

NSTX Weekly Report (March 18, 2011)

FY 2011 NSTX plasma operations started on October 4, 2010

FY 2011 NSTX Outage started on October 25, 2010

Planned Run Weeks: TBD

Run Weeks Completed: 4.21 run weeks and 839 plasma shots

The NSTX FY2011-12 Research Forum was held at the Princeton Plasma Physics Laboratory on March 15-18, 2011. The goal of the forum was to provide fusion researchers the opportunity to present ideas for experiments to be conducted on NSTX in the upcoming run, and for the NSTX topical science group leaders to generate a draft prioritized plan for experiments to be carried out. Over 170 experimental ideas were proposed by 55 team members and other researchers from 17 institutions. The requested research run-time exceeds the available run-time by a factor of 2.5. Thanks to all involved for generating excellent experimental proposals and for contributing to an efficient review and prioritization process. (J. Menard)

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

The NSTX outage continued this past week with the completion of in-vessel welding of the window, tube and shutter feed-thrus for the new tFIDA diagnostic, as well as the studs for the new Mirnov coils. The construction floor was then removed from the NSTX vessel, and Liquid Lithium Divertor (LLD) plates, now refitted with new thermocouples and mounting hardware, are being reinstalled. New Molybdenum tiles to replace graphite in the lower divertor are in the Vacuum Prep Lab, and new stainless steel mounting bases for these tiles have arrived. Also this week, a second in-vessel flux loop was replaced, the refurbished MPTS shutters were reinstalled, and the reassembly of the new Diagnostic Neutral Beam continued in the test cell.

Access to the NSTX test cell will be available this coming week.

Research Operations (M. Bell)

Boundary Physics Operations (H. Kugel)

- Liquid Lithium Divertor (LLD)
 - The installation of 3 type-K thermocouples in each of the 4 plates was completed.
 - The installation of the plates in the vacuum vessel was started.

- Lithium Evaporators (LITERS)
 - Electrical measurements on all 4 probes were completed to document post-run conditions and in preparation for their replacement with new units..
 - Oven heaters for the fabrication of 4 new units were received.

- Molybdenum Inner Divertor
 - The initial molybdenum tile delivery passed receiving inspection and cleaning of the tiles

was started.

- A Work Request was submitted for machining of 2 molybdenum sensor tiles for a thermocouple and Mirnov coil. The drawings for the Langmuir Probe tile were completed and are under review
- The Installation Procedure "Installation of the Inner Divertor Row-1 Molybdenum Tiles" was started.