

NSTX Weekly Report (Aug. 8, 2008)

FY 2008 NSTX plasma operations

Planned: 15 run weeks

Completed: 16.62 run weeks, 2571 plasmas (run completed on July 14, 2008)

- The 2008 NSTX Results/Theory Review meeting was held on Aug. 6 and 7th at PPPL. 62 presentations were made on the research progress by the NSTX team members including the initial results from the NSTX FY 2008 experimental campaign concluded on July 14, 2008. The presentation material is available on the NSTX web page. Following the Results Review, on the morning of Aug. 8, the NSTX Run Assessment meeting was held. Many useful suggestions by the team members were made to improve the NSTX operations.
- A research paper entitled "Momentum-Transport Studies in High $E \times B$ Shear Plasmas in the National Spherical Torus Experiment," by W. M. Solomon, S. M. Kaye, R. E. Bell et al., has been published in the 8 August 2008 issue of Physical Review Letters (Vol.101, No.6). The paper reports experiments conducted on NSTX to study both steady-state and perturbed momentum transport. Those studies are unique in the parameter space under investigation, where the low aspect ratio on NSTX results in rapid plasma rotation with $E \times B$ shearing rates high enough to suppress low- k turbulence. (S. Kaye)
- There will be no Monday Physics Meeting this coming week. (S. Kaye)

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

The NSTX outage continued this week with a distilled water wipe down of internal vessel surfaces, and the ongoing in-vessel diagnostic calibrations. Post-run calibrations of the magnetics diagnostic integrators were completed this past week. The NSTX test cell crane has been taken out of service for the next few weeks for extensive maintenance before the project enters the construction phase of the outage.

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

Research Operations (M. Bell)

Boundary Physics Operations (H. Kugel)

- LLD (R.Ellis, III)
 - Drawings, Statement of Work, and draft Requisition for Request for Quotes for the LLD surrounding graphite tiles have been completed and are under final review prior to submission.
 - SNL has extended the deadline for response from the LLD plate vendors to August 14th.
- Sample Analysis (C.H. Skinner)
 - Planning is in progress to arrange for the analysis of the NSTX 2008 graphite tiles and sample coupons at SNL (W.R.Wampler) and Purdue Univ (J. P. Allain).

Diagnostic Operations (R. Kaita)

- The initial set of photometric calibrations for CHERS/PCHERS/ERD is complete. (R. Bell)
- In-vessel photometric and white-plate calibrations of VIPS spectrometer divertor views and two divertor filtered cameras have been completed. (V. Soukhanovskii, LLNL)