



2006 Annual Meeting

DAILY BAMS



Issue 1 — Sunday, January 29, 2006

The Applications Advantage: Annual Meeting Showcases the Many Uses of Data

As you explore this year's AMS Annual Meeting, keep in mind the meeting's theme: "Applications of Weather and Climate Data." While the news media may focus on the devastation caused by disasters such as Hurricane Katrina, the Asian monsoon, and the European heat wave of 2003, many of the advancements in our field go unnoticed, even though these innovations can mean more lives saved, fewer properties damaged, less time and money spent on rebuilding, repairing, and recuperating. Ultimately, this is the essence of the Annual Meeting's theme: applying scientific knowledge to help everyone around the world live better lives.

This theme is especially timely given the record-breaking Atlantic Basin hurricanes. (The entire memorable year in weather will be reviewed at the symposium, "Impacts of 2005's Weather," on Tuesday.) The inundation of extreme events illustrates the importance of data applications, and the Annual Meeting will showcase many of the best and the brightest who are generating the data needed for improved applications, from artificial intelligence to radar calibration, from information processing systems to integrated observing and assimilation systems.

Two special forums at the meeting highlight some of the salient issues in data applications. "Environmental Risk and Impacts on Society: Suc-

cesses and Challenges" Forum cochair Greg Forbes of The Weather Channel notes that many advancements have been achieved in these areas but much progress is still to be made.

ing with chemical and nuclear releases in a timely and effective manner are obvious."

The forum includes a two-part session exploring both the socioeconomic impacts of and the decision-making process during weather disasters. In this session, Alan Stewart of the University of Georgia will present his Weather Salience Questionnaire, which he devised to measure the psychological impact of weather on individuals and societies in order to determine how the weather influences people's life decisions.

Another joint panel discussion from the same forum will address the most publicized

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cesses and Challenges" incorporates research on lightning, low-level transport, hurricane impacts, aviation weather services, and energy and economy issues, among other topics.

"One 'recent' success story has been the discovery of microbursts; development of technology and methodology for predicting, detecting, and avoiding them; and implementation of that technology, methodology, and training into the aviation community," says Forbes. "There have been tremendous improvements in the forecasting and warning of tornadoes and floods, but challenges remain. The challenges of deal-

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Tonight's Annual Review and Fellows Awards Session Highlights Activities from 2005

The 86th Annual Meeting kicks off today in Atlanta's Georgia World Congress Center. The meeting is being organized around the broad theme of "Applications of Weather and Climate Data" with an emphasis on documenting success stories in the applications of atmospheric, hydrologic, and oceanic sciences and the research needed to continue benefiting from new knowledge. A variety of conferences and symposia support the theme, giving attendees opportunities to explore many aspects of the activities carried out by our community.

reports on accomplishments and challenges from 2005 will be presented for each of the Society's six commissions: Scientific and Technological Activities (STAC), Publications, Planning, Professional Affairs, Education and Human Resources, and the new Commission on the Weather and Climate Enterprise. Each of these commissions has been very active through the efforts of the hundreds of volunteers who serve the Society through the many boards and committees they oversee.

This year's Annual Review will include the first annual report from the Commission on the Weather and Climate Enterprise, which was established a year ago and has already carried out a number of important programs in support of the broad community that is served by the Society. There are several other new

The Society has been engaged in a wide array of activities, as well, and the Annual Review tonight (5:00–6:00 p.m.) offers attendees a chance to hear brief summaries of the many AMS programs and initiatives carried out through active volunteer support of the Society. Short

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Over 1000 Atlanta residents are expected to attend WeatherFest today. With nearly 70 exhibits, there will be activities, games, and products for weather enthusiasts of all ages.

Science Education Headlines Today's Activities

In the spirit of the Society's dedication to scientific literacy and to students from kindergarten to grad school, the Annual Meeting will feature numerous educational events today. Hopefully, researchers, teachers, parents, and students alike will benefit—and have a little fun, too.

The workshop on "Scientific Inquiry in the K–12 Classroom" presented by

the University of Colorado's Cooperative Institute for Research in Environmental Sciences (CIRES) focuses on the best ways for scientists to teach scientific material. More and more scientists are becoming involved in K–12 education (sometimes due to organizational and funding requirements), but many do not have the necessary experience, training, or tools, according to CIRES's Sandra Laursen, who is leading the

workshop. Now in its third year, the CIRES program is an interactive way to bring science and education closer together.

"How do [scientists] do investigations? How do they make observations? These are the kinds of things kids need to know," Laursen says. "The scientists have been very eager about how they can take

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Awards Session Tonight

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initiatives that will be reported on in addition to the many ongoing programs. These include the new Certified Broadcast Meteorologist (CBM) program completing its first year of operation within the Commission on Professional Affairs and a new set of procedures for the creation of Statements of the AMS whose drafting was led by members of the STAC Commission.

The Annual Review also recognizes those individuals who have been named Fellows of the AMS. This year, 25 members of the Society were awarded this distinction (see sidebar). Each has made outstanding contributions to the atmospheric or related oceanic or hydrologic sciences or their



During tonight's Annual Review, the official kick-off of the Annual Meeting, Franco Einaudi (left) assumes the presidency of the Society from Walter Lyons (right).

application during a substantial period of years.

Despite the variety programs in which attendees can participate over the course of Sunday, the hour-long Annual

Review and Fellows Awards session marks the official kick-off of the Annual Meeting and is also the official point of transition when President-Elect Franco Einaudi takes over as President of the Society and Walter Lyons completes his term. Lyons will offer some reflections on his year as president, and Einaudi will close the Annual Review with a few remarks on how he views the coming year for the Society.

ELECTED FELLOWS 2006

M. Joan Alexander	James W. Hurrell
Lixion A. Avila	John Maurice Lewis
Edward V. Browell	Gerald A. Meehl
Gregory Paul Byrd	Linda O. Mearns
Robert D. Cess	John Molinari
V. Chandrasekar	Vickie L. Nadolski
John W. Diercks	HuaLu Pan
Lawrence Dunn	Matthew J. Parker
James E. Dye	Venkatachalam
Maria Assunção	Ramaswamy
Faus da Silva Dias	Gerard D. Wittman
Konstantine P.	Craig James Woods
Georgakakos	DaLin Zhang
C. Sue B. Grimmond	Francis William Zwiers

Meeting Theme Celebrates Useful Applications

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weather event from 2005: the Gulf Coast hurricanes. Perspectives will be given on media coverage, structural impact, flooding, and policy issues, as well as a point-counterpoint discussion on the possible effects of climate change on hurricane activity.

Lightning continues to endanger people throughout the world suddenly and often unnoticed—starting fires and other hazards that can escape early detection. A session on “Advances in Understanding of Lightning and Potential Economic and Societal Benefits” will include Richard Orville’s study on the evolution of lightning detection technology, from its early use by utility companies and airlines, to its present-day inclusion on daily weathercasts, to potential developments in the future.

Another area with broad implications is aviation. In the session on “Future Delivery of Aviation Weather Services,” R. W. Lunnon of the U.K. Met Office will explain the FLYSAFE project, which provides in-flight aircraft with coordinated hazard information including clear air turbulence, icing, thunderstorms, and wake vortices. Meanwhile, a new forecast system for terminals, called the Hub Forecast, will be presented by Dave Roden-

huis of the Federal Aviation Administration’s Air Traffic Organization.

The second forum, “Managing Our Physical and Natural Resources: Successes and Challenges,” looks at urban land surface schemes for mesoscale models, deals extensively with urban environmental matters (including an entire session on urban heat islands), and evaluates air pollution forecasts and emergency responses. Two particularly timely issues to be discussed here are flood warning systems and water conservation. Lindsey Barnes of the University of Colorado looks at the relationship of demographic characteristics, previous flash flood experiences, and public perceptions of flash flood warning systems, while NOAA’s James Hoke discusses the Hydrometeorological Prediction Center’s Excessive Rainfall Forecast, a tool used by forecast offices and emergency managers that provides probabilistic forecasts of heavy rainfall and flash flooding. Soroosh Sorooshian of the University of California, Irvine, explores the effects of population growth, increasing individual wealth, and global and local climate changes on water availability, with a focus on the southwestern United States, where a long-standing drought has made the issue a hot topic.

In addition to the variety of forums and symposia, many ex-

hibitors at the Annual Meeting are leaders in data application. Some of the products and services that these organizations offer include risk services, forecast information, storm-tracking devices, radar equipment, pressure measurement instruments, remote sensing systems, and meteorological and hydrological sensors and stations of all types.

Of course, in an ever-changing field, progress will always breed new expectations and new challenges. While showcasing the latest innovations, the Annual Meeting will also hopefully provide a glimpse into the future and invite dis-

ussion on what must be done next. For example, Steve Hanna of Harvard University, the cochair of the “Forum on Managing Our Physical and Natural Resources,” points out the need “to improve assimilation of networks of boundary layer observations into mesoscale models, and to improve linking of models down to building scales in urban areas.”

The specifics mentioned here only scratch the surface of the information that will be available at the Annual Meeting. As you seek out your interests this week, keep in mind how you can apply your scientific knowledge to society’s advantage.

First Time Attendees

The First Time Attendees Briefing will be held today at 3:00 p.m. in Room A305 of the Georgia World Congress Center. AMS Executive Director Emeritus Ron McPherson and Ken Heideman, director of AMS publications, will provide an overview of the programs, special events, exhibits, and services of the 86th Annual Meeting. If you’ve never been to an Annual Meeting, this is a great opportunity to learn how to get the most from the week’s events. The Annual Meeting is packed with conferences, sympo-

sia, special events, special programs, poster sessions, and the largest exhibit in the field of meteorology and oceanography anywhere. Even if you’ve been to an Annual Meeting, this briefing session will show you how to maximize your time. All attendees and exhibitors are welcome to attend and are also encouraged to attend the Annual Review, where you can learn more about the AMS and its programs. Following the Annual Review will be a Welcome Reception to honor the newly elected Fellows.

DAILY
BAMS

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Peter V. Hobbs



Chester W. Newton



Warren M. Washington

Three Distinguished AMS Members Given Honorary Member Status

This year, three pre-eminent scientists and leaders in their field were bestowed the special designation of Honorary Member. Peter V. Hobbs, Chester W. Newton and Warren M. Washington will be recognized for their outstanding contributions at tonight's Annual Review. Regrettably, Peter Hobbs passed away in July 2005, but was notified of his designation as Honorary Member before his passing and expressed his delight and honor at the award.

The honor is given to people with "an acknowledged pre-eminence" in the atmospheric, oceanic, hydrologic, or related sciences or application of those sciences. The procedures for selecting Honorary

Members state that those added to this roster "should be as much an honor for the Society as it is for the individual."

Chester Newton has made sustained research contributions in the area of synoptic-dynamic meteorology spanning decades. One of his main contributions is his 1954 papers on three-dimensional frontogenesis and frontolysis. Newton, along with various researchers, set professional synoptic analysis standards from which scientific hypotheses could be posed and tested quantitatively. His early work helped to clarify the

three-dimensional structure of progressive Rossby waves. Along with an important contribution to orographic cyclogenesis, Newton has also made notable contributions in the area of convective storms and the growth of precipitation.

Newton has served as AMS president, Councilor, and editor of various AMS journals and monographs. He is the recipient of the Carl-Gustaf Rossby Research Medal and the Charles Franklin Brooks Award.

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Warren Washington has been one of the nation's leading climate scientists for over 40 years. He has done some pioneering work with global climate models to understand climate and explain the role of human activities and natural processes in the Earth's climate system. Washington has provided scientific advice and counsel to the last five Presidential Administrations, most recently as Chairman of the National Science Board. He has helped shape the climate, Earth science, and environmental research programs at the National Science Foundation, the Department of Energy, NOAA, and NASA,

and served on the Board of Directors of AAAS.

Washington served as AMS president and was awarded the Charles Anderson Award for "his pioneering efforts as a mentor and passionate supporter of individuals, educational programs, and outreach initiatives designed to foster a diverse population of atmospheric scientists."

Peter Hobbs's early research focused on laboratory and theoretical studies of cloud processes including diffusion, collision/coalescence, freezing, fragmentation, and electrification of ice particles. His greatest scientific contribution is the recognition of "ice enhancement" in natural clouds. Over his career Hobbs earned a reputation as an outstanding

educator. His Cloud and Aerosol Research Group at the University of Washington provided students with the opportunity to do cutting-edge experimental research. Hobbs wrote over 340 refereed papers and four books. He rendered service on numerous national and international advisory committees, several of which he chaired.

Hobbs's service to AMS included a five-year term as cochief editor of *JAS* and associate editor of *JAS* and *JAM*. He was a Fellow of both AMS and AGU, and received the AMS Charney Award and Editor's Award.

Weatherfest Highlights Sunday

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what they know about science into the classroom."

The focus of the workshop will be on inquiry rather than content—how scientists learn more than what they know. For example, one of the most popular hands-on projects at the workshop involves the "black box," in which the scientists try to determine what object is in a sealed box. They are each asked to make a sketch (or model) of what the object might be, and as a group they attempt to form a consensus.

"This is an activity that shows the process of working out ideas, perhaps changing one's mind..." says Laursen. "It emphasizes the investigation processes, particularly model building."

Beyond just showing others how to teach, Laursen hopes the program will help scientists understand how they can make science more intelligible to the general public and thus reduce many of the scientific misconceptions and oversimplifications that are so prevalent in today's society.

The workshop will be from 1:00 p.m. to 5:00 p.m., and space is limited, so while pre-registration is not mandatory, it is encouraged.

Meanwhile, for many people, a highlight of the meeting is WeatherFest, a celebration of science with nearly 70 exhibits intended to make weather and climate more fun, more interesting, and more accessible to children of all ages. Now in its fifth year, WeatherFest will feature a dizzying array of people, activities, games, and products. Budding members of the media

can make a video of themselves giving a weather forecast, or create their own newspaper weather page. Young forecasters can give the NWS Simulator a try and see if they can forecast severe weather.

Experts in hurricane hunting, storm chasing, and other fields will be available to answer questions and tell their best weather stories, while teachers and scientists will be performing interactive science experiments. In following the meeting's theme of "Applications of Weather and Climate Data," one WeatherFest exhibit will explain the relationship between weather and health, showing the influence climate has on allergies, asthma, and vector-borne diseases.

And if you still have time after all that, a flight simulator, weather games (with prizes!), an exhibit on lightning safety, career and scholarship information, and much, much more will be available. WeatherFest, the only Annual Meeting event open to the public, will be from 12:00 p.m. to 4:00 p.m.

The focus on education will continue into Sunday evening (5:30 p.m. to 7:00 p.m.) with a poster session on educational initiatives. Over 50 posters will be presented on topics such as the AMS DataStreme Project, online weather education, The Digital Library for Earth Systems Education, the Earth2Class Workshop, methods of increasing diversity among atmospheric science students, and the utilization of various resources as teaching tools (e.g., satellite observations, the "scientist's notebook," the Integrated Data Tool, etc.).

Set Your Alarm For . . .

A Peek at the Earth Observing System of Tomorrow (Joint Session of IOAS-AOLS, Satellite Meteorology and Oceanography, and IIPS) — Room A305

9:00 a.m.—Challenges and Opportunities for NOAA in Integrating Earth Observing Systems, Conrad C. Lautenbacher, NOAA, Washington, DC

9:45 a.m.—Earth Science and Applications from Space: Initial results of Decadal Study and a Progress Report, Richard A. Anthes, UCAR, Boulder, CO; and B. Moore

The Opening of the James Holton Symposium — Room A302

8:30 a.m.—An Overview of Jim Holton's Scientific Contributions, Conway B. Leovy, Univ. of Washington, Seattle, WA

Exhibitors of the 86th AMS Annual Meeting

The AMS Annual Meeting is the host to the largest exhibit in the atmospheric, oceanic, and related sciences anywhere. Exhibitors come from the United States and abroad with over 100 organizations showcasing a wide range of products, publications, and services. Listed below are exhibitors for the 86th

Annual Meeting of the AMS. Don't miss the opportunity to browse the exhibit floor and learn what these organizations have to offer you!

Letters—Book Exhibitors
CBE—Combined Book Exhibit

Exhibit Show Hours	
Monday	5:30—7:30 P.M.
Tuesday	11:00 A.M.—6:00 P.M.
Wednesday	11:00 A.M.—7:30 P.M.
Thursday	11:00 A.M.—4:00 P.M.

	<u>Booth</u>
ABC-CLIO	CBE
AccuWeather	536
Advanced Designs Corporation	408
Aerostar International	548, 550
Air Force Weather Agency	348
All Weather, Inc.	637, 639
American Geophysical Union	CBE
ARINC	133
Association of Hydro-Meteorological Equipment Industry	640
Atmospheric and Environmental Research, Inc.	718
Atmospheric Systems Corporation	733
Avtec Systems, Inc.	628
AXYS Technologies Inc.	737
BAE Systems	644
Ball Aerospace & Technologies Corporation	336
Baron Advanced Meteorological Systems	514, 516
Belfort Instrument Company	355
BIRAL	653
Brooks/Cole, Thomson	C
Cambridge University Press	B
Campbell Scientific, Inc.	337, 339
Climatronics Corporation	614
Coastal Environmental Systems	420
Computer Sciences Corporation	341, 343
Cooperative Institute for Research in Environmental Sciences	406, 407
Davis Instruments	128
Degreane Horizon	351
DOE/ARM Program	630, 632
E. Schweizerbart'sche Gebr. Borntraeger	CBE
Eigenbrodt	751
EKO Instruments Co., LTD.	130
Elsevier / Academic Press	A
ENSCO, Inc.	708, 710
Enterprise Electronics Corporation	137
Environment Canada	615, 617
ESRI	740
FAA/Logistics Center Contracting Service	744
Geonor, As.	349
Gill Instruments Ltd	715
Global Imaging, Inc	626
Global Science & Technology, Inc.	636, 638
GRAW Radiosondes GmbH & Co	732
Hach Environmental	353
Harris Corporation	507
Heldref Publications	F
Honeywell	619
Howard University, NOAA Center for Atmospheric Sciences	717
IBM Corporation	518
International Environmental Data Rescue Organization	146
International Met Systems	342, 344
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ITT Industries	120
Japan Meteorological Business Support Center	357, 359, 361
John Wiley & Sons, Ltd.	E
Kaymont Consolidated Industries	545
Kendall/Hunt Publishing Company	129
KESTREL	730
Kipp & Zonen	132
Leosphere	738
LI-COR Biosciences	410
Lockheed Martin Corporation	448
Logotronic Inc.	543

	<u>Booth</u>
Los Gatos Research	423
Met One Instruments, Inc.	414, 416
METEK-Meteorologische Messtechnik GmbH	651, 652
Microcom Design, Inc.	248
Midland Radio Corporation	233
MODEM	541
Mountain Press Publishing Company	CBE
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National Center for Atmospheric Research	502
National Flood Insurance Program/FloodSmart Campaign	729
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National Science Foundation (NSF)	538
National Weather Center/University of Oklahoma	409, 411, 413, 415
Naval Meteorology and Oceanography Command	436
NBC Universal and Weather Plus	147
NCEH/ATSDR	746
Northern Video Graphics, Inc.	443
Northrop Grumman Space Technology	226
NovaLynx Corporation	716
NPOESS/Northrop Grumman	427
Particle Metrics Inc.	714
PAWAN EXPORTS	131
PC Weather Products, Inc.	727
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Raytheon	530
Remtech Inc.	616
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Science Applications International Corp.	542
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SeaSpace Corporation	537
Selex Sistemi Integrati GmbH	726, 728
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SGI	354, 455
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Temple University Press	CBE
The Boeing Company	522
Unisys Weather Information Services	442, 444
University Corporation for Atmospheric Research	300, 301, 302, 400, 401, 402, 502
University of North Carolina Press	CBE
University of Wisconsin at Madison	438, 440
University Press of New England	CBE
University Science Books	CBE
Vaisala Inc.	106, 107, 108, 109, 110, 111, 112, 113, 114, 115, 116, 117
Weather Decision Technologies, Inc.	246
Weather Metrics, Inc.	731
Weathernews Americas Inc.	417
World Meteorological Organization	445
World Scientific Publishing Company	CBE
Yankee Environmental Systems	412
YSI Environmental	552