

US Burning Plasma Organization Meeting of the Council

March 1, 2010, 3:00 EST
held by videoconference

Council Members in attendance:

Michael Bell
C.S. Chang
Amanda Hubbard – *Chair*
Wayne Meier
Michael Mauel
John Sarff
Phil Snyder
Tony Taylor
Mike Ulrickson
Mike Zarnstorff – *Vice Chair*

Ex-officio participants in attendance:

Erol Oktay – *FES, ITER Science Officer*
Jim Van Dam – *USBPO Director and US ITER Chief Scientist*

Others in attendance:

Chuck Greenfield — *USBPO Deputy Director*
Rita Wilkinson — *USBPO Administrator*
Nermin Uckan — *USBPO Assistant Director for ITER Liaison*
Steve Eckstrand, FES
Tom Rognlien
Tony Leonard

Council members unable to attend:

Lee Berry
Martin Greenwald
Stan Milora – *US ITER Chief Technologist*

MINUTES

1. Roll call; Introduction of new Council members

The meeting was called to order at 3:00 pm EST. Attendance was as noted above, with 10 of the current 13 Council members present (Mauel joined during the meeting).

2. Review of minutes from prior meeting

Draft minutes from the previous meeting, on November 19, 2009, were reviewed. No comments were made, and the minutes will now be posted on the Council web page.

3. Plans for 2010 Council election

The terms of four Council members—John Sarff, Tony Taylor, Mike Zarnstorff, and Amanda Hubbard—will end this summer. According to the Bylaws, two of the positions will be filled by an election of USBPO members. John Sarff has agreed to chair a nominating committee to solicit input and develop a slate of candidates. Taylor, Zarnstorff, and Hubbard, as well as Research Committee members Don Batchelor and Steve Allen, will also be members.

It is proposed to follow a similar procedure to that of past years (attached to these minutes), including broad solicitation of nominations from the USBPO membership. Sarff will start by sending a call for nominations to the USBPO community. He aims to hold the election electronically, in late April to early May.

It was noted that the terms of the current Chair and Vice Chair will also end this year. New leaders will be appointed from the continuing or incoming Council members.

4. Report from the Research Committee

Chuck Greenfield reported on recent activities of the Research Committee. As discussed at the last Council meeting, emphasis has increased on interaction with, and support of, ITPA Topical Groups. US ITPA leaders are invited to attend every other Research Committee meeting, i.e., about once per month. Many are taking advantage of this opportunity and have expressed satisfaction with the new arrangements. Specific areas of opportunity identified are BPO support for proposed ITPA modeling tasks in the divertor and transport areas. The RC has also had extensive discussions about how best to support the Divertor/SOL and Pedestal ITPA groups; their proposal is covered in the next Council agenda item.

It is planned to arrange videoconference meetings to brief STAC members in advance of the upcoming meeting in May. One topic of interest in the current charge is Test Blanket Modules, for which the recent DIII-D mockup experiments provide considerable information. Another is ELM control, using either Resonant Magnetic Perturbations or alternate methods. ITER recently sent out a call for increased attention to such potential alternate approaches, which was distributed to USBPO members. A number of ideas were received, though it is recognized many are at a preliminary stage. To expand on these and allow for broad input, a “brainstorming” videoconference is being planned for late March. This will be arranged by the leaders of the Plasma-Boundary Interface Topical Group but broadly advertised to encourage participation from other groups.

5. Proposal regarding Plasma-Boundary Interfaces Topical Group

Jim Van Dam, and Topical Group Leaders Tom Rognlien and Tony Leonard, presented and explained a proposal to rename and reorganize the current “Plasma-Boundary Interfaces” Topical Group. This follows up on suggestions and concerns raised in the September and November Council meetings about the broad scope of the group, a lack of visibility of Pedestal issues, and the fact that it is unique in mapping to two ITPA Topical Groups, Divertor/SOL and Pedestal. Since the November meeting there has been extensive discussion, by both Topical Group members and the Research Committee, about the pros and cons of splitting the group. While there were differing views, a majority felt that, given the strong links between the physics of the SOL and pedestal, there was benefit in maintaining a unified group.

The proposed change is to:

- a) Change the name of the Boundary Topical Group to the Pedestal and Divertor/SOL Topical Group, to clarify the scope of the group.
- b) Form two focus (or sub-) groups within the one Topical Group, one emphasizing pedestal physics and one emphasizing divertor/SOL. Initially Tom Rognlien would facilitate the first group and Tony Leonard the second, maintaining coordination between them; as the need arises, other facilitators would be identified.

The scope of the two sub-groups would roughly correspond to that of the Pedestal and Divertor/SOL ITPA groups, and they would support work on all issues in those groups. The effectiveness of this new organization would be evaluated in about a year.

In discussion, Council members noted the strong importance of many issues in this area, including, for example, ELM control and tritium retention for ITER, as well as SOL heat fluxes and pedestal structure, the subjects of FY09 and FY10 joint FES Milestones. Some felt that this broad scope warranted more than one topical group. On the other hand, several recognized the strong links between the sub-groups and preferred a fully unified topical group. On balance, the intermediate approach proposed was found reasonable. A motion to approve the proposed name and organizational changes was made by Tony Taylor and seconded by Michael Mael, and approved by a 9-1 vote.

Council agreed that the technical effectiveness of the newly renamed group, and its interaction with the two corresponding ITPA groups, should be monitored and requested a report in about a year. The set of USBPO Topical Groups may be reevaluated at that time.

6. Update and Council consultation re USBPO Directorate

Erol Oktay noted that USBPO Director Jim Van Dam and Deputy Director Chuck Greenfield have each been serving for nearly three years. Nermin Uckan has been serving as Assistant Director for ITER Liaison since the establishment of that position in 2006. These positions do not have a fixed term, and are appointed by OFES. Oktay and Associate Director Ed Synakowski would like to extend their terms for a further three years, noting that Van Dam has been an excellent leader of the organization, representing

the USBPO on a variety of national and international forums, and serving as the Chief Scientist for the U.S. ITER Project Office. He expressed appreciation to the USBPO directorate, including Greenfield, Uckan and the Research Committee, for their roles in disseminating information on the burning plasma advances and issues at conferences and meetings, preparing extensive technical briefings for the U.S. STAC members, supporting the U.S. members of the ITPA, and publishing monthly issues of the USBPO *eNews* online newsletter. All three have indicated their willingness to continue serving, and US ITER Project Office Director Ned Sauthoff has asked Van Dam to also continue as ITER Chief Scientist.

In discussion, Council members were extremely positive about the performance of the Directorate, also noting the role of USBPO in informing and inspiring young researchers about burning plasma research. A motion to endorse the continued service of Van Dam as Director, Greenfield as Deputy Director, and Nermin Uckan as Assistant Director for ITER Liaison was passed unanimously.

7. Update on coordination of international activities

Mike Zarnstorff reported that the USBPO working group on International Collaborations, formed in 2008, is increasingly active. The members are meeting regularly and are identifying areas in the 2009 MFE Research Needs Workshop report which could be effectively addressed by international collaboration. They will next survey opportunities at external facilities. It is expected that these assessments will conclude in late March; a report will then be written.

Erol Oktay noted a number of recent and planned meetings with international collaborators. The US Department of Energy has an increasing interest in collaborations, driven in part by global issues such as climate change. Fusion is one topic of a US-Europe Energy Council with 10 working groups, related to near-term energy alternatives; a meeting is planned on March 16. Similar discussions are taking place with other ITER Members. A US-JA Executive Secretaries Committee meeting will be held on March 24, and participation from US laboratories is encouraged. Oktay recently participated in a meeting of the International Energy Agency's Fusion Power Coordinating Committee. EU has encouraged increased collaboration on JET and W-7 and JT-60SA; they seek participants with funding, to also be involved in management of these programs. KSTAR and EAST also would like increased collaboration. Guidance from the USBPO working group will be helpful; it was noted that funding for collaborations is currently flat.

Van Dam will post some talks from international groups on the USBPO Forum. It was suggested that Oktay and Zarnstorff prepare an *eNews* article on developments in International Collaborations.

Note: A number of documents have since been posted on the USBPO Forum in the International Collaborations Topic.

8. Update on other USBPO activities and ITER developments

Director Jim Van Dam gave a general update on a number of other recent USBPO activities not covered earlier in the meeting. Topics covered included:

- **Interaction with ITPA and TTF**

As noted, the USBPO Topical Groups are working to improve communication about ITPA activities to BPO TG members. An IEA/ITPA Joint Experiments/Activities was held in meeting, Daejon, Korea, December 15-16, 2009. US ITPA representatives gave excellent summaries. Increased interaction with the US Transport Task Force has also been suggested and discussed at the RC. As a first step, the USBPO will help advertise TTF activities.
- **Communication with community**
 - Tom Rognlien continues to do an excellent job as editor of the *eNews* electronic newsletter, which just published its 40th issue. A new feature is “Research Highlights”, suggested by new RC member Dylan Brennan, which will summarize important new research from Topical Groups on a rotating basis.
 - Amanda Hubbard gave a talk on behalf of the USBPO at the Fusion Power Associates Annual Meeting (December 2-3, 2009, Washington, DC).
 - Van Dam will give a USBPO presentation at the US-EU bilateral collaboration meeting (March 16). Possible joint work between EFDA Task Forces and USBPO Topical groups may be discussed. Council members expressed interest in hearing about and discussing this possibility at a future meeting.
 - At the FES Budget Planning Meeting in March, Van Dam will talk about USBPO activities, and Zarnstorff will describe international collaborations.
 - USBPO initiated email discussion of a recent, rather negative article on fusion in *Scientific American*. It was decided that a response will be prepared by Richard Hazeltine, Stewart Prager, Ron Stambaugh, and Miklos Porkolab. Council members had a number of other suggestions for community follow-up, including coordination of MFE and IFE responses and correction of inaccuracies.
 - USBPO is starting to think about USBPO plans for 2010 APS-DPP Meeting.
- **Papers for IAEA Fusion Energy Conference**

Nermin Uckan is serving on the US paper selection committee for the 2010 IAEA FEC the and also on ITER Organization paper review committee. The USBPO *eNews* was helpful in explaining the complex progress for international paper selection, which is proceeding well. There are many proposed ITER related papers from the US, as well as ITPA and ITER session papers with US lead authors.
- **Fourth ITER International Summer School**

USBPO will help host this meeting, the first in the US, to be held May 31-June 4 at

U. Texas. The subject will be “MHD and Plasma Control.” Members were urged to circulate details of the meeting and to encourage attendance of US students and fusion researchers.

Van Dam also reported several ITER-related developments:

- **Physics task solicitations**
In 2009, the US was awarded 8 of 16 proposals for physics tasks. New solicitations are being received from ITER for Task Agreements involving an independent verification of the Blanket First Wall surface shaping and for Plasma evolution and performance during plasma regimes with controlled ELMs in ITER. For financial reasons, the US ITER Project Office prefers to submit proposals only on topics where the US has unique expertise, and has asked the USBPO to provide advice.
- **Plasma Control Workshop**
An international workshop was held at Cadarache on December 8-11, 2009. Its purpose was to bring in people from different devices to take advantage of their expertise to build the ITER Plasma Control System. Several US scientists participated, and Mike Walker reported on the meeting in *eNews* and at a Research Committee meeting.
- **ITER Council, MAC, and STAC**
New chairs have been announced for each of these key ITER bodies, following the usual rotation. A special “Heads of Delegations + One” Meeting was held in Paris, February 22-24. Dr. Brinkman and Dr. Synakowski represented the US. There will soon be a MAC meeting. It was decided that a March meeting of the ITER Council is not needed, and the date of the STAC meeting was slightly advanced to May 10-12. USBPO will arrange technical briefings as needed. Michael Bell, who is a member of the ITER Research Plan international working group, noted that this group has not been called upon to revise the ITER Research Plan document for these meetings.
- **ITER TBM Workshop.**
This is planned for April 12-15. Results of recent TBM mockup experiments on DIII-D will be reported, and strong US participation is expected.

The meeting was adjourned at 5:01 pm. The next meeting is expected to be held in June, with the new Council members in place.

Proposed nomination/election process for new Council members

Amanda Hubbard and John Sarff 3/2/10

Background: According to the USBPO Bylaws, an annual election shall be held to fill half of the vacant positions on the Council. The first such election was held in 2008. The procedure followed then, and repeated in 2009 was judged very successful. This is an update with dates updated for 2010.

Proposed process and approximate timeline:

1. Set up a small 'nominating committee' of Council and Research Committee Members. (3/1/10)
2. Send message to USBPO membership (~3/5), letting them know about the openings for Council and requesting nominations for the two elected slots. Remind about eligibility rules (must be USBPO regular member, no more than two Council members per institution, Research Committee members ineligible). Van Dam may also wish to mention in the e-News. Allow ~ 2 weeks for responses. (by ~ 3/26/10)
3. Nominating committee will consider nominations from the community, including Council and generate its own suggestions. If, as is likely, there are too many names suggested, cut down to a smaller 'slate' for the election (approx 5-7 names). The prime consideration is that all on the slate would be good additions to the Council, are interested in USBPO and are likely to contribute actively. Other considerations are breadth of institutions represented, and areas of expertise. There should probably not normally be more than one from an institution on the slate. Send proposed slate to the whole Council, the Director, and the OFES ITER Science and Technology managers, for comment (by ~ 4/7/10).
4. Contact all proposed nominees to ensure they are willing to serve. If not, make some substitutions.
5. Hold the election, with each USBPO regular member getting the opportunity to vote for up to two candidates, and allowing about two weeks for votes. Nominating committee Chair and Council Chair with Jim DeKock and Rita Wilkinson to run the election, probably using the Univ. Wisconsin web-based poll software used successfully in 2008 & 2009. (voting period ~ 4/19-5/3/2010).
6. Tabulate votes and announce the names of the two candidates receiving the most votes, who will become the new Council members (~ 5/7).

Following election, the Director, in consultation with OFES, appoints two additional members, also a Chair and Vice Chair from among the members. (Target ~ 5/28)
New members start at following Council meeting (June 2010)