# APPENDIX 1. 2002 SHORT-TERM VISITORS

## DATA ASSIMILATION OFFICE

Konstantinos Vogiatzis
Louisiana State University
Baton Rouge, Louisiana
January 3

Robert Eskridge
National Climate Data Center
Asheville, North Carolina
January 8

James Luers
National Climate Data Center
Asheville, North Carolina
January 8

Mozheng Wei
UCAR/NCEP
Boulder, Colorado
January 9

Anthony Hollingsworth
ECMWF
Reading, United Kingdom
January 10

Alan K. Powers
Computer Sciences Corp.
NASA Ames Research Center
Moffett Field, California
January 23

George Stenchikov
Rutgers University of New Jersey
Newark, New Jersey
January 30

Mitch Goldberg
NOAA, NESDIS
Camp Springs, Maryland
January 31

Byron Boville
National Center for Atmospheric Research
Boulder, Colorado
February 4

Nilton O. Reno
Lunar & Planetary Laboratory
University of Arizona
Tucson, Arizona
February 12

Peter H. Smith
Lunar & Planetary Laboratory
University of Arizona
Tucson, Arizona
February 12

Myong-In Lee
Seoul National University
Seoul, Korea
February 14

Simon Chang
Office of Naval Research NRL
Washington, D. C.
February 20

Matthew McNamara
Halcyon System, Inc.
San Francisco, California
February 22

A. Khokhlov
Naval Research Laboratory
Washington, D. C.
February 27

G. Patnaik
Naval Research Laboratory
Washington, D. C.
February 27

Alan Betts
Atmospheric Research
Pittsford, Vermont
March 11

Paul Francis van Delst
NOAA/NCWEP/EMC
Camp Springs, Maryland
March 19

Milija Zupanski
Colorado State University
Fort Collins, Colorado
March 19

Tomi Vukicevic
Colorado State University
Fort Collins, Colorado
March 20

Oliver Hans-Jurgen Reitebuch
German Aerospace Center DLR
Wessling, Bavaria, Germany
March 21

Henry Jin
NASA Ames Research Center
Moffett Field, California
April 3

Christiane Jablonowski
University of Michigan
Ann Arbor, Michigan
April 5

Joyce Penner
University of Michigan
Ann Arbor, Michigan
April 5

Jeffery R. Key
NOAA/NESDIS
Camp Springs, Maryland
April 12

David A. Santek
University of Wisconsin
Madison, Wisconsin
April 12

Christopher S. Velden
University of Wisconsin
Madison, Wisconsin
April 12

Ralf Giering
Fastopt
Hamburg, Germany
April 17

Thomas Kaminski
Fastopt
Hamburg, Germany
April 17

Dave Broutman
Naval Research Laboratory
Washington, D. C.
April 19

Tijana Janjic
Institut fuer Physik
Universitaet Hohenheim
Bremen, Germany
May 13

Manuel de la Torre Jurez
NRC/RRA (JPL)
Pasadena, California
May 30–31

Richard Swinbank
The MET office, Middle Atmosphere group,
Bracknell, United Kingdom
June 12–14

Dave Emmitt
Simpson Weather Associates, Inc.
Charlottesville, Virginia
June 26

Tijana Janjic
Institut fuer Physik
Universitaet Hohenheim
Bremen, Germany
August 19–20

Joel Tenenbaum
State University of New York
Purchase, New York
September 20

Dirceu Herdies
National Institute for Space Research
Sao Paulo, Brazil
October 23

Robert Miller
Oregon State University
Corvallis, Oregon
October 24

Weiyu Yang
SAIC NCEP
Beltsville, Maryland
October 30–31

Mike Fiorino
PCMDI
Livermore, California
October 31

Joel Norris
Assistant Prof. of Climate and Atmospheric Sciences
University of California
San Diego, California
November 5

Samson Cheung
Halcyon Systems
San Francisco, California
November 15–20

Ralf Giering and Thomas Kaminski
Co owners of Fastopt
Hamburg, Germany
November 18–21

Hui Liu
Florida State University
Tallahassee, Florida
December 2

Lidia Cucurull
University Corporation for Atmospheric Research
Boulder, Colorado
December 3

William Kuo
NCAR/UCAR
Boulder, Colorado
December 3–4

Stephen J. Lord
NOAA/NCEP
Camp Springs, Maryland
December 3–4

John C. Derber
NOAA/NCEP
Camp Springs, Maryland
December 3–4

Fuzhong, Weng
NOAA/NESDIS
Camp Springs, Maryland
December 3–4

James G. Yoe
NOAA/NESDIS
Camp Springs, Maryland
December 3–4

Gyorgi Gyarmati
University of Maryland
College Park, Maryland
December 16

Aleksey Zimin
University of Maryland
College Park, Maryland
December 16

Istvan Szunyogh
University of Maryland
College Park, Maryland
December 16–18

## MESOSCALE ATMOSPHERIC PROCESSES BRANCH

Christopher Perez
Austin College
Sherman, Texas
January 7–26

Jeremy Dobler
University of Arizona
Tucson, Arizona
March 13–15

Oliver Reitebuch
Deutsches zentrum für Luft-und Raumfaurt
March 20–21

Paolo Di Girolamo
University of Basilicata
Potenza, Italy
April–June

Dr. Arnoud Apituley
National Institute of Public Health and the Environment
The Netherlands
April 17

Dr. Sonia Garcia
United States Naval Academy,
Annapolis, Maryland
May 14–August 15

Victor Marrero
University of Puerto Rico
San Juan, Puerto Rico
May 28–August 16

Dr. Emmanouil Anagnostou
University of Connecticut
Storrs, Connecticut
May 29

Torreon Creekmore
Elizabeth City State University
Elizabeth City, North Carolina
June 1–August 15

Manuel Lonfat
University of Miami
Coral Gables, Florida
June 10–August 16

Paula Hennon
Ohio State University
Columbus, Ohio
June 10-August 16

Rebecca Eager
Valparaiso University
Valparaiso, Indiana
June 17–August 9

Bradley Hammerschmidt
Kansas State University
Manhattan, Kansas
June 17–August 9

Joseph Hoch
Pennsylvania State University
University Park, Pennsylvania
June 17–August 9

Amy Maddox
University of Missouri
Columbia, Missouri
June 17–August 9

Dave Robbins
UMBC
Baltimore, Maryland
June 17–August 9

Dr. David Baker
Austin College
Sherman, Texas
June 24–July 31

Professor Steve Burian
University of Arkansas, Civil Engineering Department
Fayetteville, Arkansas
July–August

Dr. Igor Veselovskii
Physics Instrumentation Center, Triotsk Russia
July–November

Prof. Marie Christine Quesuel de Flainville
Rio de Janeiro Catholic University
Rio de Janeiro, Brazil
July 12

Jen-Ping Chen
Department of Atmospheric Sciences,
National Taiwan University
Taipei, Taiwan
July 29–August 9

Dr. Randall Updike
U.S. Geological Survey
Denver, Colorado
August 14–15

Dr. James Lesh
JPL
Pasadena, California
August 29

Jeremy Dobler
University of Arizona
Tucson, Arizona
September 13–15

Helen Nance
University of Plymouth
United Kingdom
September 17

Jen-Ping Chen
Department of Atmospheric Sciences,
National Taiwan University
Taipei, Taiwan
September 23–24

Osman K. Dursun
Istanbul Technical University
Istanbul, Turkey
October 7–December 20

Regina Ryan
University of Delaware
Newark, Delaware
November 21

Michelle Stevenson
University of Delaware
Newark, Delaware
November 21

## CLIMATE AND RADIATION BRANCH

Jung Moon Yoo
Ewha Womens' University
Seoul, South Korea
January 1–June 29

Jean-Francois Leon
Laboratoire d'Optique Atmospherique
Universite des Sciences et Technologies de Lille
Villeneuve d'Ascq, France
January 7

Alexander Ignatov
NOAA/NESDIS
Camp Springs, Maryland
January 9

Xuepeng Zhao
NOAA/NESDIS
Camp Springs, Maryland
January 9

Leo Donner
Geophysical Fluid Dynamics Laboratory/NOAA
Princeton University
Princeton, New Jersey
January 9

June-Yi Lee
Seoul National University
Seoul, South Korea
January 17

Pinhas Alpert
Tel Aviv University
Tel Aviv, Israel
January 28–July 29

Hafuidi Johnson
Naval Postgraduate School (CIRPAS)
Monterey, California
January 31

Arnon Karnieli
Ben Gurion University of the Negev
Jacob Blaustein Institute for Desert Research
Sede Boqer Campus, Israel
February 1

Paulo Artaxo
Universidade de Sao Paulo
Sao Paulo, Brazil
February 15

Daniel Rosenfeld
The Hebrew University of Jerusalem
Jerusalem, Israel
February 19

Istvan Laszlo
NOAA/NESDIS
Camp Springs, Maryland
February 20

Ralph Kahn
Jet Propulsion Laboratory
Pasadena, California
February 28

Zev Levin
Tel Aviv University
Ramat-Aviv Israel
March 19

Aline Procopio
Universidade de Sao Paulo
Sao Paulo, Brazil
April 1

Jenny Hand
National Center for Atmospheric Research
Boulder, Colorado
April 1

Grace Wahba
University of Wisconsin-Madison
Madison, Wisconsin
April 3

Ilan Koren
Tel Aviv University
Tel Aviv, Israel
April 15

Ngar-Cheung (Gabriel) Lau
NOAA/Geophysical Fluid Dynamics Laboratory
Princeton University
Princeton, New Jersey
April 15

Jeffrey Reid
SPAWAR System Center
San Diego, California
April 18

Douglas Westphal
Naval Research Laboratory
San Diego, California
April 18

Gabriel Hegerl
Duke University
Durham, North Carolina
May 1

Kurtrease Lafate
Florida A&M University
Tallahassee, Florida
May 13

L. Larrabee Strow
University of Maryland
Baltimore, Maryland
May 15

Derimian Yvgeni
Ben Gurion University of the Negev
Jacob Blaustein Institute for Desert Research
Sede Boqer Campus, Israel
May 28

Teruyuki Nakajima
University of Tokyo
Tokyo, Japan
May 28

Hua Zhang
Institute for Global Change Research
Yokahama City, Japan
May 28

Richard Lindzen
Massachusetts Institute of Technology
Cambridge, Massachusetts
May 28

Didier Tanre
Laboratoire d'Optique Atmospherique
Universite des Sciences et Technologies de Lille
Villeneuve d'Ascq, France
May 29

Wenying Su
NASA Langley Research Center
Hampton, Virginia
May 30

Andrea de Almeida Castanho
Instituto de Fisica
Universidade de Sao Paulo
Sao Paulo, Brazil
June 3

Mark Janoff
Swarthmore College
Swarthmore, Pennsylvania
June 3

Donald Sam
Salish-Kootenai College
Pablo, Montana
June 3

Segayle Walford
Penn State University
University Park, Pennsylvania
June 5

Kate Jr-Shiuan Yang
Purdue University
W. Lafayette, Indiana
June 10

Lou-Chuang Lee
National Space Program Office
Taiwan
June 12

Yaw-Nan Chen
Taipei Cultural Representative Office
Washington, D. C.
June 12

Shao Jih
Taipei Cultural Representative Office
Washington, D. C.
June 12

Kieran Boyle
State University of New York at Stonybrook
Stony Brook, New York
June 20

Kyu-Tae Lee
National Kangnung University
Kangwon-do, South Korea
June 20–December 20

Wenying Su
NASA/Langley Research Center
Hampton, Virginia
July 8

Stefan Kinne
Max Planck Institute for Meteorology
Hamburg, Germany
July 19

Martin Wooster
King's College of London
London, England
July 19

Yuri Knyazikhin
Boston University
Boston, Massachusetts
July 22

Karla Longo de Freitas
Universidade de Sao Paulo
Sao Paulo, Brazil
July 29

Wen-Yih Sun
Purdue University
W. Lafayette, Indiana
August 3

Professor Harshvardhan
Purdue University
W. Lafayette, Indiana
August 5

Neng-Huei Lin
National Central University
Chung-li, Taiwan
August 26

Richard Hansell
University of California, Los Angeles
Los Angeles, California
August 26

Qingxian Gao
Chinese Research Academy
Beijing, China
September 1

Edmilson Dias de Freitas
Universidade de Sao Paulo
Sao Paulo, Brazil
September 3

Surabi Menon
Columbia University/NASA-GISS
New York, New York
September 18

Graham Feingold
NOAA/ETL
Boulder, Colorado
September 30

James A. Coakley, Jr
College of Oceanic & Atmospheric Sciences
Oregon State University
Corvallis, Oregon
October 1

Reto Stockli
ETH Zurich
Zurich, Switzerland
October 4

Antonio Queface
Eduardo Mondlane University
Maputo, Mozambique
October 11

Kuo-Nan Liou
University of California, Los Angeles
Los Angeles, California
October 15

In-Sik Kang
Seoul National University
Seoul, South Korea
October 24

Hongbin Yu
Georgia Institute of Technology
Atlanta, Georgia
November 17

Dorothy Koch
Yale University/NASA-GISS
New Haven, Connecticut
November 21

Ken Knapp
NOAA/NESDIS/ORA
Camp Springs, Maryland
November 21

Michael Box
University of New South Wales
Sydney, Australia
December 5

Bernard Pinty
Institute for Environment and Sustainability (IES)
EC Joint Research Centre (JRC)
Ispra, Italy
December 5

Michele Verstraete
Institute for Environment & Sustainability
EC Joint Research Centre (JRC)
Ispra, Italy
December 5

## ATMOSPHERIC EXPERIMENT BRANCH

John Guzowski
Bristol-Meyers Squibb
New Brunswick, New Jersey
April 5–6

Daniel Austin
California Institute of Technology
Pasadena, California
May 28–30

Laura Buchner
Concordia College
Moorhead, Minnesota
June–August

Kathryn O'Connor
Miami University
Oxford, Ohio
June–August

## ATMOSPHERIC CHEMISTRY AND DYNAMICS BRANCH

Wouter Peters
University of Utrecht
Utrecht, The Netherlands
January 17

Ellen Brinksma
KNMI, Royal Netherlands Meteorological Institute
DeBilt, The Netherlands
January 28–31

Irene Xueref
Harvard University
Cambridge, Massachusetts
February 4–6

Folkert Boersma
KNMI
Delft, The Netherlands
February 4–8

Pierternel Levelt
KNMI
DeBilt, The Netherlands
February 4-8

Bert Oord
KNMI
Delft, The Netherlands
February 4–8

Pieter Stammes
KNMI
Delft, The Netherlands
February 4–8

Kelly Chance
Smithsonian Astrophysical Observatory
Cambridge, Massachusetts
Various times

Olga Munoz
Institute de Astrofisica de Andalucia
Granada, Spain
March 14–15

Hester Volten
FOM Institute AMOFL
The Netherlands
March 14–15

Hongbin Yu
Georgia Institute of Technology
Atlanta, Georgia
March 20–21

Neil Bradshaw
University of Wales
Aberystwyth, United Kingdom
April 2–4

Robert Spurr
Smithsonian Astrophysical Observatory
Cambridge, Massachusetts
Various times

Rosanne Diab
University of Natal
Durban, South Africa
May 6

Bill Barnard
EPA (retired)
Washington, D. C.
June 14

Ira Sundram
NASA Goddard Institute for Space Studies (GISS)
New York, New York
July 11–12

Mike Newchurch
University of Alabama
Huntsville, Alabama
August 5–8

Robert Evans
NOAA
Boulder, Colorado
August 26–30

Eladio Knipping
University of California at Irvine
Irvine, California
September 4

M. Tali Freiman
University of Witwatersrand
Johannesburg, South Africa
October 2

Pepijn Veefkind
KNMI
Delft, the Netherlands
October 11

John P. Burrows
University of Bremen
Bremen, Germany
Various times

Peter Bundi
University of Witwatersrand
Johannesburg, South Africa
October 24

Fok-Yan Thomas Leung
California Institute of Technology
Pasadena, California
November 8

David Noone
California Institute of Technology
Pasadena, California
November 21

David Baker
National Center for Atmospheric Research (NCAR)
Boulder, Colorado
November 26

# APPENDIX 2. 2002 COMPOSITION OF THE VISITING COMMITTEES FOR THE LABORATORY

## LABORATORY VISITING COMMITTEE (OCTOBER 1993)

Alan K. Betts, Chairperson
Atmospheric Research Corporation, Pittsford, Vermont

Michael Ghil
Department of Atmospheric Science
University of California at Los Angeles, California

Donald R. Johnson
Space Science and Engineering Center
University of Wisconsin, Madison, Wisconsin

Timothy L. Killeen
Space Physics Research Laboratory
University of Michigan, Ann Arbor, Michigan

Jose M. Rodriguez
AER, Inc., Cambridge, Massachusetts

Edward Westwater
CIRES, Boulder, Colorado

## DATA ASSIMILATION OFFICE ADVISORY PANEL (OCTOBER 1992, OCTOBER 1993, JANUARY 1995, JUNE 1996, MAY 1998)

Roger Daley, Chairperson
Naval Research Laboratory, Monterey, California
(served Advisory Panel 1992, 1993, 1995, 1996, 1998)

Jeffrey Anderson
GFDL/NOAA
Princeton University, Princeton, New Jersey
(served Advisory Panel 1995, 1996, 1998)

Andrew F. Bennett
College of Oceanography
Oregon State University, Corvallis, Oregon
(served Advisory Panel 1995, 1996, 1998)

Guy Brasseur*
National Center for Atmospheric Research, Boulder, Colorado (served Advisory Panel 1992, 1993, 1995)

Phillippe Courtier
Laboratoire d'Océanographie Dynamique et de Climatologie (LODYC), Paris, France
(served Advisory Panel 1995, 1996, 1998)

Robert E. Dickinson
Department of Atmospheric Science
University of Arizona, Tucson, Arizona
(served Advisory Panel 1995, 1996, 1998)

Anthony Hollingsworth*
European Centre for Medium-Range Weather Forecasts (ECMWF), Reading, England
(served Advisory Panel 1992, 1993)

Daniel J. Jacob
Division of Engineering and Applied Science
Harvard University, Cambridge, Massachusetts
(served Advisory Panel 1995, 1996, 1998)

Donald R. Johnson
Space Science and Engineering Center
University of Wisconsin, Madison, Wisconsin
(served Advisory Panel 1992, 1993, 1995, 1996, 1998)

Kikuro Miyakoda*
GFDL/NOAA
Department of Commerce
Princeton University, Princeton, New Jersey
(served Advisory Panel 1992, 1993, 1995)

James J. O'Brien
Professor of Meteorology and Oceanography
Florida State University, Tallahassee, Florida
(served Advisory Panel 1992, 1993, 1995, 1996, 1998)

Alan O'Neill
The Center for Global Atmospheric Modelling
Department of Meteorology
University of Reading, Reading, England
(served Advisory Panel 1992, 1993, 1995, 1996, 1998)

## DATA ASSIMILATION OFFICE COMPUTER ADVISORY PANEL (MARCH 1996, AUGUST 1997)

William E. Farrell, Chairperson
SAIC, San Diego, California

Tony Busalacchi
Laboratory for Hydrospheric Processes, Code 970
NASA Goddard Space Flight Center, Greenbelt, Md.

Bill Dannevik
L262, Environmental Programs
Lawrence Livermore National Laboratory,
Livermore, California

Alan Davis
Center for Ocean-Atmosphere Prediction Studies
Florida State University, Tallahassee, Florida

Geerd-R. Hoffmann, Head
Computer Division
European Centre for Medium-Range Weather
Forecasts (ECMWF), Reading, England

Menas Kafatos
University Professor of Interdisciplinary Science
Director, Institute for Computational
Sciences and Informatics
George Mason University, Fairfax, Virginia

Reagan W. Moore
Enabling Technologies Group
San Diego Supercomputer Center, San Diego, Calif.

John Sloan*
NCAR/SCD, Boulder, Colorado

Thomas Sterling*
Lawrence Livermore National Laboratory,
Livermore, California

## MESOSCALE ATMOSPHERIC PROCESSES BRANCH, EXTERNAL REVIEW COMMITTEE REPORT, NASA GSFC, NOVEMBER 9, 1999

Dr. Robert Gall, Chair
Mesoscale Microscale Meteorology Division
National Center for Atmospheric Research
Boulder, Colorado

Dr. Michael Hardesty
Environmental Technology Laboratory
National Oceanic and Atmospheric Administration
Boulder, Colorado

Dr. Frank Marks
Hurricane Research Division
National Oceanic and Atmospheric Administration
Miami, Florida

Dr. Eric Smith
Department of Meteorology
Florida State University
Tallahassee, Florida

## EDGE TECHNIQUE REVIEW COMMITTEE, NASA GSFC AUGUST 6-7, 1997

R. Michael Hardesty (Chair)
NOAA ERL, Boulder, Colorado

Edwin Eloranta
University of Wisconsin, Madison, Wisconsin

Chester Gardner
University of Illinois, Urbana, Illinois

Robert Menzies
NASA Jet Propulsion Laboratory, Pasadena, Calif.

* No longer on the committee

## ATMOSPHERIC CHEMISTRY AND DYNAMICS BRANCH REVIEW, NASA GSFC, APRIL 16-18, 1997

Dr. William L. Chameides
School of Earth and Atmospheric Sciences
Georgia Institute of Technology, Atlanta, Georgia

Douglas D. Davis
School of Geophysical Science
Georgia Institute of Technology, Atlanta, Georgia

Matthew H. Hitchman
Dept. of Atmospheric and Oceanic Sciences
University of Wisconsin, Madison, Wisconsin

David J. Hoffman
Climate Monitoring and Diagnostics Laboratory
NOAA, Boulder, Colorado

Susan Solomon
Environmental Research Laboratory
National Oceanic and Atmospheric Administration,
Boulder, Colorado

Joe W. Waters
Microwave Atmospheric Science Group
NASA Jet Propulsion Laboratory, Pasadena, Calif.

# APPENDIX 3. 2002 VISITING SCIENTISTS AND ASSOCIATES OF JOINT CENTERS

## DISTINGUISHED VISITING SCIENTIST

David Atlas

## ESSIC

Christian Alcala
David Considine
Andrew E. Dessler
Michael Fox-Rabinovitz
Vikram Mehta
Kenneth Pickering
Maria Tzortziou

## GEORGE MASON UNIVERSITY

Dave Augustine
Bart Kelley
David Marks
Jason Pippitt
David Silberstein

## GEORGIA TECH.

Mian Chin
Paul Ginoux

## GEST CENTER

Julio Bacmeister
Tim Berkoff
Eric Bucsela
Yehui Chang
Baode Chen
Jiun-Dar Chern
Wookap Choi
James Coakley
Peter Colarco
Ron Errico
Rosana Nieto Ferreira
Santiago Gasso
Charles Gatebe
Paul Ginoux
Mircea Grecu
Guojun Gu
Mohan Gupta
Harshvardhan
Hiroo Hayashi
Dirceu Luis Herdies
Christina Hsu
Dan Johnson
Nickolay Krotkov
Prasun Kundu
Kwo-Sen Kuo
Redgie Lancaster
David Lary
Lihua Li
Shuhua Li
Xiaowen Li
Ruei-Fong Lin
Xin Lin
Dan Lubin
Ashwin Mahesh
Kenneth Minschwaner
Peter Norris
Steven Pawson
Zhaoxia Pu
Oreste Reale
Jerome Riedi
Lars Peter Riishojgaard
Joan Rosenfield
Chung-Lin Shie
Dan Stillman
Susan Strahan
Lin Tian
Igor Veselovskii
Guiling Wang
Hailan Wang
J.J. Wang
Zhien Wang
Clark J. Weaver
Judd Welton
Liguang Wu
Fanglin Yang
Song Yang
Kevin Yeh
Xiping Zeng
Jiayu Zhou
Jerald Ziemke

## JCET
Eyal Amitai
Christopher Barnet
Scott Curtis
Belay Demoz
Keith Evans
Jeffrey Halverson
Alexander Marshak
J. Vanderlei Martins
Amita Mehta
William Olson
Lazaros Oraiopoulos
Steven Platnick
Paul Poli
Jens Reichardt
Susanne Reichardt
Thomas Rickenbach
Alexander Sinyuk
Lynn Sparling
Andrew Tangborn
Ali Tokay
Omar Torres
Tamas Varnai
Yansen Wang
Guoyong Wen

## JOHNS HOPKINS UNIVERSITY
Jun Ma

## LAOR
Joe Otterman

## NRC
Matthew Boehm
Ilan Koren
Moyses Nussenzveig
Mark Olsen
Sam Shen
Mark Wenig

## NSF
Sankar-Rao Mopidevi

## UNIVERSITY OF ARIZONA
Robert Loughman
Liming Xu

## URF
Timothy Gubbels
Jess Lewis
Willis Wilson

# APPENDIX 4. 2002 SEMINARS

## SEMINARS HELD AT GSFC:

## DATA ASSIMILATION OFFICE

Robert Eskridge and James Luers, National Climatic Data Center, hosted by Chris Redder, 910.3, "Radiation bias correction of radiosonde temperature observations," January 8.

Mozheng Wei, UCAR/NCEP Environmental Modeling Center, hosted by Lars Peter Riishojgaard, 910.3, "The development and utility of NCEP's ensemble weather forecast system," January 9.

Anthony Hollingsworth, ECMWF, hosted by Richard Rood, 910.3, "Monitoring and predicting the global environment," January 10.

Susan Strahan, GEST/DAO, "The influence of planetary wave transport on Arctic ozone as observed by POAM," January 18.

Andy Tangborn, GEST/DAO, "Assimilation of stratospheric winds," January 25.

Byron Boville, National Center for Atmospheric Research, hosted by S.J. Lin, 910.3, "Atmospheric chemistry transport modeling and fvWACCM results from NCAR,"
February 4.

Nilton O. Renno and Peter H. Smith, Lunar and Planetary Laboratory, Univ. of Arizona, hosted by Arlindo Da Silva, 910.3, "Mars Atmospheric Processes," February 12.

Myong-In Lee, Seoul National University, "Moist processes in idealized large-scale models," February 14.

Ivanka Stajner, DAO/SAIC, "Ozone assimilation at the DAO," February 15.

Simon Chang, Office of Naval Research, NRL, "The data assimilation and predictability program at the Office of Naval Research," February 22.

Richard Rood, GSFC code 930, hosted by Steven Pawson, 910.3, "Constituent data assimilation: challenges and limitations," February 22.

A. Khokhlov and G. Patnaik, Laboratory for Computational Physics and Fluid Dynamics, Naval Research Laboratory, hosted by Leonid Zaslavsky, 910.3, "Adaptive COAMPS project," February 27.

David Lary, DAO, GEST visiting fellow, hosted by Steven Pawson, 910.3, "Chemical data assimilation," March 1.

Alan Betts, Atmospheric Research, Pittsford, VT, hosted by Michael Bosilovich, 910.3, "Modeling the water cycle, clouds and precipitation," March 11.

Milija Zupanski, Colorado State University, Cooperative Institute for research in atmosphere, hosted by Stephen Cohn, Code 910.3, "Development of a weak-constraint 4dvar data assimilation system at CIRA/CSU and future work," March 19.

Tomi Vukicevic, Cooperative Institute for Research in the Atmosphere, Colorado State University, “An overview of data assimilation research at the Cooperative Institute for Research in the Atmosphere (CIRA): Toward satellite radiance assimilation under all weather condition,” March 20.

Steven Pawson, GEST/DAO, hosted by 910.3, “How well can we model the climate of the middle atmosphere? The SPARC GRIPS project,” April 5.

Ralf Giering and Thomas Kaminski, Fastopt, hosted by Ricardo Todling, 910.3, “Status of the tangent linear and adjoint models of the FV-GCM,” April 17.

Dave Broutman, NRL, Washington DC, hosted by Steven Pawson, 910.3, “Rays, caustics, and gravity waves,” April 19.

Manuel de la Torre Jurez, Jet Propulsion Laboratory, hosted by Joanna Joiner, “Climate monitoring using GPS radio-occultations,” May 31.

Ron Errico, NCAR, hosted by Ron Gelaro, 910.3, “Optimal (SV) perturbations produced for moisture-measuring,” June 26.

Boyin Huang, MIT, “Sensitives of deep-ocean heat content in the MIT adjoint ocean,” July 9.

Ricardo Todling and Yanqiu Zhu, DAO/SAIC, hosted by 910.3, “Studies with the DAO retrospective Data assimilation system,” July 10.

Lars Peter Riishojgaard, DAO/UMBC/GEST, hosted by 910, “Data assimilation at Goddard: the role and the challenges,” September 12.

Ichiro Fukumori, JPL, hosted by Ricardo Todling, Code 910.3, “A routine global ocean data assimilation system of the consortium for Estimating the Circulation and Climate of the Ocean (ECCO),” September 19.

Dick Dee, SAIC, hosted by 910.3, “An adaptive scheme for estimating error variances during data assimilation,” October 21.

Robert Miller, Oregon State University, hosted by Ricardo Todling, Code 910.3, “Ensemble generation for models of multi-modal systems,” October 29.

Mike Fiorino, PCMDI, hosted by Dick Dee, Code 910.3, “Spooky results from the ERA-40 reanalysis project,” October 31.

Joel Norris, Scripps Institute of Oceanography, Univ. of California, San Diego, “Evaluation of GCM cloudiness as a function of meteorological process,” November 5.

Steven Pawson, GEST/UMBC at GSFC, “Challenges in the Data Assimilation for studies of the middle atmosphere,” November 27.

Hui Liu, Florida State University, hosted by Joanna Joiner, “Assimilation of GPS radio occultation data,” December 2.

Ivanka Stajner, DAO/SAIC, “Ozone assimilation at NASA/Goddard Data Assimilation Office,” December 18.

## MESOSCALE ATMOSPHERIC PROCESSES BRANCH

David Jorgensen, NOAA/NSSL/Mesoscale Research Division- Boulder,“ The Kinematic Structure of two intense narrow cold frontal rainbands observed by Airborne Doppler Radar” January 22.

T. N. Krishnamurti, Florida State University, “A Multi Model Approach to the Cumulus Parameterization Issue,” April 10.

Matthew Boehm, “Tropical Convection’s Roles in Tropical Tropopause Cirrus,” May 16.

Scott Curtis, “Understanding the Cause and Effects of El NiÒo with Satellite Estimates of Precipitation,” June.

Christopher C. Hennon, Ohio State University, “Predicting tropical cyclogenesis: Current Approaches and future possibilities,” September 19.

Wei-Chyung Wang, Atmospheric Sciences Research Center, State University of New York, “The role of cloud-radiation interaction in East Asia summer monsoon,” September 23.

J. Marshall Shepherd, “Overview of NASA’s Precipitation Program, White House Science Advisor Marburger and Guests,” October 11.

J. Marshall Shepherd, “Urban Rainfall Anomalies in Houston,” October 15.

Wei-Kuo Tao, Aerocenter, NASA/Goddard Space Flight Center, “Goddard Cumulus Ensemble Model: Microphysics and its application for cloud-aerosol Interaction,” Greenbelt, Maryland, October 15.

Wei-Kuo Tao, GSFC aerosol science “The Goddard Cumulus Ensemble Model: Microphysics and its application for cloud-aerosol-chemistry interaction,” Greenbelt, Maryland, November 21.

Detlef Muller, Institute for Tropospheric Research, Leipzig, Germany, “Characterization of European and Indo-Asian Pollution with 6-Wavelength Lidar,” December 3.

J. Marshall Shepherd, “Overview of Mesoscale Atmospheric Processes Branch Applications Activities,” Richard Miller/NASA Stennis, December 13.

J. Marshall Shepherd, “Etheatre Seminar to ISRO and IMD Delegation,” December 16.

## CLIMATE AND RADIATION BRANCH

Leo J. Donner, NOAA, Princeton, NJ, “The Impact of Mesoscale Processes Driven by Deep Convection on the General Circulation,” January 9.

Si-Chee Tsay, NASA/GSFC, Aerocenter Seminar, “ Dust Characterization at ACE-Asia Source Region: A Satellite/Surface Perspective,” January 9.

Jean-Francois Leon, Laboratoire d”Optique, “Passive and Active Remote Sensing of Aerosols: Results from the Indian Ocean Experiment and New Concepts from the Aqua-Train,” January 23.

Yoram J. Kaufman, NASA/GSFC and J. Vanderlei Martins, JCET/UMBC, " A Concept for Satellite Observations of Aerosol Absorption over the Oceans," January 23.

Jim Butler, NASA/GSFC, "Radiometric Calibration of EOS Satellite and Vicarious Calibration Instruments from 400 to 250nm: Results and Lessons Learned," February 6.

Paul Ginoux, UMBC, Aerocenter Seminar, "Characteristics of Dust Sources Derived from TOMS Aerosol Index," February 6.

Daniel Rosenfeld, The Hebrew University of Jerusalem, Israel, "Why do Clouds over Ocean Become Maritime?" February 19.

Lazaros Oreopoulos, JCET/UMBC, "Shortwave Cloud Absorption Estimates from the ARESE II Experiment," February 20.

Oleg Dubovik, UMBC, Aerocenter Seminar, " Non-Spherical Aerosol Retrieval Method Employing Light Scattering by Spheroids: Applications to AERONET data," February 20.

Julio Bacmeister, GEST/UMBC, "Clouds, Convection, and Boundary Layer Physics in the NSIPP AGCM," March 6.

Omar Torres, University of Maryland, Aerocenter Seminar, "Aerosol Single Scattering Albedo from TOMS: Comparison to AERONET Observations," March 6.

Albert Arking, Johns Hopkins University, "The Partitioning of Solar Energy Between Atmosphere and Surface," March 20.

Grace Wahba, University of Wisconsin, "Reproducing Kernel Space Methods for Hard and Soft Classification, with Potential Application to the No-Cloud/Cloud-Type Classification of Radiance Profiles," April 3.

Eric Vermote, University of Maryland, Aerocenter Seminar, "The 1km MODIS Aerosol Product for Atmospheric Correction," April 10.

Ilan Koren, Tel Aviv University, Israel, "Seeing Clouds," April 15.

Ngar-Cheung (Gabriel) Lau, NOAA, "The Atmospheric Bridge Linking ENSO Events to Variability of the World Oceans," April 15.

Mikhail Alexandrov, GISS, Aerocenter Seminar, "Remote Sensing of Aerosol and Trace gases by Means of MFRSR Networks," April 24.

Gabriele C. Hegerl, Duke University, "Detection of Anthropogenic Climate Change," May 1.

L. Larrabee Strow, University of Maryland Baltimore Campus, "Radiative Transfer for the Atmospheric Infrared Sounder (AIRS) on EOS-AQUA," May 15.

Charles Ichoku, Science Systems and Applications, Inc., "MODIS Aerosol Products and Climate Research," June 5.

Varnai, Tamas JCET/UMBC, “3D Radiative Effects in MODIS Cloud Observations,” June 19.

Rosana Nieto Ferreira, GEST/UMBC, “Zonal Index Cycle in the Southern Hemisphere,” July 12.

Ichoku, Charles, Science Systems and Applications, Inc., Special Seminar, “Quality Control Strategies in Aerosol Remote Sensing by MODIS,” July 17.

Martin J. Wooster, King’s College London, “Fire Radiative Energy for Biomass Burning Emissions Inventories: Pilot Studies using Ground and Satellite Based Infrared Spectral Radiances,” July 19.

William K. M. Lau, NASA/GSFC, “My Vision of the Laboratory for Atmospheres,” August 30.

Holben, Brent, NASA/GSFC, Aerocenter Seminar, “AERONET-What’s Cookin?” September 17.

Menon, Surabi, NASA/Goddard Institute for Space Studies and Columbia University, “Evaluating the Direct and Indirect Aerosol Effect on Climate,” September 18.

Steven Platnick, UMBC/JCET, Special Seminar, “An Overview of the Operational MODIS Cloud Products,” September 24.

Harshvardhan, Earth and Atmospheric Sciences, Purdue University, “Retrieval of Microphysical and Thermodynamic Properties from Non-Uniform Cloud Field,” September 25.

Graham, Feingold, NOAA Environmental Technology Laboratory, Boulder, Colorado, “First Measurements of the Aerosol Indirect Effect Using Ground-Based Remote Sensors,” October 1.

Kuo-Nan Liou, Department of Atmospheric Sciences, University of California, “Remote Sensing of 3D Inhomogeneous Cirrus Clouds Using Bidirectional Reflection and Polarization Measurements: Implications for Climate Research,” October 16.

Ken Knapp, CIRA-NOAA/NESDIS, Aerocenter Seminar, “The GOES Aerosol/Smoke Product (GASP),” October 29.

James Coakley, College of Oceanic & Atmospheric Sciences, Oregon State University, “Cloud Properties for Partly Cloudy Fields of View,” November 6.

P.K. Bhartia, NASA/GSFC, Aerocenter Seminar, “Effect of Aerosols on Ultraviolet Radiation – What we Know, What we do not Know, and Why it is Important to Know,” November 13.

Christophe Pietras, SIMBIOS Group, Aerocenter Seminar, “SeaWiFS and MODIS Aerosol Optical Thickness Matchups Using Sun Photometers,” November 26.

Edmilson De Freitas, University de Sao Paulo, and J. Vanderlei Martins, UMBC/JCET, “Influence in the Direct Radiative Forcing of Aerosols by Surface Properties using MODIS,” November 30.

Bernard Pinty and Michel Verstraete, Institute for Environment and Sustainability, Ispra, Italy, Special Aerocenter Seminar, “Use of MISR and SeaWiFS Angular/spectral Information to Monitor Vegetation Vitality, Vegetation Structure and Surface Liquefaction,” December 4.

Ming-Dah Chou, NASA/GSFC, "Clouds, Radiation Budgets and Climate in the Tropical Western Pacific," December 18.

Thomas F. Eck (923), Brent N. Holben (923), Rong-Rong Li (913), Robert C. Levy (913), Joel S. Schafer (923), Omar Torres (916), Pawan K. Bhartia (916), Aliaksandr Sinyuk (916), Oleg Doubovik (923), and Nordine Souaidia (National Institute of Standards and Technology, Gaithersburg, Maryland), Aerocenter Seminar, "Poster Session using AERONET Observations," December 19.

## ATMOSPHERIC CHEMISTRY AND DYNAMICS BRANCH

Atmospheric Chemistry and Dynamics Branch, Paul Ginoux, NASA GSFC/GEST, "Characteristics of dust sources derived from TOMS Aerosol Index," February 6.

Climate and Radiation Branch, Omar Torres, "Aerosol Single Scattering Albedo from TOMS: Comparison to AERONET observations," March 6.

Atmospheric Chemistry and Dynamics Branch, Hongbin Yu, Georgia Institute of Technology, "Impacts of Aerosols on the Land-Atmosphere Interactions," March 20.

Atmospheric Chemistry and Dynamics Branch, Neil Bradshaw, Department of Physics, University of Wales, Aberystwyth, "A dynamical theory of ozone layering in the stratosphere," April 2.

Atmospheric Chemistry and Dynamics Branch, P. K. Bhartia, NASA GSFC, "UV Remote Sensing - concentrating on its application to ozone monitoring," June 27.

Atmospheric Chemistry and Dynamics Branch, Donald Anderson, NASA GSFC, "The NASA CRYSTAL-FACE Mission and the GSFC Laboratory for Atmospheres," August 13.

Atmospheric Chemistry and Dynamics Branch, Eladio Knipping, University of California at Irvine, "Modeling C12 Formation from Sea-Salt Particles: Mechanism & Effects on Urban Coastal Ozone," September 4.

Atmospheric Chemistry and Dynamics Branch, Fok-Yan Thomas Leung, California Institute of Technology, "Elucidation of the sources of stratospheric sulfate aerosols by isotopic methods," November 8.

Climate and Radiation Branch, P. K. Bhartia, NASA GSFC, "Effects of aerosols on ultraviolet radiation - what we know, what we do not know, and why it is important to know," November 13.

Atmospheric Chemistry and Dynamics Branch, David Noone, California Institute of Technology, "Investigating the Influence of Arctic Sea Ice on Stratospheric Circulation and Ozone with GCMs," November 21.

Atmospheric Chemistry and Dynamics Branch, David Baker, National Center for Atmospheric Research (NCAR), "Recent Work on Atmospheric $CO_2$ Data Assimilation at NCAR using the GSFC PCTM Model," November 26.

## SEMINARS HELD OFF-CENTER BY LABORATORY MEMBERS:

### SOUNDER RESEARCH TEAM

Joel Susskind, "Introduction to AIRS and CrIS," host: Menas Kafatos, George Mason University, Fairfax, Virginia, October 17.

### MESOSCALE ATMOSPHERIC PROCESSES BRANCH

Wei-Kuo Tao, "Goddard Cumulus Model and Precipitation Processes," Indian Meteorological Society, New Delhi, India, February 12.

David Whiteman, "Atmospheric Research Using Raman Lidar," University of Alabama, Huntsville, Alabama, February 20.

George J. Huffman, "Progress in Global Rainfall Estimates," Dept. of Meteorology Seminar, University of Maryland, College Park, Maryland, March 7.

J. Marshall Shepherd , "Overview of NASA Earth Science Activities: Atmospheric Sciences Component," National Park Service, March 11.

Wei-Kuo Tao, "Microphysics, Radiation and Surface Processes in the Goddard Cumulus Ensemble (GCE) Model," Japan Meteorological Research Institute, Tsukuba, Ibaraki, Japan. March 18.

Geary Schwemmer, "Laser Atmospheric Remote Sensing at NASA Goddard Space Flight Center," U.S. Naval Academy, Applied Math Department, Annapolis, Maryland, March 19.

James R. Campbell, "A Ground-Based Global Lidar Network for Cloud and Aerosol Research," National Taiwan University, Department of Meteorology, Taipei, Taiwan, March 19.

Wei-Kuo Tao, "Goddard Cumulus Ensemble Model and its applications on precipitation processes," Tokyo University, Tokyo, Japan, March 20.

J. Marshall Shepherd, "Rainfall Anomalies in Houston," Pennsylvania State University, Meteorology Department, University Park, Pa., March 21.

J. Marshall Shepherd, "An Overview of the GPM Mission," Pennsylvania State University, Meteorology Department, University Park, Pa., March 21.

Xiaowen Li, "Simulating the Evaporation in Stratiform Rain," University of Chicago, Chicago, Illinois, March 26.

Xiping Zeng, "Ensemble Simulation of Tropical Convection," New Mexico Tech, Physics Department, Socorro, N.M, April 19.

Wei-Kuo Tao, "Mesoscale Convective Systems in SCSMEX: Simulated by a regional climate model and a cloud resolving model," National Taiwan University, Taipei, Taiwan, June 7.

Wei-Kuo Tao, “Precipitation processes and Cloud Resolving Models,” Taiwan Central Weather Bureau, Taipei, Taiwan, June 8.

Wei-Kuo Tao, “Mesoscale Convective Systems in SCSMEX: Simulated by a cloud resolving model,” Colorado State University, Fort Collins, Colorado, June 27.

George J. Huffman and Barbara L. Summey, “Earth Science Data As Never Before Seen: Cutting-Edge Visualizations in Code 912,” SSAI Brown-Bag Seminar, SSAI, Lanham, Maryland, July 30.

Song Yang, “Updates on TRMM/GPM and Latent Heating Products,” National Satellite Meteorological Center, Beijing, China, August 22.

Song Yang, “The Global Precipitation Measurement (GPM),” Institute of Atmospheric Physics, Beijing, China, August 23.

Wei-Kuo Tao, “Cloud model and weather modification,” National Academy of Sciences, Washington, D.C., August 28.

J. Marshall Shepherd, “Rainfall Anomalies in Houston,” Morgan State University, Engineering and Computation Sciences Department, Baltimore, Maryland, September 17.

Wei-Kuo Tao, “Microphysics, Radiation and Surface Processes in the Goddard Cumulus Ensemble (GCE) Model,” NASA Ames, Moffett Field, California, September 17.

Wei-Kuo Tao, “Microphysics, Radiation and Surface Processes in the Goddard Cumulus Ensemble (GCE) Model,” Naval Research Laboratory, Monterey, California, September 19.

Wei-Kuo Tao, “Regional-and Cloud-Scale Modeling at NASA Goddard Space Flight Center,” Bay area air quality management district, San Francisco, California, September 20.

Wei-Kuo Tao, “Convective Systems over the South China Sea: Cloud-Resolving Model Simulation,” University of Maryland, Department of Meteorology, College Park, Maryland, October 10.

J. Marshall Shepherd, “Rainfall Anomalies in Houston,” University of Virginia, Department of Environmental Sciences, Charlottesville, Virginia, October 24.

J. Marshall Shepherd, “An Overview of the GPM Mission,” University of Virginia, Department of Environmental Sciences, Charlottesville, Virginia, October 25.

Song Yang, “Global Precipitation Measurement (GPM)—overview,” Nanjing Institute of Meteorology, Nanjing China, October 27.

Wei-Kuo Tao, “Microphysics, Radiation and Surface Processes in the Goddard Cumulus Ensemble (GCE) Model,” Japan Frontal Research System for Global Change, Yokohama, Japan, October 28.

Song Yang, “Precipitation from Satellite Passive Microwave Measurements,” Nanjing Institute of Meteorology, Nanjing, China, October 29.

Song Yang, Shanghai Typhoon Institute, Shanghai, China, “TRMM—impact on hurricane research,” November 7.

Wei-Kuo Tao, "Comparison of surface energy budget and precipitation efficiency between convective systems developed during ARM, SCSMEX, TOGA COARE, GATE, WMO-01 and KWAJEX," ARM Cloud Parameterization and Modeling Meeting, Reston, Virginia, November 8.

Wei-Kuo Tao, "CRM: Status and plans in TRMM," ARM Cloud Parameterization and Modeling Meeting, Reston, Virginia, November 8.

Biswadev Roy, "Global Positioning System and Some Atmospheric Applications," Howard University, Department of Physics & Astronomy, Washington, D.C., November 13.

Eyal Amitai, "NASA Precipitation Measurement Missions," Politecnico di Torino, Turin, Italy, November 15.

Eyal Amitai, "Improved Radar-Gauge Adjusted Rain Fields Based on the TRMM Validation Program," Politecnico di Torino, Turin, Italy, November 15.

George J. Huffman, "Remote Sensing of Precipitation," SSAI Brown-Bag Seminar, SSAI, Lanham, Maryland, December 12.

## CLIMATE AND RADIATION BRANCH

Steven Platnick, "Multispectral Cloud Retrievals and the MODIS Algorithm," Institute for Terrestrial and Planetary Atmospheres, State University of New York, Stony Brook, NY, February 27.

Alexander Marshak (NASA/GSFC), "A Correct of Large Droplets in Radiative Transfer and its Effects on Cloud Absorption," State University of New York, Stony Brook, NY, March 20.

Charles Gatebe, "Perspective of Earth from Space," University of Nairobi, College of Architecture and Engineering, Nairobi, Kenya, July 24.

Charles Gatebe, "Understanding our Planet from Space," University of Nairobi, College of Biological and Physical Sciences, Nairobi, Kenya, July 26.

Charles Gatebe, "Use of MODIS Satellite Data from Improving Weather Forecasting in Africa," Kenya Meteorological Department Headquarters, Nairobi, Kenya, August 1.

Charles Gatebe, "Use of Satellite Data for Environmental Research Venue: Kenya Chemical Society International Workshop at Egerton University," Nakuru, Kenya, August 19.

Steven Platnick, "MODIS Retrieval of Cloud Optical and Microphysical Properties and Cloud Mask," Remote Sensing of the Earth's Environment from Terra, International Summer School on atmospheric and Oceanic Sciences 2002, L'Aquila, Italy, August 25-30.

Lorraine A. Remer, "Global Aerosols: The view from MODIS," University of Maryland, Department of Meteorology, College Park, Maryland, September 13.

James A. Coakley, Jr. (GEST), "Man-Made Haze, Clouds, and Climate Change," UMBC, Baltimore, Maryland, October 15.

## ATMOSPHERIC CHEMISTRY AND DYNAMICS BRANCH

Charles Jackman, "Atmospheric Effects due to the July 2000 Solar Proton Event," hosted by Dale Allen, University of Maryland, College Park, Maryland, February 6.

Anne M. Thompson, "SHADOZ (Southern Hemisphere ADditional Ozonesondes) - What Have We Learned About Tropical Tropospheric Ozone from the First Three Years' (1998-2000) Data?" hosted by G. North, Texas A&M, Dept. of Atmospheric Science, College Station, Texas, February 28.

Richard P. Cebula, "Understanding Stratospheric Ozone," hosted by SSAI, Lanham, Maryland, April 11.

Mian Chin, "Local Emission to Global Climate Forcing: Understand Tropospheric Aerosols," hosted by Scott Martin, Harvard University, Cambridge, Mass., May 10.

Anne Thompson, "What Have We Learned about Tropical Tropospheric Ozone from the First Three Years' of SHADOZ Data?" hosted by E. S. Saltzman, Earth System Science Department, University of California at Irvine, Irvine, California, May 16.

Mian Chin, "Aerosols from Surface to Sky to Space," hosted by Dale Allen, University of Maryland, College Park, Maryland, June 5.

Pawan K. Bhartia, "Remote Sensing of the Earth in Ultraviolet," hosted by Richard P. Cebula, SSAI, Lanham, Maryland, June 27.

Anne M. Thompson, "Satellite and Sounding Views of Tropospheric Ozone," hosted by Oliver Zafiriou, Woods Hole Oceanographic Institution, July 23.

Charles G. Wellemeyer, Lead Programmer/Analyst, SSAI, "Version 8 TOMS Total Ozone Retrieval Algorithm," hosted by Richard P. Cebula, SSAI, Lanham, Maryland, October 10.

Mian Chin, "Synergy of Model and Measurements to Study Atmospheric Aerosols," hosted by Rodney Weber, Georgia Institute of Technology, Atlanta, Georgia, October 18.

Omar Torres, "Aerosol absorption measurements from TOMS," hosted by Howard University, Physics Department, Washington, D.C., October 23.

Richard P. Cebula, "A Whirlwind Tour of the Earth's Ozone Layer," hosted by Mike Darzi, SSAI, Lanham, Maryland, October 29.

Omar Torres, "The use of ultraviolet observations to measure aerosol absorption from space," hosted by University of Maryland, Meteorology Dept., College Park, Maryland, October 31.

Andrew Dessler, "Elucidation of the sources of stratospheric sulfate aerosols by isotopic methods," hosted by Fok-Yan Thomas Leung, California Institute of Technology, Pasadena, California, November 8.

Anne M. Thompson, "Insights into Tropical Tropospheric Ozone from Satellite and Sonde Data," hosted by Maarten Krol, University of Utrecht, The Netherlands, December 16.

# APPENDIX 5. 2002 CONFERENCES, SCIENCE POLICY MEETINGS, SCIENCE TEAM MEETINGS, SOCIETY MEETINGS, AND WORKSHOPS

## CONFERENCES

Earth Science Technology Conference–2002, Pasadena, California, June 11–13, S.R. Kawa.

First TRMM International Conference, Honolulu, Hawaii, July 22–26.

Global Energy & Water Cycle Experiment (GEWEX) Asian Monsoon Experiment-Tropics (GAME-T) Conference, Bangkok, Thailand, October 28.

GOES-R Users Conference, Boulder, Colorado, October 1–3.

IGAC and SPIE Conferences, Crete, Greece, September 18–25.

International Conference on East-Asian Climate (EAC), Harbin, China, August 7.

International Conference on Mesoscale Convective System and Heavy Rainfall/Snowfall in East Asia, Tokyo, Japan, October 29–November 3.

International Geoscience & Remote Sensing Symposium (IGARSS'02), Toronto, Canada, June 25.

MUSCLE 12, Lidar Multiple Scattering Experiments Conference, Bavaria, Germany, September 10–12.

SPIE Remote Sensing Conference, Hangzhou, China, October 23–27, J.R. Herman.

VOLTAIRE "Validation of Multisensors Precipitation Fields and Numerical Modeling in Mediterranean Test Sites" Politecnico di Torino, Turin, Italy, November 14–15.

WCRP International Conference on quantitative Precipitation Forecast, Reading, United Kingdom, September 2–6.

## SCIENCE POLICY MEETINGS

9th Meeting of the Science Steering Committee of the U.S. Climate Variability & Predictability (CLIVAR) Program, Boulder, Colorado, July 16.

Complements to Kyoto: Technologies for Controlling CO2 Emissions, National Academy of Sciences, Washington, D.C., April 23–24, Chris Barnet.

Earth Science Vision Retreat, Petersburg, Virginia, August 19.

GSFC Earth Science Overview to White House Science Advisor John Marburger, NASA GSFC, October 11.

NASA Coastal Zone Program Formulation Meeting, NASA Wallops Flight Facility, November 17–18.

NATO Advanced Study Institute, Data Assimilation for the Earth System, Maratea, Italy, May 19–June 1.

Science Advisory Committee Meeting, Short-term Prediction Research and Transition Center (SpoRT), Huntsville, Alabama, November 13–14.

U.S. Climate Change Science Program: Planning Workshop for Scientists and Stakeholders, Washington, D.C., December 3–5, M. Gupta.

U.S. Climate Change Science Program Meeting, Washington D.C., December 3–5.

WCRP/UNEP Ozone Assessment Meeting, Les Diablerets, Switzerland, June 24–28.

## SCIENCE TEAM MEETINGS

12th International TOVS Study Conference, Lome, Australia, February 27–March 5.

AIRS Meeting and Aqua Launch, Solvang, California, May 1–4, Joel Susskind, John Blaisdell.

AIRS Science Team Meeting, Suitland, Maryland, February 12–14, Joel Susskind.

AIRS Team Meeting, Silver Spring, Maryland, September 18–20, Lena Iredell, Chris Barnet, Lou Kouvaris, Fricky Keita, John Blaisdell.

ARM Science Team Meeting, St. Petersburg, Florida, April 8–12.

Asian-Brown-Cloud Science Team Meeting, San Diego, California, October 24.

Aura Science Team Meeting Woudshoten, the Netherlands, April 9–11 A. Douglass (Organizer), P.K. Bhartia, E. Hilsenrath.

CAMEX Science Team Meeting, National Space Science and Technology Center, University of Alabama-Huntsville, Huntsville, Alabama, November 20–22.

Cassini INMS Science Team Meeting, University of Michigan, February 27–28, W.T. Kasprzak, Science Team Member.

Cloud Aerosol-Lidar and Infrared Pathfinder Satellite Observations (CALIPSO) Science Team Meeting, Hampton, Virginia, May 23.

CloudSat Science Team Meeting, Monterey, California, April 29–May 1.

CRYSTAL Science Team, Greenbelt, Maryland, January 30–February 1.

DAO-TES meeting, NASA GSFC, June 16.

EOS AMSR-E Science Team Meeting, Santa Rosa, California, August 8–9.

First CHAMP Science Meeting, Potsdam, Germany, January 22–25.

GLAS Calibration /Validation and Science Team Meeting, Greenbelt, Maryland, November 11–12.

GLAS Science Team Meeting, Austin, Texas, February 21–22.

GLAS Science Team Meeting, Boulder, Colorado, September 26–27.

GLAS Science Team Meeting, Lanham, Maryland, May 2–3.

Japanese SPARC meeting, Fukuoka, Japan, November 12–16.

Living with a Star Targeted Research and Technology Science Definition Team Meeting, University of Maryland, University College, Adelphi, Maryland, September 30–October 2, C.H. Jackman.

POAM Science Meeting Berkeley Springs, West Virginia, October 29–30, S.R. Kawa.

Second GPM International Partnership Meeting, Tokyo, Japan, May 2002.

Sixth OMI Science Team Meeting Sodankyla, Finland, June 3-7 P.K. Bhartia, E. Hilsenrath, A. Krueger, R. McPeters, G. Jaross, J. Joiner, M. Linda, T. Johnson, A. Vasilkov, E. Celarier, O. Torres, J. Ziemke, R. Cebula. Small Business Innovative Research (SBIR) Project Team Meeting, Honolulu Hawaii, January 17.

Solar Radiation & Climate Experiment (SORCE) Science Team Meeting, Steamboat Springs, Colo., July 16–19.

TIMED Science Team Meeting Johns Hopkins Applied Physics Laboratory Laurel, Maryland, February 19–20 H.G. Mayr, C.H. Jackman.

TIMED Science Team Meeting Johns Hopkins Applied Physics Laboratory Laurel, Maryland, September 5–6 H.G. Mayr, C.H. Jackman.

TRACE-P Science Team Meeting Norfolk, Virginia, June 24–26 Mian Chin.

Tropical Rainfall Measuring Mission (TRMM) International Science Team Meeting, Honolulu, Hawaii, July 22–26.

USWRP Science Symposium, Boulder, Colorado, April 22–24.

WMO Ozone Assessment: Chapter 3 writing team meeting, Boulder, Colorado, April 16–18.

## SOCIETY MEETINGS

27th EGS Assembly, Nice, France, April 21–26.

34th COSPAR Scientific Assembly, 2nd World Space Congress, Houston, Texas, October 10–19.

Committee on Space Research (COSPAR) Meeting, Houston, Texas, October 14.

82nd AMS annual meeting, Orlando, Florida, January 13–18.

AGU Fall meeting, San Francisco, California, December 6–10.

AGU Spring meeting, Washington D.C., May 28–31.

American Association for the Advancement of Science (AAAS) & Science Innovation Exposition, Boston, Massachusetts, February 17.

American Association of Advancement of Science AAAS Meeting "Big Climate Impact of Tiny Particles" Symposium, Boston, Mass., February 14–19.

American Meteorological Society (AMS) 25th Conference on Hurricanes and Tropical Meteorology, San Diego, California, April 29–May 3.

AMS 11th Conference on Cloud Physics and Atmospheric Radiation, Ogden, Utah, June 3–7.

AMS 12th Conference on the Middle Atmosphere San Antonio, Texas, November 4–8, A. Douglass, S. Strahan, R. Kawa.

Canadian Applied and Industrial Mathematics Society, Calgary, Canada, June 8–10.

European Geophysical Society Meeting, Nice, France, April 21–26.

Western Pacific Geophysics Meeting, Wellington, New Zealand, July 8–12, R.S. Stolarski.

World Space Congress 2002 IAF COSPAR Houston, Texas, October 10–19, P.K. Bhartia, E. Hilsenrath, C.H. Jackman, A.M. Thompson, M. Deland.

## WORKSHOPS

16th Working Group on Data Management of the GPCP, Tokyo, Japan, May 13–16.

1st GPM Applications Workshop, Greenbelt, Maryland, February.

1st GPM Cloud-Microwave radiative modeling workshop, Hawaii, July 20.

AEROSAT Mission Planning Meeting, New York, New York, March 22.

AEROSAT Planning Workshop Lanham, Maryland, October 3–4, S.R. Kawa, J. Mao, O. Torres.

Aerosol Workshop, Beijing, China, May 6.

Air Pollution as a Climate Forcing, University of Hawaii, Honolulu, April 29–May 3, Mian Chin.

Apare Workshop & 6th Intl. Aerosol Conference, Taipei, Taiwan, September 6–13.

ARM Cloud Parameterization and Modeling Meeting, Reston, Virginia, November 6–8.

ARM Instantaneous Radiative Fluxes Semi-Annual Workshop, October 7.

Aura Science Validation Workshop Boulder, Colorado, September 17–20, A. Douglass (Organizer), E. Hilsenrath, A. Fleig, T. Johnson, K. Stefanidies.

Aura Validation for the Troposphere Greenbelt, Maryland, January 28–29, A.R. Douglass (Organizer).

AURA Validation Working Group Meeting Pasadena, California, March 19–20, A.R. Douglass (Organizer), P.K. Bhartia, E. Hilsenrath, P.A. Newman.

Calibration Techniques for In-Situ Particle Instruments, International Space Science Institute, Bern, Switzerland, September 30–October 4, W.T. Kasprzak, Participant.

CAMEX-4 workshop, Huntsville, Alabama, November 20–22.

CAMEX-4 workshop, New Orleans, Louisiana, March 12–15.

Carbon Lidar Workshop Goddard Space Flight Center, August 27–28, S.R. Kawa, A. Andrews, J. Burris.

CCSR Workshop on Next-Generation Climate Model, Awaji Island, Japan, March 4–8.

Cirrus Regional Study of Tropical Anvils and Cirrus Layers (CRYSTAL)-Florida Area Cirrus Experiment (FACE) Meeting, Key West & Miami, Florida, June 28 and July 25.

CLAMS Workshop; Progress and Directions for the CLAMS Experiment Data Analysis, MODIS Aerosol Team, presenters, Aerospace Building, Greenbelt, Maryland, February 27–28.

Climate Diagnostics and Prediction Workshop, Fairfax, Virginia, October 21–25.

Climate Variability and Predictability (CLIVAR) International Working Group, Beijing, China, August 12.

Coastal Research Workshop NASA's Wallops Flight Facility Wallops Island, Virginia, October 17–18, M. Gupta.

Coordinated Data Analysis Workshop for Solar Energetic Particles: Solar and Geospace Connections SSAI, Lanham, Maryland, July 22–26, M. Deland, C.H. Jackman.

Coordinated Enhanced Observing Period (CEOP) Workshop, Nanuet, New York, September 9.

CRYSTAL Preparatory Workshop, Pennsylvania State University State College, Pennsylvania, May 13–15.

CRYSTAL-FACE Workshop, Lanham, Maryland, January 28–February 1.

Data Assimilation for the Carbon Cycle University of Maryland, College Park, October 21–22 S.R. Kawa, A. Andrews, S. Pawson.

Data Assimilation Office Users Workshop, University of Maryland, College Park, May 16, S.R. Kawa, A.R. Douglass.

Earth System Modeling Framework Meeting, Boulder, Colorado, September 23.

Earth System Sciences Workshop, Chung-Li, Taiwan, June 3–4.

ECMWF/GEWEX Workshop on Humidity Analysis, ECMWF, Reading, England, July 8–11, Dick Dee, Chairman of Working Group on Analysis Methods.

EOS Investigator Working Group Meeting, Ellicott City, Maryland, November 18–20.

ESTO Technology Strategy Meeting, Glenn Research Center, Ohio, April 22.

First GEWEX Atmospheric Boundary Layer Study Workshop, Reading, United Kingdom, March 25–27.

First International Workshop on Occultations for Probing Atmosphere and Climate (OPAC-1), Graz, Austria, September 16–20.

GAME-T Workshop and Hydrometeorological Studies in Thailand and Southeast Asia, Chiang Rai, Thailand, October 29–31.

Global Energy & Water Cycle Experiment (GEWEX) Cloud System Study (GCSS)-ARM Workshop on Representation of Cloud Systems in Large-Scale Models, Kananaskis, Alberta, Canada, May 19.

Global Energy & Water Cycle Experiment (GEWEX) Radiation Panel Meeting, Zurich, Switzerland, July 30.

Global Modeling Initiative Greenbelt, Maryland, November 21–22, S.R. Kawa, A.R. Douglass, E. Fleming, S. Strahan.

Global Modeling Initiative Lanham, Maryland, May 13–15, S.R. Kawa, A.R. Douglass, E. Fleming, M. Chin, S. Strahan, M. Gupta.

GOFC/GOLD Workshop, University of Maryland, College Park, Maryland, July 17–19, Mian Chin.

GOME Science Advisory Group Meeting Frascati, Italy, April 11–12, J. Gleason and E. Hilsenrath.

GPM Algorithm Workshop, Greenbelt, Maryland, March 12–13.

GPM Applications Workshop, Greenbelt, Maryland, February 19.

GPM Ground Validation Workshop, Seattle, Washington, February 6–8.

GPM International Planning Workshop, Tokyo, Japan, May 20–22.

GPM modeling workshop, July 20–21, Honolulu, Hawaii.

GRIPS Workshop, Tsukuba, Japan (Steven Pawson and K. Kodera were organizers), March 12–15.

H2O Project (IHOP), UMBC, September 30–October 1.

Harsh-Environment Mass Spectrometry, Pasadena, California, March 25–28.

HDF-EOS Workshop VI, San Francisco, California, December 4–5.

Hurricane WRF workshop, Alexandria, Virginia, May 29–30.

Hyperspectral Workshop, Singapore, March 21.

IHOP Convective Initiation Workshop, UMBC, Catonsville, Maryland, September 30.

Indo-US Workshop on Weather and Climate Modeling-Sponsored by Indo-US S&T Forum, February 7–10.

Intercomparison of 3-D Radiation Codes (I3RC) Workshop, Tucson, Arizona, June 1.

International Aerosol Conference/Workshop, Taiwan, Taipei, September 9.

International Precipitation Working Group, Madrid, Spain, September 23–27.

IPCC Workshop on Changes in Extreme Weather and Climate Events, Beijing, China, June 11–13.

ISLSCP II Data Intercomparison Workshop, Lanham, Maryland, March 12–14.

Living With a Star Science Workshop, Johns Hopkins Applied Physics Lab, Laurel, Maryland, November 14–15, C.H. Jackman.

Long-Term Climate Workgroup Meeting, New York, New York, March 13.

Maine Teachers Earth and Space Sciences Workshop, NASA GSFC, August.

MM5/WRF users workshop, Boulder, Colorado, June 24–26.

Model-Data Integration and Network Design for Biogeochemical Research Advanced Study Institute Boulder, Colorado, May 20–31, A.E. Andrews.

MODIS Land Surface Workshop, Boston University, Boston, Massachusetts, October 21–22.

NAME 3rd Science Working Group Meeting, George Mason University, Fairfax, Virginia, October 25.

NASA Educators Workshops, NASA GSFC, July.

NASA ESE Computational Technology Requirements Workshops, Washington, D.C., April 30–May 1.

National Aerosol Workshop, La Jolla, California, January 8.

National Carbon Data Assimilation Workshop, University of Maryland, College Park, Maryland, October 21 (Steven Pawson, co-organizer).

New Optical Remote Sensing Techniques for Air Quality Compliance and Air Toxics Detection Workshop, USEPA, Research Triangle Park, North Carolina, July 29–31.

NewDISS Workshop, University of Maryland, College Park, Maryland, February 6, Louis Kouvaris.

ONR-35 Aerosol Characterization Program Kick-Off Meeting, NRL Conference Room, B. 57, Room 117, April 19.

Prediction of Hurricane Intensity and Precipitation, San Diego, California, May 3–5.

Prospects for Improved Forecasts of Weather and Short-term Climate Variability on Subseasonal (2 week to 2 month) time scales, at the Newton White Mansion, April 16–18, lead organizer, Siegfried Schubert.

Puerto Rico Dust Experiment (PRIDE) Workshop, Miami, Florida, February 11.

Radiosonde Workshop Hampton University, Hampton, Virginia, May 21–23, A.M. Thompson.

Remote Sensing and Modeling Workshop Beijing, China, August 21–24, Mian Chin.

Southern African Regional Science Initiative (SAFARI) Workshop, Charlottesville, Virginia, October 7.

Space Based Lidar Winds Workshop, North Glen, New Hampshire, July 16–18.

SPARC Data Assimilation Workshop, University of Maryland Baltimore County, Baltimore, Maryland, June 10–12, P.K. Bhartia.

SPICE Tutorial Workshop, ESTEC, Noordwijk, Netherlands, September 16–18, W.T. Kasprzak, J. Demick, Participants.

The 4th Workshop on Next Generation GCMs, Boulder, Colorado, March 12–14.

The 5th Regional Climate Simulation Workshop, Chung-Li, Taiwan, June 5–6.

The Hurricane-Flood-Landslide Continuum, NOAA/USGS, Boulder, Colorado, May 9–10.

Third International Workshop on Multiangular Measurements and Models (IWMMM-3) Workshop, Steamboat Springs, Colorado, June 10–12.

TRMM Cloud Modeling-TRMM Validation, Hawaii, July 21.

Twenty-seventh Annual Climate Diagnostics and Prediction Workshop, Fairfax, Virginia, October 2002.

Whole Atmosphere Community Climate Model Workshop Longmont, Colorado, June 20–21, C.H. Jackman, A.R. Douglass, E. Fleming.

Working Group on Space-based Lidar Winds, Key West, Florida, January 23–25.

Working Group on Space-based Lidar Winds, North Conway, New Hampshire, July 15–18.

Workshop of Partial Differential Equations on the Sphere, Toronto, Canada, August 12–15.

Workshop on Arctic Ozone Loss Potsdam, Germany, March 4–6, S.R. Kawa, P.A. Newman.

Workshop on Dust Storms and Their Effects on Human Health, Raleigh, North Carolina, November 25–26, Christina Hsu.

Workshop on Interactions of Urban Pollution with the Regional and Global Environment NASA's GSFC Visitor's Center, May 7–9, A.M. Thompson (Organizer), J.F. Gleason (Organizer), P.A. Newman (Organizer), N. Krotkov, M. Chin, M. Gupta.

Workshop on Remote Sensing and Health Issues Uniformed Health Services University, Bethesda, August 1, A. Thompson, J. Herman.

Workshop on Representation on Cloud Systems in Large-Scale Models, (Joint GCSS-ARM Workshop), Kananaskis, Alberta, Canada, May 20–24.

Workshop on validation data sets for modeling mineral aerosols in global climate cycles, Jena, Germany, May 2–4, O. Torres.

# APPENDIX 6. 2002 NASA TECHNICAL REPORTS AND OTHER PUBLICATIONS

## NASA TECHNICAL REPORTS

Cahalan, R.F., Solar Radiation and Climate Experiment Brochure, NASA Publication/NP-2002-9-482-GSFC.

Cahalan, R.F., Solar Radiation and Climate Experiment Fact Sheet, NASA Publication/FS-2002-052-GSFC.

Cahalan, R.F., Solar Radiation and Climate Experiment Writer's Guide, NASA Publication/ NP2002-9-082-GSFC.

Gervin, J.C., P.S. Caruso, L.A. DeMaio, C.R. McClain, F.G. Hall, G.J. Collatz, S.R. Kawa, W.W. Gregg, A. Andrews, S. Pawson, and J. Hansen, Cost Analysis for a Recommended NASA Carbon Cycle Initiative, NASA Technical Memorandum, NASA/TM-2002-210007.

Heaps, W.S., and S.R. Kawa, Fabry-Perot Interferometer for Column $CO_2$, NASA Earth Science Technology Conference Proceedings.

Krotkov, N., J.R. Herman, P.K. Bhartia, C. Seftor, A. Arola, J. Kaurola, P. Taalas, I. Geogdzhaev, and A. Vasilkov, OMI surface UV irradiance algorithm, Vol. 3: NASA EOS Project Office, Earth Sciences Directorate, P. Stammes, Editor.

Krueger, A., N. Krotkov, S. Datta, O. Dubovik, D. Flittner, OMI $SO_2$ algorithm in OMI ATBD, Vol. 4, OMI Trace Gases Algorithms, NASA EOS Project Office, K. Chance, Editor.

McClain, C.R., F.G. Hall, G. J. Collatz, S.R. Kawa, W.W. Gregg, J.C. Gervin, J.B. Abshire, A.E. Andrews, C.D. Barnett, M.J. Behrenfeld, P.S. Caruso, A.M. Chekalyuk, L.D. Demaio, A.S. Denning, J.E. Hansen, F.E. Hoge, R.G. Knox, J.G. Masek, K.D. Mitchell, J.R. Moisan, T.A. Moisan, S. Pawson, M.M. Rienecker, S.R. Signorini, and C.J. Tucker, Science and Observation Recommendations for Future NASA Carbon Cycle Research, NASA/TM-2002-210009.

Shepherd, J.M., A. Mehta, E. Smith, J. Adams, 2002: Summary of First GPM Partners Planning Workshop, NASA/CP-2002-211602-GPM Report 7.

Shepherd, J.M., E. Smith, J. Adams, 2002: Bridging from TRMM to GPM to 3-Hourly Precipitation Estimates. NASA/TM-2002-211602-GPM Report 7.

Torres, O., R. Decae, and P. Veefkind, OMI Aerosol Retrieval Algorithm, OMI Algorithms Theoretical Basis Document, Volume III, Clouds, Aerosols, and Surface UV Irradiance, NASA-KNMI, P. Stammes, Editor.

## OTHER PUBLICATIONS

Amitai E., D.B. Wolff, D.A. Marks, and D.S. Silberstein, 2002: Radar rainfall estimation: Lessons learned from the NASA/TRMM validation program. Second European Conference on Radar Meteorology (ERAD), November 18-22, Delft, Netherlands. ERAD Publication Series, 1, 255-260 (Copernicus GmbH peer reviewed publication, ISBN 3-936586-04-7).

Chin, M., Black carbon aerosols: A burning question, Air Pollution as a Climate Forcing Workshop Report, 2002.

Chin, M. and P. Newman, From Regional Emission to Global Atmospheric Loading: Intercontinental Transport of Aerosols in the Context of ACE-Asia, Air Pollution as a Climate Forcing Workshop Report, 2002.

Huffman, G.J., 2002: Selections in the NASA/EOS Earth Observatory Web site's Ask A Scientist dept. http://earthobservatory.nasa.gov/Library/AskScientist/index.html. Why do the sunrise/sunset times change together at the Winter Solstice?

Palm, S., W. Hart, D. Hlavka, E. Welton, A. Mahesh, and J. Spinhirne, 2002: Geoscience Laser Altimeter System (GLAS) Atmospheric Data Products Algorithm Theoretical Basis Document, Version 4.2, October 2002.

Roy, B., 2002: Fact sheet Title: Support on improvement of ITU-R Rain attenuation Model using NASA Tropical Rainfall Measuring Mission (TRMM) and associated radio meteorological data (USA Fact Sheet WP3J-USA-4) Geneva, Switzerland. International Telecommunication Union (ITU)-R Fact Sheet Document Number WP3J-USA-4 recommended by ITU Working Group WP-3J in document number WP 3J/49 during the ITU-R Working Group Meetings held in Geneva, Switzerland, May 20–June 4, 2002.

Roy, B. and J. Halverson, 2002: TRMM Field Campaign Soundings Quality Control, http://trmm.gsfc.nasa.gov/trmm soundings.

Schwemmer, G., D. Miller, T. Wilkerson, D. Guerra, and R. Rallison, 2002: NASA lidar uses HOEs for lightweight scanning. *Laser Focus World*, **38**, No. 6, pp. 141-147.

Turner, D.D., D. N. Whiteman, 2002: Web Remote Raman Spectroscopy: Profiling Water Vapor and Aerosols in the Troposphere Using Raman Lidars. Handbook of Vibrational Spectroscopy, J.M. Chalmers and P.R. Griffiths (Eds), John Wiley & Sons, Ltd, 4, 2857-2878. January 2002.

# APPENDIX 7. 2002 REFEREED PUBLICATIONS

## LABORATORY FOR ATMOSPHERES

Atlas, D., 2002: Radar calibration–Some simple approaches. *BAMS*, **83** (9), 1313-1316.

Atlas, D., C.W. Ulbrich and F.D. Marks, 2002: Potential for estimating cloud liquid water path over sea ice from airborne passive microwave measurements–Reply. *JGR-Atmos*., **107** (D1-D2), 4006.

Ulbrich, C.W. and D. Atlas, 2002: On the separation of tropical convective and stratiform rains. *JAM*, **41** (2), 188-195.

## SOUNDER RESEARCH TEAM

Wielicki, B.A., T. Wong, R.P. Allan, A. Slingo, J.T. Kiehl, B.J. Soden, C.T. Gordon, A.J. Miller, S-K. Yang, D.A. Randall, F. Robertson, J. Susskind and H. Jacobowitz, 2002: Evidence for large decadal variability in the tropical mean radiative energy budget. *Science*, **295**, 841-844.

Wielicki, B.A., A. Del Genio, T. Wong, J. Chen, B.E. Carlson, R.P. Allen, F. Robertson, H. Jacobowitz, A. Slingo, D.A. Randall, J.T. Kiehl, B.J. Soden, C.T. Gordon, AJ. Miller, S.-K. Yang and J. Susskind, 2002: Response to "Changes in tropical clouds and radiation." *Science*, **296**, 2095a.

## DATA ASSIMILATION OFFICE

Atlas, R.A. Hou, and Oreste Reale, Hurricane & Flood Prediction for Community Disaster Preparedness, Earth Observation Magazine, Special NASA Earth Science Enterprise Issue. August 2002, 38-40.

Austin, J., D. Shindell, S.R. Beagley, C. Brühl, M. Dameris, E. Manzini, T. Nagashima, P. Newman, S. Pawson, G. Pitari, E. Rozanov, C. Schnadt, and T.G. Shepherd, Uncertainties and Assessments of Chemistry-Climate Models of the Stratosphere. *Atmos. Chem. Phys. Discuss. 2*, 1035-1096.

Bosilovich, M.G., On the Vertical Distribution of Local and Remote Sources of Water for Precipitation. *Meteorol. Armos. Phys*., **80**, 31-41.

Bosilovich, M.G., On the use and validation of mosaic heterogeneity in atmospheric numerical models. *Geophys. Res. Lett*., **29**, 10.1029/2001GL013925.

Bosilovich, M.G. and R. Lawford, Report on the coordinated enhanced observing period (CEOP) international workshop. *Bull. Amer. Met. Soc*., **83**, 1495-1499.

Bosilovich, M., S. Schubert, Water vapor tracers as diagnostics of the regional hydrologic cycle. *J. Hydrometeor.* **3**, 149-165.

Dickinson, R.E., S.E. Zebiak, J.L. Anderson, M.L. Blackmon, C. De Luca, T.F. Hogan, M. Iredell, M. Ji, R.B. Rood, M.J. Suarez, and K.E. Taylor, 2002: How Can we Advance our Weather and Climate Models as a Community? *Bull. Of the Amer. Meteor. Soc*., **83**, 431-434.

Erfani, A., A. Methot, R. Goodson, S. Belair, K.-S. Yeh, J. Cote and R. Moffet, Synoptic and mesoscale study of a severe convective outbreak with the non-hydrostatic Global Environmental Multiscale (GEM) model. *Meteorology and Atmospheric Physics* (published online November 21, 2002.)

Gelaro, R., C.A. Reynolds and R.M. Errico, Transient and asymptotic perturbation growth in a simple model. *Q. J. R. Meterol. Soc*., **128**, 205-227.

Gelaro, R., T.E. Rosmond and R. Daley, Singular vector calculations with an analysis error variance metric. *Mon. Wea. Rev*., **130**, 1166-1186.

Hayashi, H., M. Shiotani, and J.C. Gille, Horizontal wind disturbances induced by inertial instability in the equatorial middle atmosphere as seen in rocketsonde observations. *J. Geophys. Res*., **107**, 10.1029/2001JD000922

Kang, I.-S., K. Jin, K.-M. Lau, J. Shukla, V. Krishnamurthy, S.D. Schubert, D.E. Waliser, W.F. Stern, V. Satyan, A. Kitoh, G.A. Meehl, M. Kanamitsu, V. Ya. Galin, J.-K. Kim, A. Sumi, G. Wu, and Y. Liu, Intercomparison of Atmospheric GCM Simulated Anomalies Associated with the 1997/98 El Niño. *J. Climate*, **15**, 2791-2805.

Langland, R.H., M.A. Shapiro and R. Gelaro, Initial condition sensitivity and error growth in forecasts of the 25 January 2000 east coast snowstorm. *Mon. Wea. Rev*., **130**, 957-974.

Li, S., E.C. Cordero, and D.J. Karoly, Transport out of the Antarctic polar vortex from a three-dimensional transport model. *J. Geophys. Res*., **107** (D11), 10.1029/2001JD000508.

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Poli, P.J. Joiner, E.R. Kursinski, 1DVAR analysis of temperature and humidity using GPS radio occultation refractivity data. *J. Geophys. Res*., **107**, 4448-4467.

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Tangborn, A., R. Menard and D. Ortland, Bias Correction and random error characterization of high-resolution Doppler imager line-of-sight velocity measurements. *J. Geophys. Res*., **107**, No. D12, 10.1029/2001JD000397.

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# APPENDIX 8. 2002 AWARDS/HONORS/MEMBERSHIPS/ EDITORSHIPS

## SOUNDER RESEARCH TEAM

Lena Iredell:

DAO/SRT Outstanding Performance Award, January 7.
Member of American Meteorological Society (AMS).

## DATA ASSIMILATION OFFICE

Stephen Cohn:

Editor of Monthly Weather Review.

Siegfried Schubert:

Editor of the Journal of Climate.
Adjunct Associate Professorship within the Earth System Science Interdisciplinary Center (ESSIC) at the University of Maryland.
Member of AGU and AMS.

Man-Li C. Wu:

GSFC Performance Award, May 5.

Doug Collins, John Rosenfelder, Ann Melton, Manina Almeida, and Sarah Jackson:

DAO/SRT Group Achievement Award.

## MESOSCALE ATMOSPHERIC PROCESSES BRANCH

Scott Braun:

NASA Group Achievement Award, "Fourth Convection and Moisture Experiment (CAMEX4) Science Team," June 2002.

Scott Curtis:

Laboratory for Atmospheres Best Senior Author Publication Award, 2002.

Jeffrey Halverson:

NASA Group Achievement Award, "Fourth Convection and Moisture Experiment (CAMEX4) Science Team," June 2002.

Gerald Heymsfield:

NASA Group Achievement Award, "Fourth Convection and Moisture Experiment (CAMEX4) Science Team," June 2002.

George J. Huffman:

NASA GSFC Laboratory for Atmospheres Contractor Award for Outstanding Performance in Science, 2002.

Andrew Negri:

Outstanding Research Paper (Peer) Award, Laboratory for Atmosphere, 2002.

Biswadev Roy:

NASA Group Achievement Award, "Fourth Convection and Moisture Experiment (CAMEX4) Science Team," June 2002.

Geary Schwemmer:

Chairman, AMS Committee on Laser Atmospheric Studies, 2002.
Laser Focus World Commendation for Excellence in Technical Communications, 2002.

J. Marshall Shepherd:
Nominated for Presidential Early Career Award, 2002.
Recipient of NASA New Investigator Program Award, 2002.
Serves on Howard University NOAA Center for Atmospheric Sciences Advisory Committee, 2002.
Served on AMS Committee on Satellite Meteorology, 2002.
Served on Code 910 Peer Award Selection Committee, 2002.

David O'C. Starr:
Secretary, International Commission on Clouds and Precipitation

Wei-Kuo Tao:
Guest Editor, AMS Meteorological Monographs-Cloud Systems, Hurricanes and TRMM, 2002.
Editor, AMS Journal of Atmospheric Sciences, 2002.
Chair, AGU Committee on Precipitation and Cloud, 2002.

Lin Tian:
NASA Group Achievement Award, "Fourth Convection and Moisture Experiment (CAMEX4) Science Team," June 2002.

David Whiteman:
Allen Prize, Optical Society of America, 2002.

## CLIMATE AND RADIATION BRANCH

Robert Cahalan:
2002 Excellence in Technical Communications Award (Laser Focus World).

Winston Chao:
2002 Special Act Award (Scientific Research) from GSFC.

Prabhakara Cuddapah:
2002 Special Act Award (Scientific Research) from GSFC.

Yoram Kaufman:
2002 Goddard Senior Fellow.

Yogesh Sud:
2002 Earth Science Achievement Award from GSFC.

Si-Chee Tsay:
2002 Technical Engineering Award from GSFC.
2002 NASA Exceptional Scientific Achievement Award.

Julio Bacmeister (GEST):
2002 Climate and Radiation Best Paper Award.

Baode Chen (GEST):
2002 Climate and Radiation Scientific Achievement Award.

David Herring (Earth Observatory Group) (SSAI):
2002 People's Voice Award for Science (Webby Award from the International Academy of Digital Arts and Sciences).

## ATMOSPHERIC CHEMISTRY AND DYNAMICS BRANCH

Arlyn E. Andrews:
Performance Award, NASA GSFC.

Anne M. Thompson:
Fellow, American Association for the Advancement of Science (AAAS).

Anne R. Douglass:
Special Act Award, NASA GSFC.

UARS Team:
UARS Project Science Office in Code 916, William T. Pecora Award.

Paul A. Newman:
Arthur S. Flemming Award, Jaycees.

# APPENDIX 9. 2002 Acronyms

| | |
|---|---|
| 3S | Sun-Sky-Surface photometer |
| ACE-Asia | Aerosol Characterization Experiment-Asia |
| ACMAP | Atmospheric Chemistry Modeling and Analysis Program |
| ACS | American Chemical Society |
| ADEOS | Advanced Earth Observation Satellite |
| AERONET | Aerosol Robotic Network |
| AETD | Applied Engineering and Technology Directorate |
| AGCM | Atmospheric Global Circulation Model |
| AI | Aerosol Index |
| AIRS | Atmospheric Infrared Sounder |
| AL | Aerosol Lidar |
| AMS | American Meteorological Society |
| AMSR | Advanced Microwave Scanning Radiometer |
| AMSU | Advanced Microwave Sounding Unit |
| ARM | Atmospheric Radiation Measurement |
| ARM CART | ARM Cloud and Radiation Test Bed |
| AROTAL | Airborne Raman Ozone, Temperature, and Aerosol Lidar |
| ARREX | Aerosol Recirculation and Rainfall Experiment |
| AT Lidar | Aerosol and Temperature Lidar |
| ATMS | Advanced Technology Microwave Sounder |
| ATOVS | Advanced TOVS |
| AVHRR | Advanced Very High Resolution Radiometer |
| AVIRIS | Airborne Visible/Infrared Imaging Spectrometer |
| BASE-ASIA | Biomass-burning Aerosols in South East-Asia: Smoke Impact Assessment |
| BUV | backscatter ultraviolet |
| CALIPSO | Cloud-Aerosol Lidar and Infrared Pathfinder Satellite Observations |
| CAMEX | Convection And Moisture EXperiment |
| CCAST | Cooperative Center for Atmospheric Science and Technology |
| CCD | Convective Cloud Differential |
| CDC | Centers for Disease Control and Prevention |
| CEAS | Center for Earth-Atmosphere Studies |
| CEDAR | Coupling, Energetics and Dynamics of Atmospheric Regions |
| CERES | Clouds and the Earth's Radiant Energy System |
| CFCs | Chlorofluorocarbons |
| CHINA-TEA | Climate & Health Impacts in North/east Asia-Tropospheric Experiment on Aerosols |
| CHyMERA | Compact Hyperspectral Mapper for Environmental Remote Sensing Applications |
| CIFAR | Cooperative Institute for Atmospheric Research |
| CIMSS | Cooperative Institute of Meteorological Satellite Studies |
| CLAMS | Chesapeake Lighthouse and Aircraft Measurements for Satellites |
| CLIVAR | Climate Variability and Predictability Programme |
| CNES | Center Nationale d'Etude Spatiales |
| Co-I | Co-Investigator |
| COMMIT | Chemical, Optical, and Microphysical Measurements of In-situ Troposphere |
| CONTOUR | Comet Nucleus Tour |
| COVIR | Compact Visible and Infrared Radiometer |
| CPL | Cloud Physics Lidar |
| CrIS | Crosstrack Infrared Sounder |

| | |
|---|---|
| CRS | Cloud Radar System |
| CRYSTAL-FACE | Cirrus Regional Study of Tropical Anvils and Cirrus Layers-Florida Area Cirrus Experiment |
| CSIRO | Commonwealth Scientific Industrial Research Organization |
| CSTEA | Center for the Study of Terrestrial and Extraterrestrial Atmospheres |
| CTM | Chemical Transport Model |
| DAAC | Distributed Active Archive Center |
| DAO | Data Assimilation Office |
| DAS | Data Assimilation System |
| DDF | Director's Discretionary Fund |
| DDR | Detailed Design Review |
| DIAL | DIfferential Absorption Lidar |
| DISS | Distributed Image Spreadsheet |
| DMSP | Defense Meteorological Satellite Program |
| DSCOVR | Deep Space Climate Observatory Project (formerly Triana) |
| DWP | Doppler Wind Lidar |
| ECS | EOSDIS Core System |
| ECSO | Executive Committee for Science Outreach |
| EDOP | ER-2 Doppler Radar |
| EDR | Environmental Data Record |
| EMC | NCEP's Environmental Modeling Center |
| ENSO | El Niño Southern Oscillation |
| ENVISAT | Environmental Satellite |
| EO3 | Earth Observing 3 mission called GIFTS |
| EOS | Earth Observing System |
| EOSDIS | EOS Data and Information System |
| EPA | Environmental Protection Agency |
| EPIC | Earth Polychromatic Imaging Camera |
| EP-TOMS | Earth Probe TOMS |
| ERBE | Earth Radiation Budget Experiment |
| ERBE TOA | Earth Radiation Budget Experiment Top-Of-Atmosphere |
| ERBS | Earth Radiation Budget Satellite |
| ESA | European Space Agency |
| ESE | Earth Science Enterprise |
| ESPI | ENSO Precipitation Index |
| ESSIC | Earth System Science Interdisciplinary Center |
| ESSP | Earth System Science Pathfinder |
| ESTO | Earth Science Technology Office |
| ESTO/ACT | Earth Science Technology Office/Advanced Component Technologies |
| E-Theater | Electronic Theater |
| FFPA | filter/focal plane array |
| FvDAS | Finite volume data assimilation system |
| GADS | Global Aircraft Data Set |
| GATE | GARP Atlantic Tropical Experiment |
| GCE | Goddard Cumulus Ensemble model |
| GCM | General Circulation Model |
| GCMS | Gas Chromatograph Mass Spectrometer |
| GEOS | Goddard Earth Observing System |
| GEST Center | Goddard Earth Sciences and Technology Center |
| GEWEX | Global Energy and Water Cycle Experiment |

| | |
|---|---|
| GIFTS | Geosynchronous Imaging Fourier Transform Spectrometer |
| GIS | Geographical Information Systems |
| GISS | Goddard Institute for Space Studies |
| GLAS | Geoscience Laser Altimeter System |
| GLOBE | Global Learning and Observations to Benefit the Environment |
| GLOW | Goddard Lidar Observatory for Winds |
| GMS | Geostationary Meteorological Satellite |
| GOCART | Global Ozone Chemistry Aerosol Radiation Transport |
| GOES | Geostationary Operational Environmental Satellite |
| GoHFAS | Goddard Howard University Fellowship in Atmospheric Sciences |
| GOME | Global Ozone Monitoring Experiment |
| GPCP | Global Precipitation Climatology Project |
| GPM | Global Precipitation Measurement |
| GPS | Global Positioning Satellite |
| GSFC | Goddard Space Flight Center |
| GSRP | Graduate Student Researchers Program |
| GSWP | Global Soil Wetness Project |
| GTE | Global Tropospheric Experiment |
| GTWS | Global Tropospheric Wind Sounder |
| GV | Ground Validation |
| GVP | Ground Validation Program |
| HARGLO-2 | Intercomparison of Wind Profile Systems experiment involving the HARLIE and GLOW instruments |
| HARLIE | Holographic Airborne Rotating Lidar Instrument Experiment |
| HBCUs | Historically Black Colleges and Universities |
| HDTV | High Definition TV |
| HIRDLS | High Resolution Dynamics Limb Sounder |
| HIRS | High Resolution Infrared Sounder |
| HOTS | Holographic Optical Telescope and Scanner |
| HSB | Humidity Sounder Brazil |
| HU | Howard University |
| HUPAS | Howard University Program in Atmospheric Sciences |
| I3RC | Intercomparison of 3D Radiation Codes |
| IAMAS | International Association of Meteorology and Atmospheric Sciences |
| ICESat | Ice, Cloud, and Land Elevation Satellite |
| IGS | Internal Government Studies |
| IHOP | International $H_20$ Project |
| IIP | Instrument Incubator Program |
| INDOEX | Indian Ocean Experiment |
| INMS | Ion and Neutral Mass Spectrometer |
| INPE | Instituto Nacional de Pesquisas Espaciais (Institute for Space Research) |
| INSAT | India's Geosynchronous Satellite |
| IORD | Integrated Operational Requirements Document |
| IPCC | International Panel on Climatic Change |
| IPO | Integrated Program Office |
| IR | infrared |
| ISAS | Institute of Space and Aeronautical Science |
| ISCCP | International Satellite Cloud Climatology Project |
| ISIR | Infrared Spectral Imaging Radiometer |

| | |
|---|---|
| ITCZ | Intertropical Convergence Zone |
| JARG | Joint Agency Requirements Group |
| JCET | Joint Center for Earth Systems Technology |
| JCOSS | Joint Center for Observation System Science |
| JCSDA | Joint Center for Satellite Data Assimilation |
| JHU/APL | Johns Hopkins University Applied Physics Laboratory |
| JIESIC | Joint Interdisciplinary Earth Science Information Center (with George Mason University) |
| JPL | Jet Propulsion Laboratory |
| KNMI | Royal Netherlands Meteorological Institute |
| L2-SVIP | Lagrange-2 Solar Viewing Interferometer Prototype |
| LaRC | Langley Research Center |
| LAS | Leonardo Airborne Simulator |
| LASAL | Large Aperture Scanning Airborne Lidar |
| LORE | Limb Ozone Retrieval Experiment |
| LRR | Lightweight Rainfall Radiometer |
| MBA | microbolometer array |
| MBL | Marine Boundary Layer |
| MEIDEX | Mediterranean Israeli Dust Experiment |
| MEMS | Micro Electro Mechanical Systems |
| Metop | future European POES satellites |
| MISR | Multi-Angle Imaging Spectroradiometer |
| MIT | Massachusetts Institute of Technology |
| MLS | Microwave Limb Sounder |
| MM5 | Mesoscale Model 5 |
| MODIS | Moderate Resolution Imaging Spectroradiometer |
| MOPITT | Measurements of Pollution in the Troposphere |
| MPI | Message Passing Interface |
| MPL | Micro Pulse Lidar |
| MPLNET | Micro Pulse Lidar Network |
| MSU | Microwave Sounding Unit |
| MTR | Management Technical Review |
| NAS | NASA Advanced Supercomputing Division |
| NASA | National Aeronautics and Space Administration |
| NASDA | National Space Development Agency |
| NCAR | National Center for Atmospheric Research |
| NCCS | NASA Center for Computational Sciences |
| NCEP | National Center for Environmental Prediction |
| NDSC | Network for the Detection of Stratospheric Change |
| NESDIS | National Environmental Satellite Data and Information Service |
| NGI | Next Generation Internet |
| NGIMS | Neutral Gas and Ion Mass Spectrometer |
| NIEHS | National Institute of Environmental Health Sciences |
| NIIEM | Russian Scientific Research Institute of Electromechanics |
| NIST | National Institutes of Standards and Technology |
| NMNH | National Museum of Natural History |
| NMS | Neutral Mass Spectrometer |
| NOAA | National Oceanic Atmospheric Administration |
| NOAA CMDL | NOAA Climate Monitoring and Diagnostics Laboratory |
| NPOESS | National Polar Orbiting Environmental Satellite System |

| | |
|---|---|
| NPOL | NASA Polarimetric Radar |
| NPP | NPOESS Preparatory Project |
| NRC | National Research Council |
| NRL | Naval Research Laboratory |
| NSCAT | NASA Scatterometer |
| NSF | National Science Foundation |
| NSIPP | NASA Seasonal-to-Interannual Prediction Project |
| NTSC | National Television Standards Committee |
| NWP | Numerical Weather Prediction |
| NWS | National Weather Service |
| OAT | Operation Algorithm Team |
| ODIN | a Swedish small satellite project for astronomical and atmospheric research |
| OGO | Orbiting Geophysical Observatory |
| OLR | Outgoing Longwave Radiation |
| OMI | Ozone Monitoring Instrument |
| OMPS | Ozone Mapper and Profiler System |
| OSE | Observing System Experiment |
| OSIRIS | ODIN Spectrometer and IR Imager System |
| OSSE | Observing System Simulation Experiment |
| PACJET | Pacific Landfalling Jets Experiment |
| PBL | Planetary Boundary Layer |
| PI | Principal Investigator |
| PICASSO-CENA | Pathfinder Instruments for Cloud and Aerosol Spaceborne Observations-Climatologie Etendue des Nuages et des Aerosols |
| PLACE | Parameterization for Land Atmosphere Cloud Exchange |
| POAM | Polar Ozone and Aerosol Measurement |
| POES | Polar Orbiting Environmental Satellite |
| PR | Precipitation Radar |
| PRESTORM | Oklahoma-Kansas Preliminary Regional Experiment for STORM-Central |
| PRiDE | Puerto Rico Dust Experiment |
| PSAS | Physical-space Statistical Analysis System |
| PSC | Polar stratospheric clouds |
| QEM | Quality Education for Minorities |
| QuikSCAT | (NASA's) Quick Scatterometer satellite |
| RASL | Raman Airborne Spectroscopic Lidar |
| RCDF | Radiometric Calibration and Development Facility |
| RDAS | Retrospective data assimilation system |
| RTOP | Research and Technology Objectives and Plans |
| RTOVS | Revised TIROS-N Operational Vertical Sounder |
| SACZ | South Atlantic Convergence Zone |
| SAFARI | Southern Africa Fire-Atmosphere Research Initiative |
| SAGE | Stratospheric Aerosol and Gas Experiment |
| SBIR | Small Business Innovative Research |
| SBUV | Solar Backscatter Ultraviolet |
| SBUV/2 | Solar Backscatter Ultraviolet/version 2 |
| SCIAMACHY | Scanning Imaging Absorption Spectrometer for Atmospheric Cartography |
| SCO | stratospheric column ozone |
| SCSMEX | South China Sea Monsoon Experiment |
| SeaWiFS | Sea-viewing Wide Field-of-View Sensor |

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| SERDP | Strategic Environmental Research and Development Program |
| SHADOZ | Southern Hemisphere ADditional OZonesondes |
| SHARP | Summer High School Apprenticeship Research Program |
| SIMBIOS | Sensor Intercomparison and Merger for Biological and Interdisciplinary Oceanic Studies |
| SLAM | Small Lidar Advanced Measurement |
| SLP | Sea Level Pressure |
| SMART | Surface-sensing Measurements for Atmospheric Radiative Transfer |
| SMiR | Scanning Microwave Radiometer |
| SO | Southern Oscillation |
| SOARS | Significant Opportunities in Atmospheric Research and Science |
| SOAT | Sounder Operation Algorithm Teams |
| SOLAS | Surface Ocean Lower Atmosphere Studies |
| SOLSE/LORE | Shuttle Ozone Limb Sounding Experiment/Limb Ozone Retrieval Experiment |
| SOLVE | SAGE III Ozone Loss and Validation Experiment |
| SORCE | SOlar Radiation and Climate Experiment |
| SPANDAR | Space Range Radar, Wallops Island, Virginia |
| SPCZ | South Pacific Convergence Zone |
| SPIE | Society of Photo-Optical Instrumentation Engineers |
| SPRL | Space Physics Research Laboratory |
| SRL | Scanning Raman Lidar |
| SRT | Sounder Research Team |
| SSBUV | Shuttle Solar Backscatter Ultraviolet |
| SSE | Space Science Enterprise |
| SSM/I | Special Sensor Microwave Imager |
| SST | sea surface temperature |
| SSU | Spectral Sensor Unit |
| STAAC | Systems, Technology, and Advanced Concepts Directorate |
| STROZ LITE | Stratospheric Ozone Lidar Trailer Experiment |
| STS | Space Transportation System |
| TCO | tropospheric column ozone |
| TES | Tropospheric Emission Spectrometer |
| THOR | cloud THickness from Offbeam Returns |
| THORPEX | THe Observing-system Research and Predictability Experiment |
| TIM | Technical Interchange Meeting |
| TIMED | Thermosphere Ionosphere Mesosphere Energetics and Dynamics |
| TMI | TRMM Microwave Imager |
| TOGA-COARE | Tropical Ocean Global Atmosphere-Coupled Ocean Atmosphere Response Experiment |
| TOMS | Total Ozone Mapping Spectrometer |
| TOPEX | Topography Experiment |
| TOVS | TIROS Operational Vertical Sounder |
| TPW | total precipitable water |
| TRACE-P | TRAnsport and Chemical Evolution over the Pacific |
| TRMM | Tropical Rainfall Measuring Mission |
| TRMM KWAJEX | TRMM Kwajalein Experiment |
| TRMM LBA | TRMM Large Scale Biosphere-Atmosphere Experiment in Amazonia |
| TRR | Test Readiness Review |
| TSVO | TRMM Satellite Validation Office |
| UARS | Upper Atmosphere Research Satellite |
| UAV | Unmanned Aerial Vehicle |

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|---|---|
| UCAR | University Corporation for Atmospheric Research |
| UCLA | University of California - Los Angeles |
| UHI | Urban Heat Island |
| UMBC | University of Maryland Baltimore County |
| UMCP | University of Maryland College Park |
| UNEP | United Nations Environment Programme |
| URF | University Research Foundation |
| USRA | Universities Space Research Association |
| USWRP | U.S. Weather Research Program |
| UV | ultraviolet |
| UV-B | ultraviolet-B radiation |
| VAL | Visualization Analysis Laboratory |
| VSEP | Visiting Student Enrichment Program |
| WCRP | World Climate Research Programme |
| WHO | World Health Organization |
| WMO | World Meteorological Organization |
| WMO/UNEP | WMO/United Nations Environment Programme |
| WVTs | Water vapor tracers |