

## **NSTX-U Weekly Report (October 14, 2016)**

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

PPPL/NSTX-U researchers attended the 1<sup>st</sup> International “All-about-Divertor” Symposium on Oct. 14 – 15, 2016 in Kyoto Japan, <http://fusiondivertor.wixsite.com/all-about-divertor>. This Symposium is intended to bring together some of the world experts on the development of plasma-facing components (both solids and liquid metal) with a new perspective as to how one can come up with a sensible PFC/divertor design for the DEMO reactors. Invited talks given by the NSTX-U researchers were “Advantages and challenges of liquid lithium based divertor” by Masa Ono, “Fast flowing liquid metal development for fusion reactors “ by Egemen Kolemen, and “Long-leg and liquid metal divertors for ST-based fusion facilities” by Jon Menard. M. Ono served as a member of the international program committee for the symposium. (M. Ono)

J. Menard (PPPL) traveled to the Culham Centre for Fusion Energy (CCFE) in the UK on October 3-5, 2016 to participate in a MAST-U Project status review and to attend the CCFE advisory committee meeting. (J. Menard)

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

NSTX-U in-vessel diagnostic post-run calibrations and metrology have been completed. Lithium evaporator (LITER) probe alignments have also been checked and documented. The LITERs can now be removed from the vessel. The neutral beam (NB) #1 and #2 calorimeters have been removed from the test cell for maintenance and repairs. The NB#2 Calorimeter may be ready for reinstallation as early as next week. The dissection and forensics of the damaged PF1aU coil is in progress with the initial vertical cuts of coil insulation and conductor. Borescope inspections of individual conductor cooling paths is next. Preparation of a new PF1a coil mandrel is in progress in the shop. Work continues on the recommissioning of the coil winding facility with the successful testing of the curing oven thermocouples, and the ongoing testing of the HVAC system controls. A test stand is being prepared in the Field Coil Power Conversion building for individual coil power testing.

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