NSTX-U Weekly Report (November 23, 2016)

FY 2017, NSTX-U is in the maintenance and repair outage.

A collaborative discussion on Impurity poloidal asymmetry effects on neoclassical transport was held. Talks were presented by M. Reinke (ORNL) and M. Churchill (PPPL) on C-Mod observations, and by E. Viezzer (U. Seville) and T. Odstrcil (IPP, Germany) on ASDEX-Upgrade. A lively discussion was held between experimentalists and theorists. (R. Maingi, PPPL)

A successful Preliminary Design Review for the NTSX-U Doppler Backscattering (DBS) diagnostic was held on November 16, 2016. This diagnostic is being provided by collaborators from UCLA. DBS is a widely used mm-wave scattering technique that measures density fluctuations and flow. The DBS diagnostic will be installed on a port with a window at Bay J. It features a quasi-optical design for the interface between the diagnostic hardware and NSTX-U. The DBS electronics have been fabricated and tested at UCLA. Installation of the system is planned for the current NSTX-U outage. (B. Stratton, PPPL)

Engineering Operations (A. von Halle, P. Titus)

The NSTX-U center column has been moved to its stand in the High Bay Area, and the Laser Tracking System is being set up for center-stack metrology. Preparations for disassembly and case removal are also in progress with field reviews of the disassembly procedure and inspections of the center-stack case lift equipment. The PF1aL coil will be removed from the center-stack and brought to the test stand in the Field Coil Power Conversion building for power testing in January. Recommissioning of the coil winding facility continued with ongoing work on the taping machines and vacuum molds, and on VPI system leak checking. Nicolai Martovetsky, a coil winding and VPI expert from ORNL visited PPPL this week to review our ongoing PF1aU forensics, our PF1aU re-design plans, and the recommissioning of the coil winding facility. Inspections and maintenance of the motor generator high power Iso-Phase bus and switches is nearing completion.

Access to the NSTX-U Test Cell is expected to be available for approved work this coming week.