

NSTX Weekly Report (Aug. 18, 2006)

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

Joule Milestone: 11 weeks

Achieved: 12.66 weeks

R. Maingi (ORNL) participated remotely in the MAST part of the ITPA sponsored experiment: Dependence of the H-mode pedestal on aspect ratio. The target shape was achieved with neutral beam power up to 2.2 MW. Analysis of the pedestal properties is underway. R. Maingi also presented a seminar at General Atomics entitled: "Characteristics of small ELMs in NSTX".

M. Ono visited Los Alamos National Laboratory this week. He gave a lecture entitled "Plasma Waves in Magnetized Plasmas: How they are used in magnetic fusion research" for the Plasma Physics Summer School 2006. He also toured the LANL experimental facilities and gave a seminar entitled "NSTX Research Facility and Recent Experimental Highlights."

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

The NSTX outage continued this past week with the on-going in-vessel machining to provide the apertures required for the new Poloidal CHERS diagnostic. Also this week, the neutral beam calorimeter was removed from the beam box for maintenance and repairs, and maintenance was performed on TIV shutters and diagnostic pumps. A detailed evaluation of the diagnostic grounding system to reduce electrical noise continued, and additional power outlets were installed in the test cell.

The test cell will remain in free (card reader) access through the coming week.

Research Operations (M. Bell)

Boundary Physics Operations (H. Kugel)

- 54 NSTX operation dust samples were sent to INEL for analysis (C.H. Skinner)
- Measurements, photos, and analysis of the internal and external vessel interferences for candidate LITER-2 configurations has been in progress. A simulation of LITER-2 evaporation intensity and angular distributions versus oven geometry parameters was initiated. A conceptual design for a high performance oven heater is under investigation. Work Planning Number 1326 was issued for LITER-2, and requirements for the NEPA Form, NSTX Safety Assessment Document (SAD), Failure Modes and Effects Analysis (FMEA) revisions, and the Activity Certification Committee (ACC) review process were received. Work was initiated on preparations for a preliminary Peer Review.