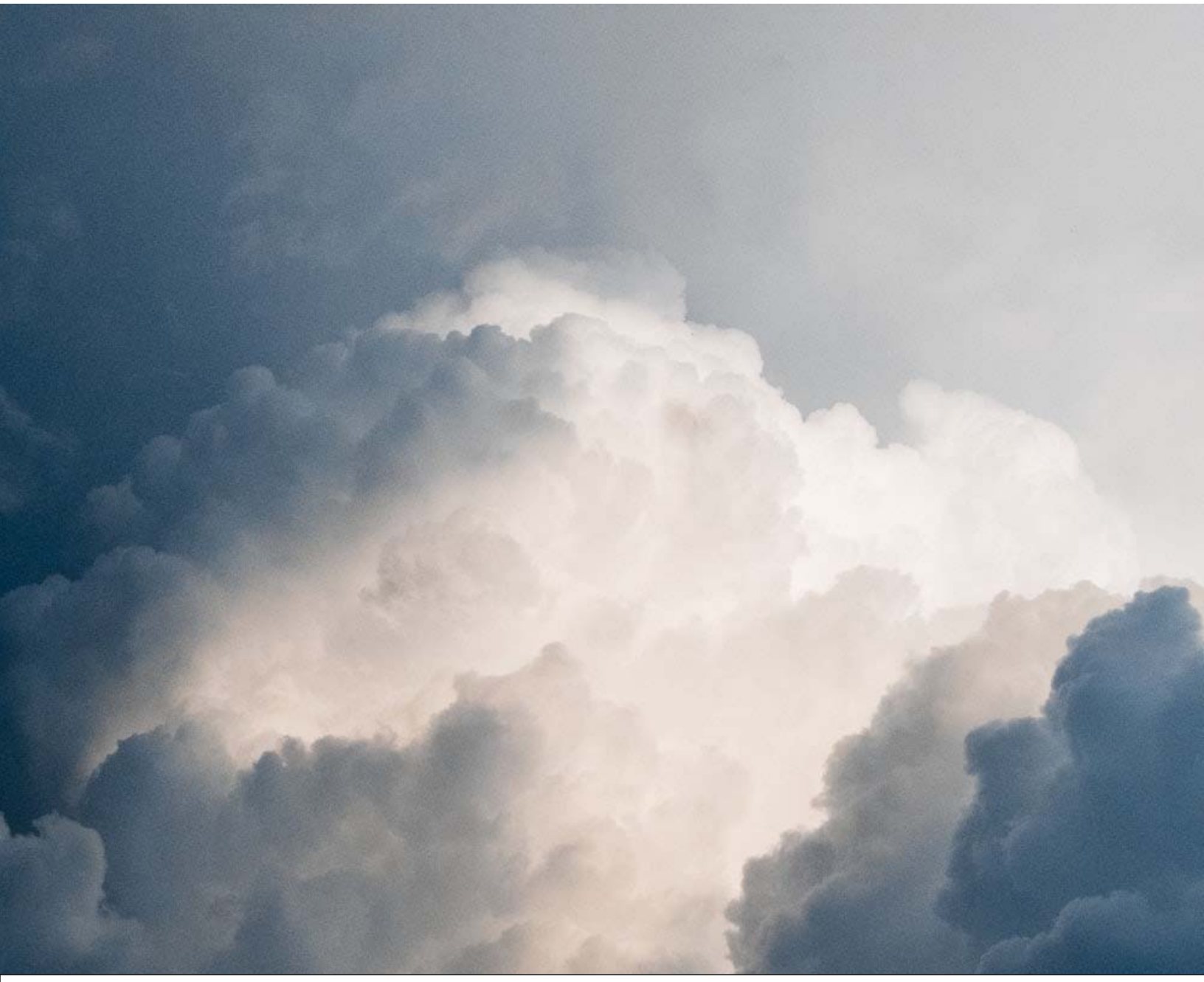
AMERICAN METEOROLOGICAL SOCIETY

Annual Report 2017



American Meteorological Society, 45 Beacon Street, Boston, MA 02108-3693

Roger Wakimoto: President's Message

Roger M. Wakimoto

The 2018 Annual Meeting in Austin was an enormous success and a poignant moment for me. Attendance was very high and comments from attendees were uniformly very good. I have an immense sense of pride that we were able to achieve President Matt Parker's vision for the Annual Meeting of "Science Communication."

The theme permeated the entire meeting and our Presidential Forum speaker, Richard Alley, was applauded for his presentation that resonated with the audience. The Special Hurricane Town Hall on Monday was also a powerful moment that illustrated how all of the sectors across the AMS work together to serve the general public. Of course, I always think about the next generation of leaders and I was heartened to see so many students and early career professionals attending the meeting. Their enthusiasm and willingness to participate in the Society's activities means that our discipline has a bright future. Finally, I was both honored and happy that Matt's wife, Shawntel Parker, was able to join us for the banquet. It was a truly profound and moving moment that many of us will not forget.

Matthew J. Parker

The AMS leadership focused on a couple of important topics during the year. I asked the Council to appoint a Task Force on Diversity, Equity, and Inclusion. This came out of my concern that the AMS did not have a strategic vision or, possibly, the organizational structure to address this critical issue that is so vital to the future success of the AMS. I look forward to receiving the task force recommendations and will share them with the membership. The political landscape has changed dramatically in ways that are already familiar to many of you. Support for science has waned and the future prospects remain unclear. Accordingly, I have asked the Council to think about whether the AMS needs to adapt to this change or remain steady with its current stance as an "honest broker" when interacting with Capitol Hill and others in the public policy arena. This topic should lead to an energetic discussion that will lay the political foundation for the AMS in the coming months and years.

I am now deep in the planning stage for the 2019 Annual Meeting in Phoenix. The theme is "Understanding and Building Resilience to Extreme Events by Being Interdisciplinary, International, and Inclusive (III)." Extreme events are constantly in the headlines and impacting our daily lives, so I am excited to see the Society come together in Arizona to discuss the science, prediction, communication, and outreach aspects of this theme. I close by thanking all of the AMS staff for supporting me during the past year and also for the upcoming year. The job as President is an enormous responsibility and it can be overwhelming at times. However, the staff is always there to help buttress your efforts, provide sage advice, remove obstacles, and be a sounding board for you. It is for all of these reasons that I am so deeply grateful.

Roger M. Wakimoto
2017-2018 AMS President

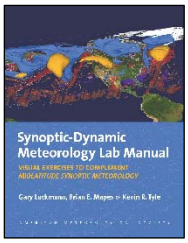
PUBLICATIONS

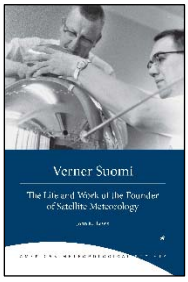
For the 6th consecutive year, a new record was established for the number of pages published in AMS journals (35,417) spread over 1,900 articles. AMS journals continued to have high Clarivate Analytics ® Impact Factors, with 3 ranked in the top 10 and 6 in the top 25 in the category of atmospheric and related sciences.

2017 Highlights

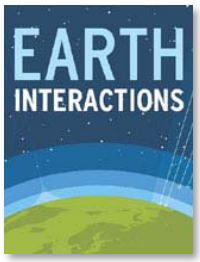
- Early Online Release production time was down to 10-14 days, and time to publication in final form was trimmed to around 60 days. Efforts to get even faster will always be a top priority.
- The Meteorological Monograph series was given new life by restructuring the process by which contributions are proposed or solicited, publicized, and disseminated.

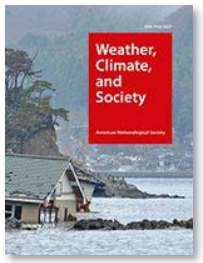
Books

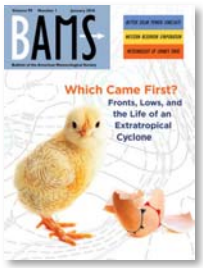




In fall 2017 AMS Books published the *Synoptic-Dynamic Meteorology Lab Manual: Visual Exercises to Complement Midlatitude Synoptic Meteorology*, created by Gary Lackmann, Brian E. Mapes, and Kevin R. Tyle to address the challenges facing atmospheric science instructors in helping students link theoretical and mathematical concepts to the real atmosphere. Also published was the biography *Verner Suomi: The Life and Work of the Founder of Satellite Meteorology,* written by a team of Suomi's associates led by John M. Lewis (National Severe Storms Laboratory and Desert Research Institute and University of Nevada–Reno) and organized by Jean M. Phillips (Space Science and Engineering Center, University of Wisconsin-Madison).







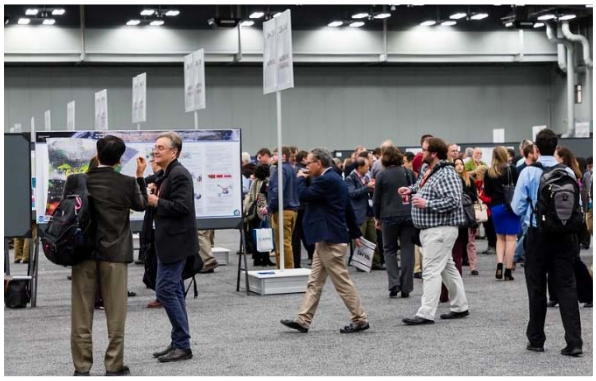
MEETINGS

The AMS Meetings department continues to show how valuable our meetings are to the entire weather, water, and climate community. The total number of registration and presentation numbers stayed close to being the same for 2017 even though we had 2 fewer meetings than the year prior. The 2017 Annual Meeting had very strong numbers to start off the year, and the 2018 Annual Meeting in Austin, Texas, was a terrific success.

AMS Meetings are vital to professionals in the private, public, and academic sector because they can share scientific research and knowledge while networking with peers, colleagues, and friends. Students also benefit from attending meetings and AMS remains committed to providing as many scholarships as possible to ensure students benefit from this important professional experience.

2017 Highlights

- AMS hosted 11 meetings in 9 cities.
- 5,878 people attended AMS conferences and symposia; compared to 5,861 the previous year.
- 768 students attended the Student Conference.
- A total of 4,750 presentations and papers were given, essentially matching the number presented in 2016.
- We had 3 AMS Meetings where exhibit programs were planned with 111 organizations participating.
- 16 organizations helped sponsor AMS meeting activities.



EDUCATION PROGRAM

The AMS Education Program, located in Washington, DC, works on behalf of AMS members to engage in, support, and offer programs and resources focused on increasing public scientific literacy. Education Program staff, contractors, and a network of educators work in partnership to support the strategic plans of the Society.

The Education Program focuses support on K-12 educators as well as faculty and students at undergraduate institutions. AMS provides professional development programs, course materials, and in-classroom resources to engage K-12 and undergraduate educators in weather, ocean, and climate sciences, with a particular focus on educators impacting significant number of students underrepresented in STEM and institutions not traditionally offering extensive geoscience coursework.

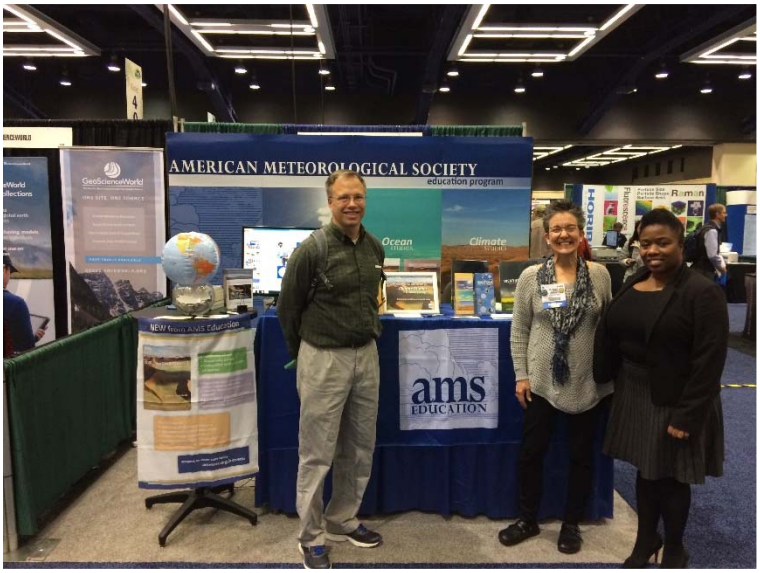
The year 2017 focused on evolving a number of our services and engaging staff and our partners in strategic planning. The largest transition of year was the launch of a new partnership with California University of Pennsylvania (Cal U) to be the new graduate-credit granting institution for all five of our teacher professional development courses. In-service, K-12 teachers in all 50 states can now leverage a modern learning management system to earn up to 15 credits. These include the three-credit courses corresponding to DataStreme Atmosphere, Ocean, and Earth's Climate System (ECS) offered in fall and spring, and summer Project ATMOSPHERE and Maury Project offerings. Teachers can also earn a new Cal U post-baccalaureate AMS DataStreme certificate upon completion of three of the five courses.

2017 Highlights

- AMS Education Program team completed a two-year major revision of the Ocean Studies textbook in collaboration with outside authors Dr. Douglas Segar and Stacy Kish. The textbook, which is primarily offered as an eBook/webBook like other Education Program publications, has a significant upgrade of content, imagery, and use of integrated web resources.
- This past year AMS received a renewed five-year award from NOAA to support in-service and pre-service K-12 teacher

training through AMS Education Program courses, as well as workforce development provided by the AMS scholarships and fellowships programs. AMS received a three-year award from the U.S. Navy Office of Naval Research to continue support of the Maury Project, and NSF funding continues to enable offering of the AMS Climate Studies Diversity Project to minority-serving colleges and universities.

- AMS held the 24th annual Maury Project two-week summer workshop for 24 K-12 educators at the U.S. Naval Academy in Annapolis, MD. AMS also held the NOAA-supported 25th Project ATMOSPHERE summer workshop at the National Weather Service Training Center in Kansas City, MO. Together the workshops have provided content and leadership training for more than 1100 K-12 educators.
- NOAA continued its longtime support of the DataStreme Atmosphere and DataStreme Ocean teacher professional development programs focused on increasing content knowledge and subject matter teaching confidence. In 2017, about 530 K-12 educators took DataStreme courses and formed Plans of Action for incorporating content into their curricula and sharing with other teachers. Over the Education Program's history, the 21,000 K-12 teachers completing DataStreme courses and summer workshops have impacted nearly 200,000 additional teachers and several million students.
- Strong partnerships continued throughout the year in support of AMS Weather, Ocean, and Climate Undergraduate Courses and diversity programs. As a whole, AMS Undergraduate Courses have activated about 900 institutional licenses, half which are from minority-serving institutions (MSIs) and have impacted more than 120,000 students.
- In May 2017, 25 MSI faculty participated in the 5th AMS Climate Studies Diversity Project course implementation workshop. There have been 130 Climate Diversity Project participants since 2012. With AMS Education Program engagement, the Consortium for Ocean Leadership (NSF support) and the U.S Ice Drilling Program Office (NSF support) continued to offer professional development experiences for MSI faculty, many of whom first participated in the Climate Diversity Project.



POLICY

The AMS Policy Program strengthens the weather, water, and climate community by helping policymakers and scientists understand one another and work together more effectively. We help develop the capacity within the AMS community to effectively and constructively contribute to the policy process. We help inform policy makers directly of established scientific understanding and the latest policy-relevant research. We promote informed and thoughtful decision-making through analysis, communication, innovative problem solving, and research. Our activities help secure the support and resources that the scientific community needs to make critical information and services available, and we work to help the nation, and the world, avoid risks and realize opportunities related to weather, water, and climate.

2017 Highlights

- AMS conducted our 17th annual Summer Policy Colloquium, which is our intensive introduction to the federal policy process for Earth scientists. Roughly 600 scientists have participated in the program. Through this effort, we are helping to develop new leaders within our community who can engage with policy makers effectively and constructively.
- The Policy Program initiated a new memo project to help inform incoming congressional offices and administration officials. The memos are brief (2 pages or less) descriptions of key issues in weather, water, and climate that are intended for general audiences (including scientists, the public, the media, and decision-makers). Critically, AMS Policy Program memos provide policy relevant information, but they are not policy prescriptive. To date, we have the following memos: 1) Earth Observations, Science, and Services; 2) Climate Change—The Basics; 3) The Radio Frequency Spectrum and Weather, Water, and Climate; and 4) Water and the Coasts: Opportunity, Vulnerability, and Risk Management.
- AMS placed its 18th scientist on Capitol Hill through the AMS Congressional Fellowship program. Fellows spend a year serving as staff for senators and members of the House of Representatives. This program ensures that an AMS scientist will be on the Hill and in a position of importance whenever members of Congress make decisions that will affect our community and the broader society that we serve.
- A Policy Program study that examines coastal vulnerability and opportunities for risk management was released.
- A workshop was held on U.S. natural hazards policy in the aftermath of hurricanes Harvey, Irma, and Maria. The study resulting from the workshop will be released in the spring of 2018.
- The Policy Program led three Congressional Visits Days (CVD) for the AMS community. In June, we held a CVD focused on weather, water, and climate. In February and September, we partnered with about a half dozen other scientific societies to make possible CVDs that focused on climate science and the geosciences, respectively.

MEMBERSHIP

The Society has placed a higher emphasis on member engagement over the past year, focusing not only on members of AMS but also significantly on the broader community.

To better support new members, AMS launched "AMS365" as a new program that periodically reaches out to new members of their first year of membership so that they can learn more about various AMS activities and programs that can support them in their career path.

Overall, we received 1,626 new member applications paid) in 2017, which is on par with the number of new member applications received in 2016. The number of applications received for Member and Member with Student Privileges was slightly lower in 2017 than it was in 2016, while the number of applications for Student Member was up more than 10%. Applications for Associate Member were also up very slightly.

Despite fewer new applications for full Member (a group that includes Members, Members with Student Privileges, Fellows, and Honorary Members), a higher than usual retention rate for this category resulted in the overall number of Members to increase for the second year in a row.

Member Type	
Honorary	35
Fellow	737
Member	8124
Member w/Stud Priv	407
Voting Associate	20
Associate	752
Precollege Student	94
Precollege Teacher	80
Student Member	2239
Sustaining CIM	8
Regular CIM	57
Small Business CIM	8
Publications CIM	72
Total	**12,633**

Mentoring365

AMS is a partner in the new Mentoring365 mentoring program. AMS Education Program Director Wendy Abshire serves as one of the AMS mentors in the program.

AMS Local Chapters

AMS Local Chapters provide ideal ways for professionals, students, and enthusiasts to network, discuss, and connect. They are instrumental in helping AMS promote and disseminate information about the atmospheric, oceanic, and hydrologic sciences.

The following chapters were authorized in 2017, with the number of active chapters now totaling 149. There are currently 83 student chapters and 66 regular chapters.

- Ball State University Student Chapter – Muncie, IN
- Central Virginia Chapter – Richmond, VA (reactivation)
- Marymount School of New York Pre-College Chapter – New York, NY (reactivation)
- Oregon State University Student Chapter – Corvallis, OR
- University of California, Irvine Student Chapter – Irvine, CA
- Wyoming Chapter – Laramie, WY

AMS Certification Programs

The AMS Certified Consulting Meteorologist (CCM) Program and the AMS Certified Broadcast Meteorologist (CBM) Program serve the public's need to identify broadcast and consulting meteorologists who have achieved a high level of competency in communicating complex weather, water, and climate information.

In 2017, 5 individuals earned the Certified Consulting Meteorologist designation, bringing the total number of active CCMs to 270.

In 2017, 32 broadcast meteorologists earned the CBM certification, bringing the total number of active CBMs to 561.

DEVELOPMENT

AMS thanks the members, corporations, and federal agencies that have generously contributed to the AMS 100th Anniversary Campaign and provided much needed funding for programs and activities that rely on external support. These programs, many of which directly impact students, could not have been implemented if it were not for the generous donations received throughout the year.

With the generous contributions received, AMS was able to:

- Award 8 graduate fellowships and 32 undergraduate scholarships, including three minority scholarships and one History of Science fellowship.
- Provide partial travel support to AMS meetings to over 100 students
- Host the 16th Annual Student Conference attended by over 750 students
- Collaborate with more than 30 corporations who provided support of nearly a half million dollars for meeting sponsorships, student programs, K-12 Education and Policy Program activities.
- Create policy memos on Earth observations, science, and services; the basics of climate change: coastal resilience; and Earth sciences uses of the radio spectrum.
- Conduct studies that examined hazard policy in light of the 2017 hurricane season that explored opportunities to improve coastal risk management.
- Implement a K-12 Teacher Workshop at the 97th AMS annual meeting.
- Offer international travel support for members to participate in a collaborative summer school.

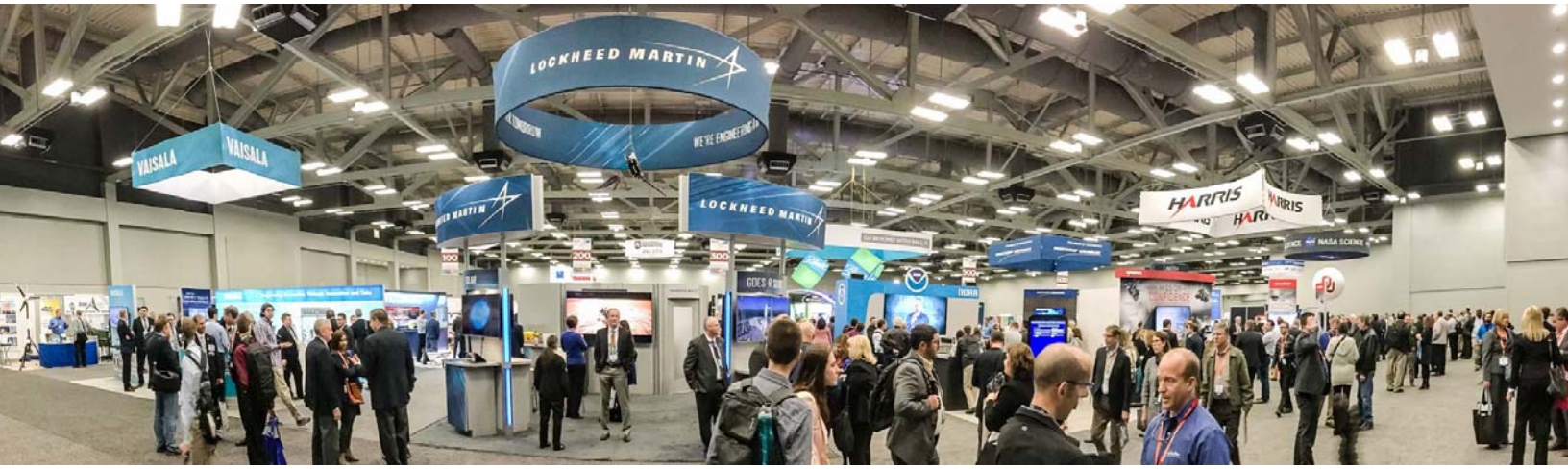
Lockheed Martin Corporation was the 2017 AMS Corporate Patron

FINANCES

While AMS programs continued to successfully support the AMS community in 2017, the Society's budget faced another challenging year, with an overall deficit in the operating budget of about $1.2 million. This was partially offset by good returns on the AMS investment portfolio, but the Society still needed to use over $700K of its reserves to cover program budget deficits. There are a number of major initiatives underway that will be addressing the current budget challenges, but some will take time to reach their expected goals.

Highlights for 2017

- AMS publications set another all-time record for the number of pages published in AMS journals, which contributes importantly to the societies financial health. Unfortunately, library subscription income continues to erode, and we missed the budget expectation for subscription income. Several books were also published that should generate revenue in the coming years.
- AMS Meetings had another terrific year, beginning with the very successful meeting in Seattle. Despite this being a year with fewer specialty meetings, the meetings that we had enjoyed better than expected attendance, and that helped boost the income from this program area.
- An important component of the deficit for 2017 is a result of the challenges being worked through in the AMS Education Program as the transition to all-electronic textbooks continues and the program retools to begin delivering its teacher professional development programs through a new platform. These are multi-year transitions that will make the program more viable for the future, but the short-term deficits must be absorbed now as we look toward future success.
- The AMS investment portfolio earned about a half million dollars more than had been budgeted, which helped offset the deficit in the operating budget.



THANK YOU

AMS Boards and Committees in 2017

AMS advances the atmospheric and related sciences, technologies, applications, and services for the benefit of society.

AMS VOLUNTEER STRUCTURE

The following list provides the membership of all AMS boards and committees in 2017. Current board and committee membership can be found on the AMS website.

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ARTICLE XII. Guidelines for Professional Conduct

To enhance the benefits of the meteorological and related professions to humanity, to uphold the dignity and honor of the profession, and to provide guidance for individual members, institutional members, or for members in association with other professionals, the American Meteorological Society has adopted the following Guidelines for Professional Conduct. Only individuals and organizations who intend to abide by these Guidelines should seek admission or continuing membership in the Society; therefore, these Guidelines will appear on the membership application form and will be published at least annually in the official organ of the Society.

1. Relationship of members to the profession as a whole.

    A. Members should conduct themselves in an ethical manner and reflect dignity and honor on their profession.

    B. Members who are professionally active should endeavor to keep abreast of relevant scientific and technical developments; they should continuously strive to improve their professional abilities.

    C. Members engaged in the development of new knowledge should make known to the scientific world their significant results through the media of technical or scientific publications or meetings.

2. Relationship of members to colleagues.

    Members should not take credit knowingly for work done by others; in publications or meetings, members should attempt to give credit where due.

3. Relationship of members to clients and the general public.

    A. Members should base their practice on sound scientific principles applied in a scientific manner.

    B. Members should not direct their professional activities into practices generally recognized as being detrimental to, or incompatible with, the general public welfare.

    C. Members undertaking work for a client should fully advise him or her as to the likelihood of success.

    D. Members should refrain from making exaggerated or unwarranted claims and statements.

    E. Members should refer requests for service that are beyond their professional capabilities or their scope of service to those properly qualified.

    F. Members shall not use or display the official seal of the American Meteorological Society, the Radio Seal of Approval, the Television Seal of Approval, or the designation Certified Consulting Meteorologist or Certified Broadcast Meteorologist unless duly authorized by the Society.