

NSTX-U Weekly Report (July 18, 2014)

NSTX-U is in the Upgrade Project outage in FY 2014

Prof. Yasushi Ono with his student Keii Gi of University of Tokyo, Japan, visited PPPL during the week of July 14, 2014 to discuss the NSTX-U collaboration with his group and also to discuss the student exchange program between University of Tokyo and Princeton University. Keii Gi will be spending two months at NSTX-U/PPPL to conduct research on his PhD thesis work on a conceptual design study of superconducting spherical tokamak power plant. (M. Ono, PPPL)

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

NSTX Upgrade activities continued with the post VPI (vacuum impregnation with epoxy) clean-up and sanding of the completed TF/OH coil assembly (see the attached picture). OH Metrology to verify CS diameters and electrical insulation testing (Megger) has been complete. The welding of the PF1A coil enclosure and insulation testing has been completed, and coil leads have been silver-plated. Work on the new centerstack casing continues in the South High Bay with the completion of the machining of PF coil pockets, the ongoing fit-ups of the PF1C coil and the ceramic break, and the start of the installation of gas injection tubing. In the NSTX-U Test Cell, trial fit-ups of the CHI bus work has started.

Development of the new Digital Coil Protection System (DCPS) continued with the ongoing testing of system software and user interfaces, and the design/fabrication of hardware and I/O layouts.

Preparations for plasma operations in the NSTX-U configuration also continued with the ongoing weld repairs of the Motor Generator Rotor. All planned weld repair areas have now been addressed. Visual weld inspections are being performed by the weld contractor's QC, PPPL QC and the PPPL Weld Engineer, and will be followed by magnetic particle testing next week. The generation and exercise of pre-operational test procedures for the Neutral Beam (NBPC) and Field Coil (FCPC) power conversion systems also continues. Areas around NB2 and the NBPC power supplies are being posted for restricted access during pre-operational power testing. Maintenance of the FCPC deionized water system has been completed and that system turned over to the operations group.

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

Completed NSTX-U TF-OH Bundle (July 2014)

