

## **NSTX-U Weekly Report (November 13, 2015)**

### **NSTX-U is in the Upgrade Project outage in FY 2016**

Francesca Poli (PPPL) traveled to Argonne National Laboratory, Nov 04-06, 2015, to attend the first Summit of Women Scientists and Engineers in the DOE laboratories. About 30 female scientists and engineers from the 17 National Laboratories were invited to attend the meeting, which was sponsored by COACH (University of Oregon) funding from the DOE. The meeting sought to engage women in STEM (Science, Technology, Engineering and Math) in the DOE research complex to discuss ongoing efforts by Leadership and employees to promote inclusiveness and enable creative, productive environments which maximize the potential of all researchers to serve the nation's interests. The purpose of this summit was to share challenges and best practices on broadening gender representation and diversity in our institutions, and identify persisting issues in the National Lab environment that prevent increased hiring and retention of women in STEM, with the desired outcome of formulating recommendations and action plans for individual researchers, laboratory management, and DOE. The *Summit* was also an opportunity for women scientists and engineers from the DOE laboratories to network with each other and discuss strategies to improve the success and leadership stature of women scientists and engineers across the DOE complex. (F. Poli)

### **Experimental Research Operations (S. Gerhardt, R. Kaita)**

The main mechanical and electrical installation tasks have been completed for the Materials Analysis and Particle Probe (MAPP). Felipe Bedoya, a doctoral student from the University of Illinois at Urbana-Champaign, has been at PPPL during the two weeks. He insured that the final connections between the MAPP electronics rack and instrument chamber on NSTX-U were made, and checked the programs (LabVIEW VI's) required for MAPP remote control during plasma operations. This includes heater control and thermocouple monitoring for thermal desorption spectroscopy (TDS) and electrostatic analyzer and detector operation for X-ray photoelectron spectroscopy (XPS). (R. Kaita, PPPL)

### **Engineering Operations (A. von Halle, P. Titus)**

NSTX-U Field Coil Power testing began this past week after completing a full set of field coil electrical insulation tests (Hi-Pots), and polarity checks of the Resistive Wall Mode (RWM) coils. The integrated system testing of the RWM coils as powered by the Switching Power Amplifier (SPA) systems has been completed, as well as comprehensive checks of the RWM sensors and magnetic diagnostics. Conditioning of the neutral beam ion sources was performed in parallel with field coil power testing. Leak checking for small air leaks continues in the upper and lower umbrellas.

The NSTX-U Test Cell will be open for approved activities through Wednesday this week, and in restricted access on Thursday and Friday for machine area scrubs and field coil testing.