

# **Solar Physics Division of the American Astronomical Society**

## **Annual Report: 2007-2008**

J. Todd Hoeksema, Chair

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The Solar Physics Division of the American Astronomical Society works to advance the study of the Sun and to promote the coordination of solar research with other branches of science. Our 558 members encompass the full range of solar physics research. June 25, 2008 marks the centennial of the first published observations of solar magnetism by G.E. Hale at Mt. Wilson. The field continues to be dynamic and productive with major progress in understanding solar flares, the solar interior, the mechanisms of solar activity and variability, coronal heating, solar wind acceleration, and the heliosphere. Yet there continue to be surprises and puzzles, for example the curious delay in the onset of Solar Cycle 24. More than 250 papers were presented at the joint meeting of the SPD and AAS in May, 2007 that included breathtaking highlights from two recently launched space missions, Hinode and STEREO. In May, 2008 the SPD is meeting jointly with the American Geophysical Union.

The SPD was led in 2007-2008 by J. Todd Hoeksema (chair) and vice-chair James A. Klimchuk. The other leaders included Neal Hurlburt (Secretary), Joan Schmelz (Treasurer) and committee members K.S. Balasubramaniam, Douglas A. Biesecker, Edward E. DeLuca, Leonard Strachan, and Amy R. Winebarger. The committee met in person at the AAS/SPD meeting in Honolulu in May 2007 and conducted business via email throughout the year. A new vice chair, Shadia Habbal, and two new committee members, Holly Gilbert and Scott McIntosh, will take office after the May 2008 meeting.

Much of the work of the division is accomplished by committees and the SPD is very grateful for their efforts. More detailed information about committees, activities, and history of the division can be found at the division web site, <http://spd.aas.org>.

The Prize committee selects the recipients of the Hale and Harvey Prizes. The SPD Prize Committee members were Adriaan Van Ballegooijen (chair), Steve Keil, Phil Scherrer, Gary Chapman, and Holly Gilbert.

The George Ellery Hale Prize is awarded to a scientist for outstanding contributions to the field of solar astronomy. The 2008 George Ellery Hale Prize winner is Hugh S. Hudson. Dr. Hudson is cited for his fundamental contributions to many aspects of solar and heliospheric physics, in particular his studies of magnetic reconnection and particle acceleration in solar flares, the initiation of coronal mass ejections, nanoflare coronal heating, and the variability of solar irradiance. He is also recognized for his leadership of and contributions to the solar physics community, especially his untiring support for international research collaborations.

The Karen Harvey Prize recognizes a significant contribution to the study of the Sun early in a person's professional career. The 2008 Karen Harvey Prize is awarded to Mark G. Linton for his significant contributions to studies of kink instabilities in delta spots, the interactions of magnetic flux tubes, and patchy reconnection in solar flares.

Popular writing awards are given to authors of popular or semi-popular articles on the Sun or the effects of the Sun on the Earth's environment. One award is made to a scientist author and the other is made to a science writer/journalist. The 2008 awards will be presented to Prof. C. Renee James of Sam Houston State University for the article entitled "Solar Forecast: Storm Ahead" that appeared in the July 2007 issue of Sky & Telescope and to Richard Talcott (senior editor for Astronomy Magazine) for his article, "Earth's Deadly Future," that appeared in the July 2007 issue of Astronomy. The Popular Writing Committee members were Mark Linton (chair), Gordon Holman, Jim McTiernan, Curt Suplee, and Brian Welsch.

A new committee was constituted this year to provide advice to the SPD community and to serve as an advocate for student-related issues with the goal of fostering a healthy growth in student participation in Solar Physics and the development of these students into solar physics scientists. Among other activities the SPD Student Committee selects students to receive stipends to attend the annual SPD meeting, determines the recipient of the new "SPD Best Student Poster of the Year" award, and provides recommendations for support for students attending SPD-sponsored summer schools. The committee members are Gordon Emslie (chair), K.S. Balasubramaniam, and Jiong Qiu.

The Thomas Metcalf SPD Travel Fund was established in 2007 to help support newer members' expenses for attending meetings relevant to solar physics. Money is being collected and we expect the first award to be made next year.

The Summer School Steering Committee represents the SPD in helping to promote and coordinate graduate student summer schools and will provide assistance and advice to local organizers. There are several SPD-science related summer schools in 2009. The committee members are Terry Forbes (chair) John Leibacher, David Alexander, Sarbani Basu, Haimin Wang, Amy Winebarger, Jim Ryan, and Gordon Emslie.

The SPD Education and Public Outreach (EPO) committee continues to make progress in the development and implementation of various education and outreach efforts. The committee works closely with the AAS's Astronomy Education Board (AEB). The SPD, in partnership with the Solar Physics and Aeronomy (SPA) section of the AGU and with strong support from the AGU education office, is implementing a new outreach program for the local community at the May 2008 joint meeting in Ft. Lauderdale. Exploration Station is based on the NASA/RIT and AAS program AstroZone and will be held at every spring and fall meeting of the AGU. The committee has also completed phase one of the expansion of the education section

of the SPD website. Improvements include a more organized structure with clearly defined sections for students, educators, SPD education opportunities, and useful resources. A more robust education section will help students better understand the opportunities available to them and feel more a part of the community, and help engage scientists and facilitate their participation in education and outreach efforts. Progress continues on finding ways to enhance undergraduate and graduate student experiences at professional meetings as well as engaging the SPD community and supporting its involvement in IYA activities. Emilie Drobnes chairs the committee that also includes Dave Dooling, Zoe Frank, Spiros Patsourakos, Pete Riley, Rich Wolfson, Jie Zhang, and several ex officio members.

The Nominating Committee selects candidates for the elected leadership positions of the SPD. This year's committee included Ron Moore (chair), K.D. Leka, and Joe Gurman. In future years the committee's job will be a little easier thanks to a change in the SPD bylaws that was approved by the membership this year. The change will allow the nominating committee, with the concurrence of the SPD Committee, the option of nominating only the incumbent for the offices of division secretary and treasurer.

The SPD's electronic newsletter, SolarNews is distributed semimonthly to the worldwide solar physics community and provides the discipline's premier global means for communicating news and information. Archives are available at <http://solarnews.nso.edu>.

The Solar Physics Division joined the AAS and its other divisions in endorsing a statement prepared by the AAS Committee on Astronomy and Public Policy strongly supporting community-based priority setting as a fundamental component in the effective federal funding of research.