

## **NSTX Weekly Report (November 30, 2007)**

### **FY 2008 NSTX plasma operations**

**Planned: TBD**

**Completed: 0 weeks**

The NSTX Research Forum for 2008 was held on Tuesday - Thursday, November 27-29, at PPPL. Many members of the NSTX Team from other institutions participated in the sessions, both in person and remotely. At the opening plenary session on Tuesday morning, the meeting heard presentations from Steve Eckstrand, in the OFES of DOE, and Robert Goldston, PPPL Director, about the Department's longer-term plan for NSTX. Presentations were also received from the NSTX Program and Project Directors and from other major facilities, including DIII-D, Alcator C-Mod, MAST (UK) and LTX concerning their plans for 2008 and the possibilities for joint research. On Tuesday afternoon and Wednesday, parallel sessions were held by each of the six Topical Science Groups (TSGs) to discuss and prioritize 100 proposals which had been received for experiments in NSTX and other supporting research. On Thursday morning the group reconvened for a final plenary session at which the results of the TSG discussions were reported and the process for developing the detailed run plan was presented by the NSTX Run Coordinator for 2008. A web site for the FY2008 NSTX Research Forum is available on the NSTX Home Page or directly <http://nstx-forum-2008.pppl.gov>. (M. Bell)

Stanley Kaye (PPPL) participated in the IEA Tokamak Meeting to discuss joint ITPA experiments on Nov. 29-30 at Culham Laboratory, United Kingdom. The purpose of the meeting was to update the status of the joint experiment plans, including the development of ideas for new joint experiments. Of particular note was the emphasis on ELM control experiments using RMP coils, and NSTX was repeatedly identified as an experiment that could address this issue. The information is needed by the end of February. (S. Kaye)

R. Maingi (ORNL) presented a seminar at the Courant Institute for Mathematical Sciences at New York University titled "Edge Plasma Observations in NSTX Experiments and Opportunities for Computational Studies" on 11/26/07. The talk was well received and generated discussion on lots of collaboration opportunities. (R. Maingi)

No Monday NSTX Physics Meeting this week. (S. Kaye)

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

NSTX outage activities are drawing to a close with the pump-down of the vacuum vessel, the neutral beam-line and the three ion sources this week. Round the clock helium refrigerator operations is in progress to first clean up the helium process gas, and then for the beam-line cool down. Conditioning of the three refurbished ion sources will begin late next week in parallel with the NSTX vacuum vessel bake. Also this past week, testing of the new lithium evaporator (LITER) shutter system was performed during evaporation measurements on the test stand.

The NSTX test cell will be in unrestricted (card reader) access from 7AM to 10PM Monday through Wednesday this coming week. Access will be restricted around the clock upon the start of the vessel bake on Thursday.

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

### **Boundary Physics Operations (H. Kugel)**

- Offline shutter testing using LITER FY08 Bay-F started and is in progress. The bellows motion drive for LITER FY08 Bay-K arrived, and preparations for assembly are in progress.
- A teleconference was held with R. Nygren, SNL project manager for the LLD to discuss planning for the Conceptual Design Review.
- A fourth Quartz Deposition Monitor was installed. Integration for data acquisition is in progress. (C. H. Skinner)

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

- Two bolometers are being installed in support of the coaxial helicity injection (CHI) experiments on NSTX. A replacement for the leaking bellows on the illumination probe to be used for calibrating the multipoint Thomson scattering (MPTS) diagnostic is also being prepared for installation.