NSTX Weekly Report (July 23, 2010)

FY 2010 NSTX plasma operations
Planned: Total- 15 run weeks (Base- 14 run weeks, ARRA- 1 run week)
Completed: Base- 5.35 run week and 1020 plasma shots
Completed: ARRA- 1.01 run week and 171 plasma shots

An NSTX Program Advisory Committee teleconference (PAC-28) was held on July 20, 2010 to discuss the NSTX program letter for collaboration by universities and industry for FY2011-2013. During the meeting, a brief update on the NSTX FY2010 run status was provided including planned upgrades for the next outage, and a presentation of key collaboration opportunities described in the NSTX program letter was also provided. The PAC then met in executive session and subsequently provided helpful feedback on ideas to enhance the draft program letter. The final version of the program letter will be publicly available July 29, 2010. (J. Menard)

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

NSTX plasma operations were suspended this past week to remove guide posts formerly used to restrain the OH coil leads before the addition of their new support bracket. These posts were found to be chaffing against the coil lead insulation during the normal thermal growth of the coil, thereby creating a fairly high resistance electrical leakage path. Repairs to the epoxy coil lead insulation were completed.

Plasma operations are scheduled to resume on Tuesday 7/27 after completing high voltage tests of the coil insulation, and the integrated system testing for restoring TF/OH operations. Access to the NSTX test cell will be restricted this coming week during plasma operations. Access is expected to be available each evening.

The new Switching Power Amplifier (SPA) power supply to provide individual power control to each of the six Resistive Wall Mode/Error Field Correction Coils was installed in the Field Coil Power Conversion building.

Research Operations (M. Bell)

Boundary Physics Operations (H. Kugel)

Alignments and spatial calibrations have been performed on the lower divertor viewing optics for the Divertor Imaging Spectrometer (DIMS). The views span the lower part of the center stack and both divertor plates, with twelve new and six old optical fibers viewing the LLD. (V. Soukhanovskii)

Testing of a new automated filling/outgassing station for the LITER system was performed. Laboratory tests have started to compare the residual outgassing spectra from a lithium coated LLD sample with that from a graphite sample.

Work started on simulating the effects on core plasma conditions of sputtering and self-sputtering from molybdenum divertor surfaces and changes in these effects with lithium

coatings.

Prof. J.P. Allain (Purdue Univ.) visited NSTX to discuss the installation of the Material Analysis Particle Probe.