

NSTX Weekly Report (April 18, 2008)

FY 2008 NSTX plasma operations

Planned: 15 weeks

Completed: 6.98 weeks, 1053 plasmas (through April 11, 2008)

There will be an NSTX Physics Meeting on **Monday, 4/21 at 1:30pm in LSB-318**. **Stewart Zweben** will summarize results from **XP-806 "Edge Electrode Baising"**. The talk will be posted at http://nstx.pppl.gov/DragNDrop/NSTX_Meetings/Monday_Physics_Meetings/2008/4-21-08/. (M. Bell)

Run Coordination (M. Bell, R. Raman)

Two experiments were conducted in the week April 10 - 16, 2008.

On Thursday 4/10, the experiment "Fast ion transport induced by Alfvén avalanches" [XP-819, E. Fredrickson] was performed. The primary, but preliminary, result is that the TAE and TAE avalanche thresholds are higher for more energetic beam distributions. Secondary results are the observation of thresholds for exciting GAE avalanches and more detailed diagnostic measurements with ssNPA and FIDA of fast ion redistribution with TAE avalanches.

Friday 4/11 was devoted to the experiment "Active RWM stabilization optimization" [XP-802, S. Sabbagh]. It was observed that the intrinsic rotating $n = 1$ mode activity in unstabilized discharge was stronger than in shots from last year which were run after lithium experiments had started. Feedback from the Br upper and lower sensors reduced the amplitude of the $n = 1$ mode, which is found to be necessary but was not sufficient for complete mode stabilization.

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

NSTX was off-line for scheduled maintenance this past week, with an emphasis placed on the installation and commissioning of the two lithium evaporator (LITER) probes. The LITER at bay F was installed, pumped and baked, and then opened to NSTX vacuum for alignments and controls testing. A temporary platform was again installed at bay K to continue alignments and control testing of the LITER probe at that location. Both probes are now loaded with lithium and installed on NSTX, with plans to complete alignments and begin integrated system testing this coming week in parallel with NSTX machine operations.

There will be no access to the NSTX test cell during plasma operations this coming week. Access to the test cell will be available from 5PM to 10PM each evening.

Research Operations (M. Bell)

Boundary Physics Operations (H. Kugel)

- Lithium Evaporator (LITER)

- LITER-F was loaded with 34.8 g of lithium and was installed on Bay-F. It is presently pumping down.
- LITER-K was loaded with 39.5 g of lithium and was installed on Bay-K. It is presently pumping down.
- Preparations are in progress to complete the remaining alignment checks and controls integration.
- The Final Design Review (FDR) for the LITER FY08 Controls and Interfacing will be Monday 4/21/08 at 9:00 am in the Auxiliary Control Room.

- Liquid Lithium Divertor (LLD)

- The Final Design Review (FDR) for the NSTX Liquid Lithium Divertor (LLD) mechanical installation will be Tuesday 4/22/08, at 9:30am in B-318.
- Separate Final Design Reviews will be held later for the Controls/Interfacing and the Diagnostics
- An electrical elementary for the LLD control racks was received from SNL, and reviewed.