

AMERICAN METEOROLOGICAL SOCIETY – JUNE SCIENCE HIGHLIGHTS

Following are story ideas and tips about upcoming AMS meetings, papers in our peer-reviewed journals, and other happenings in the atmospheric and related sciences community.

Studying Lightning in the Eye of Hurricanes. Scientists know that the convective structure of the eyewall of a mature hurricane can provide valuable information about changes in the storm intensity. They also know that when convective storms become more vigorous, their cloud-to-ground lightning strike rates increase. Therefore it is logical to conclude that studying lightning in the eyewall of hurricanes will give researchers further insight into the development and rapid intensification of these powerful storms. A paper in the May issue of AMS' *Monthly Weather Review* examines the lightning strikes in Hurricane Rita and Hurricane Katrina, two of the strongest storms in the Atlantic hurricane record. Data from the Long-Range Lightning Detection Network, the Tropical Rainfall Measuring Mission satellite, and reconnaissance aircraft showed that each hurricane produced eyewall lightning outbreaks during the period of most rapid intensification, during eyewall replacement cycles, and during the time period that encompassed the maximum intensity for each storm. See the abstract online at <http://ams.allenpress.com/perlserv/?request=get-abstract&doi=10.1175%2F2007MWR2150.1> For a copy of the paper, contact Stephanie Kenitzer.

A New Approach to Forecasting Winds at Hong Kong's Airport. Since the opening of Hong Kong International Airport (HKIA) in August 1998, about 1 in 500 flights at the airport encountered significant wind shear. Provision of timely and accurate wind shear alerts to the aircraft is a priority development area of the aviation weather services for HKIA. In aviation meteorology, wind shear refers to a sustained change (i.e., lasting more than a few seconds as experienced by the aircraft) in the headwind/tailwind, resulting in a change in the aircraft lift. A change of 15 kt or more in the headwind/tailwind is considered to be significant wind shear, which may require timely and corrective action by the pilot so that the aircraft could maintain its intended flight path. In December 2005, HKIA launched an automatic Lidar (light detection and ranging) Windshear Alerting System, which with some new technology and special scans, is able to capture about 76% of the wind shear events reported by pilots over the most-used approach corridor under clear-air conditions. The findings are reported in the May issue of the AMS' *Journal of Atmospheric and Oceanic Technology*. See the abstract at <http://ams.allenpress.com/perlserv/?request=get-abstract&doi=10.1175%2F2007JTECHA1057.1> or contact Stephanie Kenitzer for a copy of the paper.

An El Niño Chronology. The 1 May issue of the AMS *Journal of Climate* contains a chronology of 59 El Niño events based on data in northern Peru, an area where the El Niño signal is considered among the most robust, as it is located in a primary zone of climatic variability in response to El Niño Southern Oscillation (ENSO). To a greater

degree than previous El Niño chronologies, this present reconstruction reveals nonstationary behavior in warm ENSO occurrence during the last few centuries, with alternating periods of high and low activity lasting as long as 50 years. Accordingly, the beginning of the seventeenth, eighteenth, and nineteenth centuries presented active periods of warm ENSO activity, while the mid-seventeenth century seems to be the least active El Niño period. Such strong long-term variability has not been reported in previous El Niño chronologies based upon documentary records. The abstract is online at <http://ams.allenpress.com/perlserv/?request=get-abstract&doi=10.1175%2F2007JCLI1830.1> or contact Stephanie Kenitzer for a PDF of the paper.

New AMS Statement on Probability Forecasting. The AMS has issued a new statement that describes the current state of the science of probabilistic weather forecasting. Ideally all weather forecasts would include information that accurately quantifies their uncertainty. However, though there are a number of exceptions, most weather forecasts currently do not contain such information. The widespread dissemination of this probabilistic information would likely yield substantial economic and social benefits, because users could make better decisions by explicitly accounting for the uncertainty in weather forecasts. View the statement online at http://www.ametsoc.org/policy/2008enhancingweatherinformation_amsstatement.html All AMS statements are online at http://www.ametsoc.org/policy/amsstatements_inforce.html

Getting to Know Us. The first in a series of articles about the AMS 2005 membership survey are published in the May issue of the *Bulletin of the AMS*. This survey is the fifth in a series of surveys that has monitored the composition of the AMS since 1975. The responses of the 2005 survey reveal several interesting changes in the educational level, employment characteristics, and personal status of Society members. For example, the proportion of members with Ph.D. degrees has increased with time to 46% of the regular (nonstudent) and retired members in 2005. Universities/colleges, the federal government, and radio/TV remain the three most important employers of AMS members, although their relative importance has changed with time, with universities/colleges now employing more members than the federal government. Most AMS members continue to report that they became interested in the atmospheric sciences in either elementary school or as undergraduates, although the importance of early (K–6) experiences has increased with time. The paper in BAMS is the first of a series, each focusing on a particular aspect of the survey results. You can find the paper online at <http://ams.allenpress.com/archive/1520-0477/89/5/pdf/i1520-0477-89-5-727.pdf>

Coping with Climate Change: Gulf Coast Transportation and New York City. That is the topic of the next AMS Environmental Science Seminar tentatively scheduled for Friday, June 27th. The time and location are still being determined. For updates check <http://www.ametsoc.org/atmospolicy/EnvironmentalScienceSeminarSeries.html>

Broadcasters to Meet in Denver in late June. The AMS 36th Conference on Broadcast Meteorology will take place June 26-29 in Denver. For complete conference details see <http://www.ametsoc.org/MEET/fainst/200836broadcast.html>

Mountain Meteorology Conference. The AMS 13th Conference on Mountain Meteorology and 17th Conference on Applied Climatology will be held 11-5 August 2008 at the Telus Conference Center in Whistler, British Columbia, Canada. The program is still being finalized but check out preliminary details online at <http://www.ametsoc.org/MEET/fainst/200813MontMet17AP.html>

With more than 12,000 members, the AMS (<http://www.ametsoc.org>) is the nation's leading professional society for those involved in the atmospheric and related sciences.

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