NSTX Weekly Report (Oct. 24, 2008)

FY 2008 NSTX plasma operations

Planned: TBD

Completed: 0 run weeks

• At the 22nd IAEA Fusion Energy Conference being held in Geneva, Switzerland, the following two post-deadline NSTX presentations (in addition to the twenty NSTX related presentations reported last week) were made on Oct. 18, 2008: "Correlation between Electron Transport and GAE Activity in NSTX" by D. Stutman (J. Hopkins) and "Magnetic ELM Pace-making with 3-D Applied Fields in NSTX " by J. Canik (ORNL).

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

The NSTX outage continued this week with the fit-up of the fixture for the machining of the new NSTX BES diagnostic VV interface, and the removal of the bay G diagnostics and port cover to provide alternate access to the vessel during machining operations. Also this week, good progress was made on the installation of new OH coil bus leads to reduce error fields, and on the installation of a platform extension and electrical power systems for the future MSE-LIF diagnostic system. Shop work on the HHFW antenna upgrades continues.

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 teleconference was held with SNL collaborators to discuss the NSTX design for the control rack placement, power requirements, fusing, and code compliance (F. Jones). An additional meeting is scheduled for next week.
- The step-bent sample was sectioned and the edges polished to allow inspection of the copper-braze-stainless steel interface. The preliminary inspection indicated that the interface appeared to exhibit good uniformity. Preparations were started to inspect the interface under high magnification.
• Edge Sample Probe - A teleconference was held with Purdue University collaborators to discuss a sample holder design and the bellows motion drive support stand.
• Penn State University visit - 3 NSTX team members visited the Penn State University Advanced Research Laboratory to discuss with the lithium researchers at the lab issues involved with the movement of liquid lithium across a metal surface, and liquid lithium surfaces for high power deposition.