National Spherical Torus Experiment
Program Advisory Committee
16th Meeting

Princeton Plasma Physics Laboratory
Conference Room LSB-318
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CHARGE

The NSTX 2004 experimental campaign was completed on August 5 with a record number of 21 run-weeks. The NSTX National Research Team has performed proficiently and carried out extensive research on a broad range of topics of importance to the goals of the NSTX 5-Year Research Plan. Taking advantage of this progress, we are preparing to update plans for the upcoming years. A preliminary summary and research highlights of the progress will be presented to the PAC for information.

Exciting plans are on the table for NSTX in the next three years. These include diagnostic upgrades in high and low k fluctuations and in kinetic plasma profile measurements, and plasma control upgrades to reduce error fields dynamically and suppress large scale modes. Decisions will be made in 2005 on whether to proceed in 2006 with the design and procurement of a MW-level EBW system. Decisions will be made in 2006 on whether to proceed, jointly with the VLT in 2007, with the design and construction of an innovative liquid lithium divertor module for NSTX. Summaries of these plan elements and their implications on research priorities will be presented to the PAC for information.

In this context, we seek advice from the PAC on the following topic of high importance:

DOE published on August 6, 2004 a notice soliciting grant applications for NSTX research collaboration (http://www.sc.doe.gov/grants/FAPN04-24.html). Twelve groups from nine universities and private companies are expected to submit, for review by DOE, proposals to renew funding for NSTX collaboration research during the next three years. Other interested research groups will also have an opportunity to submit proposals to collaborate on NSTX. Accounting for the progress during this campaign on a range of scientific areas and the plans for the upcoming years, a description of the NSTX research priorities and collaboration opportunities, a NSTX Program Letter, is being prepared as input to DOE to support this review. A preliminary draft will be provided for review and comment by the PAC. Are the proposed overall research priorities appropriate for achieving the NSTX research goals? Are the collaboration opportunities appropriate in the context of a broad national program? Are there adjustments that the PAC would recommend?