

NSTX Weekly Report (Nov. 22, 2006)

FY 2007 NSTX plasma operations

Planned: TBD

Completed: 0 weeks

- Dennis Mueller and Charles Bush (ORNL) attended the 17 th ANS-TOFE meeting in Albuquerque, New Mexico and presented oral talks entitled "NSTX plasma start-up using transient CHI" and "Investigation of MHD Phenomena in NSTX using a Fast Soft X-ray Imaging Camera", respectively.
- There will be an NSTX Team Meeting on Tuesday, Nov. 28 at 10:30 pm in LSB 318. We will update you on the outage activities and preparation toward the FY 2007 experimental run and also on the upcoming NSTX Research Forum.

• The NSTX Research Forum for FY 2007 research on NSTX will be held on **December 5, 2006 through noon, December 7, 2006**. The Research Forum is intended to provide team members 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. Please see http://nstx.pppl.gov/DragNDrop/Research_Forum_2006/2006%20Forum%20Announcement.pdf for further details.

The first NCSX Research Forum will be from **noon, December 7 through noon, December 8, 2006**. The Research Forum will discuss the NCSX research priorities and opportunities, and identify areas of expected research interest and capability. Please visit http://ncsx.pppl.gov/Research_Forum/ResFor_index.html for more details.

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

An Operations Engineering update for the weekly report:

The NSTX outage continued this holiday shortened week with the completion of the electrical installations needed for the new Poloidal CHERS diagnostic. After a successful calibration of the high-k scattering diagnostic, that system's collection mirror was removed briefly to perform a final checkout of the steering linkage, and to install in-vessel thermocouples. Also this week, the in-vessel halo-current Rogowski coils and the RWM sensors were tested, and vacuum flanges continued to be prepared for reinstallation. The Vacuum Prep Lab prepared six new carbon tiles for installation, allowing a set of older tiles to undergo destructive analysis of their surface composition. A final design review of a dust injector developed by LANL was held this week.

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

Research Operations (M. Bell)

Diagnostic Operations (R. Kaita)

- The launching mirror for the high-k microwave turbulence diagnostic was removed. The adjustment mechanism is being examined to see if it is possible to make it less prone to jamming. Thermocouples have been installed at the mirror location. They will determine if the temperature remains low enough there for a new remote control drive motor. The old collection mirror has been removed, and the new mirror with a more optimal focal length is about to be installed.
- The leads for the faulty resistive wall mode magnetic sensors were repaired and tested. The new segmented Rogowski coil for halo current measurements has been installed on the center stack.
- The alignment of the multipoint Thomson scattering electron temperature and density profile diagnostic was completed.