

AMERICAN ASTRONOMICAL SOCIETY 2014 ANNUAL REPORT













AAS MISSION AND VISION STATEMENT

The mission of the American Astronomical Society is to enhance and share humanity's scientific understanding of the universe.

- The Society, through its publications, disseminates and archives the results of astronomical research. The Society also communicates and explains our understanding of the universe to the public.
- The Society facilitates and strengthens the interactions among members through
 professional meetings and other means. The Society supports member divisions
 representing specialized research and astronomical interests.
- 3. The Society represents the goals of its community of members to the nation and the world. The Society also works with other scientific and educational societies to promote the advancement of science.
- 4. The Society, through its members, trains, mentors and supports the next generation of astronomers. The Society supports and promotes increased participation of historically underrepresented groups in astronomy.
- 5. The Society assists its members to develop their skills in the fields of education and public outreach at all levels. The Society promotes broad interest in astronomy, which enhances science literacy and leads many to careers in science and engineering.

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Established in 1899, the American Astronomical Society (AAS) is the major organization of professional astronomers in North America. The membership also includes physicists, mathematicians, geologists, engineers and others whose research interests lie within the broad spectrum of subjects now comprising contemporary astronomy. The mission of the AAS is to enhance and share humanity's scientific understanding of the universe.

PRESIDENT'S MESSAGE: C. Megan Urry



2014 was a banner year for astronomy: Hubble approached 25, Pluto readied for its close-up, Kepler found Earth-like planets, ALMA charted molecular gas on all scales, NuSTAR completed its primary mission, LSST started construction, JWST got closer to launch, and the redshift limit for galaxies just kept on receding. Roughly 150 students got their PhDs from US institutions, some applied for postdoc and

faculty positions, some went into data science, financial services, consulting, engineering, and public policy. And everywhere you look, the American Astronomical Society played a role.

The AAS is a scientific cooperative, founded by astronomers for astronomers. It has grown from ~100 members in 1899 to ~6000 members today, commensurate with the growth in AAS meetings, now the largest gatherings of astronomers anywhere in the world.

Many of our members are young people, who attend AAS meetings to present their research and to network with potential employers. Our "buy one, get one free" subsidy makes a multi-year junior membership a no-brainer, especially as the dues are low and departments often pick up what's left of the tab.

Some retired astronomers attend AAS meetings to see old friends and hear new science results. The "Emeritus" category means a discounted membership for retired astronomers who were regular AAS members for at least 10 continuous years. A new "40+E" group has attracted a lot of interest, bringing together several dozen seasoned AAS members, including many past Officers and Councilors. We are looking at ways to pass on their advice and experience to younger astronomers.

Meetings used to be small enough that you could know nearly every astronomer in the room. That's still true in parallel or topical sessions, but now a major activity at AAS meetings is meeting new people—especially people with whom to collaborate on science.

Indeed, the purpose of meetings has evolved over time. Back when communications were slower, you went to hear the latest science results. The field was smaller so networking was less critical. Now papers in AAS journals go through the referee process at record speed and networking at meetings is the name of the game. The plenary sessions, organized with care by the AAS Vice-Presidents, have become an extraordinary resource, bringing new students up to speed quickly and providing comprehensive updates for busy professors. Special sessions and splinter sessions abound—related to individual projects, missions, and other interests. The Employment Committee sponsors networking and career development sessions that which are very well attended and reflect the

broad interests of students today, many of whom will choose not to work in academia. A new Task Force is looking at the structure of AAS meetings—stay tuned for results next year.

We are unusual for a professional society in that we publish our own journals—the Astrophysical Journal (ApJ), the ApJ Letters, the ApJ Supplement, and the Astronomical Journal (AJ). The ApJ has the highest impact factor in our field. To keep these journals at the cutting edge, we empaneled a Journals Task Force in January 2014 and its recommendations were sent to the AAS Council at the end of that year (and endorsed at the January 2015 Council meeting); a detailed implementation plan is being finalized now by a Transition Team. The main changes will include enhancing the content (for example, seamlessly linking data to figures), consolidating the editorial staff, simplifying the submission process and, now that we are fully electronic, reviewing the role and content of the ApJ Supplement and creating special issues electronically. We have also launched a new science highlights publication, AAS Nova.

Our diversity committees—the Committee on the Status of Women in Astronomy, the Committee on the Status of Minorities in Astronomy, and the Committee for Sexual-Orientation and Gender Minorities in Astronomy (SGMA, formerly the Working Group for LGBTIQ Equality)—have helped make progress toward a fully inclusive profession. The recent Inclusive Astronomy meeting, organized with substantial support from the AAS and its members, illuminated the challenges and obstacles some astronomers still face; like the 1992 meeting on the status of women in astronomy, it will culminate in recommendations for the AAS to address. The Baltimore Charter for Women in Astronomy, an outcome of the 1992 meeting, states principles that are still relevant to the issues faced by (to quote directly from the AAS Anti-Harassment Policy) members whose "gender, gender identity or expression, race, color, national or ethnic origin, religion or religious belief, age, marital status, sexual orientation, disabilities, [or] veteran status" may differ from the majority.

One major change with the potential to increase the diversity of AAS prizewinners is that, starting in 2015, any astronomer can self nominate for AAS prizes. This followed a successful trial period of self-nominations for the Warner and Pierce prizes, which resulted in larger and more competitive pools of nominees. (Self nominations are among the "best practices" recommended by the organization American Women in Science.) In another initiative to increase diversity and inclusion, the AAS Council funded grants to encourage attendance of under-represented minorities at AAS meetings (FAMOUS grants) and to support colloquia at minority-serving institutions (the Shapley program).

The AAS plays many other roles, in astronomy education, connecting job applicants with employers, providing a forum for astronomers with common interests and concerns, and speaking for astronomers to federal agencies and political leaders. For two years running, our Bahcall Public Policy

Fellow organized a well-attended "State of the Universe" briefing for Capitol Hill staff, co-hosted by House leaders of the Committee on Science, Technology and Space. Our Executive Office staff and our many volunteers on

committees, working groups, and boards have made the astronomical profession better for everyone. In all parts of astronomy, in every career phase, across academia and beyond, the AAS exists to serve its membership.

EXECUTIVE OFFICER'S MESSAGE: Kevin B. Marvel



The American Astronomical Society had a great 2014! We accomplished a lot, working, as always, to fulfill the goals set by Council, while ensuring enough resources to accomplish these goals and protect the Society and its operations against financial uncertainty. This takes a great deal of effort on the part of our staff, now 25 people in size. Thanks to their efforts and the efforts of our volunteer leaders at all levels, we

have done much to enhance and share humanity's scientific understanding of the universe, which is the Council's guiding mission statement for our Society.

Our main activity from a financial point of view is the publication of our research journals: the Astrophysical Journal (ApJ), including ApJ Letters and ApJ Supplement, and the Astronomical Journal (AJ). During 2014 a very active Journals Futures task force met regularly to develop recommendations for changes to our journals going forward. The Council approved these recommendations in January 2015, so the efforts of the task force were fulfilled. The next step, which we are working on now, is the implementation of these recommendations. Details can be found online at aas.org/posts/news/2015/02/changesahead-aas-journals and updates will be provided as they become known. For logistical, financial, and other reasons, the full implementation of all recommendations may take more than just a year, but from an author's perspective, not much will change. The same high quality, rapid peer review and editorial functions we have become known for (roughly 22 days from acceptance to publication for our ApJL; 55-60 days acceptance to publication for the ApJ and AJ) will remain. I would also like to point out that 2014 saw a reduction in the author charges yet again. The cost to publish an article in our journal is now cheaper than it ever has been and for a typical length paper, the cost is less than a new iPad. I think that says a lot about our ongoing tradition of not using the AAS journals to produce revenues to fund ongoing programs or efforts apart from the journals themselves. Not many societies approach their journals in this way and we should be proud of how we run them for the benefit of the discipline.

Our second largest effort is in the area of meetings organization. We are now very, very good at meeting organization and we continue to receive comments from members (who are members of other organizations) favorably contrasting our meetings to their own. These kudos are due to our very hard working Meeting Services team. We continue to invite meeting organizers to reach out to us to arrange a meeting in our Topical Conference Series or for logistical support for

other meetings. Let us handle the logistics so you can focus on the science.

In 2014 we met in Washington, DC, and in Boston, MA. Both meetings were successful scientifically and financially, although doing well in Boston can be a challenge. We supported Division meetings in a variety of ways for all of our Divisions, from abstracts to registration and everything in between.

Our public policy efforts in 2014 were excellently carried out by our Deputy Executive Officer and Director of Public Policy, Joel Parriott, and our John Bahcall Public Policy Fellow, Josh Shiode. In addition to our normal Congressional Visits Day, they kept us involved in multiple coalitions, supported Division hill visit days, and a wide range of other activities. We are having a positive impact, maintaining a positive reputation and can really make things happen when it is possible to do something at all, while also keeping our membership informed of policy matters important to them.

2014 saw the completion of a multi-year effort at the American Institute of Physics (AIP) to reinvent their governance structure, taking into account best practices and current thinking on board effectiveness. The changes were finally voted into operation in December 2014, so we have a new and hopefully more impactful AIP for the future. The AAS derives substantial benefit from our membership in this federation of physical science societies, including delivery of Physics Today to our members, support from the Statistical Research Center for surveys of various types focused on astronomy and astronomers, the ever-popular FYI policy news notification service, and the Congressional and State Department Fellows program, among many other activities (including the Society of Physics Students). We participate in the AIP governance now through an appointee to the AIP governing board (me) and an organizational representative (our corporate secretary, G. Fritz Benedict). I keep the Council informed when issues arise of importance to our organization and try and ensure astronomy is well-represented within AIP.

Thanks to all of you who were members in 2014. All of us, the Council, our staff, and our volunteers, thank you for your membership and participation. We hope that the goals set by Council and the efforts of our employees, contractors, and especially those of our volunteers are valuable to you and to our shared discipline. Being an AAS member is important for astronomers and those in closely related disciplines. We must work together to enhance and improve our field, and with your continued help and support, all things are possible!

FINANCIAL REPORT

The Annual Audit for 2014 was completed by Tate & Tryon. As with past years, the audit report received an unqualified opinion. In 2014, there was an overall increase in net assets of \$118,933 dollars; resulting in a total assets of \$23,100,580 as of 31 December 2014.

2014 Highlights

The American Astronomical Society is a non-profit organization. In 2014, we compiled our operation budgets with deficits to draw down our reserve funds. We reduced author fees and did not increase our membership dues while maintaining our service levels.

As planned, the AAS General Fund generated a deficit of \$86,394. The ending balance of the General Fund at 31 December was \$103,025. At 31 December the unreserved

balance in the General Operating Reserve Fund was \$2,015,768, representing 34.9% of the annual operating expenses.

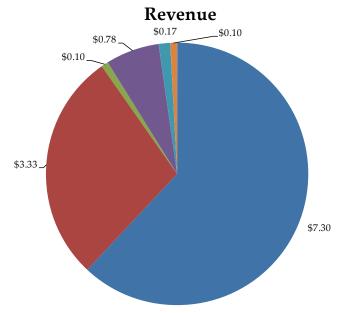
AAS bylaws, Article VIII.3, mandate that each Journal maintain a reserve fund equal or above the level of one-half of the annual operating expenses. In addition to the journal reserve funds, we have a segregated journal archive reserve fund to ensure the long-term maintenance of the electronic journals. As of 31 December 2014, the journal reserve fund balances reached \$11,572,714 representing 175.5% of the 2013 expenses.

Through financial support from NSF, we funded 58 individuals under the International Travel Grant in the amount of \$91,850.

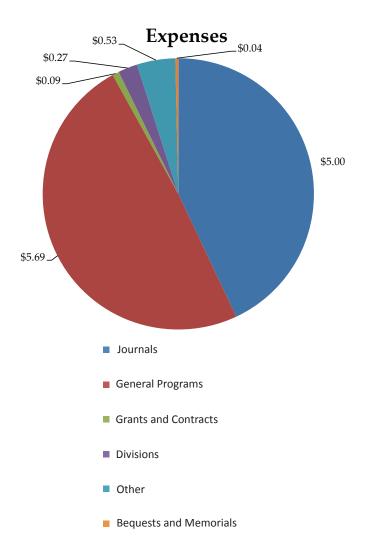
Figure 1. AAS Balance Sheet		
Assets	2014	2013
Cash and Cash Equivalents	1,456,143	1,439,802
Accounts Receivable	421,889	636,951
Prepaid Expenses	784,037	297,299
Investments	19,929,018	19,743,278
Deposits	70,463	70,463
Assets Held for Deferred Compensation	42,598	30,130
Property and Equipment	396,432	497,990
Totals Assets	\$23,100,580	\$22,715,913
	·	
Liabilities and Net Assets		
Accounts Payable and Accrued Expenses	586,639	505,626
Deferred Revenue	3,453,934	3,227,741
Deferred Compensation	42,598	30,130
Total Liabilities	\$4,083,171	\$3,763,497
Net Assets		
Unrestricted	16,496,515	16,496,947
Temporarily Restricted	1,955,806	1,890,431
Permanently Restricted	565,088	565,038
Total Net Assets	\$19,017,409	\$18,952,416
Total Liabilities and Net Assets	\$23,100,580	\$22,715,913

Figure 2. AAS Statement of	Activities	
Unrestricted Activities	2014	2013
Revenues		
Journals	7,291,926	8,998,165
General Programs	3,329,371	3,029,935
Grants and Contracts	93,145	765,783
Divisions	769,204	103,141
Other	166,164	346,247
Bequests and Memorials	30,747	60,472
AstronomyCom, Inc.	36,118	13,773
Net Assets Released from Restrictions	67,599	63,347
Total Unrestricted Income	\$11,784,274	\$13,380,863
Expenses	2014	2013
Journals	4,995,283	5,741,929
General Programs	5,690,971	4,926,125
Grants and Contracts	93,145	106,478
Divisions	269,173	201,855
Other	530,428	392,284
Bequests and Memorials	41,684	55,516
AstronomyCom, Inc.	164,022	245,758
Total Expenses	\$11,784,706	\$11,669,945
Change in Unrestricted Net Assets	(\$432)	\$1,710,918
Temporary Restricted Net Assets		
Divisions	24,925	125,171
Bequests and Memorials	70,952	84,933
Contributions and Other	37,097	64,682
Net Assets Released from Restrictions	(67,599)	(63,347)
Change in Temporarily Restricted Net Assets	\$65,375	\$211,439
Permanently Restricted Net Assets		
Contributions and Other	50	150
Change in Permanently Restricted Net Assets	\$50	\$150
Change in Net Assets	\$64,993	\$1,922,507
Net Assets Beginning of Year	18,952,416	17,029,909
Net Assets End of Year	\$19,017,409	\$18,952,416

Figure 3. Annual Revenues and Expenses (in millions of dollars)



*Bequest and Memorials includes Assets Released from Restrictions



MEMBERSHIP

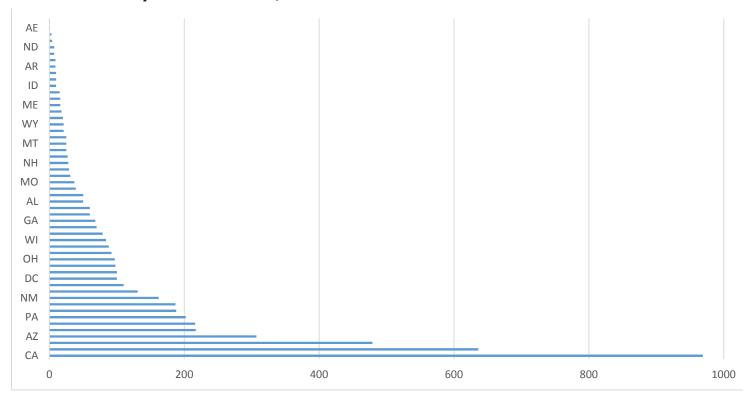
With more than 5,000 members in the US and more than 700 outside, the AAS membership is geographically diverse, with many members from countries beyond North America. The AAS is proud to draw members from countries all around the world as astronomy is clearly a global endeavor that knows no borders...after all, one sky connects us all.

Of course, we know that by growing our membership internationally through, for example, our International Affiliate membership class, we can expand the diversity of our membership to better represent the global astronomical enterprise. Already, many of our services know no boundaries, such as the AAS Job Register, AAS Wall Calendar, and AAS Membership Directory, and we

work actively to ensure a focus in these publications beyond just North America. The directory, for example, is recognized as the most comprehensive and accurate listing of international astronomy institutions, and we are working with the International Astronomical Union to ensure that our list and theirs are consistent, accurate, and complete.

Our journals draw authors from all around the world, and even our meetings are showing steadily increasing participation from astronomers working outside North America. We need this diversity to achieve our core mission, to enhance and share humanity's scientific understanding of the universe.

US Members by State - Total 5,365



969
636
479
307
217
216
202
188
187

NM 162 IL 131 MI 110 DC 100 HI 100 FL 98 OH 97 WA 92 NJ 88		
MI 110 DC 100 HI 100 FL 98 OH 97 WA 92	NM	162
DC 100 HI 100 FL 98 OH 97 WA 92	IL	131
HI 100 FL 98 OH 97 WA 92	MI	110
FL 98 OH 97 WA 92	DC	100
OH 97 WA 92	HI	100
WA 92	FL	98
	ОН	97
NJ 88	WA	92
	NJ	88

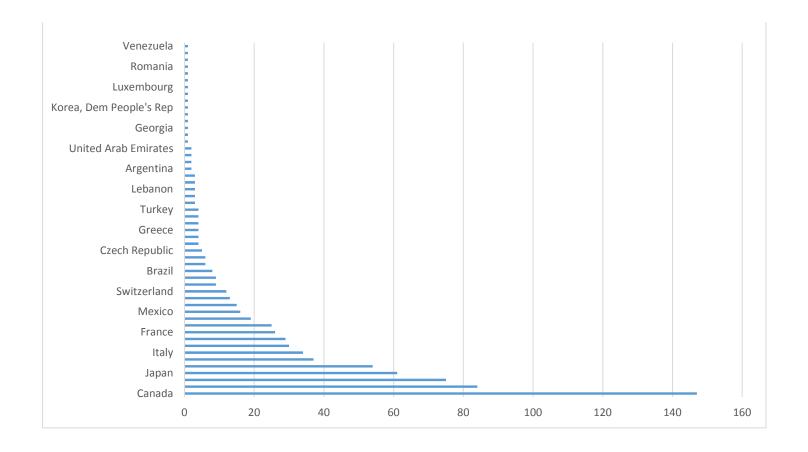
WI	84
IN	79
СТ	70
GA	68
MN	60
TN	60
AL	50
NC	50
KY	39

МО	37
SC	31
OR	29
NH	28
UT	27
IA	25
MT	25
WV	25
ОК	21

WY	21
LA	20
KS	18
ME	16
PR	16
VT	15
ID	10
NV	10
RI	10

AR	9
NE	9
DE	7
ND	7
AK	4
MS	3
AE	1
SD	1
VI	1

Non-US Members by Country - Total 782



Canada	147
Germany	84
United Kingdom	75
Japan	61
Australia	54
Republic of Korea	37
Italy	34
Netherlands	30
Chile	29
France	26
China	25
Spain	19
Mexico	16
Taiwan	15
Sweden	13
Switzerland	12

Belgium	9
South Africa	9
Brazil	8
Israel	6
Norway	6
Czech Republic	5
Denmark	4
Finland	4
Greece	4
India	4
Ireland	4
Turkey	4
Austria	3
Holy See (Vatican	3
City)	
Lebanon	3

Poland	3
Russian Federation	3
Argentina	2
Bahrain	2
Iceland	2
United Arab Emirates	2
Colombia	1
Estonia	1
Georgia	1
Hong Kong	1
Iran	1
Korea, Dem People's	1
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Lao People's Dem	1
Republic	
Latvia	1

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In 2013 we upgraded our membership database software, which improved our reporting accuracy. The numbers accurately reflect the geographic distribution of our membership.

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William I. Forrest

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PUBLISHING

AAS leadership initiated a formal strategic planning exercise for its publishing program in 2014. After a successful Journals Futures workshop in April 2013, then AAS President David Helfand appointed a special Task Force to consider the current and future position of its flagship journals in the astronomy community, starting in April 2014. The Task Force consisted of nine AAS members and Kent Anderson, now publisher of *Science* magazine. After more than eight months of lively discussion and deliberation during inperson and phone meetings, the Task Force delivered a set of recommendations for change that were unanimously approved by the AAS Council at its January 2015 meeting (see journals.aas.org).

In 2014 the Astronomical Journal (AJ) and the Astrophysical Journal, Letters, and Supplement (ApJ, ApJL, ApJS) published a total of 4,010 research articles. After many years of declining print subscriptions, the AAS moved to eliminate print editions of its journals effective 1 January 2015. The news of this decision was very well received by the astronomy library community at a meeting of the Special Libraries Association in June and at the Libraries and Information Services in Astronomy (LISA) VII meeting in Naples, Italy, in June 2014. The Task Force and AAS Publishing program staff have started to consider the implications of this, including much more focus on developing the HTML version of the journals, as opposed to the PDF representation of the typeset printed pages.

After hearing from the AAS's publishing partner, Institute of Physics Publishing, about an opportunity to establish a new joint eBook series, the AAS requested a formal proposal, which was approved first by AAS Publications Board and later by the AAS Council at its June 2014 meeting. The program is set up under the auspices of astronomy.com and is projected to bring significant returns within five years.

Concluding work on the NSF grant awarded to the AAS and AIP to study community buy in for sharing research data was completed early in 2014. At the January 2014 meeting of the AAS in Washington, DC, a workshop was held to discuss possible metadata schemas and interoperability among existing data repositories. In March 2014, a workshop was held at the AAS executive offices to discuss possible methods of peer reviewing data sets published in AAS journals.

Director of Publishing Chris Biemesderfer left the AAS in August 2014. An open search for a replacement was launched involving a search committee made up of *ApJ* Editor-in-Chief Ethan Vishniac, *AJ* Editor-in-Chief Jay Gallagher, and Publications Board member Alberto Conti. Three final candidates were interviewed and the position was offered to Julie Steffen effective October 2014. Steffen previously managed the AAS journals for many years when they were published by the University of Chicago Press.









PUBLIC POLICY

The AAS conducts a wide range of public policy activities on behalf of the membership and US astronomy. The Committee on Astronomy and Public Policy (CAPP), whose members are appointed by the President of the AAS, is charged with guiding the Society's policy activities in close collaboration with the policy staff in the Executive Office. Together, CAPP, the Director of Public Policy, and the John Bahcall Public Policy Fellow closely monitor science policy developments important to the astronomical community and engage with policymakers at federal agencies, the White House, and the Congress through advocacy initiatives.

The Director of Public Policy and John Bahcall Public Policy Fellow monitor policy issues on a day-to-day basis and work closely with the CAPP on communicating issues to both policymakers and the astronomical community. The most direct communication to the membership occurs during multiple plenary and concurrent policy sessions during AAS and division meetings.

In 2014 the AAS Council issued two CAPP-initiated policy resolutions regarding the President's Budget Request for FY 2015 and the importance of community-based priority setting.

The AAS sponsored its first ever "State of the Universe" congressional briefing, along with the chair and ranking member of the House Science, Space, and Technology Committee on 9 January 2014. AAS President Meg Urry moderated the briefing, which included a keynote science talk by Past President David Helfand and panelist remarks about alternate career paths by AAS members Blake Bullock,

Ari Buchalter, and Peggy Piper. Congressman Lamar Smith shared some opening remarks and over 80 congressional and executive branch staff attended the successful event.

The AAS is a member of several multi-society coalitions in Washington, DC, that work on science and science-education policy. These include the Coalition for National Science Funding (CNSF), the Task Force on American Innovation, the Energy Sciences Coalition, the Science-Engineering-Technology Working Group (SETWG), the STEM Education Coalition, and the Physical Sciences Education Policy Coalition. The AAS is also a member of the Intersociety Working Group and authors a chapter every year on the outlook for astronomy funding published in the AAAS Report on Research and Development.

SETWG consists of members from various scientific and technical professional societies as well as universities and industry. The group sponsors an annual Congressional Visits Day each spring. This event brings together research scientists and engineers from all over the country for two days to learn how federal funding for science works and to lobby their elected Representatives and Senators for basic research and development funding. The three-day event was held on 24-26 March 2014 in Washington, DC. This event introduces AAS members to the federal budget process and science policy formulation, and shows them the basics of meeting with Congressional offices. Fifteen AAS members, including one CAPP member, volunteered their time to participate in 2014. Feedback from the participants was very positive.





Left: CVD participants Kelly Korreck, Sara Barber, Nicole Cabrera, and Anna Ho pose for a picture with Senator Elizabeth Warren at a meet-and-greet. **Right:** CVD participants were able to attend a hearing of the full House Committee on Science, Space, and Technology. This hearing was "A Review of the President's Fiscal Year 2015 Budget Request for Science Agencies," with The Honorable John Holdren, Director, Office of Science and Technology Policy, Executive Office of the President

AAS & DIVISION MEETINGS















If you ask most people what big event occurs in Washington, DC, every four years, they'll probably say the presidential inaugural. For astronomers, though, the answer is the return of the AAS winter meeting — the "Super Bowl of Astronomy" — to the nation's capital. The quadrennial DC meetings are the biggest astronomy conferences in the world. At our 2010 meeting it became clear that we'd outgrown the Marriott Wardman Park north of Dupont Circle. The 223rd AAS meeting, held in January 2014, was our first in a new venue: the Gaylord National Resort and Convention Center in National Harbor, Maryland. Set on 350 premium acres along the Potomac River with lovely views of downtown DC and Old Town Alexandria, Virginia, the Gaylord is accompanied by more than 70 shops and restaurants and is just a 15-minute taxi ride from the capital. The final count of attendees was 3,117, not counting some 150 local middle- and high-school students who dropped by one afternoon to tour the exhibit hall and participate in hands-on science-education activities.

This was a joint meeting of the AAS and its High Energy Astrophysics Division (HEAD) and Historical Astronomy Division (HAD). Befitting such a large meeting, the program was jam-packed. The HAD meeting kicked off on Sunday afternoon with two sessions: "Why Is There Something Rather than Nothing in the Universe?" and "From Barnard's Star to the Kepler Mission: Searching for Low Mass

Companions to Stars." Regular AAS science sessions got under way on Monday morning with the Kavli Lecture by Robert Williams (former director, Space Telescope Science Institute) on the legacy of the Hubble Deep Field, the iconic "baby picture" of our universe.

That was just the first of a stellar lineup of some 20 plenary talks by AAS prize winners and other distinguished astronomers. Attendees also heard from two astronomers renowned for their success in sharing astronomy, and science more generally, with the public. Ed Krupp (Griffith Observatory) gave his Andrew Gemant Award lecture after being presented with the American Institute of Physics annual prize for contributions to the cultural, artistic, or humanistic dimension of physics. And Neil deGrasse Tyson (American Museum of Natural History), host of the Cosmos reboot on Fox-TV and National Geographic Channel, enthralled his audience with "Tales from the Twitterverse, and Other Media Excursions." The plenaries didn't wind down until late Thursday afternoon, when James Lemen (Lockheed Martin Corp.) accepted the Lancelot Berkeley Prize for meritorious research and shared some of the amazing images and videos coming from NASA's Solar Dynamics Observatory.

As is always the case when the AAS meets in the US political center of gravity, we gave special emphasis to public policy, including a special plenary address from Fleming Crim,

assistant director of the National Science Foundation's Directorate for Mathematical & Physical Sciences, which funds most ground-based astronomy in the US. The meeting also featured more than 1,000 research contributed oral and poster presentations, about 150 dissertation talks from new PhD's, a wide assortment of history and education papers, as well as contributed oral and poster papers to accompany the HEAD and HAD sessions. Another highlight was the first-ever open-mic night for members to entertain friends and colleagues. The spectacle featured musicians, singers, storytellers, comedians, poets, and jugglers — who knew that astronomers could be so talented in such down-to-Earth pursuits?!

With tongue firmly planted in cheek, people have been calling Boston the "Hub of the Universe" since the 19th century. But it was no joke when the AAS convened its 224th meeting, 1-5 June 2014, at the Westin Copley Place in the city's historic Back Bay district. Even without the AAS in town, the Greater Boston area occupies a key spot on the astronomical map thanks to its being home to the Harvard-Smithsonian Center for Astrophysics, the Massachusetts Institute of Technology, Boston University, Boston College, Tufts University, the University of Massachusetts, the Chandra X-ray Center, Sky & Telescope magazine, the American Association of Variable Star Observers, and several other institutions with cosmic connections. With so many astronomers already in the neighborhood, the Boston meeting was guaranteed to be a particularly dynamic gathering — all the more so because the AAS Solar Physics Division (SPD), Historical Astronomy Division (HAD), and Laboratory Astrophysics Division (LAD) met with us too.

Among the scientific highlights of the meeting were a baker's dozen plenary presentations, featuring the Kavli lecture by cosmologist David Spergel (Princeton), the Pierce Prize lecture by quasar expert Nadia Zakamska (Johns Hopkins), and talks by the winners of the SPD Hale and Harvey prizes. Hundreds of contributed oral and poster presenters shared their latest ideas and discoveries across the full spectrum of astronomical topics. There were four special sessions (astronomy R&D using picosatellites, observational and theoretical aspects of the multiverse, long-time-domain astronomy, and assorted topics in astrostatistics) and two multisession Meeting-in-a-Meeting programs (gamma-ray constraints on the extragalactic background light and the intergalactic magnetic field, and planets beyond the reach of NASA's Kepler mission).

Six LAD sessions, covering topics from particles to planets, explored the theme "Bridging Laboratory and Astrophysics." Two more, convened jointly with SPD, were themed "Bridging Laboratory and Solar Plasma Studies." SPD organized no fewer than 14 of its own sessions on topics ranging from the solar interior to the corona and out into

the heliosphere. HAD sessions included a joint session with LAD on the history of solar physics.

Every June AAS conference includes the all-important Annual Business Meeting. In Boston it featured a changing of the guard as outgoing AAS President David Helfand surrendered the gavel to incoming President Meg Urry.

The 225th AAS meeting took place 4-8 January 2015 at the Washington State Convention Center in Seattle. Gathering with the AAS, as usual for our winter meeting, were HEAD and HAD. Also as usual, the Seattle meeting offered a rich assortment of prize and invited talks by some of our most distinguished colleagues. We kicked off on Monday morning with the Kavli Foundation Lecture by Daniel Baker (University of Colorado, Boulder), who reviewed recent progress toward understanding the Earth-girdling Van Allen radiation belts. Emily Levesque (also UC-Boulder) gave the Cannon Award lecture on her innovative work using gamma-ray bursts to explore fundamental questions of stellar astrophysics and cosmology. Sagan Fellow Katja Poppenhaeger (Harvard-Smithsonian Center for Astrophysics) explored the highenergy environment of exoplanets. Douglas Finkbeiner (Harvard-Smithsonian Center for Astrophysics), Tracy Slatyer (MIT), and Meng Su (MIT) jointly presented the HEAD Rossi Prize lecture on their discovery, in gamma rays, of the "Fermi bubbles" and on subsequent studies of these unanticipated galactic structures at other wavelengths.

Piero Madau (University of California, Santa Cruz), recipient of the Dannie Heineman Prize for Astrophysics, awarded jointly with the American Institute of Physics, described highlights of his research on the era of first light in the universe, the ionization and heating of the intergalactic medium, and the formation and evolution of galaxies. Fiona Harrison (Caltech) presented results from NASA's ongoing Nuclear Spectroscopic Telescope Array (NuSTAR) mission, the first to capture images of the hard-X-ray sky. By special arrangement with the Royal Astronomical Society (RAS) in the United Kingdom, Carlos Frenk (University of Durham) gave his RAS Gold Medal lecture on the status of the cold dark matter paradigm in light of recent computer simulations and redshift surveys. And four years after the first recipient of the Lancelot Berkeley Prize gave the final plenary presentation at the last Seattle meeting, David Weinberg (Ohio State University) wrapped up the 225th meeting's science program with his Lancelot Berkeley Prize lecture on the Sloan Digital Sky Survey's remarkable contributions to astrophysics.

The HAD meeting got underway Sunday afternoon with two sessions: "Astronomy and the First World War" and "Ideas of Evolution Inside and Outside of Astronomy During the Long 19th Century." HAD sessions continued on Monday, with a special session entitled "Preserving the Material Legacy



of the American Observatory Movement." HEAD convened two special sessions that day as well, taking stock of the past, present, and future of general relativity on the occasion of its centennial. Other special sessions included "Astronomy Across Africa," "Results from the SDSS-III/APOGEE Survey II," and "Science with the 3D-HST Survey." There were also a wide variety of contributed oral and poster presentations, bringing

the total number of plenaries, short orals, and posters to somewhere north of 1,000.

The 46th meeting of the AAS Division for Planetary Sciences (DPS) took place at the JW Marriott Starr Pass in Tucson, Arizona, from 9 to 14 November 2014. More than 500 astronomers and planetary scientists attended, and they gave some 600 presentations to communicate new results obtained on our solar system as well as on extrasolar planetary systems from both ground- and space-based studies. Invited and prize talks included "Hot Facts About Cool Comets" by Anita Cochran (McDonald Observatory), "What's

Going on Around the Outer Planets? A Report on Recent Ring Research" by Matthew Hedman (Cornell University), "Exoplanets: A New Era of Comparative Planetology" by Victoria Meadows (University of Washington), and "After Imbrium, Before Babylon: Solar System's Middle Years" by Matija Cuk (SETI Institute).

Among the meeting's other highlights were early science results from the European Space Agency's Rosetta mission to Comet 67P Churyumov-Gerasimenko and the worldwide campaign to observe Comet C/2013 A1 Siding Spring's close encounter with Mars. Scientists also presented a variety of discoveries from Cassini at Saturn, Dawn at Vesta, Curiosity on Mars, LADEE at the Moon, and other planetary-exploration missions, as well as discoveries from ground-and space-based telescopic observations of planets, moons, comets, and asteroids.

In addition to gathering with the AAS in January 2014 and 2015, HEAD convened its own annual meeting in August 2014 in Chicago, Illinois. The AAS Division on Dynamical Astronomy (DDA) met in April-May in Philadelphia, Pennsylvania. Our newest Division, LAD, held sessions not only at the Society's meetings but also at the DPS, HEAD, and SPD meetings. It was a very busy year!

DIVISIONS, COMMITTEES & WORKING GROUPS

The AAS is a diverse group of members passionate about their discipline. What the AAS can accomplish is greatly enhanced by our Divisions, Committees, and Working Groups. Each has a role to play, but all are enabled by the dedicated enthusiasm of volunteer leaders and participants.

The AAS Divisions cover all major areas of astronomical endeavor. Our six topical Divisions are the Division for Planetary Sciences, High Energy Astrophysics Division, Solar Physics Division, Division on Dynamical Astronomy, Historical Astronomy Division, and Laboratory Astrophysics Division. Each has its own governing committee, whose volunteer leaders guide the strategic direction of each Division and partner with the AAS Council to enhance our field. All AAS members may join any, and as many, Divisions as they choose; each Division has its own membership dues and bylaws. Several Divisions have affiliate memberships, which allow scientists who would not otherwise be, or do not qualify to be, full members of the AAS to participate in Society and Division activities.

The AAS Committees help implement many of the strategic goals of the AAS Council. A full list is available online

at the AAS website, but some of the most important committees include the Committee on the Status of Women in Astronomy, Committee on the Status of Minorities in Astronomy, Committee on Public Policy, Publications Board, and Employment Committee. Some committees require election, while most rely simply on interested individuals to volunteer for service. Each AAS prize and award has its own selection committee, and there are a range of administrative committees that look after the operation of the Society in a variety of ways. Individuals interested in volunteering for committee service should contact the AAS Secretary.

Working Groups are formed by the AAS Council to look after specific issues in our field. Among those formed recently are the Working Group on Astroinformatics and Astrostatistics (WGAA) and the Working Group on Time Domain Astronomy (WGTDA). Sometimes Working Groups stay active for a long time, like the Working Group on Astronomical Software, while occasionally they "graduate" to a full-fledged Division, as outlined in our bylaws. For example, in 2012 the Working Group on Laboratory Astrophysics became the Laboratory Astrophysics Division, our first new Division in three decades.

MEDIA RELATIONS

The role of the AAS Press Office is to ensure media attention to newsworthy scientific results that are presented at Society meetings, presented by AAS members or other astronomy researchers at scientific conferences worldwide, published in peer-reviewed journals (including our own Astrophysical Journal and Astronomical Journal), or announced in press releases from recognized astronomy-related institutions. An ancillary role is to ensure media recognition for recipients of major astronomical prizes and honors, especially those awarded by the Society or its Divisions. These responsibilities fall to the AAS Press Officer, Dr. Richard Tresch Fienberg, who organizes press conferences at AAS meetings, handles media inquiries and requests for expert referrals, and manages the AAS press-release-distribution service, which forwards astronomy-related releases from public-information officers to journalists all over the world and working in all forms of print, broadcast, and electronic media. He also distributes headlines and links to online press releases via the Twitter account @AAS Press and manages the Astronomy in the News section of our website. Rick is a member of the AAS Executive Office staff, though he works from home near Boston. Assisting as volunteers are Deputy Press Officers Dr. Larry Marschall (recently retired from Gettysburg College) and Dr. Inge Heyer (Loyola University Maryland).

In preparation for AAS meetings, the Press Officer solicits press, photo, and video releases; arranges press conferences, photo opportunities, press tours, and seminars for science writers; and prepares media advisories and a press kit. During meetings, press conferences are webcast live for journalists unable to attend in person. Working with the American Association for the Advancement of Science's EurekAlert service, complimentary access to the electronic editions of the Astrophysical Journal and the Astronomical Journal is provided to accredited reporters who are not employed as astronomers.





Another of the Press Officer's responsibilities is to arrange for photography at AAS meetings. For many years we relied on volunteers, but since 2012 we've used the professional services of Joson Images. The quality of our meeting photography has taken a big leap forward thanks to Imelda Joson and her husband, Edwin Aguirre, both of whom are, like Rick Fienberg, former editors of Sky & Telescope magazine. They are both accomplished astrophotographers as well.

We've been forwarding press releases to the news media by email for more than two decades. We maintain two lists: one for reporters eligible to receive embargoed releases, and one for public-information officers (PIOs) (who, according to rules established by Science and Nature, are ineligible to receive embargoed releases). The lists include some 2,000 email addresses, with about 1,700 of them on the press list and 300 on the PIO list. On average, we forward about 100 ± 20 press releases each month. We receive dozens more, but we don't forward releases if we don't think they'll be of interest to our list members (as is the case, for example, with NASA releases about contract extensions and university releases about small grants to individual investigators). The @AAS Press Twitter account has about 3,400 followers, but not all of those are journalists or PIOs. Many are astronomers (including AAS members) or astronomy enthusiasts among the general public.

The 223rd AAS meeting in National Harbor, Maryland, in January 2014 attracted 105 press registrants. Another 20 reporters requested the webcast password. As usual for a DC-area meeting, those numbers were about 50% higher than for a typical winter meeting. Corresponding numbers for the 224th meeting in Boston, Massachusetts, in June 2014 were 56 on-site press registrants and 18 webcast viewers.

> On-site press registrants were a mix of approximately two-thirds reporters and one-third public-information officers. The AAS Press Officer organized eight press conferences and one seminar for science writers at the winter meeting; the corresponding numbers for the summer meeting were five and one, respectively. There's always more news at our winter meetings than at our summer meetings because the former have many more attendees and papers than the latter.

AAS photos © 2014 Joson Images

L-R: Rick Fienberg, Larry Marschall, Inge Heyer

EDUCATION & OUTREACH









Through its education and outreach program, the AAS nourishes a scientific outlook in society to help increase public support for scientific research, improve science education at all levels, attract young people to careers in science and technology, and make evident the connections between science, technology, and prosperity. The highest priorities of the AAS in these areas are to promote and support training the next generation of astronomers to become successful scientific researchers and educators, and to encourage and support high-quality research on the teaching and learning of astronomy.

Thanks to the Center for Astronomy Education (CAE), the Collaboration of Astronomy Teaching Scholars (CATS), the Association for Astronomy Education (AAE), and other individual members of the AAS, weekend workshops, family science events, and oral and poster sessions on various aspects of astronomy education continue to be regular features of AAS meetings.

The Astronomy Education Board (AEB) provides oversight of AAS educational activities by giving advice to the Council, the Executive Officer, the Education Officer, and, since 2009, the Education & Outreach Coordinator. Gina Brissenden began filling the Coordinator role in June 2013. She works to encourage and support members' efforts in education and outreach, and to manage AAS education programs that can't be maintained through volunteer effort alone.

In 2012 the AAS launched a new education and public outreach (EPO) initiative called Astronomy Ambassadors. Conceived by then-president Debra M. Elmegreen, the Ambassadors program comprises a professional development workshop and a community of practice designed to help improve early-career astronomers' ability to communicate effectively with students and the public. It provides mentoring and training experiences for young

astronomers, from advanced undergraduates to beginning faculty, and provides access to resources and a network of contacts within the astronomy EPO community.

By learning how to implement effective education and outreach strategies, AAS Astronomy Ambassadors become better teachers, better presenters at meetings, and better representatives of our science to the public and the government. And because young astronomers are a more diverse group than those who currently do the majority of outreach, they help the astronomical community present a more multicultural and gender-balanced face to the public, enabling members of underserved groups to see themselves as scientists.

Ambassadors are provided with a large, growing library of outreach activities and materials that are suitable for a range of venues and audiences. Many of the resources in this library were developed by organizations such as the Astronomical Society of the Pacific, the Pacific Science Center, and the Center for Astronomy Education for other outreach programs, though some resources have been created specifically for this program.

The first AAS Astronomy Ambassadors workshop was held at the 221st meeting of the AAS in Long Beach, CA, in January 2013 and served 30 young astronomers chosen from more than 75 applicants. Incorporating feedback from workshop participants and lessons learned from the reports they've submitted after conducting their own outreach events, a second annual workshop for a new cohort of 30 Ambassadors was successfully held in January 2014 at the 223rd AAS meeting in Washington, DC. The third annual workshop was held in January 2015 at the 225th AAS meeting in Seattle, WA, for a cohort of 28 Ambassadors. There was an additional workshop in October 2014 cosponsored by the AAS Division for Planetary Sciences (DPS)

held in conjunction with 46th DPS meeting in Tucson, AZ, for a cohort of 28. The AAS Council has approved continuing this program in 2016, with another workshop to be held in Kissimmee, FL, in conjunction with the 227th AAS meeting.

In June 2012 at the 220th meeting of the AAS in Anchorage, AK, the AAS launched the AAS Student Education Outreach Program. Students and their chaperones (teachers and/or parents) are invited to drop in at AAS meetings on Tuesday morning to hear a special presentation from an astronomer and then to tour the Exhibit Hall, where numerous exhibitors conduct age-appropriate interactive demonstrations and other educational activities. This program has proven to be very popular, typically including 150-250 local middle-school through community college students from underserved minority populations, STEM programs, and home school groups. Through a generous contribution from long-standing sponsor Associated Universities, Inc., the AAS is able to supply transportation and additional resources to provide this program free of charge.

At the 221st AAS meeting in Long Beach, CA, in January 2013, approximately 300 students from six schools and various homeschool programs heard a talk by Bobak "Mohawk Guy" Ferdowsi and engaged in hands-on science activities led by 23 exhibitors and volunteer outreach groups. At the 222nd AAS meeting in Indianapolis, IN, in June 2013, approximately 200 students from two schools and various homeschool programs heard from Gail Zasowski and participated in hands-on activities led by 14 exhibitors and volunteer outreach groups. More recently in January 2015, 130 students at the 225th AAS meeting in Seattle, WA, heard from astrobiologist Aomawa Shields, who was also a 2015 AAS Doxsey Prize Winner, then participated in hands-on activities with 19 exhibitors.

We continued to work on strengthening the Harlow Shapley Visiting Lectureship Program, which sends AAS members on short visits to colleges and universities that don't have robust astronomy programs. The goal is to ensure that the program supports not only the part of our mission statement that commits the Society to training, mentoring, and supporting the next generation of astronomers, but

also the part that commits us to promoting increased participation of historically underrepresented groups in astronomy. We wrote a proposal to overhaul the Shapley program, covering everything from the selection of lecturers and host institutions, through outreach and publicity, to follow-up and evaluation. With the Council's support and in collaboration with the AEB, and with help from a volunteer AAS member recruited by AAS Executive Officer Dr. Kevin Marvel, we've begun implementing the plan. Among other new components, we now arrange a Shapley Lecture at a minority-serving institution located near an upcoming AAS meeting or AAS division meeting. One faculty member from that institution and five of their students then receive free one-day registration to attend the meeting. Morgan State University, a Historically Black College or University (HBCU) in Baltimore, MD, was the first recipient of this new variety of Shapley Lectureship, and Bunker Hill Community College in Boston, MA, was the second. To increase the diversity and number of Shapley Lecturers, in fall 2014 a call for new lecturers went out to the AAS membership with positive results.

Among the Education and Outreach Coordinator's other responsibilities is arranging the judging for the Rodger Doxsey Travel Prize, which provides graduate students or postdocs within one year of receiving or receipt of their PhD with a monetary prize to enable the oral presentation of their dissertation research at a winter AAS meeting. The Coordinator is also responsible for arranging the judging for the Chambliss Student Astronomy Achievement Awards, which recognize exemplary research by undergraduate and graduate students who present posters at AAS meetings. Finally, the Education and Outreach Coordinator serves as the AAS liaison to other scientific societies' education programs. As a result of such collaboration with the American Institute of Physics (AIP), participation by the Society of Physics Students (SPS) is now a regular feature of winter AAS meetings; SPS exhibits at the undergraduate reception and holds a special evening poster session at which a wellknown astronomer gives a career-oriented "pep talk" to the attending students.







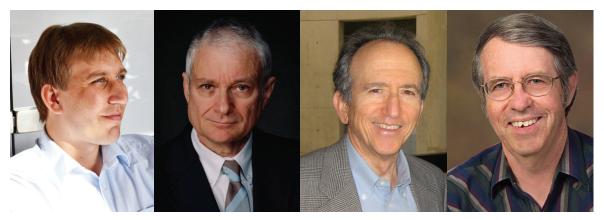




2014 PRIZE WINNERS



L-R: Nadia L. Zakamska, Piero Madau, Christopher M. Hirata, Emily Levesque, Deidre Hunter



L-R: Chris Lintott, Sander Weinreb, Michael Hauser, George Rieke

George Brooks Field (not pictured)

Henry Norris Russell Lectureship

"For a lifetime of contributions to our basic understanding of diffuse plasmas in the universe that continue to motivate current astronomers."

Nadia L. Zakamska, Newton Lacy Pierce Prize

"For her multi-wavelength work on Type II quasars that has characterized these sources in detail and led to the current 'standard model' of quasars."

Piero Madau, AAS/AIP Dannie Heineman Prize "For fundamental contributions to our understanding of the era of first light in the universe, the ionization and heating of the intergalactic medium, and the formation and evolution of galaxies."

Christopher M. Hirata, Helen B. Warner Prize "For his remarkable theoretical and observational

cosmological work, particularly that connected with weak gravitational lensing which is one of the most important ways of assessing the distribution of mass in the universe."

Emily Levesque, Annie Jump Cannon Award

"For her innovative work using gamma-ray bursts (GRBs) to explore fundamental questions of stellar astrophysics and cosmology."

Deidre Hunter, Education Prize

"For co-founding and successfully running for the last 17 years a science and astronomy education program for 5th-8th grade Navajo-Hopi students and their teachers (of Arizona and New Mexico), a historically underserved and culturally isolated population."

Chris Lintott, Beatrice M. Tinsley Prize

"For his insight and creativity that created a transformative approach to science by engaging nonscientists in cutting edge research."

Sander Weinreb, *Joseph Weber Award for Instrumentation* "For his seminal innovations that have helped define modern-day radio astronomy, including digital auto-correlation spectrometers and cryogenic low-noise amplifiers and mixers."

Michael Hauser, *George Van Biesbroeck Prize* "For his an extraordinary long career in service to the astronomy community."

George Rieke, Chambliss Astronomical Writing Award "For his graduate textbook about observation and measurement in modern astronomy, Measuring the Universe: A Multiwavelength Perspective (Cambridge University Press, 2012)."

MEMBER DEATHS

The Society was saddened during 2014 to learn of the passing of the members listed here. The Society, through its Historical Astronomy Division, strives to publish an obituary for each AAS member after we are informed of his or her death. Obituaries are published and available online through the AAS web pages. They are also provided to Astrophysics Data System. A complete index is available at had.aas.org/obits.html.

Charles A. Barth
Karl-Heinz Böhm
Robert L. Brown
Martha Stahr Carpenter
Kyong Chol Chou
Barney J. Conrath
David D. Cudaback
Stanley Czyzak
Morris S. Davis

Glen William Deen Bertram D. Donn James E. Felten Gary L. Grasdalen Richard A. Jarrell Robert Jenks H.D. Kennedy Myron Lecar John C. McConnell D. Harold McNamara Gerry Neugebauer Gerhard Neukum Thomas Pierson Roger L. Ptak Sun Hong Rhie Carl A. Rouse Paul M. Routly Robert V. Stachnik

Karen Strom
Ferenc Varadi
Trevor C. Weekes
Arthur M. Wolfe
H. John Wood, III
Bruce Woodgate
Judith S. Young

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President C. Megan Urry, Yale Univ.

Past President David J. Helfand, Quest Univ. Canada
Vice-President Paula Szkody, Univ. of Washington
Vice-President Chryssa Kouveliotou, NASA/MSFC
Vice-President Jack Burns, Univ. of Colorado at Boulder
Secretary G. Fritz Benedict, Univ. of Texas, Austin
Treasurer Nancy D. Morrison, Univ of Toledo
Education Officer Edward Prather, Univ. of Arizona
Publications Board Chair Anne P. Cowley, Arizona State
Univ.

Executive Officer Kevin B. Marvel

COUNCILORS

2012-2015

Nancy S. Brickhouse, Harvard-Smithsonian CfA Todd J. Henry, RECONS/Georgia State University Steven D. Kawaler, Iowa State Univ.

2013-2016

Geoffrey Clayton, Louisiana State Univ. Dara J. Norman, NOAO Dawn M. Gelino, Caltech

2014-2017

Kelly Holley-Bockelmann, Vanderbilt Univ. Buell T. Jannuzi, Steward Obs. Stephen Unwin, JPL

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Kevin B. Marvel, Executive Officer Tracy Beale, Registrar & Meetings Coordinator Chris Biemesderfer, Director of Publishing Gina Brissenden, Education & Outreach Coordinator Sherrie Brown, Membership Services Administrator Kelly E. Clark, Chief Financial Officer Kathy Cox, Meetings Abstract Administrator Kim Earle, Director of Meeting Services Rick Fienberg, Press Officer & Director of Communications Inge Hever, Deputy Press Officer Lisa Idem, Meetings Manager Scott Idem, Director of Information Technology Asfaw Kifle, Staff Accountant Debbie Kovalsky, Exhibits & Sponsorship Coordinator Jerry Lin, IT Specialist Justin Maciak, Systems & Network Administrator Stephen P. Maran, Senior Advisor to the Executive Officer Larry Marschall, Deputy Press Officer Joel Parriott, Director of Public Policy Faye C. Peterson, Director of Membership Services Tracy Rowe, Executive Office Assistant Greg Schwarz, Journals Specialist Joshua Shiode, John Bahcall Public Policy Fellow Julie Steffen, Director of Special Projects Crystal M. Tinch, Communications Manager

AMERICAN ASTRONOMICAL SOCIETY

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