

AAS NEWSLETTER

A Publication for the members of the American Astronomical Society

March 2003
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President's Column

Caty Pilachowski, catyp@astro.indiana.edu

The State of the AAS

Steve Maran, the Society's Press Officer, describes the January meeting of the AAS as "the Superbowl of astronomy," and he is right. The Society's Seattle meeting, highlighted in this issue of the *Newsletter*, was a huge success. Not only was the venue, the Washington State Convention and Trade Center, spectacular, with ample room for all of our activities, exhibits, and 2000+ attendees at the stimulating lectures in plenary sessions, but the weather was spectacular as well. It was a meeting packed full of exciting science, and those of us attending the meeting struggled to attend as many talks and see as many posters as we could. Many, many people stopped me to say what a great meeting it was. The Vice Presidents and the Executive Office staff, particularly Diana Alexander, deserve thanks from us all for putting the Seattle meeting together.

Our well-attended and exciting meetings are just one manifestation of the vitality of the AAS. Worldwide, our Society is viewed as strong and vigorous, and other astronomical societies look to us as a model for success. One important reason for that success is the involvement and engagement of our members, particularly our student members and early career members. At the Seattle meeting an astounding 10% of the papers were presented by undergraduate students, concrete evidence for the impact of the NSF's REU programs on education and for the increasing role that research plays in undergraduate education. The Society attracts student members because we offer affordable membership dues and meeting fees for student members, special programs and events for undergraduate and graduate student members at meetings, and many opportunities for interactions

Mt. Stromlo Observatory

Bush fires in and around the Australian Capital Territory have destroyed much of the Mt. Stromlo Observatory. Up-to-date information on the damage and how the US astronomy community can help is available at www.aas.org/policy/stromlo.htm. The AAS sends its condolences to our Australian colleagues and stands ready to help as best we can as they rebuild the observatory.

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AAS Meets in Nashville 25-29 May 2003



The AAS summer meeting for 2003 will take place in Nashville, TN. The scientific program is diverse and interesting and the local organizing committee has put together some fantastic events for AAS

members to enjoy. The currently planned tours/activities include a baseball game with

the local AAA team the Nashville Sounds, who are affiliated with the Pittsburgh Pirates (if interested, email diana@aas.org), a full-day tour experiencing the civil war heritage of middle Tennessee, a full-day tour of the Huntsville, AL Space and Rocket Center, and finally a visit to the Jack Daniel's Distillery. Each tour has its own cost, and details will be available in the meeting program and announcements.

The scientific program will include The Hale and Warner prize lectures (**Bob Howard** and **Matias Zaldarriaga**, respectively). A public lecture will be given by Dan Weedman on Seyfert Galaxies and Quasars. The topical sessions for Tuesday, 27 May and Wednesday, 28 May include The Observational Properties of Dark Energy, When Do Planets Form,

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AAS Executive Office Staff

Robert W. Milkey, Executive Officer
Kevin B. Marvel, Deputy Executive Officer
Diana T. Alexander, Conference Coordinator
Dawn-Marie Craig, Publications Assistant
Susana E. Deustua, Director, Educational Activities
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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*

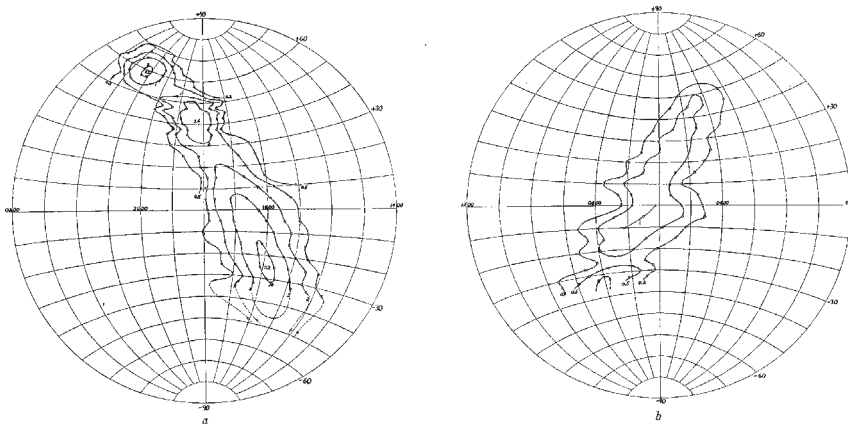
www.journals.uchicago.edu/ApJ/information.html



Russell Lecturer Reber Dies

Grote Reber (1911-2002), lifetime member of the AAS, and pioneer of radio astronomy, died on 20 December 2002, two days before his 91st birthday. Reber was awarded the Russell Lectureship in 1962; and was the first to follow up Karl Jansky's 1933 announcement of the discovery of radio waves from space. Reber was also the second astronomer (after William Huggins) to be awarded the Bruce medal for work performed as an amateur. In 1941, Reber produced the first radio map of the sky, based on a series of systematic observations.

Editor's Note: While it is not our policy to publish obituary notices in the Newsletter, the Council has determined that in the case of past AAS Presidents and Russell Lecturers, a brief notice shall be published to be followed by the usual tribute in the last number of the BAAS.



The maps above show the radio sky visible from Wheaton, Illinois as imaged by Grote Reber with his 31.4 foot (9.6m) diameter radio dish. The frequencies observed span the range 156 to 164 MHz (1.9 m wavelength). The map was built up from 200 strip-scans at declinations ranging from -32.4° to $+90^\circ$. From *Astrophysical Journal*, 100:279, 1944.

Member Deaths Noted

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

Ernest H. Cherrington

Sidney Edelson

Leon Van Speybroeck

The AAS also regrets to announce the recent death of **Frances Rotenberry**, Financial Assistant in the Executive Office. Frances worked for the AAS since October of 2000 and will be greatly missed by all.

Letters to the Editor

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.

Secretary's Corner

Arlo U. Landolt, aassec@as.org

Committee Vacancies Need to be Filled

Vacancies for several AAS committees will be filled by Council at its meeting in Nashville the last week in May 2003. Current committee members are listed under "Council/Committees" on the AAS homepage, <http://www.aas.org>. Committees which have vacancies, followed by the number of vacancies on each (in parenthesis) are:

Astronomy Education Board (2)
Committee on Employment (3)
Investment Advisory Committee (1)
Light Pollution, Radio Interference and
Space Debris (4)
Committee on Status of Minorities (3)
Committee on Status of Women in
Astronomy (3)

AAS Members may themselves volunteer, or suggest other Members for one of the vacancies. To assist members of the Committee on Appointments who may not know everyone, please include the date of PhD, as well as a few sentences conveying the background and area of expertise of the named individual. Our goal is to have both quality and breadth across the AAS committee structure.

Input must be received in the Office of the Secretary no later than **30 April 2003**. Submit suggestions to Arlo U. Landolt, AAS Secretary, by email to aassec@rouge.phys.lsu.edu or at the Department of Physics and Astronomy, Louisiana State University, Baton Rouge, LA 70803-4001, Tel: 225-578-1160, Fax: 225-578-7001.

Council Actions

The following are noteworthy actions taken by the AAS Council on 5 January 2003 at its 201st Meeting in Seattle, WA:

- Re-affirmed by Council the Executive Committee actions taken between 2 June 2002 and 5 January 2003.
- Approved the process designed to identify the next Editor of the *Astronomical Journal*.
- Commended the Executive Officer and the Executive Office staff for their strong support of the AAS.
- Adopted the report of the Committee on Appointments. Names will appear on the Society's homepage.
- Adopted the recommendations from the Prize and Award committees. Names will appear in an upcoming issue of the *Newsletter*.
- Re-appointed Stephen P. Maran as Press Officer for the interval January 2004 through 31 December 2006.
- Moved that the AAS accept an invitation to hold its summer 2007 meeting in Hawaii subject to a successful site visit and successful negotiations.
- Voted to change the name of the Annual Business Meeting

Message to Associate Members

Only (Full) AAS Members have the right to hold office or to chair committees of the Society. Many Associate members who are eligible to upgrade to Full Membership and whose expertise could benefit the Society, cannot serve. Associate members, please consider upgrading, and become more involved with Society activities!! There is no increase in dues!! (See a description of the different membership classes in the *Bylaws*, Article I.1, or on the membership application form.) Both of these sources are in the *2003 Directory*. If any of you have questions, please contact me at aassec@rouge.phys.lsu.edu.

AAS Election

The results of the latest AAS election are presented below. The Society thanks all who agreed to stand for election, for their commitment and service to the community and congratulates the winners. New AAS Officers begin their terms after the Annual Business Meeting at the June 2003 Nashville Meeting.

President

Robert P. Kirshner

Vice-President

Chris Impey

Education Officer

George D. Nelson

Councilors

Todd A. Boroson

Carol A. Christian

Alycia J. Weinberger

Nominating Committee

David S. DeYoung

Andrea K. Dupree

USNC-IAU

Geraldine J. Peters

to the Annual Members Meeting.

- Voted to contribute \$7,500 toward support of the American Institute of Physics (AIP) State Department Fellows Program for 2003. The funds would come from the Special Projects Fund.
- Voted to take \$3,000 from the Special Projects Fund for support of the Congressional Visits Day.
- Voted to take \$3,800 from the Special Projects Fund for the purchase of a portable display system.
- Voted to send a letter of commendation to Evan Owens at the University of Chicago Press, acknowledging his strong efforts toward ensuring quality AAS publications.
- Directed the AAS President, to work with other scientific societies to develop a joint resolution on global climate change.
- Voted to permit the Solar Physics Division (SPD) to change their Bylaws.
- Voted to approve L. V. Kuhl as Chair of the Search Committee for a new Editor of the *Astronomical Journal*.
- Approved the candidates for membership on the Search Committee for a new Editor of *The Astronomical Journal*.
- Council voted Catherine Cesarsky an Honorary Member of the AAS.



Publications

Astronomical Journal Editor to Retire

Paul Hodge has announced that he will retire as Editor of the *Astronomical Journal (AJ)* effective with the completion of his current term at the end of 2004. He has served as the *AJ* Editor since 1984 when he was chosen as Editor after the death of George Abell. Abell had been chosen to serve but died before he could assume the Editorship. Hodge has

overseen a tremendous growth in the *AJ*. For example, the number of submitted manuscripts grew from 426 in 1992 to about 582 in 2002 and the number of published pages in 2002 should be around 7125. He has worked hard to improve the speed of publication and in 2002 the mean time between acceptance of a paper and its publication ranged from 75 to 118 days with a mean of 89 days. The time for refereeing has also been gratifyingly small ranging from 1 to 90 days with a median of 20 days. He has also overseen the transition from the *AJ* being published by the AIP to the University of Chicago Press. The *AJ* office at the University of Washington has become highly electronic due to the efforts of Toby Smith (Assistant Editor for Electronic Publishing).

Paul Hodge is an Emeritus Professor of Astronomy at the University of Washington. He was born and raised near Seattle and received his bachelor's degree from Yale University and his Ph.D. from Harvard University in 1960. He held research and teaching positions at the Mount Wilson and Palomar Observatories, the California Institute of Technology, and the University of California at Berkeley before moving to the University of Washington. His research is primarily in the field of galaxies and star formation, but he also works on meteoritics, especially on meteorite craters. Hodge has authored or co-authored more than 400 scientific papers and 17 books, mentored more than 25 Ph.D. students; and has observed extensively with HST and, more recently, with KECK. He served the Society as a Vice President from 1990-1993.

As a result of his impending retirement, the American Astronomical Society is soliciting applications and nominations of candidates to assume the position of Editor of the *Astronomical Journal* at the end of 2004.

The Search Committee has just been formed and a longer advertisement, statement of desired qualifications, and list of application materials will be placed in the next AAS *Newsletter*, in the AAS *Job Register*, sent via email, and appear in *Physics Today*. Professor Leonard Kuhi, Chairman of the Department of Astronomy and Treasurer of the AAS will Chair the Search Committee. Both application materials and nominations should be sent to him in care of Dr. Robert Milkey, AAS Executive Officer, 2000 Florida Ave, NW, Suite 400, Washington DC 20009-1231.

Committee News

Status of Women in Astronomy

Meg Urry (CSWA Chair, Yale University), Pat Knezek (CSWA, NOAO), and Kathryn Johnston (Wesleyan University)

Women in Astronomy II: June 2003

The Committee on the Status of Women in Astronomy (CSWA) is pleased to announce that a conference on the status of women in astronomy, "Women in Astronomy II: June 2003", will be held at the California Institute of Technology in Pasadena, CA, on 27-28 June 2003. The conference convenes approximately 10 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.

Fran Bagenal from the University of Colorado chairs the Program Committee. **Judy Cohen, Wal Sargent** (Caltech), and **Barry Madore** (Carnegie/Caltech) head the Local Organizing Committee. More information, including a conference website and registration process, will soon be available (stay tuned for announcement in AASWOMEN). Astronomical leaders (department chairs, observatory directors, agency officials), faculty, postdocs, and students are encouraged to attend. We look forward to seeing many of you at the meeting.

January 2003 CSWA Meeting in Seattle

Denice Denton, Dean of Engineering at the University of Washington, addressed the CSWA meeting at the AAS, recounting her impressive campaign to diversify the faculty in her division. In the last year alone, in a search to fill 22 new positions, the division has successfully hired 7 women and 2 African Americans. (In contrast, the equivalent division at UC Berkeley hired 1/50 women in a recent search, despite the fact that on average, 15% of current engineering PhDs go to women.)

Dean Denton emphasized that all hires in her division are made based on the excellence of the candidates—none are targeted positions. She counters claims of "lowering of standards" to achieve such changes with a simple fact: 9 faculty in her Engineering College won CAREER awards last year (of 14 applications)—these are prestigious multi-year grants for young faculty. Clearly the UW Engineering faculty are top performers.

How was this level excellence and diversity achieved? The bottom line is institutional change. Dean Denton developed a "tool kit" for conducting a good faculty search (see www.washington.edu/admin/eoo/forms/ftk_01.html), which involves appropriate training for the search committee and other comprehensive reforms, including active outreach to the candidate pool. She gave specific examples of how searches are carried out, interviews conducted, offers made, and new faculty welcomed to her division. She noted that all of this would be in vain without parallel changes in the culture within the division

that made it an attractive working environment for the new faculty. Nor could such a plan be implemented without appropriate resources, in terms of both money and staff, so these have been made a priority by the Dean.

In the end, the absolutely essential component of the University of Washington program is strong leadership—at the Chair, Dean and Presidential level—committed to the ideal of excellence, to its close compatibility with diversity, and to diverting or creating the necessary resources to make it happen. A more complete report on the University of Washington's hiring program, and successful NSF ADVANCE project, will be given in the June 2003 issue of the CSWA Newsletter, *STATUS*.

Status of Minorities in Astronomy

Keivan Stassun, keivan@astro.wisc.edu

Seattle Panel Discussion on Minority Institutions and REU Programs

The Committee on the Status of Minorities in Astronomy (CSMA) hosted a special session at the AAS Meeting in Seattle. Approximately 85 members, including the AAS President, were in attendance, and the session received some press coverage (see http://www.space.com/searchforlife/seti_devore_degrees_030109.html). The goal of the session was to initiate dialogue on specific strategies for recruiting minorities into astronomy, especially via connections with Minority Institutions and through targeted efforts involving astronomy REU (Research Experiences for Undergraduates) programs.

The session was opened by an introductory talk by Keivan Stassun, (Hubble Fellow, Wisconsin) which provided context and motivation for the session. The following points were emphasized:

- Underrepresentation in astronomy is an order-of-magnitude issue: The PhD production rate among African- and Hispanic-Americans in astronomy

averages 2-3% per year, compared to these groups' 25% representation in the overall population. These groups comprise a similar proportion of physics/astronomy faculty, but with a large concentration in predominantly minority institutions; they comprise about 0.5% of the faculty in the "top 50" physics and astronomy departments.

- Minority Serving Institutions (including Historically Black Colleges, Hispanic Serving Institutions, and Tribal Colleges) are very important training grounds for future minorities in physics and astronomy. For example, the nation's Historically Black Colleges produce about 40% of all African-Americans with baccalaureate degrees in science and engineering; the top ten producers of African-Americans with baccalaureate degrees in physics are all Historically Black Colleges. The top school in this regard, Xavier University of Louisiana, produces more Black undergraduates in Physics than all of the Big Ten schools combined.

- REU programs can be important gateways to graduate study in the field, often providing valuable research experience to students at schools with fewer resources/opportunities. The session was then turned over to four invited guest speakers who formed an expert panel. The panelists were:

- Dr. James Falco, Dean of Arts & Sciences, Heritage College (a predominantly Hispanic institution in Washington state)
- Dr. Elia Eschenazi, Professor of Physics, Xavier University of Louisiana (Historically Black College)
- Dr. Robert Benjamin, Scientist and Director of REU program at the University of Wisconsin, Madison
- Dr. Kathleen Eastwood, Director of Education and Special Programs, NSF Astronomy Division.

The panelists provided a wealth of perspectives and ideas, too numerous to list here, which will be summarized in a forthcoming "white paper" to be presented to the AAS leadership. This report will also be made available on the CSMA website, and will include a summary of the excellent discussion

between the panelists and audience members that followed the panelist's prepared remarks.

Seeking Recent Minority PhDs

We would like to hear from minority AAS members who are within one year of receiving (or having received) their PhD. We hope to begin highlighting recent minority PhD recipients in the *SPECTRUM* newsletter. If you are a recent minority graduate (or know one), please send email to csma-info@astro.wisc.edu.

Contribute to *SPECTRUM*

All AAS members are welcome and encouraged to submit contributions to the CSMA's semi-annual newsletter, *SPECTRUM*. Appropriate submissions include opinion pieces, information about minority outreach efforts, discussions of personal experiences with minority-related issues, etc. We are also interested in learning about articles that have appeared in other publications that we may be able to re-print. Submissions should be directed to *SPECTRUM* editor, Keivan Stassun (keivan@astro.wisc.edu).

The current issue of the *SPECTRUM* newsletter is still available online at the CSMA website (www.astro.wisc.edu/csma). We encourage all AAS members to sign up using the online form to receive future issues of *SPECTRUM* by mail. The next issue of *SPECTRUM* will be available in June 2003.

Employment

Andrea Schweitzer, Chair schweitzer@frii.com

At the recent Seattle AAS meeting, the Employment Committee sponsored a panel discussion on "Employment: Alternative Careers for Astronomers."

We had a variety of speakers: some with Ph.D.'s, some without. Most were still involved in the astronomy community; one had happily moved on to other things. Some changed their career path while still in grad school, some following their Ph.D.s, some after doing a postdoc.

Nearly all were actively engaged in doing education and public outreach in astronomy, a trend that should be noted and supported by the professional astronomical community.

So many ideas were covered that it's difficult to summarize in one column! But here are the highlights:

- The importance of being happy in your work. Not everyone will be happiest getting a Ph.D. and working in academia!
- Sometimes it's the most creative and adventurous people who choose to leave the academic track. Each of the panelists had a strong entrepreneurial spirit.
- Cultural training in grad school often hints that not having an academic career means somehow not having succeeded. But if you look around, you'll find that a majority of successful people are not academic astronomers.
- View these career options as opportunities, not as a second choice if your "real" career path doesn't take you in the right direction. Carol Grady felt an academic job with numerous responsibilities and limited time for research seemed "closer to leaving the field than what I have experienced."
- Different things will take priority at different times in your life. Allow for flexibility in your career. Changes such as wanting to choose a particular location to live, time with family, and health concerns will be shifting priorities with your focus on astronomy.
- You may enjoy using other skills (such as writing, programming, management or teamwork on projects) more than research. Recognize that and make the most of your talents!
- While you are still in college or early in grad school, think about whether a Ph.D. is right for you. If not, consider a master's degree and perhaps other training in a complimentary field that suits you best.
- It is rarely easy to make the decision to leave the "traditional" (a.k.a. academic) path and change your career. It is a big decision, emotionally as well as intellectually.
- Your astronomy training gives you a lot of valuable skills. Dennis Ebbets offered a long list of skills you can use beyond academia, which are posted on the AAS website under "Career Services."
- Most non-academic people change careers several times throughout their lives, so expect ongoing change and new things to learn. Even the panelists weren't sure what they would be doing a few years from now!

Panelists:

- Ketan Desai, Renaissance Technologies, programmer/analyst (kdesai@nrao.edu)
- Dennis Ebbets, Ball Aerospace and Technology Corp., aerospace industry (debbets@ball.com)
- Carol Grady, Eureka and Goddard, experience working as an independent astronomer (cgrady@stis.gsfc.nasa.gov)
- Ken Swanson, Pacific NW National Lab, computer science (ken.swanson@pnl.gov)
- David Tytell, Sky & Telescope Magazine, science writing (dtytell@SkyandTelescope.com)
- Dave Van Buren, medical imaging with GE, now at JPL (dvburen@mail2.jpl.nasa.gov)

Also, three people spoke up during the discussion period with additional information:

- Gina Brissenden, astronomy education (glbrisse@wisc.edu)
- Martin Ratcliffe, Past President of the International Planetarium Society (mratcliffe@exploration.org)
- William Straka, retired from both academic and aerospace industry careers (wstraka@pacbell.net)



More than 100 people attended the Employment Committee Special Session in Seattle. Photo by Kevin Marvel

National Science Foundation (NSF) News

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

New Faces at AST

The Division is pleased to welcome three new program officers to NSF.

Dr. Nigel Sharp has become Program Director of the Extragalactic Astronomy and Cosmology research grants program. Nigel joined the Division in December 2002 on a two-year visiting position from NOAO where he has been for almost 20 years. Nigel's broad experience in astronomy and his extensive service activities will make an important contribution to the Division.

Dr. Craig Foltz joins the Division as Program Manager for NOAO and NSO. Craig brings to the Division his many years of experience as Director of the MMT and an active research career in extragalactic astronomy. We look forward to benefiting from Craig's expertise in management and in science.

Dr. Andy Clegg joins the Division as Program Manager for NRAO and the Advanced Technologies and Instrumentation grants program. Andy is returning to AST; he had previously spent a year on a temporary position working with electromagnetic spectrum management. Since then he has been with Cingular Wireless as a lead member of the technical staff. His scientific background in radio astronomy and strong interest in technical aspects of the field will be important assets to the Division.

Broader Impact at NSF

Beginning in 1 October 2002, NSF began requiring that Principal Investigators address both NSF merit review criteria—intellectual merit and broader impact—in separate statements within the one page Project Summary and the Project Description of proposals to NSF. Most of the community followed this requirement in the last round of proposal submission; of the almost 400 proposals received to the Astronomy and Astrophysics

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Education News

Bruce Partridge, *Education Officer*, bpartrid@haverford.edu

Education Sessions at the 201st Meeting in Seattle

At the most recent AAS meeting, there were an invited talk, three special, one oral, five poster and three extra sessions on education. One of these presentations was our first ever late-paper session on education! Chris Impey (University of Arizona) gave an invited talk on “Teaching in the Age of Electrons.” The sessions included a workshop on pedagogical techniques for graduate students and postdocs; one on writing successful NASA education proposals; and responses of the community to the Report on Graduate Education issued by the AAS five years ago. Members are urged to organize sessions on education for the Atlanta meeting. The deadline for submitting special session proposals is 15 May 2003.

Response of Departments to the 1996 Report on Graduate Education

Steve Strom, NOAO

In 1995, the AAS Council charged the ad hoc Astronomy Education Policy Board (AEPB) with carrying out a study aimed at examining graduate education in astronomy. In the immediate aftermath of the Cold War’s end, science policy makers believed that federal funding for basic science could not sustain the exponential growth it had enjoyed since the late 1940s. Rather federal support was thought likely to remain level, or possibly to decrease, as entitlement programs consumed an ever-increasing fraction of non-defense spending.

As one consequence, projections available at the time suggested that at best, only 30% of astronomy PhDs could look forward to permanent academic positions. Studies in related fields suggested equally dire scenarios.

With this as background, the AAS study—ultimately funded jointly by the Society and the NSF—examined the following questions:

(1) Should some or all graduate programs (a) practice “birth control” to limit the number of PhDs; (b) continue to focus primarily on the production of the next generation of research astronomers; or (c) broaden graduate study in astronomy?

(2) Are significant changes in our approach to graduate education desirable?

If so, what can be done to promote them? What cultural changes and changes in the reward structure are needed? What role can the funding agencies play?

(3) Should the training of Masters of Science become a more important element in astronomy graduate programs?

These questions were examined via a structured community dialog—involving astronomy department chairs, faculty,

graduate students, representatives from NASA and the NSF and science policy makers, and spanning two years.

The AEPB report concluded that (1) practicing birth control would be unwise; (2) the main focus of astronomy graduate education should continue to be on training the next generation of astronomers; and (3) experiments to broaden graduate education should be encouraged by federal funding agencies and universities. Among the recommended experiments were “enhanced Masters” programs; programs aimed at exposing astronomy graduate students to related disciplines and to industry (in service both of broadening their background and enhancing their post-graduate employment opportunities); and programs aimed at providing students with mentoring and experience in classroom teaching techniques (in service of improving communication skills and enhancing the quality of science education in university settings).

In spring, 2002, the AAS Council authorized a Special Session for the Seattle AAS meeting with the aim of understanding whether the report has succeeded in encouraging experiments and providing the starting point and framework for continuing a dialog regarding directions in graduate education.

The presenters at this session in Seattle included Greg Bothun (U. Oregon), who described attempts to develop a professional Masters program with a link to industry; Joel Tohline (LSU), who summarized an experiment aimed at providing a computational science/astronomy Masters; Chris Impey, who provided insight into a number of changes in the graduate program instituted at the University of Arizona; Wien Peng, a graduate student at the University of Arizona; and John Percy (U. Toronto), who described graduate education initiatives undertaken in Canada.

The formal presentations were followed by a lively dialog involving graduate students and a selection of department chairs.

Both the presentations and the discussion made it clear that a number of substantive experiments to enhance and/or broaden graduate education are indeed underway, particularly at state universities. Furthermore, it appears that links with other departments (e.g. computer and information sciences) have been forged, that options for “minors” in related disciplines are becoming more common, as are efforts to greatly enhance teaching and public outreach experiences during graduate school. The latter efforts have been both stimulated and enhanced as a result of workshops and other sessions organized by the Society.

The involvement of graduate students in education and public outreach activities also appears to have increased. This change is an outgrowth of (1) the increasing emphasis on education and public outreach by NSF and NASA; (2) the availability of funding for such efforts and greater rewards for linking research and education; and (3) the examples and frameworks provided by successful nationwide education efforts (e.g. Project Astro).

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Historical Astronomy

Barabara Welther, Past Chair, bwelther@cfa.harvard.edu

Highlights of HAD Meeting in Seattle, WA in January 2003

For a second year in a row, the announcement of our HAD annual meeting drew 20 abstracts for four paper sessions, including one presented in an AAS display session and two late papers presented on Sunday afternoon. Although we had a few papers presented in PowerPoint last year at our meeting in Washington, DC, that mode of presentation dominated the field this year in Seattle. The reasons are simple: in PowerPoint it's possible to present striking pictures, readable text, and now, even sound bites taken from interviews of astronomers taped years ago.

Our leading HAD guru of PowerPoint is **David DeVorkin**, who volunteered to burn a CD of all our presentations and to bring his laptop computer for use in our Sunday afternoon session in the Seattle Sheraton. That session, entitled *Special Topics in the History of Astronomy*, spanned four hours, including a coffee break, and featured nine papers on various aspects of ancient and modern astronomy. Three local historians were especially invited to speak on Sunday: **Peter Abrahams**, President of the Antique Telescope Society; **Karl Hufbauer**, who recently retired to Seattle from the University of California at Irvine; and **James Evans**, Professor of Physics at the University of Puget Sound. Because our meeting room was adjacent to the one for a special education session on Sunday afternoon, we drew in more than 100 people during that time frame.

From his vantage point at the University of Washington **Woody Sullivan** organized special sessions in Seattle for both the HAD and AAS. For Monday morning he arranged a special invited session entitled *History of Ideas on Extraterrestrial Life* that featured four presentations by **JoAnn Palmeri**, **Don Osterbrock**, **Steve Dick** and himself. Then for Tuesday Woody invited six

UW scientists to present papers in a morning and afternoon session on the topic, **The Biology of Astrobiology for Astronomers**.

One of the highlights of our Monday afternoon

contributed paper session was to have Vassar undergraduate, **Lucy Amory**, present her research on Nantucket markers in a paper entitled "Meridian Stones: for Form or for Function." She collaborated on her well-organized PowerPoint talk with her Nantucket mentors, **Vladimir Strelitski** and **Peter Boyce**, who were both in Seattle for the meeting. Other PowerPoint presentations that afternoon included one by **Brenda Corbin** on "Etienne Leopold Trouvelot, 19th Century Artist and Astronomer," and one by **Tom Williams** on "The Wizard of Puget Sound: Dalmero Francis Brocchi (1871-1955)." The subject of **Roy Clarke's** paper was "UCLA Astronomer Frederick Charles Leonard (1896-1960): From Childhood Prodigy to Mature Obsession," for which he showed a beautiful set of historic slides. Unfortunately, neither **Rudi Paul Lindner** of the University of Michigan nor **Durruty Jesus de Alba-Martinez** of the University of Guadalajara could get to the meeting this year to present their papers.

Our Business Meeting this year was one of the best we've had in a while. After several exchanges of e-mail in December, **Ron Brashear**, **Tom Williams**, **Brenda Corbin** and I met for lunch on Sunday before our first HAD paper session to work on the agenda. We plan to revise the bylaws this spring essentially so that we can hold our biennial election early



Past Chair of the Historical Astronomy Division, Barbara Welther (Smithsonian Astrophysical Observatory), participated in HAD sessions at the meeting. Photo by David DeVorkin.

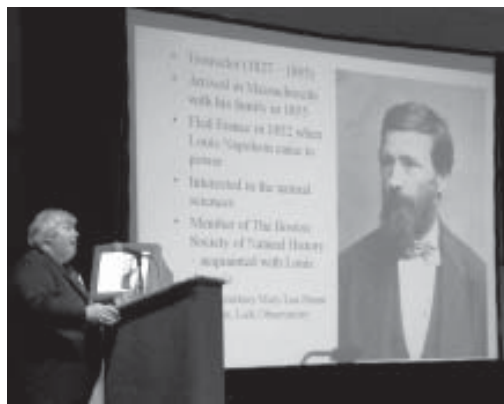
enough in the year to have the names of our new officers published in the *AAS Membership Directory* for the following year when they take office. For his part, our new Vice-Chair, **Don Yeomans** of Jet Propulsion Laboratory, has volunteered to polish the language of the original document. Later this spring we plan to present these revisions to the AAS Council for approval. Then at next year's Business Meeting in Atlanta, we'll have the membership vote on the changes.

As a result of looking at the Bylaws and other HAD documents, we noticed that our Division will celebrate its 25th anniversary in 2005. Our traditional annual meeting that year will be in San Diego. Then, for September 2005 we're also planning a special joint meeting with DPS in



New Chair of HAD, Tom Williams, updated the plans for a joint meeting with DPS in Cambridge, England, in September 2005.

Cambridge, England. Future issues of HAD News will carry more information about both meetings.



Brenda Corbin (U.S. Naval Observatory) spoke about Etienne Leopold Trouvelot, 19th-century artist and astronomer. Photo by David DeVorkin.

This spring the Doggett Prize Committee will be looking over the nomination papers of candidates to select the fourth winner of the HAD prize. The results will be announced next summer and the prize will be presented at our annual meeting in Atlanta next year. **Tom Williams** will give more information about some of the plans for the HAD meeting in 2004 in the AAS Atlanta Meetings Announcement next summer. We hope these plans include a lecture from the fourth winner of the Doggett Prize.

At the end of our Business Meeting in Seattle we announced the names of our new Committee Members: **John Briggs** of the National Solar Observatory and **Alan Hirshfeld** of the University of Massachusetts in Dartmouth. Then the retiring Chair joyfully passed the HAD plaque and gavel to **Tom Williams**, the incoming Chair. For more news about the Seattle meeting, please consult the February 2003 issue of the *HAD News*, which will be available in both printed format and electronic format on the HAD web site: <http://www.aas.org/had/hadnews.html>.

High Energy Astrophysics

Contributions from Josh Grindlay (Chair), Roger Blandford (Vice-Chair) and Matthew Baring (Secretary/Treasurer)

HEAD News from the January AAS Meeting in Seattle

2002 Bruno Rossi Prize Session

The High Energy Astrophysics community was saddened by the news that the 2002 Bruno Rossi prize winner, **Leon Van Speybroeck**, passed away on 25 December 2002, prior to the Seattle AAS Meeting. At the AAS Meeting on 8 January 2003, after a brief tribute to Leon's accomplishments and moment of remembrance, the Rossi Prize certificate was presented by HEAD



Josh Grindlay (left, Harvard-Smithsonian Center for Astrophysics) presented the Rossi Prize, won by the Late Leon Van Speybroeck (also CfA) to the Van Speybroeck's son David and daughter Elaine Van Speybroeck Carmichael. Photo by Richard Dreiser, © 2003 American Astronomical Society

included a rich assortment of Chandra images, with commentary, and concluded with some wonderful pictures of Leon at several of his milestone moments: from the early days at AS&E, to his pivotal role in the mirrors for the Einstein X-ray Observatory, to

his final masterpiece, the exquisite mirrors for the Chandra X-ray Observatory.

2003 Bruno Rossi Prize Winners

At the HEAD Business meeting during the January AAS Meeting, the Chair, Josh Grindlay, announced that the 2003 Bruno Rossi prize is being awarded to **Robert Duncan** and **Christopher Thompson** for their prediction, and to **Chryssa Kouveliotou** for her observational confirmation, of the existence of magnetars: neutron stars with extraordinarily strong magnetic fields.

2002 HEAD Election Results

The HEAD Election was concluded on 31 December 2002, and the results announced at the HEAD Business meeting on January 8th during the AAS Winter Meeting in Seattle, WA. The three newly elected members of the Executive Committee are Joel Bregman, Kathy Flanagan and Pat Slane.

HEAD Sessions in Seattle

HEAD I: Cosmic Ray Physics in the 21st Century

This is a time of rapid progress in the measurement of cosmic ray spectra from low (~ 100 MeV/n) to ultrahigh (~ 1 ZeV/n) energy.

Mark Wiedenbeck (JPL/Caltech) summarized recent results, especially from the highly successful ACE spacecraft. These have allowed isotopic composition to be determined for elements all the way through zinc with great precision, including naturally radioactive elements. These measurements allow one to conclude that there is an interval of at least 0.1 Myr between nucleosynthesis, presumably in a supernova, and acceleration, and that the residence time in the Galaxy is 15 Myr. This last determination is confirmed by four independent measurements. The secondary to primary ratio is best described by models where the particles get most of their energy impulsively rather than steadily.

Simon Swordy (Chicago) discussed intermediate energy cosmic rays near the "knee" in the spectrum around 1 PeV. The existence of a break at this high an energy is a challenge to the theory of diffusive shock acceleration in supernova remnants which predicts a lower energy. Furthermore, X-ray and gamma ray measurements of individual remnants do not show the presence of such high energy particles. Understanding the origin of cosmic rays in this range will require improved measurements of their composition and understanding of their propagation.

Angela Olinto (Chicago) summarized recent progress in the highest energy cosmic rays with Lorentz factors up to a trillion, somewhat above the "GZK" cutoff expected from photopion production on the cosmic microwave background. Two sets of experiments using atmospheric fluorescence and direct shower

continued on page 22

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, 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://cadcwww.hia.nrc.ca/meetings>.

AAS and AAS Division Meetings

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) and
David Weintraub (david@ttau.phy.vanderbilt.edu)

Solar Physics Division
16–20 June 2003 — Laurel, MD
Contact: Ed DeLuca (vice-chair@spd.aas.org)

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

Other Events

*2nd VERITAS Symposium on TeV Astrophysics of
Extragalactic Sources
24–26 April 2003 — Chicago, IL
Contact: Lucy Fortson (lucy@cygnus.uchicago.edu)
<http://gamma2003.uchicago.edu>

*The Astrophysics of Gravitational Wave Sources
24–26 April 2003 — Greenbelt, MD
Contact: Sandra Barnes
(sbarnes@milkyway.gsfc.nasa.gov)
<http://astrogravs.gsfc.nasa.gov>

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>

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 &
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)

*First Constellation-X Spectroscopy Workshop
4–7 May 2003 — Columbia University, NYC
Contact: Frits Paerels (frits@astro.columbia.edu)
<http://constellation.gsfc.nasa.gov/docs/workshop/details.html>

*The Local Group as an Astrophysical Laboratory
5–8 May, 2003 — Space Telescope Science
Institute, Baltimore, MD
Contact: Quindairian S. Gryce (gryce@stsci.edu)
http://sd.stsci.edu/Astrophysical_Laboratory/index.html

MAPS 2002 Planetarium Conference
7–10 May 2003 — Lanham, MD
Contact: Patty Seaton (pxts13@yahoo.com)
<http://www.maps-planetarium.org>

*Neutron Stars on Fire: Thermonuclear Probes of Rotation,
Magnetism, and Nuclear Physics
11–13 May 2003 — Princeton, New Jersey
Dimitrios Psaltis (dpsaltis@ias.edu)
<http://www.sns.ias.edu/~dpsaltis/burst>

*3rd International X-ray Astronomy School
12–16 May 2003 — Wallops Island, VA
Contact: xrayschool@milkyway.gsfc.nasa.gov
<http://xrayschool.gsfc.nasa.gov>

*The Nuclear Physics of Core Collapse Supernovae
26 May–8 June 2003 — Aspen, CO
Contact: Jim Truran (truran@nova.uchicago.edu)
<http://www.aspenphys.org>

Astrophysics of Dust
26–30 May 2003 — Estes Park, CO
Contact: Adolf N. Witt
(awitt@dusty.astro.utoledo.edu)
<http://astro1.panet.utoledo.edu/~aod03>

“Astronomy with Radioactivities IV” and “Filling the
Sensitivity Gap in MeV Astronomy”
26–30 May 2003 — Seeon, Bavaria, Germany
Contact: Roland Diehl (rod@mpe.mpg.de)
<http://www.mpe.mpg.de/gamma/science/lines/workshops/seeon03.htm>

10th Canadian Conf. on General Relativity and Relativistic
Astrophysics
28–31 May 2003 — Guelph, Ontario, Canada
Contact: Éric Poisson (poisson@physics.uoguelph.ca)
<http://www.physics.uoguelph.ca/poisson/ccgrra/>

*Annual Conference of The Canadian Society for History and
Philosophy of Science (CSHPS)
29–31 May 2003 — Nova Scotia, Halifax
Contact: Jean Leroux (cshps03@arts.ubc.ca)
<http://www.psych.yorku.ca/orgs/cshps>

The Riddle of Cooling Flows in Galaxies and Clusters of
Galaxies
31 May – 4 June 2003 — Charlottesville, VA
Contact: Thomas Reiprich (thomas@reiprich.net)
<http://www.astro.virginia.edu/coolflow>

*Future Directions in High Resolution Astronomy: A Celebration of the 10th Anniversary of the VLBA

8–12 June 2003 — Socorro, NM
Contact: Jonathan Romney (jromney@oc.nrao.edu)
<http://www.occ.nrao.edu/events/VLBA10th>

*Milky Way Surveys: The Structure and Evolution of Our Galaxy, The 5th Boston University Astrophysics Conference

15–17 June 2003 — Boston, MA
Contact: Kimberly Paci (kpaci@bu.edu)
<http://www.bu.edu/iar/conference>

Sixth Biennial History of Astronomy Meeting

19–22 June 2003 — Notre Dame, IN
Contact: Matthew F. Dowd (mdowd1@nd.edu)
<http://www.nd.edu/~hisast4/ndviinfo>

SCOSTEP/IAU Symp.: Solar Variability as an Input to the Earth Environment

23–28 June 2003 — Tatransk 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 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.www.astromony.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>

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>

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>

Cometary Dust in Astrophysics

10–14 August 2003 — Crystal Mountain, WA
Contact: D. Brownlee (brownlee@bluemoon.astro.washington.edu)
<http://stardust.wustl.edu/CDA.html>

*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>

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201st AAS Meeting 5 - 9 January in Seattle, WA

AAS Photos by Richard Dreiser, © 2003 American Astronomical Society



Carl Sagan Medalist Heidi Hammel (right, Space Science Inst.) was assisted by Seattle student Tori DeLung in a demonstration comparing the size of the Earth with the distance to the Moon in her public lecture at the Pacific Science Center.



NSF staffers Nigel Sharp, Kathy Eastwood, Wayne Van Citters, and Eileen Friel (l-to-r) explained how the agency works at the NSF Town Meeting.



Heidi Newberg (Rensselaer Polytechnic Inst.) and Brian Yanny (Fermilab) found a ring of stars around the Milky Way in SDSS data.



AAS President Cathy Pilachowski (lower left) greeted REU participants Mark Pitts and Jeff Cummings (both in rear), Stacy Sidle and TalaWanda Monroe at the Undergraduate Reception.



Suzanne Hawley (U. Washington) gave an invited talk on red dwarfs; colleague Bruce Balick reported on nebulae.



Invited speakers with much to say on accretion disks were Paula Szkody (U. Washington) and Ethan Vishniac (Johns Hopkins U.).



Chip Kobulnicky (left, U. Wyoming) studied field galaxies; Rabi Whitaker and Eric Jensen (both, Swarthmore College) reported finding young, nearby stars.



Gisela Telis (Columbia U.) investigated X-ray scattering by intergalactic dust, while Kwayera Davis (right, College of Charleston) explored the time domain in the Hubble data archive.



James Staley and Jody Deming (both, U. Washington) told an overflow crowd about the "Biology of Astrobiology."



Nathan Smith (U. Colorado) found unusually large proplyds in the Carina nebula.



Michael Turner (U. Chicago), discussed dark energy, explaining "The Universe is THIS big."

Invited speakers Chris Impey (left, U. Arizona) and Steve Dick (US Naval Obs.) spoke on teaching astronomy and the evolution of the concept of "cosmic evolution," respectively.





President Pilachowski presented a certificate to Russell Lecturer George Wallerstein (U. Washington).



Donald Brownlee (U. Washington) spoke about sample return missions, especially the Stardust probe.



Joseph Lazio (Naval Research Lab.) announced new low-frequency radio findings about the galactic center region from the VLA.



Warner Prize awardee Adam Riess (STScI) spoke about dark energy.



Amy Barger (U. Wisconsin & U. Hawaii) gave the Pierce Prize Lecture on "Supermassive Black Holes in the Distant Universe."



Saurabh Jha (UC Berkeley) observed a gamma-ray burst afterglow in its early moments.



Malcolm Smith (NOAO/CTIO), Caty Pilachowski and Philip A. Ianna (IDA Board of Directors Rep) announce the AAS/IDA endorsement of National Dark Sky Week taking place 1-8 April 2003. Related story page 19.



Evgenya Shkolnik (U. British Columbia) found hints of star-planet interactions in extrasolar planetary systems.



Experts reporting on Hyper Extremely Red Objects in the distant universe included Myungshin Im (SIRT Science Ctr.) and Kristin Coppin (U. British Columbia).



Rachel Webster (U. Melbourne) reported on the local universe, as mapped in neutral hydrogen with the Parkes Radio Telescope.



Paul Hertz (NASA HQ) described NASA's new "Beyond Einstein" initiative.



Public Policy Lecturer Arthur Carty (left, President, NRC of Canada) posed with James Hesser (Herzberg Inst. of Astrophysics).



Tinsley Award winners were Geoffrey Marcy (left, UC Berkeley), Steven Vogt (right, UC Santa Cruz), and Paul Butler (not shown, Carnegie Institution of Washington). Pres. Pilachowski made the presentation.



Andrea Dupree and Alex Lobel (both, CfA) reported on the "Millennium outburst" in the yellow hypergiant rho Cassiopeiae.

2003 Prize Winners Announced

Dr. George W. Wetherill

Carnegie Institute of Washington

Henry Norris Russell Lectureship

Citation states: "One of the truly original thinkers in planetary astronomy, George Wetherill pioneered the application of modern physics and numerical simulations to the formation and evolution of terrestrial planets. His geochronology concepts underpin all astronomical radiometric dates.

He and his colleagues took the lead in experimental and theoretical studies demonstrating that the meteorites and some Moon rocks are at least as old as the oldest Earth rocks, thereby establishing the first radiometric chronology for the inner solar system. Through pioneering applications of numerical and analytical simulations he demonstrated that run-away accretion can account for the assemblage of planetesimals into planets."



Dr. Donat G. Wentzel

University of Maryland

George Van Biesbroeck Prize

Citation states: "...for outstanding and sustained contributions during three decades to astronomy education in this country by stimulating the American Astronomical Society to become and remain engaged in education, and internationally, through the International Astronomical Union,

by guiding the Commission on the Teaching of Astronomy and by working for the growth of astronomy programs in developing countries."

Dr. Xiaohui Fan

University of Arizona

Newton Lacy Pierce Prize

Citation states: "The AAS awards the Pierce Prize to Dr. Xiaohui Fan for his systematic discovery of high redshift quasars in the Sloan Digital Sky Survey. These quasars are the best probe to date of the epoch of the formation of the first objects in the universe; their discovery enabled identification of the end of the epoch reionization."



Dr. Matias Zaldarriaga

New York University

Helen B. Warner Prize

Citation states: "The AAS awards the Helen B. Warner Prize to Dr. Matias Zaldarriaga for his incisive, major contributions to the theory of cosmic microwave background (CMB) anisotropies. He developed a new method of computing the CMB fluctuation power spectrum, demonstrated that linear polarization

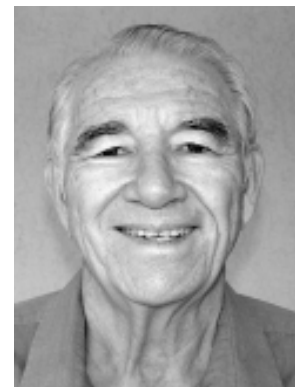
anisotropies in the CMB are a cosmological discriminant, and pioneered the study of gravitational lensing effects on the CMB."

Dr. Frank J. Low

University of Arizona

Joseph Weber Award for Astronomical Instrumentation

Citation states: "For extraordinary ingenuity in the development of infrared instrumentation and observatories, including bolometers, the Lear Jet and Kuiper Airborne observatories, and the IRAS and SIRTf space missions."



Prof. Jay M. Pasachoff

Williams College

AAS Education Prize

Citation states: "For his eloquent and informative writing of textbooks from junior high through college, For his devotion to teaching generations of students, For sharing with the world the joys of observing eclipses, For his many popular books and articles on astronomy, For his intense

advocacy on behalf of science education in various forums, For his willingness to go into educational nooks where no astronomer has gone before, the AAS Education Prize is awarded to Jay M. Pasachoff."

Dr. Rashid Sunyaev

Max-Planck Inst. fuer Astrophys.

AAS/AIP Heineman Prize

Citation states: "Rashid Sunyaev is awarded the Heineman Prize for his visionary insights into the interaction of radiation and matter on scales from the Universe to black holes."



Announcements

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	2003 Jun 2	2003 Sep - 2004 Jan	
	2003 Oct 1	2004 Feb - 2004 May	
VLA	2003 Jun 2	2003 Sep - 2004 Jan	*
	2003 Oct 1	2004 Feb - 2004 May	+
VLBA	2003 Jun 2	2003 Sep - 2004 Jan	
	2003 Oct 1	2004 Feb - 2004 May	

Notes: (*) B configuration with a maximum baseline of 11 km; (+) C configuration with a maximum baseline of 3 km.

Users of NRAO instruments from most U.S. institutions may request travel support for observing and data reduction trips, as well as page charge support. In addition, the NRAO has inaugurated a new program to support GBT research by students at U.S. universities. The program covers student stipends, computer hardware purchases, and student travel to meetings to present GBT results. Applications to this 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 **2003 Jun** for the session in 2003 Oct/Nov.

Further information on NRAO instruments, proposal submission routes, and user support is available from the NRAO home page at www.nrao.edu.

NASA Infrared Telescope Facility Observing Proposals

The due date for the 1 August 2003 – 31 January 2004 semester is **1 April 2003**. Further information can be found at <http://irtfweb.ifa.hawaii.edu/userSupport/indexota.html>. Available instruments include: (1) For 1-5 microns: a camera with 3 pixel scales and 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://irtfweb.ifa.hawaii.edu/>) for the availability of a new adaptive optics system.

Fulbright Distinguished Chairs: 1 May 2003 Deadline

Awards in the Fulbright Distinguished Chairs Program are viewed as among the most prestigious appointments in the Fulbright Scholar Program. Candidates should have a prominent record of scholarly accomplishment. Applicants should submit letter of interest (about three pages), curriculum vitae (maximum eight pages) and sample syllabus (maximum four pages) by **1 May 2003**. Following a review during early summer, scholars selected for the short list for each chair will be asked to complete a full application by 2 August 2003. Details for this award and other Fulbright grants can be found at <http://www.cies.org/>.

Maria Mitchell Women in Science Award

Since 1998, the Maria Mitchell Association has offered an annual award to recognize an individual, program or organization that encourages the advancement of girls and women in the natural and physical sciences, mathematics, engineering, computer science and technology. An award of \$10,000 is given to one individual, program or organization from the US each year. The nomination deadline is Monday, **30 April 2003** (postmark date). For further information see <http://www.mmo.org/>.

NSO Observing Proposals

The current deadline for submitting observing proposals to the National Solar Observatory is 15 May 2003 for the third quarter of 2003. Forms and information are available from the NSO Telescope Allocation Committee at P.O. Box 62, Sunspot, NM 88349 for 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/sunspot/info/introduction/obsrequest.html>. 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://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.

CSO Proposals Due 31 May 2003

The Caltech Submillimeter Observatory (CSO) encourages observing participation by astronomers from both U.S. and non-U.S. institutions. For instructions on applying and for information about available instruments, including new bolometer cameras, see <http://www.submm.caltech.edu/cso/cso-call.html>. Applications for observing time between 1 September 2003 through 31 January 2004 are due by mail 31 May 2003. Applications will be reviewed by an outside peer group.

Voyages, NASA Online Newsletter

The latest issue of *Voyages*, the NASA Office of Space Science Newsletter on Education and Public Outreach is now online at <http://spacescience.nasa.gov/education/news/index.htm>. *Voyages* is published 3 times each year and highlights programs, events and products supported by the NASA Office of Space Science, as well as the many and diverse contributions made by the space science community in support of education as a core mission of NASA.

Don't forget the abstract submission deadline for the Nashville meeting is March 19th!!!

International News

Hans J. Haubold, UN Office for Outer Space Affairs, hans@neutrino.aquaphoenix.com

11th UN/ESA Basic Space Science Workshop

The Eleventh UN/ESA Workshop on Basic Space Science: The World Space Observatory and the Virtual Observatories in the Era of 10m Telescopes, was hosted by the Comisión Nacional de Actividades Espaciales (CONAE), Centro Espacial Teófilo Tabanera at Falda del Carmen, on behalf of the Government of Argentina.



Photo of the Córdoba National University Astronomical Observatory visited during the workshop and had a night session with Argentinian Barbecue.

The presentations made during the Workshop, of which there were more than 50, focused on Virtual observatories and automated networks on how to use them; Great eyes of astronomy: pathways to evolution (Argentina's contributions to Auger, Argo, and Gemini); World space observatory (WSO/UV); Major statistical studies as observatories and use of data from different observatories to study particular regions; Small astronomical telescope facilities (in Argentina, Honduras, Indonesia, Mexico, Paraguay, Uruguay); New horizons in solar physics; and Planetology and solar terrestrial interactions.

All UN/ESA Workshops on Basic Space Science made efforts to accommodate in their programs so-called groundbreaking results related to space science. This time, two such results at the frontline of physics and mathematics lead to hot debates among participants. They were nonextensive statistical mechanics and thermodynamics, and proof of Riemann's Hypothesis.

Other topics regularly discussed at the workshop included NASA's Astrophysics Data System, and the virtual observatory concept and its background, and how small telescopes may fit in this emergent way of doing astronomy in the 21st century.

Proceedings of the Workshop will be published in *Astrophysics and Space Science* (Kluwer Academic Publishers). The next workshop will be hosted by the People's Republic of China at the China National Space Administration at Beijing, 8-12 September 2003.

Further information can be found at <http://www.seas.columbia.edu/~ah297/un-esa/>.

News from Canada

New Astrophysics Institute at Saint Mary's University, Nova Scotia

David Clarke, Acting Director, ICA, Saint Mary's University

The Department of Astronomy and Physics at Saint Mary's University (SMU) in Halifax, Nova Scotia is pleased to announce the formation of the Institute for Computational Astrophysics (ICA) within the Department. AAS member **Robert Deupree**, well-known for his work in multi-dimensional stellar simulations and currently at Los Alamos National Laboratory, will assume the tier I Canada Research Chair and Directorship of the ICA soon after 1 February 2003.

The ICA has three main thrusts: fostering excellence in research in computational astrophysics; serving as a focus for computational astrophysics both in Canada and

internationally by providing opportunities for visiting faculty, post-doctoral fellows, and graduate students to work and interact in a stimulating and congenial environment; and providing the astrophysical community at large with significant computational tools (hardware and/or software) and the expertise to use them.

Five permanent faculty members of the ICA have expertise in stellar structure, evolution, pulsation, and hydrodynamics; MHD outflows and collapse; non-LTE stellar atmospheres; and planetary formation and dynamics. Appointments will be made of post-doctoral fellows and visiting faculty where resources permit.

One of the first priorities of the new institute will be to establish a visiting scientist program, for which some living and travel expenses may be provided. In addition, the University has approved a new Ph.D. program in Astronomy into which students are expected to be admitted by the fall of 2003. Finally, the ICA will support and become a repository for public-domain versions of selected highly specialized astrophysical software such as ZEUS-3D and PHOENIX, and promote a variety of computing platforms.

Further information can be found at <http://www.ap.stmarys.ca>, or by contacting dclarke@ap.stmarys.ca.

AAS Meets...continued from front page

Blazar Continuum Across the Electromagnetic Spectrum, The Dynamic Radio Sky, The Laser Interferometer Space Antenna, Robotic Astronomical Observatories, Gamma-Ray Bursts in the Swift Era and Future Optical/UV Astronomy from Space: Science and Mission Concepts. A number of special sessions will deal with public outreach and education as well as employment issues. Representative Harold E. Ford, Jr. of Tennessee's 9th district has been invited as the public policy speaker. The local organizing committee has been working extra hard preparing for the meeting and promise plenty of southern hospitality for all meeting attendees. Full meeting details are available online at www.aas.org.

Transitions

Riegler Heads NASA Astrobiology

Guenther Riegler has been named director of astrobiology and space research at NASA Ames Research Center in California's Silicon Valley. Riegler, former executive director for science in NASA's Office of Space Science, assumed duties at NASA Ames in January.

In 1987, Riegler joined NASA Headquarters from NASA's Jet Propulsion Laboratory, Pasadena, CA, where he was responsible for astrophysics mission operations and data analysis programs. Since 1995, Riegler has served as the chief scientist for the research division of the Office of Space Science. He also assumed responsibility for mission operations and data analysis management for most of NASA's operating space science missions.

Davis New JAC/JMCT Director

In August 2002, AAS member **Gary Davis** was appointed director of the JAC/JMCT, succeeding **Ian Robson**, Deputy Director of the ATC.

Formerly employed as Professor of Physics at the University of Saskatchewan, Canada, Davis' research area included planetary astronomy, focusing on the measurement of planetary atmosphere composition using submillimetre molecular spectroscopy.

Davis graduated from McMaster University in 1979 with a B.Sc in Physics and from the University of Toronto in 1981 with an M.Sc in Physics. He received a D.Phil in Physics from Oxford University in 1987, and was a postdoctoral research assistant at the Mullard Space Science Laboratory from 1986 to 1991.

Honored Elsewhere

Marcy Selected as Aaronson Lecturer

Geoffrey W. Marcy, of U.C. Berkeley, was selected the tenth Marc Aaronson Memorial Lecturer. In October 2002, Marcy gave a professional colloquium and public talk on his award, *Planets Orbiting Nearby Stars*. This award is for a decade long body of work, which has resulted in a significant deepening of our understanding of the universe.

Gemini Telescope Renamed for Frederick C. Gillett

In November 2002, the Gemini Observatory honored Frederick C. Gillett, naming the Gemini North Telescope in his honor at the telescope on Mauna Kea, HI.

Dr. Gillett, who died in April 2001, was one of the primary visionaries of the Gemini telescopes. A pioneer in infrared astronomy, he was instrumental in assuring that the ground-breaking design of Gemini's twin 8-meter telescopes would be a major scientific contribution to astronomy in the 21st Century.

Honored Elsewhere Correction

In the rush to include a notice of two AAS recipients of the Nobel Prize in Physics for 2002 (Dr. Riccardo Giacconi and Dr. Ray Davis) in the December *Newsletter*, a few factual errors were inadvertently included in the article. Specifically, Dr. Riccardo Giacconi's early research was funded through research contracts with the Department of Defense (DoD) and with NASA, including the first detection of X-ray emission from an extra-solar cosmic source during a rocket flight in 1962. He carried out this work as the leader of the Space Research and System Division of the American Science and Engineering Corporation. The "UHURU" satellite was proposed and funded as a NASA Explorer mission (not funded by the DoD as stated in the original article) by Giacconi in 1963 and successfully launched in 1970. The Chandra X-ray Center, responsible for both the scientific and operational aspects of the Chandra X-Ray telescope, is operated by the Smithsonian Astrophysical Observatory under contract with NASA (not by NASA itself, as implied in the original notice.) We apologize for the inaccuracies in the original article, which was rapidly composed from a variety of press releases. Congratulations again to Dr. Giacconi and Dr. Davis on their award.

Calendar continued from page 11

*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>

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/>

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>

Fullam Proposals Due

Dudley Observatory announces its annual Fullam Award, a grant of up to \$10,000 for an innovative project in astronomy. The deadline for proposals is **1 April 2003**. See <http://www.dudleyobservatory.org/> for details.

ASP News

Michael Bennett, Executive Director, mbennett@astrosociety.org

ASP Board Nominations Announced

The ASP's Nominating Committee has submitted the following nominees for the Board of Directors 2003 elections.

Regular Members (three to be elected): Jose Alonso, Arecibo Observatory; Michael Bolte, Lick Observatory; George Coyne, Vatican Observatory; Debra Fischer, University of California, Berkeley; Jim Kaler, University of Illinois, incumbent; and Tim Slater University of Arizona.

Amateur Astronomy Member (one to be elected): Jane Houston-Jones, AANC, incumbent; and Terry Mann, Astronomical League.

Under the Society bylaws, additional nominations may be made in writing by any active member of the Society, provided such a nomination is signed by at least 25 active members and is accompanied by a written declaration of the nominee's willingness to serve. Additional nominations must be received by the Executive Director by 7 April 2003. Ballots and candidates' statements will be mailed to all members before 30 April 2003, and must be returned before 30 June 2003.

Two Astronomy Teaching Workshops

Two NSF Chautauqua Astronomy Teaching Workshops are coming up in the next few months.

- Learner-Centered Introductory Astronomy Teaching, 18-20 May 2003 at BioSphere2 outside Tucson, AZ
- Teaching Astronomy Under Hawaiian Skies, 14-16 July 2003 at the UH Institute for Astronomy in Honolulu, HI.

Both workshops will be taught by Tim Slater (UA), Stephen Pompea (NOAO), and Katy Garmany (Columbia/Biosphere2). For more details see <http://www.csudh.edu/soe/chaut2003>.

Education continued from page 7

Keivan Stassun alerted us to a recent workshop organized by the AAS Committee on the Status of Minorities in Astronomy in which the issues of recruitment and retention of under-represented groups were discussed. He emphasized the potential importance both of establishing links with faculty and students at institutions that primarily serve minority students, and of developing support mechanisms that provide graceful transition from those institutions into the highly competitive atmosphere characterizing most graduate schools.

The Seattle session resulted in a strong recommendation from graduate students in attendance: that the AAS establish a graduate student forum to enable regular, structured meetings

among graduate students aimed at airing and identifying issues, and bringing them to the attention of the Society. This would parallel a similar effort already sponsored by the Canadian Astronomical Society. Students interested in furthering this proposal are encouraged to express their interest to the Education Officer, Bruce Partridge at bpartrid@haverford.edu.

PUMAS (Practical Uses of Math And Science)

The On-line Journal of Math and Science Examples for Pre-College Education

Here's an opportunity to make a high-impact contribution to K-12 education with a relatively small investment of time and effort. PUMAS is a peer reviewed on-line journal of brief examples illustrating how the math and science concepts taught in pre-college classes are actually used in everyday life. PUMAS examples may be activities, anecdotes, descriptions of "neat ideas," formal exercises, puzzles, or demonstrations, written primarily by scientists, in any style that serves the material well. They are intended mainly to help K-12 teachers enrich their presentation of science and math in the classroom. All examples are distributed via the PUMAS web site.

All submissions are peer-reviewed by at least one scientist with a relevant background, and at least one teacher at an appropriate grade level. Once accepted, the example is a citable reference in a refereed science education journal and may be listed in your resume. Teachers can search the PUMAS collection based on curriculum

topic, grade level, or subject. They can select relevant examples and develop ideas of their own about how to integrate the material into their lesson plans.

Interested in participating? The examples are available to everyone via the PUMAS web site. We also need teachers at all grade levels, scientists, and engineers to volunteer for the pool of PUMAS reviewers. And we are always looking for good examples of the Practical Uses of Math And Science. See <http://pumas.jpl.nasa.gov> for further information.

Special Sessions

Atlanta 2004 Meeting

The AAS will be meeting in Atlanta, GA in January 2004. Proposals for Special Sessions (from Members only) are due no later than **9 May 2003**. Send proposals to Diana Alexander at diana@as.org.

Did you know?

You can receive monthly email announcements when new listings have been added to the AAS Job Register. Send an email to membership@as.org to be added to the distribution list.

**Upcoming
AAS Division Meetings**

**Planetary Sciences
35th Annual Meeting
1-6 September 2003
Monterey, CA**

**Solar Physics
16-20 June 2003
Laurel, MD**

**Dynamical Astronomy
4-7 May 2003
Cornell, NY**

**High Energy Astrophysics
23-26 March 2003
Mt. Tremblant, Quebec**

dedicated staff, the bill was ultimately passed unanimously through both Houses of Congress and signed into law on 19 December 2002. AAS President Catherine A. Pilachowski was in



President Bush speaks after signing the NSF Authorization Act of 2002 into law, while NSF Director Rita Colwell (front right) and others look on. AAS President Catherine A. Pilachowski is also in attendance.

attendance as President Bush signed the act into law. Representative Boehlert, chair of the House Science Committee, thanked the president for signing the bill, saying, "From our nation's students, to our economy, to our security, the fruits of this effort will be enjoyed for many years to come."

Astronomy was prominently featured in the bill through the establishment of the National Astronomy and Astrophysics Advisory Committee (NAAAC). The establishment of this committee (one of the recommendations of the Committee on the Organization and Management of Research in Astronomy and Astrophysics, a blue-ribbon committee established by President Bush in his FY 2002 budget document) will work to coordinate resources between NSF and NASA in areas where they can mutually benefit. The members have already been named, and the chair of the committee is currently former AAS president, Dr. **Robert Gehrz**, of the University of Minnesota. The committee already met once and plans an active schedule of meetings for the near future.

The President's budget was released on Monday, February 3. Because Congress has not yet passed an FY 2003 budget, all comparisons of the FY 2004 budget are being made to the President's proposed FY 2003 budget. This makes the increases seem larger than they actually are. What will really matter is the comparison of the President's proposed FY 2004 budget to the actual enacted FY 2003 budget, which will soon be passed by Congress in the form of an omnibus appropriations bill.

Members are encouraged to keep up to date on the budget situation by visiting the AAS Public Policy web page and clicking on "Current Issues."

NSF overall would receive an increase of \$453 million or 9% above the President's requested FY 2003 level for a total budget of \$5.48 billion. The MPS directorate will receive \$1.061 billion, an increase of \$119.7 million or 12.7% above the President's request for FY 2003. The Astronomical Sciences Division, AST, is slated to receive a total of \$183 million, which is composed of roughly \$106 million for facilities and \$77 million for all other division activities. This represents an increase of 13.5% for the

division as compared to the FY 2003 request. ALMA construction funding is included in the Major Research Equipment and Facilities Construction budget at a level of \$50.84 million.

Overall, NASA will receive an increase of \$469 million above the President's FY 2003 request to \$15.469 billion for FY 2004. The Office of Space Science would receive an increase of roughly \$597 million to an overall budget of \$4.007 billion for FY 2004, compared to \$3.414 billion for FY 2003, an increase of 17%. Details of the breakdown in the OSS increase are not yet available, but will be posted on the AAS web page as soon as possible.

Preserving Dark Skies

The American Astronomical Society, in partnership with the International Dark Sky Association, the Astronomical League and Sky and Telescope magazine, has endorsed a new annual event dubbed *National Dark Sky Week*. Created by Jennifer Barlow, a high school student from Virginia, National Dark Sky Week, which takes place 1-8 April 2003, will set aside a few night time hours for Americans to focus on the beauty of the night sky from their own home or from a safe but dark location, attend public star parties, planetarium shows, public lectures or other astronomy-related events. The goal of the event is to heighten the awareness of poor lighting and its destructive effects on astronomy, the beauty of the night sky, public health and wildlife as well as the inefficient use of electricity.

The AAS encourages all members to develop some activity at their own institutions during this week that will involve the public or students. For questions or more information, visit the International Dark Sky Association home page (www.darksky.org) and click on National Dark Sky Week, or visit the home page of National Dark Sky Week (www.nationaldarkskyweek.htmlplanet.com/).

Multi-Society Endorsement of National Dark Sky Week

Adopted 5 January 2003

The American Astronomical Society (AAS) and the International Dark Sky Association (IDA) hereby endorse National Dark Sky Week, a grassroots effort to highlight the beauty of the night sky and to draw attention to the ever-increasing levels of light pollution across the United States caused by poorly designed lighting.

The AAS and the IDA believe that the opportunity to experience the natural night sky should be available to every citizen of our nation. This natural resource, which inspires our attempts to understand the cosmos, should be protected through the use of well-designed lighting systems that put light where it is needed and not waste energy through unnecessary illumination of the sky. Properly designed lighting systems provide safety and convenience without polluting one of our greatest natural assets.

The American Astronomical Society and the International Dark Sky Association encourage all Americans to use the evenings of 1 April to 8 April 2003, from 10:00 p.m. to 12:00 a.m. (ET & MT)

continued on page 23



Astronaut John Grunsfeld presented Caty Pilachowski a page from Hubble's thesis that went up in shuttle during first HST servicing mission in 1999. The page proudly hangs in the AAS Executive Office! Photo by Richard Dreiser; © 2003 American Astronomical Society

President's Column continued from front page

among students, early career members, and more senior members of the astronomical community. It is no wonder that the AAS continues to play an important role in the professional lives of astronomers at all stages of our careers.

The present effectiveness of the Society, while satisfying, doesn't mean we can stop looking for ways to provide better services and opportunities for our members. At its January meeting, the Council of the Society considered many ideas for making the AAS more open and accessible, so that more members can participate and contribute beyond our scientific

meetings and journals. We will start with a new format for the business meeting, now renamed the Annual Members Meeting, at the Society's summer meeting in Nashville in May. The program for the Annual Members Meeting will include discussion and debate, and a chance for member input, on some of the more controversial issues facing the community. Other ideas which arose at the Council's discussion in January include the option of electronic voting in Society elections, and improved communication to members about the governance of the Society, including an orientation brochure for new members and more and better information on the AAS website. We considered ways, as well, to engage our student members more directly in the affairs of the Society.

The Council offered many new ideas for how we might do a better job of serving our members, and members can play a role in this process, too. If you have suggestions for improvements, please let us know. You can reach me, and even the whole Council, via the AAS website. Let us hear from you.

Audiovisual Equipment at AAS Meetings

After two very successful meetings in which LCD projectors and computers were provided in every oral session room, this equipment is now standard. It is important that presenters follow the usage instructions provided in the Preliminary Announcements and Final Programs. Although PowerPoint is the preferred format, we are able to support other formats. Please inform the Conference Coordinator, Diana Alexander, (diana@aaas.org) of your needs ahead of time. Our AV company, MSI Productions, helps us with any problems we may face.

Presentations on CD-Rom or Zip disks must be brought to the speaker ready room (Room 215, Convention Center) one day in advance of your talk. For presentations on Monday, bring materials to the speaker ready room on Sunday between the hours of 2:00pm and 6:00pm. If you are unable to do that, you may send materials to the AAS Executive Office. For the Nashville meeting, materials should arrive **no later than** Tuesday, 20 May 2003.

Overheads and screens are also standard in all oral session rooms, however, 35mm Projectors must be ordered ahead of time. Should you need additional equipment for the Nashville meeting, contact Diana before **8 May 2003**.

NSF continued from page 6

Research Grants Program, only 5% of proposals had to be returned. We remind all prospective proposers that, for NSF, 'broader impacts' reach beyond the specific scientific discipline of the proposed research. We encourage proposers to look carefully at the discussion and examples of broader impact that are provided at <http://www.nsf.gov/pubs/2003/nsf032/bicexamples.pdf>. We also urge proposers to identify **unambiguously** the broader impacts by putting them in a separate paragraph in the project summary and a separate section in the project description that are labeled clearly "Broader Impacts." These explicit separate statements make it much easier for NSF program directors to screen proposals quickly to establish whether they meet both the spirit and the exact requirements of NSF proposal preparation. This speeds the review and recommendation process.

Please see the current Grant Proposal Guide (<http://www.nsf.gov/pubsys/ods/getpub.cfm?gpg>) for more information on the preparation of proposals to NSF.

Cell Phones at AAS Meetings

The increasing prevalence of cellular telephones in our society is a great benefit to us all. They provide safety, security and enable us to stay connected with our work and family while traveling. However, despite their great usefulness, they can be a major disturbance as well.

At the past several AAS meetings, sessions, including invited sessions and prize award lectures have been interrupted by cell phone ring tones and in some cases, conversations by cell-phone during the session.

AAS members are kindly asked to exhibit the same courtesy to their colleagues who may be speaking in a session as they would hope to receive themselves. When entering a session, be sure your cell phone is turned off or set to silent ring.

Tips and Tricks

AAS Members Only Website

Debbie Kovalsky, Manager Information Systems, kovalsky@aes.org

The AAS Members Only Website is developing into a comprehensive tool for members to search the real-time member directory, register for meetings, view activity history with the AAS and access other AAS resources. Since the site's inception, we have received feedback from the membership that has been extremely helpful in enhancing and improving the site. In addition, we have had inquiries asking for instructions to perform many tasks. Following are two items that might be useful when using the site.

How do I reprint a copy of my meeting receipt?

During the meeting registration process, the final page of the registration process is a valid receipt showing that your credit card has been charged. You can print it upon completion of the registration process, or come back to reprint in the future.

1. Login to the member only website members.aas.org using your username and password. If you can't remember your password, click on the **E-mail My Password** link on the Login Page to have it emailed to the address we have on record.

Member Record for:
Debra Kovalsky
ID: 10043
Change User Name & Password
Code Explanation

2. Once you are logged in. Click on your name in the left hand column to access your personal AAS History.

3. The next screen lets you know what demographic information the AAS has on

file. Various addresses, phone numbers, subscription information, etc.

4. Click on the **your events** button to view the recent meetings you have attended.

Thank you for registering for the upcoming meeting. Please review and update your Badge Name, Affiliation and Correspondence Address by following the **Badges** link if required. If changes need to be made to your order contact us at reg-help@aes.org

Order#	Event Title	Charges	Payments	
20581	SFD0000 - The 34th Meeting of Solar Physics Division	\$ 180.00	\$ 180.00	Badges
10001	AAS001 - AAS 201st Meeting - Seattle, WA	\$ 0.00	\$ 0.00	Badges
18201	DPS0000 - DPS 34th Annual Meeting - Birmingham, AL	\$ 0.00	\$ 0.00	Badges
12517	AAS000 - AAS 200th Meeting - Albuquerque, NM	\$ 2.00	\$ 2.00	Badges

Order#	Charges	Payments	Status
No products purchased			

5. Choose the **Order#** associated with the meeting you attended to display a receipt and print it.

Purchase Detail

Thank you for registering for the upcoming meeting. Please review and update your Badge Name, Affiliation and Correspondence Address by following the **Badges** link if required. If changes need to be made to your order contact us at reg-help@aes.org

Order# 20581
ID: 10043
Full Name: Debra L. Kovalsky
Order Date: 02/15/2013

Description	Unit Price	Qty.	Price
The 34th Meeting of Solar Physics Division - Fees: 08/16/2011 To: 08/20/2011			
AAS/SFD Member	\$ 180.00	1	\$ 180.00
Fees: at APS, Portland	\$ 20.00	1	\$ 20.00
Total			\$ 200.00

How do I change my name and affiliation that appears on the printed meeting badge?

1. Follow steps 1-4 in the previous example.

2. Choose the **Badge** button associated with the meeting you will be attending.

PRIMARY - Badge

Badges: [1] [PRIMARY] [Debra Kovalsky] [Update] [Cancel]

Badge Type: PRIMARY

Profile: [Select]

First Name: [Debra]

Middle Name: []

Last Name: [Kovalsky]

Prefix: []

Suffix: []

Organization: []

Title: []

Affiliation: [American Astronomical Society]

Department: []

Address: [1000 Florida Avenue, NW]

City: [Galesburg]

State: [IA]

Zip: [52501]

Country: [USA]

3. Make the necessary changes and click on **UPDATE**. The updated information will be printed on the badge that you pickup at the meeting.

4. Make sure to logout of the Members Only Website when you are finished.

If you have any questions regarding these instructions, or would like to see additional website features covered in the *AAS Newsletter*, please send an email to kovalsky@aes.org.

detection are producing inconsistent results. The matter should be resolved by the Auger array under construction in Argentina which combines both techniques. This should also allow one to determine if these ultrahigh energy cosmic rays are accelerated from the bottom up by astrophysical mechanisms or are top down relics deriving from the early universe.

HEAD II: New Directions in X-ray Astronomy

This is a time of unprecedented discovery in X-ray astronomy as brought out in the Rossi lecture. Three special topics were highlighted.

Frits Paerels (Columbia) summarized recent reports of detection of the hot intergalactic medium which probably contains most of the missing baryons at low redshift. There are now a few reports of oxygen line features which are tantalizingly close to measuring the hot gas at high redshift. A more confident detection has been made in the local group. The prospects for characterizing the intergalactic medium using this technique are very good.

Jack Hughes (Rutgers) summarized recent spectacular images of pulsar wind nebulae and conventional supernova remnants. He explained how composition studies provide forensic evidence on the death of the exploding star. They also provide a laboratory for the study of high Mach number shock waves.

Chris Reynolds (Maryland) summarized recent X-ray measurements of accretion disks around massive black holes in nearby Seyfert galaxies and binary X-ray sources. He presented the evidence that these disks sometimes extend so close to the horizon of the black hole that it can be concluded that the hole spins rapidly and that energy is extracted from its spin. The relationship of the line to the continuum emission is not simple, which will hamper attempts to perform reverberation mapping. Future observational possibilities with Constellation-X and MAXIM are very good.

Next HEAD Meeting in Mt. Tremblant, Quebec, Canada, 23-26 March 2003

The next HEAD Division meeting is to be held in Mt. Tremblant, Canada in the mountains near Montreal from Sunday, 23 March 2003 until Wednesday, 26 March 2003. This conference, to be hosted by McGill University, will revert to the normal HEAD meeting format, contrasting with the recent joint meeting with the APS Division of Astrophysics in Albuquerque, NM. The meeting will include invited and contributed talks, poster sessions and afternoon workshops, as in recent HEAD meetings, and these will span a large range of science of interest to the high energy astrophysics community. Logistical information on hotel options, hotel reservations, driving directions, airport transportation, registration instructions, etc. is available at the conference website <http://www.westoverconferences.com/HEAD>. The Preliminary Program of Invited Speakers and session titles was announced in December and is available at the conference Web

site. The Final Program is to be posted on the conference website by February 15, with the BAAS (published) abstracts to be available at the meeting.

Solar Physics Division

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

Bob Howard is the 2003 Hale Prize Recipient

Bob Howard has been named the 2003 Hale Prize recipient, for his pioneering discoveries of fundamental properties of solar magnetic and velocity fields; initiating modern instrumentation and archiving methods for long-term solar observations; and selfless mentoring, collaboration, and leadership of solar physics research programs and institutions. Bob's Hale Prize lecture will be given at the SPD meeting in Laurel in June after a warmup at the AAS in Nashville. Be there!

Dana Longcope is the 2003 Harvey Prize Recipient

Dana Longcope (Montana State University) is the inaugural recipient of the Karen Harvey Prize "in recognition of a significant contribution to the study of the Sun early in a person's professional career," for his contributions to the study of the Sun's magnetism in the areas of separator reconnection and flux tube physics.

2003 SPD Meeting

The SPD's Annual Meeting will take place this year at the JHU/APL, 16-20 June 2003. Complete information is available at <http://www.jhuapl.edu/spd2003>.

Division on Dynamical Astronomy

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

2003 DDA Meeting

The 2003 DDA meeting will be held at Cornell University, 4-7 May 2003. Tentative plans (as of January) include a reception the evening of the 4th and a banquet on the 6th. The Organizing Committee consists of Joseph A. Burns (local host, jab16@cornell.edu), William Newman (DDA Vice Chair, win@ucla.edu), and Marc Murison (DDA Secretary, murison@usno.navy.mil). Further information, including lodging details, deadlines, and meeting program, are posted on the DDA web site.

Should you become a DDA member?

The purpose of the American Astronomical Society's Division on Dynamical Astronomy (DDA) is the advancement of all aspects of dynamical astronomy, including astrometry, celestial mechanics, solar system dynamics, stellar dynamics, the dynamics of the interstellar medium, and galactic dynamics, as well as coordination of research in these areas with other branches of astronomy. The DDA currently has about 300 active members. If your research involves gravitational dynamics or positional astronomy of any kind, you are most welcome to join

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Sydney's 25th IAU General Assembly: The Registrations Begin!

Harry Hyland & John Whiteoak
Co-Chairs of the National Organizing Committee, 25th IAU General Assembly

Like the Ole Man River, the organization of the 25th IAU General Assembly in Sydney just keeps rollin' along, but is now gathering momentum. As a milestone we are about to pay the deposit for the use of the Sydney Convention and Exhibition Centre, and this venue will be great for the General Assembly. People have begun to register for the meeting (enabling us to pay a few of the expenses!). Abstracts are being submitted, and those people who traditionally wait for the last day to do this have not long to wait now – for those applying for IAU Travel Grants the deadline for both applying and registering is the 15th of February; for others the formal deadline is the 1st of March. And don't forget the 'Early-Bird' registration deadline of the 30th of April; not only is this cheaper, but you stand the chance to win a Sydney Harbor Bridge climb for two people, and we've been told this is something to remember!

If you are still undecided about attending, and we realize the extra burden of costly airfares on top of registration and accommodation charges (after all, we are faced with such airfares almost every time we attend international meetings), please give us a chance to win you over and visit our General Assembly Website: <http://www.astronomy2003.com>. Here you can do more than merely learn about the event. You can now register for the Assembly, book accommodation and submit presentation abstracts using on-line forms, and can also download forms to apply for IAU Travel Grants and book various tours. (However, if you prefer, you can do all of this using inclusions in the IAU Information Bulletins IB 91 and 92.) We had a potential disaster on our hands when the recent fires devastated Mount Stromlo (www.anu.edu.au/fires/media.php) because some of our GA webpages were linked to Mount Stromlo Observatory addresses. Fortunately, the computer information was not destroyed, and the pages were inaccessible for only a few days; they are now being maintained at the Australian National University in Canberra.

We are hoping that many AAS members will come to Sydney and help us make the 25th IAU General Assembly the biggest and the best yet. If you attended the recent AAS meeting in Seattle you would have heard Rachel Webster explain how easy it is to be invited to the meeting. Non-members of the IAU who wish to attend can obtain invitations from several different sources – IAU President, Chairpersons of the individual meetings, and Presidents of IAU National Adhering Bodies. However, Rachel has suggested that you merely check the 'Invited Participant' box when you fill in the registration form and she will provide the invitation (in her capacity as the President of an Adhering Body).

We are continually updating the information contained on our webpages, and further information regarding accommodation, transport, and childcare has been, or is about to be, added. For the meetings you can now view the latest room-allocation information, and link this to the room plans of the Convention and Exhibition Centre. Links provide access to websites of the various meetings. Considerable effort is being put into organising associated events. These include an Astro Expo in the Exhibition Hall; a set of 'public days' will enable the Australian public to visit this exhibition and feel part of this great international 'happening'.

In all, we are doing our best to ensure that your trip to the General Assembly will make you realize why Australia is often called the Lucky Country.

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the DDA and participate in its congenial annual meetings. More information and an application form may easily be obtained from the DDA web site (see below), or from the DDA Secretary (send email to murison@usno.navy.mil).

The DDA on the Web

The DDA has a homepage on the Web, where all the latest news, information, instructions for joining the DDA, and DDA arcana are posted. The URL is <http://dda.harvard.edu/> (you can also get there through the AAS homepage at <http://www.aas.org/>).

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and 9:00 p.m. to 11:00 p.m. (CT & PT) to attend public star parties, visit their local planetarium or public observatory, or simply go outside to a safe, dark location to enjoy the wonder of the night sky. Learning the constellations, observing the planets, wondering about the stars and the Milky Way are one of the most basic of human experiences and should be enjoyed by all.

National Dark Sky Week is also endorsed by the Astronomical League, a non-profit federation of 250 astronomical societies and nearly 20,000 members, and Sky and Telescope magazine.

Visiting Congress

Again this year, the AAS will participate in the Science, Engineering and Technology Congressional Visits Day, which takes place 2-3 April 2003. Although the list of participants is nearly full, a few spots remain open. Interested members who wish to participate should contact a member of the Committee on Astronomy and Public Policy or Deputy Executive Officer Kevin Marvel (marvel@aas.org). This event begins with a day of briefings with key NASA and NSF management as well as high-level administration representatives. The second day is spent on Capitol Hill visiting congressional offices and advocating increased funding for science, engineering and technology research. This is the fifth year the AAS has participated in this event. Information on last year's event is available at www.agiweb.org/cvd/.



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Washington News

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The Budget Past

By the time this *Newsletter* reaches most AAS members, it is likely that the fiscal year 2003 budget will have finally been passed by both houses of Congress through an Omnibus Appropriations Bill.

As of mid-January, the Senate is actively debating such a bill and, once passed, the House is likely to follow the lead of the Senate. I, for one, am hoping that this comes to pass sooner rather than later due to a small wager I made, but those who receive federal funding are likely even more eager that the Congress finally finish its appointed task. The ultimate omnibus bill will include an across-the-board cut to the appropriations levels passed by the House and Senate in the fall of 2002, likely in the 2% range.

When Congress is unable (or unwilling) to pass a budget before the end of a given fiscal year and subsequently passes a continuing resolution to provide ongoing funding for government operations, there are numerous repercussions. First and foremost, new programs and projects cannot start. With no start-up funding, no start-up can take place. Well-meaning program managers within the government often find ways of providing limited funding for approved projects through other means, but this is not common. More often, no new starts occur.

Ongoing programs or projects are funded at the previous fiscal year's level. This too is detrimental, as inflation eats away at program budgets. In the current situation, with a full quarter (and a bit more) of the next fiscal year gone, programs begin to feel the pinch of limited funding. Such a situation ultimately leads to fiscal savings for the government, since only in rare circumstances are previous months' expenditures augmented to make up the difference between the two fiscal years' funding level.

So, if you find yourself in a situation where your science is being directly hindered by the lack of an enacted budget, take a few minutes and write to your elected officials. Let them know that science is being held back by their actions and you expect better in the future.

The Budget Future

During the 107th Congress, much of the science policy community's effort focused on the passage of the National Science Foundation Authorization Act of 2002. This act, which authorizes significant budget increases for the NSF over the next five years, is a shining example of the power of cooperation. Multiple scientific societies from all disciplines joined forces to support this bill. Through the leadership of Representative Boehlert (R-NY), the chair of the House Science Committee and his

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