Burning Plasma Workshop Planned for Dec '05

U.S. BURNING PLASMA ORGANIZATION

- Dec 7-9 at ORNL
- Driven by ITER decision and need to start organizing
- Topics:
  - Engaging the US fusion research community in development of USBPO
  - Advances in BP issues since Snowmass 2002
  - Status and plans for ITER (domestic and international)
  - Planning US Burning Plasma research activities in general, and for ITER specifically
- More info at http://www.burningplasma.org/WS_05.html

U.S. Burning Plasma Workshop

Oak Ridge National Laboratory
Oak Ridge, Tennessee
December 7-9, 2005

Purpose of the workshop:
Begin discussions of research plans, priorities, and community coordination for burning plasma science and technology activities in the U.S.
Address specific activities for support of ITER participation during construction and eventually for the operational phase.

Topics:

- Engaging the US fusion research community in development of the U.S. Burning Plasma Organization (www.burningplasma.org)
- Burning Plasma activities since Snowmass 2002
- Status and plans for ITER (domestic and international)
- Planning U.S. Burning Plasma research activities in general, and for ITER specifically

Program Committee:
E. Marmar (MIT), Chair
M. Bell (PPPL)
R. Fonck (U. Wisconsin)
D. Meade (PPPL)
E. Oktay (USDoE)
N. Sauthoff (PPPL)
T. Taylor (General Atomics)
N. Uckan (ORNL)
M. Ulrickson (SNLA)
J. Van Dam (U. Texas)

Local Arrangements:
N. Uckan (ORNL)

Further information on the Agenda, meeting format, abstract submission, travel information, registration, and local arrangements will be posted at the Workshop web site: www.burningplasma.org/WS_05

Held under the auspices of the U.S. Burning Plasma Organization

U.S. Burning Plasma Workshop
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Draft Agenda

Wed Dec 7
8:30 Introduction
8:45 Engaging the US fusion community in development of the USBPO (R. Fonck)
9:30 Status and Plans for ITER – Domestic (C. Strawbridge)
10:30 break
10:45 International Perspective and ITPA (R. Stambaugh)

11:45 lunch

Topical Plenary Presentations
13:00 Technology (S. Milora)
13:30 Macrosopic Stability (J. Menard)
14:00 Transport/Confinement (W. Houlberg)
14:30 Pedestal Physics (A. Leonard)
15:00 Break
15:15 Boundary (B. Lipschultz)
15:45 Energetic Particles (W. Heidbrink)
16:15 Integrated Scenarios (T. Luce)
16:45 Diagnostics and Control (R. Boivin)
17:30 End of formal session

Thursday Dec 8
8:00 Charge to Breakout Groups

8:30 **Topical Break-out sessions** (co-leaders)
- Integrated Scenarios (A. Hubbard, C. Kessel)
- Macroscopic Stability (C. Hegna, G. Navratil)
- Boundary (S. Krasheninnikov, R. Maingi)
- Transport/Confinement (C. Petty, P. Terry)
- Diagnostics and Control (S. Allen, D. Johnson)
- Energetic Particles (B. Breizman, J. Snipes)

Coffee available at 10:30, 14:30

Friday Dec 9
8:00 Reports from breakout sessions and discussion (plenary)
11:30 Summary, action items
12:00 Adjourn

Speakers and Breakout Groups should address the following six questions. The goal is to either answer these questions as completely as possible, and/or formulate a plan for answering those that need to be addressed further.

A. Recent Developments:
1. What major BP-related developments (in theory, modeling, experiment and technology) have occurred in this area since the Snowmass 2002 study?

B. Implications and Outstanding Issues:
2. What issues remain to be resolved for a successful BP experiment in ITER?
3. What are the consequences of resolving these issues, or not, in the next ~10 years?
4. What issues should be resolved by a successful BP experiment?

C. What should the U.S. fusion community do:
5. What contributions can/should the U.S. fusion program make to resolving these issues?
6. How should the BPO be structured to best help the community make these contributions?

Preliminary Draft

Macroscopic Stability Breakout Session [C. Hegna & G. Navratil]

8:30 NTMs
- D. Gates (intro)
- R. LaHaye

9:30 External Kink and RWMs
- S. Sabbagh (intro)
- S. Strait
- M. Okabayashi

10:30 BREAK

10:45 Ideal MHD – m=1 modes
- B. Coppi (intro)
- S. Jardin (intro)
- J, Manikham

Noon LUNCH

1:00 Error Fields & Critical Rotation
- M. Schaefer (intro)
- H. Reimerdes (intro)
- R. LaHaye

2:00 3D Equilibrium & Response
- L. Lao (intro)
- E. Lazarus
- T. Evans

2:45 BREAK

3:00 Pedestal
- P. Schneider (intro)
- T. Osborne
- R. Maingi

4:00 Disruptions
- D. Whyte (intro)
- H. Strauss
- R. Granetz

5:00 ICC BP Issues
- M. Zarnstorff (intro)
- J. Sarff
- T. Jarboe
- R. Raman

6:00 USBPO Discussion

What to do NOW?

U.S. Burning Plasma Organization

- Sign up for Workshop Access
  - ORNL Security Information Required for Workshop Participation:
    - **Must apply by Nov. 7, 2005 !**
    - see http://www.burningplasma.org > Workshop > Security Form

- Sign up for BPO participation
  - Identify Resource Group interests
  - Express interest for leadership positions
  - Offer suggestions for Tasks

Summary

U.S. BURNING PLASMA ORGANIZATION

- USBPO = Fusion research community-based effort to advance Burning Plasma Science and optimize benefits from participation in ITER
- Facilitate fusion community coordination of, participation in, and ownership of BP program activities
- Develop areas of focus and excellence to prepare us to participate and compete in the ITER era, and look beyond…
- Need active participation from community to succeed
- Planning a community BP Workshop in near-future
  - Security Form: **Deadline is Nov. 7, 2005!!**