

NSTX Weekly Report (Sept. 29, 2006)

FY 2006 NSTX plasma operations completed on June 23, 2006.

Joule Milestone: 11 weeks

Achieved: 12.66 weeks

Dennis Mueller is visiting the EAST tokamak in China and it achieved first plasma this week. The collaboration between GA and EAST on the Plasma Control System was very productive and effective in providing the tools needed to model and control the plasma. Dennis Mueller (PPPL) and Gary Jackson (GA, DIII-D) lent their operational experience, in support of the rapid progress in going from engineering tests of coil systems to producing plasmas. (D. Mueller)

Joon-Wook Ahn arrived at PPPL last week. He is a postdoctoral research fellow from the University of California at San Diego (UCSD), on long-term assignment to NSTX and LTX. His research on NSTX will focus on edge and boundary physics, using the UCSD fast reciprocating probe. (R. Kaita)

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

The NSTX outage continued this past week with the trial fit-up of the lower divertor plates at Bay B, modified for the new Poloidal CHERS diagnostic, and then the reinstallation of in-vessel scaffolding for trial fit-ups of the upper plates. After the successful fit-ups, the plates were removed for vacuum preparation. Maintenance of the Field Coil Power Conversion ground and line switches continues, and tests/inspections of the Neutral Beam calorimeter are underway in preparations for the repair of the drive assembly.

The test cell will remain in free (card reader) access through the coming week, only locking up the test cell for a brief period early Tuesday morning for electrical insulation tests.

Research Operations (M. Bell)

Diagnostic Operations (R. Kaita)

- A new CCD array for visible light measurements has been received. Planning for its integration into the NSTX data system has started. The new array will be used for fast divertor emission profile measurements.
- In-vessel inspection of divertor hardware has been performed in an effort to develop a new improved viewing geometry for the divertor bolometers. Other diagnostic maintenance activities include fiber optic repairs for the visible bremsstrahlung system, and the installation of new microchannel plate image intensifier for the SPRED vacuum ultraviolet survey spectrometer.

Boundary Physics Operations (H. Kugel)

- The following oral presentations were made at the DOE PFC Teleconference Meeting, 9/26/06:
"Results from Lithium Evaporation Coatings in NSTX", R. Maingi (ORNL)
"NSTX FY07 Lithium Research Plans", H. Kugel