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FOR IMMEDIATE RELEASE
20 March 2006

AMERICAN METEOROLOGICAL SOCIETY – MARCH SCIENCE HIGHLIGHTS

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

Scientists Use Satellites to Detect Deep-Ocean Whirlpools
Move over, Superman, with your X-ray vision. Marine scientists have now figured out a way to "see through" the ocean's surface and detect what's below, with the help of satellites in space. Using sensor data from several U.S. and European satellites, researchers from the University of Delaware, NASA's Jet Propulsion Laboratory and the Ocean University of China have developed a method to detect super-salty, submerged eddies called "Meddies" that occur in the Atlantic Ocean off Spain and Portugal at depths of more than a half mile. These warm, deep-water whirlpools, part of the ocean's complex circulatory system, help drive the ocean currents that moderate Earth's climate. The research marks the first time scientists have been able to detect phenomena so deep in the ocean from space--and using a new multi-sensor technique that can track changes in ocean salinity. The lead author of the study was Xiao-Hai Yan, Mary A. S. Lighthipe Professor of Marine Studies at the University of Delaware and co-director of UD's Center for Remote Sensing. His collaborators included Young-Heon Jo, a postdoctoral researcher in the UD College of Marine Studies, W. Timothy Liu from NASA's Jet Propulsion Laboratory in Pasadena, Calif., and Ming-Xia He, from the Ocean Remote Sensing Institute at the Ocean University of China in Qingdao, China. Their results are reported in the April issue of the American Meteorological Society's *Journal of Physical Oceanography.* For more information see http://www.udel.edu/PR/UDaily/2006/mar/whirlpools032006.html Contact the author at Reporters may contact Dr. Xiao-Hai Yan at (302) 831-3694 or E-mail: xiaohai@udel.edu

Characteristics of U.S. Extreme Rain Events during 1999–2003
Where, when and how much does it rain? The February issue of the AMS' *Weather and Forecasting* includes a comprehensive study of the characteristics of a large number of extreme rain events over the eastern two-thirds of the United States. Over a five-yr period, 184 events are identified where the 24-hour precipitation total at one or more stations exceeds the 50-year recurrence amount for that location. Over the entire region of study, these events are most common in July. In the northern United States, extreme rain events are confined almost exclusively to the warm season; in the southern part of the country, these events are distributed more evenly throughout the year. The authors from Colorado State University went further to

classify each event as a mesoscale convective system (MCS), a synoptic system, or a tropical system, and also the most common time of day these events occur. For more information contact Stephanie Kenitzer.

Natural Hazards Are More Common than Stats Indicate
Does it seem like the 100-year severe weather events are happening more often than every 100 years? That's because they do, according to an analysis published in the American Meteorological Society's February issue of the *Journal of Applied Meteorology and Climatology*. The analysis done by Lasse Makkonen of the Technical Research Centre of Finland, shows that natural hazards such as hurricanes, floods, earthquakes and snow storms actually occur more often than the statistics indicate. The return, or reoccurrence, of a potentially catastrophic natural disaster is typically measured using historical data ranked in order – called an extreme value analysis. But this age-old way of measurement actually underestimates the risk when applied in its presently common form. "The way we estimate the probability of a natural hazard reoccurring is fundamentally wrong unless we can relate correct probabilities to the historical extreme events" said Makkonen. His research shows that there is only one correct formula to do that, the one used by Emil Gumbel in his classical book "Statistics of Extremes" in 1958. For a copy of the paper, contact Stephanie Kenitzer. Reporters may contact the author at Lasse.Makkonen@vtt.fi

Society Adopts Three New Statement
The Society recently has adopted three new statements in recent months. The first focuses on Research and Operational Use of Environmental Satellites in Weather Applications as Part of an Integrated Earth Observing System. This statement urges several important steps in maintaining a viable environmental satellite program. The complete statement is online at http://www.ametsoc.org/POLICY/researchsystem.html The second statement is on the Freedom of Scientific Expression. The statement encourages the open and free exchange of scientific data and information and the ability of scientists to present their findings to the scientific community, policy makers, the media, and the public without censorship, intimidation, or political interference is imperative. It is online at http://www.ametsoc.org/POLICY/2006statement_freedom.html A third statement promoting continued Earth science education in schools is online at http://www.ametsoc.org/POLICY/2006statement_earthscienceed.html.

Glossary for educators, students, and weather enthusiasts!
Did you know that the AMS has a glossary of over 3000 terms on weather and climate designed specifically for a general audience! Produced under the Project ATMOSPHERE initiative, one of the Society's education programs, the development of The Glossary of Weather and Climate was inspired by increasing contemporary interest in the atmosphere and global change. The objective of the glossary is to provide a readily understandable, up-to-date reference for terms that are frequently used in discussions or descriptions of meteorological and climatological phenomena. In addition, the glossary includes definitions of related oceanic and hydrologic terms. Available in both hardcover and softcover, black and white, 272 pages, $26.95 list and $21.00 member (softcover); $34.95 (hardcover). Prices include shipping and handling. Contact Stephanie Kenitzer to purchase your copy.

AMS Hurricane and Tropical Meteorology Conference Set for April.
The 27th Conference on Hurricanes and Tropical Meteorology sponsored by the American Meteorological Society and organized by the AMS Committee on Tropical Meteorology and Tropical Cyclones will be held 24-28 April 2006 at the Hyatt Regency Resort and Conference Center, in Monterey, Calif. Although the AMS will not be operating a formal press room, media

are invited to attend the session and interview the experts. All media are asked to register in advance by contacting Stephanie Kenitzer at Kenitzer@ametsoc.org. On site, you must register (at no cost expect for special events and meals) at the AMS Registration Desk. The complete program is online at http://www.ametsoc.org/meet/fainst/200627hurricanes.html

AMS Science Journalism Award Deadline is May 1st

The American Meteorological Society has created a new award, the *AMS Award for Distinguished Science Journalism in the Atmospheric and Related Sciences,* to recognize outstanding science reporting and writing of scientific discoveries, principles, advances, and impacts in all media outlets including radio, television, newspaper, magazine and Internet. The award, which consists of a certificate from the Society, will be given for the first time at the AMS 87th Annual Meeting in San Antonio in January 2007. The award will be given for a single article or radio/television report or a series that makes atmospheric and related sciences material accessible and interesting to the general public. Short pieces or in depth articles are eligible. The award recognizes outstanding reporting for a general audience, and honor individuals rather than institutions. Nominations must be received by the AMS by 1 May 2006. The terms of reference and nomination details are online at www.ametsoc.org or contact Stephanie Kenitzer.

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The AMS (http://www.ametsoc.org) is the nation's leading professional society for those in the atmospheric and related sciences.