

## **NSTX-U Weekly Report (Feb. 1, 2013)**

### **NSTX-U is in the Upgrade Project outage in FY 2013**

On January 28, Roger Raman (University of Washington) gave the talk “Overview of Physics Results from NSTX and the NSTX-U Program Plans” to the Quest ST group at Kyushu University. On January 28 and 30, additional discussion with Professor Hanada of Quest and a representative of a local engineering company has led to a CHI design for Quest that is now ready for an assessment of hardware installation cost. On January 31 and February 1, R. Raman visited the University of Hyogo group to discuss the hardware requirements to support transient CHI studies on HIST. He also gave a condensed version of the NSTX overview talk to the HIST plasma group. (R. Raman)

Professor Yoshihiko Hirooka of NIFS (National Institute for Fusion Science), Japan visited NSTX/PPPL under the US-Japan bi-lateral collaboration during the week of Jan. 28, 2013. He discussed the lithium-effects on core confinement both in NSTX and TFTR and dust related collaboration activities with M. Ono, C. H. Skinner, R. Kaita, M. A. Jaworski, D. Mansfield, J. Strachan and R. Goldston. He also visited the NSTX lithium and dust test facilities and Lithium Tokamak Experiment. (M. Ono)

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

NSTX Upgrade construction activities continued this week with the trial assembly and successful vacuum leak checking of the first TF quadrant mold, and the loading of TF conductors into that mold in preparation for the upcoming vacuum impregnation with epoxy. Refurbishment of a neutral beam ion dump is nearing completion with plans to install it in NB#2 late next week.

Preparations for plasma operations in the NSTX-U configuration also continued with an ongoing engineering study to provide a new vacuum vessel boronization system. The fabrication of the new field coil power conversion (FCPC) system firing generators continues to make good progress, and the first production firing generator is expected to be ready to install in an FCPC rectifier next week.

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