

NSTX Weekly Report (January 9, 2004)

FY 2004 weeks of operation planned: - 18 weeks, Completed: - 0 weeks

Department, Project, Program (M. Ono, M. Peng, Mike Williams, Ed Synakowski)

- Maxim Umanksy of LLNL visited PPPL Jan 5-6 to discuss the application of the BOUT edge turbulence code to NSTX. He plans to continue the analysis of an existing L-mode shot, and to suggest additional experimental comparisons which can be attempted during the '04 run. (S. Zweben)
- 15th NSTX Program Advisory Committee Meeting will be held at PPPL on January 12-14, 2004. The updated meeting agenda is attached below.
- No Physics meeting on January 12 due to the NSTX PAC meeting at PPPL. Dave Gates will be the featured speaker on January 19 -- details to follow in January. (C. K. Phillips)

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

- Final connection and preliminary (non-power) testing of the TF bundle assembly is in progress. All pre-operational testing, including HiPots and continuity checks of the entire coil system as measured from the field coil power conversion building, will be completed next week. Integrated system power testing of the coil set will start before the end of the week.
- Dummy load testing of the OH power system was completed this past week using the new FPDP Link Interface Module (LIM), and the real-time plasma control software has been updated and tested to use this system during the integrated system power testing. Testing of the NSTX hard-wired interlock, Kirk-lock and E-Stop systems is in progress and will be ready for power testing.
- Test Cell scrubs were performed over the weekend in preparation for the coil system HiPots and subsequent power testing scheduled for this week. The test cell will be in restricted access during 1st shift testing activities, with test cell access available from the end of 1st shift to approximately 10:00PM each evening of the week. (A. von Halle)

Research Operations (M. Bell)

Physics Operations (D. Mueller)

- The upgraded plasma control computer was used for OH dummy load testing, completing a year long activity to reduce the latency in the plasma control system. The system latency has been measured and was found to have been reduced to an average value of 740microseconds - a factor of four reduction. The upgrade involved significant changes in both hardware (R. Marsala) and software (T. Gibney). Further improvements may be possible, but the current system is deemed sufficient for increasing the plasma elongation to values consistent with the NSTX 5 year plan. (D Gates)

Diagnostic Operations (R. Kaita)

- A stand has been fabricated and installed for the new array of diamond particle detectors.
- The lasers for the multipoint Thomson scattering system (MPTS) were operated. One of the lasers is operating at specification, while the other is somewhat lower but still usable. Tests for the system to calibrate the MPTS window transmission have been performed.
- Collaborators from UCLA have completed the reinstallation of their reflectometer hardware.
- The neutral particle analyzer and the deposition monitor have been pumped down and leak checked.
- The shield for the scintillator fast lost ion probe (SFLIP) has been installed.
- Three of the four ultrasoft X-ray arrays at Bay G have been reconnected.

National Spherical Torus Experiment
Program Advisory Committee
15th Meeting

Agenda

Princeton Plasma Physics Laboratory
Conference Room LSB-318
January 12-14, 2004

Monday, January 12, 2004

8:45 PAC Caucus
9:15 Rob Goldston Welcome and Charge to the PAC
9:20 Steve Eckstrand Comments from DOE
9:25 Bill Nevins Agenda and Plan of Meeting
9:30 Mike Williams TF System Status and Resumption of Operations
10:00 Coffee Break

I. FY2004 Research and Facility Upgrade

10:15 Chuck Kessel NSTX Plasma Operation Scenarios
11:00 Fred Levinton Progress and Plans for MSE CIF
11:30 Lunch
12:30 Bick Hooper Brief Summary of NSTX 5-Year Plan Review Panel Report (remote)
1:15 Ed Synakowski Elements of FY2004 Plans to Address the Goals of 5-Year Plan
3:30 Coffee
3:45 PAC Caucus

Tuesday, January 13, 2004

II. FY2004 Experimental Run Plan

8:45 Stan Kaye FY2004 Experimental Run Plan
10:30 Coffee, PAC Caucus, and lunch

III. Proposed Research and Facility Plan for FY2005-FY2006

1:00 Steve Sabbagh RWM Research on NSTX
1:30 Martin Peng FY2005-FY2006 Research Plan
2:45 Coffee
3:00 Masa Ono FY2005-FY2006 Facility Plan
4:15 PAC Caucus
6:15 Adjourn

Wednesday, January 14, 2004

8:45 Martin Peng Action Items from Previous PAC
9:00 PAC Caucus
12:00 Bill Nevins Briefing for PPPL Director
1:00 Adjourn