



NEWSLETTER

The American Astronomical Society • 2000 Florida Avenue, NW, Suite 400 • Washington, DC 20009-1231 • 202-328-2010 • aas@aas.org

PRELIMINARY SLATE, 2002 AAS ELECTIONS; Last Call for Nominations

The following have been nominated for office; most of the terms begin June 2003.

President	Neta A. Bahcall Robert P. Kirshner
Vice-President	Chris D. Impey Colin A. Norman
Education Officer	George D. Nelson
Councilors	Todd A. Boroson Gregory D. Bothun Carol A. Christian Harold A. McAlister David R. Silva Alycia J. Weinberger
USNC-IAU	Geraldine J. Peters Yervant Terzian
Nominating Committee	David S. De Young Andrea K. Dupree Steve B. Howell

Additional nominations for Officer or Councilor may be submitted by mail and must be accompanied by a written statement from the nominee indicating a willingness to serve and by the signatures of at least 30 voting Full Members of the Society. Additional nominations for the Nominating Committee must be proposed by at least 5 Full Members of the Society and must also be accompanied by the nominee's written statement indicating a willingness to serve.

All nominations and supporting materials must be received by Monday, **13 September 2002** in the Office of the Secretary. Send nominations to: **Arlo U. Landolt, Louisiana State University, Department of Physics and Astronomy, Baton Rouge, LA 70803-4001.**

HIGHLIGHTS THIS ISSUE

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COUNCIL ACTIONS

The following are among the most noteworthy actions taken by the AAS Council on 2 June 2002 at its 200th Meeting in Albuquerque, NM.

- Approved special projects funding in the amount of \$2,500 in support of the Astronomy Department Chairs' meeting in 2002;
- Approved the selection of RSM McGladrey, Inc. as the AAS auditor for the fiscal year 2002;
- Delegated to the Executive Committee the authority to review and accept the 2001 audit report;
- Approved provisionally the AAS 2003 Budget;
- Adopted the Capital Budget for 2002–2004;
- Adopted a spending formula of 4.5% of the fund balance for the next fiscal year (2003), based upon a three year sliding average;
- Accepted the AAS 2002 election results;
- Accepted the election of **Margaret M. Hanson** to the 2002 Nominating Committee;
- Appointed the Executive Committee as described in *Bylaws*, Article VI. 2, for the interval between the annual business meetings, June 2002 to June 2003;
- Re-appointed **L. V. Kuhl** as one of the AAS representatives to the American Institute of Physics (AIP) Governing Board for the interval March 2003 through March 2006;
- Adopted the Bylaws changes as published in the March 2002 *AAS Newsletter*;
- Adopted the Astronomy Education Board's (AEB's) mission statement and goals;
- Adopted the Annual Reports from the AAS journals;
- Accepted the Annual Reports from the various AAS Committees, Working Groups and Divisions;
- Approved the establishment of the Karen L. Harvey Early Career Award by the Solar Physics Division (see page 14)
- Accepted the University of Calgary's invitation to hold the June 2006 AAS meeting in Calgary, subject to a successful site survey and facility negotiations;
- Voted to have a joint January 2007 meeting with the American Association of Physics Teachers (AAPT) in Seattle;
- Voted to replace Atlanta, GA as a winter meeting site for two cycles beginning in January 2008 (and again in 2012), with Austin, TX subject to a successful site survey and facility negotiations;
- Appointed **John M. Scalo** as the Deputy Editor of the *Astrophysical Journal Letters* for a five year term, extending from 1 January 2003 through 31 December 2007;
- Renewed the term of **James Liebert** as Associate Editor of the *Astrophysical Journal* beginning 1 January 2003 through 31 December 2004;

Continued on page 3

LETTERS TO THE EDITOR

A Model for Research Grants In Retirement

Dear Editor and (Senior) Colleagues:

Since I'm just a few years away from retirement, it's probably safe to say this now: it might be a good thing to review the level and nature of federal grant support for those of us nearing retirement.

We live in an academic world in which the expectation is that salaries will only increase as we become more senior. The expectation also is that research support from outside sources – NSF or NASA – will continue at a constant or increasing level. For some astronomers at some institutions, that makes perfect sense. For others, however, both individuals and institutions, a different approach might have some advantages. For instance, from an institutional point of view, it might be advantageous to reduce both teaching expectations and salary for faculty members as they approach retirement. Some individuals and institutions are negotiating just such arrangements. Those are institutional decisions, not something for a professional community, such as the AAS, to get involved with, but I'd like to extend that model to funding.

Do all grants have to be the \$100-200,000 per year, postdoc plus a couple of graduate students, standard-issue? Some of us, as we turn more senior, may not want or need a postdoc or a pair of graduate students, or may even find it harder to attract them. Nor is it good for the profession to generate so many postdoctoral positions and so few faculty positions.

So what about a new model for NSF or NASA grants, designed for individuals moving towards retirement? It would have the following features (each one of which will annoy somebody, I can be sure!). The grant would cover ordinary research expenses like publication charges, travel, and equipment, and would cover summer salary for the faculty member, but at a level capped to some reasonable figure (not necessarily the standard 1/9 of academic year salary per month now used); no postdocs would be supported; and the number of graduate students per grant would be limited to one.

In all other ways, the nature of the grants and evaluation criteria would be the same as for any other NSF or NASA proposal. The salary limitations would make such grants relatively inexpensive to funding agencies. By ruling out postdocs, some control would be exercised over the proliferation of postdoc positions. Grants of this sort might make it possible for more of us nearing retirement to taper back our activities. The possibility of new faculty positions would thus be opened up, so grants of this nature would address in some small way the current imbalance between the number of postdoctoral positions and the number of tenure-track faculty positions in astronomy.

Why cap summer salary? I have been doing that in my own NSF grants for some years, on the grounds that neither my financial needs nor my level of activity justifies constantly increasing charges to NSF to track my academic salary. I don't expect this to be a popular view, however. Nor is it a crucial part of the general proposal floated above.

I will put my money where my mouth is, and submit a grant along these lines to the NSF within the next year. I will

explicitly point out the various features of the application, like the salary cap and the "no postdoc" provision. I will also suggest that if my colleagues at NSF like this idea, it might serve as a model for future NSF awards.

I promise to let you know how the application turns out!

Bruce Partridge

bpartrid@haverford.edu

Dues, Subscription Rates for 2003

Dues for individual Members in 2003 will not change. Slight increases for Corporate and Publisher Member dues were approved for 2003. Page charges will not change.

Domestic rates for Member subscriptions to AAS journals will be as follows.

Electronic Package (<i>ApJ</i> , <i>ApJS</i> , <i>AJ</i>)	\$ 50
<i>ApJ</i> - Paper	\$ 275
<i>ApJ</i> Paper + Electronic Package	\$ 300
<i>ApJ</i> Supplement - Paper	\$ 55
<i>AJ</i> - Paper	\$ 100
<i>AJ</i> - Paper + Electronic Package	\$ 130
<i>BAAS</i>	\$ 27

(International shipping surcharges will increase slightly from 2002 and these will be detailed on the renewal invoice.)

Member Death Noted

Since the June *Newsletter*, the Society is saddened to learn of the death of the following member:

Gordon J. F. MacDonald

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The \$105.00 annual membership dues for the American Astronomical Society include \$3.00 that is applied toward a subscription to the *AAS Newsletter*. Periodical postage paid at Washington, DC.

POSTMASTER: Send address changes to AAS, 2000 Florida Avenue, NW, Suite 400, Washington, DC 20009-1231.

Items of general interest to be considered for publication in the *Newsletter* should be sent to lscholz@aas.org. Appropriate pictures are welcomed. Further information about deadlines and submitting articles, see <http://www.aas.org/publications/newsletter.html>.

Letters to the Editor on current issues of importance to astronomers are welcomed. Letters must be signed and should not exceed 250 words. Letters must be received by Jeff Linsky, Associate Editor, Letters, no later than one week prior to the Newsletter deadline (above). You may contact Jeff Linsky by email jlinsky@jila.colorado.edu, Tel: 303-492-7838, or FAX: 303-492-5235. The Associate Editor may edit letters, but will consult with authors before doing so. Letters will be published at the discretion of the Editors.

Items submitted for the *AAS Newsletter* are not automatically included in the AAS Electronic Announcements or vice versa. Submit electronic announcement items to ela@aas.org.

AAS Publications Coordinator:	Judy Johnson
Editor:	Robert W. Milkey
Associate Editor:	Lynn Scholz
Associate Editor, Letters:	Jeffrey Linsky, U. Colorado

COUNCIL ACTIONS*Continued from page 1*

- Appointed **Timothy Bastian, Luigi Stella** and **Dieter Hartmann** Scientific Editors of the *Astrophysical Journal* for terms beginning 1 January 2003 through 31 December 2005 (see story below);
- Accepted the appointments to the Presidentially-appointed Committees and to various other Committee vacancies;
- Ratified the makeup of the Publications Board for 2002-2003, including **Judith T. Karpen**, just elected to a vacancy by Council for a term 1 January 2003 to 31 December 2006;
- Agreed that for each future AAS search for a journal editor, the Publications Board Chair will bring to Council for its approval a description of the process to be used in the search for that particular Editor. The approved process then would be presented to the membership via the *AAS Newsletter* and the AAS website.

PUBLISHING***The Astrophysical Journal Letters*****Editorial Transition**

The transition of editorial duties from Professor **Alexander Dalgarno** to Professor **Christopher Sneden** will begin **1 September**. Authors submitting manuscripts electronically through the Web Peer Review Service may continue to submit as normal and the manuscripts will be redirected automatically. Beginning **1 October 2002**, authors submitting paper manuscripts by postal mail should direct their submissions to *The Astrophysical Journal Letters*, Department of Astronomy, University of Texas, 2511 Speedway, RLM Building 15.308, Austin, TX 78712.

During this transition period, Dr. Dalgarno and the Cambridge staff will continue the peer review of all manuscripts in progress, with the goal of completing these by the end of the year. Referees will continue to correspond with the editor who assigned the manuscript. Further details, if necessary, will be posted on the web site for the journal and will be distributed through the AAS email notice service.

New *ApJ* Scientific Editors Appointed

At the June AAS meeting the Council approved the appointment of three new Scientific Editors to the *ApJ*. **Timothy Bastian** (NRAO), **Dieter Hartmann** (Clemson University) and **Luigi Stella** (University of Rome) will begin three-year terms as *ApJ* editors in January 2003.

Timothy Bastian is a Scientist at NRAO Charlottesville, and holds an adjunct faculty position in the Department of Astronomy at the University of Virginia. His research has centered on radio observations of the Sun and stars, and he has collaborated on numerous multi-wavelength studies of the outer solar atmosphere and related phenomena.

Dieter Hartmann is Associate Professor in the Department of Physics and Astronomy at Clemson University, and a leading expert in the subject of gamma-ray bursts. His research spans a broad range of topics in high-energy astrophysics, ranging from gamma-ray and X-ray space observations to

ground-based optical observations, and theoretical modeling of gamma-ray bursts, accretion binaries, supernovae, and supernova remnants.

Luigi Stella is Professor and Astronomer at the Astronomical Observatory of Rome, and Professor of High Energy Astrophysics at the University of Rome Tor Vergata. He is an internationally recognized researcher in the analysis of X-ray observations of compact objects and AGNs, and in the theoretical modeling and interpretation of the accretion phenomena that power these sources.

Three of the current *ApJ* Scientific Editors will complete their editorial service at the end of this year, **Bernhard Haisch** (California Institute for Physics and Astronomy), **Fulvio Melia** (University of Arizona), and **John Thomas** (University of Rochester). We are all indebted to these individuals for their unselfish service to the *ApJ* and our professional community.

***ApJ* Online Preprints Now Available**

Last month the *ApJ* began to make electronic copies of accepted manuscripts available on its website as on-line preprints. These preprints do not include the corrections made during the copyediting and production processes, but they do offer readers access to preprint copies of the peer-reviewed papers, several weeks in advance of publication. This service is not intended to supplant the other successful e-print services in physics and astronomy, but it does provide a homogeneous library of peer-reviewed *ApJ* preprints as an added service to Journal authors and readers.

Posting of *ApJ* preprints is at the discretion of the authors, who must grant permission to post preprints when they submit their papers, and submit a copyright release form prior to acceptance. The papers are formatted as AASTeX preprints (pdf or postscript files), to distinguish them clearly from the published *ApJ* articles, and the postings will be removed when the final papers are published. See <http://www.journals.uchicago.edu/ApJ/future.html> to access these preprints.

The list of accepted papers is accessible to anyone, but subscription access (via personal or institutional subscriptions) is required to download the papers themselves. Readers may also subscribe to an email alerting service that will send the titles and authors of recently accepted papers, on either a daily or weekly basis. To subscribe go to <http://ucp.uchicago.edu/mailman/listinfo.cgi/apj-preprints-daily> or <http://ucp.uchicago.edu/mailman/listinfo.cgi/apj-preprints-weekly>.

At this stage, preprints are being posted for papers accepted to the *ApJ* main journal (Part 1) and the *ApJ Supplements*. In the future, we plan to extend the service to the *ApJ Letters* and the *AJ*, and we will announce their availability in future issues of the *AAS Newsletter*.

***ApJ* Website Updated**

A major update has been made to the *ApJ* website at <http://www.journals.uchicago.edu/ApJ>. This includes an upgrade to the author instructions pages, which now incorporates more complete information in a more readily accessible format. The site also features the latest news on the *ApJ Letters* transition, new Scientific Editor appointments, and electronic publishing updates.

Please Donate Laptops

The AAS is planning in future to run in-house the Cybercafe part of AAS meetings. (In the past, we have been borrowing computers from local institutions and renting them.) To do this, we will need to acquire at least 20 laptop computers to setup at each meeting to give members access to the Internet to read their email and browse the Web. Since the purchase of so many laptops would be prohibitive, we are asking our members to consider donating surplus laptops that they might have. The AAS is a 503(c) not-for-profit organization and can provide the paperwork necessary to claim tax-deductible donation for these contributions.

Of course, we appreciate any donations that you could make, but we would prefer the following configuration: Working MS

Windows-compatible laptop with a minimum of a Pentium II processor, 32 MB RAM, 10 GB Hard Drive and Power Cables. Optional items that would be appreciated would be a floppy disk drive, CD-ROM drive, USB port, and ethernet adapter.

If you might be interested in making a donation, please contact Debbie Kovalsky at the AAS, kovalsky@aas.org.

AAS FISCAL REPORT DELAYED

Due to circumstances beyond the control of the AAS, the financial statements for year 2001 were not completed by the auditors in time for a report to be included in this edition of the Newsletter. The complete report will be published in the October *Newsletter*.

2003 AAS Prize Nomination Form

Please read the full descriptions of the AAS prizes and awards at <http://www.aas.org> or abbreviated information on page 12 of the 2002 *AAS Membership Directory*. All nominations are due by **1 October 2002**.

I wish to nominate (Name) _____

of (Institution) _____

for the following prize (check one):

_____ Russell Lectureship; _____ Warner Prize; _____ Pierce Prize; _____ Education Prize;
 _____ Van Biesbroeck Prize; _____ Heineman Prize; _____ Weber Award.

Please send to the *Prize Chair* (below) a letter with this form stating upon which major scientific achievements you base your belief that this person is a suitable candidate for the prize. Enclose a curriculum vitae of the nominee, bibliography and abstracts of three papers illustrative of the candidate's merit, and request that three supporting letters also to be sent to the Chair.

Print Your Name _____ Signature _____

Phone Number _____ Email Address _____

Return this form to the appropriate prize committee chair:

Warner/Pierce Prize

Margaret J. Geller
 Harvard-Smithsonian CfA
 60 Garden Street
 Cambridge, MA 02138
 Tel: 617-495-7409
 FAX: 617-495-7467
 mjg@cfa.harvard.edu

Henry N. Russell Lecture

James E. Hesser
 Dominion Astrophys. Obs.
 HIA, NRC of Canada
 5071 W. Saanich Road
 Victoria, BC V9E 2E7,
 Canada
 Tel: 250-363-0007
 FAX: 250-363-6970
 jim.hesser@nrc.ca

Education Prize

Alexei I. Filippenko
 UC, Berkeley
 Dept. of Astronomy
 601 Campbell Hall
 Berkeley, CA 94720-3411
 Tel: 510-642-1813
 FAX: 510-642-3411
 alex@astro.berkeley.edu

Van Biesbroeck Prize

Martha L. Hazen
 Harvard College Obs.
 60 Garden Street
 Cambridge, MA 02138
 Tel: 617-495-3362
 FAX: 617-495-8018
 mhazen@cfa.harvard.edu

Dannie Heineman Prize

Christine Jones
 Harvard-Smithsonian CfA
 60 Garden Street
 Cambridge, MA 02138
 Tel: 617-495-7137
 FAX: 617-496-8018
 cjf@cfa.harvard.edu

Joseph Weber Award

William J. Welch
 UC, Berkeley
 Radio Astronomy Lab.
 Berkeley, CA 94720-3411
 Tel: 510-643-6543
 FAX: 510-643-3411
 wwelch@astro.berkeley.edu

COMMITTEE NEWS

Status of Minorities in Astronomy

Chick Woodward, Chair, chelsea@astro.umn.edu and
Keivan Stassun, Editor, SPECTRUM, keivan@astro.wisc.edu

Updates to CSMA website: Minority Issues

The CSMA website has recently been updated to include information on a variety of issues relevant to minorities in the sciences and in higher education. This information can be found by following the "Minority Issues" link on the CSMA homepage at <http://www.astro.wisc.edu/csma>.

The Minority Issues page presently includes articles in the following areas: Research on the Benefits of Diversity in Higher Education; Minority Faculty Recruitment, Promotion and Tenure; and Affirmative Action.

We plan to continue updating and expanding this section of the CSMA website. We recognize that AAS members concerned about diversity and representation may not always know of good sources for information on these issues, and indeed may not always know what the relevant issues are. We hope you will find this area of the CSMA website useful, informative, and provocative.

One Hundred Minority Scholarships

The following website created by BlackExcell, <http://www.BlackExcel.org>, contains a list of links to 100+ scholarship programs for minority students. Please feel free to circulate this list to anyone who might find it useful.

2003 Edward A. Bouchet Award

The American Physical Society invites nominations of candidates for the 2003 Edward A. Bouchet Award. This award is sponsored by the Research Corporation to promote the participation of under-represented minorities in physics by identifying and recognizing a distinguished minority physicist who has made significant contributions to physics research. Any Black, Hispanic, or Native American who has made significant contributions to physics research and is an effective communicator.

The Lectureship consists of a stipend of \$3,500 plus support for travel to an APS meeting where the recipient will receive the award and give a presentation. Deadline for nominations is **15 August 2002**. Send nominating materials to Ron Mickens (Chair), 2853 Chaucer Dr., SW, Atlanta GA 30311; Tel: 404-696-0739; Fax: 404-880-6258; mick23756@aol.com. Complete details and guidelines for nomination can be found at <http://www.aps.org/praw/bouchet/index.html>.

Status of Women in Astronomy

Meg Urry, Chair, meg.urry@yale.edu

STATUS Seeks New Editor(s)

STATUS, the twice-yearly newsletter/magazine of the AAS Committee on the Status of Women in Astronomy (CSWA), is looking for one or more new editors. Since the fall of 1998, the co-editors of STATUS have been Meg Urry (Yale University) and Lisa Frattare (STScI); in 2002, they were joined by Joannah Hinz (University of Arizona). STATUS consists of original articles and reprints, most solicited or selected by the editors. In addition to addressing the specific status of women in

astronomy, STATUS also looks at research on women in other male-dominated fields. It is published by the American Astronomical Society (AAS), with production done at the Space Telescope Science Institute (STScI). Previous issues are available online at <http://www.aas.org/~cswa/pubs.html> (or AAS members can subscribe directly by sending their mail address to drenner@aas.org).

The job of STATUS editor involves soliciting articles from potential authors, finding relevant articles in the press and getting reprint permissions, editing text, interfacing with the graphics layout people, and working with the AAS office. Interested parties should send a brief email to Meg Urry (meg.urry@aas.org), the CSWA chair, outlining their interest and previous experience, if any. Please circulate this notice to anyone who might be interested.

AAUW Educational Foundation Grants

As one of the largest sources of funding in the world exclusively for graduate women, the American Association of University Women Educational Foundation in 2002-2003, will distribute more than \$4 million in fellowships, grants, and awards. More than a century after the first grant was awarded, the Foundation continues a dynamic and distinguished tradition of advancing educational and career opportunities for all women. See <http://www.aauw.org/3000/fdnfelgra/index.html> for information on current programs.

theWoman Astronomer

theWoman Astronomer has a new Web site at <http://www.womanastronomer.com>. The site has had over 5,500 visitors since it went live on the Web the first of the year. Please email saturna2@earthlink.net with contributions, suggestions for relevant links to add, and comments on ways to improve the site.

EDUCATION

Bruce Partridge, Education Officer, bpartrid@haverford.edu and
Susana Deustua, Director of Educational Activities,
sedeustua@aas.org

Life in the Universe or Astrobiology 101

David Morrison, NASA Astrobiology Institute,
dmorrison@arc.nasa.gov

There has been a recent surge in interest in teaching introductory astrobiology "Astrobio 101" as a course for non-science undergraduates. One survey indicates that more than 100 such courses are being offered, primarily by astronomers. Texts in use include *The Search for Life in the Universe* (3rd Ed) by Goldsmith and Owen; *The Search for Life on Other Planets* by Jakosky; and the new *Life in the Universe* by Bennett, Shostak & Jakosky. Since these are mostly new courses in a new discipline, there are many pedagogical approaches and choices of subject emphasis. I am facilitating the sharing of information among current and prospective instructors so that we can learn from each other's experiences. If you are interested, please contact me for further information.

Continued on the next page

Classroom Assessment Techniques in Astronomy to Improve Learning

Michael Zeilik, *The University of New Mexico*, zeilik@la.unm.edu

Are your students learning what you would like them to learn, especially in ASTRO 101? How do you find out? By using classroom assessment techniques (CATs)! These techniques will allow you to find out about your students' learning, and then improve your teaching to better achieve your learning goals. And many CATs have been proven effective without being time consuming.

Where can you find such CATs? The Field-tested Learning Assessment Guide (FLAG) at <http://www.wcer.wisc.edu/nise/cl1> is a "one-stop" resource for faculty who want to improve student learning. The FLAG presents an integrated and tested set of assessment resources and tools, many specific to astronomy and physics. They are research-based and peer reviewed. Take a look! We have just "gone live" with a revised version of the site. Please send me your comments at zeilik@la.unm.edu.

The Classroom Space Project

The following is a description of a British astronomy education program that may be of interest to some AAS members -- Bruce Partridge

Classroom Space is a national project of the United Kingdom, funded by the Particle Physics and Astronomy Research Council and run by the University of Leicester and the National Space Centre. The project is managed by Dr. Martin Barstow, Reader in Astrophysics and Space Science at the University of Leicester (mab@star.le.ac.uk). All the educational materials have been prepared by Sarah Verbickas, the project officer.

It is aimed at teachers and their 11-16 year old students. The Classroom Space materials use the exciting themes of space science and astronomy to teach key areas of the UK Science National Curriculum. The multi-disciplinary approach to the project mirrors that found in the Challenger Learning Centers and many modules will probably also be useful within US schools. Some activities can also be used within the Mathematics, Geography and Information and Communications Technology curricula. Topics covered include weather, life, volcanoes, rocks and water.

All activities incorporate space data and images that have been collected on real space missions that look at our Earth, the Moon and Mars, giving students access to information they would usually never see!

For more information about Classroom Space check out <http://www.classroomspace.org.uk> or contact: Sarah Verbickas, The National Space Centre, Exploration Drive, Leicester, United Kingdom, sarahv@spacecentre.co.uk.

How would a teacher use Classroom Space?

Classroom Space provides teachers with all the materials they would need to teach a complete lesson. There are teacher guides, lesson plans and marking schemes; student activities and worksheets; space data and images, and teaching aids such as transparencies. To download all the materials needed, visit the website, <http://www.classroomspace.org.uk>.

How will Classroom Space benefit students?

From our experience students are fascinated and enthused by space and astronomy. With Classroom Space they will work with real space data be it numbers or images that have been

collected on real space missions. They also get to see familiar science concepts from a different, and often more interesting angle. Many activities allow students to work in teams and solve problems, helping to develop key skills.

Who has created the Classroom Space activities?

Classroom Space is a team effort. The activities are initially created by a project officer who has a background in space science and astronomy. The materials are then reviewed by former teachers who now make up the Education Team at the National Space Centre, and by Post-Graduate Certificate of Education (UK teacher's certification) tutors in the Department of Education at Leicester University. All materials have been tested by teachers in schools across the UK.

All materials come with background notes for the teacher, which explain the space science concepts behind each activity. The website also has links to other sites that will provide teachers, or their students, with more information on each subject area.

How to get hold of the Classroom Space materials:

All the Classroom Space materials are freely available to download from the Internet at <http://www.classroomspace.org.uk>. Teachers who do not have Internet access and would still like to use the materials can contact Sarah Verbickas at the National Space Centre (see above).

RESEARCH IN ASTRONOMY EDUCATION:

A statement adopted by the Executive Committee of the AAS, 18 March 2002, and confirmed by Council on 2 June 2002

In recent years, astronomy education research has begun to emerge as a research area within some astronomy and physics/astronomy departments. This type of research is pursued at several North American universities, it has attracted funding from major governmental agencies, it is both objective and experimental, it is developing publication and dissemination mechanisms, and researchers trained in this area are being recruited by North American colleges and universities. Astronomy education research can and should be subject to the same criteria for evaluation (papers published, grants, etc.) as research in other fields of astronomy. The findings of astronomy education research and the scholarship of teaching, when properly implemented and supported, will improve pedagogical techniques and the evaluation of both teaching and student learning.

The AAS applauds and supports the acceptance and utilization by astronomy departments of research in astronomy education. The successful adaptation of astronomy education research to improving teaching and learning in astronomy departments requires close contact between astronomy education researchers, education researchers in other disciplines and teachers who are primarily research scientists. The AAS recognizes that the success and utility of astronomy education research is greatly enhanced when it is centered in an astronomy or physics/astronomy department.

2002 AAS, ASP and IAPPP Scholarships

Terry Oswalt, Florida Institute of Technology, oswalt@luyten.astro.fit.edu.

Two high school students, **Matthew Douglas Apau Jachowski** and **Harish Gautam Khandrika** were presented with the 2002 *Priscilla and Bart Bok Awards* by the American Astronomical Society (AAS) and Astronomical Society of the Pacific (ASP). Their outstanding astronomical research projects were exhibited at the 53rd annual Intel International Science and Engineering Fair (ISEF), held in Louisville, Kentucky during 12-18 May 2002.

Jachowski, a 16-year-old from Maui High School in Kahului, Hawaii, won the AAS-ASP Bok First Place Award and a \$5000 scholarship for his project "Effect of Observation Timing on Initial Orbit Determination Accuracy." Jachowski investigated how the precision of orbital elements determined for several asteroids are affected by the times observations are gathered and by the computational techniques used. Jachowski's teacher/sponsor was **Keith Imada**.

Khandrika, 14, from La Jolla High School in La Jolla, California, won the AAS-ASP Bok Second Place Award and a \$3000 scholarship for his project "Evidence for Decay of ⁴⁴Titanium to ⁴⁴Calcium in Supernova Remnant Cassiopeia A." Using Compton Gamma Ray Observatory data, Khandrika measured the isotopic abundances in Cass A and found evidence for the formation and decay of ⁴⁴Ti, indicating that the stellar remnant is a neutron star, rather than a black hole. Khandrika's teacher/sponsor was **Martin Teachworth**.

The AAS-ASP judging team consisted of **Terry Oswalt** of the Florida Institute of Technology, **Douglas Hall** of Vanderbilt University and **Jay White** of Rhodes College. Oswalt presented the Bok Awards on behalf of the AAS and ASP during the Special Awards ceremonies, held at the Louisville Convention Center on Thursday evening, 16 May.

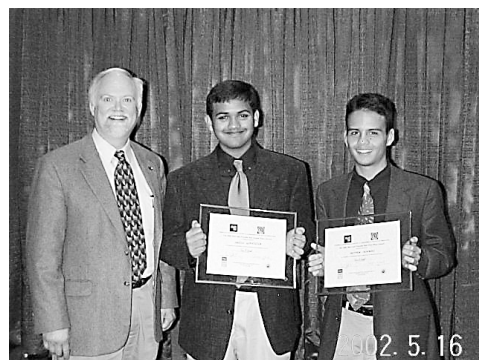
Oswalt, Hall and White also served as judges for the *Richard D. Lines Special Award in Astronomy*,

presented annually at the ISEF by the International Amateur-Professional Photoelectric Photometry (IAPPP). Hall presented the Lines Award and a \$5000 scholarship to **Kyle Brady Winkleman**, 14, from Louis Scott Junior High School in Winchester, Tennessee. Winkleman's winning project was "Study of Atmospheric Turbulent Cells Using Stellar Aberration." Using data collected with a small telescope and homemade interferometer, Winkleman investigated the size of atmospheric turbulence cells by measuring how stellar twinkling (scintillation) varies as the separation between two telescopes is increased. Winkleman's teacher/sponsor was **Ruth Walton**.

All three students have been invited to publish papers describing their projects in the *IAPPP*

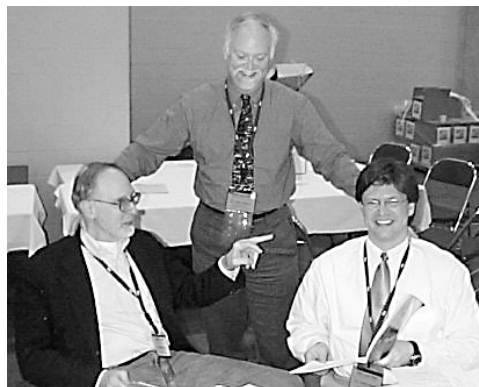
Communications, an international journal specializing in collaborative astronomy research projects involving students, amateurs and professional astronomers. In addition, the high school science departments of each student will receive \$1000. The scholarships and science department contributions are provided by a grant from the National Science Foundation, administered by the AAS on behalf of the three participating professional organizations.

Science Service publishes the weekly *Science News*, and hosts the Intel International Science and Engineering Fair. Each year 3-5 million students complete science research projects and roughly 1,200 of those students earn the right to compete at the Intel ISEF. Throughout the United States and around the world, 500 Intel ISEF-affiliated science fairs send two individual finalists and one team project to compete on the international level. Held annually in May, the fair brings together students from 40 nations to compete for scholarships, tuition grants, internships, scientific field trips and the grand prize: a trip to attend the Nobel Prize Ceremonies in Stockholm, Sweden. Science Service founded the ISEF in 1950. The AAS, ASP and IAPPP have co-sponsored special awards in astronomy at the annual ISEF since 1991.



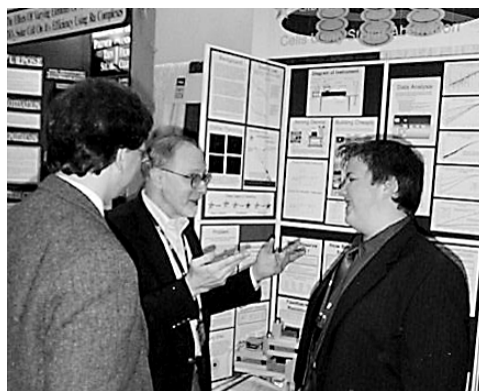
Judge Terry Oswalt (left, Florida Institute of Technology) presented to Matthew Douglas Apau Jachowski (right) and Harish Gautam Khandrika (center) the 2002 Priscilla and Bart Bok Awards of the AAS.

Photo by FocusOne.



The AAS-ASP judging team was (l. to r.) Douglas Hall (Vanderbilt University), Terry Oswalt (Florida Institute of Technology), and Jay White (Rhodes College).

Photo by Randy Burch

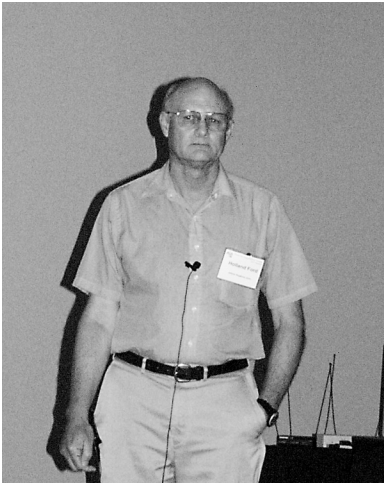


Kyle Brady Winkleman (right), 14, from Louis Scott Junior High School in Winchester, TN, won the International Amateur-Professional Photoelectric Photometry (IAPPP) Richard D. Lines Award and a \$5000 scholarship for his project, "Study of Atmospheric Turbulent Cells Using Stellar Aberration."

Photo by Terry Oswalt



Harjit Ahluwalia (U. New Mexico) chaired the local organizing committee.
Photo by Steve Maran



Principal Investigator Holland Ford (Johns Hopkins U.) described the performance of Hubble's new Advanced Camera for Surveys.



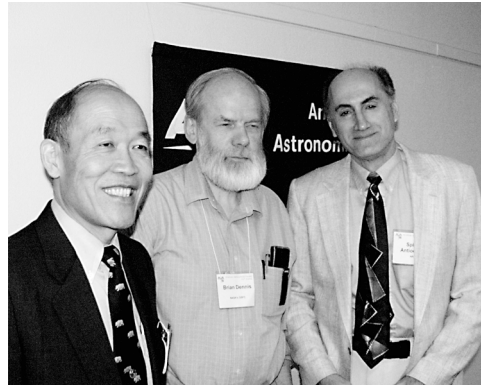
Gethyn Timothy (Nightsen, Inc.) displayed the first far-ultraviolet image of Betelgeuse.

200th AAS Meeting in Albuquerque

The AAS met again in the Albuquerque Convention Center after a dozen years. The Convention Center expanded substantially in the meantime, as has the attendance at our June meetings. Local Chair **Harjit S. Ahluwalia** (University of New Mexico) and his associates did a wonderful job in arranging for our return visit. There were just under 1400 registrants. For Prizes awarded at the meeting see page 15. All illustrations are AAS Photos by Kelley Knight, © 2002 American Astronomical Society, unless otherwise indicated.



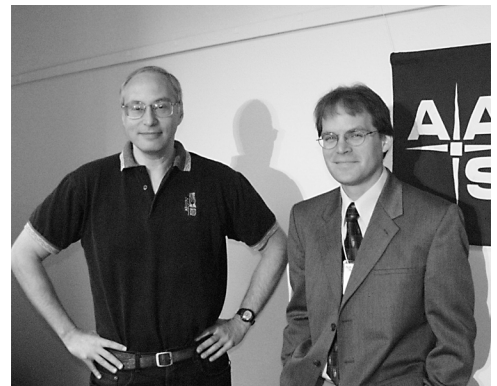
Bradley Hindman (left) and Deborah Haber (both, Joint Institute for Laboratory Astrophysics) reported on "solar subsurface weather," some recent results from helioseismology with the Michelson Doppler Imager on SOHO. John Leibacher (right, NSO) provided commentary



Robert Lin (left, UC Berkeley) and Brian Dennis (ctr., NASA GSFC) described the first results on solar flares from the RHESSI satellite. Spiro Antiochos (Naval Research Lab.) commented on the work.



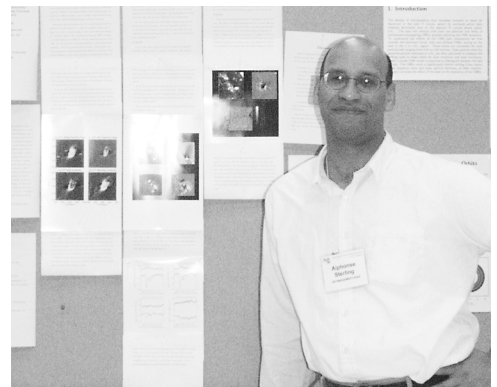
Sally Heap (NASA GSFC) showed Joseph Cassinelli (U. Wisconsin) her new and cooler temperature scale for O-type stars.



Michael Warren (right, Los Alamos National Lab.) presented three-dimensional simulations of massive core collapse to produce a supernova. Adam Burrows (left, U. Arizona), commented on the need for even more detailed physics in such models.



Michael Odenkirchen and Eva Grebel (both, Max Planck Institute for Astronomy, Heidelberg) described a globular cluster tidally torn across ten degrees on the sky.



Alphonse Sterling (NASA MSFC) investigated coronal dimmings, signatures of the source regions of coronal mass ejections.



Phillip Kronberg and hat-sporting Stirling Colgate (both, Los Alamos National Lab.) re-evaluated the energy released by magnetic activity associated with giant black holes, and concluded that it's immense.



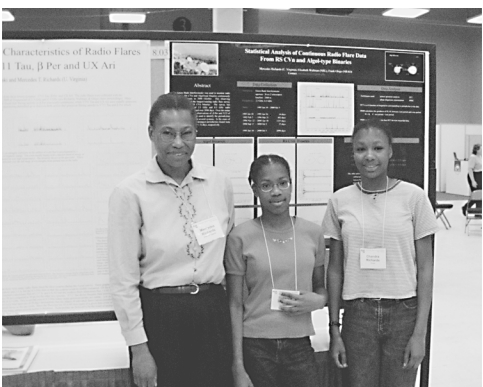
Experts who spoke at a briefing on the 40th anniversary of X-ray astronomy were (l.-to-r.) Jean Swank (NASA GSFC), Herbert Gursky (Naval Research Lab.), Richard Griffiths (Carnegie Mellon U.), John Mulchaey (Carnegie Observatories), and Craig Sarazin (U. Virginia).



Edward Cheng (left, NASA GSFC), Daniela Calzetti (STScI) and Rodger Thompson (U. Arizona) briefed the press on the first post-servicing images from NICMOS on HST.



Herbert Gursky reminisced on the sounding rocket flight of 12 June 1962, which discovered Scorpius X-1 and the X-ray background radiation.



Mercedes Richards (left, U. Virginia) posed with daughters Suzanne (center) and Chandra at her display paper on radio flares from active binary stars.



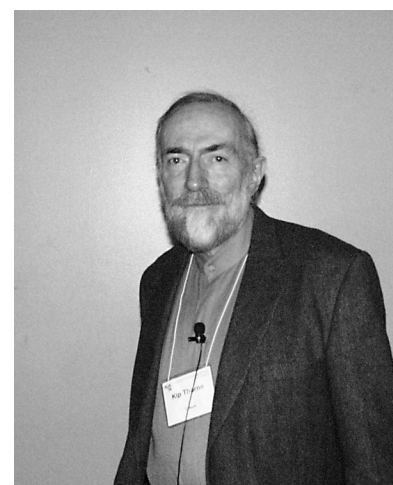
Ann Boesgaard and Eric Armengaud (both, U. Hawaii, Manoa) reported on the "Beryllium dip," a new probe of stellar interiors.



Carol Grady (NOAO/NASA GSFC) told about teaching astronomy to learning impaired students in the mainstream elementary school classroom.



Fran Bagenal (U. Colorado) gave an invited talk on the Jovian magnetosphere.



Kip Thorne (Caltech) gave the public lecture on gravitational radiation.

For Award Photographs, see page 15

CALENDAR

Listed below are meetings or other events that have come to our attention (new or revised listings noted with an asterisk). Due to space limitations, we publish notice of meetings 1) occurring in North, South and Central America; 2) meetings of the IAU; and 3) meetings as requested by AAS Members. Meeting publication may only be assured by emailing lscholz@aas.org. Meetings that fall within 30 days of publication are not listed.

A comprehensive list of world-wide astronomy meetings is maintained by Liz Bryson, Librarian C-F-H Telescope in collaboration with the Canadian Astronomy Data Centre, Victoria, BC. The list may be accessed and meeting information entered at <http://cadwww.hia.nrc.ca/meetings>.

AAS and AAS Division Meetings

Division for Planetary Sciences

6–11 October 2002 — Birmingham, AL

Contact: J. Hunter Waite (hunter@umich.edu)

201st Meeting of the AAS

5–9 January 2003 — Seattle, WA

Contact: AAS Executive Office (diana@aas.org)

Division on Dynamical Astronomy

4–7 May 2003 — Ithaca, NY

Contact: Joe Burns (jab16@cornell.edu)

202nd Meeting of the AAS

25–29 May 2003 — Nashville, TN

Contact: Rich Gelderman (gelderman@wku.edu)

Other Events

*2nd Meeting on Astrometry in Latin America and 3rd Brazilian Meeting on Fundamental Astronomy

2–5 September 2002 — Araraquara, Brazil

Contact: adelabr@andromeda.iagusp.usp.br

<http://www.iagusp.usp.br/~adelabr>

*Scientific Requirements for Mitigation of Comets and Asteroids

3–6 September 2002 — Washington, DC

Contact: Nalin Samarasingha (nalin@noao.edu)

<http://www.noao.edu/meetings/mitigation>

11th UN/ESA Workshop on Basic Space Science

9–13 September 2002 — Cordoba, Argentina

Contact: Hans Haubold (haubold@kph.tuwien.ac.at)

<http://www.seas.columbia.edu/~ah297/un-esa>

Winds, Bubbles and Explosions: Honoring John Dyson

9–13 September 2002 — Patzcuaro, Michoacán, Mexico

Contact: Jane Arthur (bubbles@astrosmo.unam.mx)

<http://www.astrosmo.unam.mx/~bubbles>

CNO in the Universe

10–14 September 2002 — Saint-Luc (Valais), Switzerland

Contact: Daniel Schaerer (schaerer@ast.obs-mip.fr)

<http://obswww.unige.ch/cno>

Celestial Mechanics 2002

10–14 September 2002 — St. Petersburg, Russian Federation

Contact: N. V. Shuigina (nvf@quasar.ipa.nw.ru)

IAU Colloquium 189: “Astrophysical Tides: The Effects in the Solar and Exoplanetary Systems”

16–20 September 2002 — Nanjing, China

Contact: Yuehua Ma (yhma@mail.pmo.ac.cn)

<http://www.pmo.ac.cn/web/IAU189/1st-announcement.html>

COSMO-02: International Workshop on Particle Physics and the Early Universe

18–21 September 2002 — Chicago, IL

Contact: cosmo02@pancake.uchicago.edu

<http://pancake.uchicago.edu/~cosmo02>

International Meteor Conference 2002

26–29 September 2002 — Frombork, Poland

Contact: Ina Rendtel (treasurer@imo.net)

<http://www.imo.net/news/imc.html>

Astronomical Society of the Pacific Annual Meeting:

“The Cosmic Thread: From Stars to Life”

28–29 September 2002 — Berkeley, CA

Contact: Michael Bennett (mbennett@astrosociety.org)

<http://www.astrosociety.org>

CODATA Conf.: Frontiers of Scientific and Technical Data

29 September–3 October 2002 — Montreal, Canada

<http://www.codata.org>

*“Astrophysical Particle Acceleration in Geospace and Beyond”

6–10 October 2002 — Chattanooga, TN

Contact: Rob Preece (Rob.Preece@nssdc.nasa.gov)

<http://huntsville2002.physics.auburn.edu>

*The Emergence of Cosmic Structure

7–9 October 2002 — College Park, MD

Contact: Susan Lehr (October@astro.umd.edu)

<http://www.astro.umd.edu/october/2002/2002.html>

13th Annual October Astrophysics Conference in Maryland:

The Emergence of Cosmic Structure

7–9 October 2002 — College Park, MD

Contact: Susan Lehr (October@astro.umd.edu)

<http://www.astro.umd.edu/october>

2002 Lowell Workshop: “Outer Edges of Dwarf Irregular Galaxies: Stars and Gas”

10–11 October 2002 — Flagstaff, AZ

Contact: Deidre Hunter (lowell02@lowell.edu)

<http://www.lowell.edu/Workshops/Lowell02>

Radio Astronomy at the Fringe

10–12 October 2002 — Green Bank, WV

Contact: J. Richard Fisher (rfisher@nrao.edu)

34th COSPAR Scientific Assembly/World Space Congress

10–19 October 2002 — Houston, TX

Contact: cospar@copernicus.org

<http://www.copernicus.org/COSPAR/COSPAR.html>

Astronomical Data Analysis Software and Systems (ADASS XII)

13–16 October 2002 — Baltimore, MD

Contact: Perry Greenfield (adass@stsci.edu)

<http://www.adass2002.stsci.edu>

Annual Astronomy Conference of Mexico (Reunion Anual de Astronomía)

16–18 October 2002 — Guadalajara, Mexico

Contact: J. P. Phillips (jpp@udgerv.cencar.udg.mx)

The 2002 HST Calibration Workshop

17–18 October 2002 — Baltimore, MD

Contact: Dixie Shipley (calworkshop@stsci.edu)

<http://www.stsci.edu/stsci/meeting/cal02>

*Neutrino News from the Lab and the Cosmos

17–19 October 2002 — Batavia, IL

Contact: Kev Abazajian (aba@fnal.gov)

<http://www-astro-theory.fnal.gov/Conferences/NuCosmo/>

- Carnegie Obs. Centennial Symp. I: "Co-evolution of Black Holes and Galaxies"
20–25 October 2002 — Pasadena, CA
Contact: Luis Ho (lho@ociw.edu)
<http://www.ociw.edu/ociw/symposia/symposium1>
- International Dark Sky Association National Fall Meeting
25–26 October 2002 — Cambridge, MA
Contact: Dan Green (green@cfa.harvard.edu)
<http://cfa-www.harvard.edu/cfa/ps/nelpag/meetings.html>
- *NAS Sackler Coll.: Challenges to the Standard Paradigm: Fundamental Physics and Cosmology
1–3 November 2002 — Irvine, CA
Contact: Miriam Glaser Heston (mheston@nas.edu)
<http://www.nationalacademies.org/nas/colloquia>
- Galactic Center Workshop 2002
3–8 November 2002 — Kailua-Kona, HI
Contact: Thomas R. Geballe (tgeballe@gemini.edu)
http://www.gemini.edu/science/gc_conf
- *VII Escuela la Hechicera, Relatividad, Campos y Astrofísica
3–8 November 2003 — Mérida, Venezuela
Contact: Dalia Márquez (escuela@ula.ve)
<http://ogion.ciens.ula.ve>
- IAU Symposium. 215: "Stellar Rotation"
11–15 November 2002 — Cancun, Mexico
Contact: André Maeder (andre.maeder@obs.unige.ch)
<http://cuevano.astro.ugto.mx/~eenens/iau215>
- Carnegie Obs. Centennial Symp. II: "Measuring and Modeling the Universe"
17–22 November 2002 — Pasadena, CA
Contact: Wendy Freedman (wfreedman@ociw.edu)
<http://www.ociw.edu/ociw/symposia/symposium2>
- *SIRTF Observation Planning Workshop
22–23 November 2003 — Pasadena, CA
Contact: obsplan@ipac.caltech.edu
<http://sirtf.caltech.edu/SSC/ost/WORKSHOP>
- *SIRTF Observation Planning Workshop
6–7 December 2003 — Pasadena, CA
Contact: obsplan@ipac.caltech.edu
<http://sirtf.caltech.edu/SSC/ost/WORKSHOP>
- *American Geophysical Union 2002 Fall Meeting
6–10 December 2002 — San Francisco, CA
Contact: meetings@agu.org
<http://www.agu.org/meetings/fm2top.html>
- IAU Coll. 190: "Magnetic Cataclysmic Variables"
8–13 December 2002 — Cape Town, South Africa
Contact: Sonja Vrielmann (sonja@penguin.ast.uct.ac.za)
<http://mensa.ast.uct.ac.za/mcv.html>
- XXIst Texas Symposium on Relativistic Astrophysics
9–13 December 2002 — Florence, Italy
Contact: texas_florence@arcetri.astro.it
<http://www.arcetri.astro.it/~texaflor>
- Neutrinos: Data Cosmos and Planck Scale
15 January–15 May 2003 — Santa Barbara, CA
Contact: David Gross (gross@itp.ucsb.edu)
<http://www.itp.ucsb.edu>
- Carnegie Obs. Centennial Symp. III: "Clusters of Galaxies: Probes of Cosmological Structure and Galaxy Evolution"
26–31 January 2003 — Pasadena, CA
Contact: John Mulchaey (jmulchaey@ociw.edu)
<http://www.ociw.edu/ociw/symposia/symposium3>
- *IAU Coll. 191: The Environment and Evolution of Binary Stars
3–7 February 2003 — Yucatan, Mexico
Contact: C.D. Scarfe (scarfe@uvic.ca)
- Carnegie Obs. Centennial Symp. IV: "Origin and Evolution of the Elements"
16–21 February 2003 — Pasadena, CA
Contact: Andrew McWilliam (amcwilliam@ociw.edu)
<http://www.ociw.edu/ociw/symposia/symposium4>
- *34th Lunar and Planetary Science Conference
17–21 March 2003 — League City, TX
Contact: Paula Walley (walley@pi.usra.edu)
- *2003 EGS–AGU–EUG Joint Assembly
7–11 April 2003 — Nice, France
Contact: meetings@agu.org
<http://www.copernicus.org/egsagueng/index.html>
- *33rd Saas-Fee Course: "Gravitational Lensing: Strong, Weak and Micro"
7–12 April 2003 — Les Diablerets, Switzerland
Contact: Georges Meylan (gmeylan@stsci.edu)
<http://obswww.unige.ch/saas-fee>
- *IAU Coll. 192: Supernovae (10 years of SN1993)
22–26 April 2003 — Valencia, Spain
Contact: J.M. Marciade (J.M.Marcaide@uv.es)
- Sixth Biennial History of Astronomy Meeting
19–22 June 2003 — Notre Dame, IN
Contact: Matthew F. Dowd (matthew.f.dowd.11@nd.edu)
- *SCOSTEP/IAU co-sponsored Symp.:
Solar Variability as an Input to the Earth Environment
23–28 June 2003 — Tatranská Lomnica, Slovakia
Contact: ISCS 2003 (iscs2003@astro.sk)
- *Gordon Research Conference on the Origins of Solar Systems
6–11 July 2003 — Bristol, RI
Contact: Pat Cassen (pcassen@mail.arc.nasa.gov)
<http://www.grc.uri.edu>
- *IAU Coll. 193: Variable Stars in the Local Gr
6–11 July 2003 — Christchurch, New Zealand
Contact: Don W. Kurtz (dwkurtz@uclan.ac.uk)
- XXVth International Astronomical Union General Assembly
13–26 July 2003 — Sydney, Australia
Contact: IAU Secretariat (iau@iap.fr)
<http://www.astronomy2003.com>
- *IAU Symp. 217: Recycling Intergalactic & Interstellar Matter
14–17 July 2003 — Sydney, Australia
Contact: P.-A. Duc (paduc@cea.fr)
- IAU Symp. 216: Maps of the Cosmos
14–17 July 2003 — Sydney, Australia
Contact: L. Staveley-Smith Lister (Staveley-Smith@csiro.au)
- *Asymmetric Planetary Nebulae III: Winds, Structure, and the Thunderbird
27 July–1 August 2003 — Mount Ranier, WA
Contact: Bruce Balick (balick@astro.washington.edu)
<http://www.astro.washington.edu/balick/APN>

DIVISION NEWS



Solar Physics Meets in Albuquerque

This account of the meeting was organized and assembled by Stephen Walton, with most of the text in the form of contributions from Wolfgang Kalkofen, Steve Keil, Robert Lin and David Webb.

The Solar Physics Division met jointly in June 2002 with the 200th meeting of the AAS. The meeting was ably organized by **Judy Karpen** of NRL, the Vice Chair of the SPD. Before the science itself, however, there was time for recreation. Thanks to Judy, a two-day camp out at Chaco Canyon was organized for hardy SPD members which included a fascinating tour of the area's archeo-astronomy sites. Judy writes, “**Kim’ Malville** was our leader and archaeo-astronomy expert (aided by his wife, **Nancy**) and **Alma Coles** was our gourmet chef (aided by sous-chef **Bill Coles**).” One SPD member even photographed what may be an observation of a coronal mass ejection (CME) seen during a solar eclipse!

*Coronal Mass Ejections: Speaking of CMEs, one of the four topical sessions at the meeting devoted to solar physics was on this very topic. **David Webb** contributed the following description of that session:*

“The session was organized by **Bernard Jackson** (UC San Diego) and **David Webb** (Boston College). Its purpose was to review the current observations, modeling and theory concerning the relationship between solar and heliospheric magnetic fields and CMEs. Coronal magnetic fields are considered a key driver of CMEs, which also play an important role in ejecting magnetic flux and helicity from the Sun. For example, the interior regions of CMEs often appear to erupt as coronal flux ropes which, from spacecraft, reveal themselves as strong, rotating magnetic fields (clouds). The session consisted of a poster session with ten papers on Tuesday and a half-day oral session with 12 talks on Wednesday. Both sessions were well attended; the room for the oral session appeared to be

nearly full with about 130 people! The presentations covered many topics including observations of the surface and coronal magnetic fields associated with CMEs, analytical and MHD modeling of flux ropes and CMEs from the corona into the heliosphere, and the relationships between CMEs and prominences, active regions and flares.”

*Chromospheres: Moving inward from the corona, **Wolfgang Kalkofen** (CfA) organized Session 53 on “Structure and Dynamics of Chromospheres.” He writes:*

“The aim of the Topical Session on “Structure and Dynamics of Chromospheres” was to show what we know and understand about chromospheres and to point to flaws in our models and lacunae in our understanding as areas on which to concentrate our future research. In the introductory talk, titled “Stellar Chromospheres and the Sun,” **M. Giampapa** (NSO) placed the Sun among the late-type stars. He noted that in chromospheric emission, active and quiet chromosphere stars may differ from one another both in the filling factor of active regions and in intrinsic heating rates. It is not known why the intrinsic rates differ. He also indicated that diagnostics of cool regions appear to require two-component chromospheric models.

Contributed talks to this session came from **Z. Musielak** (University of Texas Arlington), **S. Hasan** (Indian Institute of Astrophysics), **P. Goode** (BBSO/NJIT), and **H. Uitenbroek**. Dr. Kalkofen wishes to acknowledge that the Session was supported by the National Science Foundation.

The Photosphere: Of course, much of the science presented at the meeting was on this well-studied region of the Sun. The third special session at the SPD was a survey of the projected capabilities of the Advanced Technology Solar Telescope (ATST).

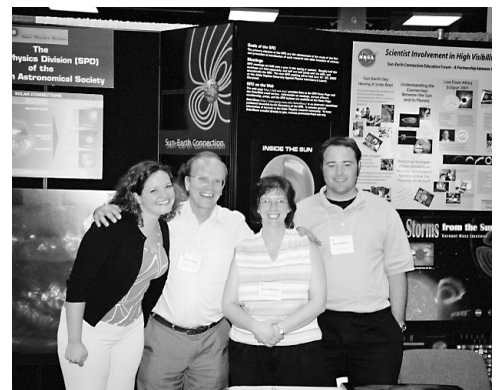
***Steve Keil** writes:*

“Highlights of the session included a keynote talk by **Eugene Parker** that clearly stated many of the unanswered question about solar magnetism that ATST observations will address. While the solar magnetic field and its terrestrial outreach is often defined by the many large magnetic features on the solar surface, their evolution is largely determined by the unresolved small-scale fibril structure.



Petroglyphs from Chaco Canyon. Could the sun symbol shown (lower right) represent a CME seen during an eclipse?

Photo by Bill Coles (UCSD)



At the SPD booth, Hale Prize Lecturer Eric Priest (St. Andrews Univ.) with (l. to r.) U. Memphis undergraduate physics students Virginia Richardson, Claire Nevells, and Drew Medlin. Nevells and Richardson gave a joint poster at the meeting on deriving coronal densities using multi-thermal analysis of SERTS rocket spectra. Medlin gave a poster on using multi-thermal analysis of SERTS spectra to look for composition changes between active regions.

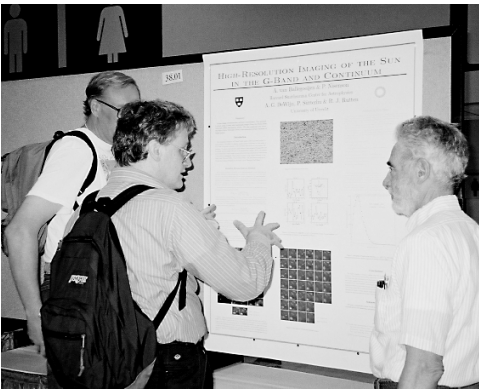


Cristina Cadavid (right, CSU Northridge) discusses the work of her student, Elizabeth Bell, with Valentina Abramenko (Crimean Astrophysical Laboratory). Bell, using principal component image analysis techniques, identified solar features at various size scales.

Photo by Gary Chapman (CSUN)



Hikers take a hard-earned rest at Chaco Canyon.
Photo by Deborah Scherrer (Stanford)



Aad van Ballegooijen (Harvard/CfA) discusses high-resolution imaging of the solar photosphere using simultaneous G-band and continuum observations with George Simon (right) and Cliff Toner (both NSO, partially obscured on left).

Photo by Julia Saba (GSFC)



Stephen Walton (SFO/CSUN) discusses results on the relative contributions of faculae and network to the solar irradiance with Eric Priest (St. Andrews)
Photo by Gary Chapman (CSUN)

The talk by **Alan Title** highlighted what we have learned about sunspots above, in, and below the solar surface using a variety of observing assets. Alan pointed out that sunspot structure is the key to how magnetic flux is released into the solar atmosphere. These sunspot observations have revealed a wealth of fine structure that the combined efforts of space missions such as Solar-B and SDO and a telescope with the capabilities of the ATST will be required to fully understand.”

*Solar Interior: Proceeding into the interior of the Sun, Thursday's special session on the subject of "Helioseismology and the Solar Interior" is discussed by **Steve Walton**: "As a non-specialist, I was extremely impressed by the ability of the data analysts and theorists both. We are moving toward a much better understanding of the interaction between differential rotation and convection that powers the solar dynamo. Theoretical understanding has progressed dramatically with the powerful insights provided by the new data. Observations of the far side of the sun, the processes of emerging flux below the surface, and changes in solar subsurface structure with solar cycle phase are rapidly adding to our understanding."*

*RHESSI First Results: **Robert Lin**, of UC, Berkeley, contributed the following on RHESSI:*

"First results from the Ramaty High Energy Solar Spectroscopic Imager (RHESSI) were presented in special oral and poster sessions and at a press conference. Of note was a movie of the X1.5 limb flare on 21 April 2002, showing the RHESSI hard X-ray contours overlaid on the TRACE images in the 195 Å band. The surprise was that the X-rays lead the EUV emission by a minute or more, presumably indicating some preheating to temperatures well above the 1–2 million K range that TRACE is sensitive to. The RHESSI high sensitivity, especially when both shutters are out of the field of view, has allowed the detection of an unexpected steady solar flux of >3keV X-rays and impulsive events smaller than those detectable with GOES. The high resolution imaging spectroscopy capability was exploited in several presentations, showing different spectra

for footpoint and coronal sources. In one flare on 20 February 2002, two bright footpoints were observed in hard X-rays with similar spectra but they did not brighten simultaneously as had previously been observed with Yohkoh/HXT. Instead, one footpoint brightened several seconds later. Another definitive result was the relatively sharp break in the power-law spectrum of several flares at energies between 50 and ~100 keV. These and other results provide information about the electron spectrum and its evolution although the full implications for the acceleration mechanism itself must await further analysis.

2002 Hale Prize: Many of these details were put into perspective by **Eric Priest's** superb Hale Prize lecture, entitled "Our Enigmatic Sun." Dr. Priest, of St. Andrew's University in Scotland, began his talk by giving what he felt was the proper role of theory in solar physics: not to reproduce every observation, nor to explain every process, but to understand the basic processes and mechanisms and proceed from simpler to more complex models. The overriding mechanism we need to understand is the magnetic field. To illustrate this, Dr. Priest discussed three basic questions about the Sun: "How are the magnetic fields generated?"; "How do flares and CMEs occur?"; and "Can Reconnection Heat the Corona?" A link to Dr. Priest's talk can be found on his home page at <http://www-solar.mcs.st-andrews.ac.uk/~eric>. Because the talk was written in plain HTML, it can be viewed by any modern Web browser/operating system combination.

Studentship Awards: An important part of every SPD meeting is the Studentship awards, which help fund travel to the meeting for the students. This year's awardees are: **Mr. Mark Ammons** (NSO, advisor **Christoph Keller**); **Mr. Peter Hubbard** (Univ. Memphis; advisor: **Joan Schmelz**); **Ms. Jy King** (NIT; advisor: **Hailin Wang**); **Ms. Ana ROSAT** (Catholic University of America; advisor: **Nat Gopalswamy**); **Ms. Meredith J. Wills-Davey** (MSU Bozeman; advisor: **Loren Acton**).

Acknowledgments: The SPD is grateful to the AAS for its hospitality and help with this year's meeting.

Continued on the next page



Solar Physics Division Women's Lunch on Wednesday, 05 June 2002. About two dozen women in the Solar Physics Division were joined by several nonsolar women astronomers for a "networking" lunch organized by Judy Karpen (reclining at the right).

Photo by Constance Walker(NOAO)

New Early Career Prize Dedicated To Karen Harvey

The Solar Physics Division has created a new prize to recognize and encourage new talent in solar physics, and to recognize the contributions of **Karen Harvey** to the study of the Sun. The prize will be awarded at least once every two years, and it will be accompanied by a certificate and an honorarium. It is anticipated that an announcement of the opportunity to submit nominations for a selection by the end of the year will appear this Fall in the *AAS Newsletter* and in *SolarNews*.

Citation: For a significant contribution to the study of the Sun early in a person's professional career.

Selection: To qualify, a candidate must not have reached 36 years of age, or have no more than ten years of professional experience since the PhD or equivalent degree, at the end of the selection year. In addition to scientific merit, consideration may be given to a person's service to the Solar Physics community.

Endowment: Tax-deductible contributions, including securities, are solicited for the establishment and maintenance of this prize. For further information, please contact the SPD Chair, John Leibacher, chair@spd.aas.org or 520-318-8305.

2002 Popular Writing Awards Presented

Jeff Brosius, Chair, Popular Science Writing Award Selection Committee, brosius@comstoc.gsfc.nasa.gov

The Division's 2002 popular writing awards were awarded to **Ron Cowen** and **Sid Perkins**, both writers for *Science News* magazine, and **Carolus J. Schrijver** and **Alan M. Title**, physicists in the Lockheed Martin Advanced Technology Center.

Cowen's article "Stormy Weather" and Perkins' article "Pinning Down the Sun-Climate Connection" were a two-part series that appeared in *Science News*, January 2001, volume 159, pages 26 and 45, respectively. Cowen describes the cyclic variations in the Sun's activity, and explains the differences between two types of solar storm: flares and coronal mass ejections. He explains current work on predicting the occurrence of such eruptions and their importance to Earth, where they disrupt communications and power networks, threaten astronauts and high-altitude flight crews, and cause the beautiful aurora.

Perkins tackled the difficult task of disentangling solar and earthly effects on Earth's climate, addressing phenomena that follow the Sun's 11-year activity cycle. Temperature,

rainfall, forest fires, and hurricane frequency all appear to correlate with the solar cycle, and Perkins describes recent work to help explain such correlations. While variations in the Sun's output clearly affect conditions in the earth's upper atmosphere, whether or how this ultimately affects weather at the surface remains controversial.

Schrijver and Title's two-part article "Today's Science of the Sun" appeared in *Sky and Telescope*, February 2001 and March 2001. The series described the current state of understanding the Sun, from its interior to its atmosphere, covering such diverse topics as the solar dynamo, helioseismology, magnetic fields, the hot corona, the solar wind, and possible influences the Sun may have on earth, life, and weather. They pointed out that physical processes on the Sun occur on spatial scales that range from atomic to hundreds of thousands of miles, and encompass other branches of science as well. They described currently unsolved problems for which new observations and improved computing capabilities are expected to yield solutions in the future.

Each year, the SPD awards one prize to a professional scientist and one prize to a science writer or journalist for articles published in US or Canadian newspapers or magazines during the previous calendar year. Prizes include \$500 cash and a certificate of recognition. Articles are judged on relevance to solar physics, educational value, accuracy, clarity of presentation, and number of readers who would likely have seen them.

Dynamical Astronomy Nominate for Brouwer!

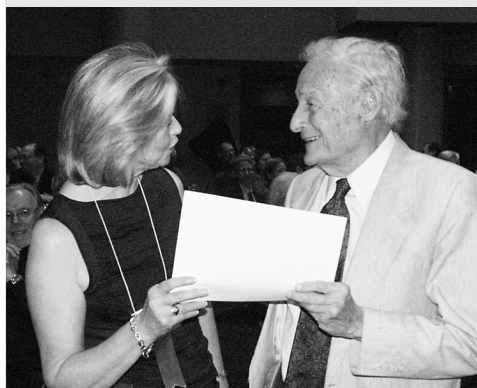
The Division's Brouwer Award recognizes outstanding contributions to the field of dynamical astronomy, including celestial mechanics, astrometry, stellar systems, galactic and extragalactic dynamics. The deadline for nominations is **31 December 2002**. Send nominations to Dr. Matthew J. Holman, mholman@cfa.harvard.edu. For complete information about the Award and about nominating, see <http://dda.harvard.edu>.

AAS Small Research Grants 2002

- **David Alves** (Columbia Astrophysics Lab), "Search for Type II Cepheids in M31 Globular Clusters;"
- **Michael W. Castelaz** (Pisgah Astronomical Research Inst.), "Multi-year, Continuous Phase Coverage Photometry of Alpha Umi;"
- **Michael W. Castelaz** (Pisgah Astronomical Research Inst.), "Real Time Solar/Lunar Imaging for Education/Public Outreach;"
- **Ranga-Ram Chary** (UC, Santa Cruz), "Models for the Diffuse Galactic Gamma-Ray Background in preparation for GLAST;"
- **Richard Ditteon** (Rose Hulman Institute of Technology), "Proposal for an Asteroid Photometry Telescope System;"
- **Denise C. Gabuzda** (University College, Cork, Ireland), "Studies of Parsec-Scale Variations in Compact Active Galactic Nuclei;"
- **Jack F. Gallimore** (Bucknell Univ.), "MERLIN Observations of Masers in Protoplanetary Disks;"
- **Timothy W. Giblin** (The College of Charleston), "Development of an Automated and Remote 0.5 m Telescope at Eteleman Observatory at Univ. Virg. Islands;"
- **Percy L. Gomez** (Carnegie-Mellon University), "A Comparison of Different Estimators of Galaxy Cluster Mass;"
- **Fabio Governato** (Univ. of Washington), "The Origin and Dynamical Properties of Intracluster Stars;"
- **Bruce Grossan** (LBNL), "The Role of Dust in LLAGN;"
- **Eric G. Hintz** (Brigham Young Univ.), "Undergraduate/High School Astronomy Research Collaborations;"
- **Donald W. Hoard** (Univ. of Washington), "Time-resolved Optical Spectroscopy of Sco X-1;"
- **J. Andreas Howell** (Willowcroft Observatory), "Purchase telescope and filter wheel for survey of W Uma binary stars;"
- **Michael D. Jonev** (Brigham Young Univ.), "Improved Absolute Magnitudes for Dwarf Cepheids;"
- **Kevin M. Lee** (Univ. Nebraska, Lincoln), "Purchase of Intermediate Band Filters;"
- **Douglas C. Leonard** (Univ. of Massachusetts), "Geometry and Cosmological Utility of Core Collapse Supernovae;"
- **Di Li** (Harvard-Smithsonian Center for Astrophysics), "HI Narrow Line Absorption: A New Tracer for Measuring Magnetic Field in Dense Molecular Clouds;"
- **Michael Liu** (Univ. of Hawaii), "A Methane-Break Search for Young Jovian-Mass Objects;"
- **Massimo Marengo** (Harvard-Smithsonian Center for Astrophysics), "Mid-IR Imaging of Dusty Circumstellar Envelopes;"
- **David A. Moffett** (Furman Univ.), "Development of a Pulsar Data Acquisition System at PARI;"
- **Russell L. Palma** (Sam Houston State University), "Helium Isotopic Compositions and the Stardust Mission;"
- **Elisha Polomski** (Univ. of Minnesota), "Herbig Ae/Be Observations;"
- **Jaehyon Rhee** (Univ. of Virginia), "New Metal-Poor Giants and Horizontal-Branch Stars from the HK-II Survey"
- **Ronald G. Samec** (Bob Jones Univ.), "Filter Wheel/UBVRI Standard Filter Set for Undergraduate Research Program;"
- **H. Paul Shuch** (SETI League), "The VSA: a Proof-of-Concept Prototype for Array2k;"
- **Dirk Terrell** (Southwest Research Inst.), "Photometric Studies of Close Binary Stars;"
- **Hien D. Tran** (Johns Hopkins Univ.), "A Spectropolarimetric Survey of a Complete Sample of Seyfert 2 Galaxies;"
- **David E. Trilling** (Univ. of Pennsylvania), "Observations and Data Analysis with the Deep Ecliptic Survey Team;"
- **David Turner** (Saint Mary's Univ.), "Archival Information on Cepheid Period Changes, III;"
- **Stefanie Wachter** (Univ. of Washington), "A Dynamical Study of the Low Mass X-ray Binary GX 349+2;"
- **Anthony J. Weitenbeck** (Madison, WI), "To measure the interstellar linear polarization toward Markarian 421;"
- **J. Doug West** (AAVSO), "SBIG CCD Camera Purchase for AAVSO Observational Program;"
- **Timothy R. Young** (Univ. of North Dakota), "TOAST: Transient Objects Automated Search Telescope."

ALBUQUERQUE MEETING AWARDS

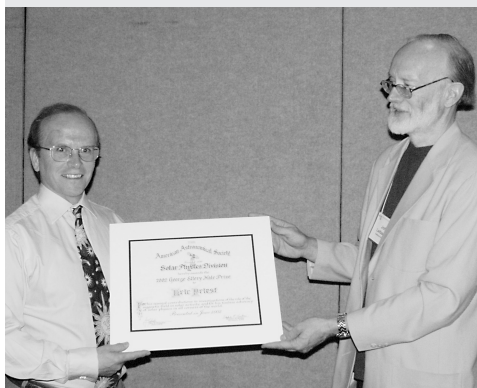
Except as noted otherwise, photos are AAS Photos by Kelley Knight, © 2002, American Astronomical Society.



Victor Blanco (retired, Vero Beach, FL) received the 2002 George Van Biesbroeck Prize for "long-term, extraordinary or unselfish service to astronomy" from AAS President Anneila Sargent.



Michael Zeilik (U. New Mexico) received the 2002 Education Prize from AAS President Sargent.



Eric Priest (left, Univ. St. Andrews) received the Hale Prize from Solar Physics Division Chair John Leibacher.

AAS President Sargent presented the 2002 Heineman Prize – jointly sponsored by the American Institute of Physics and the AAS – to J. Richard Bond (CITA)

AAS Photo, by Debbie L. Kovalsky, © 2002 American Astronomical Society



NEWS FROM NSF

Eileen Friel, Executive Officer, Division of Astronomical Sciences, NSF, efriel@nsf.gov

CAREER Awardees for FY2002

- Ian Dell'Antonio (Brown University), "Measuring Cosmology and the Evolution of Structure via Gravitational Lensing;"
- Nicholas Gnedin (University of Colorado, Boulder), "Numerical Simulations of Re-ionization;"
- Kathryn Johnson (Wesleyan University), "Simulating the Universe from the Bottom Up;"
- Rita Sambruna (George Mason University), "The Physics of Relativistic Jets from Multiwavelength Observations;"
- Uros Seljak (Princeton University), "Investigation of Cosmological Models with Weak Lensing;"
- Max Tegmark (University of Pennsylvania), "Beyond Cosmological Parameters;" and
- Jonathan Williams (University of Florida), "The Formation of Stars in Groups."

NSF Outreach Visits - Just Ask!

Interested in knowing more about how NSF and the Astronomy Division work, available funding opportunities, how proposals are handled, or how the NSF budget is established? We would be happy to come visit your institution to discuss these and any other questions. To set up a visit, contact Dr. Eileen Friel (efriel@nsf.gov or 703-292-4895). NSF will cover all costs for the visit.

Criterion 2 Now Required

Proposals to NSF are evaluated by two review criteria that all proposals must address explicitly: intellectual merit and broader impact. While most proposals address the first review criterion, many fail to address the second criterion of 'broader impact'. NSF policy now *requires* that Principal Investigators address both merit review criteria in separate statements within the one page Project Summary and the Project Description. The new *Grant Proposal Guide* (<http://www.nsf.gov/pubsys/ods/getpub.cfm?gpg>), specifies that, effective **1 October 2002**, NSF *will return without review* proposals that do not separately address both merit review criteria within the Project Summary.

For NSF, the notion of 'broader impact' goes beyond the commonly used phrase "education and public outreach" (EPO), to include many activities that an active researcher and teacher would already be doing. It is important to point these out explicitly in the proposal. To help proposers and reviewers understand what NSF means by 'broader impact', we have collected some examples below. The list is not exclusive or exhaustive, nor is any proposal meant to include all of them:

How well does the activity advance discovery and understanding while promoting teaching, training, and learning?

- including students (undergraduate, graduate, or K-12) in research
- bringing the research into teaching; do you incorporate your research into your lectures?
- involving graduate and post-docs in undergraduate teaching activities
- encouraging student participation at scientific and professional meetings
- developing or partnering with educators to develop research-based educational materials

How well does the proposed activity broaden the participation of under-represented groups (e.g. gender, ethnicity, disability, etc.)?

- establishing research collaborations with students and/or faculty who are members of under-represented groups or who are from institutions that serve under-represented groups.

- including students from under-represented groups in research or educational activities

To what extent will it enhance the infrastructure for research and education, such as facilities, instrumentation, networks, and partnerships?

- supporting the development and dissemination of instrumentation, multi-user facilities, or tools.
- upgrading computational tools and/or infrastructure

Will the results be disseminated broadly to enhance scientific and technological understanding?

- making data available to the scientific community and/or the public
- giving scientific presentations to the public (e.g. schools, local groups)
- participating in multi- and interdisciplinary conferences or workshops

What may be the benefits of the proposed activity to society?

- giving examples and explanations of how the research aids society
- analyzing and interpreting research and education results in formats understandable and useful for non-scientists.

Eligibility for NSF grants

A reminder to proposers that individuals regularly employed at Federally Funded Research and Development Centers (FFRDCs) are not normally eligible to apply for grants in the Astronomy Division. Individuals from FFRDCs may serve as co-PI's on proposals from other institutions, but may not receive any salary support. FFRDCs include NSF-funded centers, such as NRAO, NOAO, NSO, and NAIC, NASA-funded centers, such as STScI, and other federally funded centers, such as the Smithsonian Institution.

JOINT NSF-NASA NEWS

Guenther Riegler, Executive Director/Science, Office of Space Science, NASA and Wayne Van Citters, Division Director, Division of Astronomical Sciences, NSF

National Astronomy & Astrophysics Advisory Committee (NAAAC).

In response to the recommendations of the Committee on the Management of Astronomy and Astrophysics (COMRAA), and with the approval of the Office of Management and Budget, NSF and NASA are proceeding to charter a joint National Astronomy and Astrophysics Advisory Committee (NAAAC). With a membership of approximately ten members of the community, this committee will provide advice to both agencies in a variety of areas including:

- The identification of gaps and duplication between the two agencies, in research and analysis programs as well as in missions, observatories, facilities, archives, etc.
- Advice on coordinating the development of the strategic plans of the two agencies for astronomy and astrophysics
- Advice on specific areas which may benefit from coordinated formulation, solicitation of proposals for research, observations, and/or hardware development, and financial support
- Conducting specialized studies when requested by the agencies

We hope to have the Committee officially chartered and operating by September.

Areas of Collaboration are under Discussion

NASA's Office of Space Science and NSF's Division of Astronomical Sciences have begun discussions about several candidate areas for joint programs or coordinated activity.

ASP NEWS

Mike Bennett, Executive Director, mbennett@astrosociety.org

PASP Editors Reappointed

The ASP announces the reappointment of Drs. **Anne Cowley** and **David Hartwick** as Editors of the *PASP*. The *PASP* features timely handling and rapid publication of research articles, papers on astronomical instrumentation, review articles and dissertation summaries by recent graduates. New submissions are encouraged. Authors should refer to the *PASP* web site (<http://pasp.phys.uvic.ca>) for further information. A free monthly *PASP* table of contents can be requested; instructions for subscribing can be found on the journal web site.

Discounts on Conference Series

The ASP is offering discounts up to 60% on many past volumes of the *Conference Series*. For a list of volumes on sale and their prices, visit <http://www.astrosociety.org/pubs/cs/confseries.html>. To establish a standing order for the *Conference Proceedings*, please email orders@astrosociety.org.

Federal Workers Contribute via Payroll Deduction

This fall, federal employees can elect to make a charitable contribution to the ASP by payroll deduction via the Combined Federal Campaign (CFC). The ASP's CFC number is 2447. This is an easy way for federal employees to support the many educational and outreach activities of the ASP.

Annual Meeting: 28-29 September

The 114th Annual Meeting of the ASP will be held 28 and 29 September in the San Francisco Bay Area. On Saturday, 28 September, the ASP will co-host a star party and a free public lecture by noted author and comet-hunter David Levy. The Sunday event will be a day-long public lecture series on the UC Berkeley campus entitled "The Cosmic Thread: From Stars to Life," with talks by Alex Filippenko, Geoff Marcy, Chris McKay, David Morrison, Jill Tarter, Chris Impey, Ben Zuckerman, and Seth Shostak. The Society awards banquet will feature noted author Timothy Ferris. For complete meeting information go to <http://www.astrosociety.org/events/meeting.html>.

Project ASTRO News

San Diego State University and the UC San Diego have joined to become the 12th official Project ASTRO site. This landmark astronomer-teacher partnership program, founded in 1993 by the ASP with support from NSF and NASA, is now maintained through local fund-raising efforts at each regional site. Each astronomer "adopts" a classroom and works with the teacher, making repeated visits focusing on hands-on activities. Since its inception, Project ASTRO has trained over 1,200 teacher-astronomer partnerships reaching over 85,000 students in classrooms nationwide. For information on how to get involved, go to the ASP web site, <http://www.astrosociety.org>, click on education, and then on Project ASTRO.

With support from the NSF, Project ASTRO has just published *El Universo a sus Pies* (a Spanish version of *The Universe at Your Fingertips*), now available through the ASP catalog and e-commerce site. The materials were excerpted and translated from the Project's collections of outstanding activities, under the guidance of an international team of Spanish-speaking astronomers and educators.

INTERNATIONAL NEWS

Application for IAU Membership

Arlo U. Landolt, Secretary, USNC-IAU, aassec@rouge.phys.lsu.edu

The US National Committee for the International Astronomical Union (USNC-IAU) invites qualified scientists to apply for membership in the IAU. Scientists nominated for IAU membership will receive an invitation to attend the July 2003 XXVth General Assembly in Sydney, Australia. A Membership Application Form is printed in the center of this *Newsletter*.

Meeting the Challenges of Space Science Education In the Developing World

Hans J. Haubold, United Nations Office for Outer Space Affairs, haubold@kph.tuwien.ac.at

Elements of space science and technology education have not been introduced widely into the science curricula in many developing nations partly because the benefits of such disciplines are not readily apparent and the academic resources are often not available. The United Nations (UN) has recognized that introducing these curricula into the developing nations can revitalize the educational system as a whole, can introduce the concepts of high technology in a non-esoteric fashion, and help create national capacities in science and technology in general. All nations, regardless of their degree of industrialization, stand to benefit from the spin-offs from space science and technology.

In developing nations teaching science at the university level presents many challenges: students may not be able to observe or experience the phenomena being taught, which compounds the difficulty of learning basic principles and seeing the relationship between concepts and the application of concepts to real life problems. Underlying these difficulties is a general lack of skills in the relevant aspects of mathematics and problem-solving strategies. Learning is impeded when science is taught in a language different from the mother tongue, which is often the case in developing countries and there are too few academically and professionally well-trained teachers.

Since 1990, the UN has supported and encouraged the concept of regional centers for space science and technology education in developing countries and has identified four core educational components of the centers:

- remote sensing and geographic information system,
- satellite meteorology and global climate,
- satellite communications, and
- space and atmospheric science.

Under the Program on Space Applications, implemented by the United Nations Office for Outer Space Affairs, regional Centers for Space Science and Technology Education have now been established in:

- India for Asia and the Pacific (CSSTEAP, <http://www.cssteap.org>);
- Morocco (CRASTE-LF) and Nigeria (ARCSSTE-E) for Africa;
- Brazil and Mexico for Latin America and the Caribbean; and
- Jordan for Western Asia.

Each Center provides post graduate education, research, and applications programs for university educators, as well as research and application scientists in each of the four Education Curricula.

HONORED ELSEWHERE

Davis Wins National Medal of Science



Ray Davis, Jr. of Brookhaven National Lab has won the National Medal of Science.
Photo, Brookhaven National Laboratory.

Ray Davis, Jr., Research Professor at the Brookhaven National Laboratory, was presented with a National Medal of Science, the nation's highest award for lifetime achievement in fields of scientific research, by President Bush on 12 June 2002. His award citation reads: "For creating the first experiment to measure solar neutrino flux, continuing research on tracking the time dependence of the solar neutrino flux, and creating the new field of neutrino astronomy."

Kulkarni Is 2002 Jansky Lecturer

The 37th Annual Jansky Lecturer is **Shrinivas (Shri) Kulkarni**. Kulkarni is being honored by the Associated Universities, Inc./NRAO, as "a young and active researcher, whose work represents a breadth and depth usually associated with a lifetime of productive work. As a graduate student, he collaborated with Don Backer of the University of California at Berkeley in the discovery of the first millisecond pulsar. Kulkarni's essential contribution was to configure the Arecibo correlator for enough speed to find that pulsar. He also created the Caltech fast pulsar timing machine and invented the flexible filter bank." He will deliver the Jansky Lecture, entitled "The Brightest Explosions in the Universe," at all four NRAO sites: 17 October at Green Bank, WV; 18 October at Charlottesville, VA; 1 November at Socorro, NM; and 9 December in Tucson, AZ.

Kulkarni is John D. and Catherine T. MacArthur Professor of Astronomy and Planetary Science at the California Institute of Technology and a senior fellow at the Mount Wilson Institute.

NOAO's Ridgway Honored With Pascal Chair

Stephen T. Ridgway, a scientific staff member at the National Optical Astronomy Observatory in Tucson, AZ, has been awarded a Blaise Pascal International Research Chair for 2002 by the Fondation de l'Ecole Normale Supérieure in Paris. The foundation awards three to five Blaise Pascal Chairs annually, with candidates drawn from many disciplines. The award carries support for a one-year visit to a university or laboratory in the Paris region. Ridgway's research interests are in high-angular resolution instrumentation, planetary and stellar science. Currently he is working with astronomers of the Georgia State University on the CHARA Array optical interferometer on Mt. Wilson. He is a collaborator in the OHANA fiber-linked optical interferometry project at Mauna Kea, and is lead scientist on industry-university teams organized by Boeing-SVS to study concepts for a Terrestrial Planet Finder mission.

TRANSITIONS

Lo Is Next NRAO Director

Fred K. Y. Lo will be the director of the NRAO, effective 1 September 2002. Lo succeeds **Paul A. Vanden Bout**, who served as NRAO director from 1985–2002, will become the interim director of the Joint ALMA (Atacama Large Millimeter Array) Office, after which he will undertake a research sabbatical and then return to the NRAO's research staff.

Lo received his doctorate degree in 1974 in physics from MIT and joined the Caltech as a Research Fellow in Radio Astronomy. He went on to the University of California at Berkeley and the University of Illinois at Urbana-Champaign. Lo is currently Distinguished Research Fellow and the Director of the Institute of Astronomy and Astrophysics of the Academia Sinica, located in Taipei, Taiwan.

NSF MPS's Eisenstein Steps Down

The NSF Astronomy Division regrets to inform the AAS membership that **Robert Eisenstein**, Assistant Director of NSF's Mathematical and Physical Sciences Directorate, has stepped aside as of 31 May 2002 after five year's tenure. His support of the Gemini Observatory and his championship of ALMA have been essential to their realization. His concern for the health of the grants program has enabled the Astronomy Division to make significant progress in increasing funding rates among research grants in the past few years. Bob will spend the next year at CERN, in Geneva, on professional development leave. **John Hunt** becomes acting Assistant Director while a nationwide search is conducted for Bob's successor.

ANNOUNCEMENTS

State Department and Congressional Fellowships

The American Institute of Physics (AIP) seeks applicants for two fellowship programs:

AIP State Department Science Fellowship: Each year, AIP sponsors one fellow to work in the US State Department, providing much-needed scientific and technical input into the formulation of the nation's foreign policy. Application deadline is **1 November 2002** (postmarked). For more information see <http://www.aip.org/mgr/sdf.html>.

AIP/APS Congressional Science Fellowship: These fellows serve one year on the staff of a Member of Congress or congressional committee, learning the legislative process while lending scientific expertise to public policy issues. Application deadline is **15 January 2003** (postmarked). For details, see <http://www.aip.org/pubinfo> or http://www.aps.org/public_affairs/fellow/index.shtml.

CSO Call for Proposals

The Caltech Submillimeter Observatory (CSO) encourages observing participation by astronomers from both US and non-US institutions. For instructions on applying, see <http://www.submm.caltech.edu/cso/cso-call.html> for information about available instruments, including new bolometer cameras. Applications for observing time between 1 February 2003 through 31 July 2003 are due by mail **31 October 2002**. Applications will be reviewed by an outside peer group.

NASA IRTF Observing Proposals

The NASA Infrared Telescope Facility is accepting observing proposals for the 1 February–31 July 2003 semester. See <http://irtf.ifa.hawaii.edu/userSupport/indexota.html> for instructions, applications and information. Available instruments include: (1) For 1-5 microns: a 3-pixel scale camera with a circular variable filter, a cross-dispersed moderate resolution spectrograph, and a high-resolution spectrograph. (2) For 5-25 microns: a camera, a low-resolution wide spectral range spectrograph, and high-resolution spectrographs for 8-25 microns. Check our web site <http://irtf.ifa.hawaii.edu/> for the availability of a new adaptive optics system. The deadline for submission of proposals is **1 October 2002**.

NSO Observing Proposals

The current deadline for submitting observing proposals to the National Solar Observatory is **15 August 2002** for the fourth quarter of 2002. Forms and information are available from the NSO Telescope Allocation Committee at PO Box 62, Sunspot, NM 88349 for Sacramento Peak facilities (sp@nso.edu) or PO Box 26732, Tucson, AZ 85726 for Kitt Peak facilities (nso@noao.edu). A TeX or PostScript template and instruction sheet can be downloaded from <http://www.nso.edu/>. A Windows-based observing-request form is also available at the WWW site. Users' Manuals are available at <http://www.nso.edu/sunspot/telescopes.html> for the SP facilities and <http://www.nso.noao.edu/nsokp/nsokp.html> for the KP facilities.

Proposers to SP may inquire whether the Adaptive Optics system may be available for their use. Observing time at National Observatories is provided as support to the astronomical community by the National Science Foundation.

GOES Solar X-ray Imager (SXI) FITS Data and SolarSoft Code Released

The NOAA Space Environment Center and the SXI team are preparing to reprocess the more than 100,000 solar images taken during the SXI Post-Launch Test period from 7 September–20 December 2001. This upcoming data release will include data in the research grade FITS format. Although these data include system test images, the vast bulk (some 87,000 images) consists of nearly continuous patrol sequences taken from 19 October to 17 December 2001. Many interesting solar events were observed during this period, including activity associated with CME launch, flares, filament activations, etc. Level-0 and Level-1 FITS data is available from the National Geophysical Data Center's (NGDC's) website at <http://sxi.ngdc.noaa.gov/>.

Along with the data release, the first elements of a SolarSoft branch for SXI are released in public domain and free to all users. They will be hosted both at the NGDC website and at the SolarSoft website at <http://www.lmsal.com/solarsoft>. The Space Environment Center website contains more information about the SXI program at: <http://sec.noaa.gov/sxi/>.

Call for NAS Smith Medal Nominations

The National Academy of Sciences is accepting nominations for the J. Lawrence Smith Medal, a prize of \$25,000 awarded every three years for an original and meritorious investigation of meteoric bodies. Nominations will be accepted through **6 September 2002**. For complete information, see <http://nas.edu/nas/awards>.

Call for NRAO Observing Proposals

Astronomers are invited to submit proposals for observing time on the NRAO Green Bank Telescope (GBT), Very Large Array (VLA), and Very Long Baseline Array (VLBA):

Instrument	Deadline	Observing Period	Note
GBT	2002 Oct 1	2003 Jan–2003 May	
	2003 Feb 3	2003 Jun–2003 Sep	
VLA	2002 Oct 1	2003 Jan–2003 May *	
	2003 Feb 3	2003 Jun–2003 Sep +	
VLBA	2002 Oct 1	2003 Jan–2003 May	
	2003 Feb 3	2003 Jun–2003 Sep	

(*) D configuration with a maximum baseline of 1 km.

(+) A configuration with a maximum baseline of 36 km. The VLBA antenna at Pie Town, New Mexico, may also be requested, which doubles the maximum baseline.

The NRAO has inaugurated a new program to support GBT research by students, both graduate and undergraduate, at US universities. The program covers student stipends, computer hardware purchases, and student travel to meetings to present GBT results. Applications to the program are tied to GBT observing proposals.

The NRAO and the European VLBI Network jointly handle proposals for observing time on the Global VLBI Network. The deadline is **1 October 2002** for the session in Feb. 2003. Further information on NRAO instruments and proposal submission routes is available from the NRAO home page at <http://www.nrao.edu>.

MAST Now Accepting Data Contributions

The Multimission Archive at the Space Telescope Science Institute (MAST) encourages the contribution from its user community of high-level science products, defined as fully processed (reduced, co-added, cosmic-ray cleaned, etc) images and spectra, as well as products derived from them including catalogs and new data reduction software. Contributions must be based on data from one or more of the MAST missions, including the Hubble Space Telescope. MAST has established a set of guidelines for the contribution of high-level science products on its website, including recommended file formats and naming conventions. These guidelines can be found at http://archive.stsci.edu/hlsp_guidelines.html.

Decadal Solar System Report Now Available

New Frontiers in the Solar System: An Integrated Exploration Strategy, new from the National Academies' National Research Council, surveys the current state of planetary science, outlining the key scientific questions, and missions that could help answer them, for the next ten years. The report may be accessed at <http://www.nationalacademies.org/ssb/> or at <http://www.aas.org/dps/decadal/>.

SETI Institute: Nominate for the Drake Award

The SETI Institute last year established an award honoring the pioneering spirit of the man often proclaimed the "Father of SETI," Dr. Frank Drake. The Institute seeks nominations for the 2002 Frank Drake Award for Innovation in SETI and Life In the Universe Research. Scientists or outstanding students are eligible for the \$5,000 (maximum) award. All required nomination materials, including letters of support, must be submitted by **31 August 2002**. Complete award and nominating information may be obtained at <http://www.seti.org>, or by contacting Karenlee Smith, nominations coordinator, Tel: 650-961-6633.



American Astronomical Society
2000 Florida Avenue, NW, Suite 400
Washington, DC 20009-1231

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WASHINGTON NEWS

Kevin B. Marvel, Deputy Executive Officer, marvel@aaas.org



Congressional Visits Day

Each year the Committee on Astronomy and Public Policy (CAPP) participates with other scientific societies in a Congressional Visits Day. Along with members of the committee, four to eight early-career AAS members are invited to participate in this two-day event. If you are interested in participating, please contact a member of the Committee on Astronomy and Public Policy or Kevin Marvel (marvel@aaas.org) directly. Reasonable expenses will be reimbursed for the participants. The participant list fills up quickly each year, so be sure to plan ahead and sign up early. Photos by Kevin Marvel.



Chris De Pree (Agnes Scott College) and Deborah Haarsma (Calvin College) awaiting the arrival of Senator Ron Wyden (D-OR) at the Congressional Visits Day Breakfast Briefing.



Rachel Akeson (Caltech), Joe Alexander (center, National Research Council Space Studies Board), and Paul Vanden Bout (NRAO) discuss strategies for the day's lineup of Congressional Visits.