

AAS NEWSLETTER

A Publication for the members of the American Astronomical Society

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PRESIDENT'S COLUMN

Caty Pilachowski, catyp@astro.indiana.edu

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

As I end my term as president of the AAS, I'm grateful to hand the gavel to incoming president Bob Kirshner, and I breathe a sigh of relief that the Society remains as strong and vigorous as when Anneila Sargent handed it to me in 2002. The AAS is held as a standard worldwide as an active and healthy society of professional astronomers. Our meetings are exciting, well attended, and diverse. Our journals are recognized as the most prestigious in our field. Our finances are in good shape. Almost all professional astronomers in North America, from the youngest to the most senior, are members, recognizing the many benefits of membership, and most participate, in some way, in the programs of the Society. The Society's success derives from its mission, simply to "promote the advancement of astronomy and closely related branches of science." It's a mission we all share, and because of that, the Society earns our support and dedication.

A brief list of the issues that have passed across my desk in the last two years is amazing in its breadth: meeting sites, global climate change, postdoc employment conditions, creationism and intelligent design, the Stromlo fire, the Columbia accident, the cancellation of SM4, the appointments of editors for our journals, public policy, diversity, education, finances, ethics, light pollution – the list goes on and on. The Society touches our professional lives in so many ways. Our world changes quickly, and the Society is continually and successfully adapting to new challenges, and to the changing needs of our members.

Among the most important jobs of the president is to thank all of the individuals who give of their time and energy to serve the Society. Ron Allen is retiring from a term on the U.S. National Committee of the IAU, the body that oversees the election of new US members to the IAU and all of our official interactions with the IAU. Tom Ayres, Dana Backman, and Susana Lizano are completing terms on the Council. Joe Burns is completing his term as vice president, having overseen the programs for both the Denver and the San Diego meetings. All of them have shared their wisdom and helped to sustain the vigor of the AAS, and deserve the thanks of all of us for their contributions.

I also welcome incoming vice president Wal Sargent, councilors Jill Bechtold, Karen Bjorkman, and Alan Title, and USNC-IAU representative Edward Guinan as they begin their terms of office. I hope that each one will find their service to the AAS as rewarding as I have. Those who also ran for these offices, but were not elected, deserve our thanks, as well. Our Society remains strong because of the willingness of so many of our members to serve.

The Annual Members Meeting will also bring us to another important transition for the AAS. Arlo Landolt will complete his third consecutive, and sixth cumulative term as Secretary, a total of 18 years of service. For many astronomers, Arlo is synonymous with the Society: he's been Secretary as long as quite a few members have been members. He has served the Society with integrity and honor, and has shepherded us wisely as the Society has evolved and grown in an increasingly complex world. Serving with him has been one of the greatest pleasures of my own term. John Graham will begin his first term this month, and I welcome him, knowing that he will continue the tradition of service exemplified by the Society's Secretaries.

And to all of you, thank you for giving me the opportunity to serve, and to learn. I'm pleased to hand the gavel to Bob, and look forward to being able to relax and enjoy the San Diego meeting!

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Items of general interest to be considered for publication in the *AAS Newsletter* should be sent to crystal@aaas.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@aaas.org.

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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@aaas.org

Journal Homepages/Manuscript

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

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



LETTERS TO THE EDITOR

THE AAS SHOULD WEIGH IN ON THE LEAP SECONDS ISSUE

Dear Editor:

In "A Problem with the Proposed Change in Coordinated Universal Time" (*AAS Newsletter* #115, June 2003), Rob Seaman and Steve Allen alerted us all to a proposal that the International Telecommunication Union (ITU) abolish leap seconds. (For full particulars, see <http://www.ien.it/luc/cesio/itu/ITU.shtml>.)

The ITU is the body that gave us leap seconds in 1972. What we have in place today is as instituted back then. The Bureau International des Poids et Mesures (BIPM), at the recommendation of the ITU, gives us an international atomic time (TAI) that is now precisely 32s fast on Coordinated Universal Time (UTC).

But civil law and custom since antiquity have dictated a time scale tied to Earth rotation, which we know as UT1. Since Earth's rotation rate is slowly decreasing, UT1 cannot keep up with TAI over the long run. The ITU's solution was to create UTC, a time scale that marks time accurately in atomic seconds, but adds or subtracts a leap second, when necessary, to keep UTC within 0.9 seconds of UT1.

My own view is that we need both TAI and UTC as they exist today. UTC should remain the basis for civil time. Implementations of technology that are sensitive to leap seconds should be modified to use TAI as their time base. Disconnecting UTC from Earth rotation is not an acceptable solution.

I urge the AAS leadership to seek a consensus on this issue and to advise the ITU of the AAS position.

Roger L. Mansfield
Colorado Springs, CO

DEMOCRACY IN THE IAU

Dear Editor:

I am responding to the letter by the President and General Secretary of the IAU (*AAS Newsletter*, March 2004). Although a vote on statutes by those attending a General Assembly would be unrepresentative, one by national representatives is no better. The latter should have the say in budgetary matters, because they represent national adhering organizations, which support the IAU financially. For such matters as

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MEMBER DEATHS NOTED

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

Joseph Chamberlain
Bev Oke

Elizabeth (Beth) Holmes
Robert M. Walker

Janet Mattei

MOON TO MARS MISSION

On 30 January 2004, President Bush created by executive order the Commission on Implementation of United States Space Exploration Policy. The commission's scope and objectives as stated in the executive order are reproduced here.

The mission of the Commission shall be to provide recommendations to the President on implementation of the vision outlined in the President's policy statement entitled "A Renewed Spirit of Discovery" and the President's Budget Submission for Fiscal Year 2005 (collectively, "Policy"). The Commission shall examine and make recommendations to the President regarding:

- a) A science research agenda to be conducted on the Moon and other destinations as well as human and robotic science activities that advance our capacity to achieve the Policy;
- b) The exploration of technologies, demonstrations, and strategies, including the use of lunar and other in situ natural resources, that could be used for sustainable human and



Pictured are Commission chair Pete Aldridge, two commission members who are also AAS members Neal de Grasse Tyson (second from left) and Maria T. Zuber (fourth from left), and commission member Robert S. Walker (second from right).

- robotic exploration;
- c) Criteria that could be used to select future destinations for human exploration;
- d) Long-term organization options for managing implementation of space exploration activities;
- e) The most appropriate and effective roles for potential private sector and international participants in implementing the Policy;
- f) Methods for optimizing space exploration activities to encourage the interests of America's youth in studying and pursuing careers in mathematics, science, and engineering and;
- g) Management of the implementation of the Policy within available resources.

The commission will complete its work this summer and publish a report outlining how the President's new vision for space exploration will be implemented.

The commission's comprehensive website includes video footage of most of the hearings as well as photos and other information (www.moontomars.org).

Letters to the Editor continued

changes to the statutes, however, it would be better to conduct a Union-wide ballot.

The statement is made that 'Division presidents are elected democratically by their members.' I am a member of three divisions, but in none of them is that true, although it is true within both the commissions I have served as president. Some proposals were discussed during the past triennium for making election of division presidents and boards more democratic, but to my knowledge, they have not yet been put into practice.

The new statutes make it easier to create new commissions, which is an excellent idea. But they also require commissions to defend their existence every three years. How seriously this scrutiny is intended to be remains to be seen, but it would be counterproductive to compel leaders of active and vigorous commissions, who already devote much time to IAU affairs, to increase their efforts substantially to defend their achievements.

Indeed the IAU needs to become more appealing and flexible, and the recent changes are likely to be helpful. But we should neither discard what is good in the old structure, nor discourage those who have been willing to serve within it. And the steps toward democracy should go much farther than they have, including broadly based election of future Presidents and General Secretaries of the Union!

Colin Scarfe
Former president of IAU Division IX and of Commissions 30 and 26
Victoria, BC

Note: 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.

COMMITTEE NEWS

STATUS OF WOMEN IN ASTRONOMY

Patricia Knezek (CSWA Chair, WIYN Observatory)

CSWA Loses Associate Editor of *STATUS*

The CSWA was deeply saddened to learn of the death of Dr. Elizabeth (Beth) Holmes on 23 March 2004. Beth had served as an associate editor of *STATUS* since January 2003, after volunteering at a CSWA session during an AAS meeting. Her cheerful willingness to help, especially in a pinch, will be sorely missed. A tribute to Beth will appear in the June 2004 issue of *STATUS*.

Activities at the Denver AAS Meeting

We would like to invite everyone to attend the special session entitled “The Astronomy Workforce” on Thursday, 3 June at the Denver AAS meeting. The CSWA is co-sponsoring this session with the Committee on the Status of Minorities in Astronomy (CSMA), and *STATUS* editor Fran Bagenal (U. Colorado) is organizing the session. The purpose is to present the demographics of the astronomy profession and discuss solutions (both institutional and personal) to the challenges posed by the evolution of the astronomy workforce; and the aim is to involve a broad audience from across the astronomy profession. In particular, this session will focus on the challenges astronomers are facing to try and balance their profession and their family.

After the “The Astronomy Workforce” session, the CSWA will hold a panel discussion on “Diversity—Next Steps” from 1:00-2:00pm, in Room 601. We will report on the ongoing follow-up to the Women in Astronomy II (WIA II) meeting held in June 2003, focusing on the progress made on the recommendations we plan to present to the AAS Council in January 2005. These cover areas such as family issues, changing the culture, and hiring practices, as well as the special responsibilities, and opportunities afforded by small and women’s colleges, large institutions, and the workforce outside academia.

Finally, we would like to bring to people’s attention the invited talk “Hidden Losses: Alternatives to Faculty Careers in the Sciences Among Doctorally - Prepared Women” by Elaine Seymour (U. Colorado), also on Thursday, 3 June. This promises to be an exciting meeting for women in astronomy!

Report on the CSWA Draft of Recommendations from the WIA II Meeting

The CSWA announced at its session during the Atlanta AAS meeting that the committee was beginning to work to distill

the key issues and suggestions from the Women in Astronomy II Meeting (WIA II) held 27-28 June 2003, and to synthesize them into a solid set of recommendations to present to the AAS Council. We originally set an optimistic goal to present the recommendations to the community at large in March 2004, and to the Council at the Denver June 2004 AAS. After work began in earnest, we concluded that the January 2005 AAS meeting was a better target date for presenting the outcome to the AAS Council.

As a part of this process, we are soliciting comments and suggestions from the AAS community at large. As a first step, the CSWA held a session in Atlanta that was summarized in the March 2004 *AAS Newsletter*. Presentations from that session are available on the web at www.aas.org/~cswa/WIA2003.html under “Meeting Summaries.” Our next step will be to provide a draft for viewing, comments, and suggestions, through the “Members Only” AAS web pages. Details of when the draft is available and how to access it will be published in the CSWA’s weekly electronic newsletter, AASWOMEN. Issues of the newsletter are available on the web at www.aas.org/~cswa/bulletin.board/. You may also subscribe to the newsletter by sending email to majordomo@stsci.edu, with a message in the BODY (not the subject line) “subscribe aaswlist yourusername@youraddress.” We will incorporate the comments and suggestions from AAS members for the presentation to the AAS Council in January 2005. We anticipate that this set of recommendations will be only the first, and as the astronomy workforce continues to evolve, other recommendations may follow.

EMPLOYMENT COMMITTEE

So how does an Astronomer End Up as a Lawyer?

By Andrew Loan, Ph.D.

Eight years ago, I was an astronomer finishing my doctorate in Cambridge, England. Now, I am a tax lawyer in the City of London. To the external observer, an academic career seems to provide a very enjoyable lifestyle (doing something that interests you rather than just to pay the bills; setting your own targets; conferences in sunny locations), although the truth of administration, preparing funding applications and teaching commitments is not so readily apparent. So why did I choose to step off of the well-defined astronomical career path (undergraduate degree, doctorate, post docs, tenure track, tenure) and do something different?

I am not alone. The statistics show that many people with doctorates can – indeed, many must – go on to do other

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things. Even in 1973, less than 65% of US doctorates in physics and astronomy were employed, temporarily or permanently, in academia. By 1997, less than 37% were in academia, and substantial majority of doctorates were pursuing non-academic careers. The reasons for this are pretty clear. The number of US doctorates during that 24 year period increased by over 150% (from under 14,000 to over 35,000), but the number of academic jobs only increased by 50% (from almost 9,000 to almost 13,000).¹ As a consequence, many doctorates will not find an academic job, even if they want one. The university system in the UK differs markedly from that in the US, but the statistics are similar and the same principles apply.²

After an undergraduate degree in natural sciences (mainly physics) at Cambridge, I embarked on a PhD at the Institute of Astronomy, also in Cambridge in September 1993. About half way through the nominal three year research period, I realised that I did not necessarily want to be an astronomer for the rest of my life, and that it was by no means certain that I would have that choice anyway.

I attended a course in the summer of 1994 run by the UK astronomy research funding body, PPARC, together with other graduate funding bodies, to show doctoral students the range of career options available outside of academia – in the public or private sector – and to highlight the many talents that doctoral students possess – determination, intelligence, technical expertise, communication skills. In the words of the UK Grad programme, “doctoral students are our most talented: they have the potential to make a significant difference to the

economic competitiveness of the UK”.³ The same applies in the US or any other nation.

I decided to pursue a legal career and was fortunate to obtain sponsorship from a law firm through two years of law school. After law school, and a further two years as a trainee lawyer, I qualified in September 2000. I have subsequently specialised in tax law. To my mind, tax is the area of the law with the most intellectual content. In many ways, my job is not too dissimilar to academic research, but the research that I do is of practical and financial importance to the clients that I advise – and the financial rewards are not bad either.

Perhaps you will be smart, or lucky, enough to stay in academia for the rest of your working career – but perhaps you will not. Some time spent thinking about other career paths will not be wasted. An academic career may not be the bed of roses that you expect, and your skills (many of which you may not realise that you possess) will enable you to perform a wide range of jobs outside academia. At least you will be better prepared for the options that are available and will be in a position to make an informed choice of career.

Good luck.

1. Statistics taken from a study by G. Levin et al., published at the AAAS meeting in February 2003: see <http://www.nber.org/~sewp/events/aaas0203/Levin-StephanAAAS.ppt> and also <http://www.gsu.edu/~wwwsps/people/StephanP/changingcareeroutcomesinacademe.pdf>

2. See, for example, a recent study by the UK funding body, PPARC, at <http://www.pparc.ac.uk/Pbl/PiedaNewCohort.pdf> and <http://www.pparc.ac.uk/Pbl/PiedaOldCohort.pdf>

3. <http://www.grad.ac.uk/>

FROM THE EDUCATION OFFICE

Susana E. Deustua, Director, Educational Activities, deustua@aaas.org

The Astronomycenter.org

The Astronomycenter.org is entering beta testing. This “Astronomy 101” digital collection, or library, is a portal for teachers and students of introductory college-level astronomy that organizes thousands of select, high-quality resources including activities, demonstrations, tutorials, images, raw data, lecture notes, assessments, news items, and curricula. Astronomycenter.org is being built by the AAS under ComPADRE (Communities in Physics and Astronomy for Digital Resources in Education). The site editor is Marc Gagne at West Chester University, who is focusing on designing the user interface, selecting content, implementing an editorial and review process, and seeking feedback from the astronomy community. The goal is to create a community of authors, reviewers, and instructors to ensure the quality of the collection, promote the use of the portal, share experiences,

and support education efforts within the Society. ComPADRE is a joint project of the American Astronomical Society, American Association of Physics Teachers, American Physical Society and the American Institute of Physics/Society of Physics Students that is funded by the National Science Foundation Division of Undergraduate Education’s National STEM Digital Library program.

Please stop by the ComPADRE booth in the Exhibit area at the Denver Meeting and take a test drive. Your feedback is important.

For more information on ComPADRE visit compadre.org or read all about it on paper in the March/April 2004 issue of *Mercury* and in the December 2002 *AAS Newsletter* (which luckily is also available online from the AAS website).

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AAS Meeting News

203rd Meeting, January 2004 Atlanta, Georgia

The Atlanta Meeting hosted nine education sessions: five poster sessions, one oral and three special sessions. The pre-meeting sessions and workshops were popular. The two-day workshop, Improving the Introductory Astronomy Survey Course for Non-Science Majors Through Active Learning, led by Tim Slater and Ed Prather was held on Saturday and Sunday before the meeting, and was packed. The Sunday afternoon Astronomy 101 session, organized by Grace Deming focused on the training of pre-college science teachers and was very well attended. The Special Sessions played to full houses, clearly showing the deep interest the AAS membership has in astronomy education. Education and Public Outreach from NASA's Great Observatories was organized by Jay Pasachoff, winner of the 2003 Education Prize. Speakers were Observatory Directors and heads of the Observatories' EPO offices. Cool Astronomy for Everyone speakers were Heidi Hammel on cool planets, and Robert Nemiroff on the Astronomy Picture of the Day in the classroom. A total of 144 education-related abstracts submitted. I note that the number of education research papers is increasing.

204th Meeting, 31 May – 3 June 2004, Denver, Colorado

Upcoming education-related workshops and sessions at the Denver Meeting in June 2004 number thirteen and promise to be quite interesting. These special and extra sessions include:

- College Astronomy Teaching Workshop: Learner-Centered College Astronomy Teaching. Led by T. Slater and E. Prather on Saturday and Sunday before the meeting.
- Astro 101 - The Graduate Instructor and Undergraduate Preceptor. Organized by D. Richstone, T. Rector, L. Lebofsky, and R. McCray on Sunday afternoon.
- Interactive Education and Peer Instruction in Physics and Astronomy Introductory Courses. Organized by S. Dutta
- Followup to the Workshop for New Faculty in Physics and Astronomy. Organized by S. Deustua.
- New Ways of Teaching College Astronomy – Practical Advice and Results. Organized by D. Duncan.
- Cool Astronomy For Everyone. Organized by S. Deustua
- Teaching Astronomy to Impact Students' Worldviews. Organized by: T. Duncan and A. Venkatesan
- NASA Origins Missions & Astrobiology. Organized by D. Backman.
- When We Were Young: Early Life on Venus, Earth and Mars. This is a public lecture. The speaker will be Dr. David Grinspoon, planetary scientist SouthWest Research Institute, Boulder, CO, and author of *Lonely Planets*, a popular science book about astrobiology.

Contributed sessions include:

- Undergraduate Astronomy Curriculum
- Astronomy Education
- Astronomy Education Research
- Astronomy for K-12
- Informal Astronomy Programs

Remember to check the meeting schedule, either online or in your meeting book, for dates, times, locations and abstracts.

Workshop for New Faculty in Physics and Astronomy

It is not too early to be thinking about the Workshop for New Faculty in Physics and Astronomy. Sponsored by the American Association of Physics Teachers (AAPT), the American Astronomical Society (AAS) and the American Physical Society (APS) the workshop is held in November each year at the American Center for Physics. Now in its ninth year, this annual conference helps new faculty understand how students learn physics and astronomy and suggests how this information can impact a new professor's teaching methods. The workshop is intended for faculty in the first few years of their initial tenure-track appointment at a four-year college or university.

The 2004 Workshop will be held 4-7 November at the American Center for Physics in College Park, MD. Our program is supported by the National Science Foundation, which pays all local expenses connected with the Workshop, including housing and meals for the participants. The only cost to participants is transportation to College Park. The discussion format and small breakout groups of the Workshop permit the participants to exchange ideas with one another and with leading innovators in physics and astronomy education. Proceedings from the 2003 Workshop are available online at www.aapt.org/Events/2003NewFacultyProceedings.cfm.

Nominations of faculty to attend the Workshop are submitted by department heads before 24 September 2004. The capacity of the Workshop is limited, and nominations are generally accepted in the order in which they are received. Submit letters of nomination to Maria Elena Khoury at mkhoury@aapt.org.

A Review of Astronomy Education Research

In the Astronomy Education Review, Volume 2, Issue 2 an online journal at <http://aer.noao.edu>, Janelle Bailey and Timothy Slater's article, *A Review of Astronomy Education Research*, provides a concise summary of research in astronomy education. Ironically, although astronomy is both one of the most popular and oldest of the physical sciences, astronomy education research is amongst the newest fields. Bailey and Slater review the history of astronomy education research, areas of current study and areas where study is needed, and most welcome for astronomers, tell us where the scholarly articles can be found.

FIRST ANNUAL NSBP/AAS SCHOLARSHIP WINNERS

In the spirit of fostering cooperation between the AAS and professional organizations serving minorities in physics and astronomy, the AAS Council in January 2004 approved four new scholarships to encourage minority undergraduates to pursue advanced study in astronomy and space science. Up to four new scholarships of \$1000 each, funded jointly by the AAS and the National Society of Black Physicists (NSBP), will be awarded annually to undergraduates through a competitive process administered by NSBP. Judging will include participation of AAS members.

NSBP is the largest and most widely recognized organization devoted to the African-American physics community. NSBP represents faculty and students at Historically Black Colleges and Universities, and its annual meetings draw over 600 attendees, with an increasing number of recruiters from graduate schools around the country.

The first annual NSBP/AAS scholarships were awarded at the NSBP meeting in February 2004, with AAS members Charles McGruder and Barbara Williams serving as judges.

The scholarships are named to commemorate African American astronomers and space scientists Harvey Washington Banks, Walter McAfee, Ronald McNair, and Michael Anderson. These scholarships are offered in their memory and in the hopes of inspiring the next generation of astronomers and space explorers.

The first annual NSBP/AAS scholarship recipients for 2004 are Joshua Banks and Christopher Jones.

Joshua Banks is a graduating high-school senior at the Baltimore Polytechnic Institute. As a junior, he was a member of the school's Physics Olympics Team, which placed second at the University of Maryland Physics Olympics. He is currently enrolled in a research practicum through which he is conducting research on ferromagnetic thick films at Morgan State University under the guidance of Prof. Fredrick Oliver. Joshua hopes to earn a Ph.D. in physics/astronomy, and become a university professor and researcher in particle astrophysics.

Christopher Jones is a freshman at Morgan State University in Baltimore, majoring in Engineering Physics. At Morgan State University, Christopher is majoring in Engineering Physics, with an honors curriculum. Christopher plans to obtain a graduate degree in astronomy/astrophysics.

For information about the NSBP/AAS scholarships, visit the CSMA website: www.aas.org/csma. If you would like to get involved, contact Keivan Stassun: keivan.stassun@vanderbilt.edu.

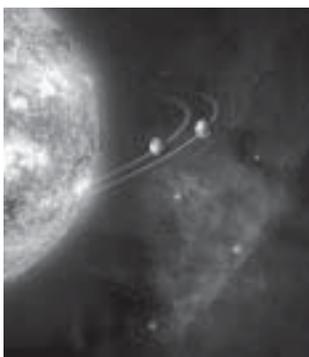


NSBP/AAS scholarship winners Joshua Banks (left) and Christopher Jones (right).

CHASING VENUS: OBSERVING THE TRANSITS OF VENUS

"Chasing Venus: Observing the Transits of Venus, 1631-2004" is on exhibit until 3 April 2005 at the Smithsonian Institution Libraries Exhibition Gallery at the National Museum of American History. "Chasing Venus" tells the story of the transits of Venus using the marvelous illustrations in the rich collection of rare books from the Smithsonian Libraries, supplemented by appropriate artifacts from the National Museum of American History and the United States Naval Observatory.

No one alive today has seen the planet Venus pass across the face of the Sun! The first recorded observation of a transit of Venus was by Jeremiah Horrocks in 1639, about 30 years after the invention of the telescope. Only six transits of Venus have occurred between 1600 and 2000, with the last occurring in 1882 - over 120 years ago. Two transits of Venus will take place this century: 8 June 2004 and 6 June 2012.



Venus actually passes between Earth and the Sun every 584 days. When this happens, Venus usually appears to us to be above or below the Sun, because the orbit of Venus is tilted slightly with respect to Earth's orbit. On very rare occasions, however, Venus lines up directly between Earth and the Sun. Unless we know where to look, we would miss the transit entirely. In America, the June, 2004 transit is visible only in the eastern half of the country and ends shortly after sunrise. The Sun will be low in the sky, so you will need a clear northeastern horizon to get a good view.

The online exhibition is available on the Smithsonian Institution Libraries website at <http://www.sil.si.edu/exhibitions/chasing-venus>.

Text adapted and excerpted from the Smithsonian Institution Libraries online Press Room at www.sil.si.edu. Evoking the transit of Venus. Image usage courtesy of the Smithsonian Institution Libraries, Jet Propulsion Laboratories and Raytheon Corp. Artists: Harman Smith and Chris Hawley.

NEWS FROM NATIONAL SCIENCE FOUNDATION

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

Deadlines for FY2005 Funding

AST announces the following deadlines for research and instrumentation grant opportunities in FY2005. Note that the deadline for the ATI program has shifted significantly from previous years.

The deadline to submit proposals for Research Experiences for Undergraduates (REU) Sites will likely change, from mid-September to mid-August. Prospective PIs for the REU program are encouraged to contact Randy Phelps (rphelps@nsf.gov or 703-292-4910), and to check the AST website, for updates. Please plan for an earlier submission deadline.

22 July 2004: CAREER (MPS) - Faculty Early Career Development Program

August-Sept (TBD) 2004: REU Sites - Research Experiences for Undergraduates (REU) Sites
REU Supplements Anytime

13 October 2004: NSF Astronomy and Astrophysics Postdoctoral Fellowship Program (AAPF)

13 October 2004: MPS Distinguished International Postdoctoral Research Fellowships (MPS-DRF)

1 November 2004: Advanced Technologies and Instrumentation (ATI)

15 November 2004: Astronomy & Astrophysics Research Grants in the following areas:

- EXC - Extragalactic Astronomy and Cosmology
- GAL - Galactic Astronomy
- PLA - Planetary Astronomy
- RUI - Research at Undergraduate Institutions
- SAA - Stellar Astronomy and Astrophysics

15 January 2005: Underrepresented Minorities Programs:
RPG - Research Planning Grants
CAA - Career Advancement Awards

20 January 2005: Program for Research and Education with Small Telescopes (PREST)

27 January 2005: Major Research Instrumentation (MRI)

Anytime: Research Opportunity Awards and REU supplements and Meeting or Conference support proposals.

2004 NSF Astronomy & Astrophysics Postdoctoral Fellows

The Division of Astronomical Sciences is pleased to announce the 2004 class of NSF Astronomy and Astrophysics Postdoctoral Fellows. Fellows engage in a program of research of an observational, instrumental, or theoretical nature, in combination with a coherent educational plan for the three-year duration of the fellowship. The program is intended to recognize young investigators of significant potential, and provide them with experience in research and education that will establish them in positions of distinction and leadership in the community.

Hector Arce, American Museum of Natural History - "The Impact of Young Stellar Outflows on their Surroundings"

Kelle Cruz, University of Washington - "Measuring the Luminosity and Mass Functions of Low-Mass Stars and Brown Dwarfs"

Joshua Faber, University of Illinois at Urbana-Champaign - "New Frontiers in Relativistic Hydrodynamics"

Dragan Huterer, University of Chicago - "Towards Understanding of Properties and Nature of Dark Energy"

Sheila Kannappan, University of Texas at Austin - "Galaxy Evolution at $z=0$ and Beyond"

Douglas Leonard, California Institute of Technology - "Supernovae, the Fate of the Universe, and Broadening the Perspectives of Tomorrow's Scientists"

M. Virginia McSwain, Yale University - "Observations of Rotational Mixing in Massive Stars"

Travis Metcalfe, High Altitude Observatory/NCAR - "Asteroseismology of Sun-like Stars"

Henry Roe, California Institute of Technology - "Titan's Methane Meteorological Cycle"

Visas for International Visitors

The NSF Office of International Science and Engineering (OISE) warns that foreign visitors and their U.S. sponsors must allow much more advanced time for the visa process. The Department of State recommends that visa applications be submitted "at least three months before the intended date of entry." Cases have been known to take 4-5 months, or even longer. Individuals should consult the nearest U.S. embassy

continued on page 14

ASP NEWS

Michael Bennett, Executive Director, mbennett@astrosociety.org

2004 ASP Awards

The Society is pleased to announce the recipient of its Catherine Wolfe Bruce Gold Medal and its other awards for this year. The Board of Directors was unanimous in their selection of Chushiro Hayashi (Kyoto University, Japan) for the Bruce Gold Medal, which, since 1898, has been bestowed upon an individual for fundamental, life-long contributions to astronomy. The Board noted Hayashi's theoretical contributions to our understanding of stellar evolution and to the formation of planetary systems.

In addition, the Board announced the winners of the other awards for 2004. AAS Members are in bold:

The Maria and Eric Muhlmann Award, for developing innovative instruments and techniques—**John Lacy** (University of Texas at Austin, USA)

The Robert J. Trumpler Award, for best recent Ph.D. thesis—**David Charbonneau** (California Institute of Technology, USA)

The Klumpke-Roberts Award, for contributing to public understanding of astronomy—Seth Shostak (SETI Institute, USA)

The Thomas J. Brennan Award, for teaching of astronomy in grades 9-12—John Land (Broken Arrow Senior High School, USA)

The Amateur Achievement Award, for significant observational or technological contributions—Nicholas Szymanek (United Kingdom)

The Las Cumbres Amateur Outreach Award, for outreach to K-12 students and the public—the Big Bang Band (Angelo Parisi, Matt Gardner, and Terry Dye) (USA)
Katy Garmany, ASP President

News from the PASP

The Editors of the PASP would like to call astronomers' attention to several features of the journal that may be important to authors:

- Rapid publication (median submission to acceptance in 2003 was 45 days)
- Worldwide readership (subscriptions held by about 600 libraries and 1000 individuals in over 40 countries)
- Early electronic publication (articles posted online as soon as proofs are corrected, ahead of the print edition)

We invite submission of manuscripts in all areas of astronomy and astrophysics research, as well as articles on astronomical instrumentation and techniques, software advances, review articles (both invited and author initiated), and dissertation

summaries. Also, consider submitting your conference review articles to the PASP for greater visibility.

Please see our web pages (<http://pasp.phys.uvic.ca>) or contact the editors (pasp@asu.edu) for further information.
Anne Cowley (Arizona State Univ.) & David Hartwick (Univ. of Victoria), PASP Co-Editors

Some Space Still Available for “Cosmos in the Classroom 2004”

Registration is still available at this symposium for both new and experienced “Astronomy 101” faculty, to be held 16-18 July at Tufts University. Find out what modern research is revealing about teaching and learning and how these results apply to courses in introductory astronomy for non-science majors. For complete information go to the ASP web site at <http://www.astrosociety.org> and click on “Education.”

Andrew Fraknoi, Organizing Committee Chair

Project ASTRO—10 Years Old and Going Strong

This spring marks the 10th anniversary of Project ASTRO, the innovative program from the ASP that partners amateur and professional astronomers with teachers around the country to give students a hands-on introduction to astronomy. Since the program started in San Francisco and Los Angeles classrooms in 1994, it has directly reached more than 103,000 students, helping them enjoy and participate in the excitement of scientific discovery. Originally funded by NSF and NASA, Project ASTRO is currently operating through 12 regional sites across the nation, all of which are now self-supporting.

Close to 2000 astronomers, graduate students, and amateur astronomers have been trained in 1-on-1 partnerships with local teachers since the program began. A key element in the success of the program is that astronomers and teachers are first trained together at summer workshops that guide them through teaching space science using a variety of hands-on, inquiry-based activities.

New volunteer astronomers are always needed. If you want some “real world” classroom experience to round out your understanding of education and public outreach, Project ASTRO could be the solution. For a listing of all the site contacts, and for more general information about Project ASTRO, visit the ASP web site at: <http://www.astrosociety.org> and click on “Education.”

Andrew Fraknoi, Project ASTRO Director



Rachel Akeson and Tammy Bosler visit with Congressman Brian Schiff (D-CA), a strong supporter of NASA and NSF.



AAS CVD participants listen to Congressman Nick Smith (R-MI) at the CVD breakfast. Smith had just returned from visiting with Col. Muammar Qadhafi on the occasion of disclosing Libya's weapons programs.



CVD participants meet with OMB staff. Margaret Turnbull points out to David Radzanowski of the OMB that cuts to the Beyond Einstein initiative have unintended consequences on the production of graduate students.

Washington News continued from back page

NAS Hubble Committee Formed

The NAS has formed a Committee on Assessment of Options for Extending the Life of the Hubble Space Telescope. The chair, Lou Lanzerotti, has a long history of service to the nation through serving on and chairing a variety of such committees, including serving on the Vice President's Space Policy Advisory Board from 1991 to 1993. Other committee members are: Steven Battel, Charles F. Bolden, Jr., Rodney A. Brooks, Jon H. Bryson, Benjamin Buchbinder, Bert Bulkin, Robert F. Dunn, **Sandra M. Faber**, **Riccardo Giacconi**, Gregory J. Harbaugh, Tommy Holloway, John M. Klineberg, Vijay Kumar, Forrest S. McCartney, Stephen M. Rock, Joseph H. Rothenberg, Joseph H. Taylor, Jr., Roger E. Tetrault and Richard H. Truly. The committee membership represents a cross-section of scientists and engineers, astronauts and Nobel Prize winners.

The task statement for the committee is included here for the benefit of AAS members.

1. Assess the viability of a space shuttle servicing mission that will satisfy all recommendations from the CAIB, as well as ones identified by NASA's own Return-to-Flight activities. In making this assessment, compare the risks of a space shuttle servicing mission to HST with the risks of a shuttle mission to the ISS and,

where there are differences describe the extent to which those differences are significant. Estimate to the extent possible the time and resources needed to overcome any unique technical or safety issues associated with HST servicing that are required to meet the CAIB recommendations, as well as those from the Stafford-Covey team.

2. Survey other available engineering options, including both on-orbit robotic intervention and optimization of ground operations that could extend the HST lifetime.

3. Assess the response of the spacecraft to likely component failures and the resulting impact on servicing feasibility, lost science, and the ability to safely dispose of HST at the end of its service life.

4. Based upon the results of the tasks above, provide a benefit/risk assessment of whether extension of HST service life, via (a) a shuttle servicing mission if one is deemed viable under task #1 and/or (b) a robotic servicing mission if one is deemed viable under task #2, is worth the risks involved. The assessment should include consideration of the scientific gains from different options considered and of the scientific value of HST in the larger context of ground and space-based astronomy and science more broadly. Special attention should be paid to the practical implications of the limited time available for meaningful intervention robotically or via the shuttle.

The Budget

The budget process this year will not follow the proscribed process, with Congress passing all appropriations bills by September 30, but will mimic the past several years where the budget is not signed until well into the next fiscal year. Since 2004 is a presidential election year, there is little incentive to push through controversial budget bills. The debate and discussion needed to hash out the difficult issues can only provide ample fodder for sound-bite politics on the evening news and neither party is interested in opening themselves up to this kind of potentially damaging activity.

We can expect the Department of Homeland Security, Department of Defense and perhaps the Military Construction bills to pass rather early in the year due to both need and broad support. The remaining bills, including the VA-HUD-IA appropriations bill that funds NASA and NSF, are likely to be delayed until after the election in November, perhaps not even until late January of 2005. Appropriations hearings have already been held for most of the agencies and departments. We now wait only for congressional action. We may be waiting quite a while.

Congressional Visits Day

On 3-4 March, the ninth annual Science-Engineering-Technology congressional visits day took place. More than 200 scientists from a range of disciplines descended upon Washington for a day of briefings followed by a day of visits with



Chris De Pree (Agnes Scott College) and undergraduate astronomy major Alexis Crane at NASA headquarters before the group visit with OSS senior staff.



John Leibacher (l) and a non-AAS CVD participant congratulate Congressman Rush Holt (D-NJ) on his award for service in support of science.



David Wilner and Ed Deluca meet with a staffer in Congressman Michael E. Capuano's (D-MA) office.

Hill offices. More than 2/3 of the congressional offices were visited by representatives of this broadly based science coalition.

The AAS participated with a total of 16 people. They included the following: Rachel Akesson (Caltech), Joe Alexander (National Academy of Sciences), Tammy Bosler (UC Irvine), Alexis Crane (Agnes Scott College), Ed Deluca (Harvard-Smithsonian, CfA), Chris DePree (Agnes Scott College), Ann Hornschemeier (Johns Hopkins University), John Leibacher (National Solar Observatory), Michael Nord (NRL), Jeremy Richardson (National Research Council), Mark Sykes (University of Arizona), Maggie Turnbull (University of Arizona), David Wilner, (Harvard-Smithsonian CfA), and Amy Winebarger (George Mason University/ NRL).

Keeping these volunteers busy involved scheduling 25 appointments, arranging for lodging and travel and producing comprehensive briefing folders. This year, our AAS policy intern, Tina Soumela, a graduate student in international affairs at George Washington University performed this complex task and the event went off without any major problems.

Ann Horscheimer, one of our early career participants, was asked to write a brief personal view of her participation in CVD and her text is included below.

A Personal View of CVD

If you pursued a doctoral degree you may recall the first time someone conferred

upon you the degree's title: "Congratulations, *Doctor* Maria Mitchell." If perhaps you had forgotten this moment and wanted to briefly regain some of the positive aura of having status conferred with a title, you might consider participating in Congressional Visits Day. I found that the most important part of "Hello Ms. Staffer, I am Dr. Ann Hornschemeier, a constituent of Senator Sarbanes" was far and away the word "constituent."

In the time I spent preparing for this day, I was quite nervous about what I would say to these Congressional staffers. Their educational backgrounds include areas such as political science, not high energy astrophysics. Would I be expected to compare and contrast the merits of X-ray astronomy versus health care for poor children?

It turns out that being a "constituent" really means that you have some status with your representatives. Even if your business is science, you have a job in the district, and research dollars are coming to the district through you. This is important to a Congressman.

However, one does need to be well-prepared. Luckily, the AAS office equips one well. You are properly debriefed the day before the visits about the state of the budget. This year, a staffer from the House Science committee followed the Senate briefing with: "Well, you have heard about the bleak Senate, now let's talk about the *Bleak House*." It was important to acknowledge the difficulties facing the members of Congress.

I connected my field of X-ray astronomy to the American Science & Engineering (AS&E) X-ray machines that were used for security screening in the office buildings. Riccardo Giacconi and other X-ray astronomy pioneers at AS&E developed some of the first astronomical X-ray detectors, and I felt that connecting this to personal security demonstrated the broad range of links between seemingly obscure scientific research and very useful everyday technology. I mentioned this again in my follow-up letters after the day was over.

The only area of preparation in which I was really lacking were the business cards. It is *not* common after finishing a doctoral degree to obtain business cards. Luckily, Kevin Marvel had a kilogram of his own, so I wrote my name and contact info on the back. So, another benefit of this experience is that I *now* own 249 business cards of my own and have the sense of security that comes with knowing my husband can't forget my office number.

I have always been politically responsible: voting regularly, making occasional campaign contributions and writing letters on behalf of AAS action issues. But it was clear that one-on-one time spent with a Congressional staffer (or member if they should be available) was an extremely valuable investment. I strongly recommend delivering a business card—preferably your own—to your Congressional representatives during a visit of your own. It is time well spent.

-by Ann Horscheimer

AWARDS AT THE ATLANTA MEETING

Seven prizes were awarded at the 204th AAS meeting. In the captions, DK stands for “AAS Photo by Debbie L. Kovalsky © 2004 American Astronomical Society” and KK means “AAS Photo by Kelley Knight © 2004 American Astronomical Society.”



Rashid Sunyaev (Max Planck Institute for Astrophysics, Garching and Space Research Institute, Moscow) received the Dannie Heineman Prize for Astrophysics from AAS President Catherine Pilachowski. KK



Jay Pasachoff (Williams College) received the AAS Education Prize. DK



Here, President Pilachowski presents the Newton Lacy Pierce Prize in Astronomy to Xiaohui Fan (University of Arizona). KK



Ray Jayawardhana (left, University of Michigan) received the 2003 AIP Science Writing Award for a Scientist from Philip Schewe (American Institute of Physics). DK



Frank Low (University of Arizona) received the 2003 Joseph Weber Award for Astronomical Instrumentation. DK.



Jonathan Grindlay (center, Harvard University) presented the Rossi Prize to Robert Duncan (left, University of Texas-Austin) and Chryssa Kouveliotou (NASA Marshall Space Flight Center/USRA). KK



Michael Hoskin (center, Cambridge University), recipient of the LeRoy E. Doggett Prize for Historical Astronomy was flanked by previous awardees Curtis Wilson (left, St. Johns College) and Owen Gingerich (Harvard University). KK

HONORED ELSEWHERE

Ostriker Wins RAS Gold Medal

The Royal Astronomical Society's highest honor, the Gold Medal, was awarded to **Professor Jeremiah P. Ostriker**, Plumian Professor at the Institute of Astronomy, University of Cambridge.

Ostriker is internationally renowned as one of the most influential researchers in theoretical astrophysics; and worked in the development of sophisticated numerical simulations of the evolution of the early universe and the formation of structure in cosmology, including galaxies, clusters of galaxies, and the intergalactic medium.

Keller Receives Bessel Research Award

Dr. Christoph U. Keller has been named the recipient of the Friedrich Wilhelm Bessel Research Award which recognizes lifetime achievements in science. Keller, whose current research includes: solar magnetic fields, high-precision polarimetry of the sun and stars in the visible and infrared, and high spatial resolution techniques, is a faculty member at the National Solar Observatory in Tucson, AZ.

The Alexander von Humboldt Foundation grants approximately 10 Friedrich Wilhelm Bessel Research Awards annually to young, top-flight scientists and scholars from abroad who are already recognized as outstanding researchers in their fields.

Linde Wins the 2004 Cosmology Prize

Andrei Linde, is the co-recipient of the 2004 Cosmology Prize of the Peter Gruber Foundation for development of fundamental ideas of cosmic inflation, which has been one of the dominant themes of cosmology for more than two decades.

The original concept of inflation and its many variations, including chaotic inflation, proposed and developed by Linde (and co-recipient Alan Guth) have led to a revolution in our approach to studying cosmology and to understanding the history of the universe.

Born in Moscow in 1948, Linde received a B.S. from Moscow State University and a Ph.D. from Moscow's Lebedev Physical Institute. Prior to joining the Stanford faculty in 1990, Linde worked at the Lebedev Physical Institute and at CERN, Switzerland. He is also the author of many scholarly papers and has written two books on particle physics and inflationary cosmology.

Trimble Elected to Four-Year Term

The Forum on History of Physics of the American Physical Society is the approximate APS equivalent of the AAS's Historical Astronomy Division, except that physicists generally assume that very old data are never useful. It has in common that the membership is a mix of professional historians of science and aging researchers, who have discovered that some of the things they remember as "current events" are now history. It also has in common a governance structure in which the committee includes several flavors of chair (vice, elect, past, etc) for several years, election being determined almost entirely by name recognition, and thus it is that AAS member **Virginia Trimble** has just narrowly edged out Bill Evenson of Brigham Young University for the task that begins with vice-chair this year and ends with past chair in 2007-2008.

Ghez and Reiss Awarded Sackler Prize

Andrea M. Ghez (UCLA) and **Adam G. Riess** (STScI) have been awarded the Raymond and Beverly Sackler Prize in the Physical Sciences. The Sackler Prize supports dedication to science, originality and excellence, and it is intended for young scientists who have made outstanding and fundamental contributions in their fields.

Ghez was recognized for her pioneering high-resolution infrared observations that provide evidence for, and establish the mass of, the supermassive blackhole in the center of the Galaxy; and Reis for his contributions to the observational study of distant Type Ia supernovae that reveal the accelerating expansion of the universe, and the possible existence of dark energy.

Baumgarte Receives Guggenheim Fellowship

Thomas Baumgarte (Assistant Professor of Physics, Bowdoin College; Adjunct Assistant Professor of Physics, University of Illinois at Urbana-Champaign) has been awarded the 2004 Guggenheim Fellow. Baumgarte, one of 185 recipients, was awarded for his achievements in computer simulations of gravitational waves.

This Guggenheim Foundation was founded in 1925 by former United States Senator and Mrs. Simon Guggenheim, in memory of John Simon Guggenheim, a son, who died April 26, 1922. The Foundation offers Fellowships to further the development of scholars and artists by assisting them to engage in research in any field of knowledge and creation in any of the arts, under the freest possible conditions and irrespective of race, color, or creed.

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or Consulate to find out the expected processing time for that country. The OISE web site contains a link to visa information for foreign visitors: http://www.nsf.gov/home/int/int_travel.htm

Astronomy & Astrophysics Advisory Committee

The joint NSF-NASA advisory committee, the Astronomy & Astrophysics Advisory Committee (AAAC), has produced their annual report, due 15 March each year. The report is submitted to the heads of NSF and NASA and to Congressional committees, OMB and OSTP. This latest report, as well as information on AAAC membership, activities, and earlier reports can be found on the AAS web site, at www.aas.org/aaac. The AAAC is responsible for providing advice to both agencies on issues such as coordinating the development of strategic plans and the identification of specific areas that might benefit from coordinated activities. The committee's next meeting is scheduled for 21-22 June 2004.

Staff Profile

The astronomers of the Astronomy Division may be familiar faces to many of the Society members, but enabling all we do is an administrative staff that takes care of the many proposals we receive, the many reviews we hold, and the awards we make. We would like to introduce you to some of them in this column. On your next visit to NSF to serve on a panel, or at the NSF booth at the next AAS meeting, you may meet them.



Kim Elliott (Information Technology Specialist) serves as the IT Specialist in the Division. She is responsible for coordinating, implementing and assisting external and internal users on all of the NSF automated systems including FastLane and E-Jacket. She also maintains and manages the technology

responsibility for the Division's web page and serves as the administrator for information dissemination in the Division. She has been a NSF employee for 28 years.



Sharon Bolden (Division Secretary) handles the essential day-to-day routine activities within the Division, time and attendance sheets, mail/distribution, travel for Division staff, greeting visitors, maintaining schedules and calendars, and scheduling conference rooms. She handles the travel for the advisory committees and

other scientific boards and visitors. Before joining the Division, she served 15 years in the United States Army, where she worked in Administration serving in Germany, Korea, and various stateside assignments. Her last assignment was with the Joint Staff at the Pentagon. She then

worked in the private sector in administrative, accounting and property management areas before coming to the NSF. She holds an A.A.S. in Business Management from Northern Virginia Community College, and recently obtained her B.S. in Business Administration from Strayer University.



Elizabeth Pentecost (Project Management Administrator) is responsible for the oversight and management of the Division's financial, personnel operation and serves as a key non-scientific member of the Astronomy Division's management team. She serves as Executive Assistant to the program directors responsible for major projects such as the Gemini Observatory and the ALMA project. Prior to coming to NSF in November 2003, Ms. Pentecost was Deputy Director of the NRL and USNO Astronomy Programs at the Universities Space Research Association (USRA).

Honored Elsewhere continued from page 13

AAS Members Elected to the National Academy of Sciences

The National Academy of Sciences announced the election of 72 new members and 18 foreign associates from 13 countries in recognition of their distinguished and continuing achievements in original research. Election to the Academy—is regarded as the one of the highest honors in American Science.

Congratulations to the following AAS members:

Catherine Cesarsky, director general, European Southern Observatory, Munich, Germany,

Andrea M. Ghez, professor of physics and astronomy, University of California, Los Angeles,

Andrew E. Lange, Marvin L. Goldberger Professor of Physics, division of physics, mathematics, and astronomy, California Institute of Technology,

David J. Stevenson, George Van Osdol Professor of Planetary Science, division of geological and planetary sciences, California Institute of Technology, Pasadena,

Alan M. Title, senior fellow, Lockheed Martin Advanced Technology Center, Palo Alto, CA,

Maria T. Zuber, E.A. Griswold Professor of Geophysics and head, department of earth, atmospheric, and planetary sciences, Massachusetts Institute of Technology.



Professor Penny D. Sackett
 Director
 Research School of Astronomy & Astrophysics
 Mt Stromlo Observatory
 Cotter Road
 Weston ACT 2611 Australia

T: +61 2 6125 0266
 F: +61 2 6125 0260
 E: director@rso.anu.edu.au
 rsowww.anu.edu.au

9 February 2004

Dr Kevin B. Marvel
 Deputy Executive Officer
 American Astronomical Society
 2000 Florida Avenue N.W. Suite 400
 Washington D.C. 20009
 USA

MAR 28 2004

Kevin
 Dear Dr Marvel,

On behalf of the staff and students of the Research School of Astronomy & Astrophysics, I write to thank you, the President and staff of the American Astronomical Society, the Director and staff of the National Optical Astronomy Observatory and all astronomy libraries and personal donors across the United States who have contributed to the very kind donation of over 3,000 pounds of library books to help rebuild the Library at Mount Stromlo Observatory.

Given the total loss of the Library collection last year, this is a major step in restoring and enhancing the information resources available to the School, and will be a permanent reminder of the kindness and generosity of our North American colleagues.

Yours sincerely,

Professor Gary Da Costa
 Acting Director, RSAA

c.c. President, American Astronomical Society
 Director, NOAO
 Dr Peter Wood, RSAA, ANU
 Dr Ralph Sutherland, RSAA, ANU
 Ms Samantha Jackson, Hancock Library, ANU

THANKS FROM MT STROMOLO

Included here is a facsimile of a thank-you letter from Mt. Stromlo acting director Gary Da Costa for the efforts of the AAS and our volunteer project coordinators Ed Anderson (Northern Arizona University) and Jessica Bryant (NOAO). It is the donations of the materials themselves, by a variety of AAS members, that made this project possible. Many thanks to both the donors and our coordinators for their efforts.

Kevin B. Marvel
 AAS Deputy Executive Officer

AAS MEMBER INFORMATION

Is your AAS member information correct?

Visit the Members Only Pages at www.aas.org to check your member listing.

Need to update your information?

Contact the Membership Department at membership@aaas.org.

DIVISION NEWS

High Energy Astrophysics Division

Roger Blandford, Chair HEAD

HEAD held its annual business meeting at the Atlanta AAS. It was announced that Harvey Tananbaum and Martin Weisskopf would share the 2004 Bruno Rossi Prize. Stephen Murray took over as Vice Chair while Deepto Chakrabarty, Fiona Harrison and Kim Weaver joined the Executive Committee. Plans for the next HEAD Divisional Meeting to be held in New Orleans 8-11 September 2004 were described.

The HEAD oral sessions at the AAS comprised seven excellent and well-attended talks by Peter Garnavich, Masao Sako, Maxim Lyutikov and Andrew MacFadyen on Gamma-Ray Bursts and by Edward Colbert, Roland van der Marel and Simon Portegies-Zwart on Intermediate Mass Black Holes.

The HEAD membership has been concerned with the implications of the President's Space Exploration Plan for the Beyond Einstein and Explorer programs. In particular, the 2005 NASA budget proposes that the launch dates of the two Einstein Observatories, Constellation-X and LISA, be postponed and that the Einstein Probe program be indefinitely deferred. The funding for the Explorer program is also reduced. A scientific meeting on the Beyond Einstein program will be held at SLAC on 12-14 May 2004.

AAS Calendar Project

As a service to its members, the AAS is developing a wall calendar to be provided to each member, pending sufficient sponsorship. The calendar will include dates of interest for individuals working in the astronomical sciences such as proposal deadlines, AAS and AAS division meeting abstract deadlines and meeting dates as well as other important information. The calendar will be 18 months long and be published each January. The calendar will be distributed to AAS members at the same time as the *AAS Directory*.

Input from AAS members is needed. If you have a deadline that astronomers should know about, please email Crystal Tinch (crystal@aes.org) with full details. Note that we will be publishing only AAS scientific meeting information at this time.

Attention AAS Corporate Members and Astronomy-related Institutions!

Sponsorship opportunities for this calendar, which will be provided to all AAS members, are available at a range of affordable levels. Day sponsorship is \$500, half-months are \$1000 and full months are \$1800.

The month sponsorship includes choice of full-panel art for the month (within editorial limits), logo printing on the back of the calendar and in the front matter of the calendar as well as choice of caption text, up to 200 words.

Half-month sponsorship includes choice of half panel art for the month (within editorial limits), logo printing in the front matter of the calendar and choice of caption text, up to 100 words.

Day sponsorship (available only to individuals) includes only recognition of astronomy-related days of significance that can be summarized in five to eight words and recognition in the front-matter of the calendar.

Organizations interested in sponsoring a month, half-month or individuals wishing to sponsor a day entry are encouraged to contact Kevin B. Marvel (marvel@aes.org).

Astronomical Journal

Plans are being made for the move of the Editorial Office of the *Astronomical Journal* from the University of Washington to the University of Wisconsin, which will be effective by the end of the year. Authors should continue to submit papers to the Seattle office until the transfer is complete and an announcement is made regarding new submission instructions. Paul Hodge, Editor and Jay Gallagher, Editor-Elect

Status of the NSO/Dunn Solar Telescope and Instruments

The Dunn Solar Telescope (DST) at the National Solar Observatory/Sacramento Peak has been the mainstay of high resolution ground based solar observing for decades. During the past few years, the demand for DST observing time has averaged an over-subscription rate of about 170%. This demand jumped to over 200% for the April-June 2004 quarter. Newer instruments that can take advantage of diffraction limited images delivered by high order adaptive optics are either online or expected to come online within the next several months. These include the Italian IBIS Fabry Perot Imaging Spectrometer, the Diffraction Limited Spectropolarimeter (DLSP) in collaboration with HAO, an infrared polarimeter system in collaboration with the University of Hawaii, and an upgraded CCD control system developed at NSO. The light port that feeds the HAO/NSO Advanced Stokes Polarimeter, the NSO UBF and horizontal spectrograph, as well as the IBIS instrument is being upgraded from a low to a high order AO system. All of these new capabilities greatly enhance the tools available to the solar community.

In recent years, aging systems and general wear on the telescope has resulted in more frequent break-downs and loss of valuable observing time. Systems needing attention include motor controls, supports for various optical assemblies and modernization of telescope control and instrument interface systems. For example, the advent of AO has also revealed some issues with subtle image wobble, and new instruments, many of which are demonstrations or prototypes for instruments being designed for the ATST, are becoming difficult to interface to aging hardware.

In an effort to address and mitigate some of these issues and to enhance the quality and quantity of DST observations, we need to allocate some large time blocks for systems upgrades. Over the next few years we will allocate somewhat more time to telescope maintenance and engineering. To address some of the more critical immediate needs such as removing the image wobble and implementing the new data collection system, we have allocated time in the up-coming quarter for engineering, which required delaying many of the current science proposals. Thus, during the July-September 2004 quarter, the DST will be open for proposals only for the month of September. The telescope time allocation will return to regular schedule during the last quarter, October-December 2004. However, we will probably need to allocate some additional large engineering blocks in the next year or two. We will keep the community informed of when and potential scheduling impacts.

We seek your patience and support during this process, and encourage the solar physics community to take advantage of the new capabilities and continue requesting observing time.

We will strive hard to accommodate all good scientific proposals.

Please note that the deadline for submitting proposals to request time for the NSO/DST telescope for exceptional case of September 2004 was 15 May 2004. The deadline for submitting the proposal for the October - December 2004 quarter is 15 August 2004. For more information, you are welcome to contact K. S. Balasubramaniam, Chair of the NSP/SP Telescope Allocation Committee (bala@nso.edu; Phone; 505-434-7134).

NSF/OPP Proposals

The National Science Foundation's Office of Polar Programs has put out the solicitation for the 2004 Antarctic Research Programs (Aeronomy & Astrophysics, Biology & Medicine, Environmental Research, Geology & Geophysics, Glaciology, and Ocean & Climate Sciences). For the specific interests of the AAS community, the OPP's Antarctic Aeronomy and Astrophysics Program provides support for experimental and theoretical investigations in the areas of polar cosmology, astrophysics (including particle astrophysics and cosmic rays studies), as well as Galactic and extragalactic astronomy (including solar astronomy).

The full text of the NSF 04-559 solicitation is available at the NSF web site <http://www.nsf.gov/pubs/2004/nsf04559/nsf04559.htm>. Important facts to note about the solicitation:

- 1) Submission Window: April 15, 2004 - June 04, 2004.
- 2) The proposals are invited: (a) to perform research in Antarctica; and (b) to perform related research and data analysis in the U.S. The solicitation summarizes Antarctic research opportunities, describes available facilities and support in Antarctica, details how to write a successful Antarctic proposal, links to an online system you must use to request field support, and links to further information.
- 3) To request field support, the proposer must use the "Polar Ice" operational worksheets (<http://polarice.usap.gov>) as instructed in the document. This is a substantial task which must be accomplished before the submission of a proposal to NSF via FastLane.
- 4) If field support is not required, then the "no-fieldwork" worksheet should be filled (Section V). A proposal that does not contain either the fieldwork or no-fieldwork worksheets is subject to return without review. The Antarctic Research solicitation should be used together with the NSF's Grant Proposal Guide: <http://www.nsf.gov/pubs/ods/getpub.cfm?nsf042>.
- 5) The estimated number of new awards is 110; and the anticipated funding amount is \$15,000,000 per year (pending availability of funds).

Applications Software Development Summer School

The US National Virtual Observatory Project announces the first Applications Software Development Summer School, to be held 14-18 September 2004 at the Aspen Center for Physics in Aspen, Colorado.

In this week-long, hands-on session, participants will work with experienced NVO software developers to become familiar with data discovery, data access, and high performance computing capabilities of the Virtual Observatory. In addition, participants will be introduced to VO analysis tools and utilities. In the second half of the week small teams will create their own VO-enabled data analysis applications. Additional information about the summer school, including accommodations, possibilities for financial support, and instructions for submitting an application, is available at the US NVO web site at <http://www.us-vo.org/summer-school/> or by sending e-mail to summer-school@us-vo.org.

Proposal Call for the High Sensitivity Array (HSA)

Proposals for a high sensitivity VLBI array consisting of the VLBA, Green Bank Telescope (GBT), phased VLA (Y27), and Arecibo (AR) are now being accepted with priority. A total of up to 100 hours in each trimester (~25 hours/month) may be scheduled for highly rated projects that can justify the increase in sensitivity over the VLBA by more than an order of magnitude. This capability opens up promising new avenues for scientific discovery.

The High Sensitivity Array (HSA) is available at frequencies of 0.33, 0.61, 1.4, 5, 8.4, 15, 22, and 43 GHz starting with the June 1, 2004 proposal deadline. Proposals should be sent to NRAO only. To request HSA time, the observer should indicate in item 11 of the proposal coversheet on the line starting "VLBA" that the antennas requested are "HSA = VLBA+GBT+Y27+AR" (or any subset of three of these that includes the VLBA). See the web pages at <http://www.nrao.edu/HSA> for more details.

The Mexican Astronomical Society

One of the major achievements of the XVIII National Astronomy Congress held during March 2004, was the formation of the Mexican Astronomical Society which will bring together all astronomers from institutions that are active in this discipline.

There had been discussion of forming a Society prior but in the discussion session held in San Calros, Bahia de Guaymas, a consensus document to initiate it was signed by those present.

CALENDAR

AAS & AAS Division Meetings

8th HEAD Meeting

8-11 Sept 2004 — New Orleans, LA
Contact: Dr. John Vallerga
(info@eurekasci.com)
www.eurekasci.com

Other Events

Physics with Cosmic Accelerators

5-16 July 2004 — Bad Honnef, Germany
<http://www.astro.uni-wuerzburg.de/summerschool/>

Galaxies Viewed with Chandra

7-9 July — Cambridge, MA
Contact: Paul J. Green
(pgreen@cfa.harvard.edu)
<http://cxc.harvard.edu/gals04>

The Nature and Evolution of Disks around Hot Stars

7-9 July 2004 — Johnson City, TN
Contact: Richard Ignace
(hotstars@mail.etsu.edu)

IAU Symposium No. 224 - The A-Star Puzzle

8-13 July 2004 — Poprad, Slovakia
Contact: Juraj Zverko
(IAUS224LOC@ta3.sk)
<http://www.ta3.sk/IAUS224>

The SOHO14-GONG2004 Workshop — Helio- and Asteroseismology: Towards a Golden Future

12-16 July 2004 — New Haven, CT
Contact: Sarbani Basu
(basu@stro.yale.edu)
<http://www.astro.yale.edu/sogo04>

Cores, Disks, Jets & Outflows in Low & High Mass Star Forming Environments: Observations, Theory, & Simulations

12-16 July 2004 — Alberta, Canada
Contact: Rene Plume & Rachid Ouyed
(plume@ism.ucalgary.ca)
<http://www.ism.ucalgary.ca/meetings/banff>

Bioastronomy 2004 - Habitable Worlds

12-16 July 2004 — Reykjavik, Iceland
Contact: Thorsteinn Thorsteinsson
(thor@os.is)
<http://www.os.is/~thor/bioastronomy04/>

Cosmos in the Classroom 2004: A Symposium on Teaching Introductory Astronomy for Non-Science Majors

16-18 July 2004 — Medford, MA
Contact: Andrew Fraknoi
(fraknoiandrew@fhda.edu)
www.astrosociety.org

*RFI2004: Workshop on Mitigation of Radio Frequency Interference in Radio Astronomy

16-18 July 2004 — Penticton, British Columbia, Canada
Contact: Frank Briggs
(fbriggs@mso.anu.edu.au)
<http://www.drao-ofr.hia-ih.nrc-cnrc.gc.ca/rfi2004/>

SKA 2004

18-24 July 2004 — Penticton, British Columbia, Canada
Contact: Sean Dougherty
(sean.dougherty@nrc-cnrc.gc.ca)
<http://www.drao-ofr.hia-ih.nrc-cnrc.gc.ca/>

IAU Symposium No. 225 - Gravitational Lensing Impact on Cosmology

19-23 July 2004 — Lausanne, Switzerland
Contact: Yannick Mellier
(IAUSymp225@obs.unige.ch)
<http://obswww.unige.ch/IAUSymp225>

Second TPF/Darwin International Conference: Dust Disks and the Formation, Evolution and Detection of Habitable Planets

26-29 July 2004 — San Diego, CA
Contact: Steve Unwin
(stephen.unwin@jpl.nasa.gov)
http://planetquest.jpl.nasa.gov/TPF_darwin/

Astrophysics in the Far Ultraviolet: Five Years of Discoveries with FUSE

2-6 August 2004 — Victoria, BC, Canada
Contact: G. Sonneborn (george.sonneborn-1@nasa.gov)
<http://fuse-conference.pha.jhu.edu/>

*Introduction to Adaptive Optics/CfAO Summer School 2004

7-13 August 2004 — Santa Cruz, CA
Contact: Paula Towle (cfao@ucolick.org)
<http://cfao.ucolick.org/>

8th International Colloquium on Atomic Spectra and Oscillator Strengths for Astrophysical and Laboratory Plasmas

8-12 August 2004 — Madison, WI
Contact: J. E. Lawler (jelawler@wisc.edu)
<http://uw.physics.wisc.edu/ASOS8/>

Chemical Enrichment of the Early Universe

9-13 August 2004 — Santa Fe, NM
Contact: Chris Fryer (fryer@lanl.gov)
<http://qso.lanl.gov/meetings/meet2004/index.html>

Modest 5-Modeling Dense Stellar Systems

11-14 August 2004 — Ontario, Canada
Contact: Alison Sills (asills@mcmaster.ca)
<http://www.manybody.org/modest-5.html>

Massive Stars in Interacting Binaries

16-20 August 2004 — Quebec province, Canada
Contact: A. Moffat/N. St-Louis
(moffat@astro.umontreal.ca/
stlouis@astro.umontreal.ca)
<http://www.astro.umontreal.ca/MSIB/>

Meteoroids 2004

16-21 August 2004 — London, Canada
Contact: Peter Brown, LOC Chair
(meteoroids2004@uwo.ca)
www.uwo.ca/meteoroids2004

IAU Colloquium No. 197 - Dynamics of Populations of Planetary Systems

31 August - 4 September 2004 — Belgrade, Serbia and Montenegro
Contact: Zoran Knezevic
(zoran@aob.bg.ac.yu)
<http://www.aob.bg.ac.yu/IAUCol197/>

*Science with Wavelengths on Human Scales: A Celebration of the 74th Birthday of Bill Erickson and Low Frequency Radio Science Meeting

8-11 September 2004 — Santa Fe, NM
Contact: Patricia Henning
(henning@as.unm.edu)
<http://lwa.nrl.navy.mil/WCE>

IAU Symposium No. 226 - Coronal and Stellar Mass Ejections

13-17 September 2004 — Beijing, China
Contact: Kenneth Dere
(cme2004@bao.ac.cn)
http://lasco-www.nrl.navy.mil/~avourlidcme_mtg/

*New Windows on Star Formation in the Cosmos

11-13 October 2004 — College Park, MD
Contact: Susan Lehr
(october@astro.umd.edu)
<http://www.astro.umd.edu/october/>

Large Scale Structures and Their Role in Solar Activity

18-22 October 2004 — Sunspot, NM
Contact: K. Sankarasubramanian
(sankara@nso.edu)
www.nso.edu/general/workshops/2004/

***Astrometry in the Age of the Next Generation of Large Telescopes**

18 - 20 October 2004 — Flagstaff, AZ
Contact: David Monet
(dgm@nofs.navy.mil)
<http://www.nofs.navy.mil/astrom2004>

***Astronomical Data Analysis Software and Systems XIV (ADASS)**

24-27 October 2004 — Pasadena, Ca
Contact: Thomas H. Handley, Jr.
(adass@ipac.caltech.edu)
<http://adass.ipac.caltech.edu/>
<http://adass.org/>

Galaxy-Intergalactic Medium Interactions

25-29 October 2004 — Santa Barbara, CA
Contact: Piero Madau
(pmadau@ucolick.org)
http://www.kitp.ucsb.edu/activities/gimi_c04?id=302

***Third CHANDRA Calibration Workshop**

25-26 October 2004 — Cambridge, MA
Contact: CHANDRA Calibration Workshop Organizing Committee
(ccw@head-cfa.harvard.edu)
<http://cxc.harvard.edu/ccw/>

Workshop on Chondrites and the Protoplanetary Disk

8-11 November 2004 — Honolulu, HI
Contact: Alexander N. Krot
(sasha@higp.hawaii.edu)
<http://www.lpi.usra.edu/meetingschondrites2004/>

***The Spitzer Space Telescope: New Views of the Cosmos**

9-12 November 2004 — Pasadena, CA
Contact: Andrea Dean
(spisci1@ipac.caltech.edu)
<http://ssc.spitzer.caltech.edu/mtgs/newviews/>

22nd Texas Symposium on Relativistic Astrophysics

13-17 December 2004 — Stanford/Palo Alto, CA
Contact: Maura Chatwell
(maura@slac.stanford.edu)
<http://texasatstanford.slac.stanford.edu/>

Announcements continued from page 17

Provisionally the Society will be coordinated by the members of the Organizing Committee of the National Congress of Astronomy to establish the legal framework, draw up statutes, define membership categories and operating principles; and a website and electronic newsletter will be created.

Members of the National Organizing Committee are Salvador Curiel of the Instituto de Astronomia, UNAM-Cd. De Mexico, Marco Moreno Corral of the

***From Young Disks to Planets: New Observations, Models and Theories**

7-10 March 2005 — Pasadena, CA
Contact: Rafael Millan-Gabet
(disks05@ipac.caltech.edu)
<http://msc.caltech.edu/conferences/2005/disks05/>

***Grand Challenge Problems in Computational Astrophysics**

7 Mar - 10 Jun 2005 — Los Angeles, CA
Contact: Mark Morris
(pca2005@ipam.ucla.edu)
<http://www.ipam.ucla.edu/programs/pca2005/>

***Protostars and Planets V**

24-28 October 2005 — Honolulu, HI
Contact: Bo Reipurth
(reipurth@ifa.hawaii.edu)
<http://www2.ifa.hawaii.edu/CSPF/ppv/ppv.html>

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

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

Instituto de Astronomia UNAM-Ensenada, Luis Felipe Rodriguez of the Centro de Radioastronomia y Astrofisica UNAM-Morelia, Alberto Carraminana of the Instituto Nacional de Astrofisica, Optica y Electronica of Tonantzintla, Puebla, Roger Coziol of the Astronomy Department, University of Guanajuato, John Peter Phillips of the Instituto de Astronomia y Meteorologia of the University of Guadalajara, Pedro Valdes Sada of the University of Monterrey and Antonio Sanchez Ibarra of Area de Astronomia, University of Sonora.

Call for Input for NRC Study

The National Research Council's Space Studies Board is beginning a study on lessons learned from principal investigator-led missions in the space sciences. The study was requested by NASA's Office of Space Science and will address the following tasks:

- (1) examine and assess the selection process and objectives for PI-led missions, including the balance between science objectives and cost and management criteria,
- (2) examine the roles, relationships, and authority among members of the PI-team (e.g., PI, university, industry, field center) in past missions,
- (3) identify lessons learned from the scientific and technical performance of previous PI-led missions,
- (4) investigate and analyze the factors contributing to cost overruns of missions, including any requirements that are imposed on PI-led projects during their development,
- (5) identify opportunities for knowledge transfer to new PIs and sustained technical management experience throughout the program, and
- (6) identify lessons learned and recommend practices and incentives for improving the overall conduct of future PI-led missions.

Many members of the AAS community have valuable experience with Explorer and Discovery missions. We welcome your comments on successful or unsuccessful case studies the committee might examine or your comments on any of the task items noted above. Please send your comments via e-mail to ssb@nas.edu.



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FROM THE AAS SECRETARY

Arlo U. Landolt, aassec@as.org

Society members are reminded that from 2 June 2004 all correspondence for the AAS Secretary should be directed to Dr. John A. Graham, Carnegie Institution of Washington, Dept. of Terrestrial Magnetism, 5241 Broad Branch Road, NW, Washington, D.C., 20015. Graham's Secretary's Office e-mail address will be aassec@dtm.ciw.edu, and his telephone number will be 202-478-8820.

WASHINGTON NEWS

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



Hubble, Bubble,...

A lot has happened since administrator O'Keefe announced that no future servicing missions to the HST would take place. Senator Barbara Mikulski (D-MD) and Representative Mark Udall (D-CO) both submitted bills to

their respective chambers of Congress acknowledging the important role of the HST as well as calling for an independent review of the Administrator's decision.

Initially, Administrator O'Keefe called upon the chair of the Columbia Accident Investigation Board (CAIB), Hal Gehman, to provide that independent review, but Admiral Gehman stated that ultimately only a deep and rich study of the gain/risk equation would be able to justify any decision on future servicing missions.

Two studies have been called for by Senator Mikulski and her colleague Senator Kit Bond (R-MO). The first is by the General Accounting Office and will provide a cost analysis of the additional costs required to meet the CAIB recommendations for a non International Space Station shuttle flight. The second is a National Academy of Sciences study to

weigh the scientific benefits provided by a repaired HST versus the risk to the astronaut servicers of the telescope. This second study will be undertaken by the Space Studies Board in partnership with the Aeronautics and Space Engineering Board. A link to this committee will be distributed to the membership via Informational Email as soon as the project website is operational.

Although we are now in a wait-and-see stage on this issue, it is still very appropriate for AAS members who care deeply about the issue to contact their representative or senators. Thank-you letters to those members who have supported the HST and astronomy more broadly are always welcome by Congressional offices. Members may find the proper mailing address for their members of congress on the AAS Public Policy web pages using the "Zip-To-It" feature. Just enter your home or work zip code and send in your letters.

Administrator O'Keefe will speak at the Denver AAS meeting. We anticipate he will discuss the Hubble decision and the increasingly discussed possibility of a robotic servicing option. For those members unable to attend, his comments will be posted quickly on the AAS Public Policy web pages.