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# AAS NEWSLETTER

A Publication for the members of the American Astronomical Society

## PRESIDENT'S COLUMN

Robert Kirshner, [aaspres@as.org](mailto:aaspres@as.org)

As I write this, summer is definitely winding down, and the signs of Fall on a college campus are all around: urgent overtime work on the last licks of summer renovations is underway, vast piles of trash and treasure from cleaning out dorm rooms are accumulating, with vigorous competitive double-parking of heavily-laden minivans just ahead. With the Galaxy overhead most of the night, and the summer monsoon in progress in Arizona, the pace of supernova studies slackens just a bit (for me, anyway) and I had time to do a little summer reading. There were too many mosquitoes in Maine to read in a hammock, but there was enough light on the screened porch.

One of the great pleasures of life is to read something on a topic where you think you know a lot, and to find you have a lot to learn. Reading the slim volume "Miss Leavitt's Stars: The Untold Story of the Woman Who Discovered How to Measure the Universe," by George Johnson (Atlas Books, 2005, \$22.95) gave me that special pleasure. We all

know that Henrietta Swan Leavitt measured the Cepheid variable stars in the Magellanic Clouds to establish the period-luminosity relation, and that this rung on the distance ladder let Hubble reach M31 and other nearby galaxies. And I recognized George Johnson's name from his thoughtful pieces in the *New York Times* science pages.

But I confess, though I walk on the streets where she lived, work in a building connected by a labyrinth to the one she worked in, and stand on the distance ladder every day, my cerebral cortex is a little short on retrievable biographical details for Henrietta Swan Leavitt. Johnson has plumbed the Harvard archives, local census records, and the correspondence of Harvard College Observatory Directors to give us a portrait of astronomical research at the turn of the century, and of this dedicated woman who opened up the path to cosmic distances.

Director Edward Pickering had an industrial model of research: "A great observatory should be as carefully organized and administered as a railroad.

CONTINUED ON PAGE 3

Inside

3

Who Served Us Well:  
John N. Bahcall

5

Katrina Affected  
Physics and  
Astronomy (KAPA)  
Community Bulletin  
Board

6

New AAS  
Membership Class:  
International  
Affiliate

11

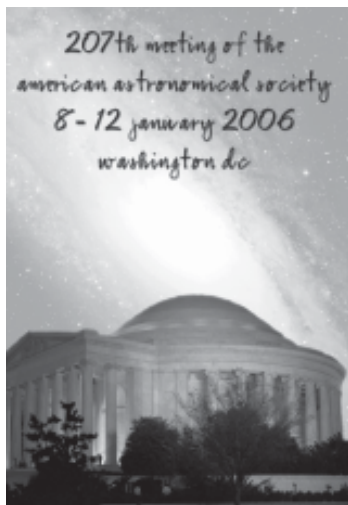
AAS Statement on the  
Teaching of Evolution

13

Congressional Visits  
Day Summary

Back cover  
Washington News

## AAS MEETS IN WASHINGTON DC 8-12 JANUARY 2006



The 207th AAS meeting returns to Washington on 8-12 January 2006. This meeting will be held in the Marriott Wardman, easily accessible from the Ronald Reagan Washington National Airport and located on the Metro's Red Line. The Society Vice-Presidents have invited excellent speakers including two Nobel Prize winners; the Russell, Heineman and Warner Prize Lectures will be given. AAS Members are organizing over 20 special sessions with topics ranging from Hot Jupiters to the Epoch of Reionization. HAD and HEAD sessions are also on the program.

Lunchtime events include town meetings by NASA, NSF, JWST, ALMA, EVLA, Constellation-X and the IAU. Education and Career Workshops will be held on the weekend prior to the official opening of the meeting. The NASA Center of Astronomy Education Teaching Excellence Workshop requires separate registration. See the online Meeting Announcement ([www.aas.org/meetings/aas207](http://www.aas.org/meetings/aas207)) for details.

Contributed papers will round out the Meeting Program. Abstracts of presentations for the DC Meeting are due on Wednesday, 19 October 2005 at 9pm EDT.

The AAS Job Center, Cyber Café, Exhibits and Gadgets and Gizmos displays will run for all four days of the meeting. An Undergraduate Orientation introduces students to the astronomical community and the meeting structure. The Graduate Networking event allows those entering the job market to meet employers and the AAS Employment Committee in an informal atmosphere.

The Executive Office is in the process of scheduling a scientific tour in the DC area as our pre-meeting event. We have had inquiries about activities and tours for guests during the meeting. Future explorers will have further information. This meeting is being hosted by the AAS Executive Office.



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The \$115.00 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 Avenue, 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](mailto:crystal@aas.org). Appropriate pictures are welcome. For information about deadlines and submitting articles, see [www.aas.org/publications/newsletter.html](http://www.aas.org/publications/newsletter.html). Items submitted to the *AAS Newsletter* are not automatically included in the AAS Electronic Announcements or vice versa. Submit electronic announcement items to [ela@aas.org](mailto:ela@aas.org).

**Judith M. Johnson**, AAS Publications Manager  
**Robert W. Milkey**, Editor  
**Crystal M. Tinch**, Associate Editor  
**Jeff Linsky**, U. Colorado, Associate Editor, Letters

#### Manuscript Submissions Using AASTeX

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

#### AASTeX Homepage:

[www.journals.uchicago.edu/AAS/AASTeX](http://www.journals.uchicago.edu/AAS/AASTeX)

**User Support:** [aastex-help@aas.org](mailto:aastex-help@aas.org)

**Journal Homepages/Manuscript**

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

[www.journals.uchicago.edu/ApJ/information.html](http://www.journals.uchicago.edu/ApJ/information.html)

#### AAS Email Policy

To unsubscribe from AAS emails, contact [address@aas.org](mailto:address@aas.org)

For address changes email [address@aas.org](mailto:address@aas.org)

## LETTERS TO THE EDITOR

### WILL ASTRONOMY BE NEXT TO HIT THE FUNDING WALL?

Dear Editor:

The \$4,700 M estimate for hardware initiatives in the most recent astronomy decadal survey is about 20% higher in constant dollars than it was in 1990, and 70% over the 1980 figure. Astronomers have always been encouraged to reach for the stars, whatever the cost. But the experience of particle physics suggests trouble ahead, unless we control the rising fraction of resources earmarked for a few Overwhelmingly Ambitious Facilities (OAF's).

Until the early 1990s, particle physics was the flagship of the physical sciences. Facilities continued to grow, and it seemed that there was no limit. But Congress' cancellation of the Superconducting Super - Collider (SSC) after massive cost overruns, crippled morale in the field. Now, experimental particle physics is in steep decline in the US [1]. Could a similar flame-out happen to astronomy?

After the SSC debacle, many particle physicists re-tooled themselves as astronomers, others have gone to work for Wall Street. Would we re-discover the excitement of less expensive projects overlooked in the rush to justify huge instruments? There is more opportunity for that in astronomy. But once a discipline has suffered a major setback, the tendency is to leave the disappointment behind, and do something totally different.

It is hard to tell exactly where the Funding Wall for astronomy is. At its initial estimated cost of about \$6,500 M the SSC was several times more expensive than any single OAF under present consideration [2]. But this experience (see also the similar woes of earth sciences research in the wake of EOS program difficulties [3]) shows that, beyond a certain point the path gets uncontrollably slippery and cancellation of an OAF can gravely wound a discipline. The upcoming NSF Senior Review seems to offer a good opportunity to seriously reflect on a balanced astronomy program with growth limits - perhaps less on the eventual size of facilities than on the rate at which we try to acquire all of them at once.

#### References

1. "High Energy Physics: Exit America?", *Science*, 308, 38 (2005)
2. "Astronomers Lobby for the Next Big Thing", *Science*, 307, 1864 (2005)
3. "Earth Observation Program at Risk, Academy Warns", *Science*, 308, 614 (2005)

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Note: Letters to the Editor on current issues of importance to astronomers are welcomed. Letters must be signed and should not exceed 250 words. Send to Jeff Linsky, Associate Editor, Letters, ([jlinsky@jila.colorado.edu](mailto: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.

## MEMBER DEATHS

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

**Jack T. Kent   Michael J. Klein   Jason Porter  
Ronald C. Stone**

## WHO SERVED US WELL



**John N. Bahcall**  
1934-2005

John Norris Bahcall, the Richard Black Professor in the School of Natural Sciences of the Institute for Advanced Studies, passed away 17 August. John Bahcall had a distinguished career including both outstanding scientific contributions and public service to science. He worked on a wide variety of problems in astrophysics from the

Sun to quasars and was at the center of developments in understanding solar neutrinos. John served the AAS as Councilor, 1978-1981, and as President, 1990-1992. He also did a great service to the astronomical community by leading the National Academy's study *The Decade of Discovery in Astronomy and Astrophysics* (1991). He was honored as the Russell Lecturer at the AAS Centennial Celebration in 1999. Included among his many honors were two other awards from the AAS, the Heinemann award in 1994 and the Warner Prize in 1970. (*Photo credit: Cliff Moore*).

A celebration of John's distinguished life and work will be held on Saturday, 29 October, at the Institute for Advanced Study. Scientific lectures will take place in the morning and personal tributes in the afternoon. A reception at 4:00 p.m. will conclude the day. Those planning to attend this event are asked to contact the Institute by e-mail at JNBmem@ias.edu or telephone at 609-951-4448.

### PRESIDENT'S COLUMN CONTINUED FROM FRONT PAGE

Every expenditure should be watched, every real improvement introduced, advice from experts welcomed, and, if good, followed, and every care taken to secure the greatest possible output for every dollar expenditure. A great savings may be effectuated by employing unskilled and therefore inexpensive labor, of course under careful supervision."

This cheap labor pool (at 25 cents an hour, about 1/8th of Pickering's salary) consisted mainly of women. Pickering's housekeeper, Williamina Fleming, was overqualified for that task but well-suited for this forerunner of pipeline processing. Fleming and two other "computers" Annie Jump Cannon and Antonia Maury were set to work on the Henry Draper Catalog—the Sloan Survey of its day. Henrietta Leavitt, a Radcliffe graduate of somewhat independent means with relatives in Cambridge, signed up as a volunteer at the Harvard College Observatory in 1893 at the age of 25. She worked on variable stars, at a variable pace, set by her own family obligations and uncertain health, working in a room at 60 Garden Street that Johnson generously describes as

today having "all the charm of a room in a state hospital." Of course, he means a state mental hospital.

Henrietta Leavitt had trouble with her hearing. "My friends say, and I recognize the truth of it, that my hearing is not nearly as good when absorbed in astronomical work." Her absorption was deep. She proved to be extraordinary at the task of finding variables on the Harvard plates flooding in from Arequipa, Peru, the Synoptic Telescope of its time. "What a variable-star 'fiend' Miss Leavitt is," wrote Charles Young, from Princeton. The most important thing was, of course, the relation between the periods and the magnitudes. "It is worthy of notice," she observed laconically, that "the brighter variables have the longer periods."

It is always a little tricky looking backwards, but there is no doubt that Henrietta Leavitt did the essential work, understood the central point, and that this work grew in importance after its publication. But she died in 1921, just before the period-luminosity relation had its greatest impact when used by Hubble to show that the Milky Way is not the whole Universe. There are just 36 citations to her pivotal work in ADS.

As Johnson says, she is a ghostly figure, and her biographical ectoplasm has been shaped to fit the needs of others. Part of the urge to hagiography comes from the contrast between her modest, earnest, and poorly compensated work and the bombast of Harlow Shapley, the Director at Harvard after Pickering.

The clueless Swedish mathematician Gösta Mittag-Leffler wrote to Miss Leavitt at the HCO in 1925, saying "I feel seriously inclined to nominate you to the Nobel prize in physics of 1926, although I must confess my knowledge of the matter is quite incomplete." Among the gaps in his knowledge was her death four years earlier.

This letter found its way to Shapley who replied, as Johnson astutely observes, "with faint praise weighed with subtle condescension" saying that "Miss Leavitt's work on the variable stars in the Magellanic Clouds, which led to the discovery of the relation between period and apparent magnitude, has afforded us a very powerful tool in measuring great stellar distances." As Johnson points out, a fairer reading of the record is not that her work led to the relation, but that she discovered it by herself and for all of us. Although a look around at your colleagues may not be the best way to absorb this lesson, the science is bigger than the individuals. I imagine Henrietta Leavitt was satisfied with that idea, even if Shapley was not.

This book is so slim, it hardly counts as a full biography of Henrietta Leavitt, but I doubt if anybody is going to do much better. Your students are going to choose it for supplemental reading in Astronomy 101 because it only has 132 pages of text, and some of that (the epilogue about Maarten Schmidt and the quasars!) should have been left out. There just isn't much of a record from this quiet woman. Johnson and his archival sleuth, Louisa Gilder, seem to have dug about as deeply as a person can and to have made about as much as a person should of the data. For example, Johnson notes that in the 1920 census, a year before she died, while she was living with her mother in an apartment on Linnean Street, Miss Leavitt, whose job title at the Observatory was always "assistant", defiantly listed her occupation as "Astronomer."

## SECRETARY'S CORNER

John Graham, [aassec@asas.org](mailto:aassec@asas.org)

### Committee Vacancies Need to be Filled

Vacancies for several AAS committees will be filled by Council at its meeting in Washington in January 2006. Current committee members are listed under "Council/Committees" on the AAS homepage, [www.aas.org](http://www.aas.org). Committees that have vacancies, followed by the number of vacancies on each (in parenthesis) are:

Russell Lectureship Committee (2)  
Heineman Prize Committee (2)  
Warner and Pierce Prize Committees(3)  
Annie J. Cannon Prize Committee (1)  
AAS Education Prize Committee (2)  
Weber Award Committee (2)  
Henri Chrétien Grant Committee (2)

The Council takes advice from the Committee on Appointments for committee posts, AAS Members may themselves volunteer to serve on a committee, or suggest other Members for one of the vacancies. To be most useful to the Committee on Appointments, who may not know everyone, please include the date of Ph.D., as well as a few sentences conveying to the Committee the background and area of expertise of the named individual. Please assist us with this! We need to have both quality and breadth on our committees in order to help them make wise and fair recommendations to the Council.

Input must be received in the Office of the Secretary no later than 1 December 2005. Submit suggestions to John A. Graham, AAS Secretary, by email to [aassec@asas.org](mailto:aassec@asas.org) or at the Dept. of Terrestrial Magnetism, Carnegie Institution of Washington, 5241 Broad Branch Rd., NW, Washington, DC 20015, Tel: (202) 478-8867, Fax: (202) 478-8821.

### Message to Associate Members

Only (Full) AAS Members have the right to hold office or to chair committees of the Society. Many Associate members who are eligible to upgrade to Full Membership and whose expertise could benefit the Society, cannot serve. Associate members, please consider upgrading, and becoming more involved with Society activities! There is no increase in dues! (See a description of the different membership classes in the Bylaws, Article I.1, or on the membership application form.) If any of you have questions, please contact me at [aassec@asas.org](mailto:aassec@asas.org).

### 2006 Membership Invoices

AAS members will be receiving their 2006 Membership Invoices soon after this issue of the *AAS Newsletter*. Since virtually everyone eventually does pay their dues, please consider prompt payment of your dues! Prompt payment saves the Society staff considerable effort and time in reminders, which translates into saving money for all of us!

### Washington Meeting Sessions Need Chairs

AAS members are invited to volunteer to chair one of the oral paper sessions at the AAS meeting in Washington in January 2006. A session chair should be at least a few years beyond the Ph.D., and have had experience, i.e., being the lead author in presenting at least two or three oral papers at AAS meetings. Watch for the Final Program on the Web, and after it has been posted, review its contents, and then list in order of preference two, three or four oral sessions that you would be willing to chair, in or near your field of expertise. Email your preferences to John Graham, AAS Secretary, at [aassec@asas.org](mailto:aassec@asas.org), and he will respond once final chair assignments are known. We do appreciate your help in this important task. Please consider volunteering if you know you'll be in Washington. It's a great way of getting involved with the new science being presented at the meeting!

### 2006 AAS Elections Final Slate

The following people have been nominated for office; most of the terms begin June 2006. Either an election ballot or details on voting electronically will be included in the December *AAS Newsletter*. The election will close 31 January 2006.

Vice-President	Robert W. O'Connell Faith Vilas
Education Officer	Richard McCray Timothy Slater
Councilors	Megan Donahue Martin Elvis Margaret M. Hanson Karen J. Meach John S. Mulchaey Marc Postman
USNC-IAU, Cat. I	Lynne Hillenbrand James W. Truran
Nominating Committee	Christine M. Clement Nancy R. Evans Angela V. Olinto Robert E. Williams

## PUBLICATIONS NEWS

### New *ApJ* Scientific Editors Appointed

The *Astrophysical Journal* is pleased to welcome two new Scientific Editors to its staff, John Mulchaey and Frederic Rasio.

John Mulchaey is a Staff Astronomer at the Observatories of the Carnegie Institution of Washington. John is best known for his work on galaxy groups, galaxy clusters, and AGNs, but his research has touched on virtually all aspects of extragalactic observational astronomy and most of its wavelength regions. This provides him with a broad base of expertise that will be invaluable for his editorial work.

Frederic Rasio is an Associate Professor at the Department of Physics and Astronomy at Northwestern University. Fred is well known for his work on the dynamics of dense star clusters and related phenomena, but he also has a broad research background that encompasses accretion disks, compact objects, and star/planet formation as well. He brings a broadranging expertise that will enable him to oversee the review of papers across a wide range of topics.

Two other Scientific Editors are completing their service with the *ApJ* this year. Linda Sparke (U. Wisconsin) completed her editorial term earlier this year, and Joe Shields is stepping down at the end of this year in order to take up his new duties as the Chair of the Department of Physics and Astronomy at Ohio University. We all owe these individuals a debt of gratitude for their unselfish service to the *ApJ* and to our professional community as a whole.

### Accessing AAS Journals

In this short contribution we will address several issues and possible misconceptions about access to the AAS journals.

There are costs associated with the operations of journals and, although advances in technology have provided opportunities for cost reduction, these are still substantial. There are two extremes in the models for generation of revenues from scholarly publications, "author pays" (page charges) or "reader pays" (subscriptions). The AAS journals operate on a mixed mode with approximately 55% of total revenue coming from page charges, 32% from subscriptions and the remainder from investment earnings, reprint sales, and other sources. As a first approximation page charge revenue pays all the cost of peer review and preparation of the manuscript for publication and the subscription costs pay for copying and distribution of both electronic and print products. Preserving a structure that is affordable for both authors and readers requires maintaining a delicate balance between page charge and subscription revenue. Per-page subscription costs for the AAS Journals are among the lowest among scholarly journals and this has allowed us to maintain a healthy base of library subscribers throughout the world.

The online content of the AAS Journals since we began to publish an electronic version (1995 for *ApJL*, 1996 for *ApJ* & *ApJS*, and 1998 for *AJ*) is hosted on servers managed by the University of Chicago Press (UCP). The main server is located at the UCP facilities in Chicago, with a mirror at CDS in Strasbourg, France. Each article in the journal is presented in HTML, PDF, or Postscript format. Access to these is restricted to subscription holders until the article is three years old and then it is available to all readers.

AAS content prior to the dates quoted above has been scanned and placed online by the NASA Astrophysics Data System (ADS). This content is also freely available to all readers.

Abstracts of AAS articles are available on the UCP, CDS and ADS sites without any requirement for subscriptions.

Subscriptions to AAS online content come in two flavors, institutional licenses, and individual subscriptions. Access under an institutional license is enabled for either a range of IP addresses or for an entire internet domain. Typically an entire campus or laboratory is covered by a single license. When making an initial access to the HTML copy through an institutional license one may see a screen identifying the licensee. Until recently this screen did not display for the PDF version, so if one linked from an abstracting source such as ADS, one was not aware of the redirect to the UCP site and that a paid license is required.

For access under an individual license the reader must enter a user name and password. This access can be made from any web browser anywhere, but use is limited to one user at a time.

### Katrina Affected Physics and Astronomy (KAPA) Community Bulletin Board

Hurricane Katrina has affected thousands of members of the physics and astronomy community. Students in the afflicted areas, undergraduate and graduate students, are unable to attend their colleges and universities. Physics and astronomy educators at all levels have lost their jobs, their paychecks, and their homes. Displaced students need to get back into classes to continue their educations. Faculty members, post-docs, and high-school teachers need teaching and research jobs.

To help them get back on their feet we, ComPADRE, have created a physics and astronomy community bulletin board to advertise immediate, temporary positions for students, teachers, and faculty members. Providers of help will post details; those who need help can apply directly. There also will be some other helpful links.

If you know someone from the affected area who needs to relocate, please refer them to <http://www.compadre.org/katrina>. If you know of positions at your institution, in your school district, in your state, please list them on the website. Whatever help we can provide those impacted by Hurricane Katrina will be very much appreciated.

## AAS Creates New Membership Class: International Affiliate Membership

At the last IAU meeting in Sydney, Australia the AAS sponsored an exhibit booth for the first time. Many international astronomers visited the booth to find out what benefits Society membership provided and spoke to members of the AAS Council and executive office staff. From these conversations, two things became clear: 1) some of the AAS membership benefits were of great interest to international astronomers (e.g. personal electronic subscription to Society journals at reduced rates), and 2) the normal full membership dues were too high for many of our international colleagues and covered costs for benefits that foreign astronomers would not generally be able to utilize.

After extensive analysis of the pros and cons of creating a new membership class, the AAS Council decided to create a new International Affiliate Membership class.

Beginning with the 2006 membership year, the AAS will offer this new class to astronomers who reside outside the United States. The new class is intended to provide an economical option for our international colleagues to participate in specific AAS activities and receive certain benefits. There will be no Junior level within the International Membership class.

The 2006 membership dues for International Affiliates will be 55 USD.

Current full members should take note that astronomers who reside outside the United States are NOT restricted to the International Affiliate class, nor will they be required or asked to change membership classification. The AAS strongly encourages international colleagues to apply for and maintain regular AAS membership thereby enjoying all the rights and benefits of full membership. The Society benefits significantly from international members serving in elected positions and on Society committees. International Affiliate members will be precluded from holding such positions.

Specific privileges that **will** be made available to International Affiliates are:

- \* Listing in the online and printed AAS Membership Directories
- \* Access to the AAS Members Only pages (members.aas.org) to manage member data, register for meetings, review the online Members Only Directory and much more
- \* Receipt of all electronic communications including the *Job Register* and relevant electronic notices
- \* Ability to purchase an *electronic* subscription to the *Astronomical Journal*, *Astrophysical Journal* and *Astrophysical Journal Supplement* at the current member rate (50 USD)
- \* Access to the electronic PDF copy of the *AAS Newsletter* when published following email notification
- \* Ability to present papers at AAS meetings without sponsorship or being subject to the one-paper rule (only one paper per lifetime may be presented by sponsored non-members)
- \* Member discounts for AAS meeting registration

Specific privileges of regular AAS membership (Full, Associate, or Junior) that **will NOT** be made available to International Affiliates are:

- \* Member rates on *print* subscriptions to the AAS Journals
  - \* Subscription to *Physics Today* published by the American Institute of Physics
  - \* Print copies of the *AAS Membership Calendar*, *AAS Newsletters* and the *AAS Membership Directory* (copies of the *Membership Directory* may be purchased by International Affiliate Members for the per-copy price plus any shipping costs)
  - \* Voting in AAS elections
  - \*\* Nomination of new members or endorsement of member promotions
  - \*\* Service on the AAS Council or AAS committees
- (\*\*Note: available to only full members)

Qualifications for International Affiliate membership parallel those for regular AAS membership and include:

- \* Nomination by one Full Member of the AAS  
or
- \* Documented membership in another international astronomical organization with similar eligibility requirements as those of the AAS (e.g. International Astronomical Union)

Current AAS Members who reside outside the United States and wish to convert to International Affiliate status may contact the membership department directly or may annotate their renewal invoice for 2006 and pay the corresponding reduced dues rate (55 USD). Nomination or membership in another society is not required for current AAS members.

International Affiliate members who establish residency for one year or longer in the United States will be required to convert to regular AAS membership and pay the appropriate increased dues rates beginning the next membership year.

Help us spread the news about our new International Affiliate membership class by telling your foreign colleagues about this unique opportunity to receive many of the benefits of AAS membership at a reduced rate.

## GADGETS AND GIZMOS AT THE JANUARY 2006 WASHINGTON DC MEETING

If you're interested in sharing educational resources and materials you've developed, adapted and used, whether you're new to teaching or an old hand, this session is for you. Suitable demonstrations include interactive web tools, instructional software, remote observing tools, and, of course, real gadgets and gizmos. Only non-commercial educational presentations are appropriate for this forum. Presenters will be able to distribute printed materials and/or CD and DVDs but will not be allowed to conduct sales. If you are interested in using this forum, or have questions about the suitability of an idea or technology, please email gg@aaas.org. Deadline for G&G requests is 19 October 2005. Demonstrations should be as stand-alone as possible – during peak usage times internet access can be limited.

## DIVISION NEWS

### DIVISION ON DYNAMICAL ASTRONOMY (DDA)

Marc Murison  
Secretary, DDA, ddasec@aaas.org

#### 2006 Annual Meeting

The 2006 meeting of the DDA will be held in Halifax, Nova Scotia, 25-29 June 2006. The organizing committee is Joe Hahn (Local Host), Saint Mary's University, Halifax, [jhahn@ap.stmarys.ca](mailto:jhahn@ap.stmarys.ca); Stephen Unwin (DDA Vice-Chair), JPL/Caltech, [stephen.unwin@jpl.nasa.gov](mailto:stephen.unwin@jpl.nasa.gov); and Marc Murison (DDA Secretary), U.S. Naval Observatory, [murison@usno.navy.mil](mailto:murison@usno.navy.mil). Meeting information is posted to the DDA web site, <http://dda.harvard.edu/>, as it becomes known.

#### Membership Reminder

Any AAS regular or affiliate member wishing to join the DDA can do so very easily on the AAS membership renewal form when it comes out this Fall, or by contacting the AAS Membership Department at [membership@aaas.org](mailto:membership@aaas.org). Division information is regularly sent via email so please make sure your email address in the *AAS Membership Directory* is up to date.

#### Call for Brouwer Award Nominations

The Brouwer Award Selection Committee (BASC) of the DDA invites nominations from any member of the AAS for an annual award competition. The Brouwer Award recognizes outstanding contributions to the field of dynamical astronomy, including celestial mechanics, astrometry, stellar systems, galactic and extragalactic dynamics. It is open to candidates of any age or nationality, occupation, or specific field of interest. The Award consists of an honorarium of \$2000 plus an appropriate certificate.

Letters of nomination should cite the achievements in or contributions to dynamical astronomy that might appropriately be recognized by the Award. Nominations should be supported by copies of the vitae and bibliography of the nominee and by letters of recommendation from three knowledgeable people testifying to the long-term impact of the nominee's contributions to dynamical astronomy. Nominations and supporting documentation should be sent to the BASC Chair (from whom further information may be obtained) so as to be received not later than 31 December 2005: Dr. Robin M. Canup, Southwest Research Institute, 1050 Walnut St., Suite 426, Boulder, CO 80302-5143, [robin@boulder.swri.edu](mailto:robin@boulder.swri.edu). Additional information regarding the Brouwer Award may also be found at the DDA web site.

#### DDA Student Stipend Program

For the twelfth consecutive year, the Division is making available two student stipends to encourage student participation at the annual meetings held each spring. The stipends are \$550 each,

and meeting registration and abstract fees are waived. Any full or part-time student presently enrolled in an academic program at a college or university is eligible and encouraged to apply. For the 2006 meeting submit an abstract of a paper for presentation along with a letter of recommendation from an adviser, to: Dr. David Merritt, Department of Physics, Rochester Institute of Technology, 54 Lomb Memorial Drive, Rochester, NY 14623-5603, [merritt@astro.rit.edu](mailto:merritt@astro.rit.edu).

### HISTORICAL ASTRONOMY DIVISION (HAD)

#### Steven J. Dick Awarded HAD LeRoy E. Doggett Prize

The Historical Astronomy Division of the American Astronomical Society is pleased to announce that Steven J. Dick has been awarded the fifth LeRoy E. Doggett Prize for Historical Astronomy. The award of the Prize was for his distinguished career and publication record that has significantly influenced the field of the history of astronomy. The HAD will present Dr. Dick with the Doggett Prize and he will deliver the Doggett Prize Address at the January 2006 HAD meeting in Washington, DC.

Steve Dick's career as a historian of astronomy spans more than twenty-five years during which he has become one of the most respected scholars in the field. He established his reputation with his tremendously productive research in the history of ideas of extraterrestrial life. This has resulted in the publication of three books on the subject, all by Cambridge University Press: "Plurality of Worlds: The Origins of the Extraterrestrial Life Debate from Democritus to Kant" (1983), "The Biological Universe, the Twentieth Century Extraterrestrial Life Debate, and the Limits of Science" (1996), and "Life on Other Worlds: The Twentieth Century Extraterrestrial Life Debate" (1998). His other major career work has been his history of the United States Naval Observatory, *Sky and Ocean Joined* (Cambridge, 2003), an exceptional book that is essential reading for all historians of astronomy. His many other co-edited volumes and historical papers stand as a testament to his important contributions to our discipline.

Steve Dick has also been an active and involved member of the history of astronomy community. He has been elected Vice-Chair and Chair of the Historical Astronomy Division of the AAS and later Vice-President and President of the IAU Commission 34 on History of Astronomy. Locally, Steve Dick has also served as Vice-President and President of the Philosophical Society of Washington.

From 1989 to 2003, Steve Dick was Historian of Science at the U.S. Naval Observatory. Since 2003 he has been Chief Historian at NASA.

## COMMITTEE NEWS

### STATUS OF WOMEN IN ASTRONOMY

Patricia Knezek

CSWA Chair, WIYN Observatory, knezek@noao.edu

#### CSWA Membership Changes

I want to welcome incoming CSWA members Kim Venn (Macalester College/St. Paul, MN), and James Rhoads (STScI/Baltimore, MD). I'm also honored and delighted to announce that I was approved by the AAS Council to serve a second term. I will continue in my role as CSWA chair. Kim, James, and I will all be serving from 2005 to 2008. We are joining continuing members Francesca Primas (ESO/Garching, Germany; 2004-2007), Joan Schmelz (U. Memphis/Memphis, TN; 2004-2007), Amy Simon-Miller (GSFC/Greenbelt, MD; 2004-2007), James Ulvestad (NRAO/Socorro, NM; 2003-2006), Stephanie Wachter (IPAC/Pasadena, CA; 2003-2006), and Kimberly Weaver (GSFC/Greenbelt, MD; 2003-2006). I would also like to express my sincere appreciation to outgoing members Neal Evans and Lisa Frattare for their many contributions to the committee. They were both instrumental in the successful authoring and endorsement of the Pasadena Recommendations. Also, Lisa has served as a co-editor of both STATUS and AASWOMEN during her tenure on CSWA. We thank them both!

We encourage you to contact one of the CSWA members if you have comments, questions, and/or suggestions. We also suggest that you to check out the CSWA web site, which is ably maintained by Amy Simon-Miller, see <http://www.aas.org/~cswa/>. Among the new additions to the web site is a link to the talks given during the "Institutional Solutions to the Two-Body Problem" special session held during the June 2005 AAS meeting in Minneapolis. Details on the CSWA activities at the June 2005 AAS were included in the August 2005 AAS *Newsletter*.

#### Changes in the Wind for AASWOMEN

The CSWA is pleased to announce that Joan Schmelz is joining Jim Ulvestad and myself, Patricia Knezek, as a co-editor of AASWOMEN, the CSWA's weekly electronic newsletter. Joan is taking over for Lisa Frattare. Our thanks again to Lisa for all her help!

Along with the change in editorship, the CSWA is moving its listserv from STScI to a new home at the AAS. We hope that this transition will be largely transparent to our readership, and will include information in AASWOMEN about new accounts for submission, subscribing, and unsubscribing, as soon as those details are available. If you are used to receiving our newsletters and find that you no longer are, please don't hesitate to email me at [knezek@noao.edu](mailto:knezek@noao.edu). We would like to thank STScI for its accommodation of the listserv for the past five years, and Susana Deustua for all her help in getting things set up at the AAS!

#### Update on the Pasadena Recommendations

After a quiet summer, the CSWA will begin reviving its activities related to the Pasadena Recommendations. We have drafted and are reviewing a letter that will be sent to the departmental chairs and division heads of colleges, universities, and institutions encouraging them to publicly endorse the Recommendations. The CSWA plans to maintain a list of institutions that have endorsed them on our web site. We have begun to identify options for funding activities consistent with the Recommendations, particularly the longitudinal study of young women in astronomy. We also plan to create small committees to work on ways to implement the major areas of the Recommendations. We plan to solicit part of the membership on these committees from the AAS community. Please take a look at the Recommendations, which are available off our the CSWA web site, <http://www.aas.org/~cswa/> and see if there might be an area you would be interested in working on.

## NEWS FROM...

### NATIONAL SCIENCE FOUNDATION

Eileen D. Friel, [efriel@nsf.gov](mailto:efriel@nsf.gov)

Executive Officer, Division of Astronomical Sciences

#### New Program Announcement for the AAG

As forewarned in an earlier *AAS Newsletter*, AST has published a new Program Announcement for the *Astronomy and Astrophysics Research (AAG) Program*, NSF 05-608, which is available at [http://www.nsf.gov/publications/pub\\_summ.jsp?ods\\_key=nsf05608](http://www.nsf.gov/publications/pub_summ.jsp?ods_key=nsf05608). The nature of the AAG program has not changed – it still provides individual investigator and collaborative research grants for observational, theoretical, laboratory and archival data studies in all areas of astronomy and astrophysics. Instituting a program announcement simply provides us a framework for administering the program within NSF and informing you about funding opportunities. There are two significant changes, though, in how proposals are submitted to AST under this new program announcement.

Beginning in 2005, all proposals submitted to the AAG Program must be submitted through FastLane during the annual *submission window*, which begins each year on 15 September and ends on 15 November at 5:00 p.m. submitter's local time. **The end date of the annual submission window, 15 November, is an absolute deadline date, after which proposals will not be accepted for review.**

**In submitting proposals to the AAG Program in FastLane, proposers must identify the AAG Program Announcement number, NSF 05-608, in the "Program Announcement/Solicitation Number" block on the NSF Cover Sheet.** Compliance with this requirement is critical to determining the relevant proposal processing guidelines. Failure to submit this information may delay processing.



Proposals submitted in response to the AAG program announcement should be prepared and submitted in accordance with the general guidelines contained in the Grant Proposal Guide (GPG) found at: [http://www.nsf.gov/publications/pub\\_summ.jsp?ods\\_key=gpg](http://www.nsf.gov/publications/pub_summ.jsp?ods_key=gpg). The GPG changes regularly, so we urge proposers to consult the current version carefully before every proposal submission. **Proposals that do not conform to current GPG requirements may be returned without review.** For some GPG requirements, AST has no discretion in allowing exceptions to return without review, so please do not assume that the requirements in use during your last submission still apply.

### Upcoming Deadlines for AST Programs

12 October 2005: Astronomy & Astrophysics Postdoctoral Fellowship Program (NSF 03-578). Program solicitation at <http://www.nsf.gov/pubs/2003/nsf03578/nsf03578.htm>.

1 November 2005: Advanced Technologies and Instrumentation (ATI)

15 November 2005: Astronomy & Astrophysics Research Grants, including the Research at Undergraduate Institutions (RUI) program. In FastLane, submissions proposers should specify that the proposal is in response to NSF 05-608 for AAG and NSF 00-144 for the RUI program.

20 January 2006: Program for Research and Education with Small Telescopes (PREST) (NSF 04-557). Program solicitation at: <http://www.nsf.gov/pubs/2004/nsf04557/nsf04557.htm>.

26 January 2006: Major Research Instrumentation (MRI) (NSF 04-511). Program solicitation at: <http://www.nsf.gov/pubs/2004/nsf04511/nsf04511.htm>.

Anytime: Research Opportunity Awards, REU supplements, and proposals for Meeting or Conference support. We encourage submission of REU and ROA supplements before 1 January for support in the following summer.

### FY2005 CAREER Awardees

The Division of Astronomical Sciences at the National Science Foundation (NSF) is pleased to announce the FY 2005 Faculty Early Career Development (CAREER) program recipients. This NSF-wide program is the Foundation's most prestigious award for support of the early career-development activities of junior faculty members. The intent of the program is to provide stable support at a sufficient level and duration to enable awardees to develop careers as outstanding teacher-scholars in the context of the mission of their organization. The FY 2005 CAREER recipients are:

- Dr. Vassiliki Kalogera, Northwestern University, "Theoretical Studies of Compact Objects in Binary Systems".

- Dr. Gregory Laughlin, University of California – Santa Cruz, "The Detection and Characterization of Extrasolar Planets".
- Dr. Amber Miller, Columbia University, "A Novel CMB Polarization Experiment based on Large Arrays of Coherent Polarimeters".
- Dr. Daniel Reichart, University of North Carolina – Chapel Hill, "Multi-wavelength Research and Educational Experiences for Graduate, Undergraduate, and High School Students across North Carolina".
- Dr. Pieter van Dokkum, Yale University, "The Formation Epoch of Massive Galaxies".

### ALMA Update

On July 11, the Atacama Large Millimeter Array (ALMA) project passed a major milestone when Associated Universities Inc. signed a contract with Vertex Communications Corporation for the purchase of up to 32 antennas. These will constitute North America's share of the international project's 12m antennas.

NSF authorized AUI to negotiate and sign the contract following a long and careful procurement process which included extensive coordination with North America's European partner, the European Southern Observatory (ESO), and with the Joint ALMA Office (JAO), which is overseeing construction of the array. The approval followed the recommendation of the ALMA Director and the unanimous concurrence of the ALMA Board, the supervisory and regulatory body for ALMA. The decision affirms NSF's commitment to this transformational international instrument, and its confidence in the ALMA team and the strength of the ALMA partnership. At its June 2005 meeting, the ESO Council reaffirmed its commitment to ALMA, and ESO is working to complete its parallel antenna procurement process as soon as possible, as recommended by the ALMA Director and the ALMA Board at the June 2005 meeting of the Board.

### ASTRONOMICAL SOCIETY OF THE PACIFIC

Mike Bennett, [mbennett@astrosociety.org](mailto:mbennett@astrosociety.org)  
Executive Director

### Three New Board Members Elected

ASP members have elected three board members who began their three-year terms on 1 September 2005. Congratulations and welcome aboard!

**Steven V. W. Beckwith** is the former Director of the Space Telescope Science Institute and is a professor of physics and astronomy at Johns Hopkins University. His main research interests are the formation and early evolution of planets including

those outside the Solar System and the birth of galaxies in the early universe. He also contributes his time to advisory committees on research policy that help shape the landscape of funding for major astronomy projects in the world.

**David Crawford** is the Executive Director of the International Dark-Sky Association and Emeritus Astronomer at the National Optical Astronomical Observatories. He received his doctorate in astronomy at the University of Chicago and worked most of his scientific career at the Kitt Peak National Observatories and NOAO. He received the AAS's van Biesbrock Award for service to astronomy, and an honorary doctorate in 2004 from the New England College of Optometry for his work in improving the nighttime environment.

**Bruce Partridge** has been a Professor of Astronomy at Haverford College for more than 30 years. His undergraduate degree was from Princeton; the D.Phil. from Oxford (both in atomic physics). His current research centers on cosmology, with particular focus on the 3 K cosmic microwave background, radio sources at high redshifts, and galaxy formation. For six years he served as Education Officer of the American Astronomical Society, and for the past three years on the Board of the ASP.

### ...And One Appointed

**George "Pinky" Nelson** has been appointed to the ASP Board to complete the final two years of Leif Robinson's term, who recently resigned from the Board. Leif, Editor Emeritus of *Sky and Telescope* magazine, and an ASP board member since 2001, decided to resign in order to "pursue retirement full-time," as he put it. "I plan on living outside the US most of the time now," Leif said, "and I just couldn't properly fulfill my duties to the ASP." Dr. Nelson is Director of Science, Mathematics, and Technology education at Western Washington University in Bellingham, Washington. He holds a B.S. in Physics from Harvey Mudd College and a Ph.D. in astronomy from the University of Washington. From 1996 through 2001 he was the director of Project 2061, the national science, mathematics, and technology education reform effort of the American Association for the Advancement of Science. From 1978 to 1989 he was a NASA astronaut and flew three space shuttle missions. He currently serves as Education Officer of the American Astronomical Society.

### New PASP Editor Appointed

The Board of Directors of the Astronomical Society of the Pacific is pleased to announce that **Dr. Paula Szkody** has been appointed Editor of the *Publications of the ASP*, effective 1 January 2006.

Dr. Szkody, Professor of Astronomy at the University of Washington, has a very distinguished scientific record of research and publication in many journals, with over 300 refereed publications. She is currently serving a second term as Scientific Editor of the *Astrophysical Journal*, has served as a Councilor of the American Astronomical Society, and as President of IAU

Commission 42. She served on the ASP Board of Directors from 1988-1992 and on the ASP Publication Board from 2001-2003. Her first solo paper was published in the PASP in 1974 on a subject that became her Ph. D. thesis.

Dr. Katy Garmany, Past President of the ASP and chair of the Selection Committee, noted that the Committee was gratified by the strong interest from the astronomical community in this position, which is a reflection of the outstanding job that the present Editors, Anne Cowley and David Hartwick, have done with the PASP during their eight years as co-editors.

The ASP Board of Directors is delighted that Dr. Szkody has accepted this position, which will ensure that the PASP remains strong and vibrant.

## HONORED ELSEWHERE

### CRAFOORD PRIZE AWARDED TO AAS MEMBERS

The Royal Swedish Academy of Sciences has awarded the Crafoord Prize in Astronomy 2005 to **James E. Gunn**, Princeton University; **P. James E. Peebles**, Princeton University; and **Martin J. Rees**, Cambridge University, UK "for contributions towards understanding the large-scale structure of the Universe".

James Gunn first made theoretical contributions to the field of galaxy formation, the gaseous medium between galaxies and the presence of dark matter in galaxies. Later, he has played a central role in several observational projects, like the Hubble telescope and the Sloan Digital Sky Survey, which aims to chart the properties of one million galaxies.

James Peebles predicted some of the most important properties of the fluctuations of the microwave background radiation already around 1970. He later developed the basis for the statistical description of the structure in the Universe. He has for a long time been one of the main advocates for the hierarchical view of structure formation.

Sir Martin Rees early on recognized the importance of dark matter for the formation and properties of galaxies. This has stimulated extensive computer simulations of the large-scale structure. He has also suggested observational tests for early star and galaxy formation.

## FROM THE EDUCATION OFFICE

Susana E. Deustua, Director of Educational Activities, [deustua@aes.org](mailto:deustua@aes.org)

### American Astronomical Society Statement on the Teaching of Evolution

A press release went out on 20 September announcing the AAS Statement on the Teaching of Evolution. The statement was drafted by the Astronomy Education Board and the Committee on Public Policy in Astronomy and presented to the Executive Committee of the AAS Council. The final statement, as it was adopted by the Council, is given here in its entirety. Supporting references and additional information are available on the Society's web site at <http://www.aas.org>.

The press release included quotes from President Robert P. Kirshner who said, "Science teachers have their hands full teaching the things that we actually know about the world we live in. They shouldn't be burdened with content-free dogma like Intelligent Design", and from George Nelson, Education Officer, "Anti-science movements like Intelligent Design, however disguised, seriously undermine the already difficult task of educating the next generation to be science literate. And a science literate citizenry is necessary if America is to continue to thrive."

We believe this AAS statement will be useful to those who find themselves dealing with these issues of science and religion. The full PDF version, available from the AAS website, has all the supporting references and additional information, and, is suitable for members to print out and deliver to their friends, family and debate partners.

### American Astronomical Society Statement on the Teaching of Evolution - September, 2005

The American Astronomical Society supports teaching evolution in our nation's K-12 science classes. Evolution is a valid scientific theory for the origin of species that has been repeatedly tested and verified through observation, formulation of testable statements to explain those observations, and controlled experiments or additional observations to find out whether these ideas are right or wrong. A scientific theory is not speculation or a guess — scientific theories are unifying concepts that explain the physical universe.

Astronomical observations show that the Universe is many billions of years old (see the AAS publication, *An Ancient Universe*, cited below), that nuclear reactions in stars have produced the chemical elements over time, and recent observations show that gravity has led to the formation of many planets in our Galaxy. The early history of the solar system is being explored by astronomical observation and by direct visits to solar system objects. Fossils, radiological measurements, and changes in DNA trace the growth of the tree of life on Earth. The theory of evolution, like the theories of gravity, plate tectonics, and Big Bang cosmology, explains, unifies, and predicts natural phenomena. Scientific theories provide a proven framework for improving our understanding of the world.

In recent years, advocates of "Intelligent Design," have proposed teaching "Intelligent Design" as a valid alternative theory for the

history of life. Although scientists have vigorous discussions on interpretations for some aspects of evolution, there is widespread agreement on the power of natural selection to shape the emergence of new species. Even if there were no such agreement, "Intelligent Design" fails to meet the basic definition of a scientific idea: its proponents do not present *testable* hypotheses and do not provide evidence for their views that can be verified or duplicated by subsequent researchers.

Since "Intelligent Design" is not science, it does not belong in the science curriculum of the nation's primary and secondary schools. The AAS supports the positions taken by the National Academy of Sciences, the American Association for the Advancement of Science, the National Science Teachers' Association, the American Geophysical Union, the American Chemical Society, and the American Association of Physics Teachers on the teaching of evolution. The AAS also supports the National Science Education Standards: they emphasize the importance of scientific methods as well as articulating well-established scientific theories.

### References Cited

*The Ancient Universe: How Astronomers Know the Vast Scale of Cosmic Time*. Published by the American Astronomical Society. It is also available as a PDF on the Society's webpages at <http://www.aas.org/education/publications/AncientUniverseWeb.pdf>.

### ComPADRE Pathway Project Funded

ComPADRE received funding for the new ComPADRE Pathway project from the National Science Foundation. This places the ComPADRE Digital Library for Physics and Astronomy Education among a group of eight projects that have been asked to play a leadership role in the growth and operation of the National Science Digital Library.

The ComPADRE Pathway supports teachers and learners in Physics and Astronomy by providing content and services to enhance science education. ComPADRE is a network of content collections serving specific communities in these disciplines. Current and future collections serve, among others, life-long learners, high school teachers and their classes, undergraduate instructors and students of introductory and upper-division courses, majors in physics and astronomy, and researchers in physics and astronomy education. These collections are built by and for the communities, and provide links to high-quality learning resources and host and archive resources that might otherwise disappear. Collection resources are approved by editors, are organized specifically for each community, and undergo a formal peer review process on some collections. These collections also provide tools that allow community members to communicate, share resources, and learn from each other. The American Association of Physics Teachers, American Astronomical Society, American Institute of Physics, American Physical Society, and the Society of Physics Students, collaborate on ComPADRE as part of their mission to promote and sustain Physics, Astronomy, and science education. They have integrated this project into the societies' education, mentoring, and outreach activities. The collections can be viewed at <http://www.compadre.org>.

## EXECUTIVE OFFICE NOTES

In the third week of August, we said goodbye to Dennis Renner, our Manager of Membership Services, who left us to become Director of Membership for the Association of American Colleges and Universities. Dennis was with the AAS for approximately four and half years, and, during that time made a considerable improvement to the integrity of our membership database. As this newsletter goes to press we are in the process of recruiting for his replacement.

Near the end of August we welcomed Eboni Bowman to the Executive Office staff as the Registrar for Meetings and Exhibits. She has been studying in the Events Planning Program at George Washington University and will be responsible for registering attendees for AAS and Divisional meetings as well as assisting with the logistics for the variety of other AAS committee meetings and special events.

### **It's That Time Again...Time to Renew Your AAS Membership and Subscriptions!**

The 2006 AAS Membership Renewal Invoices will be mailed during the first two weeks of October. We encourage you to take a moment and return your payment and the bottom portion of your invoice upon receipt. By doing so, you will not only eliminate the need for reminder notices, but also ensure member services and subscriptions continue without interruption.

And please consider using your invoice as well to make a tax-deductible contribution to the AAS and/or the Division of your choice. Your dollars will provide much needed support for non-revenue programs sponsored by the AAS, DDA, DPS, HAD, HEAD and/or SPD.

Contact the Membership Department at [membership@as.org](mailto:membership@as.org) if you do not receive your invoice by 4 November 2005 or for answers to your renewal questions.

## ANNOUNCEMENTS

### **NSO Observing Proposals**

The current deadline for submitting observing proposals to the National Solar Observatory is 15 November 2005 for the first quarter of 2006. Information is available from the NSO Telescope Allocation Committee at P.O. Box 62, Sunspot, NM 88349 for Sacramento Peak facilities ([sp@nso.edu](mailto:sp@nso.edu)) or P.O. Box 26732, Tucson, AZ 85726 for Kitt Peak facilities ([nsokp@nso.edu](mailto:nsokp@nso.edu)). Instructions may be found at <http://www.nso.edu/general/observe/>. A web-based observing-request form is at <http://www2.nso.edu/cgi-bin/nsoforms/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](ftp://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.

### **ARO Observing Proposals**

The Arizona Radio Observatory (ARO) is accepting observing proposals for use of the Sub-millimeter Telescope (SMT) on Mt. Graham, Arizona as well as for the Kitt Peak 12-meter Telescope (KP12m) for the period 14 November 2005 to 30 June 2006. The telescopes are expected to be available to the general astronomical community for a minimum of 10 percent of the scheduled time. Graduate student participation is especially encouraged regardless of institutional affiliation. Institutions (or individuals) that wish to acquire longer commitments of time should contact the ARO Director, Prof. Lucy Ziurys ([ziurys@as.arizona.edu](mailto:ziurys@as.arizona.edu)). Observations can be conducted remotely from anywhere in the world via ARO's virtual control room software.

Details about the telescopes and their instrumentation may be found at <http://aro.as.arizona.edu>. Information about Remote Observing can be viewed at <http://aro.as.arizona.edu/remotel/remotel.htm>. For further information please contact the ARO staff astronomers Drs. W. Peters ([wpeters@as.arizona.edu](mailto:wpeters@as.arizona.edu)) or Kiriaki Xilouris ([kxiluri@as.arizona.edu](mailto:kxiluri@as.arizona.edu)).

Proposals should consist of the standard proposal cover sheet (<http://aro.as.arizona.edu/proposals>); a brief scientific justification (not more than two pages); and a source list with observing time requirements and justification. Proposals will be reviewed by the ARO TAC, appointed by the Steward Observatory Director. Scheduling of successful proposals will be done according to availability of the receivers requested. For further information please contact Kiriaki Xilouris.

Electronic submissions will be expected in Postscript, MSWord or PDF formats. Please submit your proposals by midnight MST 31 October 2005 to: Kiriaki Xilouris ([kxiluri@as.arizona.edu](mailto:kxiluri@as.arizona.edu)).

### **Annual Reviews Discounts**

AAS Members are once again eligible to enjoy a 30% savings when purchasing current editions of the *Annual Review of Astronomy and Astrophysics* (September 2005, Volume 43) and/or the *Annual Review of Earth and Planetary Sciences* (May 2005, Volume 33). To take immediate advantage of these special offers, visit the Members Only Pages at [members.aas.org](http://members.aas.org) to download the form and place your order directly with Annual Reviews.

This shows that NASA's focus is still R&D, though it is likely that safety costs for the Shuttle will cause a duplication of this year's transfer of funds from R&D accounts to the Space Shuttle. It ends up that the large increases provided by the House and Senate, would more or less return the R&D funds to last year's (FY2004) level, but with the anticipated Shuttle costs, R&D still stands to lose. Additionally, the increase in NASA's R&D falls almost entirely in the "applied" category, with basic research (which funds astronomy and space science) seeing a decrease of 3.3% under the Senate plan to \$2.21B. It is not certain how the conference committee between the Senate and House will finally deal with NASA's budget, but the numbers are more likely to fall toward the Senate values.

NSF would receive a 1.1% increase under the Senate plan to \$5.5B for FY2006. Both the House and the Administration would fund NSF at \$5.6B, so it is clear more work is needed to justify NSF's activities to our Senators. In the past, the Senate has championed NSF, but the restructured appropriations committees have weakened support for NSF in the Senate as Senator Bond is no longer the chairman of the responsible committee. With an anticipated 2% inflation rate, the 1-3% increases expected for most divisions will barely keep their budgets even with last year.

The Department of Energy would receive an increase from both the House and Senate of about 3%, standing in stark contrast with the Administration's requested cut of 2.6%. The Office of Science within DOE would see an increase of 1.3% from the Senate and 1.5% from the House, again in contrast with the Administration's requested cut of 4.5%. An active lobbying effort by the physical science community has played a role in securing these increases.

Although the House finished their required work early, the delayed Senate passage of appropriations bills and the need to reconcile the various bills between the House and Senate will mean another year in which the budget is not finalized by 1 October (the start of the US government fiscal year). Expect last minute negotiations to carry through into at least November, with the President finally signing the bills into law perhaps by the end of December. The FY2007 budget will be released near the start of February and the cycle will begin again. With the ongoing costs in Iraq and other fiscal pressures, the outlook for science funding is bleak, with flat funding anticipated for the coming several years.

## CONGRESSIONAL VISITS DAY SUMMARY

by Allison Lowell, Graduate Student (Arizona State University)

I had the opportunity to attend the annual Congressional Visits Day (CVD) in Washington, D.C. (10-11 May) with others from the AAS. The overall experience was incredible, and I learned a tremendous amount about speaking with Congress about funding scientific research.

We met with representatives from NSF and NASA, who were very forthcoming about the budget challenges they face. As a graduate student who relies on this funding for support, it was a real eye-opener. I was struck by the excitement about future projects and missions combined with deep concerns about having the funding to do them.

Our first Congressional meeting (the same day a Cessna plane flew into restricted airspace and prompted an evacuation!) was with a staffer from the House Science Committee, and we discussed the fate of the Hubble Space Telescope. Other meetings included Floyd Des Champs (Sr. Professional Staff, Sen. McCain and Commerce, Science & Transportation Committee), Michael Dodson (Legislative Fellow, Sen. Bill Nelson, FL), and Jeff M. Bingham (Staff Director, Senate Subcommittee on Science and Space). All of these people are firm believers in the importance of scientific research. Michael Dodson, who was on leave from his position at the Kennedy Space Center, spent nearly forty minutes with I and Dr. Jon Morse discussing science issues and future space missions, and he offered to put me in touch with several astronauts!

I must say that getting to know the other astronomers that attended this event was just as important to me as meeting with members of Congress and their staffers. As a graduate student, these are the people that inspire me each and every day.

The overall experience on Capitol Hill left me realizing that meeting with Congress is critical to making our concerns heard. I am much more interested in following events dealing with science and policy, especially as it bears on support for young researchers. Congress has the most influence on the future of scientific research, and they can not help us if we do not let them know our needs.

Note: Early career astronomers interested in participating in CVD 2006 should contact Kevin Marvel by email ([marvel@as.org](mailto:marvel@as.org)).

## CALENDAR

### AAS & AAS DIVISION MEETINGS

#### 207th Meeting - Washington, DC

8-12 January 2006  
Contact AAS Executive Office  
gilmore@as.org

#### 208th Meeting - Calgary, Alberta

4-8 June 2006  
Contact Russ Taylor  
russ@ras.ucalgary.ca

#### Division on Dynamical Astronomy

25-29 June 2006 — Halifax, Nova Scotia  
Contact: Joe Hahn (jhahn@ap.smu.ca)  
http://dda.harvard.edu

#### High Energy Astrophysics Division

4-7 October 2006 — San Francisco, CA  
Contact: Dr. John Vallerga  
(head2006@earthlink.net)

#### 209th Meeting - Seattle, WA (Joint with AAPT)

7-11 January 2007  
Contact AAS Executive Office  
gilmore@as.org

### OTHER EVENTS

#### Fourth Chandra Calibration Workshop

31 Oct-1 Nov 2005 — Cambridge, MA  
Contact: Vinay Kashyap  
(ccw@head.cfa.harvard.edu)  
http://cxc.harvard.edu/ccw/

#### 7th Pacific Rim Conference on Stellar Astrophysics

1-5 November 2005 — Seoul, Korea  
Contact: Young Woon Kang  
(kangyw@sejong.ac.kr)  
http://arcsec.sejong.ac.kr/~web/pacific-rim/

#### Six Years of Science with Chandra Symposium

2-4 November 2005 — Cambridge, MA  
Contact: Antonella Fruscione  
(afruscione@cfa.harvard.edu)  
http://cxc.harvard.edu/symposium\_2005

#### The Spitzer Science Center 2005 Conference: Infrared Diagnostics of Galaxy Evolution

14-16 November 2005 — Pasadena, CA  
Contact: Harry Teplitz  
(irevolve@ipac.caltech.edu)  
http://ssc.spitzer.caltech.edu/mtgs/irevolve

#### IAU Symposium No. 232

Scientific Requirements for Extremely Large Telescopes (ELTs)  
14-18 Nov 2005 — Cape Town, South Africa  
Contact: Michel Dennefeld (dennefel@iap.fr)  
http://www.saa.ac.za/IAUS232/

#### IHY/Basic Space Science Workshop

20-23 November 2005 — United Arab Emirates University  
Contact: Barbara Thompson)  
ihy\_unbss\_info@ihy.gsfc.nasa.gov  
http://ihy.gsfc.nasa.gov/

#### 16th Annual "October" Astrophysics Conference in Maryland: "Gamma-Ray Bursts in the Swift Era"

29 Nov - 2 Dec 2005 — Washington, DC  
Contact: Susan Lehr  
(october@astro.umd.edu)  
http://www.astro.umd.edu/october/

#### 11th Latin-American Regional IAU Meeting (LARIM-2005)

11-16 December 2005 — Pucon, Chile  
Contact: Monica Rubio  
(mrubio@das.uchile.cl)

#### Relativistic Jets: The Common Physics of AGN, Microquasars and Gamma-Ray Bursts

14-17 December 2005 — Ann Arbor, MI  
Contact: Philip Hughes  
(phughes@umich.edu)  
http://www.astro.lsa.umich.edu/users/mctpwww/

#### Astrochemistry-From Laboratory Studies to Astronomical Observations

15-20 December 2005 — Honolulu, HI  
Contact: Ralf I. Kaiser  
(kaiser@gold.chem.hawaii.edu)  
http://www.chem.hawaii.edu/Bil301/  
AstroPacificchem.html

#### \*Astrochemistry - A Molecular Approach

18-20 December 2005 — Honolulu, HI  
Contact: Ralf I. Kaiser (ralfk@hawaii.edu)

#### From Z-Machines to ALMA: (Sub)millimeter Spectroscopy of Galaxies

13-14 January 2006 — Charlottesville, VA  
http://www.cv.nrao.edu/naasc/zmachines/

#### \*Supernova and Gamma Ray Burst Remnants

6-10 February 2006 — Santa Barbara, CA  
Contact: Martin Laming  
(laming@nrl.navy.mil)  
http://www.kitp.ucsb.edu/activities/grb\_c06/?id=340

#### \*Physics of the Inner Heliosheath: Voyager Observations, Theory, and Future Prospects

3-9 March 2006 — Oahu, HI  
Contact: Jacob Heerikhuisen  
(Jacob.Heerikhuisen@ucr.edu)  
http://www.igpp.ucr.edu/  
Conferences\_Astro\_2006.htm

#### IAU Symposium No. 233

Solar Activity and its Magnetic Origin  
31 March-3 April 2006 — Cairo, Egypt  
Contact: Ahmed Abdel Hady  
(aahady@yahoo.com)  
http://www.iaus233.edu.eg/

#### \*IAU Symposium No. 234

Planetary Nebulae in our Galaxy and Beyond  
3-7 April 2006, — Waikoloa Beach, HI  
Contact: Michael J. Barlow  
(mjb@star.ucl.ac.uk)  
http://www.ifa.hawaii.edu/iau234/

#### \*The Red Rectangle

23-25 May 2006 — Charlottesville, VA  
Contact: Ciska Markwick-Kemper  
(ciska@virginia.edu)  
http://www.theredrectangle.net

#### 2006 Annual Meeting of the Canadian Astronomical Society/Societe Canadienne D'Astronomie (CASCA)

1-4 June 2006 — Calgary, Alberta  
Contact: Rene Plume  
(plume@ism.ucalgary.ca)  
http://www.ism.ucalgary.ca/meetings/casca06

#### \*Bethe Centennial Symposium on Astrophysics

2-3 June 2006 — Ithaca, NY  
Contact: Dong Lai  
(dong@astro.cornell.edu)  
http://astro.cornell.edu/~dong/bethe.htm

#### \*6th INTEGRAL (International Gamma-Ray Astrophysics Laboratory)

workshop "The Obscured Universe"  
2-8 July 2006 — St. Petersburg, Russia  
http://www.rssd.esa.int/Integral/integ\_workshops.html

#### Physics and Astrophysics of Supermassive Black Holes

9-14 July 2006 — Santa Fe, NM  
Contact: Chris Fryer (fryer@lanl.gov)  
http://qso.lanl.gov/meetings/meet2006/index.html

**\*36th COSPAR Scientific Assembly  
and Associated Events**

16-23 July 2006 — Beijing, China  
[http://www.copernicus.org/COSPAR/  
COSPAR.html](http://www.copernicus.org/COSPAR/COSPAR.html)

**IAU Symposium No. 235**

Galaxy Evolution through the Hubble  
Time

14-17 August 2006 — Prague, Czech  
Republic

Contact: Jan Palous ([palous@ig.cas.cz](mailto:palous@ig.cas.cz))  
<http://astro.cas.cz/iaus235/>

**IAU Symposium No. 236**

Near Earth Objects, our Celestial  
Neighbors: Opportunity and Risk  
14-18 August 2006 — Prague, Czech  
Republic

Contact: Giovanni B. Valsecchi  
([giovanni@rm.iasf.cnr.it](mailto:giovanni@rm.iasf.cnr.it))  
<http://adams.dm.unipi.it/iaus236/>

**IAU Symposium No. 237**

Triggered Star Formation in a Turbulent  
ISM

14-18 August 2006 — Prague, Czech  
Republic

Contact: Jan Palous ([palous@ig.cas.cz](mailto:palous@ig.cas.cz))  
<http://astro.cas.cz/iaus237/>

**XXVIth General Assembly of the IAU**

14-25 August 2006, Prague, Czech  
Republic

Contact: Oddbjorn Engvold ([iau@iap.fr](mailto:iau@iap.fr))  
<http://www.astronomy2006.com/>

**IAU Symposium No. 238**

Black Holes: from Stars to Galaxies -  
across the Range of Masses  
21-25 August 2006 — Prague, Czech  
Republic

Contact: Vladimir Karas  
([vladimir.karas@cuni.cz](mailto:vladimir.karas@cuni.cz))  
<http://astro.cas.cz/iaus238/>

**IAU Symposium No. 239**

Convection in Astrophysics  
21-25 August 2006 — Prague, Czech  
Republic

Contact: Ian W. Roxburgh  
([i.w.roxburgh@qmul.ac.uk](mailto:i.w.roxburgh@qmul.ac.uk))  
<http://www.astro.keele.ac.uk/iaus239/>

**IAU Symposium No. 240**

Binary Stars as Critical Tools and Tests  
in Modern Astrophysics  
22-25 August 2006 — Prague, Czech  
Republic

Contact: William I. Hartkopf  
([wih@usno.navy.mil](mailto:wih@usno.navy.mil))  
<http://ad.usno.navy.mil/iaus240>

**From Cosmic Static to Cosmic Evolution**

15-19 Oct 2006 — Charlottesville, VA

Contact: Ken Kellerman  
([kkellerm@nrao.edu](mailto:kkellerm@nrao.edu))

**Cool Stars 14**

6-10 November 2006 — Pasadena, CA

Contact: John Stauffer  
([stauffer@ipac.caltech.edu](mailto:stauffer@ipac.caltech.edu))  
<http://ssc.spitzer.caltech.edu/mtgs/cs14/>

**IAU Symposium No. 241**

Stellar Populations as Building Blocks of  
Galaxies

10-14 December 2006 — La Palma,  
Canary Islands, Spain

Contact: Alexandre Vazdekis  
([vazdekis@ll.iac.es](mailto:vazdekis@ll.iac.es))  
[http://www.astro.rug.nl/~peletier/  
IAUS241.html](http://www.astro.rug.nl/~peletier/IAUS241.html)

**Living with a Star 1: A new era in  
understanding our space environment**

26-29 March 2007 — Boulder, Colorado

Contact: Karel Schrijver  
([schryver@lmsal.com](mailto:schryver@lmsal.com))  
<http://www.lws1.org>

Note: Listed are meetings or other  
events that have come to our attention  
(new or revised listings noted with an  
asterisk). Due to space limitations, 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](mailto:crystal@aas.org). Meetings that  
fall within 30 days of publication are not  
listed.

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

**ASTROPHYSICAL ACTIVITIES AT  
THE KAVLI INSTITUTE FOR  
THEORETICAL PHYSICS,  
UC SANTA BARBARA**

**Intensive Studies**

The major activity of KITP are the three to  
six month programs of intensive study of  
a particular topic. These involve at least  
20 visiting senior scientists (post-PhD) in  
residence at all times. Applications are  
presently being taken for programs in the  
2006-2007 academic year. See [http://  
www.kitp.ucsb.edu/activities/future](http://www.kitp.ucsb.edu/activities/future) for  
information.

**Program Proposals Welcomed**

Scientists interested in proposing  
programs for the 2007-2008 academic year  
should contact any of the astrophysicists  
of the KITP's Advisory Board (currently  
A. Burrows, P. Madau, and C. McKee), the  
director of the KITP (D. Gross) or the  
astrophysics permanent member (L.  
Bildsten) for information on proposal  
preparation. Decisions are made in  
February 2006, and full proposals should  
be at the KITP by early December 2005.  
Visit [http://www.kitp.ucsb.edu/activities/  
suggest/](http://www.kitp.ucsb.edu/activities/suggest/) for further information.

**Graduate Student Programs**

Graduate students can participate at the  
KITP either as an affiliate of a visiting  
senior member (this is typically the case  
for a graduate student who accompanies  
their thesis advisor as a participant) or as  
a Graduate Fellow. Students cannot apply  
to the program directly, but rather need to  
be nominated by their PhD advisor. The  
Graduate Fellows will be fully supported  
during their stay at the KITP. See [http://  
www.kitp.ucsb.edu/activities/grad\\_fellows](http://www.kitp.ucsb.edu/activities/grad_fellows)  
for information and deadlines.

**Visiting Researchers: KITP Scholars**

Applicants from non-Ph.D.-granting  
institutions and from institutions with  
greater emphasis on teaching (as  
measured, for example, by teaching load)  
are particularly encouraged to apply.  
Active theorists at national labs with large  
programmatic responsibilities are also  
encouraged to apply. See [http://  
www.kitp.ucsb.edu/activities/scholars/](http://www.kitp.ucsb.edu/activities/scholars/) for  
further information.



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Washington, DC 20009-1231

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Washington DC

## WASHINGTON NEWS

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



Viewing the US science funding process from afar is a confusing experience. I spent a bit of time this summer working in Germany and I can say that our process is certainly not well understood beyond our own borders. Many of the scientists I spoke with simply didn't understand our process and certainly didn't understand the yearly jeopardy that all science funding in the US faces. Other countries decide what to do and then complete it, even if extra money must be spent and other programs delayed or canceled. Difficulties aside, all funding systems work for the most part, with great telescopes and scientific results being produced by countries all around the world.

The outstanding hurdle for astronomy in the future is that the large projects currently on the drawing board will require significant capital. The kind of capital that a single nation simply cannot provide alone. Partnerships will be ever more important in the coming years and trying to understand the processes that each nation uses to fund science will be worthwhile for those building the large astronomical infrastructure of the future. At upcoming AAS meetings efforts will be made to bring topics on the

international nature of astronomy to our members, including panel sessions on the funding processes and priority setting systems of different nations. To accomplish the great science that new telescopes can produce, we must first build a worldwide network of partnerships to help move projects from the drawing board through the forests of red tape to actuality.

This summer (in striking contrast to past years) the House and Senate passed a large number of bills including the comprehensive Energy bill and many of the appropriations bills that fund government agencies. Overall, the House passed all appropriations bills and the Senate five of the 11 before the August recess. The science funding outlook looks good (in the sense that it is not negative) from an overall perspective with the Senate providing \$58.7B for R&D and the House \$57.0B. The Senate number is about 3.7% above current year funding levels.

NASA receives the largest bump-up from both the House (7.8% over FY2005) and Senate (7.1% over FY2005) for a total R&D budget of \$11.5B. The total NASA budget under the Senate plan would be \$16.4B, which is \$200M more than FY2005 (1.2% growth).