

NSTX Weekly Report (Nov. 27, 2009)

FY 2010 NSTX plasma operations

Planned: TBD run weeks

Completed: 0 run week and 0 plasma shot

- Twenty abstracts have been submitted by NSTX researchers to the 19th International Conference on Plasma Surface Interactions to be held in San Diego, CA in May 2010. The abstracts are placed in a web folder at

http://nstx.pppl.gov/DragNDrop/Scientific_Conferences/PSI/2010/abstracts/ (V. Soukhanovskii, LLNL)

- The 2009 Nuclear Fusion Award winning paper on Resistive wall stabilized operation in rotating high beta NSTX plasmas (Nucl. Fusion 46 635-644) by Steven A Sabbagh et al. is available at <http://www.iop.org/EJ/abstract/0029-5515/46/5/014/>.

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

The NSTX outage continued this week with the completion of in-vessel construction activities, and the start of the diagnostic calibrations. All Liquid Lithium Divertor (LLD) plates, cooling lines and internal bundles have been installed, and the last diagnostic tile are being fit into place. Also this week, the internal mirror for the high-k scattering diagnostic was installed and calibrated.

The NSTX test cell will be in restricted access several days next week during a calibration of the test cell neutron detector.

Research Operations (M. Bell)

Boundary Physics Operations (H. Kugel)

- Liquid Lithium Divertor (LLD)
 - All LLD plates, cooling lines, and internal cable bundles have been installed.
 - The plate power and thermocouple cable feedthrough connectors have been installed.
 - The plate gap Mirnov tiles and the plate gap radial bias tile have been installed.
 - Preparations started for installing the plate gap toroidal bias tile and the 3x33 Langmir Probe Array tile.
 - The 12 shunt tiles have been installed and their has cabling is in progress.
- LLD Related Diagnostics
 - 2 Phantom v710 cameras were received
 - Machining started on the re entrant Phantom camera ports.
- Divertor Region Sample Probe
 - A successful Conceptual Design Review was held for the Purdue Materials Analysis Particle Probe (MAPP) by Prof. J. P. Allain (Purdue Univ) for placement on the present Sample Probe drive in 2011.

- Lithium Evaporator (LITER2010)
- Testing of the Bellows Motion Controls started.

Diagnostic Operations (R. Kaita)

- Calibrations have begun to prepare diagnostics for NSTX plasma operations in FY2010. The first of these activities involved in-vessel measurements to calibrate the mirror settings for the high-k turbulence diagnostic.