

NSTX Weekly Report (Feb. 19, 2010)

FY 2010 NSTX plasma operations

Planned: Total - 15 run weeks (Base - 14 run weeks, ARRA - 1 run week)

Completed: 0 run week and 0 plasma shot

Two members for the NSTX team were invited to give oral presentations at the 2010 Innovative Confinement Workshop that was held from February 16 through 19 at PPPL. Roger Raman (University of Washington collaborator) gave the talk "Demonstration of Plasma Start-up in NSTX Using Transient CHI" and Stefan Gerhardt of PPPL gave the talk "Progress in Developing Advanced Spherical Tokamak Scenarios in NSTX." (R. Kaita)

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

The NSTX start-up activities continued this week with the start of the vessel bake after the completion of the initial round of integrated system testing of the Liquid Lithium Divertor (LLD) system. Also this week, assembly of the LITER #1 probe was nearing completion, and testing of safety interlocks for the field coil power, variable frequency, and neutral beam systems was started.

Access to the NSTX test cell will be restricted this coming week during vessel bake-out operations.

Research Operations (M. Bell)

Boundary Physics Operations (H. Kugel)

- Liquid Lithium Divertor (LLD)
 - The LLD plates are being radiatively heated to the 300° range during the vessel bakeout now in progress.
 - XP1000 "LLD Characterization" was reviewed by the Lithium Research Topical Science Group.
- LLD Diagnostics
 - The LLD viewing fast cameras were fit-up and trial tested on the vessel, and then removed to avoid heating during bakeout. Calibration of these visible cameras for near IR measurements is in progress. Preparations for white plate calibrations started.
- Liquid Lithium Evaporators (LITERs)
 - The electrical assembly of the first Bay F unit (F1) was completed. Preparations for F1 leak checking started.
 - The electrical assembly of the first Bay K unit (K1) started.
 - Work continued on mechanical assembly of the probe drive position controls for units F2 and K2.
 - An improved liquid lithium metering technique for the prototype LITER liquid fill system was tested successfully.