



2022 ANNUAL REPORT

The American Institute of Physics (AIP) is a 501(c)(3) membership corporation of scientific societies. AIP pursues its mission—to advance, promote, and serve the physical sciences for the benefit of humanity—with a unifying voice of strength from diversity.

In its role as a federation, AIP advances the success of its Member Societies by providing the means to pool, coordinate, and leverage their diverse expertise and contributions in pursuit of a shared goal of advancing the physical sciences in the research enterprise, in the economy, in education, and in society.


In its role as an institute, AIP operates as a center of excellence using policy analysis, social science, and historical research to promote future progress in the physical sciences.

Change is afoot at AIP. It's exciting, and it's transformative.

David J. Helfand, Chair, AIP Board of Directors

From Transformative Planning to Implementation

AIP is a place for coming together, a platform for collaboration, dialogue, and discovery. A place that moves the physical sciences — and humanity — forward.

With that in mind, when the Board of Directors adopted our new [Strategic Framework, AIP-2025](#) , in 2019, AIP immersed itself in the difficult but necessary work of planning and reimagining itself to ensure we are well positioned for future success to advance, promote, and serve the physical sciences for the benefit of humanity.

I'm pleased to report that in 2022 we've taken a major step forward from designing the plan to implementing it, and we've begun to make the necessary investments in the people, processes, and technology to deliver on our commitment for 2025 and beyond.

One area where we've made significant progress is the realization of the Federation goal: to become a vibrant federation that advances the success of our Member Societies. As part of that process, we've revisited what advancing the success of Member Societies means and have launched our new Federation Assembly, which is self-led by the Member Societies. You can read more about the Assembly and why it was created [here](#).


As you might have already noticed, we also underwent a branding refresh. But let me be clear, branding is not simply about our logo. It goes much deeper. The process of creating



Michael Moloney, CEO

this new brand was one of self-reflection and discovery about what AIP really aspires to be. The new logo is deliberately intended to illustrate a radiating spectrum to invoke a sense of diversity and of action. Our new tagline now accompanying that logo — Empowering Physical Scientists — is a bold declaration of our ambition to serve. This brand shapes the narrative about who we are as an organization and how we represent ourselves to our members and to the outside community.

As we have moved through the work of transformation, we've come to realize that much of

what we do is about providing information that empowers individuals and organizations in the physical sciences community. Whether it's through our diversity efforts, the Society of Physics Students and Sigma Pi Sigma, or informing the broader community through our [magazines and other publications](#) , we engage with the world by providing information and analysis.



Brand launch video

As a result of that realization, we are building a new digital experience platform (DXP) as the centerpiece of our transformation that will revolutionize the way we engage with audiences and support our stakeholders. Read more about our [DXP initiative](#) and how data will form the basis of how we serve our community.

But our work is not just externally focused. We've also taken a big step forward in the Excellence goal: to be recognized for cultivating an effective, talented, diverse, and engaged staff that delivers excellence to our stakeholders.

That has meant making some internal changes. Our Department of Human Resources is now Talent and Culture. This shift reframes our overall approach to how we support our team. The goal is to further empower staff to be able to more effectively serve our Member Societies and the greater physical sciences community. We've also repurposed our IT operation, pivoting internal staff to new priorities and bringing in a vendor who can provide a depth and flexibility in technical experience and knowledge that's more impactful for us as an organization and for our Member Societies.

In the end, we believe in the power of the physical sciences to shape a better world. While we still have work to do, I'm proud of what we've accomplished to date. At AIP, we are infusing a culture of membership throughout all that we do. As a convenor, our federation is comprised of membership societies and related organizations with one common goal: collective action for the greater good of the physical sciences community.

Read on to learn more about the year's highlights and accomplishments.


Michael H. Moloney
Chief Executive Officer

American Center for Physics Expands to Downtown DC

The American Center for Physics Board signed a lease for a shared office in downtown Washington, DC. Known as ACP-DC, the new office will serve as a collaboration hub for AIP, APS, and AAPT, with society-specific "neighborhoods" as well as shared meeting and common spaces. The central location makes it an ideal venue for Member Societies to gather in the nation's capital. Construction of the new office space is expected to be completed by the end of 2023 or early 2024.

With AIP's new hybrid work environment, we're exploring new ways to reduce our footprint in our headquarters building in College Park, MD, while being mindful that we have deep roots in the community and still intend to maintain a presence in the area.



 We are building a digital experience that will dramatically improve the way audiences experience our information while also generating valuable data about how the content we are producing is serving our Member Societies and the physical sciences community.

Scott Montgomery, Chief Content Officer



AIP Takes Major Step Toward Digital Transformation


As part of our organizational journey through digital transformation, AIP entered into the beta phase of designing, building, and testing a new digital experience platform (DXP), with the goal of launching in mid to late 2023.

Why it Matters

The DXP will modernize the way AIP works and interacts with our stakeholders by strengthening our relationships with key audience groups. It will give our Member Societies, the physical sciences community, and others who engage with us a customized and more meaningful experience.


Go Deeper

As technology continues to advance, organizations are required to evolve to meet the changing needs and expectations of their customers, especially in the dynamic world of information delivery. Our new DXP is being constructed as a shared asset for the federation, ensuring that all of our content is tailored to individual users' needs and allowing us to expose them to new information of potential interest. Information will also be presented in ways that encourage interaction.

The DXP is a core component of our transformation journey to [AIP-2025](#) , our Strategic Framework that centers on the four pillars: Federation, Institute, Reputation, and Excellence. From 2020 through 2023, AIP expects to have invested between \$5 million to \$7 million in its transformation, which is being funded by our Strategic Investment Fund.

Learn more

Read about AIP's [mission and overarching strategy](#). 

View all our [publications](#). 

FYI and *Physics Today* staff participated in a media panel where they interviewed the director of the Office of Science for the U.S. Department of Energy, Asmeret Asefaw Berhe.



AIP History Newsletter, Volume 54, Number 2



Physics Today, March 2022

Physics Today won a gold Excel Award for its [#BlackInPhysics essays](#). 

AIP is doing the difficult work of grappling with how to advance the success of its Member Societies and then doing what it takes to make it happen.

James Taylor, Chief Federation Officer



AIP Federation Assembly Convenes for the First Time

The AIP [Federation Assembly](#), a new, flexible convening body of the AIP Federation, is officially up and running. In March of 2022, the 22 delegates met for the first time in College Park and agreed on the value of working together for collective action on shared concerns. Throughout the rest of the year, the body created its charter and operating procedures, ratified them, elected delegate [Amy V. Walker](#) as chair and AVS delegate, and [Robert Rosner](#) as vice chair.

Why it Matters

The Assembly is a mechanism by which AIP Member Societies bring concerns and priorities to the forefront. Its work forms the basis of the [Annual Forum](#) agenda, ensuring that the agenda is member led.

Go Deeper


The newly created Assembly is designed to support the Federation Goal, enhance connections between AIP and the Member Societies, and create avenues for collective action between the Member Societies. Each Member Society nominates two delegates to the body to attend meetings and vote on recommendations to AIP. AIP is represented on the Federation Assembly in a non-voting, ex officio capacity, with seats currently held by AIP Board Chair David J. Helfand and AIP CEO Michael Moloney.

As stated in the [Assembly's charter](#), its purpose is to facilitate federation and Member Society collaboration and collective action and inform AIP's work to advance the success of its Member Societies. The Assembly makes recommendations to the AIP CEO, advising on federation actions and AIP activities that support the shared mission.

Learn More

Dive into the newly created [Federation Assembly Charter](#) and [Operating Procedures](#)

AIP Expands Affiliate Member Category

AIP expanded its [Affiliates membership category](#)  to include nonprofit, educational, and government organizations that align with AIP's mission. Previously, only scientific societies could join the Federation, and this change allows us to include a wider representation of the physical science enterprise. Since reimagining the category, we currently work with 18 AIP Affiliates and have enhanced our connection with the American Association for the Advancement of Science.

Why it Matters

As AIP moves to further position itself as a leader and a convenor in the physical sciences community, it's imperative that we include a broader community of related organizations that can help us to further our mission to advance, promote, and serve the physical sciences for the benefit of humanity so that we can make a real impact in the world. In the end, we believe that together we go further.

Learn More

View all of our [Affiliates](#)  and the benefits they receive through our collaboration.



Federation Assembly delegates

From a Diversity, Equity, Inclusion, Belonging, and Accessibility (DEIBA) perspective, 2022 can be summed up in three words: exciting, groundbreaking, and transformative.

Jovonni Spinner, Diversity, Equity, and Belonging Officer



TEAM-UP Together Receives \$12.5 Million Grant

TEAM-UP Together, a collective action initiative with AAPT, AAS, APS, and SPS that aims to double the number of African American students receiving their bachelor's degree in physics and astronomy by 2030, received its largest financial contribution to date, a [\\$12.5 million five-year grant](#) from the Simons Foundation and Simons Foundation International.

Currently the grant funds scholarships for undergraduate students who are attending Historically Black Colleges and Universities or Predominantly Black Institutions. In 2023, the scholarship will be expanded to support Black physics and astronomy students at all institutions across the US. Additionally, grants will be awarded to academic departments to implement systemic change projects at their institution to address the persistent underrepresentation of African American physics and astronomy students.


Why it Matters

The historical trend of low percentages of African Americans obtaining undergraduate degrees in physics or astronomy needs to be reversed, not only to improve STEM equity but also as an imperative of the scientific community's obligation to humanity. Solving our world's biggest challenges requires a workforce of scientists with a diverse range of life experiences and cultural backgrounds to ensure fresh and challenging perspectives are brought to bear on the questions of our time. It's vital we remove the barriers to entry that keep talented African American students from becoming physicists and astronomers.

Go Deeper

According to an [AIP survey](#), just 3% of physics bachelor's degrees were earned by African Americans for the class of 2018. A number of factors contribute to why so few African Americans pursue undergraduate degrees in the physical sciences, such as lack of a sense of belonging and lack of academic support.

Formed in 2017, TEAM-UP — the Task Force to Elevate African American Representation in Undergraduate Physics & Astronomy — released a groundbreaking

report, [The Time is Now: Systemic Changes to Increase African Americans with Bachelor's Degrees in Physics and Astronomy](#) , TEAM-UP's goal is to double the number of African Americans who graduate college with an undergraduate degree in physics or astronomy by 2030.

Learn More

Read more about [TEAM-UP](#), task force members, and key activities. 

Read about how AIP and Member Societies are committed to [promoting increased diversity, equity, and inclusion](#). 



TEAM-UP TOGETHER

Our Goal

Driving Systemic Change and Improving Outcomes for African Americans in Physics & Astronomy

In 2018, African Americans earned a total of

238 & **12**
bachelor's degrees in physics
bachelor's degrees in astronomy



The goal is to double the # of students per year to

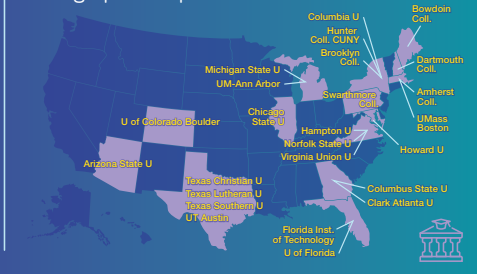
500 & **25**
bachelor's degrees in physics
bachelor's degrees in astronomy
by 2030

Scholarships

Awarded **31** African American students
\$10,000 scholarships for the 2022-23 academic year

25
schools represented

Geographic Dispersion



Program Support

Lead Partners

AAPT AAS APS SPS AIP

Sponsors

Simons Foundation & Simons Foundation International
Heising-Simons Foundation

Advisory Committee

The TEAM-UP/TEAM-UP Together (TU-T) Advisory Committee provides guidance and advice on the overall TEAM-UP effort, assuring alignment to the TEAM-UP report and recommendations, and advises on reaching the program's overarching goal.



Our Progress in 2022

Funding

Received
\$12.5M
from Simons Foundation and Simons Foundation International
\$500K
from the Heising-Simons Foundation

Goal to raise

\$30M



Stakeholder Engagement

8
Lead Partner Program Committee Meetings

16
Stakeholder Presentations

2
Executive Sponsor Meetings

Hosted **2** listening sessions at the National Society of Black Physicists Annual Conference with students and leadership/faculty 

DEIBA Strategic Framework Nears Completion

AIP formed a DEIBA Strategic Planning Working Group to engage the Member Societies to fine-tune our DEIBA strategic framework, with the goal of finalizing the plan and implementing it in 2023.

Why It Matters

Backed by Member Society buy-in and support, this plan will form the foundation of our DEIBA work, with the aim of establishing AIP as a DEIBA leader in the physical sciences community to ensure we have sustainable DEIBA initiatives that are embedded into the core of our organizations.

Go Deeper

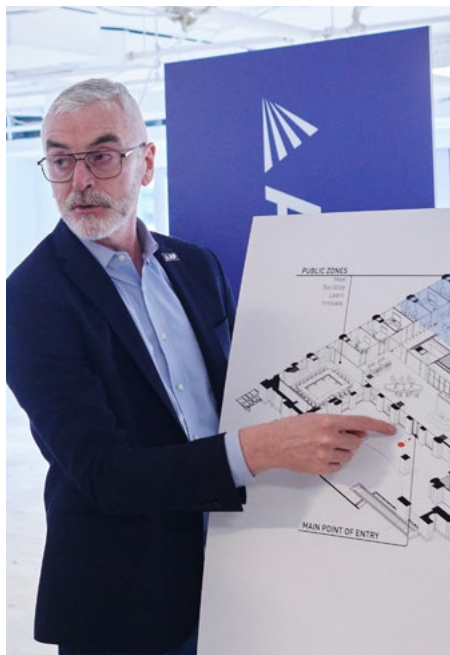
The DEIBA plan ties directly to AIP's Strategic Framework and an underlying tenet of our mission that our strength is in our diversity. Once completed, the plan's purpose is for AIP to serve as a lead convenor in the physical sciences community, bringing together Member Societies and thought leaders to discuss best practices, identify gaps, leverage resources, and identify how we can work together to achieve DEIBA success to make a real impact in the world.

Learn More

Read about the role of AIP's [Diversity, Equity, and Belonging Officer](#) , a new position created to expand AIP's efforts in this area.

AIP launched [Initial Conditions: A Physics History Podcast](#) , a podcast that tells the untold stories behind important scientific discoveries.

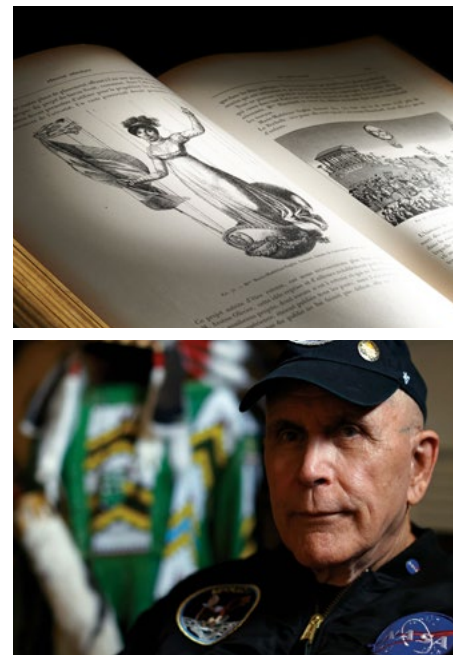
Illustration from *La Navigation Aerienne*.




Michael Moloney sharing plans for the new ACP-DC.



AIP staff in the new ACP-DC space.



J.C. Elliot-High Eagle, Oral History 

To date, the Niels Bohr Library & Archives has compiled more than 1,500 online [oral histories](#) , including an interview with President Biden's new chief science advisor Arati Prabhakar.

2022 was a milestone year for Sigma Pi Sigma and the Society of Physics Students.

Brad Conrad, Director
Society of Physics Students and Sigma Pi Sigma



Sigma Pi Sigma and the Society of Physics Students Celebrate 100 Years, Expand Constitution

Sigma Pi Sigma's signature conference — the Physics Conference, better known as PhysCon — celebrated its 100-year anniversary and its largest meeting in history, where more than 1,200 attendees gathered for three days in Washington, DC.

In other milestone news, Sigma Pi Sigma — which operates within the Society of Physics Students (SPS) — expanded its constitution to officially include astronomy students and related majors.

Go Deeper

Astronomers have always been among the Sigma Pi Sigma membership. In fact, when the honor society was founded 100 years ago with nine members — independent from AIP — one member was an astronomer. The constitutional change simply makes official what Sigma Pi Sigma has been doing all along: serving physics, astronomy, and related majors.

Today, the honor society is part of AIP and has nearly 600 chapters located at colleges and universities throughout the country and 100,000 lifetime members.

Sigma Pi Sigma's key event, PhysCon, takes place every three years. This year's event drew undergraduate physics and astronomy students, faculty, scientists, and engineers; representation from 257 universities; and an estimated 38% of attendees identified as female.

Plenary speakers included:

- **Julianne Pollard-Larkin**, MD Anderson Cancer Center physics section chief of thoracic service, Department of Radiation Physics, and board member of the American Association of Physicists in Medicine
- **K. Renee Horton**, NASA space launch system quality engineer
- **Rush Holt Jr.**, scientist, politician, and former CEO of the American Association for the Advancement of Science
- **Sarah Hörst**, Johns Hopkins University associate professor of planetary sciences

Special centennial speakers included:

- **Dame Jocelyn Bell Burnell**, British astronomer who discovered pulsars
- **John Mather**, astrophysicist, cosmologist, and Nobel Prize winner
- **Jim Gates**, theoretical physicist and past American Physical Society president
- **Eric Cornell**, Nobel Prize winner and physicist who, along with Carl E. Wieman, was able to synthesize the first Bose-Einstein condensate

Watch our PhysCon plenary videos:

[Opening Remarks](#) 

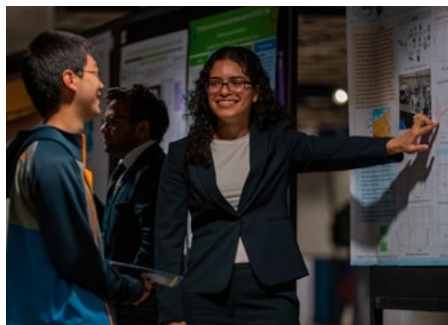
[Julianne Pollard-Larkin](#) 

[K. Renee Horton](#) 

[Rush Holt](#) 

[Sarah Hörst](#) 

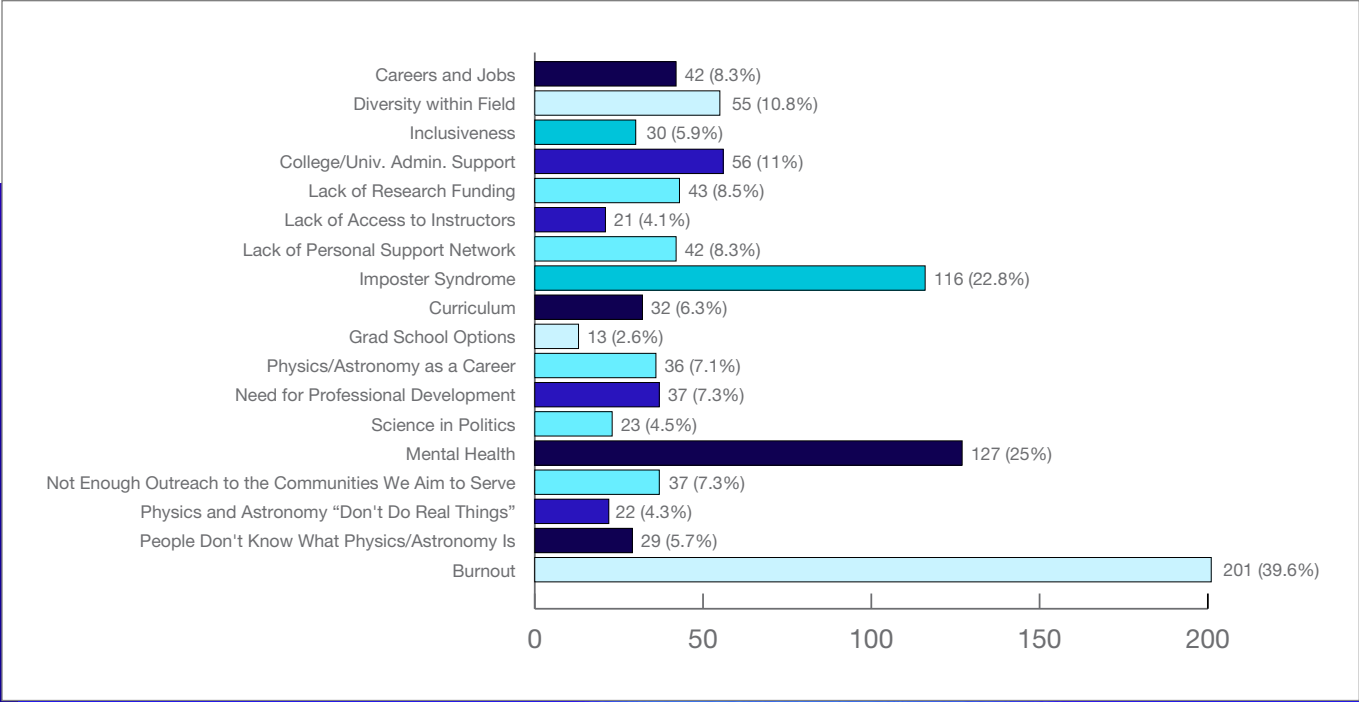
The 100th Physics Congress in Washington, DC.





The 100th Physics Congress in Washington, DC.

At PhysCon 2022, students were polled about the greatest issues of concern to them.



Financial Performance

In 2022, AIP posted its 13th consecutive year of positive net operating results, a testament to our long-term commitment to overall operational excellence. 2022 also served as a transition year in developing key actions for implementation of our Strategic Framework that will build our commitment to our overarching strategy and our audiences' experience of AIP for the coming years.

Though many of our meetings in 2022 continued to be held virtually, we were able to coordinate more frequent leadership and staff gatherings in a hybrid model with in-person and virtual attendance. AIP was able to remain financially strong and build on its organizational excellence.

Noteworthy 2022 Financial Highlights

- Net surplus from operations of \$2.8M
- Investments generated a negative return of -11.3%, decreasing to \$203.8M
- Net assets decreased -7.9% to \$230.9M
- Net assets released from restricted reserves \$13.2M

Net Assets and the Path Forward

Each year, AIP goes through the process of reviewing and evaluating its financial assets and aligning them with the Institute's core goals and priorities. The Board Designations are the culmination of this effort. In 2022, total net assets released from restrictions totaled \$13.2M, coming from donor restrictions (\$1.6M) and Board-designated funds (\$11.6M). These funds provided valuable resources for implementing numerous priorities for 2022 and sustaining financial operations.

The Board continues to focus on how AIP is working to build out the overall stability and sustainability of our financial future, partly by using a multipronged approach that considers items for oversight of the operational budget and of spending formulas from quasi-endowments and other Board-designated funds, special purpose funds that are guided by donor intentions, and the operational risk reserves fund for managing financial risk in the longer term. We continue watching the trends and benchmarks of our peers, mitigating risks with uncertainty ahead in terms of market performance, general inflation, and real growth in AIP's expense base. This Board mandate provides financial discipline that allows for long-term financial stability balanced with a diversified investment approach that seeks stable asset appreciation.

AIP is grateful for the generous support provided by donors, foundations, and sponsors for its programs and awards and will continue to be a disciplined steward of its financial assets.

Consolidated Financial Overview (in thousands)

	2022	2021	2020
Investments	\$203,825	\$231,771	\$207,473
Total Assets	\$272,360	\$290,318	\$265,450
Total Net Assets	\$230,861	\$250,613	\$226,491
Investment Return	-11.3%	14.3%	12.0%
Operating Activities			
Total Revenue	\$89,087	\$85,677	\$80,794
AIP Publishing, Net	\$15,684	\$15,873	\$16,088
AIP Foundation, Net	\$135	\$130	(\$15)
AIP Programs, Net	(\$12,994)	(\$11,506)	(\$10,874)
Net Operating Surplus	\$2,825	\$4,497	\$5,199

The American Institute of Physics, Incorporated (tax exempt under section 501(c)(3) of the Internal Revenue Code) includes AIP Publishing, LLC (AIPP), a disregarded entity under the AIP tax exempt status. AIPP is a single member and wholly owned subsidiary of AIP. The primary purpose of AIPP is to support the scientific and educational mission of AIP through scholarly publishing activities in the physical and related sciences.

AIP Publishing is the sole shareholder in AIP Global, Inc. (AIPG), a for-profit corporation. The primary purpose of AIPG is to advance the physical sciences for the benefit of society by acting as a business liaison for the dissemination of knowledge of physics and to collaborate and network with physicists.



2022 Annual Report

aip.org