NSTX Weekly Report (Dec. 15, 2006)

FY 2007 NSTX plasma operations
Planned: TBD
Completed: 0 weeks

There will be an NSTX Physics Meeting on TUESDAY, Dec. 19 at 1:30 pm in LSB252 (Note change of time and place). Shige Kubota will give an update on the UCLA fluctuation diagnostics for the upcoming run (capabilities, schedules, etc). The presentation will be in the Monday Physics Meeting Folder in the Drag and Drop area by the time of the meeting. (S. Kaye)

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

The NSTX outage continued this past week with the completion of a thorough in-vessel cleaning, the application of black paint to some reflective surfaces, a set of final in-vessel photographs, and the reinstallation of the neutral beam to torus transition duct. All vacuum seals were completed and the NSTX vessel went back under vacuum on Thursday. Also this week, power testing of the combined PF1A upper and lower power systems was performed into a dummy load.

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

Research Operations (M. Bell)

Diagnostic Operations (R. Kaita)

• A supersonic gas injector (SGI) upgrade peer design review was successfully conducted on Wednesday, December 13. The SGI upgrades planned for FY07 operations include a high-pressure capability and an independent gas handling system. (W. Blanchard, PPPL, V. A. Soukhanovskii, LLNL).

• Final position measurements of in-vessel hardware were completed with the "FARO arm." These included the locations of the new view ports and the calibration target for the deuterium-alpha imaging system, aiming point of the LITER lithium evaporator, and orientations of the quartz microbalance deposition monitors.

• A new visor to provide protection during lithium evaporation was welded above the ports for the high-k microwave scattering turbulence diagnostic.

• All highly-reflective in-vessel surfaces were sprayed with a black coating to minimize the stray light that would affect visible-wavelength diagnostics.

• Spatial alignments were performed for visible cameras with new views of the lower divertor region.

• Measurements were taken for future tangential divertor bolometer sightlines. The present bolometer detectors were reinstalled with the existing divertor views.

• New silicon wafer sample coupons were installed on the vacuum vessel walls.
• The connections for the new electrode biasing system were completed. A peer design review of the electronics for the electrodes and the Langmuir probes on the same support structure was held on Tuesday, December 12.