

The Burning Issues:
U.S. Burning Plasma Organization e-News
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from Ray Fonck, USBPO Director

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Dear Burning Plasma Aficionado:

This note is being sent to give you a short update on U.S. Burning Plasma Organization activities.

These news notes will also be posted on the BPO website at <http://burningplasma.org/news.html>

Thank you for your interest in Burning Plasma research in the U.S.!

1) ISSUE CARDS SOLICITED FOR ITER DESIGN REVIEW PROCESS

The ITER Organization is beginning an extended design Review Process. Its goal is to resolve major open design questions in order to prepare procurement packages for construction. This will be a continuing process over a couple of years.

A near-term action in this process is to generate a list of issues that may point to changes in the design to improve performance or research flexibility, reduce cost, improve schedule, or resolve an interface problem. The cards will address topics like: physics requirements and objectives; magnet systems; vacuum vessel and interfaces; heating systems; QA; safety and licensing; etc. The USBPO community is being asked to offer input on issues such as science/physics capabilities and diagnostics.

Brad Nelson, USIPO Engineering Manager, is coordinating this effort for the U.S. community and the USBPO and VLT are being enlisted to engage the science and technology communities. The first task is to identify a simple list of potential issues and any perceived options that could address or refine the issue. Although issues can be raised throughout the ITER construction

project, it is desired that a significant portion of the Issues be identified in the next few months to aid in focusing the Design Review process.

To that end, the Topical Group leaders will be contacting their group membership to solicit input for this process. Those community members interested in participating in this effort should contact the leaders of Topical Groups that may cover areas of interest. An initial set of issues has been generated from the Research Committee's list of potential ITER Physics Tasks (see below).

More information on this process and on the ITER reference design will be posted in the USBPO Bulletin Board forum Task Groups > ITER Issue Cards.

2) ITER PHYSICS TASKS PROPOSED FOR 2006-2007

The USBPO Research Committee has generated a list of suggested ITER Physics Tasks for 2006-2007. ITER Physics Tasks are discrete, short-term tasks undertaken by ITER participants to support the immediate project development. The tasks assigned to the U.S. community are negotiated and agreed upon by the ITER team and the USIPO.

The goal of this exercise was to enlist the research community in offering suggestions for ITER Physics Tasks for consideration by OFES and the USIPO in their discussions with the ITER team. The process was organized and run by the USBPO Research Committee, which consists of the leadership of the 10 USBPO Topical Groups.

The approach followed included:

- 1) The Topical Group leaders canvassed their group membership and solicited suggestions for Physics Tasks through a running discussion via e-mail and bulletin board exchanges.
- 2) Each suggested Task was described by:
 - Task Title
 - Brief Task Description
 - Importance/Impact of Task
 - Deliverables
 - Estimated Task Completion Time
- 3) A total of 77 suggestions were generated by the Topical Groups.
- 4) These 77 suggested Tasks were examined by all of the Topical Group leaders and ranked in perceived importance using metrics based on:
 - Impact on ITER design - Urgency
 - How well-defined task and deliverables are
 - Whether it addresses a high-priority ITPA item
 - Impact on U.S. positioning and support of long-term goals of U.S. program
 - Unique capabilities in U.S. community
 - Synergy / Complementarity with ITER partners

5) A high-priority list of 14 Tasks was generated. Descriptions of these 14 tasks are available in the USBPO Bulletin Board forum Task Groups > ITER Physics Tasks 2006-2007

These Tasks have been submitted to the USIPO and OFES for consideration as new and ongoing U.S. ITER Physics Tasks for 2007. Those that are selected in negotiation with the ITER team will be referred back to their originating Topical Groups for execution in the next year. It is expected that only a subset may be selected as assigned U.S. tasks. We will inform the USBPO membership when we obtain more information on the disposition of these suggested Tasks.

3) USBPO COUNCIL STARTS CHARTER DEVELOPMENT

A working group has been formed by members of the USBPO Council to develop a formal Charter for the USBPO. This group is working with the USBPO management to define policies and procedures for activities and governance of the USBPO. The policies will address issues such as: selection and terms of service for Council members and Topical Group leaders; roles of the USBPO in the U.S. fusion research enterprise; ensuring broad community participation and access; etc. Members of the Charter working group are:

George Tynan (chair)
Amanda Hubbard
Martin Peng
Craig Petty
John Sarff

The USBPO Director and Council Chair also participate as ex-officio members.

4) REPORT ON PLANNING FOR PARTICIPATION IN ITER RELEASED

A Plan for U.S. Participation in ITER was required by the Energy Policy Act of 2005 (EPAAct). The OFES requested that the USBPO prepare this plan, with FESAC consultation. To address this charge, the USBPO created a Task Group to draft an initial plan. [See details in March 10, 2006 USBPO eNews]. This Task Group addressed the three questions posed in EPAAct., relying as much as possible on existing reports from recent fusion community studies. The report was drafted by the Task Group over the course of about 2 months in Spring 2006, and was presented to FESAC for comment and review at its June 1 meeting. Some reviews were also submitted by USBPO Council members. The final report given to DOE reflected those reviewers' comments and criticisms. The document was not intended for fusion experts, but it does include some technical detail in support of the plan. The submitted plan was incorporated into the DOE/OFES response to requirements placed in the Energy Policy Act by Congress.

A copy of the report, "Planning for U.S. Fusion Community Participation in the ITER Program", is now available to members in the USBPO Bulletin Board forum Task Groups > Energy Policy Act

It is emphasized that the document represents only a first step at developing a full plan to engage ITER. It is expected that the fusion research community will continue to develop this plan.

5) REARRANGEMENT OF USBPO BULLETIN BOARD FORUM

Please note that the USBPO Bulletin Board Forum has been rearranged in an effort to make it cleaner and easier to navigate. Please provide us with comments and suggestions you may have. Your input can be provided either via email to support@burningplasma.org or in the USBPO Bulletin Board forum USBPO > Comments and Feedback

