

# Meeting Goal: Review Research Status & Agree on Plan Elements & Timeline Prior to Writing 1<sup>st</sup> Plan Draft



## Agenda

1. Introduction - Gary Taylor
2. HHFW Research Plan - Joel Hosea
3. EBW Research Plan - Gary Taylor
4. Fast Ion Physics Research Plan - Eric Fredrickson
5. Discussion

*NSTX Wave-Particle Research Planning Meeting  
June 28, 2007*

# Schedule for Plan Activities



<b>Key Dates</b>	<b>NSTX 5-yr Planning Activities</b>
Dec. 5, 2006	Announce the plan at the NSTX Research Forum
Dec. 22, 2006	Initial brainstorming on key research opportunities for the next 5 years
Jan. 15, 2007	Input from theory community for theory/modeling support
Feb. 2007	A workshop or mini-meetings to identify key research opportunities
March 2007	Develop preliminary cost estimates in support of key opportunities
April 2007	Develop draft plan for key approaches in support of opportunities
April 2007	Develop and review outline for the draft plan
April 2007	Team meeting to review approaches and opportunities
<b>July 2007</b>	<b>Initial draft plan ready</b>
<b>August 2007</b>	<b>Team discussion of the initial draft plan</b>
<b>Mid-Sept, 2007</b>	<b>Tokamak Planning Workshop at MIT</b>
Oct. – Dec. 2007	Improve the draft plan
January 2008	NSTX PAC reviews the draft plan
February 2008	Final draft plan ready for review by the team
April 1, 2008	Final plan (document) ready
3 wks before review	Draft presentation material ready
2 wks before review	Dry run of the presentation
1 wk before review	Final presentation material ready
~ May 2008 (TBD)	New 5 Year Plan Review meeting

# Notes from 6/27/07 NSTX 5-year Planning Meeting



- Ono & Menard to provide list of machine & diagnostic upgrades that are likely to be funded during FY09-13 by 6/29/07
- Menard requesting detailed, 8-12 page, chapter outline by **July 11**:
  - will send to Menard by July 13
- First draft of chapter for group review requested by mid-August
- Include status of theory & modeling, and specific developments needed to support proposed FY09-13 plan in each science chapter
- Coordinate plan development with similar programs at C-Mod, DIII-D, MAST, Pegasus, etc.
- Highlight research relevant to ITER, NHTX, ST-CTF, Aries-ST
- Assume 12-week baseline run campaigns (15-week incremental) during FY09-12 and no run in FY13

# Chapter 4: Wave-Particle & Fast Ion Physics

## *Proposed Outline*



### Introduction (**Taylor\***)

#### 4.1 High Harmonic Fast Wave Physics (**Hosea\***, Ryan, Phillips & Wilson)

*4.1.1 HHFW Research Goals*

*4.1.2 HHFW Physics*

*4.1.3 HHFW Heating System*

*4.1.4 Status of HHFW Research*

*4.1.5 HHFW Research Plan for 2009-2013*

#### 4.2 Electron Bernstein Wave Physics (**Taylor\***, Bigelow & Caughman)

*4.2.1 EBW Research Goals*

*4.2.2 EBW Physics*

*4.2.3 ECH/EBW Heating System*

*4.2.4 Status of EBW Research*

*4.2.5 EBW Research Plan for 2009-2013*

#### 4.3 Fast Ion Physics (**Fredrickson\*** & Gorelenkov)

*4.3.1 Fast Ion Research Goals*

*4.3.2 Fast Ion Physics*

*4.3.3 CAE Heating System*

*4.3.4 Status of Fast Ion Research*

*4.3.5 Fast Ion Research Plan for 2009-2013*

### References

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