

Minutes from the NSTX Run Planning Meeting on Jan 11, 2006 (R. Raman)

A meeting was held in B318 at 3pm to discuss plans for the initial experiments to be conducted on NSTX. An initial draft of a possible Run Plan is included on pages 2 and 3. The action items from this meeting are show in ***bold italics***.

The overall plans are as follows:

Experiments that meet NSTX milestones for FY06 and or contribute to an ITPA task will be scheduled early in the run.

The first week would be devoted to getting the NSTX plasma control system fully functional while simultaneously bringing all necessary systems on-line. These include:

High-k scattering diagnostic

Other diagnostics

Commission the Movable glow probe

Commission the NBI system

Test RWM/EF Mode detection algorithm

Commission and conduct Supersonic gas injection tests

Conduct XPs that require some time before Li is introduced in the vessel

The second week would mostly be devoted to a Lithium campaign, as follows:

About two days to validate the Li system.

An additional day or two to develop suitable targets that could be used by other experiments (for example long pulse H-mode discharges) and to conduct a density scan. The goal is to come out of these four to five days of experiments with an assessment of the capability of the Li system. This work is also expected to fulfill the Boundary Physics milestone for FY06. ***A half page summary of the proposed activities, from each interested XP contributor including requirements for the movable glow probe XMP, is needed ASAP to finalize the titles of the XPs that would be run during the Li campaign.***

This would be followed by a few days of work devoted to addressing the MHD milestone. A dedicated XMP will commission the RWM system, followed by an initial day or two for XPs in this area. ***Justification for conducting an RWM experiment early in the run, which is not a FY06 milestone, is needed.***

Plans for half-day of experiments aimed at validating the high-k scattering system is needed, as this system is required by several other XPs.

The appropriate target for a rtEFIT controlled discharge and its contribution to other experiments to be conducted during 2006 is needed.

The details of the run plan for weeks 4 and 5 will be discussed at the next meeting.

Draft NSTX 2006 Run Schedule outline (R. Raman, Jan 11, 2006)

4-Boundary, 5-T&T, 6-ISD, 7-SFPS, 8-WavePart, 9-MHD

Bold: meets milestone, **Red:** meets ITPA task,

Bold Red: meets milestone and ITPA task

Weeks 0 to 3

No	Author	Title	Days	Phys Run Days
1.0	Neumeyer	Engineering ISTP-001	3	0
1.1	Menard	Calibration of equilibrium magnetics (PF, OH, TF)	0.5	0
1.2	Menard	Calibration of RWM/EF detection magnetics (SPAs/RWMs)	0.5	0
1.3	M. Bell	Diamagnetic Loop calibration	0.25	0
2.0	Mueller, Gates, Kugel, Smith, Stevenson, Menard	Plasma startup and PCS testing - High k-scattering test - Movable glow probe test - NBI commissioning - RWM/EF Mode detection (PB) test - Supersonic gas jet test - other diagnostics	2.0	2.0
2.1	Levinton	MSE calibration at 0.45T, Src A - Rayleigh scattering (finished January 23-25)	0.5	0.5
3.0		Start plasma operations before Li		
4.1	Vlad	P35 - Div heat load and detachment (EdgePhys)	1	1
5.1	Kaye	P87 - Bt to 0.45T sacling on confinement (PB) ? - move	0.5	0.5
6.1	Kaye	P46 (Kaye) ELM severity & confinement on shape (ISD) 0.45T ? - still thinking	1.0	1.0
7.1	Raman	P13 - Transient CHI (SFPS)	1	1
8.1	Wilson	XMP for RF conditioning (Wave/Part)	0.5	0.5
4.2	Kugel	P30 - Li deposition (EdgePhys)	2.0	2.0
4.3	Skinner, Boedo, Williams	P60, 59, 26 - Density scaling, erosion measurements, blob characterization. Develop fueling requirements.	2.0	2.0
9.1	Menard	RWM/EF mode detection algorithm & preprogrammed EF correction to PCS (XMP)	1.25	1.25
	Total		15.0	11.75

Weeks 4 and 5: Milestone and ITPA driven XPs - **preliminary**

No	Author	Title	Days	Run Days
9.2	Menard	P108 - Comparison of n=1 EFC to DEFC	2	2
6.2	Gates	P92 - Long pulse double null development with rtEFIT - Which XPs are going to use this?	1	1
5.2	Smith	p new- High k system verification	0.5	0.5
4.4	Maingi	P77 - pedestal dependence on aspect ratio	1	1
4.5	Hubbard	P-8 C-Mod/MAST/NSTX small ELM regime comp.	1	1
8.2	Fredrickson	P18 - TAE/EPM impact on fast ion transport	1	1
8.3	Heidbrink, Fredrickson, Crocker	Fast-ion Transport by Fishbone instabilities & Documentation of TAE/EPM fast ion losses	1	1
7.2	Raman	P13 - Transient CHI, requires new MOV	1	1
5.3	Stutman	P9 - perturbed electron transport with collisionality, heat flux and current. Highly benefits from high-k system	1	1
5.4	Delgado (Thesis)	P22 - Impurity transport in H-modes - Highly benefits from high-k system	1	1
5.5	Levinton	P12 - Transport in RS plasmas - Highly benefits from high-k system	1	1
	Total		11.5	11.5