

NSTX-U Weekly Report (January 13, 2017)

FY 2017 status: NSTX-U is in a maintenance and repair outage.

NSTX-U Recovery Project (R. Hawryluk)

The first Design Validation and Verification Review (DVVR) is scheduled for January 18th and will review the NSTX-U Instrumentation and Control Systems. Progress continues on the development of NSTX-U System Design Descriptions (SDDs) and drafts are being reviewed and updated. In the test cell, the removal of the lower ceramic break is in progress with the completion of electrical disconnections and the removal of the upper portion of the centerstack pedestal. Recommissioning of the coil winding facility continued with the ongoing fabrication of the coil winding brake skid. Work in the Neutral Beam clean room / decon facility continued on the disassembly of the spare ion source with an internal water leak, and on the decontamination and evaluation of an ion source last used on TFTR. The new source grid alignment machine has been fully commissioned in the clean room, and is being actively used on ion source assembly. Final machining of the PF1AL mandrel is nearly complete and repair of an o-ring groove on the original PF1AU mandrel continues.

NSTX-U Research (J. Menard)

Mario Podestà gave an NSTX-U Monday physics meeting presentation on his recent research related to “Computation of Alfvén Eigenmode stability and saturation through a reduced fast ion transport model in TRANSP” and the presentation is downloadable from [here](#). The NSTX-U Boundary Science Group held discussions on possible FY17 and FY18 research milestones, and NSTX-U researchers also participated in liquid metal strategy discussions led by Rajesh Maingi. Zhehui (Jeff) Wang from Los Alamos National Laboratory visited PPPL during the week of January 9 to discuss boundary science collaborations. Jon Menard gave a PPPL colloquium entitled “Motivations for Spherical Torus research and initial results from NSTX Upgrade” and the presentation is downloadable from [here](#).