

NSTX Weekly Report (Dec. 23, 2005)

FY2006 weeks of research operations

Planned: TBD

Completed: 0 weeks

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

The NSTX outage continued this past week with the successful pump-down of both the NSTX vacuum vessel and neutral beam-line. Electrical insulation testing of the vacuum vessel segments and magnet coil systems, as well as the hydrostatic testing of the coil system cooling lines, is in progress in preparation for the upcoming run. The re-installation of the TF bus systems is proceeding on schedule, and electrical installations associated with the new lithium evaporator system have started.

Due to the holiday break, access to the NSTX test cell will only be available on Wednesday and Thursday (12/28 & 12/29) this coming week. (A. von Halle)

Research Operations (M. Bell)

Diagnostic Operations (R. Kaita)

- The divertor bolometer was installed on its lower dome port flange. This completed the diagnostic installations on the NSTX vacuum vessel prior to pump-down.
- The chiller has been repaired and the ion pump has been replaced on the SPRED vacuum ultraviolet survey spectrometer. The detector was also just repaired, so the diagnostic is now ready for plasma operations.

Boundary Physics Operations (H. Kugel)

- An IR Camera replacement cable was received. The IR camera system is being readied for calibrations during Bakeout. (R.Maingi, ORNL)
- Tests were performed on a candidate momentum detector for the LPI pellet target probe. The results indicate that the piezocrystal detector is sufficiently sensitive for installation on the LPI.
- The LITER-1 rack power installation achieved 85% completion. A draft of the Control Wiring Diagram (CWD) for the thermocouples, and the air and helium sensors was completed. All remaining parts required for the electrical and instrumentation feedthroughs on the probe body were ordered. The off-line test chamber was modified to accommodate testing of a fully assembled LITER-1

probe. The cartridge prototype was used tested successfully in air to over 400 watts. An eddy current analysis was completed. Work was initiated on the Failure Effects and Modes Analysis (FMEA).