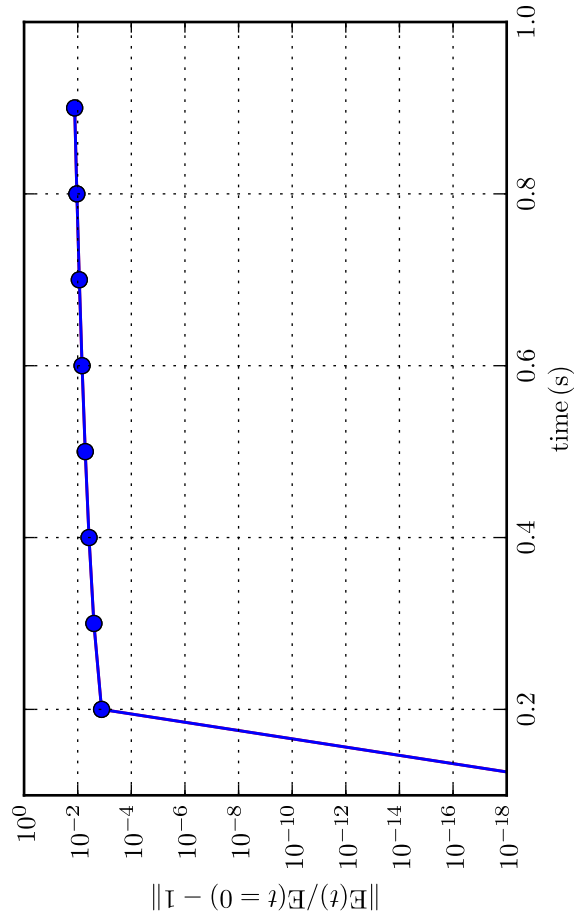
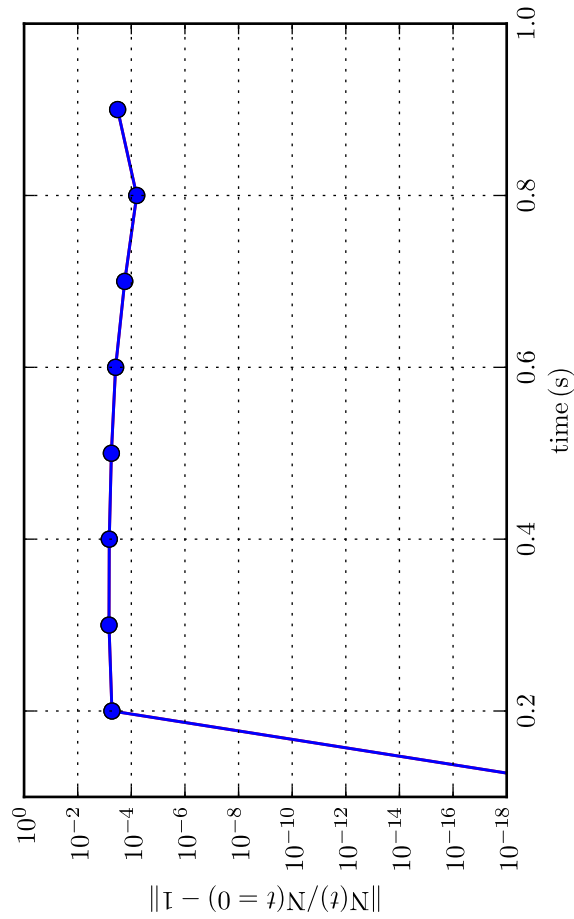
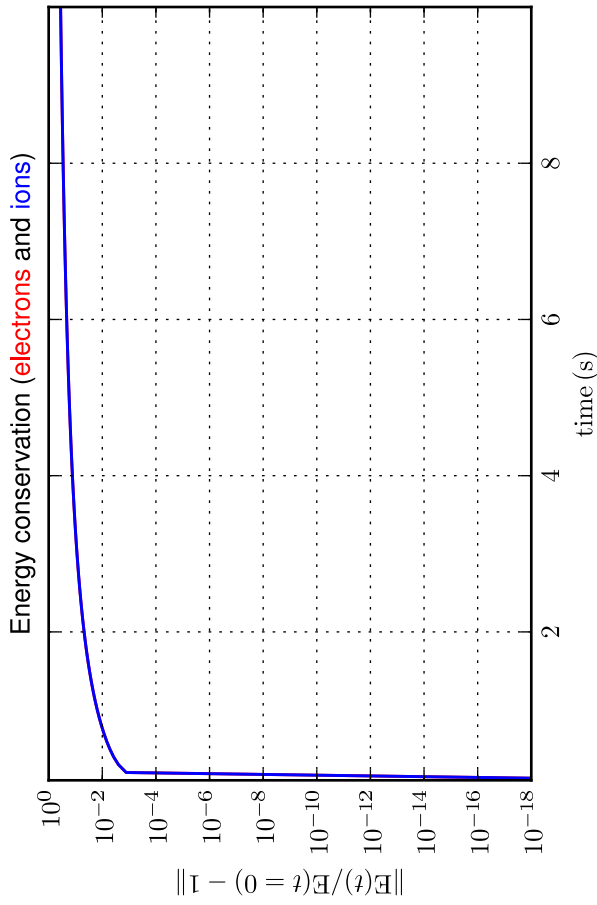
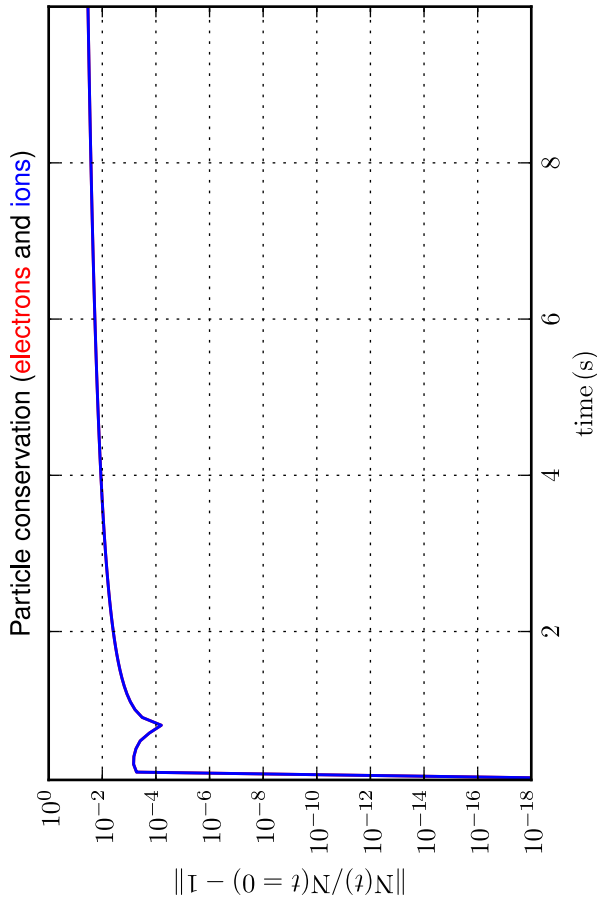


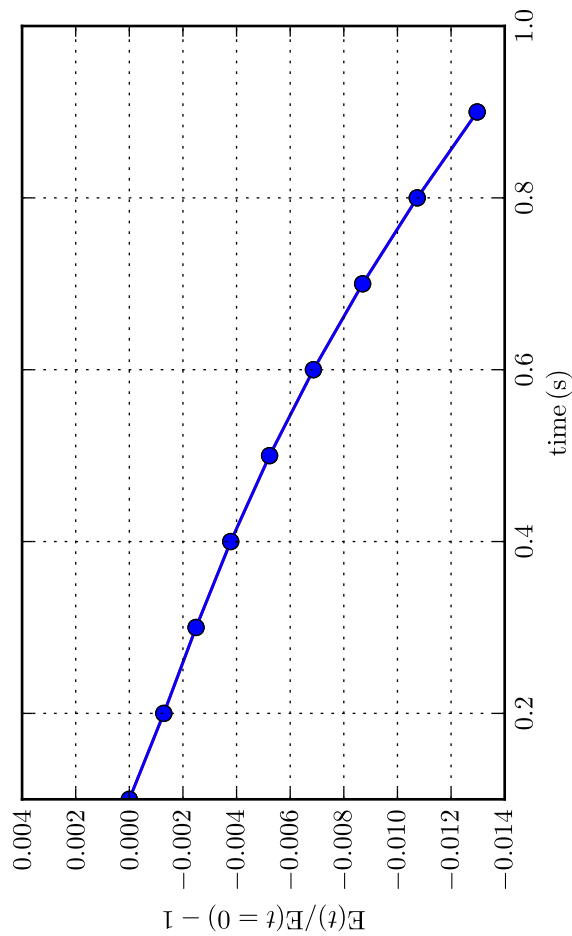
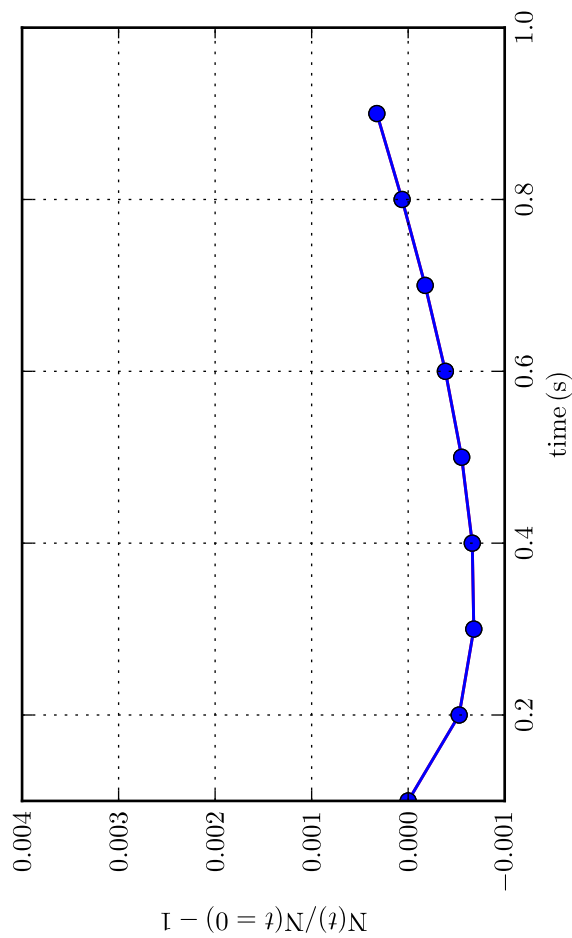
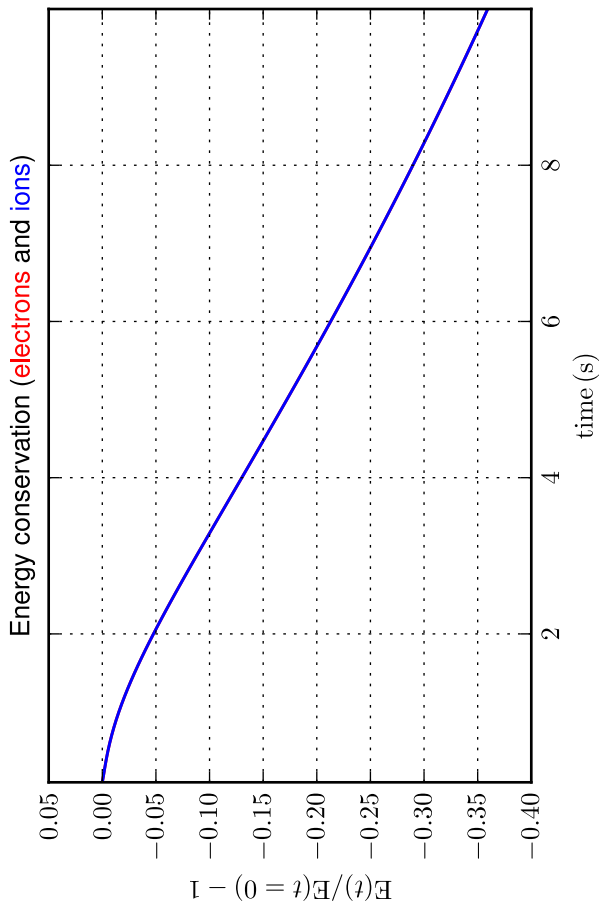
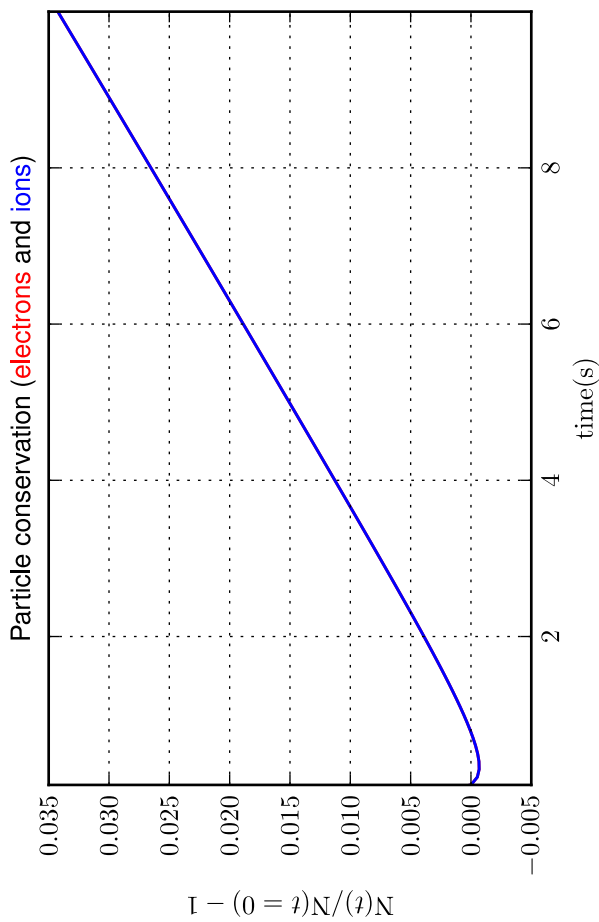
Part. & Energy conservation [Case: I.1.5.i, Solver: 3, $D = 0.1 \text{ m}^2/\text{s}$, $v = -0.30 \text{ m/s}$, $\Delta t = 10.00$, $\tau = 1.0 \times 10^{-3} \text{ s}$, $N_p = 101$]

Comparison with initial solution - log scale; total time and zoom over time



Part. & Energy conservation [Case: I.1.5.i, Solver: 3, $D = 0.1 \text{ m}^2/\text{s}$, $v = -0.30 \text{ m/s}$, $\Delta t = 10.00$, $\tau = 1.0 \times 10^{-3} \text{ s}$, $N_p = 101$]

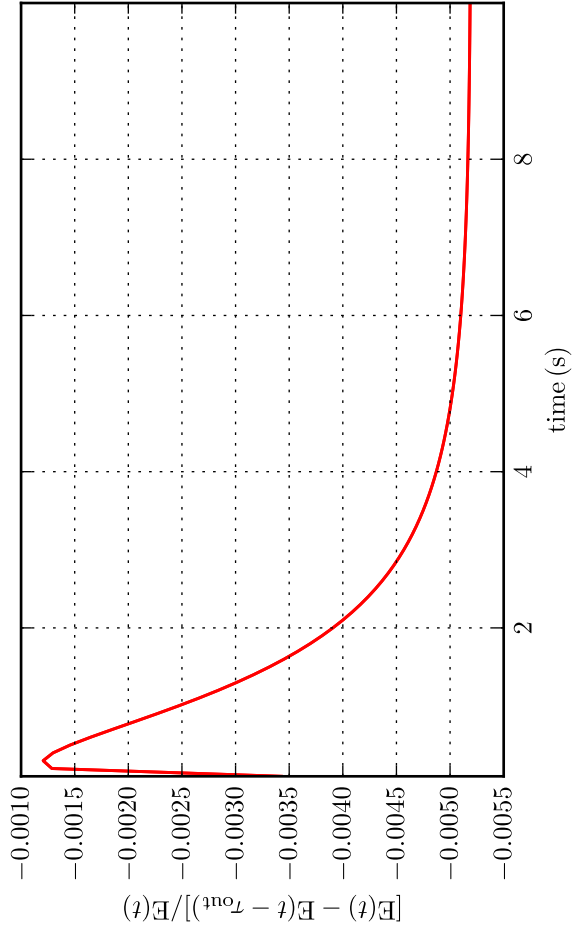
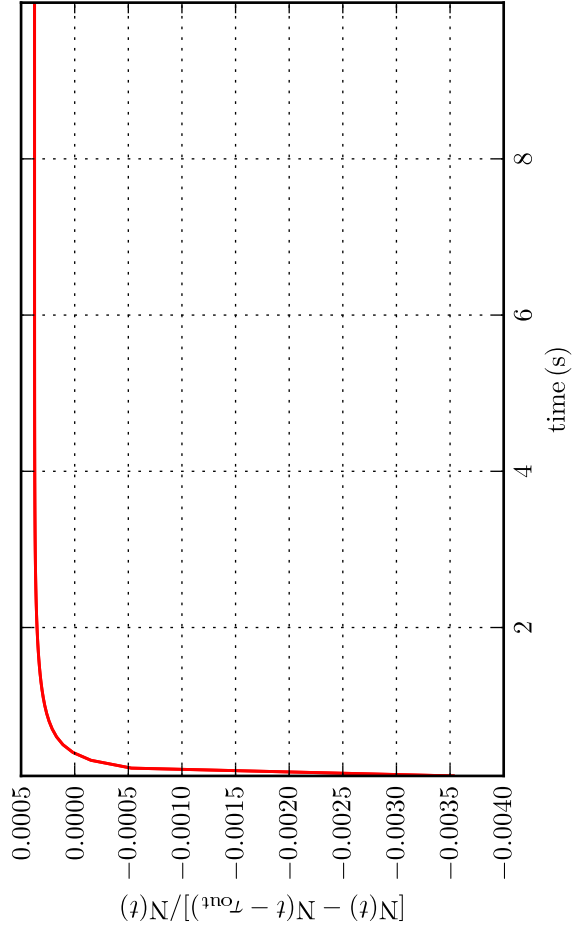
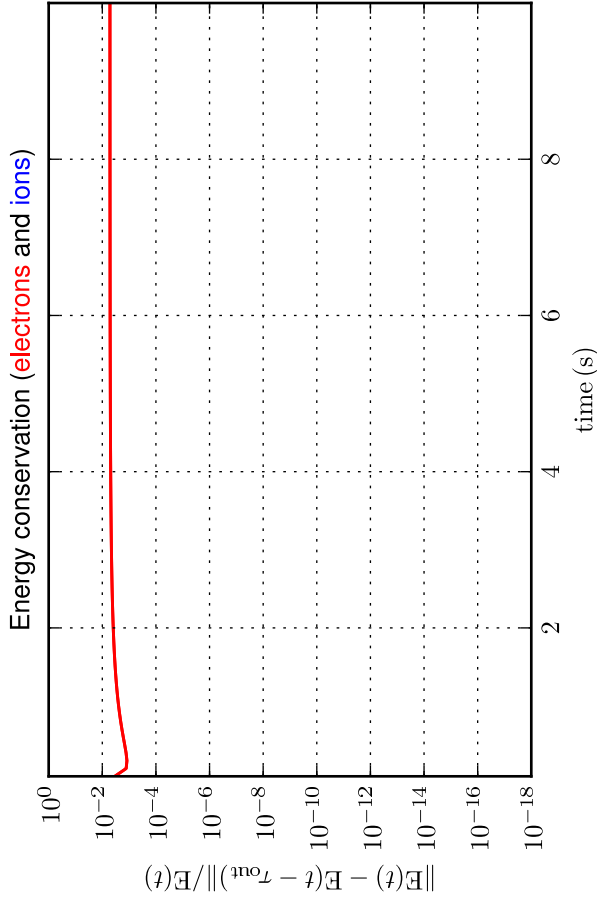
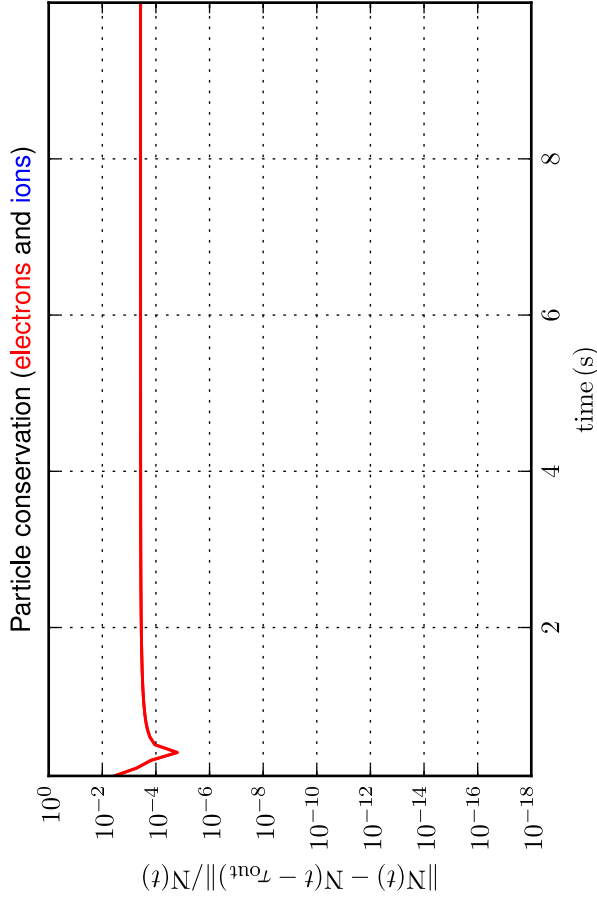
Comparison with initial solution - linear scale; total time and zoom over time



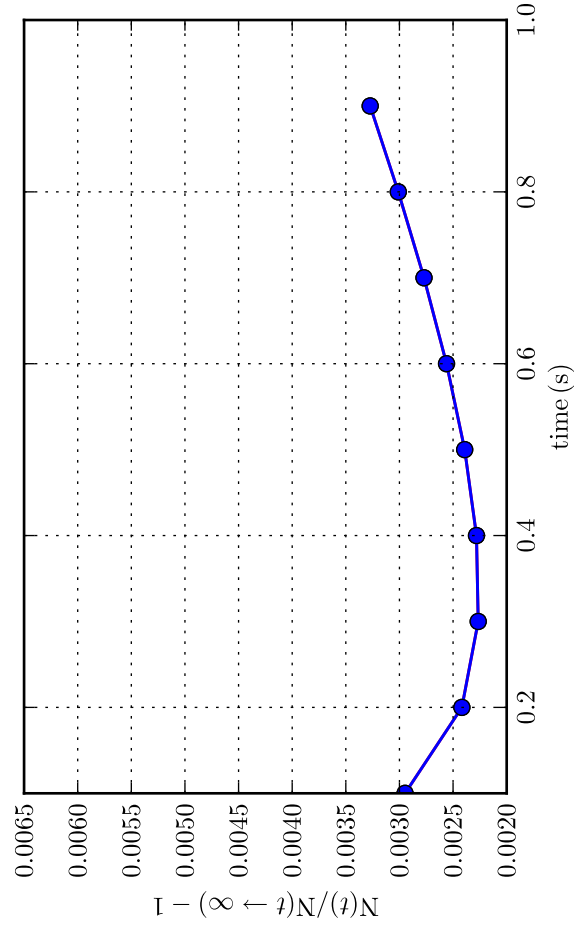
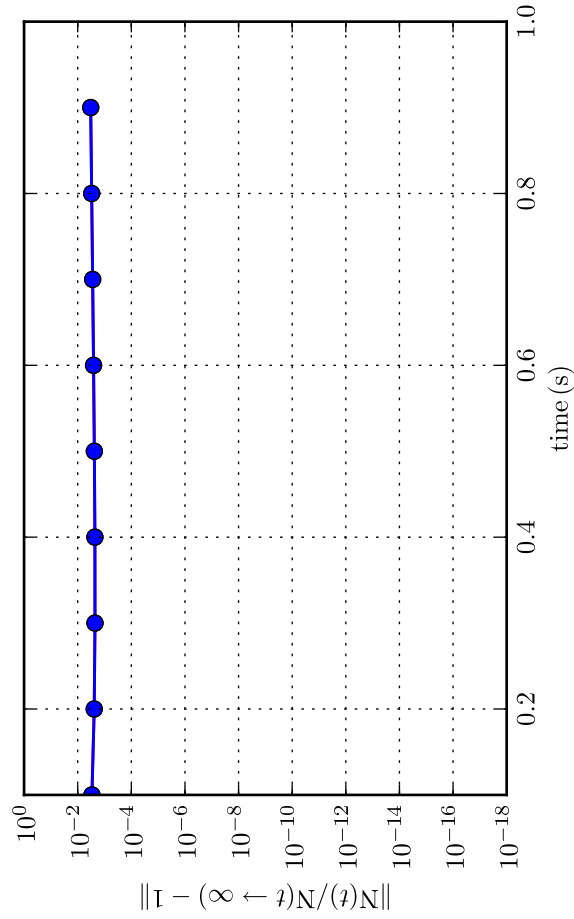
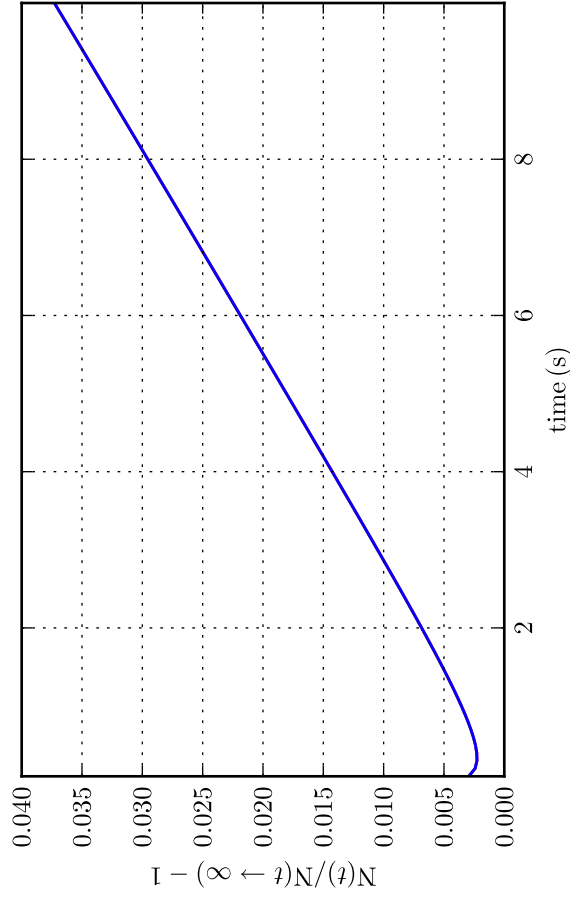
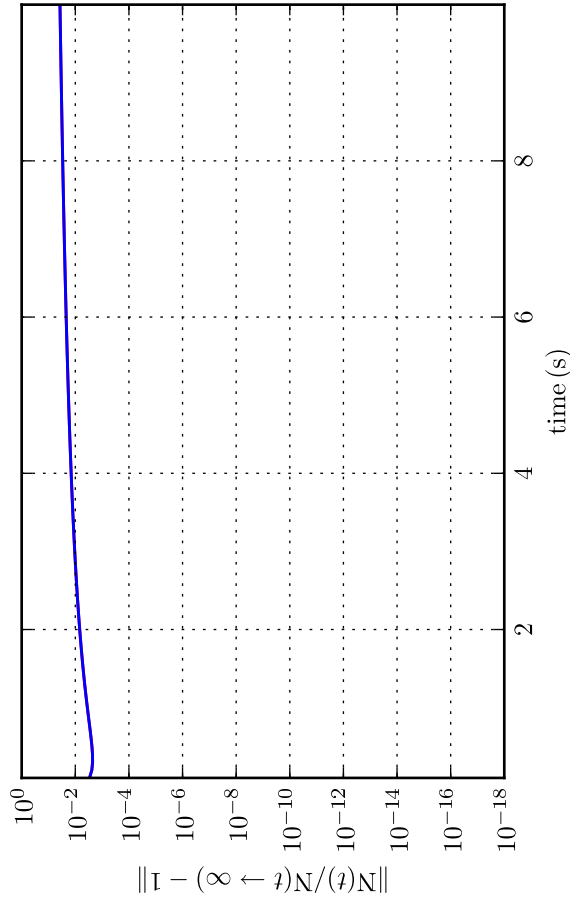
$$I - (0 = t)N/(t)N$$

$$I - (0 = t)N/(t)N$$

Part. & Energy conservation [Case: I.1.5.i, Solver: 3, $D = 0.1 \text{ m}^2/\text{s}$, $v = -0.30 \text{ m/s}$, $\Delta t = 10.00$, $\tau = 1.0 \times 10^{-3} \text{ s}$, $N_p = 101$]
Comparison with previous time-sampled (τ_{out}) solution - log and linear scales

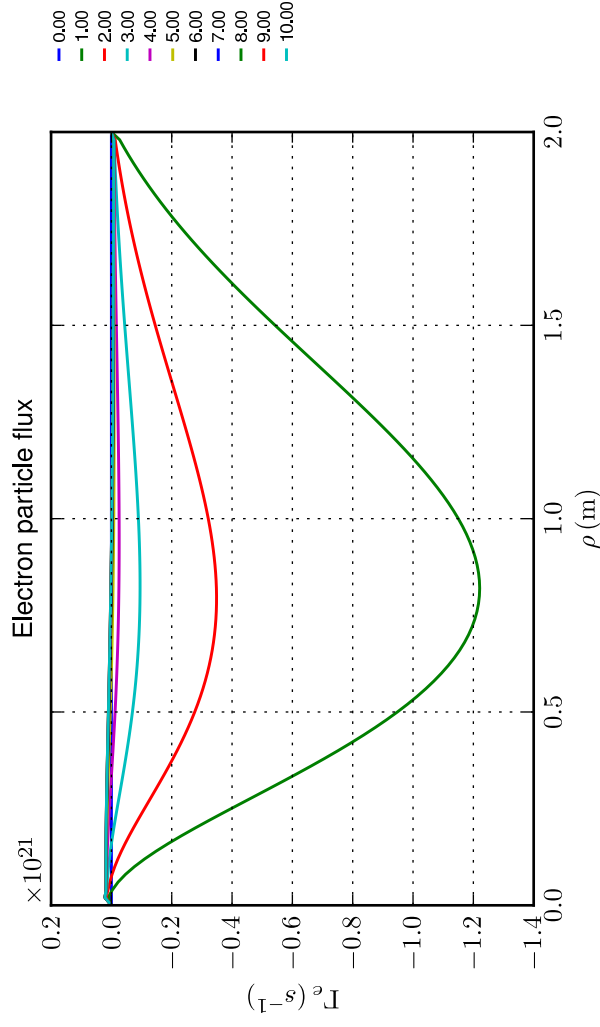
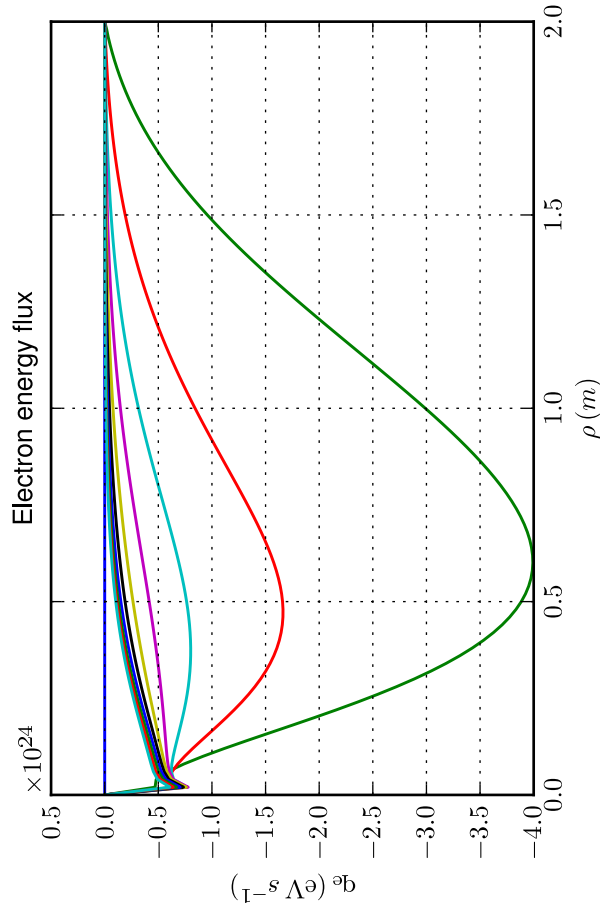
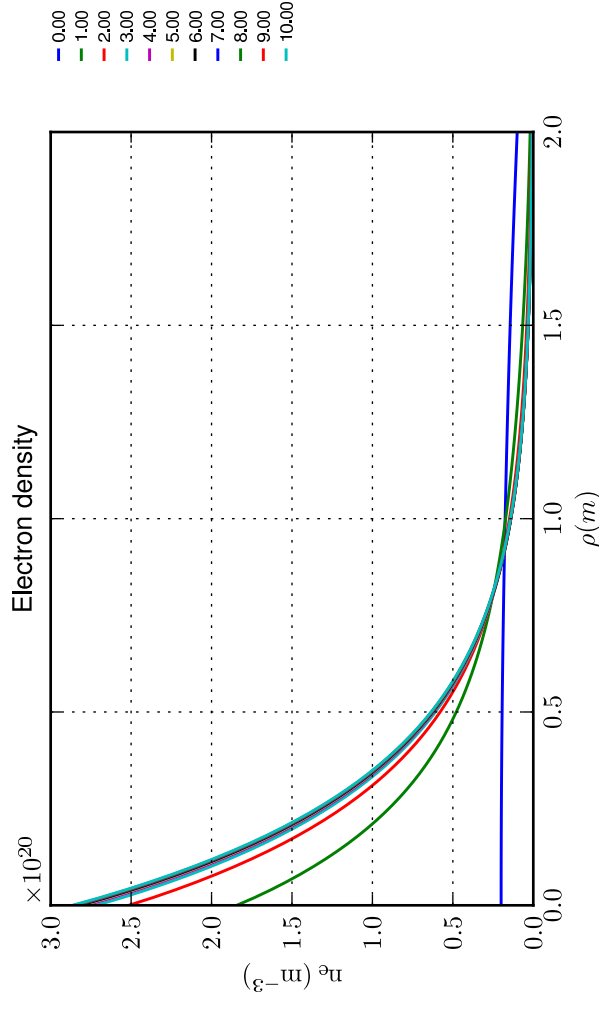
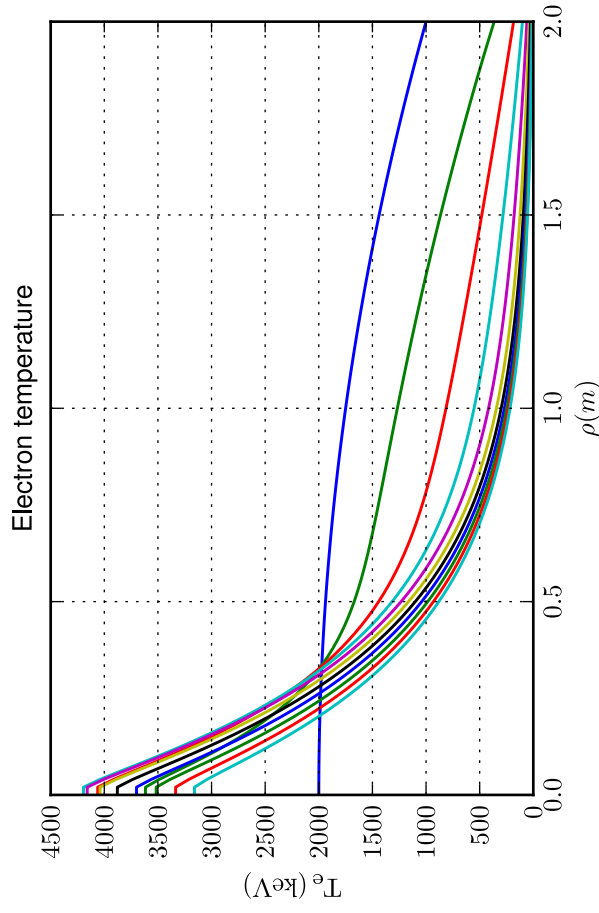


Particle conservation [Case: I.1.5.i, Solver: 3, $D = 0.1 \text{ m}^2/\text{s}$, $v = -0.30 \text{ m/s}$, $\Delta t = 10.00$, $\tau = 1.0 \times 10^{-3} \text{ s}$, $N_p = 101$]
 Comparison with asymptotic solution (electrons and ions); total time and zoom over time



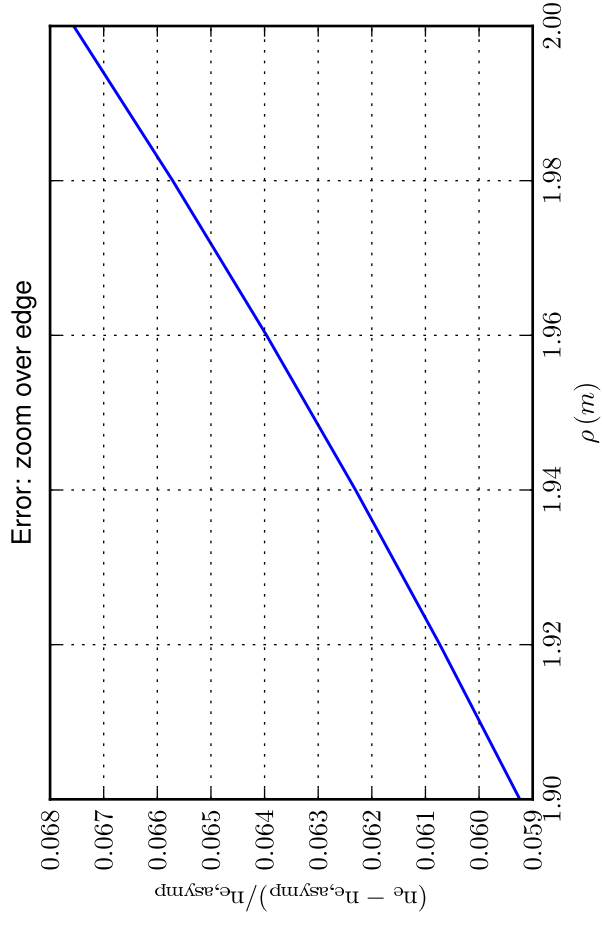
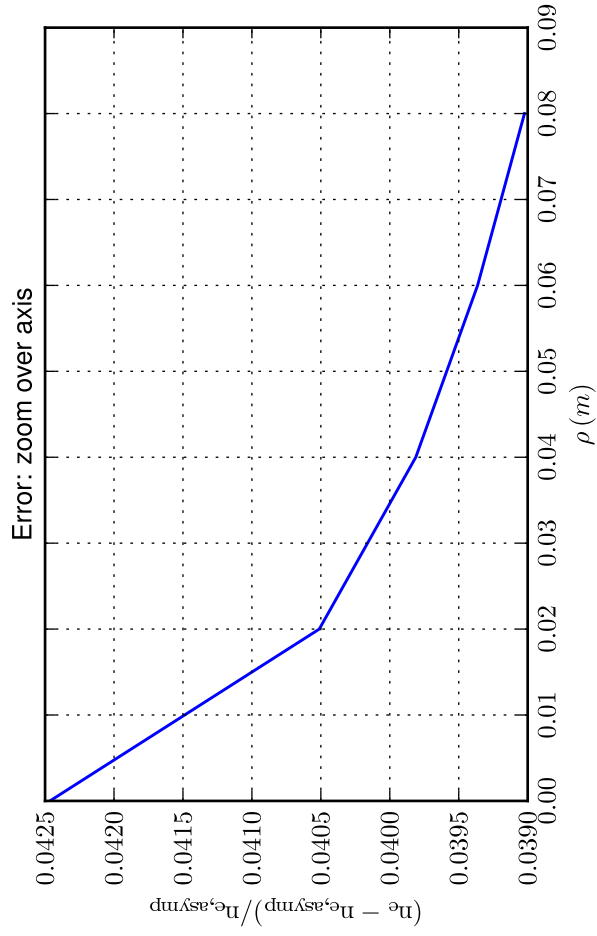
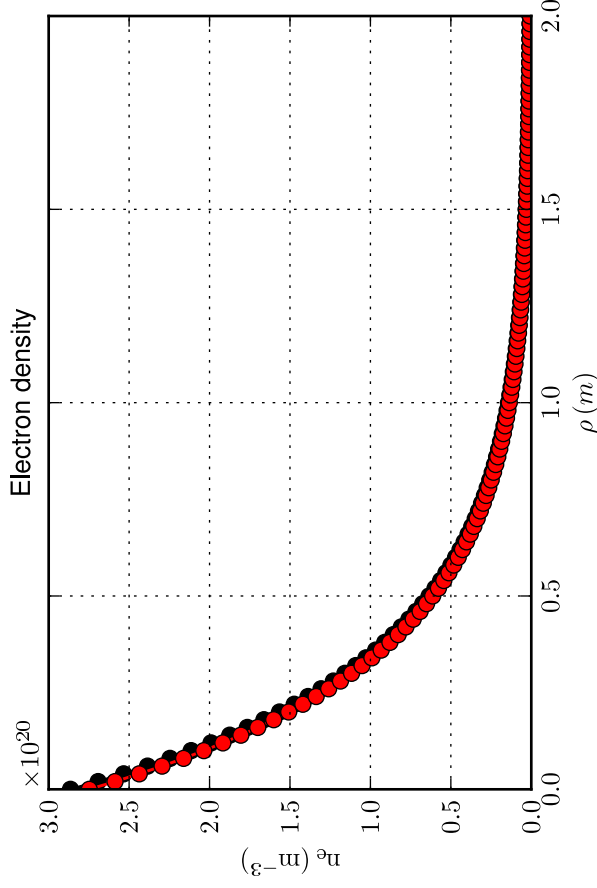
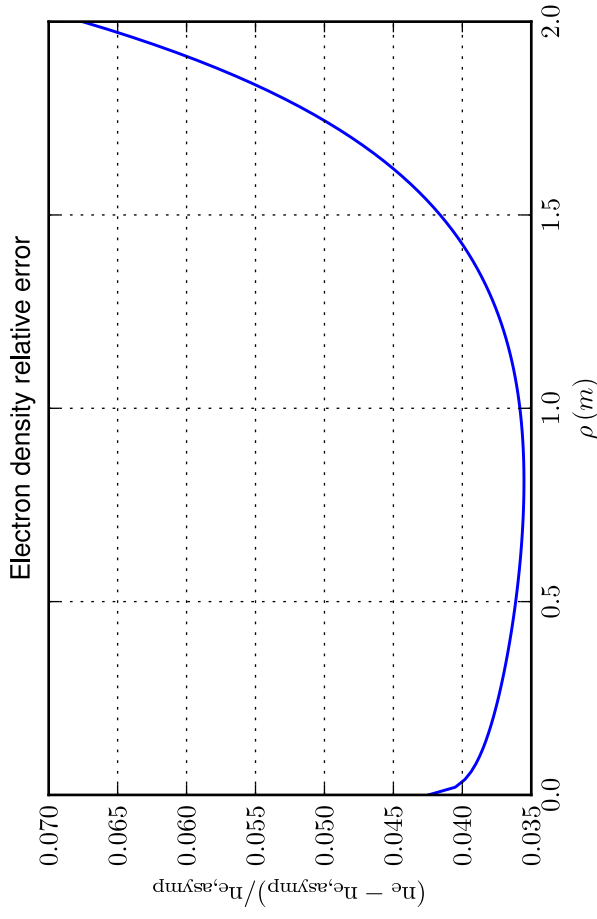
Profiles [Case: I.1.5.i, Solver: 3, $D = 0.1 \text{ m}^2/\text{s}$, $v = -0.30 \text{ m/s}$, $\Delta t = 10.00$, $\tau = 1.0 \times 10^{-3} \text{ s}$, $N_\rho = 101$]

Time sampling: total simulation time/10



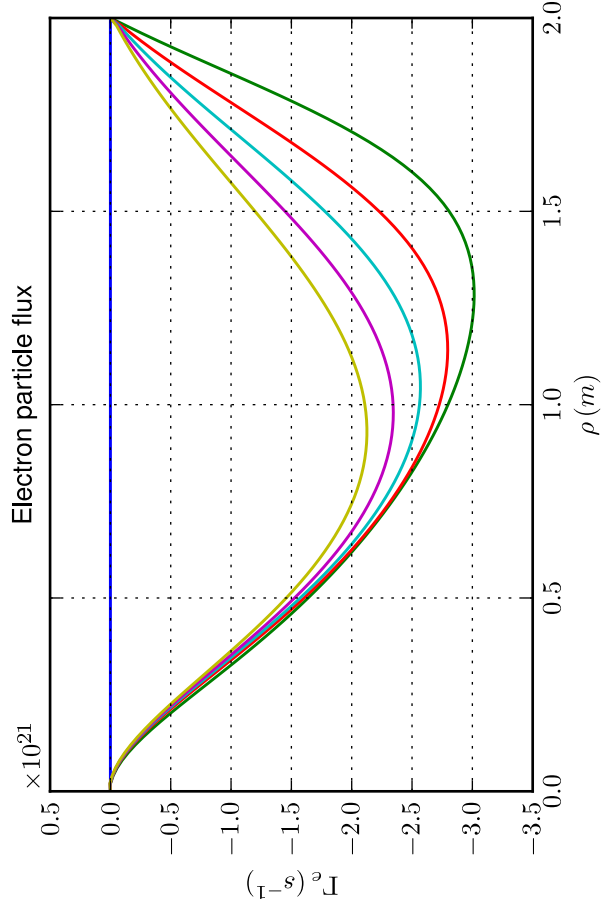
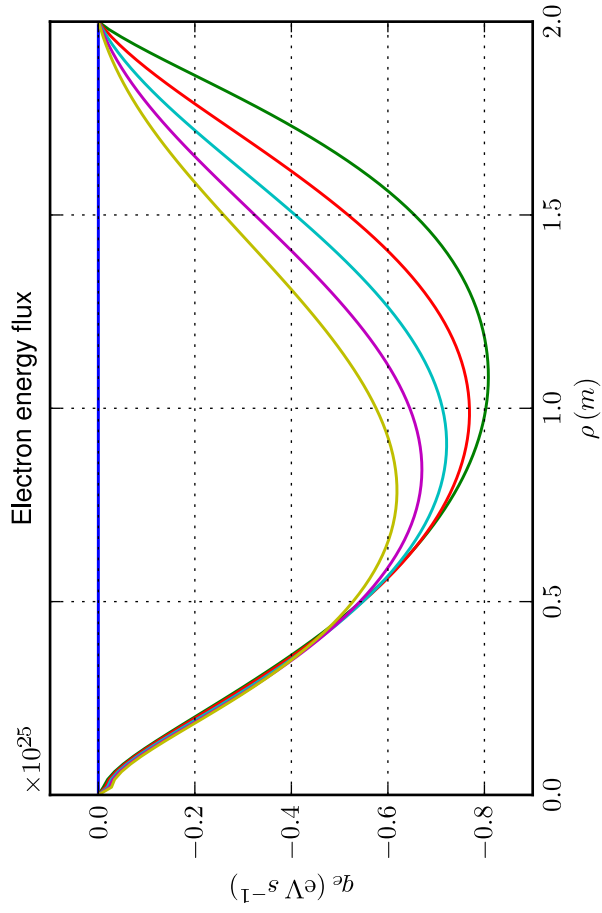
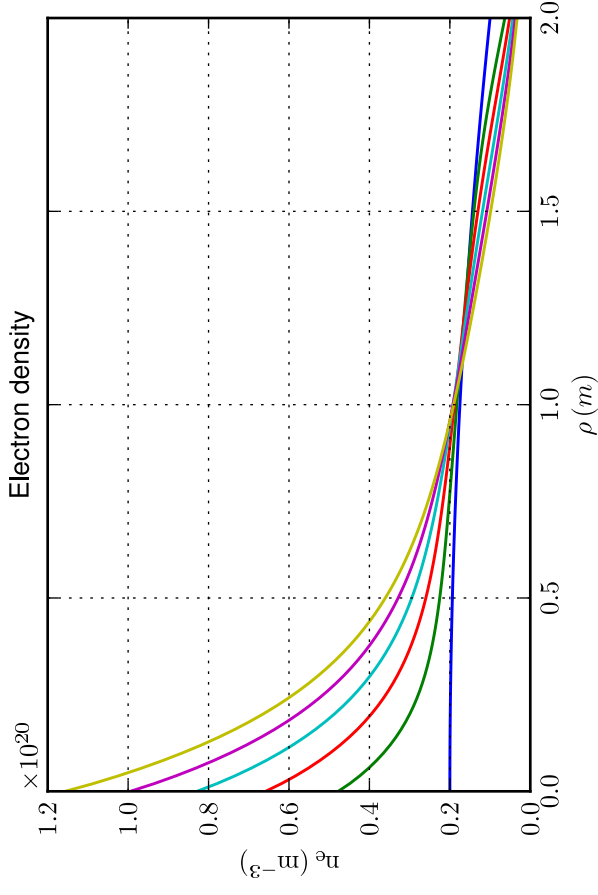
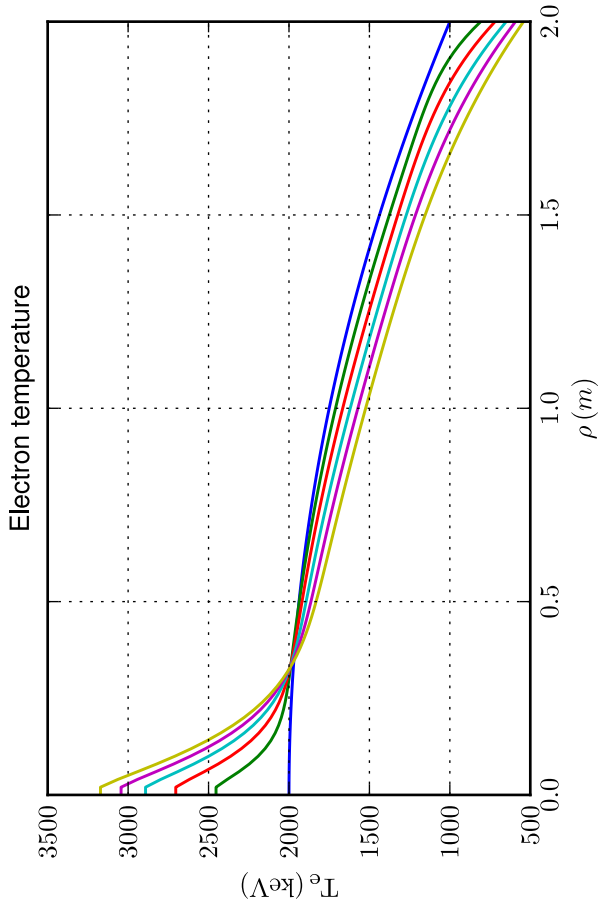
Profiles [Case: I.1.5.i, Solver: 3, $D = 0.1 \text{ m}^2/\text{s}$, $v = -0.30 \text{ m/s}$, $\Delta t = 10.00$, $\tau = 1.0 \times 10^{-3} \text{ s}$, $N_\rho = 101$]

Comparison with asymptotic solution



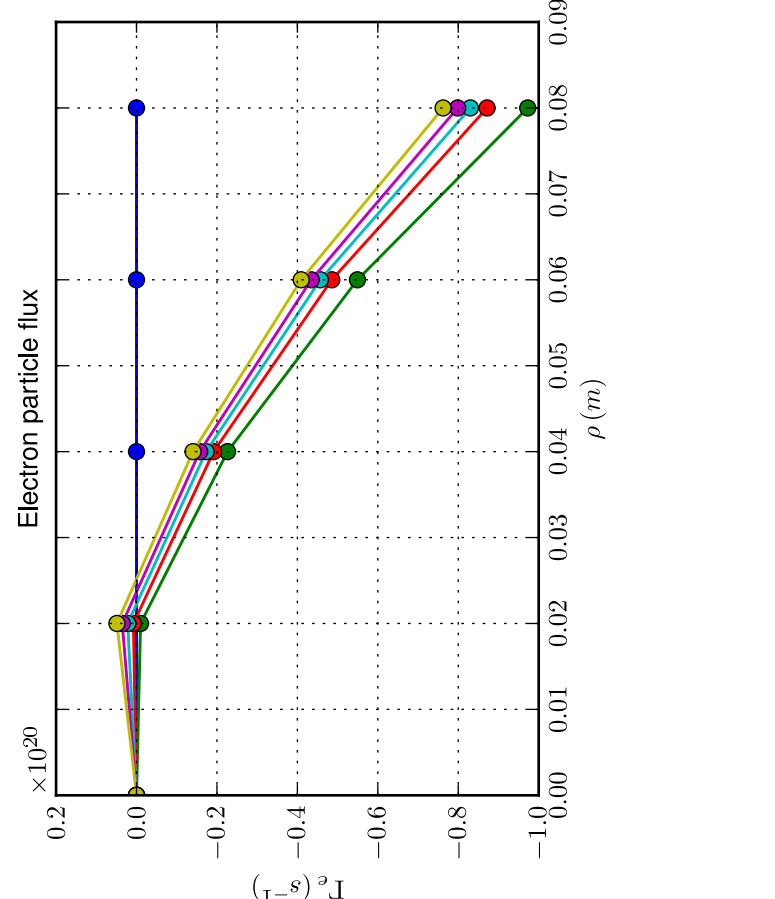
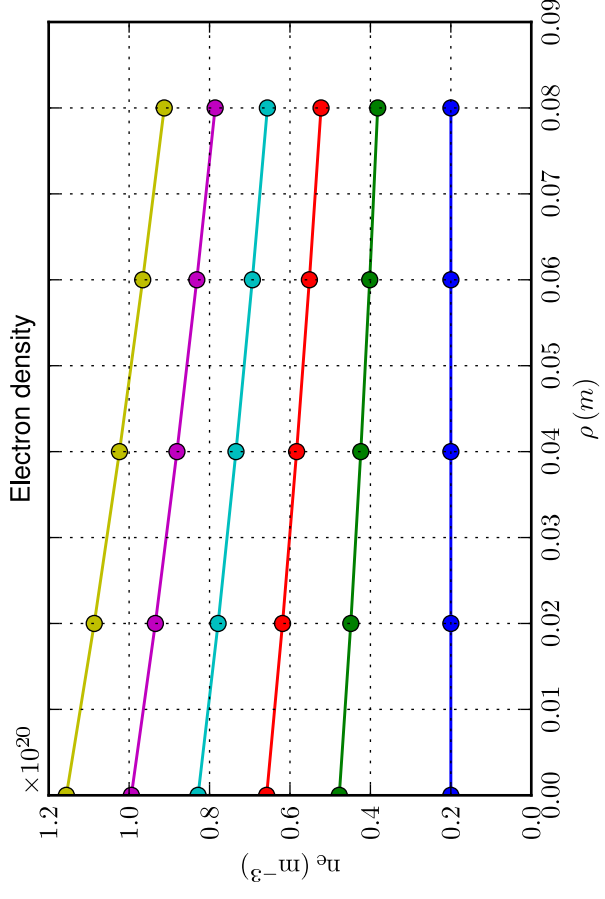
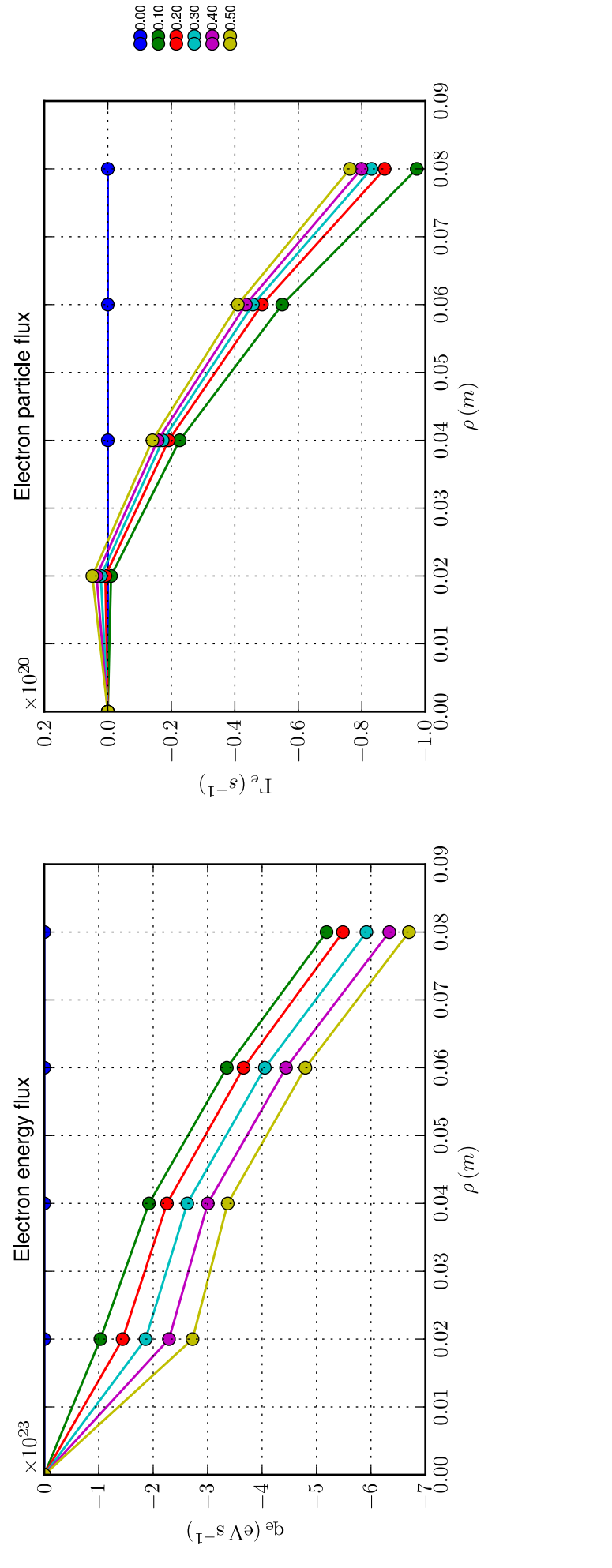
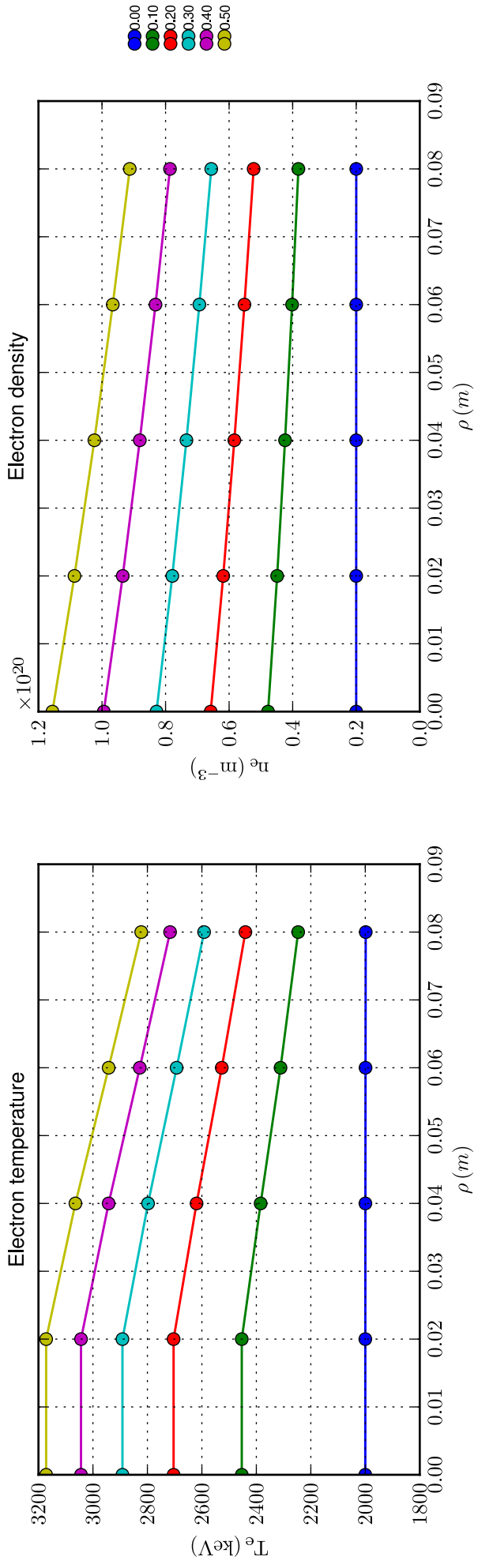
Profiles [Case: I.1.5.i, Solver: 3, $D = 0.1 \text{ m}^2/\text{s}$, $v = -0.30 \text{ m/s}$, $\Delta t = 10.00$, $\tau = 1.0 \times 10^{-3} \text{ s}$, $N_\rho = 101$]

Time sampling: first 10 time slices or zoom over time $0.1 \times (a^2/D)/|1 - (Va/D)| = 0.57 \text{ s}$

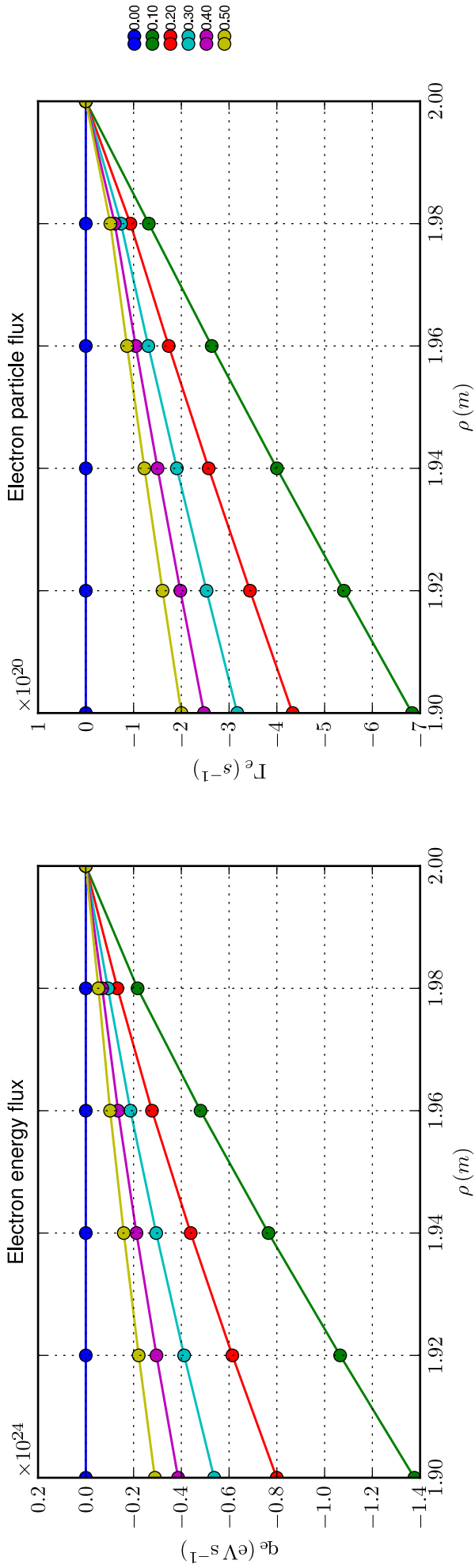
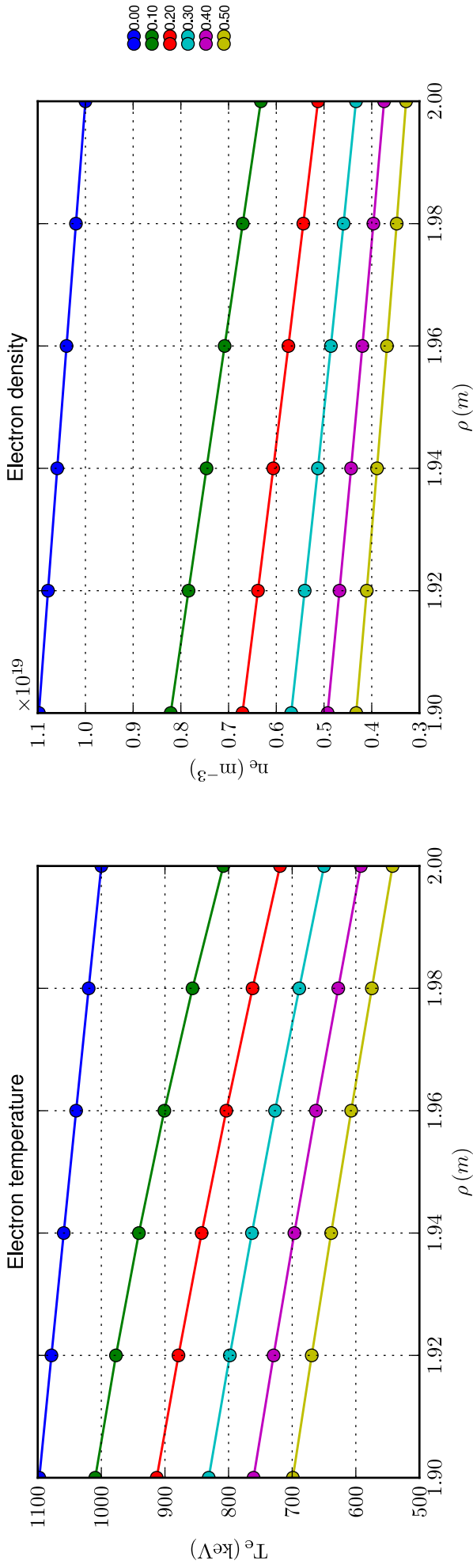


0.00
0.10
0.20
0.30
0.40
0.50

Profiles [Case: I.1.5.i, Solver: 3, $D = 0.1 \text{ m}^2/\text{s}$, $v = -0.30 \text{ m/s}$, $\Delta t = 10.00$, $\tau = 1.0 \times 10^{-3} \text{ s}$, $N_\rho = 101$]
 Spatial zoom over magnetic axis; time sampling: first 10 time slices or zoom over time $0.1 \times (a^2/D)/|1 - (V_a/D)| = 0.57 \text{ s}$

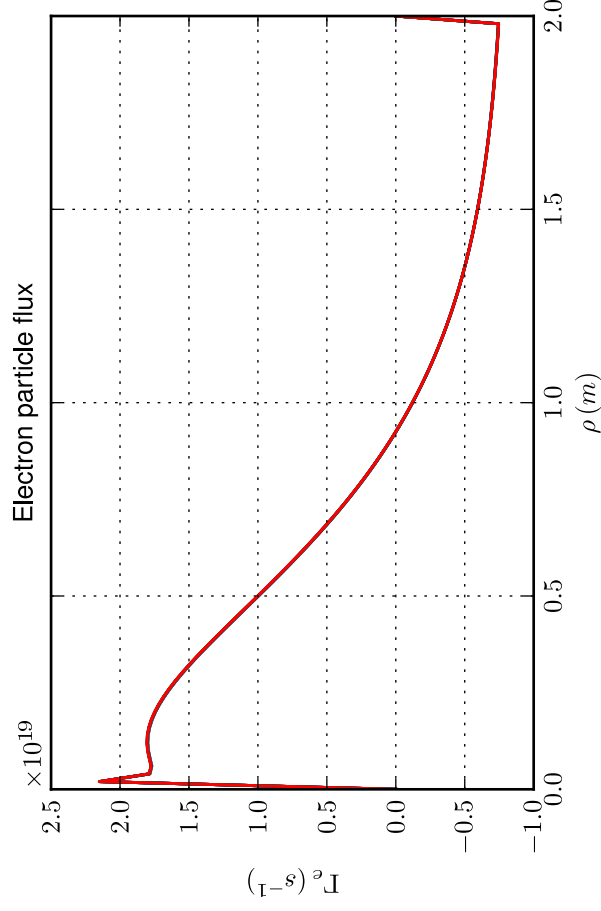
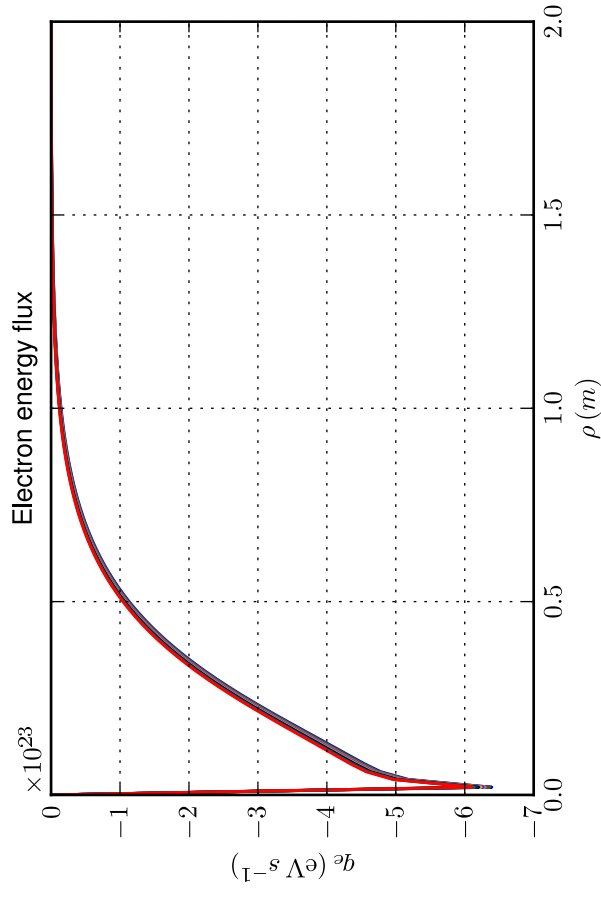
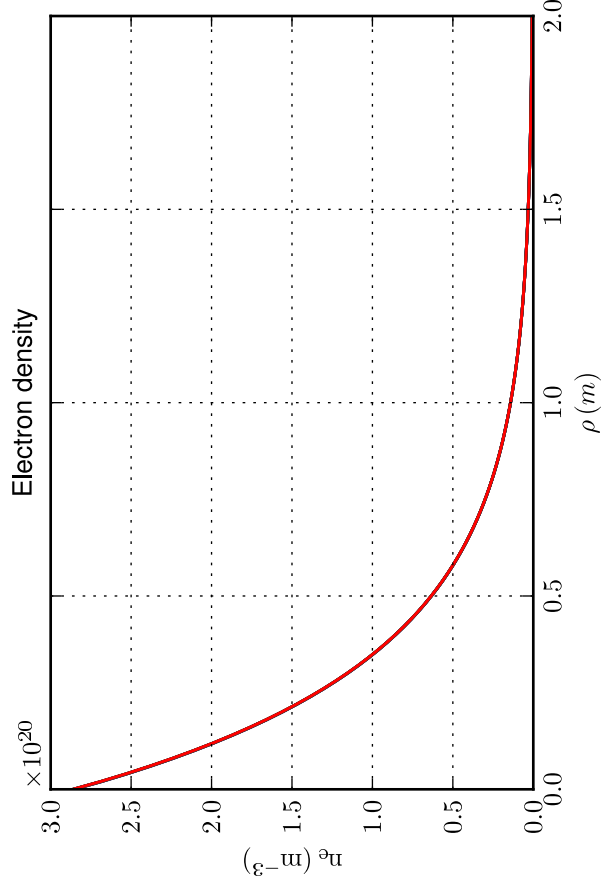
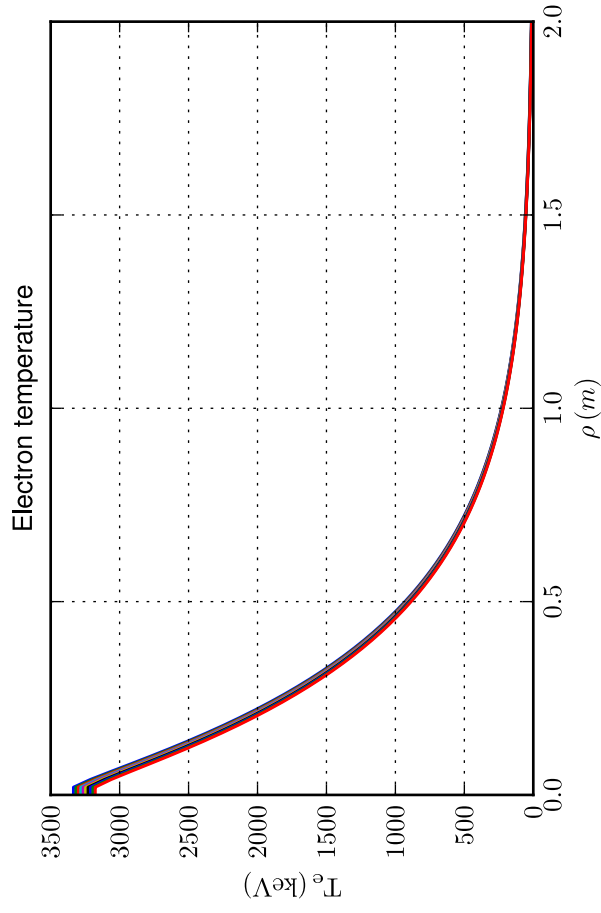


Profiles [Case: I.1.5.i, Solver: 3, $D = 0.1 \text{ m}^2/\text{s}$, $v = -0.30 \text{ m/s}$, $\Delta t = 10.00$, $\tau = 1.0 \times 10^{-3} \text{ s}$, $N_\rho = 101$]
 Spatial zoom over edge; time sampling: first 10 time slices or zoom over time $0.1 \times (a^2/D)/|1 - (Va/D)| = 0.57 \text{ s}$



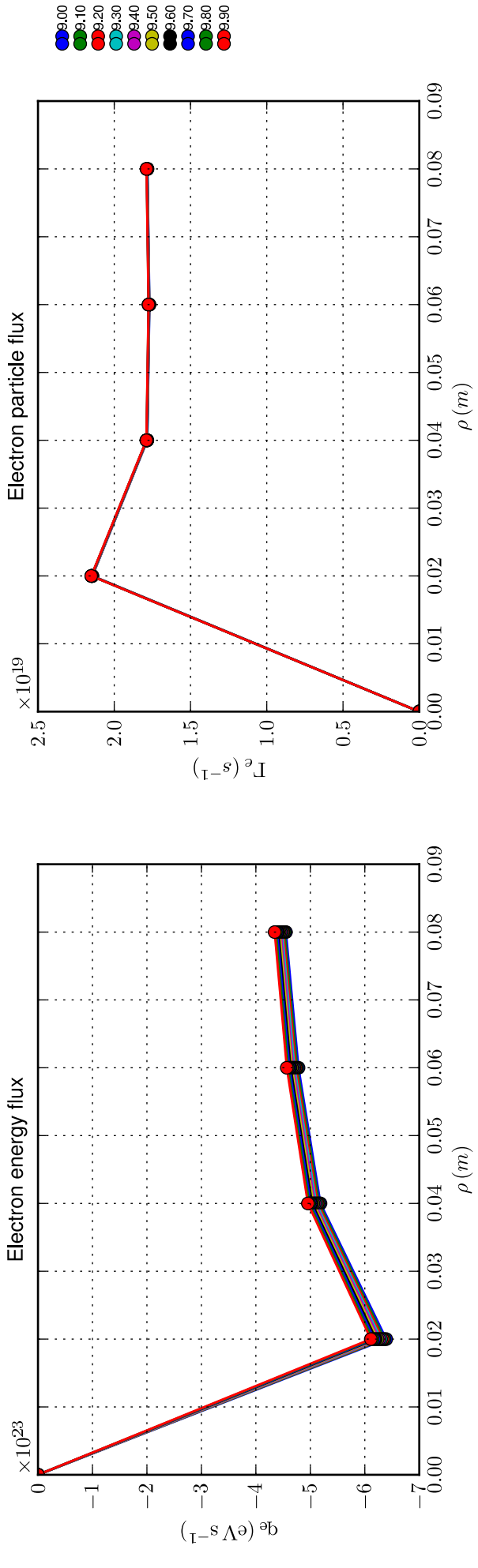
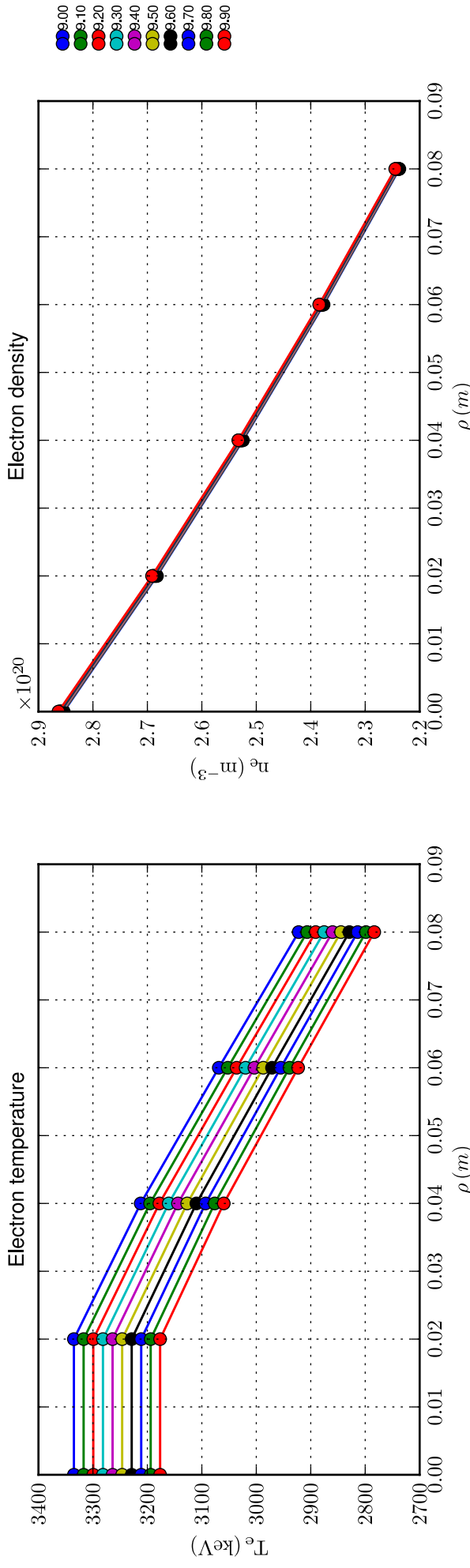
Profiles [Case: I.1.5.i, Solver: 3, $D = 0.1 \text{ m}^2/\text{s}$, $v = -0.30 \text{ m/s}$, $\Delta t = 10.00$, $\tau = 1.0 \times 10^{-3} \text{ s}$, $N_\rho = 101$]

Time sampling: last 10 time slices



9.00
9.10
9.20
9.30
9.40
9.50
9.60
9.70
9.80
9.90

Profiles [Case: I.1.5.i, Solver: 3, $D = 0.1 \text{ m}^2/\text{s}$, $v = -0.30 \text{ m/s}$, $\Delta t = 10.00$, $\tau = 1.0 \times 10^{-3} \text{ s}$, $N_\rho = 101$]
 Spatial zoom over magnetic axis; time sampling: last 10 time slices



Profiles [Case: I.1.5.i, Solver: 3, $D = 0.1 \text{ m}^2/\text{s}$, $v = -0.30 \text{ m/s}$, $\Delta t = 10.00$, $\tau = 1.0 \times 10^{-3} \text{ s}$, $N_\rho = 101$]
 Spatial zoom over edge; time sampling: last 10 time slices

