



American Meteorological Society Scholarship/Fellowship Program Sponsors

“Each year, one of the most important and exciting works of the American Meteorological Society is the granting of scholarships and fellowships to provide help to deserving undergraduate and graduate students in their educations. This year, the AMS is proud to be able to make fifty-two of these prestigious awards, and this would not be possible without the generous contributions of our individual members and support from the private and public sector. As your president, it has been my great pleasure to make the calls to notify these extremely bright young people of their awards, and then to meet with them personally at the Annual Meeting. These are the future leaders of our community and we should be very proud of our investments in their professional development. These fifty-two brilliant students were selected from among a large and incredibly competitive group of highly qualified and talented applicants, and so they truly do represent “the best of the best” student members of the AMS. Their personal achievements are already quite incredible and their futures are going to be exciting. On behalf of the AMS and the recipients of the scholarships and fellowships, I want to express our deep appreciation to all of our sponsors for their very generous support.”

— Jon Malay, AMS Past President

GRADUATE FELLOWSHIP SPONSORS



ITT Exelis



Lockheed Martin Corporation



Science Applications International Corporation (SAIC)/Space, Aviation, and Science Operation



NOAA's Climate Program Office & NOAA's National Weather Service



DOE Atmospheric System Research



NASA Earth Science



AMS 21st Century Campaign

Ensuring a strong future for the atmospheric and related sciences and services.

MINORITY SCHOLARSHIP SPONSORS



Baron Services



Earth Resources Technology, Inc.



AMS 21st Century Campaign

Ensuring a strong future for the atmospheric and related sciences and services.

NAMED UNDERGRADUATE SCHOLARSHIPS

The Orville Family Endowed Scholarship

The Dr. Pedro Grau Undergraduate Scholarship

The Guillermo Salazar Rodriguez Undergraduate Scholarship

The Mark J. Schroeder Endowed Scholarship in Meteorology

The Richard and Helen Hagemeyer Scholarship

The Ethan and Allan Murphy Endowed Memorial Scholarship

The Werner A. Baum Endowed Scholarship

The Loren W. Crow Memorial Scholarship

The Larry R. Johnson Memorial Scholarship

The Om and Saraswati Bahethi Scholarship

The Carl W. Kreitzberg Endowed Scholarship

The Bob Glahn Endowed Scholarship
in Statistical Meteorology

The David S. Johnson Endowed Scholarship

The Saraswati (Sara) Bahethi Scholarship

The Dr. Yoram Kaufman Scholarship

The Bhanwar Lal Bahethi Scholarship

The Karen Hauschild Friday Endowed Scholarship

The K. Vic Ooyama Endowed Scholarship

The Dr. Robert S. Fraser Scholarship

The Michael A. Roberts, Jr. Endowed Scholarship

The Naval Weather Service Association Scholarship

FRESHMAN UNDERGRADUATE SCHOLARSHIP SPONSORS



Science and Technology Corporation



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Baron Services & Baron Services, Integrated Weather Solutions



Stinger Ghaffarian Technologies



Raytheon Company



Earth Networks



Vaisala, Inc.



Naval Weather Service Association



Lockheed Martin Mission Systems and Sensors

The Percival D. Wark and Clara B. (Mackey) Wark Endowed Scholarship

The Bernard Vonnegut and Vincent Schaefer Endowed Scholarship



Harris Corporation

The Edgar J. Saltsman Endowed Scholarship

GRADUATE FELLOWSHIP SPONSORS

The American Meteorological Society (AMS) in cooperation with industry and federal agencies, awards graduate fellowships, which carry a \$24,000 stipend, to students entering their first year of graduate school. The number of fellowships awarded each year is contingent on funding. Students must intend to pursue careers in the atmospheric or related oceanic or hydrologic sciences. One of the primary goals of the AMS fellowship program is to provide adequate funding to a student, so that he or she can focus solely on their studies and research. AMS is extremely grateful to the following organizations that support graduate fellowships.

ITT EXELIS

AMS CORPORATE PATRON

Leveraging over 40 years experience, ITT Exelis is a world leader in the development and production of reliable climate and environmental monitoring sensors, systems, subsystems and software. These solutions, coupled with expert engineering services, capture, process, visualize and analyze Earth images, climate change, and other environmental data. With a tradition of excellence, Exelis was part of the original team working with NASA and the National Ocean & Atmospheric Administration (NOAA), which established the meteorological program in 1965. In addition, Exelis developed and produced sophisticated imaging and sounding space-qualified payload systems with operational experience in Geostationary Earth Orbiting (GEO) and Low Earth Orbiting (LEO) programs that have consistently achieved 100% on-orbit mission success. The proven leading-edge technology that Exelis creates allows for commercial and government customers to use this information to monitor and predict weather and climate change and to conduct scientific research, all vital in forming national policy, protecting and saving lives and property, ensuring efficient and effective commerce and economic growth, and creating a more livable environment. Exelis works with world-class people, facilities, and resources that all have a breadth of experience in all facets of remote sensing and GPS navigation to promote strong system-engineering methods to ensure quality products and solutions that leverage the strength of the corporation. The mission behind the Exelis technology is to provide innovative climate and environmental monitoring solutions to customers, to help them visualize and understand critical events happening, both on Earth and in space, with enough time to take effective action and make best-informed decisions.

For more information go to www.exelisinc.com.

LOCKHEED MARTIN CORPORATION

AMS CORPORATE PATRON

Lockheed Martin Corporation (LMC), headquartered in Bethesda, Maryland, has a long history of service to the meteorological and environmental community. LMC built and launched the world's first weather satellite, *TIROS I*, in 1960 and since that time has deployed over 100 satellites (accommodating over 600 instruments) to observe the Earth and the sun, including all of the NOAA and Defense Department polar-orbiting operational satellites (POES and DMSP). Continuing this proud heritage, LMC was recently awarded the contract to build the spacecraft for the latest generation of the Geostationary Operational Environmental Satellite series R (GOES-R). LMC also builds instruments that satellites carry, such as the Cryogenic Limb Array Etalon Spectrometer (CLAES) that flew on the Upper Atmosphere Research Satellite and detected chlorofluorocarbons (CFCs) in the stratosphere, and the Solar X-ray imager (SXI) flying on the current GOES satellites. For GOES-R LMC is building two new instruments: the solar ultraviolet imager (SUVI) and the geostationary lightning mapper (GLM). LMC is also a world leader in ground-based weather systems, including the NEXRAD weather surveillance radar deployed at over 150 sites in this country and abroad, the tropospheric wind profiler radar deployed at over 35 sites in this country, and more recently, laser radar systems designed to detect wind shear and wake vortex conditions at airports. The Corporation builds a range of meteorological and oceanographic sensors, including expendable probes that collect data on the physical properties of the ocean and upper atmosphere, which are used by the National Weather Service and other customers. Exploiting data gathered by meteorological sensors requires integrated weather systems and in this arena LMC provides systems to the Department of Defense

and civil agencies to ingest environmental data from low-earth-orbiting and geostationary satellites, both domestic and international, and generate analysis and forecast products. Integrated system solutions are also provided for international customers such as the National Integrated Meteorological and Hydrological Forecast Systems for Romania. Lockheed Martin is a total system provider with a proud heritage—and we never forget who we're working for.

SCIENCE APPLICATIONS INTERNATIONAL CORPORATION (SAIC)/SPACE, AVIATION, AND SCIENCE OPERATION

SAIC is a FORTUNE 500® scientific, engineering, and technology applications company that uses its deep domain knowledge to solve problems of vital importance to the nation and the world, in national security, energy and the environment, health and cybersecurity. The company's approximately 41,000 employees serve customers in the U.S. Department of Defense, the intelligence community, the U.S. Department of Homeland Security, other U.S. Government civil agencies and selected commercial markets. Headquartered in McLean, Virginia, SAIC had annual revenues of approximately \$11 billion for its fiscal year ended January 31, 2011.

SAIC's Space, Aviation, and Science Operation (SASO), operating within the Global Preparedness, Science, and Recovery Business Unit, offers a broad range of expertise in Earth, space, and environmental sciences applications, software and computer systems engineering, and integrated meteorological and environmental system implementation. Our employees have strengths in technical and scientific disciplines, including the physical sciences of meteorology, oceanography, astronomy, chemistry, atmospheric science, and hydrology, and in all aspects of computer science. Our technical and scientific staff are located in the Washington, D.C., area, Texas, Florida, California, Virginia, Mississippi, North Carolina, and several other states. SASO has a rich history of providing quality science, systems integration, data management, and engineering support to NASA, NOAA, U.S. Navy, FAA, and other satisfied customers.

SAIC SASO is pleased to be a sponsor of the AMS graduate fellowship program.

NOAA'S CLIMATE PROGRAM OFFICE

Established in October 2005, NOAA's Climate Program Office (CPO) manages competitive research

programs in which NOAA funds high-priority climate science, assessments, decision support research, outreach, education, and capacity-building activities designed to advance our understanding of the Earth's climate system, and to foster the application of this knowledge in risk management and adaptation efforts. CPO-supported research is conducted in regions across the United States, at national and international scales, and globally. This research advances core agency capabilities in (i) understanding and modeling; (ii) observing systems, data stewardship, and climate monitoring; (iii) predictions and projections; and (iv) integrated service development and decision support.

These core capabilities are, in turn, intended to advance NOAA's ability to provide sustained, reliable, and timely climate services focused in five broad societal challenge areas: (i) climate impacts on water resources; (ii) coasts and climate resilience; (iii) sustainability of marine ecosystems; (iv) changes in extremes of weather and climate; and (v) information for mitigating climate change.

The CPO also provides strategic guidance for the agency's climate science and services programs, and supports NOAA's contributions to the U.S. Global Change Research Program (USGCRP) and the interagency Climate Change Adaptation Task Force. It also plays an active role in numerous international climate activities, including the Intergovernmental Panel on Climate Change (IPCC) and the Global Framework for Climate Services initiative launched by the 2009 Third World Climate Conference.

Visit us online at www.climate.gov to learn more about our science and services; or at www.cpo.noaa.gov to learn more about the CPO and its grants programs.

DOE ATMOSPHERIC SYSTEM RESEARCH

Atmospheric System Research (ASR), one of the global climate research programs of the U.S. Department of Energy (DOE) Office of Science, strives to resolve scientific uncertainties related to atmospheric climate processes. Managed by DOE's Office of Biological and Environmental Research, the ultimate goal of ASR is to improve the treatment of cloud, aerosol, and radiation physics in regional and global climate models in order to improve the climate simulation capabilities of these models.

The ASR Program promotes the usage of atmospheric measurements at permanently instrumented DOE Atmospheric Radiation Measurement (ARM) research sites at locales representative of the Earth's

major climate regimes (Arctic, tropical, and midlatitudes). Two ARM Mobile Facility units with many of the same capabilities as the fixed sites also gather atmospheric data for a period of up to 18 months at selected geographic locations. ARM measurements allow ASR scientists to research a broad range of issues that span surface-based remote sensing, physical process investigation, and modeling of cloud, aerosol, and radiation processes. The ASR science team has made significant contributions to radiative transfer theory and applications, ground-based remote sensing of cloud and aerosol properties, cloud process modeling, and cloud and radiation parameterizations for global climate models. Many new science components in the Community Earth System Model (CESM) were developed by ASR scientists.

ASR research activities are carried out at national laboratories, universities, and private institutions, and are selected through competitive, merit review processes.

NASA EARTH SCIENCE

NASA's Earth Science Division is dedicated to studying the Earth from space to advance our scientific understanding of the global integrated Earth system and meet societal needs. The Earth Observing System (EOS) deployed by NASA in the 1990s has provided an unprecedented comprehensive capability to measure global climate change. The data from EOS and other Earth observing satellites have allowed scientists to characterize, understand, and predict variability and trends in the Earth system and its components. NASA now embarks on a new series of platforms of well-calibrated, highly accurate, and stable Earth observations from space. Together with the continued progress in Earth system and climate modeling, NASA provides unique perspectives and insights into the intricate workings of the coupled natural-human system of the only planet that we know to be capable of sustaining life. These advancements serve the scientific community, decision makers, resource managers, and the public.

NASA's Earth Science Division has six science focus areas:

- **Atmospheric Composition:** understanding and improving predictive capability for changes in atmospheric chemistry and composition
- **Weather:** enabling improved predictive capability for weather and extreme weather events.
- **Carbon Cycle and Ecosystems:** quantifying global land cover change and terrestrial and marine

productivity, and improving carbon cycle and ecosystem models.

- **Water and Energy Cycle:** quantifying the key reservoirs and fluxes in the global water cycle and improving models of water cycle change and fresh water availability.
- **Climate:** understanding the role of oceans, atmosphere, and ice in the climate system and in improving predictive capabilities for its future evolution.
- **Earth Surface and Interior:** characterizing and understanding Earth surface changes and variability of the Earth's gravitational and magnetic fields.

NASA's Earth Science Division sponsors four AMS Graduate Fellowships each year. NASA places particular emphasis on the applicant's ability and interest in pursuing academic training and research using NASA Earth observations and model results. See <http://nasascience.nasa.gov/earth-science> for further details on the strategic plans and program content.

NOAA'S NATIONAL WEATHER SERVICE

Building a WeatherReady Nation

The National Oceanic and Atmospheric Administration's (NOAA) National Weather Service (NWS) provides weather, water, and climate forecasts and warnings for the United States, its territories, adjacent waters, and ocean areas, for the protection of life and property and the enhancement of the national economy. NWS data and products form a national information database and infrastructure that can be used by other governmental agencies, the private sector, the public, and the global community.

NOAA's NWS strives for a "Weather-Ready Nation" through building community resilience in the face of increasing vulnerability to extreme weather and water events.

The devastating impacts of extreme events can be reduced through improved readiness, which is why the Weather-Ready Nation initiative is so important. Through operational initiatives, NOAA's National Weather Service is transforming its operations to help America respond. In the end, emergency managers, first responders, government officials, businesses, and the public will be empowered to make fast, smart decisions to save lives and livelihoods.

The initiative includes improvements in a wide range of areas to support management of the nation's

water supply, understanding of climate-related risks, economic productivity, and healthy communities and ecosystems.

Building on past successes in decision support services, the National Weather Service is launching community-based pilot projects across the country, ranging in focus from emergency response to integrated environmental services, to enhance the nation's preparedness. NOAA's Office of Oceanic and Atmospheric Research and National Environmental Satellite, Data, and Information Service are moving new science and technology into weather service operations that will improve forecasts, increase lead time, and ultimately increase weather-readiness.

Building a Weather-Ready Nation starts with these internal actions, but requires the action of a vast nationwide network of partners including other government agencies and emergency managers, researchers, the media, insurance industry, non-profits, the private sector, the Weather Enterprise, and more.

NOAA's NWS by the Numbers: Nearly 5,000 dedicated people work in 122 weather forecast offices, 13 river forecast centers, 9 national centers, and other support offices around the United States and its territories. Each year, NWS collects some 76 billion observations and issues approximately 1.5 million forecasts and 50,000 warnings.

AMS 21st CENTURY CAMPAIGN

The AMS 21st Century Campaign provides a focused institutional mechanism for AMS members, and organizations involved in the atmospheric and related sciences and services, to make meaningful contributions to the advancement of their science and to societal betterment. This campaign theme parallels and supports the goals of the AMS 10-Year Vision—which is to employ the remarkable advances in the atmospheric and related sciences and services for the benefit of society as a whole. The campaign is centered around five program areas:

- AMS Policy Program—working to strengthen the connection between public policy and Earth

system science and services by building policy research and by creating opportunities for policymakers and scientists to engage and exchange perspectives to foster better-informed policy decisions

- Education—the AMS Fellowship and Scholarship Programs assist students pursuing degrees in the atmospheric and related sciences. AMS relies on support of its members and an array of private sector and government agencies to fund the fellowships and scholarships. AMS is also a strong advocate of providing educational opportunities for students within the framework of scientific conferences. Contributions to the Education Fund will also help to support student travel to AMS meetings and the implementation of the AMS Student Conference, which has more than 500 student attendees each year.
- Teacher Training Enhancement—the AMS K–12 Education Program works to promote interest and literacy in science, mathematics, and technology at a very early age, and strives to maintain a network of well-trained teachers supplied with quality instructional resource materials. AMS has built widely recognized K–12 teacher enhancement initiatives that are making a difference in upgrading public scientific literacy on a national scale. The AMS Education Program actively seeks individual and corporate support to assure that its exemplary teacher enhancement programs continue to thrive and reach teachers throughout the United States.
- History of the Atmospheric and related sciences—projects aimed at gathering, preserving, and providing access to historical documentation in science and technology.
- Public Awareness—focusing increasing the visibility of AMS in both the atmospheric sciences community and in areas outside of our own field.

Through the support of member contributions to the AMS 21st Century Campaign, AMS is able to award minority scholarships and graduate fellowships to outstanding individuals pursuing degrees in the atmospheric and related sciences.



MINORITY SCHOLARSHIP SPONSORS

The AMS Minority Scholarship, now entering its nineteenth year, is designed to encourage minority students who have been traditionally underrepresented in the sciences, especially Hispanic or Latino, American Indian or Alaska Native, and Black or African American students, to pursue careers in the atmospheric and related oceanic and hydrologic sciences. The scholarships carry \$6000 stipends, with \$3000 being awarded for each of the recipient's first two years of undergraduate study. Since the inception of the program, AMS has awarded over 130 scholarships to very deserving candidates. AMS thanks the following organizations for supporting an AMS Minority Scholarship.

BARON SERVICES

Baron Services' products span the globe serving government, business, and consumer markets with state-of-the-art weather technologies and integrated solutions. We provide comprehensive weather solutions from advanced radar systems, data integration, forecast modeling including air quality and hydrology, numerous display solutions, and distribution to authorized users and the public.

Baron Services continues to lead the weather industry through innovation. Through its partnership with L-3 STRATIS, Baron services was awarded a five-year contract from NOAA's National Weather Service (NWS), Federal Aviation Administration (FAA), and Department of Defense (DOD) NEXRAD radars to dual-polarization capability. This application will result in benefits across several categories, including tornado debris cloud detection and forecasting for flash floods, hail, and winter precipitation. The project is currently scheduled for completion in late summer of 2013.

Baron has also built dual-polarized radars for television broadcasters throughout the country. This includes the powerful C-band Klystron radar that packs more than one million watts of power and houses a revolutionary calibration technique that vastly improves the radar's accuracy and performance.

Baron Services' mobile division, WxWorx, is the exclusive weather data provider for XM WX Satellite Weather, a trusted information source for pilots and mariners. The company supplies both hardware and software solutions for onboard weather to the aviation, marine, and emergency management industries. Part of the XM NavWeather service, Baron Services' Threat Matrix technology is available as standard/

standard option on select models from Acura, Honda, Hyundai, Infiniti, Lexus, Nissan, and Porsche.

Baron is headquartered in Huntsville, Alabama, with offices in Oklahoma, North Carolina, and Florida. Despite quick company growth, Baron Services' mission has remained the same for more than 20 years: to produce tools that provide accurate, site-specific weather information. The company philosophy is solidified by technology and people committed to saving lives.

EARTH RESOURCES TECHNOLOGY, INC.

ERT is a science, Information Technology (IT) and engineering company with expertise in scientific research, Earth system modeling, Earth remote and in situ sensing, weather and climate analysis, system and software engineering, and education and outreach. ERT provides mission-oriented science, engineering, and information technology support services to NASA Goddard Space Flight Center and Johnson Space Center, NOAA's National Weather Service (NWS), National Ocean Service (NOS), National Environmental Satellite, Data, and Information Service (NESDIS), Ocean and Atmospheric Research (OAR), USGS, and the Army Corps of Engineers. Our customer- and employee-oriented policies have enabled us to maintain high levels of staff loyalty as an employer of choice for science, engineering, and information technology professionals.

ERT is a woman-owned small business company founded in 1996. ERT has a large cadre of scientists, engineers, and IT specialists, providing an extensive and growing range of scientific-, IT-, and engineering-related services to NOAA, NASA, and USGS missions and operations. As a fast-growing science, engineering, and IT services company, ERT seeks out highly qualified scientific and technical

personnel and partnerships in the areas of science and Earth system modeling and remote sensing, software and systems engineering, information technology, Geographic Information Systems (GIS), education and outreach, environmental services, and geo-technical engineering. More information on ERT and opportunities nationwide can be found at www.ertcorp.com.

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FRESHMAN UNDERGRADUATE SCHOLARSHIP SPONSORS

The AMS Freshman Undergraduate Scholarship program is open to all high school students and is designed to encourage study in the atmospheric and related sciences. Serving as a unique example of various sectors of our field joining together to support young, talented minds, the scholarships are being sponsored by industry leaders and includes named scholarships either established by an AMS member or in memory of someone. The sponsors of these scholarships have all recognized the importance in encouraging young people to enter into the atmospheric and related sciences and thus have made generous contributions in support of the 2012 AMS Freshman Undergraduate Scholarship Program. AMS thanks all of the sponsors for their generous support.

SCIENCE AND TECHNOLOGY CORPORATION

Science and Technology Corporation (STC) is an innovative, private company founded by Dr. Adarsh Deepak in 1979. Our highly qualified staff provides technical support services to the U.S. Government (NASA, NOAA, DoD, and other agencies), industry, and international organizations at 20 locations across the United States and in Europe.

STC is a leader in numerous aspects of atmospheric sciences and related remote sensing research, to include

- meteorological satellite data processing and analysis
- modeling and analysis of clouds, aerosols, ozone, and atmospheric gases
- radiation propagation studies
- global and mesoscale model development
- air quality forecast improvements

In addition, we have a distinguished record of providing superb management support for Earth science program activities. Current/recent atmospheric science support activities include

- NOAA's Earth System Research Laboratory (ESRL)
- National Environmental Satellite Data and Information Service (NESDIS)
- NOAA's Air Resources Laboratory (ARL)
- Office of the Federal Coordinator for Meteorology (OFCM)
- International Global Energy and Water Cycle Experiment (GEWEX) Project Office

Beyond our strength in atmospheric sciences, STC has several other scientific and technical capabilities of excellence, to include

- multidisciplinary scientific software development, to include High-Performance Computing (HPC)
- instrument systems design, development, fabrication, implementation, and calibration for ground, satellite, airborne, and ship platforms
- Computational Fluid/Structural Dynamics (CFD/CSD) modeling for advanced rotorcraft and NASA spacecraft
- polar and cold regions technology applications
- naval architecture for design and testing of ice-breaking ships
- electronic, mechanical, composite, and machining fabrication of NASA flight-certified and ground support equipment and test articles
- chemical and biological demilitarization, monitoring, and laboratory activities
- developmental and operational testing and evaluation
- small satellite design, development and fabrication

BARON SERVICES, INC.

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Baron Services continues to lead the weather industry through innovation. Through its partnership with L-3 STRATIS, Baron Services was awarded a

five-year contract from NOAA's National Weather Service (NWS) to provide a systemwide upgrade of the 171 NWS, Federal Aviation Administration (FAA), and Department of Defense (DOD) NEXRAD radars to dual-polarization capability. This application will result in benefits across several categories, including tornado debris cloud detection and forecasting for flash floods, hail, and winter precipitation. The project is currently scheduled for completion in late summer of 2013.

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BARON SERVICES, INTEGRATED WEATHER SOLUTIONS

Baron Services, Integrated Weather Solutions products are in use throughout the world. In the international marketplace, Baron has delivered weather solutions in countries including Paraguay, Romania, Taiwan, Brunei, Saudi Arabia, Indonesia, and most recently, Uzbekistan.

Baron Services provides comprehensive weather solutions including advanced radar systems, data integration, forecast modeling including air quality and hydrology, numerous display solutions, and distribution to governments, business, and public users. Through Baron's Integrated Observational Network Solution (IONS), the company provides comprehensive turn-key integration of new and existing

meteorological assets for nowcasting and forecasting activities including weather detection, data processing, numerical weather prediction, 2D and 3D visualization, and weather data dissemination.

In Uzbekistan, for example, Baron installed two Doppler weather radar systems as part of an instrumentation modernization to achieve higher-resolution weather surveillance and enhance weather forecasts. In Brunei, a modernization project is incorporating both Baron Services' meteorological hardware, including an S-band dual-polarization Doppler weather radar, as well as patented technologies, providing remote weather monitoring, storm tracking and display, web distribution, advanced hydrological forecasting and modeling, and the ability to disperse weather information to authorized users, including the public.

In the United States, Baron Services continues to lead the weather industry. Through its partnership with L-3 STRATIS, the company was awarded a five-year contract from NOAA's National Weather Service (NWS) to provide a systemwide upgrade of the 171 NWS, Federal Aviation Administration (FAA), and Department of Defense (DOD) NEXRAD radars to dual-polarization capability.

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RAYTHEON COMPANY

Raytheon Company, with 2010 sales of \$25 billion, is a technology and innovation leader specializing in defense, homeland security, and other government markets throughout the world. With a history of innovation spanning 89 years, Raytheon provides state-of-the-art electronics, mission systems integration, and other capabilities in the areas of sensing; effects; and command, control, communications and intelligence systems, as well as a broad range of mission support services. With headquarters in Waltham, Massachusetts, Raytheon employs 72,000 people worldwide. For more about Raytheon, visit us at www.raytheon.com and follow us on Twitter at @raytheon.

Raytheon's MathMovesU® program is committed to increasing students' interest in math and science

education by engaging them in hands-on, interactive activities. The innovative programs of MathMovesU include Raytheon's Sum of all Thrills™ experience at INNOVENTIONS at Epcot®, which showcases math in action as students design and experience their own thrill ride using math fundamentals; the "In the Numbers" game, a partnership with the New England Patriots on display at The Hall at Patriot Place™ presented by Raytheon; the company's ongoing sponsorship of the MATHCOUNTS® National Competition; and the MathMovesU scholarship and grant program providing more than \$1 million in annual funding to students and teachers. Follow MathMovesU and other Raytheon community outreach programs on Twitter @RaytheonCSR.

VAISALA, INC.

Vaisala contributes to a better quality of life by providing a comprehensive range of innovative observation and measurement products and services for meteorology, weather critical operations, and controlled environments. Vaisala is recognized world over for its contribution to the development, manufacturing, and marketing of high-quality sensors, instruments, systems, and services to solve measurement needs or observation requirements. For over 70 years, our strong customer focus, combined with reliability and convenience, provides our partners and customers distinct performance advantages and cost savings from the total solutions that we can deliver.

Vaisala is committed to measuring environments of all proportions, from the Earth's atmosphere to the inside of an engine component. Striving for worldwide market leadership in selected businesses, our competitive edge lies in product leadership. We are global market leaders in upper-air observations; airport weather observation equipment; fire weather and resource management systems; hydrology applications; road weather observation systems; surface weather-measuring networks; lightning detection data networks and instruments; and in professional equipment for measuring relative humidity, dewpoint, CO₂, and barometric pressure. High investment in research and development guarantees that Vaisala products are in the forefront of environmental measurement technology both now and in the future.

Therefore, it is again with great pleasure that Vaisala provides a scholarship to individuals who share this company's enthusiasm and commitment toward the science of meteorology.

LOCKHEED MARTIN MISSION SYSTEMS AND SENSORS

Lockheed Martin Mission Systems and Sensors (MS2) provides systems engineering, software development, and complex program management for global security, civil, and commercial markets. MS2 executes nearly 500 programs for the U.S. Navy, Coast Guard, Air Force, Army, and Marine Corps, as well as industrial, research, and medical customers in 50 nations.

The company's Marion, Massachusetts, facility has a proud heritage of more than 60 years in the development and production of specialized instrumentation for environmental observations. Hundreds of demanding customers around the world including NOAA, all U.S. Department of Defense agencies, and meteorological/oceanographic services around the world rely on our expendable instrumentation to understand global climate challenges. The MS2 Marion operation provides advanced GPS upper-air sounding systems for synoptic and research atmospheric measurements, from the surface to the upper atmosphere. Our oceanographic instrumentation and data acquisition systems enable users to obtain real-time profiles of ocean temperature, current velocity, and salinity.

Headquartered in Bethesda, Maryland, Lockheed Martin is a global security company that employs about 123,000 people worldwide and is principally engaged in the research, design, development, manufacture, integration, and sustainment of advanced technology systems, products, and services. The Corporation's net sales for 2011 were \$46.5 billion.

Lockheed Martin is proud to support the American Meteorological Society and its AMS Freshman Undergraduate Scholarship Program. We wish this year's recipients all the best.

HARRIS CORPORATION

Harris Corporation is an international communications and information technology company serving government and commercial markets in more than 150 countries. The company has annual revenue of more than \$6 billion and 17,000 employees—including nearly 7,000 engineers and scientists.

Harris provides the most advanced, NIST-compliant, weather information systems available today, offering real-time information and high-quality resolutions/enhancements for effective analysis and decision making by operational meteorologists in NOAA, FAA, DoD, and the international community.

Harris has been developing and delivering weather, satellite command and control, and information systems for over six decades, and is a recognized leader in the development and deployment of ground systems for the ingesting, processing, displaying, and manipulation of meteorological satellite data. Our systems incorporate current technology for high-capacity processing in a totally secure NIST-compliant environment.

Harris is the prime contractor and systems integrator, leading a world-class team on the \$781 million effort to design, develop, deploy, integrate, and sustain NOAA's Ground Segment for the GOES-R next generation of geostationary weather satellites. The Ground Segment includes the Mission Command and Control of the new spacecraft, as well the processing, product generation, and product distribution of the satellite data. In April 2010, Harris was also selected to furnish the final piece of the Ground Segment—the \$130 million Ground Antenna Subsystem. This effort will result in a robust, reliable, end-to-end ground infrastructure that will support the operational requirements of the GOES-R system for the life of the mission.

CLS AMERICA, INC.

The CLS Group of Companies entered its twentieth year of operations in the United States of America in January 2006 with a new look and a new way of doing business. In 1986, Service Argos, Inc., was established near Washington, D.C., in order to provide operational services and end-user support for the joint French/USA Argos System. Argos is a satellite-based tracking and data collection system that employs a French electronics package flying aboard a number of U.S. NOAA polar-orbiting weather satellites. In 1987, a second company—North American CLS, Inc.—was established in order to provide Argos-based services to a number of commercial users and nonenvironmental agencies throughout North America.

The Argos Data Collection and Geo-Location System is devoted to monitoring and protection of the Earth's environment. In operational service since 1978, the Argos instruments fly on NOAA's Polar-Orbiting Environmental Satellite System and the operating terms of the service are defined by an intergovernmental bilateral agreement between the United States and France. Argos can locate any platform carrying a suitable transmitter, anywhere in the world, and collect data from sensors connected to that transmitter. Half of the Argos system capacity is currently used for meteorological and oceanographic

operations and research. Much of the data collected from the more than 20,000 transmitters active today are relayed around the world via the World Meteorological Organization's Global Telecommunications System (GTS). The next generation of Argos systems will enable increasingly lower power transmissions from the users platforms, higher data rates through the satellites, and the capability to dialog with the transmitter/platform device. Argos system enhancements will enable the scientific community to satisfy increasingly difficult data relay needs with a proven, reliable, and robust data collection system as Argos continues its Earth observation and monitoring mission.

On January 1, 2006 Service Argos, Inc., and North American CLS, Inc., merged into a single unit, called CLS America, Inc. The single company will enable a stronger and more cost-effective support of all Argos applications, especially the U.S. governmental scientific users.

In January 2007 CLS became an approved reseller of Iridium data services, thus enabling CLS to provide an even wider variety of data-collection capabilities to complement our core Argos services.

CLS America continues to be based in the Washington, D.C., metropolitan area, with headquarters in Largo, Maryland. Mr. Bill Woodward, former president of Service Argos, Inc. is the president and CEO of CLS America.

STINGER GHAFFARIAN TECHNOLOGIES (SGT)

SGT is an award-winning, nationwide service provider, offering a full spectrum of systems engineering, IT, science and program management services. Founded in 1994 and headquartered in Greenbelt, Maryland, we support a wide array of government agencies and are committed to our ICE principles—focusing on Integrity, Customers, and Employees. SGT works closely with our customers and teammates to ensure the best possible solutions for today's most challenging problems. We hold the following certifications: ISO 9001:2008; AS9100; ISO2000; CMMI Level 3.

We are involved in a wide range of Earth and space science research ranging from studying the ice loss over ice sheets to monitoring sea level rise, developing advanced intelligent computer systems for planetary rovers to science data processing and dissemination. From missions exploring distant planets and asteroids, near to Earth, and circling the moon, to rovers traversing planetary surfaces and missions that provide telescopic views of the heavens, SGT's

engineering and scientific expertise assist in the furtherance of human inquiry.

Our scientists study geodynamical processes to gain insight into the structure and composition of the Earth and the redistribution of mass associated with both tidal and nontidal sources of forcing. SGT, partnered with NASA Goddard Institute for Space Studies (GISS) program, is a leader in the study of climate change.

In addition to this, SGT provides end-to-end IT services for science and archival data centers, mission control centers, ground data acquisitions, campuswide network management, and numerous other areas, delivering innovative, customer-focused IT support.

We infuse and deploy advanced information systems technology into missions using numerical analysis and high performance computing, algorithm development, modeling, GIS and web mapping, intelligent systems, agile science data processing and archiving systems.

SGT is recognized for our successful contract performance and advantageous cost management solutions, and have received some of the industry's most prestigious awards, including NASA's prestigious Georg M. Low Award for Quality and Excellence.

SGT is proud to be a corporate member of the AMS! Visit us at www.sgt-inc.com.

EARTH NETWORKS

Owner of the WeatherBug Brand of Products and Solutions

About Earth NetworksSM-WeatherBug[®]

Earth Networks-WeatherBug, the leading provider of weather information and services, will again sponsor an AMS Freshman Undergraduate Scholarship for the 2011/2012 school year. Since its founding nearly 20 years ago, Earth Networks (formerly AWS) has been strongly invested in the education sector and is firmly committed to fostering the careers of future scientists and meteorologists.

Earth Networks began in the education market by pioneering a program that installed and networked thousands of professional-grade weather stations at schools. The data from these stations enabled teachers to apply real-world weather information when teaching core STEM courses and lessons on other key topics, such as geography. The company's rigorous curriculum meets national and state education standards for grades K-12.

Today, Earth Networks operates the world's largest weather observation and lightning detection net-

works and is building what will become the largest greenhouse gas-monitoring network. Observations from Earth Networks inform and alert consumers, enterprises, and governments around the world, providing them with advanced environmental intelligence for decision making and safety. The company's popular WeatherBug website, desktop application, and mobile apps provide millions of consumers with real-time, local weather information and dangerous severe weather alerts. Enterprise solutions from Earth Networks enable organizations, including energy and utilities, agriculture, sports and recreation, emergency operations, and government entities, to safeguard lives, prepare for weather and climate events, and improve business operations. Earth Networks (www.earthnetworks.com) is headquartered in the Washington, D.C., area with offices in Mountain View, California; New York, New York; Milan, Italy; and a local presence in 50 countries worldwide.

NAVAL WEATHER SERVICE ASSOCIATION

The Naval Weather Service Association (NWSA) is an association of naval officers, enlisted men and women, and civilians who have provided meteorological, oceanographic and numerical predictions services to the United States Navy as well as all other military services. The membership consists predominately of current and former meteorological specialists (aerographers mates), meteorologists and oceanographers, computer scientists and academics. The NWSA was formed in August 1976 in order to preserve friendships beyond active service and sustain an ongoing relationship with active duty members of the Naval Meteorological and Oceanography Command.

In 1978 the Association established a scholarship fund to support those seeking degrees in meteorology, oceanography and atmospheric sciences, and has provided annual awards for more than 30 years.

In 2011 the membership approved the transfer of management responsibilities of the Naval Weather Service Association Scholarship to the AMS. The AMS will safeguard and manage the funds gifted by the NWSA for the specific purpose of sustaining two annual awards based on selections of the AMS scholarship committee. The fund provided by the generous contributions of the NWSA membership will allow the Naval Weather Service Association Scholarship to be awarded for at least the next 10-15 years. For more information about the NWSA please visit the Association's website: www.navalweather.org/home.html

THE PERCIVAL D. WARK AND CLARA B. (MACKEY) WARK ENDOWED SCHOLARSHIP

The Percival D. Wark and Clara B. (Mackey) Wark Endowed Scholarship honors the late parents of Dr. David Q. Wark, a longtime AMS member. Dr. Wark, a United States federal employee for over a half-a-century, and a longtime AMS member and Fellow of AMS, has endowed an AMS Named Scholarship in honor of his parents, Percival Damon Wark and Clara Belle (Mackey) Wark. As stated by Dr. Wark, "The establishment of this scholarship is prompted by the donor's acknowledgment of the outstanding scientific and cultural leadership of the AMS, as well as its unique and universal position in promoting the science of meteorology. It is fitting that Percival D. Wark and Clara B. (Mackey) Wark should be memorialized in this milieu."

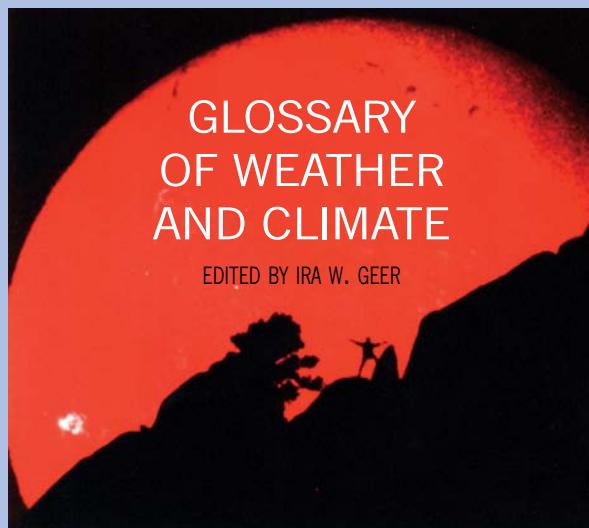
THE BERNARD VONNEGUT AND VINCENT SCHAEFER ENDOWED SCHOLARSHIP

The Bernard Vonnegut and Vincent Schaefer Scholarship honors two individuals who worked as colleagues and were friends over many years, and who made significant contributions to science and meteorology. In addition to their outstanding scientific contributions, those who knew Bernie and Vince,

knew of their zest for learning and discovery that carried through their entire lives, and most importantly the positive outlook and encouragement that they conveyed to all of their students. In an effort to honor these two individuals and their contributions to the sciences, the Vonnegut/Schaefer Scholarship Fund has been established in their name. To reach the scholarship endowment level necessary, Bernie's first graduate student has pledged a two-for-one challenge match of \$50,000 over the next two years. For every dollar contributed to the Vonnegut/Schaefer Freshman Scholarship, it will be matched with a two-dollar gift.

THE EDGAR J. SALTSMAN ENDOWED SCHOLARSHIP

The Edgar J. Saltsman Endowed Scholarship honors the late Ed Saltsman, a longtime AMS member. After graduating from high school, Mr. Saltsman continued his education at Cleveland College and Indiana University where he majored in math. Following school he enlisted in the United States Air Force and served as a climatologist and meteorologist. He earned the rank of major before retiring from service. After serving in the air force he worked with the U.S. Weather Bureau (now known as NOAA's National Weather Service) in both Washington, D.C., and in New Orleans.



Educators, students, and weather enthusiasts! A glossary of over 3000 terms on weather and climate designed specifically for a general audience! Produced under the Project ATMOSPHERE initiative, 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.

©1996 American Meteorological Society. Available in both hardcover and softcover, B&W, 272 pages, \$26.95 list/\$21.00 member (softcover); \$34.95 (hardcover) plus shipping and handling. **Order online at www.ametsoc.org/amsbookstore.** Please send prepaid orders to Order Department, American Meteorological Society, 45 Beacon St., Boston, MA 02108-3693.

NAMED UNDERGRADUATE SCHOLARSHIPS

The AMS Named Undergraduate Scholarship program awards scholarships to students in their final year of undergraduate study. The goal of the program is to recognize students with outstanding academic records and to encourage them to continue their academic studies into graduate school. Named scholarships are established by members, and by individuals wishing to honor and remember a loved one or by organizations wishing to sponsor a scholarship in their name. AMS is proud and honored to help facilitate these special scholarships.

The Orville Family Endowed Scholarship honors the family's more than 80 years of continuous service to meteorology. The late Howard T. Orville, head of the Naval Aerological Service, 1940–1950, had a career marked by many commendations. After his retirement from the navy, he held key industrial posts and was appointed by President Eisenhower as chairman of the Advisory Committee on Weather Control in 1953. Capt. Orville was president of the AMS, 1948–1949. The scholarship also honors his sons, the late Harold D. Orville, distinguished professor of meteorology, South Dakota Institute of Mines and Technology, and Richard E. Orville, professor of atmospheric sciences, Texas A&M University. Harold Orville performed pioneering research in a career centered on numerical cloud modeling and served the Society as councilor, executive committee member, commissioner, and journal editor. Richard Orville performed groundbreaking research in lightning science, including development of the National Lightning Detection Network and served the Society as publications commissioner, education commissioner and as a consequence, was a council member for 12 years. Through a bequest from the estate of Howard T. Orville and contributions from members of his family, the endowed undergraduate scholarship in the amount of \$5000 is awarded annually.

The Dr. Pedro Grau Undergraduate Scholarship honors the late Dr. Pedro Grau y Triana. Medical doctor, legislator, original inventor, and businessman, Dr. Grau was a hardworking, globe-trotting researcher of human nature and historic events. Among his many interests were tropical hurricanes. Having gone through several very severe ones, he thought that every effort should be made to understand their nature and improve the forecasting. The scholarship is given by his daughter, Mrs. Manon Rodriguez. Mrs. Rodriguez is also generously supporting **The**

Guillermo Salazar Rodriguez Undergraduate Scholarship, in honor of her late husband. Mrs. Rodriguez has funded a \$2500 scholarship in each of the above names in the interest of seeing more effort and resources devoted to atmospheric research.

The Mark J. Schroeder Endowed Scholarship in Meteorology is funded by Mark and Eva Schroeder. Schroeder, former research meteorologist of the U.S. Forest Service and the National Weather Service, could be considered one of the pioneers of fire meteorology. For over a quarter of a century, he literally worked on every facet of the fire meteorology program. After nearly 16 years on assignment to the U.S. Forest Service, he transferred to that agency in 1971. During World War II he served in the American and European theaters as a Weather Reconnaissance Officer. In 1973 he retired from the U.S. Air Force Reserve as a lieutenant colonel. The endowed undergraduate scholarship in the amount of \$5000 is awarded annually.

The Richard and Helen Hagemeyer Scholarship honors Richard and Helen Hagemeyer. Prior to Mr. Hagemeyer's death in 2001, he and Mrs. Hagemeyer had served the weather industry by working at the National Oceanic and Atmospheric Administration and its predecessor agencies for more than 75 years. Mrs. Hagemeyer retired from the Weather Bureau in 1978. Mr. Hagemeyer served as the director of the Pacific Region of the National Weather Service. They have funded a \$3000 undergraduate scholarship to help fulfill a desire to support atmospheric and related oceanic sciences education.

The Ethan and Allan Murphy Endowed Memorial Scholarship honors the late Ethan and Allan Murphy, father and son, who each made a number of contributions to the field of meteorology throughout their individual careers. To honor these contributions

and the memories of these two men, the family of Ethan and Allan Murphy has established a scholarship that will be augmented by contributions from interested individuals. The scholarship will support an undergraduate student who, through curricular or extracurricular activities, has evidenced an interest in weather forecasting or in the value and utilization of forecasts. The scholarship is awarded annually in the amount of \$2000.

The Werner A. Baum Endowed Scholarship honors the late Prof. Werner A. Baum, a national and international leader in meteorology. Baum was a strong advocate of the highest standards for education and research, and promoted those standards through administrative positions in universities and the government. The endowed undergraduate scholarship in the amount of \$5000 is awarded annually.

The Loren W. Crow Memorial Scholarship is sponsored by NCIM, an association of private sector meteorologists, of which Loren Crow was a founder and charter member. As a mentor and friend of many of today's practitioners of applied meteorology, Loren Crow shall be remembered as a principal leader in the field of applied meteorology. He envisaged and advocated vigorous expansion of private sector consulting. He believed that innovation by a few or even by one can have great future influence. His contributions during a career of a half-century can be found in present practices, and his concerns for the field as a whole have withstood the test of time. The scholarship carries a \$2000 stipend and is awarded to a student that has evidenced an interest in applied meteorology. Founded in 1968, the NCIM's mission is to promote the ethical, scientifically rigorous, and prosperous practice of meteorology to serve the broad range of customers in the public and private sectors throughout the world. All NCIM members are Certified Consulting Meteorologists (CCM), and for more than three decades, NCIM has conducted far-ranging activities for professional development through mentoring, networking, marketing, advocacy, workshops, scholarships, and internships.

The Larry R. Johnson Memorial Scholarship honors the late Larry Johnson whose contributions to meteorology spanned over 30 years and careers with the U.S. Air Force and PRC [now known as Northrop Grumman Information Technology (IT)]. Larry served 10 years with PRC in a variety of assignments on the Advanced Weather Interactive Processing

System (AWIPS) program, the integrating element of the \$4.5B National Weather Service Modernization. Known as "Mr. AWIPS," Larry's tenure on AWIPS was longer than any other person, and his contributions to the success of AWIPS stand out among all others. The scholarship carries a \$2000 stipend.

The Om and Saraswati Bahethi Scholarship is sponsored by Science Systems and Applications, Inc., (SSAI), a Lanham, Maryland-based company. Om and Sara Bahethi, both originally from India, are naturalized United States citizens and the founders of SSAI. Om would not have completed his college education and doctoral degree in physics in the United States had it not been for scholarships and assistance provided by various government and educational institutions. SSAI is very proud of Om and Sara's strong commitment to assisting students pursuing degrees in the atmospheric and related sciences. SSAI, a woman-owned small business, has been performing scientific and technological applications services and has steadily grown since its incorporation in April 1977. SSAI has received numerous commendations for within-budget and on-time quality support services. SSAI's areas of expertise are Earth and space sciences, advanced computing, scientific analysis, instruments engineering, systems development, and information technology. The scholarship carries a \$2000 stipend.

The Carl W. Kreitzberg Endowed Scholarship honors the late Dr. Kreitzberg's role as a scientist, mentor, colleague, and friend. Throughout his career he was a dedicated leader and advocate for observational data campaigns and numerical modeling research to better understand mesoscale weather phenomenon. He inspired his students with his innate curiosity and constant questioning, instilling in many of them a similar drive. Dr. Kreitzberg always believed that research in the search of understanding was a fun, enjoyable activity. He demonstrated this by his intensely curious spirit in the classroom each and every day. He also imparted this to his one-on-one mentoring with graduate students. The scholarship will be awarded annually in the amount of \$2000.

The Bob Glahn Endowed Scholarship in Statistical Meteorology is funded by Bob Glahn, who, for nearly half a century, has been involved in pioneering work in the development of statistical applications within the atmospheric sciences. As one in a long list of achievements, Dr. Glahn developed the concept of Model Output Statistics (MOS) used

by many countries worldwide. The scholarship carries a \$2500 stipend.

The David S. Johnson Endowed Scholarship was established in memory of David Simonds Johnson, past president and Honorary Fellow of AMS and a pioneer in the use of weather satellites. Johnson, “Dave” to friends and associates alike, was a meteorologist and administrator for NOAA for more than a half-century and served as the first assistant administrator of the National Environmental Satellite, Data and Information Service (NESDIS). The David S. Johnson Endowed Undergraduate Scholarship will be administered by the American Meteorological Society (AMS) and will be awarded to a student entering his or her final year of university study, majoring in atmospheric or related oceanic and hydrologic sciences or in remote sensing of the Earth. The scholarship carries a \$3000 stipend.

The Saraswati (Sara) Bahethi Scholarship is sponsored by Science Systems and Applications, Inc. (SSAI), a woman-owned small business, that has been performing scientific and technological applications services for NASA, NOAA, and other federal agencies since its incorporation in 1977. SSAI’s areas of expertise are Earth and space sciences, advanced computing, complex science data and information systems, scientific analysis, instrument engineering, systems development, and information technology. SSAI is also a proud sponsor of the AMS/Om and Saraswati Bahethi Scholarship, which is named after the founders of SSAI, and is awarded to students entering their final year of undergraduate study. The scholarship carries a \$2000 stipend.

The Dr. Yoram Kaufman Scholarship has been established by Science Systems and Applications, Inc. (SSAI), in memory of Dr. Yoram Kaufman. Dr. Kaufman was a leading scientist at NASA’s Goddard Space Flight Center (GSFC) whose research led to greater understanding of global warming. His primary fields were meteorology and climate change, with a specialty in analyzing aerosols—airborne solid and liquid particles in the atmosphere. He wrote more than 200 scientific papers, found ways to measure aerosols to determine whether they were caused by humans or occurred naturally, and was working to understand their ultimate effect on Earth’s warming climate. In addition to being a compassionate and charismatic leader, Dr. Kaufman was also an excellent motivator who provided opportunities to SSAI employees to further their careers in support of

NASA GSFC science and technology contracts. The scholarship carries a \$2000 stipend.

The Bhanwar Lal Bahethi Scholarship has been established and sponsored by Dr. Om P. Bahethi in memory of his beloved elder brother to honor his generosity in assisting and motivating numerous youngsters to seek an education in science and engineering. Bhanwar Bahethi (1930–1972) did not receive a formal education. Because of his interests in science, mechanics, and how things work, however, he was able to teach himself car repair skills that allowed him to become an auto mechanic and operate a small roadside, open-air garage in the desert city of Jodhpur, India. Numerous students and families benefited from Bhanwar’s assistance. It was his generosity in borrowing money for his younger brother’s education and travel to the United States that enabled Om to receive a Ph.D. in physics and to start a company, Science Systems and Applications, Inc. (SSAI). SSAI excels in science and technology support services. The scholarship carries a \$2000 stipend.

The Karen Hauschild Friday Scholarship has been established by the family of Karen Hauschild Friday in honor of her memory. Karen Hauschild Friday was born December 3, 1940 in Fairview, Oklahoma. The dust bowl was particularly severe in northwestern Oklahoma, and upon failure of the family farm, Karen’s father moved to work at Tinker Air Force Base in the Douglas Aircraft plant in support of the War effort. She married Dr. Elbert W. (Joe) Friday in 1959. She was a supportive wife during Joe’s 20 year career in the air force, during his terms as deputy director and director of the National Weather Service, and during the rest of their 47-and-a-half-year marriage. She was a wonderful mother for their two daughters and a devoted grandmother, taking joy with her five grandchildren. Joe and Karen traveled extensively throughout the American west where Karen enjoyed her love of American Indian art and culture. She lost a two-and-a-half-year battle with cancer on March 21, 2007. The scholarship carries a \$2500 stipend.

The K. Vic Ooyama Endowed Scholarship has been established in honor of the late Katsuyuki Ooyama, whose distinguished science career spanned more than 50 years. Dr. Ooyama was known for his valuable contributions in advancing the theory and modeling of tropical cyclones, for his many years of service to NOAA, and for influencing an entire younger generation of scientists studying cyclogenesis. The scholarship, in the amount of \$2000, will be awarded annually.

The Dr. Robert S. Fraser Scholarship has been established by Science Systems and Applications, Inc. (SSAI) in honor Dr. Robert (Bob) S. Fraser, a mentor to Om Bahethi, president of SSAI. While working at the NASA/GSFC Laboratory for Atmospheres for almost 22 years, Bob took a great interest as a mentor to many professionals working in the areas of satellite remote sensing and modeling of transfer of solar radiation in the Earth's atmosphere. Bob spent innumerable hours with Om, teaching him the complexities of modeling the physics, atmospheric processes, and numerical schemes that are the heart and soul of computing radiation transfer. Bob, in more ways than one, communicated a positive outlook on life, humility, and sincerity when Om worked as a Goddard contractor. Bob's generous assistance and wisdom contributed to outstanding learning and the career advancement of everyone who came in contact with him. SSAI is very proud of Dr. Robert Fraser's strong commitment to assisting others in their careers. The scholarship carries a \$2000 stipend.

The Michael A. Roberts, Jr. Scholarship has been established by family and friends to honor his memory and contributions to the sciences. Mr. Roberts was an active member of AMS and

had a distinguished record serving his country as a lieutenant in Vietnam in the U.S. Air Force Strategic Air Command Center. He was an accomplished scholar who earned several degrees and professionally worked at Enron, leading a research team designing systems to capture timely meteorological data. He then joined The Citidal Group where he led a team focusing on the impacts of weather on natural gas and electric power supply and demand and on the pricing of these and other commodities. The scholarship carries a \$2000 stipend.

The **Naval Weather Service Association** (NWSA) is an association of naval officers, enlisted men and women, and civilians who have provided meteorological, oceanographic and numerical predictions services to the United States Navy as well as all other military services. The membership consists predominately of current and former meteorological specialists (aerographers mates), meteorologists & oceanographers, computer scientists and academics. The NWSA was formed in August 1976 in order to preserve friendships beyond active service and sustain an ongoing relationship with active-duty members of the Naval Meteorological and Oceanography Command. The scholarship carries a \$5000 stipend.

The Father James B. Macelwane Annual Award

Supported by the AMS 21st Century Campaign

The Father James B. Macelwane Annual Award was established by the American Meteorological Society to honor the late Rev. James B. Macelwane, S.J., a world-renowned authority of seismology, who was a geophysicist and Dean of the Institute of Technology, Saint Louis University, until his death in 1956. The recipient of the Father James B. Macelwane award will receive a stipend of \$1000 supported by member donations to the AMS 21st Century Campaign.

The purpose of this award is to stimulate interest in meteorology among college students through the submission of original student papers concerned with some phase of the atmospheric sciences. The student must be enrolled as an undergraduate at the time the paper is written, and no more than two students from any one institution may enter papers in any one contest.

The award includes a \$1000 stipend and partial travel support to the AMS Annual Meeting.

SUBMISSION OF PAPERS: To consider papers for the Macelwane Award, the AMS Committee of Judges must receive the following: 1) an original copy of the paper in addition to 3 copies (total of 4); 2) a letter of application from the author, including contact information, stating the title of the paper and the name of the university at which the paper was written; 3) a letter from the department head or other faculty member of the major department, confirming that the author was an undergraduate student at the time the paper was written, and indicating the elements of the paper that represent original contributions by the student; 4) an abstract of no more than 250 words of the author's paper.

The above information must be postmarked by 10 June 2011. Mail to American Meteorological Society, Macelwane Award, 45 Beacon Street, Boston, MA 02108-3693. The evaluation of the papers occurs during the summer. Announcement of the award recipient will be made in the fall of 2011.