

## NSTX Weekly Report (Nov. 06, 2009)

### **FY 2010 NSTX plasma operations**

**Planned: TBD run weeks**

**Completed: 0 run week and 0 plasma shot**

• Members of the NSTX Team participated in the 51st Annual Meeting of the Division of Plasma Physics of the American Physical Society in Atlanta GA Nov 2 - 6, and presented 5 invited talks, 13 contributed talks and 50 contributed posters. The invited talks were: "The Role of Kinetic Effects, Including Plasma Rotation and Energetic Particles, in Resistive Wall Mode Stability" by J. Berkery, "Comparison of poloidal velocity measurements to neoclassical theory on NSTX" by R. Bell, "Generation and Sustainment of Rotation in Tokamaks" by W. Solomon, "Modification of Edge Profiles and Stability with Lithium Wall Coatings in NSTX" by R. Maingi and "Advances in High-Harmonic Fast Wave Physics in the National Spherical Torus Experiment" by G. Taylor. (M. Bell)

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

The NSTX outage continued this week with the routing of in-vessel cabling for the Liquid Lithium Divertor (LLD) system heaters. Resistance checks of the in-vessel LLD plate heaters and cabling are in progress, and electricians continued to install racks, power, tray-work and cabling for the LLD controls and diagnostics. Also this week, machinists continued on RWM error field coil modifications at bay G in support of preparations for the new MSE-LIF diagnostic.

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)
  - Plates #1 and #3 are installed. Plate #2 is in the vessel and alignment is in progress. Plate #4 is assembled and awaiting installation.
  - Installation of the 12 LLD cables for heater power and thermocouples from the Control rack to outer vessel port-J was completed.
  - AC power installation for the category-4 LLD Control and Diagnostic racks was completed.
  - The LLD plate cooling manifold mechanical installation was completed, and the air supply installation and testing was completed.
- LLD Diagnostics
  - A lens was received for the input optics of the divertor spectrometer
- Lithium Evaporator (LITER2010)
  - Two Thermionics Bellows Motion drives were received for assembling 2 additional LITERs (2 for on the vessel, 2 for reloading)