

NSTX Weekly Report (Dec. 8, 2006)

FY 2007 NSTX plasma operations

Planned: TBD

Completed: 0 weeks

- The NSTX Research Forum for FY 2007 research on NSTX was held at PPPL on December 5 - 7, attended by members of the NSTX Research Team, including several collaborators, some participating by teleconference links from off-site. After a plenary session on Tuesday morning, which provided information on plans, capabilities and organization for the next run period, break-out sessions were organized by the six NSTX Experimental Task (ET) Groups on Tuesday afternoon and through Wednesday. In these sessions, members of the research team presented ideas for experiments which were then discussed and prioritized. A total of 122 proposals for experiments, requesting 123 days of runtime, were presented and evaluated. From these, a subset of highest priority experiments was selected by the ET Groups and reported by the group leaders to a final plenary session of the Forum on Thursday morning. The NSTX Run Coordinator for 2007, Dr. David Gates then presented the plan for preparing and reviewing the detailed NSTX Experimental Proposals and allocating run time. The material presented at the Forum can be found through the Web link http://nstx.pppl.gov/DragNDrop/Research_Forum_2006/. (M. Bell, D Gates)

- Martin Peng (ORNL) presented an invited talk: "Progress toward Fusion Component Test Facility (CTF)" on November 29 at the 23rd Annual Meeting of Japan Society of Plasma Science and Nuclear Fusion (JSPF) Research in Tsukuba, Japan. He also attended the Fifth IEA/ITPA Workshop during November 30 - December 1 at JAEA to discuss the ITPA joint experiment proposals for 2007. (M. Peng)

- There will be an NSTX Physics Meeting on Monday, Dec. 11 at 1:30 pm in LSB 318. Leonid Zakharov will give a talk entitled "NSTX and Lithium." (S. Kaye)

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

The NSTX outage continued this past week with the completion of in-vessel installations and diagnostic calibrations. All tiles have been reinstalled in the vacuum vessel, and a photometric calibration of the new Poloidal CHERS diagnostic completed. The FARO measuring arm was used to perform a final spatial calibration, and critical reflective surfaces have been blackened with a vacuum compatible paint. New protective visor shields have been installed over the MPTS and high k scattering diagnostic windows, and in-vessel thermocouples have been reinstalled and tested. In-vessel cleaning, inspections and photos are scheduled to be completed in time to reinstall the neutral beam to torus transition duct before the end of this coming week.

The test cell will remain in free (card reader) access through most of the coming week.

Research Operations (M. Bell)

Boundary Physics Operations (H. Kugel)

- Polished silicon coupon samples were prepared for installation in NSTX after final cleanup prior to pump-down. (C.H. Skinner)

Diagnostic Operations (R. Kaita)

- The photometric calibrations of the new poloidal rotation (PCHERS) diagnostic, as well as the existing CHERS ion temperature and the ERD edge rotation systems, were completed.
- Optical alignments of the modified launching mirror and new collection mirror for the high-k microwave turbulence diagnostic were completed. Sound wave tests of the sensitivity of the system to low-k fluctuations were also performed.
- Photometric calibrations of the hydrogen-alpha imaging diagnostic and the tangential “optical” X-ray array were completed.
- A visor to protect one of the windows for the multipoint Thomson scattering diagnostic during lithium evaporation was installed.