Who are the partners in this team?

Nicole Verboncoeur and Samantha Gunter

What are you and your partner proposing to do?

We propose to design a model describing the motion of a single particle in a magnetic mirror system. This will include optimizing the particle’s containment parameters, ie changing the velocity, the angle of arrival into the system, magnitude of the magnetic field, distance between magnetic field maxima, etc.

What area of E&M will you be conducting original calculations for?

Plasma physics

What source material are you drawing from?

John Wesson’s work on Tokamaks as well as the Summary of UCRL Pyrotron (Mirror Machine) Program by R.F. Post. among others used for research on Nicole’s paper on Magnetic Mirrors.

What has been done so far and what are you going to do? It’s ok if it’s a solved problem, but you will need to reproduce what has been done and extend it beyond what your reference material offers.

Nicole has already constructed a basic model for the particle motion, we plan on expanding this model to include real world ranges of value.