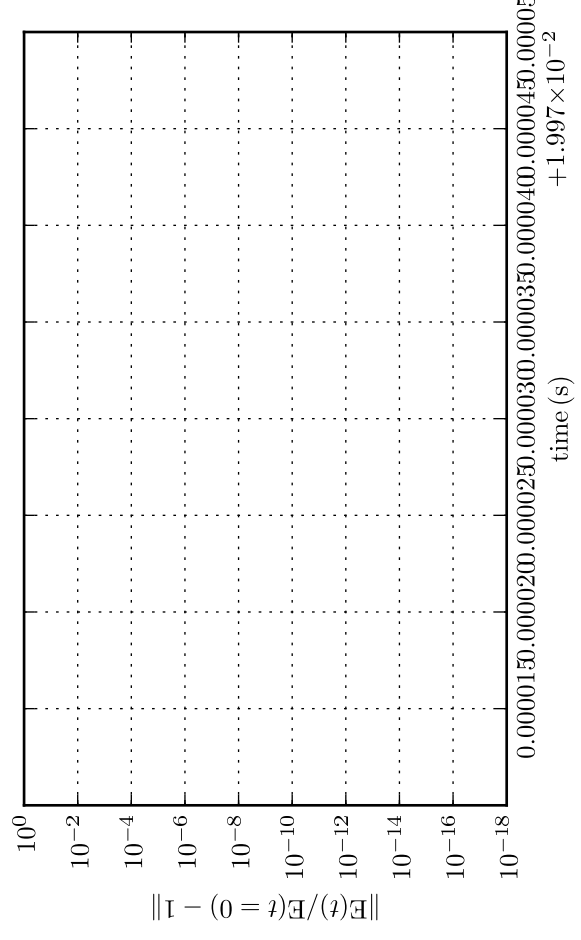
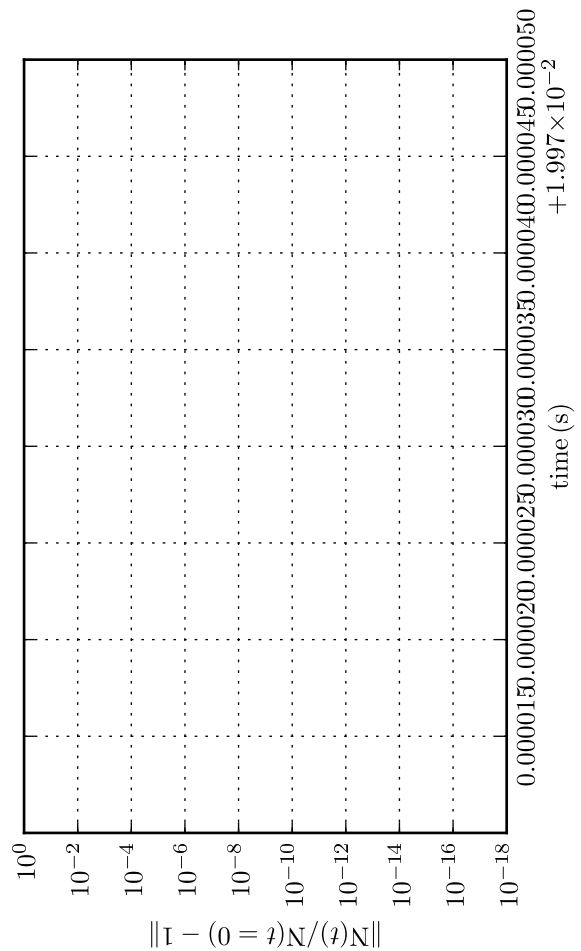
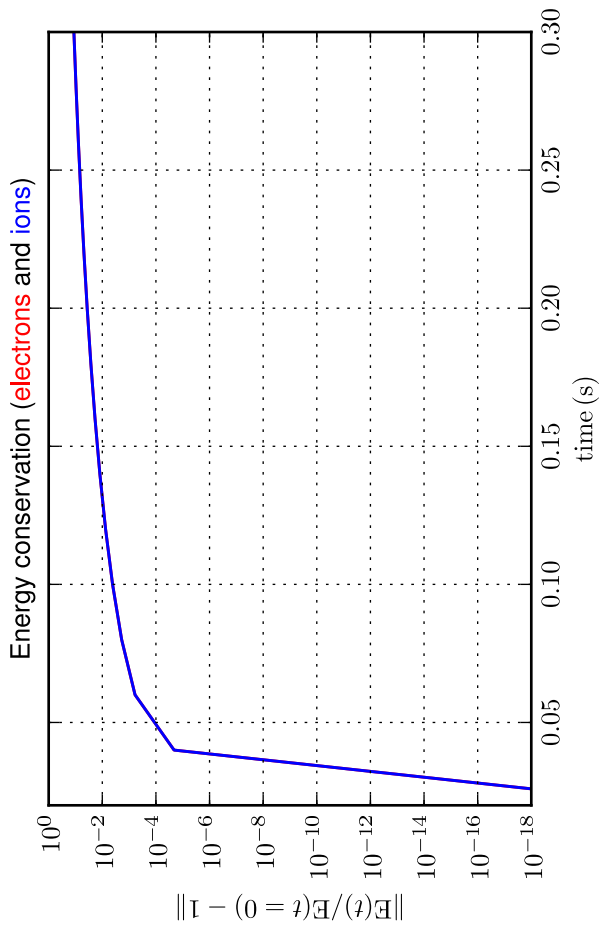
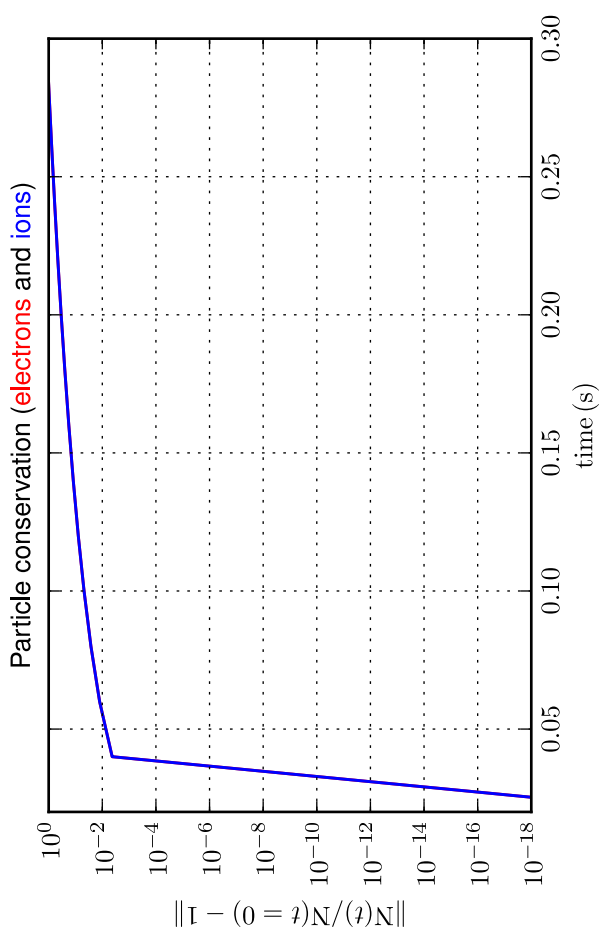
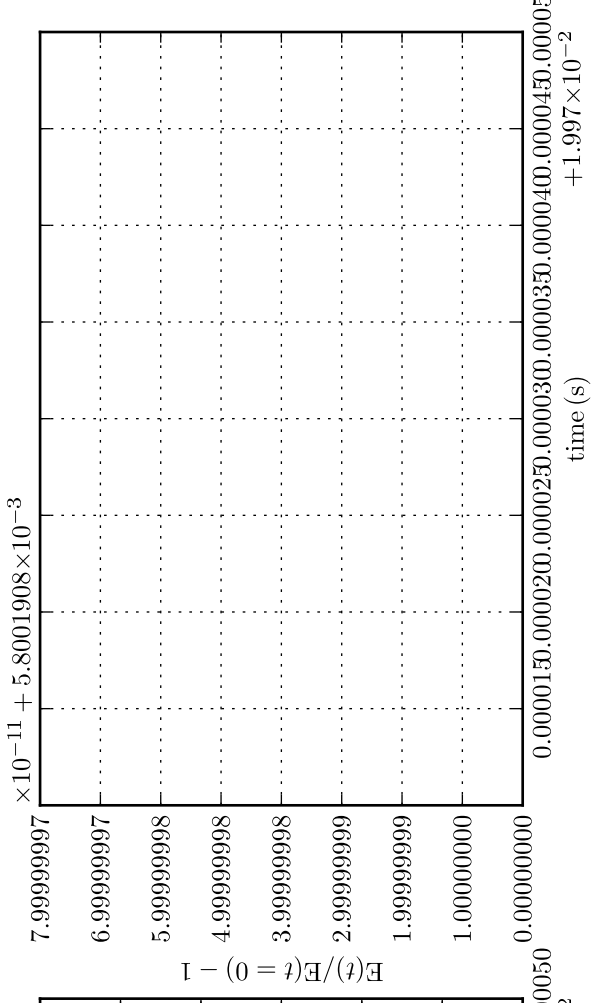
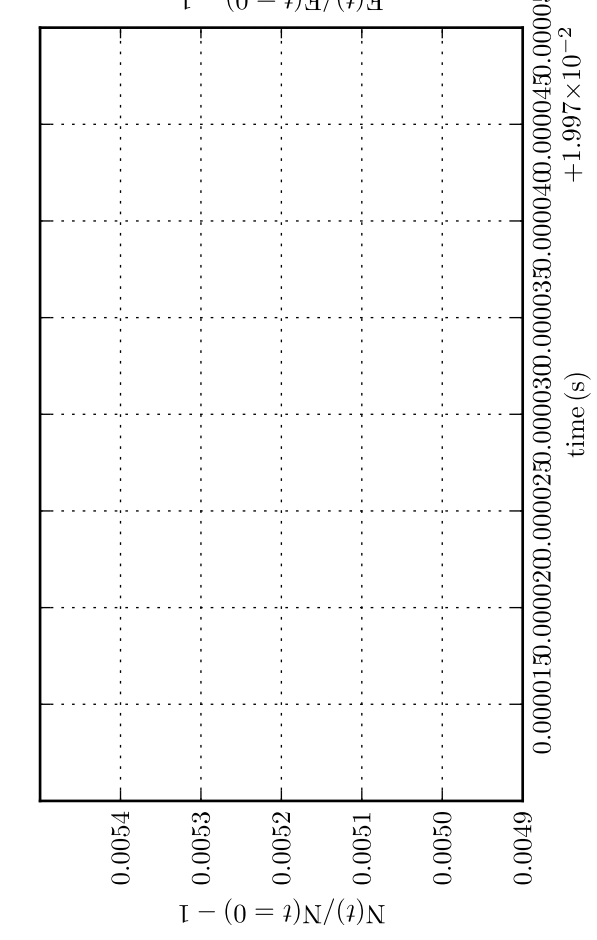
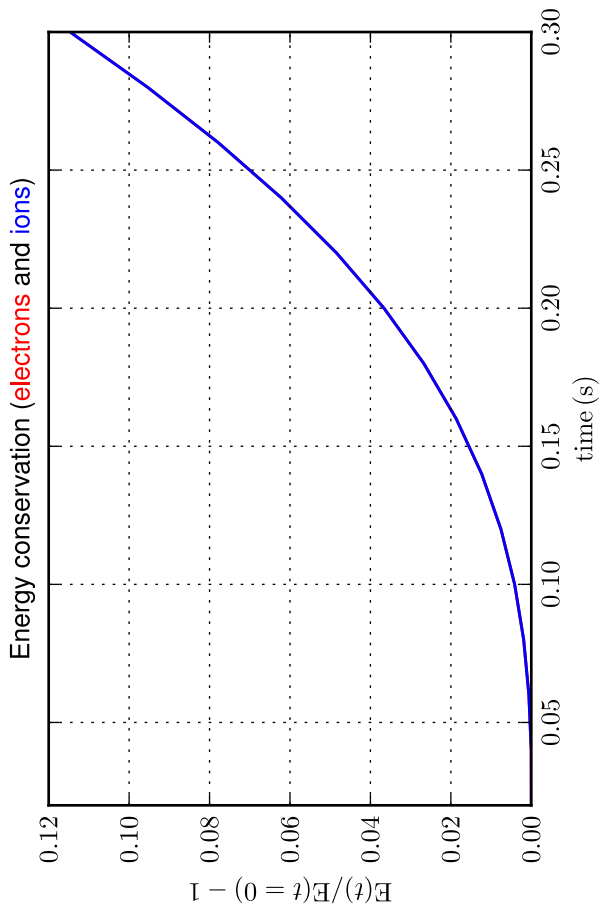
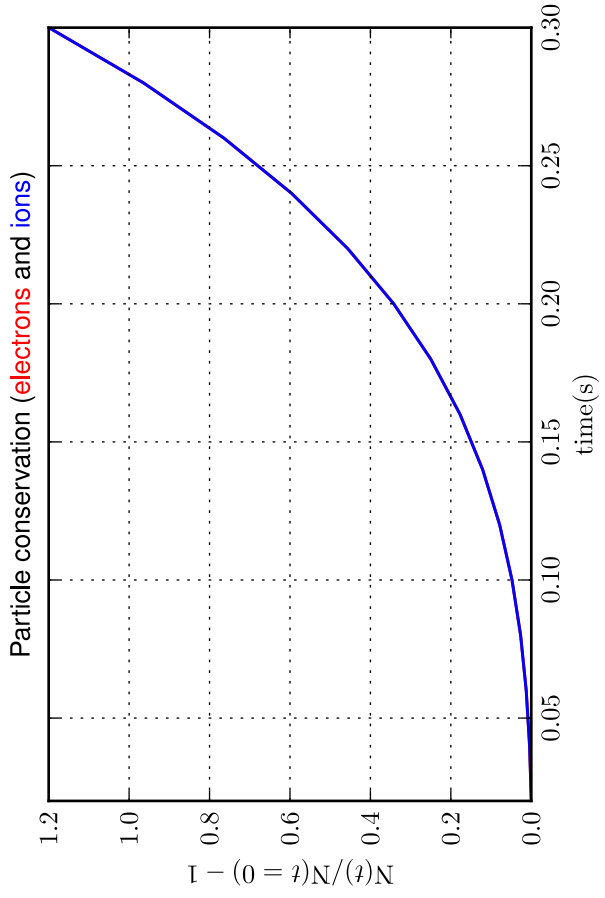


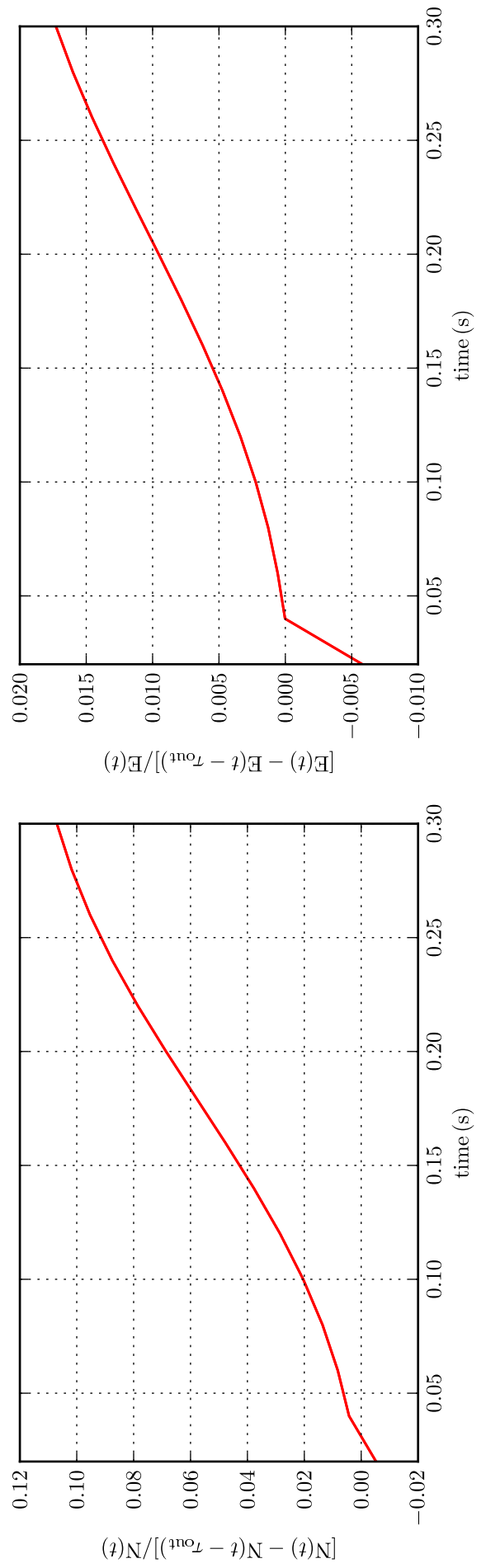
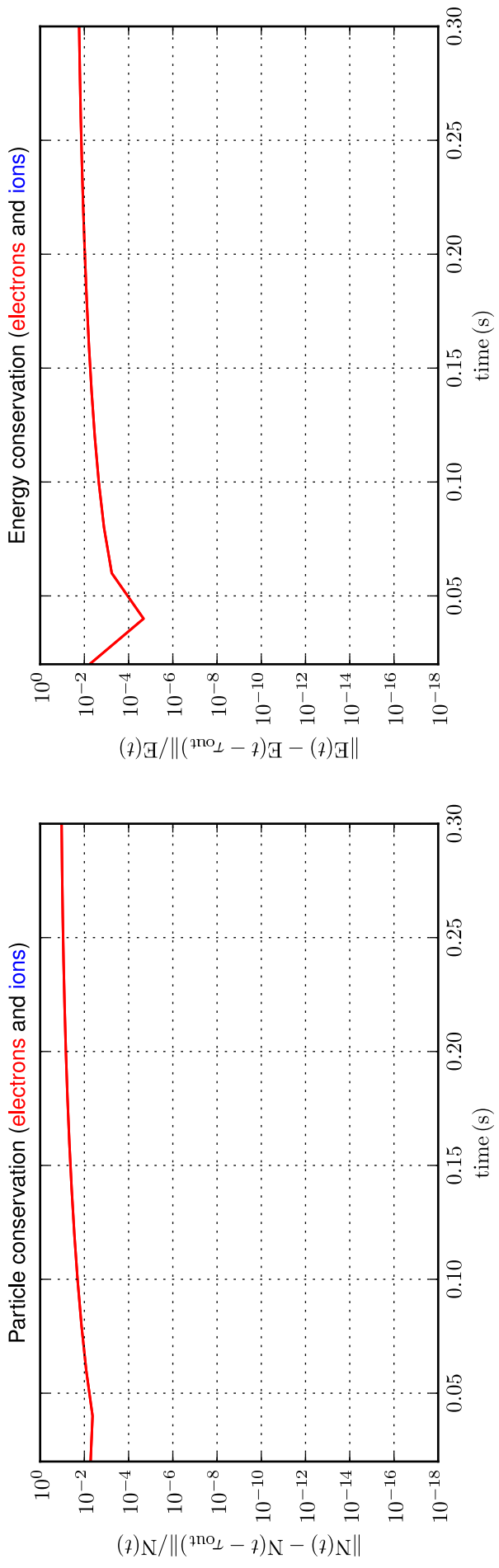
Part. & Energy conservation [Case: I.1.5.k, Solver: 3, $D = 0.1 \text{ m}^2/\text{s}$, $v = -2.00 \text{ m/s}$, $\Delta t = 2.00$, $\tau = 1.0 \times 10^{-3} \text{ s}$, $N_p = 101$]
 Comparison with initial solution - log scale; total time and zoom over time



Part. & Energy conservation [Case: 1.1.5.k, Solver: 3, $D = 0.1 \text{ m}^2/\text{s}$, $v = -2.00 \text{ m/s}$, $\Delta t = 2.00$, $\tau = 1.0 \times 10^{-3} \text{ s}$, $N_p = 101$]
Comparison with initial solution - linear scale; total time and zoom over time

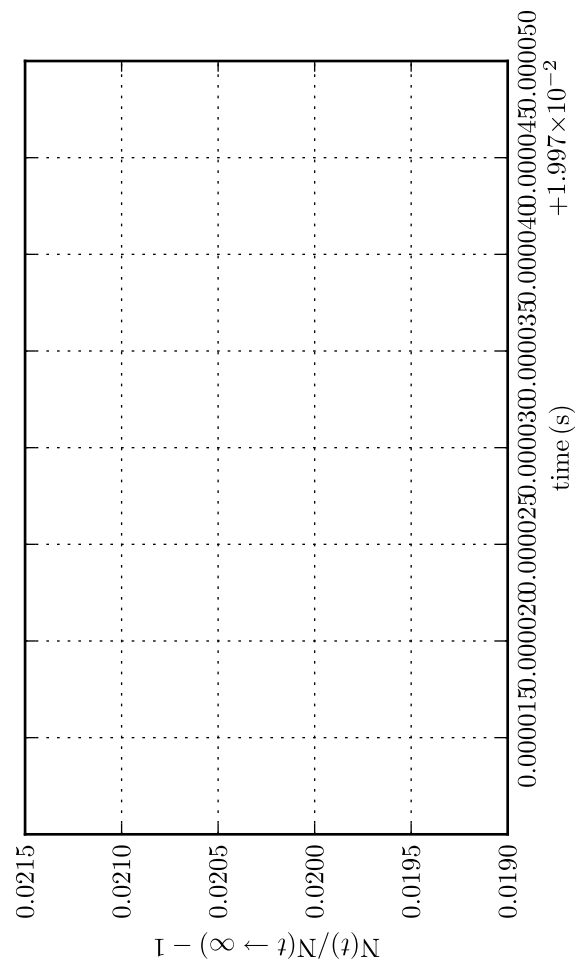
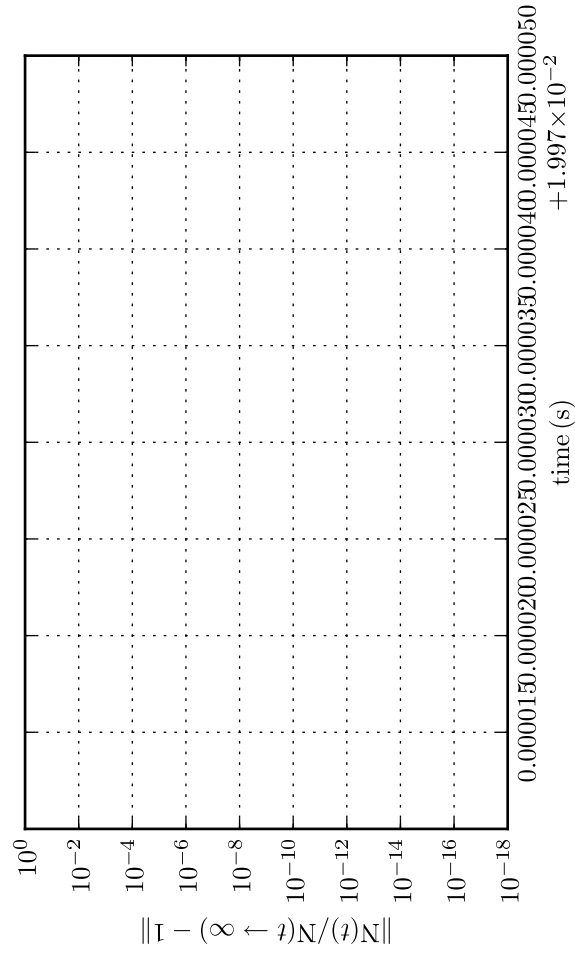
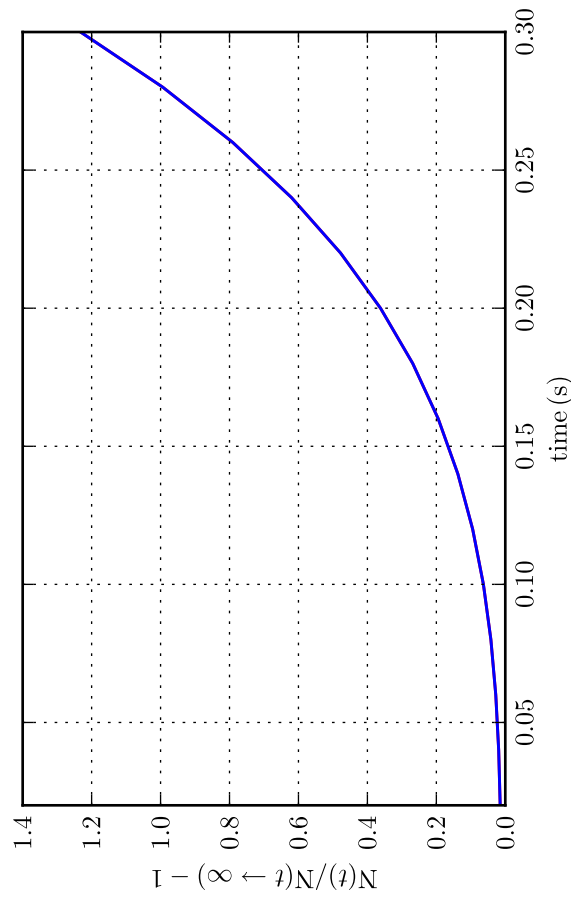
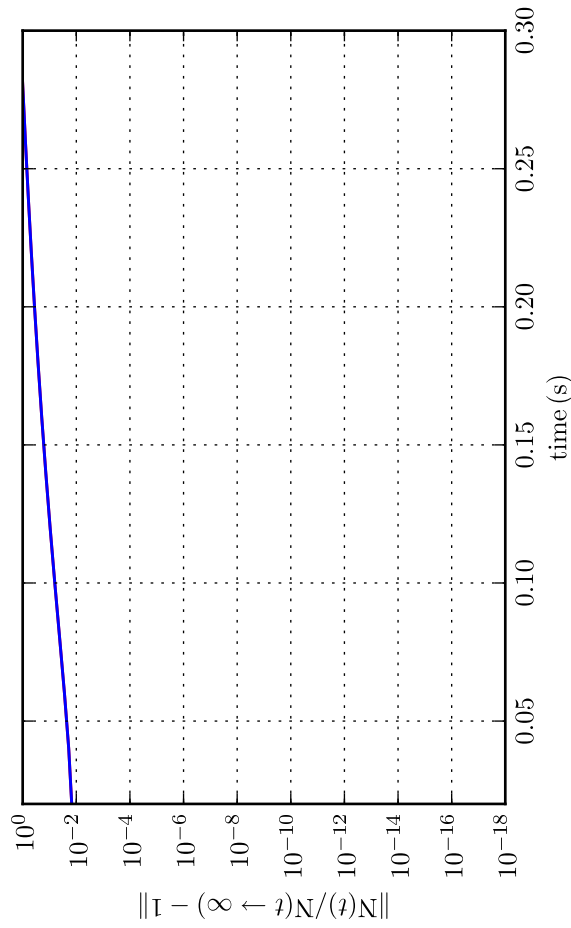


Part. & Energy conservation [Case: I.1.5.k, Solver: 3, $D = 0.1 \text{ m}^2/\text{s}$, $v = -2.00 \text{ m/s}$, $\Delta t = 2.00$, $\tau = 1.0 \times 10^{-3} \text{ s}$, $N_p = 101$]
Comparison with previous time-sampled (τ_{out}) solution - log and linear scales



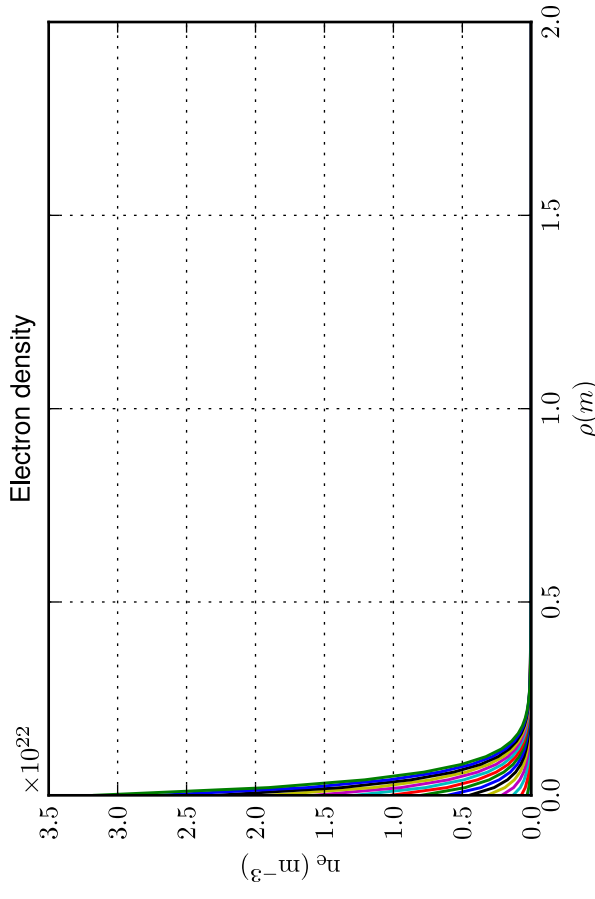
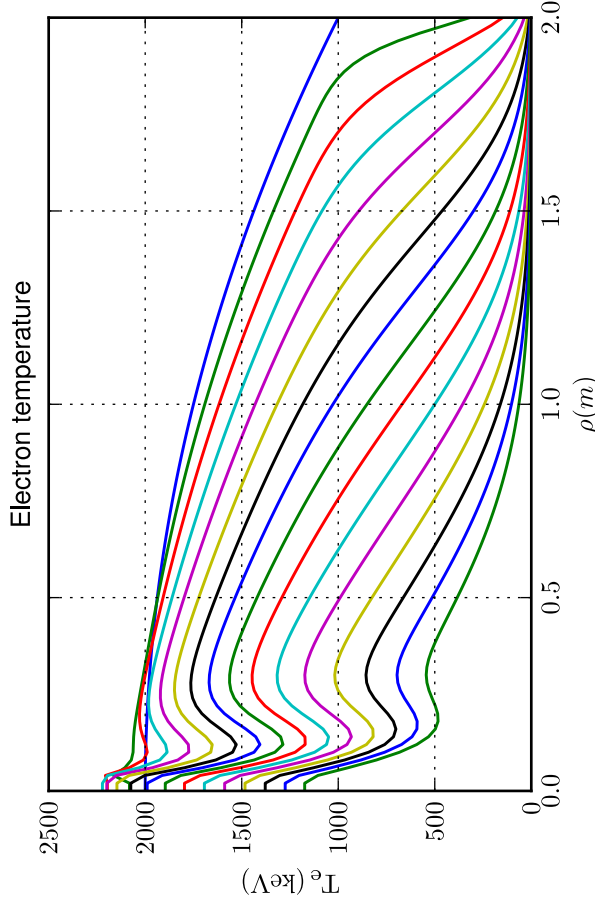
Particle conservation [Case: I.1.5.k, Solver: 3, $D = 0.1 \text{ m}^2/\text{s}$, $v = -2.00 \text{ m/s}$, $\Delta t = 2.00$, $\tau = 1.0 \times 10^{-3} \text{ s}$, $N_p = 101$]

Comparison with asymptotic solution (electrons and ions); total time and zoom over time

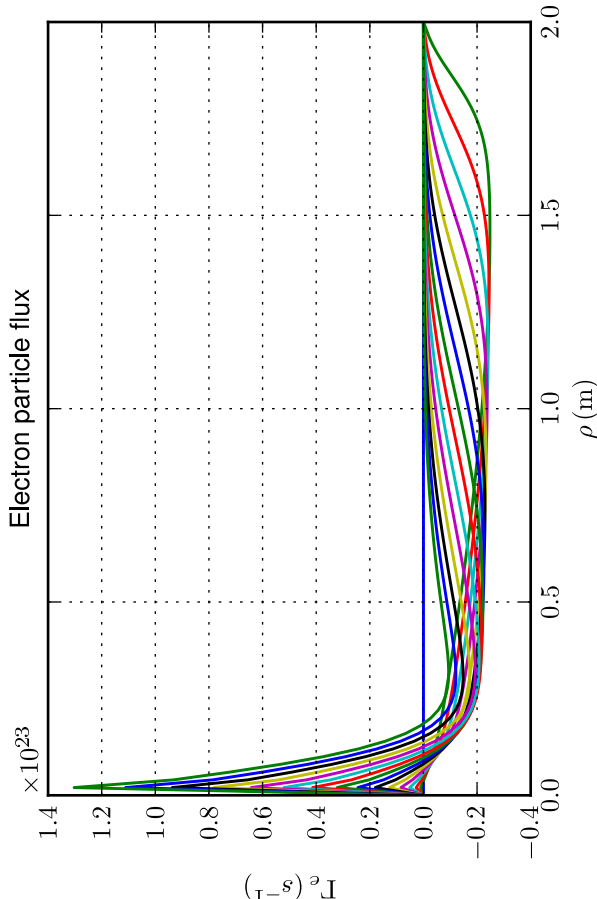
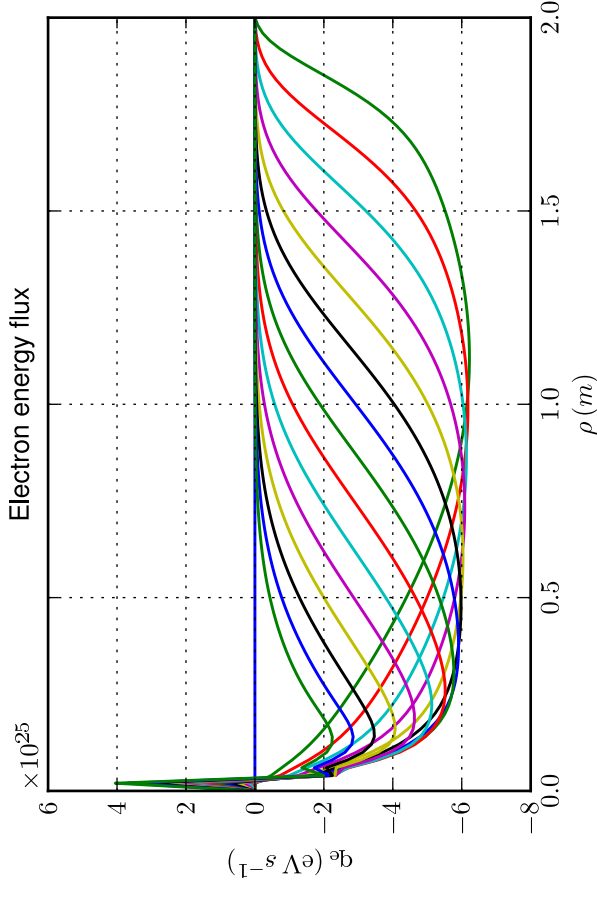


Profiles [Case: I.1.5.k, Solver: 3, $D = 0.1 \text{ m}^2/\text{s}$, $v = -2.00 \text{ m/s}$, $\Delta t = 2.00$, $\tau = 1.0 \times 10^{-3} \text{ s}$, $N_\rho = 101$]
 Time sampling: total simulation time/10

- 0.00
- 0.02
- 0.04
- 0.06
- 0.08
- 0.10
- 0.12
- 0.14
- 0.16
- 0.18
- 0.20
- 0.22
- 0.24
- 0.26
- 0.28
- 0.30

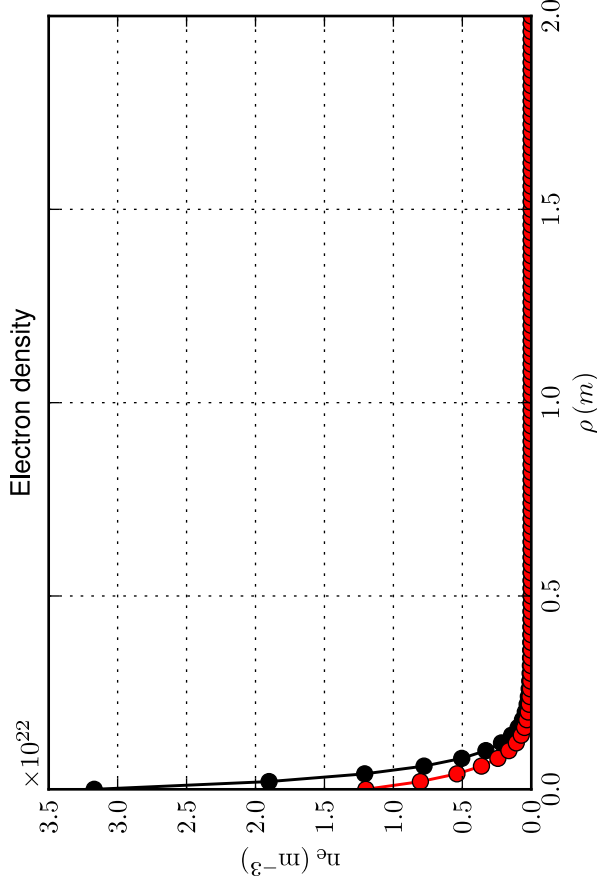
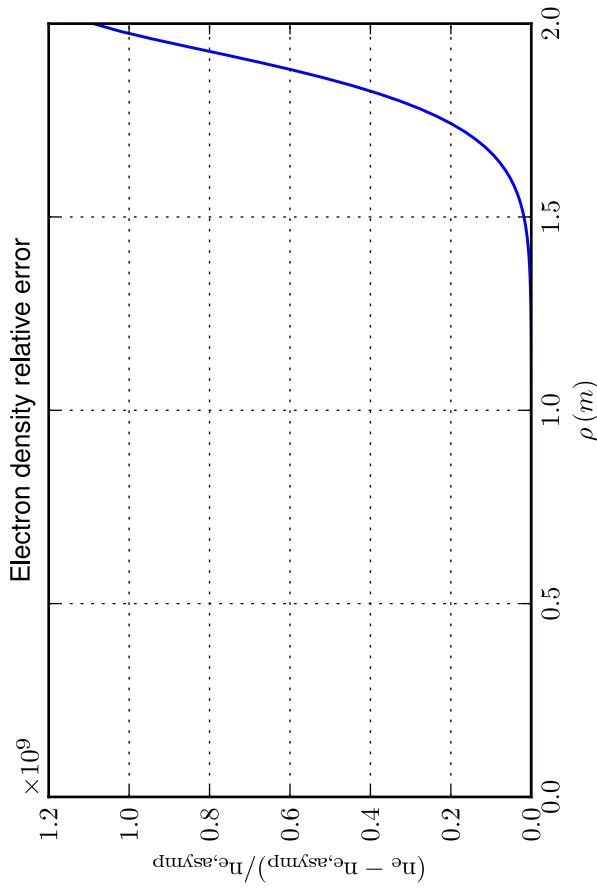


- 0.00
- 0.02
- 0.04
- 0.06
- 0.08
- 0.10
- 0.14
- 0.16
- 0.18
- 0.20
- 0.22
- 0.24
- 0.26
- 0.28
- 0.30

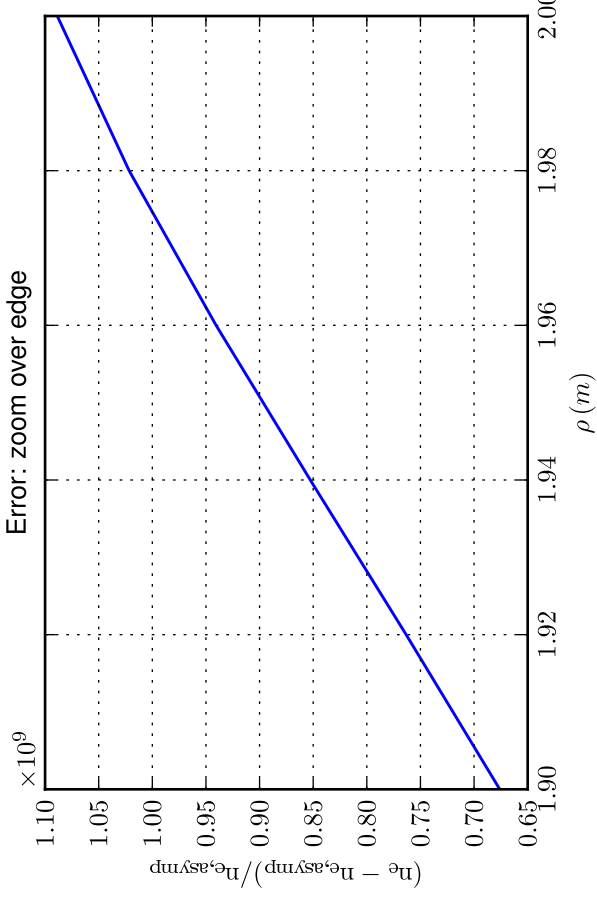
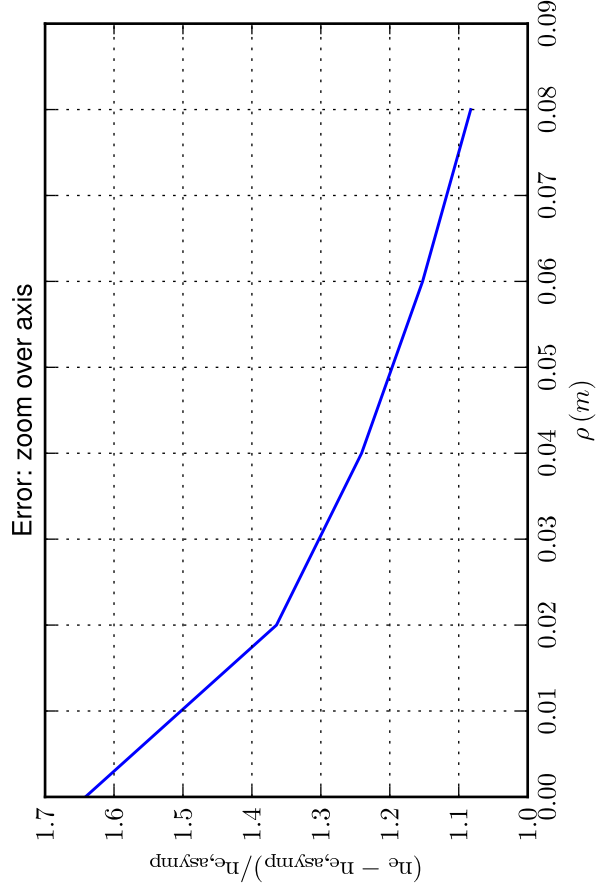


Profiles [Case: I.1.5.k, Solver: 3, $D = 0.1 \text{ m}^2/\text{s}$, $v = -2.00 \text{ m/s}$, $\Delta t = 2.00$, $\tau = 1.0 \times 10^{-3} \text{ s}$, $N_\rho = 101$]

Comparison with asymptotic solution

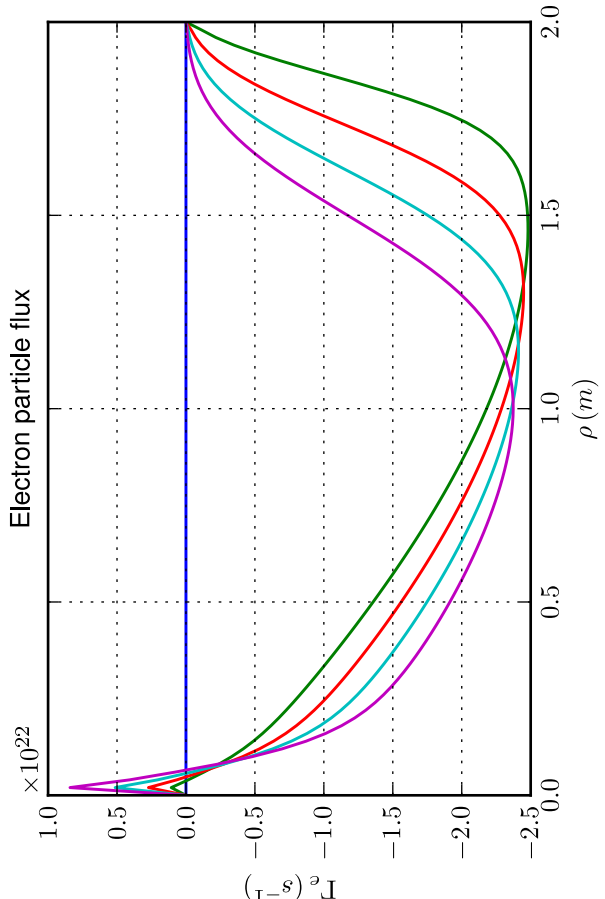
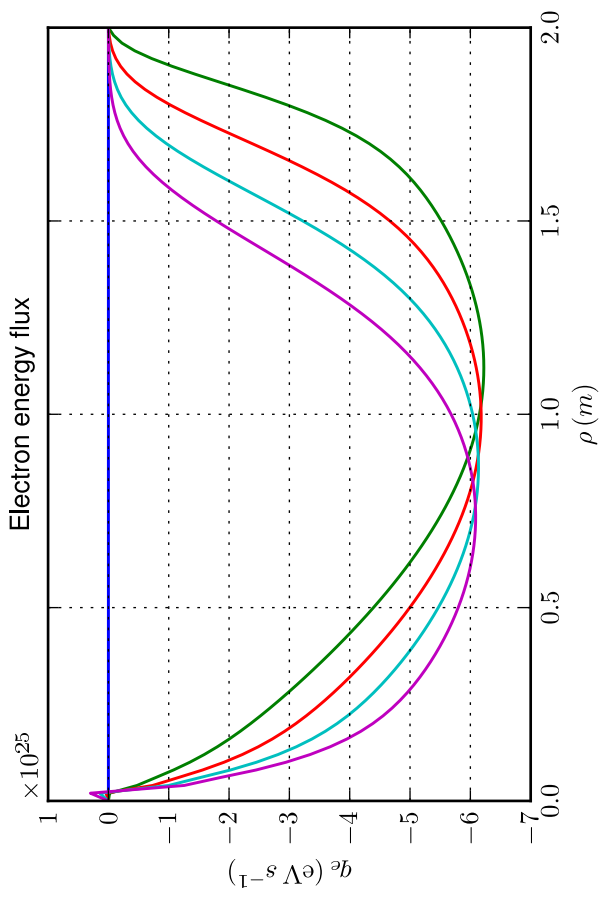
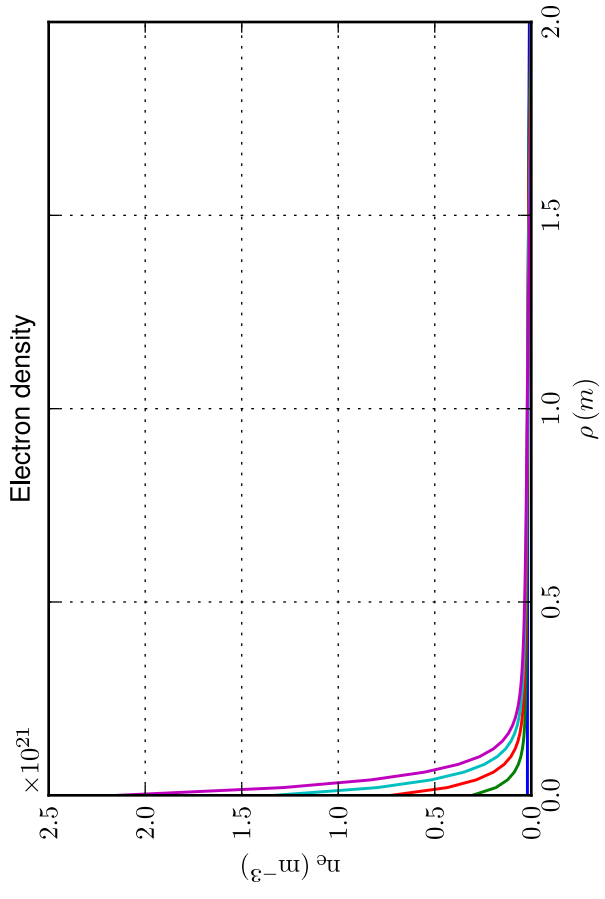
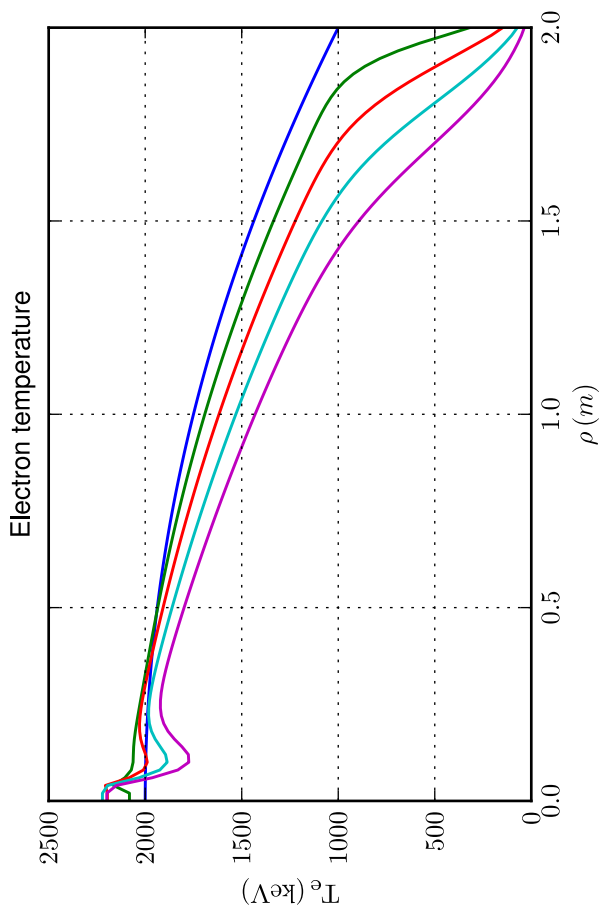


● final calculation
● asymptotic



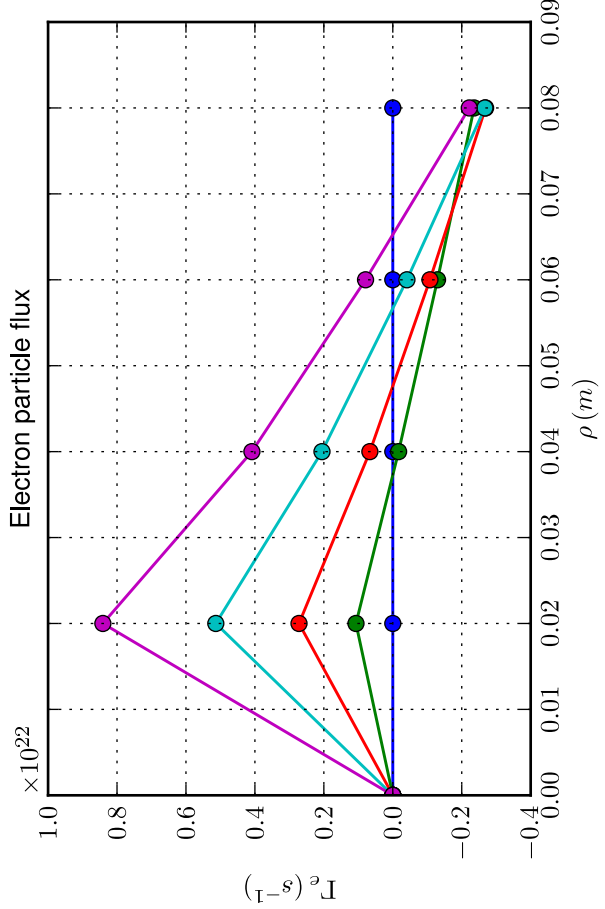
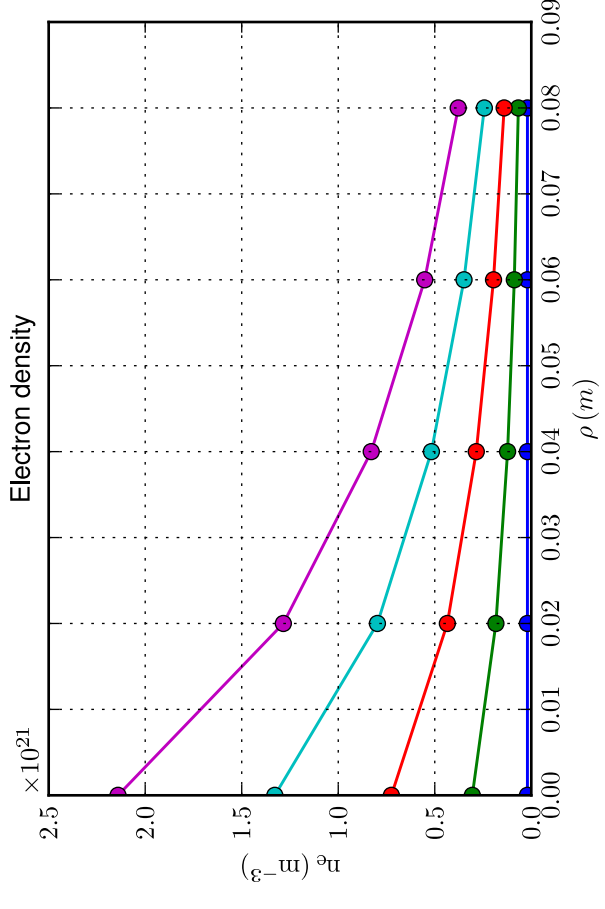
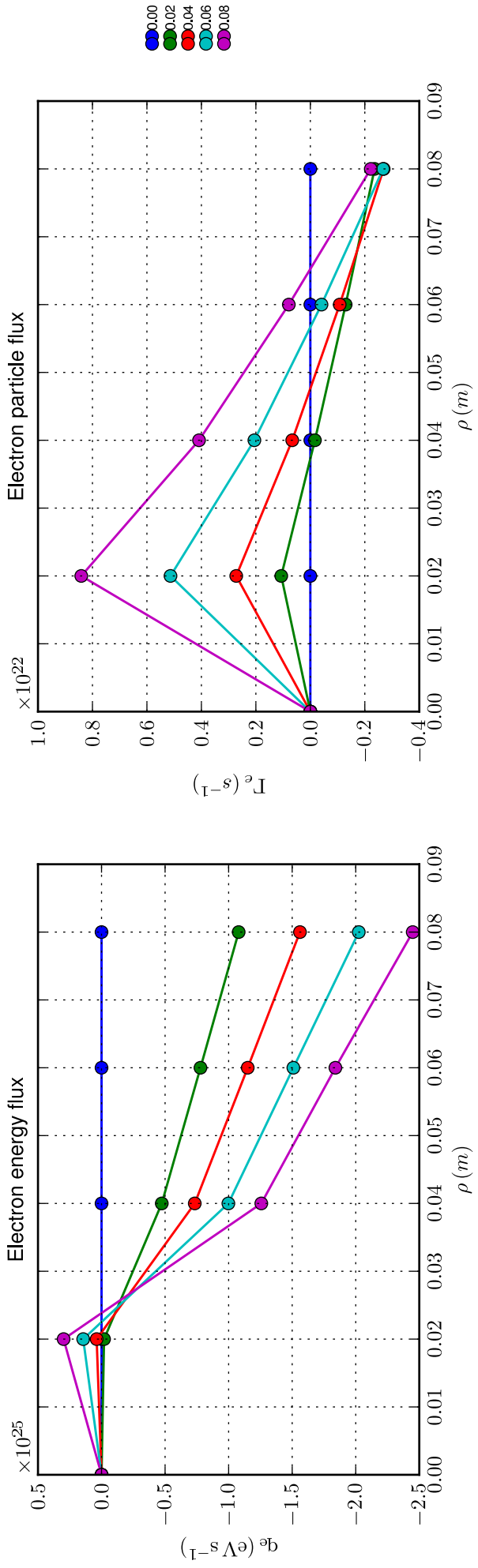
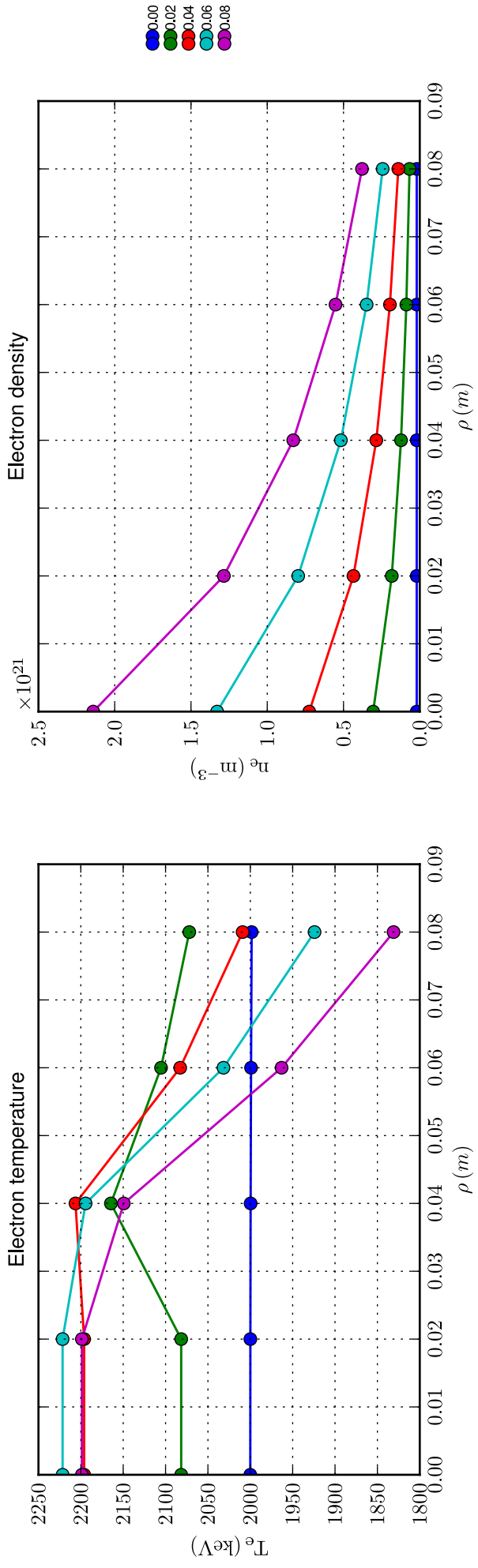
Profiles [Case: I.1.5.k, Solver: 3, $D = 0.1 \text{ m}^2/\text{s}$, $v = -2.00 \text{ m/s}$, $\Delta t = 2.00$, $\tau = 1.0 \times 10^{-3} \text{ s}$, $N_\rho = 101$]

Time sampling: first 10 time slices or zoom over time $0.1 \times (a^2/D)/|1 - (V_a/D)| = 0.10 \text{ s}$

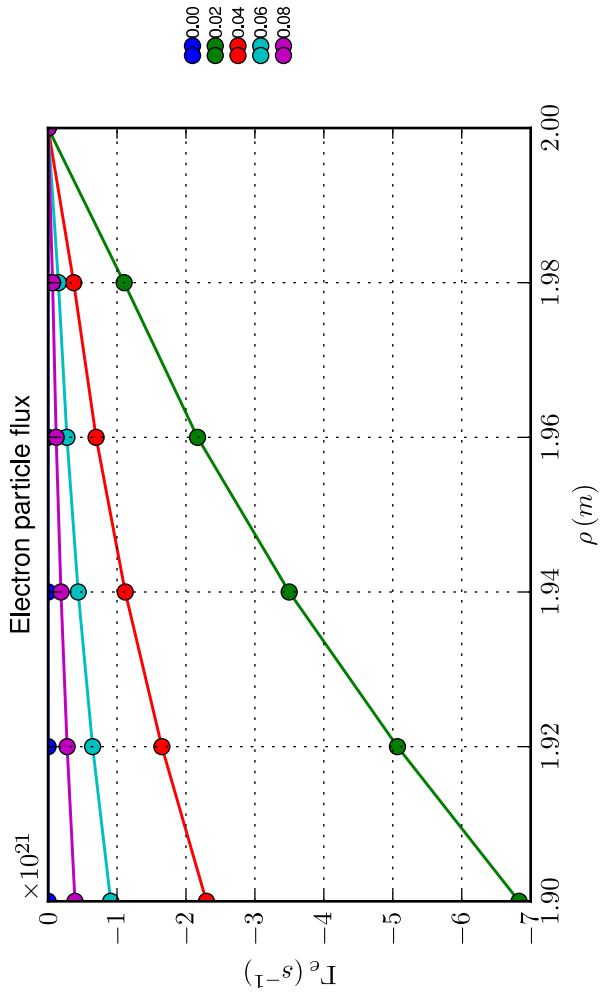
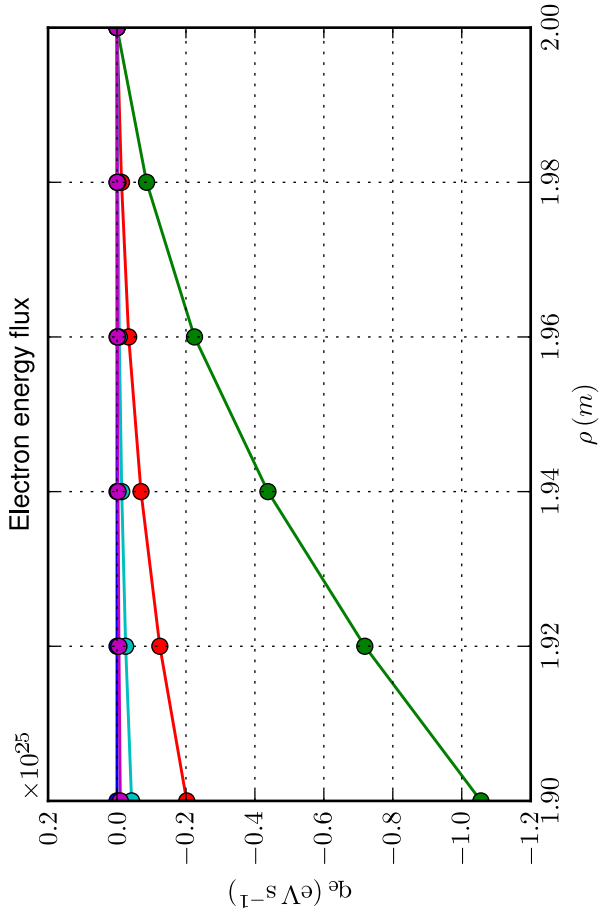
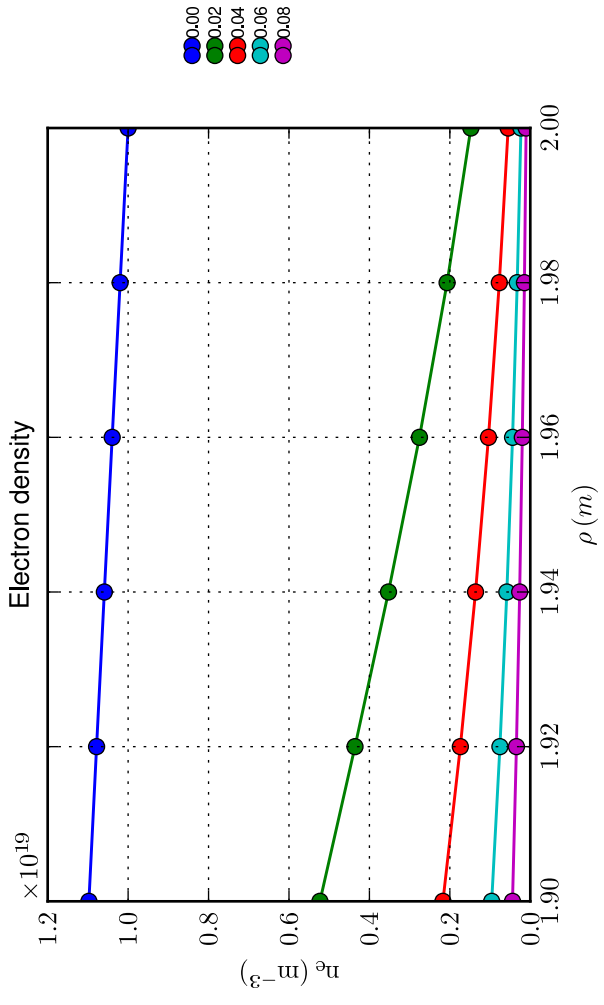
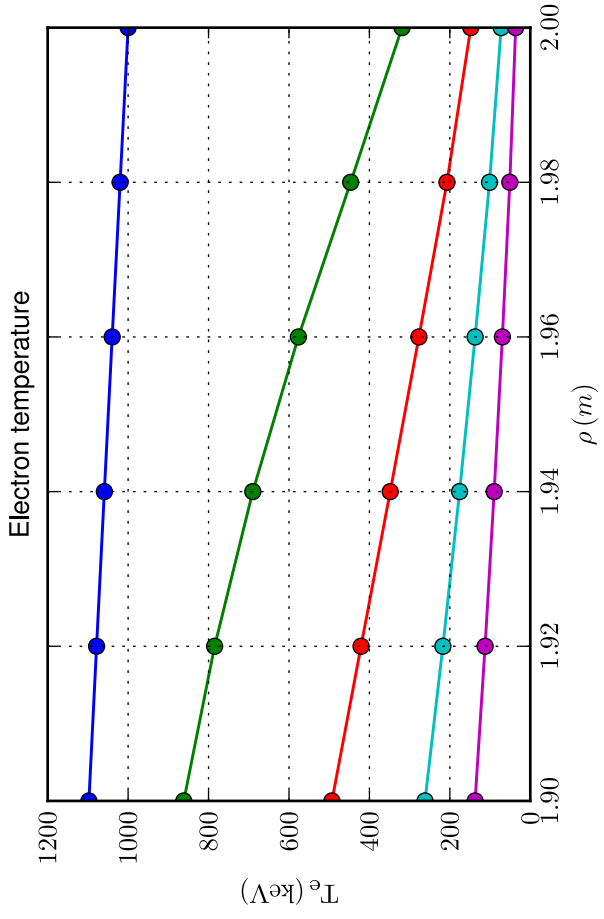


0.00
0.02
0.04
0.06
0.08

Profiles [Case: I.1.5.k, Solver: 3, $D = 0.1 \text{ m}^2/\text{s}$, $v = -2.00 \text{ m/s}$, $\Delta t = 2.00$, $\tau = 1.0 \times 10^{-3} \text{ s}$, $N_\rho = 101$]
 Spatial zoom over magnetic axis; time sampling: first 10 time slices or zoom over time $0.1 \times (a^2/D)/|1 - (V_a/D)| = 0.10 \text{ s}$

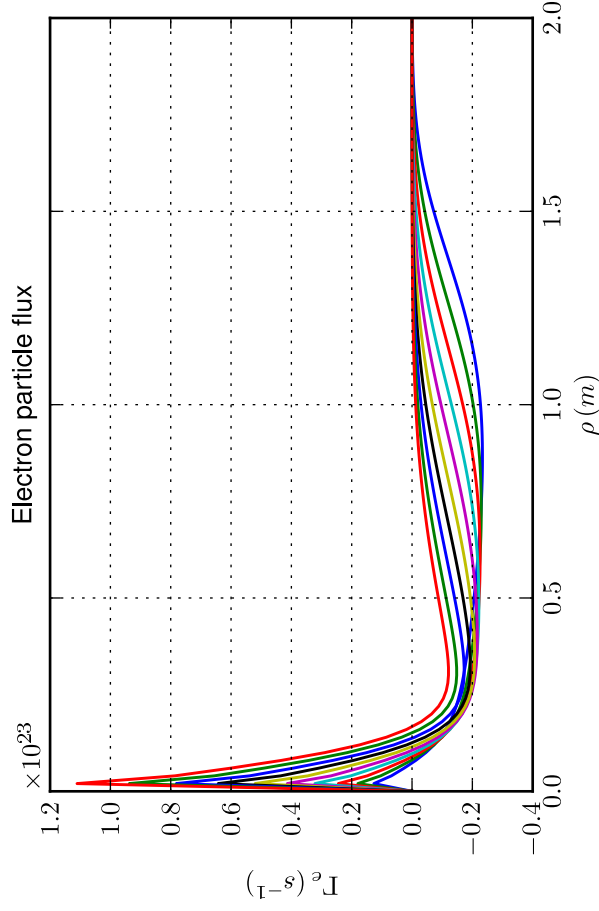
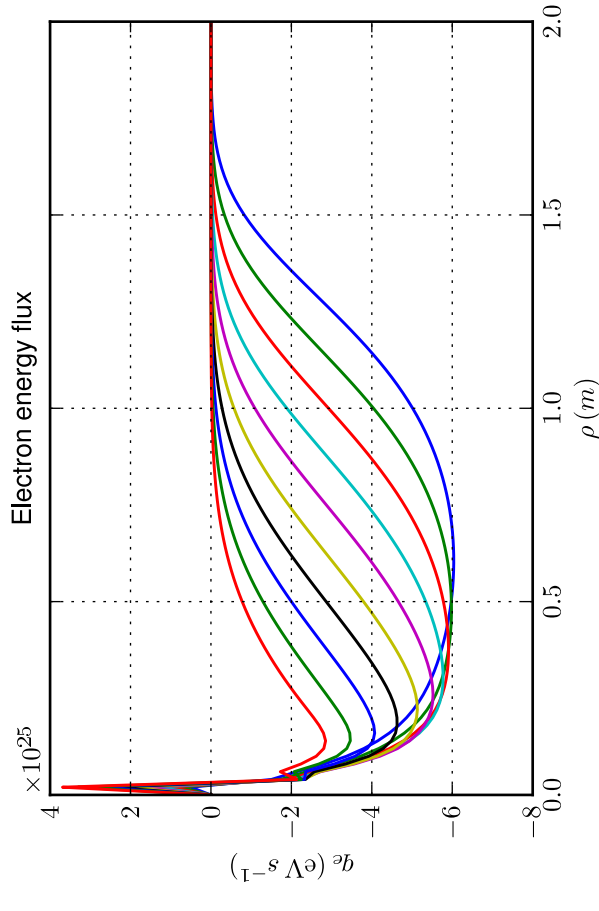
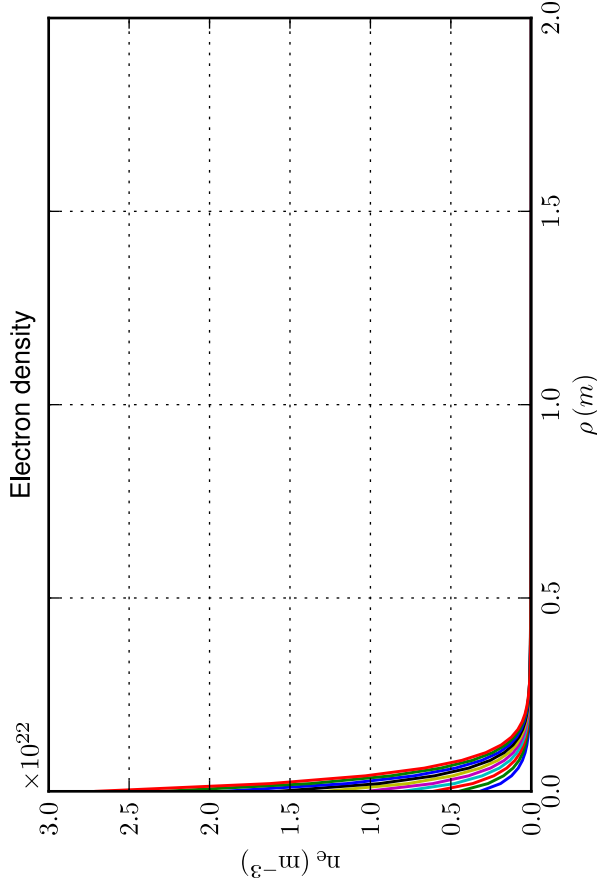
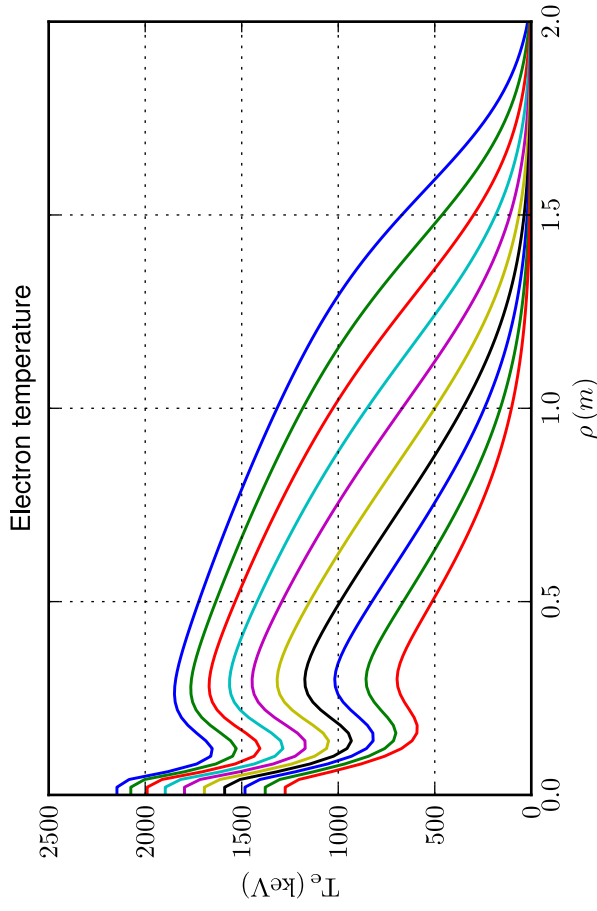


Profiles [Case: 1.1.5.k, Solver: 3, $D = 0.1 \text{ m}^2/\text{s}$, $v = -2.00 \text{ m/s}$, $\Delta t = 2.00$, $\tau = 1.0 \times 10^{-3} \text{ s}$, $N_\rho = 101$]
 Spatial zoom over edge; time sampling: first 10 time slices or zoom over time $0.1 \times (a^2/D)/|1 - (Va/D)| = 0.10 \text{ s}$



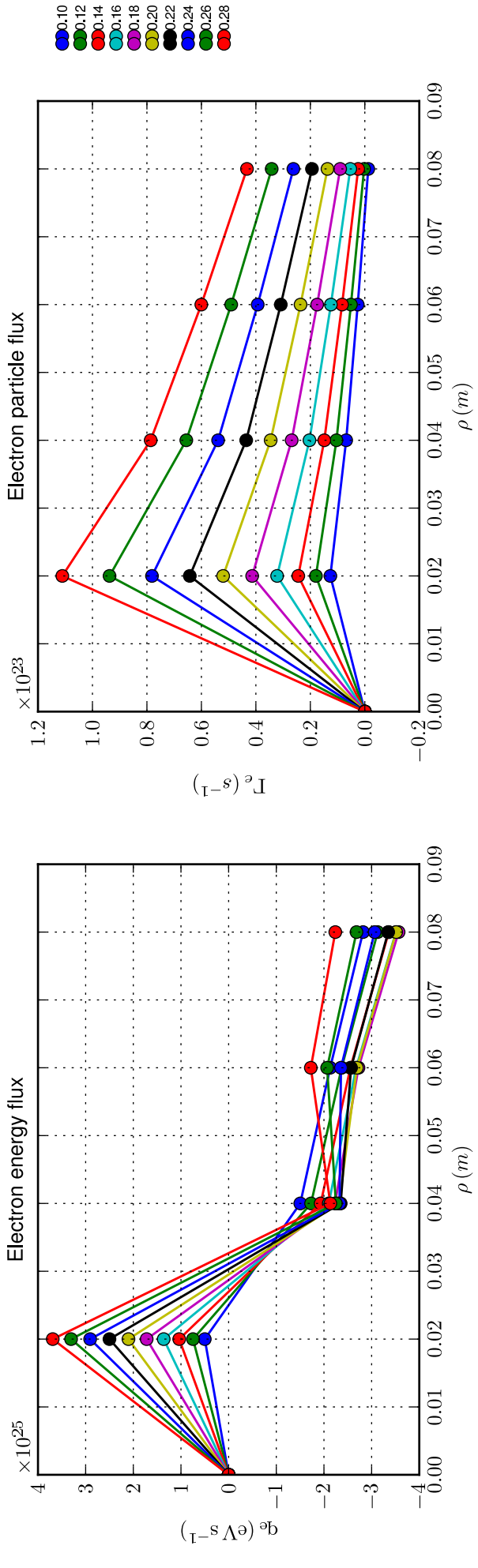
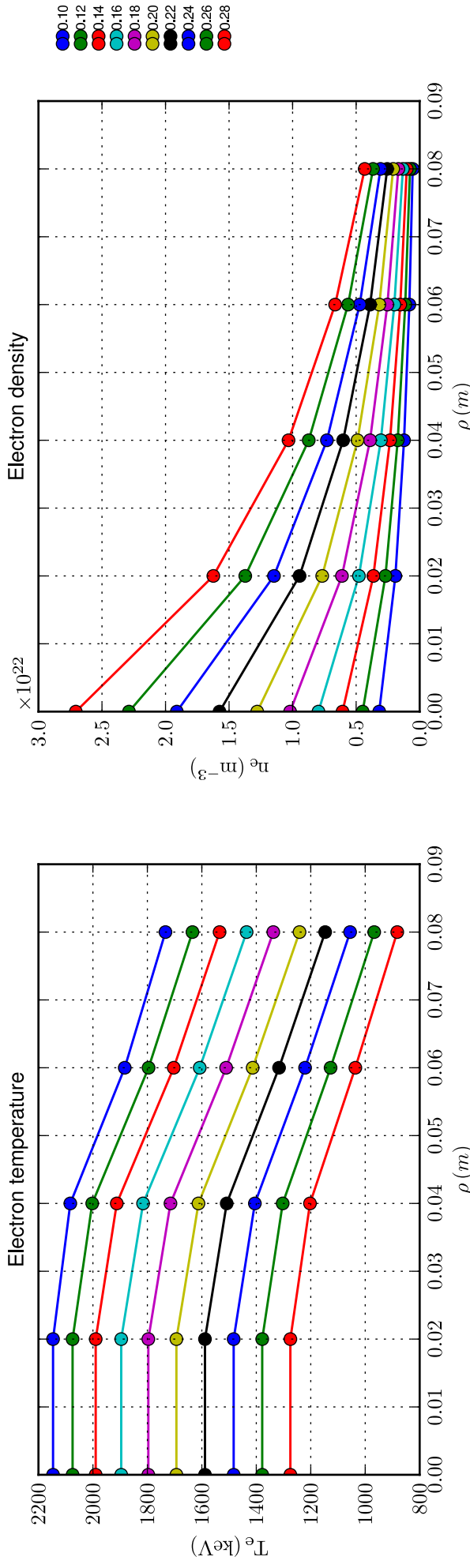
Profiles [Case: I.1.5.k, Solver: 3, $D = 0.1 \text{ m}^2/\text{s}$, $v = -2.00 \text{ m/s}$, $\Delta t = 2.00$, $\tau = 1.0 \times 10^{-3} \text{ s}$, $N_\rho = 101$]

Time sampling: last 10 time slices



Legend for time slices: 0.10, 0.12, 0.14, 0.16, 0.18, 0.20, 0.22, 0.24, 0.26, 0.28

Profiles [Case: 1.1.5.k, Solver: 3, $D = 0.1 \text{ m}^2/\text{s}$, $v = -2.00 \text{ m/s}$, $\Delta t = 2.00$, $\tau = 1.0 \times 10^{-3} \text{ s}$, $N_\rho = 101$]
 Spatial zoom over magnetic axis; time sampling: last 10 time slices



Profiles [Case: 1.1.5.k, Solver: 3, $D = 0.1 \text{ m}^2/\text{s}$, $v = -2.00 \text{ m/s}$, $\Delta t = 2.00$, $\tau = 1.0 \times 10^{-3} \text{ s}$, $N_\rho = 101$]
 Spatial zoom over edge; time sampling: last 10 time slices

