

NSTX Weekly Report (Dec. 22, 2006)

FY 2007 NSTX plasma operations

Planned: TBD

Completed: 0 weeks

- N. N. Gorelenkov has been invited to present a talk entitled "Predictions and observations of global beta-induced Alfvén-acoustic modes in JET and NSTX" at the European Physical Society meeting to be held in Warsaw, Poland in July 2007. (S. Kaye)

- A Boundary Workshop was held at DIII-D, Dec 11-12, 2006 with the focus on the DIII-D 5-Year boundary research plan and the issues affecting ITER and steady state development beyond ITER. H. Kugel attended in person; C.H. Skinner, R. Maingi (ORNL), and V. Soukhanovskii (LLNL) participated electronically. (H. Kugel)

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

The NSTX outage continued this past week with the vacuum pumping and leak checking of both the NSTX vacuum vessel and neutral beam enclosure. Also this week, electrical insulation tests (HiPots) of the NSTX Field Coils were performed, as well as a full set of resistance measurements (taken at 200 Amps) of the Toroidal Field Coil flag joints. All tests were satisfactory.

Research Operations (M. Bell)

Diagnostic Operations (R. Kaita)

- Activities during the past week mostly involved acquisition of hardware in preparation for the upcoming run period. New interference filters for optical diagnostics were received, including those for lithium and molecular deuterium emission lines. An order was placed for 7 terabytes of additional disk storage to accommodate new and upgraded imaging diagnostics, some of which are expected to collect almost a half a gigabyte of data per shot.

- Thirty-point data from the NSTX Thomson scattering diagnostic (MPTS) has been loaded to the MDS tree for 50 days of the 2006 experimental campaign. A list of those days is available at http://nstx.pppl.gov/DragNDrop/Diagnostics_&Support/Sys/MPTS30-2006.pdf.

The density calibration has been made with Rayleigh scattering for 19 of the original 20 channels. Raman scattering data has been used to calibrate the density for the new channels and also one older channel for which the Rayleigh-wavelength filter has become irreproducible. The 30-point profile data is now accessible by using the system-wide IDL function "ts3" instead of the familiar "ts". (B. LeBlanc)

Boundary Physics Operations (H. Kugel)

- A Peer Review for the Supersonic Gas Injector (SGI)-Upgrade was held. During the review, minor questions were answered, no chits were submitted, and the review was declared a success. The scope of work, the anticipated charges, and the immediate initiation of the work were approved. (V. Soukhanovskii, LLNL)

- C. H. Skinner attended a joint meeting between PPPL and Princeton University School of Engineering and Applied Science to discuss new collaborations between PPPL and Main Campus.