

NSTX Weekly Report (Dec. 23, 2009)

FY 2010 NSTX plasma operations

Planned: TBD run weeks

Completed: 0 run week and 0 plasma shot

• **ARRA Milestone** - The Final Design Review (FDR) for the mechanical engineering design of the MSE-LIF diagnostic took place on December 9th and the FDR for the mechanical engineering design of the MPTS diagnostic upgrade took place on December 18th. These FDRs were successful which completes the FY 2010 Q1 ARRA Milestone of "Complete mechanical engineering design of diagnostic upgrades including cost and schedule. Progress continues in procuring long lead materials for the MPTS diagnostic upgrades. (T. Egebo)

• **FY2010 Joint Research Target Q-1 Milestone** - The first quarter goal for the FY2010 Joint Research Target on SOL thermal transport has been met. The first quarter goal entails, in essence, a coordinated planning and analysis activity toward execution of the experiments in coming quarters. A joint experimental research plan has been agreed upon, that will allow comparison of SOL thermal transport in Alcator C-Mod, DIII-D, and NSTX, with both dimensional and dimensionless parameter variations. In NSTX, joint experiments will focus on a common scaled poloidal cross-section shape, with NSTX and DIII-D comparisons providing an aspect ratio variation and NSTX and C-Mod comparisons a rhostar scan. (R. Maingi, ORNL)

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

The NSTX outage continued this week with the installation of a rebuilt neutral beam Torus Isolation Valve, and the ongoing pre-operational testing of the Liquid Lithium Divertor (LLD) heating system. Crews are preparing for final in-vessel wipe-downs, and the re-installation of the neutral beam to torus transition duct in early January.

The NSTX test cell will remain in free (card reader) access this coming week during the holiday break.