



Solar Physics
Division -- 1998
Annual Report

Stephen W. Kahler, Chair

The purpose of the Solar Physics Division (SPD) is the advancement of the study of the Sun and the coordination of such research with other branches of science. Any member of the AAS may join the SPD by application to the Treasurer of the SPD. Affiliate membership is provided for persons who are not members of the AAS but who are members of another recognized scientific society with interests related to solar physics. Membership in the SPD at the end of 1998 stood at 391 full members, 71 student members and 66 affiliate members for a total of 528 total members. Annual dues are \$8.00.

In the 1998 SPD election Judy Karpen, was elected the vice chair, and Dale Gary was elected for a second three-year term as treasurer. Karen Harvey and Peter Gilman were elected to the SPD Committee (replacing Mona Hagyard and Adriaan van Ballegooijen). With the 1998 SPD meeting John Thomas replaced Thomas Holzer as the Out-Going Vice Chair. Officers continuing their terms through 1998 were Stephen Kahler, chair; Stephen Walton, secretary; and Committee members Terry Forbes and Phil Goode.

The 1999 Nominating Committee consists of Harry Jones (Chair), Matt Penn, and Steve Tomczyk. The Hale Prize Committee consists of John Leibacher (Chair), A. Gordon Emslie, Ernest Hildner, Eric Priest, and Neil Sheeley. The SPD Studentship Committee is chaired by Gordon Emslie. The SPD liaisons are Thomas Ayres (stellar astronomy), James Chen (plasma physics), Victor Pizzo (solar-terrestrial physics), and Reuven Ramaty (high-energy physics). Craig DeForest is the public relations officer. The Popular Writing Award Committee consists of Aad van Ballegooijen (chair), Peter Gilman, Leila Belkora, and Jeffrey Brosius. Two SPD members, John Thomas and John Mariska, are scientific editors for the *Astrophysical Journal*.

The SPD sponsors the George Ellery Hale Prize, awarded to a scientist who has made outstanding contributions to solar physics. The 1999 Hale Prize will be awarded to John W. Harvey of NSO/Tucson for his fundamental contributions to our understanding of the nature of solar magnetic fields and of the internal structure of the Sun through helioseismology, for his development of innovative solar instrumentation, and for his selfless and untiring service to the solar physics community. The Hale Prize is nominally awarded every two years, in even-numbered years, but a prize will

also be awarded at the AAS centennial meeting in Chicago in 1999, in recognition of Hale's key role in the founding of both Yerkes Observatory and of the AAS , which celebrates its centennial in 1999.

The SPD held its 29th annual meeting May 26-29 jointly with the spring meeting of the American Geophysical Union in Boston, Massachusetts. A total of 457 scientific abstracts were submitted in the SH (solar-heliospheric) sessions of the meeting. This was the largest SPD meeting to date, with a number of parallel sessions filling the four days of the meeting. A new SPD booth was prepared for the exhibit area by Lockheed-Martin Corporation and the Jet Propulsion Laboratory. The booth was a big attraction, with 3-D movies of the solar corona on high-definition TV as a highlight of the work done by SPD members. The topics of the special SH sessions of the meeting were:

SH01 Results from the "Whole Sun Month" Campaign: One Solar Rotation

SH02 Active Sun and the Sun-Earth Connection/Space Weather: Modeling and Observations

SH03 Active Sun and the Global Heliosphere: Modeling and Observations

SH04 Suprathermals: Incidental or Essential for Space Plasmas?

SH05 First Results from the Advanced Composition Explorer (ACE) Mission

SH06 Helioseismology, Solar Magnetic Fields, and Flows: Surface and Interior

SH08 Sun-Earth Connection Education and Outreach

Two SPD members, Robert Lin and Guenter Brueckner, were honored as new AGU Fellows at the meeting. We regret to report the death of Guenter Brueckner on 11 July 1998.

The following students received Studentship awards with financial support from the SPD to attend the Boston meeting: Mr. Henry (Trae) Winter (University of Memphis), Mr. Jingshan Wang (New Jersey Institute of Technology), Mr. Ian Sammis (California Institute of Technology), Ms. Sarah Lipsey (University of Colorado), Mr. Edisher Kaghashvili (Abastumani Astrophysical Observatory, Georgia), Ms. Mandy Hagenaar (Universiteit Utrecht, The Netherlands), and Mr. Tony Darnell (University of Colorado).

The second annual SPD Popular Writing Awards, initiated to encourage public education about the Sun and heliosphere, were presented at the AGU/SPD meeting. Dick Thompson of Time Magazine won the journalist prize for his article "Eye on the Storm-Tossed Sun" which appeared in the September 8, 1997 issue. Bradley E. Schaefer received the scientist prize for "Sunspots that Changed the World," from the April 1997 issue of Sky and Telescope.

SPD members voted this fall for a change to the SPD Bylaws to make the Popular Writing Awards permanent. The following new provision for the Popular Writing Award was incorporated under SPD Bylaws Article X: Prizes and Awards:

2. The Solar Physics Division of the American Astronomical Society sponsors, with the cooperation of the American Astronomical Society, two Popular Writing Awards to be awarded annually to authors of popular or semi-popular articles on the Sun or the effects of the Sun on the Earth's environment. The purpose of these awards is to encourage scientists, science writers, and journalists to write about the Sun and thereby educate the public about results from contemporary solar research.

The following rules govern the awards:

(a) The articles shall be judged, and selections for the awards shall be made by a Popular Writing Awards Committee, which is appointed by the Chairperson of the Solar Physics Division in consultation with the Division Committee. The Popular Writing Awards Committee shall consist of five members including a voting chairperson. Four of the members shall be chosen for their knowledge of solar astronomy or space physics, and the fifth member shall be chosen from outside the science community. Terms of office of the committee shall be two years with two or three new members being selected each year.

(b) Awards shall be made annually in two categories, one for scientists (including both professionals and students) and another for science writers and journalists. One award shall be offered in each category.

(c) Any living scientist, science writer or journalist is eligible to receive an award without consideration of race, sex, or nationality, except that current members of the Popular Writing Awards Committee are not eligible for awards in that year.

(d) The Popular Writing Awards Committee is to publish an announcement of the competition for the awards in publications of the Society and the Division. The committee shall actively solicit nominations for the awards. Nominations of candidate articles may be submitted (in writing to the committee) by any member of the public. Self-nominations are welcome. The committee retains the privilege to nominate candidate articles themselves.

(e) Candidate articles are popular or semi-popular articles about contemporary scientific studies of the Sun or the effects of the Sun on the Earth's environment. The articles must be in English, and must have been published in a North American newspaper, magazine, or popular science journal during the previous calendar year. The selection of winning articles is to be based on the following criteria: relevance to solar astronomy or solar physics, or space physics directly related with the Sun; educational value; accuracy in describing the scientific issues involved; clarity of presentation; number of readers who would likely have seen the article.

(f) Each award will be made to the first author of the winning article(s), who will receive a cash award and a certificate citing the article(s) for which the award was made. In case of an article with multiple authors, each co-author will receive such a certificate.

(g) The Division will arrange the funding for the awards, including the cost of producing award certificates (if any), although the Society, as the legal corporate body, is the legal agent for the administration of the funds for these purposes. The awards may be funded in part from the operating funds of the Division. The competition for the awards is subject to annual approval of the SPD Committee.

(h) The winners of the awards shall be announced at the annual meeting of the Division. Formal announcement of the winners of the awards will be carried in the Bulletin of the American Astronomical Society.

The 1999 annual meeting of the SPD will be held jointly with the 194th meeting of the American Astronomical Society in Chicago, Illinois, May 30-June 3 celebrating the centennial year of the Society and the thirtieth anniversary of the SPD. An SPD tour of Yerkes Observatory will take place the first day of the meeting. The Hale Prize, normally given in even-numbered years, will be awarded at this meeting to recognize of the important role of George Ellery Hale in the history of both the AAS and solar physics. The scientific organizer was SPD vice chair Judy Karpen. The program of the SPD consists of XXX papers in the regular sessions as well as in the following six special sessions

SPD I: New Views of the Solar Interior

SPD II: A Centennial Celebration of the Life and Work of George Ellery Hale

SPD III: Active Region Formation and Evolution

SPD IV: Advanced Solar Space Missions

SPD V: The Sun Close Up: Results from the TRACE Mission

SPD VI: Here Comes the Sun: Plans for the Y2K Maximum.

A midday meeting will also be held for community discussion of the NASA Sun-Earth Connection Program Roadmap and the solar physics section of the Decadal Survey of Astronomy and Astrophysics for the National Academy of Sciences.

In 2000 the SPD will hold a separate meeting June 18-23 at Caesars Tahoe in Stateline, Nevada to be hosted by the solar group of the Lockheed-Martin Corporation.

A history of the SPD, which celebrates its 30th anniversary in 1999, was published by John Thomas in an article entitled "The Solar Physics Division" as a contribution to "The American Astronomical Society's First Century" edited by David DeVorkin and published for the centennial celebration of the AAS.

In 1998 the frequency of the SPD electronic newsletter, SolarNews, continued to be two regular issues per month. The SPD Secretary, Stephen Walton, who is the editor, also produced a number of special issues of SolarNews, containing timely items, in addition to the regular bimonthly issues. Current and back issues of SolarNews are available at <http://helios.tuc.noao.edu/SolarNews/>, which is a WWW site maintained by John Leibacher.

Further information about the SPD can be obtained from the Division's WWW site at http://umbra.nascom.nasa.gov/aas_spd/, also accessible from the AAS web site. The SPD WWW site is maintained by Joseph Gurman.