

## NSTX Weekly Report (Oct. 2, 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)**

• M. Ono attended the 2nd International Conference on Microelectronics and Plasma Technology (ICMAP2009) on Sept. 23 - 25 in Busan, Korea. He gave an invited talk entitled "Spherical Tokamak Research Overview". He also visited National Fusion Research Center, Daejeon, Korea, the home of the KSTAR device, and he also gave a colloquium entitled "Recent Results of NSTX."

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

The NSTX outage continued this week with the ongoing in-vessel calibrations of the CHERS diagnostics. The FARO measuring arm has been installed in the vessel for spatial calibrations. The HHFW Faraday shields have been removed from the vessel for cleaning, and the Bay G port cover has been moved to the vacuum shop in preparation for MSE-LIF diagnostic installations. The machine's umbrella cover has been removed, and routine inspections of the TF buswork are in progress. Good progress was made on the shop assembly of the new LLD plates, and installation of LLD power systems in the test cell 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)
  - Installation of plate #1 heaters and thermocouples completed.
  - Installation of plate #2 heaters and thermocouples started.
  - All 4 Rogowski sensor coils completed and ready for installation.
  - The Bay-H, 2D magnetic sensors installed in the gap tiles. Tiles awaiting thermocouple installation.
  - The control rack is powered up and is being power conditioned
  - The control rack Interlock Circuit was tested and completed.
  
- Lithium Evaporator (LITER2010)
  - Requisition submitted for LITER pump carts
  - Simplification of internal cable connection method started.