

Near-Term Planning for 2008 NSTX Run

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**Wave-Particle Interaction
Topical Science Group Meeting**
December 6, 2007

NSTX Campaign Begins Early February, Need to Start Writing Experimental Proposals Now



- *12 run week campaign begins in February, ends in June*
- *Bakeout starts today, ends December 18*
- *Neutral beams will condition during bakeout*
- *Begin ISTP to restart NSTX in mid-January*
- *Develop our high priority experimental proposals between now and mid-January*
- *Identify a lead author for each proposal*
- *Identify experiments needing lithium, needing "virgin" machine with no lithium, or that can run in "pre-lithiumized" machine*
- *High priority proposals will be reviewed between mid-January and February 1st*

Need to Develop Experimental Proposals Between Now & January 15th



- *Proposals should be as short as possible, preferably no more than one page:*
 - *Basic discharge conditions*
 - *Identify new conditions that require development, consult Dennis Mueller in the Physics Operations Group first*
 - *What scans are needed, what order, get the end points*
 - *Consult diagnosticians to make sure you get the data you need*
- *Propose our TSG meets on Thursdays, 10-11 AM in LSB 252 to develop & review proposals on the following days:*
 - December 13th*
 - December 20th*
 - January 3rd*
 - January 10th*

Energetic Particle Experiments



- *EP transport by TAE avalanches & EPMs - 2 days [1]*
- Podesta, Heidbrink, Fredrickson & Darrow
- *Alfvén cascades & associated transport - 1 day [1]*
- Crocker & Fredrickson
- *Measurement of BAAE & TAE RSAE mode structure with high-k scattering - (0.5)* days [2] - Lee & Gorelenkov*
- *Vertical NPA scan with/without MHD - (0.5)* days [2] - Medley*
- *2-3 hours of XMP time to commission FIDA diagnostic - Heidbrink*

[] = priority * () = days assuming 7.5 day allocation

HHFW & EBW Experiments



- HHFW phase scan in D L-mode - 0.5 days [1] - Hosea
- HHFW CD in D L-mode - 0.5 days [1] - Hosea & Ryan
- HHFW loading at < 200 kW D NBI H-mode - piggyback [2] - Ryan
- HHFW phase scan CD in D NBI H-mode - 1 (1.5)* days [1]
- Hosea, Ryan & Heidbrink
- HHFW coupling into I_p ramp at $I_p \sim 200\text{kA}$ - 0.5 days [2]
- Hosea, Ryan & Taylor
- Optimize EBW emission coupling in H-mode - 0.5 days [1] - Taylor
- 2 day XMP to condition HHFW in D plasmas: - Ryan & Hosea
 - Includes Low P_{rf} HHFW coupling to measure sheath loss - XMP [2] - Ryan

[] = priority * () = days assuming 7.5 day allocation