

NSTX Weekly Report (Jan. 7, 2005)

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

Department, Project, Program (M. Ono, M. Peng, E. Synakowski)

There will be an NSTX Physics Meeting on Monday, 1/10 at 1:30 PM in B318. Phil Efthimion will give a brief overview of Plasma Science and Technology experiments and opportunities to participate in these experiments. A copy of the talk will be placed in the NSTX Drag and Drop area under Monday Physics meetings. (S. Kaye)

H. Takahashi presented a talk at an ELM working group meeting titled: "Building a Model for Onset of ELM from Experiment - Observation of Scrape-off-Layer Current (SOLC) in ELMing Discharges in DIII-D." The meeting had remote participation by several scientists from DIII-D. (R. Maingi)

Physics Analysis (S. Kaye, C. K. Phillips)

Investigations comparing neutron rate measurements from the fission chamber and scintillation detectors indicated a drift in the calibration factor of the scintillation detector over the past two years. Subsequent comparisons between these measurements and expected neutron fluxes as calculated by TRANSP for FY04 data indicate agreement between the calculated values and both measured values to within 10%. The drift in the calibration factor will be investigated, and the agreement between calculated and measured neutron fluxes will be studied further relative to the NPA measurements.

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

The NSTX outage continued this past week with the completion of the shielding of the new Rogowski coils, and the start of the assembly of the TF joint flag boxes on the upper hub. Over the holidays, vacuum leak checking of the vessel revealed leaks at seals on both the NB duct and bay K port cover, and the vessel was vented this week to replace o-ring seals at these locations. The vessel was pumped back down over the weekend and leak checking is again in progress. The reinstallation of vacuum vessel thermal insulation disturbed during this outage continues, as well as the installation of CHI bus-work, in preparation for a vessel bakeout scheduled for later this week. The fabrication of the new PF1A upper coil also continues and should be ready for oven curing this week. The first of the disconnect switches for the Switching Power Amplifier (SPA) supplies needed for Resistive Wall Mode experiments has been moved into the SPA power supply room for testing. There will be NSTX test cell access restrictions during the upcoming vacuum vessel bakeout. (A. von Halle)

All electrical work within the NSTX test Cell for the RWM cabling has been completed from the installation point of view. However some RWM coil cables have been kept disconnected by the operations crew for access to the machine etc. The load cables to the SPA from the P13 SDS have been installed. One SDS has been received, and the other two are expected to be received this week. The installation spec for AC Power to the RWM SPA & SDS has been prepared and is expected to be signed out next.

Testing of the first two of the six SADs (Stand Alone Digitizers) with the SKY will take place next week. Testing of the Input Signal Conditioner Modules has begun and should be completed by early next week. Stuffing of the Analog Coil Protection Calculator Module is almost complete, and chassis wiring is about 80% complete. Stuffing of the SPA Status Module is complete and is awaiting test and Front panel fabrication. The Fault Processing Module design is complete, but awaits resources to fabricate and wire.

Testing of the PCS/PSRTC control software used for RWM is being tested in the simulation mode. (C. Neumeyer)

Research Operations (M. Bell)

Diagnostic Operations (R. Kaita)

The taping of an electrostatic shield for each of the new plasma current Rogowski has been completed. A cross-calibration with the original coils will be conducted in an off-line facility.