AMERICAN ASTRONOMICAL SOCIETY

2021 Annual Report

AMERICAN
ASTRONOMICAL
SOCIETY

Cover image: This composite Spitzer Space Telescope, Hubble Space Telescope, and Chandra X-ray Observatory image shows the center of the Milky Way at infrared, optical, and X-ray wavelengths, respectively. The Milky Way's supermassive black hole is located within the bright region right of center. [NASA, ESA, SSC, CXC, and STScI]

The mission of the American Astronomical Society is to enhance and share humanity's scientific understanding of the universe as a diverse and inclusive astronomical community.

The Vision of the AAS

To create a world where all people value and benefit from a scientific understanding of our universe.

Our Values

Curiosity: We conduct research driven by our curiosity about the universe.

Integrity: We act with integrity, ethical behavior, and transparency as we perform our investigations and share our results.

Inclusivity: We use fair and accessible practices to create a diverse and welcoming scientific community.

Empowerment: We mentor and support our early career members, using our resources to create a positive environment for them and for our astronomical community.

Sustainability: We accomplish our work using environmentally sensitive actions rooted in scientific understanding.

PRESIDENT'S MESSAGE: PAULA SZKODY

The second year of my term began with an optimistic feeling: vaccines were available and the world was ready for a return to pre-2020 normal. The AAS was gearing up for a January 2022 in-person meeting in Salt Lake City after the previous three virtual-only ones. But the emergence of the COVID-19 Omicron variant wreaked havoc on all our plans, forcing us to make the difficult but necessary decision to cancel the entire meeting just two weeks before it was to take place. I am immensely grateful for the dedicated Board of Trustees who all showed up for lengthy discussions despite holiday plans and commitments, for the AAS staff who worked many hours of what should have been vacation time, for our Executive Officer, Kevin Marvel, who handled all the ensuing contract negotiations, and for the support of many members who understood what we were facing.

Despite this rough start to 2022, much was accomplished over the previous year. Our Strategic Plan was finalized last summer and provides a guide for our work in the next five years. In January, the AAS journals paved the way to the future by becoming entirely open access to the world. To help mitigate author publication charges, the budget for waivers was increased. The result has been a successful model for other journals and a demonstration of our mission to enhance and share humanity's scientific understanding of the universe. The Astro2020 Decadal Report finally emerged in November, providing a guide to our public policy advocacy. While we lost Director of Public Policy Joel Parriott to the National Science Foundation for a few years, we gained our past John N. Bahcall Public Policy Fellow Bethany Johns back as his replacement, and together with Julie Davis (our current Bahcall Fellow), and our Past President Megan Donahue, we have a good team to promote the Decadal agenda over the next years. Partnering with the American Geophysical Union Mentoring 365 Program enabled the hiring of our first staff education person (Tom Rice), who will spearhead the participation of our members. New and existing AAS task forces and committees have put in substantial effort this year to advance AAS community interests. As an example, the Light Pollution Radio Interference and Space Debris Committee sponsored workshops in August 2021 and March 2022 to discuss the burgeoning space satellite business and developed recommendations to mitigate the impacts of this industry on astronomy.

All of this could not have been accomplished without the work of many volunteers who populate our 40 committees, working groups, and task forces and donate so many hours of their time. I am optimistic that the last meeting of my term as President — AAS 240 in Pasadena, California — will indeed occur in person, and I thank the three Vice Presidents (Geoff Clayton, Steve Unwin, and Adam Burgasser) and the AAS meetings team (Elizabeth Scuderi, Michele Stevenson, Sherrie Brown, Jasmine Lathon-Gordon, Zuzana Kelyman, and Bill McCall) for their dedication to make this our first totally hybrid meeting. My work was possible due to many emails/calls providing information and advice with Kevin Marvel and Secretary Alice Monet. I feel privileged to have had the opportunity to serve as President of this amazing organization.

Paula Szkody and Alice Monet at the cherry trees on University of Washington campus, March 2022. [Image provided by Paula Szkody]

Kevin and his six-year old son Graham preparing for a day out on the Chesapeake Bay.

EXECUTIVE OFFICER'S MESSAGE: KEVIN MARVEL

Before diving into a summary of the important accomplishments the AAS has made during the past year, I think it is important to take a moment to recognize the tens of millions of people who have likely died because of the coronavirus and its variants in the past two years and all those who have lost a loved one to this horrible pandemic. The official counts do not capture the full magnitude of our shared global tragedy or the personal loss of the many more people impacted personally.

During 2021, the Strategic Assembly produced a Strategic Plan to help guide our activities. The plan includes challenging goals in five key areas: Addressing significant global issues that affect astronomy; building equitable, diverse, and inclusive practices within the astronomical community; supporting astronomy education, professional development, and dissemination of astronomical science; cultivating our network of partnerships within the AAS and with related organizations; and improving transparency and efficiency within the AAS. I'm pleased to note we have already made progress on several of the specific actions the report called out and we'll be updating the Strategic Assembly and the membership in the coming months and years on our work toward these goals.

Beginning in January 2022, the AAS journals transitioned to a fully open access business model. Although costs for publication have gone up (due to the loss of subscription revenue), the journals are now fully compatible with the ever-increasing requirements for open access publication worldwide, and all content is available immediately for download by anyone, anywhere. We have not seen a decline in submissions with this transition, and we view the positive outcomes this move enables as well worth the effort. We continue to operate the journals with the community of researchers as our primary focus, which includes oversight from a volunteer Publications Committee and the Board of Trustees.

Our meetings in 2021 were fully virtual and successful by all measures given the constraints of the pandemic. In 2022, we unfortunately had to cancel our January conference due to a pandemic surge, but our summer meeting and future meetings will be held in person with some level of online or hybrid content available as well. Time will tell if a fully hybrid meeting format is sustainable given the increased costs of supporting both in-person and virtual attendance simultaneously.

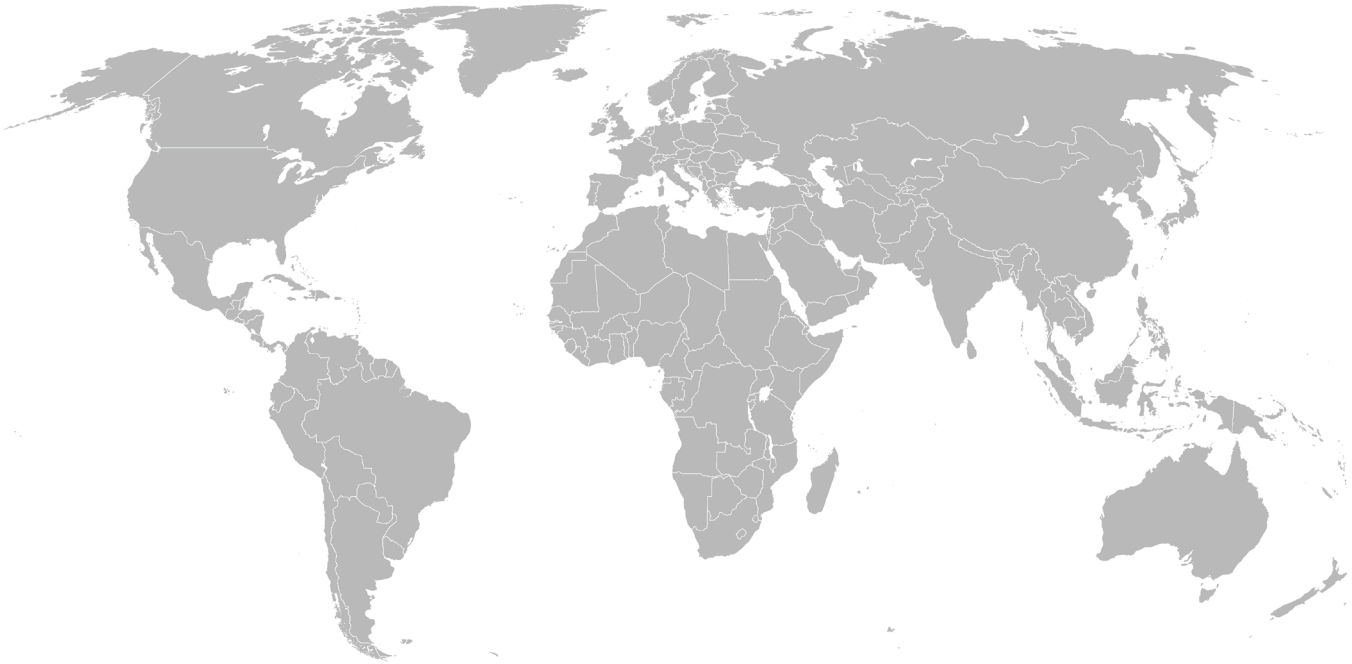
We will be operating in uncertain times for the next several years. In addition to political uncertainties and challenges, financial and economic challenges are front and center. A climate of inflation will pose a challenge for all individuals and institutions, including the AAS, but it will not daunt us from making progress on the challenging goals laid out in our Strategic Plan, including finding ways to deliver our value in an equitable, inclusive, and affordable manner. It remains true that "not-for-profit" represents a tax status, not a business model, but our mission drives us to look beyond the bottom line alone as we seek to enhance and share humanity's scientific understanding of the universe as a diverse and inclusive astronomical community. Thanks for your membership and your support for our community-driven organization.

MEMBERSHIP

For some members, the AAS presents the ultimate opportunity to support the Society in its mission to enhance and share humanity's scientific understanding of the universe. Others like the prestige of belonging to the major professional society of astronomers in North America. There are additional tangible benefits such as discounts and the possibility of winning grants or awards, but most members think beyond themselves. As a member, you'll personally get something of value with your dues and at no additional cost, you generate value for those with whom you share a common bond. Our member community drives the Society's meetings, journals, and public policy efforts, which, in turn, become the engines for bold new discoveries in the quest to understand the cosmos.

6,640 Total (count as of 9 July 2021)

27 Alumni	**299** Amateur	**744** Emeritus	**123** Educator	**3,933** Full
12 Honorary	**1** Patron	**950** Graduate Student	**148** International Affiliate	**403** Undergraduate



5,923 Total in USA
717 Total outside USA
60 Countries including USA

AAS & DIVISION MEETINGS

The year opened with a successful virtual winter meeting (AAS 237, detailed in the previous annual report) that drew more than 3,000 participants. The Society further built out its virtual model for AAS 238, held 7–9 June 2021, featuring a broad range of sessions, workshops, and events across the three-day online meeting. Scientific talks took place live via Zoom, poster presenters displayed their work virtually via iPosters, and the AAS 238 Slack community enabled participants to ask questions within sessions, connect, and interact. Some additional highlights from the meeting included:

Ten prize and plenary lectures:

- **Enrique López Rodríguez** (Kavli Institute for Particle Astrophysics and Cosmology; Stanford University), on his pioneering work on extragalactic magnetic fields
- **Tabbetha Dobbins** (Rowan University), on findings from the TEAM-UP Report, which details efforts to increase the number of African Americans with bachelor's degrees in physics and astronomy
- **Emily Levesque** (University of Washington), on results from her breakthrough studies of massive stars and their explosive end states
- **Blakesley Burkhart** (Rutgers University), on astrophysical turbulence across diverse environments
- **Russell Howard** (Naval Research Laboratory), on key developments in understanding of coronal mass ejections and their role in space weather
- **Lucia Kleint** (University of Geneva), on her models of magnetic fields in the quiet Sun
- **Karin Öberg** (Harvard University), on surprising observations of complex organic molecules and laboratory experiments to interpret them
- **Marla Geha** (Yale University), on the structure and dynamics of low-redshift dwarf galaxies
- **Roberta Humphreys** (University of Minnesota), on the critical role of stellar mass loss in the upper part of the Hertzsprung-Russell diagram
- **Daniel Stern** (Jet Propulsion Laboratory), on science highlights from NASA's Nuclear Spectroscopic Telescope Array (NuSTAR) mission
- Public-policy town halls from NASA, the National Science Foundation, the Space Telescope Science Institute, and more

A Science for Science Writers session on the upcoming launch and expected results from JWST

Topical career sessions, including "Public Speaking in a Virtual Environment" and "How to Communicate COVID Impacts in Your Job Marketing Materials"

Considering community concerns about the limitations of virtual meetings, the AAS Board of Trustees initially opted for the winter meeting, AAS 239, to be held in person in Salt Lake City, Utah, with the addition of limited virtual components. Due to pandemic developments in the weeks ahead of the meeting and uncertainty around vaccination availability, however, the Board ultimately made the difficult decision to cancel AAS 239.

A subset of the planned meeting activities went forward as virtual events. These included the full press conference program, many of the planned community webinars and town halls, and some splinter meetings and workshops. In addition, the astronomy community came together in the subsequent months to organize several virtual events — like a Gather Town networking session — to fill the roles of other canceled meeting events.

To limit potential disruption to AAS 240, the summer 2022 meeting in Pasadena, California, the Board of Trustees decided to plan it as a fully hybrid meeting. This meant the inclusion of both virtual and in-person components and the ability to easily pivot to fully virtual if changes in the pandemic made it necessary.

Division and Topical Meetings

Other Society-run meetings also adapted to the ongoing pandemic in 2021. The Historical Astronomical Division held its annual meeting virtually in conjunction with AAS 237, and the annual Solar Physics Division and the Laboratory Astrophysics Division meetings were held online in conjunction with AAS 238. Other virtual meetings this year included:

- AAS Topical Conference Series 8: Habitable Worlds 2021, held 22–26 February
- The 52nd Meeting of the Division on Dynamical Astronomy, held 17–21 May
- The 53rd Meeting of the Division for Planetary Sciences, held 3–8 October

PUBLISHING

The AAS's community-owned, peer-reviewed journals collectively publish more than 4,000 articles each year from a diverse and international authorship, and they consistently feature some of the most-read and most-cited research results in the astronomical sciences.

This year marked a substantial change for AAS Publishing as the Board of Trustees ratified a plan to change the business model of AAS journals to full open access, effective 1 January 2022.

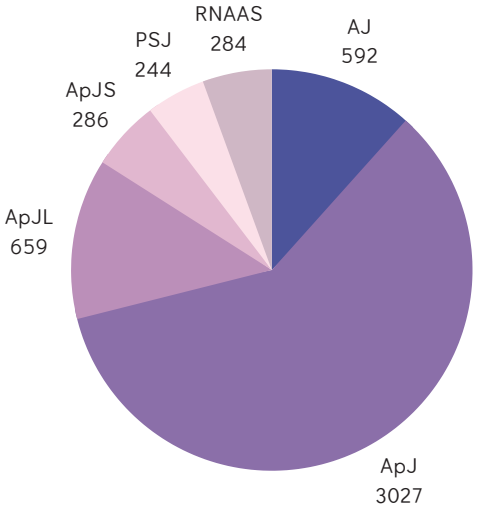
As stated in the announcement, "The transition to open access (OA) will allow everyone to access this high-quality and trusted research, and it will offer scientists low-cost fully OA options for publishing their research in astronomy and related disciplines. The new publishing policy aligns with ongoing efforts by the Society to center diversity, equity, and inclusion in its work within the astronomical community."

This move has been well received by the community and, as of early 2022, submission numbers to AAS journals remain strong.

Other highlights from AAS Publications:

- The *Bulletin of the AAS (BAAS)* published abstracts from five AAS science meetings, obituaries, and the report of the SATCON2 Workshop, held 12–16 July 2021. The BAAS logged nearly 144,000 page views from over 65,000 users in 2021.
- Development continues on AAS's WorldWide Telescope (WWT), an open-source application that displays astronomical, Earth, and planetary data to allow visual navigation through the 3D universe. New capabilities this year improve the use of this tool to import, process, and view large scientific datasets and properly align them in the context of the sky.
- AAS Nova, a news site that summarizes recent research published in AAS journals, featured 180 full articles and more than 230 short digests in 2021. The site received 579,000 pageviews and 177,000 unique visitors this year.

Articles Published in AAS Journals in 2021



AAS Journals Stats

>6,200 submissions to AAS journals in 2021

78 countries represented

18 Focus Issues published across AAS journals

PUBLIC POLICY

In 2021, the AAS public policy team continued advocating for the astronomical sciences and keeping the membership up to date on federal policy.

This year we bid farewell to Kelsie Krafton, the 2019–2021 John N. Bahcall Public Policy Fellow. Our new fellow, Julie Davis, joined the policy team in September. In December, the long-time Director of Public Policy, Joel Parriott, departed for a temporary assignment at the White House Office of Science and Technology Policy.

As in previous years, the team worked to promote AAS member priorities in the federal appropriations process, joined fellow scientific society coalitions to weigh in on a variety of policies and legislation, hosted policy-related sessions at the winter and summer AAS meetings, and ran a successful Congressional Visits Day (again held virtually due to the pandemic).

Two topics stood out as major themes for 2021:

Satellite Constellations

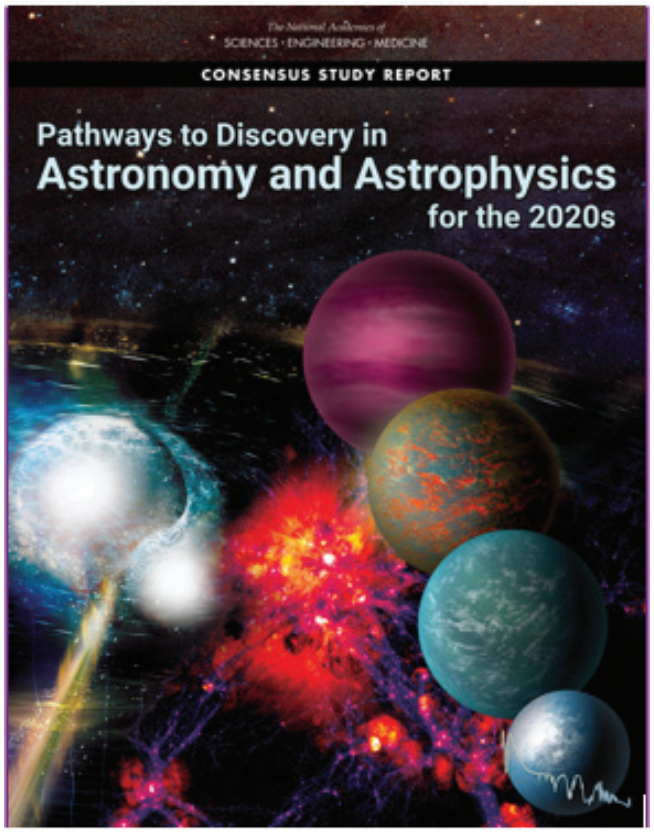
Mitigating threats to astronomy by commercial satellite constellations remained a priority issue for the AAS policy team. Beginning in 2019, commercial space companies like SpaceX began launching dozens of satellites into Low Earth Orbit (LEO) as part of planned constellations of thousands of satellites. Reflected sunlight and radio transmissions from these satellites significantly interfere with ground-based astronomy, but rules or regulations to mitigate these harms are nearly nonexistent.

Alongside members of the AAS Committee on Light Pollution, Radio Interference, and Space Debris (LPRISD), the policy team participated in the virtual, NSF-funded SATCON2 workshop in July. This workshop brought together astronomers, satellite operators, policy experts, and broader stakeholders to discuss pathways forward. The workshop resulted in a published report, which the AAS public policy team has used in over a dozen briefings to Congress, the Executive Branch, and various federal agencies. Accounts of ongoing actions for this rapidly evolving issue can be found in the AAS public policy blog.

Decadal Survey Advocacy

In November, the long-awaited 2020 Decadal Survey for Astronomy and Astrophysics was released. The report, titled “Pathways to Discovery in Astronomy and Astrophysics for the 2020s,” puts forth an ambitious outline for answering our most pressing scientific questions with new missions and an emphasis on the health of the profession. The decadal surveys form the foundation for AAS advocacy, as they represent community-consensus priorities and a process that is well respected by the Executive and Legislative branches of the government. The decadal survey chairs, Drs. Rob Kennicutt and Fiona Harris, testified at a December House Science, Space, and Technology Committee hearing, to which the AAS policy team also submitted written witness testimony. Together with the Committee on Astronomy and Public Policy, the policy team began to plan our advocacy campaign, which will be a multiyear process.

Starlink satellites pass overhead near Carson National Forest, New Mexico, photographed soon after launch. Credit: M. Lewinsky/ Creative Commons Attribution 2.0



SKY & TELESCOPE

In 2021, *Sky & Telescope* (S&T) celebrated its 80th anniversary. But there's no resting on laurels at *S&T*; the staff plowed ahead with its usual forward-looking perspective, with an eye on the next 80 years.

Magazine. *S&T* kicked off 2021 with three new bimonthly columns introduced with the January issue — Suburban Stargazer, First Exposure, and Pro-Am Conjunction. The staff also began developing a new monthly beginner's column, which will launch in mid-2022.

November's 80th-anniversary issue — the 961st since the first issue appeared in November 1941 — featured a look back at a golden age of amateur astronomy, an article on the JWST, and a special section on the future of astronomy. *S&T* also increased its efforts in diversity, equity, and inclusion, with a cover story on Henrietta Swan Leavitt (December) and an in-depth profile of inner-city astro-guru Derrick Pitts of Philadelphia's Franklin Institute (February 2022).

In 2021, *S&T* writers brought home several prestigious awards: Science Editor Camille Carlisle won the Jonathan Eberhart Planetary Science Journalism Award for her article "Rugged Worlds" (May 2020), while News Editor Monica Young won the AAS Solar Physics Division (SPD) Popular Media Award for journalists for "To Touch the Sun" (November 2020). Contributing Editor Monica Bobra also won the SPD's award for scientists for her infographic "Crossing the Edge of Our Solar System" (September 2020), created with artist Nicolle Fuller and *S&T* Art Director Terri Dubé.

Website & Social. In 2021, *S&T*'s website, skyandtelescope.org, continued to attract over 5 million unique visitors annually, with nearly 11 million pageviews. Most popular: *S&T*'s interactive sky chart (>800,000 views). In 2021, *S&T*'s web team began producing videos — including podcast videos — to help grow both podcast and YouTube subscribers. Online subscribers in 2021 and Q1 2022 continued a steady rise: YouTube (6,280, +21%), Facebook (611,807, +2%), Twitter (124,500, +6%), and Instagram (10,294, +49%).

Products & Tours. In August, *S&T* launched its new Shopify online store, shopatsky.com. The new platform has a refreshingly clean look, and more than 5,000 orders poured in through Q1 2022. A fifth of those came from emails to those signed up to *S&T*'s Shop at Sky list (37,422 subscribers). Other ever-growing online lists, which collectively help promote *S&T*'s brand and content, include a weekly newsletter (60,779) and a Tour/Advertiser Partner list (26,455).

Despite the pandemic, *S&T* successfully ran four astronomy tours in 2021: to Canada in June to witness an annular solar eclipse by chartered flight; to Botswana in July for *S&T*'s second stargazing safari; to Iceland in October to seek auroras; and to Antarctica in December to experience a total solar eclipse. Tours are now booking at skyandtelescope.org/tours out through 2027.

Other Initiatives. *S&T* completed a year-long strategic-planning effort in 2021, with a new reader survey to go out in mid-2022. Both efforts will inform the brand's goals for the next five years and beyond. *S&T* also furthered its "Astro 101" program, with multiple professors of introductory astronomy courses testing the model during the fall semester of using *S&T* magazine content in their classrooms.

S&T chartered flight to see June 2021 annular eclipse.

THE AAS FELLOWS PROGRAM

The AAS Fellows Program was established by the Board of Trustees in late 2019 to honor members for extraordinary achievement and service and their contributions toward the AAS mission of enhancing and sharing humanity's scientific understanding of the universe. AAS Fellows are recognized for original research and publication, innovative contributions to astronomical techniques or instrumentation, significant contributions to education and public outreach, and noteworthy service to astronomy and to the Society itself.

An initial group of 242 Legacy Fellows was designated by the Board and announced in early 2020 (nine of whom were added retroactively in early 2021). These include past recipients of certain awards from the AAS or its topical Divisions, distinguished AAS elected leaders and volunteer committee members, and previously unrecognized individuals with long histories of outstanding research, teaching, mentoring, and service.

In February 2021, the AAS honored another 31 members as Fellows.

Conny Aerts
Amy Barger
Peter Boyce
Catherine Cesarsky
You-Hua Chu
Anita Cochran
Françoise Combes
Wanda Díaz-Merced
Frank Drake
Gary J. Ferland
Alexei V. Filippenko
Joshua Frieman
John S. Gallagher III
Philip R. Goode
John Grunsfeld
Puragra Guhathakurta
Heidi Hammel
John Hawley*
John P. Hughes
Roberta Humphreys
Garth D. Illingworth
Rachel Ivie
Victoria Kaspi
Mark S. Marley
Matt Mountain
Richard Mushotzky
Rita Sambruna
Daniel Wolf Savin
Harold Weaver
Belinda Wilkes
Ellen Zweibel

DIVISIONS, COMMITTEES, WORKING GROUP & TASK FORCES

While the day-to-day operations of the Society are managed by AAS staff, what the Society can accomplish is greatly enhanced by our volunteer-driven Divisions, Committees, Working Groups, and Task Forces. Below are a few highlights from some of these many groups in 2021.

- The Beyond Academe Task Force is working with the Employment Committee and the Education Committee to recommend how the AAS can serve our many students and professionals who work at places other than universities.
- The Solar Eclipse Task Force has been conducting workshops to prepare the community for the upcoming 2023 and 2024 solar eclipses that will cross North America.
- The Light Pollution, Radio Interference, and Space Debris Committee sponsored workshops in August 2021 and March 2022 to present the latest developments in the burgeoning space satellite business. The Board endorsed the recommendations of SATCONs 1 & 2, as well as other similarly themed meetings, and the AAS will be aiding the newly formed International Astronomical Union's Centre for the Protection of the Dark and Quiet Sky from Satellite Constellation Interference in advocating their work.
- The Committee on the Status of Minorities in Astronomy, the Committee on the Status of Women in Astronomy, and the Working Group on Accessibility and Disability represented the AAS at several virtual conferences in 2021, including the Society for Advancement of Chicanos/Hispanics & Native Americans in Science meeting and the National Society of Black Physicists meeting.
- The Board approved a proposal from the Diversity, Equity, and Inclusion Task Force for the AAS to hire a full-time DEI Committee Support Specialist on staff.
- The Board approved proposals to form several new Task Forces and Working Groups, including:
  - A Climate Change Task Force to determine the size and causes of the AAS carbon footprint and to propose ways the Society could become carbon neutral by 2050.
  - A Working Group on Ethics to draft policies as needed to address ongoing and new ethical issues and concerns.
  - A Task Force to explore the formation of an AAS Historic Site Designation Program, as proposed by the Working Group on the Preservation of Astronomical Heritage.

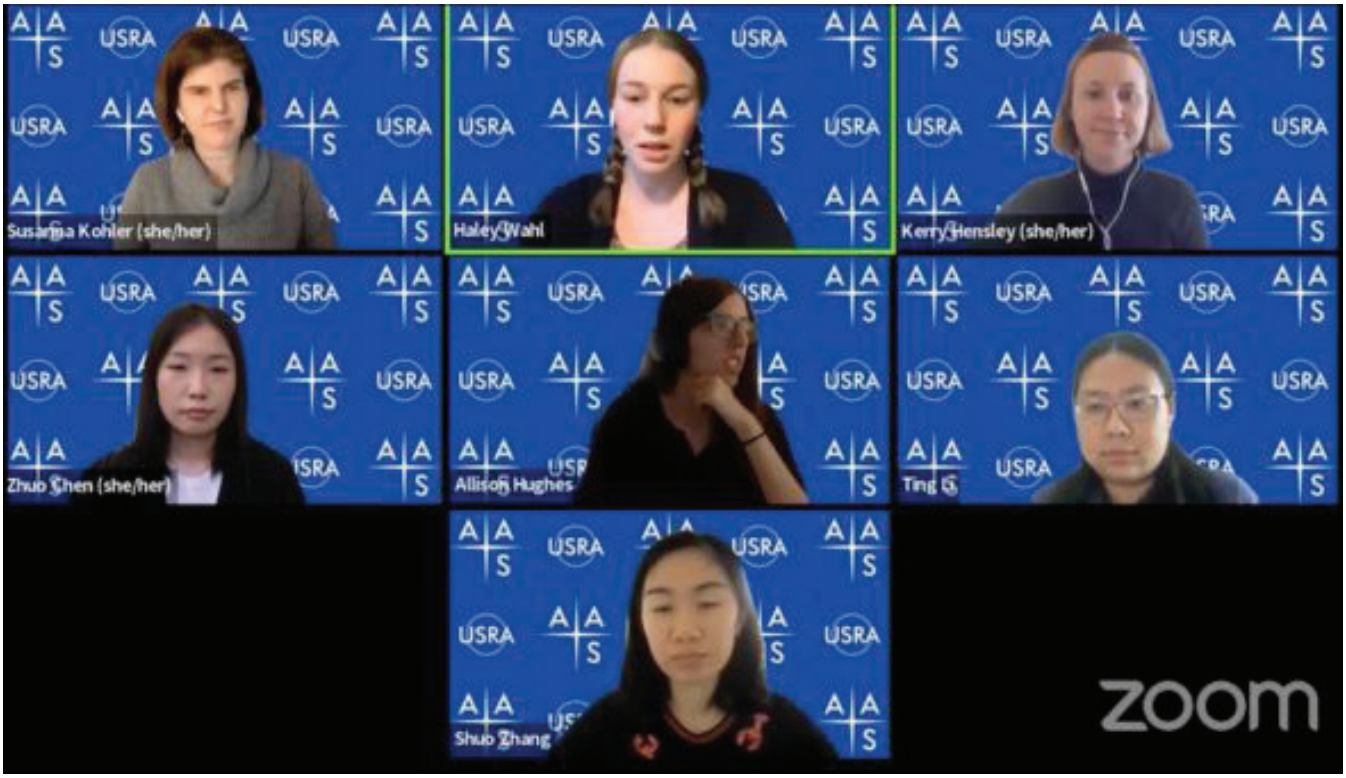
MEDIA RELATIONS

Rick Fienberg

2021 marked a significant staff transition as long-time AAS Press Officer Rick Fienberg retired in September and AAS Nova Editor Susanna Kohler took over his role. The Society also hired former AAS Media Fellow Kerrin Hensley to serve as Deputy Press Officer and the new Editor of AAS Nova. Rounding out the AAS Press Office is the AAS Media Fellow, an astronomy graduate student who works part-time with the Press Office and the Communications team. Tarini Konchady (Texas A&M University) served as the Fellow during academic years 2019–2021, and Haley Wahl (West Virginia University) took over for 2021–2022.

What was the Press Office up to this year?

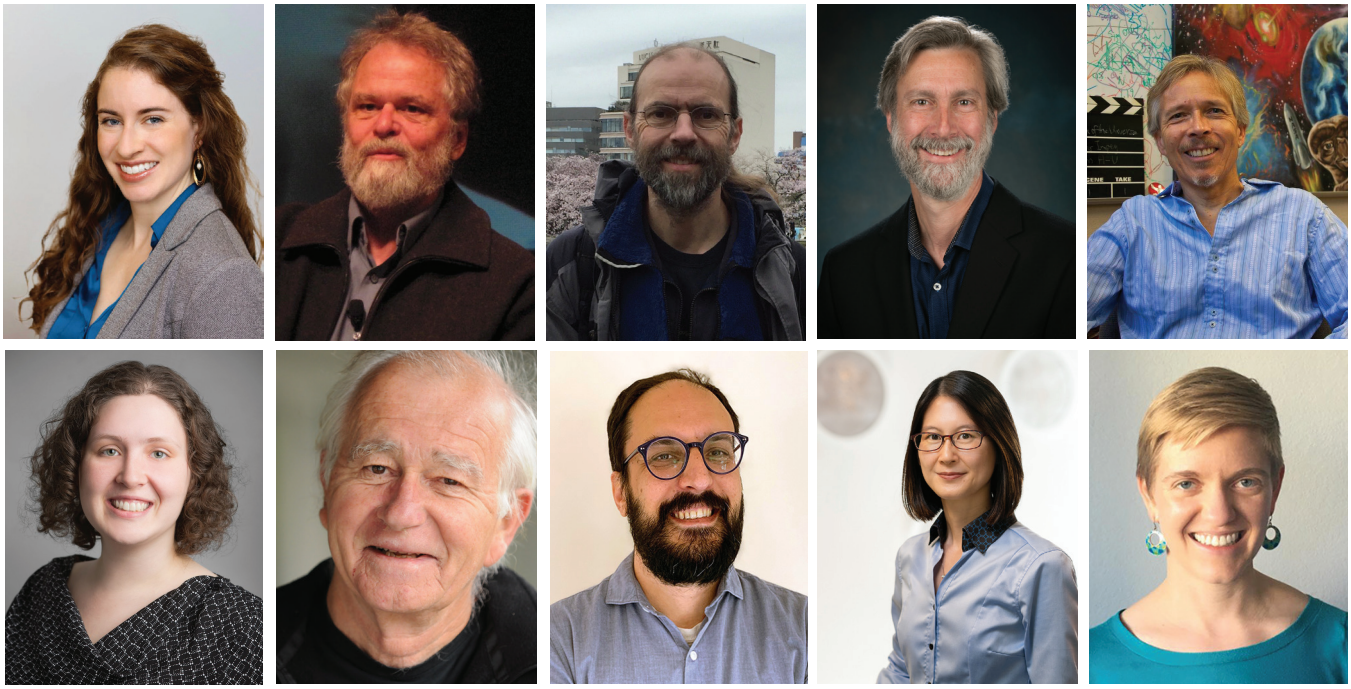
- Between April 2021 and April 2022, we curated and shared nearly 2,000 astronomy-news press releases from institutions worldwide via the @AAS_Press Twitter account and the AAS website's Astronomy in the News page.
- We issued a number of our own press releases throughout the year to our email list of more than 2,000 astronomy and space science writers worldwide. These releases highlighted AAS prize winners, described new initiatives on which AAS has partnered, and outlined results from important Society activities.
- We organized and ran full press conference programs at AAS 237, AAS 238, and AAS 239 (though this meeting was canceled, the press conferences went forward virtually). Each included 30–40 presenters organized across 6–10 briefing sessions, and each had more than 100 press registrants who attended the live-streamed briefings and produced extensive media coverage of the results.
- We continued to build out the Society's partnership with Astrobites, a graduate-student-run organization that summarizes recent astro-ph preprints for a broader audience. Besides cross-posting Astrobites content on AAS Nova (the AAS journals' research news blog), we also select an Astrobites Media Intern for every AAS meeting and work with the Intern and a group of 6–10 Astrobites authors who live-blog the meeting, providing valuable summaries of meeting content that are then published on astrobites.org and aasnova.org.



AAS Media Fellow Haley Wahl emcees a virtual press conference associated with AAS 239.

2021 PRIZEWINNERS

To foster and recognize excellence in astronomy, the AAS presents honors, awards, and prizes for outstanding contributions to astronomical research, instrumentation, writing, and service.



Top row (l-r) : Laura Kreidberg, Bill Paxton, Robert Lupton, David Weinberg, Chris Impey. Botton row (l-r): Rebekah Dawon, Nick Scoville, Enrique López Rodríguez, Sherry H. Suyu, Courtney Dressing.

Laura Kreidberg - Annie Jump Cannon Award: For her pioneering research on the structure, composition, and dynamics of exoplanet atmospheres.

Bill Paxton - Beatrice M. Tinsley Prize: For his inspired work on providing, maintaining, and supporting the use of open-source stellar-evolution codes that have seeped into the foundation of research and education efforts.

Robert Lupton & David Weinberg - Dannie Heineman Prize for Astrophysics: For essential contributions to facilitating, guiding, and participating in transformative science resulting from modern large-scale astronomical surveys at optical wavelengths, in particular the Sloan Digital Sky Survey.

Chris Impey - Education Prize: For his national and international impact through his outstanding teaching of thousands of students at his home university and, via the web, worldwide.

Rebekah Dawson - Helen B. Warner Prize for Astronomy: For her important contributions on planet formation and dynamics, particularly on hot Jupiter exoplanets and the connection between planetary composition and orbital structure.

Nick Scoville - Henry Norris Russell Lectureship: For lifelong contributions to our understanding of molecular gas and star formation in the Milky Way and other galaxies, for visionary leadership, and for inspiring generations of early career astronomers.

Enrique López Rodríguez - Fred Kavli Plenary Lecture: For his pioneering work on extragalactic magnetic fields using infrared polarization.

Sherry H. Suyu - Lancelot M. Berkeley – New York Community Trust Prize for Meritorious Work in Astronomy:
For her leadership of the H0LiCOW collaboration, which is measuring the cosmic expansion rate using gravitationally lensed quasars.

Courtney Dressing - Newton Lacy Pierce Prize in Astronomy: For her leading contributions that have dramatically advanced our understanding of the formation rate, composition, and evolution of planets around low-mass M-dwarf stars.

2021 AAS DONORS

The AAS acknowledges the donors, members, and friends who supported AAS's programs and initiatives in 2021.

Singularity: $5,000+
J. W. Harvey
Arnold M. Heiser

Quasar: $1,000-$4,999
Edward Anders
Eric E. Becklin
Edward K. Conklin
Megan Donahue
In honor of
Annie Jump Cannon
Peter A. Gilman
David J. Helfand
Arlo & Eunice Landolt
Kevin B. Marvel
Leelavati Murthy
In honor of
M. Ramanarayanan, PhD
Jeremiah and Alicia Ostriker
Terry D. Oswalt
Larry & Mary Ramsey
Bruce A. Twarog
Neil deGrasse Tyson
William C. Wells
Lee Anne M. Willson

Supernova: $500-$999
Anonymous (3)
Thomas R. Ayres
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James Nathan Fry
Nicole Lloyd-Ronning
Stephen P. Maran
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Dr. Malcolm Savedoff
Alice K. B. Monet
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S. Christian & Jade Simonson
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Alan T. Tokunaga
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Nova: $250-$499
Bruce Balick
In honor of
George Wallerstein
Rahul Bendre
Fritz & Ann Benedict
Jeffrey Bennett
Nicole S. van der Bliek
Spencer L. Buckner
C. Richard DeVore
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Frederick K. Lamb
Richard B. Larson
Stephen S. Lawrence
Carol LePage
In memory of Donald & Irene Osterbrock
Felix & Elizabeth Lockman
Chopo Ma
Stephan R. McCandliss
Michael H. Moloney
Joseph E. Pesce
Jane R. Rigby
Farid Salama
Eric P. Smith
Martha K. Smith
In memory of
Susan Simkin
Paula Szkody
Thomas R. Williams

Supergiant: $100-$249
Anonymous (3)
In honor of
Michael Corcoran
Thomas B. Ake, III
Kevin H. Baines
Samuel C. Barden
Diana L. Blaney
Joel N. Bregman
William T. Bridgman
G. Stanley Brown
Melissa Brucker
Jack O. Burns
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Patrick Crane
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James A. Earl
Steven Robert Federman
Paul D. Feldman
Richard Tresch Fienberg
Andrew Fraknoi
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Donald E. Groom
Edward J. Groth, III
Murthy Gudipati
Christopher Gullen
In memory of
Susan Simkin
John D. Gullen
In memory of
Susan Simkin
Richard J. Harms
Matthew M. Hedman
Amanda Hendrix
James E. Hesser
Philip E. Hodge
Jon Todd Hoeksema
Deidre Ann Hunter
Paul Idell
In memory of
Dr. Malcolm Savedoff
Kazunori Ishibashi
David C. Jenner
Margaret Johnston
Harrison P. Jones
Susan Jones
In memory of
Dr. Thomas Parker Bishop
Richard R. Joyce
Stephen W. Kahler
John G. Kirk
Patricia Knezek
David C. Koo
Kathleen E. Kraemer
In memory of
Karl P. Kraemer
Seppo Laine
Amy Y. Lien
Tim Lister
Timothy A. Livengood
Julie H. Lutz
Stephen J. Mackwell
Philip Massey
Liam McDaid
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Kenneth S. Rumstay
In memory of
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Nathan E. Sanders
Daniel A. Schwartz
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In memory of
Mary Berdy Skumanich
J. Allyn Smith
Michael S. Snowden
John R. Spencer
Curtis Struck
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R. Brent Tully
Michael S. Turner
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Hugh M. Van Horn
In memory of
Dr. Malcolm Savedoff
Dan VanDerZanden
Frederick M. Walter
Rene A.M. Walterbos
Alycia J. Weinberger
Kay Weiss
Robert E. Williams
Steven P. Willner
P. Frank Winkler
Richard W. Zurek

Giant: UP TO $99
Anonymous (5)
Elisabeth R. Adams
David F. Bartlett
Adam Battle
Richard P. Boyle, S.J.
Paul A. Bradley
David Brain
Ronald J. Buta
Sanlyn Buxner
Douglas A. Caldwell
Richard J. Cartwright
Julie Castillo-Rogez
Michael G. Coucke
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Noreen A. Grice
Theodore R. Gull
George & Judith Gullen
In memory of
Susan Simkin
Kathryn Denise Gullen
In memory of
Susan Simkin
Candice Hansen
Dieter Hartmann
Saeko S. Hayashi
Richard B. C. Henry
In honor of Reggie Dufour
Elliott Horch
Charles Hull
Brian K. Jackson
Beth E. Johnson
David Geoffrey Johnson
Michelle Kirchoff
Frederick W. Kleinhans
Arieh Konigl
Elizabeth Koprucki
Yoshio Kubo
Steven H. Langer
Martha A. Leake
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Christopher W. Mauche
Robert S. McMillan
Robert M. Nelson
Claire E. Newman
Robert Nikutta
Michael C. Nolan
Robert Olling
William L. Peters
Judith Pipher
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Dr. Malcolm Savedoff
Patricia Potter
In memory of
Jack Counter, Jr.
Andrew John Riggall Prentice
Francis A. Primini
Carlton Pryor
Jani Radebaugh
Julie A. Rathbun
Barney J. Rickett
Edgard G. Rivera-Valentin
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Jane L. Russell
Taro Sakao
Diego Paul Sanchez
Lana
William Saylor
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Tamikka Sims
Edward C. Sittler, Jr.
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Lance Stiefel
Jeff L. Stoner
Peter A. Sturrock
Woodruff T. Sullivan, III
Hidenori Takeda
C. Bruce Tarter
Matthew S. Tiscareno
Elizabeth P. Turtle
Pradnya P. Vakil
Rebecca Veitch
In memory of
Dr. Malcolm Savedoff
Janet Vertesi
Jan M. Vrtilek
Harold A. Weaver, Jr.
Michael W. Werner
James G. Williams
Peter K. G. Williams
Peter D. Wilson
Ralph Winrich
Michael H. Wong
Tony H. Wong
Rosemary F. G. Wyse
Bin Yang
Eliot F. Young

IN MEMORIAM

The Society was saddened to learn of the passing of the following members in 2021. The Society, through its Historical Astronomy Division, strives to publish an obituary for each AAS member after we are informed of the member's death. Obituaries are published and available online through the *Bulletin of the AAS* website at https://baas.aas.org/obituaries.

Adriaan van Ballegooijen
Michael Bennett
Mike Cahill
Robert D. Chapman
Peter Conti
Upendra Desai
Lowell R. Doherty
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Ray Escoffier
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2021 FINANCIAL REPORT

As of 31 December 2021, the net assets were $14,783,356, an increase of $1,660,015 from 2020. This is largely attributed to the investment income, the journals activity, and the donation of the Willmann-Bell book collection.

Taking into account AAS editoral costs, the *Astrophysical Journal (ApJ)* family and *Planetary Science Journal (PSJ)* produced annual operating surpluses of $595,698 and $61,644, respectively, while the *Astronomical Journal (AJ)* produced a slight deficit of $25,936. These results are due to the collection of subscriptions, the amount of published content, and reduced costs. We have recategorized the Journals Program expenses, which were previously included in the General Programs expense category, to now fall under Journals expenses. This segregation better represents the full cost of our Journals Program.

The market value of our portfolio increased by $1,063,076. The journal development expenses reached $73,640. In 2021, we spent $169,353 towards strategic initiatives. In 2021, we received an employee retention payment of $182,900.

Gold Open Access (GOA) fees reached $643,459 in 2021, up from $175,509 in 2017. The GOA fee is set higher than the base quanta fee at a level that would cover lost subscription revenue if all authors selected (or were required to select) GOA and assumes no subsidy from the journal reserve funds.

Additionally, our partnership with Institute of Physics Publishing (IOPP) and inclusion in their larger subscription bundle (IOPsx) netted royalty revenue in the amount of $180,715, up from $38,293 in 2017. In 2020, 64 percent of our *AJ* and *ApJ* institutional subscribers purchased our content through the IOPsx package. Participating in the IOPsx package was one way to insulate the AAS journals from single subscription cancellations.

In July of 2019, we created AAS Sky Publishing, LLC, as a wholly owned subsidiary of the AAS. Through this subsidiary, we purchased *Sky & Telescope* business lines from F+W Media through a bankruptcy sale. At the time of the purchase, we also assumed the fulfillment of subscriptions paid to F+W for future years through 2025. Since the entire subscription revenue was not collected by the AAS and two tours were cancelled due to the pandemic, we experienced a loss of $865,929 in 2021, down from $1,247,456 in 2020. We do anticipate losses in the first few years as we continue to build *S&T* content through an editorial advisory board and increase the magazine's subscription base. We anticipate a surplus being produced by 2024.

The donation of the Willmann-Bell book collection was valued at $488,000 in 2021. In addition to the value of the donation, it is driving additional customers to the online store, which will increase the store's revenue over time.

AstronomyCom, Inc. (ACI), a wholly owned for-profit subsidiary of the AAS created to diversify the Society's revenue streams, is used to fund partnerships/programs that are not considered to be tax-exempt by the IRS but are closely related to our mission. Our eBooks partnership with IOPP, our journals publisher, is accounted for in ACI. Due to the pandemic in 2020, the revenue to ACI in 2021 was $88,228, up from $25,724 in the previous year.

Figure 1. AAS Balance Sheet

Assets	**2021**	**2020**
Cash and Cash Equivalents	782,985	840,192
Accounts Receivable	1,173,883	926,389
Inventory	506,843	98,981
Prepaid Expenses	474,069	641,040
Investments	15,248,283	14,185,207
Deposits	112,233	112,233
Assets Held for Deferred Compensation	527,020	408,548
Goodwill, net	2,240,126	3,136,176
Property and Equipment	929,329	1,132,877
Tenant Improvement Assets		
Totals Assets	$21,994,771	$21,481,643
Liabilities and Net Assets		
Accounts Payable and Accrued Expenses	901,379	907,933
Deferred Revenue	3,246,057	4,443,610
Deferred Rent	850,626	911,878
Deferred Compensation	527,020	408,548
Total Liabilities	$5,525,082	$6,671,969
Net Assets		
Without Donor Restrictions	11,860,767	10,703,249
With Donor Restrictions	4,608,922	4,106,425
Total Net Assets	$16,469,689	$14,809,674
Total Liabilities and Net Assets	$21,994,771	$21,481,643

Figure 2. AAS Statement of Activities		
Unrestricted Activities	**2021**	**2020**
Revenues		
Journals	9,253,310	9,015,140*
General Programs	3,385,381	4,076,278*
Divisions	387,792	459,911
Other	338,259	144,352
Grants and Contracts	333,194	50,628
Bequests and Memorials	33,920	283,098
AstronomyCom, Inc	88,228	25,724
AAS Sky Publishing, LLC	4,051,503	3,169,452
Net Assets Released from Restrictions	56,303	31,489
Total Unrestricted Income	$17,927,890	$17,256,072
Expenses		
General Programs	3,097,542	4,438,273
Journals	7,657,739	7,614,755
Divisions	60,715	84,517
Other	636,261	783,799
Grants and Contracts	352,807	62,873
Bequests and Memorials	54,886	31,113
AstronomyCom, Inc	1,100	12,751
AAS Sky Publishing, LLC	4,909,322	4,416,908
Total Expenses	$16,770,372	$17,444,989
Change in Unrestricted Net Assets	$1,157,518	($188,917)
Temporary Restricted Net Assets		
Bequests and Memorials	177,152	192,317
Contributions and Other	169,284	402,517
Divisions	212,364	170,106
Net Assets Released from Restrictions	(56,303)	(31,489)
Change in Temporarily Restricted Net Assets	$502,497	$733,451
Change in Net Assets	$1,660,015	$544,534
Net Assets Beginning of Year	14,809,674	14,265,140
Net Assets End of Year	$16,469,689	$14,809,674

**Segregated the Journals Program costs from General Programs to Journals.*

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