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Dear Burning Plasma Aficionados:

This newsletter provides a short update on U.S. Burning Plasma Organization activities. E-News is also available online at <http://burningplasma.org/enews.html>. Comments on articles in the newsletter may be sent to the editor (R. Nazikian rnazikian@pppl.gov) or assistant editor (Rita Wilkinson ritaw@mail.utexas.edu).

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

Director's Corner by J. Van Dam

Are you a USBPO member, or are you only subscribing to eNews? If you are a researcher or graduate student active in burning plasma science and technology research, I encourage you to become fully involved in the USBPO as a member by joining one or more of the Topical Groups. Please see the Membership Drive information at the end of this column.

ITER Contributed Oral Session at APS-DPP

As it did last year, the USBPO has organized a special session of 12-minute contributed talks about research work related to ITER at the APS Division of Plasma Physics Annual Meeting (November 2-6, Atlanta). Our thanks go to USBPO Deputy Director Chuck Greenfield for masterminding the organization of this session. It will be held on Thursday afternoon, November 5. Rich Hawryluk will chair the session.

ITPA Coordinating Committee Meeting

The annual meeting of the Coordinating Committee for the International Tokamak Physics Activity (ITPA) was held July 15 and 16 in Cadarache, France. From the US, Ron Stambaugh attended as the chair of the Coordinating Committee, and Erol Oktay and I as members. Other participants from the US were Rejean Boivin (Diagnostics), Stan Kaye (Transport and Confinement), and Bruce Lipschultz (SOL and Divertor), who are the international leaders for their respective topical groups. Each of the seven topical group leaders presented a summary of

the activities and future plans for their groups. Several times David Campbell, Assistant Deputy Director General for the ITER Fusion Science and Technology Department, complimented the topical groups on how well their work is aligned with ITER research needs. Then, Coordinating Committee members from the seven ITER Members described the status of the fusion programs in their countries. The ITER Organization has offered to assume the responsibility for maintaining the ITPA web site. The Coordinating Committee also discussed policies and procedures for ITP data access and publications. Also, we talked about setting up a test case for modeling needs related to divertors, which the other topical groups could then emulate, since the ITPA wants to move toward incorporating theory modeling and simulations into its Joint Experiments (to be called Joint Activities). The annual IEA/ITPA meeting to discuss and schedule the next round of Joint Experiments will be held this year in Daejeon, Korea, December 15 and 16, hosted by the Korean National Fusion Research Institute.



Participants at the ITPA Coordinating Committee Meeting being given a tour of the future ITER site, visible in the background. (Photograph courtesy of ITER.)

TBM Simulation Experiments on DIII-D

Each Test Blanket Module (TBM) to be installed in ITER for the purpose of testing methods to breed tritium fuel will produce a localized magnetic field perturbation. There is an urgent scientific question whether these field perturbations might affect the plasma behavior—e.g., pedestal performance, power threshold for L-to-H mode transition, plasma rotation, and loss of energetic ions. At the request of the ITER Organization, the DIII-D tokamak program is presently constructing a scaled hardware mockup of ITER TBM ferromagnetic error fields, for the purpose of studying their effects. ITER has invited its seven Members to send scientists to participate in these experiments, which will be led by Mike Schaffer (GA) and Joe Snipes (ITER). At present, the experiments are scheduled for immediately after the APS-DPP Annual Meeting. Details can be obtained from Mike Schaffer <schaffer@fusion.gat.com>.

Upcoming STAC-7 Meeting

The 7th meeting of the Science and Technology Advisory Committee (STAC) of the ITER Council will be held October 21-23 in Cadarache, France. The Council has assigned an unusually extensive charge for the STAC to address at this meeting. In short, the four elements of the charge are to evaluate whether (1) the *Projects Requirements* implement the *Project Specifications*, (2) the Systems Requirements for major ITER systems are appropriate to meet the

Project Requirements, (3) the designs of major systems satisfy the Requirements, and (4) the Updated Construction Schedule and ITER Research Plan are a suitable basis for achieving Q=10. A pre-STAC meeting with two STAC members from each ITER Partner will be held September 3 and 4 in Cadarache in order to lay the groundwork for the October meeting. Here, “groundwork” refers to a determination in advance of the extent and methodology for the evaluations by the STAC, the documentation that is required from ITER for such evaluations, and the procedure for completing preparatory work prior to the October meeting. My own thinking is that very likely we will have to call on US experts to help us, on short notice, with these assessments. This STAC report will be important to the ITER Council, which, at its meeting in November, will be grappling with weighty issues of facility scope, schedule, and cost.

USBPO Membership Drive

Taking a page from non-profit organizations, the US Burning Plasma Organization would like to introduce an annual Membership Drive. First, we tell you about all the activities of the USBPO and the services that it provides to the fusion community. (We’ll let our web site tell the story; in particular, please look at our most recent Annual Report, posted on the Reference Files page.) Then, we convince you to join up as a new member—which is just a click away. Go to “Sign Up: Topical Groups” in the left-hand sidebar on the USBPO web page, and choose the topical groups of your interest. At that point, you become a USBPO member—a regular member if your home institution is in the US, an associate member otherwise. In addition, you will automatically be added to the mailing list for our monthly electronic newsletter *eNews*, which has up-to-date news items and scintillating articles related to burning plasma science. The beautiful thing about joining the USBPO is that there are no membership dues! So I encourage you to take a few minutes and become fully involved in the USBPO. You will feel good about yourself for having done so!

↵ Announcements

Submit BPO-related announcements for next month’s eNews to Raffi Nazikian at rnazikian@pppl.gov.

Upcoming Burning Plasma Events

2009

Sept 6-11

[6th International Conference on Inertial Fusion Sciences and Applications \(IFSA 2009\)](#)

San Francisco, California USA

Sept 6-11

[14th International Conference on Fusion Reactor Materials \(ICFRM-14\)](#)

Sapporo, Japan

Sept 21-23
[11th IAEA Technical Meeting on Energetic Particles in Magnetic Confinement Systems](#)
Kiev, Ukraine

Sept 21-24
[14th International Symposium on Laser-Aided Plasma Diagnostics \(LAPD-14\)](#)
Castelbrando, Treviso, Italy

Sept 24-25
ITPA Energetic Particle Topical Group Meeting
Kiev, Ukraine

Sept 30-Oct 2
[12th Int'l Workshop on "H-mode Physics and Transport Barriers"](#)
Princeton, New Jersey USA

Oct 5-7
ITPA Transport & Confinement Topical Group Meeting
Princeton, New Jersey, USA

Oct 5-7
ITPA Pedestal & Edge Physics Topical Group Meeting
Princeton, New Jersey, USA

Oct 6-8
ITPA MHD Topical Group Meeting
Abingdon, UK

Oct 11-16
[9th International Symposium on Fusion Nuclear Technology \(ISFNT-9\)](#)
Dalian, China

Oct 12-16
ITPA Diagnostics Topical Group Meeting
Pohang, Korea

Oct 20-23
ITPA Integrated Operation Scenarios Topical Group Meeting
San Diego, California USA

Nov 2-6
[51st APS-DPP Meeting](#)
Atlanta, Georgia USA

Nov 9-11
[14th Workshop on MHD Stability and Control](#)
Princeton, New Jersey USA

Nov 15-19
[ANS Winter Meeting](#)
Washington, DC USA

Dec 2-3
[Fusion Power Associates 30-Year Anniversary Meeting and Symposium](#)
Washington, DC USA

Dec 8-11
[The 19th International Toki Conference \(ITC19\)](#)
Ceratopia Toki-City, Gifu, Japan

Dec 14-17
ITPA SOL & Divertor Topical Group Meeting
San Diego, California USA

2010

Week of 22 March
ITPA Transport & Confinement Topical Group Meeting
Oxfordshire, UK

Spring
ITPA IOC Topical Group Meeting
Princeton, New Jersey USA

May
ITPA Diagnostics & HTPD Topical Group Meetings
USA

Fall
ITPA Transport and Confinement Topical Group Meeting (following IAEA)
South Korea

Fall
ITPA IOC Topical Group Meeting (following IAEA)
South Korea

Fall
ITPA Diagnostics Topical Group Meeting (following IAEA)
Japan

Oct 24-29

[9th Int'l Conference on Tritium Science and Technology](#)

Nara, Japan

2011

Spring

ITPA Transport & Confinement Topical Group Meeting (following US/EU TIF)

San Diego, California USA

Fusion Research-related events can also be seen on the USBPO website at <http://burningplasma.org/events.html>.