

## **NSTX Weekly Report (February 10, 2012)**

### **NSTX is in the Upgrade Project outage in FY 2012**

The NSTX-U facility enhancement brainstorming meeting was held on Feb. 7 and 8 at PPPL. Fifty one presentations were made. The presentation material is available on the web URL:

<http://nstx-u.pppl.gov/five-year-plan/five-year-plan-2014-18/facility-enhancement-brainstorming>

(J. Menard, M. Ono)

The LLNL NSTX research group started a new collaboration with Alcator C-Mod tokamak Team at MIT Plasma Science and Fusion Center. The goal of the collaboration is to obtain experimental experience and improve understanding of plasma-surface interactions and divertor physics with high-Z (molybdenum) plasma-facing components and cryo-pumping for NSTX Upgrade. The LLNL postdoctoral researcher Alexander Tronchin-James moved to Cambridge, MA to participate in Alcator C-Mod tokamak diagnostic and plasma operations. Vlad Soukhanovskii (LLNL) visited PSFC MIT from 6 to 8 February. During his visit he held productive discussions with PSFC MIT staff on a variety of Boundary Physics and Diagnostics topics. (V. Soukhanovskii)

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

NSTX Upgrade construction activities continued this week with the completion of MPTS diagnostic calibrations and spatial metrology of internal/external vacuum vessel components associated with that diagnostic's fields of view for the upgrade configuration. The removal of the neutral beam in-vessel armor tile system is now in progress, and is expected to continue through next week. Good progress continues to be made on the additional welding required for the vacuum vessel support ribs, with two bays on the underside of the vessel now completed. A new prototype firing generator has been completed and installed in a Field Coil Power Conversion rectifier for system testing. Also this week, a review of the electrical insulation test results of two TF coils formerly used on the PLT device indicated that these coils are suitable for use as current limiting reactors for the Upgraded NSTX OH coil power system configuration.

Access to the NSTX test cell will be available only through previous arrangement with the Upgrade Work Control Center.