

NSTX Weekly Report (Jan. 09, 2009)

FY 2009 NSTX plasma operations

Planned: TBD

Completed: 0 run weeks

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

Start-up activities for the NSTX FY09 run continued this week with the testing of NSTX diagnostics via the new Linux-based MDSplus data server, and the preparation of the MPTS Lasers for the upcoming Rayleigh/Raman scattering calibrations. Vacuum leak checking of the NSTX vessel is nearing completion, and machine area "scrubs" are in progress. Round-the-clock operation of the neutral beam helium refrigerator compressors to clean-up the helium process gas is in progress in preparation for beam-line cool down and ion source conditioning. The NSTX test cell will be in restricted access this coming week during the MPTS diagnostic calibrations..

Research Operations (M. Bell)

Boundary Physics Operations (H. Kugel)

- Liquid Lithium Divertor (LLD) (M. Viola)
 - A joint SNL(NM), SNL(CA), PPPL weekly teleconference was inaugurated to review project status and discuss near term technical approaches.
 - SNL (Sandia National Laboratory) has completed 2 of 6 copper segments and has sent the parts to the brazing vendor. Brazing of the first 2 units is scheduled to start 12/22/08.
 - SNL presented a design review of the LLD control rack. CHITS were derived and work is progress to resolve open items.
 - The step-bending of a second PPPL aluminum prototype plate test section was completed and the part has been received. Analysis is in progress.

- Lithium Dropper (D. Mansfield)

- A high vacuum test of paraffin coated lithium powder up to temperatures of about 260°C was completed. Residual Gas Analyzer exhibited no significant hydrocarbon signatures as the temperature was increased through the paraffin melting temperature (70-80°C), and after the powder melted into liquid lithium (180°C), the test chamber base vacuum pressure reached the low 10^{-9} torr regime. These results instigated planning for testing lithium powder dropping on to a heated porous molybdenum surface.

- Sample Probe (C. Skinner)

- A trial fitup of the probe support stand at Bay-J lower divertor was successful.
- A meeting was held to review and assign remaining tasks for achieving probe operation for the FYO9 run.

Diagnostic Operations (R. Kaita)

- Two 30 Hz IR cameras (lower div., upper div.) are ready for calibration during the upcoming vessel bake. Preparations are being made to calibrate the fast IR camera during the bake also. (R. Maingi, ORNL)