

**US Burning Plasma Organization  
Meeting of the Council  
June 13, 2007 (1:30-3:30 p.m. EDT)  
held by video conference**

**Council Members in attendance:**

Steve Allen  
Rich Hawryluk  
Amanda Hubbard – Chair  
Earl Marmar  
Bill Nevins  
Martin Peng  
Craig Petty  
John Sarff  
Tony Taylor  
Mike Zarnstorff – Vice-chair  
Stan Milora – US ITER Chief  
Technologist

**Ex-officio participants in attendance:**

Erol Oktay –USDOE  
Jim Van Dam – USBPO Director and  
US ITER Chief Scientist

**Others in attendance:**

Chuck Greenfield —USBPO Deputy  
Director  
Nermin Uckan—USBPO Asst. Director  
for ITER Liaison

**Unable to attend:**

Steve Cowley  
Gerald Navratil  
Gene Nardella  
Dave Petti  
George Tynan

**MINUTES**

**1. Roll call**

The meeting was called to order at 1:35 EDT. Attendance was as noted above, with 11 of current 15 voting members present.

**2. Review of minutes from February 27, 2007**

Amanda Hubbard opened the meeting to comments or corrections to minutes drafted from the February 27, 2007 Council Meeting. There were no changes suggested. She noted some events which have happened since that meeting. Responding to Council comments, the draft Bylaws were amended to clarify the status of ex-officio members. A final version of the Bylaws was approved by unanimous e-mail vote on April 6<sup>th</sup> (with all but two Council members responding). They were posted on the BPO website. George Tynan and the Charter subcommittee were thanked for many months of hard work on the Charter and Bylaws.

There was discussion of whether minutes of Council meetings, which have up to now been distributed by email and on the forum only to Council members and participants, should be posted more publicly so as to be available to all USBPO members. An advantage of this would be greater transparency and openness, so as to make clearer what the Council is doing. There was general agreement that this should be done, with the

proviso that minutes should then not contain sensitive information such as, for example, personnel discussions. Hubbard agreed to check past minutes, and to investigate the most appropriate place on the BPO forum and/or website for posting.

### **3. Update on USBPO activities and plans [Greenfield, Van Dam]**

Deputy Director Chuck Greenfield and Director Jim Van Dam gave a summary of USBPO activities since the last Council meeting.

Main topics covered by Greenfield included:

- *Plans for APS-DPP Meeting.* A significant USBPO presence is planned during the 2007 APS-DPP meeting. Van Dam has been nominated to give a Tutorial on Burning Plasmas. An evening session on the ITER Design Review is planned, with Guenter Janeschitz as the key speaker. It was suggested that US members Rich Hawryluk and/or Ron Stambaugh be invited to give further details on US involvement in the review. Rather than organize a separate contributed or oral session on burning plasma research during the conference, it is proposed to compile a list of relevant papers in other meeting sessions. Topical Groups will also be encouraged to meet in conjunction with the meeting.
- *High priority research activities.* The most active and urgent tasks at present are those associated with the ITER Design Review, in which many USBPO members are engaged. The US-led effort on design of Resistive Wall Mode, Error Field Correction and Resonance Magnetic Perturbation coils (for ELM control) was cited as a particularly active example.
- *Diagnostics White Paper.* Following up on the successful workshop on Diagnostic Development for Fusion Plasmas, which was organized by the USBPO Diagnostics Topical Group and held at General Atomics in February 2007, the Topical Group is preparing a White Paper to be sent to OFES. This will advocate increased efforts on diagnostics R&D for burning plasmas. The Research Committee will review this document and decide whether and how to endorse it.
- *Communications Guidelines.* The Research Committee has been discussing means of communicating better with USBPO and Topical Group members. A set of "Communication Guidelines" are in preparation, and will be distributed to the Council when complete. Raffi Nazikian has agreed to edit the BPO e-newsletter, which will be published monthly. The Topical Groups will start to use e-mail lists, archived to the web, rather than the web Forum which has not been well utilized, to communicate with members. Periodic group meetings are being encouraged. Transition of the USBPO website to a Wiki format is being discussed.

Topics covered by Van Dam included:

- *Integrated Scenarios Topical Group leadership.* Because Chuck Greenfield is now the USBPO Deputy Director, the leadership of the Integrated Scenarios Topical Group was vacant. Chuck Kessel, formerly the group Deputy Leader, has

been selected as leader. Tim Luce has agreed to serve as the new Deputy Leader. Council concurred in this selection.

- *ITER Design Review.* As noted above, USBPO has been very active in the Design Review, particularly the twelve urgent issues identified by the Working Group 1 on Design Requirements and Physics Objectives. Lists of potential contributors were identified by Topical Groups. Some of these people are now being contacted by WG1 members; this process has in some cases moved slowly. There is now urgency to complete these tasks. Erol Oktay commented that OFES guidelines are being developed whereby some of this requested work can be reimbursed. Nermin Uckan, USBPO Assistant Director for ITER Liaison, is developing a spreadsheet of all tasks and US participants, and was thanked for this and other efforts. Chuck Greenfield and Amanda Hubbard commented that the lack of publicly available information on the leaders and participants in the Design Review has been an issue.
- *Other recent activities:* USBPO presentations were given at the March 2007 Budget Planning Meeting and FESAC meetings. Van Dam also gave an invited talk at the April APS meeting. These and other presentations are available on the USBPO website. Van Dam also participated in the Test Blanket Module workshop held at ORNL, May 30-June 1, which was intended to provide information to OFES re US participation in TBM work on ITER. He was able to input concerns and information from USBPO members to this review. A report on this workshop will be made to DOE and FESAC.
- *Planned Activities.* Francois Waelbroeck from the Institute for Fusion Studies, U. Texas, will give a talk on behalf of USBPO at the upcoming Latin American Workshop on Plasma Physics in Mexico. USBPO is looking into holding a Burning Plasma Winter School, to be held at UCLA in January. Van Dam, along with fellow ITPA coordinating committee members Ned Sauthoff and Ron Stambaugh, will attend the upcoming ITPA CC meeting in Cadarache.

#### **4. Status report from Subcommittee on US-ITER Participation [Marmar]**

As noted at the last Council meeting, Council member Earl Marmar has been asked to lead this Council subcommittee. Its current members, which include both Council members and other experts, are Steven Allen, Michael Bell, Cary Forest, Steve Knowlton, Earl Marmar, Farrokh Najmabadi, Hutch Neilson, Martin Peng, Philip Snyder, Ted Strait, George Tynan, Nermin Uckan, and Dennis Whyte. It was noted that the motivation for the panel was to follow up on the June 2006 report prepared by the USBPO Energy Policy Act Task Group, led by past USBPO Director Ray Fonck. That report, and response from Congress, suggested that further development of the high priority ITER research issues and US involvement would be valuable. Three videoconferences have been held, with considerable discussion of the scope of panel work. It appears that the work will take several months to complete, which may make its report too late for direct input to the current FESAC Panel on Strategic Planning.

## **5. Discussion of policy regarding foreign applicants for BPO involvement [Van Dam]**

Jim Van Dam reviewed the history of the issue of foreign applicants for USBPO membership. In 2006, soon after formation of the USBPO, Ray Fonck rejected applications from a few EU researchers, stating that the organization was not ready. It was noted that anyone can view the USBPO website, though not the forum, and can sign up to receive e-newsletters. In April 2007 a request for membership from Canadian researchers with strong involvement in the US fusion program was approved, with the agreement of the USBPO Executive Committee. Other, occasional, requests are being received. It is felt that a clear policy on how to handle such requests is needed. It was noted that the current Charter restricts membership to those whose “home institution lies within the US”.

Amanda Hubbard framed the Council discussion with the following general possibilities:

1. No membership allowed for foreign applicants. This is what the Charter and Bylaws say.
2. Full membership allowed.
3. Foreign ‘affiliate’ or ‘correspondent’ status, with access to additional internal information but, for example, no voting rights.

There was considerable discussion about the pros and cons of each of these possibilities, with a number of good points raised. It was generally recognized that there is a ‘continuum’ of possible involvement with the US program, making it difficult to draw a line on criteria for membership. Most were generally in favor of openness with the rest of the world fusion community. It was commented that USBPO will be setting an example for similar organizations in other parties, and that other organizations such as APS have foreign members. On the other hand, a number of people were concerned about extending full privileges such as voting rights, Council membership or Topical Group leadership to foreign researchers. It was commented that while currently there is no information on the forum which should not be seen by other ITER parties, such a situation is possible in future. Some suggested that some criteria for membership such as sponsorship by a US laboratory or involvement in a specific USBPO Task be established. Some felt that the current ‘case by case’ treatment was sufficient. However, it was noted that the criteria are unclear, and that this is not strictly permitted under the current Charter.

Hubbard then asked three Council members, Mike Zarnstorff, Stan Milora, and Bill Nevins, to continue this discussion. The three agreed to work on drafting a proposed policy, taking into account the opinions expressed at this meeting, and if necessary suggest changes to the USBPO Charter and/or Bylaws. Zarnstorff will coordinate this activity. The group will report back to Council before, or at, its next meeting. It was noted that a vote of Council would be needed to make any changes to the Charter. In the interim, Van Dam will inform foreign applicants that Council is considering the policy.

## **6. Discussion of initial rotation of Council Membership**

A proposal for initial rotation of Council membership was presented by Amanda Hubbard. Some procedure is needed to reconcile the current 14 regular members with the goal, adopted in the bylaws, of having 12 regular members with staggered 3-year terms. It is proposed to vary the terms of the current Council members, with members variously having 2, 3 or 4 year terms. There was general agreement with this procedure. Tony Taylor proposed that OFES be consulted in determining terms for each member. The proposal was amended to reflect this, and is appended to these minutes.

A motion to adopt the amended proposal was made by Tony Taylor and seconded by Steve Allen and Martin Peng. This was unanimously approved.

The next action will be for a proposed division of terms for current members to be made as outlined in the procedure. It is expected to be presented by the Chair at the next Council meeting.

## **7. Any other business**

Amanda Hubbard opened the floor to other business. None was brought up.

The meeting was adjourned at 2:20 p.m. EDT.

## **Proposal for initial terms of USBPO Council members.**

### **Background:**

The USBPO Charter and Bylaws, recently approved by the Council, call for twelve Council members, apart from ex-officio members. These would each serve terms of three years, staggered so that normally four members are replaced each year.

However, in its initial formation, the Council had fourteen such members, all of whom started their terms in Spring 2006. One member was recently replaced, so there are still fourteen total. As was discussed at the February 27, 2007 Council meeting, some procedure thus needs to be adopted to reconcile the current situation with the Bylaws, and avoid having complete turnover of the Council at the same time.

### **Proposed procedure (as amended and adopted by Council on June 13, 2007):**

The current Council members will be divided into three groups, with terms ending as follows:

Six members Spring 2008 (two year term)  
Four members Spring 2009 (three year term)  
Four members Spring 2010 (four year term)

The assignment of terms for each member will be made jointly by the Council Chair and Vice-Chair and the USBPO Director, in consultation with OFES, taking into account the desire to maintain balance and breadth both among institutions and across expertise. This will be discussed with the Council before being made public in Fall 2007.

In Spring 2008, two members will be elected by BPO members, and two appointed, following the current Bylaws. This would bring the number of members to twelve. Four new members would similarly be selected in Spring 2009 and Spring 2010, by which time the desired staggering of three year terms would have been achieved.