

NSTX Weekly Report (February 15, 2008)

FY 2008 NSTX plasma operations

Planned: TBD

Completed: 0 weeks

- Stanley Kaye visited the Univ. of Wisconsin on Monday, Feb. 4 to give a seminar on Recent Results on NSTX. During his visit, he had discussions with S. Prager, P. Terry, J. Sarff, C. Forrest, A. Sontag and D. Anderson. (S. Kaye)
- There will be an NSTX Physics Meeting on Monday, 2/18 at 1:30 PM in LSB318. We will have two talks: “**Update on sheared plasma rotation and tearing modes on DIII-D**” by R. LaHaye and “**Update on Biased Electrode Experiment**” by S. Zweben. The presentation material will be found in http://nstx.pppl.gov/DragNDrop/NSTX_Meetings/Monday_Physics_Meetings/2008/2-18-08/ (S. Kaye)
- The February NSTX Team meeting was held on Tuesday, Feb. 12. The team was updated on the plasma operation and experimental plan. A summary of the recent NSTX PAC meeting, the NSTX budget update, and the preparation toward the Budget Planning Meeting were also presented. The presentation material is available on the NSTX web page.

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

A bake of the NSTX vacuum vessel was performed this past week. Systems were configured to start and ramp up the bake on Sunday, and the vessel remained at temperature until Thursday evening. During the bake, internal vessel surfaces were treated with Trimethylboron (boronization). Systems are being re-configured for plasma operations this coming weekend, with plans to resume plasma operations on Monday morning. Also this week, lithium wetting tests in support of design development for a liquid lithium divertor were performed using the lithium evaporator to be installed at Bay F later this run period.

The NSTX test Cell will be in restricted access this week during plasma operations on the 1st shift, and during vacuum conditioning of the HHFW antennas on Wednesday and Thursday evening.

Research Operations (M. Bell)

Diagnostic Operations (R. Kaita)

- Diagnostic activities that had been planned for the past week were deferred due to the bakeout. The main task is to restore diagnostic equipment that had been removed for the bakeout, and this is continuing through the weekend.

Boundary Physics (H. Kugel)

- The following talks were given on LITER FY 08:

- "The Effect of Solid Lithium Coatings on NSTX Plasma Performance and Plans for Liquid Lithium Divertor", H. W. Kugel, R. Ellis III, R. Kaita, R. Maingi, R. Majeski, R. Nygren , PFC e-Meeting, Feb. 13, 2008.
- "NSTX Lithium Evaporator FY08 (LITER FY08)", H. W. Kugel, Activity Certification Committee Meeting, Feb. 14, 2008.

- LITER_Bay K - Adjustments to the formed-bellows support mechanism were completed. The assembled unit passed a leak check. Installation of cover shields to protect exposed cable connections during crane lifting is in progress.

- LLD

- LLD Test Chamber: The chamber base pressure reached operating range, and operations started with testing of the data acquisition system. (J. Timberlake)
- LLD activity progressed on a conceptual design for the plate heater, cooling line and fastener layout. A Conceptual Design Review has been scheduled for Wed, 2/20/08, 10:00 am , B318. (R. Ellis III)

- Li Powder Development

- A Final Design Review (FDR) was held for a Lithium Powder Dropper, and was found to be a success pending resolution of the CHITS. (D. Mansfield)