

## NSTX-U Weekly Report (April 18, 2014)

### **NSTX-U is in the Upgrade Project outage in FY 2014**

PPPL staff participated in the spring, 2014 ITPA Pedestal and Edge Physics (PEP) topical science group in Prague, Czech Republic from 4/15-4/17. S. Gerhardt presented a talk "Results from JRT 2013: regimes devoid of large ELMS." These results included new analysis on Enhanced Pedestal H-modes from NSTX. The technical program was organized and chaired by R. Maingi. (R. Maingi)

### **Engineering Operations (A. von Halle, C. Neumeyer)**

NSTX Upgrade activities continued with the ongoing work to wind the new OH coil on the inner TF bundle. The brazing to transition the OH conductor to the fourth and final winding layer of that coil has been completed and winding has resumed. The new centerstack casing has been cleaned following the completion of stud welding, and has been lifted into the vertical position in preparation for the installation of the new PF1B coil. The new RWM coil at bay I is now complete, and has passed its electrical insulation tests. Welding of NB2 vacuum and cooling water piping continues.

Digital Coil Protection System (DCPS) phase I testing continued this week using the internal Autotester (AT) and waveform input files. A Final Design Review of the DCPS to Field Coil Power Conversion (FCPC) interfaces was successfully held this week.

Preparations for plasma operations in the NSTX-U configuration also continued with the preparations of the Field Coil Power Conversion (FCPC) system for upcoming power testing. Commissioning of the new TF and OH PLC based fault relaying system continued, and the 350HP FCPC cooling water pump is in the process of being removed for repair. The first set of fiber-optic transmitters/receivers for the new plasma current ( $I_p$ ) calculator are complete and being tested. The contract to make the weld repairs to the MG#1 rotor is expected to be awarded next week. Maintenance of the neutral beam power supplies also continued with the completion of the Bending Magnet supplies.

Access to the NSTX test cell will be available only through previous arrangement with the Upgrade Work Control Center.