



## Summary

- **The APPEL (Applied Plasma Physics Experiments in Linear Device) is an experimental system designed to carry out basic plasma physics experiments as well as serve as a test-bed for experimenting various plasma facing components interaction with strongly magnetized plasma.**
- **All the subsystems of the APPEL device is ready for the assembly. In the initial phase, the system will be tested under the designed vacuum levels and the experimental data will be generated during the testing of the electromagnets to reach the maximum axial magnetic field.**
- **A Magnetic field used in the plasma physics device guide, confine the charge particles therefore, the stress free operation of APPEL Electromagnets is ultimate goal of the analysis presented in this article. APPEL electromagnets are used to generate linear, magnetic mirror and Cusp magnetic field configurations.**
- **Expected Peak magnetic field induction at the centre of the APPEL device calculated by using COMSOL is 0.65T for a linear configuration with driving current 750A.**