

## Alan Robock

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### EDUCATION:

B.A. in Meteorology, 1970 University of Wisconsin, Madison  
Honors: Phi Eta Sigma, Phi Kappa Phi, Honors Program, Graduated with Distinction

S.M. in Meteorology, 1974 Massachusetts Institute of Technology  
Thesis: "Spin-down of a Stratified, Rotating Fluid"  
Advisor: Norman A. Phillips

Ph.D. in Meteorology, 1977 Massachusetts Institute of Technology  
Dissertation: "Climate Predictability and Simulation with a Global Climate Model"  
Advisor: Edward N. Lorenz Honors: NSF Graduate Fellow, Sigma Xi

### EXPERIENCE:

Professor II [Distinguished Professor], Department of Environmental Sciences, Rutgers University, July, 2003 – present. (Professor, January, 1998 – June, 2003)

Director, Meteorology Undergraduate Program, Rutgers University, July, 2006 – present.

Associate Director, Center for Environmental Prediction, Rutgers University, July, 2005 – present. (Director, July, 2001 – June, 2005)

Visiting Scientist, Laboratoire de Météorologie Dynamique, Université Pierre et Marie Curie, Paris, France, January – June, 2005.

Member Representative for Rutgers University to the University Corporation for Atmospheric Research, March, 2001 – present.

Member, Quaternary Studies Graduate Certificate Program, Rutgers University, September, 2000 – present.

Member, Environmental and Occupational Health Sciences Institute, Rutgers University, January, 1999 – June, 2004.

Professor, Dept. of Meteorology, Univ. of Maryland, July, 1996 – December, 1997. (Assistant Professor, August, 1977 – June, 1982; Associate Professor, July, 1982 – June, 1996)

Visiting Research Scientist, Princeton University, NOAA/Geophysical Fluid Dynamics Laboratory, September, 1994 – August, 1995.

Maryland State Climatologist, January, 1991 – December, 1997.

AAAS Congressional Science Fellow (Legislative Assistant, Congressman Bill Green (NY); and Research Fellow, Environmental and Energy Study Conf.), September, 1986 – August, 1987.

Fellow and Council Member, Cooperative Institute for Climate Studies, University of Maryland, June, 1984 – January, 1990.

Snow Forecaster, Montgomery County (Maryland) Public Schools, 1980 – 1981.

Research Scientist, Atm. Sci. Group, Lawrence Livermore Lab., California, Summer, 1973.

Peace Corps Volunteer, Philippines, 1970 – 1972. (Developed curricula and trained teachers of meteorology in the fishery vocational colleges.)

### **EDITORIAL SERVICE:**

Editor, *Journal of Climate and Applied Meteorology*, January, 1985 – December, 1987.  
Associate Editor, *Reviews of Geophysics*, September, 1994 – December, 2000; February, 2006 – present.  
Associate Editor, *Journal of Geophysical Research–Atmospheres*, November, 1998 – April, 2000.  
Editor, *Journal of Geophysical Research–Atmospheres*, April, 2000 – March, 2005.  
Member of Editorial Board, *Atmospheric and Oceanographic Sciences Library*, Springer publishing, January, 2006 – December, 2008.

### **INVITED ACADEMIC VISITS:**

State Hydrological Institute, Leningrad, USSR, August, 1981; July, 1984; December, 1989; March, 1991.  
Computing Center, Academy of Sciences, Moscow, USSR, July, 1984; March, 1991.  
Alexander von Humboldt University, Berlin, DDR, May, 1988.  
Michigan Technological University, Houghton, April, 1990.  
Earth System Science Center, Pennsylvania State University, University Park, February, 1992.  
Commission of the European Communities Joint Research Centre, Ispra, Italy, May, 1993.  
Tokyo Metropolitan University, July, 1993 (Japan Society for the Promotion of Science Research Fellow); July, 1998.  
Quaternary Research Center and Volcano Systems Center, University of Washington, Seattle, March, 1995.  
Institute for the Study of Planet Earth, University of Arizona, Tucson, March, 1996 (Visiting Scholar); February, 1997.  
Max Planck Institut für Meteorologie, Hamburg, Germany, April, 1996; October, 1996.  
Université Catholique de Louvain, Louvain-la-Neuve, Belgium, April, 1996 (Invited Professor).  
University of New South Wales, Sydney, Australia, December, 1996.  
North Carolina State University, Raleigh, February, 1998.  
State University of New York, Stony Brook, April, 1998.  
Queen's University, Belfast, Northern Ireland, June, 1998.  
Institute of Geography, Academia Sinica, Beijing, August, 1998.  
University of Bristol, Bristol, England, October, 2000.  
McGill University, Montreal, Canada, January, 2001.  
International Pacific Research Center, University of Hawaii, April, 2001; May, 2002.  
Escuela Politécnica Nacional, Quito, Ecuador, May, 2001.  
University of Copenhagen, Denmark, January, 2003.  
University of Victoria, British Columbia, Canada, April, 2003.  
University of Paris, January, 2004.  
University of Maine, February, 2004.  
The Pennsylvania State University, February, 2004.  
Royal Holloway, University of London, England, March, 2005.  
University of Reading, England, March, 2005.  
Hadley Centre for Climate Prediction and Research, Exeter, England, May, 2005.  
University of Cambridge, Cambridge, England, May, 2005.  
European Space Research and Technology Centre, European Space Agency, Noordwijk, Netherlands, May – June, 2005.

University of Texas, March, 2006.

University of Hawaii, August, 2006.

The Pennsylvania State University, November, 2007.

Istanbul Technical University, Turkey, January, 2008.

University of Virginia, April, 2008.

University of Oklahoma, April, 2008.

Purdue University, April, 2008.

University of Texas, April, 2008.

Jet Propulsion Lab/California Institute of Technology, February, 2009.

McGill University, Montreal, Canada, November, 2009.

Max Planck Institute for Meteorology, Hamburg, Germany, November, 2009.

**M.S. STUDENTS SUPERVISED:** Donald Marks (1980), Dale Kaiser (1984), John Scialdone (1985), Peter Ahnert (1986), Andrew Vogelmann (1986), C. Adam Schlosser (1992), Jianping Mao (1992), Yuhe Liu (1992), Joanna Dionne (1993), Melissa P. Free (1993), Jared K. Entin (1996), Brad Fisher (1997), Sean Gray (1998), Shuang Qiu (1998), Juan Carlos Antuña (1998), Lifeng Luo (2000), Lori Thompson (2001), Luke Oman (2003), Haibin Li (2005), Thomas Atkins (2005), Chaochao Gao (2005)

**PH.D. STUDENTS SUPERVISED:** Dian J. Gaffen (now Seidel) (1992), Jianping Mao (1995), C. Adam Schlosser (1995), Melissa P. Free (1996), Jared K. Entin (1998), Juan Carlos Antuña (2002), Lifeng Luo (2003), Luke Oman (2005), Haibin Li (2007), Chaochao Gao (2008), Elif Sertel (2008)

**POSTDOCS SUPERVISED:** Suxia Liu, November, 1994 – September, 1995; G. Srinivasan, November, 1998 – October, 1999; Jared Entin, December, 1998 – February, 1999; S. Ramachandran, August, 1999 – February, 2000; Mingquan Mu, November, 2000 – May, 2003; Gonzalo Miguez-Macho, January, 2001 – February, 2005; Richard Anyah, September, 2005 – June, 2007; Luke Oman, February, 2006 – October, 2006.

#### **MEMBERSHIP IN PROFESSIONAL SOCIETIES:**

American Meteorological Society, 1976 – present.

- Member, Committee on Climate Variations, 1997 – 2003.

- Appointed to committee to draft a policy statement on geoenvironment, 2008 – 2009.

American Geophysical Union, 1978 – present.

- Atmospheric Sciences Section

  - Member, Executive Committee, 2000 – present.

  - Chair, Climate Technical Committee, 2005 – 2006.

  - President-Elect, 2006 – 2008.

  - President, 2008 – 2010.

- Member, Council, 2006 – 2010.

- Member, Meetings Committee, 2006 – 2008.

- Member, Future Focus Task Force, 2008 – 2009.

American Association for the Advancement of Science, 1975 – present.

- Member, Congressional Science Fellow Selection Committee, 1987.

- Atmospheric and Hydrospheric Sciences Section (Section W)

  - Member, Electorate Nominating Committee, 1999 – 2002.

  - Chair-Elect, 2009 – 2010.

International Association of Volcanism and Chemistry of the Earth's Interior, 2000 – present.

## HONORS:

Elected Fellow, American Meteorological Society, 1998.

Listed in *Who's Who in America*, 1999.

Listed in *2000 Outstanding Scientists of the 20th Century*, 1999.

Listed in *Who's Who in the World*, 2000.

Cook College Research Excellence Award, for active and original research documented by a series of research papers, 2001.

GCIP (GEWEX (Global Energy and Water Experiment) Continental-scale International Project) Program Management Award, "For his efforts in preparing useable soil moisture data sets and making them available to the GCIP Community," 2002.

Recipient of Outstanding Scientific Research Paper Award from NOAA Office of Oceanic and Atmospheric Research, 2003.

Honored by the University Corporation for Atmospheric Research for advocacy on behalf of the scientific community above and beyond the call of duty, October, 2004.

Honored by *Web of Science* for a Highly Cited Article: "Since 2000, you have had 61 citations to your article, 'The Global Soil Moisture Data Bank.' This means that the number of citations your article received places it in the top 1% within its field according to *Essential Science Indicators*<sup>SM</sup>. Your work is highly influential among your colleagues in your field of study." (2005)

Honored by *Web of Science* for a Highly Cited Article: "Since 2000, you have had 87 citations to your article, 'Volcanic Eruptions and Climate.' This means that the number of citations your article received places it in the top 1% within its field according to *Essential Science Indicators*<sup>SM</sup>. Your work is highly influential among your colleagues in your field of study." (2005)

2nd place, *Weatherwise* 2005 Photo Contest. Winning photograph of polar stratospheric cloud taken Aug. 29, 2004 in McMurdo, Antarctica, published in September/October 2005 *Weatherwise*, **58**, no. 5, pp. 46-47.

Honored by the University Corporation for Atmospheric Research for advocacy on behalf of the scientific community above and beyond the call of duty, October, 2005.

Editor's Award, *Journal of Hydrometeorology*, "for providing timely, insightful, and comprehensive reviews that have helped to ensure the publication of high quality research," presented at American Meteorological Society Annual Awards Banquet, February 1, 2006.

Rutgers University Board of Trustees Award for Excellence in Research, the university's highest honor for distinguished research contributions, May 4, 2006.

Honored by the University Corporation for Atmospheric Research for advocacy on behalf of the scientific community above and beyond the call of duty, October, 2006.

Honored by the University Corporation for Atmospheric Research for advocacy on behalf of the scientific community above and beyond the call of duty, October, 2007.

Member of the Intergovernmental Panel on Climate Change, which won the Nobel Peace Prize, December 10, 2007.

Bradley Prize for best talk of the year, Geological Society of Washington, December, 2007.

"Your award consists of a silver bowl, with your name inscribed on it, and a check for \$200."

Honored by the University Corporation for Atmospheric Research for advocacy on behalf of the scientific community above and beyond the call of duty, October, 2008.

American Meteorological Society/Sigma Xi Distinguished Lecturer, 2008-2009.

Elected Fellow, American Association for the Advancement of Science, 2008.

Honored by the University Corporation for Atmospheric Research for advocacy on behalf of the scientific community above and beyond the call of duty, October, 2009.

**MEMBERSHIP ON NATIONAL AND INTERNATIONAL PANELS:**

Working Group VIII, US-USSR Agreement on Cooperation in the Field of Environmental Protection, 1979 – 1995.

NASA Climate Data System Advisory Committee, 1985 – 1990.

Climate Trends Panel, National Climate Program Office, NOAA, 1988 – 1989.

Joint Working Group on International Aerosol Climatology Project, 1989 – 1995.

Global Climate Upper Air Data Experts Group, NOAA, 1990 – 1991.

Working Group I of the Intergovernmental Panel on Climate Change (IPCC), 1990 – present.

NASA GSFC DAAC User Working Group, 1991 – 1993.

Scientific Advisory Board, National Institute for Global Environmental Change (NIGEC), Great Plains Regional Center, 1992 – 2000.

International Association of Volcanism and Chemistry of the Earth's Interior (IAVCEI) and International Association for Meteorology and Atmospheric Sciences (IAMAS) Commission on Volcanism and the Earth's Atmosphere 1992 – present (Secretary, 1992 – 2000; Leader, 2000 – 2004).

International Climate Commission of IAMAS, 1995 – present.

International Global Aerosol Chemistry project, Focused Aerosol Activity 8.4, "Upper Tropospheric and Stratospheric Aerosols," Coordinating Committee, 1995 – 1999.

Land Surface Working Group, Climate System Model, NCAR, 1997 – 1999.

International Satellite Land Surface Climatology Project (ISLSCP) Science Panel, 1997–present.

SPARC Working Group on Stratospheric Aspects of Climate Forcings, 1997 – present.

GEWEX Americas Prediction Project (GAPP) Data Management Committee, 2001 – present.

Advisory Council for the Consortium for Atlantic Regional Assessment (CARA) at Penn State University, 2003 – 2006.

International Commission on the Middle Atmosphere of IAMAS, 2003 – 2007.

National Ecological Observatory Network (NEON) Design Consortium, Science and Human Dimensions Committee, Climate Change Subcommittee, 2004 – 2005.

Technical Committee on Remote Sensing and Data Assimilation in Hydrology, European Geophysics Union, 2005 – 2006.

Elected member of President's Advisory Committee (formerly University Relations Committee), University Corporation for Atmospheric Research, 2005-2011. Member, PACUR Subcommittee to review the NCAR/ASP Faculty Fellowship applications.

Member, International Soil Moisture Working Group, 2006 – present.

Member, National Association of State Universities and Land Grant Colleges (NASULGC); Commission on Food, Environment and Renewable Resources; Board on Oceans and Atmosphere, 2008 – present.

## **PARTICIPATION IN INTERNATIONAL EXPERIMENTS:**

Atmospheric Model Intercomparison Project (AMIP), 1992 – present.

Leader of Diagnostic Subproject 11: Evaluation of soil moisture and continental water budget

Project on Intercomparison of Land-surface Parameterization Schemes (PILPS), 1992 – present.

Contributor of model simulations and validation data sets

Co-leader of PILPS Phase 2(d) project (grassland simulations for Valdai, Russia)

Member, International Coordinating Committee, 1999 – present

International Satellite Land Surface Climatology Project (ISLSCP), 1993 – present.

Contributor of validation data sets

Conductor of soil moisture intercomparisons

GCM Reality Intercomparison Project for SPARC (GRIPS), 1997 – present.

Co-leader of Task 3a, Intercomparison of Simulations of the 1991 Pinatubo Eruption

Atmospheric Radiation Measurement (ARM) Science Team, 1998 – 2000.

Participant in Single Column Modeling Intercomparison Project

Stratospheric Aerosol and Gas Experiment II (SAGE II) Science Team, 1999 – 2003.

Land Data Assimilation System (LDAS) Science Team, 1999 – present.

Soil Moisture and Ocean Salinity (SMOS) Validation and Retrieval Team, 2005 – present.

Northern Eurasian Earth Science Partnership Initiative (NEESPI) Science Team, 2005 – 2007.

Soil Moisture Active Passive (SMAP) Calibration/Validation Working Group, 2008 – present.

## **BOOKS:**

1. Robock, Alan, and Clive Oppenheimer, Eds., 2003: *Volcanism and the Earth's Atmosphere*, Geophysical Monograph 139, American Geophysical Union, Washington, DC, 360 pp.

## **REFEREED JOURNAL ARTICLES:**

1. Robock, Alan, 1975: On the eddy structure of hurricanes, *Quart. J. R. Met. Soc.*, **101**, 657-663.
2. Robock, Alan, 1976: Reply [to comments on above paper by J. S. A. Green and H. Riehl]. *Quart. J. R. Met. Soc.*, **102**, 453-455.
3. Bornstein, Robert D. and Alan D. Robock, 1976: Effects of variable and unequal time steps for advective and diffusive processes in simulations of the urban boundary layer. *Mon. Weather Rev.*, **104**, 260-267.
4. Robock, Alan, 1978: Internally and externally caused climate change. *J. Atmos. Sci.*, **35**, 1111-1122.
5. Robock, Alan, 1979: The "Little Ice Age": Northern Hemisphere average observations and model calculations. *Science*, **206**, 1402-1404.
6. Robock, Alan, 1980: The seasonal cycle of snow cover, sea ice, and surface albedo. *Mon. Weather Rev.*, **108**, 267-285.
7. Robock, Alan, 1981: A latitudinally dependent volcanic dust veil index, and its effect on climate simulations. *J. Volcanol. Geotherm. Res.*, **11**, 67-80.

8. Robock, Alan, 1981: The Mount St. Helens volcanic eruption of 18 May 1980: Minimal climatic effect. *Science*, **212**, 1383-1384.
9. Robock, Alan and Clifford Mass, 1982: The Mount St. Helens volcanic eruption of 18 May 1980: Large short-term surface temperature effects. *Science*, **216**, 628-630.
10. Mass, Clifford and Alan Robock, 1982: The short-term influence of the Mount St. Helens volcanic eruption on surface temperature in the Northwest United States. *Mon. Weather Rev.*, **110**, 614-622.
11. Robock, Alan, 1982: The Russian surface temperature data set. *J. Appl. Meteorol.*, **21**, 1781-1785.
12. Robock, Alan, 1983: Global mean sea level: indicator of climate change? *Science*, **219**, 996.
13. Robock, Alan, 1983: Ice and snow feedbacks and the latitudinal and seasonal distribution of climate sensitivity. *J. Atmos. Sci.*, **40**, 986-997.
14. Robock, Alan and Michael Matson, 1983: Circumglobal transport of the El Chichón volcanic dust cloud. *Science*, **221**, 195-197.
15. Robock, Alan, 1983: El Chichón provides test of volcanoes' influence on climate. *Nat. Weather Dig.*, **8**, 40-45.
16. Robock, Alan, 1984: Climate model simulations of the effects of the El Chichón eruption. *Geofísica Internacional*, **23**, 403-414.
17. Matson, Michael and Alan Robock, 1984: Satellite detection of the 1982 El Chichón eruptions and stratospheric dust cloud. *Geofísica Internacional*, **23**, 117-127.
18. Ropelewski, Chester F., Alan Robock and Michael Matson, 1984: Comments on "An apparent relationship between Eurasian spring snow cover and the advance period of the Indian summer monsoon." *J. Climate Appl. Met.*, **23**, 341-342.
19. Robock, Alan, 1984: Snow and ice feedbacks prolong effects of nuclear winter. *Nature*, **310**, 667-670.
20. Robock, Alan, 1985: Detection of volcanic, CO<sub>2</sub> and ENSO signals in surface air temperature. *Adv. Space Res.*, **5**, No. 6, 53-56.
21. Kaiser, Dale and Alan Robock, 1985: Effects of concurrent snow and cloud cover on planetary albedo. *Adv. Space Res.*, **5**, No. 6, 279-282.
22. Robock, Alan and Dale Kaiser, 1985: Satellite-observed reflectance of snow and clouds. *Mon. Weather Rev.*, **113**, 2023-2029.
23. Robock, Alan, 1985: An updated climate feedback diagram. *Bull. Amer. Met. Soc.*, **66**, 786-787.
24. Scialdone, John and Alan Robock, 1987: Comparison of Northern Hemisphere snow cover data sets. *J. Climate Appl. Met.*, **26**, 53-68.
25. Green, Bill, 1987: Policies on global warming and ozone depletion. *Environment*, **29**, No. 3, 5, 45. [ghostwritten]

26. Vogelmann, A. M., A. Robock and R. G. Ellingson, 1988: Effects of dirty snow in nuclear winter simulations. *J. Geophys. Res.*, **93**, 5319-5332.
27. MacCracken, Michael C. and Alan D. Robock, 1988: A message of hope for a missing colleague. *Environment*, **30**, No. 5, 5.
28. Scialdone, John and Alan Robock, 1988: Reply [to comments on paper #24 above by Kukla, Robinson, and Crum]. *J. Climate*, **1**, 442.
29. Robock, Alan, 1988: Enhancement of surface cooling due to forest fire smoke. *Science*, **242**, 911-913.
30. Robock, Alan, 1989: Policy implications of nuclear winter and ideas for solutions. *Ambio*, **18**, 360-366.
31. Robock, Alan, 1989: New models confirm nuclear winter. *Bull. Atomic Sci.*, **45**, No. 7, 32-35.
32. Robock, Alan, 1989: Satellite data contamination. *Nature*, **341**, 695.
33. Robock, Alan, 1990: Nuclear winter confirmed. *National Forum - The Phi Kappa Phi Journal*, **70**, No. 1, 17-19.
34. Robock, Alan, 1991: Surface cooling due to forest fire smoke. *J. Geophys. Res.*, **96**, 20,869-20,878.
35. Gaffen, Dian J., Alan Robock and William P. Elliott, 1992: Annual cycles of tropospheric water vapor. *J. Geophys. Res.*, **97**, 18,185-18,193.
36. Gaffen, Dian J., William P. Elliott, and Alan Robock, 1992: Relationships between tropospheric water vapor and surface temperature as observed by radiosondes. *Geophys. Res. Lett.*, **19**, 1839-1842.
37. Robock, Alan and Jianping Mao, 1992: Winter warming from large volcanic eruptions. *Geophys. Res. Lett.*, **19**, 2405-2408.
38. Robock, Alan, Richard P. Turco, Mark A. Harwell, Thomas P. Ackerman, Rigoberto Andressen, Hsin-shih Chang and M. V. K. Sivakumar, 1993: Use of general circulation model output in the creation of climate change scenarios for impact analysis. *Climatic Change*, **23**, 293-335.
39. Graf, H.-F., I. Kirchner, A. Robock and I. Schult, 1993: Pinatubo eruption winter climate effects: model versus observations. *Climate Dynamics*, **9**, 81-93.
40. Robock, Alan and Yuhe Liu, 1994: The volcanic signal in Goddard Institute for Space Studies three-dimensional model simulations. *J. Climate*, **7**, 44-55.
41. Robock, Alan and Hans-F. Graf, 1994: Effects of preindustrial human activities on climate. *Chemosphere*, **29**, 1087-1097. (Invited paper)
42. Robock, Alan, Konstantin Ya. Vinnikov, C. Adam Schlosser, Nina A. Speranskaya, and Yongkang Xue, 1995: Use of midlatitude soil moisture and meteorological observations to validate soil moisture simulations with biosphere and bucket models. *J. Climate*, **8**, 15-35.

43. Maytín, Carlos E., Miguel Acevedo, Ramón Jaimez, Rigoberto Andressen, Mark A. Harwell, Alan Robock, and Aura Azócar, 1995: Potential effects of global climatic change on the phenology and yield of maize in Venezuela. *Climatic Change*, **29**, 189-211.
44. Robock, Alan and Jianping Mao, 1995: The volcanic signal in surface temperature observations. *J. Climate*, **8**, 1086-1103.
45. Robock, Alan and Melissa P. Free, 1995: Ice cores as an index of global volcanism from 1850 to the present. *J. Geophys. Res.*, **100**, 11,549-11,567.
46. Stenchikov, Georgiy L. and Alan Robock, 1995: Diurnal asymmetry of climatic response to increased CO<sub>2</sub> and aerosols: Forcings and feedbacks. *J. Geophys. Res.*, **100**, 26,211-26,227.
47. Robock, Alan, Karl E. Taylor, Georgiy L. Stenchikov, and Yuhe Liu, 1995: GCM evaluation of a mechanism for El Niño triggering by the El Chichón ash cloud. *Geophys. Res. Lett.*, **22**, 2369-2372.
48. Vinnikov, Konstantin Y., Alan Robock, Nina A. Speranskaya, and C. Adam Schlosser, 1996: Scales of temporal and spatial variability of midlatitude soil moisture. *J. Geophys. Res.*, **101**, 7163-7174.
49. Vinnikov, Konstantin Ya., Alan Robock, Ronald J. Stouffer, and Syukuro Manabe, 1996: Vertical patterns of free and forced climate variations. *Geophys. Res. Lett.*, **23**, 1801-1804.
50. Yang, Zong-Liang, Robert E. Dickinson, Alan Robock and Konstantin Ya. Vinnikov, 1997: On validation of the snow sub-model of the Biosphere-Atmosphere Transfer Scheme with Russian snow cover and meteorological observational data. *J. Climate*, **10**, 353-373.
51. Robock, Alan, Konstantin Ya. Vinnikov, and C. Adam Schlosser, 1997: Reply (Evaluation of land-surface parameterization schemes using observations) [to comments on paper #42 above by Xue *et al.*] *J. Climate*, **10**, 377-379.
52. Chen, T. H., A. Henderson-Sellers, P. C. D. Milly, A. J. Pitman, A. C. M. Beljaars, J. Polcher, F. Abramopolous, A. Boone, S. Chang, F. Chen, Y. Dai, C. E. Desborough, R. E. Dickinson, L. Dümenil, M. Ek, J. R. Garratt, N. Gedney, Y. M. Gusev, J. Kim, R. Koster, E. A. Kowalczyk, K. Laval, J. Lean, D. Lettenmaier, X. Liang, J.-F. Mahfouf, H.-T. Mengelkamp, K. Mitchell, O. N. Nasonova, J. Noilhan, A. Robock, C. Rosenzweig, J. Schaake, C. A. Schlosser, J.-P. Schultz, Y. Shao, A. B. Shmakin, D. L. Verseghy, P. Wetzell, E. F. Wood, Y. Xue, Z.-L. Yang, and Q. Zeng, 1997: Cabauw experimental results from the Project for Intercomparison of Land-surface Parameterization Schemes (PILPS). *J. Climate*, **10**, 1194-1215.
53. Schlosser, C. Adam, Alan Robock, Konstantin Ya. Vinnikov, Nina A. Speranskaya, and Yongkang Xue, 1997: 18-Year land-surface hydrology model simulations for a midlatitude grassland catchment in Valdai, Russia. *Mon. Weather Rev.*, **125**, 3279-3296.
54. Mao, Jianping and Alan Robock, 1998: Surface air temperature simulations by AMIP general circulation models: Volcanic and ENSO signals and systematic errors. *J. Climate*, **11**, 1538-1552.

55. Qu, Weiqing, A. Henderson-Sellers, A. J. Pitman, T. H. Chen, F. Abramopolous, A. C. M. Beljaars, A. Boone, S. Chang, F. Chen, Y. Dai, C. E. Desborough, R. E. Dickinson, L. Dümenil, M. Ek, J. R. Garratt, N. Gedney, Y. M. Gusev, J. Kim, R. Koster, E. A. Kowalczyk, K. Laval, J. Lean, D. Lettenmaier, X. Liang, J.-F. Mahfouf, H.-T. Mengelkamp, P. C. D. Milly, K. Mitchell, O. N. Nasonova, J. Noilhan, J. Polcher, A. Robock, C. Rosenzweig, J. Schaake, C. A. Schlosser, J.-P. Schultz, A. B. Shmakin, D. L. Verseghy, P. Wetzels, E. F. Wood, Y. Xue, Z.-L. Yang, and Q. Zeng, 1998: Sensitivity of latent heat fluxes from PILPS land-surface schemes to perturbations of surface air temperature. *J. Atmos. Sci.*, **55**, 1909–1927.
56. Robock, Alan, C. Adam Schlosser, Konstantin Ya. Vinnikov, Nina A. Speranskaya, Jared K. Entin, and Shuang Qiu, 1998: Evaluation of AMIP soil moisture simulations. *Global and Planetary Change*, **19**, 181-208.
57. Stenchikov, Georgiy L., Ingo Kirchner, Alan Robock, Hans-F. Graf, Juan Carlos Antuña, R. G. Grainger, Alyn Lambert, and Larry Thomason, 1998: Radiative forcing from the 1991 Mount Pinatubo volcanic eruption. *J. Geophys. Res.*, **103**, 13,837-13,857.
58. Kelly, P. M., P. D. Jones, A. Robock, and K. R. Briffa, 1998: The contribution of Hubert H Lamb to the study of volcanic effects on climate. *Weather*, **53**, 209-222. (Invited paper)
59. Vinnikov, Konstantin Y., Alan Robock, Shuang Qiu, Jared K. Entin, Manfred Owe, Bhaskar J. Choudhury, Steven E. Hollinger and Eni G. Njoku, 1999: Satellite remote sensing of soil moisture in Illinois, United States. *J. Geophys. Res.*, **104**, 4145-4168.
60. D'Arrigo, Rosanne, Gordon Jacoby, Melissa Free, and Alan Robock, 1999: Northern Hemisphere temperature variability for the past three centuries: Tree-ring and model estimates. *Climatic Change*, **42**, 663-675.
61. Entin, Jared, Alan Robock, Konstantin Y. Vinnikov, Shuang Qiu, Vladimir Zabelin, Suxia Liu, A. Namkhai, and Ts. Adyasuren, 1999: Evaluation of Global Soil Wetness Project soil moisture simulations. *J. Meteorol. Soc. Japan*, **77**, 183-198. (Invited paper)
62. Pitman, A. J., A. Henderson-Sellers, C. E. Desborough, Z.-L. Yang, F. Abramopoulos, A. Boone, R. E. Dickinson, N. Gedney, R. Koster, E. Kowalczyk, D. Lettenmaier, X. Liang, J.-F. Mahfouf, J. Noilhan, J. Polcher, W. Qu, A. Robock, C. Rosenzweig, C. A. Schlosser, A. B. Shmakin, J. Smith, M. Suarez, D. Verseghy, P. Wetzels, E. Wood, Y. Xue, 1999: Key results and implications from Phase 1(c) of the Project for Intercomparison of Land-surface Parametrization Schemes, *Climate Dynamics*, **15**, 673-684.
63. Vinnikov, Konstantin Y., Alan Robock, Shuang Qiu, and Jared K. Entin, 1999: Optimal design of surface networks for observation of soil moisture. *J. Geophys. Res.*, **104**, 19,743-19,749.
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97. \*Robock, Alan, and Piers Forster, 2004: Use of observations from the Mt. Pinatubo eruption to estimate climate sensitivity. *Pre-Conference Volume, IPCC Working Group I Workshop on Climate Sensitivity, Paris, France, July 26-29, 2004*, 81-83.
98. Robock, Alan, 2004: Global warming. Letter to the Editor, *Science Times* section, *New York Times*, September 7, 2004.
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100. Seidel, Dian, James Angell, Alan Robock, Bruce Hicks, Karin Labitzke, John Lanzante, Jennifer Logan, Jerry Mahlman, V. Ramaswamy, Bill Randel, Eugene Rasmusson, Rebecca Ross, and S. Fred Singer, 2005: Jim Angell's contributions to meteorology:

- Report from a symposium honoring him on his 80th birthday. *Bull. Amer. Meteorol. Soc.*, **86**, 403-410.
101. Robock, Alan, 2005: Blurb sent wrong message. (Letter to Editor about cloud seeding) *Bull. Amer. Meteorol. Soc.*, **86**, 1400.
  102. Robock, Alan, 2006: Bigger threat to Earth. (Letter to Editor about global warming) *New York Times*, Sept. 19, p. F4.
  103. Mills, Michael J., Luke Oman, Alan Robock, and Owen B. Toon, 2006: Here's how "nuclear winter" might occur. (Guest Opinions) *Daily Camera*, Boulder, Colorado, Dec. 28.
  104. Robock, Alan, and Hong-Fu Yin, 2006: Environmental impact of continental volcanism. *IAVCEI News*, No. 2, 10.
  105. Robock, Alan, 2007: Nuclear power's costs and perils (Letter to Editor), *Physics Today*, **60**, No. 1, 14.
  106. Robock, Alan, 2007: Climate effects of a regional nuclear conflict. *IPRC Climate*, **7**, no. 1, 16-18.
  107. Robock, Alan, 2007: Nuclear power challenges and alternatives (Reply to comments on "Nuclear power's costs and perils. (Letter to Editor)"), *Physics Today*, **60**, No. 9, 16.
  108. Francis, Jennifer, Tony Broccoli, Kristy Dahl, David Robinson, and Alan Robock, 2007: Global warning, not whining. (Letter to Editor) *Daily Targum*, **140**, No. 16 (Sept. 25), 10-11.
  109. O'Malley, Doug, and Alan Robock, 2007: Warming up to global action. *Bergen Record*. (Op-ed, Oct. 31).
  110. Robock, Alan, 2008: Time to bury a dangerous legacy – part II: Climatic catastrophe would follow regional nuclear conflict. YaleGlobal Online (Yale Center for the Study of Globalization, Yale University, New Haven, Connecticut, March 17, 2008), <http://yaleglobal.yale.edu/display.article?id=10512>
  111. Robock, Alan, 2008: 20 reasons why geoengineering may be a bad idea. *Bull. Atomic Scientists*, **64**, No. 2, 14-18, 59, doi:10.2968/064002006.
  112. Robock, Alan, 2008: Geoengineering shouldn't distract from investing in emissions reduction. *Bull. Atomic Scientists*, Roundtable discussion, <http://www.thebulletin.org/web-edition/roundtables/has-the-time-come-geoengineering>
  113. Robock, Alan, 2008: Whither geoengineering? *Science*, **320**, 1166-1167.
  114. Ohring, George, Shabtai Cohen, Joel Norris, Alan Robock, Yinon Rudich, Martin Wild, and Warren Wiscombe, 2008: Global dimming and brightening; International Workshop of the Israel Science Foundation on Global Dimming and Brightening; Ein Gedi, Israel, 10–14 February 2008. *EOS*, **89**, 212.
  115. Robock, Alan, 2008: The value of thoroughly evaluating geoengineering schemes. *Bull. Atomic Scientists*, Roundtable discussion, <http://www.thebulletin.org/web-edition/roundtables/has-the-time-come-geoengineering>
  116. Robock, Alan, 2008: Geoengineering: It's not a panacea. *Geotimes*, **53**, no. 7, 58.

117. Robock, Alan (Lead Author); Sjaak Slanina (Topic Editor). 2008: Nuclear winter. In: *Encyclopedia of Earth*. Cutler J. Cleveland, Ed. (Washington, D.C.: Environmental Information Coalition, National Council for Science and the Environment). [http://www.eoearth.org/article/Nuclear\\_winter](http://www.eoearth.org/article/Nuclear_winter)
118. Robock, Alan, 2008: We should really worry about nuclear winter. *Bull. Atomic Scientists*, Roundtable discussion, <http://www.thebulletin.org/web-edition/roundtables/has-the-time-come-geoengineering>
119. Robock, Alan, 2009: Nuclear winter. in *Encyclopedia of Climate and Weather, Volume 2*, Stephen H. Schneider, Ed., (Oxford Univ. Press, New York), in press. (Invited paper)
120. Robock, Alan, 2009: A biased economic analysis of geoengineering. *RealClimate*, <http://www.realclimate.org/index.php?p=840>
121. Robock, Alan, 2009: Testimony before the House Committee on Science and Technology Hearing, "Geoengineering: Assessing the Implications of Large-Scale Climate Intervention," November 5, 2009, 125 pp. [http://democrats.science.house.gov/Media/file/Commdocs/hearings/2009/Full/5nov/Robock\\_Testimony.pdf](http://democrats.science.house.gov/Media/file/Commdocs/hearings/2009/Full/5nov/Robock_Testimony.pdf)
122. Robock, Alan, and Owen Brian Toon, 2010: Local nuclear war, global suffering. *Scientific American*, **302**, 74-81.

\* papers also presented at conferences

#### **CONFERENCES ORGANIZED:**

1. Workshop on the Impacts of Climate Change on New Jersey, Rutgers University, February 23, 2001.
2. Workshop on Modeling Current and Future NYC Metro Area Meteorological Distributions, Rutgers University, March 2, 2001.
3. Lidar Measurement in Latin America Workshop, Camagüey, Cuba, March 6-8, 2001. (Member of Program Committee)
4. AGU Chapman Conference on Volcanism and the Earth's Atmosphere, Thera, Greece, June 17-21, 2002.
5. Second Lidar Measurement in Latin America Workshop, Camagüey, Cuba, February 15 – March 1, 2003. (Member of Program Committee)

#### **CONFERENCE SESSIONS CONVENED:**

1. "Modeling Results from PILPS," 14th AMS Conference on Hydrology, Dallas, Texas, January 10-15, 1999.
2. "Volcanic Eruptions and Climate," AGU Fall Meeting, San Francisco, California, December 13-17, 1999.
3. "Ten Years of Science from the 1991 Mount Pinatubo Volcano Eruption," All Union Session, AGU Fall Meeting, San Francisco, California, December 10-14, 2001.
4. "Regional Climate Modeling," AGU Fall Meeting, San Francisco, California, December 6-10, 2002.

5. "Volcanism and the Earth's Atmosphere," XXIII General Assembly of the International Union of Geodesy and Geophysics, Sapporo, Japan, June 30 – July 11, 2003.
6. "Volcanism and the Earth's Atmosphere," IAVCEI General Assembly, Pucón, Chile, November 14-19, 2004.
7. "Methods in Regional Climate Modeling," AGU Fall Meeting, San Francisco, California, December 13-17, 2004.
8. "Northern Eurasia Regional Climate and Environmental Change," AGU Fall Meeting, San Francisco, California, December 13-17, 2004.
9. "Multi Scale Soil Moisture Estimation Using Field Instrumentation, Remote Sensing and Modeling, EGU General Assembly, Vienna, Austria, April 2-6, 2006.
10. "Environmental Impact of Continental Volcanism," IAVCEI International Conference on Continental Volcanism, Guangzhou, China, May 14-18, 2006.
11. "Environmental Consequences of Regional Nuclear Conflicts," AGU Fall Meeting, San Francisco, California, December 11-15, 2006.
12. "Twenty-Five Years After El Chichón: Volcanic Aerosols and Their Climatic Effects," AGU Joint Assembly, Acapulco, México, May 22-25, 2007.
13. "The Fellows Speak," AGU Joint Assembly, Acapulco, México, May 22-25, 2007.
14. "Geoengineering," AGU Fall Meeting, San Francisco, California, December 10-14, 2007.
15. "Charney Lecture," AGU Joint Assembly, Ft. Lauderdale, Florida, May 27-30, 2008.
16. "The Fellows Speak," AGU Joint Assembly, Ft. Lauderdale, Florida, May 27-30, 2008.
17. "Volcanism and the Earth's Atmosphere," IAVCEI General Assembly, Reykjavik, Iceland, August 18-22, 2008.
18. "Geoengineering to Counteract Global Warming?" AGU Fall Meeting, San Francisco, California, December 15-19, 2008.
19. "Bjerknes Lecture," AGU Fall Meeting, San Francisco, California, December 15-19, 2008.
20. "Charney Lecture," AGU Joint Assembly, Toronto, Canada, May 24-27, 2009.
21. "Bjerknes Lecture," AGU Fall Meeting, San Francisco, California, December 14-18, 2009.

#### **PAPERS PRESENTED AT CONFERENCES:**

1. Bornstein, Robert D. and Alan D. Robock, 1974: Effects of variable and unequal time steps in the simulation of the urban boundary layer using the two-dimensional version of the URBMET model. *Bull. Amer. Met. Soc.*, **55**, 1410. (AMS Annual Meeting, 1975)
2. Robock, Alan, 1977: Sunspots and climate: model experiments. *EOS*, **58**, 1120. (AGU Fall Meeting, San Francisco, December 5-9, 1977)
3. The performance of a seasonal global climatic model. (Invited paper; JOC Study Conference on Climate Models: Performance, Intercomparison and Sensitivity Studies, National Academy of Sciences, Washington, April 3-7, 1978)

4. Stochastic forcing of an energy-balance climate model. (Invited paper; Workshop on Estimating and Interpreting Climatic Spectra, Boulder, October 9-12, 1978)
5. Robock, Alan, 1978: A seasonal global surface albedo parameterization. *EOS*, **59**, 1083. (AGU Fall Meeting, San Francisco, December 4-8, 1978. Also served as session chairman.)
6. Solar-climate modeling. (Invited paper; Solar-Terrestrial Workshop, Los Alamos Scientific Laboratory, New Mexico, June 26-29, 1979)
7. On the causes of climate change during the past 400 years. (Invited paper; Soviet-American Symposium on Climate Modeling, Climate Change and Statistics, Tbilisi, USSR, October 15-22, 1979)
8. Robock, Alan, 1979: The seasonal cycle of snow cover, sea ice and surface albedo. *Bull. Amer. Met. Soc.*, **60**, 846. (Symposium on High Latitude Climate Systems, Boston, November 6-8, 1979)
9. The response of an energy-balance climate model to latitudinally dependent volcanic dust. (XVII General Assembly of the International Union of Geodesy and Geophysics, Canberra, Australia, December 2-15, 1979)
10. The use of snow and ice data in energy balance climate modeling. (Invited paper; Snow Watch Workshop, NSF, Washington, October 2-3, 1980)
11. The effect of the Mt. St. Helens volcanic eruption on climate. (First Conference on Climate Variations of the American Meteorological Society, San Diego, January 19-23, 1981)
12. Volcanic eruptions and climate change. (Third Scientific Assembly of the International Association of Meteorology and Atmospheric Physics, Hamburg, FRG, August 17-28, 1981)
13. Robock, Alan, 1981: The latitudinal and seasonal distribution of climate sensitivity. *EOS*, **62**, 885. (AGU Fall Meeting, San Francisco, December 7-11, 1981)
14. Energy balance climate model calculations of the effects of the El Chichón eruption. (Seventh Climate Diagnostics Workshop, NOAA/CAC, Boulder, October 18-22, 1982)
15. Northern Hemisphere snow cover and surface temperature. (with Peter R. Ahnert; Seventh Climate Diagnostics Workshop, NOAA/CAC, Boulder, October 18-22, 1982)
16. Satellite detection of the 1982 El Chichón eruptions and stratospheric cloud. (with Michael Matson; Seventh Climate Diagnostics Workshop, NOAA/CAC, Boulder, October 18-22, 1982)
17. Robock, Alan, 1982: Energy balance model calculations of the El Chichón climate effect. *EOS*, **63**, 902. (Invited paper; AGU Fall Meeting, San Francisco, December 7-15, 1982)
18. A review of the atmospheric effects of the El Chichón eruption of 4 April 1982. (Invited paper: Second Conference on Climate Variations of the American Meteorological Society, New Orleans, January 10-14, 1983)
19. The sea ice/thermal inertia feedback: determinant of the latitudinal and seasonal distribution of climate sensitivity. (Second Conference on Climate Variations of the

American Meteorological Society, New Orleans, January 10-14, 1983. Also served as session chairman.)

20. Robock, Alan, 1984: Snow and ice feedbacks and climate sensitivity. *Annals of Glaciology*, **5**, 225. (International Glaciological Society Symposium on Ice and Climate Modelling, Evanston, June 27-July 1, 1983)
21. Detecting the El Chichón climate effect. (XVIII General Assembly of the International Union of Geodesy and Geophysics, Hamburg, FRG, August 15-27, 1983)
22. Search for volcanic and CO<sub>2</sub> signals in surface air temperature data. (Second International Meeting on Statistical Climatology, Lisbon, Portugal, September 26-30, 1983)
23. Effects of concurrent snow and cloud cover on planetary albedo. (with Dale Kaiser, XXV COSPAR Meeting, Symposium on Space Observations for Climate Studies, Graz, Austria, June 25-29, 1984)
24. Detection of volcanic, CO<sub>2</sub> and ENSO signals in surface air temperature. (XXV COSPAR Meeting, Symposium on Space Observations for Climate Studies, Graz, Austria, June 25-29, 1984)
25. Climatic effects of volcanism. (Invited paper; 188th National Meeting of the American Chemical Society, Philadelphia, August 27-31, 1984)
26. The effect of anomalous snow cover on the general circulation of the atmosphere using a simple climate model. (with James W. Tauss; Ninth Climate Diagnostics Workshop, NOAA/CAC, Oregon State University, Corvallis, October 22-26, 1984)
27. Nuclear winter: energy balance climate model finds large long-lasting effects. (Beijing International Symposium on Climate, Beijing, China, October 30-November 3, 1984)
28. Volcanic signal in surface air temperature. (Beijing International Symposium on Climate, Beijing, China, October 30-November 3, 1984)
29. Detection of volcanic, CO<sub>2</sub> and ENSO signals in surface air temperature. (Third Conference on Climate Variations of the American Meteorological Society, Los Angeles, January 8-11, 1985) (pp. 78-80 in extended abstracts volume)
30. Nuclear winter. (Invited paper; Fourth Women's Leadership Conference, Washington, June 13-15, 1985)
31. Effects of snow cover and tropical forcing on mid-latitude monthly mean circulation. (with James W. Tauss; First WMO Workshop on the Diagnosis and Prediction of Monthly and Seasonal Atmospheric Variation Over the Globe, University of Maryland, College Park, July 29 – August 2, 1985)
32. Nuclear winter: dirty snow effects on snow-albedo feedback depend on precipitation rate. (with Andrew Vogelmann and Robert Ellingson, IAMAP/IAPSO Joint Assembly, Honolulu, August 5-26, 1985)
33. Climatic consequences of nuclear war (Invited paper; 13th International Congress of Biochemistry, Amsterdam, August 29, 1985)

34. Comparison of Northern Hemisphere snow cover data sets (with John Scialdone; Snow Watch 1985: Workshop on CO<sub>2</sub>/Snow Interaction, University of Maryland, College Park, October 28-30, 1985)
35. Effects of snow cover and tropical forcing on mid-latitude monthly mean circulation (with James W. Tauss; Snow Watch 1985: Workshop on CO<sub>2</sub>/Snow Interaction, University of Maryland, College Park, October 28-30, 1985)
36. Robock, Alan and John Scialdone, 1985: Comparison of Northern Hemisphere snow cover data sets. *EOS*, **66**, 899. (AGU Fall Meeting, San Francisco, December 9-13, 1985)
37. Surface temperature effects of forest fire smoke plumes. (DNA Global Effects Program Technical Meeting, NASA/Ames, February 25-27, 1986)
38. Dirty snow effects are of small climatic consequence in nuclear winter scenarios. (with Andrew M. Vogelmann and Robert G. Ellingson; DNA Global Effects Program Technical Meeting, NASA/Ames, February 25-27, 1986)
39. Nuclear winter: simulations of climate following nuclear war. (Invited paper; Society for Computer Simulation Eastern Simulation Conference, Norfolk, VA, March 10, 1986)
40. Surface temperature effects of forest fire smoke plumes. (Invited paper; DNA Global Effects Program Technical Meeting, Mission Research Corporation, Santa Barbara, California, April 7-9, 1987)
41. Surface temperature effects of forest fire smoke plumes. (XIX General Assembly of the International Union of Geodesy and Geophysics, Vancouver, August 9-22, 1987)
42. Atmospheric science issues in Congress. (Twelfth Climate Diagnostics Workshop, NOAA/CAC, Salt Lake City, Utah, October 12-16, 1987)
43. Cooling from Canadian forest fires. (Invited paper; United Nations/SCOPE-ENUWAR Workshop, Geneva, Switzerland, November 16-20, 1987)
44. Robock, Alan, 1987: The sea ice/thermal inertia feedback, *EOS*, **68**, 1227. (Invited paper; AGU Fall Meeting, San Francisco, December 7-11, 1987)
45. China, California conflagrations cause cooling. (Invited paper; SCOPE-ENUWAR Workshop, Moscow, USSR, March 21-26, 1988)
46. Cooling from 1987 forest fires. (Invited paper; DNA Global Effects Program Technical Meeting, Mission Research Corporation, Santa Barbara, CA, April 19-21, 1988)
47. Volcanoes and climate. (Invited paper; Symposium on Climate and Geosciences, NATO, Louvain-la-Neuve, Belgium, May 22-27, 1988)
48. Climate and public policy in the United States Congress. (Invited paper; Symposium on Climate and Geosciences, NATO, Louvain-la-Neuve, Belgium, May 22-27, 1988)
49. Nuclear winter. (Invited paper; Summer Institute for University Faculty, "Regional Conflict and Global Security: The Nuclear Dimension," University of Wisconsin, Madison, June 17-24, 1988)
50. Nuclear winter – model results and observational analogues. (Invited paper; 16th Nordic Meteorologists' Meeting, Reykjavik, Iceland, August 6-9, 1988)

51. Public policy implications of nuclear winter. (Invited paper; The Alva and Gunnar Myrdal Foundation and the Royal Academy of Sciences Conference on Environmental Consequences of Nuclear War – Scientific Consensus and Global Policy Implications, Stockholm, Sweden, August 20-22, 1988)
52. Global climate change. (Invited paper; Global Climate Change Conference, Cornell University/National Governor's Association, New York City, February 28 - March 3, 1989)
53. The volcanic contribution to climate change of the past 100 years. (Invited paper; DOE Workshop on Greenhouse-Gas-Induced Climatic Change: A Critical Appraisal of Simulations and Observations, University of Massachusetts, Amherst, May 8-12, 1989)
54. The greenhouse effect. (Invited paper: Transportation Research Board Executive Committee Meeting, National Research Council, National Academy of Sciences, Traverse City, Michigan, June 8-9, 1989)
55. Atmospheric effects of the 1988 Yellowstone smoke. (Fifth Scientific Assembly of the International Association of Meteorology and Atmospheric Physics, Reading, England, July 31 - August 11, 1989)
56. Creating climate change scenarios for effects analysis. (Invited paper; EPA Scenarios Advisory Meeting, National Center for Atmospheric Research, Boulder, Colorado, August 31 - September 1, 1989)
57. GCM greenhouse warming scenarios for Africa. (Invited paper; Second PAN-EARTH Workshop on Effects of Climate Change with Emphasis on Sub-Saharan Africa, Saly, Senegal, September 11-15, 1989)
58. NCDS in a university setting – the Maryland experience. (Invited paper; NASA Climate Data System Workshop, NASA/GSFC, Greenbelt, Maryland, September 20-22, 1989)
59. Climatological importance of smoke in the atmosphere. (International Workshop on Space Observations of Tropospheric Aerosols and Complementary Measurements, International Radiation Commission, Hampton, Virginia, November 15-18, 1989)
60. Forest fire smoke effects on surface air temperature. (Invited paper; AGU Chapman Conference on Global Biomass Burning: Atmospheric, Climatic and Biospheric Implications, Williamsburg, Virginia, March 19-23, 1990)
61. Theoretical aspects of GCMs. (Invited paper; International Workshop on Climatic Variability and Climate Changes in Venezuela and the Caribbean Region, Mérida, Venezuela, April 23-27, 1990. Also served on organizing committee.)
62. Scaling methodology. (Invited paper; International Workshop on Climatic Variability and Climate Changes in Venezuela and the Caribbean Region, Mérida, Venezuela, April 23-27, 1990)
63. Volcanic effects on climate. (Invited paper; NASA Volcano Climate Workshop, College Park, June 17-18, 1990)
64. Volcanic dust veil indices. (Seventh AMS Conference on Radiation, San Francisco, July 23-27, 1990)

65. Using computers to model the environment. (Invited paper; Association for Computing Machinery Conference on Computers and the Quality of Life, George Washington University, Washington, September 13-16, 1990)
66. Impact of global change on agriculture and ecology. (Invited paper; 39th Annual Meeting of the American Society of Tropical Medicine and Hygiene, New Orleans, LA, November 4-8, 1990)
67. Robock, Alan, 1991: Solar variations and climate change: a review. *EOS*, **72**, 222. (Invited paper; AGU Spring Meeting, Baltimore, MD, May 28 – June 1, 1991)
68. Gaffen, Dian J., William P. Elliott and Alan Robock, 1991: Assessing the spatial resolution of the global radiosonde network for tropospheric water vapor studies. *EOS*, **72**, 83. (presented by Gaffen; AGU Spring Meeting, Baltimore, MD, May 28 - June 1, 1991)
69. Nuclear winter. (Invited paper; International Physicians for the Prevention of Nuclear War 10th World Congress, Stockholm, Sweden, June 27-30, 1991)
70. The volcanic signal in the global temperature record. (Invited paper; NASA Greenhouse Effect Detection Experiment (GEDEX) Atmospheric Temperature Workshop, Columbia, MD, July 9-11, 1991)
71. An improved volcanic dust veil index and the volcanic signal in global climate. (Fifth AMS Conference on Climate Variations, Denver, October 14-18, 1991)
72. Robock, Alan, 1991: Climatic effects of the Mt. Pinatubo eruption. *EOS Supplement, AGU 1991 Fall Meeting*, 65. (AGU Fall Meeting, San Francisco, December 9-13, 1991. Also served as session chairman.)
73. Gaffen, Dian J., William P. Elliott and Alan Robock, 1991: The annual cycle of tropospheric water vapor. *EOS Supplement, AGU 1991 Fall Meeting*, 148. (presented by Gaffen; AGU Fall Meeting, San Francisco, December 9-13, 1991)
74. Climatic effects of volcanic eruptions. (with Yuhe Liu and Jianping Mao; Invited paper: AGU Chapman Conference on Climate, Volcanism and Global Change, Hilo, Hawaii, March 23-27, 1992)
75. Global climate changes due to volcanic eruptions: analysis of GCM results. (presented by Yuhe Liu; AGU Chapman Conference on Climate, Volcanism and Global Change, Hilo, Hawaii, March 23-27, 1992)
76. Impact of volcanic eruptions on surface air temperature and precipitation. (presented by Jianping Mao; AGU Chapman Conference on Climate, Volcanism and Global Change, Hilo, Hawaii, March 23-27, 1992)
77. Schlosser, Adam, Alan Robock, Konstantin Ya. Vinnikov, and Nina A. Speranskaya, 1992: Soil moisture simulations with a 15-cm bucket model – comparisons with ground truth. *EOS Supplement, AGU 1992 Spring Meeting*, 111. (presented by Schlosser; AGU Spring Meeting, Montreal, May 12-16, 1992)
78. Robock, Alan, Adam Schlosser, Konstantin Ya. Vinnikov, and Nina A. Speranskaya, 1992: Comparison of soil moisture simulations with SiB and with a 15-cm bucket model. *EOS Supplement, AGU 1992 Spring Meeting*, 111. (AGU Spring Meeting, Montreal, May 12-16, 1992)

79. Relative effects of El Chichón and the '82-'83 El Niño on continental climate. (with Karl E. Taylor and Yuhe Liu, presented by Taylor; Second International Conference on Modelling of Global Change and Variability, Hamburg, Germany, September 7-11, 1992)
80. Detecting variability and trends in tropospheric humidity using radiosonde data. (with Dian J. Gaffen and William P. Elliott, presented by Gaffen; Yale Mintz Memorial Symposium on Climate and Climate Change, Jerusalem, December 28-31, 1992)
81. New variables in parameterization of surface hydrology processes in climate models. (with Konstantin Ya. Vinnikov, C. Adam Schlosser, and Nina A. Speranskaya, presented by Vinnikov; AMS Conference on Hydroclimatology: Land-Surface/Atmosphere Interactions on Global and Regional Scales, Anaheim, California, January 17-22, 1993)
82. Nuclear winter update: is the theory still valid? (Invited paper; International Conference on Sustainable Development Strategies and Global/Regional/Local Impacts on Atmospheric Composition and Climate, New Delhi, India, January 25-30, 1993)
83. Use of GCM output in the creation of climate change scenarios for impact analysis. (Invited paper; International Conference on Sustainable Development Strategies and Global/Regional/Local Impacts on Atmospheric Composition and Climate, New Delhi, India, January 25-30, 1993)
84. General circulation model outputs and their utilization in climate change impact analysis scenarios: case study – Venezuela. (Invited paper: International Workshop on Climate Variability, Global Change, and their Impacts in Latin America and the Caribbean, San José, Costa Rica, March 1-5, 1993)
85. Validation of humidity, moisture fluxes and soil moisture in GCMs. (Invited paper: AMIP Meeting, Bologna, Italy, May 10-12, 1993)
86. Stenchikov, Georgy L. and Alan Robock, 1993: Causes of diurnal asymmetry in climate change as calculated with a new radiative-convective model. *EOS Supplement, AGU 1993 Spring Meeting*, 77. (presented by Stenchikov; AGU Spring Meeting, Baltimore, Maryland, May 24-28, 1993)
87. Robock, Alan and Melissa Free, 1993: Use of ice cores in construction of a volcanic index. *EOS Supplement, AGU 1993 Spring Meeting*, 88-89. (AGU Spring Meeting, Baltimore, Maryland, May 24-28, 1993)
88. Modeling of El Chichón cloud induced atmospheric reaction (with G. Stenchikov, Y. Liu, and K. Taylor; presented by G. Stenchikov; Fourth Workshop on the Community Climate Model, NCAR, Boulder, Colorado, June 28 - July 1, 1993)
89. Climatic effects of the 1991 Mt. Pinatubo eruption. (Invited paper; 6th IAMAP and 4th IAHS Joint International Conference, Yokohama, Japan, July 11-23, 1993)
90. Verification of soil moisture simulations with SSiB and a 15-cm bucket model by comparison with Russian observations. (Invited paper; with C. Adam Schlosser, Yongkang Xue, Konstantin Ya. Vinnikov, and Nina A. Speranskaya; 6th IAMAP and 4th IAHS Joint International Conference, Yokohama, Japan, July 11-23, 1993)
91. Long-term data sets of soil moisture and other hydrology parameters from the former Soviet Union. (Invited paper; with Konstantin Ya. Vinnikov, Nina A. Speranskaya, and

- C. Adam Schlosser; 6th IAMAP and 4th IAHS Joint International Conference, Yokohama, Japan, July 11-23, 1993)
92. Winter warming from large explosive volcanoes (Invited paper: Gordon Research Conference on the Impact of Volcanism on Climate, Henniker, New Hampshire, July 26-30, 1993; also served as Discussion Leader)
  93. Modeling aerosol-cloud-radiation interactions using an improved radiative-convective model (with Georgiy L. Stenchikov; presented by Georgiy L. Stenchikov; Gordon Research Conference on the Impact of Volcanism on Climate, Henniker, New Hampshire, July 26-30)
  94. The impact of pre-industrial anthropogenic activities on global climate. (Invited paper; Polluted or Pristine? Scientific, Cultural, and Policy Implications of Pre-Industrial Anthropogenic Impact on the Global Carbon Cycle, East-West Center, Honolulu, Hawaii, September 17-19, 1993)
  95. Observed effects of aerosols on the diurnal cycle of surface air temperature. (International NOAA/DOE MINIMAX Workshop, College Park, September 27-30, 1993)
  96. Diurnal asymmetry of the surface air temperature response of radiative-convective model calculations CO<sub>2</sub> and aerosol forcing: cloud and boundary layer process feedbacks. (with Georgiy L. Stenchikov and presented by him; International NOAA/DOE MINIMAX Workshop, College Park, September 27-30, 1993)
  97. Volcanoes and climate: Climate model and observational studies, and use of ice cores in construction of a volcanic index. (Invited paper; with Melissa P. Free; International Geosphere-Biosphere Program (IGBP) PAGES - INQUA COT Meeting "Climatic Impact of Explosive Volcanism," Tokyo, Japan, December 1-2, 1993)
  98. Robock, Alan, Karl E. Taylor, Georgiy L. Stenchikov, and Yuhe Liu, 1993: GCM test of a possible mechanism for El Niño triggering by the El Chichón ash cloud. *EOS Supplement, AGU 1993 Fall Meeting*, 114. (Invited paper; AGU Fall Meeting, San Francisco, December 6-10, 1993. Also served as convenor of session and session chairman.)
  99. Stenchikov, Georgiy L. and Alan Robock, 1993: Climatic effects due to water vapor amount increase in the stratosphere after the Pinatubo eruption. *EOS Supplement, AGU 1993 Fall Meeting*, 114. (Invited paper; presented by Stenchikov; AGU Fall Meeting, San Francisco, December 6-10, 1993.)
  100. Robock, Alan, 1993: AMIP soil moisture validation – poor simulations over northern Asia. *EOS Supplement, AGU 1993 Fall Meeting*, 160. (AGU Fall Meeting, San Francisco, December 6-10, 1993)
  101. Global warming: How much? How soon? How do we know? (Invited paper; 5th Conference on the Intersections of Particle and Nuclear Physics, St. Petersburg, Florida, May 31-June 6, 1994)
  102. Improved soil moisture simulations with SSiB and a 15-cm bucket model incorporating Russian observations. (with C. Adam Schlosser, Konstantin Ya. Vinnikov, Yongkang Xue, and Nina A. Speranskaya; European Conference on the Global Energy and Water Cycle, London, England, July 18-22, 1994)

103. The volcanic signal in surface temperature observations. (with Jianping Mao, and presented by him; International Symposium on Global Change in Asia and the Pacific Region, Beijing, China, August 8-10, 1994)
104. Soil moisture spinup in the AMIP experiments. (Invited paper; Meeting on Problems in Initializing Soil Wetness, Center for Ocean-Land-Atmosphere Studies, Calverton, Maryland, August 19, 1994)
105. Temporal and spatial autocorrelation of midlatitude soil moisture measurements. (Invited paper; with Konstantin Ya. Vinnikov, and presented by him; Meeting on Problems in Initializing Soil Wetness, Center for Ocean-Land-Atmosphere Studies, Calverton, Maryland, August 19, 1994)
106. In situ soil moisture data. (Invited paper, with Konstantin Ya. Vinnikov, and presented by him; GEWEX Global Soil Wetness Workshop, Longmont, Colorado, October 4-6, 1994)
107. Surface temperature effects of the 1991 Pinatubo eruption: winter warming and summer cooling. (Invited paper: NATO Advanced Research Workshop on "The Effects of the Mt. Pinatubo Eruption on the Atmosphere and Climate," Rome, Italy, September 26-30, 1994)
108. The volcanic record in ice cores for the past 2000 years. (Invited paper; with Melissa P. Free; NATO Advanced Research Workshop on "Climatic Variations and Forcing Mechanisms of the Past 2000 Years," Il Ciocco, Italy, October 3-7, 1994)
109. Analysis and modeling of the hydrological cycle using Russian data. (Invited paper; with Konstantin Vinnikov; GCIP Science Review and Science Panel, NCAR, Boulder, November 1-4, 1994)
110. Temporal and spatial variability of mid-latitude soil moisture. (with Konstantin Vinnikov and Nina Speranskaya; given by Konstantin Vinnikov; Nineteenth Climate Diagnostics Workshop, University of Maryland, College Park, Maryland, November 14-18, 1994)
111. Winter warming from volcanic eruptions. (with Jianping Mao; given by Jianping Mao; Nineteenth Climate Diagnostics Workshop, University of Maryland, College Park, Maryland, November 14-18, 1994)
112. El Niños and large volcanic eruptions: no relationship in general, but El Chichón may be an exception. *EOS Supplement, AGU 1994 Fall Meeting*, 121. (Invited paper; AGU Fall Meeting, San Francisco, California, December 5-9, 1994)
113. Soil moisture simulations for high latitudes compared to observations: improvements by considering water table and winter condensation effects. *EOS Supplement, AGU 1994 Fall Meeting*, 127. (with Konstantin Vinnikov, Jared Entin, and Nina A. Speranskaya; AGU Fall Meeting, San Francisco, California, December 5-9, 1994)
114. Midlatitude soil moisture: temporal and spatial statistical structure. *EOS Supplement, AGU 1994 Fall Meeting*, 106. (with Konstantin Vinnikov and Nina A. Speranskaya; given by Konstantin Vinnikov; AGU Fall Meeting, San Francisco, California, December 5-9, 1994)
115. Effects of Pinatubo aerosol microphysical transformations on aerosol optical parameters and forcing. *EOS Supplement, AGU 1994 Fall Meeting*, 101. (with Georgiy L.

- Stenchikov; given by Georgiy L. Stenchikov; AGU Fall Meeting, San Francisco, California, December 5-9, 1994)
116. Validation of humidity, moisture fluxes, and soil moisture in GCMs–AMIP Diagnostic Subproject 11. (Invited paper; with C. Adam Schlosser, Konstantin Vinnikov, Suxia Liu, Nina Speranskaya, Dian J. Gaffen, Richard D. Rosen, David A. Salstein, and James D. Boyle; First AMIP Scientific Conference, Monterey, California, May 15-19, 1995)
  117. Comparison of GCM and MSU Temperatures for the AMIP experiment (1979-1988)–AMIP Diagnostic Subproject 19. (Invited paper; with Justin J. Hnilo, John R. Christy, and Jianping Mao; First AMIP Scientific Conference, Monterey, California, May 15-19, 1995)
  118. Gravimetric observations of soil moisture data set for ISLSCP Global Soil Wetness Validation Subprogram. (Invited paper; with Konstantin Ya. Vinnikov, presented by Konstantin Ya. Vinnikov; ISLSCP Scientific Panel Meeting, NASA, Greenbelt, Maryland, June 15-16, 1995)
  119. Validation and intercomparison of multiyear biosphere and bucket model offline simulations for a typical midlatitude grassland catchment. (with C. Adam Schlosser, Konstantin Ya. Vinnikov, Nina A. Speranskaya, and Yongkang Xue; presented by C. Adam Schlosser; XXI Scientific Assembly of the IUGG, Boulder, Colorado, July 2-14, 1995)
  120. Temporal and spatial variation of soil moisture in China. (with Suxia Liu and Konstantin Ya. Vinnikov; presented by Suxia Liu; XXI Scientific Assembly of the IUGG, Boulder, Colorado, July 2-14, 1995)
  121. A new volcanic index based on ice cores. (Invited paper; with Melissa P. Free; XXI Scientific Assembly of the IUGG, Boulder, Colorado, July 2-14, 1995)
  122. Modeling past temperature variations using a new volcanic index. (Invited paper; with Melissa P. Free; presented by Melissa P. Free; XXI Scientific Assembly of the IUGG, Boulder, Colorado, July 2-14, 1995)
  123. Soil moisture observations: Ground truth (literally) for evaluation of remote sensing. (with Konstantin Ya. Vinnikov, Nina A. Speranskaya, C. Adam Schlosser, Suxia Liu, Jared Entin, and Vladimir Zabelin; XXI Scientific Assembly of the IUGG, Boulder, Colorado, July 2-14, 1995)
  124. Use of Valdai, Russia, data for next PILPS Phase 2c experiment (with C. Adam Schlosser, Konstantin Ya. Vinnikov, and Nina A. Speranskaya; XXI Scientific Assembly of the IUGG, Boulder, Colorado, July 2-14, 1995)
  125. Modeling of climatic effects and vertical distribution of AEROCE-observed gases and aerosols (Invited presentation; with Georgiy L. Stenchikov and Russell R. Dickerson; presented by Georgiy L. Stenchikov, AEROCE Workshop, Miami, Florida, November 18-19, 1995)
  126. Modeling land surface processes in a variety of climates in China (with Jared Entin and Suxia Liu; presented by Jared Entin; AGU Fall Meeting, San Francisco, California, December 11-15, 1995)

127. Gravimetric observations of soil moisture: ground truth for calibration of satellite derived indices (with Konstantin Ya. Vinnikov, Manfred Owe, and Bhaskar Choudhury; presented by Konstantin Vinnikov and myself; AGU Fall Meeting, San Francisco, California, December 11-15, 1995)
128. Comparison of possible solar, volcanic, and anthropogenic climate effects for 1400 to the present using an upwelling-diffusion energy-balance climate model (with Melissa P. Free; presented by Melissa P. Free; AGU Fall Meeting, San Francisco, California, December 11-15, 1995)
129. Evaluation of multi-year regional scale simulations of soil moisture (with Konstantin Ya. Vinnikov, Jared Entin, and C. Adam Schlosser; Second International Conference on the Global Energy and Water Cycle, Washington, DC, June 17-21, 1996)
130. Regional scale variations of soil moisture (with Konstantin Ya. Vinnikov, Jared Entin, Vladimir Zabelin, Nina A. Speranskaya, and Suxia Liu; presented by Konstantin Ya. Vinnikov; Second International Conference on the Global Energy and Water Cycle, Washington, DC, June 17-21, 1996)
131. On validation of the snow sub-model of the Biosphere-Atmosphere Transfer Scheme with Russian snow cover and meteorological observational data (with Zong-Liang Yang, Robert E. Dickinson, and Kostya Ya. Vinnikov; presented by Zong-Liang Yang; Second International Conference on the Global Energy and Water Cycle, Washington, DC, June 17-21, 1996)
132. Modeling and remote sensing of regional scale soil moisture variations in Asia (with Konstantin Ya. Vinnikov, Jared Entin, C. Adam Schlosser, Vladimir Zabelin, Nina A. Speranskaya, and Suxia Liu; 1996 Western Pacific Geophysics Meeting, Brisbane, Australia, July 23-27, 1996)
133. Global soil moisture data set from gravimetric observations for evaluation of satellite-based remote sensing of soil moisture (with Konstantin Ya. Vinnikov; Third International Workshop on Application of Remote Sensing to Hydrology, Greenbelt, Maryland, October 16-18, 1996)
134. Soil moisture data set and its application (with Konstantin Ya. Vinnikov, Jared Entin, Adam Schlosser, Nina Speranskaya, Vladimir Zabelin, and Suxia Liu.; presented by Konstantin Ya. Vinnikov; GCIP PI Workshop, Huntsville, Alabama, November 19, 1996)
135. ECHAM4 GCM simulations of the climatic response to the 1991 Pinatubo eruption - Winter warming confirmed (with Ingo Kirchner, Hans-F. Graf and Georgiy L. Stenchikov; First SPARC General Assembly, Melbourne, Australia, December 2-6, 1996)
136. Radiative forcing of climate from the 1991 Pinatubo eruption (with Georgiy L. Stenchikov, Ingo Kirchner, and Hans-F. Graf; presented by Georgiy L. Stenchikov; First SPARC General Assembly, Melbourne, Australia, December 2-6, 1996)
137. Solar, volcanic, and anthropogenic effects on climate from 1400 to the present (with Melissa P. Free, Rosanne D'Arrigo, and Gordon Jacoby; presented by Melissa P. Free; AGU Fall Meeting, San Francisco, California, December 15-19, 1996)

138. Limits of natural variations in global and regional climate as compared to observed climatic trends (with Konstantin Ya. Vinnikov; presented by Konstantin Ya. Vinnikov; AGU Fall Meeting, San Francisco, California, December 15-19, 1996)
139. Comparison of modeled temperatures based on solar, volcanic and trace gas forcings with a hemispheric tree-ring temperature reconstruction. (with Rosanne D'Arrigo, Gordon Jacoby, and Melissa P. Free; presented by Rosanne D'Arrigo; AGU Fall Meeting, San Francisco, California, December 15-19, 1996)
140. Evaluation of Global Soil Wetness model calculations with observed soil moisture data. (with Konstantin Vinnikov, Jared Entin, Vladimir Zabelin, and Suxia Liu; 13th AMS Conference on Hydrology, Long Beach, California, February 2-7, 1997)
141. Global Soil Wetness validation strategy. (with A. J. Dolman, P. Kabat, H. Matsuyama, T. Oki, and K. Y. Vinnikov; presented by A. J. Dolman; 13th AMS Conference on Hydrology, Long Beach, California, February 2-7, 1997)
142. Volcanic aerosol perturbation experiments. (Invited presentation; with Georgiy L. Stenchikov, Hans-F Graf, Ingo Kirchner, and Juan Carlos Antuña; presented by Georgiy L. Stenchikov; GCM-Reality Intercomparison Project for SPARC (GRIPS) Workshop, Berlin, Germany, March 3-5, 1997)
143. Results from PILPS 2d Valdai experiment. (with C. Adam Schlosser, Konstantin Ya. Vinnikov, Nina A. Speranskaya, and Andrew Slater; AGU Spring Meeting, Baltimore, Maryland, May 27-30, 1997)
144. Radiative forcing of aerosols. (NASA Mini-Workshop on Aerosols and Climate, GISS, New York, June 2-3, 1997)
145. Effects of seasonal freezing on soil moisture. (with Konstantin Ya. Vinnikov; International Symposium on Physics, Chemistry, and Ecology of Seasonally Frozen Soils, University of Alaska Fairbanks, June 10-12, 1997)
146. Radiative forcing of climate from the 1991 Mount Pinatubo volcanic eruption. (with Georgiy L. Stenchikov, Ingo Kirchner, Hans-F. Graf, Juan Carlos Antuña, R. G. Grainger, Alyn Lambert, and Larry Thomason; presented by Hans-F. Graf; 7th IAMAS International Conference, Melbourne, Australia, July 1-9, 1997)
147. General circulation model simulations of the climatic response to the 1991 Mount Pinatubo volcanic eruption. (with Ingo Kirchner, Georgiy L. Stenchikov, Hans-F. Graf, and Juan Carlos Antuña; presented by Hans-F. Graf; 7th IAMAS International Conference, Melbourne, Australia, July 1-9, 1997)
148. Preliminary results from PILPS Phase 2d: Analysis of modeled soil-water and snow processes for an 18-year period at a midlatitude grassland catchment. (with C. Adam Schlosser, Andrew J. Pitman, and Andrew Slater; presented by Andrew J. Pitman; 7th IAMAS International Conference, Melbourne, Australia, July 1-9, 1997)
149. Global warming: Must we act now? (Invited paper; The Costs of Kyoto, Implications of Climate Change Policy, National Press Club, Washington, DC, July 15, 1997)
150. ECHAM-4 climate model simulation of winter warming from the 1991 Mount Pinatubo volcanic eruption (Invited paper; with Hans-F. Graf, Georgiy L. Stenchikov, Ingo Kirchner, and Juan Carlos Antuña; Tsukuba International Workshop on Stratospheric

- Change and its Role in Climate and on the ATMOS-C1 Satellite Mission, Tsukuba, Japan, October 20-22, 1997)
151. Evaluating soil moisture modeling (GEWEX Continental Scale International Project PI Workshop, NCAR, Boulder, November 5-6, 1997)
  152. Solar, volcanic, and anthropogenic influences on climate (Invited paper; Climate Changes - Causes and Consequences, European Academy for Environmental Affairs, Bonn, Germany, November 10-11, 1997)
  153. Climate model simulation of winter warming following the 1991 Mount Pinatubo volcanic eruption (with Ingo Kirchner, Hans-F. Graf, Georgiy L. Stenchikov, and Juan Carlos Antuña; AGU Fall Meeting, San Francisco, California, December 8-12, 1997)
  154. The warming of the past century in the context of the Little Ice Age (with Melissa Free; AGU Fall Meeting, San Francisco, California, December 8-12, 1997)
  155. Soil moisture monitoring using SMMR microwave observations calibrated with in situ soil moisture observations from Illinois, USA (with Konstantin Vinnikov, Shuang Qiu, and Manfred Owe; presented by Konstantin Vinnikov; AGU Fall Meeting, San Francisco, California, December 8-12, 1997)
  156. Spectral optical characteristics and radiative forcing from the Mount Pinatubo aerosol cloud (with Georgiy L. Stenchikov, Juan Carlos Antuña, Ingo Kirchner, Hans-F. Graf, R. G. Grainger, Alyn Lambert, and Larry Thomason; AGU Fall Meeting, San Francisco, California, December 8-12, 1997)
  157. Observed spatial and temporal scales of soil moisture variations in the extratropics (with Jared Entin and Konstantin Vinnikov; AGU Fall Meeting, San Francisco, California, December 8-12, 1997)
  158. The Mongolian soil moisture data set, and its application to observed trends and scales of soil moisture variations in Asia (with Konstantin Vinnikov, Jared K. Entin, and A. Namkhai; Ninth American Meteorological Society Symposium on Global Change, Phoenix, Arizona, January 11-16, 1998)
  159. The role of natural variability in observed global and regional climatic trends (with Konstantin Vinnikov and David Robinson; presented by Konstantin Vinnikov; Ninth American Meteorological Society Symposium on Global Change, Phoenix, Arizona, January 11-16, 1998)
  160. Dynamical response (winter warming) to Pinatubo aerosols in ECHAM-4 (GRIPS Workshop, Greenbelt, Maryland, March 3-6, 1998)
  161. The stratospheric thermal response to Pinatubo aerosol and ozone depletion (with G. Stenchikov, I. Kirchner, H.-F. Graf, and Juan Carlos Antuña; presented by G. Stenchikov; GRIPS Workshop, Greenbelt, Maryland, March 3-6, 1998)
  162. The study of regional climate and chemical processes with single column models (with Georgiy Stenchikov, Sean Gray, and Michael Gamazaychikov, ARM Science Team Workshop, Tucson, Arizona, March 24-26, 1998)

163. The Pinatubo aerosol forcing estimated with ECHAM4 and the simulated climate response (with Ingo Kirchner, Hans-F. Graf, and Georgiy L. Stenchikov; presented by Ingo Kirchner; EGS meeting, Nice, France, April 20-24, 1998)
164. The role of advective fluxes in the diurnal cycle of surface air temperature in the Great Plains (with Sean M. Gray, Georgiy Stenchikov and Wanchun Chen; presented by Sean Gray; AGU Spring Meeting, Boston, Massachusetts, May 26-29, 1998)
165. Soil moisture data for the Mississippi River basin (with Konstantin Y. Vinnikov and Jared Entin, and Pedro Viterbo; GCIP Mississippi River Climate Conference, St. Louis, Missouri, June 8-12, 1998)
166. Observed spatial and temporal scales of soil moisture variations (with Jared Entin, Konstantin Y. Vinnikov, and Pedro Viterbo; presented by Jared Entin; GCIP Mississippi River Climate Conference, St. Louis, Missouri, June 8-12, 1998)
167. Optimal design of surface networks and remote sensing resolution for observations of soil moisture (with Konstantin Y. Vinnikov, Shuang Qiu, and Jared Entin; presented by Konstantin Y. Vinnikov; GCIP Mississippi River Climate Conference, St. Louis, Missouri, June 8-12, 1998)
168. Evaluation of the utility of using SMMR satellite microwave observations for retrieving soil moisture data (with Konstantin Y. Vinnikov, Shuang Qiu, Jared Entin, Manfred Owe, Bhaskar Choudhury, and Eni Njoku; presented by Konstantin Y. Vinnikov; GCIP Mississippi River Climate Conference, St. Louis, Missouri, June 8-12, 1998)
169. Observed land surface hydrology variations of the past 30 years (with Nina A. Speranskaya, Konstantin Y. Vinnikov, and Natalia K. Grib; presented by Nina A. Speranskaya; 9th Global Warming International Conference & Expo, Hong Kong, June 8-10, 1998)
170. The volcanic signal in surface temperature observations (with Jianping Mao; presented by Jianping Mao; 9th Global Warming International Conference & Expo, Hong Kong, June 8-10, 1998)
171. Using soil moisture observations to evaluate land surface models (ECMWF and WCRP/GEWEX Workshop on Modelling and Data Assimilation for Land-Surface Processes, Reading, UK, June 29 - July 2, 1998)
172. Radiative forcing and climate response from the 1991 Mt. Pinatubo aerosol cloud (with G. Stenchikov, I. Kirchner, and H.-F. Graf; presented by G. Stenchikov; International Aerosol Symposium, St. Petersburg, Russia, July 6-9, 1998)
173. The ARM SCM intercomparison study – overview and results for Case 1 (with R. T. Cederwall, D. A. Randall, S. K. Krueger, D. Cripe, S. J. Ghan, S. F. Iacobellis, S. A. Klein, U. Lohmann, R. C. J. Somerville, G. Stenchikov, S. Xie, K.-M. Xu, J. J. Yio, and M. H. Zhang; presented by R. T. Cederwall; GCSS-WGNE Workshop at ECMWF: Cloud Processes and Cloud Feedbacks in Large-scale Models, November 9-13, 1998)
174. Observational validation of GSWP model calculations (Invited paper; 14th AMS Conference on Hydrology, Dallas, Texas, January 10-15, 1999).

175. Evaluation of Global Soil Wetness Project soil moisture simulations and implications for land-surface modeling (with Jared K. Entin and K. Y. Vinnikov; presented by Jared K. Entin; 14th AMS Conference on Hydrology, Dallas, Texas, January 10-15, 1999.)
176. PILPS Phase 2(d): Simulations of a boreal grassland hydrology at Valdai, Russia (Invited paper; with C. Adam Schlosser, A. Slater, A. J. Pitman, K. Ya. Vinnikov, A. Henderson-Sellers, and N. A. Speranskaya; presented by C. Adam Schlosser; 14th AMS Conference on Hydrology, Dallas, Texas, January 10-15, 1999. Also served as convenor of session and session chair)
177. PILPS 2(d): The representation of snow processes in land-surface schemes (Invited paper; with Andrew J. Slater, C. A. Schlosser, A. J. Pitman, A. Henderson-Sellers, K. Ya. Vinnikov, and N. A. Speranskaya; presented by Andrew J. Slater; 14th AMS Conference on Hydrology, Dallas, Texas, January 10-15, 1999. Also served as convenor of session and session chair)
178. Partition of snowmelt into runoff and infiltration in PILPS 2(d) (Invited paper; with K. Y. Vinnikov, Lifeng Luo and N. A. Speranskaya; 14th AMS Conference on Hydrology, Dallas, Texas, January 10-15, 1999)
179. Opportunity for more PILPS Phase 2 experiments using Russian water balance stations (Invited paper; with Konstantin Y. Vinnikov and N. A. Speranskaya; presented by Konstantin Y. Vinnikov; 14th AMS Conference on Hydrology, Dallas, Texas, January 10-15, 1999. Also served as convenor of session and session chair)
180. Detection of global warming in observed trends in Northern Hemisphere snow cover and sea ice areas (with Konstantin Y. Vinnikov, R. J. Stouffer, J. E. Walsh, D. A. Robinson, V. F. Zakharov, and D. Garrett; presented by Konstantin Y. Vinnikov; 10th AMS Symposium on Global Change Studies, Dallas, Texas, January 10-15, 1999)
181. Can we use the climate response to volcanic eruptions to estimate climate sensitivity? (with Melissa P. Free; presented by Melissa P. Free; 10th AMS Symposium on Global Change Studies, Dallas, Texas, January 10-15, 1999)
182. Summer desiccation as a global warming fingerprint (with K. Y. Vinnikov, J. K. Entin, R. J. Stouffer, V. Zabelin, and A. Namkhai; 10th AMS Symposium on Global Change Studies, Dallas, Texas, January 10-15, 1999)
183. The role of solar and volcanic forcing in the Little Ice Age (with Melissa P. Free; presented by Melissa P. Free; 10th AMS Symposium on Global Change Studies, Dallas, Texas, January 10-15, 1999)
184. Stratospheric control of climate (Invited paper; IPCC Detection/Attribution Workshop, College Station, Texas, January 15-16, 1999).
185. The diurnal cycle over the Great Plains (Invited paper; with Georgiy L. Stenchikov; NIGEC Regional Integrated Assessment Workshop, NCAR, Boulder, Colorado, February 4-5, 1999)
186. PILPS Phase 2(d) update and proposal for more Phase 2 projects (Invited paper; PILPS International Strategy Forum, Honolulu, Hawaii, February 23-26, 1999. Also served as session chair.)

187. Test of midlatitude cumulus ensembles and diurnal cycle of advection, temperature, and moisture simulated by regional and global models with ARM data (with Georgiy Stenchikov, Ernesto Hugo Berbery, Sean Gray, and Wanchun Chen; presented by Georgiy Stenchikov; ARM Science Team Meeting, San Antonio, Texas, March 23-26, 1999)
188. The diurnal cycle over the Great Plains (invited paper; with Georgiy L. Stenchikov; presented by Georgiy L. Stenchikov; Principal Investigator's Workshop, Great Plains Regional Center for Global Environmental Change, March 29-30, 1999)
189. Soil moisture observations for evaluation of Global Soil Wetness Project simulations (with Govindarajan Srinivasan, Konstantin Vinnikov, Jared Entin, Vladimir Zabelin, Suxia Liu, A. Namkhai, and T. Adyasuren; Third International Scientific Conference on the Global Energy and Water Cycle, Beijing, China, June 16-19, 1999)
190. Radiative forcing of the Pinatubo aerosol cloud as calculated by four GCMS with different radiative schemes (with Georgiy Stenchikov, Hans-F. Graf, Ingo Kirchner, Brian Soden, Richard Wetherald, V. Ramaswamy, S. Ramachandran, Natalia Andronova, Michael Schlesinger, E. Rozanov, and F. Yang; 10th AMS Conference on Atmospheric Radiation, Madison, Wisconsin, June 28 – July 2, 1999)
191. Climate responses to radiative forcing following the 1991 Mount Pinatubo volcanic eruption: Winter warming and summer cooling (with Georgiy Stenchikov, Hans-F. Graf, Ingo Kirchner, Brian Soden, Richard Wetherald, V. Ramaswamy, and S. Ramachandran; 10th AMS Conference on Atmospheric Radiation, Madison, Wisconsin, June 28 – July 2, 1999)
192. Evaluation of revised AMIP I soil moisture simulations (session chair; with G. Srinivasan and Konstantin Y. Vinnikov; XXII Scientific Assembly of the IUGG, Birmingham, UK, July 19-30, 1999)
193. Evaluation of PILPS 2(d) hydrological simulations at Valdai, Russia (Invited paper; with Lifeng Luo, Konstantin Y. Vinnikov, Jared K. Entin, and Nina A. Speranskaya; XXII Scientific Assembly of the IUGG, Birmingham, UK, July 19-30, 1999)
194. Intercomparison of climate model simulations of the response to the 1991 Pinatubo volcanic eruption (Invited paper; with Georgiy L. Stenchikov; XXII Scientific Assembly of the IUGG, Birmingham, UK, July 19-30, 1999)
195. Scales and trends of observed soil moisture variations, and predicted future variations (with Konstantin Y. Vinnikov; XXII Scientific Assembly of the IUGG, Birmingham, UK, July 19-30, 1999)
196. Detection and attribution of anthropogenic global warming using observed trends in Northern Hemisphere snow cover and sea ice areas (with Konstantin Y. Vinnikov, Ronald J. Stouffer, John Walsh, Claire Parkinson, Donald Cavalieri, David A. Robinson, Victor Zakharov, and Donald Garrett; XXII Scientific Assembly of the IUGG, Birmingham, UK, July 19-30, 1999)
197. The Global Soil Moisture Data Bank (XXII Scientific Assembly of the IUGG, Birmingham, UK, July 19-30, 1999)

198. Plans for future PILPS Phase 2 experiments (Invited paper; XXII Scientific Assembly of the IUGG, Birmingham, UK, July 19-30, 1999)
199. SAGE II validation with a global lidar network (Invited paper; with Juan Carlos Antuña and Georgiy L. Stenchikov; SAGE II Science Team Meeting, Hampton University, Hampton, Virginia, August 16-17, 1999)
200. Uncertainties of predicted global warming (Invited presentation and panel discussion; Dixy Lee Ray Memorial Symposium II, Washington, DC, September 1, 1999)
201. Global soil moisture data set and techniques for land surface model evaluation (Invited paper; GEWEX/INSU International Workshop on Modeling Land Surface Atmosphere Interactions and Climate Variability, Gif-sur-Yvette, France, October 7, 1999)
202. PILPS Phase 2 experiments (Invited paper; Joint session of the CAS/JSC Working Group on Numerical Experimentation (WGNE) and the GEWEX Modelling and Prediction Panel (GMPP), Naval Research Laboratory, Monterey, California, October 25-29, 1999)
203. AMIP revisit experiments (Invited paper; Joint session of the CAS/JSC Working Group on Numerical Experimentation (WGNE) and the GEWEX Modelling and Prediction Panel (GMPP), Naval Research Laboratory, Monterey, California, October 25-29, 1999)
204. GRIPS Pinatubo intercomparisons (Invited paper; Joint session of the CAS/JSC Working Group on Numerical Experimentation (WGNE) and the GEWEX Modelling and Prediction Panel (GMPP), Naval Research Laboratory, Monterey, California, October 25-29, 1999)
205. Northern Hemisphere snow cover trends and global warming (Invited paper; International Arctic Research Center Workshop, GFDL, Princeton, New Jersey, November 2-3, 1999)
206. The snow-soil moisture-monsoon relationship (Invited paper; 7th U.S.-Japan Workshop on Global Climate Change, "Precipitation Systems/Processes and Their Variability in the Asia Pacific Region," Tokyo, November 16-18, 1999)
207. The collaborative GCIP Land Data Assimilation System (LDAS) project (with E. F. Wood, K. Vinnikov, D. Tarpley, J. C. Schaake, G. O'Donnell, K. Mitchell, C. Marshall, D. Lohmann, D. Lettenmaier, P. Houser, F. Habets, J. Entin, Q. Duan, and B. Cosgrove; AGU Fall Meeting, San Francisco, California, December 13-17, 1999)
208. Winter warming following volcanic eruptions: observations and climate model simulations of forced Arctic Oscillation patterns (with Georgiy L. Stenchikov, S. Ramachandran, and V. Ramaswamy; AGU Fall Meeting, San Francisco, California, December 13-17, 1999)
209. Improved Mount Pinatubo aerosol data set using lidar measurements (with Juan Carlos Antuña and Georgiy L. Stenchikov; presented by Juan Carlos Antuña; AGU Fall Meeting, San Francisco, California, December 13-17, 1999; session convenor and chair)
210. Comparison of the climatic response to the 1991 Pinatubo eruption as calculated by ECHAM4 and SKYHI (With Georgiy L. Stenchikov, S. Ramachandran, Juan Carlos Antuña, V. Ramaswamy, Hans-F. Graf and Ingo Kirchner; presented by Georgiy Stenchikov; AGU Fall Meeting, San Francisco, California, December 13-17, 1999)
211. Water partition in a seasonally snow covered region; Results from the PILPS 2(d) experiment at Valdai, Russia (with Lifeng Luo, G. Srinivasan, Konstantin Y. Vinnikov,

- Jared K. Entin, and PILPS Modeling Groups; presented by Lifeng Luo; AGU Fall Meeting, San Francisco, California, December 13-17, 1999)
212. Role of volcanic and solar forcings in decade to century-scale climate variability (Invited paper; with Melissa Free; presented by Melissa Free; AGU Fall Meeting, San Francisco, California, December 13-17, 1999)
  213. The missing Pinatubo aerosols: A global lidar-SAGE II comparison (with Juan Carlos Antuña and Georgiy L. Stenchikov; AMS Symposium on Lidar Atmospheric Monitoring, Long Beach, California, January 9-14, 2000)
  214. Detection and attribution of anthropogenic global warming using Northern Hemisphere sea ice extent (with Konstantin Y. Vinnikov, Ronald J. Stouffer, John E. Walsh, Claire L. Parkinson, Donald J. Cavalieri, John F. B. Mitchell, Donald Garrett, and Victor F. Zakharov; presented by Konstantin Y. Vinnikov; 11th AMS Symposium on Global Change; Long Beach, California, January 9-14, 2000)
  215. The collaborative GCIP Land Data Assimilation System (LDAS) project and supportive NCEP uncoupled land-surface model initiatives (with K. Mitchell, C. Marshall, D. Lohmann, M. Ek, Y. Lin, P. Grunmann, P. Houser, E. Wood, J. Schaake, D. Lettenmaier, D. Tarpley, W. Higgins, R. Pinker, B. Cosgrove, J. Entin, and Q. Duan; presented by K. Mitchell; 15th AMS Conference on Hydrology; Long Beach, California, January 9-14, 2000; also served as Session Chair)
  216. Soil moisture observations for LDAS evaluation (with Lifeng Luo and Konstantin Vinnikov; 15th AMS Conference on Hydrology, Long Beach, California, January 9-14, 2000; also served as Session Chair)
  217. Intercomparison study of GCM simulations of climate impact of the 1991 Mt. Pinatubo volcanic eruption (with Georgiy Stenchikov, S. Ramachandran, Juan Carlos Antuña, V. Ramaswamy, Hans-F. Graf, and Ingo Kirchner; presented by Georgiy Stenchikov; GRIPS Workshop, University of Toronto, March 13-15, 2000)
  218. PINMIP (Pinatubo Model Intercomparison Project) (GRIPS Workshop, University of Toronto, March 13-15, 2000)
  219. Evaluation of Land-surface Data Assimilation Schemes simulations of soil moisture in the GCIP region (GCIP/GAPP PI Workshop, Potomac, Maryland, March 27-28, 2000)
  220. A model study of the effect of Pinatubo volcanic aerosols on stratospheric temperatures, (with V. Ramaswamy, S. Ramachandran, and G. Stenchikov; presented by V. Ramaswamy; Cess Symposium; May 2000)
  221. Global in situ measurements of soil moisture (Invited paper; GEWEX/BAHC International Workshop on Soil Moisture Monitoring, Analysis and Prediction, Norman, Oklahoma, May 16-18, 2000)
  222. Oklahoma Mesonet soil moisture observations for 1998: Visualization, quality control, and analysis of scales (with Lifeng Luo, Karen Humes, Konstantin Vinnikov, Jeff Basara, and Ronald Elliott; presented by Lifeng Luo; GEWEX/BAHC International Workshop on Soil Moisture Monitoring, Analysis and Prediction, Norman, Oklahoma, May 16-18, 2000)

223. Winter warming following volcanic eruptions: Observations and climate model simulations of forced arctic oscillation patterns (with Georgiy Stenchikov, S. Ramachandran, Juan Carlos Antuña, V. Ramaswamy, Hans-F. Graf and Ingo Kirchner; IAVCEI General Assembly, Bali, Indonesia, July 17-22, 2000)
224. GCM simulation of climate impact of the 1991 Mt. Pinatubo volcanic eruption (with Georgiy Stenchikov, S. Ramachandran, Juan Carlos Antuña, V. Ramaswamy, Hans-F. Graf, and Ingo Kirchner; presented by Georgiy Stenchikov; International Radiation Symposium 2000, St. Petersburg, Russia, July 24-29, 2000)
225. Detection and attribution of anthropogenic global warming using observed trends in northern hemisphere soil moisture, snow cover and sea ice areas *and* Land surface modeling in regions with seasonally frozen soil (Invited paper; with Konstantin Vinnikov; NSF Arctic System Science (ARCSS) Hydrology Workshop, Santa Barbara, California, September 18-20, 2000)
226. Tropospheric responses in GCM simulations of the impact of the 1991 Mt Pinatubo eruption (with G. L. Stenchikov, V. Ramaswamy, and S. Ramachandran; Second SPARC General Assembly, Mar del Plata, Argentina, November 6-10, 2000)
227. Radiative forcing and stratospheric responses in GCM simulations of the impact of the 1991 Mt. Pinatubo eruption (with G. L. Stenchikov, V. Ramaswamy, and S. Ramachandran; Second SPARC General Assembly, Mar del Plata, Argentina, November 6-10, 2000)
228. SAGE II measurements of Mount Pinatubo aerosols: tropical and midlatitude validation with a lidar network (with Juan Carlos Antuña and G. L. Stenchikov; Second SPARC General Assembly, Mar del Plata, Argentina, November 6-10, 2000)
229. Radiative impact of the Mt Pinatubo volcanic eruption: Lower stratospheric response (with S. Ramachandran, V. Ramaswamy, and G. L. Stenchikov; Second SPARC General Assembly, Mar del Plata, Argentina, November 6-10, 2000)
230. The snow-soil moisture-monsoon relationship (Invited paper; 8th U.S.-Japan Workshop on Global Climate Change, "Pacific-Asian and North America monsoon climate variability, global impacts and inter-relationships," Greenbelt, Maryland, November 28-30, 2000)
231. Soil moisture variations in Oklahoma (with Lifeng Luo, Konstantin Vinnikov, Karen Humes, Ronald Elliott, and Jeffery Basara; presented by Lifeng Luo; AGU Fall Meeting, San Francisco, California, December 15-19, 2000)
232. Water partition in a seasonally snow covered region; Results from the PILPS 2(d) experiment at Valdai, Russia (with Lifeng Luo and Konstantin Y. Vinnikov; AGU Fall Meeting, San Francisco, California, December 15-19, 2000)
233. SKYHI simulations of interactive effects of Mt. Pinatubo volcanic aerosols and the QBO (with G. Stenchikov, K. Hamilton, M. D. Schwarzkopf, V. Ramaswamy, and S. Ramachandran; presented by G. Stenchikov; AGU Fall Meeting, San Francisco, California, December 15-19, 2000)
234. SKYHI simulations of interactive effects of Mt. Pinatubo volcanic aerosols, QBO, and ozone changes (Invited presentation; with Georgiy L. Stenchikov; presented by Georgiy

- L. Stenchikov; GRIPS Workshop, Max Planck Institute for Meteorology, Hamburg, Germany, February 26-28, 2001)
235. Use of lidar aerosol measurements in climate modeling (Invited presentation; with Georgiy L. Stenchikov; Workshop on Lidar Measurement in Latin America, Camagüey, Cuba, March 6-8, 2001; also served as workshop organizer and session chair)
  236. Model assessment of observed contemporary trends in Arctic climate (Invited presentation; with Konstantin Y. Vinnikov, David A. Robinson, Richard L. Armstrong, Ronald J. Stouffer, Thomas L. Delworth, Anthony J. Broccoli, and Keith W. Dixon; presented by Konstantin Y. Vinnikov; Second Wadati Conference on Global Change and Polar Climate, Tsukuba, Japan, March 7-9, 2001)
  237. Evaluation of Land Data Assimilation System simulations of soil moisture in the GCIP region (Invited presentation, with Lifeng Luo and Konstantin Y. Vinnikov, GAPP PI Workshop, Potomac, Maryland, April 30 – May 2, 2001)
  238. Recent results from the GAPP Land Data Assimilation System Project (LDAS) (Invited presentation, with Ken Mitchell, D. Lohmann, P. Houser, J. Schaake, E. Wood, D. Lettenmaier, M. Ek, D. Tarpley, R. Pinker, P. Grunmann, Q. Duan, W. Higgins, and H. van den Dool; presented by Ken Mitchell; GAPP PI Workshop, Potomac, Maryland, April 30 – May 2, 2001)
  239. SAGE II validation with a global lidar network (Invited presentation, with Juan Carlos Antuña and Georgiy Stenchikov, SAGE II Science Team Meeting, Hampton, Virginia, May 3-4, 2001)
  240. QBO and Pinatubo aerosol effects on stratospheric temperatures (with Georgiy Stenchikov, Kevin Hamilton, Dan Schwarzkopf, V. Ramaswamy, and S. Ramachandran; presented by Georgiy Stenchikov; SAGE II Science Team Meeting, Hampton, Virginia, May 3-4, 2001)
  241. The observed relationship between snow cover, soil moisture, and the Asian monsoon (with Mingquan Mu, Konstantin Vinnikov, and David Robinson; 8th Scientific Assembly of IAMAS, Innsbruck, Austria, July 10-18, 2001)
  242. Snow cover, soil moisture, and the Asian monsoon (with Mingquan Mu and participating AMIP II modeling groups; 8th Scientific Assembly of IAMAS, Innsbruck, Austria, July 10-18, 2001)
  243. SKYHI simulations of Arctic Oscillation response to variations of the lower stratospheric temperature caused by volcanic aerosols and the Quasi-Biennial Oscillation (with Georgiy Stenchikov, Kevin Hamilton, Daniel Schwarzkopf, V. Ramaswamy, and S. Ramachandran; presented by Georgiy Stenchikov; 8th Scientific Assembly of IAMAS, Innsbruck, Austria, July 10-18, 2001)
  244. Design of the American Lidar Network (ALINE) for stratospheric aerosol observations (with Juan Carlos Antuña, Minard L. Hall, Patricia Mothes, John E. Barnes, Barclay Clemesha, Dale Simonich, and Craig Tepley; NDSC (Network for Detection of Stratospheric Change) 2001 Symposium, Arcachon, France, September 24-27, 2001)
  245. Use of lidar aerosol measurements in climate modeling (with Georgiy Stenchikov; NDSC 2001 Symposium, Arcachon, France, September 24-27, 2001)

246. Climatic effects of the 1991 Mt. Pinatubo volcanic eruption (Invited presentation; with Georgiy L. Stenchikov; AGU Fall Meeting, San Francisco, California, December 10-14, 2001; also convened session and served as session chair)
247. Interaction of volcanic aerosols, ozone changes, and the Quasi-Biennial Oscillation determine the atmospheric response to the June 15, 1991 Pinatubo eruption (Invited presentation; with Georgiy L. Stenchikov, Kevin Hamilton, M. Daniel Schwarzkopf, V. Ramaswamy, and S. Ramachandran; presented by Georgiy L. Stenchikov; AGU Fall Meeting, San Francisco, California, December 10-14, 2001; also convened session and served as session chair)
248. Diagnosis of climate model simulations by downscaling with a high-resolution regional model (with Gonzalo Miguez Macho, Georgiy L. Stenchikov, and Christopher Weaver; presented by Gonzalo Miguez Macho; AGU Fall Meeting, San Francisco, California, December 10-14, 2001)
249. A new technique to estimate the diurnal and seasonal cycles of climatic trends, with applications to temperature and sea ice (with Konstantin Y. Vinnikov, D. J. Cavalieri, and C. L. Parkinson; presented by Konstantin Y. Vinnikov; AMS Annual Meeting, Orlando, Florida, January 13-17, 2002)
250. Northern Hemisphere snow cover extent and global warming: observed and simulated variations (with Konstantin Y. Vinnikov, D. A. Robinson, R. L. Armstrong, D. J. Cavalieri, C. L. Parkinson, R. J. Stouffer, T. L. Delworth, K. W. Dixon, A. J. Broccoli, J. M. Gregory, G. M. Flato, N. C. Grody, B. H. Ramsay, P. Romanov, and A. N. Basist; presented by Konstantin Y. Vinnikov; AMS Annual Meeting, Orlando, Florida, January 13-17, 2002)
251. Evaluation of LDAS land surface models with observed forcing and hydrology (with Lifeng Luo, K. E. Mitchell, P. R. Houser, J. C. Schaake, E. F. Wood, D. P. Lettenmaier, D. Lohmann, B. Cosgrove, Q. Duan, R. T. Pinker, W. Higgins, and D. Tarpley; presented by Lifeng Luo; AMS Annual Meeting, Orlando, Florida, January 13-17, 2002)
252. Evaluation of streamflow and snowpack simulations in the land surface models of the Land Data Assimilation System (LDAS) project (with Dag Lohmann, K. E. Mitchell, P. R. Houser, J. C. Schaake, E. F. Wood, D. Tarpley, R. W. Higgins, R. T. Pinker, D. P. Lettenmaier, B. Cosgrove, Q. Duan, J. Sheffield, and L. Luo; presented by Dag Lohmann; AMS Annual Meeting, Orlando, Florida, January 13-17, 2002)
253. Downscaled regional climate simulations for the Mid-Atlantic states using RAMS (with Gonzalo Miguez-Macho and G. Stenchikov; AMS Annual Meeting, Orlando, Florida, January 13-17, 2002)
254. The observed relationship between snow cover, soil moisture, and the Asian monsoon (with M. Mu, K. Y. Vinnikov, and D. A. Robinson; presented by M. Mu; AMS Annual Meeting, Orlando, Florida, January 13-17, 2002)
255. Another statistical look at LDAS soil moisture fields (with John C. Schaake, Q. Duan, K. E. Mitchell, P. R. Houser, E. F. Wood, D. P. Lettenmaier, B. Cosgrove, D. Lohmann, R. Pinker, J. Sheffield, and D. Tarpley; presented by John C. Schaake; AMS Annual Meeting, Orlando, Florida, January 13-17, 2002)

256. Atmospheric responses and stratosphere-troposphere interactions forced by the 1991 Mt. Pinatubo eruption (with Georgiy Stenchikov; presented by Georgiy Stenchikov; GRIPS Workshop, Tsukuba, Japan, March 12-15, 2002)
257. Update on PINMIP (with Georgiy Stenchikov; presented by Georgiy Stenchikov; GRIPS Workshop, Tsukuba, Japan, March 12-15, 2002)
258. Evaluation of N-LDAS land surface models with observed forcing and hydrology (with the N-LDAS team; European Geophysical Society XXVII General Assembly, Nice, France, April 21-26, 2002)
259. The observed relationship between snow cover, soil moisture, and the Indian summer monsoon (with M. Mu, K. Y. Vinnikov, and D. Robinson; European Geophysical Society XXVII General Assembly, Nice, France, April 21-26, 2002)
260. The North American Land Data Assimilation System (N-LDAS) project (with K. Mitchell, P. R. Houser, E. F. Wood, J. Schaake, D. P. Lettenmaier, D. Lohmann, W. Higgins, R. Pinker, and D. Tarpley; presented by D. P. Lettenmaier; European Geophysical Society XXVII General Assembly, Nice, France, April 21-26, 2002)
261. Evaluation of North American LDAS land surface models with observed surface fluxes, soil moisture, and soil temperature (with Lifeng Luo, Kenneth E. Mitchell, Paul R. Houser, Eric F. Wood, John C. Schaake, Dennis P. Lettenmaier, Brian A. Cosgrove, Q. Duan, Dag Lohmann, J. Sheffield, Wayne Higgins, Rachel T. Pinker, Dan Tarpley, Kenneth C. Crawford, and Jeffrey B. Basara; Mississippi River Climate and Hydrology Conference, New Orleans, Louisiana, May 13-17, 2002)
262. Validation of North American LDAS retrospective forcing with station observations and model experiments (with Lifeng Luo, Kenneth E. Mitchell, Paul R. Houser, Eric F. Wood, John C. Schaake, Dennis P. Lettenmaier, Dag Lohmann, Brian A. Cosgrove, Q. Duan, J. Sheffield, Jesse Meng, Wayne Higgins, Rachel T. Pinker, Dan Tarpley, Kenneth C. Crawford, and Jeffrey B. Basara; presented by Lifeng Luo; Mississippi River Climate and Hydrology Conference, New Orleans, Louisiana, May 13-17, 2002)
263. Real-time and retrospective forcing in the North American Land Data Assimilation System (N-LDAS) project (with Brian A. Cosgrove, Dag Lohmann, Kenneth E. Mitchell, Paul R. Houser, Eric F. Wood, John Schaake, Dennis P. Lettenmaier, Lifeng Luo, Qingyun Duan, Justin Sheffield, Jesse Meng, Wayne Higgins, Rachel Pinker, Dan Tarpley, and Ying Lin; presented by Paul Houser; Mississippi River Climate and Hydrology Conference, New Orleans, Louisiana, May 13-17, 2002)
264. Progress to Derive Improved Surface Radiation Budgets for the Global Energy and Water Cycle Experiment (GEWEX) Continental-Scale International Project and the GEWEX Americas Prediction Project (GCIP/GAPP) (with Rachel T. Pinker., J. Dan Tarpley, Kenneth Mitchell, Xu Li, Tzveta Kassabova, Hongqing Liu, Istvan Laszlo, Paul R. Houser, Eric F. Wood, John Schaake, Alan Robock, Dennis P. Lettenmaier, Wayne Higgins, Brian A. Cosgrove, Dag Lohmann, Justin Sheffield, Lifeng Luo, Q. Duan, and the North America LDAS Team; presented by Rachel Pinker; Mississippi River Climate and Hydrology Conference, New Orleans, Louisiana, May 13-17, 2002)
265. Cloud Detection and Snow Mapping in Reprocessing of GCIP/GAPP Radiative Fluxes (with Xu Li, Rachel T. Pinker, Kenneth Mitchell, Paul R. Houser, Eric F. Wood, John

- Schaake, Dennis Lettenmaier, J. Dan Tarpley, Wayne Higgins, and the North American LDAS Team; presented by Rachel Pinker; Mississippi River Climate and Hydrology Conference, New Orleans, Louisiana, May 13-17, 2002)
266. An estimate of the sensitivity of large-scale model simulations to the mosaic-of-tiles approach to land-atmosphere coupling: A case study over the GCIP region (with L. Luo, C. P. Weaver, and R. Avissar; presented by L. Luo; Mississippi River Climate and Hydrology Conference, New Orleans, Louisiana, May 13-17, 2002)
  267. Validation of North American-LDAS modeled energy budgets (with Eric F. Wood, Jesse Meng, Fengua Wen, Kenneth Mitchell, Paul R. Houser, John Schaake, Dennis P. Lettenmaier, Dag Lohmann, Brian Cosgrove, Qingyun Duan, Justin Sheffield, Lifeng Luo, Wayne Higgins, Rachel Pinker, and Dan Tarpley; presented by Eric F. Wood; Mississippi River Climate and Hydrology Conference, New Orleans, Louisiana, May 13-17, 2002)
  268. An Intercomparison of North American LDAS Soil Moisture Fields (with John Schaake, Qingyun Duan, Kenneth Mitchell, Paul Houser, Eric Wood, Dennis Lettenmaier, Brian Cosgrove, Dag Lohmann, Lifeng Luo, Justin Sheffield, Wayne Higgins, Rachel Pinker, and Dan Tarpley; presented by John Schaake; Mississippi River Climate and Hydrology Conference, New Orleans, Louisiana, May 13-17, 2002)
  269. The GAPP/GCIP Multi-institution North American Land Data Assimilation System (N-LDAS) (with Kenneth E. Mitchell, P. Houser, J. Schaake, E. Wood, D. Lettenmaier, D. Lohmann, B. Cosgrove, Q. Duan, J. Sheffield, L. Luo, W. Higgins, D. Tarpley, R. Pinker, and J. Meng; presented by Kenneth E. Mitchell; Mississippi River Climate and Hydrology Conference, New Orleans, Louisiana, May 13-17, 2002)
  270. Lidar-derived aerosol extinction dataset for aerosol data assimilation for the Mt. Pinatubo eruption (with Juan Carlos Antuña and Georgiy L. Stenchikov; presented by Juan Carlos Antuña; AGU Spring Meeting, Washington, DC, May 27-31, 2002)
  271. The American Lidar Network (ALINE) for Stratospheric Aerosol Observations; Next Step: A Stratospheric Aerosol Observatory on the Equator (Invited presentation; Lidar Working Group of the Network for Detection of Stratospheric Change, Observatoire d'Haute Provence, France, June 10-13, 2002)
  272. Mt. Pinatubo as a Test of Climatic Feedback Mechanisms (Invited presentation; Chapman Conference on Volcanism and the Earth's Atmosphere; Thera, Greece, June 17-21, 2002; also organized conference and served as session chair)
  273. Arctic Oscillation Response to the 1991 Mount Pinatubo Eruption (Invited presentation; with Georgiy Stenchikov, V. Ramaswamy, M. Daniel Schwarzkopf, Kevin Hamilton, and S. Ramachandran; presented by Georgiy Stenchikov; Chapman Conference on Volcanism and the Earth's Atmosphere; Thera, Greece, June 17-21, 2002)
  274. Mt. Pinatubo Stratospheric Aerosols in the Tropics: Comparison of SAGE II and Lidars (with Juan Carlos Antuña, Georgiy Stenchikov, Larry W. Thomason, John E Barnes, and Jun Zhou; presented by Juan Carlos Antuña; Chapman Conference on Volcanism and the Earth's Atmosphere; Thera, Greece, June 17-21, 2002)
  275. Comparison of SAGE II Aerosol Measurements with Lidars Following the 1991 Mount Pinatubo Eruption (with Juan Carlos Antuña and Georgiy Stenchikov; presented by Juan

- Carlos Antuña; International Laser Radar Conference, Québec City, Québec, Canada, July 8-12, 2002)
276. Toward a Lidar Network in Latin America (with Juan Carlos Antuña, Pablo O. Canziani, Barclay Clemesha, Francisco Zaratti, and Errico Armandillo; presented by Juan Carlos Antuña; International Laser Radar Conference, Québec City, Québec, Canada, July 8-12, 2002)
  277. The “LIPAZ” Lidar Project (with Francesco Zaratti, Ricardo Forno, Flavio Ghezzi, Errico Armandillo, Giorgio Fiocco, Juan Carlos Antuña, Pablo O. Canziani, and Barclay Clemesha; presented by Errico Armandillo; International Laser Radar Conference, Québec City, Québec, Canada, July 8-12, 2002)
  278. Downscaling climate anomalies from a GCM using RAMS (with Gonzalo Miguez-Macho and Georgiy Stenchikov; presented by Gonzalo Miguez-Macho; Fifth RAMS User Workshop, Thera, Greece, September 29 – October 3, 2002)
  279. Engineering RAMS to produce improved climate simulations for the mid-Atlantic states of the U.S. (with Gonzalo Miguez-Macho and Georgiy Stenchikov; presented by Gonzalo Miguez-Macho; Fifth RAMS User Workshop, Thera, Greece, September 29 – October 3, 2002)
  280. AMIP forcing: Inclusion of tropospheric and stratospheric aerosols and greenhouse gases (AMIP Workshop “Toward Innovative Climate Model Diagnostics,” Toulouse, France, November 12-16, 2002)
  281. Snow cover, soil moisture, and the Asian summer monsoon (AMIP Workshop “Toward Innovative Climate Model Diagnostics,” Toulouse, France, November 12-16, 2002)
  282. Southern Hemisphere annular mode response to the 1991 Mount Pinatubo eruption (with G. Stenchikov, V. Ramaswamy, M. D. Schwarzkopf, K. Hamilton, S. Ramachandran, and L. Oman; presented by G. Stenchikov; AGU Fall Meeting, December 6-10, 2002)
  283. Modeling the present climate and future climate anomalies over North America using RAMS (with Gonzalo Miguez Macho and Georgiy L. Stenchikov; presented by Gonzalo Miguez Macho; AGU Fall Meeting, December 6-10, 2002)
  284. High latitude soil moisture observations to study climate variations and to evaluate climate models (Invited presentation; with Konstantin Vinnikov, Lifeng Luo, and Mingquan Mu; AGU Fall Meeting, December 6-10, 2002)
  285. The New Jersey TOWER (Invited presentation; Urban Atmospheric Observatory Workshop, New York City, January 27-28, 2003)
  286. Snow cover, soil moisture, and the Asian summer monsoon (with Mingquan Mu, Konstantin Y. Vinnikov, and David A. Robinson; 14th AMS Symposium on Global Change and Climate Variations, Long Beach, California, February 9-13, 2003)
  287. The Global Soil Moisture Data Bank: An update including new United States stations (Invited presentation; with Lifeng Luo, Mingquan Mu, and Konstantin Vinnikov; AMS Symposium on Observing and Understanding the Variability of Water in Weather and Climate, Long Beach, California, February 9-13, 2003)

288. Analysis of diurnal and seasonal cycles in climatic trends for records with changes of observation times (with Konstantin Vinnikov and Alan Basist; presented by Konstantin Vinnikov; 14th AMS Symposium on Global Change and Climate Variations, Long Beach, California, February 9-13, 2003)
289. The relationship between cloudiness and surface temperature (with Konstantin Vinnikov, Norman Grody, and Alan Basist; presented by Konstantin Vinnikov; 12th AMS Conference on Satellite Meteorology and Oceanography, Long Beach, California, February 9-13, 2003)
290. Analysis of water balance simulation of Land Data Assimilation System (with John Schaake, Qingyun Duan, Kenneth Mitchell, Paul Houser, Eric Wood, Dennis Lettenmaier, Brian Cosgrove, Dag Lohmann, Lifeng Luo, Justin Sheffield, Wayne Higgins, Rachel Pinker, and Dan Tarpley; presented by John Schaake; 17th AMS Conference on Hydrology, Long Beach, California, February 9-13, 2003)
291. Evaluation of streamflow and snowpack simulations in the land surface models of the North American Land Data Assimilation (N-LDAS) Project (with Dag Lohmann, Kenneth Mitchell, Paul R. Houser, Eric F. Wood, John Schaake, Dennis Lettenmaier, Brian Cosgrove, III, Ming Pan, Qingyun Duan, Justin Sheffield, Lifeng Luo, Jesse Meng, Wayne Higgins, Rachel Pinker, and Dan Tarpley; presented by Dag Lohmann; 17th AMS Conference on Hydrology, Long Beach, California, February 9-13, 2003)
292. GCIP Water and Energy Budget Synthesis (WEBS) (with J. Roads, Richard Lawford, E. Bainto, Ernesto Berbery, S Chen, B. Fekete, K. Gallo, Andrew Grundstein, Wayne Higgins, Masao Kanamitsu, Witold Krajewski, Venkat Lakshmi, Daniel Leathers, D. Lettenmaier, L. Luo, Edwin Maurer, Tilden Meyers, D Miller, Kenneth Mitchell, Thomas Mote, Rachel Pinker, Thomas Reichler, David Robinson, J Smith, G. Srinivasan, Konstantin Vinnikov, T. Vonder Haar, C. Vorosmarty, S. Williams, and Evgeney Yarosh; presented by John Roads; 17th AMS Conference on Hydrology, Long Beach, California, February 9-13, 2003)
293. Comparisons of soil moisture data from in situ measurements and global hydrological model outputs (with G. Ramillien, A. Cazenave, and P. C. D. Milly; presented by G. Ramillien; EGS-AGU-EUG Joint Assembly, Nice, France, April 7-11, 2003)
294. Evaluation of the North American Land Data Assimilation System over the Southern Great Plains during the warm season (with Lifeng Luo, Eric F. Wood, Fenghua Wen, Kenneth E. Mitchell, Paul R. Houser, John C. Schaake, Dag Lohmann, Brian Cosgrove, Justin Sheffield, Qingyun Duan, R. Wayne Higgins, Rachel T. Pinker, J. Dan Tarpley, Jeffery B. Basara, and Kenneth C. Crawford; EGS-AGU-EUG Joint Assembly, Nice, France, April 7-11, 2003)
295. Overview and validation work of the North American Land Data Assimilation System (NLDAS) (with Dag Lohmann, Kenneth E. Mitchell, Paul R. Houser, Eric F. Wood, John C. Schaake, Brian Cosgrove, Qingyun Duan, Justin Sheffield, Ming Pan, Lifeng Luo, Jesse Meng, R. Wayne Higgins, Rachel T. Pinker, and J. Dan Tarpley; presented by Dag Lohmann; EGS-AGU-EUG Joint Assembly, Nice, France, April 7-11, 2003)
296. An inter-comparison of soil moisture fields in the North American Land Data Assimilation System (NLDAS) (with John C. Schaake, Qingyun Duan, Kenneth E. Mitchell, Paul R.

- Houser, Eric F. Wood, Dennis Lettenmaier, Dag Lohmann, Brian Cosgrove, Justin Sheffield, Lifeng Luo, R. Wayne Higgins, Rachel T. Pinker, and J. Dan Tarpley; presented by John C. Schaake; EGS-AGU-EUG Joint Assembly, Nice, France, April 7-11, 2003)
297. Assessment of snow modeling in the North American Land Data Assimilation System (NLDAS) (with Ming Pan, Eric F. Wood, Justin Sheffield, Fenghua Wen, Kenneth E. Mitchell, Paul R. Houser, John C. Schaake, Dag Lohmann, Brian Cosgrove, Qingyun Duan, Lifeng Luo, and Bruce H. Ramsay; presented by Eric Wood; EGS-AGU-EUG Joint Assembly, Nice, France, April 7-11, 2003)
  298. Mechanisms of Forced Arctic Oscillation Response to Volcanic Eruptions (invited presentation; The Role of the Stratosphere in Tropospheric Climate, Whistler, British Columbia, Canada, April 29 – May 2, 2003)
  299. Analysis of Stratospheric and Tropospheric Impacts from the Mount Pinatubo Eruption in the GFDL R30 and GISS GCMs (with Luke Oman, Georgiy L. Stenchikov, Brian Soden, and Richard Wetherald; presented by Luke Oman; The Role of the Stratosphere in Tropospheric Climate, Whistler, British Columbia, Canada, April 29 – May 2, 2003)
  300. Arctic Oscillation Response to the 1991 Pinatubo Eruption in the SKYHI GCM with a Realistic Quasi-Biennial Oscillation (invited presentation; with Georgiy L. Stenchikov, Kevin Hamilton V. Ramaswamy, and M. Daniel Schwarzkopf; XXIII General Assembly of the International Union of Geodesy and Geophysics, Sapporo, Japan, June 30 – July 11, 2003)
  301. Climatic Impacts of Volcanic Gas Emissions (invited presentation; with Georgiy L. Stenchikov; XXIII General Assembly of the International Union of Geodesy and Geophysics, Sapporo, Japan, June 30 – July 11, 2003)
  302. Decadal Soil Moisture Variations in The Ukraine: 45 Years of In Situ Observations Compared to Climate Model Simulations and NCEP/NCAR and ERA40 Reanalyses (with Mingquan Mu, Konstantin Y. Vinnikov, Iryna Trofimova, Tatiana Adamenko, Pedro Viterbo, and Thomas Atkins; XXIII General Assembly of the International Union of Geodesy and Geophysics, Sapporo, Japan, June 30 – July 11, 2003)
  303. Stratospheric and Tropospheric Forcing of the Arctic Oscillation by the 1991 Mt. Pinatubo Eruption (invited presentation; with Georgiy L. Stenchikov, Kevin Hamilton, V. Ramaswamy, M. Daniel Schwarzkopf; presented by Kevin Hamilton; XXIII General Assembly of the International Union of Geodesy and Geophysics, Sapporo, Japan, June 30 – July 11, 2003)
  304. Volcanic eruptions and climate: Winter warming and summer cooling (invited presentation: Gordon Research Conference on Solar Radiation and Climate, New London, New Hampshire, July 13-18, 2003)
  305. A Study of Interactive Climate Effects of Volcanic Radiative Forcing and QBO (with G. Stenchikov, K. Hamilton, V. Ramaswamy, and M. D. Schwarzkopf; presented by G. Stenchikov; Gordon Research Conference on Solar Radiation and Climate, New London, New Hampshire, July 13-18, 2003)

306. Contributions of Jim Angell to the Study of the Effects of Volcanic Eruptions on Climate (Invited presentation: Jim Angell 80th Birthday Symposium, Silver Spring, Maryland, November 4, 2003)
307. Land surface model evaluation using a new soil moisture and hydrology data set from Boissy-le-Châtel, France (with Thomas Atkins and Cécile Loumagne; presented by Thomas Atkins; AGU Fall Meeting, December 8-12, 2003)
308. The Impact of the 1991 Pinatubo Volcanic Eruption on Climate Using a Vertically Resolved Stratospheric Aerosol Data Set Derived from SAGE II Observations (with Georgiy L. Stenchikov, Kevin Hamilton, V. Ramaswamy, M. Daniel Schwarzkopf, Arlindo da Silva, and Larry Thomason; presented by Georgiy L. Stenchikov; presented by Thomas Atkins; AGU Fall Meeting, December 8-12, 2003)
309. Comparing the Climatic Impact from Low Latitude versus High Latitude Volcanic Eruptions (with Luke Oman and Georgiy L. Stenchikov; presented by Luke Oman; AGU Fall Meeting, December 8-12, 2003)
310. Soil Moisture Estimation Using Surface Backscattering Coefficients Observed by the Tropical Rain Measurement Mission Precipitation Radar (with Shinta Seto, Lifeng Luo, Taikan Oki, Toshio Iguchi, and Katumi Musiake; AGU Fall Meeting, December 8-12, 2003)
311. Effects of Global Warming on Drought Frequency and Duration in the Northeast United States (with Chaochao Gao; presented by Chaochao Gao; AGU Fall Meeting, December 8-12, 2003)
312. Land Surface Model Evaluation Using a New Soil Moisture Data Set from Boissy-le-Châtel, France (with Thomas Atkins and Cécile Loumagne; presented by Thomas Atkins; 18th AMS Conference on Hydrology, Seattle, Washington, January 12-15, 2004)
313. Evaluation of ERA40 and CEP/DOE-Reanalysis II (R2) using Soil Moisture Observations from China for 1981-1999 (with Haibin Li, Suxia Liu, Xinggou Mo, and Pedro Viterbo; presented by Haibin Li; 18th AMS Conference on Hydrology, Seattle, Washington, January 12-15, 2004)
314. Soil Moisture Estimation Using Surface Backscattering Coefficients Observed by the Tropical Rain Measurement Mission (TRMM) Precipitation Radar (with Shinta Seto, Lifeng Luo, Taikan Oki, Toshio Iguchi, and Katumi Musiake; 18th AMS Conference on Hydrology, Seattle, Washington, January 12-15, 2004)
315. Nuclear Winter Update (Invited presentation, NPRI Symposium – Three Minutes To Midnight: The Impending Threat of Nuclear War, Washington, DC, January 25-27, 2004)
316. The Global Soil Moisture Data Bank (Invited presentation, Northern Eurasian Earth Science Partnership Initiative (NEESPI) Data Workshop, St. Petersburg, Russia, February 23-26, 2004)
317. Tree Rings and Volcanic Eruptions (Invited presentation, Tree Rings and Climate: Sharpening the Focus, Tucson, Arizona, April 6-9, 2004)
318. Panel Discussion (Invited presentation, Tree Rings and Climate: Sharpening the Focus, Tucson, Arizona, April 6-9, 2004)

319. Soil moisture observations for validation of remote sensing, with an example using retrievals from the Tropical Rain Measurement Mission Precipitation Radar (Invited presentation, with S. Seto, L. Luo, T. Oki, and T. Iguchi, European Geosciences Union 1st General Assembly, Nice, France, April 25-30, 2004)
320. Detection of the effects of volcanic eruptions on climate (with Georgiy Stenchikov; 9th International Meeting on Statistical Climatology, Cape Town, South Africa, May 24-28, 2004)
321. Use of observations from the Mt. Pinatubo eruption to estimate climate sensitivity (with Piers Forster; IPCC Working Group I Workshop on Climate Sensitivity, Paris, France, July 26-29, 2004)
322. Global Volcanic Forcing for the Last 2000 Years Derived From Multiple Ice Core Records (with Chaochao Gao, Caspar Ammann, and Philippe Naveau; presented by Chaochao Gao; IAVCEI General Assembly, Pucón, Chile, November 15-19, 2004)
323. Interaction of Climate Impacts of Volcanic Eruptions and ENSO (with G. Stenchikov, V. Ramaswamy, and M. D. Schwarzkopf; presented by G. Stenchikov; IAVCEI General Assembly, Pucón, Chile, November 15-19, 2004)
324. Climatic Response to High Latitude Volcanic Eruptions (with L. Oman and G. L. Stenchikov; presented by L. Oman; IAVCEI General Assembly, Pucón, Chile, November 15-19, 2004)
325. Climate Model Simulations of the Effects of the 1783-1784 Laki Eruption (with Luke Oman, Georgiy L. Stenchikov, and Thorvaldur Thordarson; IAVCEI General Assembly, Pucón, Chile, November 15-19, 2004. Also served as session chair.)
326. Land surface model evaluation using a new soil moisture dataset from Kamennaya Steppe, Russia (with T. Atkins and N. Speranskaya; presented by T. Atkins; AGU Fall Meeting, San Francisco, California, December 13-17, 2004)
327. Spectral Nudging to Eliminate the Effects of Domain Position and Geometry in Regional Climate Model Simulations (with G. Miguez-Macho and G. L. Stenchikov; presented by G. Miguez-Macho; AGU Fall Meeting, San Francisco, California, December 13-17, 2004)
328. Forty Five Years of Observed Soil Moisture in the Ukraine: No Summer Desiccation (Yet) (with M. Mu, K. Y. Vinnikov, I. V. Trofimova, and T. I. Adamenko; presented by G. Miguez-Macho; AGU Fall Meeting, San Francisco, California, December 13-17, 2004)
329. The Peace Corps – A Career Enhancing Opportunity (Fourth Annual AMS Student Conference, San Diego, California, January 8-9, 2005)
330. Evaluation of Reanalysis Soil Moisture Simulations Using Newly Updated Soil Moisture Observations from the Ukraine and China (with H. Li, M. Mu, and K. Y. Vinnikov; 19th AMS Conference on Hydrology and 16th AMS Conference on Climate Variability and Change; San Diego, California, January 10-13, 2005)
331. Latitudinal distribution of temperature trends at the surface and in the troposphere (with Konstantin Y. Vinnikov, N. Grody, M. D. Goldberg, R. J. Stouffer, and P. D. Jones; presented by Norman Grody; 16th AMS Conference on Climate Variability and Change; San Diego, California, January 10-13, 2005)

332. Tree Ring Records Underestimate Volcanic Cooling (16th AMS Conference on Climate Variability and Change; San Diego, California, January 10-13, 2005)
333. Climate response over North America to a simultaneous El Niño and volcanic eruption (with Megan E. Linkin, G. L. Stenchikov, and W. Stern; presented by Megan E. Linkin; 16th AMS Conference on Climate Variability and Change; San Diego, California, January 10-13, 2005)
334. Non-uniform root distribution in a land surface model to improve soil moisture and surface flux simulations (with Thomas Atkins; presented by Thomas Atkins; 19th AMS Conference on Hydrology; San Diego, California, January 10-13, 2005)
335. Evaluation of IPCC soil moisture simulations using observations for the second half of the 20th Century (with Haibin Li; presented by Haibin Li; International Workshop on IPCC Model Analysis, Honolulu, Hawaii, March 1-4, 2005)
336. Volcanic Impact on Arctic Oscillation and Stratosphere-Troposphere Dynamic Interaction in the IPCC Historic Runs (with G. Stenchikov, K. Hamilton, R. Stouffer, B. Santer, and V. Ramaswamy; presented by G. Stenchikov; International Workshop on IPCC Model Analysis, Honolulu, Hawaii, March 1-4, 2005)
337. Evaluation of Reanalysis Soil Moisture Simulations Using Newly Updated Soil Moisture Observations from the Ukraine and China (invited presentation; with H. Li, M. Mu, and K. Y. Vinnikov; European Geosciences Union General Assembly, Vienna, Austria, April 24-29, 2005. Also served as session chair.)
338. The impact of water table dynamics on climate (with G. Miguez-Macho, Y. Fan, and C. P. Weaver; presented by G. Miguez-Macho; European Geosciences Union General Assembly, Vienna, Austria, April 24-29, 2005)
339. The volcanic eruption signal in ice cores (invited presentation; Carlsberg Foundation Ice Core Dating Conference, Copenhagen, Denmark, August 15-17, 2005)
340. Global Warming and New Jersey Water Resources (invited presentation; New Jersey Environmental Leaders Meeting, Princeton University, October 12, 2005)
341. Global Warming (invited presentation, Nuclear Policy Research Institute workshop on Nuclear Power and Global Warming, Airlie House, Warrenton, Virginia, November 7-8, 2005)
342. Evaluation of Soil Moisture Ocean Salinity satellite retrievals of soil moisture using in situ soil moisture observations (First Meeting of the SMOS Validation and Retrieval Team, Ávila, Spain, November 21-24, 2005)
343. Effects of Aerosols on the Carbon Cycle and on Soil Moisture (invited presentation; with H. Li; AGU Fall Meeting, San Francisco, California, December 5-9, 2005)
344. From Solar Dimming to Solar Brightening: Observations, Modeling, Impacts (invited presentation; with M. Wild, A. Ohmura, J. Feichter, P. Stier, and H. Li; presented by M. Wild; AGU Fall Meeting, San Francisco, California, December 5-9, 2005)
345. Evaluation of IPCC AR4 Soil Moisture Simulations for the Second Half of the 20th Century (with H. Li and M. Wild; presented by H. Li; AGU Fall Meeting, San Francisco, California, December 5-9, 2005)

346. The 1452 A.D. Kuwae Eruption Signal Derived from Multiple Ice Core Records: Greatest Eruption over the Past 700 Years (with C. Gao, S. Self, J. Witter, J. Steffenson, H. Clausen, M. Siggaard-Andersen, S. Johnsen, P. A. Mayewski, and C. Ammann; presented by C. Gao; AGU Fall Meeting, San Francisco, California, December 5-9, 2005)
347. Modeling the Sulfate Deposition to the Greenland Ice Sheet From the Laki Eruption (with L. Oman, G. Stenchikov, T. Thordarson, and C. Gao; presented by L. Oman; AGU Fall Meeting, San Francisco, California, December 5-9, 2005)
348. The Global Soil Moisture Data Bank - Benchmark Soil Moisture Observations (with Haibin Li and Konstantin Y. Vinnikov; AGU Fall Meeting, San Francisco, California, December 5-9, 2005)
349. A Strategy for a Global In-Situ Soil Moisture Network (with Peter J. van Oevelen, Tom J. Jackson, D Entekhabi, and Yann H. Kerr; presented by Peter J. van Oevelen; AGU Fall Meeting, San Francisco, California, December 5-9, 2005)
350. Effects of solar dimming on soil moisture trends (with Haibin Li; presented by Haibin Li; 18th American Meteorological Society Conference on Climate Variations, Atlanta, Georgia, January 29 – February 2, 2006)
351. The effect of vegetation type on the seasonal and diurnal cycles of soil temperature (with Thomas Atkins; presented by Thomas Atkins; 18th American Meteorological Society Conference on Climate Variations, Atlanta, Georgia, January 29 – February 2, 2006)
352. Seasonal and Diurnal Cycles in Climate Change and Variability (with Konstantin Y. Vinnikov and N. C. Grody; presented by Konstantin Y. Vinnikov; 18th American Meteorological Society Conference on Climate Variations, Atlanta, Georgia, January 29 – February 2, 2006)
353. Using soil moisture observations to study climate variations, to evaluate climate models, and as ground truth for remote sensing (Invited presentation: International Soil Moisture Working Group Workshop, Noordwijk, Netherlands, March 28-29, 2006)
354. Atmospheric volcanic loading derived from bipolar ice cores (with C. Gao, L. Oman, and G. Stenchikov; European Geosciences Union General Assembly, Vienna, Austria, April 3-7, 2006)
355. Effects of solar dimming on soil moisture trends (with H. Li; European Geosciences Union General Assembly, Vienna, Austria, April 3-7, 2006)
356. Volcanism and Climate Change (Invited plenary lecture; IAVCEI International Conference on Continental Volcanism, Guangzhou, China, May 14-18, 2006)
357. Volcanic Forcing of Climate over the Past 2000 Years: An Improved Ice Core Based Index for Climate Models (with Chaochao Gao, presented by Chaochao Gao; IAVCEI International Conference on Continental Volcanism, Guangzhou, China, May 14-18, 2006)
358. Comparing Climatic Response to Low and High Latitude Volcanic Eruptions (with Luke Oman and Georgiy Stenchikov; IAVCEI International Conference on Continental Volcanism, Guangzhou, China, May 14-18, 2006)

359. Climate system response to the Toba mega eruption (Invited presentation, with Caspar Ammann and Samuel Levis, presented by Caspar Ammann; IAVCEI International Conference on Continental Volcanism, Guangzhou, China, May 14-18, 2006)
360. Volcanic Test of Arctic Oscillation Variability in the IPCC AR4 Climate Models (Invited presentation, with Georgiy Stenchikov, Kevin Hamilton, Ronald J. Stouffer, V. Ramaswamy, Ben Santer, and Hans-F. Graf; IAVCEI International Conference on Continental Volcanism, Guangzhou, China, May 14-18, 2006)
361. Volcanic Eruptions and the Environment: The Historic Record (Invited presentation, Euroscience Open Forum, Munich, Germany, July 15-19, 2006)
362. Geoengineering with volcanic eruptions (Invited presentation; with Luke Oman and Georgiy Stenchikov, Managing Solar Radiation Workshop, Moffett Field, California, November 18-19, 2006)
363. Global warming (Invited presentation; CDC NCEH/ATSDR 7th National Environmental Health Conference, Atlanta, Georgia, December 5, 2006)
364. The role of groundwater reservoir in continental water cycle: Observations and modeling (Invited presentation; with Ying Fan, Gonzalo Miguez-Macho, Christopher Weaver, and Robert Walko; presented by Ying Fan; AGU Fall Meeting, San Francisco, California, December 11-15, 2006)
365. Groundwater control on soil moisture at continental scales (with Gonzalo Miguez-Macho, Ying Fan, Christopher Weaver, and Robert Walko; presented by Gonzalo Miguez-Macho; AGU Fall Meeting, San Francisco, California, December 11-15, 2006)
366. Groundwater control on land surface fluxes, boundary layer structure, and precipitation (with Richard Anyah, Christopher Weaver, Gonzalo Miguez-Macho, and Ying Fan; presented by Richard Anyah; AGU Fall Meeting, San Francisco, California, December 11-15, 2006)
367. Volcanic Forcing of Climate over the Past 1500 Years: An Improved Ice-Core-Based Index for Climate Models (with Chaochao Gao and Caspar Ammann; presented by Chaochao Gao; AGU Fall Meeting, San Francisco, California, December 11-15, 2006)
368. Can Volcanic Eruptions Produce Ice Ages or Mass Extinctions? (Invited presentation; with Caspar Amman, Luke Oman, Drew Shindell, and Georgiy Stenchikov; AGU Fall Meeting, San Francisco, California, December 11-15, 2006)
369. Modeling the Climate Response of the Laki Eruption - Benjamin Franklin was Right (Invited presentation; with Luke Oman, Georgiy Stenchikov, and Thorvaldur Thordarson; presented by Luke Oman; AGU Fall Meeting, San Francisco, California, December 11-15, 2006)
370. Consequences of Regional Scale Nuclear Conflicts and Acts of Individual Nuclear Terrorism (with Owen B. Toon, Richard Turco, Charles Bardeen, Luke Oman, and Georgiy Stenchikov; presented by Owen B. Toon; AGU Fall Meeting, San Francisco, California, December 11-15, 2006)
371. Potential Fuel Loadings, Fire Ignitions, and Smoke Emissions from Nuclear Bursts in Megacities (with Richard Turco, Owen B. Toon, Charles Bardeen, Luke Oman, and

- Georgiy Stenchikov; presented by Richard Turco; AGU Fall Meeting, San Francisco, California, December 11-15, 2006)
372. Regional Simulations of Stratospheric Lofting of Smoke Plumes (Invited presentation; with Georgiy Stenchikov and Michael Fromm; presented by Georgiy Stenchikov; AGU Fall Meeting, San Francisco, California, December 11-15, 2006)
  373. Climatic Consequences of Regional Nuclear Conflicts (with Luke Oman, Georgiy Stenchikov, Owen B. Toon, Charles Bardeen, and Richard Turco; presented by Luke Oman; AGU Fall Meeting, San Francisco, California, December 11-15, 2006)
  374. Nuclear Winter Revisited: Still the Most Dangerous Potential Environmental Consequence of Human Actions (with Luke Oman and Georgiy Stenchikov; AGU Fall Meeting, San Francisco, California, December 11-15, 2006)
  375. Modeling verifies the widespread effects of the 1783-84 Laki eruption (with Thor Thordarson, Luke Oman, Georgiy Stenchikov, and Chaochao Gao; presented by Thor Thordarson; Volcanic and Magmatic Studies Group Winter 2007 Meeting, Oxford, England, January 4-5, 2007)
  376. Global Warming and the Impact on Coastal Communities (Invited presentation; Southeast Regional Offshore Wind Power Symposium, Charleston, South Carolina, February 26-27, 2007)
  377. The 1982 El Chichón Volcanic Eruption: A Review of the Aerosol Cloud Distribution and Observed Climatic Effects (Also served as Session Chair; AGU Joint Assembly, Acapulco, México, May 21-25, 2007)
  378. Can volcanic eruptions produce ice ages or mass extinctions? (with Caspar Amman, Luke Oman, Drew Shindell, and Georgiy Stenchikov; International Union of Geodesy and Geophysics XXIV General Assembly, Perugia, Italy, July 2-13, 2007)
  379. Mechanism of Climate Warming after Supervolcano Eruptions (with Luke Oman and Georgiy Stenchikov; presented by Georgiy Stenchikov; International Union of Geodesy and Geophysics XXIV General Assembly, Perugia, Italy, July 2-13, 2007)
  380. Climatic consequences of nuclear conflict – nuclear winter is still a threat (Invited presentation; Nuclear Weapons: The Final Pandemic Preventing Proliferation and Achieving Abolition, Royal Society of Medicine, London, England, October 3-4, 2007)
  381. Global Warming (Invited presentation; Preparing for Climate Change Liability, New Orleans, Louisiana, November 29-30, 2007)
  382. Volcanic Eruptions and Climate: Sulfates are More Important Than Halogens in Producing Climate Change (Invited presentation; AGU Fall Meeting, San Francisco, California, December 10-14, 2007)
  383. Climate Model Simulations of Tropical and Polar Stratospheric Aerosol Injection: Cooling but Drought (Also served as Session Chair; with Luke Oman and Georgiy Stenchikov; AGU Fall Meeting, San Francisco, California, December 10-14, 2007)
  384. Defining New Roles for Scientific Professional Organizations in Society? (Invited presentation; AGU Fall Meeting, San Francisco, California, December 10-14, 2007)

385. Regional Climate Modeling over the Marmara Region, Turkey, with Improved Land Cover Data (with Elif Sertel; presented by Elif Sertel; AGU Fall Meeting, San Francisco, California, December 10-14, 2007)
386. Geoengineering: Climate Model Simulations and Why it May be a Bad Idea (invited presentation; 8th National Conference on Science, Policy, and the Environment, Washington, DC, January 16-18, 2008)
387. Smoke and mirrors: Is geoengineering a solution to global warming? (with Luke Oman and Georgiy Stenchikov; 20th American Meteorological Society Conference on Climate Variability and Change, New Orleans, Louisiana, January 20-24, 2008)
388. Solar dimming and soil moisture trends (Invited presentation; Global Dimming and Brightening Workshop, Ein Gedi, Israel, February 10-14, 2008)
389. Climatic consequences of nuclear conflict (Invited presentation; Nuclear Weapons – The Greatest Peril to Civilization, A conference to imagine our world without them, Yale University, New Haven, Connecticut, February 21-22, 2008)
390. Incorporating Water Table Dynamics in Climate Modeling: Groundwater Influence on Coupled Land-Atmosphere Variability (with Richard Anyah, Christopher P. Weaver, Gonzalo Miguez-Macho, and Ying Fan; 2008 AGU Joint Assembly, Ft. Lauderdale, Florida, May 27-30, 2008)
391. Volcanic Forcing of Climate over the Past 1500 Years: An Improved Ice-Core-Based Index for Climate Models (with Chaochao Gao and Caspar Ammann; IAVCEI General Assembly, Reykjavik, Iceland, August 18-22, 2008)
392. Twenty Reasons Why Geoengineering May Be a Bad Idea (Invited presentation; 16<sup>th</sup> Biennial AMS/AGU Joint Heads and Chairs Meeting, National Center for Atmospheric Research, Boulder, Colorado, October 16-17, 2008)
393. Acid Deposition From Stratospheric Geoengineering With Sulfate Aerosols (with Ben Kravitz, Luke Oman, and Georgiy Stenchikov; presented by Ben Kravitz; AGU Fall Meeting, San Francisco, California, December 15-19, 2008)
394. The Practicality of Geoengineering (with Allison Marquardt, Ben Kravitz, and Georgiy Stenchikov; AGU Fall Meeting, San Francisco, California, December 15-19, 2008)
395. Climate Effects of the 2008 Okmok and Kasatochi Eruptions (Invited presentation; with Ben Kravitz, Luke Oman, Georgiy Stenchikov, and Allison Marquardt; presented by Ben Kravitz; AGU Fall Meeting, San Francisco, California, December 15-19, 2008)
396. The Global Soil Moisture Data Bank and Scales of Soil Moisture Variations with Applications to Network Design (Invited presentation; Soil Moisture and Soil Temperature Observations and Applications: A Joint U.S. Climate Reference Network (USCRN) – National Integrated Drought Information System (NIDIS) Workshop, Oak Ridge, Tennessee, March 3-5, 2009)
397. The Many Problems with Geoengineering Using Stratospheric Aerosols (Invited presentation; American Physical Society April Meeting, Denver, Colorado, May 2-5, 2009)

398. Arctic Stratospheric Geoengineering with Spring or Summer Injections (Invited presentation; with Allison Marquardt, Ben Kravitz, and Georgiy Stenchikov; AGU Joint Assembly, Toronto, Canada, May 24-27, 2009)
399. Observational Evidence of the Impact of Groundwater Pumping on Streamflow: The High Plains Aquifer, USA. (With M. Deniz Kustu and Ying Fan; presented by M. Deniz Kustu; AGU Joint Assembly, Toronto, Canada, May 24-27, 2009)
400. Impact of land cover change on the summer climate of the Marmara Region, Turkey (With Elif Sertel and Cankut Ormeci; presented by Elif Sertel; Global Conference on Global Warming 2009, Istanbul, Turkey, July 5-9, 2009)
401. Geoengineering with stratospheric aerosols: Climate model simulations, injection options, and concerns (Invited presentation; Gordon Research Conference: Radiation & Climate, New London, New Hampshire, July 5-10, 2009)
402. Geoengineering with stratospheric sulfate aerosols in the boreal spring (with Ben Kravitz, Allison Marquardt, and Georgiy Stenchikov; presented by Ben Kravitz; Gordon Research Conference: Radiation & Climate, New London, New Hampshire, July 5-10, 2009)
403. Volcanic Eruptions and Climate (Keynote Lecture; NOAA National Weather Service, Northeast Regional Operational Workshop XI, Albany, New York, November 4, 2009)
404. A Proposal for Standardized Geoengineering Experiments for CMIP5 (Invited presentation; Strategic Workshop on Geoengineering Research, Hamburg, Germany, November 25-26, 2009)

**INVITED LECTURES (since 1988):**

1. Institute for Meteorology and Geophysics, Alexander von Humboldt University, Berlin, DDR, May 31, 1988. (On “Nuclear winter - consequences of nuclear war”)
2. Geophysics Institute, University of Stockholm, Sweden, August 24, 1988. (On “Nuclear winter analogs”)
3. Foreign Policy Institute, Johns Hopkins University, Washington, DC, October 12, 1988. (On “A Soviet-American Peace Corps”)
4. Physics Department, American University, Washington, DC, February 22, 1989. (On “Nuclear winter”)
5. National Association of Home Builders Annual Meeting, Washington, DC, May 19, 1989. (On “Greenhouse warming”)
6. National Geographic Society, Washington, DC, June 2, 1989. (On “Greenhouse Warming”)
7. NOAA/NASA Summer Institute in Atmospheric Science, College Park, Maryland, July 14, 1989. (On “Nuclear winter”)
8. Science, Technology, and Society Seminar, University of Maryland, October 12, 1989. (On “Nuclear Winter”)
9. Laboratory for Plasma Research, University of Maryland, October 31, 1989. (On “Greenhouse warming and nuclear winter”)

10. Georgetown University Environmental Club, Washington, DC, November 7, 1989. (On “Greenhouse warming”)
11. Northwestern University, Physics Department, Evanston, Illinois, November 13, 1989. (On “Nuclear Winter”)
12. Purdue University, Department of Earth and Atmospheric Sciences, West Lafayette, Indiana, November 14, 1989. (On “Nuclear winter”)
13. State Hydrological Institute, Leningrad, USSR, December 8, 1989. (On “Nuclear Winter”)
14. American Association for the Advancement of Science, Washington, DC, January 5, 1990. (On “Life after fellowships,” presentation to 40 current Science Fellows.)
15. Michigan Technological University, Department of Geological Engineering, Geology and Geophysics, Houghton, Michigan, April 2, 1990. (On “Nuclear winter”)
16. Michigan Technological University, Department of Geological Engineering, Geology and Geophysics, Houghton, Michigan, April 2, 1990. (On “Volcanoes and climate”)
17. Michigan Technological University, Symposium on Global Warming and the Future, Houghton, Michigan, April 3, 1990. (On “Greenhouse warming”)
18. Physics Department, James Madison University, Harrisonburg, Virginia, September 14, 1990. (On “Nuclear winter”)
19. Physics Department, Dickinson College, Carlisle, Pennsylvania, October 15, 1990. (On “Nuclear winter”)
20. State Hydrological Institute, Leningrad, USSR, March 21, 1991. (On “Environmental effects of the Gulf War”)
21. Computing Center, USSR Academy of Sciences, Moscow, March 26, 1991. (On “Environmental effects of the Gulf War”)
22. Geological Society of Washington, Cosmos Club, Washington, DC, April 24, 1991. (On “Greenhouse warming”)
23. National Institute of Standards and Technology, Gaithersburg, Maryland, June 7, 1991. (On “Global warming”)
24. Earth System Science Center, Pennsylvania State University, University Park, Feb. 12, 1992. (On “Climatic effect of the Mt. Pinatubo eruption”)
25. Climate Analysis Center, NOAA, Camp Springs, Maryland, April 28, 1992. (On “Soil moisture observations and calculations”)
26. Geophysical Fluid Dynamics Laboratory, NOAA, Princeton University, Princeton, New Jersey, May 4, 1992. (On “Observed and simulated variability of soil moisture”)
27. American Geophysical Union press conference on Chapman Conference on Volcanoes and Climate, National Press Club, Washington, DC, May 18, 1992.
28. Department of Meteorology, University of Wisconsin, Madison, October 30, 1992. (On “Volcanoes and climate”)

29. National Research Council, National Academy of Sciences, Washington, DC, December 2, 1992. (On “Volcanoes and climate”)
30. Scientific Colloquium, NASA Goddard Space Flight Center, Greenbelt, Maryland, March 26, 1993. (On “Volcanoes and climate”)
31. Commission of the European Communities Joint Research Centre, Ispra, Italy, May 13, 1993. (On “Nuclear winter update – Is the theory still valid?”)
32. Institute of Geography, Academy of Sciences, Beijing, China, July 2, 1993. (On “Soil moisture data and simulations”)
33. Department of Geophysics, Peking University, Beijing, China, July 3, 1993. (On “Volcanoes and climate”)
34. Department of Geography, University of Tokyo, Japan, July 9, 1993. (On “Volcanoes and climate”)
35. Department of Geography, Tokyo Metropolitan University, Japan, July 24, 1993. (On “Volcanoes and climate”)
36. Department of Mineral Sciences, Smithsonian Institution, Washington, DC, December 16, 1993. (On “Volcanoes and climate”)
37. US Naval Academy, Annapolis, February 7, 1994. (On “Volcanoes and climate”)
38. Max-Planck-Institut für Meteorologie, Hamburg, Germany, July 13, 1994. (On “Observed effects of volcanoes in surface temperature and ice core records”)
39. Geophysical Fluid Dynamics Laboratory, NOAA, Princeton University, Princeton, New Jersey, October 11, 1994. (On “Soil moisture simulations with a bucket and SSiB as compared to Russian observations”)
40. Geophysical Fluid Dynamics Laboratory, NOAA, Princeton University, Princeton, New Jersey, October 25, 1994. (On “Volcanoes and climate”)
41. US Naval Academy, Annapolis, January 23, 1995. (On “Volcanoes and climate”)
42. Quaternary Research Center, University of Washington, Seattle, March 7, 1995. (On “Observed effects of volcanoes on surface temperature”)
43. Volcano Systems Center, University of Washington, Seattle, March 8, 1995. (On “A mechanism for El Niño triggering by the El Chichón ash cloud”)
44. Panel on Atmospheric Effects of Aviation, National Research Council, National Academy of Sciences, Washington, DC, July 31, 1995. (On “Volcanic stratospheric aerosols and climate”)
45. Department of Hydrology and Water Resources, University of Arizona, Tucson, March 18, 1996. (On “Remote sensing of soil moisture”)
46. Institute for the Study of Planet Earth, Laboratory of Tree-Ring Research, and Departments of Atmospheric Sciences and Hydrology and Water Resources, University of Arizona, Tucson, March 18, 1996. (On “Soil moisture observations and modeling”)
47. Institute for the Study of Planet Earth and Laboratory of Tree-Ring Research, University of Arizona, Tucson, March 20, 1996. (On “Volcanic eruptions and climate change”)

48. Max Planck Institut für Meteorologie, Hamburg, Germany, April, 11, 1996. (On “Soil moisture observations and modeling”)
49. Max Planck Institut für Meteorologie, Hamburg, Germany, April, 12, 1996. (On “Winter warming from volcanic eruptions - AMIP confirmation”)
50. Université Catholique de Louvain, Louvain-la-Neuve, Belgium, April, 17, 1996 (On “Volcanic eruptions and climate change”)
51. Université Catholique de Louvain, Louvain-la-Neuve, Belgium, April, 19, 1996 (On “Soil moisture observations for remote sensing and modeling”)
52. Université Catholique de Louvain, Louvain-la-Neuve, Belgium, April, 24, 1996 (On “Volcanic eruptions and El Niño”)
53. NASA Goddard DAAC, Greenbelt, Maryland, July 16, 1996 (On “Soil moisture data sets”)
54. Flinders University, Adelaide, Australia, July 31, 1996 (On “Volcanic eruptions and climate”)
55. New Zealand Meteorological Service, Wellington, New Zealand, August 5, 1996 (On “Volcanic eruptions and climate”)
56. US Naval Academy, Annapolis, September 18, 1996. (On “Volcanic eruptions and climate”)
57. Undersecretary of Commerce for Atmospheres and Oceans James Baker, November 15, 1996. (On “Stratospheric control of climate”)
58. University of New South Wales, Sydney, Australia, December 12, 1996. (On “Remote sensing and modeling of soil moisture”)
59. US Naval Academy, Annapolis, February 17, 1997. (On “Volcanic eruptions and climate”)
60. University of Maryland, Baltimore County, March 12, 1997. (On “Volcanic eruptions and climate”)
61. Brookdale Community College, Lincroft, New Jersey, March 27, 1997. (On “Global warming”)
62. Rutgers University, Department of Environmental Sciences, April 18, 1997. (On “Climate model evaluation and remote sensing using soil moisture observations”)
63. Rutgers University, Department of Environmental Sciences, April 21, 1997. (On “Modeling and observational studies of the effects of volcanic eruptions on climate”)
64. US Senate Foreign Relations Committee, Subcommittee on International Economic Policy, Export and Trade Promotion, June 26, 1997. (On “Global warming: The scientific consensus”)
65. University of Delaware, Department of Geography, October 3, 1997. (On “Volcanic eruptions and climate: summer cooling and winter warming”)
66. US Naval Academy, Annapolis, October 6, 1997. (On “Volcanic eruptions and climate”)

67. US House of Representatives Committee on Science, Subcommittee on Energy and Environment, October 7, 1997. (On “Global warming: State of the science”)
68. University of Tokyo, October 23, 1997. (On “Soil moisture observations for remote sensing and model evaluation”)
69. Japan Meteorological Agency Headquarters, Tokyo, October 23, 1997. (On “Remote sensing of soil moisture” and “Climate model simulations of winter warming from the 1991 Mt. Pinatubo eruption”)
70. Meteorological Research Institute, Japan Meteorological Agency, Tsukuba, October 24, 1997. (On “Remote sensing of soil moisture using SMMR microwave observations”)
71. Prince George’s Community College, Bowie, Maryland, October 31, 1997. (On “Volcanic eruptions and climate”)
72. North Carolina State University, Raleigh, February 2, 1998. (On “Volcanic eruptions and climate”)
73. University of Maryland, Department of Chemistry, February 16, 1998. (On “Principles of climatology”)
74. State University of New York, Stony Brook, April 1, 1998. (On “Soil moisture observations for model validation, climate analysis and remote sensing”)
75. George Mason University, April 10, 1998. (On “Detection of global warming” and debate with S. Fred Singer)
76. Queen’s University, Belfast, Northern Ireland, June 24, 1998. (On “Winter warming and summer cooling from volcanic eruptions”)
77. Tokyo Metropolitan University, July 28, 1998. (On “Winter warming and summer cooling from volcanic eruptions” and “Soil moisture observations for remote sensing, model evaluation and climate analysis”)
78. Institute of Geography, Academy of Sciences, Beijing, China, August 6, 1998. (On “Global soil moisture: model validation and remote sensing”)
79. Ministry of Nature and the Environment, Ulaanbaatar, Mongolia, August 13, 1998. (On “Winter warming and summer cooling from volcanic eruptions”)
80. University of Wisconsin, Department of Atmospheric and Oceanic Sciences, October 9, 1998. (On “Soil moisture observations for remote sensing, model evaluation, and climatic analysis”)
81. Lamont Doherty Earth Observatory, Columbia University, Palisades, NY, October 27, 1998. (On “Stratospheric control of climate”)
82. Geology Museum, Rutgers University, New Brunswick, New Jersey, January 30, 1999. (On “Summer cooling and winter warming from volcanic eruptions”)
83. Brookdale Community College, Lincroft, New Jersey, April 15, 1999 (On “Global warming”)
84. Goddard Institute for Space Studies, Columbia University, New York City, February 4, 2000 (On “Winter warming following volcanic eruptions: Observations and climate model simulations of forced Arctic Oscillation patterns”)

85. Environmental and Occupational Health Sciences Institute, Rutgers University, March 9, 2000 (On “Global warming: How much? How soon? How do we know?”)
86. NASA Goddard Space Flight Center, Greenbelt, Maryland, June 12, 2000 (On “Volcanic Eruptions and Climate: Winter Warming and Summer Cooling”)
87. NASA Goddard Space Flight Center, Greenbelt, Maryland, June 14, 2000 (On “Evidence in Support of Anthropogenic Impacts on Climate”)
88. Hong Kong Observatory, July 14, 2000 (On “Volcanic Eruptions and Climate: Winter Warming and Summer Cooling”)
89. University of Tokyo, August 4, 2000 (On “Volcanic Eruptions and Climate: Winter Warming and Summer Cooling” and “Using Soil Moisture Observations to Study Climate Variations, to Evaluate Climate Models, and as Ground Truth for Remote Sensing”)
90. Royal Meteorological Society, London, October 18, 2000 (On “Volcanic Eruptions and Climate: Winter Warming and Summer Cooling”)
91. Hadley Centre for Climate Research, Meteorological Office, Bracknell, England, October 19, 2000 (On “Volcanic Eruptions and Climate: Winter Warming and Summer Cooling”)
92. University of Bristol, Bristol, England, October 20, 2000 (On “Volcanic Eruptions and Climate: Winter Warming and Summer Cooling”)
93. Department of Geology Colloquium, Rutgers University, October 25, 2000 (On “Volcanic Eruptions and Climate: Winter Warming and Summer Cooling”)
94. Centre for Climate & Global Change Research, McGill University, Montreal, Canada, January 10, 2001 (On “Volcanic Eruptions and Climate: Winter Warming and Summer Cooling”)
95. International Pacific Research Center, University of Hawaii, Honolulu, April 19, 2001 (On “Volcanic Eruptions and Climate: Winter Warming and Summer Cooling”)
96. Department of Physics & Astronomy, University of Hawaii, Hilo, April 20, 2001 (On “Volcanic Eruptions and Climate: Winter Warming and Summer Cooling”)
97. International Pacific Research Center, University of Hawaii, Honolulu, April 23, 2001 (On “Using Soil Moisture Observations to Study Climate Variations, to Evaluate Climate Models, and as Ground Truth for Remote Sensing”)
98. Escuela Politécnica Nacional, Quito, Ecuador, May 23, 2001 (On “Volcanic Eruptions and Climate: Winter Warming and Summer Cooling”)
99. Laboratoire de Météorologie Dynamique du CNRS, Paris, France, September 28, 2001 (On “Using Soil Moisture Observations to Study Climate Variations, to Evaluate Climate Models, and as Ground Truth for Remote Sensing”)
100. Institute for Marine and Coastal Science, Rutgers University, January 28, 2002 (On “Volcanic Eruptions and Climate: Winter Warming and Summer Cooling”)
101. Sustainability Education Center, New York City, February 9, 2002 (On “Global Warming”)

102. Geophysical Fluid Dynamics Laboratory, Princeton University, February 21, 2002 (On “Volcanic Eruptions and Climate: Winter Warming and Summer Cooling”)
103. Department of Meteorology, University of Maryland, February 28, 2002 (On “Volcanic Eruptions and Climate: Winter Warming and Summer Cooling”)
104. COMET Program, National Center for Atmospheric Research, Boulder, Colorado, March 27, 2002 (On “Volcanic Eruptions and Climate: Winter Warming and Summer Cooling”)
105. Department of Earth Sciences, Millersville University, Millersville, Pennsylvania, April 4, 2002 (On “Volcanic Eruptions and Climate: Winter Warming and Summer Cooling”)
106. International Research Institute, Lamont-Doherty Earth Observatory, Palisades, New York, April 10, 2002 (On “Volcanic Eruptions and Climate: Winter Warming and Summer Cooling”)
107. International Pacific Research Center, University of Hawaii, Honolulu, May 28, 2002 (On “The relationship between snow cover, soil moisture, and the Indian summer monsoon: observations and model simulations”)
108. International Pacific Research Center, University of Hawaii, Honolulu, May 30, 2002 (On “Mt. Pinatubo as a Test of Climatic Feedback Mechanisms”)
109. The Icelandic Meteorological Society, Reykjavík, Iceland, August 28, 2002 (On “Volcanic eruptions and climate”)
110. Nordic Academy for Advanced Study (NorFA) Summer School, “Environmental effects of large volcanic eruptions on the Northern Hemisphere,” Skaftafell, Iceland, August 30, 2002. (On “Frequency of large volcanic eruptions in the Northern Hemisphere”)
111. Meteorological Research Institute, Seoul, Korea, September 23, 2002 (On “The relationship between snow cover, soil moisture, and the Indian summer monsoon: observations and model simulations”)
112. Seoul National University, Seoul, Korea, September 25, 2002 (On “Mt. Pinatubo as a test of climatic feedback mechanisms”)
113. Korean Meteorological Administration, Seoul, Korea, September 25, 2002, (On “Mt. Pinatubo as a test of climatic feedback mechanisms”)
114. Climate Change Forum, Seoul, Korea, September 27, 2002 (On “Global warming”)
115. NOAA Aeronomy Laboratory, Boulder, Colorado, October 9, 2002 (On “Mt. Pinatubo as a test of climatic feedback mechanisms”)
116. University of Copenhagen, January 6, 2003 (On “Volcanic Eruptions and Climate: Winter Warming and Summer Cooling”)
117. University of Victoria, Victoria, British Columbia, Canada, April 28, 2003 (On “Volcanic Eruptions and Climate: Winter Warming and Summer Cooling”)
118. Special Libraries Association 2003 Annual Meeting, New York City, June 11, 2003 (On “Global Warming”)
119. NASA/UMBC Graduate Student Summer Program, Goddard Space Flight Center, Greenbelt, Maryland, June 13, 2003 (On “Impacts of Volcanic Eruptions on Climate”)

120. Dalhousie University, Halifax, Nova Scotia, Canada, July 29, 2003 (On “Volcanic Eruptions and Climate: Winter Warming and Summer Cooling”)
121. University of Paris, France, January 5, 2004 (On “Using Soil Moisture Observations to Study Climate Variations, to Evaluate Climate Models, and as Ground Truth for Remote Sensing”)
122. Cemagref, Antony, France, January 6, 2004 (On “Using Soil Moisture Observations to Study Climate Variations, to Evaluate Climate Models, and as Ground Truth for Remote Sensing”)
123. University of Maine, February 5, 2004 (On “Volcanic Eruptions and Climate: Winter Warming and Summer Cooling”)
124. Pennsylvania State University, February 12, 2004 (On “Volcanic Eruptions and Climate: Winter Warming and Summer Cooling”)
125. Pennsylvania State University, February 13, 2004 (On “Using Soil Moisture Observations to Study Climate Variations, to Evaluate Climate Models, and as Ground Truth for Remote Sensing”)
126. McMurdo Station, Antarctica, September 5, 2004 (On “Global Warming”)
127. McMurdo Station, Antarctica, October 3, 2004 (On “Volcanic Eruptions and Climate”)
128. University of Chile, Santiago, November 10, 2004 (On “Volcanic Eruptions and Climate”)
129. Royal Holloway, University of London, England, March 3, 2005 (On “Volcanic Eruptions and Climate”)
130. University of Reading, England, March 4, 2005 (On “Volcanic Eruptions and Climate”)
131. Laboratoire de Météorologie Dynamique, Ecole Normale Supérieure, Paris, France, March 10, 2005 (On “Volcanic Eruptions and Climate”)
132. Laboratoire de Météorologie Dynamique, Université Pierre et Marie Curie, Paris, France, March 29, 2005 (On “Evaluation of Reanalysis and IPCC Soil Moisture Simulations Using Newly Updated Soil Moisture Observations from the Ukraine, China, and Illinois”)
133. Hadley Centre for Climate Prediction and Research, UK Met Office, Exeter, England, May 10, 2005 (On “Evaluation of Reanalysis Soil Moisture Simulations Using Newly Updated Soil Moisture Observations from the Ukraine and China”)
134. Hadley Centre for Climate Prediction and Research, UK Met Office, Exeter, England, May 11, 2005 (On “Comparing Climatic Response to Low and High Latitude Volcanic Eruptions”)
135. University of Cambridge, England, May 17, 2005 (On “Comparing Climatic Response to Low and High Latitude Volcanic Eruptions”)
136. Laboratoire des Sciences du Climat et de l’Environnement, Commissariat à L’énergie Atomique, Saclay, France, June 28, 2005 (On “Evaluation of Reanalysis Soil Moisture Simulations Using Newly Updated Soil Moisture Observations from the Ukraine and China” and “Volcanic Eruptions and Climate”)

137. Hurricane Katrina Teach-In, Rutgers University, October 26, 2005 (On “Global warming produces stronger hurricanes”)
138. Department of Earth and Environmental Science, Univ. of Pennsylvania, Philadelphia, November 4, 2005 (On “Using Soil Moisture Observations to Study Climate Variations, to Evaluate Climate Models, and as Ground Truth for Remote Sensing”)
139. University of Texas, Austin, March 2, 2006 (On “Comparing Climatic Response to Low and High Latitude Volcanic Eruptions”)
140. University of Texas, Austin, March 3, 2006 (On “Using Soil Moisture Observations to Study Climate Variations, to Evaluate Climate Models, and as Ground Truth for Remote Sensing”)
141. Laboratoire de Météorologie Dynamique, Université Pierre et Marie Curie, Paris, France, March 13, 2006 (On “Comparing Climatic Response to Low and High Latitude Volcanic Eruptions”)
142. Brookdale Community College, Lincroft, New Jersey, March 23, 2006 (On “Global Warming”)
143. University of Warsaw, Poland, March 31, 2006 (On “Global Warming”)
144. University of Warsaw, Poland, March 31, 2006 (On “Using Soil Moisture Observations to Study Climate Variations, to Evaluate Climate Models, and as Ground Truth for Remote Sensing”)
145. Zhejiang University, Hangzhou, China, May 24, 2006 (On “Climatic consequences of regional nuclear conflict”)
146. University of Hawaii, Honolulu, August 1, 2006 (On “Climatic consequences of regional nuclear conflict”)
147. University of Hawaii, Honolulu, August 3, 2006 (On “Climatic response to high latitude eruptions”)
148. University of Maryland, College Park, August 31, 2006 (On “Climatic consequences of regional nuclear conflict”)
149. University of Colorado, Boulder, September 27, 2006 (On “Climatic consequences of regional nuclear conflict”)
150. University of Colorado, Boulder, September 27, 2006 (On “Comparing Climatic Response to Low and High Latitude Volcanic Eruptions”)
151. Princeton University, Princeton, New Jersey, October 18, 2006 (On “Climatic consequences of regional nuclear conflict”)
152. University of Iowa, Iowa City, November 10, 2006 (On “Comparing Climatic Response to Low and High Latitude Volcanic Eruptions”)
153. University of Iowa, Iowa City, November 10, 2006 (On “Climatic consequences of regional nuclear conflict”)
154. Université Pierre et Marie Curie, Paris, France, January 9, 2007 (On “Can Volcanic Eruptions Produce Ice Ages or Mass Extinctions?”)

155. Brookdale Community College, Lincroft, New Jersey, February 15, 2007 (On “Climatic consequences of nuclear war”)
156. Princeton University, Princeton, New Jersey, March 5, 2007 (On “Climatic consequences of regional nuclear conflict”)
157. Camagüey Meteorological Center, Camagüey, Cuba, March 12, 2007 (On “Climatic consequences of regional nuclear conflict”)
158. Millersville University, Millersville, Pennsylvania, March 22, 2007 (On “Global Warming”)
159. United Nations Headquarters, New York, April 3, 2007 (On “The Science of Global Warming”; United Nations Global Compact U.S. Network Meeting: “Managing Climate Change”)
160. Ohio University, Athens, Ohio, April 17, 2007 (On “Global Warming”)
161. Universidad Nacional Autónoma de México, Mexico City, May 28, 2007 (On “Global Warming”)
162. Universidad Nacional Autónoma de México, Mexico City, May 28, 2007 (On “Comparing Climatic Response to Low and High Latitude Volcanic Eruptions”)
163. United Nations Headquarters, New York, June 7, 2007 (On “Global Warming The IPCC Fourth Assessment”; Non-governmental organizations briefing)
164. Brainstorming Retreat, “The Role of the United Nations in Climate Change: Exploring the Way Forward from Now to Bali and Beyond,” Rye Brook, New York, June 23, 2007 (On “Scientific Evidence of Climate Change”; invited by Indonesian Mission to the United Nations)
165. Rainforest Alliance, New York City, September 12, 2007 (On “Will Reforestation Help Solve Global Warming?”)
166. Geological Society of Washington, Cosmos Club, Washington, DC, October 24, 2007 (On “Climatic Consequences of Nuclear Conflicts – Nuclear Winter is Still a Threat”)
167. The Pennsylvania State University, State College, Pennsylvania, November 12, 2007 (On “Smoke and Mirrors: Is Geoengineering a Solution to Global Warming?”)
168. The Pennsylvania State University, State College, Pennsylvania, November 13, 2007 (On “Climatic Consequences of Nuclear Conflict”)
169. Istanbul Technical University, Turkey, January 8, 2008 (On “Using Soil Moisture Observations to Study Climate Variations, to Evaluate Climate Models, and as Ground Truth for Remote Sensing”)
170. Istanbul Technical University, Turkey, January 9, 2008 (On “Climatic Consequences of Nuclear Conflicts – Nuclear Winter is Still a Threat”)
171. Istanbul Technical University, Turkey, January 9, 2008 (On “Comparing Climatic Response to Low and High Latitude Volcanic Eruptions”)
172. United Nations Headquarters, New York, February 1, 2008 (On “Global Warming” to Committee on Teaching About the United Nations Conference)

173. American Museum of Natural History, New York City, February 7, 2008 (On “Volcanic Eruptions and Climate”)
174. Laboratoire de Météorologie Dynamique, Université Pierre et Marie Curie, Paris, France, March 19, 2008 (On “The Science and Politics of Geoengineering”)
175. University of Virginia, Charlottesville, April 3, 2008 (Moore Lecture, on “Climatic Consequences of Nuclear Conflict”)
176. University of Virginia, Charlottesville, April 3, 2008 (On “The Science and Politics of Geoengineering: Smoke and Mirrors?”)
177. NASA Langley Research Center, Hampton, Virginia, April 4, 2008 (On “The Science and Politics of Geoengineering: Smoke and Mirrors?”)
178. National Severe Storms Laboratory/National Weather Center/University of Oklahoma, Norman, April 7, 2008 (On “Solar Dimming and Soil Moisture Trends”)
179. National Severe Storms Laboratory/National Weather Center/University of Oklahoma, Norman, April 8, 2008 (On “The Science and Politics of Geoengineering: Smoke and Mirrors?”)
180. National Severe Storms Laboratory/National Weather Center/University of Oklahoma, Norman, April 8, 2008 (On “Climatic Consequences of Nuclear Conflict”)
181. Purdue University, West Lafayette, Indiana, April 10, 2008 (On “Volcanic Eruptions and Climate”)
182. Purdue University, West Lafayette, Indiana, April 10, 2008 (On “Climatic Consequences of Nuclear Conflict”)
183. University of Texas, Austin, April 16, 2008 (On “Smoke and Mirrors: Is Geoengineering a Solution to Global Warming?”)
184. University of Texas, Austin, April 16, 2008 (On “Climatic Consequences of Nuclear Conflict: Nuclear Winter is Still a Threat”)
185. U.S. House of Representatives, June 13, 2008 (On “Climatic consequences of nuclear conflict”) (To Congressional staff, sponsored by AAAS Center for Science, Technology and Security Policy)
186. Princeton University, Princeton, New Jersey, June 17, 2008 (On “Climatic consequences of nuclear conflict”)
187. Rutgers University Distinguished Faculty Talk Series, October 6, 2008 (On “Human Emissions of Particles to the Stratosphere from Geoengineering or Nuclear Winter: A Bad and a Very Bad Idea”)
188. State University of New York, Stony Brook, October 22, 2008 (On “Climatic consequences of nuclear conflict”)
189. Princeton University, Princeton, New Jersey, October 24, 2008 (On “Twenty reasons why geoengineering may be a bad idea”)
190. Washington College, Chestertown, Maryland, October 29, 2008 (Sigma Xi Distinguished Lecture, on “Smoke and Mirrors: Is Geoengineering Solution to Global Warming?”)

191. Purchase College, State University of New York, Purchase, New York, November 11, 2008 (Sigma Xi Distinguished Lecture, on “Climatic Consequences of Nuclear Conflict”)
192. American Meteorological Society’s Environmental Science Seminar Series, Russell Senate Office Building, Washington, DC, November 21, 2008 (On “Smoke and Mirrors: Is Geoengineering a Solution to Global Warming?”)
193. University of Colorado, Boulder, Colorado, January 30, 2009 (Distinguished Lecture Series, on “Smoke and Mirrors: Is Geoengineering a Solution to Global Warming?”)
194. NASA Jet Propulsion Laboratory, Pasadena, California, February 23, 2009 (On “Smoke and Mirrors: Is Geoengineering a Solution to Global Warming?”)
195. California Institute of Technology, Pasadena, California, February 24, 2009 (On “Climatic Consequences of Nuclear Conflict”)
196. Oak Ridge National Laboratory, Oak Ridge, Tennessee, March 5, 2009 (On “Smoke and Mirrors: Is Geoengineering a Solution to Global Warming?”)
197. Laboratoire de Météorologie Dynamique, Université Pierre et Marie Curie, Paris, France, March 17, 2009 (On “Smoke and Mirrors: Is Geoengineering a Solution to Global Warming?”)
198. South Dakota State University, Brookings, South Dakota, March 30, 2009 (Sigma Xi Distinguished Lecture, on “Global warming is real, and what you can do about it”)
199. South Dakota State University, Brookings, South Dakota, March 30, 2009 (Sigma Xi Distinguished Lecture, on “Smoke and Mirrors: Is Geoengineering a Solution to Global Warming?”)
200. University of South Dakota, Vermillion, South Dakota, March 31, 2009 (Sigma Xi Distinguished Lecture, on “Global warming is real, and what you can do about it”)
201. University of South Dakota, Vermillion, South Dakota, March 31, 2009 (Sigma Xi Distinguished Lecture, on “Smoke and Mirrors: Is Geoengineering a Solution to Global Warming?”)
202. Brookdale Community College, Lincroft, New Jersey, April 2, 2009 (On “Global warming and global conflict”)
203. University of North Carolina, Asheville, North Carolina, April 6, 2009 (Sigma Xi Distinguished Lecture, on “Smoke and Mirrors: Is Geoengineering a Solution to Global Warming?”)
204. NOAA National Climatic Data Center, Asheville, April 7, 2009 (On “Smoke and Mirrors: Is Geoengineering a Solution to Global Warming?”)
205. Appalachian State University, Boone, North Carolina, April 7, 2009 (Sigma Xi Distinguished Lecture, on “Smoke and Mirrors: Is Geoengineering a Solution to Global Warming?”)
206. Appalachian State University, Boone, North Carolina, April 8, 2009 (Sigma Xi Distinguished Lecture, on “Climatic Consequences of Nuclear Conflict”)

207. Harvey Mudd College, Claremont, California, April 10, 2009 (On “Climatic Consequences of Nuclear Conflict”)
208. Northern Michigan University, Marquette, Michigan, April 14, 2009 (Sigma Xi Distinguished Lecture, on “Global warming is real, and what you can do about it”)
209. Kirksville College of Osteopathic Medicine, Kirksville, Missouri, April 16, 2009 (Sigma Xi Distinguished Lecture, on “Smoke and Mirrors: Is Geoengineering a Solution to Global Warming?”)
210. Truman State University, Kirksville, Missouri, April 16, 2009 (Sigma Xi Distinguished Lecture, on “Climatic Consequences of Nuclear Conflict”)
211. Board on Atmospheric Science and Climate, National Academy of Sciences, Washington, DC, April 20, 2009 (On “Are we ready for the next volcanic eruption?”)
212. Lafayette College, Easton, Pennsylvania, April 21, 2009 (On “Smoke and Mirrors: Is Geoengineering a Solution to Global Warming?”)
213. Carnegie Mellon University, April 22, 2009 (Sigma Xi Distinguished Lecture, on “Smoke and Mirrors: Is Geoengineering a Solution to Global Warming?”)
214. Ramapo College, Mahwah, New Jersey, April 23, 2009 (Sigma Xi Distinguished Lecture, on “Global warming is real, and what you can do about it”)
215. University of Wisconsin, Madison, September 25, 2009 (On “Smoke and Mirrors: Is Geoengineering a Solution to Global Warming?”)
216. Sierra Club, Philadelphia, Pennsylvania, November 16, 2009 (On “Smoke and Mirrors: Is Geoengineering a Solution to Global Warming?”)
217. McGill University, Montreal, Canada, November 18, 2009 (On “Climatic Consequences of Nuclear Conflict”)
218. McGill University, Montreal, Canada, November 19, 2009 (Lorne Trottier Public Science Symposium; on “Smoke and Mirrors: Is Geoengineering a Solution to Global Warming?”)
219. McGill University, Montreal, Canada, November 20, 2009 (On “Volcanic eruptions and climate change”)

In the 1980s, Dr. Robock made over 100 presentations on the subject of Nuclear Winter to high schools, colleges, universities, community groups, scientific organizations, and in television and radio interviews, including the first lectures on nuclear winter in the People’s Republic of China, Hong Kong, the Philippines, Norway, the Netherlands, and Leningrad, USSR.

**INVITED PARTICIPATION IN NATIONAL WORKSHOPS AND INTERNATIONAL SYMPOSIA:**

1. JOC Study Conference on Climate Models: Performance, Intercomparison and Sensitivity Studies, National Academy of Sciences, Washington, April 3-7, 1978.
2. Workshop on Estimating and Interpreting Climatic Spectra, NSF, Boulder, October 9-12, 1978.
3. Solar-Terrestrial Workshop, DOE, Los Alamos, June 26-29, 1979.

4. Soviet-American Symposium on Climate Modeling, Climate Change and Statistics, Tbilisi, USSR, October 15-22, 1979.
5. Snow Watch Workshop, NSF, Washington, October 2-3, 1980.
6. Cloud/Climate Workshop, NASA/GISS, New York City, October 29-31, 1980.
7. Workshop on Solar Constant Variations, NASA/GLAS, Greenbelt, MD, November 5-7, 1980.
8. Mt. St. Helens Eruption: Its Atmospheric Effects and Potential Climatic Impact, NASA/U.S. Climate Program, Washington, November 18-21, 1980.
9. Climate Modeling Workshop, NSF, Boulder, April 6-8, 1981.
10. Sixth Climate Diagnostics Workshop, NOAA/CAC, Palisades, NY, October 14-16, 1981.
11. Seventh Climate Diagnostics Workshop, NOAA/CAC, Boulder, October 18-22, 1982.
12. Eighth Joint Meeting of Working Group VIII, US-USSR Agreement on Cooperation in the Field of Environmental Protection, National Academy of Sciences, Washington, January 24-25, 1983.
13. Eighth Climate Diagnostics Workshop, NOAA/CAC, Toronto, October 17-21, 1983.
14. ISLSCP (International Satellite Land Surface Climatology Project) Experimental Design Working Group Meeting, NASA/GSFC, Greenbelt, MD, March 7-9, 1984.
15. SOA (State-of-the-Art) Meeting on Climatic Effects and First Detection, DOE, Arlington, VA, April 30 – May 2, 1984.
16. Nuclear Deterrence: New Risks, New Opportunities, University of Maryland, College Park, September 5-7, 1984.
17. Conference on Large Scale Fire Phenomenology, National Bureau of Standards, Gaithersburg, MD, September 10-13, 1984.
18. First Pilot Climate Data System Workshop, NASA/GSFC, Greenbelt, MD, October 17, 1984.
19. Ninth Climate Diagnostics Workshop, NOAA/CAC, Oregon State University, Corvallis, October 22-26, 1984.
20. Tenth Joint Meeting of Working Group VIII, US-USSR Agreement on Cooperation in the Field of Environmental Protection, University of Maryland, College Park, February 6, 1985.
21. Symposium on Nuclear Winter: Current Assessment and Implications, National Academy of Sciences, Washington, March 26-27, 1985.
22. First WMO Workshop on the Diagnosis and Prediction of Monthly and Seasonal Atmospheric Variation Over the Globe, University of Maryland, College Park, July 29 – August 2, 1985.
23. Scientific Committee on Problems of the Environment (SCOPE) General Assembly, National Academy of Sciences, Washington, September 12, 1985.

24. International Symposium on the Medical Implications of Nuclear War, Institute of Medicine, National Academy of Sciences, Washington, September 20-22, 1985.
25. Snow Watch 1985: Workshop on CO<sub>2</sub>/Snow Interaction, University of Maryland, College Park, October 28-30, 1985.
26. Second Pilot Climate Data System Workshop, NASA/GSFC, Greenbelt, MD, January 29-30, 1986.
27. DNA Global Effects Program Technical Meeting, NASA/Ames, Moffett Field, CA, February 25-27, 1986.
28. Resources for the Future Seminar on the Policy Aspects of Climate Forecasting, National Academy of Sciences, Washington, March 4, 1986.
29. Nuclear Winter: Strategic and Diplomatic Implications, Virginia Polytechnic Institute, Blacksburg, Virginia, March 6, 1986.
30. Scientists, Educators and the Strategic Defense Initiative, Union of Concerned Scientists, Washington, DC February 22-24, 1987.
31. DNA Global Effects Program Technical Meeting, Mission Research Corporation, Santa Barbara, California, April 7-9, 1987.
32. AAAS Committee on Science, Engineering and Public Policy, Washington, DC, June 11, 1987.
33. National Research Council Committee on Global Change, National Academy of Sciences, Washington, DC, June 11, 1987.
34. Environmental Problems and Policies in Eastern Europe, Wilson Center, Smithsonian Institution, Washington, DC, June 15-16, 1987.
35. Twelfth Climate Diagnostics Workshop, NOAA/CAC, Salt Lake City, Utah, October 12-16, 1987.
36. Twelfth Joint Meeting of Working Group VIII, US-USSR Agreement on Cooperation in the Field of Environmental Protection, GFDL, Princeton, New Jersey, October 19-21, 1987.
37. United Nations/ENUWAR (SCOPE project: Environmental Consequences of Nuclear War) Workshop, Geneva, Switzerland, November 16-20, 1987.
38. SCOPE-ENUWAR Workshop, Moscow, USSR, March 21-26, 1988.
39. DNA Global Effects Program Technical Meeting, Mission Research Corporation, Santa Barbara, CA, April 19-21, 1988.
40. Symposium on Climate and Geosciences, NATO, Louvain-la-Neuve, Belgium, May 22-27, 1988.
41. Summer Institute for University Faculty, Regional Conflict and Global Security: The Nuclear Dimension, University of Wisconsin, Madison, June 17-24, 1988.
42. 16th Nordic Meteorologists' Meeting, Reykjavík, Iceland, August 6-9, 1988.
43. Conference on Environmental Consequences of Nuclear War – Scientific Consensus and Global Policy Implications, Alva and Gunnar Myrdal Foundation and Royal Academy of Sciences, Stockholm, Sweden, August 20-22, 1988.

44. Climate Trends Workshop, National Climate Program Office, National Academy of Sciences, Washington, DC, September 7-9, 1988.
45. Strategic Planning Seminar: The Drought of 1988 and Beyond; National Climate Program Office, Resources for the Future, and National Academy of Sciences; Washington, DC; October 18, 1988.
46. Thirteenth Climate Diagnostics Workshop, NOAA/CAC, Cambridge, Massachusetts, October 31 – November 4, 1988.
47. Global Climate Change Conference, Cornell University/National Governor's Association, New York City, February 28 – March 3, 1989.
48. PAN-EARTH Case Study Coordinators Cornell Workshop, Cornell University, Ithaca, New York, March 6-8, 1989.
49. Forum on Global Change and Our Common Future; National Academy of Sciences, Smithsonian Institution, and American Association for the Advancement of Science; Washington, DC; May 2-3, 1989.
50. DOE Workshop on Greenhouse-Gas-Induced Climatic Change: A Critical Appraisal of Simulations and Observations, University of Massachusetts, Amherst, May 8-12, 1989.
51. Transportation Research Board Executive Committee Meeting, National Research Council, National Academy of Sciences, Traverse City, Michigan, June 8-9, 1989.
52. EPA Scenarios Advisory Meeting, National Center for Atmospheric Research, Boulder, Colorado, August 31 – September 1, 1989.
53. Second PAN-EARTH Workshop on Effects of Climate Change with Emphasis on Sub-Saharan Africa, Saly, Senegal, September 11-15, 1989.
54. NASA Climate Data System Workshop, NASA/GSFC, Greenbelt, Maryland, September 20-22, 1989.
55. International Workshop on Space Observations of Tropospheric Aerosols and Complementary Measurements, International Radiation Commission, Hampton, Virginia, November 15-18, 1989.
56. AGU Chapman Conference on Global Biomass Burning: Atmospheric, Climatic and Biospheric Implications, Williamsburg, Virginia, March 19-23, 1990.
57. International Workshop on Climatic Variability and Climate Changes in Venezuela and the Caribbean Region, Mérida, Venezuela, April 23-27, 1990. (Member of Organizing Committee)
58. NASA Volcano Climate Workshop, College Park, June 17-18, 1990. (Invited to lead the session on Radiation/Climate Modeling)
59. Global Change Science and Research in China, Committee on Scholarly Communication with the People's Republic of China, National Academy of Sciences, Washington, DC, July 10, 1990.
60. Association for Computing Machinery Conference on Computers and the Quality of Life, George Washington University, Washington, DC, September 13-16, 1990.

61. Fifteenth Climate Diagnostics Workshop, NOAA/CAC, Asheville, North Carolina, October 29 – November 2, 1990.
62. 39th Annual Meeting of the American Society of Tropical Medicine and Hygiene, New Orleans, Louisiana, November 4-8, 1990.
63. The Regions and Global Warming: Impacts and Response Strategies, Center for Growth Studies, Houston Advanced Research Center, The Woodlands, Texas, March 3-6, 1991.
64. AGU Spring Meeting, Baltimore, Maryland, May 28 - June 1, 1991.
65. International Physicians for the Prevention of Nuclear War 10th World Congress, Stockholm, Sweden, June 27-30, 1991.
66. NASA Greenhouse Effect Detection Experiment (GEDEX) Atmospheric Temperature Workshop, Columbia, Maryland, July 9-11, 1991.
67. First Demetra Meeting on Global Change, Chianciano Terme, Italy, October 28 – November 1, 1991.
68. NASA GSFC DAAC User Working Group Workshop, College Park, Maryland, December 2-3, 1991.
69. AGU Chapman Conference on Climate, Volcanism and Global Change, Hilo, Hawaii, March 23-27, 1992.
70. NOAA Operational Measurements Science Review Meeting, Greenbelt, Maryland, May 27-28, 1992.
71. PILPS Planning Meeting, Columbia, Maryland, June 24-26, 1992.
72. American Association of State Climatologists Annual Meeting, Bowling Green, Kentucky, August 6-7, 1992.
73. AMIP Diagnostic Subprojects Meeting, Livermore, California, November 16-17, 1992.
74. NASA GSFC DAAC User Working Group Workshop, Greenbelt, Maryland, December 14-15, 1992.
75. International Conference on Sustainable Development Strategies and Global/Regional/Local Impacts on Atmospheric Composition and Climate, New Delhi, India, January 25-30, 1993. (Member of International Organizing Committee)
76. ISLSCP (International Satellite Land Surface Climatology Project) Data Set Meeting, NASA/GSFC, Greenbelt, Maryland, February 18-19, 1993.
77. International Workshop on Climate Variability, Global Change, and their Impacts in Latin America and the Caribbean, San José, Costa Rica, March 1-5, 1993.
78. PAN-EARTH Workshop on Climate Change Scenarios for Impacts on Mangrove Ecosystems, University of Miami, Florida, March 10, 1993.
79. AMIP Meeting, Bologna, Italy, May 10-12, 1993.
80. AGU Spring Meeting, Baltimore, Maryland, May 24-28, 1993.
81. 6th IAMAP and 4th IAHS Joint International Conference, Yokohama, Japan, July 11-23, 1993.

82. Gordon Research Conference on the Impact of Volcanism on Climate, Henniker, New Hampshire, July 26-30, 1993. (Discussion Leader)
83. Polluted or Pristine? Scientific, Cultural, and Policy Implications of Pre-Industrial Anthropogenic Impact on the Global Carbon Cycle, East-West Center, Honolulu, Hawaii, September 17-19, 1993.
84. International NOAA/DOE MINIMAX Workshop, College Park, September 27-30, 1993. (Local Organizer)
85. NASA GSFC DAAC User Working Group Workshop, Greenbelt, Maryland, November 17-18, 1993.
86. International Geosphere-Biosphere Program (IGBP) PAGES-INQUA COT Meeting Climatic Impact of Explosive Volcanism, Tokyo, Japan, December 1-2, 1993. (Working Group leader)
87. AGU Fall Meeting, San Francisco, California, December 6-10, 1993. (Convenor of special session and session chair)
88. US-Russian Earth Sciences Joint Working Group Meeting, NASA HQ, Washington, DC, April 25-27, 1994.
89. USGCRP Workshop on Earth System Modeling, NSF HQ, Washington, DC, May 1-4, 1994.
90. 5th Conference on the Intersections of Particle and Nuclear Physics, St. Petersburg, Florida, May 31-June 6, 1994.
91. European Conference on the Global Energy and Water Cycle, London, July 18-22, 1994.
92. American Association of State Climatologists Annual Meeting, Madison, Wisconsin, July 28-29, 1994.
93. Workshop on Paleocalibration of Climate Sensitivity, NOAA HQ, Silver Spring, Maryland, August 15-17, 1994.
94. Meeting on Problems in Initializing Soil Wetness, Center for Ocean-Land-Atmosphere Studies, Calverton, Maryland, August 19, 1994.
95. NATO Advanced Research Workshop on "The Effects of the Mt. Pinatubo Eruption on the Atmosphere and Climate," Rome, Italy, September 26-30, 1994.
96. NATO Advanced Research Workshop on "Climatic Variations and Forcing Mechanisms of the Past 2000 Years," Il Ciocco, Italy, October 3-7, 1994.
97. GCIP Science Review and Science Panel, NCAR, Boulder, November 1-4, 1994.
98. Nineteenth Climate Diagnostics Workshop, University of Maryland, College Park, Maryland, November 14-18, 1994. (Session chair)
99. AGU Fall Meeting, San Francisco, California, December 5-9, 1994.
100. First AMIP Scientific Conference, Monterey, California, May 15-19, 1995.
101. XXI Scientific Assembly of the IUGG, Boulder, Colorado, July 2-14, 1995. (Co-Convenor of Joint Symposium; Session Chair of 2 sessions)

102. NASA Aerosol Interdisciplinary Program Workshop, Columbia, Maryland, October 30-November 1, 1995. (Working Group Coordinator)
103. GCIP Coupled Modeling Workshop, NOAA HQ, Silver Spring, Maryland, May 9-10, 1996.
104. Principal Investigators Workshop, Great Plains Regional Center for Global Environmental Change, Nebraska City, Nebraska, October 9-10, 1996.
105. NASA Mini-Workshop on Aerosols and Climate, GISS, New York, June 2-3, 1997.
106. ISLSCP (International Satellite Land Surface Climatology Project) Science Panel Meeting, NOAA HQ, Silver Spring, Maryland, July 10-11, 1997.
107. The Costs of Kyoto, Implications of Climate Change Policy, National Press Club, Washington, DC, July 15, 1997.
108. Global Climate Change Workshop, Annapolis Center, Annapolis, Maryland, July 17-18, 1997.
109. American Association of State Climatologists Annual Meeting, Prescott, Arizona, August 7-9, 1997.
110. Tsukuba International Workshop on Stratospheric Change and its Role in Climate and on the ATMOS-C1 Satellite Mission, Tsukuba, Japan, October 20-22, 1997. (Session Chair)
111. GEWEX Continental Scale International Project PI Workshop, NCAR, Boulder, November 5-6, 1997
112. Climate Changes – Causes and Consequences, European Academy for Environmental Affairs, Bonn, Germany, November 10-11, 1997.
113. GRIPS Workshop, Greenbelt, Maryland, March 3-6, 1998.
114. ARM Science Team Workshop, Tucson, Arizona, March 24-26, 1998.
115. Global Hydrologic Validation Workshop, Princeton University, Bedminster, New Jersey, April 5-7, 1998.
116. GEWEX Continental Scale International Project Workshop on Vision for 2000-2005, Silver Spring, Maryland, April 20-21, 1998.
117. Principal Investigators Workshop, Great Plains Regional Center for Global Environmental Change, Lincoln, Nebraska, April 29-30, 1998.
118. Workshop on Land Surface Representation in Global Climate Models, GISS, New York, May 14-15, 1998.
119. GCIP Mississippi River Climate Conference, St. Louis, Missouri, June 8-12, 1998. (Member of Program Committee, Session Convenor, and Session Chair)
120. ECMWF and WCRP/GEWEX Workshop on Modelling and Data Assimilation for Land-Surface Processes, Reading, UK, June 29 - July 2, 1998.
121. 14th AMS Conference on Hydrology, Dallas, Texas, January 10-15, 1999. (Session Convenor and Session Chair)

122. IPCC Detection/Attribution Workshop, Texas A&M University, College Station, Texas, January 15-16, 1999.
123. NIGEC Regional Integrated Assessment Workshop, NCAR, Boulder, Colorado, February 4-5, 1999.
124. PILPS International Strategy Forum, Honolulu, Hawaii, February 23-26, 1999. (Session Chair)
125. XXII Scientific Assembly of the IUGG, Birmingham, UK, July 19-30, 1999. (Session Chair)
126. SAGE II Science Team Meeting, August 16-17, 1999.
127. GEWEX/INSU International Workshop on Modeling Land-Surface Atmosphere Interactions and Climate Variability, Gif-sur-Yvette, France, October 4-8, 1999. (Rapporteur of Working Group)
128. Joint session of the CAS/JSC Working Group on Numerical Experimentation (WGNE) and the GEWEX Modelling and Prediction Panel (GMPP), Naval Research Laboratory, Monterey, California, October 25-29, 1999.
129. International Arctic Research Center Workshop, GFDL, Princeton, New Jersey, November 2-3, 1999.
130. 7th U.S.-Japan Workshop on Global Climate Change, "Precipitation Systems/Processes and Their Variability in the Asia Pacific Region," Tokyo, November 16-18, 1999. (Co-Chair of Working Group)
131. GRIPS Workshop, University of Toronto, March 13-15, 2000.
132. GCIP/GAPP PI Workshop, Potomac, Maryland, March 27-28, 2000.
133. GAPP Science Plan Workshop, Potomac, Maryland, March 28-29, 2000. (Served as rapporteur)
134. GEWEX/BAHC International Workshop on Soil Moisture Monitoring, Analysis and Prediction, Norman, Oklahoma, May 16-18, 2000.
135. NSF Arctic System Science (ARCSS) Hydrology Workshop, Santa Barbara, California, September 18-20, 2000.
136. 8th U.S.-Japan Workshop on Global Climate Change, "Pacific-Asian and North America monsoon climate variability, global impacts and inter-relationships," Greenbelt, Maryland, November 28-30, 2000.
137. Coordinated Enhanced Observing Period (CEOP) International Workshop, Greenbelt, Maryland, February 27 – March 1, 2001.
138. Workshop on Lidar Measurement in Latin America, Camagüey, Cuba, March 6-8, 2001.
139. GAPP PI Workshop, Potomac, Maryland, April 30 – May 2, 2001.
140. SAGE II Science Team Meeting, May 3-4, 2001.
141. Coastal Research Agenda Workshop, New Jersey Department of Environmental Protection, Trenton, New Jersey, June 8, 2001.

142. Mid-Atlantic Regional Assessment (MARA) Workshop, State College, Pennsylvania, June 18-19, 2001.
143. Lidar Working Group of the Network for Detection of Stratospheric Change, Observatoire d'Haute Provence, France, June 10-13, 2002.
144. Chapman Conference on Volcanism and the Earth's Atmosphere, Thera, Greece, June 17-21, 2002.
145. Cooperative Program for Operational Meteorology, Education, and Training (COMET) New Approaches to Meteorology Education Course for University Faculty, Boulder, Colorado, August 12-16, 2002.
146. Nordic Academy for Advanced Study (NorFA) Summer School, "Environmental effects of large volcanic eruptions on the Northern Hemisphere," Skaftafell, Iceland, August 28 – September 3, 2002.
147. Climate Change Forum, Seoul, Korea, September 27, 2002.
148. Urban Atmospheric Observatory Workshop, New York City, January 27-28, 2003.
149. The Role of the Stratosphere in Tropospheric Climate, Whistler, British Columbia, Canada, April 29 – May 2, 2003.
150. Gordon Research Conference on Solar Radiation and Climate, New London, New Hampshire, July 13-18, 2003.
151. Reconciling Vertical Temperature Trends Workshop, Asheville, North Carolina, October 28-30, 2003.
152. Jim Angell 80th Birthday Symposium, Silver Spring, Maryland, November 4, 2003.
153. SPARC Workshop on Understanding Seasonal Temperature Trends in the Stratosphere, Silver Spring, Maryland, November 5, 2003.
154. NPRI Symposium – Three Minutes to Midnight: The Impending Threat of Nuclear War, Washington, DC, January 25-27, 2004.
155. Northern Eurasian Earth Science Partnership Initiative (NEESPI) Data Workshop, St. Petersburg, Russia, February 23-26, 2004.
156. Tree Rings and Climate: Sharpening the Focus, Tucson, Arizona, April 6-9, 2004.
157. IPCC Working Group I Workshop on Climate Sensitivity, Paris, France, July 26-29, 2004.
158. CAHMDA (Catchment-scale Hydrological Modeling and Data Assimilation)-II International Workshop on the Terrestrial Water Cycle: Modeling and Data Assimilation across Catchment Scales, Princeton, New Jersey, October 25-27, 2004.
159. National Ecological Observatory Network (NEON) Design Consortium, Science and Human Dimensions Committee Meeting, Marina del Rey, California, January 4-6, 2005.
160. National Ecological Observatory Network (NEON) Design Consortium, Science and Human Dimensions Committee Meeting, Boston, Massachusetts, March 15-17, 2005.
161. National Ecological Observatory Network (NEON) Design Consortium, Science and Human Dimensions Committee Meeting, Estes Park, Colorado, June 7-9, 2005.

162. NCAR Strategic Planning Retreat, Boulder, Colorado, July 25-26, 2005.
163. *WMO Scientific Assessment of Ozone Depletion: 2006*, Chapter 6 Author's Meeting, Boulder, Colorado, October 14-16, 2005.
164. International Soil Moisture Working Group Workshop, Noordwijk, Netherlands, March 28-29, 2006.
165. *WMO Scientific Assessment of Ozone Depletion: 2006*, Chapter 6 Author's Meeting, Vienna, Austria, April 8, 2006.
166. *WMO Scientific Assessment of Ozone Depletion: 2006*, Panel Review Meeting, Les Diablerets, Switzerland, June 19-23, 2006.
167. Managing Solar Radiation Workshop, Moffett Field, California, November 18-19, 2006.
168. United Nations Global Compact U.S. Network Meeting: "Managing Climate Change," United Nations Headquarters, New York, April 3, 2007.
169. Brainstorming Retreat, "The Role of the United Nations in Climate Change: Exploring the Way Forward from Now to Bali and Beyond," Rye Brook, New York, June 23, 2007.
170. Nuclear Weapons: The Final Pandemic, Preventing Proliferation and Achieving Abolition, Royal Society of Medicine, London, England, October 3-4, 2007.
171. Global Dimming and Brightening Workshop, Ein Gedi, Israel, February 10-14, 2008.
172. Nuclear Weapons – The Greatest Peril to Civilization, A conference to imagine our world without them, Yale University, New Haven, Connecticut, February 21-22, 2008.
173. Greater Horn of Africa Regional Model Intercomparison Project (AFRMIP) First Planning Meeting, Rutgers University, March 27-28, 2008.
174. NASA Goddard Institute for Space Studies AR5 Science Workshop, New York City, November 18, 2008.
175. Soil Moisture and Soil Temperature Observations and Applications: A Joint U.S. Climate Reference Network (USCRN) – National Integrated Drought Information System (NIDIS) Workshop, Oak Ridge, Tennessee, March 3-5, 2009.
176. NASA Soil Moisture Active and Passive (SMAP) Algorithms and Calibration/Validation Workshop, Oxnard, California, June 9-11, 2009.
177. Gordon Research Conference: Radiation & Climate, New London, New Hampshire, July 5-10, 2009.
178. Strategic Workshop on Geoengineering Research, Max Planck Institute for Meteorology, Hamburg, Germany, November 25-26, 2009.

#### **GRANTS:**

1. NASA, NSG-5209, "Multidisciplinary Research Program in Atmospheric Science," August 1, 1977 – December 31, 1980, \$1,006,396. (My portion of this grant supported my work on climate research.)
2. NSF, ATM-7918215, "Climate Change Caused by Natural Variation and Volcanic Dust as Simulated by a Seasonal Model," October 15, 1979 – March 31, 1982, \$85,177.

3. NOAA/NESS, NA79AA-D-00094, NA80-AAD00035, "Collaborative Research in Satellite Meteorology," June 15, 1979 – March 31, 1982, \$128,547. (My portion of this grant supported my work on snow cover.)
4. NOAA/CAC, NA81AA-H-00023, "Collaborative Research Agreement, 1980-1983," \$238,534. (My portion of this grant supported my work on satellite observed reflectance.)
5. NSF, ATM-8213194, "Numerical Model Studies of Climate Variability," November 1, 1982 – June 30, 1986, \$174,000.
6. NOAA/CICS, NA84AA-H-00026, "Block Funding for Cooperative Institute for Climate Studies," 1984-1988, \$2,524,637. (My portion of this grant supported my work on snow cover data sets. It also supported my work on surface temperature effects of forest fire smoke, with funding from the Defense Nuclear Agency.)
7. AAAS Congressional Science Fellowship, September 1, 1986 – August 31, 1987, \$28,000.
8. NOAA, NA87AA-D-CP003, "Surface Temperature Effects of Forest Fire Smoke Plumes," December 1, 1986 – April 30, 1988, \$100,000. (Funding from the Defense Nuclear Agency.)
9. NASA, GSFC874S NCA5110, "Instructional Use of NASA's Climate Data System (NCDS)," March 1, 1989 – February 28, 1990, \$20,000.
10. NSF, ATM-8920590, "The Volcanic Signal in Global Climate," April 1, 1990 – April 30, 1994, \$300,000.
11. USDA Forest Service Cooperative Agreement, PSW900081CA, "Verification of Monthly Mean Forecasts of Temperature, Precipitation, Dewpoint and Wind in the Continental United States," July 1, 1990 – December 31, 1991, \$46,326. (With Bill Klein)
12. NOAA, NA90AADAC804, "Analysis and Modeling of Soviet Soil Moisture Data," September 1, 1990 – August 31, 1992, \$130,000.
13. NASA, NAG 5-1835, "Climate Model Calculations of The Effects of Volcanoes on Global Climate," December 1, 1991 – November 30, 1996, \$439,000.
14. NOAA Climate and Global Change Program, NA36GPO311, "Analysis and Modeling of the Hydrological Cycle Using Russian Data," August 1, 1993 – July 31, 1995, \$290,000.
15. DOE Office of Energy Research, DE-FG02-93ER61691.A000, "Validation of Soil Moisture in GCMs – AMIP Diagnostic Subproject 11," September 1, 1993 – August 31, 1998, \$148,500.
16. NOAA Climate and Global Change Program, NA56GPO212, "Midlatitude Land Surface Processes: Modeling and Analysis in Support of GCIP Using American, Russian, and Chinese Data," May 1, 1995 – April 30, 1999, \$445,000.
17. NSF Climate Dynamics Program, ATM-9528201, ATM-9996063, "Climatic Effects of Volcanic Eruptions," March 1, 1996 – February 28, 2000, \$165,000.
18. NASA, NAGW-4912, "Climatic Effects of Volcanic Eruptions," December 1, 1995 – February 28, 1997, \$55,000.

19. NOAA Climate and Global Change Program, NA66GPO438, "Limits of Natural Variations in Global and Regional Climate as Compared to Observed Climatic Trends," July 1, 1996 – June 30, 1999, \$150,000. (Konstantin Ya. Vinnikov, P.I.)
20. DOE Great Plains National Institute for Global Environmental Change, "The Diurnal Cycle over the Great Plains in the Future: Mechanisms and Spatial Distribution," July 1, 1996 – June 30, 2000, \$215,000. (Georgiy L. Stenchikov, P.I.)
21. NASA Mission to Planet Earth, NAGW5227, "Global Soil Moisture Data Set From Satellite and Gravimetric Observations for Climatic Studies and Evaluation of the Hydrological Aspects of Climate Models," July 1, 1996 – July 14, 1997, \$97,300. (Konstantin Ya. Vinnikov, P.I.)
22. NASA, NAG-53739, "Climatic Effects of Volcanic Eruptions," March 1, 1997 – February 28, 1999, \$110,000.
23. NASA Mission to Planet Earth, NAG-55161, "Global Soil Moisture Data Set From Satellite and Gravimetric Observations for Climatic Studies and Evaluation of the Hydrological Aspects of Climate Models," July 15, 1997 – July 14, 1999, \$100,000. (Konstantin Ya. Vinnikov, P.I.)
24. NASA, NAG-57913, "Climatic Effects of Volcanic Eruptions," March 1, 1999 – December 31, 1999, \$46,000. (Georgiy L. Stenchikov, P.I.)
25. NASA Earth Science Enterprise, NAG 1-2154, "SAGE II Validation with a Global Lidar Network," January 1, 1999 – December 31, 2002, \$253,933.
26. NOAA Climate and Global Change Program, GC99-443b, "Evaluation of Land Surface Data Assimilation System Simulations of Soil Moisture in the GCIP Region," September 1, 1999 – August 31, 2003, \$225,000.
27. NASA Earth Science Enterprise, NAG 5-9792, "Volcanic Eruptions and Climate," August 1, 2000 – July 31, 2003, \$180,000.
28. NSF Climate Dynamics, ATM-9988419, "Volcanic Eruptions and Climate," April 1, 2000 – March 31, 2004, \$270,000.
29. NOAA Climate and Global Change Program, "Sea Ice and Snow Cover as Parameters for Detection, Attribution, and Monitoring of Anthropogenic Climate Change," June 1, 2000 – May 31, 2003, \$270,000. (Konstantin Y. Vinnikov, P.I.)
30. NASA Earth Science Enterprise, "Reanalysis for Stratospheric Trace Gas Studies," June 1, 2000 – May 31, 2003, \$493,560. (Steven Pawson, P.I.)
31. Inter-American Institute for Global Change Research, "Characterization of stratospheric and upper tropospheric aerosols over Central and South America," February 1, 2000 – January 31, 2001, \$29,923. (Pablo Canziani, P.I., Juan Carlos Antuña, Co-P.I.)
32. New Jersey Department of Environmental Protection, SR-00-048, "Assessment of the Consequences of Climate Change for New Jersey," July 1, 2000 – March 31, 2002, \$60,000.
33. NSF, ATM-0083165, "Collaborative Research on the Snow-Soil Moisture-Monsoon Relationship," August 1, 2000 – July 31, 2003, \$194,516.

34. World Meteorological Organization, Support for Workshop on Lidar Measurement in Latin America, Camaguey, Cuba, March, 2001, \$2000.
- \*35. U.S. Department of Education, "Interdisciplinary Graduate Education in Environmental Biology, Chemistry and Physics," September 1, 2001 – August 31, 2004, \$731,754 (\$519,426 from U.S. Dept. of Education, and \$212,328 matching funds from Rutgers.)
36. Cook College, Rutgers University, "Assessment of the Consequences of Climate Change for New Jersey," November 1, 2001 – June 30, 2002, \$5,000.
37. NASA Goddard Institute for Space Physics, NCC5-553, "Research in Regional and Global Climate Variability," April 1, 2001 – March 31, 2003, \$1,514,060. [Support for Center for Environmental Prediction]
38. NSF, "Support for AGU Chapman Conference, Volcanism and the Earth's Atmosphere," June, 2002, \$18,000.
39. NASA, "Support for AGU Chapman Conference, Volcanism and the Earth's Atmosphere," June, 2002, \$10,000.
40. IAVCEI, "Support for AGU Chapman Conference, Volcanism and the Earth's Atmosphere," June, 2002, \$3,000.
41. New Jersey Department of Environmental Protection, SR-02-082, "Impacts of Climate Change on New Jersey Water Resources," June 1, 2002 – November 30, 2003, \$90,000.
42. NOAA OGP, NA03-OAR-4310057, "Evaluation and Development of the Land Data Assimilation System (LDAS) Using Observations," March 1, 2003 – February 28, 2007, \$240,000.
43. Inter-American Institute for Global Change Research, "Support for Second Workshop on Lidar Measurement in Latin America," February 17, 2003 – February 27, 2003, \$3,000. (Juan Carlos Antuña, Co-P.I.)
44. NOAA OGP, NA03-OAR-4310155, "Volcanic Forcing of Climate over the Past 2000 Years: An Improved Ice-Core-Based Index for Climate Models," August 1, 2003 – July 31, 2007, \$299,336.
45. NSF Climate Dynamics, ATM-0313592, "Collaborative Research on the Climatic Effects of the 1783-1784 Laki Volcanic Eruption," August 1, 2003 – July 31, 2007, \$486,789.
46. NASA Terrestrial Hydrology and Global Water Cycle Program, NNG04GF18G, "Soil Moisture Data Rescue from Russia and China," April 1, 2004 – March 31, 2006, \$26,537.
47. NSF Climate Dynamics, ATM-0351280 and NASA Office of Earth Science, NNG05GB06G, "Stratospheric Aerosol Data Assimilation for Climate Studies," March 1, 2004 – February 28, 2007, \$524,000. (Georgiy L. Stenchikov, P.I.)
48. New Jersey Department of Environmental Protection, SR03-073, "Regional Climate Change and Impact on New Jersey Water Resources," March 1, 2004 – June 30, 2005, \$50,000.
- \*49. NSF Water Cycle, ATM-0450334, "Coupled Climatic-Hydrologic Change in the Terrestrial Water Cycle of North America in the 20th and 21st Centuries: Natural Variability and Anthropogenic Impacts," March 1, 2005 – February 28, 2010, \$818,564.

- \*50. European Space Agency, "Evaluation of Soil Moisture Ocean Salinity satellite retrievals of soil moisture using in situ soil moisture observations from the Ukraine, Mongolia, China, and the United States," July 1, 2005 – , access to data, but no funds.
- \*51. U.S. Department of Education, "Interdisciplinary Graduate Education in Environmental Science and Engineering," August 15, 2006 – August 14, 2009, \$633,360. (Daniel Giménez, P.I.)
- \*52. NSF Climate Dynamics, ATM-0730452, "Collaborative Research in Evaluation of Suggestions to Geoengineer the Climate System Using Stratospheric Aerosols and Sun Shading," February 1, 2008 – January 31, 2011, \$554,429. (Includes \$5000 Research Experience for Undergraduates supplement.)
- 53. NSF Climate Dynamics, ATM-0730463, "Modeling Climate Variability and Change of the Greater Horn of Africa," October 1, 2007 – September 30, 2010, \$382,602. (Richard Anyah, P.I.) [Anyah took the years 2 and 3 support with him the University of Connecticut.]
- 54. New Jersey Agricultural Experiment Station, Internal Hatch Awards Program, "The Global Soil Moisture Data Bank and Geoengineering," January 8, 2008 – June 30, 2008, \$5,000.
- 55. Rutgers Climate and Environmental Change Initiative, "Regional Scale Climate Change Prediction and its Meaning for Social-Institutional Adaptation in Rajasthan, India," September 25, 2008 – June 30, 2009, \$10,000. (Trevor Birkenholtz, P.I.)
- \*56. EPA, "Observational, laboratory, and modeling studies of the impacts of climate change on allergic disease," October 1, 2009 – September 30, 2012, \$900,000 (\$42,256 my part). (Leonard Bielory, P.I.)
- \*57. NSF Arctic System Science, ARC-0908834, "Regional Climate Modeling of Volcanic Eruptions and the Arctic Climate System," August 1, 2009 – July 31, 2012, \$342,401.
- \*58. NASA, NNX09AJ99G, "Soil Moisture Observations for SMAP Calibration and Validation," May 19, 2009 – May 18, 2012, \$222,745.
- 59. NOAA, "The effect of U.S. Great Plains irrigation on precipitation and streamflow," May 1, 2010 – April 30, 2013, \$365,352, submitted.

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