

Abstract Submitted
for the DPP09 Meeting of
The American Physical Society

Python Graphical User Interface (GUI) for Control of the Levitated Dipole Experiment¹ DAVID JACOME, Saint Peters College, DARREN GARNIER, Columbia University, PAUL WOSKOV, JAY KESNER, MIT — The Levitated Dipole Experiment (LDX) is used to study the confinement properties of plasmas in a magnetic dipole field. In LDX a superconducting coil is levitated for up to 3 hours within a large vacuum chamber to produce the confining dipole field. The plasma experiments take place during this time, with ~ 10 second plasma shots, one shot every ~ 5 min. MDSplus software is used to run the experiment and store the data. The software is currently controlled by command line operations. Since levitation time is limited, it's important to maximize efficiency and accuracy of experimental operations. Here, we present a Graphical User Interface (GUI) to efficiently control the operation of the experiment. The need for a GUI that integrates the MDSplus data cycle, cell access control, and routine experimental parameter controls is necessary. The GUI program provides a simple method for monitoring and setting experiment parameters. Python is used as the primary language to run the commands. A program called XRCed distributed by wxPython works as a visual tool.

¹Supported by the National Undergraduate Fellowship in Plasma Physics and Fusion Energy Sciences.

David Jacome
Saint Peters College

Date submitted: 16 Jul 2009

Electronic form version 1.4