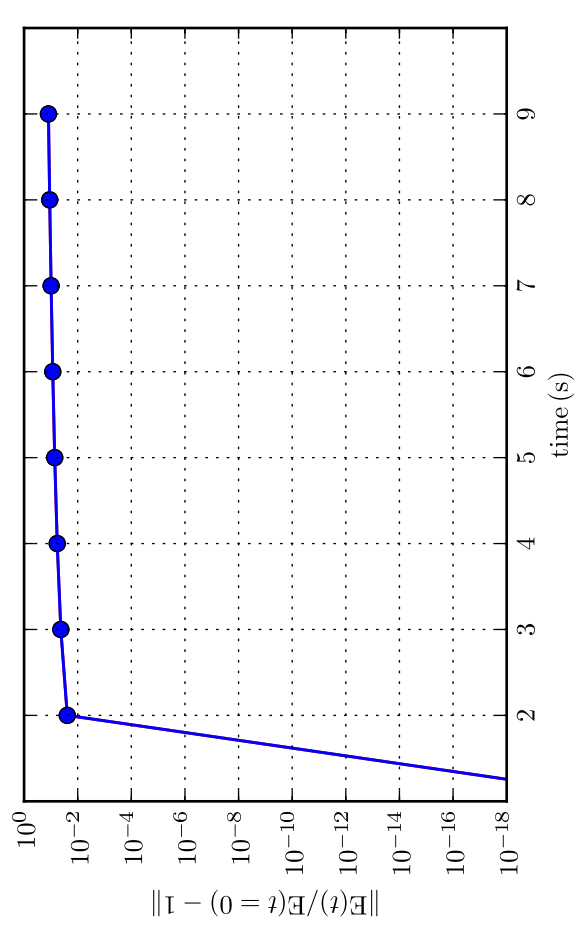
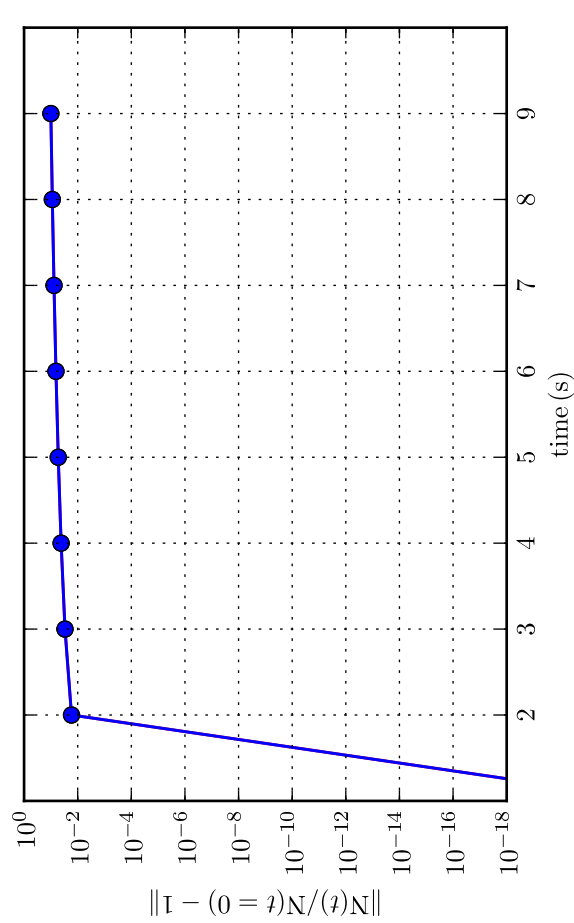
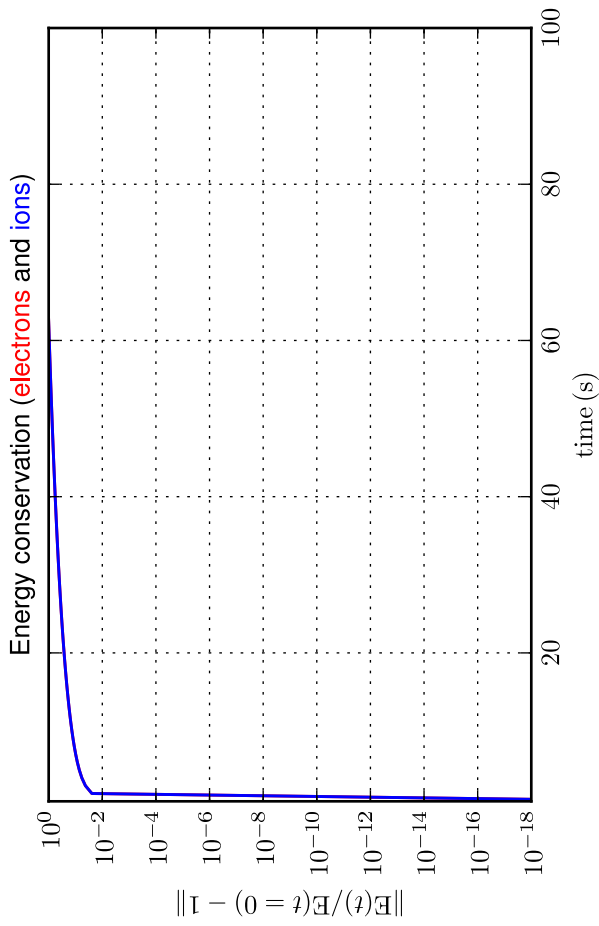
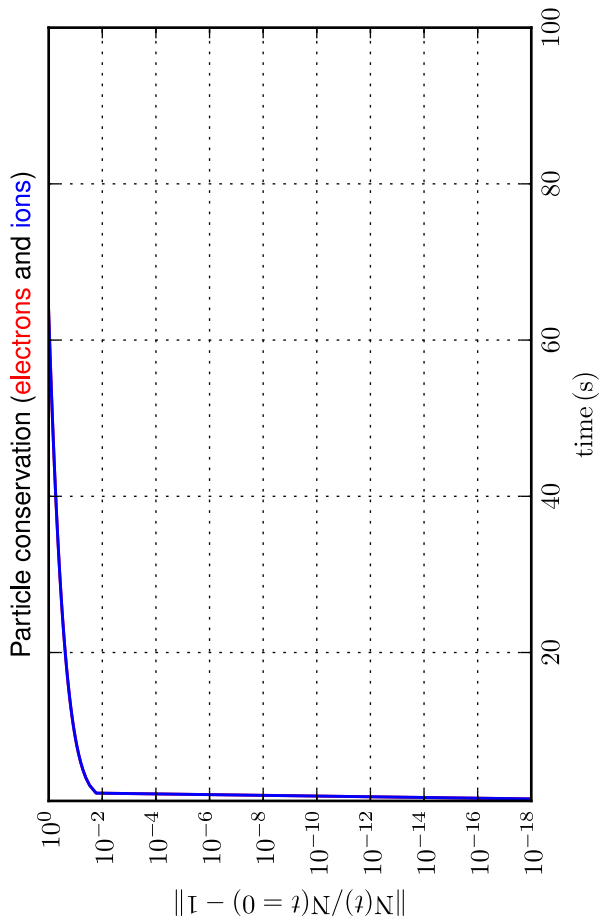


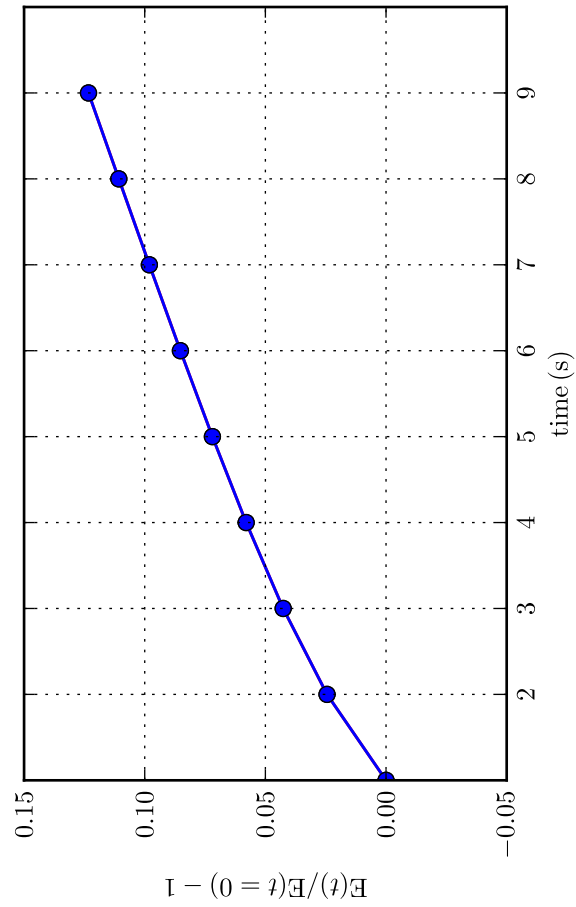
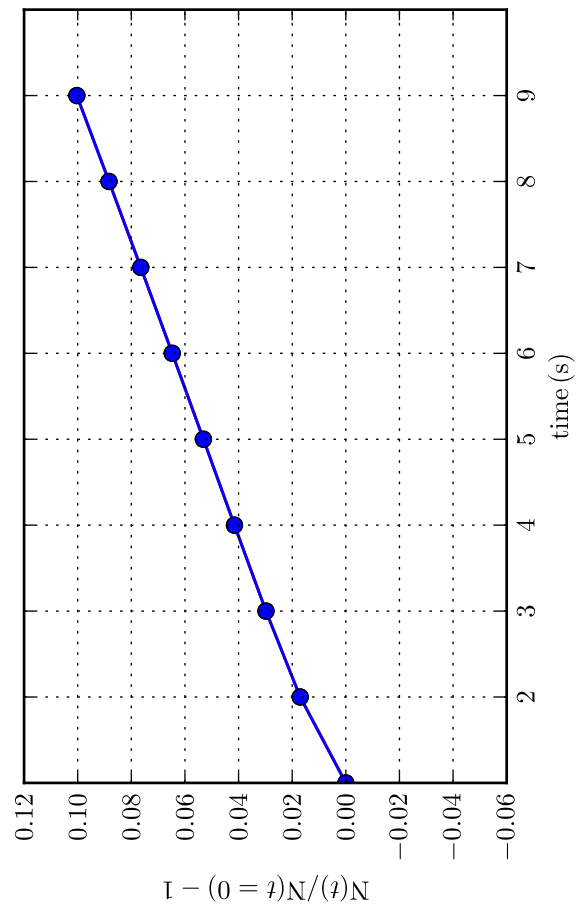
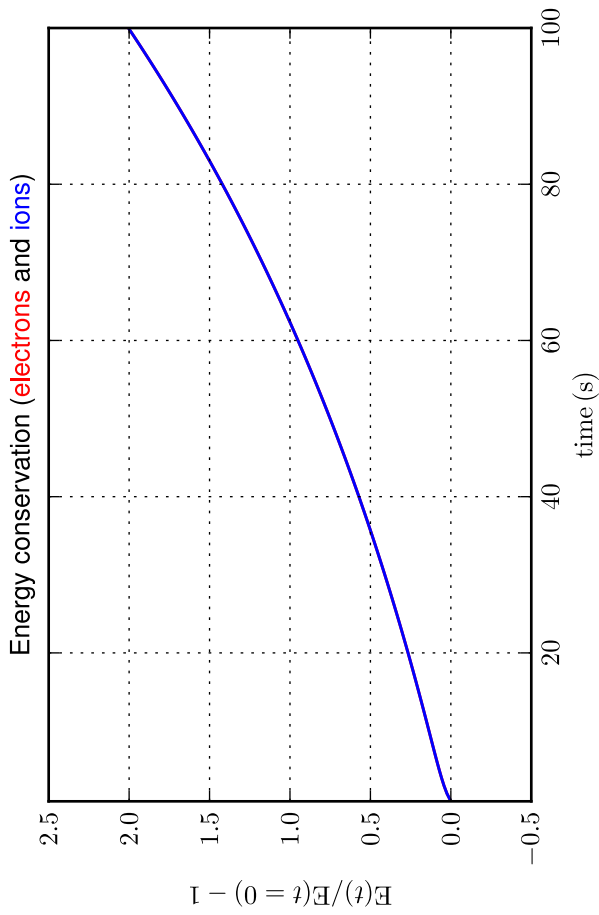
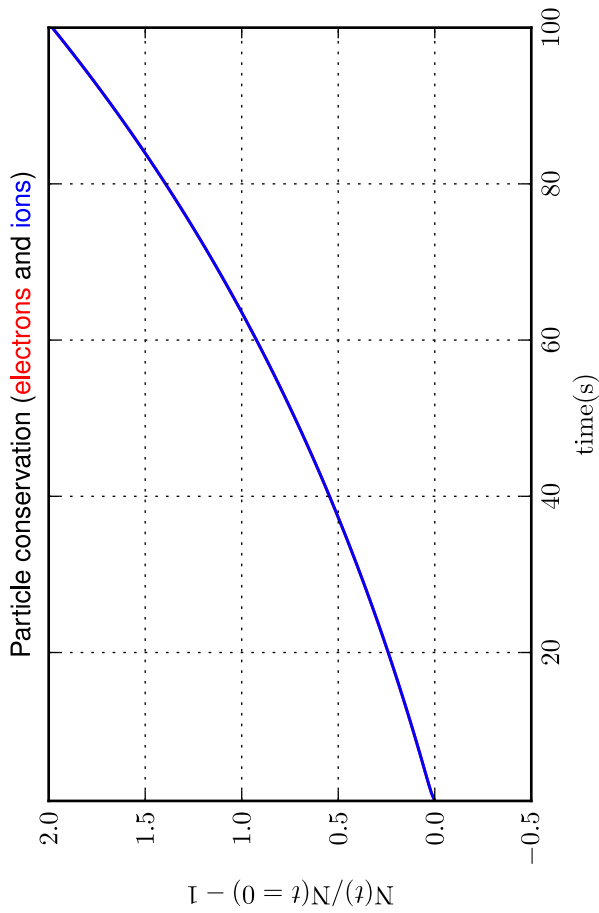
Part. & Energy conservation [Case: I.1.5.a, Solver: 3,  $D = 0.1 \text{ m}^2/\text{s}$ ,  $v = 0.10 \text{ m/s}$ ,  $\Delta t = 100.00$ ,  $\tau = 1.0 \times 10^{-3} \text{ s}$ ,  $N_p = 51$ ]

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

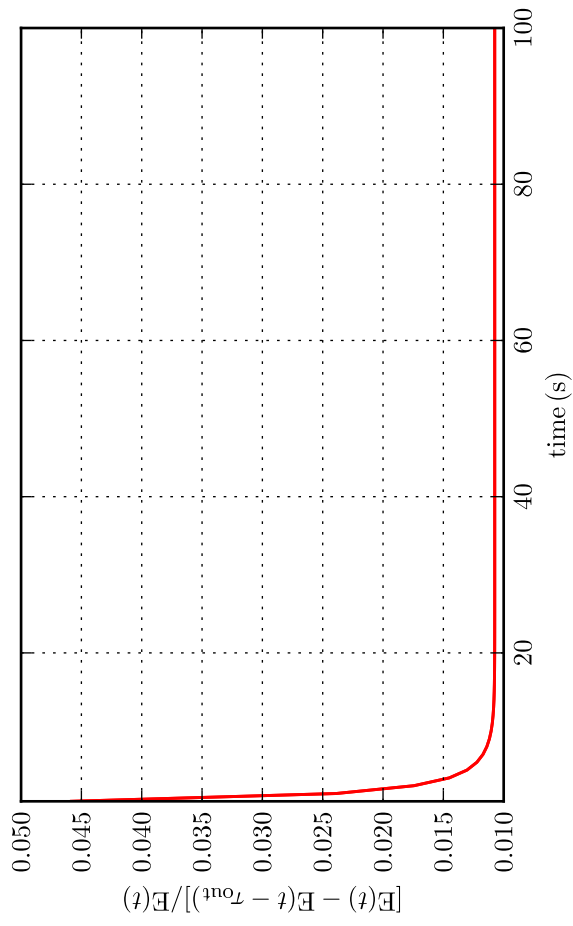
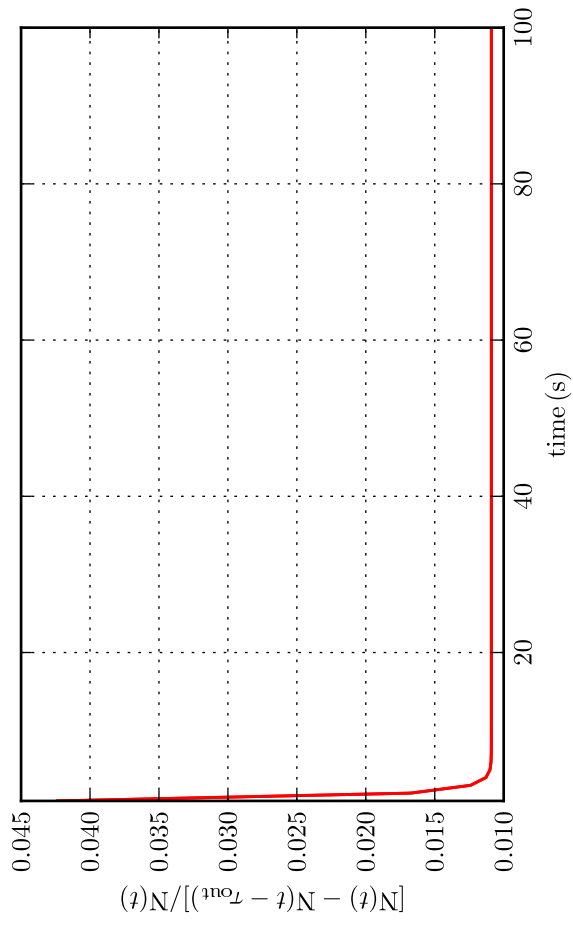
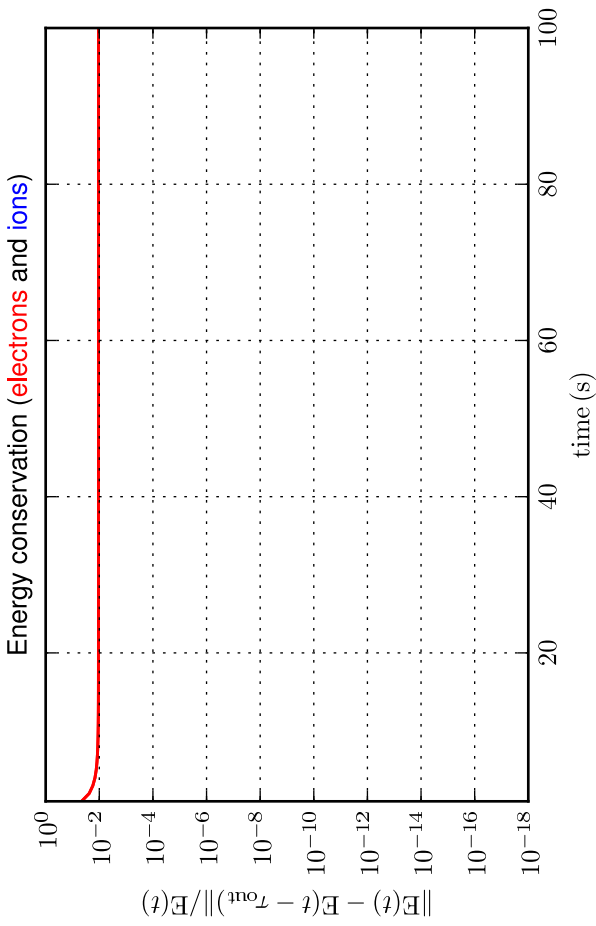
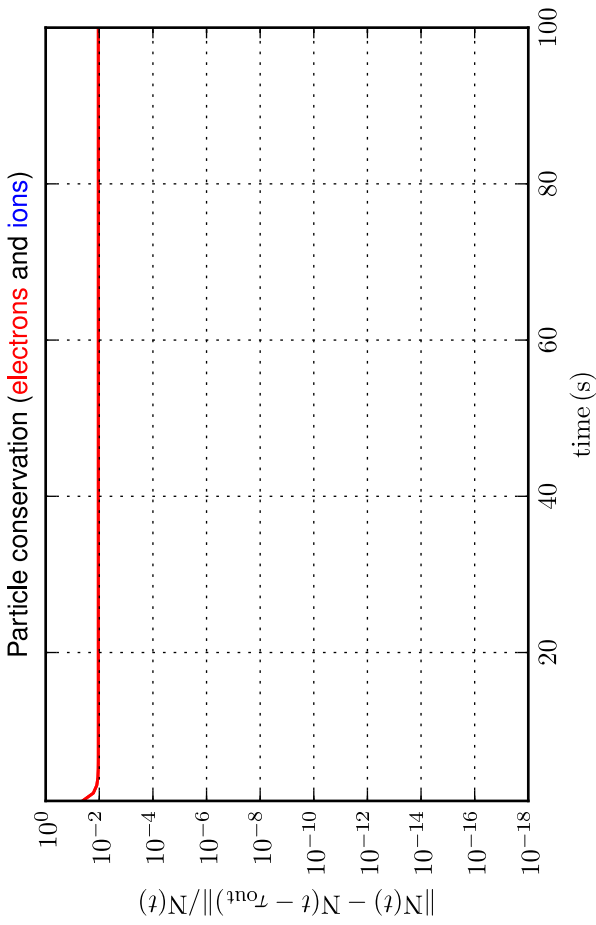


Part. & Energy conservation [Case: 1.1.5.a, Solver: 3,  $D = 0.1 \text{ m}^2/\text{s}$ ,  $v = 0.10 \text{ m/s}$ ,  $\Delta t = 100.00$ ,  $\tau = 1.0 \times 10^{-3} \text{ s}$ ,  $N_p = 51$ ]

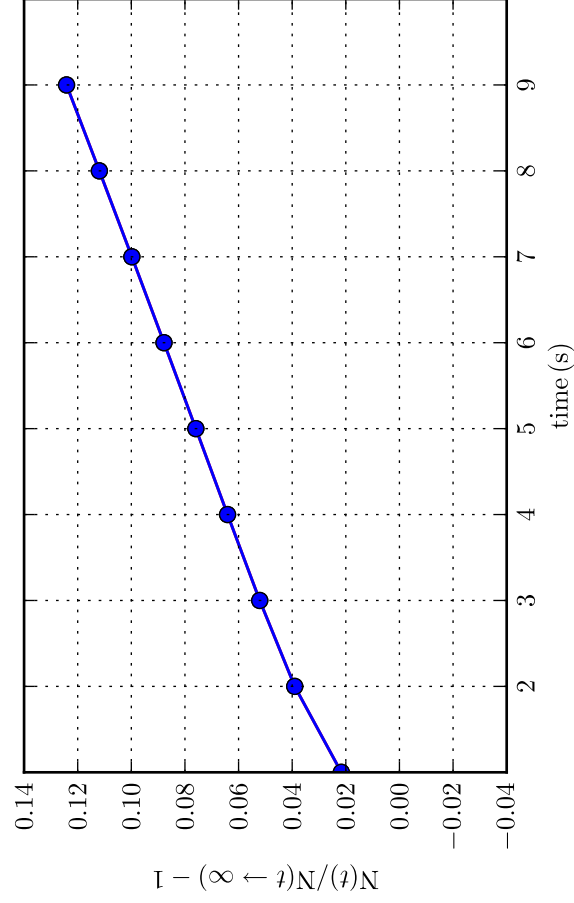
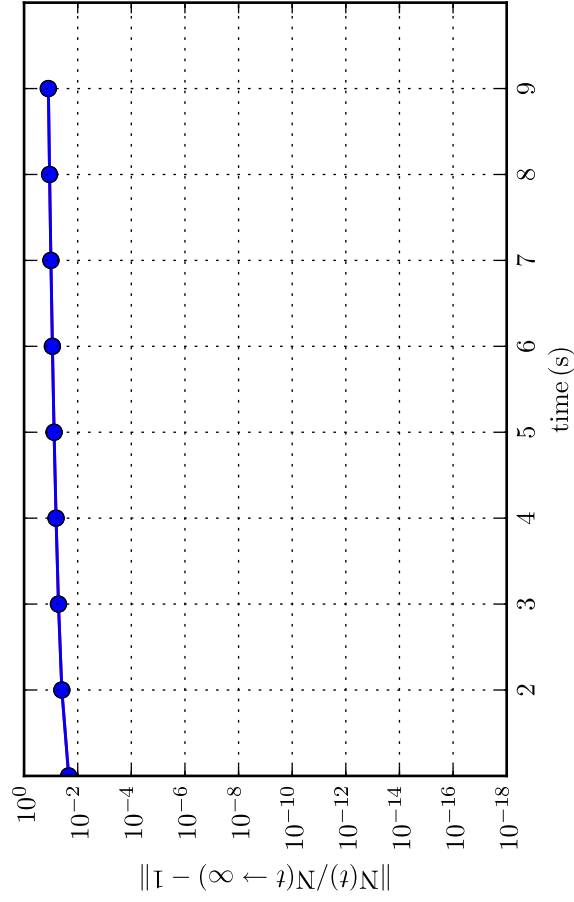
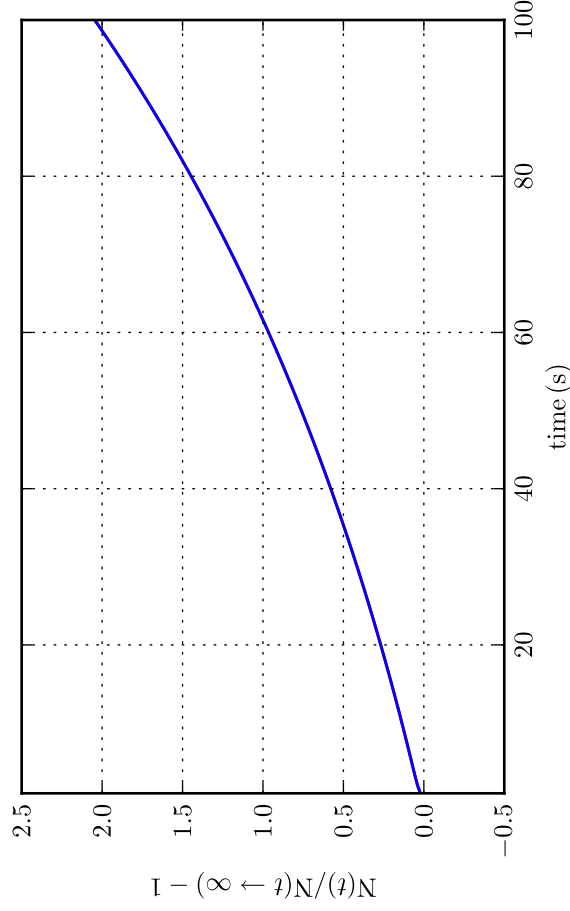
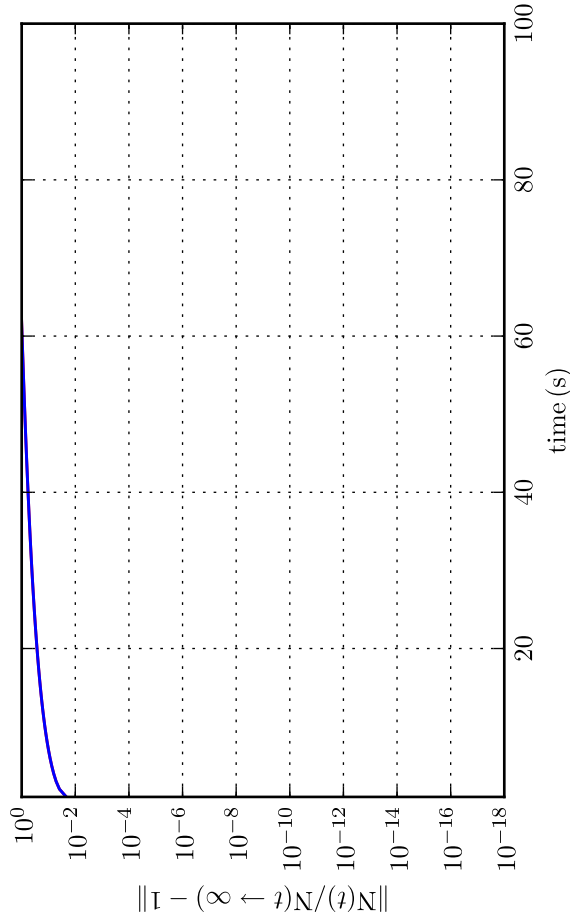
Comparison with initial solution - linear scale; total time and zoom over time



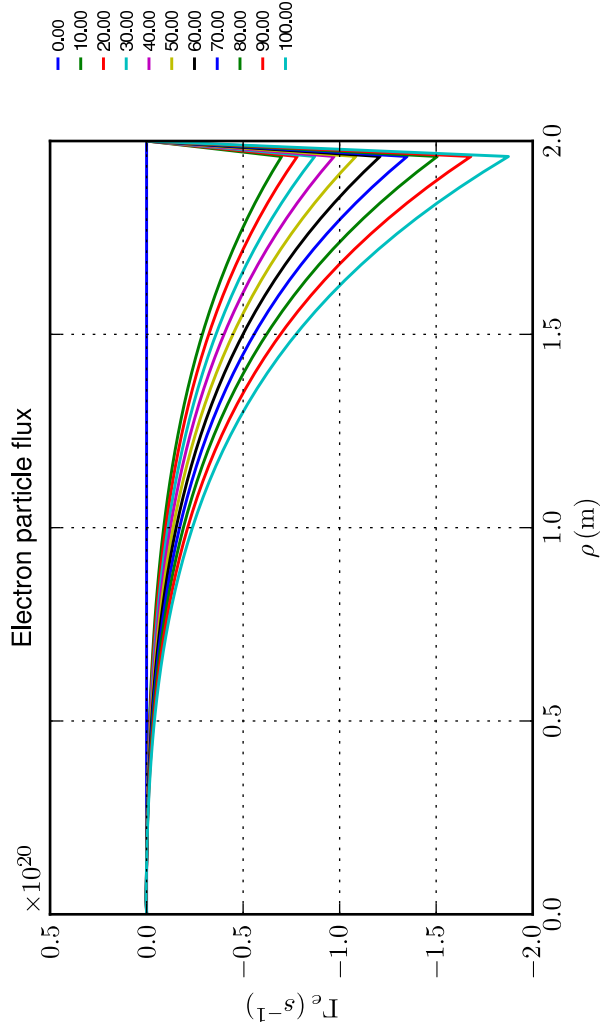
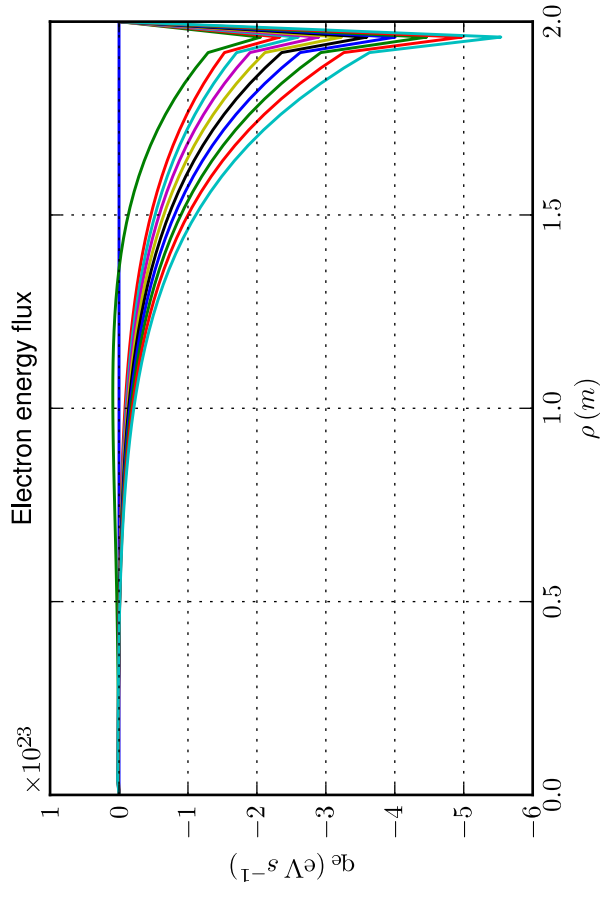
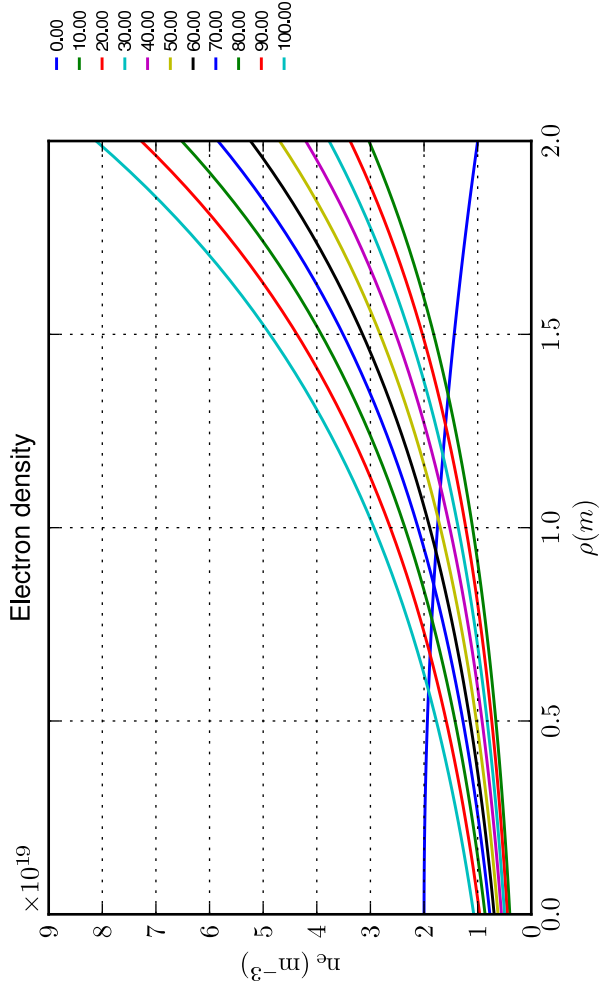
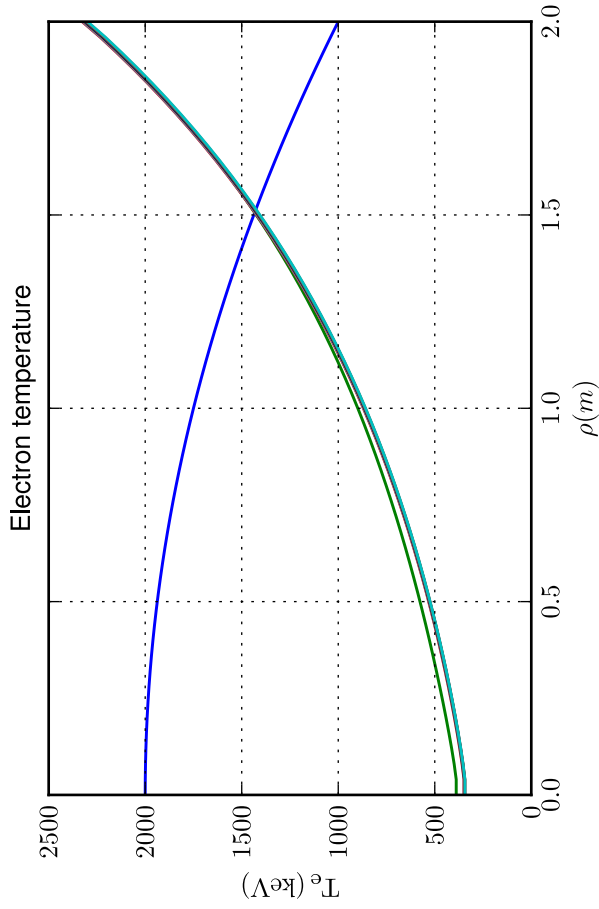
Part. & Energy conservation [Case: I.1.5.a, Solver: 3,  $D = 0.1 \text{ m}^2/\text{s}$ ,  $v = 0.10 \text{ m/s}$ ,  $\Delta t = 100.00$ ,  $\tau = 1.0 \times 10^{-3} \text{ s}$ ,  $N_p = 51$ ]  
 Comparison with previous time-sampled ( $\tau_{\text{out}}$ ) solution - log and linear scales



Particle conservation [Case: I.1.5.a, Solver: 3,  $D = 0.1 \text{ m}^2/\text{s}$ ,  $v = 0.10 \text{ m/s}$ ,  $\Delta t = 100.00$ ,  $\tau = 1.0 \times 10^{-3} \text{ s}$ ,  $N_p = 51$ ]  
 Comparison with asymptotic solution (electrons and ions); total time and zoom over time

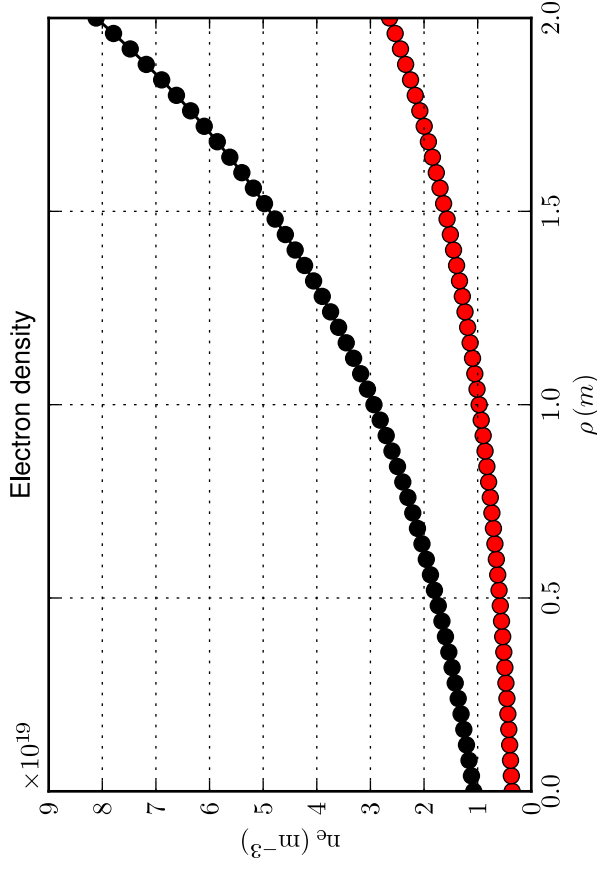
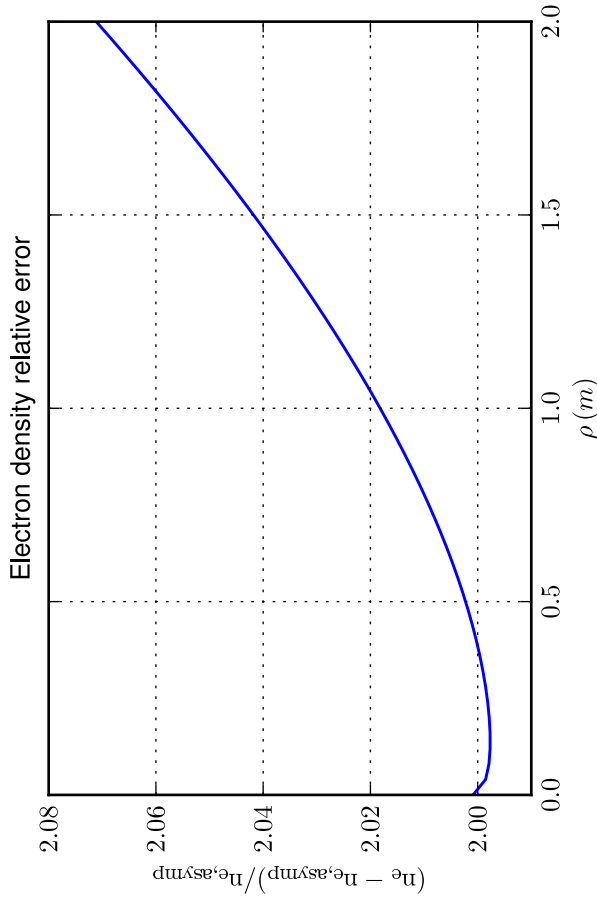


Profiles [Case: I.1.5.a, Solver: 3,  $D = 0.1 \text{ m}^2/\text{s}$ ,  $v = 0.10 \text{ m/s}$ ,  $\Delta t = 100.00$ ,  $\tau = 1.0 \times 10^{-3} \text{ s}$ ,  $N_\rho = 51$ ]  
 Time sampling: total simulation time/10

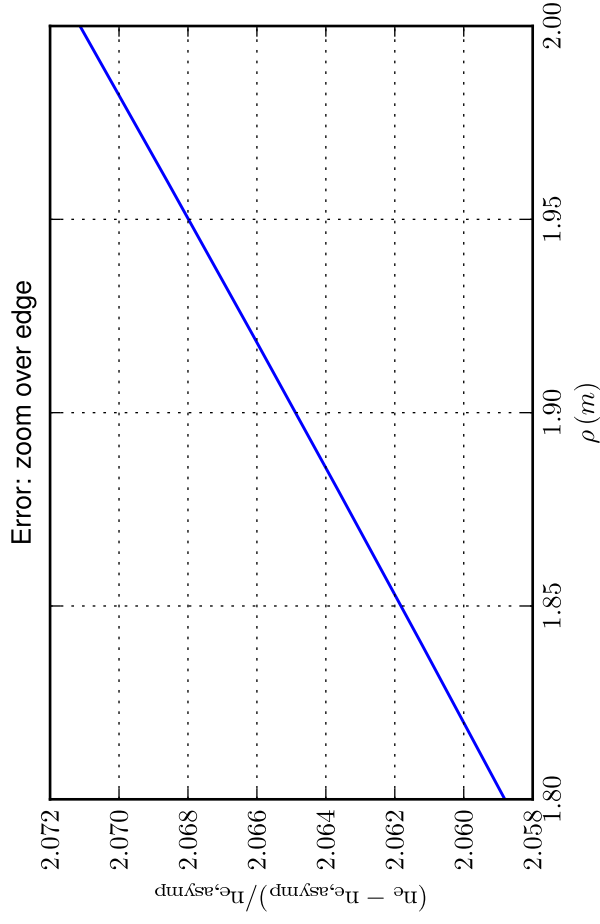
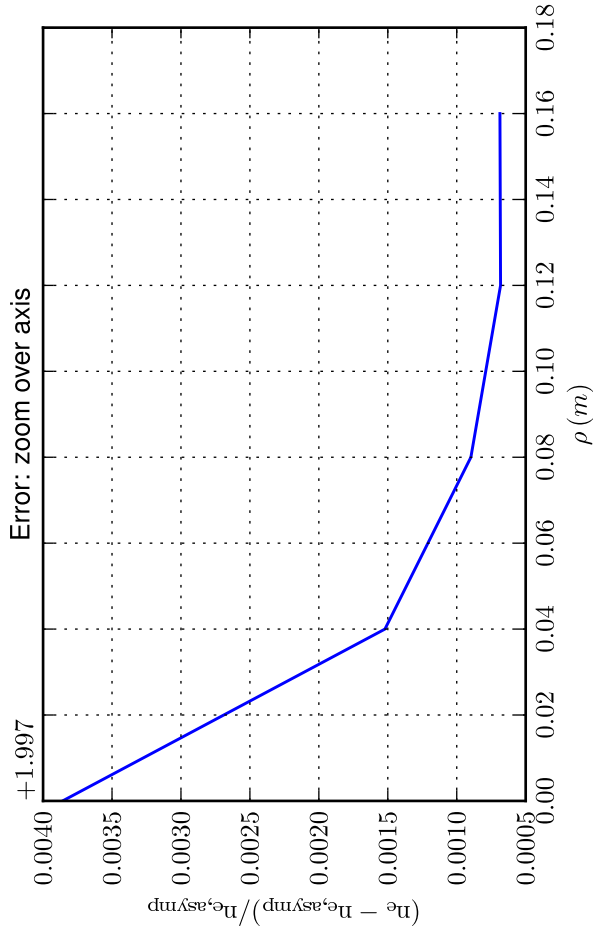


Profiles [Case: I.1.5.a, Solver: 3,  $D = 0.1 \text{ m}^2/\text{s}$ ,  $v = 0.10 \text{ m/s}$ ,  $\Delta t = 100.00$ ,  $\tau = 1.0 \times 10^{-3} \text{ s}$ ,  $N_\rho = 51$ ]

Comparison with asymptotic solution

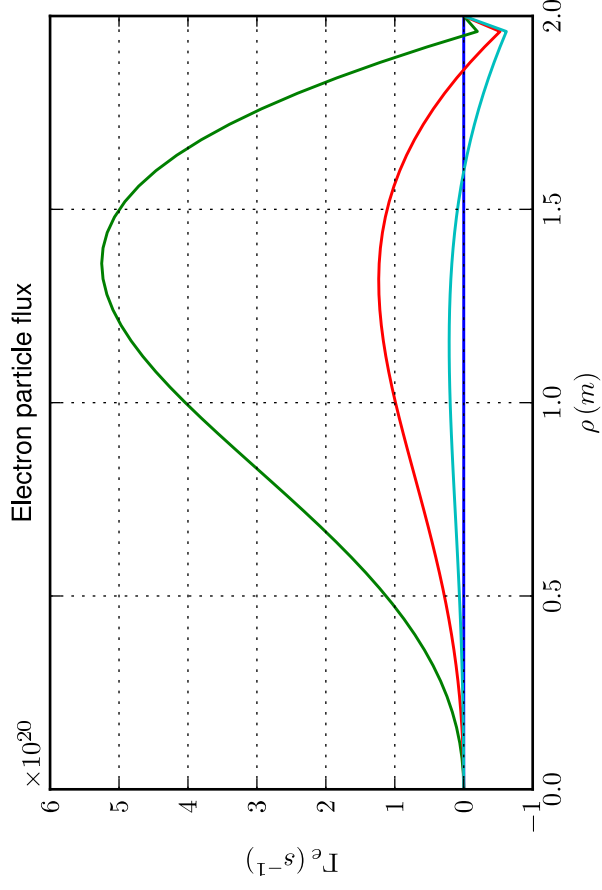
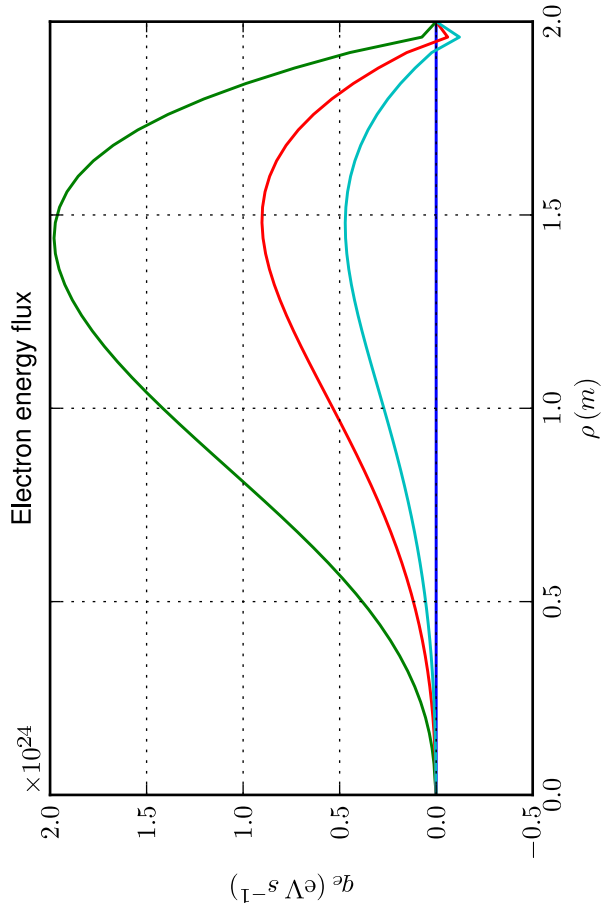
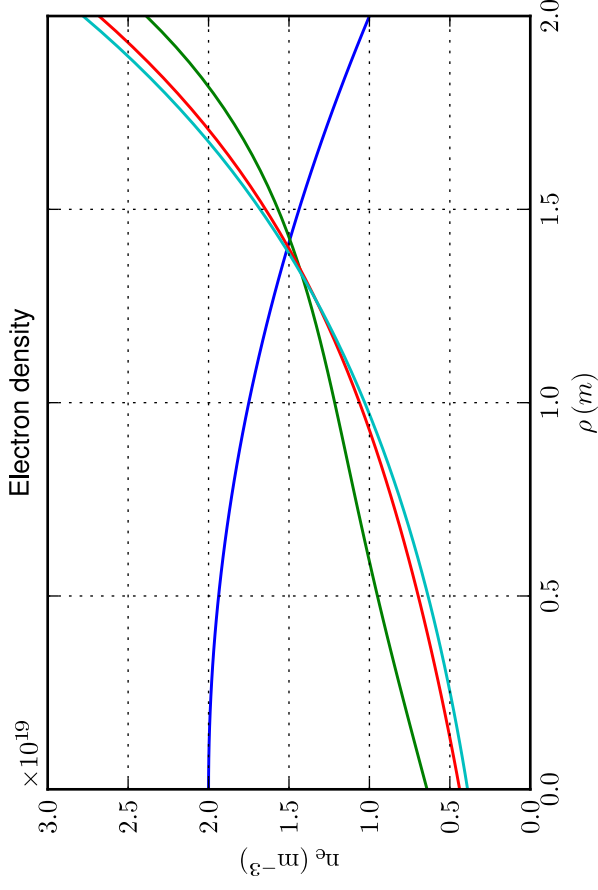
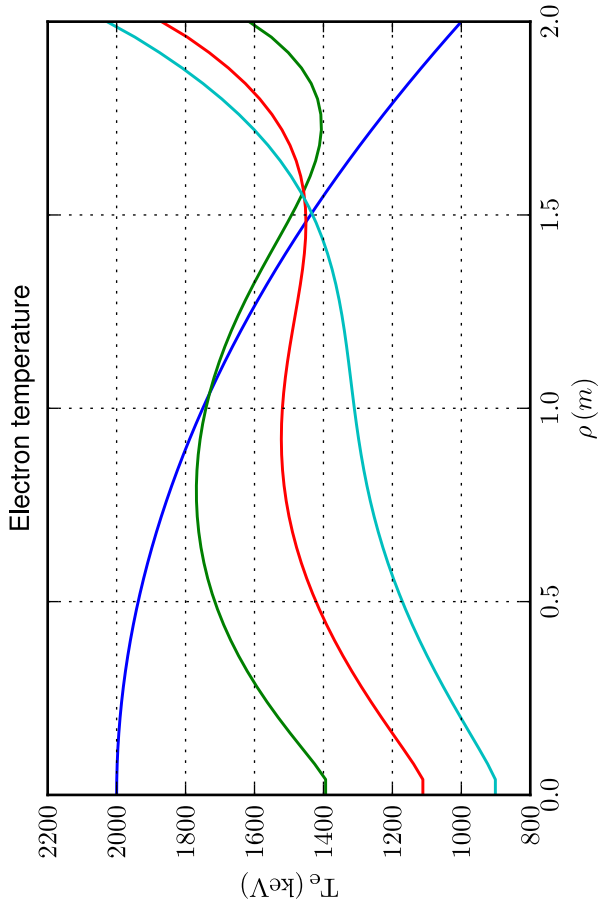


● final calculation  
● asymptotic



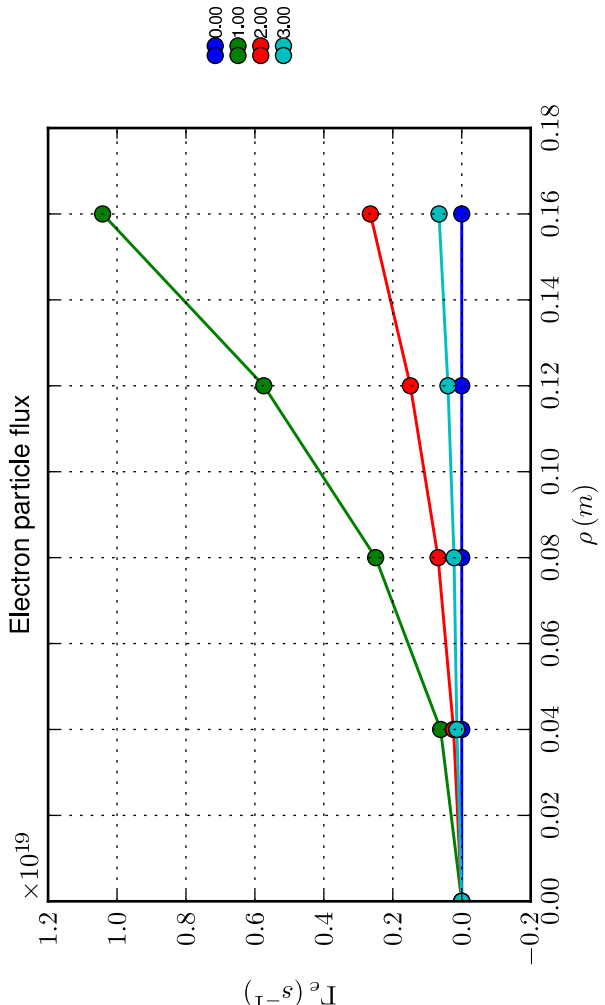
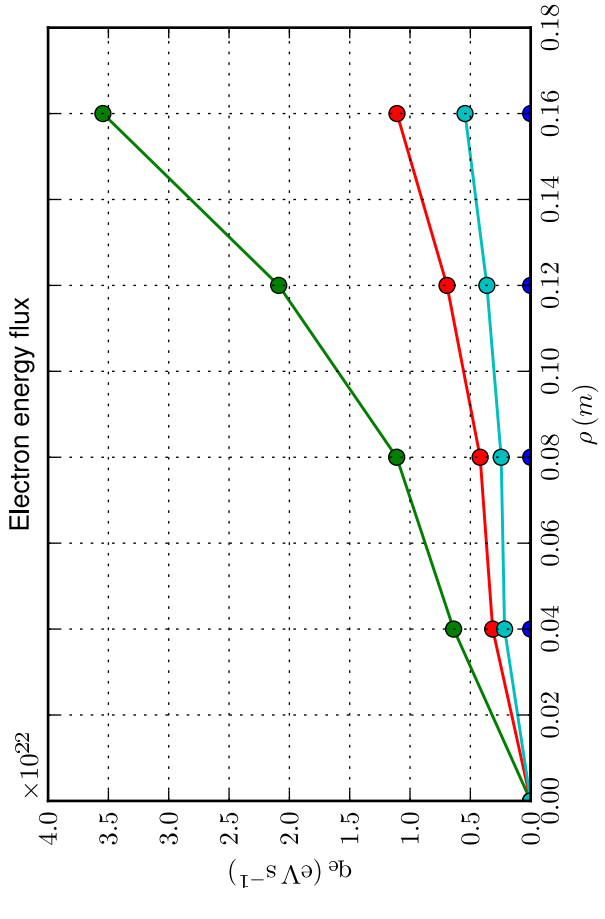
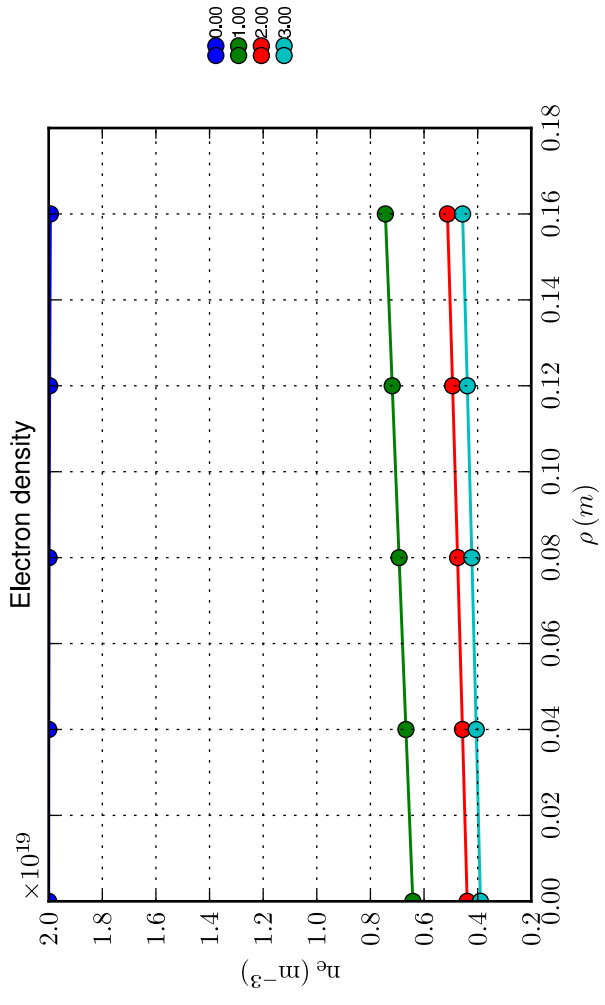
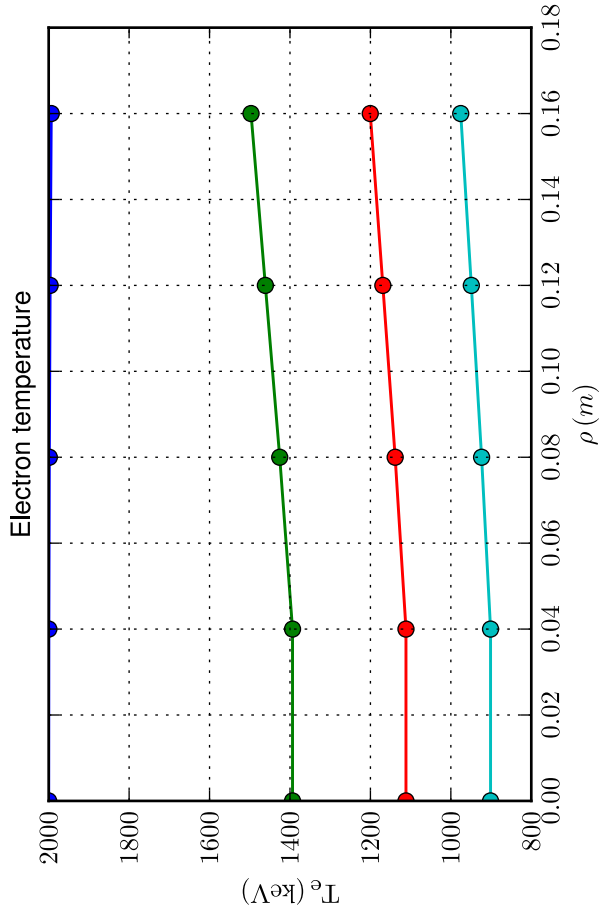
Profiles [Case: I.1.5.a, Solver: 3,  $D = 0.1 \text{ m}^2/\text{s}$ ,  $v = 0.10 \text{ m/s}$ ,  $\Delta t = 100.00$ ,  $\tau = 1.0 \times 10^{-3} \text{ s}$ ,  $N_\rho = 51$ ]

Time sampling: first 10 time slices or zoom over time  $0.1 \times (a^2/D)/|1 - (Va/D)| = 4.00 \text{ s}$



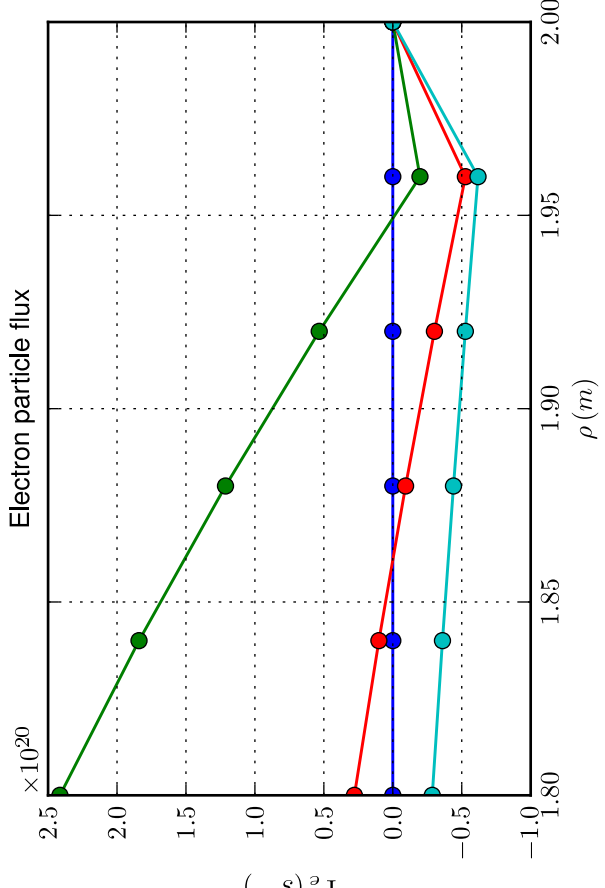
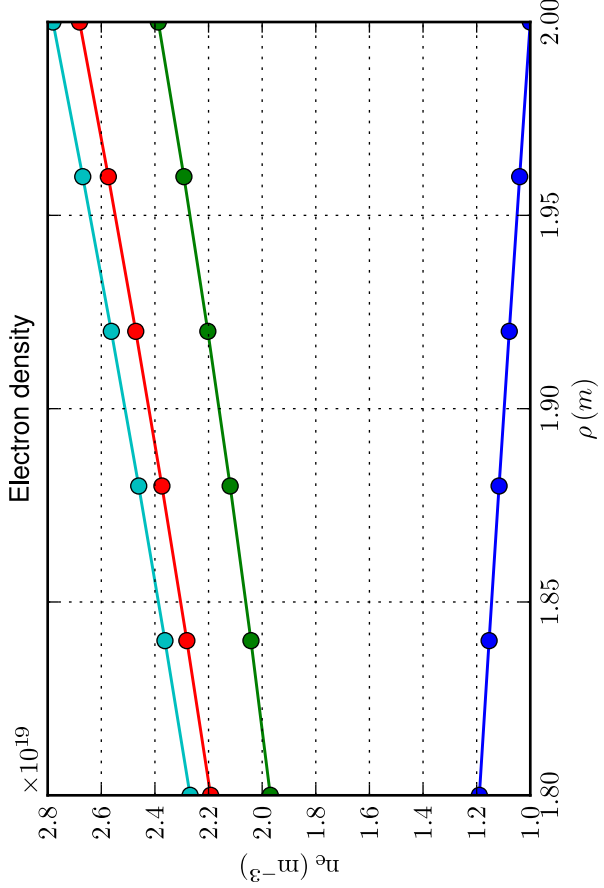
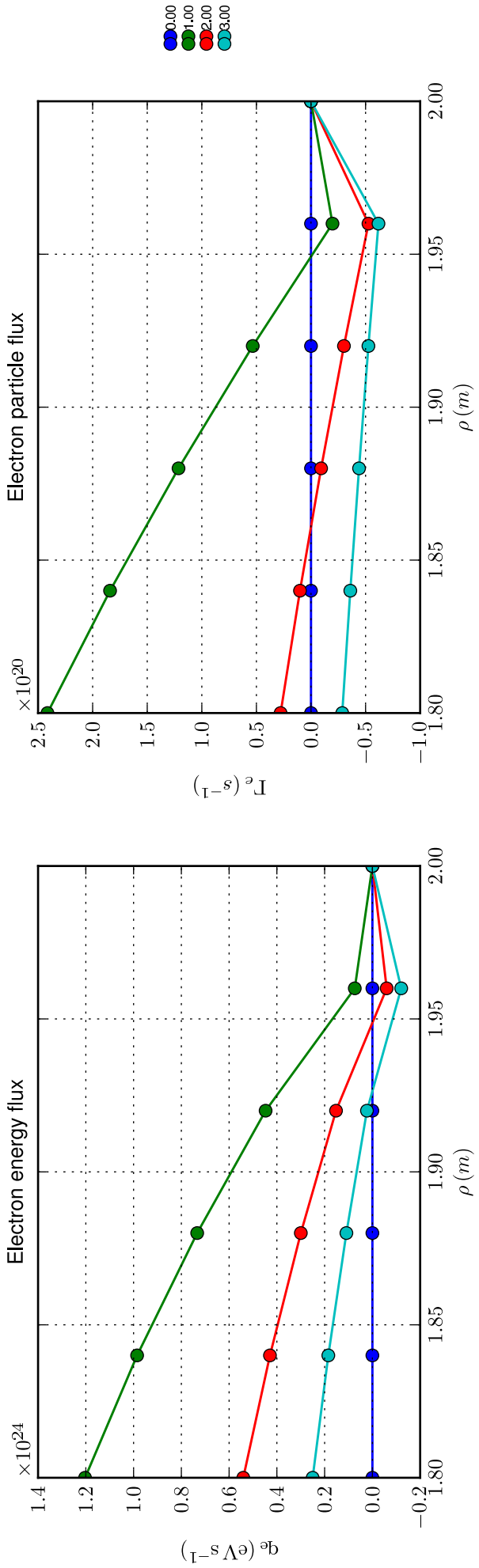
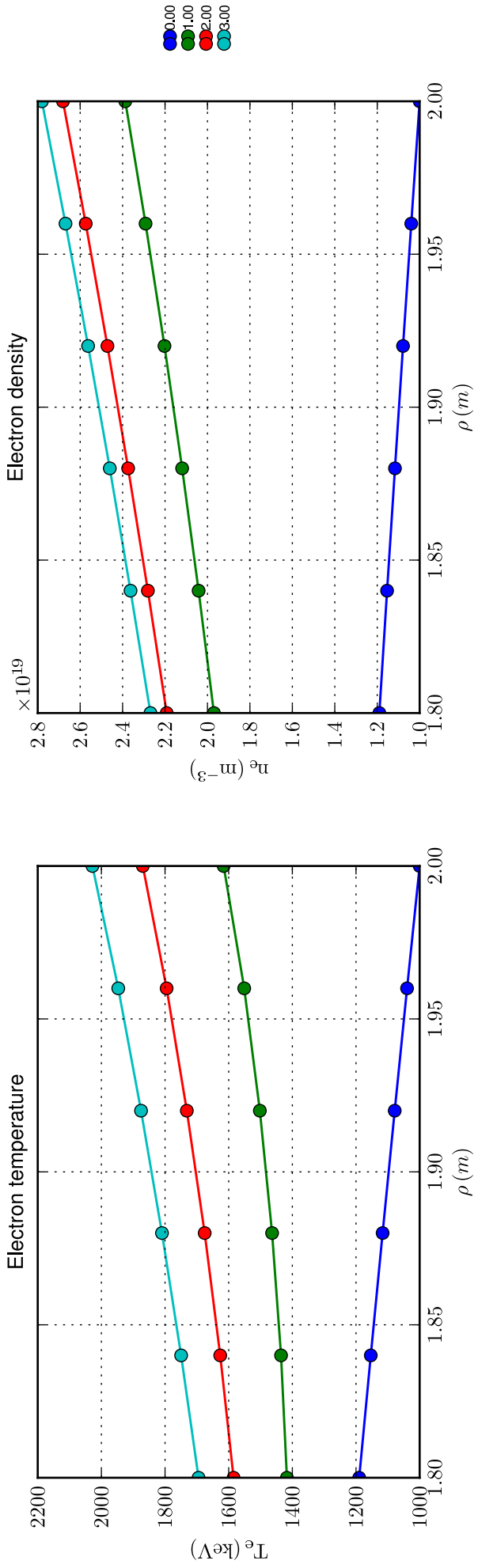
— 0.00  
— 1.00  
— 2.00  
— 3.00

Profiles [Case: I.1.5.a, Solver: 3,  $D = 0.1 \text{ m}^2/\text{s}$ ,  $v = 0.10 \text{ m/s}$ ,  $\Delta t = 100.00$ ,  $\tau = 1.0 \times 10^{-3} \text{ s}$ ,  $N_p = 51$ ]  
 Spatial zoom over magnetic axis; time sampling: first 10 time slices or zoom over time  $0.1 \times (a^2/D)/|1 - (Va/D)| = 4.00 \text{ s}$

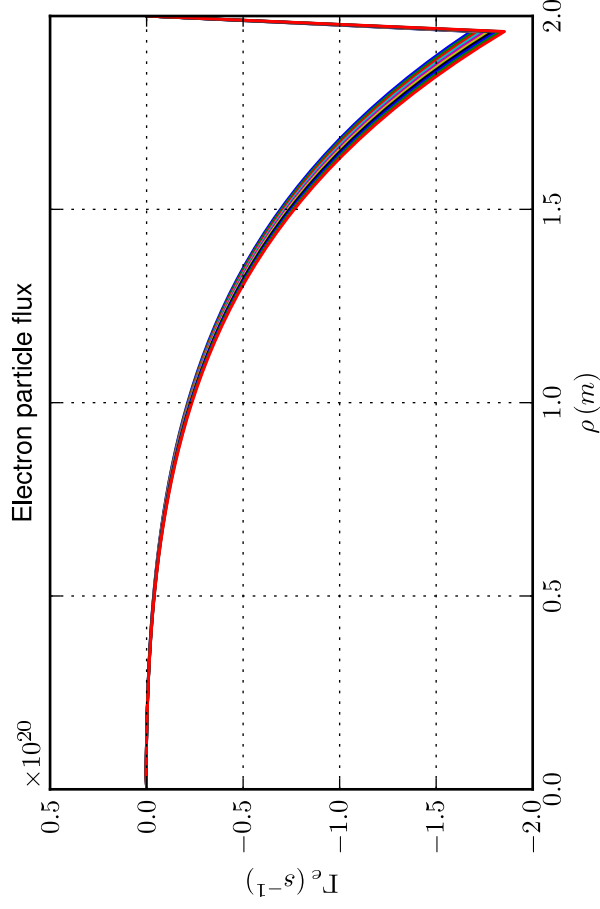
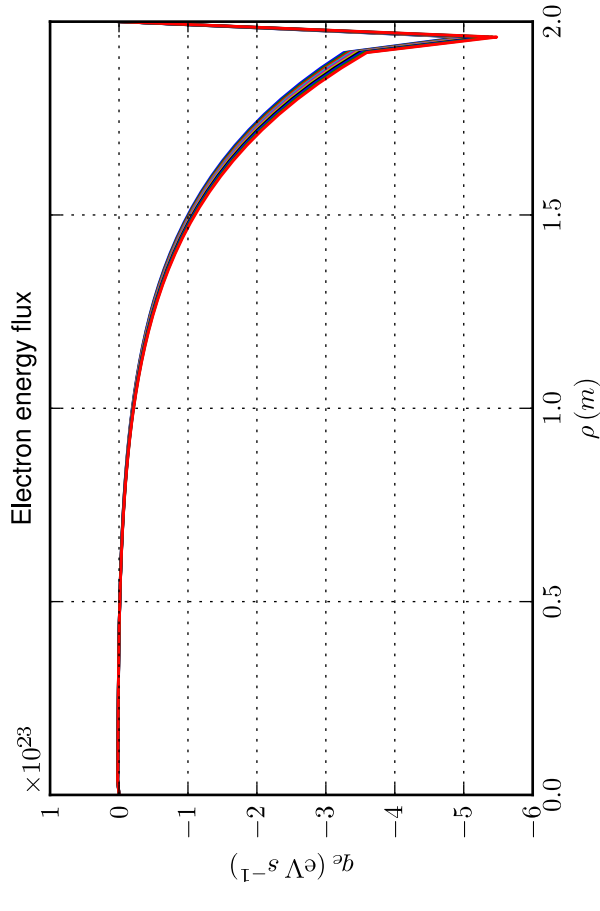
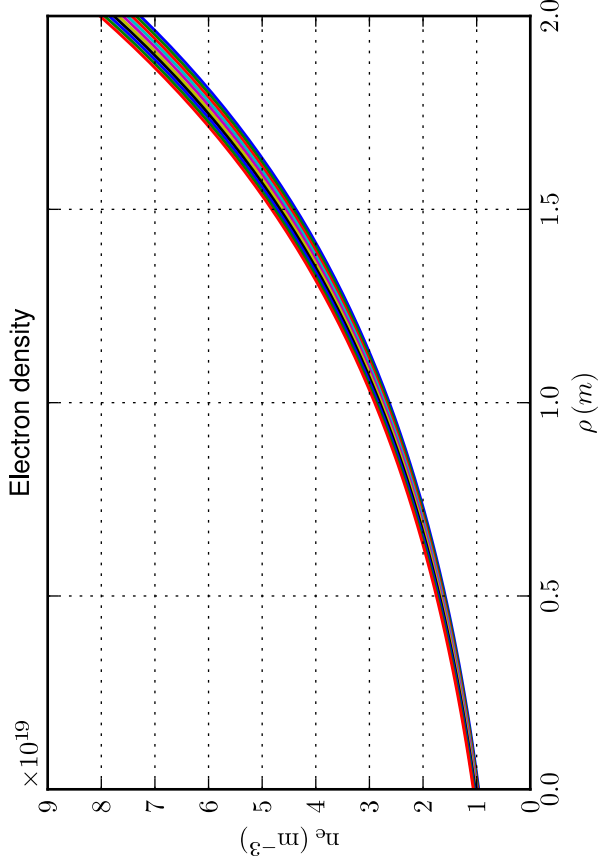
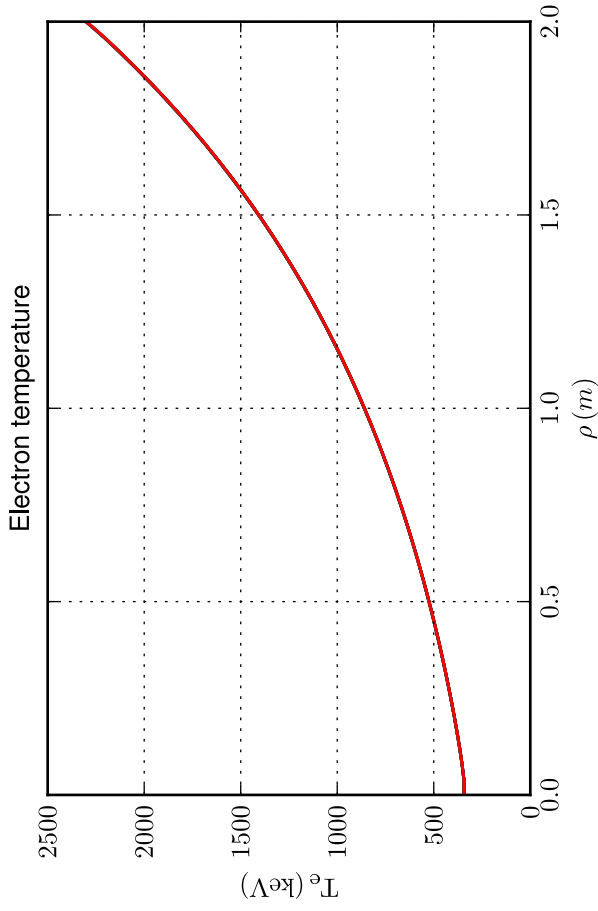




Profiles [Case: 1.1.5.a, Solver: 3,  $D = 0.1 \text{ m}^2/\text{s}$ ,  $v = 0.10 \text{ m/s}$ ,  $\Delta t = 100.00$ ,  $\tau = 1.0 \times 10^{-3} \text{ s}$ ,  $N_\rho = 51$ ]  
 Spatial zoom over edge; time sampling: first 10 time slices or zoom over time  $0.1 \times (a^2/D)/|1 - (Va/D)| = 4.00 \text{ s}$

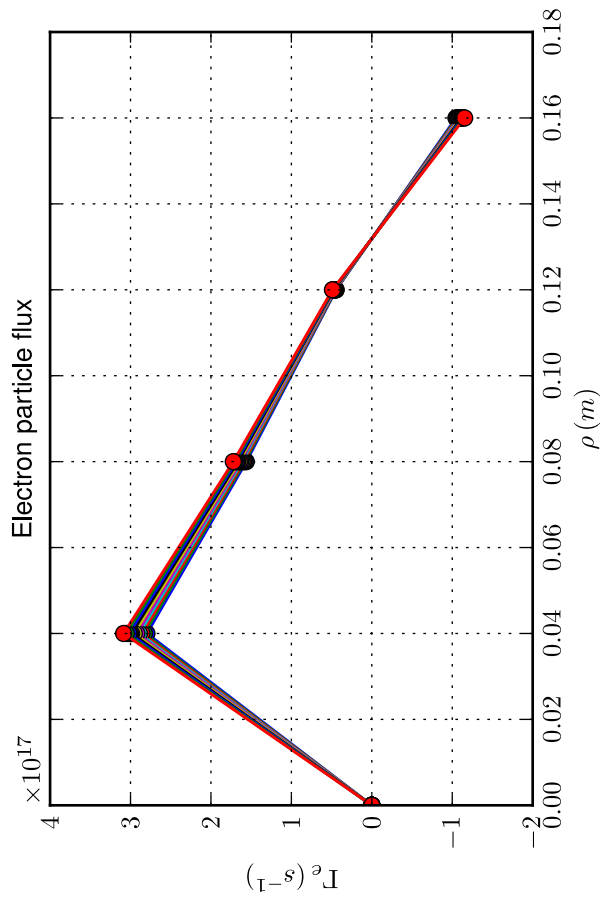
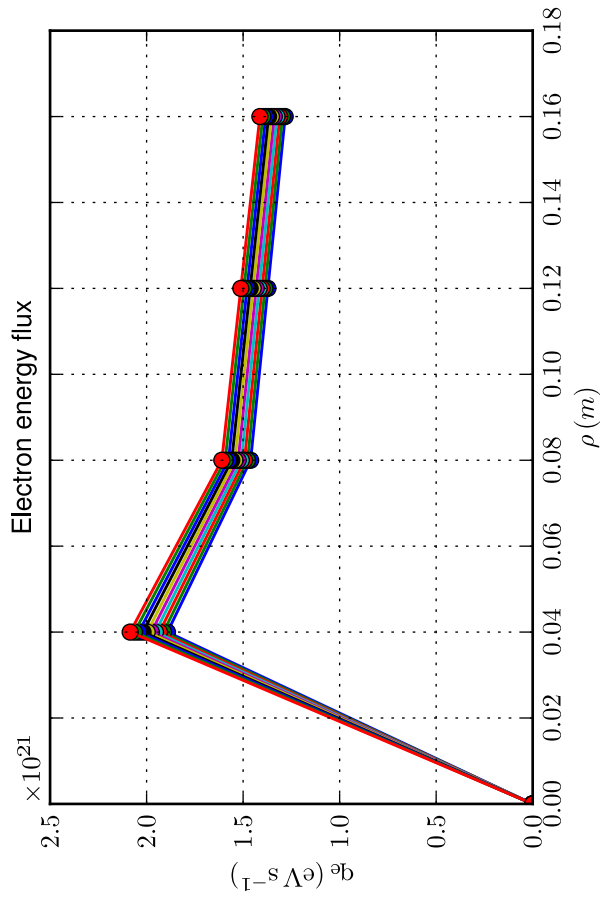
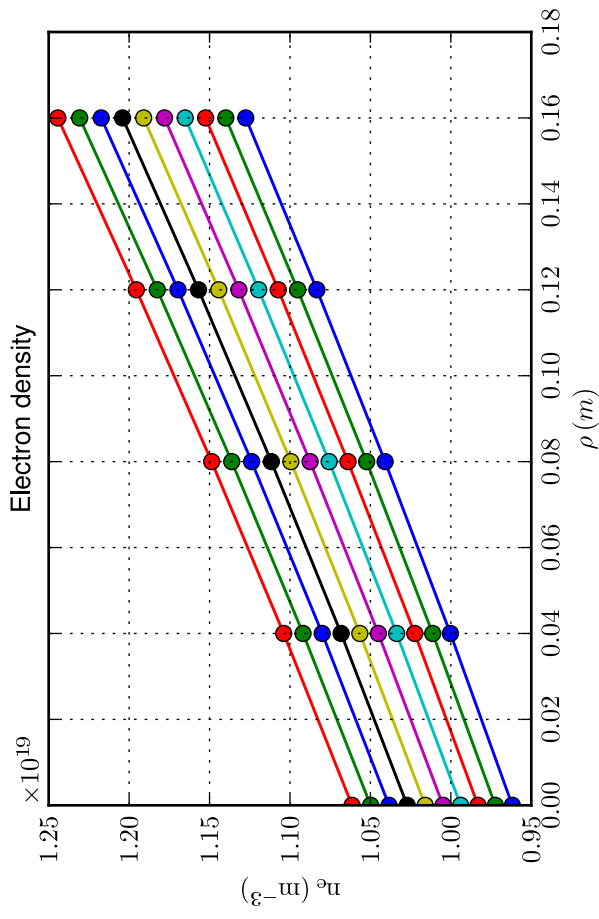
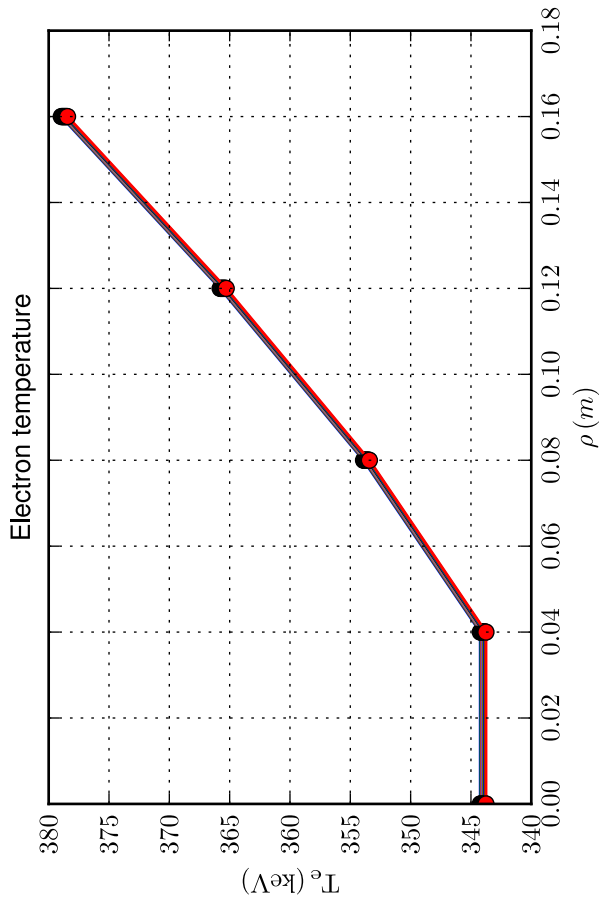


Profiles [Case: 1.1.5.a, Solver: 3,  $D = 0.1 \text{ m}^2/\text{s}$ ,  $v = 0.10 \text{ m/s}$ ,  $\Delta t = 100.00$ ,  $\tau = 1.0 \times 10^{-3} \text{ s}$ ,  $N_\rho = 51$ ]  
 Time sampling: last 10 time slices

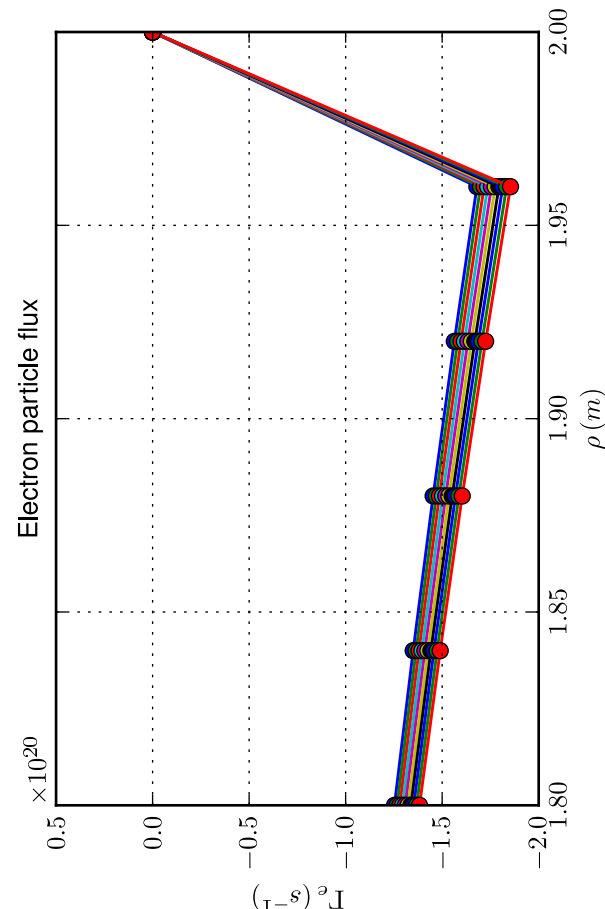
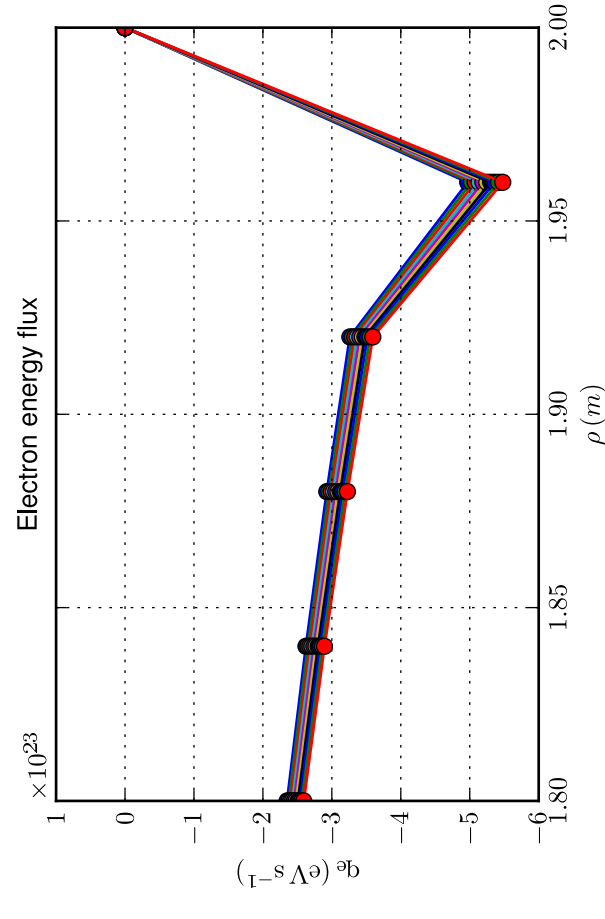
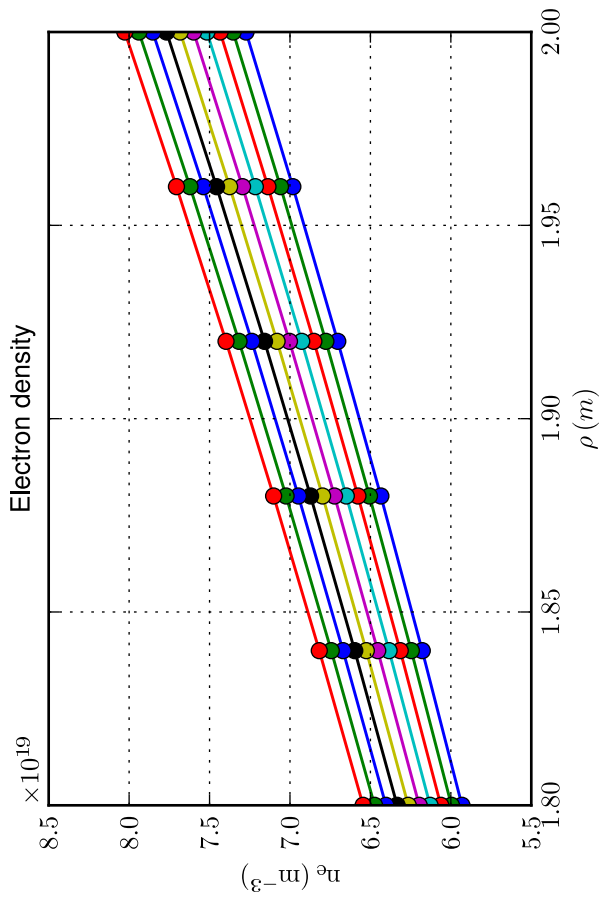
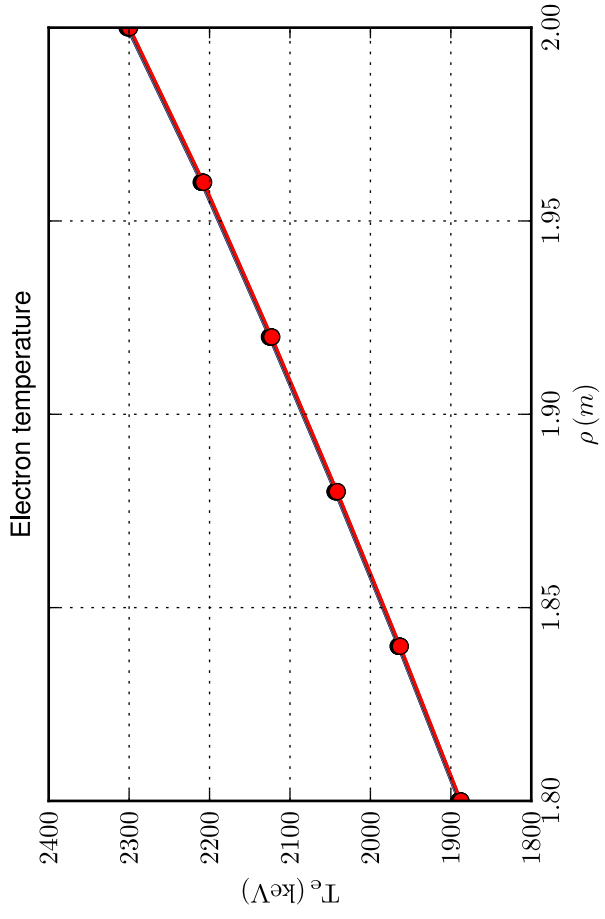


90.00  
 91.00  
 92.00  
 93.00  
 94.00  
 95.00  
 96.00  
 97.00  
 98.00  
 99.00

Profiles [Case: 1.1.5.a, Solver: 3,  $D = 0.1 \text{ m}^2/\text{s}$ ,  $v = 0.10 \text{ m/s}$ ,  $\Delta t = 100.00$ ,  $\tau = 1.0 \times 10^{-3} \text{ s}$ ,  $N_\rho = 51$ ]  
 Spatial zoom over magnetic axis; time sampling: last 10 time slices



Profiles [Case: I.1.5.a, Solver: 3,  $D = 0.1 \text{ m}^2/\text{s}$ ,  $v = 0.10 \text{ m/s}$ ,  $\Delta t = 100.00$ ,  $\tau = 1.0 \times 10^{-3} \text{ s}$ ,  $N_\rho = 51$ ]  
 Spatial zoom over edge; time sampling: last 10 time slices



30.00  
 91.00  
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