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Annual Report 2003

The American Meteorological Society

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Dear Members,

Being your president in 2003 was an unforgettable experience. I was fortunate enough to attend almost all of the technical conferences conducted by the Society during the year, and doing so allowed me to see, first hand, the depth and breadth of the activities of the AMS. Our Society can be very proud of supporting our profession by convening many of the finest scientific and technical conferences in the world. Similarly, the AMS publications continue to set high standards for scientific publications.

I'm proud to say that this year also featured change. Your Society took some bold steps this year to further the cause of our science and profession.

One change of paramount importance was the upgrading of the AMS certification programs. With its continuing education standards and other new features, the new Certified Broadcast Meteorologist Program should help ensure that weathercasters essentially become "chief scientist" for their stations.

Some changes are still in the formative stages, but equally profound. The National Research Council, in its report "Fair Weather: Effective Partnerships in Weather and Climate Services," challenged us to become the forum for enhancing the partnerships among the components of the weather and climate enterprise. Good efforts have begun this year to explore ways of meeting this challenge.

The opening section of this annual report highlights several representative achievements of our Society in education, policy, and professional development, including the new certification standards. Following these featured examples, the report assesses the progress of our work, this year, in meeting five key long-term objectives.

All of these achievements stem from a plan–the 10-Year Vision mapped out by the AMS Council in 1998. All of the committee meetings, conference calls, and discussions that go into an AMS year, involving hundreds of active volunteers like you and me, are guided by that Vision. Over and over this path comes up in discussions about what steps to take to keep the Society vibrant and to expand the opportunities available to our field in the future.

As we mark the midway point of the decadal journey charted in the Vision report, we can see that we have made tremendous progress. We can also see much progress needs to be made, with some areas faring better than others. Breaking down our achievements by the major trends identified in the 10-Year Vision–growing multidisciplinarity, inclusiveness, technological advance, enhanced outreach, and financial development–we can readily see both the triumphs and the opportunities we all share as AMS members.

I want to extend my heartfelt thanks to all of you for granting me the privilege of serving as your president for 2003. I also want to thank Ron McPherson and his capable staff of the AMS for making my task as your president very easy. For me, the culmination of the volunteer work your colleagues devoted to the Society this year was the highly successful annual meeting just completed in Seattle. The total attendance, 3200, was the second largest ever. The Society doesn't stop there, however. I urge your enthusiastic support and participation so that our Society may continue to grow and support our enterprise in the future.

Sincerely,

Elbert W. "Joe" Friday
President, 2003

Throughout 2003, innovative endeavors have helped the Society fulfill its goals and build on a distinguished legacy now in its ninth decade. The three initiatives described in the following pages are examples of such innovations. They stand out as important milestones this year for the Society.

Training New Scientists: Innovative Outreach to Minority Students

In 2003, the AMS Education Program, with funding from the National Science Foundation, embarked on a new initiative to introduce minority undergraduates to the atmospheric sciences. The new NSF funding has so far helped 50 minority-serving institutions implement "Online Weather Studies," a basic course on weather and climate developed and serviced by the AMS Education Program. AMS delivers part of the course via the Internet, which allows a highly motivational approach whereby students learn about weather as it happens in near-real time.

The ultimate goal of the new initiative is to help increase diversity in the scientific workforce by encouraging minorities to consider a career in science. Over a four-and-a-half year period, 100 minority-serving institutions are expected to incorporate Online Weather Studies into their curriculum, reaching thousands of students. Eligible colleges and universities include those listed by the U.S. Department of Education as historically black colleges and universities, Hispanic-serving institutions, tribal colleges and universities, and Alaska Native or Native Hawaiian-serving institutions.

The nation faces a serious challenge in attracting members of racial and ethnic minority groups to science and science-related careers (including teaching). While about 27 percent of the U.S. population is African American, Hispanic/Latino, American Indian/Alaska Native, or Native Hawaiian/Other Pacific Islander, these groups make up only about 7 percent of the total science and engineering workforce. This under-representation is especially acute in the geosciences, including the atmospheric sciences. The National Science Foundation reports that minorities earn almost 15 percent of all bachelor's degrees in science and engineering but only 4.6 percent of bachelor's degrees in the geosciences. Minorities earn only 3.3 percent of all master's degrees and 5 percent of all Ph.D. degrees in the geosciences.

In the innovative new 12- to 15-week introductory college-level course, AMS staff meteorologists coordinate current weather data delivered via the Internet with investigations keyed to the day's weather. The course has been offered in various formats ranging from strictly online (with few or no formal classroom meetings) to a laboratory role in a traditional lecture course. AMS has developed a course home page, textbook, study guide, faculty manual CD, and secure instructor's home page. The Online Weather Studies home page delivers student investigations (two per week), current weather data and maps, satellite imagery, composite radar displays, a daily weather summary, and forecasts.

Meteorological data, supplied in learner-friendly formats by the Cooperative Program for Operational Meteorology, Education, and Training (COMET), are updated hourly, 24 hours a day, and seven days a week, year-round. The customized full-color textbook features a traditional sequence of topics, and each of the 15 chapters provides background information for each week's investigations.

In part because of the user-friendly electronic and printed materials, Online Weather Studies can be offered by meteorology instructors as well as by science faculty having no prior teaching experience or formal training in the atmospheric sciences. Faculty volunteers who have already taught the course are available to assist instructors offering the course for the first time. Also, AMS staff meteorologists are prepared to answer questions on all aspects of course delivery and content.

The AMS Online Weather Studies course is gaining wide acceptance throughout the United States, and not just through the new NSF funding aimed at minority-serving institutions. By the end of 2003, the course had been licensed by 200 undergraduate institutions–many of them offering weather and climate studies for the first time.

Helping Set National Priorities: The Policy Study Series

Influencing policy decisions affecting our field is a major emphasis for the Society. In 2000, the AMS Atmospheric Policy Program (APP) launched a series of national policy studies on "Weather, Climate, and National Priorities." ITT Industries and Raytheon provide underwriting support for the Policy Study Series. For each study, APP convenes a forum of experts in order to generate a set of policy options and recommendations. This was the first year in which the AMS hosted two such forums.

Because El Nino and other climate fluctuations can have huge societal impacts, from local to international levels, it is important to understand and improve climate predictions as well as to use predictions more effectively to allow communities to prepare and respond. The Policy Study Series addressed these issues in an April 2003 forum on "Improving Responses to Climate Predictions," held in collaboration with Columbia University. The forum brought together 96 weather and climate scientists, decision strategy specialists, and policy makers.

The cumulative authority of these attendees was clear in the resulting report, which integrated a variety of perspectives–from the scientists who make the predictions to the people who use them. Although seasonal climate predictions will always have limited accuracy, they can be used effectively to save dollars and lives. Flood mitigation is just an example of the efforts that climate predictions can benefit. Use of seasonal predictions can also help farmers select, plant, irrigate, and harvest crops and can help emergency preparedness managers plan for disaster assistance and recovery.

Nonetheless, many people still hesitate to use climate predictions in their daily business or in governing. The forum revealed that these people are often concerned about the accuracy and reliability of the predictions and want more data about the potential risks and benefits of using them. People also want to better understand the uncertainties involved in any prediction and want to know how to legally protect themselves when using the predictions.

The forum report, available on the AMS Web site, contains recommendations that covered at least five general areas:

• A national investment: The nation should increase its investment in climate science research, climate impact assessments, and

the supporting infrastructure. Investments in climate prediction research should be collaborative and balanced between modeling, data collection and analysis, and observing.

• Dealing with uncertainty and risk: The climate community should include uncertainty measures with its predictions. Furthermore, national policies need to reduce management and/or legal constraints that inhibit application of climate information in decision making.

• Opportunities for partnership: Government, academia, and the private sector need to work together to define one or more coordinated efforts to improve climate prediction services and applications. Also, the science community and users should partner to develop measures of success.

• Facilitating application: Government and academia should create educational opportunities for scientists to better understand how society reacts to climate and related forecasts. Academic institutions should train "science integrators" who can communicate user needs to climate information providers and facilitate effective use of climate predictions. In turn, providers and potential users of climate information should recruit and retain such science integrators.

• A need for sharing and dialogue: The World Meteorological Organization should serve as a conduit for sharing climate services and applications internationally, and the AMS should provide opportunities for continued science-policy dialogues, since climate science policy is a relatively new area.

The AMS held a second forum on "Weather and Highways," in early November with partial support from the Federal Highway Administration (FHWA) and the National Science Foundation. More than 90 people attended this forum, which generated a healthy exchange of information and policy issues. The vigorous policy level dialogues led to findings and recommendations on how to improve the safety and efficiency of the nation's highway system through better application of weather information. A final report will be available in early 2004 on the Web. Also, as it did for the Climate Prediction Forum, *BAMS* will bring perspectives from this forum to the wider AMS membership.

Encouraging Continued Professional Growth: Changes to the Broadcast Seal and Certified Consulting Meteorologist Programs

In 2003, the AMS approved a proposal to implement a mandatory continued professional development component for its certifications programs–the Certified Consulting Meteorologist and Seal of Approval. This continued professional development program will give CCMs and Sealholders a formal way of demonstrating that they are working to maintain their professional competence.

In January 2005, the AMS will introduce a new program called the Certified Broadcast Meteorologist (CBM) program, intended to raise the professional standard in broadcast meteorology and encourage a broader range of scientific understanding, especially with respect to environmental issues.

The CBM program is an "upgrade" to the current AMS Seal of Approval. The Seal was launched in 1957 when the Board on Broadcast Meteorology was formed. The Board began evaluating television and radio tapes in late 1959 and the first Seals of Approval were granted soon after. To date, over 1300 Television and over 150 Radio Seals of Approval have been awarded.

The Seal of Approval is awarded to broadcast meteorologists whose on-air presentations meet established criteria for scientific competence and effective communication skills. Seals have been awarded to meteorologists with widely

varying approaches to presenting the weathercast. Among radio and television meteorologists, the Seal of Approval is sought as a mark of distinction. Seal holders are highly respected among their peers. Professional meteorologists have confidence that weather presentations made by Seal holders will be technically sound and responsibly delivered. The general public can have equal confidence in the quality and reliability of weather presentations made by broadcast meteorologists approved by the Society.

The CBM Program will raise the bar even higher, making the meteorologists even more valuable to news organizations. Current AMS Sealholders who wish to receive the new CBM designation will be required to pass an examination demonstrating their basic competence in atmospheric science. The test will also include questions on a broader range of scientific issues.

All broadcast meteorologists certified by the AMS will be required to participate in a program of continuing professional development to maintain their certification, in order to ensure that CBMs and Sealholders remain current in the sciences. The program will be structured to strongly encourage a broader understanding of science topics, especially those related to the environment. To support this, AMS will expand its repertoire of education and training opportunities for broadcast meteorologists.

The Certified Consulting Meteorologist (CCM) program was established to ensure that those so designated meet or exceed a high level of proficiency within the field. The certification enables users of meteorological services to select consultants or employees with greater confidence in the quality and reliability of the products or services they will receive. The CCM is also a formal recognition on the part of his or her colleagues, acting through the Society, that an applicant is considered well-qualified to carry on the work of a consulting meteorologist.

In 2003, the AMS Council also approved a proposal to implement a mandatory continued professional development component for the CCM program. This development recognizes that maintaining certification requires a CCM to stay current in the rapidly evolving scientific areas covered by the CCM designation.

A structured approach for documenting the continuing professional development efforts of individual CCMs has been developed. This program will give CCMs a formal way of demonstrating that they are working to maintain their professional competence. The Continuing Professional Development segment of the CCM program is expected to begin in January 2005. Further details on the continued professional development plan are available on the AMS Web site at http://www.ametsoc.org/amscert/

These changes in the continued professional development requirements for AMS Sealholders and CCMs are the result of several years of research and debate within the broadcast meteorologist and CCM communities. They are designed to raise the standard and the value of the AMS certifications in newsrooms across the country and for the general public.

REACHING TOWARD THE FUTURE

In 1996, the Council of the AMS commissioned a study to plan for the future of the Society. That study, formalized in 1998 as the AMS 10-Year Vision, praised the Society for being strong and dynamic since its founding in 1919. At the same time, it noted that "the pace of change in our fields and our environment has increased and the AMS will serve its members and society well only if it is sensitive and responsive to these changes." The report identified five general areas of change affecting the Society:

• Sciences are becoming increasingly multidisciplinary, and the Society must follow suit.

• The Society will need to be more inclusive of all relevant groups.

• The expanding public interest in our field and its products means enhancing our outreach.

• The Society will have to remain at the forefront of the technology revolution.

• These efforts will require priorities in financing and intensified development.

The following pages identify some of the important steps your Society took in those areas in 2003.

Meetings By the Numbers

- **3900 people attended AMS conferences and symposia**
- **More than 2900 attendees gave presentations**
- **284 exhibits booths at the 83rd Annual Meeting and 340 exhibit booths for the year**
- **4 CD-ROMs and 4 Preprint volumes were produced**
- **18 organizations–a record number–sponsored a meeting activity**

AMS Journals

1354 Papers Accepted
(All-time record)

Meteorological Monographs published in 2003

Cloud Systems, Hurricanes, and the Tropical Rainfall Measuring Mission (TRMM): A Tribute to Dr. Joanne Simpson

Radar and Atmospheric Science: A Collection of Essays in Honor of David Atlas

A Half-Century of Progress in Meteorology: A Tribute to Richard Reed.

While atmospheric sciences remain central to the activities of the AMS, the broad quest for understanding, leading to prediction and applications, must be pursued in a multidisciplinary setting.

Meetings Reach Across Disciplines

By maintaining the momentum of change stimulated by the new Annual Meeting format initially established in 2001, the 83rd Annual Meeting in Long Beach, California, in February 2003, helped the Society cross disciplinary boundaries. The meeting was organized around the broad theme of water cycle variability and impacts and two special interdisciplinary symposia supported the theme: "Observing and Understanding the Variability of Water in Weather and Climate," and "Impacts of Water Variability: Benefits and Challenges."

The results from Annual Meeting format changes continue to be positive. The number of abstracts submitted has grown slightly (up 10% from 2002). The number of authors submitting manuscripts for the preprint volume continues to decline (down 15% from 2002), yet meeting attendance gained slightly. This year saw a significant increase in the poster program; nearly half of all presentations were posters. The goal is to increase the number of posters as a means of reducing parallel sessions and stimulating interaction between authors and other attendees.

In addition to the 83rd Annual Meeting, the Society organized 10 meetings in six cities–one in Wellington, New Zealand.

AMS Journals–Record Number of Papers Accepted

A particularly positive multidisciplinary development for the AMS publications department is the phoenix-like rise of *Earth Interactions* (*EI*), the all-electronic journal that explores the interactions among biological, physical, and human components of the earth system. After Dr. Jonathan A. Foley, of the University of Wisconsin, took over as chief editor at the beginning of 2003, new life was injected into the journal. Fourteen new contributions were posted in 2003 (and another 8 are currently in process) compared to only three all of last year. At least two special issues are slated for the coming year and all indications are that *EI* has only just begun to enjoy the popularity and prestige that had been hoped for since its inception in 1997.

Overall, across all journals, the number of submissions and accepted papers increased significantly. The number of accepted papers entering the production process at AMS Headquarters exceeded 1300, an all-time record. The number of receipts of these papers in the department was up roughly 6% over 2002 and 9% over 2001. The number of papers sent to press was 1401 for the year, the second-highest total on record for a calendar year. For 2003, the AMS journals collectively published nearly 19,500 pages, approximately the same total as for 2002.

Perhaps most impressive is the fact that the increased traffic was handled with same efficiency (and with the same staffing level) as had been established in 2002, with the mean production time for all journals at around 155 days. Several of the journals have mean production times well below this, and there is a constant effort to bring those above the 150-day mark down to that level. Another barometer of progress is the size of the backlog. The backlog of papers in house, which exceeded 450 three years ago, is now less than 50.

Reaching Teachers and Undergraduate Students

Weather is not the only focus of the AMS Education Program. The development and pilot testing of a new teacher

enhancement course, DataStreme Ocean, has been the major education program innovation during 2003. Funded by NOAA, the course emphasizes the use of ocean-related data and information delivered via the Internet. The course is being implemented nationally at 22 locations during the Spring 2004 semester.

Furthermore, AMS is offering its NSF-funded Water in the Earth System (WES) Project teacher-enhancement distance-learning course, entitled DataStreme WES, in 32 states. A total of about 1500 teachers were trained through Fall 2003 (since its inception), with about 400 of them trained in 2003.

Summer 2003 teacher training programs included a workshop for a total of 70 teachers who have been designated as DataStreme WES, DataStreme Atmosphere, and DataStreme Ocean Local Implementation Team leaders in early July at the University of Washington and Seattle-area NOAA installations (hosted by the University of Washington Oceanography and Atmospheric Sciences departments). Other training programs included a two-week Maury Project workshop (for teacher enhancement in oceanography) hosted by the U.S. Naval Academy in late July, and a two-week Project ATMOSPHERE workshop (for meteorology) hosted by the NWS Training Center in late July. Each was attended by 22 teachers. Support for these programs is provided by NSF, US Navy, NWS, AMS, and NOAA via the AMS/NOAA Cooperative Program for Earth System Education (CPESE).

Better science and a stronger field overall means entraining not only people from traditional fields and backgrounds, but also other professional disciplines and occupations and amateur enthusiasts-people working on the periphery of the atmospheric and related sciences and services in areas such as marketing, engineering, computing, and other fields. AMS is striving to reach out more to the international community, as well as promote cooperation and involvement from different sectors of membership.

500 New Student Members

Growing the membership, both by recruiting new members and retaining current members, remained an important goal of the Society in 2003. Much of the Society's efforts were concentrated in promoting various programs previously established to help broaden the appeal of the Society.

Student membership has continued to grow significantly during the last couple of years. Student membership totaled 1026 in 2001, increased to just over 1300 in 2002 and reached 1778 by the end of 2003. While several factors can account for the significant influx of new member applications during the last year, one initiative that seems to have played a major role in this regard is the Early Career Dues (ECD) rate implemented in 2003. The ECD package, established to assist students in the first five years after graduation, is offered only to former Student Members of the Society. This reduced rate seems to have provided students with an added incentive for joining the Society before graduation.

One of the prerequisites for taking advantage of the ECD rate is an upgrade from Student Member to that of full Member. In 2003, we saw an increase in the number of student upgrades–from 129 upgrades in 2002 to 206 upgrades in 2003. A total of 181 Members took advantage of the ECD rate in 2003.

The number of new member applications for 2003 was 1225 compared to 920 for 2002.

***Weatherwise* Partnership**

The recruitment and retention of Associate Members was also a major focus of the Society in 2003. In 2002, the AMS entered into an agreement with Heldref Publications, the publisher of *Weatherwise* magazine, allowing the Society to offer *Weatherwise* to its members at a discounted rate. In addition to allowing members to subscribe to *Weatherwise* at a discount, this allowed the Society to create a new benefits structure for Associate Members that included a reduced dues rate and a choice between *BAMS* and *Weatherwise* magazine as the member publication. Current Associate Members responded by choosing *Weatherwise* nearly as often as *BAMS* when selecting the membership publication. New Associate Members and Associate Members who rejoined the Society after a period of inactivity tended to select *Weatherwise*. Overall, the membership embraced this new benefit by ordering over 1200 subscriptions to *Weatherwise* in 2003.

Reaching User Communities

One way the Society engaged people on the periphery of its traditional fields was by establishing a presence at the Intelligent Transportation Society of America's Annual Meeting in Minneapolis, Minnesota. Among other things, the AMS exhibit booth at the meeting promoted the Atmospheric Policy Program's "Weather and Highways Forum." The AMS Surface Transportation Committee Chair was also a panelist in the "Surface Transportation Weather Programs" session. The Society was also involved with the 2003 meeting of the Council for Engineering and Scientific Society Executives.

During the Annual Meeting in Long Beach, the AMS reached out to many people who make important technical

advances and to the people who benefit from those advances. The Society inaugurated the First Users Conference–"Water Resources, Community Uses and Needs for Weather and Climate Services." This conference, attended by more than 120 people, focused on user experiences and needs rather than products and services or the science and technology behind them. The intent is to make the Annual Meeting more inclusive and to help stimulate business for corporate members and exhibitors–another of the 10-Year Vision Study goals.

Crossing Borders

As has been the case for several AMS Annual Meetings, the National Weather Service International Affairs Office held a workshop for international representatives as part of the Annual Meeting. This year, more than 60 international delegates to the World Meteorological Organization attended this workshop and the Annual Meeting.

The AMS education program also continues to have international impact; two South Africans and one Canadian attended the Project ATMOSPHERE Summer 2003 teacher training program via NOAA, AMS, and CMOS support. In addition, eight AERAs (American Meteorological Society Education Resource Agents) attended the Sixth International Conference on School and Popular Meteorological and Oceanographic Education in Madrid, Spain, in early July 2003.

Broadening *BAMS*

The evolution of the *Bulletin of the American Meteorological Society* continued in 2003 with emphasis on expanding opportunities for members to become authors and to reach a wider audience. Two new sections have been in development during the year.

The first new section, "In Box," premiered in the November issue. This section bridges the gap between the accessible and newsy Nowcast section and the peer-reviewed Articles section. In Box combines short, informative reports about innovative services and programs with brief, informal essays sharing insights about various issues in sciences, education, research and operations.

The second section, by and for student members of the AMS, is set to debut in early 2004. A group of undergraduate editors is spearheading the project to provide informational articles, interviews, and resources for their peers as they head into the profession. The section will feature student research projects on-line in the *BAMS* Web archive.

These sections should stimulate more ideas from new authors as well as more interest from the readership. Meanwhile, articles continue to flow in from the traditional sources–the research and operational communities. In the last two years the rate of article submissions has nearly doubled.

New Chapters in 2003

Georgia Institute of Technology Student Chapter, Atlanta, GA

Johnson County Pre-College Chapter, Mountain City, TN

Ladue School District Pre-College Chapter, House Springs, MO

SFSU Gator Weather Student Chapter, San Francisco, CA

Virginia Piedmont Chapter, Charlottesville, VA

2003 Membership By the Numbers

Honorary members	31
Fellows	541
Members	7854
Members with Student Privileges	105
Associate Members, Voting	53
Associate Members, Nonvoting	824
Associate Members, High School Students	90
Associate Members, K - 12 Teacher	32
Student Members	1778
Corporation Members*	164
TOTAL	**11472**

**Includes 6 Sustaining; 60 Regular; 14 Small Business; 84 Publication*

AMS is more proactive than ever in raising public awareness about the capabilities of our community's sciences and services. This work includes promoting scientific literacy among the general public and informing decision makers in weather- and climate-sensitive organizations.

Influential in Policy

The AMS Atmospheric Policy Program, now in its fifth year, had another banner year in 2003. With a Summer Policy Colloquium, two Policy Study Forums, a Presidential Policy Forum, and a Congressional Policy Fellow, the Society is taking an active role in investing in the future of the atmospheric and related sciences.

At the Colloquium, conducted 1 – 10 June 2003, nearly 50 presenters and 40 participants spent 10 days listening to distinguished speakers and discussing policy issues of importance to the community. The program is now supported by the Paleoclimate Program of the Atmospheric Sciences Division of NSF with $449,000 for a five-year period to support continued participation by graduate students (10 per year) and by minority faculty or faculty at minority-serving institutions (two per year). These participants are selected on the basis of nationwide competition. The 2004 Summer Policy Colloquium will be held 6 – 15 June 2004 at the Washington Court Hotel.

The AMS 2000 – 2001 Congressional Fellow Tim Benner continues to work in EPA's Office of Science Policy. The 2001 – 2002 Congressional Fellow Ana Unruh has remained on Capitol Hill in the office of Representative Edward Markey (D-Massachusetts). Johannes Loschnigg, the Society's Congressional Fellow for 2002–2003, had been serving on the personal staff of Senator Joseph Lieberman (D-Connecticut) but is now completing an assignment with the staff of the Committee on Governmental Operations.

The AMS 2003 – 2004 Congressional Fellow is Wendy Parker, a Ph.D. in the philosophy of science at the University of Pittsburgh. She wrote her dissertation on the use of climate-change scenarios to advance the science of meteorology. Parker selected a position on the minority staff of the Senate Committee on Environment and Public Works. The AMS Congressional Science Fellowship is administered by the American Association for the Advancement of Science and is jointly funded by AMS and the University Center for Atmospheric Research.

Working with Congress and the Federal Agencies

Another direct outgrowth of the 10-Year Vision Study is the AMS Government Relations Program, which works on Capitol Hill and in the federal agencies to advance the sciences and services, and most importantly, the interests of the nation. The Program keeps the Society up-to-date on critical issues within the policy arena, educates Congressional staff on issues of mutual concern, and offers the expertise of the Society to help tailor federal legislative and budgetary decisions to make them more effective.

Over the past two years, the Government Relations Program has greatly expanded the Society's contacts on Capitol Hill by staying in touch with key Congressional staff members on a regular basis to monitor developments and to offer the Society's expertise, and simply to make the atmospheric and related sciences and services a constant and pressing issue for law makers.

More than ever, AMS has come to be known on Capitol Hill and among federal agencies as the source of an objective-as-possible perspective on weather and climate. Society staff and members make periodic visits to policy-makers in Congress, provide a stream of information, and offer the Society's views on

issues in all phases of the legislative process, including providing testimony at hearings, Hill briefings, and Society-produced statements or by offering assistance in drafting legislation.

In the recent past, AMS Executive Director Dr. Ronald McPherson has testified on a potential upcoming gap in NPOESS coverage, AMS Senior Policy Fellow Dr. Robert Corell has testified on climate change, and AMS has worked with Congressional staff to help prepare an AMS Sealholder to testify on tornado warnings. The Government Relations Program has also weighed in on a NOAA reauthorization bill, communicated concerns about any abrupt changes with respect to the structure of NOAA's Office of Atmospheric Research, and offered the Society's views on climate variability and change–among a number of other issues.

The Government Relations Program is also increasingly working with AMS Sealholders. For the first time, at the AMS Conference on Broadcast Meteorology in Seattle, there was a session on government-relations activities. These efforts will reach a more intense pitch in the coming year and culminate in June 2005, when the broadcasters meet in Washington, D.C. The focus of that Conference will be the activities of the federal government that affect our field and how Sealholders can make a difference. It will include briefings by Capitol Hill and agency staff and feature participant visits—and interviews—with their members of Congress that should provide a foundation for contacts for years to come.

The AMS, in association with other scientific and technology societies and organizations, has also become involved in Congressional Visits Day, the preeminent legislative function in the science and technology fields. In March 2003, more than 200 scientists and engineers came to Washington to listen to briefings from Capitol Hill and agency staff and visit Senators and Representatives to communicate the overall needs in science and technology. The Society's support of Congressional Visits Day will continue in 2004.

Scientific Literacy through Local Chapters

In 2002 the Council approved the Local Chapter Affairs Committee's (LCAC) request to establish pre-college level AMS local chapters to help promote K – 12 science literacy. In 2003, the LCAC and the AMS Board on Pre-college Education jointly set a goal for actively promoting the establishment of pre-college local AMS Chapters nationwide. The Council approved the formation of two new pre-college chapters in 2003.

60 Seals and 9 CCM Certificates

In 2003, 60 Television Seals of Approval were granted along with one Radio Seal. In addition, nine AMS members were granted Certified Consulting Meteorologist certificates.

WeatherFest

The 2003 AMS Annual Meeting was again a showcase for scientific information for the general public. The 2nd WeatherFest drew nearly a thousand people from the greater Los Angeles area. The centerpiece of WeatherFest and an important

component of the overall AMS Annual Meeting was the "Science on a Sphere" exhibit hosted by the National Oceanic and Atmospheric Administration Forecast Systems Laboratory.

Making News

AMS continues to gain visibility in the media. From the public relations perspective, the 2003 Annual Meeting in Long Beach was a huge success. More than a dozen reporters attended, covering the scientific sessions and events in papers across the country. The Society also continues to be an excellent resource to members of the media, providing contacts, background information, and educational opportunities.

AMS Specialty Meetings also offer unique opportunities for media interests. To generate press coverage the AMS issues media advisories, follows up with local media inviting them to do a story about the meeting or particular papers, interviews the experts, or hosts local broadcast from the meeting. Several papers at this year's Fire Weather Conference generated significant interest and media coverage because of the recent California wildfires.

The Society also issued a number of press releases on newsworthy journal articles. The media panel discussion at the Summer Policy Colloquium also has been a significant part of ongoing efforts to build relationships with key reporters. This year Andy Revkin, science reporter with *The New York Times* joined in the discussions.

The second Policy Forum on Weather and Highways also generated media interest and resulted in a story carried by Scripps Howard newspapers around the country and on the Intelligent Transportation Society of America Web page.

AMS Web Site by the Numbers

Over 1.2 million visitors since March 1999

Hosting 12 STAC committee sites

Hosting 15 Local Chapter sites

Statements of the AMS

The AMS Council approved five new statements during 2003. The statements, "Climate Change Research: Issues for the Atmospheric and Related Sciences," and, "Support for Automated Observations from U.S. Commercial Aircrafts," were adopted by the Council on 9 February 2003, and were published in the April 2003 *BAMS*.

The Council adopted the "Atmospheric Ozone" and the "Acid Deposition," statements in September 2003. The "Meteorological Drought" statement was adopted in December 2003. All the statements will be published in *BAMS* in early 2004 and are posted on the AMS Web site.

The Society must make maximum use of advances in technology in publications, meetings, member services, education, policy, communications with members, and more. This goal is becoming a reality.

Computers Make Things Possible

A variety of technological developments helped AMS programs to reach their objectives. For example, the AMS Education group presented the Society with the challenge of choosing and installing a data-processing server. Their goal was to reduce the need to rely on third-party servers for delivering materials to their distance learning classes. The Society's IS staff met the challenge.

Enhancing support for AMS meetings remotely and onsite was also a major initiative in 2003. A variety of successful networking and Internet connectivity solutions were implemented and a presentation management and recording software package was developed and tested during this past meeting season. The software works in conjunction with the already successful Abstract Management System. It enables speakers to upload their abstracts, extended abstracts, and presentations to the Web in a variety of formats, in advance of the meeting. At the meeting these preloaded presentations are ready and waiting for the speaker when arriving at the podium. For those tweaking their talks up until the last hour, presentations can be copied to the meeting room PC from a variety of media. With speakers' permission, presentations were recorded and made available on the AMS website for viewing after the meeting. Finally, this was the first year that all of the annual meeting program committees and half of the specialty meeting program committees made CD-ROM the meeting publication media of choice.

Throughout the year, thousands of paper files were scanned, indexed, and then stored on a Network Attached Storage device. While much of the technology-related work at the AMS is transparent to the members, this continued effort to bring technology to the staff allows the Society to offer enhanced services to the community.

The Future of Print

The Society is finding itself on the cusp of a new all-electronic era in publishing. At present the AMS is surveying the market to determine the pace at which AMS should reduce or phase out its reliance on the print medium in both the editing and production phases of manuscript processing. We are already seeing a steadily increasing proportion of our authors uploading manuscripts and transmitting figures electronically. This continuing evolution in the way that the Society does business ensures that 2004 will be the most exciting year yet for the Society's journals.

Changing Education through Technology

The AMS precollege education program activity is now centered primarily on the national offering of the highly successful DataStreme distance-learning courses to upgrade the science content competency of teachers. The AMS/NOAA Cooperative Program for Earth System Education (CPESE) is the major vehicle for this effort. A substantial component of CPESE is promoting educational activity to attract members of groups underrepresented in science and technology to science (and science teaching) careers.

The far-reaching impact of this technologically savvy approach is noteworthy. For example, by December 2003, the DataStreme Atmosphere three-hour graduate-credit teacher-enhancement distance-learning course had trained a total of 6500 precollege teachers nationwide since its inception in 1996. During 2003, NOAA funding through AMS/NOAA DPESE supported the training of over 400 teachers.

Although 2003 was still tough financially, it was an improvement over the previous year as the Society stood on more solid ground to support its new initiatives.

The Financial Picture

The AMS budget is divided into several major categories. The Society's significant continuing program areas are contained in the Service, Publications, and Meetings (SPM) section of the budget. Another important area of the budget is Education and Special Initiatives, which includes all grants and other special programs that are funded by grants or income from the AMS Reserve Fund, or sponsorships. The remaining areas of the budget include the Atmospheric Policy Program (APP), Development, Public Information Program, and Government Relations Program.

The economy remained stagnant during most of 2003, and the budget reflected that sluggishness. While SPM income and expense numbers look much better than last year, the AMS still experienced some shortfalls in our projections. The Education and Special Initiatives budgets, APP, Development, Public Information, and Government Relations, are all at or better than budget and our mutual funds recovered approximately half of 2002 losses or about $250,000. However, it is in the area of our SPM budget that the Society continues to see deficits.

The final audited financial statements will not be available until June and the books were not yet closed at the time this annual report went to press. Total SPM income will be approximately $9,100,000, while total SPM expenses will be close to $9,600,000, yielding a deficit of about $500,000. Overall, the Society's Reserve Fund will decline by approximately $150,000 after inclusion of investment income and Education and Special Initiative expenditures. This is significantly better than last year's losses but still in need of improvement.

AMS now presents a five-year plan to the Council and Executive Committee as part of the budgeting process. This remains especially important as the Society struggles with a continuing uncertain economic climate. The Society has also taken measures, and will continue to do so, to reduce expenses and increase revenue as best as can be done without seriously impacting the ability to deliver core mission activities. See the "Members" page on the AMS Web site later this year to review both year-end audited financial statements and a more detailed discussion of Society finances.

Highlights of the 2003 budget are as follows:

Services: *BAMS* and Other Member Services: The Society has lowered the deficit in this area of the budget from $500,000 two years ago to approximately $200,000 this year. The projection for dues was $40,000 less than anticipated; page-charge income fell by $20,000; and advertising dropped off significantly ($30,000).

Journals: This continues to be the single largest budget area for both income and expense. The Society has nine primary journals with revenues and expenses of approximately $5.5 million and $5.3 million, respectively, and net income of about $200,000. The bankruptcy of a major subscription agency with $90,000 of AMS journal orders, and the continuing problem with uncollected page charge revenue (around $350,000), seriously affected the Society's ability to produce additional income needed to offset *BAMS* and meeting losses. The increase in uncollected page charges directly relates to the number of papers submitted by international authors (many from nations that prohibit payment of page charges as a matter of law). The AMS continues to monitor and look for solutions to this problem.

Books: Sale of AMS books is the smallest of AMS program areas, with revenues

of approximately $200,000. This includes about $60,000 of World Meteorological Organization publications for which the Society is the sole distributor in North America.

Meetings: Losses in the Meetings and Exhibits program continued in 2003. Losses this year were half of those in 2002, but still a major concern ($400,000). Attendance remains lower than needed and hotel and on-site costs continue to escalate. Exhibit income, page charges, and sponsorships all continue to decline and hotel attrition charges increased. The Society is taking steps to reduce expenses in this area.

Education: Activity in this area of the budget closely mirrored last year's total of $1,900,000. Our Education Programs generate most of this revenue while several smaller travel-related grants covered awards for attendance at AMS specialized meetings. The Society contributes significant cost sharing to these programs in support of our educational goals.

Atmospheric Policy Program, Public Information, and Government Relations: The Atmospheric Policy Program has been a tremendous success and is now close to being self-supporting via grants, sponsorships, and tuition. The Society also continues to carry out a variety of public information activities each year and has have also expanded the government related activities. These activities are now funded mostly out of the SPM Budget.

Development and the 21st Century Campaign

AMS individual and corporate members joined together in supporting AMS activities with outstanding commitment in 2003. Individual members contributed nearly $170,000, a 7% increase over last year. Several activities and programs rely on the generous donations from members, including:

• The 2nd Annual AMS Student Conference, attended by more than 200 students from schools all across the United States

• A graduate fellowship, a history fellowship, and three minority scholarships

• Travel support for U.S. students to attend a mountain meteorology workshop in Italy

• Student travel support to the AMS Summer Policy Colloquium

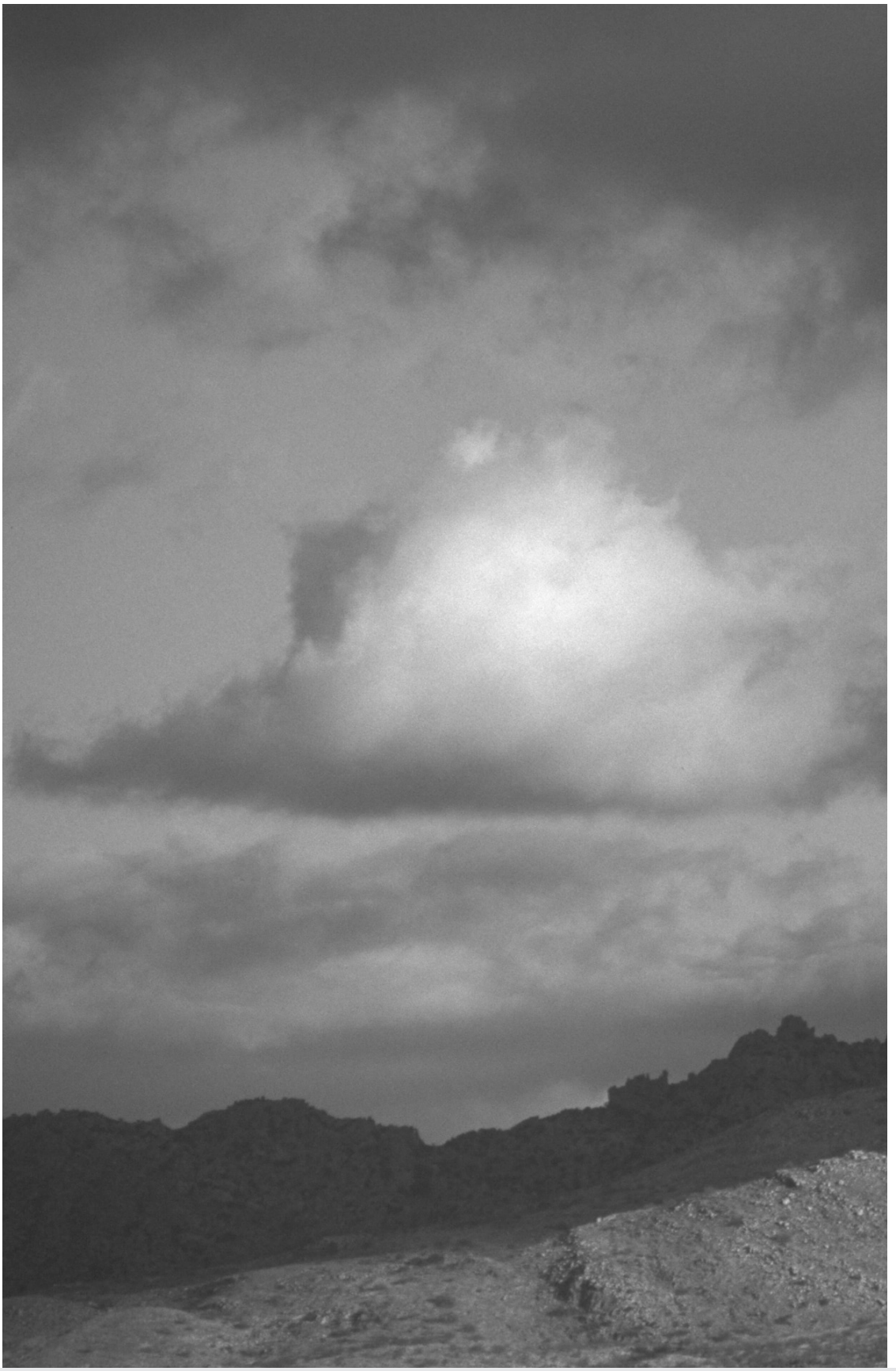
• The mailing of journals to less developed countries and the former Soviet Union

• Teacher support for the K – 12 Education Program

• Travel support for AMS fellowship and scholarship recipients to attend the AMS Annual Meeting

• Archiving of historically important scientific documents and photographs

In addition to individual member support, nearly 40 corporations contributed over half a million dollars to meetings sponsorship, fellowships and scholarships, the Policy Colloquium, and the K – 12 Education Program. AMS is grateful that ITT Aerospace and Communications Division continues as an AMS Corporate Patron. ITT continues their support to the Graduate Fellowship and the Atmospheric Policy Programs, as well as their annual meeting exhibit participation. Additionally Raytheon continues as a Corporate Underwriter providing support to the Atmospheric Policy Program. Corporate donations continue to be an integral part of the overall AMS development efforts and we are grateful that so many corporations continue to see the importance in partnering with AMS in supporting the atmospheric and related sciences.



2003 Deceased Members

Robert L. Clark

Robert E. Daniels

Isadore Dordick

Lawrence Dye

Edwin B. Fawcett

Hal Gerrish

Hugh M. Gray

James T. Green

John F. Griffiths

Peter Halloway

Edward B. Hanrahan

Kenneth Hare

James E. Heelon

George Hendrix

Fred L. Horton

William H. Klein

Carl Kreitzberg

Duane Lea

Robert C. Miller

Vance E. Moyer

Franklin Newhall

Dwight E. Nunn

Joe R. O'Neal

Louis C. Peltier

Willard J. Pierson

George Quereau

William Raymond

Frank Record

Alexander F. Sadowski

A.C. Scurlock

Arthur N. Strahler

Herman R. Swart

Oscar H. True

John T. Walser

Marvin Wesely

Dansy T. Williams

Harry A. Young

Carl-Gustaf Rossby Research Medal

Keith A. Browning
University of Reading

Jule G. Charney Award

Wilfried H. Brutsaert
Cornell University

Verner E. Suomi Award

Thomas R. Karl
NOAA/
National Environmental Satellite, Data, and Information Service
National Climatic Data Center

Sverdrup Gold Medal Award

Robert A. Weller
Woods Hole Oceanographic Institution

Henry Stommel Research Award

Harry L. Bryden
School of Ocean and Earth Science
Southampton Oceanography Centre

Charles Franklin Brooks Award for Outstanding Services to the Society

George L. Frederick
Vaisala Inc.

Cleveland Abbe Award for Distinguished Services to Atmospheric Sciences by an Individual

Richard E. Hallgren
American Meteorological Society

Charles E. Anderson Award

David D. Houghton
University of Wisconsin - Madison

Clarence Meisinger Award

Michael T. Montgomery
Colorado State University

Henry G. Houghton Award

Azadeh Tabazadeh
NASA Ames Research Center

Award for Outstanding Contribution to the Advance of Applied Meteorology

John C. Freeman
Weather Research Center

Charles L. Mitchell Award

Robert S. Davis
NOAA/NWS

Francis W. Reichelderfer Award

Joseph T. Schaefer
NWA/NOAA Storm Prediction Center

Award for an Exceptional Specific Prediction

Raymond Brad
NOAA/NWS

Michael L. Jurewicz, Sr.
NOAA/NWS

David G. Morford
NOAA/NWS

Jeff S. Waldstreicher
NOAA/NWS Eastern Region

Award for Outstanding Service by a Broadcast Meteorologist

Fred Gadomski
The Pennsylvania State University

Paul G. Knight
The Pennsylvania State University

Award for Outstanding Achievement in Biometeorology

George W. Thurtell
University of Guelph

Award for Outstanding Services to Meteorology by a Corporation

Vaisala OYJ

Louis J. Battan Author's Award

Susan Solomon
NOAA/Aeronomy Laboratory

Remote Sensing Lecturer for 2003

James W. Wilson
National Center for Atmospheric Research

Banner I. Miller Award

Mark DeMaria
NESDIS Office of Research and Applications, Regional and Mesoscale Meteorology Team

John Kaplan
NOAA/AOML
Hurricane Research Division

Max A. Eaton Prize

Matthew D. Eastin
Department of Atmospheric Science
Colorado State University

Editors Award
Journal of the Atmospheric Sciences

Andrew A. White
The Met Office

Editors Award
Journal of Applied Meteorology

Robert E. Schlesinger
University of Wisconsin-Madison

Editors Award
Journal of Physical Oceanography

Bernadette M. Sloyan
Woods Hole Oceanographic Institution

Editors Award
Monthly Weather Review

Gary M. Lackmann
North Carolina State University

Editors Award
Journal of Atmospheric and Oceanic Technology

James L. Mueller
Center for Hydro-Optics and Remote Sensing (CHORS)
San Diego State University

Editors Award
Weather and Forecasting

Michael E. Baldwin
Cooperative Institute for Mesoscale Meteorological Studies
University of Oklahoma

Editors Award
Journal of Climate

William H. Lipscomb
Los Alamos National Laboratory

Editors Award
Journal of Hydrometeorology

Robert J. Kuligowski
NOAA/NESDIS
Office of Research and Applications

Teaching Excellence Award

Alistair B. Fraser
The Pennsylvania State University

Award for Outstanding Chapter of the Year

District of Columbia Chapter

Award for Outstanding Student Chapter of the Year

Texas A&M University Student Chapter

Honorary Members

Peter S. Eagleson
John A. Knauss

Fellows

Michael L. Banner
Harry L. Bryden
Mary Ann Cooper
George D. Emmitt
Dara Entekhabi
Christopher K. Folland
Lee-Lueng Fu
Christopher J. R. Garrett
Douglas J. Gauntlett
Jeffrey D. Hawkins
Charles S. Herring
Edward E. Hindman
Nelson G. Hogg
David P. Jorgensen
Vladimir Kamenkovich
Witold F. Krajewski
Mojib Latif
Steven W. Lyons
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Richard E. Passarelli, Jr.
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X. William Proenza
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Joseph L. Reid
Roddy R. Rogers
Daniel Rosenfeld
Robert E. Saffle
Edwin K. Schneider
Dian J. Seidel
Ronald B. Smith
Robert A. Weller
Gregory W. Withee

The Structure of the AMS

The AMS depends on hundreds of volunteers to carry out its mission through the actions of the Council, the Executive Committee, the commissions, and the various boards and committees under these groups.

COUNCIL OF THE AMS

COMMITTEES OF THE COUNCIL

Fellows

Public Policy

EXECUTIVE COMMITTEE

COMMITTEES OF THE EXECUTIVE COMMITTEE

Admissions Committee

Annual Meeting Program Committee

Atmospheric Research Awards Committee

Awards Oversight Committee

Development Committee

Economic Development Committee

Education Advisory Committee

History of the Atmospheric Sciences Committee

Intelligent Transportation Systems Committee

Interactive Information and Processing Systems Committee

Investments Committee

Local Chapter Affairs Committee

Nominating Committee

Oceanographic Research Awards Committee

Committee on Societal Impacts

COMMISSION ON PROFESSIONAL AFFAIRS

Board of Certified Consulting Meteorologists

Board of Broadcast Meteorology

Board on Private Sector Meteorology

Board for Operational

Board of Government Meteorologists

Board on Continuing Education

PUBLICATIONS COMMISSION

Board of the Journal of the Atmospheric Sciences

Board of the Journal of Applied Meteorology

Board of the Journal of Physical Oceanography

Board of the Monthly Weather Review

Board of the Journal of Atmospheric and Oceanic Technology

Board of Weather and Forecasting

Board of the Journal of Climate

Earth Interactions

Board of the Journal of Hydrometeorology

Bulletin of the American

Meteorological Society

Meteorological and Geoastrophysical Abstracts

Board of Meteorological Monographs

Information Systems Committee

SCIENTIFIC AND TECHNOLOGICAL ACTIVITIES COMMISSION

Agricultural and Forest Meteorology

Applied Climatology

Artificial Intelligence Applications to Environmental Science

Atmospheric Chemistry

Atmospheric Electricity

Atmospheric and Oceanic Fluid Dynamics

Atmospheric Radiation

Aviation, Range, and Aerospace Meteorology

Biometeorology and Aerobiology

Boundary Layers and Turbulence

Climate Variations

Cloud Physics

Coastal Environment

Hydrology

Interaction of the Sea and Atmosphere

Laser Atmospheric Studies

Measurements

Mesoscale Processes

Meteorological Aspects of Air Pollution

Meteorology and Oceanography of the Southern Hemisphere

Middle Atmosphere

Mountain Meteorology

Planned and Inadvertent Weather Modification

Polar Meteorology and Oceanography

Probability and Statistics

Radar Meteorology

Satellite Meteorology and Oceanography

Severe Local Storms

Tropical Meteorology and Tropical Cyclones

Weather Analysis and Forecasting

Board on the Urban Environment

EDUCATION AND HUMAN RESOURCES COMMISSION

Board on Higher Education

Board on Outreach and Pre-College Education

Board on Women and Minorities

Committee of Judges for Undergraduate Awards

PLANNING COMMISSION

Constitution and Bylaws

The Constitution and Bylaws are available on the AMS Web site (www.ametsoc.org) and are also available upon request from AMS Headquarters. To receive a copy, contact Joyce Annese at (617) 227-2426 ext. 206 or jannese@ametsoc.org

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American Meteorological Society

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FMA Research Inc.

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Richard D. Rosen*
NOAA/Oceanic and Atmospheric Research

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Thomas R. MacPhail
NOAA/NWS

Stanley Marsh
Southern California Edison Company

Chuck H. Wash
Naval Post Graduate School

*2003 Executive Committee