

AAS NEWSLETTER

A Publication for the members of the American Astronomical Society

June 2003
Issue 115

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AAS
Promotional
Display



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

The Search for a New AJ Editor

Sumner Starrfield, Chair Publications Board

The AAS Publications Board and AAS Council have constituted a Search Committee to find a successor to Paul Hodge as Editor of the *Astronomical Journal*. Professor Hodge's current term ends in December 2004 and we would like to choose the new editor by January 2004 in order to provide sufficient time for the change in editorship.

The Chair of the Search Committee is Leonard Kuhi (University of Minnesota), the other members are Melissa McGrath (STScI), Philip Myers (CfA), Chris Sneden (University of Texas), Sumner Starrfield (ASU), and Jean Turner (UCLA). Robert Milkey (AAS Executive Officer) is an ex-officio member.

Paul Hodge's retirement was announced in the March *AAS Newsletter*. The article described Hodge's contributions to the development of the *AJ* over the past 19 years. We are extremely grateful to him for his service to the *AJ* and to astronomy.

The Search Committee is soliciting both applications and nominations of candidates from the AAS membership at large. People with either an interest in the position, or who wish to nominate candidates, or who have questions are invited to contact the Chair of the committee (kuhi@astro.umn.edu).

The Editor has overall responsibility for the content and presentation format of the journal. The final decision regarding the acceptance of material submitted to the journal rests with the Editor. The Editor also has overall responsibility for all aspects of the operations of the journal editorial office.

Editorial Responsibilities include setting the criteria for papers to be published in the journal and making decisions about acceptance or rejection of submitted manuscripts; establishing editorial policies and procedures for applying the selection criteria; overseeing the refereeing process for manuscripts submitted for publication in the journal; communicating referee's reports to authors and mediating in the refereeing process; and scheduling accepted manuscripts for publication, or establishing scheduling criteria.

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Dresselhaus Named New Physics Group Chair

Dr. Mildred S. Dresselhaus has been chosen as the first woman to chair the governing board of the American Institute of Physics; a group of 10 scientific societies that apply a wide range of physical sciences to the public welfare. Nuclear physics, acoustics, optics, astronomy, climatology and meteorology are just samples of the sciences AIP societies handle.

Leading the AIP board is another accomplishment in Dresselhaus' long career that includes winning the National Medal of Science, directing the Office of Science at the US Department of Energy and 35 years of teaching and research at the Massachusetts Institute of Technology.



"AIP is important to me and to all physicists. I am very much looking forward to this new opportunity to serve the physics community." Dresselhaus said. "As I get into the job I hopefully can find areas where I can have special impact. My experiences all give me some perspective that should help me in this new position."

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AAS Executive Office Staff

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Items of general interest to be considered for publication in the *Newsletter* should be sent to crystal@aas.org. Appropriate pictures are welcomed. For further information about deadlines and submitting articles, see www.aas.org/publications/newsletter.html. Items submitted to the *AAS Newsletter* are not automatically included in the AAS Electronic Announcements or vice versa. Submit electronic announcement items to ela@aas.org.

Kevin B. Marvel, AAS Publications Manager
Robert W. Milkey, Editor
Crystal M. Tinch, Associate Editor
Jeff Linsky, U. Colorado, Associate Editor, Letters

Manuscript Submissions Using AASTeX

The *AJ* and *ApJ* accept manuscripts electronically that are prepared using the AASTeX manuscript package. Following are some important addresses for obtaining information about AASTeX and electronic submission.

AASTeX Homepage:

www.journals.uchicago.edu/AAS/AASTeX

User Support: aastex-help@aas.org

Journal Homepages/Manuscript

Submission: *AJ*, *ApJ*, *ApJL*

www.journals.uchicago.edu/ApJ/information.html



Russell Lecturer Aller Dies

Lawrence H. Aller, lifetime member of the AAS, died at the age of 89, on 16 March 2003. He was awarded the Russell Lectureship in 1992; and also served as an AAS Councilor from 1953-1956.

A high school drop out, Aller impressed a UC Berkeley professor with his knowledge of astronomy and talked his way into the university, earning a bachelor's degree in 1936. He went to Harvard, trained in atomic physics and astronomy, and earned his master's degree in 1938 and a PhD in 1942.

Aller, a UCLA astronomy professor was very instrumental in developing the university's astronomy department. His honors include election to the American Academy of Arts and Sciences in 1961, and to the National Academy of Science in 1962.

Member Deaths Noted

Since the March *Newsletter*, the Society is saddened to learn of the deaths of the following members, former members and affiliate members:

William Buscombe **Mary W. Peters** **Roland Svensson** **Albert G. Mowbray**

Letters to the Editor

A Problem with the Proposed Change in Coordinated Universal Time

Dear Editor:

AAS members should be aware of a potential change to Coordinated Universal Time (UTC). In 1999, while the world was attending to the changes required by Y2K, the precision timing community began discussing a more basic change to civil time. A serious proposal is now being considered to simply cease the issuance of leap seconds. In short, UTC would no longer approximate GMT, but rather would be frozen at so many seconds offset from TAI (international atomic time).

A November 1999 "GPS World" article by McCarthy and Klepczynski (http://iraf.noao.edu/~seaman/leap/GPS-Nov99_Innov.pdf) initiated events leading to the international Colloquium on the UTC Timescale in Torino, Italy on 28-29 May 2003 (http://www.ien.it/events/docs/web_titoli_utc.pdf). The results of this colloquium are unknown as we write, but a recommendation is being considered for a change to the definition of UTC. The required leap second every year or two may be replaced by the notion of a leap hour every millennium or so.

In the absence of leap seconds the world's civil clocks (including NTP and WWV used by our telescopes) would be detached from synchronization with the spinning Earth. DUT, the difference between UTC and UT1, would grow past the current 0.9s limit, requiring that astronomical software be rewritten. Even casual amateur observations would detect the discrepancy between UTC and UT1 within a few years. There would be a large expense to the astronomical community merely to preserve current

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President's Column

Caty Pilachowski, catyp@astro.indiana.edu

“So, what does the President of the AAS do?” Now, after my first year of service as the President of the Society, the answer to the question so many have asked me is becoming a little clearer. The official functions of the job, chairing the Council and Executive Committee and introducing prize winners at scientific meetings, are the most obvious and well-defined tasks expected of the President. But the lion's share of the job falls between the President's public role and the business end of the Society, so ably supported by our outstanding executive office staff. Among the President's most important jobs is to link together the many individuals, committees, organizations, and groups that comprise the Society, to assure that good communications are maintained and that all the pieces work together smoothly. The President serves as a conduit for both member and Society working unit concerns to the Council and governance of the Society, maintains a holistic view of the Society's many parts and their interrelationships, and balances the needs of the members, committees, and other groups for the greatest good. Each President must see the role in a different way, and emphasize different priorities, but for me, the success of the Society grows larger from the efforts of all of us working together.

Our summer meeting is the time of our Annual Members' Meeting, and a time of transition for the Society's Officers and Councilors. In Nashville our retiring Council members Charles Lada, Dimitri Mihalas, and Ellen Zweibel will complete their terms of office. They have served well, and brought fresh ideas and new perspectives to the Council's deliberations, and each in his or her own way, has made a mark on the future directions of the Society. Anneila Sargent will complete her term as Past President, and I owe her a special debt for her help, kindness and advice as I began my own term. The Society has been fortunate to enjoy her leadership. Robert Williams is also completing his term as Vice President; we owe him greatly for his efforts in planning the outstanding scientific sessions and invited talks we have enjoyed at recent meetings, as well as for his wise council on the Executive Committee. Bruce Partridge will be retiring as the Society's Education Officer. Over the last six years, Bruce has led the Astronomy Education Board and been a strong voice on the Council, advocating a compelling vision of the Society's role in astronomy education. We will miss all of them, even as we welcome Robert Kirshner, our new President Elect; Chris Impey, our new Vice President; Todd Boroson, Carol Christian, and Alycia Weinberger, our new Councilors; and George Nelson, who begins his term as our new Education Officer. I very much look forward to working with each of them.

Committee News

Status of Women in Astronomy

Meg Urry (*CSWA Chair, Yale University*)

The Committee on the Status of Women in Astronomy announces a conference on the status of women in astronomy, “Women in Astronomy II: Ten Years After,” to be held at the California Institute of Technology in Pasadena, CA, on 27-28 June 2003. The conference convenes approximately ten years after the historic first conference on women in astronomy, held in Baltimore in 1992.

The purpose of the second conference is to examine how far we, the profession, have progressed, and to identify the next steps. The motivation is not only equity and fairness for women astronomers but also the practical issue of providing the best workforce possible to achieve national goals. Dr. Fran Bagenal from the University of Colorado chairs the Program Committee. Drs. Judy Cohen, Wal Sargent (Caltech), and Barry Madore (Caltech/Carnegie) head the Local Organizing Committee.

Registration and information on accommodations are now available on-line at <http://www.aas.org/~cswa/WIA2003.html>. Note that the registration deadline is 16 June 2003, but deadlines for the hotel accommodations vary, and can be as soon as 26 May

2003. Please see the web site for information on upcoming deadlines, as well as on the program, sponsors, and so forth.

A meeting poster is also available from the web site. We encourage you to print it out and post it!

The *AASWOMEN* newsletter will post information on the meeting in every issue between now and the date of the meeting. We hope to see many of you there!

Status of Minorities in Astronomy

Keivan Stassun, keivan@astro.wisc.edu

On the web at www.astro.wisc.edu/csma

New CSMA Report on Role of Minority-Serving Institutions and REU Programs

Stemming from the CSMA special session at the January 2003 AAS meeting in Seattle, the CSMA has produced a “white paper” summarizing the session. The report is entitled “Enhancing Diversity in Astronomy: Minority-Serving Institutions and REU Programs. Strategies and Recommended Actions” and includes the Executive Summary below. The full report, can be accessed from the CSMA website, and will be formally presented to the AAS Council at the Nashville meeting and published in *BAAS*. The CSMA is now working with the AAS Council to effect these strategies and action items.

continued on next page

Executive Summary

Minority-serving institutions (MSIs) are major producers of minority undergraduates in physics. Tapping the undergraduate talent at these institutions may be key to enhancing diversity at the higher levels of the astronomy profession. The loss of these students at the undergraduate/graduate transition represents a significant leak in the pipeline of minority talent into astronomy.

Key strategies are to:

- Establish relationships with MSIs. This requires efforts that are deliberate, aggressive, and ongoing. Continuity is key to building successful partnerships. Visitation programs need to be sustained efforts; “one-shot” recruiting is generally not effective.

- Work with MSIs to develop programs that “grow talent from within,” in which students first participate in research at their home institution, with thoughtful and nurturing transitions to mentors at other institutions.

- Create, and take advantage of, informal networks to open pathways from MSIs into astronomy graduate programs. Implicit here is that relationship-building requires cooperation both logistical and personal; building trust with MSI faculty is central to building successful partnerships with those institutions.

- Address the perceived disconnect between the educational atmosphere present at many MSIs and that which characterizes many of our graduate programs. MSI faculty are working to develop dynamic undergraduate programs that respond to student needs, that incorporate current pedagogical methods, and that inculcate an appreciation for teaching as part of the profession. These values should be extended to the graduate level to allow for a more seamless “handoff” of students from one program to the next, and to address the issue of minority retention at the graduate level. MSI faculty often do not trust that their students will be “taken care of” in graduate programs at majority institutions, and many students believe the teaching activity is undervalued.

- Increase the visibility of a diversity of astronomers at the K-12 level to “put a face” on the profession, and to communicate opportunity and inclusiveness. This emphasizes the value of “having diversity to get diversity.”

Four specific action items emerged for the AAS itself. The AAS should:

- Develop a small grants program to support minority recruiting efforts by AAS-affiliated institutions and individuals.

- Partner with professional societies of minorities in physics, such as the National Society of Black Physicists and National Society of Hispanic Physicists.

- Encourage reform of graduate education in astronomy to (1) impedance-match with reforms taking place at the undergraduate level in MSIs, and to (2) place additional value on teaching, including increased training of graduate students in teaching.

- Advocate via policy and direct activities to support the infrastructure needs at MSIs. These institutions support a broad base of students; they should develop the same kinds of opportunities normally attributed to R-1 schools.

***Astronomy Magazine* Article Features CSMA Members**

The May 2003 issue of *Astronomy Magazine* features an interview with several AAS members—including members of the CSMA—on issues of diversity, representation, and equity in the field. The full text of the article is available on the CSMA website.

Highlights of June 2003 issue of *SPECTRUM*

The current issue of the CSMA’s newsletter, *SPECTRUM*, will focus on the timely topic of affirmative action. Planned articles include:

- “A Report Card on Affirmative Action” by Bowen, Bok, and Burkhart (authors of the book *The Shape of the River*)

- “When Principles Get in the Way” by Stanley Fish

- “The Lessons of the Grocery Shelf and Affirmative Action” by Virginia Postrel

SPECTRUM is distributed to members at AAS meetings and is mailed to subscribers the week of the meeting. To subscribe, visit the CSMA website, where the newsletter can also be read online.

We hope to begin including short bios of recent minority PhD recipients in the newsletter. Please contact *SPECTRUM* editor, Keivan Stassun, at keivan@astro.wisc.edu.

Dresselhaus...continued from front page

Dresselhaus received her Ph.D. in physics from the University of Chicago in 1958; and since then, has received 17 honorary doctorates. She has mentored dozens of women (as well as men) down the difficult road to physics Ph.Ds. The MIT professor also has extensive experience as a leader of scientific societies; and has served as President of the American Physical Society (APS), Treasurer of the National Academy of Sciences (NAS), President of the American Association for the Advancement of Science (AAAS) and on numerous advisory committees and councils.

Professor Dresselhaus’ work in physics has produced key breakthroughs in understanding carbon nanotubes—atom-thin walls of carbon that promise unprecedented high-strength materials. She will succeed John A. Armstrong, who is stepping down as Chair after five years.

The Search for a New AJ Editor continued from front page

Management Responsibilities include administering the journal editorial office and supervising all editorial office staff, and encouraging professional staff development; preparing an annual budget for the editorial office and operating the editorial office in accord with that budget; participating in the development of an overall operations budget for the journal with the AAS Treasurer, Executive Officer and journal publisher; working with the journal publisher and the Executive Officer, as appropriate, to resolve problems, develop and improve operating procedures, and control production costs; consulting with and reporting to the AAS Council and the AAS Publications Board, regarding publication policies, and preparing annual reports on the status of the journal for the Council and Publications Board; attending meetings of the AAS Publications Board and AAS Council to report on the status of the journal.

Other Responsibilities include developing and enhancing electronic methods for both presentation and delivery of the journal to subscribers, and for long-term archival of the journal contents (in collaboration with the publisher and AAS Executive Office); attending AAS scientific meetings and engaging in discussions with authors regarding the journal, and other meetings with publishers, advisory committees, etc., as required.

Qualifications: The Editor must be a scientist of recognized stature and achievement in the field of astronomy and astrophysics, capable of exercising proper editorial judgment and effectively managing the editorial operations for the journal.

The Society expects to compensate the Editor at roughly a half-time level and will negotiate the level of effort for any other staff as required by the AJ Editorial Office. The current operating structure includes an Associate Editor, at the same location as the Editor, and additional staff as required by the Journal Editorial offices.

Candidates for this position should submit a cover letter, CV, and bibliography to Leonard Kuhi, Chair at the address below. Email submission of PDF files will also be accepted. Nominations for the position may also be sent to the same address. Selected candidates will be asked to provide evidence of institutional support for their taking on the above editorial duties. The cover letter should address the candidate's qualifications, reason for interest in the position, and ideas for the future of the *AJ*. In accordance with the Bylaws of the Society, the Search Committee will make its recommendations to the AAS Publications Board and AAS Council. The final selection is made by the Council. Applications and nominations received before 1 June 2003 will be given full consideration. AAE/EOE.

Editor, The Astronomical Journal
American Astronomical Society
2000 Florida Avenue, NW, Suite 400
Washington, DC 20009-1231
Attention: Leonard Kuhi, Chair, AJ Editor Search Committee
Email Submission Address: milkey@aaas.org

Letters to the Editor continued from page 2

functionality. We would also forever sacrifice easy algorithmic conversions from UTC (wall clock time) to mean solar time, local apparent time and to sidereal time. All such calculations would require access to tabular data retrieved from the internet.

Members are encouraged to become involved in resolving this issue favorably for astronomy. A leap second bibliography is at <http://www.ucolick.org/~sla/leapsecs> and a counter proposal at <http://iraf.noao.edu/~seaman/leap>.

Rob Seaman, NOAO
Steve Allen, UCO/Lick

Letters to the Editor on current issues of importance to astronomers are welcomed. Letters must be signed and should not exceed 250 words. Send to Jeff Linsky, Associate Editor, Letters, (jlinsky@jila.colorado.edu; 303-492-7838 phone; or 303-492-5235 fax) one week prior to the *AAS Newsletter* deadline. Letters may be edited for clarity/length (authors will be consulted) and will be published at the discretion of the Editors.

AAS Membership Benefits Just Got Better

Annual Reviews Discount Program

The AAS has provided its members the yearly opportunity to purchase the *Annual Review of Astronomy and Astrophysics* at a reduced price. Up until now, however, this discount was only applicable for the current volume and orders were subject to deadlines—restrictions that did not always accommodate member needs and schedules.

We are pleased to announce this benefit program is being revamped and expanded so that AAS members will now be eligible to receive a 30% discount on current and back volumes of all Annual Review publications, including the *Annual Review of Astronomy and Astrophysics* and the *Annual Review of Earth and Planetary Sciences*. And, members will be able to **order directly from** Annual Reviews throughout the year whenever it is convenient for them. Specific information detailing the order process will be posted on the Members Only section of the AAS website and be included in an upcoming Exploder once arrangements are finalized with Annual Reviews.

Stay tuned as the AAS continues to explore ways to add to and enhance your membership benefits...

National Science Foundation News

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

2003 NSF Astronomy and Astrophysics Postdoctoral Fellows

The Division of Astronomical Sciences is pleased to announce the 2003 class of NSF Astronomy and Astrophysics Postdoctoral Fellows. Fellows engage in a program of research of an observational, instrumental, or theoretical nature, in combination with a coherent educational plan for the three-year duration of the fellowship. The program is intended to recognize young investigators of significant potential, and provide them with experience in research and education that will establish them in positions of distinction and leadership in the community. Some fellows choose to change institutions during their tenure. This is the third year of this fellowship, and the class of 2003 creates a full complement of fellows for the first time.

Joseph Barranco - Kavli Institute for Theoretical Physics and Harvard-Smithsonian Center for Astrophysics: "Planet Embryos in Vortex Wombs: Protoplanetary Disks and the Formation of Planetesimals"

John Feldmeier - Case Western University and NOAO: "The Study of Intracluster Starlight and Demystifying the Scientific Process"

Rose Finn - University of Massachusetts Amherst: "H α Derived Star-Formation Rates of $z \sim 0.5$ and $z \sim 0.8$ Galaxy Clusters"

Jennifer Hoffman - University of California, Berkeley: "Supernovae in 3-D: Bridging the Gap Between Observations and Theory"

Anne Metevier - Center for Adaptive Optics: "Signatures of Galaxy Evolution in Groups at $z \sim 1$ "

Katherine Rhode - Wesleyan and Yale Universities: "Globular Clusters as Probes of Galaxy Formation and Evolution"

Jessica Rosenberg - University of Colorado: "Using Ly α Absorbers as Probes of Galaxy Halos"

Jennifer Sokoloski - Harvard-Smithsonian Center for Astrophysics: "Observations of Jets from Accreting White Dwarfs"

Deadlines for Funding

AST announces the following deadlines for research and instrumentation grant opportunities in FY2004.

24 July 2003
CAREER (MPS) - Faculty Early Career Development Program

1 September 2003
ATI - Advanced Technologies and Instrumentation

15 September 2003
REU Sites - Research Experiences for Undergraduates (REU) Sites
REU Supplements can be submitted at anytime

8 October 2003
NSF Astronomy and Astrophysics Postdoctoral Fellowship Program (AAPF)

8 October 2003
MPS Distinguished International Postdoctoral Research Fellowships (MPS-DRF)

15 November 2003
Astronomy & Astrophysics Research Grants in the following areas:
EXC - Extragalactic Astronomy and Cosmology
GAL - Galactic Astronomy
PLA - Planetary Astronomy
RUI - Research at Undergraduate Institutions
SAA - Stellar Astronomy and Astrophysics

15 January 2004
Underrepresented Minorities Programs:
RPG - Research Planning Grants
CAA - Career Advancement Awards

Research Opportunity Awards and REU supplements can be submitted at anytime

NSF Outreach Visits

The Division of Astronomical Sciences has made it a point to increase its presence at AAS meetings and to be much more active in its interactions with the community. We reiterate our offer, first made in the August 2002 *AAS Newsletter*, to come to your institution to talk about NSF and update you on our programs, processes and policies. Given the limited travel budgets that we have to deal with from time to time, we would also like to try an experiment—that of "virtual visits." Please let us know if your department or organization might be interested in arranging a videoconference among some or all of you and some or all of us. Contact Dr. Eileen Friel (efriel@nsf.gov).

News from NSF and NASA

Wayne Van Citters, Director, Division of Astronomical Sciences, NSF and Anne Kinney, Director, Division of Physics and Astronomy, NASA

National Astronomy and Astrophysics Advisory Committee

In response to the recommendations of the Committee on the Management of Research in Astronomy and Astrophysics (COMRAA), NSF and NASA chartered the joint National Astronomy and Astrophysics Advisory Committee (NAAAC) in September 2002. The NAAAC will provide advice to both agencies on issues such as coordinating the development of strategic plans and the identification of specific areas that might benefit from coordinated activities. The NAAAC met in October 2002 and has produced its first report, which is available, along with the joint NSF-NASA response, on the AAS web site at <http://www.aas.org/naaac>. The Committee is chaired by Dr. Robert Gehrz, of the University of Minnesota (gehrz@astro.umn.edu).

Education News

Bruce Partridge, Education Officer, bpartrid@haverford.edu

Parting Thoughts

I would like to begin by thanking the Society for the opportunity to serve as Education Officer for the last six years. In late May I will turn over these duties to my friend and very capable successor, George Nelson. I have enjoyed my two terms as Education Officer; I could hardly have hoped for a more vibrant period in which to represent education interests in the American Astronomical Society. The past six years have seen substantial change in, and greater emphasis on, the role of education in the Society and in the astronomical community in general.

Before I turn from education back to educating, may I share a few reflections on the changing scene in astronomy education?

Let me begin with the greater recognition of the value of education in our field and of the role astronomy can play in the science education of the public.

- The AAS Council has included education as one of the major missions of the Society.
- The Society has reformulated its Education Office, and now has a full time Director of Educational Activities, Susana Deustua.
- National meetings have been held on graduate education in astronomy and on the goals of survey courses for non-majors.
- The recent Decadal Survey, Astronomy and Astrophysics in the New Millennium, makes a strong case for the value of education to our community, and for the value of astronomy to the American public. It also makes a series of follow-up recommendations for both the Society and individual departments.
- Finally, there is an increased emphasis on education and public outreach on the part of major funding agencies that support astronomy.

A second change is the gradual but now incontestable emergence of a new discipline of astronomy education research.

- The first national conference focused exclusively on this emerging field was sponsored by NASA/OSS last summer in Chicago.
- A new specialized journal has appeared, *Astronomy Education Review* (<http://aer.noao.edu>).
- AAS meetings now include sessions devoted not just to best teaching practices but also to the specialized interests of astronomy education researchers.

- The AAS Council has stated its recognition of the value of astronomy education research.
- A few astronomy departments are appointing tenure-track staff whose research centers on astronomy education.

The first change is an unalloyed good. Some of us may gripe about the need to address education and public outreach in applications for NASA funds or the need to address the so-called “Criterion 2” in NSF applications. But the overall goal of improving science literacy is beyond dispute, and the attention and support our field gains because of its special appeal to the public is widely recognized.

The second change, in my view, is less straightforward. While I welcome a more professional approach to how we teach astronomy, I also believe there are some pitfalls we should try to avoid.

Let me begin with the obvious remark that, like cosmology, astronomy education is a field with a knowledge base, a set of procedures and a set of basic assumptions. Like cosmology, astronomy education also borrows from other fields, principally psychology. Astronomy education professionals make a disproportionate contribution to the growing reservoir of understanding about how students of college age and younger learn about science and about astronomy in particular. Taking this body of knowledge into account can improve the teaching all of us do, and benefit all our students, even if we do not identify ourselves formally as “astronomy education professionals.” Astronomy educators and their research findings keep the rest of us honest, calibrated and informed. They provide evaluative measures and challenge the assumptions many of us make about our teaching and its effectiveness.

I suspect most astronomers would agree with this series of statements, and I also suspect that more of us would agree with them than might have been true a decade ago. If these statements sound good and unexceptional, why do I not describe the emergence of a cadre of professional astronomy educators as an unalloyed good? Here are some concerns, which I will spell out in more detail elsewhere. The concerns arise not from the recent development of astronomy education research but from some possible reactions to it.

- The danger that the educator may drive out the astronomer. If we become so wrapped up in how students learn that we forget what they should be learning, we risk cutting ourselves off from the roots of our field and from our own backgrounds in astronomy.

If, for instance, we insist that every student must clearly grasp exactly why the moon has phases, we may miss out on the time and opportunity to help students understand larger issues like the evolution of physical systems, be they stars or the Universe.

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High Energy Astrophysics

Contributors *Ilana Harrus (NASA/GSFC)*, *HEAD Press Officer*
Matthew Baring (Rice University), *HEAD Secretary-Treasurer*

HEAD Meeting Report

The 2003 HEAD Divisional meeting held in Mt. Tremblant, Canada (23-26 March 2003) generated an exciting science program in the midst of beautiful surroundings. The meeting organization was overseen by Westover Consultants Inc, led by Gale Quilter, in collaboration with the McGill University Physics department, with **Vicky Kaspi** as Chair of the LOC. Their dedicated hard work before and during the meeting underpinned its success.

Science Summary

The meeting included a presentation on the Intergalactic and Interstellar medium by **Smita Mathur** (Ohio State University); and invited talks on the Galactic Center and Sgr A* given by **Reinhard Genzel** (MPE and UC Berkeley) and **Fred Baganoff** (MIT). A workshop exclusively devoted to INTEGRAL was the first occasion for the INTEGRAL team to give us an update on the mission's progress. With all instruments working well, the team is expected to start the Guest Observer phase quite soon. Early results from INTEGRAL suggest that it will be a significant player in the field of gamma-ray bursts. Entertaining talks by **Pat Slane** (Harvard-Smithsonian Center for Astrophysics) and **Steve Reynolds** (North Carolina State University) summarized the many new insights that both Chandra and XMM-Newton have brought to the study of SNRs.

On Monday, **Paul Hertz** (NASA) and **Harvey Tannanbaum** (Harvard-Smithsonian Center for Astrophysics) presented the potential of NASA's "Beyond Einstein" program, and **Sterl Phinney** (Caltech) presented LISA and the detection of gravitational waves. This session formed the focal point for the theme of the HEAD meeting. The afternoon Swift session provided reviews of the instruments and future prospects for this mission; and the session on clusters of galaxies, included reviews by **Monique Arnaud** (CEA-Saclay) on XMM-Newton results and **Maxim Markevitch** (Harvard-Smithsonian Center for Astrophysics) on Chandra discoveries.

Tuesday started with a review of the large survey made by Chandra and XMM-Newton, clearly focal missions of the meeting, followed by a session on high-resolution spectroscopy in astrophysics and a workshop devoted to the future mission EXIST. Afternoon sessions on X-ray binaries, reviewed by **Tod Strohmayer** (NASA/GSFC), and also gamma-ray bursts, where **George Ricker** (MIT) summarized the increasing database of burst localizations and afterglow science instigated by HETE-II.

On the last day, a review talk on X-ray binaries was given by **Deepto Chakrabarty** (MIT). **Rudi Wijnands** (St. Andrews)

announced the first discovery of a QPO in a millisecond pulsar; and proposed Lobster-ISS mission was presented. The meeting ended with two excellent sessions, one on magnetars (with a review talk by **Mallory Roberts**, McGill University), and one on AGNs with two review talks by **Ian George** (UMBC/GSFC) and **Piotr Zycki** (Nicolaus Copernicus Astronomical Center, Warsaw).

The next HEAD Divisional meeting is planned for the Fall of 2004, probably a four day conference in New Orleans in the first half of September.

Schramm Award

The David N. Schramm award was given to **Ron Cowen** for his article "Jet Astronomy" published in *Science News* (November 9, 2002) and **Robert Irion** for his article "Ashes to Ashes" published in *Science* (September 27, 2002). Both authors were recognized for their work and their commitment to make High Energy Astrophysics understandable to the general public. The prize was presented to the two winners at the meeting banquet by **Josh Grindlay**, Chair of the HEAD Executive Committee.

The photographs (courtesy of **George Chartas**, Penn State University) of the award ceremony (and of the banquet) are available at <http://lheawww.gsfc.nasa.gov/users/imh/HEAD2003/Pictures/Banquet>.

Press Conferences

Three press conferences were scheduled during the meeting; and **Tod Strohmayer** (NASA/GSFC) and **Jon Miller** (CfA) opened the festivities under the watchful commentary of **Philip Kaaret** (CfA). They discussed the mounting evidences for Intermediate Mass Black Holes. For images see: <http://lheawww.gsfc.nasa.gov/users/imh/HEAD2003/Pictures/Press-conferences/PC1/>.

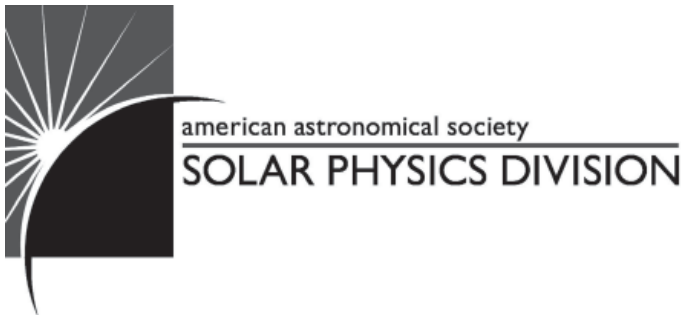
Pietro Ubertini (Inst d' Astrofisica Spaziale) presented the most recent Gamma-ray burst detected by INTEGRAL and **Nat Butler** (MIT) discussed his results on the possible detection of light element lines in the spectrum of Gamma-ray burst afterglow. **Don Lamb** (University of Chicago) provided the context for the models discussed. For images see: <http://lheawww.gsfc.nasa.gov/users/imh/HEAD2003/Pictures/Press-conferences/PC2/>.

George Chartas (Penn State University) discussed his results on winds from quasars, and **Yuxuan Yang** (UMd) presented new results on large scale structures. This was a special Chandra session and **Paul Green** (CfA) provided the commentary and the explanations for both results. For images see: <http://lheawww.gsfc.nasa.gov/users/imh/HEAD2003/Pictures/Press-conferences/PC3/>

Photographs are courtesy of **Ben Dorman** (NASA/GSFC).

Solar Physics Division

John Leibacher, Chair, chair@spd.aas.org



Congratulations to Aaron Chavez who provided the winning logo in the SPD logo competition! We had an impressive turnout with over 100 submissions.

SPD to meet at JHU/APL in June

The Solar Physics Division will hold its Annual Meeting at Johns Hopkins University's Applied Physics Laboratory in Laurel, Maryland on 16-20 June 2003. There will be 30 invited oral, 60 contributed oral, and 168 posters and late papers, with sessions on Helioseismology and the Changing Solar Interior, the Photosphere and Chromosphere, the Corona, Coronal Mass Ejections, Solar Wind and Heliosphere, Transequatorial and other Coronal Structures, RHESSI Results, Flares and Microflares, Instrumentation, Data Analysis Challenges, and "Beyond SDO."

In addition, there will be four "Parker Lectures" to provide a broad, tutorial background to various aspects of the science featured at the meeting, the Hale Prize lecture by **Bob Howard**, and the inaugural awarding of the Harvey Prize to **Dana Longcope**, as well as a special talk on "the Joy of Solar Physicists in Science Education" by **Cherri Lynn Morrow**. AND then there is everyone's favorite, the SPD Business Meeting where—among other exciting topics—we'll discuss possible amendments to the Bylaws to, at least, enable electronic voting and to streamline the process of modifying the ByLaws. Materials describing these Bylaws changes should be included in the mailing of this year's ballot for the election of new SPD Officers: two Committee Members and a Secretary. See you in Laurel!

Information about all aspects of the Meeting and the SPD are available at <http://spd.aas.org>.

Division on Dynamical Astronomy

Marc Murison, DDA Secretary, murison@usno.navy.mil

The Brouwer Award Selection Committee (BASC) of the DDA invites nominations for the Brouwer Award—the DDA's highest

honor. The Brouwer Award has been established to recognize outstanding contributions to the field of dynamical astronomy, including celestial mechanics, astrometry, stellar systems, galactic and extragalactic dynamics. It is open to candidates of any age or nationality, occupation, or specific field of interest. (The Award consists of a \$2000 honorarium and a corresponding certificate.)

Letters of nomination should cite the achievements in or contributions to dynamical astronomy that might appropriately be recognized by the Award. Nominations should be supported by copies of the vitae and bibliography of the nominee and by letters of recommendation from three knowledgeable people testifying to the long-term impact of the nominee's contributions to dynamical astronomy. Nominations and supporting documentation should be sent to the BASC Chair (from whom further information may be obtained) so as to be received no later than 31 December 2003:

Dr. Alan Toomre

MIT

77 Massachusetts Ave., 2-371

Cambridge, MA 02139

toomre@math.mit.edu

Additional information regarding the Brouwer Award may also be found at the DDA web site (<http://dda.harvard.edu/>).

Planetary Sciences

Richard P. Binzel, Chair, rpb@mit.edu



Urey Prize Winner Robin M. Canup

Dr. Robin M. Canup has been awarded the 2003 Urey Prize in Planetary Sciences. The Urey Prize recognizes outstanding achievements in planetary science by a young scientist, and is named in honor of the late Nobel Laureate Harold C. Urey, who made significant advances in the fields of physical chemistry, geochemistry, lunar science, and astrochemistry.

Canup, assistant director of the Space Studies Department at Southwest Research Institute, was recognized for her groundbreaking research contributions on the moon's origin and dynamical evolution. She has published numerous technical articles on the origin of the moon, planetary and satellite formation, and the physics of planetary rings; and has given many commentaries on television and within popular science journals, particularly on the formation of the moon.

Canup holds a bachelor's degree in physics from Duke University and a doctorate in astrophysics from the University of Colorado at Boulder; she joined SwRI in 1998.



Ostro Awarded Kuiper Prize

The 2003 Gerard P. Kuiper Prize has been awarded to **Dr. Steven J. Ostro** for his years of research demonstrating the power of radar techniques to wrest information from asteroids.

As a senior research scientist at NASA's Jet Propulsion Laboratory in Pasadena, Ostro has pioneered radar exploration of asteroids. He and his colleagues have successfully obtained radar echoes from more than 200 asteroids, mostly ones that

cross Earth's orbit but also including many in the main asteroid belt between Mars and Jupiter.

Ostro, the 20th prize recipient, earned his bachelor's degrees in liberal arts and ceramic science from Rutgers University, a master's degree in engineering physics from Cornell University, and a doctorate in planetary sciences from the Massachusetts Institute of Technology.

The prize, named for Gerard Kuiper, widely regarded as the father of modern planetary science, is awarded to one scientist each year "whose achievements have most advanced our understanding of the planetary system."

Beebe Wins Masursky Award

Reta F. Beebe has been awarded the 2003 Harold Masursky Award that recognizes and honors individuals who have rendered outstanding service to planetary science and exploration through engineering, managerial, programmatic or public service activities.

A professor at New Mexico State University, Beebe is the director of the NASA Planetary Atmospheres Data Node, and chairs the Committee for Planetary and Lunar Exploration (COMPLEX), which is the principal committee of the National Research Council of the National Academy of Science. This committee will oversee implementation of the Decadal Plan for Planetary Astronomy in the nation from 2003-2013.



Education New continued from page 7

This is the flip side of an exclusive focus on content that has made so many "Astro 101" courses ineffective. Balance is needed.

- Of greater concern is that proper technique might replace rather than enhance enthusiasm and love of the field. We amateurs in teaching clearly have a lot to learn from professional educators. But the enthusiasm that comes from loving a subject and loving to teach it also counts.

- Next, there is the danger that departments and individuals will wash their hands of undergraduate education by turning it over to "the experts." To do so would be to lose all the advantages of working with and learning from astronomy education researchers.

- Equally, there is a risk that astronomy education researchers will give up on us amateurs and go their own way.

These dangers can be avoided if we in the astronomical community and the astronomy education research community respect each other and each other's activities. Seeing just that kind of mutual respect grow and deepen has been one of the great pleasures of my years as your Education Officer.

Ferguson Named Annie Jump Cannon Award Winner



Annette Ferguson (Max-Planck-Institut für Astrophysik) received the 2003 Annie Jump Cannon Award in Astronomy. Established by AAS in 1934, the award honors a woman postdoctoral scholar for significant research in astronomy. Its administration was transferred in 1974 to the Foundation, which now oversees the award in cooperation with AAS. The award carries a stipend of \$5,000.

Following undergraduate studies at the University of Toronto, Ferguson received her PhD in Astrophysics from the Johns Hopkins University in 1997. Her thesis advisor was Rosemary Wyse. She has held postdoctoral fellowships at the Institute of Astronomy, Cambridge and the Kapteyn Institute, Groningen and is currently a Marie Curie Fellow at the Max-Planck-Institut für Astrophysik in Garching,

Germany. Her research focuses on observational studies of large-scale star formation and resolved stellar populations in nearby galaxies and their implications for understanding galaxy formation and evolution.

Ferguson will use the Cannon Award to continue her studies of the fossil stellar populations in M31 and M33. This research exploits wide-field ground-based observations from the Isaac Newton Telescope on La Palma as well as high-resolution imagery from the Advanced Camera for Surveys on the Hubble Space Telescope. Specific goals are to place constraints on the star formation history of galactic disks and the role that satellite accretion has played in the galaxy assembly process.

The AAS Advisory Committee for the award includes Karen Kwitter (Williams College, Williamstown, MA), Joan Najita (National Optical Astronomy Observatory, AZ), and Kim Venn (Macalester College, St. Paul, MN).

The AAS Job Register

One of the services the AAS provides to the astronomical research community is the monthly publication of the *Job Register*. The *Job Register* is the premier publication for employment announcements in astronomy and astrophysics.

Job announcements appear from both academia and the private sector as well as government labs and even foreign institutions.

The *Job Register* has recently undergone an upgrade, which we hope has been nearly transparent to both employers and job seekers. Specifically, we have migrated to a database system, which allows easy submission of announcements and easy publication of the *Job Register* each month. This new system, developed in-house by AAS Executive Office staff, greatly enhances our ability to produce a high-quality publication with a minimum of staff effort.

As part of the upgrade some policies have been changed or modified, which members should know about. Below are the policies that guide the production of the *Job Register*. Any questions about the policies can be directed to Kevin B. Marvel, Deputy Executive Officer, at the Executive Office or by email to marvel@aaas.org.

AAS Job Register Policies

The *Job Register* will be published on the first day of each month.

All recruitment announcements submitted for publication must remain open at least until the subsequent publication of the *Job Register*. In other words, job searches announced in the *Job Register* must be open for at least a full month from their initial date of publication.

All employers must certify that the job being announced is a *bona fide* recruitment and that the position has not been promised to any particular individual.

Deadlines: Job announcements may be submitted at any time, but must be received by the 15th of each month for publication in the next issue of the *Job Register*.

Payment must be received no later than the 20th of the month prior to the month in which the announcement will appear. If payment is not received in whole by the 20th, the job will appear in the subsequent month's issue.

Examples:

- Submit on or before 15 October and pay on or before 20 October - Announcement will appear in the November *Job Register*.
- Submit on or before 15 October and pay on or after 21 October but before 20 November - Announcement will appear in the December *Job Register*.

- Submit on or before 15 October and pay on or after 21 November - Announcement will appear in the January *Job Register*.

Cost: Job announcements cost \$114 per month of publication. A five dollar discount is provided for employers who pay by credit card. Rates usually increase yearly.

Word Count: Job announcements are limited to 250 words. Announcements will be edited to conform to this limit.

Submission: Announcements are accepted using an online submission form. The web address for this form is:
https://www.aas.org/forms/job_submit.html.

Announcements must be for single positions. Special exceptions to this rule are provided for recruitments of individuals to large postdoctoral or fellowship programs of national or international scope. Example: A University department is recruiting for two postdoctoral scholars - Two job announcements are required. UNESCO is recruiting for researchers to teach in universities world-wide on temporary assignment - A single job announcement is required. Other exceptions may be allowed on a case by case basis.

Other policy details are available online at <http://www.aas.org/JobRegister/pubpol.html>.

AAVSO Publishes the Story of Dorrit Hoffleit

Janet A. Mattei, Director, AAVSO, jmattei@aaavso.org

The American Association of Variable Star Observers (AAVSO) is proud to publish the intriguing and inspiring story of Dorrit Hoffleit, *Misfortunes as Blessings in Disguise*.

Hoffleit, Senior Research Astronomer Emeritus at Yale University, and Director Emeritus at Maria Mitchell Observatory (MMO) in Nantucket, Massachusetts, spent her astronomy career at Harvard College Observatory, at Yale and as director of the MMO. Although she officially retired in 1978, Dorrit continues to work from her Yale office.

During her 75 years in astronomy, Dorrit has known and worked with such notables as Hertzsprung, Bok, Shapley, Cannon, Opik, and Brouwer. Best known for revisions of the Yale Bright Star Catalogue, Dorrit has also published several articles, books, and monographs in meteoritics, astrometry, variable stars, and the history of astronomy.

Dorrit, most proud of her years spent at MMO, established an astronomical research program for young women and men who presented their scientific research on variable stars before the AAVSO membership.

Excerpts and ordering information are available at <https://www.variablestars.com/book.shtml>.

Calendar

Listed are meetings or other events that have come to our attention (new or revised listings noted with an asterisk). Due to space limitations, and 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 crystal@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

1–6 September 2003 — Monterrey, CA
Contact: Ted Roush (ttroush@mail.arc.nasa.gov)

Other Events

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 Group
6–11 July 2003 — Christchurch, New Zealand
Contact: Don W. Kurtz (dwkurtz@uclan.ac.uk)
<http://www.vuw.ac.nz/scps/IAU193>

Michelson Interferometry Summer School
7–11 July 2003 — Pasadena, CA
Contact: Gerard van Belle (gerard@huey.jpl.nasa.gov)
<http://sim.jpl.nasa.gov/michelson/iss.html>

Modest 3 - Modeling Dense Stellar Systems
9–11 July 2003 — Melbourne, Australia
Contact: Rosemary Mardling (mardling@monash.edu)
<http://www.manybody.org/modest-3.html>

XXVth International Astronomical Union General Assembly
13–26 July 2003 — Sydney, Australia
Contact: IAU Secretariat (iau@iap.fr)
<http://www.astronomy2003.com>

IAU Symp. 216: Maps of the Cosmos
14–17 July 2003 — Sydney, Australia
Contact: L. Staveley-Smith (Lister.Staveley-Smith@csiro.au)
<http://www.atnf.csiro.au/iau-ga/iau216>

IAU Symp. 217: Recycling Intergalactic & Interstellar Matter
14–17 July 2003 — Sydney, Australia
Contact: P.-A. Duc (paduc@cea.fr)
<http://www-dapnia.cea.fr/Sap/Conferences/IAU>

IAU Symp. 218: Young Neutron Stars and Their Environment
14–17 July 2003 — Sydney, Australia
Contact: R. N. Manchester (iau218@csiro.au)
<http://www.atnf.csiro.au/iau-ga/iau218>

IAU Special Session 1: Recent Progress in Planetary Exploration
18–19 July 2003 — Sydney, Australia
Contact: D. P. Cruikshank (dcruikshank@mail.arc.nasa.gov)
<http://www.atnf.csiro.au/iau-ga/iau218>

IAU Special Session 2: Astronomy in Antarctica
18–19 July 2003 — Sydney, Australia
Contact: M. Burton (M.Burton@unsw.edu.au)
<http://newt.phys.unsw.edu.au/sps2>

Xth Marcel Grossmann Meeting
20–26 July 2003 — Rio de Janeiro, Brazil
<http://www.cbpf.br/mg10/WelcomeNew.html>

IAU Symp. 219: Stars as Suns: Activity, Evolution and Planets
21–25 July 2003 — Sydney, Australia
Contact: A. O. Benz (benz@astro.phys.ethz.ch)
<http://cfa-www.harvard.edu/symp219/home.html>

IAU Symp. 220: Dark Matter in Galaxies
21–25 July 2003 — Sydney, Australia
Contact: M. Walker (m.walker@physics.usyd.edu.au)
<http://www.physics.usyd.edu.au/~maw/IAUS220/Main.html>

IAU Symp. 221: Star Formation at High Angular Resolution
22–25 July 2003 — Sydney, Australia
Contact: M. Burton (iau221@phys.unsw.edu.au)
<http://newt.phys.unsw.edu.au/iau221>

Atomic Data for X-Ray Astronomy
22–23 July 2003 — Sydney, Australia
Contact: Dr. Anil K. Pradhan (pradhan.1@osu.edu)
<http://www.astro.ohio-state.edu/~pradhan/iau/iau.html>

IAU Spec. Sess. 3: New Classification Scheme for Double Stars
24 July 2003 — Sydney, Australia
Contact: B. D. Mason (bdm@draco.usno.navy.mil)
<http://www.astronomy2003.com>

IAU Spec. Sess. 4: Effective Teaching & Learning of Astronomy
24–25 July 2003 — Sydney, Australia
Contact: J. R. Percy (jpercy@utm.utoronto.ca)
<http://www.astronomy2003.com>

*AGN Physics with the Sloan Digital Sky Survey
27–30 July 2003 — Princeton, NJ
Contact: Pat Hall or Gordon Richards (patgordon@astro.princeton.edu)
<http://www.astro.princeton.edu/~gtr/sdssagn2003/>

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>

*Square Kilometer Array International Workshop, SKA Conference 2003

27 July–2 August 2003 — Geraldton, Western Australia
Contact: yt28@cornell.edu
<http://www.atnf.csiro.au/projects/ska/events/geraldton/index.html>

*Physics and Astrophysics of Neutron Stars
28 July–1 August 2003 — Santa Fe, NM

Contact: Chris Fryer (fryer@lanl.gov)
<http://neutron-stars.lanl.gov/>

SPIE 48th Annual Meeting: International Symposium on Optical Science and Technology

3–8 August 2003 — San Diego, CA
Contact: spie@spie.org
<http://www.spie.org>

*Summer School on Adaptive Optics

9–15 August 2003 — Santa Cruz, CA
Contact: Paula Towle (cfao@ucolick.org)
<http://cfao.ucolick.org/>

*Cometary Dust in Astrophysics

10–15 Aug 2003 — Crystal Mountain, WA
Contact: D. Brownlee
(brownlee@bluemoon.astro.washington.edu)
<http://www.lpi.usra.edu/meetings/stardust2003/>

*2nd NAIC-NRAO School on Single-Dish Radio Astronomy

10–16 August 2003 — Green Bank, WV
Contact: Karen O'Neil (koneil@gb.nrao.edu)
<http://www.gb.nrao.edu/sd03/>

*Massive Stars in Interacting Binaries

16–20 August 2003 — Quebec province, Canada
Contact: A. Moffat/N. St-Louis
(moffat@astro.umontreal.ca/stlouis@astro.umontreal.ca)

*Chicago Workshop on Adaptive Mesh Refinement Methods

3–5 September 2003 — Chicago, IL
Contact: Carrie Eder (amr2003@flash.uchicago.edu)
<http://flash.uchicago.edu/amr2003/>

*Conference on Statistical Problems in Particle Physics, Astrophysics, and Cosmology

8–11 September 2003 — Menlo Park, CA
Contact: Arla Lecount (phystat2003@slac.stanford.edu)
<http://www-conf.slac.stanford.edu/phystat2003/>

12th UN/ESA Workshop on Basic Space Science

8–12 September 2003 — Beijing, P.R. China
Contact: Hans J. Haubold
(hans@neutrino.aquaphoenix.com)
<http://www.seas.columbia.edu/~ah297/un-esa>

Gamma-ray Bursts: 30 Years of Discovery
8–12 September 2003 — Santa Fe, NM
Contact: Ed Fenimore (grb2003@nis.lanl.gov)
<http://grb2003.lanl.gov>

*Four Years of Chandra Observations: A tribute to Riccardo Giacconi

16–18 September 2003 — Huntsville, AL
Contact: Martin C. Weisskopf
Martin.Weisskopf@msfc.nasa.gov
<http://cxc.harvard.edu/giacconi/>

International Workshop on Planetary Probe Atmospheric Entry and Descent Trajectory Analysis and Science

6–9 October 2003 — Lisbon, Portugal
Contact: David Atkinson (entryws@sstep.org)

Stellar Populations

6–10 October 2003 — Garching, Germany
<http://www.mpa-garching.mpg.de/~stelpops/>

14th Annual October Astrophysics Conference: The Search for Other Worlds

13–14 October 2003 — College Park, MD
Contact: Susan Lehr (october@astro.umd.edu)
<http://www.astro.umd.edu/october/>

*5th Microquasar Workshop – Microquasars and Related Astrophysics

13–19 October 2003 — Beijing, China
Contact: microquasar@jet.uah.edu
<http://jet.uah.edu/microquasar>

*Imagery and Data Fusion

15–17 October 2003 — Washington, DC
Contact: John C. Evans (jevans@gmu.edu)
<http://www.aipr-workshop.org/>

*2003 IEEE Nuclear Science Symposium and Medical Imaging Conference

19–24 October 2003 — Portland, OR
Contact: Ralph B. James, Brookhaven National Laboratory
(rjames@bnl.gov)
<http://www.nss-mic.org>

*Second CHANDRA Calibration Workshop

27–28 October 2003 — Cambridge, MA
Contact: Hank Donnelly (rdonnelly@cfa.harvard.edu)
<http://cxc.harvard.edu/ccw/>

*The Formation and Evolution of Massive Young Star Clusters

17–21 November 2003 — Cancun, Mexico
Contact: Henny J.G.L.M. Lamers (lamers@astro.uu.nl)
Linda J. Smith (ljs@star.ucl.ac.uk)
www.star.ucl.ac.uk/clusters

IAU Coll. 194: Compact Binaries in the Galaxy and Beyond

17–22 November 2003 — La Paz, Mexico
Contact: Gagik Tovmassian
(iau194@astrosen.unam.mx)
<http://www.astrosen.unam.mx/~iau194>

continued on page 17

Announcements

New Astronomy/Space Science Education Journal

Astronomy Education Review, a new on-line journal/magazine for astronomy and space-science education aims to serve a broad audience of those involved in education. The journal includes sections of research papers (and discussions of how research on teaching and learning applies in classrooms or other educational settings); short reports on innovative techniques and approaches; annotated lists of educational resources; news and opinion pieces; and announcements of opportunities.

Astronomy Education Review welcomes submissions for any of these sections; and guidelines are on the site, which is currently recording over 100,000 hits and nearly 5,000 separate sessions each month.

The journal is supported by the National Optical Astronomy Observatories and the NASA Office of Space Science, and is endorsed by the AAS and the Astronomical Society of the Pacific.

The home page for the journal can be found at <http://aer.noao.edu>; and contributions are being accepted the first issue of Volume 2.

IAU Commission on Education and Development

The IAU Commission 46 Newsletter 58 can be viewed at the following url: <http://physics.open.ac.uk/IAU46/newsletter58.html>. The Newsletter includes information about the forthcoming teaching meeting at the IAU General Assembly, a report on public education problems at the most recent total solar eclipse, and various other information of potential interest to those teaching astronomy or those interested in developing countries.

NSO Observing Proposals

The current deadline for submitting observing proposals to the National Solar Observatory is 15 August 2003 for the fourth quarter of 2003. Forms and

information are available from the NSO Telescope Allocation Committee at P.O. Box 62, Sunspot, NM 88349 or Sacramento Peak facilities (sp@nso.edu) or P.O. Box 26732, Tucson, AZ 85726 for Kitt Peak facilities (nso@noao.edu). A TeX or PostScript template and instruction sheet can be emailed at your request; obtained by anonymous ftp from <ftp.nso.edu> (cd `observing_templates`) or <ftp.noao.edu> (cd `nso/nsoforms`); or downloaded from the WWW at <http://www.nso.edu/general/observe/>. A Windows-based observing-request form is also available at the WWW site. Users' Manuals are available at <http://www.nso.edu/nsosp/dst/> for the SP facilities and <http://nsokp.nso.edu/> 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.

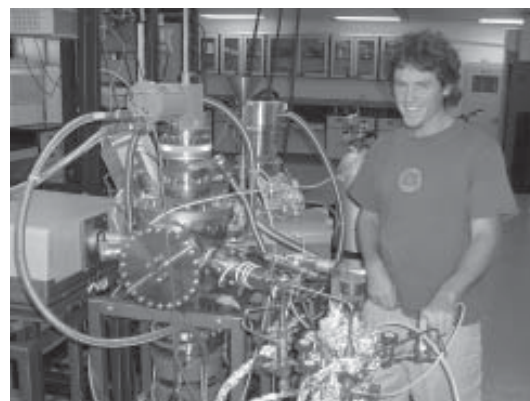
New Program at the University of Hawaii

The Department of Chemistry and the Department of Physics & Astronomy opened the new interdisciplinary graduate program "Reaction Dynamics, Laboratory Astrophysics, and Planetary Sciences" leading to a Ph.D. degree in chemistry and physics, respectively (<http://www.chem.hawaii.edu/Bil301/program.htm>). The prime directive of this endeavor is to unravel the underlying mechanisms on how complex, (astrobiologically) important molecules and nanostructures are synthesized from the bottom up via single atoms, radicals, and small molecules in the interstellar medium, in atmospheres of planets and their satellites, cometary comae; these studies also nicely connect with combustion and chemical vapor deposition processes. In collaboration with research groups from the Hawaiian Institute of Geophysics and Planetology (HIGP), the Institute for Astronomy (IfA), and The Open University (UK), cutting edge laboratory experiments, electronic structure calculations, and astronomical observations will be linked to lecture

courses outlining fundamental principles in physical chemistry, physics, reaction dynamics, astrochemistry, astrobiology, planetary chemistry, combustion sciences, and nanomaterial research.

"This program presents a unique opportunity to bridge laboratory experiments like gas phase reactions in planetary atmospheres and energetic particle processing of extraterrestrial ices with actual astronomical observations utilizing the natural resources of Hawaii's telescopes of the Big Island," Corey Jamieson, graduate student in the program, pointed out. Researchers hope that this concentrated endeavor will ultimately revolutionize the understanding of the astrochemical processing of extraterrestrial environments and also to shed light on the astrobiological evolution of the interstellar medium and of our solar system.

Interested candidates should send a letter of interest, three letters of recommendation, transcripts or equivalent documentation, and a curriculum vitae to: Prof. Ralf I. Kaiser, Department of Chemistry, University of Hawaii at Manoa, 2545 The Mall, Honolulu, HI 96822, USA (email: kaiser@gold.chem.hawaii.edu) or to Prof. Klaus Sattler, Department of Physics, University of Hawaii, Honolulu, HI 96822, USA (email: sattler@hawaii.edu). Exceptionally well qualified candidates are offered teaching assistantships and full tuition fee waivers.



Graduate student Corey Jamieson preparing the UHV setup to simulate charged particle interactions with nitrogen-rich ices on Triton and Pluto.

Honored Elsewhere

AAS Members Elected to the National Academy of Sciences

The National Academy of Sciences announced the election of 72 new members including 17 women, the largest number ever elected in a single year. Election to the academy—is regarded as the one of the highest honors in American science.

Congratulations to the following AAS Members:

Wendy, L. Freedman, director, Observatories of the Carnegie Institution.

Shrinivas R. Kulkarni, professor of astronomy and planetary sciences, California Institute of Technology.

Judith L. Lean, research physicist, space science division, Naval Research Laboratory.

Henry J. Melosh, professor, lunar and planetary laboratory, University of Arizona.

Paul L. Schechter, professor of astrophysics, Massachusetts, Institute of Technology.

Saul A. Teukolsky, professor of physics and astrophysics and director of the Center for Radiophysics and Space Research, Cornell University.

Bahcall and Davis Awarded 2003 Franklin Medal

The Franklin Institute, one of the nation's premier centers of science education and development, awarded the 2003 Benjamin Franklin Medal in Physics to **John Bahcall**, **Raymond Davis**, and Masatoshi Koshihba for their work that led to an understanding of neutrino emission from the sun.

The groundbreaking work of Bahcall, Davis, and Koshihba led to the discovery and understanding of solar neutrinos, furthering our knowledge of the internal processes of the Sun and stars in general. Their research demonstrated that the nuclear fusion of light elements that produces neutrinos also causes the Sun to shine. Their discoveries have led to a continuous expansion in our knowledge of the fundamental physics of elementary particles.

In 1961, Bahcall began collaborating with Davis and performing calculations that later culminated in Davis's experiment in the Homestake Gold Mine in South Dakota. Bahcall provided the theoretical basis for Davis' experiments and subsequently Koshihba's by predicting the flux of Solar neutrinos expected on Earth.

A member of the National Academy of Sciences, the American Academy of Arts and Sciences, and the American Philosophical Society, Bahcall was a member of the Hubble Telescope Working Group for more than 20 years. He has received numerous honors and awards including the NASA Distinguished Public Service Medal and the National Medal of Science.

Bahcall earned his A.B. in physics from the University of California, Berkeley, in 1956, an M.S. in physics from the University of Chicago in 1957, and a Ph.D. in physics from Harvard University in 1961.

Davis first detected solar neutrinos in an experiment located almost a mile underground in the Homestake Gold Mine in South Dakota. Building on his experience with an earlier experiment in a limestone mine in Ohio, Davis began the South Dakota experiment in 1967. Knowing that a solar neutrino produces radioactive argon when it interacts with chlorine, Davis developed an experiment with a commonly used dry-cleaning chemical called perchloroethylene, which provided a large concentration of chlorine atoms. By placing a 100,000-gallon tank of perchloroethylene deep under the Earth (to isolate it from interactions with cosmic rays) and subsequently counting the number of argon atoms after a period of time, Davis was able to successfully detect the presence of neutrinos, though he found fewer than predicted by Bahcall's calculations.

Raymond Davis received his B.S. and M.S. degrees in 1939 from the University of Maryland, and his Ph.D. in physical chemistry from Yale University in 1942. Davis is a member of the National Academy of Sciences and the American Academy of Arts and Sciences and has received countless honors for his lifetime achievement including the Wolf Prize in Physics, the National Medal of Science and the 2002 Nobel Prize in Physics along with Dr. Koshihba.

Koshihba led the design and construction of the Kamiokande neutrino detector in Japan, which detects the time of arrival, energy, and direction of incoming neutrinos. This experiment confirmed Davis's measurements and detected a type of neutrino that Davis's experiment was unable to detect as well as actually showing that the detected neutrinos came from the direction of the Sun.

This research led to the discovery of neutrino oscillations, which showed conclusively that neutrinos have mass. On the way from the Sun, some neutrinos change type and become undetectable by experiments like the one Davis designed. Kamiokande was designed by Koshihba to detect these neutrino oscillations.

Koshihba earned his B.S. in 1951 from the University of Tokyo, and his Ph.D. in physics from the University of Rochester, NY in 1955. Koshihba is a member of the American Physical Society, the Physical Society of Japan, and the Japanese Astronomical Society. He has been awarded numerous honors and prizes including the Academy Award from the Academy of Japan, the Order of Cultural Merit, which was conferred by the Emperor of Japan in person, the Wolf Prize, and in 2002, the Nobel Prize in Physics along with Dr. Davis.

continued on page 17

News from the AAS Journals

Redlined Manuscripts Soon Available with Proofs

Until recently *ApJ* and *AJ* authors were only able to proofread their articles using proofs of the journal pages. Significant copyediting changes in the proofs are flagged with queries, but the proofs do not show the multitude of more minor changes made to the accepted manuscript. Many authors have asked whether we could provide a more extensive marked-up version of the manuscript itself, so they could check the copyediting changes in detail.

Recently we have begun to offer authors pdf and postscript copies of the “redlined” copyedited manuscript, as a supplement to the regular paper proofs. As the name implies, changes to the text are indicated with red strikeout lines (for deleted text) and blue (for added or replaced text). Original and revised equations are shown in full.

Use of the redlined manuscript files is optional. Authors still indicate all corrections and answers to queries directly on the page proofs. However the redlined text provides more detailed information for authors who want to check the editing or an editor’s query in detail. Full instructions are provided in a README file contained in the directory with the pdf proofs and the redlined files.

We began introducing the redlined files with *ApJ Supplements* proofs in April, and we will extend their use across the AAS journals over the summer. As always, we welcome your comments; you may include them with your proof corrections, or you can contact the *ApJ* or *AJ* journal offices directly (apj@as.arizona.edu or astroj@astro.washington.edu).

Reorganization of Electronic Publishing at the UCP

Late last year, University of Chicago Press information technology manager and long-time AAS electronic publishing guru Evan Owens left UCP to spearhead a new journals archiving initiative at JSTOR’s Princeton office. UCP has reorganized as a result of Owens’ departure and assigned new managers to IT and electronic publishing. As the new UCP Journals IT manager, Stephen Shew will oversee all systems development and maintenance, including web-based peer review (WPR), e-commerce, and new publishing technologies. Reporting to Shew is John Muenning, the new electronic publishing development manager, who will devote a significant amount of his time to electronic publishing R & D for AAS publications. Neither Shew nor Muenning are actually new; their 35+ combined years of UCP experience include a wide range of systems management and development work. The electronic publishing operations group has been reassigned to Julie Steffen, UCP’s associate journals manager and director of astronomy journals.

Steven Shore Retiring as *ApJ* Scientific Editor

Dr. Steven N. Shore has resigned his appointment as *ApJ* Scientific Editor to become one of the new Scientific Editors of *Astronomy and Astrophysics*. Last year Dr. Shore was appointed Professor at the University of Pisa, which made his move to *A&A* a natural transition. Steve is one of the longest-serving *ApJ* Scientific Editors, and since 1996 has overseen the peer review of 1347 manuscripts. Later this year *A&A* will adopt a Scientific Editor system similar to that of the *ApJ* model, and Shore’s experience will be invaluable as the journal makes that transition.

Honored Elsewhere continued from page 14

Bahcall Wins Dan David Prize

John N. Bahcall, pioneer in the development of neutrino astrophysics, has been awarded \$1 million dollars. Bahcall, the 2003 Dan David Prize winner, is currently a Richard Black Professor of Natural Sciences at the Institute for Advanced Study, Princeton University.

The David Prize named after international entrepreneur and auto photo booth developer, Dan David, is funded from a \$100 million Dan David Foundation endowment administered by Tel Aviv University. A key facet of the prize is that it “pays forward” where \$100,000 of each award goes to scholarships for young researchers or scholars in the winner’s field of studies.

Title Elected to National Academy of Engineering

Congratulations to **Alan H. Title** for being elected to the National Academy of Engineering (NAE)! Title was among 77 new members and nine foreign associates elected, bringing the total U.S. membership to 2,138 and the number of foreign associates to 165.

Election to the National Academy of Engineering is among the highest professional distinctions accorded an engineer. Academy membership honors those who have made “important contributions to engineering theory and practice, including significant contributions to the literature of engineering theory and practice,” and those who have demonstrated accomplishment in “the pioneering of new fields of engineering, making major advancements in traditional fields of engineering, or developing/implementing innovative approaches to engineering education.”

Title, AAS Member and 2001 Hale Prize Winner, is the principal physicist in the solar and astrophysics department at Lockheed Martin Corp., in Palo Alto, Calif.

ASP News

Michael Bennett, Executive Director, mbennett@astrosociety.org

Vera Rubin Wins ASP's Bruce Medal

Dr. Vera Rubin of the Carnegie Institution has been selected as the winner of the ASP's highest honor, the prestigious Catherine Wolfe Bruce Gold Medal, for 2003. Awarded since 1898 for a lifetime of outstanding research in astronomy, the Bruce Medal has gone to some of the greatest astronomers of the past century. In awarding the medal to Dr. Rubin, the ASP Board of Directors especially cited her noteworthy discoveries in the dynamics and distribution of galaxies and pioneering investigations into dark matter.

The following ASP 2003 award winners were also announced:

- Dr. Keith Noll and the Hubble Heritage Project Team—The Klumpke-Roberts Award for outstanding contributions to the public understanding and appreciation of astronomy.
- Dr. Rodger Thompson and the NICMOS team—The Maria and Eric Muhlmann Award for recent innovative advances in instrumentation, software, or observational infrastructure.
- Dr. Daniel Reichart, University of North Carolina at Chapel Hill—The Robert J. Trumpler Award for a recent Ph.D. recipient whose research is considered unusually important.
- Mr. Mario Motta, Lynnfield, MA—The Las Cumbres Award honoring outstanding outreach efforts by an amateur astronomer.
- Mr. Eugene Zajac, Shaker Heights High School—The Thomas J. Brennan Award recognizing exceptional achievement in the teaching of astronomy at the high school level.
- Mr. Kyle Smalley, Cambridge, MA—The Amateur Achievement Award recognizing significant contributions to astronomy by a non-professional astronomer.

The award ceremonies will take place at the ASP's annual awards banquet on 11 October in Berkeley, California. For more details see the ASP web site at <http://www.astrosociety.org>.

ASP Board of Directors Elects Officers

The ASP Board of Directors has elected new officers to two-year terms commencing in March 2003. Catharine Garmany, new ASP President, is Director of the Astronomy Program at Columbia University's Biosphere 2 campus in Oracle, Arizona. She has recently served as ASP Vice-President and before that as a Board Member.

Dennis Schatz, new Vice-President, is Associate Director of the Pacific Science Center in Seattle and has served two term on the ASP Board.

At the same time, Board Secretary Mary Kay Hemenway (University of Texas-Austin) and Board Treasurer Eugene Epstein were re-elected to their respective offices.

ASP Board Ballots Due June 30

ASP members should cast their votes for the four open Board positions, and return them to the ASP office in San Francisco, before June 30, 2003. This is your opportunity to participate in the governance of the Society, so please consider the candidates' statements carefully and cast your vote.



Natalie F. Patterson

The AAS Executive Office welcomes our new Financial Assistant, Natalie Patterson. Natalie worked for the Mortgage Bankers Association of America as a Senior Client Service Associate and a Senior Communications Assistant. She's a native Washingtonian and the mother of two sons.

Calendar continued from page 13

- *Payload and Mission Definition in Space Sciences
17–28 November 2003 — Tenerife, Canary Islands
Contact: Ms. Nieves Villoslada or
Ms. Lourdes González (xvwinter@ll.iac.es)
<http://www.iac.es/winschool2003/info.html>
- *Hawaii International Conference on Sciences
15–18 January 2004 — Honolulu, HI
Contact: Andrew Burge (sciences@hicsciences.org)
<http://www.hicsciences.org>
- *5th Intergral Workshop, The Integral Universe
16–20 February 2004 — Munich, Germany
Contact: Dr. Giselher Lichti (grl@mpe.mpg.de)
<http://astro.estec.esa.nl/Integral/>
- *Astronomical Polarimetry: Current Status and Future Directions
15–19 March 2004 — Waikoloa, HI
Contact: Andy Adam (pol2004@jach.hawaii.edu)
- *Cosmos in the Classroom 2004: A Symposium on Teaching Introductory Astronomy for Non-Science Majors
16–18 July 2004 — Medford, MA
Contact: Andrew Fraknoi (fraknoiandrew@fhda.edu)
www.astrosociety.org
- *Modest 5—Modeling Dense Stellar Systems
11–14 August 2004 — Hamilton, Ontario, Canada
Contact: Alison Sills (asills@mcmaster.ca)
<http://www.manybody.org/modest-5.html>

Washington News continued from back page

AAS members are encouraged to write a short thank-you note to their member of Congress for supporting the amazing growth in astronomy-related science funding. Only through regular communication with policy-makers can we hope to maintain the level of growth we are currently experiencing.

CNSF Hill Exhibition

The AAS will once again sponsor a booth at a special exhibition on the Hill featuring NSF-funded science efforts. This yearly event, sponsored by the Coalition for National Science Funding (www.cnsfweb.org) usually draws 20 to 30 members of Congress and nearly 100 congressional staffers. The fifty or so booths range from hands-on demonstrations to simple scientific posters.

This year, the AAS will host an exhibit from the Sloan Digital Sky Survey and several members of the project team. Past exhibitors include NOAO, NRAO, the Boomerang project and the Gemini observatory.

Congressional Visits Day

Nadia Afrin, AAS Public Policy Intern

On 2-3 April 2003 the AAS participated in the annual Congressional Visits Day (CVD) events, organized by the Science-Engineering-Technology Work Group (SETWG). The Work Group is an information network comprised of professional societies, educational institutions and trade associations and its objective is to raise visibility for the benefits of federally-funded research. This year the coalition presented Representative James Walsh and Alan Mollohan with the George E. Brown Leadership Award for their contribution to science, engineering and technology.

CVD participants included eleven early career and senior astronomers: Richard Binzel (MIT), Bruce Carney (University of North Carolina, Chapel Hill), Edward DeLuca (Smithsonian Astrophysical Observatory), Christopher DePree (Agnes Scott College), Sue Lederer (California State University, San Bernardino), John Leibacher (National Solar Observatory), Jon Morse (University of Colorado, Boulder), Daniel J Pisano (CSIRO – Australia Telescope National Facility), Mark Sykes (University of Arizona) and John Wilson (University of Virginia). They were accompanied by two students from Agnes Scott College, Julia DeBlasio and Sarah Neal. The participants met with senators, representatives and congressional staffers from various constituencies including Virginia, Colorado, Wisconsin, Georgia, California, Arizona, Massachusetts, Texas, Connecticut, North Carolina and Tennessee. During the congressional visits, the astronomers pointed out the various benefits of science and requested for increased funding. They also took this opportunity to endorse the Department of Energy, Office of Science authorization bill. Besides congressional visits, the group also attended briefings by the National Science Foundation, NASA and the Office of Management and Budget.

AAS participants in CVD are drawn from the membership of the Committee on Astronomy and Public Policy or individuals nominated by a member of CAPP. If you would like to participate in this yearly event, please contact a member of CAPP (<http://www.aas.org/comms/pubpol.html>) or Kevin Marvel (marvel@aas.org).



L-R: AAS Public Policy Intern Nadia Afrin, John Wilson, Chris Conselice, Chris DePree, Jewels Deblasio, Sarah Neal, Daniel J. Pisano



L-R: Sarah Neal, Representative John Duncan (R-TN), Jon Morse



L-R: Pamela Franklin (Congressional Science Fellow), Christopher Conselice, Congressman Adam Schiff, Susan Lederer



L-R: Bruce Carney, Congressman Virgil Goode, Jr., John Wilson, Jon Morse



L-R: Christopher Conselice, Mark Sykes, Congressman Randy Forbes, John Wilson, Susan Lederer



*William Clyburn,
Legislative Assistant
for NASA/Science for
Senator Zell Miller
and Jewels Deblasio*

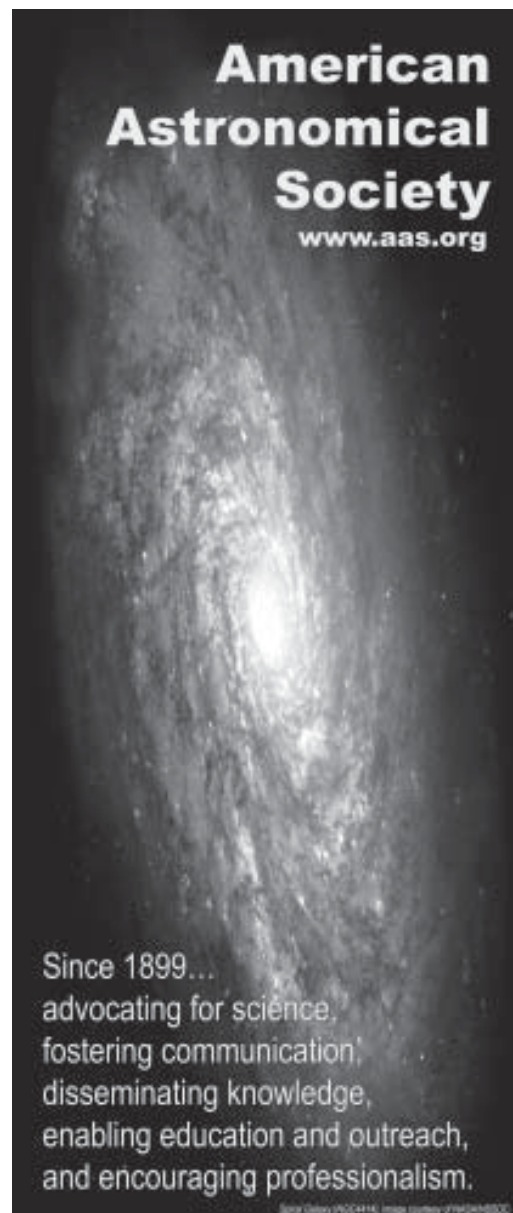


L-R: John Leibacher; Sara Neal, Congressman John Linder (GA), Jewels Deblasio, Chris DePree

AAS Promotional Display

A new exhibit display highlighting the AAS and its programs will have its debut at the Nashville meeting. Members are encouraged to drop by and pick up information about their Society and the services and programs available to them. Special Rolodex cards will be available with AAS contact information for easy lookup of key phone numbers. Non-members will be able to pick up application forms as well.

This flexible and dynamic exhibit will be used again at the IAU meeting in Sydney, at next year's National Society of Black Physicists meeting, at the Women in Astrophysics meeting in Pasadena (June 27-28) and appear at all future AAS meetings. If you think an upcoming scientific or affiliated meeting would benefit from this exhibit, please contact Kevin Marvel to arrange for it to be sent to the event.





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Washington News

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



FY 2003 Budget Finally Passed

Having waited until nearly half of the fiscal year was complete, Congress finally passed the FY 2003 Omnibus appropriations bill. The President signed it into public law 108-7 on 20 February 2003.

This whopper of a bill (more than 1000 pages) includes \$397.4 billion in discretionary spending for fiscal year 2003, including funding for NASA and NSF.

NASA is funded at an overall level of \$15.3 billion, or \$443 million more than FY 2002. \$50 million of this total is set aside for the investigation of the Columbia tragedy.

NASA's Office of Space Science received \$3.5 billion, up \$599 million from its FY 2002 level. This 20.7% increase is phenomenal in a fiscal environment where the average government program received roughly 3-4% above its previous fiscal year level. The OSS enjoys support both on the Hill and in the White House because of its targeted missions, which are tied directly to broad science questions. This fact, when combined with an effective community-based strategic planning process and incorporation

of Decadal Survey objectives, appears to be highly effective at securing increasing funding for the office.

Some of the specific items funded by Congress include \$95 million for the Pluto-Kuiper Belt mission, which NASA originally proposed canceling, \$20 million for the new Jupiter Icy Moons Orbiter and \$19 million additional funding for the Mars program.

NSF is funded at an overall level of \$5.3 billion, or \$487 million above FY 2002. Of this total, about \$4 billion is for research, \$150 million for research equipment and construction and \$909 million for education and human resources. This increase represents a 10% growth for the agency. The increase for R&D within the agency is 11.4% above FY 2002 and can be taken as the first step in the doubling of the agency's budget authorized in the NSF Authorization Act of 2002, which was signed into law last fall. The ALMA telescope received \$30 million to begin construction and should grow to just over \$50 million in the next fiscal year. Exactly how the increase overall will "trickle-down" to the division of Astronomical Sciences (AST) remains to be seen, but a general trend to increase the level of physical science funding has been instigated by a report from the President's Council of Advisors on Science and Technology (PCAST) calling for increased attention to this area of research.