.1.2.10)
pow_ntor_fi (3614)	waves%coherentwave(:)%profiles.1d%pow_ntor_fi (array3dflt_type) (9.8.1.2.2)
pow_ntor_fz (3614)	waves%coherentwave(:)%profiles.1d%pow_ntor_fz (array3dflt_type) (9.8.1.2.2)
curd_par (3614)	waves%coherentwave(:)%profiles.1d%curd_par (vecflt_type) (9.8.1.2.13)
curd_parntor (3614)	waves%coherentwave(:)%profiles.1d%curd_parntor (matflt_type) (9.8.1.2.10)
cur_tor (3614)	waves%coherentwave(:)%profiles.1d%cur_tor (vecflt_type) (9.8.1.2.13)
cur_tor_ntor (3614)	waves%coherentwave(:)%profiles.1d%cur_tor_ntor (matflt_type) (9.8.1.2.10)
e_plus_ave (3614)	waves%coherentwave(:)%profiles.1d%e_plus_ave (matflt_type) (9.8.1.2.10)
e_minus_ave (3614)	waves%coherentwave(:)%profiles.1d%e_minus_ave (matflt_type) (9.8.1.2.10)
e_para_ave (3614)	waves%coherentwave(:)%profiles.1d%e_para_ave (matflt_type) (9.8.1.2.10)
k_perp_ave (3614)	waves%coherentwave(:)%profiles.1d%k_perp_ave (matflt_type) (9.8.1.2.10)
profiles_2d (3192)	waves%coherentwave(:)%profiles.2d (waves_profiles_2d) (9.8.1.3.509)
powd_tot (3615)	waves%coherentwave(:)%profiles.2d%powd_tot (matflt_type) (9.8.1.2.10)
powd_e (3615)	waves%coherentwave(:)%profiles.2d%powd_e (matflt_type) (9.8.1.2.10)
powd_i (3615)	waves%coherentwave(:)%profiles.2d%powd_i (array3dflt_type) (9.8.1.2.2)
powd_z (3615)	waves%coherentwave(:)%profiles.2d%powd_z (array4dflt_type) (9.8.1.2.4)
powd_fe (3615)	waves%coherentwave(:)%profiles.2d%powd_fe (matflt_type) (9.8.1.2.10)
powd_fi (3615)	waves%coherentwave(:)%profiles.2d%powd_fi (array3dflt_type) (9.8.1.2.2)
powd_fz (3615)	waves%coherentwave(:)%profiles.2d%powd_fz (array4dflt_type) (9.8.1.2.4)
powd_ntor (3615)	waves%coherentwave(:)%profiles.2d%powd_ntor (array3dflt_type) (9.8.1.2.2)
powd_ntor_e (3615)	waves%coherentwave(:)%profiles.2d%powd_ntor_e (array3dflt_type) (9.8.1.2.2)
powd_ntor_i (3615)	waves%coherentwave(:)%profiles.2d%powd_ntor_i (array4dflt_type) (9.8.1.2.4)
powd_ntor_z (3615)	waves%coherentwave(:)%profiles.2d%powd_ntor_z (array5dflt_type) (9.8.1.2.5)
powd_ntor_fe (3615)	waves%coherentwave(:)%profiles.2d%powd_ntor_fe (array3dflt_type) (9.8.1.2.2)
powd_ntor_fi (3615)	waves%coherentwave(:)%profiles.2d%powd_ntor_fi (array4dflt_type) (9.8.1.2.4)
powd_ntor_fz (3615)	waves%coherentwave(:)%profiles.2d%powd_ntor_fz (array5dflt_type) (9.8.1.2.5)
powd_iharm (3615)	waves%coherentwave(:)%profiles.2d%powd_iharm (array5dflt_type) (9.8.1.2.5)
beamtracing (3192)	waves%coherentwave(:)%beamtracing(:) (beamtracing) (9.8.1.3.68)
npoints (3174)	waves%coherentwave(:)%beamtracing(:)%npoints (integer) (9.8.1.1.2)
power (3174)	waves%coherentwave(:)%beamtracing(:)%power (float) (9.8.1.1.1)
dnpar (3174)	waves%coherentwave(:)%beamtracing(:)%dnpar (vecflt_type) (9.8.1.2.13)
length (3174)	waves%coherentwave(:)%beamtracing(:)%length (vecflt_type) (9.8.1.2.13)
position (3174)	waves%coherentwave(:)%beamtracing(:)%position (waves_rtposition) (9.8.1.3.510)
r (3616)	waves%coherentwave(:)%beamtracing(:)%position%r (vecflt_type) (9.8.1.2.13)
z (3616)	waves%coherentwave(:)%beamtracing(:)%position%z (vecflt_type) (9.8.1.2.13)
phi (3616)	waves%coherentwave(:)%beamtracing(:)%position%phi (vecflt_type) (9.8.1.2.13)
psi (3616)	waves%coherentwave(:)%beamtracing(:)%position%psi (vecflt_type) (9.8.1.2.13)
theta (3616)	waves%coherentwave(:)%beamtracing(:)%position%theta (vecflt_type) (9.8.1.2.13)
wavevector (3174)	waves%coherentwave(:)%beamtracing(:)%wavevector (waves_rtwavevector) (9.8.1.3.511)
kr (3617)	waves%coherentwave(:)%beamtracing(:)%wavevector%kr (vecflt_type) (9.8.1.2.13)
kz (3617)	waves%coherentwave(:)%beamtracing(:)%wavevector%kz (vecflt_type) (9.8.1.2.13)
kphi (3617)	waves%coherentwave(:)%beamtracing(:)%wavevector%kphi (vecflt_type) (9.8.1.2.13)
npar (3617)	waves%coherentwave(:)%beamtracing(:)%wavevector%npar (vecflt_type) (9.8.1.2.13)
nperp (3617)	waves%coherentwave(:)%beamtracing(:)%wavevector%nperp (vecflt_type) (9.8.1.2.13)
ntor (3617)	waves%coherentwave(:)%beamtracing(:)%wavevector%ntor (vecflt_type) (9.8.1.2.13)



var_ntor (3617)	waves%coherentwave(:)%beamtracing(:)%wavevector%var_ntor (integer) (9.8.1.1.2)
polarization (3174)	waves%coherentwave(:)%beamtracing(:)%polarization (polarization) (9.8.1.3.342)
epol_p_re (3448)	waves%coherentwave(:)%beamtracing(:)%polarization%epol_p_re (vecflt_type) (9.8.1.2.13)
epol_p_im (3448)	waves%coherentwave(:)%beamtracing(:)%polarization%epol_p_im (vecflt_type) (9.8.1.2.13)
epol_m_re (3448)	waves%coherentwave(:)%beamtracing(:)%polarization%epol_m_re (vecflt_type) (9.8.1.2.13)
epol_m_im (3448)	waves%coherentwave(:)%beamtracing(:)%polarization%epol_m_im (vecflt_type) (9.8.1.2.13)
epol_par_re (3448)	waves%coherentwave(:)%beamtracing(:)%polarization%epol_par_re (vecflt_type) (9.8.1.2.13)
epol_par_im (3448)	waves%coherentwave(:)%beamtracing(:)%polarization%epol_par_im (vecflt_type) (9.8.1.2.13)
powerflow (3174)	waves%coherentwave(:)%beamtracing(:)%powerflow (powerflow) (9.8.1.3.345)
phi_perp (3451)	waves%coherentwave(:)%beamtracing(:)%powerflow%phi_perp (vecflt_type) (9.8.1.2.13)
phi_par (3451)	waves%coherentwave(:)%beamtracing(:)%powerflow%phi_par (vecflt_type) (9.8.1.2.13)
power_e (3451)	waves%coherentwave(:)%beamtracing(:)%powerflow%power_e (vecflt_type) (9.8.1.2.13)
power_i (3451)	waves%coherentwave(:)%beamtracing(:)%powerflow%power_i (matflt_type) (9.8.1.2.10)
fullwave (3192)	waves%coherentwave(:)%fullwave (fullwave) (9.8.1.3.216)
grid (3322)	waves%coherentwave(:)%fullwave%grid (complexgrid) (9.8.1.3.89)
uid (3195)	waves%coherentwave(:)%fullwave%grid%uid (integer) (9.8.1.1.2)
id (3195)	waves%coherentwave(:)%fullwave%grid%id (string) (9.8.1.1.3)
spaces (3195)	waves%coherentwave(:)%fullwave%grid%spaces(:) (complexgrid_space) (9.8.1.3.98)
geotype (3204)	waves%coherentwave(:)%fullwave%grid%spaces(:)%geotype (vecint_type) (9.8.1.2.14)
geotypeid (3204)	waves%coherentwave(:)%fullwave%grid%spaces(:)%geotypeid (vecstring_type) (9.8.1.2.15)
coordtype (3204)	waves%coherentwave(:)%fullwave%grid%spaces(:)%coordtype (matint_type) (9.8.1.2.11)
objects (3204)	waves%coherentwave(:)%fullwave%grid%spaces(:)%objects(:) (objects) (9.8.1.3.307)
boundary (3413)	waves%coherentwave(:)%fullwave%grid%spaces(:)%objects(:)%boundary (matint_type) (9.8.1.2.11)
neighbour (3413)	waves%coherentwave(:)%fullwave%grid%spaces(:)%objects(:)%neighbour (array3dint_type) (9.8.1.2.3)
geo (3413)	waves%coherentwave(:)%fullwave%grid%spaces(:)%objects(:)%geo (array4dflt_type) (9.8.1.2.4)
measure (3413)	waves%coherentwave(:)%fullwave%grid%spaces(:)%objects(:)%measure (matflt_type) (9.8.1.2.10)
xpoints (3204)	waves%coherentwave(:)%fullwave%grid%spaces(:)%xpoints (vecint_type) (9.8.1.2.14)
subgrids (3195)	waves%coherentwave(:)%fullwave%grid%subgrids(:) (complexgrid_subgrid) (9.8.1.3.99)
id (3205)	waves%coherentwave(:)%fullwave%grid%subgrids(:)%id (string) (9.8.1.1.3)
list (3205)	waves%coherentwave(:)%fullwave%grid%subgrids(:)%list(:) (complexgrid_objectlist) (9.8.1.3.93)
cls (3199)	waves%coherentwave(:)%fullwave%grid%subgrids(:)%list(:)%cls (vecint_type) (9.8.1.2.14)
indset (3199)	waves%coherentwave(:)%fullwave%grid%subgrids(:)%list(:)%indset(:) (complex_grid_indexlist) (9.8.1.3.91)
range (3197)	waves%coherentwave(:)%fullwave%grid%subgrids(:)%list(:)%indset(:)%range (vecint_type) (9.8.1.2.14)
ind (3197)	waves%coherentwave(:)%fullwave%grid%subgrids(:)%list(:)%indset(:)%ind (vecint_type) (9.8.1.2.14)
ind (3199)	waves%coherentwave(:)%fullwave%grid%subgrids(:)%list(:)%ind (matint_type) (9.8.1.2.11)
metric (3195)	waves%coherentwave(:)%fullwave%grid%metric (complexgrid_metric) (9.8.1.3.92)
measure (3198)	waves%coherentwave(:)%fullwave%grid%metric%measure(:) (complexgrid_scalar) (9.8.1.3.94)
griduid (3200)	waves%coherentwave(:)%fullwave%grid%metric%measure(:)%griduid (integer) (9.8.1.1.2)
subgrid (3200)	waves%coherentwave(:)%fullwave%grid%metric%measure(:)%subgrid (integer) (9.8.1.1.2)
scalar (3200)	waves%coherentwave(:)%fullwave%grid%metric%measure(:)%scalar (vecflt_type) (9.8.1.2.13)
vector (3200)	waves%coherentwave(:)%fullwave%grid%metric%measure(:)%vector (matflt_type) (9.8.1.2.10)
matrix (3200)	waves%coherentwave(:)%fullwave%grid%metric%measure(:)%matrix (array3dflt_type) (9.8.1.2.2)
g11 (3198)	waves%coherentwave(:)%fullwave%grid%metric%g11(:) (complexgrid_scalar) (9.8.1.3.94)
griduid (3200)	waves%coherentwave(:)%fullwave%grid%metric%g11(:)%griduid (integer) (9.8.1.1.2)
subgrid (3200)	waves%coherentwave(:)%fullwave%grid%metric%g11(:)%subgrid (integer) (9.8.1.1.2)
scalar (3200)	waves%coherentwave(:)%fullwave%grid%metric%g11(:)%scalar (vecflt_type) (9.8.1.2.13)
vector (3200)	waves%coherentwave(:)%fullwave%grid%metric%g11(:)%vector (matflt_type) (9.8.1.2.10)
matrix (3200)	waves%coherentwave(:)%fullwave%grid%metric%g11(:)%matrix (array3dflt_type) (9.8.1.2.2)
g12 (3198)	waves%coherentwave(:)%fullwave%grid%metric%g12(:) (complexgrid_scalar) (9.8.1.3.94)
griduid (3200)	waves%coherentwave(:)%fullwave%grid%metric%g12(:)%griduid (integer) (9.8.1.1.2)
subgrid (3200)	waves%coherentwave(:)%fullwave%grid%metric%g12(:)%subgrid (integer) (9.8.1.1.2)
scalar (3200)	waves%coherentwave(:)%fullwave%grid%metric%g12(:)%scalar (vecflt_type) (9.8.1.2.13)
vector (3200)	waves%coherentwave(:)%fullwave%grid%metric%g12(:)%vector (matflt_type) (9.8.1.2.10)

matrix (3200)	waves%coherentwave(:)%fullwave%grid%metric%g12(:)%matrix (array3dfft_type) (9.8.1.2.2)
g13 (3198)	waves%coherentwave(:)%fullwave%grid%metric%g13(:) (complexgrid_scalar) (9.8.1.3.94)
griduid (3200)	waves%coherentwave(:)%fullwave%grid%metric%g13(:)%griduid (integer) (9.8.1.1.2)
subgrid (3200)	waves%coherentwave(:)%fullwave%grid%metric%g13(:)%subgrid (integer) (9.8.1.1.2)
scalar (3200)	waves%coherentwave(:)%fullwave%grid%metric%g13(:)%scalar (vecflt_type) (9.8.1.2.13)
vector (3200)	waves%coherentwave(:)%fullwave%grid%metric%g13(:)%vector (matflt_type) (9.8.1.2.10)
matrix (3200)	waves%coherentwave(:)%fullwave%grid%metric%g13(:)%matrix (array3dfft_type) (9.8.1.2.2)
g22 (3198)	waves%coherentwave(:)%fullwave%grid%metric%g22(:) (complexgrid_scalar) (9.8.1.3.94)
griduid (3200)	waves%coherentwave(:)%fullwave%grid%metric%g22(:)%griduid (integer) (9.8.1.1.2)
subgrid (3200)	waves%coherentwave(:)%fullwave%grid%metric%g22(:)%subgrid (integer) (9.8.1.1.2)
scalar (3200)	waves%coherentwave(:)%fullwave%grid%metric%g22(:)%scalar (vecflt_type) (9.8.1.2.13)
vector (3200)	waves%coherentwave(:)%fullwave%grid%metric%g22(:)%vector (matflt_type) (9.8.1.2.10)
matrix (3200)	waves%coherentwave(:)%fullwave%grid%metric%g22(:)%matrix (array3dfft_type) (9.8.1.2.2)
g23 (3198)	waves%coherentwave(:)%fullwave%grid%metric%g23(:) (complexgrid_scalar) (9.8.1.3.94)
griduid (3200)	waves%coherentwave(:)%fullwave%grid%metric%g23(:)%griduid (integer) (9.8.1.1.2)
subgrid (3200)	waves%coherentwave(:)%fullwave%grid%metric%g23(:)%subgrid (integer) (9.8.1.1.2)
scalar (3200)	waves%coherentwave(:)%fullwave%grid%metric%g23(:)%scalar (vecflt_type) (9.8.1.2.13)
vector (3200)	waves%coherentwave(:)%fullwave%grid%metric%g23(:)%vector (matflt_type) (9.8.1.2.10)
matrix (3200)	waves%coherentwave(:)%fullwave%grid%metric%g23(:)%matrix (array3dfft_type) (9.8.1.2.2)
g33 (3198)	waves%coherentwave(:)%fullwave%grid%metric%g33(:) (complexgrid_scalar) (9.8.1.3.94)
griduid (3200)	waves%coherentwave(:)%fullwave%grid%metric%g33(:)%griduid (integer) (9.8.1.1.2)
subgrid (3200)	waves%coherentwave(:)%fullwave%grid%metric%g33(:)%subgrid (integer) (9.8.1.1.2)
scalar (3200)	waves%coherentwave(:)%fullwave%grid%metric%g33(:)%scalar (vecflt_type) (9.8.1.2.13)
vector (3200)	waves%coherentwave(:)%fullwave%grid%metric%g33(:)%vector (matflt_type) (9.8.1.2.10)
matrix (3200)	waves%coherentwave(:)%fullwave%grid%metric%g33(:)%matrix (array3dfft_type) (9.8.1.2.2)
jacobian (3198)	waves%coherentwave(:)%fullwave%grid%metric%jacobian(:) (complexgrid_scalar) (9.8.1.3.94)
griduid (3200)	waves%coherentwave(:)%fullwave%grid%metric%jacobian(:)%griduid (integer) (9.8.1.1.2)
subgrid (3200)	waves%coherentwave(:)%fullwave%grid%metric%jacobian(:)%subgrid (integer) (9.8.1.1.2)
scalar (3200)	waves%coherentwave(:)%fullwave%grid%metric%jacobian(:)%scalar (vecflt_type) (9.8.1.2.13)
vector (3200)	waves%coherentwave(:)%fullwave%grid%metric%jacobian(:)%vector (matflt_type) (9.8.1.2.10)
matrix (3200)	waves%coherentwave(:)%fullwave%grid%metric%jacobian(:)%matrix (array3dfft_type) (9.8.1.2.2)
geo (3195)	waves%coherentwave(:)%fullwave%grid%geo(:) (complexgrid_geo_global) (9.8.1.3.90)
geotype (3196)	waves%coherentwave(:)%fullwave%grid%geo(:)%geotype (integer) (9.8.1.1.2)
geotypeid (3196)	waves%coherentwave(:)%fullwave%grid%geo(:)%geotypeid (string) (9.8.1.1.3)
coordtype (3196)	waves%coherentwave(:)%fullwave%grid%geo(:)%coordtype (vecint_type) (9.8.1.2.14)
geo_matrix (3196)	waves%coherentwave(:)%fullwave%grid%geo(:)%geo_matrix(:) (complexgrid_scalar) (9.8.1.3.94)
griduid (3200)	waves%coherentwave(:)%fullwave%grid%geo(:)%geo_matrix(:)%griduid (integer) (9.8.1.1.2)
subgrid (3200)	waves%coherentwave(:)%fullwave%grid%geo(:)%geo_matrix(:)%subgrid (integer) (9.8.1.1.2)
scalar (3200)	waves%coherentwave(:)%fullwave%grid%geo(:)%geo_matrix(:)%scalar (vecflt_type) (9.8.1.2.13)
vector (3200)	waves%coherentwave(:)%fullwave%grid%geo(:)%geo_matrix(:)%vector (matflt_type) (9.8.1.2.10)
matrix (3200)	waves%coherentwave(:)%fullwave%grid%geo(:)%geo_matrix(:)%matrix (array3dfft_type) (9.8.1.2.2)
measure (3196)	waves%coherentwave(:)%fullwave%grid%geo(:)%measure(:) (complexgrid_scalar) (9.8.1.3.94)
griduid (3200)	waves%coherentwave(:)%fullwave%grid%geo(:)%measure(:)%griduid (integer) (9.8.1.1.2)
subgrid (3200)	waves%coherentwave(:)%fullwave%grid%geo(:)%measure(:)%subgrid (integer) (9.8.1.1.2)
scalar (3200)	waves%coherentwave(:)%fullwave%grid%geo(:)%measure(:)%scalar (vecflt_type) (9.8.1.2.13)
vector (3200)	waves%coherentwave(:)%fullwave%grid%geo(:)%measure(:)%vector (matflt_type) (9.8.1.2.10)
matrix (3200)	waves%coherentwave(:)%fullwave%grid%geo(:)%measure(:)%matrix (array3dfft_type) (9.8.1.2.2)
bases (3195)	waves%coherentwave(:)%fullwave%grid%bases(:) (complexgrid_vector) (9.8.1.3.100)
griduid (3206)	waves%coherentwave(:)%fullwave%grid%bases(:)%griduid (integer) (9.8.1.1.2)
label (3206)	waves%coherentwave(:)%fullwave%grid%bases(:)%label (string) (9.8.1.1.3)
comp (3206)	waves%coherentwave(:)%fullwave%grid%bases(:)%comp(:) (complexgrid_scalar) (9.8.1.3.94)
griduid (3200)	waves%coherentwave(:)%fullwave%grid%bases(:)%comp(:)%griduid (integer) (9.8.1.1.2)
subgrid (3200)	waves%coherentwave(:)%fullwave%grid%bases(:)%comp(:)%subgrid (integer) (9.8.1.1.2)
scalar (3200)	waves%coherentwave(:)%fullwave%grid%bases(:)%comp(:)%scalar (vecflt_type) (9.8.1.2.13)
vector (3200)	waves%coherentwave(:)%fullwave%grid%bases(:)%comp(:)%vector (matflt_type) (9.8.1.2.10)



matrix (3200)	waves%coherentwave(:)%fullwave%grid%bases(:)%comp(:)%matrix (array3dflt_type) (9.8.1.2.2)
align (3206)	waves%coherentwave(:)%fullwave%grid%bases(:)%align (vecint_type) (9.8.1.2.14)
alignid (3206)	waves%coherentwave(:)%fullwave%grid%bases(:)%alignid (vecstring_type) (9.8.1.2.15)
basis (3206)	waves%coherentwave(:)%fullwave%grid%bases(:)%basis (integer) (9.8.1.1.2)
e_components (3322)	waves%coherentwave(:)%fullwave%e_components (e_components) (9.8.1.3.180)
e_plus (3286)	waves%coherentwave(:)%fullwave%e_components%e_plus (complexgrid_scalar_cplx) (9.8.1.3.95)
griduid (3201)	waves%coherentwave(:)%fullwave%e_components%e_plus%griduid (integer) (9.8.1.1.2)
subgrid (3201)	waves%coherentwave(:)%fullwave%e_components%e_plus%subgrid (integer) (9.8.1.1.2)
scalar (3201)	waves%coherentwave(:)%fullwave%e_components%e_plus%scalar (vecplx_type) (9.8.1.2.12)
vector (3201)	waves%coherentwave(:)%fullwave%e_components%e_plus%vector (matcplx_type) (9.8.1.2.9)
matrix (3201)	waves%coherentwave(:)%fullwave%e_components%e_plus%matrix (array3dcplx_type) (9.8.1.2.1)
e_minus (3286)	waves%coherentwave(:)%fullwave%e_components%e_minus (complexgrid_scalar_cplx) (9.8.1.3.95)
griduid (3201)	waves%coherentwave(:)%fullwave%e_components%e_minus%griduid (integer) (9.8.1.1.2)
subgrid (3201)	waves%coherentwave(:)%fullwave%e_components%e_minus%subgrid (integer) (9.8.1.1.2)
scalar (3201)	waves%coherentwave(:)%fullwave%e_components%e_minus%scalar (vecplx_type) (9.8.1.2.12)
vector (3201)	waves%coherentwave(:)%fullwave%e_components%e_minus%vector (matcplx_type) (9.8.1.2.9)
matrix (3201)	waves%coherentwave(:)%fullwave%e_components%e_minus%matrix (array3dcplx_type) (9.8.1.2.1)
e_para (3286)	waves%coherentwave(:)%fullwave%e_components%e_para (complexgrid_scalar_cplx) (9.8.1.3.95)
griduid (3201)	waves%coherentwave(:)%fullwave%e_components%e_para%griduid (integer) (9.8.1.1.2)
subgrid (3201)	waves%coherentwave(:)%fullwave%e_components%e_para%subgrid (integer) (9.8.1.1.2)
scalar (3201)	waves%coherentwave(:)%fullwave%e_components%e_para%scalar (vecplx_type) (9.8.1.2.12)
vector (3201)	waves%coherentwave(:)%fullwave%e_components%e_para%vector (matcplx_type) (9.8.1.2.9)
matrix (3201)	waves%coherentwave(:)%fullwave%e_components%e_para%matrix (array3dcplx_type) (9.8.1.2.1)
e_norm (3286)	waves%coherentwave(:)%fullwave%e_components%e_norm (complexgrid_scalar_cplx) (9.8.1.3.95)
griduid (3201)	waves%coherentwave(:)%fullwave%e_components%e_norm%griduid (integer) (9.8.1.1.2)
subgrid (3201)	waves%coherentwave(:)%fullwave%e_components%e_norm%subgrid (integer) (9.8.1.1.2)
scalar (3201)	waves%coherentwave(:)%fullwave%e_components%e_norm%scalar (vecplx_type) (9.8.1.2.12)
vector (3201)	waves%coherentwave(:)%fullwave%e_components%e_norm%vector (matcplx_type) (9.8.1.2.9)
matrix (3201)	waves%coherentwave(:)%fullwave%e_components%e_norm%matrix (array3dcplx_type) (9.8.1.2.1)
e_binorm (3286)	waves%coherentwave(:)%fullwave%e_components%e_binorm (complexgrid_scalar_cplx) (9.8.1.3.95)
griduid (3201)	waves%coherentwave(:)%fullwave%e_components%e_binorm%griduid (integer) (9.8.1.1.2)
subgrid (3201)	waves%coherentwave(:)%fullwave%e_components%e_binorm%subgrid (integer) (9.8.1.1.2)
scalar (3201)	waves%coherentwave(:)%fullwave%e_components%e_binorm%scalar (vecplx_type) (9.8.1.2.12)
vector (3201)	waves%coherentwave(:)%fullwave%e_components%e_binorm%vector (matcplx_type) (9.8.1.2.9)
matrix (3201)	waves%coherentwave(:)%fullwave%e_components%e_binorm%matrix (array3dcplx_type) (9.8.1.2.1)
b_norm (3286)	waves%coherentwave(:)%fullwave%e_components%b_norm (complexgrid_scalar_cplx) (9.8.1.3.95)
griduid (3201)	waves%coherentwave(:)%fullwave%e_components%b_norm%griduid (integer) (9.8.1.1.2)
subgrid (3201)	waves%coherentwave(:)%fullwave%e_components%b_norm%subgrid (integer) (9.8.1.1.2)
scalar (3201)	waves%coherentwave(:)%fullwave%e_components%b_norm%scalar (vecplx_type) (9.8.1.2.12)
vector (3201)	waves%coherentwave(:)%fullwave%e_components%b_norm%vector (matcplx_type) (9.8.1.2.9)
matrix (3201)	waves%coherentwave(:)%fullwave%e_components%b_norm%matrix (array3dcplx_type) (9.8.1.2.1)
b_binorm (3286)	waves%coherentwave(:)%fullwave%e_components%b_binorm (complexgrid_scalar_cplx) (9.8.1.3.95)
griduid (3201)	waves%coherentwave(:)%fullwave%e_components%b_binorm%griduid (integer) (9.8.1.1.2)
subgrid (3201)	waves%coherentwave(:)%fullwave%e_components%b_binorm%subgrid (integer) (9.8.1.1.2)
scalar (3201)	waves%coherentwave(:)%fullwave%e_components%b_binorm%scalar (vecplx_type) (9.8.1.2.12)
vector (3201)	waves%coherentwave(:)%fullwave%e_components%b_binorm%vector (matcplx_type) (9.8.1.2.9)

matrix (3201)	waves%coherentwave(:)%fullwave%e_components%b_binorm%matrix (array3dcplx_type) (9.8.1.2.1)
b_para (3286)	waves%coherentwave(:)%fullwave%e_components%b_para (complexgrid_scalar_cplx) (9.8.1.3.95)
griduid (3201)	waves%coherentwave(:)%fullwave%e_components%b_para%griduid (integer) (9.8.1.1.2)
subgrid (3201)	waves%coherentwave(:)%fullwave%e_components%b_para%subgrid (integer) (9.8.1.1.2)
scalar (3201)	waves%coherentwave(:)%fullwave%e_components%b_para%scalar (vecplx_type) (9.8.1.2.12)
vector (3201)	waves%coherentwave(:)%fullwave%e_components%b_para%vector (matcplx_type) (9.8.1.2.9)
matrix (3201)	waves%coherentwave(:)%fullwave%e_components%b_para%matrix (array3dcplx_type) (9.8.1.2.1)
k_perp (3286)	waves%coherentwave(:)%fullwave%e_components%k_perp (complexgrid_scalar_cplx) (9.8.1.3.95)
griduid (3201)	waves%coherentwave(:)%fullwave%e_components%k_perp%griduid (integer) (9.8.1.1.2)
subgrid (3201)	waves%coherentwave(:)%fullwave%e_components%k_perp%subgrid (integer) (9.8.1.1.2)
scalar (3201)	waves%coherentwave(:)%fullwave%e_components%k_perp%scalar (vecplx_type) (9.8.1.2.12)
vector (3201)	waves%coherentwave(:)%fullwave%e_components%k_perp%vector (matcplx_type) (9.8.1.2.9)
matrix (3201)	waves%coherentwave(:)%fullwave%e_components%k_perp%matrix (array3dcplx_type) (9.8.1.2.1)
pol_decomp (3322)	waves%coherentwave(:)%fullwave%pol_decomp (pol_decomp) (9.8.1.3.340)
mpol (3446)	waves%coherentwave(:)%fullwave%pol_decomp%mpol (vecint_type) (9.8.1.2.14)
e_plus (3446)	waves%coherentwave(:)%fullwave%pol_decomp%e_plus (array3dfft_type) (9.8.1.2.2)
e_plus_ph (3446)	waves%coherentwave(:)%fullwave%pol_decomp%e_plus_ph (array3dfft_type) (9.8.1.2.2)
e_minus (3446)	waves%coherentwave(:)%fullwave%pol_decomp%e_minus (array3dfft_type) (9.8.1.2.2)
e_minus_ph (3446)	waves%coherentwave(:)%fullwave%pol_decomp%e_minus_ph (array3dfft_type) (9.8.1.2.2)
e_norm (3446)	waves%coherentwave(:)%fullwave%pol_decomp%e_norm (array3dfft_type) (9.8.1.2.2)
e_norm_ph (3446)	waves%coherentwave(:)%fullwave%pol_decomp%e_norm_ph (array3dfft_type) (9.8.1.2.2)
e_binorm (3446)	waves%coherentwave(:)%fullwave%pol_decomp%e_binorm (array3dfft_type) (9.8.1.2.2)
e_binorm_ph (3446)	waves%coherentwave(:)%fullwave%pol_decomp%e_binorm_ph (array3dfft_type) (9.8.1.2.2)
e_para (3446)	waves%coherentwave(:)%fullwave%pol_decomp%e_para (array3dfft_type) (9.8.1.2.2)
e_para_ph (3446)	waves%coherentwave(:)%fullwave%pol_decomp%e_para_ph (array3dfft_type) (9.8.1.2.2)
b_norm (3446)	waves%coherentwave(:)%fullwave%pol_decomp%b_norm (array3dfft_type) (9.8.1.2.2)
b_norm_ph (3446)	waves%coherentwave(:)%fullwave%pol_decomp%b_norm_ph (array3dfft_type) (9.8.1.2.2)
b_binorm (3446)	waves%coherentwave(:)%fullwave%pol_decomp%b_binorm (array3dfft_type) (9.8.1.2.2)
b_binorm_ph (3446)	waves%coherentwave(:)%fullwave%pol_decomp%b_binorm_ph (array3dfft_type) (9.8.1.2.2)
b_para (3446)	waves%coherentwave(:)%fullwave%pol_decomp%b_para (array3dfft_type) (9.8.1.2.2)
b_para_ph (3446)	waves%coherentwave(:)%fullwave%pol_decomp%b_para_ph (array3dfft_type) (9.8.1.2.2)
k_perp (3446)	waves%coherentwave(:)%fullwave%pol_decomp%k_perp (array3dfft_type) (9.8.1.2.2)
local (3322)	waves%coherentwave(:)%fullwave%local (local) (9.8.1.3.264)
e_plus (3370)	waves%coherentwave(:)%fullwave%local%e_plus (array3dfft_type) (9.8.1.2.2)
e_plus_ph (3370)	waves%coherentwave(:)%fullwave%local%e_plus_ph (array3dfft_type) (9.8.1.2.2)
e_minus (3370)	waves%coherentwave(:)%fullwave%local%e_minus (array3dfft_type) (9.8.1.2.2)
e_minus_ph (3370)	waves%coherentwave(:)%fullwave%local%e_minus_ph (array3dfft_type) (9.8.1.2.2)
e_norm (3370)	waves%coherentwave(:)%fullwave%local%e_norm (array3dint_type) (9.8.1.2.3)
enorm_ph (3370)	waves%coherentwave(:)%fullwave%local%enorm_ph (array3dfft_type) (9.8.1.2.2)
e_binorm (3370)	waves%coherentwave(:)%fullwave%local%e_binorm (array3dfft_type) (9.8.1.2.2)
e_binorm_ph (3370)	waves%coherentwave(:)%fullwave%local%e_binorm_ph (array3dfft_type) (9.8.1.2.2)
e_para (3370)	waves%coherentwave(:)%fullwave%local%e_para (array3dfft_type) (9.8.1.2.2)
e_para_ph (3370)	waves%coherentwave(:)%fullwave%local%e_para_ph (array3dfft_type) (9.8.1.2.2)
b_norm (3370)	waves%coherentwave(:)%fullwave%local%b_norm (array3dfft_type) (9.8.1.2.2)
b_norm_ph (3370)	waves%coherentwave(:)%fullwave%local%b_norm_ph (array3dfft_type) (9.8.1.2.2)
b_binorm (3370)	waves%coherentwave(:)%fullwave%local%b_binorm (array3dfft_type) (9.8.1.2.2)
b_binorm_ph (3370)	waves%coherentwave(:)%fullwave%local%b_binorm_ph (array3dfft_type) (9.8.1.2.2)
b_para (3370)	waves%coherentwave(:)%fullwave%local%b_para (array3dfft_type) (9.8.1.2.2)
b_para_ph (3370)	waves%coherentwave(:)%fullwave%local%b_para_ph (array3dfft_type) (9.8.1.2.2)
k_perp (3370)	waves%coherentwave(:)%fullwave%local%k_perp (array3dfft_type) (9.8.1.2.2)
codeparam (3192)	waves%coherentwave(:)%codeparam (codeparam) (9.8.1.3.84)
codename (3190)	waves%coherentwave(:)%codeparam%codename (string) (9.8.1.1.3)
codeversion (3190)	waves%coherentwave(:)%codeparam%codeversion (string) (9.8.1.1.3)
parameters (3190)	waves%coherentwave(:)%codeparam%parameters (string) (9.8.1.1.3)
output_diag (3190)	waves%coherentwave(:)%codeparam%output_diag (string) (9.8.1.1.3)
output_flag (3190)	waves%coherentwave(:)%codeparam%output_flag (integer) (9.8.1.1.2)
codeparam (3159)	waves%codeparam (codeparam) (9.8.1.3.84)

codename (3190)	waves%codeparam%codename (string) (9.8.1.1.3)
codeversion (3190)	waves%codeparam%codeversion (string) (9.8.1.1.3)
parameters (3190)	waves%codeparam%parameters (string) (9.8.1.1.3)
output_diag (3190)	waves%codeparam%output_diag (string) (9.8.1.1.3)
output_flag (3190)	waves%codeparam%output_flag (integer) (9.8.1.1.2)
time (3159)	waves%time (float) (9.8.1.1.1)

## [cpoinstances](#) <sup>188</sup>

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last update: 2015-08-07 by dpc

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last update: 2013-08-29 by dpc

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<sup>188</sup>[https://www.efda-itm.eu/ITM/html/cpoinstances\\_\\_4.10b.11.html](https://www.efda-itm.eu/ITM/html/cpoinstances__4.10b.11.html)