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Attachment(s):
(1) "AAS Newsletter with item on ISWI", 1.1 MB pdf, 20 pages.

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Dear ISWI Participant:

The ISWI Newsletter will be closed between July 21 and August 13 (2010) because The Editor (myself) will be in Sumatra, Indonesia, installing MAGDAS-9 magnetometers for SERC on behalf of the International Space Weather Initiative.

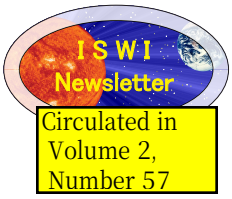
Please see Page 18 of the attached pdf. It has a short article about ISWI. Many thanks to Dr. Hans Haubold for sending it along to the "ISWI Newsletter Office" here in Fukuoka, Japan.

Kind regards,
George Maeda
The Editor.

# AAS Newsletter

A Publication for the members of the American Astronomical Society

March/April 2010, Issue 151




Circulated in Volume 2, Number 57

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## President's Column

John Huchra, president@aas.org

We had a great meeting in Washington last month. We saw new results galore, from new planets to the first results from our refurbished Hubble Space Telescope. The plenary talks were spectacular and the side sessions were fun and well attended. The banquet was a smashing success—who would have thought we'd have a mashed potato bar right next to the HST Wide Field Planetary Camera 2 fresh down orbit! Despite a few floods and some difficulty with handicapped access, the venue was comfortable. We set a record for the largest astronomy meeting ever held at just about 3400 registrants. We owe many thanks to the people who made this meeting a success especially the AAS staff and the members of the executive committee who arranged the program and plenary speakers.

One of the meeting's high points was the address by NASA Administrator and former Hubble astronaut and Marine Corps Major General Charles Bolden. He was not able to say much at the time about the administration's plans for NASA or for the FY11 budget, but he reiterated the importance of NASA's science program and emphasized two issues we as American astronomers often ignore and sometimes even disdain, despite the fact that they are strong points of the field. The first is education and public outreach. Astronomy is one of the key doors to STEM education in college, with a very large fraction of students taking astronomy as their first and often only physical science class.

One rough estimate is that 250,000 college students across the country take introductory astronomy each year. It is an important part of our profession and one that we can be proud of. It also is important to spread the word about science and careers in science at the primary and secondary school level. We need to support the people who do teach and the people who are trying to improve astronomy education at all levels.

It also is evident that among all the sciences our public outreach efforts are absolutely first rate. The general public, including elected officials, really appreciates the efforts we make to showcase discoveries. I for one am thoroughly convinced that without these efforts, spearheaded by just a small fraction of our society, support for astronomical research would be considerably less. Again, many thanks to the public affairs and press officers who do this for us.

I urge, as did Administrator Bolden, every one of you who can, to go out and help in these activities. Give talks in primary and secondary schools, engage in programs at museums and planetariums, and support others to do these things as well. The payoff for you will be large and the payoff for the Nation will be even greater.

The second important point Bolden touched on was international cooperation. Astronomers were very early to create an international organization for communication. Founded in 1919, the International Astronomical Union (IAU) was one of the very first international scientific unions, predating even physics (the International Union of Pure and Applied Physics started in 1922). In the actual astronomical enterprise, with a few exceptions, international competition has been the norm. In the past that has helped us. The race to the moon in the 1960's clearly benefited American science and astronomy in particular. The military, industrial and intellectual competition of the cold war also benefited American science. But those days are over. There is now economic competition among some of the developed nations, but fortunately for the world,

*continued on page 3*

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*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

# From the Executive Office

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

As I watched the horrible tragedy of the earthquake in Haiti unfold during the later part of January, I was struck by the fact that our personal daily trials and tribulations here in the US are insignificant compared to the much greater challenges faced by those in the developing world. Even greater were the painful human tragedies seen on TV in the days following the earthquake. Some of our members have asked what the AAS can or should do for those in need in this poor country so close to the United States. I have to say that there are far greater organizations than the AAS doing more good and having a greater impact than we could hope to have following such a tragedy. Please consider donating directly to the Red Cross and other similar organizations. Be careful to check that the organization you are donating to is a valid charitable organization using the web-based data base Guidestar (guidestar.org) or IRS publication 78, available online at irs.gov.

After such tragedies occur, even ones smaller in scope than this recent earthquake, I check our membership database to see if we have any members who live in the region and then try and make contact with them to see if they are OK or need help from their member Society. Mainly I get a grateful thank you note, but no direct requests. The AAS' resources are focused on our combined mission to enhance and share humanity's scientific understanding of the Universe. We have no ability and nearly no resources to reach out and provide any substantial aid, but sometimes just knowing that your scientific colleagues are concerned about you can be a comfort in times of need. Thankfully, we had no members in Haiti.

Looking carefully at our membership roster, one can tell immediately that we do not have a large number of astronomers in the developing world in general. In fact, we have no members in a very large number of countries. This has obvious implications. We aren't fully utilizing the world's potential astronomical talent and many who could provide the next creative theory, instrument or observation will never even be able to participate. The IAU is undertaking an effort this year to use astronomy for development, building on many of their successful programs like the teaching astronomy for development program (TAD), which brings practicing astronomers to a country to teach teachers about astronomy. Although the AAS opted not to prepare a bid for the IAU's call for proposals to host an office for astronomy development, we remain very supportive of the IAU's goals in this area and will continue to find ways to partner with the IAU in the future.

We just wrapped up the largest astronomy meeting in world history (confirmed by the IAU!). Thanks to all of you who attended and thanks especially to our Vice Presidents, who planned the scientific content of the meeting and to all our members who submitted so many great talks. We had only a few logistical problems, isolated to a failed piece of network hardware and some service provision issues from the hotel. Most shocking were the problems encountered by a few disabled members of our Society. Not only did they face substantial difficulties getting around the meeting due to the hotel's infrastructure and miscommunication among hotel staff, in some instances they were not offered seats in a crowded lecture room despite their obvious challenges.

I would like to request that all members make an extra effort at our future meetings to assist our colleagues with disabilities so that they may derive benefit from participating fully in our meetings. We may never be able to guarantee the service level of the venue staff where we hold our meetings (though we will do our best), but we can certainly ensure that each of us gives attention to those in need. Please be considerate of all your colleagues at the meeting, whether they are disabled or not and whether they are disabled only temporarily or not. Please show common courtesy in all situations and please, please, make an extra special effort to facilitate attendance at our meetings for those facing physical challenges. We owe it to each other to ensure that every meeting attendee can participate and we can only ensure this with your help.

**President's Column** *continued from front page*

the high level military competition has slackened. The other side of the issue is that astronomy has become much more like high-energy physics. While it is still possible to solve many problems with small facilities, as a field we are now aspiring to systems of facilities and programs that exceed any individual nation's ability to support. Cooperation is essential for the science.

Lastly Bolden also reminded us that just as the developed nations have an economic responsibility to the undeveloped world, the scientific community has a responsibility to aid in education and the public understanding of science world-wide. The IAU, under the stewardship of its new president, Bob Williams, has taken up this very challenging task.

Just as we do for STEM education and for creating excitement for science in the US, astronomers can contribute very significantly to similar efforts in the developing world. Scientists have made the developed world "flat" through research collaborations and communication. I urge you all to help flatten the rest of the world as well.

# Secretary's Corner

## AAS Election

The results of the latest AAS election are presented below. The Society thanks all who agreed to stand for election, for their commitment and service to the community, and congratulates the winners. New AAS Officers and Councilors begin their terms after the Annual Business Meeting on 26 May 2010 at the Miami Meeting.

**Vice-President (2010-2013)**
Nicholas B. Suntzeff

**Secretary (2010-2013)**
G. Fritz Benedict

**Councilors (2010-2013)**
Edward F. Guinan
Patricia Knezek
Robert D. Mathieu

**USNC-IAU: Cat. 1 (2011-2014)**
Jill C. Tarter

**Nominating Committee (2010-2013)**
David R. Silva
Susana E. Deustua

# 25 Things about...AAS President-Elect Debra Elmegreen

**1. Device I would never give up:** Computer
**2. My favorite movie is:** Avatar!
**3. When I have an extra hour at home, I like to:** I never have an extra hour! (Watch tv)
**4. At work, I like to wear:** Skirt suits
**5. When I get home, I like to wear:** Old blue jeans and a sweatshirt
**6. The most important thing I learned from my mother was:** Always believe in yourself
**7. The most important thing I learned from my father was:** You can do anything boys can do
**8. My favorite time of day is:** Sunset
**9. My favorite holiday is:** Christmas
**10. My favorite software application is:** IRAF (or is that my least favorite?!)
**11. Web site I spend the most time on:** college-themusical.com
**12. My first real job was:** Summer research assistant in the Cosmic Ray Physics branch at Naval Research Laboratory after high school graduation
**13. The location where I do my best thinking is**: Dining room table
**14. What I would like to be the world's best at is:** Understanding galaxies...or being a major league baseball player
**15. I prefer AM or FM radio:** AM
**16. I love to:** Go to Yankees games
**17. Something that really annoys me:** Boston Red Sox!
**18. For physical activity I like:** Going for a walk
**19. I make the best:** Brownies
**20. My favorite city is:** Rome
**21. My favorite actress is:** Meryl Streep
**22. My favorite athlete is:** Derek Jeter
**23. I used to play:** Softball (first base and pitcher)
**24. What I really think of Twitter, Facebook, etc**.: They're for younger people than me!
**25. I think people should:** Care more about the environment

# Miami Meeting Promises Fun in the Sun

Florida is the Sunshine State, so it's hard to think of a more appropriate venue for a joint meeting of the AAS and the Solar Physics Division (SPD). The 216th AAS meeting convenes 23-27 May in downtown Miami at the newly renovated Hyatt Regency hotel, just steps from Biscayne Bay with easy access to the city's famous white-sand beaches. The Miami Museum of Science & Space Transit Planetarium, home of the syndicated PBS-TV program Star Gazer with Jack Horkheimer, is a short taxi ride away.

This is a particularly exciting time for solar physicists thanks to the planned February launch of NASA's Solar Dynamics Observatory (SDO), which will study our daytime star at extremely high spatial and temporal resolution. SDO and several ongoing solar missions will feature prominently in talks and posters at the Miami meeting, as will, no doubt, the ongoing controversy over predictions of the level of solar activity likely in Cycle 24.

Plenary talks will showcase two new infrared-astronomy missions. Goran Pilbratt (ESA Herschel Science Centre) will describe how the Herschel space observatory is changing our view of the dusty universe, and Ned Wright (UCLA), principal investigator of NASA's Wide-field Infrared Survey Explorer, will present early results from WISE's all-sky survey, which began in January.

Among the many other plenary presentations are prize talks by some of the most distinguished scientists in our field, including Marcia Neugebauer (Univ. of Arizona) and Brian Welsch (UC Berkeley), recipients of the SPD's 2010 George Ellery Hale and Karen Harvey prizes, respectively.

The AAS exists to serve our members, but we can't do a very good job of it if we don't know what's on members' minds. That's why every summer meeting includes the Annual Members Meeting, to which all attendees are invited. In Miami it's at midday on Wednesday, 26 May. You'll hear a report on the financial health of the Society, learn about new initiatives from the AAS Council, and have an opportunity to raise and comment on issues of concern to the astronomical community. In addition, AAS Executive Officer Kevin Marvel will provide some context for the latest federal budget and the imminent decadal survey report with a brief presentation entitled "Astronomy Policy: The Coming Dry Season." The SPD will hold its Business Meeting, on Tuesday evening, 25 May.

Two more opportunities to talk about astronomy and public policy will be available at NSF and NASA Town Hall meetings, and there will be a gathering of the AAS Committee on the Status of Women in Astronomy during which you can explore the implications of the ongoing career study recently featured on the pages of *Nature*.

Always popular at AAS summer conferences are the "Meeting-in-a-Meeting" colloquia on special topics. These involve multiple oral sessions, often across two or more days. In Miami there will be Meetings-in-a-Meeting on the Local Bubble, Herschel science, and laboratory astrophysics. And you won't want to miss the SPD's Parker lectures, introductory-level reviews of burning topics in solar astronomy (no pun intended).

Because this is a joint AAS-SPD meeting, there will be not one but two public talks. The first, on Monday evening, 24 May, will focus on the Sun. In the second, one night later, David Dearborn (LLNL) will explain how to avoiding having a really bad day at the hands of a rogue asteroid. And because AAS and SPD members like to mingle, especially when food and drink are involved, there will be plenty of receptions in Miami. Among them are the opening reception for all attendees on Sunday evening and at least two (possibly three) receptions where students can learn about next steps in their education and explore career options.

In addition to the Meetings-in-a-Meeting in Miami, there will be meetings before the meeting. These are the Center for Astronomy Education's teaching workshops, which occur on Saturday and Sunday, 22 and 23 May, and the Association for Astronomy Education's AstroZone and reception for K-12 educators that same weekend.

All this amounts to just the tip of the iceberg, which is probably a lousy metaphor for a meeting in sunny Miami, but you get the point. Add more invited talks, hundreds of oral and poster papers, dozens of exhibits, and endless opportunities for hallway schmoozing, and you've got a meeting that you really can't afford to miss. Keep your eye on the AAS website (aas.org) for more program information as it becomes available. See you in Florida!

# Committee Vacancies

Vacancies for several AAS committees will be filled by Council at its meeting at Miami, Florida in May 2010. Current committee members are listed on the AAS homepage, aas.org.

AAS Members may themselves volunteer, or suggest other Members for one of the vacancies. Think about areas in which your own particular background might be helpful to us. Committee activity also is a very good way of getting to know other members and can be fun as well. To assist members of the Committee on Appointments who may not know everyone, please include the date of PhD, as well as a few sentences conveying the background and area of expertise of the named individual. Our goal is to have both quality and breadth across the AAS committee structure. Please let us know if you think you could help.

Input must be received in the Office of the Secretary no later than 30 April 2010. Submit suggestions to John Graham, AAS Secretary, by email to aassec@aas.org or at the Department of Terrestrial Magnetism, 5241 Broad Branch Road, N.W., Washington, DC 20015, Tel:202-478-8867, Fax: 202-478-8821.

# Council Actions

Taken at the 215th Meeting of the Council of the American Astronomical Society in Washington DC, 8 January 2010

- The AAS Council confirmed a number of administrative and budget-related adjustments previously approved by the Executive Committee and detailed in the Council meeting minutes.
- The Council considered the strategic plans submitted by its committees and boards and the results of the previous days planning retreat. The Strategic Planning Sub-Committee, chaired by Peter Stockman, will produce a final draft plan based on those inputs and discussions in time for discussion and possible adoption at the Miami meeting.
- Fritz Benedict was appointed to a term (2010-2013) on the Governing Board of the American Institute of Physics.
- Jennifer Wiseman was appointed as AAS representative (Category II) for a three-year term (2010-2013) on the US National Committee for the International Astronomical Union.
- A group was formed to implement a mentoring system within the AAS. The Education and Outreach Coordinator, Rick Fienberg will facilitate.
- Following comment from the membership, a revised AAS Ethics Statement was approved.
- The Council acted to bring forward the deadline for unsolicited nominations for the Society's prizes to 30 June.
- The Council voted to accept a bequest from Lancelot Berkeley though the New York Community Trust for an AAS prize and instructed the Executive Officer with the help of a small group to carry out further discussions.
- The recommendations of the AAS Prize Committees, previously approved by the Executive Committee, for the awards of the 2010 AAS prizes were confirmed.
- A list of appointments to the AAS Prize Committees for 2010 was approved.
- The Audit Committee for 2010 was appointed.
- It was decided not to change the postdoctoral decision date deadline.
- It was decided not extend further the number of categories of those eligible to be first authors on more than one paper at AAS meetings.
- Having fulfilled the need in getting amateur participation in AAS activities, the Working Group on Professional-Amateur Collaboration was deemed to be dissolved.
- The Council extended the appointment of John S. Gallagher as Editor-in-Chief of the *Astronomical Journal* and Margaret M. Hanson as Associate Editor-in-Chief for five years from 15 January 2010.
- The Council voted to extend the term of the Editor of *Astrophysical Journal Letters*, Christopher Sneden for a further two years up until 31 December 2012.
- In executive session, the AAS Council reviewed and commended the performance of the Executive Officer and voted on a salary increase for 2010.

## Member Deaths

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

**Geoffrey Burbidge**
**J.P. Davidson**
**Andrew Lange**

## 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@aas.org or log into your member record at aas.org.

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

For address changes, email address@aas.org

# 2010 AAS Prize Winners

L-R: Margaret J. Geller (copyrighted by Massimo Ramella), Anna Frebel, Tommaso Treu, Scott Ransom

**Margaret J. Geller - Henry Norris Russell Lectureship**
The 2010 Henry Norris Russell Lectureship of the American Astronomical Society is awarded to Margaret Geller of the Smithsonian Astrophysical Observatory for a lifetime of work on the distribution and clustering of galaxies in the Universe and for her notable success in describing this work to the public. Her early research with John Huchra unambiguously revealed the characteristic filamentary structure with huge voids in this distribution, fundamentally changing the direction of research for a generation of astronomers. This work provided the impetus for the accurate large-scale simulations of today which are such important tools for understanding the structure itself and its connection to fundamental physics.

**Anna Frebel - Annie Jump Cannon Award**
The 2010 Annie Jump Cannon prize is awarded to Anna Frebel for her pioneering work in advancing our understanding of the earliest epochs of the Milky Way Galaxy through the study of its oldest stars. Using the technique of high resolution stellar spectroscopy, Dr. Frebel discovered the most metal-poor star known, as well as the oldest known star, dated to 0.5 Gyr after the Big Bang by analysis of the abundances of radioactive isotopes of Th and U. Her work reveals the abundance patterns produced by the first stars, the so-called Population III stars, and is now branching out into defining tests for theories for the formation of the first stars and of the Galactic halo.

**Tommaso Treu - Newton Lacy Pierce Prize**
For his insightful work into the physical understanding of the formation and evolution of galaxies, groups an clusters, including the coupled evolution of the luminous, dark matter and black hole components

**Scott Ransom - Helen B. Warner Prize**
For his astrophysical insight and innovative technical leadership enabling the discovery of exotic, millisecond and young pulsars and their application for tests of fundamental physics

**Drake Deming - Beatrice Tinsley Prize**
The 2010 Tinsley Prize is awarded to Drake Deming for his innovative and pioneering work detecting thermal infrared emission from transiting extrasolar planets using the Spitzer Space Telescope.

**Philip M. Sadler - AAS Education Prize**
For a lifetime of devotion to a research-based approach to better understand the nature of teaching and learning in K-12 and college-level astronomy.

For opening our minds to the misconceptions and reasoning difficulties held by teachers and students about astronomy, and the role understanding these misconceptions and reasoning difficulties plays in improving teaching and learning.

For helping the entire field of astronomy education research gain acceptance within the astronomical community.

For developing the StarLab portable planetarium that has enabled world-wide educational experiences in astronomy for children and adults that would otherwise be inaccessible.

**Donald Hall - Joseph Weber Award for Astronomical Instrumentation**
The 2009 Joseph Weber award is presented to Dr. Donald Hall of the Institute for Astronomy at the University of Hawaii for his innovative contributions to the development of low noise detectors for observational infrared astronomy that have enabled decades of scientific discoveries.

Early on, Dr. Hall pioneered the use of InSb as an alternative to the bolometer for astronomical observations out to just beyond 5 microns for both solar and terrestrial atmospheric research. He then developed the Fourier Transform Spectrometer as a facility class instrument on the Mayall 4-meter Telescope, which led to the discovery of extraterrestrial acetylene and

L-R: Philip M. Sadler, Edward W. Kolb and Michael S. Turner, Virginia L. Trimble, Dan Maoz

methane. His major contribution has been the development of the HAWAII series of HgCdTe infrared arrays and associated electronics through a highly successful collaboration with industry. This has culminated in the 4 megapixel HAWAII-2RG array and SIDECAR ASIC controller. With its large, buttable format together with low dark current, low read noise, and high quantum efficiency, the HAWAII-2RG is the ultimate detector for many applications, and they are the detectors of choice on many of the major telescopes worldwide. As one nominator said, Dr Hall's "contributions have profoundly changed the face of near infrared observing."

**Virginia L. Trimble - Van Biesbroeck Prize**
The 2010 George Van Biesbroeck Prize is awarded to Dr. Virginia L. Trimble for her many years of dedicated service to the national and international communities of astronomers, including her expert assessments of progress in all fields of astrophysics and her significant roles in supporting organizations, boards, committees and foundations in the cause of astronomy.

**Edward W. Kolb and Michael S. Turner - AAS-AIP Heineman Prize**
The 2010 Dannie Heineman Prize for Astrophysics is awarded to Edward W. Kolb and Michael S. Turner for their joint fundamental contributions to cosmology and their development of the field of particle astrophysics, which have resulted in a vibrant community effort to understand the early universe.

**Robert D. Stephens - Chambliss Award for Amateur Achievement for 2009**
The AAS awards the 2009 Chambliss Medal for Amateur Achievement to Robert D. Stephens for his extensive contributions to the understanding of asteroids through collection and analysis of asteroid photometry. Over the last ten years, Stephens has published more than 200 asteroid lightcurves in the Minor Planet Bulletin. His careful and diligent work on lower-numbered asteroids without well-determined lightcurve parameters has revealed slow rotators - a group of objects which are critical to understanding the importance of solar radiation torque on small asteroids. His success in decoding the light curves of these objects required that he perfect techniques that allowed him to put the data from runs that spanned periods of up to two months onto a common system and to deal with the possibilities that the asteroid was not in simple, single-axis rotation, but might be "tumbling" and so present a highly-complex and non-repeating light curve. Stephen's work has been the foundation for papers published in *Icarus* and *Astronomy & Astrophysics* and he has been the author of more than 100 publications.

**Dan Maoz - Chambliss Award for Writing for 2009**
The recipient of the Chambliss Astronomical Writing Award is Dan Maoz, Professor of Physics and Astronomy at Tel-Aviv University, for his textbook "Astrophysics in a Nutshell." Providing a wide-ranging treatment of topics from stellar structure to cosmology, this advanced undergraduate text explains crucial physics with sufficient depth to capture students' curiosity without getting lost in detail.

"Astrophysics in a Nutshell" emphasizes "back-of-the-envelope" skills essential to the aspiring researcher, and offers an excellent array of well-crafted and creative problems for each chapter. The AAS is delighted to award this prize to Prof. Maoz for an outstanding contribution to advanced textbook literature.

*To foster and recognize excellence in astronomy, the Society awards or jointly awards with other organizations nine prizes for outstanding contributions to astronomical research. The AAS Divisions also award prizes for excellence in their fields of astronomy. Nominations for the various AAS awards are welcome each year by* ***30 June****. See aas.org/grants/awards.phpfor award requirements.*

# AAS Statement on Professional Ethics

Adopted by the AAS Council 8 January 2010

The mission of the American Astronomical Society is to enhance and share humanity's scientific understanding of the Universe. We believe the advancement of astronomy requires that we provide ethical guidelines for AAS members and, for that matter, anyone involved in professional astronomical activities.

Every astronomer is a citizen of the community of science. Each of us shares responsibility for the welfare of this community. We endorse the statement of the American Physical Society that "Science is best advanced when there is mutual trust, based upon honest behavior, throughout the community." All scientists should act ethically in the conduct of their research, in teaching and education, and in relations with both members of the public and other members of the scientific community. We have a special responsibility to students and postdoctoral fellows to train them in ethical conduct.

The American Astronomical Society believes that the following are the minimal standards of ethical behavior relating to the profession.

## Conduct Towards Others

All people encountered in one's professional life should be treated with respect. At no time is abusive behavior acceptable. Scientists should work to provide an environment that encourages the free expression and exchange of scientific ideas. They should promote equality of opportunity and treatment for all their colleagues, regardless of gender, race, ethnic and national origin, religion, age, marital status, sexual orientation, disabilities, or any other reason not related to scientific merit. This principle is clearly stated in our By-Laws (aas.org/governance/bylaws.php).

More senior members of the profession, especially research supervisors, have a special responsibility to facilitate the research, educational, and professional development of students and subordinates. This includes providing safe, supportive work environments, fair compensation and appropriate acknowledgment of their contribution to any research results. In addition, supervisors should encourage the timely advance of graduate students and young professionals in their career aspirations.

It is also incumbent on senior members of our profession to inform more junior members of these ethical issues and of institutional and government guidelines, policies and procedures related to the oversight and maintenance of ethical standards for research and conduct. It is the responsibility of all members of our Society to familiarize themselves with such guidelines, policies and procedures.

## Research

Data and research results should be recorded and maintained in a form that allows review, analysis, and reproduction by others. It is incumbent on researchers involved in large, publicly-supported studies to make results available in a timely manner.

Fabrication of data or selective reporting of data with the intent to mislead or deceive is unethical, unacceptable and fraudulent, as is the appropriation of unpublished data or research results from others without permission and attribution.

It should be recognized that honest error is an integral part of the scientific enterprise. It is not unethical to be wrong, provided that errors are promptly acknowledged and corrected when they are detected.

## Publication and Authorship Practices

All persons who have made significant contributions to a work intended for publication should be offered the opportunity to be listed as authors. This includes all those who have contributed significantly to the inception, design, execution, or interpretation of the research to be reported. People who have not contributed significantly should not be included as authors. Other individuals who have contributed to a study should be appropriately acknowledged. The sources of financial support for any project should be acknowledged/disclosed. All collaborators share responsibility for any paper they coauthor, and every coauthor should have the opportunity to review a manuscript before its submission. It is the responsibility of the first author to ensure these.

Proper acknowledgement of the work of others should always be given, and complete referencing is an essential part of any astronomical research publication. Authors have an obligation to their colleagues and the scientific community to include a set of references that communicates the precedents, sources, and context of the reported work. Deliberate omission of a pertinent author or reference is unacceptable. Data provided by others must be cited appropriately, even if obtained from a public database.

All authors are responsible for providing prompt corrections or retractions if errors are found in published works with the first author bearing primary responsibility.

Plagiarism is the presentation of others' words, ideas or scientific results as if they were one's own. Citations to others' work must be clear, complete, and correct. Plagiarism is unethical behavior and is never acceptable.

These statements apply not only to scholarly journals but to all forms of scientific communication including but not limited to press releases, proposals, websites, popular books, and podcasts.

Authors, editors and referees should also be aware of the professional and ethical standards that have been adopted for the AAS journals (aas.org/ethicsPolicy).

### Peer Review

Peer review is an essential component of many aspects of the scientific process such as evaluating research proposals, publishing research results, and evaluating colleagues for career advancement.

Peer review can serve its intended function only if the members of the scientific community are prepared to provide thorough, fair, and objective evaluations based on requisite expertise. Although peer review can be difficult and time-consuming, scientists have an obligation to participate in the process.

Reviewers should disclose conflicts of interest resulting from direct competitive, collaborative, or other relationships with those they are reviewing and recuse themselves from cases where such conflicts preclude an objective evaluation. It is unethical to seek to gain an advantage by means of reviewing the work of others, either through use of private information or biased reviews of other's work.

Privileged information or ideas that are obtained through peer review must be kept confidential and not used for competitive gain.

### Conflicts of Interest

Many activities of scientists and educators have the potential for a conflict of interest. Any professional relationship or action that may either be, or be perceived to be, a conflict of interest should be fully disclosed. Conflict of interest includes, but is not limited to, situations where the outcome of a deliberation will influence the financial status of one of the participants, or situations where decisions will affect the status of a person who is close to one of the participants. Most organizations or activities have mechanisms for managing conflicts, for example, through recusal. If a conflict of interest cannot be properly managed, the activity should be avoided or discontinued.

### Resources

There are many sources of ethics information and case studies appropriate to astronomers. We wish to specifically mention:

- The American Physical Society Guidelines for Professional Conduct: (www.aps.org/policy/statements/02_2.cfm)
- The DHHS Office of Research Integrity guide An Introduction to the Responsible Conduct of Research. (ori.dhhs.gov/documents/rcrintro.pdf)
- The Federal policy on research misconduct. (www.ostp.gov/cs/federal_policy_on_research_misconduct)
- The National Academies' On Being a Scientist. (www.nap.edu/catalog.php?record_id=12192)

# Chambliss Astronomy Achievement Student Awards

Through the generosity of AAS Member 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 gold-plated 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 215th 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; and a very special thank you to AAS member Bill Wells who organized the scheduling.

**Graduate Medal**
Sean M. Couch
Ian Crossfield
Scott Engle
Ryan Johnson

**Graduate Honorable Mentions**
Benjamin Davis
Christopher Crockett
Eric Hilton

**Undergraduate Medal**
Kyle Cook
Ian Czekala
Breann Sitarski

**Undergraduate Honorable Mentions**
Nicholas Hunt-Walker
Julie Moreau

# Division News

### Solar Physics Division (SPD)

Marcia Neugebauer, left, (U. Arizona) has been selected as the Hale Prize winner for 2010. The citation reads: The 2010 Hale Prize is awarded to Marcia Neugebauer for her seminal contributions to the discovery of the solar wind and her extensive and ongoing contributions to solar-heliospheric physics.

Brian Welsch (Space Sciences Lab) is the winner of the Karen Harvey prize. The citation reads: The 2010 Karen Harvey prize is awarded to Brian Welsch for his role in the development of correlation techniques to measure velocities at the solar surface.

# Highlights from a Truly Capital Meeting

The 215th AAS meeting in Washington, DC, in early January was more than just the largest in the Society's history. With 3,414 registrants, it was the largest astronomy meeting in the history of the universe—as far as we know, anyway! Attendees flocked to the Marriott Wardman Park hotel from all over the world to hear eight prize lectures and ten other invited talks, including a policy address by NASA Administrator Charles Bolden and a personal travelogue of the last Hubble servicing mission by astronaut John Grunsfeld. Astronomers presented more than 2,300 oral and poster papers, and some four-dozen researchers showcased newsworthy science in 11 press conferences eagerly attended by more than 100 reporters representing print, online, and broadcast media (both radio and TV).

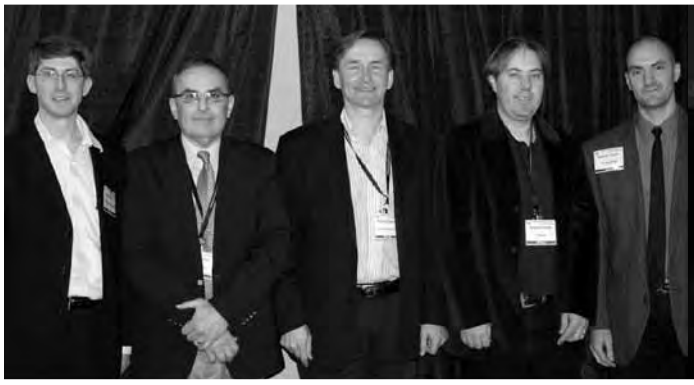
Among the many other highlights of the meeting was the Society banquet at the National Air and Space Museum, featuring a performance by the Capitol Steps in which Pluto was reminded that, sometimes, size does matter. Both the Historical Astronomy Division and the High Energy Astrophysics Division met concurrently with the parent society. There was so much going on all the time that you couldn't help but find something interesting no matter where you turned. The photographs on these pages barely scratch the surface. Unless otherwise noted, all photos are by Richard Dreiser, 

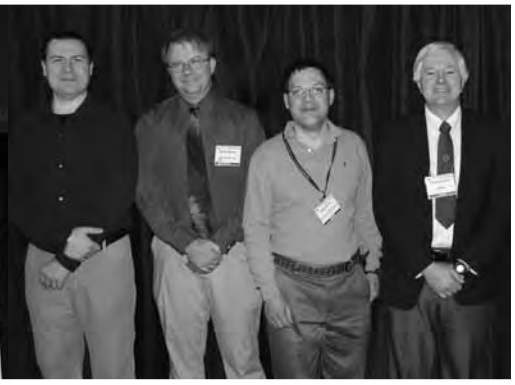
**Left:** Hundreds of students attended Sunday's undergraduate reception to learn about summer internships and graduate programs in astronomy. Among them were (L to R) Eric Geier, Brittin Borland, Sarah Friberg, Alicia VonLanken, and Michael Huff, all currently or formerly of Indiana University. **Middle:** Speaking at a HAD Special Session on the first century of astronomical spectroscopy, and proving that Auguste Comte was wrong when he said that the constitution of the stars is forever unknowable, were (seated, L to R) Barbara J. Becker (UC Irvine), Matthew Stanley (NYU), John B. Hearnshaw (Univ. of Canterbury, NZ), and (standing, L to R) Richard Jarrell (York Univ.), Barbara Welther (SAO), Joseph S. Tenn (Sonoma State Univ.), Vera Rubin (Carnegie Inst. of Washington), and David H. DeVorkin (NASM). Photo courtesy of Joseph S. Tenn. **Right:** Reporter Dennis Sadowski (Catholic News Service) interviewed Father George Coyne (Vatican Obs.), recipient of the 2009 George Van Biesbroeck Prize.

**Left:** Public-information officers Ray Villard (STScI) and Colleen Sharkey (ESA Hubble) had plenty to smile about with scientific results flowing from the newly refurbished Hubble Space Telescope. **Middle**: Visitors to the Press Room kept mixing up public-information officers Whitney Clavin (left, NASA/JPL) and Megan Watzke (CXC). **Right:** No AAS meeting would be complete without a press conference on black holes. Participants at the one in Washington, which featured new discoveries about stellar-mass, intermediate, and supermassive black holes, included Jimmy Irwin (Univ. of Alabama), Julie Comerford (UC Berkeley), Javiera Guedes (UC Santa Cruz), Francesca M. Civano (CfA), and Ruth Daly (Penn State Univ.).



**Left:** The exhibit hall was the perfect spot to meet old friends and make new acquaintances. L to R: Wes Traub (NASA/JPL), Nancy Roman (Chevy Chase, MD), and Ken Seidelmann (Univ. of Virginia). **Middle:** The Kepler mission's first exoplanet discoveries, including a "hot Jupiter" with the density of Styrofoam, made headlines all over the world. Presenting and discussing Kepler's ultraprecise stellar light curves at a Monday press briefing were (clockwise from top left) Dimitar Sasselov (CfA), Natalie Batalha (San Jose State Univ.), Bill Borucki (NASA/ARC), Ron Gilliland (STScI), Pete Worden (NASA/ARC), Jon Morse (NASA HQ), and Caty Pilachowski (Indiana Univ.). **Right:** Sara Schechner (Harvard Univ.), past chair of the Historical Astronomy Division, presented HAD's 2010 LeRoy Doggett Prize to Michael J. Crowe (Univ. of Notre Dame), whose prize talk explored milestones in the centuries-old debate about the existence of extraterrestrial life.



**Left:** L to R: John Martin (Univ. of Illinois, Springfield), Edward Sion (Villanova Univ.), Peter Garnavich (Univ. of Notre Dame), and Andrew Drake (Caltech) presented new results on exploding stars ranging from recurrent novae to pair-instability supernovae. Nathan Smith (right, UC Berkeley) helped reporters appreciate the implications of the discoveries. **Middle:** Joshua Bloom (UC Berkeley) received the 2009 Pierce Prize for his observational and theoretical work on gamma-ray bursts. **Right**: L to R: Donald Hoard (Caltech), Brian Mason (USNO), and Robert Zavala (USNO) briefed reporters on new solutions to old stellar mysteries, including what's eclipsing Epsilon Aurigae. Arne Henden (right, AAVSO) offered sage commentary.



**Left:** On Monday evening AAS members and the press corps roasted Steve Maran (seated) on the occasion of his retirement after 25 years as AAS Press Officer. Neil deGrasse Tyson (AMNH) obviously relished his role as master of ceremonies. Photo by Larry Marschall (Gettysburg College). **Middle:** Enjoying cocktails and cake at a reception before the roast are (L to R) incoming AAS president Debra Elmegreen (Vassar College), AAS Executive Officer Kevin Marvel, AAS past president J. Craig Wheeler (Univ. of Texas) holding a "Marantini," and Marvel's wife, Tamara Koch. **Right:** Among those roasting the former AAS Press Officer was the new AAS Press Officer, Rick Fienberg, who literally went over the top in his attempt to look the part.


**Left:** Scott Gaudi (Ohio State Univ.) received the 2009 Warner Prize and gave a talk entitled "The Demographics of Exoplanets." **Middle:** Aaron Wolfe (Villanova Univ.) explains to Robert Noyes (CfA) how he concluded that K-type dwarfs are the 'Goldilocks' stars for hosting long-term habitable planets. **Right**: Scientists working with each of the still-orbiting Great Observatories unveiled dramatic new images of galaxies near and (very) far at a press briefing on Tuesday. L to R: Karl Gordon (STScI), Roman Shcherbakov (CfA), John Grunsfeld (STScI), Garth Illingworth (UC Santa Cruz), and Rogier Windhorst (Arizona State Univ.).

**Left:** Rogier A. Windhorst (left, Arizona State Univ.) and Garth Illingworth (UC Santa Cruz) told reporters about the latest ultradeep images from the Hubble Space Telescope, which reveal galaxies and galaxy fragments at redshifts of 8 and possibly higher. **Middle:** Several HEAD sessions were devoted to new findings from the Fermi mission. At a Tuesday press conference, Paul Ray (left, NRL) and Scott Ransom (second from left, NRAO) described Fermi observations of pulsars, after which Andrea Schmidt and John Singleton (both LANL) presented a new emission model that seems able to reproduce pulsar spectra from radio waves through gamma rays. **Right**: Carlson Chambliss (Kutztown, PA), who generously funded the AAS Chambliss awards, explained the design of the prize medals to Andrea Dupree (CfA). Photo by Kenneth Rumstay (Valdosta State Univ.).

**Left:** Four-time shuttle astronaut Charles Bolden, now the NASA Administrator, walked around the exhibit hall with Anita Krishnamurthi, the AAS's Bahcall Public Policy Fellow. **Middle:** NASA science director Edward Weiler points out features on a model of the James Webb Space Telescope to his boss, who piloted the Hubble Space Telescope's deployment mission in 1990. AAS president John Huchra (background, CfA) looks on. **Right**: Standing in front of a mural depicting an ultradeep Hubble image, for scale, are Matt Mountain (STScI), John Huchra (CfA), Edward Weiler (NASA HQ), Garth Illingworth (UC Santa Cruz), Charles Bolden (NASA HQ), Rogier Windhorst (Arizona State Univ.), and Jon Morse (NASA HQ).

**Left:** As no one knows better than an astronaut, it's a small world. AAS Membership Director Faye Peterson (right) is second cousin to the wife of NASA Administrator Charles Bolden. **Middle:** During his public-policy address, Bolden pledged not to take money from space science to pay for human space flight, a remark that prompted loud applause. **Right:** AAS president John Huchra and Hubble repairman John Grunsfeld exchanged certificates of appreciation before Grunsfeld described how he and his crewmates on *Atlantis*'s STS-125 mission gave the Hubble Space Telescope a new lease on life. AAS members honored the former astronaut, now deputy director of STScI, with a standing ovation to thank him for risking his life to refurbish Hubble for the benefit of all astronomy.

**Left:** At a Wednesday news conference on the "dark side" of cosmology, (L to R) Gene Byrd (Univ. of Alabama), David Law (UCLA), Niv Drory (MPIE), and Stacy McGaugh (Univ. of Maryland) presented new findings on dark matter and dark energy from the Local Group to the edge of the visible universe. **Middle:** Larry Marschall (Gettysburg College), seen here at a news conference, has been volunteering as AAS Deputy Press Officer for more than a decade. **Right:** AAS president John Huchra (left, CfA) and Cathy O'Riordan (AIP) presented Lennox Cowie (Univ. of Hawaii) with the 2009 AAS-AIP Heinemann Prize for his seminal work on galaxy formation and evolution.

**Left:** Kepler wasn't the only source of exoplanet news in Washington. At a Wednesday press briefing, (L to R) Xavier Koenig (CfA), Carl Melis (UC San Diego), Rory Barnes (Univ. of Washington), Brian Jackson (NASA/GSFC), and Scott Gaudi (Ohio State Univ.) presented new findings from ground-based exoplanet searches using a variety of technologies, including gravitational microlensing. **Middle:** AAS president John Huchra (CfA) presented the 2009 Cannon Award to supernova expert and fellow Harvard-Smithsonian astronomer Alicia Soderberg. **Right**: As she has for many years, Deputy Press Officer Inge Heyer (Joint Astronomy Centre) ably orchestrated activities in the AAS Press Room and managed to keep chaos at bay.




**Left:** Chryssa Kouveliotou (NASA/MSFC) presented the 2009 HEAD Rossi Prize to Charles Bailyn (Yale Univ.), Ronald Remillard (MIT), and Jeffrey McClintock (CfA) for their measurements of stellar black hole masses in the Milky Way. **Middle:** William Irace (left, NASA/JPL) and David Leisawitz (NASA/GSFC) unveiled the first-light image from the WISE satellite, which is now working on an all-sky survey of the infrared sky. **Right:** Sometimes astronomy really is rocket science, as implied by this juxtaposition at the National Air and Space Museum, site of the Society banquet. Photo by Kevin Marvel.



**Left:** At the AAS banquet at the National Air and Space Museum, Hubble repairman John Grunsfeld (STScI) chatted with 2010 Cannon Award recipient Anna Frebel (CfA). Photo by Kevin Marvel. **Middle:** AAS president John Huchra (right, CfA) presented Peter Serlemitsos (NASA/GSFC) with the 2009 Joseph Weber Award for his innovative contributions to X-ray detector and telescope designs. **Right:** With a performance of musical satire by the Capitol Steps just minutes away, AAS president John Huchra (CfA) honored Mary Kay Hemenway (Univ. of Texas, Austin) with the 2009 AAS Education Prize.



**Left:** At the Society banquet, AAS president John Huchra (CfA) gave Jean and Ric Edelman of Edelman Financial Services a certificate of appreciation for their generous donation of 15,000 Galileoscope kits to U.S. schoolteachers. **Middle:** At the DC meeting's final news briefing, Sangwook Park (left, Penn State Univ.) and Edward Young (UCLA), who participated by teleconference and isn't pictured, presented new findings with implications for the enrichment of the solar nebula by supernova ejecta. Mordecai-Mark Mac Low (AMNH) explained how Earth survived the epoch of orbital migration, and Cesar Fuentes (CfA) showed how he dug into the Hubble archive and came up with some new Kuiper Belt Objects. **Right:** Still standing at the end of a very busy week in the press room are (L to R) former AAS Press Officer Steve Maran, his successor, Rick Fienberg, Deputy Press Officers Inge Heyer and Larry Marschall, and AAS photographer Richard Dreiser. Photo by Ray Villard (STScI).

# Practical Astroinformatics: An Emerging Discipline

Kirk Borne (GMU), D. Burke (CFA), A. Connors (Eureka), S. G. Djorgovski (Caltech), E. Feigelson (PSU), A. Goodman (CFA), M. Graham (Caltech), E. Guinan (Villanova), T. Loredo (Cornell), H. Newberg (RPI), P. Protopapas (CFA), A. Szalay (JHU)

In the past two years, we have witnessed the emergence of an informatics-oriented approach to astronomical research: Astroinformatics. This was especially evident at the January 2010 AAS meeting in Washington DC, where two special sessions were held: "Practical Astroinformatics: An Emerging Discipline," and "Beyond Simple Models—New Methods for Complex Data" (Astrostatistics). The Astroinformatics session was "standing room only," with a large enthusiastic audience, who were treated to five invited talks and a lively panel discussion. The Astrostatistics session was the last session of the conference and yet it also retained a large interested audience, who were delighted with a final presentation by Dr. Xiao Li Meng, distinguished statistician from Harvard.

What is Astroinformatics? This is the discipline of data-oriented astronomy research and education that focuses on very large datasets. It is related to similar disciplines in the fields of biological science and geosciences: Bioinformatics and Geoinformatics. Astroinformatics is related to the more established field of Astrostatistics: the former focuses on data mining in very large datasets, and the latter focuses on data analysis of complex datasets. The massive and complex data products from current and future sky surveys are driving the need for more sophisticated analysis algorithms, data handling methods, and research approaches that are associated with both informatics and statistics research. All of these research activities are encouraged, enabled, and enhanced by the rich panoply of Virtual Observatory (VO) data discovery, access, and manipulation tools.

Since 2008, there have been several international conferences devoted to astroinformatics and astrostatistics-related research topics. There will be at least two additional related conferences this year: the Practical Astroinformatics conference at Caltech (June 2010), and the NASA Conference on Intelligent Data Understanding (October 2010). These conferences will focus on the fundamental research sub-disciplines within astroinformatics: machine learning (data mining), statistics, visualization, semantics, and large-database analysis. For more information, including details from previous conferences, visit www.practicalastroinformatics.org, or contact Kirk Borne at kborne@gmu.edu.

# Honored Elsewhere

## deGrasse Tyson selected as EarthSky Science Communicator of the Year

EarthSky, a clear voice for science heard around the world, and more than 600 scientists today announced the selection of Neil deGrasse Tyson as the EarthSky Science Communicator of the Year for 2009.

Tyson is an astrophysicist and the Frederick P. Rose Director of the Hayden Planetarium at the American Museum of Natural History in New York. Since 2006, he has served as host of PBS's educational television show NOVA scienceNOW. He has been a frequent guest on The Daily Show, The Colbert Report, and other programs. Tyson was selected as EarthSky Science Communicator of the Year after EarthSky asked its 600+ Global Science Advisors to nominate and vote on which scientists had best communicated with the public during 2009. Tyson's name rose to the top from a wide field of prestigious figures in science.

EarthSky is featuring Tyson in an eight-minute EarthSky Clear Voices for Science podcast, speaking on the importance of science in creating an informed U.S. electorate.

EarthSky, producer of the internationally syndicated science podcasts in English and Spanish, serves as a platform for scientists to speak on important issues facing the 21st century. Through its global broadcast network and online outlets, EarthSky creates 15 million media impressions for science and scientists every day. In other words, people hear, watch or read the words of scientists, via EarthSky, that often every day.

## Geller Receives Academy Honors

The National Academy of Sciences (NAS) will honor 17 individuals with awards in recognition of extraordinary scientific achievements in the areas of biology, chemistry, geology, astronomy, and psychology.

Margaret J. Geller, senior scientist at the Smithsonian Astrophysical Observatory, is the recipient of the James Craig Watson Medal. Geller is being honored for her role in critical discoveries concerning the large-scale structure of the universe, for her insightful analyses of galaxies in groups and clusters, and for her being a model in mentoring young scientists. The award—consisting of a medal, a $25,000 prize, and a gift of $25,000 to an institution of the recipient's choosing—recognizes contributions in astronomy.

The National Academy of Sciences is a private, nonprofit honorific society of distinguished scholars engaged in scientific and engineering research, dedicated to the furtherance of science and technology and to their use for the general welfare. Since 1863, the National Academy of Sciences has served to "investigate, examine, experiment, and report upon any subject of science or art" whenever called upon to do so by any department of the government.

# Committee on Employment

Eric Gawiser (Rutgers University) & M. Virginia McSwain (Lehigh Univ.)

## Making the Job Application Process More Efficient

From students to senior faculty, we are inundated with e-mail, homework, grading, lesson-planning, mentoring, reading, observing, coding, data analysis, proposals, papers, refereeing, job-applying, letter-writing, and hiring. This time crunch would be alleviated somewhat if technological advances could make astronomers more efficient in applying for jobs, writing recommendation letters, and reviewing applications.

Typical postdoc and faculty job ads require you to rework the research statement to be a "short statement of research interests" or a "joint statement of research accomplishments and plans" or "separate statements of research accomplishments and research plans," with varying page limits. And then you have to navigate a webform or package it up into one PDF, proofread to make sure you didn't forget to query-replace all variations of the university and department names, and send it in. In the end, most of the time is spent on bureaucratic details rather than adding real value to the applications. There must be a better way!

This cycle, one of us is writing recommendation letters for six applicants. Six letters take time to write, but if one tailors each to the position being sought it becomes sixty. So lofty goals of tailoring can degenerate into changing the name of the institution at the beginning and end, proofreading to make sure that you did not introduce errors, and figuring out how to submit it to the right email address or webform. The nature of the process makes it seem callous to write a generic "To Whom It May Concern" letter and submit it everywhere, but that would save time that's currently spent on cosmetic changes. There must be a better way!

Another of us has served on more than her fair share of faculty search committees. In her first search, applications were managed in the traditional fashion: paper copies arrived by mail. The committee used file folders stored in portable plastic crates to organize the applications alphabetically, and they put colored stickers on the file tabs to indicate which committee members had viewed the file. Since there was only a single copy of each file available, they had to keep the crates in a secure common space where all committee members could find it. That meant spending weekends in the conference room flipping pages, taking handwritten notes, looking for misplaced files, and cursing those darn stickers that were constantly falling off. With only a single paper application circulating during our meetings, committee members often had to rely on incomplete notes or unreliable memory, resulting in some misunderstandings as the shortlist was made. There must be a better way!

What if the astronomy community could expand the successful AAS Job Register to manage applications? Applicants would save time and reduce stress during the application process by uploading electronic cover letters, research statements, and CVs with the ability to replace files if a mistake is realized. They could create a default statement that could either be submitted to each position they apply for or customized to reflect specific collaborators and facilities available at a given institution. The database could support multiple application formats appropriate for postdocs, fellowships, faculty, etc. Employers and search committees could access the password-protected files online, anytime, anywhere. References could submit their letters electronically without a hassle, choosing between an automatically-propagated default letter or customization. The secure database could even record the comments of each search committee member and offer a numerical ranking system that could be viewed by any committee member. The database could be sorted by rank, alphabetical order, applicant demographics, or any other attribute, and during meetings, it could instantly pull up a recommendation letter or research statement for further discussion. The database could be set up to display only candidates on the shortlist once it has been chosen.

Sound like a fairy tale? Such a database exists at http://academicjobsonline.org, supported by Duke University. For the math community, the American Mathematical Society sponsors a version called MathJobs.org. Employers in North America pay a modest annual fee that allows up to seven job postings and online application review. For job seekers and letter writers, the service is free. The database can handle all of the above functions. One of us used MathJobs.org while serving as an external committee member on a Math Department search, and it greatly improved the experience.

We propose that the AAS work with AcademicJobsOnline.org to adapt this application database to Astronomy. It could even bring in a new source of revenue for the AAS if the society contracts with AcademicJobsOnline.org and charges users a small markup. Learning to use just one website and being able to automatically propagate a CV, publication list, and statement of research accomplishments into each application would save applicants considerable time. Applicants should still be encouraged to submit a tailored statement of research plans utilizing the resources of a given institution. Letter-writers face the same important choice between submitting a generic letter or a carefully crafted one based on the job description and available facilities, but submission of multiple letters will be faster with a single web interface to learn.

On the downside, an AstroJobs.org database might invite more applications for every position, as nothing would stop someone from posting the same CV as a reply to every ad.

*continued on next page*

It will help to encourage people to focus on jobs that fit them well via clear communication in the job ad and educating applicants not to waste their time. However, current searches already attract irrelevant or unqualified applicants, and a cursory glance at the application is enough to dismiss about half of the pile. The best candidates will continue to rise to the top by customizing their applications and getting recognized for their achievements.

No employer would be forced to use this database, but given that it's already well-developed, tested, and efficient, we expect that it would rapidly become the standard application process for individual postdocs, faculty jobs, and many postdoc fellowships. And then we'd all have a bit more time to do research – or hit the gym!

*The opinions of the authors are their own, and do not necessarily reflect the views of the AAS Committee on Employment. We welcome your comments and responses to this and previous columns. Check out our website (aas.org/career/) for additional resources and contact information for the committee members.*

# Status of Women in Astronomy

Joan Schmelz, CSWA Chair, University of Memphis, jschmelz@memphis.edu

## Another Glass Ceiling Shatters!

The 2010 Hale Prize goes to Marcia Neugebauer for her seminal contributions to the discovery of the solar wind and her extensive and ongoing contributions to solar-heliospheric physics.

The Hale Prize is awarded to a scientist for outstanding contributions to and impact on the field of solar astronomy. It was first awarded in 1978; this is the first time it will go to a woman.

Marcia Neugebauer has not only made fundamental contributions to the understanding of Solar and Space Physics, but she has also had an enormous personal impact on the field.

"Contributions of 20th Century Women to Physics," http://cwp.library.ucla.edu/, highlights some of the important scientific contributions Marcia has made during her illustrious career:

1. "Mariner 2 Observations of the Solar Wind, 1. Average Properties," (with C. W. Snyder) J. Geophys. Res. 71:4469 (1966) contained the first extensive measurements of the solar wind as well as the discovery of many of it properties.

2. "Initial Deceleration of Solar Wind Positive Ions in the Earth's Bow Shock," J. Geophys. Res. 75:717 (1970) showed how ions are decelerated at the bow shock, an important step not only in understanding the mechanisms that produce this shock, but also the shocks that occur throughout the solar system and presumably the galaxy and beyond.

3. "Observations of the Internal Structure of the Magnetopause," (with C.T. Russel and E.J. Smith) J. Geophys. Res. 79:499 (1974) showed that the magnetopause was a thick boundary of many ion gyroradii, and changed the theory of the structure of the boundary.

4. "The Role of Coulomb Collisions in Limiting Differential Flow and Temperature Differences in the Solar Wind," J. Geophys. Res. 81:78 (1976) showed that despite the "collisionless" nature of the solar wind, there was evidence that energy equipartition between H+ and He+ could be understood in terms of the Coulomb collision frequency for the two species.

5. "The Velocity Distributions of Cometary Protons Picked Up by the Solar Wind," (with A. J. Lazarus, H. Balsiger, S. A. Fuselier, F. M. Neubauer and H. Rosenbauer) J. Geophys. Res. 94:5227 (1989) measured the velocity distributions of ions in the coma of comet Halley.

6. "Densities and Abundances of Hot Cometary Ions in the Coma of P/Halley," (with R. Goldstein, B. E. Goldstein, S. A. Fuselier, H. Balsiger and W.-H. Ip) Astrophys. J. 372:291 (1991) measured the mass spectrum of ions in the outer coma of comet Halley.

Marcia has been a Co-PI for the solar wind experiments on Mariner 2, OGO 5, Apollo 12, Ulysses, Giotto, WIND, CELIAS on SOHO, and the Genesis Discovery mission. She has management experience as the supervisor of the JPL Space Plasma Physics Group, manager of the JPL Physics Section and Space Physics Section, and as the lead scientist for the JPL Space Physics Element. She has given back to the community through her service as an associate editor of JGR, secretary, president elect, and president of the Solar-Planetary Relationships Section of the AGU, editor in chief for Reviews of Geophysics, president elect and president of the AGU, and a member of the governing board of the American Institute of Physics. She has numerous awards and medals, is the author of over 200 scientific publications, and the editor of six books.

For these and many other reasons, Marcia Neugebauer is well deserving of the 2010 Hale Prize. Watch out! The shards of that shattered glass ceiling are falling all around us.

# Announcements

## AAS Membership Calendar

As a membership benefit, the AAS Membership Calendar includes important dates, such as proposal and grant deadlines and AAS sponsored meetings. 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. Sponsorship space is provided on a first-come, first-served basis. Groups interested in sponsoring a month may contact Crystal Tinch (crystal@aas.org) for more information and pricing details for the 2010 calendar. Deadline for sponsorship is 1 September 2010.

## Call for Arecibo Observing Proposals

NAIC invites proposals for use of the 305-m diameter Arecibo radio telescope in respect of its 1st June 2010 deadline. These would be for using the telescope in the eight months beginning 1st October 2010.

Proposal submission details, and a web-based cover sheet, can be found at www.naic.edu/science/proposals_set.htm. A guide for new telescope users is at www.naic.edu/~astro/guide.

Radio sources with declinations of -1 < Dec < +37.5 deg are visible from Arecibo. Available receivers in the (frequency-agile) Gregorian Dome cover 1.1 - 10 GHz, plus selected lower frequencies. Pulsar, spectral-line, VLBI and continuum backends are available to exploit these. User-related information is at www.naic.edu/~astro/astronomy.htm.

The Arecibo Mk-5A disc-based recorder for Very Long Baseline Interferometry (VLBI) is available for use with the HSA, EVN and Global networks at all bands up to 10 GHz. VLBI proposals should be submitted directly to these networks rather than to Arecibo; include special justification for the use of the 305-m telescope. The maximum data recording rate at Arecibo is currently 1 Gbps, (512 Mbps with the HSA). eVLBI science observations up to 512 Mbps have been made with the EVN.

## International Space Weather Initiative

Sharafat Gadimova and Hans J. Haubold, United Nations Office for Outer Space Affairs, Vienna International Centre, Vienna, Austria, Sharafat.Gadimova@unvienna.org

The United Nations Committee on the Peaceful Uses of Outer Space (UNCOPUOS), in its fifty-second session in Vienna from 3 to 12 June 2009, noted the importance of continuing to build upon the successes of the International Heliophysical Year 2007 (IHY 2007, http://ihy2007.org/), in particular by deepening the understanding of the function of the Sun and its effects on the Earth's magnetosphere, environment and climate, and noted with satisfaction the agreement reached by the Scientific and Technical Subcommittee at its forty-sixth session to consider, beginning at its forty-seventh session in February 2010, a new agenda item entitled "International Space Weather Initiative (ISWI)" under a three-year workplan (2010, 2011, 2012) with specific focus on the effects of space weather on the Earth. ISWI will utilize the ground-based world-wide IHY instrument arrays under deployment since 2005.

International ISWI workshops have been tentatively scheduled to be hosted by Egypt (2010) for Western Asia, Nigeria (2011) for Africa, and Ecuador (2012) for Latin America and the Caribbean. The 2009 UN/ESA/NASA/JAXA Workshop on Basic Space Science and the International Heliophysical Year 2007, held in the Republic of Korea in 2009, started implementing the ISWI as put forth by UNCOPUOS (http://bssihy.kasi.re.kr/unbssw_newsletter.aspx). Major elements of ISWI will be issuing of an ISWI Newsletter by Bulgaria and an ISWI Website (http://www.iswi-secretariat.org/) by Japan on a continuing basis in the period of time 2010-2012 to assure world-wide delivery of the results of ISWI and its instrument arrays. This will cover all 192 Member States of the United Nations.

## IAU Commission 46 on Education and Development

The semiannual newsletter of IAU Commission 46 on Education and Development is now available online at physics.open.ac.uk/%7Ebwjones/IAU46/pdf/IAUNL71small-file.pdf

It includes information about a documentary about Galileo, a link to a resource guide to the Moon, discussions of international astronomy education, news of meetings in Spain, Sri Lanka, and Odessa, and a new feature: book reviews.

## Viktor Ambartsumian International Prize

The Viktor Ambartsumian Prize is one of the important awards in astronomy/astrophysics and related sciences. It is being awarded to outstanding scientists having significant contributions in the physical-mathematical sciences from any country and nationality. The Prize totals USD 500,000 and is being awarded once every two years, starting with 2010.

Please see details for nominations at http://vaprize.sci.am.

# Calendar of Events

## AAS & AAS Division Meetings

DDA Meeting
25-29 April 2010, Brookline, MA
LOC Chair: Matija Cuk
(cuk@eps.harvard.edu)

## Other Events

*Stellar Populations in the Cosmological Context
3-6 May 2010, Baltimore, MD
Jason Kalirai and Massimo Robberto
(jkalirai@stsci.edu)
stsci.edu/institute/conference/spring2010

Magnetic Fields: From Core Collapse to Young Stellar Objects
17-19 May 2010, London, Ontario
Shantanu Basu (basu@astro.uwo.ca)

Meteoroids 2010
24-28 May 2010, Breckenridge, CO
Diego Janches (diego@cora.nwra.com)
cora.nwra.com/Meteoroids2010/

*End-of-Term Hawaii Open Meeting on Exoplanets
27-28 May 2010, Honolulu, HI
Eric Gaidos (gaidos@hawaii.edu)
http://www.soest.hawaii.edu/GG/FACULTY/GAIDOS/ethome.html

6th Solar Polarization Workshop
30 May-4June, Maui, HI
kopiko.ifa.hawaii.edu/spw6/

IAU Symposium 270: Comptational Star Formation
31 May – 4 June 2010, Barcelona, Spain
SOC co-chairs: J. Alves, B. Elmegreen, V. Trimble
iaus270.org

*Scientific Opportunities for new Instrumentation, Asilomar 2010 (SOFIA2010)
6-8 June 2010, Monterey Peninsula, CA
B-G Andersson
(asilomar2010@sofia.usra.edu)
sofia.usra.edu/Asilomar2010

Twelfth Synthesis Imaging Workshop
8-15 June 2010, Socorro, NM
Amy Mioduszewski (amiodusz@nrao.edu)
aoc.nrao.edu/events/synthesis/2010/

The First Galaxies, Quasars & Gamma-Ray Bursts
6-10 June 2010, Pennsylvania State Univ
Yuexing Li and Derek Fox
(yuexing@astro.psu.edu)
astro.psu.edu/firstgalaxies

ASTRONUM-2010: The 5th International Conference on Numerical Modeling of Space Plasma Flows
14-19 June 2010, San Diego, CA
Nikolai Pogorelov
(Nikolai.Pogorelov@uah.edu)
icnsmeetings.com

UP: Have Observations Revealed a Variable Upper End of the Initial Mass Function?
21-25 June 2010, Sedona, AZ
Mark Seibert (up2010@obs.carnegiescience.edu)
up2010.obs.carnegiescience.edu

IAU Symposium 271
Astrophysical Dynamics: From Stars to Galaxies
21-25 June, 2010, Nice, France
Allan Sacha Brun (sacha.brun@cea.fr)
irfu.cea.fr/Projets/IAUSymp271

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

Second Workshop on Binaries in the Solar System
13-15 July 2010, Poznan, Poland
Bill Merline or Agnieszka Kryszczynska
(binaries2@boulder.swri.edu)
boulder.swri.edu/binaries2-mtg/

*Chemistry, Dynamics and Structure of the Milky Way, Summer School and Workshop on Galactic Studies with the LAMOST Surveys
5-23 July 2010, KIAA-PKU, Beijing
kiaa.pku.edu.cn/Activities/sw2010/

International Summer Institute for Astrophysical Modeling (ISIMA): Transport Processes in Astrophysics
5 July-13 August 2010, UC Santa Cruz
Pascale Garaud (isima@ucsc.edu)
isima.ucsc.edu

Chandra Science Workshop
12-15 July 2010, Boston, MA
Pail Green (pgreen@cfa.harvard.edu)
cxc.harvard.edu

*Accretion Processes in X-rays: from White Dwarfs to Quasars
13-15 July 2010, Boston, MA
Paul Green (accr10@cfa.harvard.edu)
http:// cxc.harvard.edu/cdo/accr10/

*Probing the High Redshift Universe - Event E12 of the 38th COSPAR Scientific Assembly
18-25 July 2010, Bremen, Germany
Pete Roming (roming@astro.psu.edu)
cospar-assembly.org

IAU Symposium No. 272
Active OB Stars: Structure, Evolution, Mass Loss, and Critical Limits
19-23 July 2010, Paris, France
Coralie Neiner (Coralie.Neiner@obspm.fr)
iaus272.obspm.fr

Meteoritical Society Annual Meeting
26-30 July 2010, New York, NY
Denton Ebel (debel@amnh.org)
metsoc2010.org/

2010 Sagan Summer Workshop
26-30 July 2010, Pasadena, CA
Dawn Gelino
(sagan_workshop@ipac.caltech.edu)
nexsci.caltech.edu/workshop/2010/index.shtml

Cosmos in the Classroom 2010
1-4 August 2010, University of Colorado, Boulder
www.astrosociety.org/events.hmtl

*10th International Colloquium on Atomic Spectra and Oscillator Strengths for Astrophysical and Laboratory Plasmas
3-7 August 2010, Berkeley, CA
Jaan Lepson (asos10@ssl.berkeley.edu)
http://sprg.ssl.berkeley.edu/labastro/ASOS10/index.html

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 cadcwww.hia.nrc.ca/meetings.

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

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**Newsletter 151 March/April 2010**

# Washington News

Anita Krishnamurthi, John Bahcall Public Policy Fellow, anitak@aas.org

The President's budget request was released on 1 February and it reflects the priorities of the Administration—there are big investments in climate change research, renewable energy, and STEM education. Overall, science has fared well in this budget with NSF getting an 8% increase to $7.4B and NASA's request of $19B with roughly $5B going to the Science Mission Directorate.

Of course, this does not mean that the wealth has been spread evenly. The biggest news on NASA is that the Constellation program has been cancelled and an entirely new vision for the manned spaceflight program proposed. Within NASA's science budget, Earth Science sees the biggest increase with an additional $382M over FY2010. Planetary science and Heliophysics see some small increases. In some very good news for planetary science, a restart of Pu-238 production with DOE is called out specifically. As I have discussed before, the Administration had requested funds for this restart last year to enable planetary science missions but Congress had zeroed out the request. So this is a promising start and we will have to make sure we engage Congress on the issue so it actually gets funded this time around.

However, there is a decline in funding for astrophysics, about $25M or 2.5% at NASA. The news is not much better at NSF. The Astronomical Sciences (AST) at NSF received the smallest increase (2.5%) within the Mathematical and Physical Sciences Directorate (which in itself received a very modest increase of 4.3%, lower than other directorates within NSF). We are waiting for the report of the ongoing Astronomy and Astrophysics Decadal Survey to help set priorities. OSTP and the agencies are also waiting to see what it says. But the question is—will there be a budget in the coming year(s) that supports the aspirations of the community? These are indeed tough economic times but as we see with this year's budget, priorities will get funded.

So let's view this as a call to get more engaged in the process and get to know our Congressperson(s)! As I said in my last column, Congress assumes their constituents are happy if they don't hear from them. So write letters, make phone calls, visit them if you are in DC or when they are back home in their districts—tell them about your concerns and make the case for increased astronomy funding. Keeping in mind that all politics is local, let them know what astronomy funding is doing for their own district as well as specifying the long-term societal benefits of curiosity-based science.

Check out the AAS "Contacting Congress" page (aas.org/policy/contact.php)—there are some great tips there on how to write letters to Congress and how to set up a visit. Draft your letters and have stamped and addressed envelopes so that you can respond quickly when you need to act. We will be communicating with you through our Informational Emails and Action Alerts as the year goes by. Let us work together to advocate effectively for astronomy funding this year and also as the next year's budget gets formulated for the overall health and vibrancy of our field.