

# *The Plasmatic*



## **Newsletter of the Topical Group in Plasma Astrophysics<sup>1</sup>**

**July 19, 2001**

### **I. Message from the Chair**

#### **The Inception**

As many of you know, the Topical Group in Plasma Astrophysics (GPAP) was officially constituted as an APS unit in 1998. The officers and standing committees required by the bylaws are in place and functioning. This is our inaugural newsletter. I would like to take this opportunity to recap some of the recent accomplishments of GPAP.

First and foremost, plasma astrophysics, encompasses a truly diverse and cosmic range of environments in which plasma physics plays an important role. Historically, plasma astrophysics has been between traditional disciplinary boundaries and sometimes fell through the cracks in terms of appreciation and recognition by the larger scientific community. Yet plasma physics is now firmly embedded in several scientific areas of keen interest outside the laboratory. These include near-Earth space and solar plasma environments, stellar and interstellar physics, dynamo physics, accretion disk physics, and particle acceleration.

#### **Scientific Activity**

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<sup>1</sup> The title *Plasmatic* is taken from Dwight Nicholson's humorous name for those interested in plasma physics in general, and plasma astrophysics in particular.

Scientifically, we have established a significant presence at the annual meeting of the Division of Plasma Physics (DPP), with which GPAP has considerable common interest. The DPP program committee has been very supportive of the GPAP agenda. At the 43<sup>rd</sup> annual DPP meeting in Long Beach, CA, two GPAP-sponsored minisymposia will be held (see below). In the last two years, GPAP has also organized invited sessions at the APS April meeting. The most recent April meeting in Washington, DC, featured a session on solar physics organized jointly with the Division of Astrophysics.

The GPAP Executive Committee is enthusiastic about miniconferences at the DPP meetings. It was decided at the Quebec DPP meeting (November 2000) that miniconferences at the annual DPP meetings will be a major focus of GPAP scientific activity. The miniconference format allows us to organize sessions comprised of invited talks, with a typical duration of thirty minutes. This year's two miniconferences will be described below in some detail. The Executive Committee is very interested in proposals from the membership for future minisymposia. Another activity is our endorsement of the 2002 International Congress on Plasma Physics (see item below).

In addition to miniconferences, we should take the opportunity to propose invited, review, and tutorial talks for the DPP meeting. The GPAP can provide a vehicle for interacting with the larger scientific community. The Executive Committee welcomes individual initiatives and suggestions.

In order to promote thinking and discussion about plasma astrophysics, our *modus operandi* might be as follows. One could invite a prominent speaker to give a tutorial or review talk at the DPP meeting. This initiative could then be followed up with a minisymposium at the following year's DPP meeting, in which a critical mass of active researchers are invited to provide a more comprehensive and detailed picture of the field. This would then be followed in subsequent years by focused sessions of invited and contributed papers. This process can be supplemented by occasional topical conferences on plasma astrophysics.

In order to be successful, active participation by GPAP members is essential. The Executive Committee is in constant need of the scientific expertise and vision of its members. The URL for GPAP is <http://www.aps.org/units/gpap/index.html>

*Jim Chen*

## **II. Items of Interest**

### **APS Fellow from GPAP**

As a topical group, GPAP is entitled to select an APS fellow. Last year Hideaki Takabe of Osaka University was nominated and elected as a Fellow of the APS. Dr. Takabe's citation read as follows: "For his theoretical and numerical investigations leading to the universally-used ablation front Rayleigh-Taylor dispersion curve, and his role in shepherding the emerging field of laser astrophysics". Congratulations to Dr. Takabe!

### **Minisymposia at the November Meeting of the Division of Plasma Physics**

The annual meeting of the Division of Plasma Physics will take place from October 29 to November 2 in Long Beach, California. Details of this meeting can be found at <http://www.aps.org/units/DPP>. We have been allocated two minisymposia, as follows.

1. *Plasma Turbulence in the Corona, Heliosphere and Interstellar Medium: Observations and Theory of Cascade and Dissipation Processes*, organized by William Matthaeus of Bartol Research Institute of the University of Delaware.
2. *Magnetic Reconnection in Space and Astrophysical Plasmas*, organized by Peter Gary of the Los Alamos National Laboratory.

These minisymposia will be of one to one and a half days in duration, and be primarily organized around invited talks of half an hour to forty five minutes in length. Contributed presentations will be accepted as posters or oral talks if space permits. These minisymposia are a great opportunity to “come up to speed” in an area.

### **International Conference on Plasma Physics, July 2002**

The International Conference on Plasma Physics (ICPP) is a major international conference on the subject of plasma physics, held every two years. In 2002 it will be held in Sydney, Australia. The dates of the conference are July 15-19, and the conference website is <http://www.ise.canberra.edu.au/icpp2002>. The organizers of the conference are very keen on a major plasma astrophysics component, and have contacted GPAP to this end. We endorse this meeting and strongly encourage all GPAP members to travel to Sydney and present a contribution. *Real astronomers* among the GPAP membership will relish the opportunity to see ? Centauri, the Magellanic Clouds, and other wonders of the southern skies.

*Steve Spangler*

### **Items for *The Plasmatic* ?**

We plan to issue *The Plasmatic* once or twice a year. If you would like to suggest additional items for our newsletter, or classes of topics that we could publish, contact the GPAP Secretary-Treasurer, Steve Spangler, at [srs@astro.physics.uiowa.edu](mailto:srs@astro.physics.uiowa.edu).