

## GFDL Awards and Honors – Research, Development, and/or Application 2000-2014

### International

**Gilbert Walker Distinguished Chair Professorship at IIT Delhi India** – V. Ramaswamy (2013): For “his outstanding research record, including his work to elucidate the role of aerosols and greenhouse gases in climate change in the Indian region, which involves changes in the Walker circulation”

#### **Norbert Gerbier-Mumm International Award, World Meteorological Organization**

Massimo Bollasina, Yi Ming, and V. Ramaswamy (2013): “For an original scientific paper on the influence of meteorology in a particular field of the physical, natural or human sciences, or on the influence of one of these sciences on meteorology” on the paper “Anthropogenic Aerosols and the Weakening of the South Asian Summer Monsoon” published in *Science*, 334 (6055), 2011

V. Ramaswamy (2003): For the research paper: “Stratospheric Temperature Trends: Observations and Model Simulations” by V. Ramaswamy, *et al.*, published in *Reviews of Geophysics*, 39, 71-122, 2001

**Noble Lecturer in the Physics Department, University of Toronto** – Isaac Held (2012): “General Circulation of the Atmosphere”

**BBVA Foundation Frontiers of Knowledge Award** - Isaac M. Held (2011): “for his fundamental contribution to understanding the structure of atmospheric circulation systems and the role of water vapor in climate change”

**World Climate Research Program Award for Outstanding Scientific Oral Presentation** – Massimo Bollasina, Rym Msadek, and Illisa Ocko (2011): World Climate Research Program Open Sciences Conference 2011

**RAICES Prize, Ministry of Science and Technology of Argentina** – Isidoro Orlanski, Emeritus (2011): “for exceptional scientific contributions and their efforts in promoting science development in Argentina”

**Australian Commonwealth Scientific and Industrial Research Organization (CSIRO) Distinguished Visiting Scientist Fellowship Award Program** – Stephen Griffies (2010): This award “recognizes his many achievements in the field of global ocean and climate modeling”

**Wei Lun Distinguished Visiting Professor, the Chinese University of Hong Kong** – Ngar-Cheung Lau (2010): This is the most prestigious visiting academic appointment at the University

**Bert Bolin Lecturer at Stockholm University** – V. Ramaswamy (2009): “Dissecting the Roles of Aerosols and Greenhouse Gases in Climate Change: Scientific Understanding and Policy Implications”

**Kyoto Earth Hall of Fame** – Syukuro Manabe, Emeritus (2009): One of the first three inductees to the Hall of Fame; this award recognizes his seminal contributions in the study of Global Warming

**2007 Nobel Peace Prize: Intergovernmental Panel On Climate Change (IPCC)** – 37 current and former GFDL scientists contributed significantly to the IPCC process and consequently share in the 2007 Nobel Peace Prize that was awarded jointly to Albert Arnold Gore, Jr. and the IPCC, “for their efforts to build up and disseminate greater knowledge about man-made climate change, and to lay the foundations for the measures that are needed to counteract such change”

**Atmospheric Science Librarians International 2007 Choice in the Scientific and Technical Category** – V. Ramaswamy, Ronald Stouffer, Held, *et al.* (2007): “For co-authorship in the ‘high impact comprehensive publication’ – Intergovernmental Panel on Climate Change Working Group I report ‘Climate Change 2007: The Physical Science Basis’ ”

**K. R. Ramanathan Distinguished Professor, Physical Research Laboratory, India** – V. Ramaswamy (2004): Awarded for “work in atmospheric sciences and, in particular, for international reputation in studies of atmospheric radiation processes”

**Hong Kong Observatory’s 120th Anniversary Certificate of Distinguished Meteorologist Award** -Ngar-Cheung Lau (2003) – El Nino and Asian Climate

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## White House

### Presidential Rank Award for Distinguished Senior Professionals

Isaac Held (2010) – “Isaac’s achievements, hard work and dedication distinguish him an extraordinary example of professionalism and achievement in government”

### Presidential Rank Award for Meritorious Senior Professionals

V. Ramaswamy (2005) – “Cited for his unusual scientific creativity and expertise in the understanding and quantification of the factors that force global climate variations and change and his research into the effects that natural causes and human activity may have on the climate”

Isaac Held (2004) – “For his fundamental contribution to understanding modeling the Earth’s weather and climate”

### **Presidential Early Career Award for Scientists and Engineers (PECASE)**

Charles Stock (2009) – “For enhancing the marine ecosystem dynamics included in GFDL’s earth system model (ESM), and applying ESM and other GFDL models to the study of impacts of climate and variability on marine resources”

Yi Ming (2008) – “For an outstanding record of innovative investigations on aerosols, their interaction with clouds, and their effect on climate and human health, using an end-to-end approach encompassing both climate and modeling observation”

Arlene Fiore (2006) – “Contributed significantly to the science of atmospheric chemistry and to our understanding of ozone pollution and its regulation”

Gabriel Vecchi (2004) – “For fundamental contributions concerning the roles of sub seasonal variability on the onset and termination of El Nino, and on Indian Monsoon rainfall”

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## **Professional Society**

### **American Geophysical Union**

**Hydrologic Sciences Award** – P.C.D. Milly (2013)

**Atmospheric Sciences Ascent Award** – Paul Ginoux (2013), for "sustained pioneering work on aerosols"

**James B. Macelwane Award** – Arlene Fiore (2011), “For significant contributions to the geophysical sciences by an outstanding young scientist”

**William Bowie Medal** – Syukoro Manabe (2010), “This award recognizes his outstanding contributions to fundamental geophysics and for unselfish cooperation in research.”

**James R. Holton Junior Scientist Award** – Arlene Fiore (2005), Massimo Bollasina (2013)

### **Reviewer Recognition**

Rong Zhang (2012) – Editor’s Citation

Larry W. Horowitz (2008) – Editor’s Citation

Thomas R. Knutson (2008) – Editor’s Citation

## American Meteorological Society

**Bernard Haurwitz Lecturer** – Gabriel Lau (Lecture to be given at Annual Meeting in 2015)

**Clarence Leroy Meisinger Award** – Gabriel Vecchi (2013): “For outstanding contributions to the understanding of tropical climate and variability and change”

**Henry M. Stommel Research Award** – Kirk Bryan, Emeritus (2009): “For pioneering contributions to ocean circulation modeling, including model development and applications to the study of ocean heat transport and the ocean’s role in climate”

**Carl Gustaf Rossby Award** – Isaac Held (2008): “For fundamental insights into the dynamics of the Earth’s climate through studies of idealized dynamical models and comprehensive climate simulations”

**Henry G. Houghton Award** – Brian J. Soden (2002): “For creative and thoughtful use of observations from multiple satellite sensors to better characterize the climate system’s radiative and hydrological balances”

## Reviewer Recognition

Isaac M. Held (2012) – Journal of the Atmospheric Sciences Editor’s Award, “For high-level and insightful reviews for a number of editors”

Takeshi Doi (2012) – Journal of Climate Editor’s Award, “For providing a thoughtful and decisive review of a difficult paper on a short notice”

Andrew Wittenberg (2009) – Journal of Climate Editor’s Award, “For his dependably scholarly, constructive, and thorough reviews”

Thomas R. Knutson (2008) – Journal of Climate Editor’s Award, “For his thorough, thoughtful and insightful reviews that have greatly assisted the Journal of Climate editors in some of their most difficult decisions”

## European Geosciences Union

**Fridtjof Nansen Medal** – Stephen Griffies (2014): For oceanographic research

## University, Industry, and External Governmental

**Houghton Lecturer at the Massachusetts Institute of Technology** – Gabe Vecchi (2014)

**Foreign Policy’s Leading Global Thinkers of 2013** – Tom Knutson, Andrew Wittenberg, Fanrong Zeng, and Rong Zhang (2013): “For explaining the complex issues surrounding the extreme events in 2012, and speaks to the broad reach of the work undertaken by all the contributors”

**Noble Lecturer, Physics Department at the University of Toronto** – Isaac Held (2012)

**Alumni Fellowship at Penn State University** – Ronald Stouffer (2012)

**William T. Pecora Award, NASA & Department of the Interior** – Paul Ginoux (2006)

**Aerocenter Journal Citation Award, NASA Goddard Space Flight Center** – Paul Ginoux (2005)

**Technical Honor’s Program Award, Raytheon** – Jeffrey Flick (2005)

**Thompson Lecturer, National Center for Atmospheric Research** – Isaac Held (2005)

**Integrative Graduate Education and Research Traineeship, Distinguished Lecturer, Columbia University** – Isaac Held (2004)

**Alumni Award, University of Michigan** – Leo J. Donner (2003)

**Group Achievement Award for Aqua Mission Team, NASA** – Leo J. Donner (2003)

**Meritorious Service Award, Department of the Interior** – P. C. D. Milly (2002)

**DAO Special Recognition Award, NASA Goddard Space Flight Center** – Shian-Jiann Lin (2002)

**Honorary Doctor of Humane Letters, Chadron State College** – Jerry Mahlman (2000) – The College’s third-ever: “In recognition of his exemplary service to mankind, Chadron State College is pleased to confer upon Dr. Jerry Mahlman the honorary degree, Doctor of Humane Letters. Dr. Mahlman’s scientific career and research has fostered understanding of the effects of human behavior on the ozone layer and worldwide climate change.”

**Climate Protection Award, Environmental Protection Agency** – Jerry Mahlman (2000): “Dr. Jerry Mahlman’s research career has been directed at modeling, diagnosing, and understanding the behavior of the atmosphere and its implications for climate and chemical change. Over the past decade, he has occupied a central role in the direct interpretation and communication of human-caused climate change to policy-makers and communities. Under his leadership over the last 15 years, the Geophysical Fluid Dynamics Laboratory has become

widely recognized as one of the world’s finest climate modeling centers, and a world leader in providing unbiased scientific information on the climate change problem.”

**Scientific Research Award, NASA Goddard Space Flight Center – Shian-Jiann Lin (2000)**

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## **Department of Commerce, National Oceanic and Atmospheric Administration, and Office of Oceanic and Atmospheric Research**

### **Department of Commerce Gold Medal Awards**

Leo Donner, Paul Ginoux, Jean-Christophe Golaz, Richard Hemler, Larry Horowitz, Yi Ming, Marcel Schwarzkopf, Michael Winton, Andrew Wittenberg, Bruce Wyman, *et al.* (2012) – “The group is recognized for original research and world scientific leadership in the modeling of atmospheric greenhouse gases and aerosols, and their interactions with climate”

Morris Bender, Stephen Garner, Isaac Held, Thomas Knutson, Shian-Jiann Lin, Joe Sirutis, Gabriel Vecchi *et al.* (2011) – “The group is recognized for sustained high-quality research, scientific assessment and leadership resulting in an improved understanding of the impact of anthropogenic climate change on past and future hurricane activity”

John Lanzante, V. Ramaswamy, *et al.* (2007) – “For coordinating and drafting a Climate Change Science Program report on Temperature Trends in the Lower Atmosphere”

Morris Bender, Timothy Marchok, *et al.* (2006) – “For development of critical improvements to the Geophysical Fluid Dynamics Laboratory Hurricane Predictions System, and its implementation into operational hurricane forecasts”

V. Ramaswamy and Ronald J. Stouffer (2002) – “For world-renowned scientific contributions to the recently concluded state-of-the-art assessment of the science of global change”

### **Department of Commerce Silver Medal Awards**

John Dunne, Stephen Griffies, Robert Hallberg, Matthew Harrison, Jasmin John, John Krasting, Bonnie Samuels, Lori Sentman, Ronald Stouffer, and Andrew Wittenberg (2013) – “For the development and application of NOAA’s first comprehensive Earth System Models that couple the carbon cycle and climate to project changes”

Kirsten Findell , Larry Horowitz, Hiram Levy, Dan Schwarzkopf, and V. Ramaswamy (2009) – “For showing that projected changes in human emissions of short-lived gases and particles, which are controlled locally and regionally throughout the world to improve air quality, may significantly influence climate in the 21<sup>st</sup> century”

Thomas Delworth, Keith Dixon, Stuart Freidenreich, Paul Ginoux, Richard Hemler, Larry Horowitz, V. Ramaswamy, M. Daniel Schwarzkopf, Michael Spelman, and Ronald Stouffer (2005) – “For delivering state-of-the-art model simulations of past, present, and future climate and for enabling open access to the data sets. Results from a recent international workshop support the conclusion that the Geophysical Fluid Dynamics Laboratory climate model is among the best in the world”

### Department of Commerce Bronze Medal Awards

Douglas Aikin, Rusty A. Benson, Ron Bewtra, James A. Deuringer, Jeffrey D. Flick, Ronald N. Henne, Frank M. Indiviglio, John T. King, Amy Renee Langenhorst, Lawrence J. Lewis, Garrett W. Power, Catherine Raphael, John P. Sheldon, Bernard H. Siebers, Thomas E. Taylor, Jeffrey Varanyak, Edward A. Weiss, Robert K. White and William T. Yeager (2014) – “For selfless application of administrative and technical support throughout Hurricane Sandy to protect mission capability, life, and property at NOAA’s Geophysical Fluid Dynamics Laboratory”  
Rusty Benson (2014) – “For dedication in acquiring supercomputing services to sustain production of the Nation’s operational numerical weather and climate forecast systems”

Ron Bewtra, Jeff Flick, Frank Indiviglio and Bernie Siebers (2014) – “For excellence in transforming NOAA’s R&D High Performance Computing System into an enterprise-wide environment, providing new capabilities that enable scientific advancement”

Aneet K. Bewtra, Jeffery D. Flick, John T. King, Stephen F. Mayle, John P. Sheldon, Bernie H. Siebers Jr. and Edward Weiss III (2010) – “For personal and professional excellence in quickly and effectively restoring mission capability after an electrical disaster at GFDL”

Anand Gnanadesikan (2009) – “For remarkable contributions and original concepts in the design and leverage of the Sant Ocean Hall, the national exhibition on the global ocean”

Keith Dixon and Ronald J. Stouffer (2006) – “For development of the NOAA Operational Model Archive and Distribution System, the first operational U.S. National climate and weather model archive”

John Lanzante (2006) – “For developing research-quality radiosonde and atmospheric temperature datasets for reliably monitoring climate variations and change”

Morris Bender and Timothy Marchok (2005) – “For remarkable improvements to operational hurricane track forecasts through improvements to the Geophysical Fluid Dynamics Laboratory hurricane model and transition of these to NCEP/NWS and DOD”

## Other Department of Commerce Awards

**General Counsel Award** – Marian Westley (2013): “For exceptional performance and significant contributions to the Office of the General Counsel”

**Energy and Water Management Award** – Aneet K. Bewtra, Scott P. Burnham, Jeffrey D. Flick, Brendon Johnson, Stephen F. Mayle, John McGreggor, Amy L. McLiverty, Bernard H. Siebers, and Robert Taylor (2014): “For redesigning GFDL's UPS system, resulting in substantial energy and costs savings”

## NOAA Administrator’s Awards

Shian-Jiann Lin (2013) – “For dramatic improvements in atmospheric models leading to major scientific advances, especially in the simulation of tropical storm activity”

Stephen Griffies (2012) – “For scientific vision, leadership, and development of the Modular Ocean Model (MOM) for climate modeling, research, and predictions”

Thomas Delworth, Isaac Held, Larry Horowitz, Thomas Knutson, Hiram Levy, II, V. Ramaswamy, M. Daniel Schwarzkopf, Ronald Stouffer, *et al.* (2008) – “For outstanding dedication to developing U.S. Climate Change Science Program (CCSP) Synthesis and Assessment Products integrating climate research for decision support”

Aneet Bewtra, John Sheldon, Brian Gross, *et al.* (2005) – “For extraordinary efforts, dedication, and teamwork to develop and issue integrated requirements for a NOAA high performance computer system that realistically demonstrates our One-NOAA vision”

## Oceanic and Atmospheric Research Awards

**Top Research Accomplishments of 2012** – Charles A. Stock (2012) – “For climate impacts studies on endangered leatherback turtles”

**NOAA Green Steward** – Whit Anderson (2009) – “For taking actions to reduce OAR’s carbon footprint. The actions we take on land ultimately affect the oceans we strive to manage and protect”

**Daniel L. Albritton Outstanding Science Communicator** – Keith Dixon (2008) – “An expert climate modeler, has a rare talent and passion for explaining the complexities of climate science in a style that is clear, compelling, and even entertaining. He has educated and influenced stakeholders and policymakers by translating complex information about climate and making it accessible to non-scientists”

**Team Employees of the Year** – FMS Modeling Team: Jeffrey Anderson, Brian Gross, Bruce Wyman, Matthew Harrison, Isaac Held, Richard Hemler, Stephen Klein, Paul Kushner, Peter Phillipps, Joseph Sirutis and Michael Winton (2002) – “For outstanding contributions to the improvement and accessibility of two key atmospheric models”

### **Employee of the Year**

Bernie Siebers (2012) – “For contributions to the development of the cutting-edge technology used to manage GFDL’s massive data archive”

Rusty Benson (2010) – “For outstanding contributions to the promotion of excellence in Administrative/Technical Support at NOAA/GFDL”

Jeffrey D. Flick (2009) – “For outstanding leadership and dedication in ensuring the security of NOAA’s IT systems, and the design and development if NOAA’s next generation high-speed networks”

Stephen Mayle (2006) – “For exceptional leadership by example and strong commitment to personal and professional excellence during all the mission-critical projects undertaken on behalf of OAR”

Wendy Marshall (2005) – “For personal and professional excellence in planning and executing budget duties within OAR and NOAA and for providing outstanding customer service”

John Sheldon (2005) – “For outstanding leadership in developing strategic IT policies and activities to advance NOAA’s environmental data mission and High Performance Computing vision”

Keith Dixon (2004) – “For his superb leadership, personal dedication to excellence, and significant contributions to climate change simulations for the 2007 Intergovernmental Panel on Climate Change”

### **NOAA Research “Outstanding Scientific Paper” Award**

Andrew Wittenberg (2011): Are Historical Records Sufficient to Constrain ENSO Simulations?, *Journal of Climate*, 2009.

Kirsten Findell, Larry Horowitz, Hiram Levy, Dan Schwarzkopf, and V. Ramaswamy (2009): Strong Sensitivity of Late 21<sup>st</sup> century to Projected Changes in Short-lived Air Pollutants, *Journal of Geophysical Research*, 2008.

V. Ramaswamy and Ronald Stouffer (2008) for co-authorship on the work: Solomon, S., D. Qin, M. Manning, R.B. Alley, T. Berntsen, N.L. Bindoff, Z. Chen, A. Chidthaisong, J.M. Gregory, G.C. Hegerl, M. Heimann, B. Hewitson, B.J. Hoskins, F. Joos, J. Jouzel, V. Kattsov, U. Lohmann,

T. Matsuno, M. Molina, N. Nicholls, J. Overpeck, G. Raga, V. Ramaswamy, J. Ren, M. Rusticucci, R. Somerville, T.F. Stocker, R. Stouffer, P. Whetton, R.A. Wood and D. Wratt, 2007: Technical Summary. In: *Climate Change 2007: The Physical Science Basis. Contribution of Working Group I to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change* [Solomon, S., D. Qin, M. Manning, Z. Chen, M. Marquis, K.B. Averyt, M. Tignor and H.L. Miller (eds.)]. *Cambridge University Press*, Cambridge, United Kingdom and New York, NY, USA.

Shaoqing Zhang, Matthew Harrison, Anthony Rosati, and Andrew Wittenberg (2008): System Design and Evaluation of Coupled Ensemble Data Assimilation for Global Oceanic Climate Studies, *Monthly Weather Review*, 135, 3541-3564, 2007.

Gabriel Vecchi, Brian Soden, Andrew Wittenberg, Isaac Held, Ants Leetmaa, and Matthew Harrison (2007): Weakening of Tropical Pacific Atmospheric Circulation Due To Anthropogenic Forcing, *Nature*, 441, 73-76, 2006.

Thomas Delworth (2003) for co-authorship on the work: Delworth, Thomas, and M.E. Mann, Observed and Simulated Multidecadal Variability in the Northern Hemisphere, *Climate Dynamics*, 16(9), 661-676, 2000.

Isaac Held and Brian Soden (2002): Water Vapor Feedback and Global Warming, *Annual Review of Energy and the Environment*, 25, 441-475, 2000.

V. Ramaswamy (2002) – For scientific contributions as a Chapter Lead Author of the international state of understanding assessment of the ozone layer “Scientific Assessment of Ozone Depletion: 1998” that was produced under the United Nations Montreal Protocol on Substances that Deplete the Ozone Layer and that serves NOAA’s mission to provide scientific information to national and international decision makers on the topic of ozone-layer rehabilitation.

Richard Wetherald and Brian Soden (2002) for co-authorship on the work: Soden, Brian, R. Wetherald, G. Stenchikov, and A. Robock, 2002: Global Cooling after the Eruption of Mount Pinatubo: A Test of Climate Feedback by Water Vapor, *Science*, 296(5568), 727-730.

Morris Bender (2001) for co-authorship of the work: Bender, Morris, and I. Ginis, 2000: Real-case Simulations of Hurricane-ocean Interaction Using a High-resolution Coupled Model: Effects on Hurricane Intensity, *Monthly Weather Review*, 128(4), 917-946.

Stephen M. Griffies (2001) for co-authorship of the work: Griffies, Stephen, C. Böning, F.O. Bryan, E.P. Chassignet, R. Gerdes, H. Hasumi, A.C. Hirst, A.M. Treguier, D. Webb, 2000: Developments in Ocean Climate Modeling, *Ocean Modeling*, 2, 123-192.

Thomas Knutson and R. Tuleya (2000): Increased Hurricane Intensities with CO<sub>2</sub>-induced Warming As Simulated Using the GFDL Hurricane Prediction System, *Climate Dynamics*, 15, 503-519, 1999.

V. Ramaswamy, and Brian Soden (2000) for co-authorship of the work: Haywood, J.M., V. Ramaswamy, and Brian Soden, Tropospheric Aerosol Climate Forcing in Clear Sky Satellite Observations Over the Oceans, *Science*, 283(5406), 1299-1303, 1999.

Ronald Stouffer (2000) for co-authorship of the work: Vinnikov, K.Y., R. Stouffer, A. Robock, J.E. Walsh, C.L. Parkinson, D.J. Cavaleiri, J.F.B. Mitchell, D. Garrett, and V.F. Zakharov, Global Warming and Northern Hemisphere Sea Ice Extent, *Science*, 286, 1934-1936, 1999.

### **NOAA Distinguished Career Award**

Anthony Rosati (2014): “For outstanding efforts over many years to develop state-of-the-art climate models and assimilation systems to advance seasonal to centennial climate prediction in NOAA”

Hiram Levy (2013): “For pioneering the understanding of tropospheric chemistry through discovery of fundamental mechanisms and global atmospheric chemistry modeling”