

NSTX Weekly Report (Sept. 25, 2009)

FY 2009 NSTX plasma operations completed on August 14, 2009

Planned: 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)**

At a NSTX Physics Meeting on Monday 9/21/2009, Dr. J-W. Ahn presented a talk on "Arrangement of measured SOL profiles in NSTX" in which he showed good agreement between the data from the fast reciprocating probe and the multi-pulse Thomson scattering diagnostics in ELM-free H-mode plasmas. Drs. J. Berkery and R. Maingi presented outlines of their invited talks at the forthcoming APS-DPP annual meeting.

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

The NSTX outage continued this week with the completion of fit-ups of the new BES in-vessel collection optics. The Bay G port cover is now being removed in preparation for modifications to accommodate the new MSE-LIF diagnostic, and the HHFW Faraday shields are being removed from the vessel for cleaning. The Final Design Review of the Liquid Lithium Divertor (LLD) control system was held. In the LLD assembly area, heaters were installed in the first LLD plate and in the test cell, electricians continued installing conduits and trays for the LLD system.

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

- the 2nd of 4 Rogowski coil enclosures for the plates was sealed, and assembly started on the 3rd unit.
- the installation of heaters in the 1st of 4 plates was completed.
- work started on connecting extension cables to the installed heaters.
- work continued on installation of test cell cabling, trays, and power.
- a meeting was held to plan the installation procedure for the 99 Langmuir Probe Array tile.
- a successful Final Design Review was conducted for the LLD Controls (H. Schneider)

LITER 2010

- specifications for pumpcarts to support rapid reloading of LITERs were developed and procurement was started.

Graphite Tile Analysis

- planning is underway to complete analysis of the graphite tiles at Sandia National Laboratory and Purdue University to meet the pumpdown schedule.

Diagnostic Operations (R. Kaita)

- The post-run in-vessel calibrations for diagnostics have begun. The spatial locations have been measured of the divertor views through the optical fibers to the visible spectrometer. The calibration of the John Hopkins Tangential Optical Soft X-Ray (tOSXR) array was completed.