

NSTX Weekly Report (May 7, 2010)

FY 2010 NSTX plasma operations

Planned: Total - 15 run weeks (Base - 14 run weeks, ARRA - 1 run week)

Completed: Base - 0.99 run week and 157 plasma shots

Completed: ARRA - 1.01 run week and 171 plasma shots

Jon Menard attended the Programme Committee Meeting for the 23rd IAEA Fusion Energy Conference 2010. The meeting was held in Vienna, Austria May 3-7. Jon represented U.S. experimental contributions to the conference, served as chair of the sub-group responsible for reviewing experimental submissions, and helped to define the scientific program and organize the oral and poster presentations. (J. Menard)

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

The extended NSTX maintenance period to address an OH coil lead water leak continued this week with the successful review and testing of the proposed repair, and then the repair of the actual coil lead. Pressure testing of the repaired OH coil was successfully performed and the installation of a new support structure at the OH lead stem will be implemented. The new lithium evaporator (Liter) probe at bay K had to be removed from the NSTX vessel to modify the support bracket to allow proper alignment, and a procedure is being developed to replace a failed shutter at that bay. Also this week, tests of a prototype hot air-based heating system for one of the four Liquid Lithium Divertor (LLD) plates was performed. Access to the NSTX test cell will be available this coming week during this extended maintenance period.

Research Operations (M. Bell)

Boundary Physics Operations (H. Kugel)

- Liquid Lithium Divertor (LLD)
 - Preparations continued for testing a prototype hot-air heating of an LLD plate.
- LLD Diagnostics
 - The fabrication of the fiber holder for the divertor spectrometer input optics was completed, and final assembly and adjustment of the fibers at the input to the spectrometer was started.
- Lithium Evaporators (LITERs)
 - A fitup of the second LITER for Bay K was performed. It was found that the new support structure for this unit needed adjustment. The machining was completed and the unit is awaiting reinstallation. During the fitup, the shutter blade at Bay K was damaged and became stuck in an intermediate position. A repair procedure for this is being developed.

Diagnostic Operations (R. Kaita)

Progress continues to be made in diagnostic installations and improvements. The optical fiber work for the Beam Emission Spectroscopy (BES) is complete, and tests are planned for the coming week. The last of the remote mirror control mechanisms for the High-k turbulence diagnostic has been implemented and tested.