

NSTX Weekly Report (Dec. 02, 2005)

FY2006 weeks of research operations

Planned: TBD

Completed: 0 weeks

NSTX Department, Project, Program (M. Ono, M. Peng)

- Please join us in celebrating and wishing our head of NSTX Research Ed Synakowski well in his new position at the Lawrence Livermore National Laboratory. The celebration luncheon will be held at Carlucci's Grill in West Windsor, on Monday, December 19, 2005 from 11:45 - 1:30 P.M. Please see attached flyer for menu & payment details or send an e-mail to Joanne Savino, JSavino@pppl.gov.
- The final list of the leadership and deputy leadership for Run Coordination and respective Experimental Task Force groups for the 2006 is as follows:
Run Coordinator and deputy: Roger Raman (U. Washington), Steve Sabbagh (Columbia U)
Experimental Task Force Group Leaders and Deputies:
 1. Integrated Scenario Development: Dave Gates (PPPL), Stan Kaye (PPPL)
 2. MHD: Jon Menard (PPPL), Aaron Sontag (Columbia U)
 3. Transport and Turbulence: Michael Bell (PPPL), Kevin Tritz (Johns Hopkins)
 4. Wave-Particles: Gary Taylor (PPPL), Phil Ryan (ORNL)
 5. Solenoid-free Start-up: Dennis Mueller (PPPL), Brian Nelson (U. Washington)
 6. Edge Physics: Rajesh Maingi (ORNL), Vlad Soukhanovskii (LLNL)
- There will be an NSTX Physics Meeting on Monday, 12/5 at **3 PM** in LSB318 (**Note change of time**). Jon Menard will give a dry run of his MHD overview for the Burning Plasma workshop. (S. Kaye)

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

The NSTX outage continued this past week with the reinstallation of the TF/OH bundle into the machine's center column after the successful repair of the OH coil water leak. In-vessel diagnostic installations and calibrations continued, concentrating on the MPTS, FIReTIP and High-K Scattering Scattering systems this week. New neutral beam duct bellow shields have been fabricated and will be installed after testing and vacuum preparation.

Access to the NSTX test cell will be available via the card readers throughout this coming week. (A. von Halle)

Research Operations (M. Bell)

In place of J.R. Wilson who is now serving as the head of the Off-Site Research Department, J. Hosea will be the branch head of the NSTX RF Operations.

Diagnostic Operations (R. Kaita)

- The vacuum enclosures for the ultra-soft X-ray arrays were reinstalled on the Bay G port cover. The visible bremsstrahlung detector was also reinstalled on the Bay G port cover, and a spatial calibration was performed.
- Work on the optical alignment of the high-k fluctuation diagnostic was completed. Further checks of the system with a microwave beam are planned for next week. Work was also performed on the alignment of a fiber array with a view of the lower NSTX divertor.

Boundary Physics Operations (H. Kugel)

- The assembly of the LITER-1, Cartridge-A, internal oven was completed. Fabrication of the heat-shield and the internal heaters continued. Sonic sifting of the ceramic bonding powder for the heaters was found to solve coagulation of the applied cement. The fabrication of the Bay-F probe alignment jig achieved 90% completion in preparation for the scheduled alignment date next week. Specifications for "Proposed Operating Scenarios" (D.K. Mansfield) were presented to a meeting on LITER-1 Interlocks and Controls, and concurrence was achieved on the Interlock Logic Design document, and the respective purviews of the software and the hardwired interlocks. Preliminary software for the PLC controls was loaded and is under testing. A short section mockup of the guard vacuum conduit was completed, and demonstrated the feasibility of the proposed internal cabling design. SAD and FMEA revision issues were discussed.
- A new piece is being made for the MGP anode connection to replace the one found to have defective metal.
- Planning was initiated for photographing the final internal configuration of the machine prior to pump-down.