

NSTX Weekly Report (July 1, 2005)

FY2005 Planned Operations: 17 weeks
Completed: 9.35 weeks producing 1037 plasmas
Maintenance Week - No plasma operations

NSTX Department, Project, Program (M. Ono, M. Peng, E. Synakowski)

- Stan Kaye, Rajesh Maingi (ORNL), Jon Menard, Martin Peng (ORNL), Roger Raman (U Washington) and Vlad Soukhanovskii (LLNL) attended the 32nd Meeting of the European Physical Society Meeting in Tarragona Spain on 27 June-1 July 2005. J. Menard had an oral presentation on Integrated High Performance Plasmas on NSTX, while M. Peng presented an invited talk on the ST CTF option. R. Maingi presented a poster on Type V ELMs, S. Kaye presented a poster on Confinement and Transport Scaling in NSTX and R. Raman presented a poster on Transient CHI on NSTX and V. Soukhanovskii presented a poster on Particle and Power Exhaust in high-performance NSTX plasmas. Other NSTX poster contributions were on kinetic instabilities by E. Fredrickson, Fast X-ray observations of reconnection events by B. Stratton, and Gyrokinetic analysis of C-Mod and NSTX plasmas by M. Redi. These three posters were covered by those attending the conference. (S. Kaye)
- Makoto Hasegawa arrived from Kyushu University on June 29, 2005 and will stay until August 12, 2005. Mr. Hasegawa will work on Simulation Codes EFIT & EBW on NSTX. (J. Savino)

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

The NSTX test cell remained open for maintenance this past week, with emphasis placed on installation activities associated with the new high K scattering diagnostic. Most of the waveguides for this diagnostic have now been installed, the alignment of the launcher at Bay H has been completed, and the detector table has been mocked-up in place. The Lithium Pellet Injector was re-installed on NSTX, is under vacuum but still isolated from the machine, and has been loaded with pellets. The new Moveable Glow Discharge Cleaning Probe was moved to its test stand in the NSTX test cell for integrated system testing before being installed at Bay K top. The Johns-Hopkins Li telescope was installed at Bay J bottom, and the multicolor X-ray array at Bay G.

NSTX machine operations will resume on Tuesday morning after the July 4th holiday. (A. von Halle)

Research Operations (M. Bell)

Boundary Physics Operations (H. Kugel)

- The LPI was reinstalled and a short bakeout was performed. It was then vented, loaded with lithium pellets, and is presently pumping down.
- The Preliminary Test Procedure (PTP) for the Movable Glow Probe was completed. This included full range motion in a near-vertical vacuum chamber. It was then removed from its test fixture to perform mechanical adjustments derived from the testing.

Diagnostic Operations (R. Kaita)

- Support structures for the “optical” X-ray array and the lithium X-ray “telescope” were installed during the past week. These diagnostics are part of the Johns Hopkins University (JHU) collaboration on NSTX. Luis Delgado-Aparicio, a graduate student in the JHU Plasma Spectroscopy Group, gave a talk on the first system on June 27 at PPPL entitled, “The Tangential 3-Color “Optical” Soft X-Ray Array for Fast Electron Temperature and Transport Measurements.”