

NSTX Weekly Report (Oct. 03, 2008)

FY 2008 NSTX plasma operations

Planned: TBD

Completed: 0 run weeks

- R. Maingi (ORNL) presented a seminar at the PSFC at MIT on 9/26/08 titled: "Status of ELM experiments in NSTX". (R. Maingi)
- The contributed poster "Thermal Control of the Liquid Lithium Divertor for NSTX ", R. Nygren (SNL), et al. was presented at the 25th Symposium on Fusion Technology (SOFT), 15-19 September 2008, Rostock, Germany. (H. Kugel)

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

The NSTX outage continued this week with the dismantling of the upper TF hub to clean and silver plate the flag joints. Metrology of exposed metal surfaces in the vacuum vessel has been completed in preparation for machining the BES diagnostic vacuum vessel interface, and to provide reference points for future installations. In-vessel magnetic sensors have been inspected, and some rework along with the need for additional shielding has been identified. The machine shops made good progress this week on the fixtures required for the BES machining, and on the modifications to the Faraday Shields for the HHFW Antenna. Engineering peer reviews of the Liquid Lithium Divertor (LLD) diagnostics were held this past week, and the final design package for the LLD control system was released by SNL for review.

The NSTX test cell will be in free (card reader) access this coming week.

Research Operations (M. Bell)

Boundary Physics Operations (H. Kugel)

- Liquid Lithium Divertor (LLD)
 - A potential vendor was visited to assess methods for fabricating parts of the LLD. Samples were obtained, and preparations for sample testing was started.
 - A Peer Review of the Biased Electrode Tiles was presented by S. Zweben.
 - A Peer Review of the Tile Current Monitor was presented by S. Gerhardt.
- Lithium Sample Testing (R. Kaita)
 - A probe was mounted on the Test Chamber to allow solid lithium pellets to be loaded on LLD molybdenum sample to test wetting under vacuum conditions following HGDC.(R. Kaita)

Diagnostic Operations (R. Kaita)

- A meeting was held on September 30 to discuss plans for completing the installation of

the remote control system for the high-k turbulence diagnostic. It was decided that final connections between the remote drive mechanism and the mirror shafts will be made, and tested to check the reproducibility of the position settings under computer control. It was also agreed that the encoders will be supplied with uninterruptible power to preserve their settings in the event of a power failure.