

**U.S. Burning Plasma Workshop**  
Oak Ridge National Laboratory  
Dec 7 -9, 2005

**Draft Agenda – Plasma Control Break-Out Session**

8:30 – 9:45 Joint Session Diagnostics/Control (RB moderate)

- Discussion of goals of meeting, charges to working groups
- Discussion to clarify material presented in Plenary talks
- **Presentation?: CODAC Task Status and Issues(?) (Martin Greenwald)**

9:45 – 11:00 Plasma Control Session A (DH moderate)

- Presentation and discussion of plasma control breakout process (Humphreys, Gates). Outline:
  - o Introduction? Depends on outcome of joint diagnostics/ctrl session
  - o General approach: answer questions 1-5 in context of separate topics
  - o Presentations followed by discussion; running summary notes
  - o Question 6 (BPO Structure) discussed in separate session at end of day
  - o Final joint Diagnostics/Control session to discuss Question 6 + Summaries
- **Presentation: ITER Plasma Control and US Plasma Control Design Resources (Humphreys)**
- Discussion of ITER control design/analysis task, resources

10:25 – 10:40 BREAK

- **Presentation: RWM Control Design/Analysis for ITER (Meade)**
- Discussion of RWM control design/analysis resources

11:00 – 12:00 Plasma Control Session B (DG moderate)

- **Presentation: US Experimental Resources for ITER Control (Gates)**
- **Presentation: Plasma-Wall Interaction, Divertor, and Off-Normal Control (Whyte/Granetz)**
- Discussion of experimental resources

12:00 – 13:15 LUNCH

13:15 – 14:30 Plasma Control Session C (DH moderate)

- **Presentation: Computational Modeling/Analysis Resources for ITER Control (Lodestro)**
- **Presentation: Realtime DCON (Glasser)**
- Discussion of computational tools and resources for operations control design/analysis

14:30 – 14:45 BREAK

14:45 – 15:30 Joint Integrated Scenario Modeling/Plasma Control Session (CK moderate)

- **Presentation: Integrated Scenario Modeling for ITER (Kessel)**
- Discussion of integrated scenario modeling resources for ITER control

15:30 – 16:30 Plasma Control Session D (DG, DH moderate)

- Discussion of Question 6
- Discussion of Summary Notes

16:30 – 17:30 Joint Diagnostics/Control Session (RB moderate)

- Joint discussion of Question 6
- Joint discussion of Summaries

### **Questions to be Answered:**

#### **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?