

NSTX Weekly Report (Nov.21, 2008)

FY 2009 NSTX plasma operations

Planned: TBD

Completed: 0 run weeks

At the 50th Annual Meeting of the American Physical Society Division of Plasma Physics held in Dallas Texas, November 17-21, six invited talks, 11 contributed talks and 45 contributed posters were presented by members of the NSTX Team. The invited speakers and their titles were M. Podestà (UC Irvine) "Experimental studies on fast-ion transport by Alfvén waves on NSTX", N. Gorelenkov (PPPL) "Beta-induced Alfvén-Acoustic Eigenmodes in NSTX and DIII-D Driven by Beam Ions", J. Park (PPPL) "3D perturbed tokamak equilibria and the importance of plasma response", R. Maqueda (Nova Photonics) "ELM filament structure in the National Spherical Torus Experiment", H. Yuh (Nova Photonics) "Suppression of turbulent transport in NSTX internal transport barriers", and "D. Smith (PPPL) "Electron gyro-scale fluctuations in NSTX plasmas". (M. Bell)

Eric Fredrickson of PPPL became the 2008 American Physical Society Fellow. His citation reads "For many contributions to the physics of MHD instabilities in tokamak, including pioneering experimental studies of magnetic reconnection, ballooning modes, resistive instabilities, and fast-ion-driven Alfvén instabilities".

The National Spherical Torus Experiment (NSTX) Research Forum for 2009 is scheduled for December 8 - 10, 2008 at the Princeton Plasma Physics Laboratory in Princeton, NJ USA. Team members or prospective collaborators are invited to attend or to participate remotely. The Research Forum is intended to provide team members the opportunity to present ideas for experiments to be conducted on NSTX in the forthcoming run and for theoretical work supporting NSTX. Both well-developed and new ideas in the early stages of development are welcomed. For further details, please see <http://nstx-forum-2009.pppl.gov/>. Proposals for experiments to be performed in 2009 can be submitted for discussion at the Research Forum through this website. There are no registration fees for the meeting, but researchers from other institutions must pre-register to participate. See the website for details. (M. Bell)

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

The NSTX outage continued this week with the completion of the in-vessel construction activities, the re-installation of the Bay G port cover, and the start of diagnostic calibrations in preparation for vessel pump-down. The TF upper hub has been re-assembled, and testing of individual TF flag joint probes has been completed. An end-to-end combined test of the flag joint resistance measuring system will be performed after the upper and lower machine lids are re-installed. Hydrostatic testing of the machine's various cooling paths is in progress. The NSTX test cell will be in free (card reader) access this coming week.

Research Operations (M. Bell)

Boundary Physics Operations (H. Kugel)

- Liquid Lithium Divertor

- A gage for testing shaped LLD copper segments was designed and submitted for fabrication.
- Candidate heaters for the LLD were received for testing, and for trial fitups to the electrical feedthrus.
- Teleconferences were held with UIUC on the design of the UIUC LLD tile gap Langmuir Probe Array signal conditioning units, and technical information was received from UIUC for the LLD cable and cable tray engineering now in progress.

- Divertor Region Sample Probe

- A peer review of the support stand drawings for the sample probe bellows motion drive was successful, and the drawings were submitted for fabrication.
- A meeting was held at the 50th meeting of the APS, DPP between NSTX and Purdue Univ collaborators to review design, installation, and research plans for the FY09 baseline divertor region sample probe.