1. Ex = 5.0e+05
2. Fx = 8.010883e-14
3. Acceleration = 3.382347e+17

Plot shown below

Graphical user interface, chart

Description automatically generated

Figure 1. 30 particle illustration

Graphical user interface

Description automatically generated

Figure 2. 3000 particle illustration

1. Current formula is q\*n\*mu\*E\*area

Plot shown below

Chart, line chart

Description automatically generated Figure 3. Current plot

Trend is increasing however gradually settles after certain time step.

1. E density plot shown in Figure 4, temperature plot shown in Figure 5.

Chart, surface chart

Description automatically generated

Figure 4. Electron density plot

Chart, histogram

Description automatically generated

Figure 5. Temperature plot

Unfortunately was not able to finish the rest as I’m too overwhelmed by the 4th year workload and assignment 2 was a complete mess. I’m not made for Matlab coding. Sorry to let myself down :’(