

## **NSTX Weekly Report (December 3, 2010)**

**FY 2011 NSTX plasma operations started on October 4, 2010**

**FY 2011 NSTX Outage started on Oct. 25, 2010**

**Planned Run Weeks: TBD**

**Run Weeks Completed: 4.21 run weeks and 839 plasma shots**

The NSTX Results and Theory Review for the 2010 and beginning 2011 operational campaign was held at PPPL on Nov. 30- Dec. 2, 2010. The Review covered results from experiments, analysis and theory for this period. The Review was broken into sessions following the lines of the Topical Science Groups, with the following number of talks in each session: Transport and Turbulence (13), Advanced Scenarios (7), Lithium Research (6), Macroscopic Stability (14), Solenoid-Free Startup (2), Boundary Physics (14) and Waves and Energetic Particles (14). Thirteen of the talks were given remotely. The presentations are available at [http://nstx.pppl.gov/DragNDrop/NSTX\\_Meetings/Results\\_Reviews/2010/](http://nstx.pppl.gov/DragNDrop/NSTX_Meetings/Results_Reviews/2010/). (S. Kaye)

The NSTX Project conducted an assessment of the FY10 run on Friday, discussing opportunities to improve NSTX operations in the areas of Program Coordination/Research Planning, Collaborator Support, and Run Staffing/Equipment needs. Summaries of these discussions and suggestions will be distributed to the NSTX team for additional comments. (Al von Halle)

Yeong-Kook Oh (Head of Experimental Research Division, KSTAR Research Center) of National Fusion Research Institute (NFRI), Daejeon, Korea has arrived on Dec. 1, 2010 for his sabbatical leave. He will be collaborating on NSTX including the NSTX plasma operations and the pilot plant design study. (M. Ono)

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

The NSTX outage continued this past week with in-vessel diagnostic calibrations utilizing the Romer measuring arm, and the completion of the TF and OH Flex Bus inspections. Re-installation of the OH and TF bus is now in progress. The Neutral Beam Ion Source in the "A" position was removed this week, and will be replaced with a spare unit later in the outage. Rebuilding of TIV's and cleaning of windows continued in the Vacuum Prep Lab, and maintenance of the RWM coil grounding switch in the test cell is nearing completion. Electricians continued installations for the new MSE-LIF diagnostic and for the upgrade to add a second Switching Power Amplifier system.

Access to the NSTX test cell will be available this coming week, but in-vessel access will be limited during tile sanding and cleaning.

### **Research Operations (M. Bell)**

#### **Diagnostic Operations (R. Kaita)**

- In-vessel diagnostic calibrations are nearing completion. Measurements were performed for the charge-exchange recombination spectroscopy (CHERS), poloidal CHERS, edge rotation diagnostic (ERD), and fast ion deuterium alpha (FIDA) systems. The calibration of the beam emission spectroscopy (BES) diagnostic was also completed.