

NSTX Weekly Report (Mar. 4, 2005)

FY2005 Planned Operations: 14 weeks
Completed: 0 weeks producing 0 plasmas

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

The NSTX outage continued this past week with the completion of the epoxy potting of the TF joint flag and box assemblies on the TF inner bundle. The flag boxes will now be cured via baking, and tested before the TF inner bundle is installed on NSTX. The Microtherm thermal insulation blanket was installed on the completed PF1A/OH coil assembly, and the coils have been installed on NSTX. Pre- Operational testing of the Motor Generator was completed and the set was run through it's full operating range. The commissioning of the Switching Power Amplifier (SPA) supply needed to power the new Resistive Wall Mode (RWM) error field coils continued this week with the successful integrated testing of the new real time data acquisition hardware and software. The SPA supply and power systems are now being configured to begin dummy load testing. The compressors for the neutral beam helium refrigerator continued operations to clean-up the helium process gas. The MPTS lasers have been restored to operations and system alignments are in progress.

There are no NSTX test cell access restrictions scheduled for this week. (A. von Halle)

Research Operations (M. Bell)

- The overall system design review for the Hypervelocity Dust Injection (HDI) project as an internal magnetic field imaging diagnostic for NSTX was successfully conducted this past week. We plan to finish the engineering design review by the end of next week (Mar.11, 2005) for HDI injector (excluding imaging system) and start collecting all the parts (ordered or machined). So far this year, the LANL team has put together a report regarding the point design, physics, and design parameters of HDI. We have identified the type of dust and dispenser components, acceleration scheme, and imaging components. (Z. Wang, LANL)

Boundary Physics Operations (H. Kugel)

- The Edge/Boundary Physics - ET Group reviewed the following Experimental Proposal: "JSOL Width Scaling, Profiles, and Power Balance Measurements", by J. Boedo (UCSD), et al. (R.Kaita)
- The Edge/Boundary Physics - ET Group met to receive and to discuss the presentations by A.Y. Pigarov (UCSD), "UEDGE Simulation of Large Parallel Plasma Flows in the SOL of NSTX", and an associated Memorandum "UEDGE

Simulation of Large Parallel Plasma Flows of the SOL Size in NSTX". Tentative plans were made to form a small working group to pursue possible experimental characterization and benchmarking of the discussed flows. (R. Kaita)

- Additional cylinders (4) of Trimethyl Boron (TMB) were received.
- The installation of a modified front spool piece for Supersonic Gas Injector (SGI) to remove interference with normal Fast Probe measurements was completed, and the SGI is now undergoing pump-down and bake-out.
- The Fast Probe TIV was closed and probe bake-out was initiated to help accelerate vessel pump-down.
- Lithium Pellet Injector meetings were held to reschedule work to accommodate near term Test Cell closure and to specify permanent nearby locations for ancillary equipment.