

NSTX Weekly Report (October 26, 2007)

FY 2008 NSTX plasma operations

Planned: TBD

Completed: 0 weeks

The National Spherical Torus Experiment (NSTX) Research Forum for 2008 is scheduled for November 27 - 29, 2007 at the Princeton Plasma Physics Laboratory in Princeton, NJ USA. Team members or prospective collaborators are invited to attend or participate remotely. The Research Forum is intended to provide interested researchers the opportunity to present ideas for experiments to be conducted on NSTX in the forthcoming run. Both well-developed and new ideas in the early stages of development are welcomed. A web site for the FY2008 NSTX Research Forum has been created. It can be accessed through a link on the NSTX Home Page or directly <http://nstx-forum-2008.pppl.gov>. Proposals for experiments to be performed in 2008 can be submitted for discussion at the Research Forum may be submitted through the website. Any problems with the website should be addressed to S. Kaye (skaye@pppl.gov). There are no registration fees for the meeting, but researchers from other institutions are asked to pre-register in order to participate. (M. Bell, S. Kaye)

C. M. Ryu (Professor, Pohang University of Science and Technology - POSTECH) in Korea visited PPPL to discuss collaborations involving the analysis of NSTX turbulence data.

The NSTX Team Meeting as held on Friday, November 2, 2007 at 1:30 P.M., in B318. Updates of outage status, plans toward the plasma operations, upcoming fall meetings, and the Next Five Year Planning were discussed. The presentation material is available on the web site.

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

The NSTX outage continued this past week with the ongoing calibration of in-vessel diagnostics, and the completion of upgrades to the vacuum vessel bake-out system controls intended to allow neutral beam ion source conditioning in parallel with the vessel bake scheduled for mid-December. The lower machine umbrella cover has been re-installed, and installation of the upper TF bus links is in progress. Also this week, electrical insulation tests (HiPots) of the PF and OH coil systems were successfully performed, as well as testing of the real-time data acquisition system.

The NSTX test cell will be in unrestricted (card reader) access this coming week.

Research Operations (M. Bell)

Boundary Physics Operations (H. Kugel)

- The remaining two LITER 2008 vessel port covers were completed. A third unit for offline shutter testing with lithium evaporation was completed previously, and assembly of the shutter mechanism was started. The vendor confirmed that the second bellows motion drive for installing the second LITER on NSTX will be shipped 11/16/07.

* A Design Review was held for the inner vessel parts for releasing lithium powder directly into discharges of interest. The Review was declared a success pending resolution of the CHITS. (L. Roquemore)

* Insulation and non conductive materials used in NSTX were analyzed at the main campus Image Analysis Center (IAC) of the Princeton Institute for the Science and Technology of Materials (PRISM). The results are under analysis. (J. Timberlake)

* R.Nygren, SNL project manager for the LLD reported SNL is waiting a new vendor shipping date for the special molybdenum mesh to be tested. (R. Ellis,III)

Diagnostic Operations (R. Kaita)

- The main calibration effort during the past week focused on the poloidal rotation (PCHERS) system and the fast ion diagnostic based on deuterium-alpha emission measurements (FIDA). The alignment following installation of a large number of optical fibers for these diagnostics has been completed, and spatial calibrations are in progress.