

## **NSTX Weekly Report (Sept. 18, 2009)**

**FY 2009 NSTX plasma operations completed on August 14, 2009**

**Planned: Total - 16 run weeks (Base - 11 run weeks, ARRA - 5 run weeks)**

**Completed: Total - 16.84 run weeks with 2,748 plasma shots  
(Base - 10.95 run weeks with 1,705 plasma shots  
ARRA - 5.89 run weeks with 1,043 plasma shots)**

- The NSTX Results/Theory Review was held on Tues and Wed, Sept. 15 and 16. The purpose of the Review was to present results based on both experimental and theoretical/computational efforts during the 2009 campaign. The presentations were made by those who led either the experimental or theory efforts in the areas of Boundary Physics, Transport and Turbulence, Waves and Energetic Particles, Macroscopicity, Lithium Studies and Advanced Scenario Development. A total of 73 individual topics were covered by the presentations. (S. Kaye)
- The annual NSTX run assessment was held this past week, and suggestions have been gathered on possible ways to improve NSTX program coordination, collaboration support, run schedule and staffing. (A. von Halle)

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

The NSTX outage continued this week with some in-vessel diagnostic calibrations before an extensive cleaning of all plasma facing surfaces. The cleaning-up of the passivated lithium residue was completed over the weekend, and the Romer measuring arm will be installed on Monday morning for fit-ups of the new Beam Emission Spectroscopy (BES) diagnostic. Also this week, progress was made on electrical installations for the new Liquid Lithium Divertor (LLD) system, and the shops remained busy on fabrications for BES and LLD, as well as on parts for the new Motional Stark Effect 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)
  - LLD plate documentation package received from molybdenum coating vendor.
  - Completed prototype installation of 3 thermocouples and 3 heaters in Test Plate
  - Completed test of ceramic insulators on heater cables
  - Completed prototype assembly of Rogowski Coil cable assembly
- LLD Diagnostics
  - Purchase Order awarded for LLD spectrometer.
  - Purchase Order awarded for LLD cameras.

- Lithium Evaporator (LITER2010)
- Vendor acknowledged receipt of Purchase Order for 2 additional probe drives and provided 12 week delivery date.
- Requisitions submitted for all required vacuum flange hardware for 2 additional probes.