

NSTX Weekly Report (Mar. 18, 2005)

FY2005 Planned Operations: 17 weeks

Completed: 0 weeks producing 0 plasmas

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

- M. Ono and M. Peng (ORNL) attended the Fusion Facility Coordination Meeting in Germantown, Maryland on March 14 and the Budget Planning Meeting in Gaithersburg, Maryland on March 15 – 16. The NSTX BPM presentation files are available on the NSTX web page.
- There will be no physics meeting on March 21. On March 23, at 1:30 pm in LSB 318, an NSTX Team Meeting will be held. The outage status and the preparation for the plasma operations will be discussed. A brief summary of the Budget Planning Meeting will be also given.

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

The NSTX outage continued this past week with the completion of the assembly of the TF flag boxes to the upper hub, and the installation of the complete TF inner bundle into the machine center column. The assembly of the TF flag boxes to the lower hub was completed over the weekend, and the resistance checks of the completed joints are in progress. Bus-work has been installed to the OH and PF1A coils, and insulation testing (HiPots) of those systems has been successfully completed. The plasma real-time control system is now running in it's full 352 channel configuration and is ready to support NSTX experimental operations. The SPA commissioning is now underway. Open circuit tests have been successfully performed. The next sequence of tests will run the SPA into a dummy load. The gas system controls were also successfully tested via the plasma real-time control system, and the Supersonic Gas Injector completed pre-operational testing. The test cell was locked up Saturday evening to align the MPTS lasers through the vessel, and plans are underway to perform a Rayleigh/Raman scattering calibration. The neutral beam liquid helium refrigerator is now in full operation and cooldown of the beamline is in progress.

The installation of the TF flexible bus links and the machine area scrubs needed to start power testing is in progress and will restrict access to the NSTX test cell this week. Integrated system testing of the NSTX field coils will begin during the last week in March and will be followed directly by plasma operations. (A. von Halle)

Research Operations (M. Bell)

Boundary Physics Operations (H. Kugel)

- Tools for fabricating lithium pellets were completed. Lithium foil for fabricating lithium pellets was received. Parts needed for LPI maintenance and upgrades were completed. LPI reassembly was started.
- XMP-36, "Re-commissioning of the Supersonic Gas Injector for FY05 Operations" (V. A. Soukhanovskii , LLNL) was approved, and the calibration phase was started.
- C. H. Skinner presented the talk "Is Carbon a Realistic Choice for ITER's Divertor ?" at a meeting of the Boundary Physics Science Focus Group.

Physics Operations (D. Mueller)

- The expanded real time control system was successfully tested this week. This includes hardware upgrades and software support for the following items: SPA data acquisition (32 channels), RWM data acquisition (64 channels), expanded equilibrium magnetics (64 channels), SPA Interface Module (3 output channels, 1 for each SPA power supply), and the lower dome branch 5 gas injector (in support of CHI). These upgrades nearly doubled the data acquisition load on the system from 192 channels up to 352 channels. All systems are tested and operational. Cabling and calibration work will proceed over the coming weeks, along with detailed system checks. (D. Gates)