NSTX Weekly Report (January 28, 2011)

FY 2011 NSTX plasma operations started on October 4, 2010
FY 2011 NSTX Outage started on October 25, 2010
Planned Run Weeks: TBD
Run Weeks Completed: 4.21 run weeks and 839 plasma shots

The NSTX Program Advisory Committee (PAC-29) met on January 26-28 at PPPL. The PAC was charged to provide advice and feedback on the near-term research priorities, preparation for NSTX Upgrade, and alignment with the OFES vision for fusion. The PAC heard presentations on recent research progress, programmatic and project status and plans, and detailed physics results and plans for the FY11-12 run and the Upgrade outage period. (J. Menard - NSTX Program)

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

The NSTX outage continued this past week with the completion of structural modifications to the main platform around bay G in preparation for installing the diagnostic neutral beam for the new MSE-LIF diagnostic. Other MSE-LIF work included the installation of new services such as chilled water piping and control system racks/cable trays, and modifications needed to the machine's helium bake-out lines. Successful reviews were held on a redesign of the Liquid Lithium Divertor (LLD) fasteners to allow the plates to be reinstalled in NSTX without external heating or cooling, and on a design to replace the first row of the inboard divertor with molybdenum tiles. Also this week, fiber-optic pulls between the SPA1 & SPA2 supplies were completed, and in-vessel Romer Arm measurements of new penetrations for T-FIDA were performed. Access to the NSTX test cell will be available this coming week.

Research Operations (M. Bell)

Boundary Physics Operations (H. Kugel)

• Liquid Lithium Divertor (LLD)
- Work is in progress for a Final Design Review of the mechanical work and reconditioning of the plates.
- Preparations have started for a Peer Review of the plate thermocouple instrumentation and the inter-plate graphite tile instrumentation (magnetic sensors, thermocouple, Langmuir Probes).

• Molybdenum Inner Divertor Tiles
- Preparations have started for a Peer Review of the molybdenum tile thermocouple and the retained instrumentation (magnetic sensors, thermocouple, Langmuir Probe) in the graphite tiles surrounding the molybdenum tiles.

• Materials Analysis Particle Probe (MAPP)
- A Preliminary Design Review of the probe's mechanical design, and a Final Design Review of the probe's analysis chamber and instrumentation (Purdue) were successful pending resolution of the CHITS.