

AAS Newsletter

A Publication for the members of the American Astronomical Society

3

AAS Elections

Preliminary

Slate

4

Council Actions

9

Chambliss

Medal Winners

12

Scenes of the

Pasadena

Meeting

18

Announcements

Back page

Washington

News

President's Column

John Huchra, president@as.org

I am writing this just after the end of our very successful 214th meeting. We had a bumper crop of registrations (more on the importance of this later) plus some spectacular sessions and invited talks. In the background, Astro2010 was holding its first program meetings, prompting people, especially me, to pop back and forth between AAS sessions and Decadal Survey sessions. All I can say is that I am glad the Decadal Survey comes only once every ten years.

Once again, I came away from the meeting impressed by the breadth of what we do. The first invited session was on Cassini at Saturn (lets go back!), followed by talks on simulations of black holes, Spitzer and star formation, and an old friend of mine, the Virgo Cluster. I finally (despite claiming heritage as a cosmologist) understood all the varied new surveys for supernovae and their links to cosmology, jets in young stellar objects (fortunately far from my field), public outreach at planetariums and really, really why Pluto should not be classified as a planet. The evening public session on this drew a huge and enthusiastic crowd. No, lets not "vote" again. As an aside, I definitely realize now that there are things the IAU should do and things the IAU should not. Draw your own conclusions here!

The meeting closed with talks on building galaxies, the history of astronomy at the Huntington Library, accretion power in the universe and building the halo of our galaxy. All the while, sessions on education, the International Year of Astronomy (hint, hint, get engaged!), adaptive optics, laboratory astrophysics and a variety of other topics were running in the background. It has been a while since I was so enervated at a summer meeting and I hope we can make future meetings as useful and successful. Architects of the Universe unite!

Next, I also want to report on the activities of your Council. First, we have drafted a Society ethics statement which is posted for comments by members. As per my last column, it aims to cover the most important issues facing astronomers in their professional lives. As a more gentle science, we wanted not to be overly prescriptive. Have a look. Send comments to the AAS website. In short, treat each other well, be honest and give credit in research and publication, and avoid or disclose conflicts.

Second, we have prioritized the Society's goals and drafted a mission statement. Those of you who have been involved understand how hard this is, but also how important it is. The mission is an overarching statement that sets out, as simply as possible, what the Society is all about. It is most often used externally, i.e. to explain to outsiders why we exist. The goals depend on the current issues facing the Society and can and should be changed as the Society evolves over the long term. The important issue here is that well articulated and prioritized goals help tremendously in allocating the Society's resources. So here goes:

The Mission of the American Astronomical Society is to enhance and share humanity's scientific understanding of the Universe. To accomplish this mission, we have adopted the following goals in priority order:

- The Society, through its publications, disseminates and archives the results of astronomical research.
- The Society facilitates and strengthens the interactions among members through professional meetings and other means.
- The Society represents the goals of its community of members to the nation and the world.
- The Society, through its members, trains, mentors and supports the next generation of astronomers.
- The Society assists its members to develop their skills in the fields of education and public outreach at all levels.



AAS Officers and Councilors

John P. Huchra, President
Debra M. Elmegreen, President-Elect
Lee W. Hartmann, Vice-President
Christine Jones, Vice-President
Lee Anne Willson, Vice-President
Hervey (Peter) Stockman, Treasurer
John A. Graham, Secretary
Richard F. Green, Publications Board Chair
Timothy F. Slater, Education Officer
Stephen P. Maran, Press Officer

Councilors

Richard G. French
Chryssa Kouveliotou
James D. Lowenthal
Felix J. Lockman
Nancy Morrison
Nicholas B. Suntzeff
C. Megan Urry
Charles E. Woodward
Jennifer Wiseman

Executive Office Staff

Kevin B. Marvel, Executive Officer
Tracy Beale, Membership Services Administrator
Chris Biemesderfer, Director of Publishing
Laronda Boyce, Meetings & Exhibits Coordinator
Lisa Brown, Financial Assistant
Kelly E. Clark, Chief Financial Officer
Scott Garvey, Administrative Assistant
Kelli Gilmore, Director of Meeting Services
Scott Idem, Systems & Network Manager
Judith M. Johnson, Managing Editor AER & BAAS
Faye C. Peterson, Manager, Membership Services
Crystal M. Tinch, Communications & Development

The *AAS Newsletter* (ISSN 8750-9350) is published bi-monthly by the American Astronomical Society, 2000 Florida Avenue, NW, Suite 400, Washington, DC 20009-1231; Tel: 202-328-2010, Fax: 202-234-2560, aas@aas.org; www.aas.org.

The \$141.00 annual membership dues for the American Astronomical Society include \$3.00 that is applied toward a subscription to the *AAS Newsletter*. Periodical postage paid at Washington, DC.

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

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

Judith M. Johnson, Editor
Crystal M. Tinch, Associate Editor
Jeff Linsky, U. Colorado, Associate Editor, Letters

AAS Email Policy

To unsubscribe from AAS emails, contact address@aas.org

For address changes, email address@aas.org

From the Executive Office

Kevin B. Marvel, Executive Officer, marvel@aas.org

The Pasadena meeting ended up having slightly more attendees than expected and we believe we kept expenses low, so I am hopeful that we will have a positive financial result. Thank you for eating all your bagels!

The winter meeting this year saw fewer people attend than anticipated, which has a direct impact on the financial results for the Executive Office each year. Unfortunately, the magnitude of the potential fluctuations from the meeting finances can easily swamp any fiscal savings in other areas of AAS finance. Such is life.

As pointed out by President Huchra in his column, the scientific content of the meeting was significantly augmented by the presence of the decadal survey sessions being held next door to the AAS meeting. We were happy to make the space and AV resources available to this important activity and look forward to the results of this important National Academy study.

In my last column, I highlighted the meeting revenues and expenses to illustrate how we manage our meetings with the goal of paying our costs, including the staff that make our meetings possible. This issue I will discuss our journals.

The AAS journals (*ApJ*, *ApJL*, *ApJS*, *AJ*, *BAAS* and now *AER*) are managed from the Executive Office, edited (including peer-review) in editorial offices and published by a publishing organization. The *BAAS* and *AER* are published by the American Institute of Physics, while the other journals are published by the Institute of Physics Publishing, based in Bristol, England. While the Executive Office is responsible for overseeing the financial and some managerial aspects of the journals, the bulk of the work in producing the journals is managed by the editors-in-chief and their deputies, a dedicated team of managing editors and other associate and scientific editors.

The managing editors (and assistants), editors-in-chief and their deputies are all paid positions, either full or part time. In addition to staff costs, the offices have some infrastructural expenses, such as phone lines and Internet connections and there are incidental travel costs to bring editors together with our publishers or staff from the Executive Office for occasional meetings or make trips to promote the journals. For all of our journals, we have a Director of Publishing, Chris Biemesderfer, who has front line responsibility and a Deputy Director of Publishing, Judy Johnson, who serves as managing editor for the *BAAS* and the *AER* as well as handling the details of abstract submission and processing for AAS and AAS Division meetings. Everyone involved with our journals is tremendously dedicated and we all owe them our thanks for making our journals the top in the field.

Each year we bring together our editorial teams, the Executive Office management team and our publisher to set the budget for the journals for the coming fiscal year. It typically takes a day or two to get all the details together and talk through changes to the budgets. Estimates of the number of submitted pages need to be made, and plans for new developments established. The budget is given a thorough scrubbing. The AAS works very closely with our publisher to keep costs down and does this by quizzing them in detail when changes are presented. Honestly, it is a bit rough being our publisher due to this deep inspection of budgets, but it is important.

Once we have established the costs (including for the editorial offices) we set page charges and subscription rates to cover the expenses, including setting aside some funds for archive preservation and maintenance, technological development and

continued on next page

In short, the Council believes that right now the main activities of the Society are publications (*ApJ*, *AJ*, *BAAS*, newsletters, etc.), and meetings, followed by public policy activities, training and career related activities, and science and astronomy education and public outreach. This prioritization is meant to guide our resource allocation and the development of new programs and program goals. Over the next several months we will be working on a more detailed plan for the AAS and I hope you will contribute by both contacting your AAS Council members and, most importantly, volunteering to help in those areas where you are most passionate. The AAS, as most professional societies, is only as good as its membership, so please contribute your time and effort. We hope the above helps explain why it is important for astronomers to understand why it is important to be members.

Lastly, I need to discuss the Society's finances. As most other organizations, we have been hit by the Wall Street financial

crisis. We were relatively conservatively invested, so the hit was less so than many Universities and other organizations. While we have place plans in place to stabilize and improve the Society's overall financial situation (thanks be to Kevin Marvel and Kelly Clark), a number of our prize and other endowed funds are now, in the words of Wall Street, "under capitalized." While I would ordinarily not ask members to help in this way, we need to raise funds for the Cannon Prize and to sustain the endowment for the John Bahcall Public Policy Fellowship in particular. Members of the AAS Council have themselves promised matching funds up to a minimum of \$2000. Those of you who can, please help, at any level. Those of you who cannot, I understand completely, but continue in the future to think of helping your Society and its goals.

Thank you,
John Huchra

Secretary's Corner

2009 AAS Elections Preliminary Slate

Vice-President	Nicholas Suntzeff Rosemary Wyse
Secretary	G. Fritz Benedict
Education Officer	Timothy F. Slater
Councilors	You-Hua Chu Ed Guinan Pat Knezek Bob Mathieu Scott Ransom Mark Sykes
USNC-IAU:	Humberto Campins Jill Tarter
Nominating Committee	Susana Deustua Lori Allen Pamela L. Gay David L. Meier David Silva

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

Committee must be proposed by at least five Full Members of the Society and must also be accompanied by the nominee's written statement indicating a willingness to serve.

All nominations and supporting materials must be received by 16 September 2009 in the Office of the Secretary. Send nominations to: John A. Graham, Dept. of Terrestrial Magnetism, Carnegie Institution of Washington, 5241 Broad Branch Rd., NW, Washington, DC 20015.

Reminder for Prize Nominations

The AAS needs your help in getting due recognition for our most outstanding colleagues.

Nominations for the 2010 AAS Prizes must arrive in the Secretary's Office by 1 October 2009. The Prize nomination form is published in this *Newsletter* and is also posted online in the members only area of the AAS website. This year, nominations are being received for the Annie Jump Cannon Award, the Newton Lacy Pierce Prize, the Helen B. Warner Prize, the Dannie Heineman Prize, the George Van Biesbroeck Prize, the Education Prize, the Joseph Weber Award for Astronomical Instrumentation, the Henry Norris Russell Lectureship and the Tinsley Prize.

Nominations are also being received for the 2009 Chambliss Amateur Achievement Award and for the Chambliss Writing Award which have the same deadline of 1 October for the receipt of nominations.

ensuring adequate journal reserve funds. We set page charge rates to cover the costs related to peer review, copy editing and production, while we set subscription rates to cover the cost of delivery of electronic content, archiving, and, of course, the actual cost of making printed copies. We feel this distribution of costs fairly burdens the beneficiaries with the costs directly linked to their benefit. Authors pay for peer-review and editing. Subscribers pay to get and archive the content. Both pay (a bit) to ensure adequate journal reserves and for the management and oversight of the journals.

This budgeting process ultimately results in a presentation to the AAS Council, who approve the rates and the budget. This takes place at the summer AAS meeting. As I have pointed out before, the Council members are elected by the membership and it is an important thing to elect dedicated, serious people to this position. They guide our organization, ensure its financial success and set page charges. Your vote is clearly important.

Publishing journals is not an easy activity. It requires a lot of effort, both at our editorial offices and at our publisher. It also costs money. Significant value is added to author's

work through embedding of links, cross-linking, archiving, assignment of digital object identifiers (DOIs), copyediting, peer review and so on. As a scholarly publisher, we strive to achieve the lowest possible costs that allow us to publish the best quality science in the best manner possible. Because some journals are published by for-profit publishers, some people in government, including the US Congress, have begun to pay attention to the publishing sector, including scholarly publishing.

What the AAS fears, along with other scholarly publishers, is the disruption of our non-profit publishing model through government mandates. Because the primary motivation for Congress to develop mandates is due to commercial publishers, the non-profit publishers are working together to explain our publishing model to members of Congress and the administration. Because it is a complex story, it takes a while to explain in detail, but we are hopeful that government mandates to require a particular business model (open access or arbitrary proprietary periods) will fail once decision makers understand the benefits provided by non-profit scholarly publishers. More on this in a future column.

Council Actions

Council Actions Taken at the 214th Meeting of the Council of the American Astronomical Society at Pasadena, CA on 7 June 2009.

- Approved a draft of an Ethics Statement to be circulated to the membership for comment.
- Approved a strategic planning process which will be developed together with the standing committees of the Council.
- Adopted a Vision Statement for the Society along with a secondary text for future planning purposes.
- Accepted the AAS 2009 election results.
- Accepted the election of Thomas M. Bania and Gina Brissenden to the 2009 AAS Nominating Committee.
- Accepted the election of John P. Huchra, Debra M. Elmegreen, Lee W. Hartmann, Christine Jones, Hervey (Peter) Stockman, John A. Graham, and Kevin B. Marvel to the Executive Committee for the interval between the annual business meetings 10 June 2008 to 26 May 2010.
- Approved amendments to the Bylaws of the High Energy Astrophysics Division.
- Decided to continue to award the Van Biesbroeck Prize on an annual basis.
- Decided to undertake a fundraising effort with the aim of capitalizing underfunded prizes.
- Appointed Thomas A. Hockey as Editor of the *Astronomy Education Review*.
- Agreed to support a request from the American Association for the Advancement of Science to join the Science and Human Rights Coalition.
- Decided not to change the current recommended acceptance date for postdoctoral applications but to reconsider the matter at the January Council meeting.
- Extended the appointments of John Gallagher and Margaret Hanson as Editor-in-Chief and Associate Editor-in-Chief of the *Astronomical Journal*.
- Approved the Financial Reports for 2008.
- Accepted the Audit Report and the Audit Committee Report for 2008.
- Appointed an auditor for 2009.
- Adopted the 2010 budget.
- Elected Paul Vanden Bout and Sidney Wolff to four-year terms on the Publications Board.
- Elected Guy Consolmagno, Suzanne Gurton, and Edward Prather to three-year terms on the Board of Education.
- Appointed members of the standing committees taking into account recommendations from the Committee on Appointments.

Letter to the Editor

Scientific Entrepreneurship as a Career Path for Astronomers

Dear Editor:

Marcel Bergmann's article in the March/April *AAS Newsletter* highlights opportunities offered by soft money research institutes. Astronomers considering careers outside academia and government labs might also be interested in another alternative—science entrepreneurship.

The best known example is American Science and Engineering (AS&E), formed around 1958 as an MIT spin-off by Bruno Rossi and Riccardo Giacconi. AS&E successes in X ray astronomy, which led to Giacconi's Nobel prize, are familiar to most astronomers. AS&E has grown into a publicly traded corporation, employing over 350 worldwide in development and manufacture of CT scanners for security, biomedicine and industrial testing applications.

Atmospheric and Environmental Research (AER) Inc. was founded in 1977 by Nien Dak Sze, a Harvard post doc in Applied Physics. AER developed and applied commercial codes for ozone studies and for air quality, weather and climate prediction. The solar research group we formed at AER in 1978 carried out some of the first studies of solar irradiance variation and of solar plasma electric fields. AER has grown to over 100 employees, and recently was sold to ISO, Inc., a large risk assessment firm.

Cambridge Research and Instrumentation, (CRI) Inc. was founded in 1985. The cryogenic radiometers and laser intensity stabilizers we produced built on concepts acquired and developed in our solar irradiance studies; they now provide primary standards worldwide at e.g. NIST, NPL, and PTB for flux calibration of detectors. CRI expertise in liquid crystal optics led to a line of wave-length agile filters and polarization analyzers that found application from biomedical imaging to telecom. These commercial developments proceeded in parallel with our NSF- and NASA -funded solar research, which produced over 50 refereed papers, including several in *Science* and *Nature*, until the sale of the company in 1999. CRI now employs about 60 in development, manufacture and world-wide sales of innovative electro-optic instruments.

These three examples illustrate that entrepreneurially minded astronomers can combine competitive research programs with commercialization of related technology—both experimental and theoretical. Time spent in commercial management does not necessarily reduce research time more than would university teaching or administrative duties at a national or industrial lab. A unique strength of US science is the pragmatism and diversity of our funding sources. Career opportunities can be built on this careers that provide intellectual challenge, flexible location, and the satisfaction of developing useful products.

Peter Foukal
pvfoukal@comcast.net

Corrections

The NSF Director is Arden Bement.

The following were omitted from the AAS Member Anniversary list:

Teije de Jong
Michael R. Haas

Member Deaths

The Society is saddened to learn of the deaths of the following members, former members and affiliate members:

Henry Albers
Russell Makidon
Frank J. Low
Martin A. Pomerantz
William A. Rense

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.

Opting In and Out of AAS Publications

If you would no longer like to receive paper copies of the *AAS Newsletter*, the *AAS Membership Directory*, or the *AAS Calendar*, please send an email to address@as.org or log into your member record at as.org.

To unsubscribe from AAS emails, contact address@as.org

Committee on Employment

Peter Williams (peter.todd.williams@gmail.com)

Jobs in Industry

What do you expect from a job in industry? I made the leap. I expected a complete loss of autonomy, a stressful, degrading work environment, coworkers and bosses who wouldn't understand my background, but at least a good paycheck. In all regards but the last, I was wrong. I have had a blast ever since.

Academic life tends to paint the corporate world with the washed-out, uniform grays of a smoggy distant cityscape. The truth is that some corporations are everything you fear, but others are rewarding, exciting places to work. You can have a rich, challenging career in industry, and never look back. Or, you can regret making the move forever.

I began my search in industry when I could not land a job in academia. At first, I got turned down for every job I applied for—even a gandy dancer. After many months, I eventually learned the arts of the resume (do not use a CV!), the cover letter, the presentation, the interview, and how not to appear desperate. That plus a good deal of luck, and I landed my first job in industry as a computational physicist.

Yes, I work in a cubicle. No, my job does not have the sex appeal of astrophysics. I have not published in a while either. Frankly, I labor in relative obscurity. Where is the upside?

Let me begin with the autonomy I mentioned earlier: I have far more autonomy now than I ever did in astrophysics.

Autonomy is supposed to be one of the prime perks of academia. That is the myth, but at least in my world, reality fell far short. By the end of grad school I had developed a long-range vision for a program of research on jets, but I found I had no freedom to implement it. Each postdoc meant long hours devoted to somebody else's project; there was no way to do my own work. In industry, we would say that my interests and those of my bosses were fundamentally misaligned. I became stuck in the paradox that to do what was best for my career meant to throw my career in the toilet.

In contrast, in industry, I have complete control of my multi-year project. There is nobody breathing down my neck. There is no advisor poking his head in for frequent updates; there is no grant committee that needs a written progress update. In fact, there is no grant committee at all. If I want to do something, I do it. Succeed or fail, I own it.

And failure is not necessarily bad. If half of your projects do not end in complete failure, you are probably not pushing the boundaries enough. A good fraction of the equipment you buy you may find you do not actually need. That is to be expected. Nobody is going to pester you about it.

In fact, one of the hardest things for new hires to learn is how to act with their newfound autonomy. We have a hard time getting newbies to spend enough money! They are used to having to grovel for second-hand equipment. We do not do that. Time is worth more than money. If we need something, we buy it. In industry, you will never want for the tools you need to do your job.

If this sounds like being treated like an adult, it is not a mistake. While there is a hierarchy, it is oddly liberating.

There is a hierarchy in academia as well, but we pretend there is not. Again, the myth in academia is that all inputs are judged on their merits, not on who is making the input. The reality, I would argue, is that some people are not to be interrupted when making a point at a seminar, some people's theories must be attacked obliquely, and some people's grants get viewed in a more favorable light. Deference must be paid to the experts, even if they are wrong.

There is no such concept where I work. There are no sacred cows or powdered wigs. The hierarchy is explicit; everyone has a boss, but the hierarchy we have exists only in executive function, not expertise. I am the expert on my subject matter, and in that regard my bosses pay deference to me, not the other way around.

So what is my day like? Well, I spend most of my time doing actual physics. These are not trivial problems; when I finish work on a topic it is worthy of publication if I so desire, but I am usually off to something new. I have a primary project, which is physics code development. I also have various secondary problems I am working on at any given time. Some of these are problems that others have posed to me; I don't have to solve those, but it is a point of pride that I do. Other projects are inventions I have thought up that sooner or later might end up being patented and put into a product that ships.

My colleagues are all competent and industrious; otherwise, they would be shown the door—we do not have tenure. By no means are they researchers who “couldn't hack it” in academia. They are quite smart but slow to show it off; nobody cares how smart you are if you can not play well with others, and a brilliant person who nobody can stand to work with will soon be out of a job. The only weaknesses my coworkers show is a tendency to smile a lot, leave work at five, and not come in on the weekends. After years in academia I for one have finally learned what regular sleep feels like.

I never doubt for a moment that my work is not important or useful. I know that it leads to better chemical detection devices that help in some small way to make for a better world through the advances in medical technology that they enable. For many of my colleagues this is one of the prime motivators.

When we die no textbook will eulogize our accomplishments; only in anonymity do we make small advances that lead to big improvements in society's health and safety, and that alone helps us to get out of bed in the morning.

You will never ever have job security in industry. That is a definite downside. But, as long as you are working, you should be paid well. Just like you, if I had wanted money to begin with, I would not have gone into astrophysics. Quite frankly, if I had found autonomy in academia, I would be happy as a clam earning a small fraction of my current pay.

But let me tell you, it is not bad being paid more than your professors. It may sound crass to discuss numbers but in my view it is essential because otherwise you will get taken advantage of. With a physics PhD and a good resume, in Silicon Valley, your starting salary as a minimum should begin

with a "1." (Knock off 20% for astronomy—sorry!). Wall Street will pay several times that, even now. Close to half a million is not unheard of. Whatever you do, do NOT settle for something like \$70k, because I guarantee you that jobs that pay that level will not challenge you and will not offer upward mobility. This is not academia. Less is not more. Less is less.

The AAS Committee on Employment is pleased to highlight useful resources for astronomers, and welcomes your comments and responses to this and previous columns. Please check out our website (www.aas.org/career/) for additional resources or contact the committee chair (Travis Metcalfe, travis@ucar.edu).

Chambliss Astronomy Achievement Student Awards

Through the generosity of Carlson Chambliss, the AAS established the Astronomy Achievement Student Awards to recognize exemplary research by undergraduate and graduate students who present posters at the semi-annual AAS meetings. Awardees are honored with an engraved bronze Chambliss medal and a certificate. Graduate and undergraduate posters are considered separately. Students with Honorable Mentions receive a certificate.

The AAS thanks all the students who participated in the 214th Meeting of the American Astronomical Society Chambliss Student Achievement Awards and who made the judges' job difficult indeed due to the high quality of the presentations. We also thank all the judges who volunteered their time and energy.

Graduate Student Chambliss Medal Awardees

Daniel Caputo, University of Missouri-Columbia
Pebble Formation: 3.3 and 11.3 mm Data

Ian Crossfield, UCLA
Limits on Thermal Emission from Two Non-Transiting Exoplanets

Rachel Smith, UCLA
Observations of $^{12}\text{C}/^{13}\text{C}$ Fractionation in Embedded Protostars using VLT-CRIRES

Honorable Mention: Graduate Students

Alexandre Gallene, European Southern Observatory/
Observatoire de Paris, Chile
Cepheids at High Resolution: Pulsation, Distances and Circumstellar Envelopes

Saurav Dhital, Vanderbilt University
Planets in Binary Star Systems: An Input Catalog of Wide Low-mass Pairs for SIM 'Lite'

Luke Schmidt, New Mexico Institute of Mining and Technology
Design Requirements and Component Down Selection Process for an Aperture Masking Instrument at the Magdalena Ridge Observatory 2.4m Telescope

Susanna Finn, Boston University
Chemical Evolution of Infrared Dark Cloud Cores

Suzanne Butler, University of California, Berkeley
Identifications of Five INTEGRAL Sources via Optical Spectroscopy

Undergraduate Student Chambliss Medal Awardees

Sandra Behncke, Creighton University
A Spitzer Space Telescope Infrared Spectral Study of Quasar Outflows

Honorable Mention: Undergraduate Student

Daniella Bardalez-Gaglioffi, MIT
Hubble Space Telescope Imaging and Spectral Analysis of Brown Dwarf Multiples: Discovery of a Brown Dwarf Triple System

Adele Plunkett, Middlebury College
Three-dimensional Kinematics of the Oxygen-rich Supernova Remnant G292.0+1.8

News from NSF Division of Astronomical Sciences

Nigel Sharp, Acting Executive Officer, Division of Astronomical Sciences, nsharp@nsf.gov

Staff Changes in AST

The Astronomy Division is pleased to welcome two new program officers to NSF on visiting appointments of two to three years. Dr. Thomas Statler, of Ohio University, comes to AST as a program officer in the Astronomy and Astrophysics Research Grants program, where he will have primary responsibility for several areas across the different programs. He is also expected to play a role in the oversight of the Gemini Observatory.

Dr. Scott Fisher, of Gemini Observatory, joins AST as program officer with primary responsibility for Education and Special Programs, such as the Research Experiences for Undergraduates (REU) and the Partnerships for Astronomy and Astrophysics in Research and Education (PAARE) programs, and optical and IR instrumentation grants programs.

Drs. Brian Patten and Tom Barnes have completed their rotations at NSF and have departed AST for their home institutions. We thank them for their significant contributions and wish them well.

In mid-June, Dr. Nigel Sharp became Acting Executive Officer in AST, on the departure of Eileen Friel to become Director of Lowell Observatory. Nigel is well known to all, having served for a number of years as program officer for the Extragalactic Astronomy and Cosmology program, and the primary contact and representative for multidisciplinary, cross-directorate, and interagency activities in all AST research areas. For the past few years, he has served as team leader for all individual investigator grants programs in AST and has been instrumental in representing AST in cross-NSF activities. Nigel's familiarity with NSF practices and policies, his broad knowledge of the field, and his active position in the community will serve AST well.

Active recruitment for Dr Friel's successor began as soon as her move was announced, and should be well along by the time you read this. We also hope to be able to announce a new Division Director in the near future.

Upcoming Deadlines for FY2009 funding:

10 August 2009: The Major Research Instrumentation (MRI) program is announcing a call for proposals that is separate from the standard January submission deadline. Awards made in response to this solicitation will be funded under the American Recovery and Reinvestment Act of 2009 (ARRA) (Public Law 111-5), and have special award conditions. Unless otherwise specified, ARRA funding should be considered one-time funding. The parameters of this *Major Research Instrumentation-Recovery and Reinvestment (MRI-R²)* competition differ from those for the regular MRI competition. Please see the program solicitation [http://](http://www.nsf.gov/pubs/2009/nsf09561/nsf09561.pdf)

www.nsf.gov/pubs/2009/nsf09561/nsf09561.pdf for more information.

Early September 2009: Research Experiences for Undergraduates (REU) Sites – A new program announcement is under development at NSF, but major program changes are not expected. The exact deadline date will be announced in a new REU solicitation, which will be published at least 90 days before the fall proposal deadline. Currently we anticipate that the deadline will be in early September.

14 October 2009: NSF Astronomy and Astrophysics Postdoctoral Fellowships Program (AAPF) (NSF 07-572)

22 October 2009: NSF/DOE Partnership in Basic Plasma Science and Engineering. (NSF 08-589; <http://www.nsf.gov/pubs/2008/nsf08589/nsf08589.htm>) The goal of this three-year (FY09-FY11) program initiative is to enhance plasma research and education in this broad, multidisciplinary field by coordinating efforts and combining resources of the two agencies. The initiative will address fundamental issues in plasma science and engineering that can have impact in other areas or disciplines in which improved basic understanding of the plasma state is needed.

1 November 2009: Advanced Technologies and Instrumentation (ATI)

15 November 2009: Astronomy & Astrophysics Research Grants (AAG) (NSF 05-608) provides individual investigator and collaborative research grants for observational, theoretical, laboratory and archival data studies in all areas of astronomy and astrophysics.

AAS on Facebook

The AAS is now on Facebook! You can become a "fan" of the AAS and receive occasional updates and news via our Facebook page. In just a few weeks, we've reached over 900 fans. You can find us by simply searching for the American Astronomical Society. Post feedback via our Wall on what sort of content and news would be useful on our Facebook page.

News from the Astronomical Society of the Pacific (ASP)

James Manning, Executive Director

Johnny Appleseeds of Science

At the ASP, we think of science education and outreach much the way we think of gardening. You plant the seed or seedling, water it, fertilize it, nurture it, protect it from weeds and pests, and with luck, watch your efforts bear fruit somewhere down the road.

Johnny Appleseed managed to fill sizable portions of the Midwest with apple trees using this basic technique. Why can't we do the same for science?

It's one of the reasons that our annual meeting has evolved to serve the education and public (EPO) community in recent years. Think of it as a kind of "gardening show" for astronomy and space EPO as we share experiences, learn new techniques, and strategize to make the landscape bloom with improved science attitudes, interest, and career aspirations.

This year, our meeting is evolving a bit further by welcoming scientists and science educators of every ilk, including earth science, biology, and other sciences, to provide for greater "cross-pollination." Our disciplines may be different, but they are connected and integrated in all sorts of ways, and the techniques we use are transferable. And so there will be new opportunities to make new connections and forge new relationships.

Our annual gathering will occur in Millbrae, California, 12-16 September 2009. The theme is "Science Education and Outreach: Forging a Path to the Future," and will focus on the Year of Science, the International Year of Astronomy, sharing experience and best practices, and establishing new connections and collaborations among science disciplines and each other for future success in our science education missions.

Saturday and Sunday, 12-13 September, will feature a weekend of workshops for formal and informal educators and amateur astronomers in space and earth science and related sciences. Special weekend events include a Saturday meeting of the Astronomical Association of Northern California, and a Sunday "SETI Speakers Series" featuring scientists and researchers from the SETI Institute discussing issues surrounding the search for life beyond the Earth. Thanks to the generous sponsorship of the Spitzer Space Center, a limited number of scholarships of up to \$300 are available to eligible workshop participants to help defray the costs of attending.

Monday through Wednesday, 14-16 September, will feature an education and public outreach symposium of demonstrations, mini-workshops, panel presentations, oral presentations and posters organized according to the strands of the conference theme. We welcome participation and presentations from the astronomy, space science, earth science, and other science education communities as we reach across disciplines to share the best of what we know and do, and to seek those new connections and collaborations among science educators. There's plenty of room for astronomers and space scientists, and we hope you will consider joining us as we work together to cultivate a future friendly to science.

For conference details and information, visit our web site at: www.astrosociety.org/events/meeting.html.

Please join us this September in the San Francisco Bay Area as we look forward and consider how, working together, we can advance a future of science literacy, enlightenment and achievement.

Additionally, check out our web page at www.astrosociety.org/education/grants/grants.html for news on the Simple Effective Education and Dissemination (SEED) Grants For Astronomy Researchers for 2009.

The SEED program, generously supported this year by the Planck and Herschel Missions, offers small grants to active researchers in astronomy, astrophysics, or space science to engage in public outreach, K-14 formal education, or informal education programs or activities. Maximum grants are \$2,500; funds may be used to purchase equipment related to the proposed EPO activity, or to defray expenses associated with carrying out the activity. Given the nature of the Planck and Herschel Missions, SEED Grant proposals involving cosmology, galaxy and star formation studies, solar system investigations, and space science will be given special consideration. Proposal submission deadline is 31 July 2009 (with announcement of awards by 15 September 2009), so there should still be time to apply as you read.

Think of it as Planck, Herschel and the ASP chipping in to help you buy your seed, as you, too, work to cultivate a future of good science and science literacy.

And keep planting!

Division News

Division on Dynamical Astronomy (DDA)

Steve Unwin, Brouwer Award Selection Committee Chair, Stephen.C.Unwin@jpl.nasa.gov

The Division on Dynamical Astronomy of the AAS seeks the advancement of all aspects of dynamical astronomy, including celestial mechanics, solar system dynamics, stellar dynamics, the dynamics of the interstellar medium and galactic dynamics, and coordination of such research with other branches of science.

Nominations are invited for the 2009-10 Dirk Brouwer Award of the Division on Dynamical Astronomy. Each year since 1976 the DDA has honored the achievements of a major contributor to the field of dynamical astronomy, providing the awardee with an honorarium, a certificate, and presentation of an award lecture. The DDA's Brouwer Award Selection Committee invites you to suggest candidates for this award. You do not have to be a member of the AAS or DDA to nominate. We seek a wide range of award candidates differing in age, gender, nationality, occupation, field of

interest, and scientific and technical contributions. The main criteria, which are not necessarily weighted equally, are (a) excellence in scientific research; (b) impact and influence in the field; (c) excellence in teaching and training of students; (d) outstanding advancement and other support of the field through administration, public service or engineering achievement.

You can find more information on the Brouwer Award, the selection process, and a list of previous award winners at: http://dda.harvard.edu/brouwer_award/. Recent recipients include Victor Brumberg, Simon White, Jacques Laskar, and James Williams. Please send nominations, with a brief explanation of the candidate's achievements, to the Brouwer Award Selection Committee Chair, Stephen Unwin Stephen.C.Unwin@jpl.nasa.gov.

Solar Physics Division (SPD)

Todd Hoeksema, SPD Chair, todd@sun.stanford.edu

Business News from the Solar Physics Division

The Solar Physics Division Committee met in Boulder, Colorado on Sunday, 14 June, just prior to the 40th scientific meeting of the SPD. News about the scientific meeting will appear in the next newsletter. The outgoing Secretary, Neal Hurlburt, welcomed new committee members, Bill Abbett and Alex Pevtsov, and the newly elected division secretary, Yuhong Fan. The outgoing chair, Todd Hoeksema, thanked the secretary and the retiring committee members, Doug Biesecker and Amy Winebarger, for their service to the AAS SPD.

Each year the division recognizes the best popular articles about the Sun and its effects on Earth's environment. This year's journalist award went to Joe Rao for his informative and enthusiastic article, "Shades of Glory—My whirlwind tour to the North Pole and back for 175 seconds of totality", that appeared in the October 2008 issue of *Natural History*. The scientist writer award was given for an August 2008 article in *Scientific American* entitled "Bracing for a Solar Superstorm" to co-authors Sten F. Odenwald and James L. Green.

The Thomas Metcalf Travel Award Fund was established in 2007 to support travel expenses of recent Ph.D. scientists to meetings related to solar physics. Procedures for administering

the grants were approved and the fund will make its first awards in the next few months. See spd.aas.org for details. The division gratefully acknowledges the generous contributions of family, friends, and colleagues of Tom Metcalf.

The SPD spends most of its financial resources in support of students. Unfortunately this year's economy limited the number of studentship awards to just six of the ten well-qualified applicants. The SPD resolved to explore options for increasing the funding available, including the possibility of raising our dues. The winner of the 'Best Student Poster' award will be announced in the next newsletter.

The Education and Public Outreach committee sponsored a public event in Boulder on Sunday afternoon, 14 June that was well attended, even though the Sun itself refused to put in much of an appearance. Despite the rain, a special student reception that evening was a big success, giving many of the more than 50 students in attendance a special chance to get to know a few SPD community leaders. Retiring EPO chair, Emilie Drobnes, gave such an exciting account of the group's activities and plans that the SPD Committee approved an increased budget for the coming year.

At the SPD Members' Meeting Paul Bellaire from the NSF and Jeff Newmark from NASA presented status reports from the agencies. Among other highlights was an upbeat report from Steve Keil, director of the National Solar Observatory, giving good news about the Advanced Technology Solar Telescope project. If all goes well, approval for starting construction could come in the next few months.

Next year the SPD looks forward to meeting jointly with the American Astronomical Society in Miami in May. We are exploring options for our 2011 meeting.



Left: Solar Physics Division Chair, Todd Hoeksema (left), congratulates Sten Odenwald (center) and Jim Green, recipients of the division's Popular Writing Award for their August 2008 Scientific American article, Bracing for a Solar Superstorm. **Right:** At the student reception Shadia Habbal, incoming SPD chair, shares some of the excitement of solar science with Julie Stern, one of six SPD studentship award winners. More than 50 students participated in the 2010 SPD meeting.

For IYA: The Universe Brought to Your Doorstep

Well, at least expert talks about the universe and its contents! The AAS Committee on Status of Minorities in Astronomy, Las Cumbres Observatory, the University of Texas at Brownsville (UTB), and a few other entities are cooperating in an attempt to share the excitement of the cosmos with four year colleges and other interested entities. The idea is that you ask for what you want (topic, time frame, location, any cost sharing you can manage) and we attempt to find someone who will be a good fit. The person will typically come for a day to speak with one or more classes, groups of students, faculty, and so forth. There is no need to arrange a public talk (though it is not forbidden) - we are not trying to compete with the Shapley program! We think we can make this work because most of our team was involved in a 2005

World Year of Physics speakers' bureau that had, and more or less achieved, similar goals. To request a speaker, please go to our UTB web site: <http://arcc.phys.utb.edu/web/LasCumbres/REQUESTS/howto.html>

If perchance you are willing to be a speaker, please get in touch with the SCMA and LCO contacts, Keivan Stassun and Virginia Trimble, whose coordinates are in your AAS membership directory

Richard Price (UTB)
Keivan Stassun (SCMA)
Virginia Trimble (LCO)

Scenes of the Pasadena Meeting

The 214th AAS meeting, at Pasadena, CA on 7-11 June 2009, drew 1116 registrants, but seemed much smaller at times. Some astronomers only attended for a day or two, but even at full strength the meeting was dwarfed by the just-expanded Pasadena Convention Center, now consisting of two separate conference buildings. Neil Sheeley presented the Hale Prize lecture, based on three-dimensional views of coronal activity from SOHO and STEREO. Listeners included Sylvia Hale, wife of a direct descendant of George Ellery Hale. There were multiple sessions on the 2010 astronomy and astrophysics decadal survey and a well-attended reception at Carnegie Observatories headquarters. Charles Townes, going strong as he approached age 94, presented new interferometric observations of alpha Orionis with collaborator Ed Wishnow. An evening special session on planet definition in the 21st century was open to the public both at the convention center and via live webcast. Led off by NOVA ScienceNOW television host Neil deGrasse Tyson and NASA Pluto probe P.I. Alan Stern, the session drew questions from the off-site audience via Twitter, Facebook and old-fashioned e-mail. The full panel is shown in a photo on the next page. All pictures with this article are AAS Photos by Kelley Knight Heins, ©2009, American Astronomical Society.



Left: Rosaly Lopes (JPL) gave the opening invited talk, on "Cassini at Saturn." **Right:** Cosmological observers: (l-r) James Braatz (National Radio Astronomy Obs.) extended the reach of H_0 determinations with water megamasers; Jonathan C. Bird (Ohio State U.) explored the use of ultra-long period Cepheids as standard candles; Daniel Perley and Joshua Bloom (UC, Berkeley) discovered that "dark" gamma ray bursts are optically dim due to dust in the host galaxies.



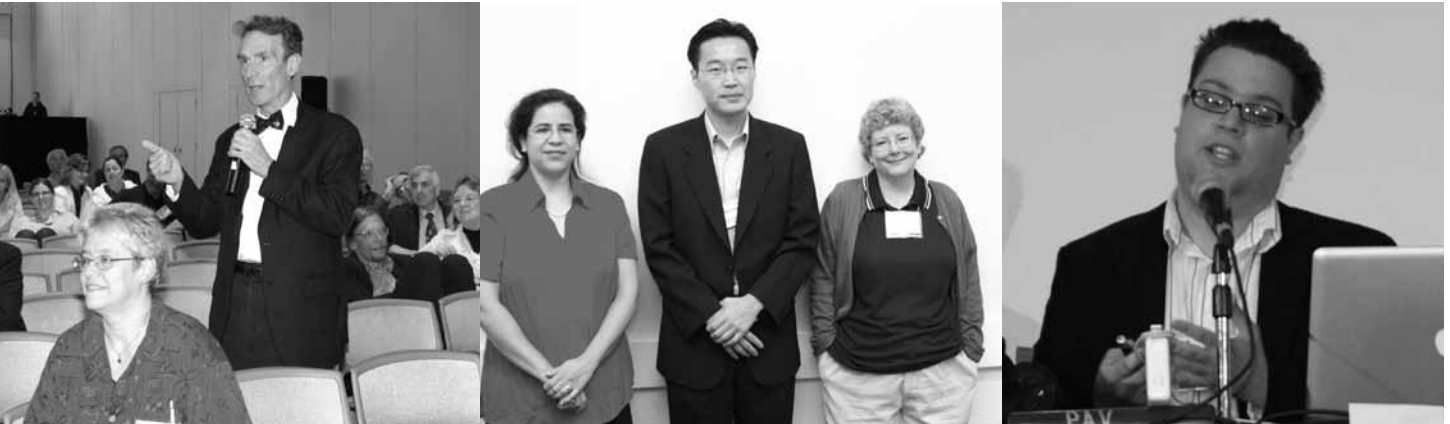
Left: Philip Hopkins (UC, Berkeley) presented an invited talk on galaxy collisions. **Middle:** Pluto scribes: Among at least six authors of popular books on Pluto at the meeting were Steve Maran ((left, AAS) and Larry Marschall (right, Gettysburg College), who co-wrote *Pluto Confidential* and Alan Boyle (MSNBC.com), whose *The Case for Pluto: A Little Planet Made a Big Difference* will be published in October. The other three Pluto authors (shown in another group photo) are Alan Stern, Neil Tyson, and David Weintraub. **Right:** Wendy Freedman (Director, Carnegie Observatories) commented at a cosmology press conference and spoke about using the Spitzer Space Telescope to re-calibrate the extragalactic distance scale in the mid-infrared.



Left: Daniel Lewis described astronomical history at the Huntington Library in Pasadena, where he works. **Right:** Bulent Kiziltan (left, UC, Santa Cruz) proposed a new method to estimate ages of millisecond pulsars. Karl Gebhardt (U. Texas, Austin) found that the central black hole in M87 is significantly more massive than previously believed.



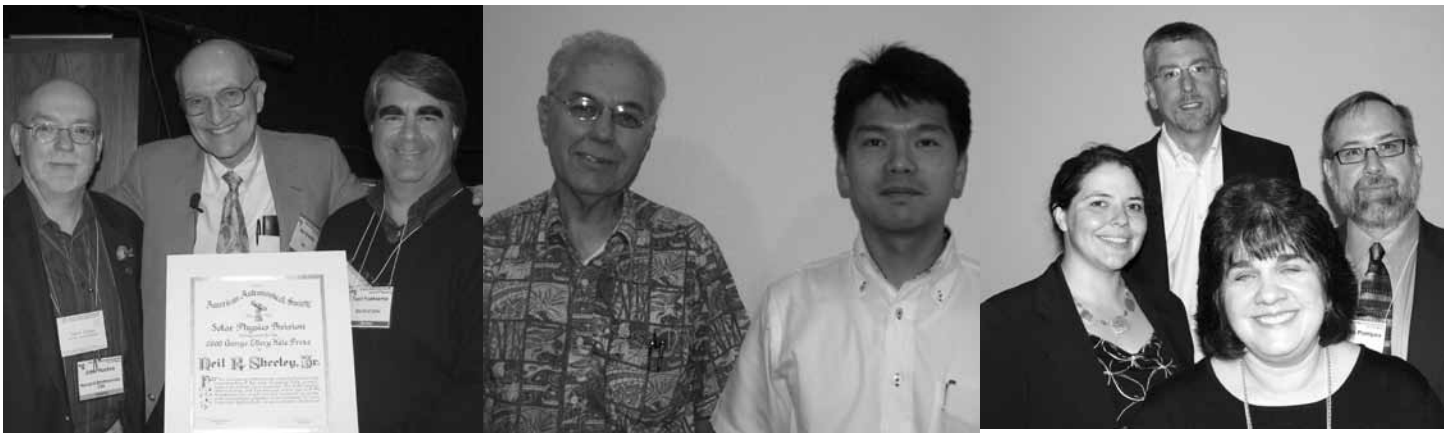
Left: Stellar findings were announced by (front row, first and second from left) Charles Townes and Edward Wishnow (both, UC, Berkeley) who measured Betelgeuse shrink over 15 years, Kelsey Johnson (rear, left, U. Virginia), who probed the birth of super star clusters, Adam Burgasser (front, right) and John Bochanski (rear, right), both of MIT, who found that certain ultracool subdwarfs have unusual galactic orbits, and Jonathan Swift (rear, center, U. Hawaii), who found the likely direct progenitor of a massive star with the Submillimeter Array. **Middle:** Prof. Townes enjoyed a surprise cake, served in anticipation of his 94th birthday in July. This year is the 45th anniversary of his Nobel Prize in Physics. **Right:** Speakers at an evening special session on how to define “planet,” were (front, l-to-r), Charles Beichman (Michelson Science Ctr.), Renu Malhotra (U. Arizona), Alan Stern (Principal Investigator, New Horizons mission), Mark Sykes (Planetary Science Institute), and (rear, l-to-r), David Weintraub (Vanderbilt U.), Jean-Luc Margot (UCLA), and Neil Tyson (American Museum of Natural History).



Left: TV personality “Bill Nye the Science Guy” made a point; Inge Heyer (Jt. Astronomy Ctr.) is at front. **Middle:** Reporting spectral identifications of massive young stellar objects in the Galactic Center region were (l-to-r) Solange Ramírez and Deokkeun An (both, Infrared Processing and Analysis Ctr.) and Kristen Sellgren (Ohio State U.). **Right:** David Rodriguez (UCLA) told of “Imaging the Molecular Disk Orbiting the Twin Suns of V4046 Sgr” with the Submillimeter Array.



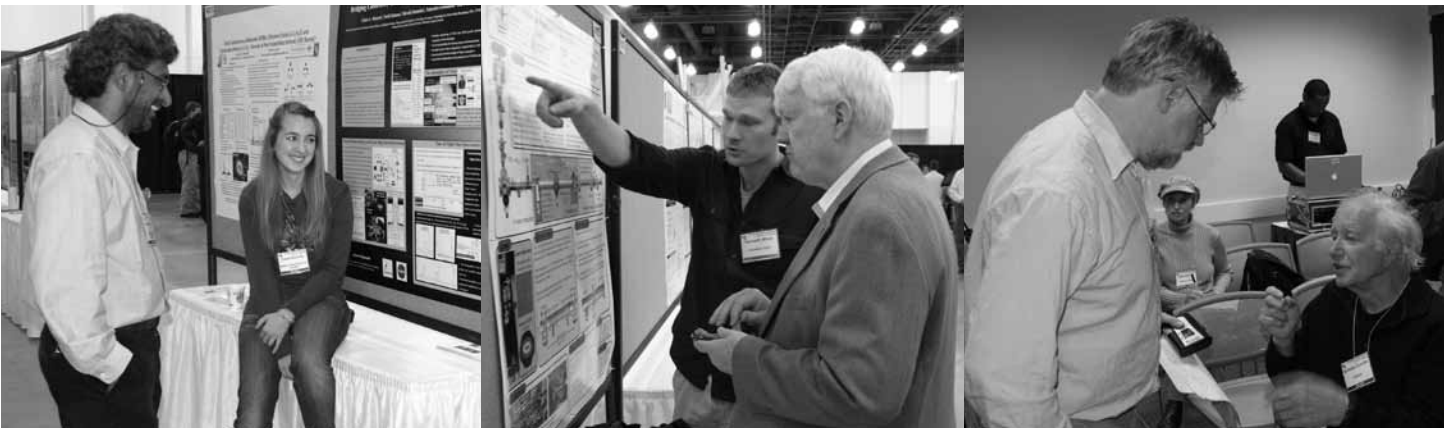
Left: Key scientists of the Wide-field Infrared Survey Explorer mission who summarized science plans for WISE were (l-to-r) Amy Mainzer and Peter Eisenhardt (both, Jet Propulsion Lab.) and Principal Investigator Edward Wright (UCLA). **Middle:** Robert Harris (Harvard U.) reported multi-epoch, multi-configuration, wide angle VLA images of the Perseus cluster. **Right:** Luke Schmidt (New Mexico Institute of Mining and Technology) discussed instrumentation development processes for a new telescope at Magdalena Ridge Observatory.



Left: Neil Sheeley (center, Naval Research Lab.) celebrated receiving the Hale Prize with AAS President John Huchra (left) and Solar Physics Division Chair Todd Hoeksema. Sheeley lectured on "Remote-sensing Observations of the Corona and Solar Wind." **Middle:** Alan Stockton (left, U. Hawaii) used the Keck II Telescope and laser guide star adaptive optics to image galaxies near redshift 2.5, and found that the targets formed almost all their stars at an even earlier epoch. Jin Koda (Stony Brook U.) detected more extensive tidal debris than previously known in the Antennae galaxies with a wide-field camera on the Subaru Telescope. **Right:** Panelists on the International Year of Astronomy were (l-to-r) Pamela Gay (Southern Illinois U., Edwardsville), who told new findings from the Galaxy Zoo project, Douglas Isbell (U.S. IYA2009 contact person), Constance Walker (Chair, US Dark Skies Working Group), and Stephen Pompea (U.S. Project Director for IYA2009).



Left: Disk discussion: Michele Montgomery (left, U. Central Florida) simulated steady-state accretion disks in dwarf novae. Fathi Namouni (Observatoire de la Cote d'Azur, France) told how in circumstellar accretion disks, jets with unequal components may cause asymmetric removal of linear momentum from the star-disk system. **Middle:** Pamela Gay (front left) and a crew of bright undergraduates produced live webcasts of the press conferences and selected meeting sessions for Astronomy Cast. **Right:** Carol Thornton (UC, Irvine) obtained spectra of low-mass Seyfert galaxies with Spitzer.



Left: Murthy Gudipati (left, Jet Propulsion Lab.) studies the evolution of ices in the universe. Claire Ricketts (NASA Ames) conducted lab experiments pertinent to aerosols on Titan. **Middle:** Kenneth Miller (left, Columbia U.) described experiments on the dominant formation mechanism of molecular hydrogen during the epoch of formation of the first stars to Chuck Lillie (Northrop Grumman). **Right:** Nicholas Scoville (seated, Caltech) explained a fine point about interacting galaxies to Ron Cowen (*Science News*). Writer Kala Perkins (with cap) is in the background.

Exoplanet Exploration Program Analysis Group (ExoPAG)

Dear Colleagues:

The Astrophysics Division of NASA's Science Mission Directorate is pleased to announce the establishment of an Exoplanet Exploration Program Analysis Group, or ExoPAG. The ExoPAG will be an open, interdisciplinary forum for gathering community input into NASA's Exoplanet Exploration Program (ExEP), and for conducting analyses in support of ExEP science objectives and their implications for planning and prioritization of Program activities. The ExoPAG will communicate its findings and the results of its analyses to NASA through the Agency's formal advisory structure in the form of reports to the Astrophysics Subcommittee of the NAC (NASA Advisory Council) Science Committee.

To carry out its role, the ExoPAG will:

- Articulate the key scientific drivers for exoplanet research;
- Evaluate the expected capabilities of potential ExEP missions for achieving the science goals of the Program;
- Regularly evaluate ExEP goals, objectives, investigations and required measurements on the basis of the widest possible community outreach;
- Articulate focus areas for needed mission technologies; and
- Identify related activities that enhance the ExEP mission portfolio such as ground-based observing, theory and modeling programs, and community engagement.

Further information about the structure and function of the ExoPAG can be found on the Web at <http://exep.jpl.nasa.gov/>. The purpose of this open letter to the scientific community is to solicit nominations for membership on the ExoPAG Executive Committee.

The ExoPAG will be led by a Chairperson drawn from the membership of the Astrophysics Subcommittee. The inaugural ExoPAG Chair will be Prof. James F. Kasting of Penn State University. Prof. Kasting will be supported in this role by an Executive Committee representing the broad exoplanetary science community. Together, the ExoPAG Chair and Executive Committee will be responsible for capturing and organizing community input, overseeing ExoPAG analyses, reporting ExoPAG findings and inputs to the Astrophysics Subcommittee, and keeping the scientific community apprised of ongoing activities and opportunities within NASA's ExEP. The ExoPAG Executive Committee will be selected to achieve a functional balance among observers, theoreticians, instrumentation experts, and technologists, as well as a scientific balance across the disciplines of astrophysics, exoplanetary and planetary science, and astrobiology.

Nominations for the ExoPAG Executive Committee should be submitted via email to the address: ExoPAG@nasa.gov.

Nominations must include both a cover letter and a one-page CV summarizing the nominee's relevant background. The cover letter should provide a description of the nominee's area of expertise and qualifications for service on the ExoPAG Executive Committee. Self-nominations are welcome. The deadline for receipt of nominations is 4 September 2009, with announcement of selections anticipated for early October 2009.

The first ExoPAG meeting is planned to be held in conjunction with the 215th AAS Meeting in Washington, DC, January 2010. Travel and lodging expenses for the ExoPAG Chair and Executive Committee members (only) will be paid by the ExEP, in accordance with NASA regulations. Further details about the inaugural ExoPAG meeting will be posted on the ExoPAG web site as the information becomes available.

We look forward to working with all of our stakeholders to develop a robust and compelling Exoplanet Exploration Program.

Sincerely,

Douglas Hudgins, NASA HQ
Exoplanet Exploration Program Scientist

Lia LaPiana, NASA HQ
ExoPlanet Exploration Program Executive

Jon Morse
Director, Astrophysics Division, NASA HQ

Member Spotlight

In each issue, we will feature one member, their research or other work, a bit of their history and their picture. We will accept suggestions for this feature, but no self-nominations. If you know of a fellow member who does interesting research, came to our field through interesting circumstances or is just a fantastic person, consider submitting their story to us for possible publication (500 word limit). We will only publish stories approved by members willing to be featured. Email your suggestion to Crystal Tinch, crystal@aaas.org.

Honored Elsewhere

Adler Planetarium lauds Rubin and Hammel in 2009

Vera C. Rubin was presented with a Lifetime Achievement Award in a ceremony at Chicago's historic Adler Planetarium in May 2009. The award recognized her pioneering work on galaxy rotation rates, specifically her discovery of "flat rotation curves" for galaxies. This work stands as one of the most direct and robust lines of evidence for the existence of dark matter. Rubin is a research astronomer at the Carnegie Institution of Washington.

At the same ceremony, Heidi B. Hammel was named the 2009 recipient of the Women in Space Science Award. She was honored for exemplifying the characteristics that lead to success academically and in the work force, and for inspiring young women to pursue careers in science, technology, engineering, and math. In addition to receiving the award, Hammel participated in an afternoon of astronomy-themed workshops for over 200 girls from the Chicago school systems, and gave the workshop's keynote address. Hammel is a senior research scientist with the Space Science Institute in Boulder, CO.

Jayawardhana Named to Canada's Top 40 List

Ray Jayawardhana has been named to Canada's Top 40 under 40 list for 2009, an honor that recognizes a success achieved at a youthful age.

Jayawardhana (professor of astronomy and astrophysics, University of Toronto) is a Canada Research Chair in observational astrophysics. "I wasn't even sure that I wanted to be a scientist when I was younger but I did know that if I was to become one, I wanted to be a publicly engaged scientist," he said. "As a scientist winning this award, it is another opportunity to showcase scientists and science as an integral part of Canada's cultural landscape and its economic endeavours."

The program is designed to promote mentorship and professional development by introducing these leaders to the established business community and by promoting them as role models for young Canadians. In choosing the recipients, the board at Caldwell Partners considers the nominees' vision and leadership; innovation and achievement; impact; community involvement and contribution; and growth/development strategy.

AAS Members Elected to NAS

The National Academy of Sciences (NAS) today announced the election of 72 new members and 18 foreign associates from 15 countries in recognition of their distinguished and continuing achievements in original research.

Those elected bring the total number of active members to 2,150. Foreign associates are nonvoting members of the Academy, with citizenship outside the United States. Today's election brings the total number of foreign associates to 404.

The National Academy of Sciences is a private organization of scientists and engineers dedicated to the furtherance of science and its use for the general welfare. It was established in 1863 by a congressional act of incorporation signed by Abraham Lincoln that calls on the Academy to act as an official adviser to the federal government, upon request, in any matter of science or technology.

Alexei V. Filippenko: Richard and Rhoda Goldman Distinguished Professor of Astronomy, department of astronomy, University of California, Berkeley

Adam G. Riess: professor of physics and astronomy, department of physics and astronomy, Johns Hopkins University, Baltimore

Stanton J. Peale: professor emeritus and research professor of physics, department of physics, University of California, Santa Barbara

Freedman and Kennicutt receive Gruber Cosmology Prize

Two recipients of the 2009 Cosmology Prize of the Peter and Patricia Gruber Foundation include Wendy Freedman, director of the Observatories of the Carnegie Institution of Washington in Pasadena, California; and Robert Kennicutt, director of the Institute of Astronomy at the University of Cambridge in England.

They are being honored for their leadership in the definitive measurement of the value of the Hubble constant, one of the most important numbers in astronomy. The Hubble constant indicates the rate at which the universe has been expanding since the "Big Bang," thus connecting the universe's age with its size. The Cosmology Prize was the first to be awarded when the Gruber International Prize Program was inaugurated in 2000; and its tenth anniversary, which the Foundation will celebrate this summer, coincides with the International Year of Astronomy.

we will also likely meet with local staff. Like last year, the goal of these visits is to inform local congressional offices of the impact astronomers have in the local community—including outreach efforts, training students, and other activities that occur in the state and district.

Pasadena Meeting and Decadal Panels

Public policy at the AAS meeting in Pasadena was highlighted by the concurrent Decadal Survey Program Prioritization Panels. The panels are charged with evaluating proposed projects. They were divided into four groups—Optical and Infrared Astronomy from the Ground (OIR), Electromagnetic Observations from Space (EOS), Radio, Millimeter and Submillimeter from the Ground (RMS), and Particle Astrophysics and Gravitation (PAG). I spent a good deal of time in the OIR panel, hearing presentations from the Thirty Meter Telescope, Giant Magellan Telescope, and the Large Synoptic Survey Telescope, among others. The next day, at the EOS panel I heard presentations on Coronagraph Free-Flyers and Starshades, General astrophysics with Terrestrial Planet Finder-C, and a response from the ATLAST project.

Each group that presented in Pasadena had responded to specific requests for information from the panel—both with detailed written responses and also presentations in person at the convention center in Pasadena. For example, the TMT and GMT both dealt with the sort of funding levels they might receive from the NSF and the amount of observing

time this would provide to the U.S. community. LSST faced questions on managing the enormous data flow it would generate. The panels have the difficult task of sorting through the scientific goals and technical challenges facing all projects, and ultimately ranking the missions.

Other public policy events included the usual Town Hall meetings from NSF and NASA, where the FY 2010 budget details were discussed. The agency budget releases occurred unusually late this year, occurring in early May. As I wrote in my last column, the NSF is seeing increases whereas NASA's budget is roughly flat. This means that ground-based facilities as well as NSF grants will show some growth, but NASA Science continues to shrink, with decreases to NASA Astrophysics, and flat budgets at planetary science. The House appropriations committee has also released their appropriations bill, in which NSF receives slightly less than the President's request. For full details of the agency budgets, and for timely updates, check out the FY 2010 tag at the public policy blog - <http://blog.aas.org/tag/fy-2010/>

The Pasadena meeting was the last NSF Town Hall for Astronomy Division Executive Officer Eileen Friel, who is moving to Arizona to become the director of Lowell Observatory. She received a warm round of applause from the assembled crowd as a thank you for her years of service to the astronomical community at the NSF. The AAS wishes her well at her new position at Lowell.



Left photo: Stephen Redman (left) and Senator Robert Casey, Jr. (D-PA) at a constituent breakfast at the Capitol Visitors Center. **Right photo:** L-R - Amber Straughn, Andy Becker, Jill Tarter, Jim Klimchuk, Stephen Redman, Marcos Huerta, Ann Hornschemeier, Josh Emery, and Dieter Hartmann at the CVD reception in the Hart Senate Office Building.

Announcements

AAS 2010 Membership Calendar

As a membership benefit, the *AAS Membership Calendar* includes important dates, such as proposal and grant deadlines and AAS sponsored meetings. Sponsors receive selection of a photo layout page and 250 words of text. For only \$2000, your institution or department can show support for the whole astronomical community and be featured prominently in astronomers' offices across the country. Sponsors are reminded that space is provided on a first-come, first-served basis. Groups interested in sponsoring a month may contact Crystal Tinch (crystal@as.org) for more information and pricing details for the 2010 calendar. Deadline for sponsorship is 1 September 2009.

Call for NRAO Observing Proposals

Astronomers are invited to submit Regular and Large proposals for observing time on the NRAO Green Bank Telescope (GBT), Expanded Very Large Array (EVLA), and Very Long Baseline Array (VLBA). A Large proposal is defined as requiring at least 200 hours of observing time on one or more of the NRAO instruments.

Instrument	Deadline	Observing Period	Notes
GBT	2009 Oct 1	2010 Feb - 2010 May	%
	2010 Feb 1	2010 Jun - 2010 Sep	%
EVLA	2009 Oct 1	2010 Mar - 2010 May	*
	2010 Feb 1	2010 Jun - 2010 Sep	+
VLBA	2009 Oct 1	2010 Feb - 2010 May	
	2010 Feb 1	2010 Jun - 2010 Sep	

Notes:

(%) The availability of GBT receivers and backends typically changes with each new proposal call. Please read www.gb.nrao.edu/gbtprops/latestgbtcfp.shtml to see what is available for the latest proposal call.

(*) The D configuration with a maximum baseline of 1 km. Shared-risk observing with the new WIDAR correlator will begin, nominally in 2010 Mar, with the EVLA in the D configuration. The shared risk observing programs are described at www.aoc.nrao.edu/evla/astro/. Capabilities of the new correlator will be announced in NRAO Newsletters and via the "News for Proposers" available at www.vla.nrao.edu/astro/ prior to the 1 Oct 2009 deadline.

(+) The 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, a program to support research by students at U.S. universities covers student stipends, computer hardware purchases, and student travel to meetings to present observing results. Applications to this program are tied to observing proposals. Awards of up to \$35,000 are possible. For details, see wiki.gb.nrao.edu/bin/view/Observing/NRAOStudentSupportProgram

The NRAO and the European VLBI Network jointly handle proposals for observing time on the Global VLBI Network at centimeter wavelengths; the deadline is 1 Oct 2009 for the session in Feb/Mar 2010. Also, the NRAO and a set of European observatories jointly handle proposals for VLBI observing time at a wavelength of 3mm; the deadline is 1 Oct 2009 for the session in May 2010. The NRAO also handles proposals for the VLBI High Sensitivity Array at the same deadlines as for the VLBA; this Array includes the VLBA, GBT, and Arecibo in the U.S., plus Effelsberg in Germany. Although it is expected that WIDAR commissioning will eventually include VLBI capabilities for the EVLA, no definite timescale for implementing this has yet been set, and the High Sensitivity Array will not include the phased EVLA for the 1 Oct 2009 deadline."

Information on NRAO instruments, proposal submission routes, and user support is available via the NRAO website at www.nrao.edu.

NSO Observing Proposal Deadline

The current deadline for submitting observing proposals to the National Solar Observatory is 15 August 2009 for the fourth quarter of 2009. Information is 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 (nsokp@nso.edu). Instructions may be found at www.nso.edu/general/observe/. A web-based observing-request form is at www2.nso.edu/cgi-bin/nsiforms/obsreq/obsreq.cgi. Users' Manuals are available at <http://nsosp.nso.edu/dst/> for the SP facilities and <http://nsokp.nso.edu/> for the KP facilities. An observing-run evaluation form can be obtained at [ftp://ftp.nso.edu/observing_templates/evaluation.form.txt](http://ftp.nso.edu/observing_templates/evaluation.form.txt).

Proposers are reminded that each quarter is typically oversubscribed, and it is to the proposer's advantage to provide all information requested to the greatest possible extent no later than the official deadline. Observing time at National Observatories is provided as support to the astronomical community by the National Science Foundation.

CSO Call for Proposals Due 31 October 2009

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 bolometer cameras, see www.submm.caltech.edu/cso/cso-call.html. Applications for observing time between 1 February 2010 through 31 July 2010 are due by 31 October 2009. Applications will be reviewed by an outside peer group.

Calendar

AAS & AAS Division Meetings

DPS Meeting

4-9 Oct 2009, Fajardo, Puerto Rico
dps.aas.org/meetings/

AAS 215th Meeting

3-7 January 2010, Washington, DC
Contact: Kelli Gilmore
(gilmore@aaas.org)
aaas.org/meetings

HEAD Meeting

1-4 March 2010, Big Island, HI
Contact: John Vallerga
(info@eurekasci.com)
www.confcon.com
www.hiltonwaikoloavillage.com/

Other Events

2009 IAU Symposia, Special Sessions and Joint Discussions
www.astronomy2009.com.br/

***10th Annual Advanced Maui Optical and Space Surveillance Technologies (AMOS) Conference**
1-5 September 2009, Maui, HI
Contact: Sandy Ryan
(sandy@amostech.com)
www.amostech.com

***Two Days of Hands-on Astronomy and Earth-science Education Workshops for 4th -12th Grade Teachers**
12-13 Sept 2009, near San Francisco, CA
www.astrosociety.org/events/meeting.html

***Science Education and Outreach: Forging a Path to the Future: The 120th Anniversary Meeting of the Astronomical Society of the Pacific**
12-16 September 2009, Millbrae, CA
Contact: Albert Silva
(asilva@astrosociety.org)
www.astrosociety.org/events/meeting.html

***Science with SKAMP: Widefield Spectroscopy of the Southern Radio Sky**
16-17 September 2009, Molonglo Observatory (near Canberra), Australia
Contact: Bryan Gaensler
(bgaensler@usyd.edu.au)
<http://www.physics.usyd.edu.au/sifa/Main/ScienceWithSKAMP>

***Solar Analogs II**
20-23 Sept 2009, Flagstaff, AZ
Contact: Jeffrey Hall (jch@lowell.edu)
<http://www.lowell.edu/workshops/SolarAnalogII/index.php>

***Chandra Calibration Review**
21 September 2009, Boston, MA
Contact: Vinay Kashyap
(axafcal@head.cfa.harvard.edu)
<http://cxc.harvard.edu/ccr/>

***Assembly, Gas Content and Star Formation History of Galaxies**
21-24 Sept 2009, Charlottesville, VA
Contact: Aaron Evans
(aevans@nrao.edu)
www.nrao.edu/meetings/galaxies09/

***Chandra's First Decade of Discovery**
21-25 Sept 2009, Cambridge, MA
Contact: Scott Wolk (tenyears@head.cfa.harvard.edu)
http://cxc.harvard.edu/symposium_2009/

***SOHO-23: Understanding a Peculiar Solar Minimum**
21-25 Sept 2009, Northeast Harbor, ME
Contact: John Kohl
(jkohl@cfa.harvard.edu)
www.soho23.org/

Ten Years of Science with Chandra
22-25 Sept 2009, Boston, MA
Contact: Harvey Tananbaum
(ht@cfa.harvard.edu)

Nonlinear Processes in Astrophysical Plasmas: Particle Acceleration, Magnetic Field Amplification, and Radiation Signatures
28 Sept-2 Oct 2009, Santa Barbara, CA
Contact: Anatoly Spitkovsky
(anatoly@astro.princeton.edu)
www.kitp.ucsb.edu/activities/auto/?id=975

***Frank N. Bash Symposium 2009**
18-20 October 2009, Austin, TX
Contact: Peter Yoachim
(yoachim@astro.as.utexas.edu)
www.as.utexas.edu/new_horizons/

***Reionization to Exoplanets: Spitzer's Growing Legacy**
26-28 October 2009, Pasadena, CA
Contact: Patrick Ogle
(ogle@ipac.caltech.edu)
<http://ssc.spitzer.caltech.edu/mtgs/spitzer2009>

*** Women in Astronomy and Space Science III**
21-23 Oct 2009, College Park, MD
Contact: Anne Kinney
(Anne.L.Kinney@nasa.gov)
<http://wia2009.gsfc.nasa.gov/>

***2009 Fermi Symposium**
2-5 November 2009, Washington, DC
Contact: David Thompson
(David.J.Thompson@nasa.gov)
<http://fermi.gsfc.nasa.gov/science/symposium/2009/>

IAU Symposium No. 268 Light Elements in the Universe
9- 13 Nov 2009, Geneva, Switzerland
Contact: Corinne Charbonnel
(corinne.charbonnel@obs.unige.ch)
obswww.unige.ch/iau268

***From Stars to Galaxies: Connecting Our Understanding of Star and Galaxy Formation**
7-10 April 2010, Gainesville, FL
Contact: Jonathan Tan
(starstogalaxies@astro.ufl.edu)
<http://conference.astro.ufl.edu/STARSTOGALAXIES/index.html>

***SPIE Astronomical Telescopes and Instrumentation 2010**
27 June – 2 July 2010, San Diego, CA
Contact: customerservice@spie.org
http://electronicimaging.org/?WT.mc_id=Cal-EI

*New or revised listings

Note: Listed are meetings or other events that have come to our attention. 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 cadwww.hia.nrc.ca/meetings.



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

Periodical
Postage
Paid
Washington DC

Newsletter 147 July/August 2009

Washington News

Marcos Huerta, John Bahcall Public Policy Fellow, blog.aas.org



The summer heat wave has begun in DC, as has a seemingly endless wave of incoming summer tourists and interns. Congress continues work on FY 2010 appropriations, with health care reform front and center during the summer, but with long breaks to visit the home districts and attend fundraisers, barbecues and picnics.

This is my penultimate column as the John Bahcall Fellow—I will be leaving the AAS in September to start as the American Institute of Physics/AVS Congressional Science Fellow. The search for the next Bahcall fellow is underway. I will write more on my tenure as the Bahcall fellow in the September/October newsletter.

Congressional Visits Day

The AAS participated once again in the Science-Engineering-Technology Congressional Visits Day. The two-day event was 28-29 April in Washington, DC. This year's participants were: Dieter Hartmann, Ann Hornschemeier, John Huchra, Jim Klimchuk, Chryssa Kouveliotou, Stephen Redman, Amber Straughn, Jill Tarter, Julia Lee, and Josh Emery. They heard from NSF and NASA Astrophysics, as well as a briefing at the AAAS Headquarters featuring panelists from the Office of Management and Budget, the White House Office of Science and Technology Policy, and others.

It was a very unusual year for the Congressional visits because the FY 2010 budget details had yet to be released only the top line numbers for each agency were announced. Thus the agency briefings that usually include programmatic details for NASA and NSF were missing. The detailed budget was rolled out in May. Our visits to the hill focused on asking that members support President Obama's goal that we spend 3% of our GDP on research and development, which he announced at the National Academies of Science earlier in the week.

Contacts with elected officials are vital for those in the astronomical community. Please consider joining us for next year's Congressional Visits Day, and contact me directly if you are interested in coming to Washington. Photos from this year's CVD are featured on page 13.

Local Visits

Of course, you do not have to come to Washington to interact with your Senator or Representative. For the second year, the AAS is organizing local congressional visits, in the local district offices. By the time this newsletter arrives, the 51 astronomers who signed up for the local visits will be well into scheduling meetings for the August recess. The AAS will provide leave-behinds and other briefing materials and coordinate a few conference calls to discuss the visits. I am hopeful we will be able to arrange a few meetings with members, though

continued on page 13