Appendix 3

CONTRIBUTORS TO IPCC WG1 REPORT, 1994, ON THE RADIATIVE FORCING OF CLIMATE CHANGE

CHAPTER 1: CO₂ AND THE CARBON CYCLE

Convening Lead Author

David Schimel National Center for Atmospheric Research, USA

Lead Authors

D. Alves Instituto Nacional de Pesquisas Espaciais (INPE), Brazil
 I.G. Enting CSIRO Division of Atmospheric Research, Australia
 M. Heimann Max-Planck Institut für Meteorologie, Germany
 D. Raynaud CNRS - Laboratoire de Glaciologie, France

U. Siegenthaler University of Bern, Switzerland

T. Wigley Office for Interdisciplinary Earth Studies @ UCAR, USA

Contributors

S. Brown University of Illinois, USA

W. Emanuel
 M. Fasham
 C. Field
 Oak Ridge National Laboratory, USA
 James Rennell Centre (NERC), UK
 Carnegie Institute of Washington, USA

P. Friedlingstein BISA, Belgium

R. Gifford CSIRO Division of Plant Industry, Australia

R. Houghton Woods Hole Research Center, USA

A. Janetos NASA Headquarters, USA

S. Kempe University of Hamburg, Germany

R. Leemans RIVM (Netherlands Institute for Public Health and Environment), Netherlands

E. Maier-Reimer Max-Planck Institut für Meteorologie, Germany

G. Marland Oak Ridge National Laboratory, USA
R. McMurtrie University of New South Wales, Australia
J. Melillo Woods Hole Oceanographic Institution, USA

J. F. Minster GRGS, France

P. Monfray Centre des Faibles Radioactivités, France

M. Mousseau Université de Paris Sud, France
 D. Ojima Colorado State University, USA
 D. Peel British Antarctic Survey, UK
 D. Skole University of New Hampshire, USA

E. Sulzman National Center for Atmospheric Research, USA

P. Tans NOAA, Climate Monitoring & Diagnostics Laboratory, USA

310 Appendix 3

I. Totterdell Chilworth Research Centre, UK
P. Vitousek Stanford University, USA

Modellers

J. Alcamo RIVM (Netherlands Institute for Public Health and Environment), Netherlands

B.H. Braswell

B.C. Cohen

UNECE Committee on Energy, Switzerland

W.R. Emanuel

Oak Ridge National Laboratory, USA

I.G. Enting
 G.D. Farquhar
 R.A. Goldstein
 L.D.D. Harvey
 National Center for Atmospheric Research, USA
 Australian National University, Australia
 Electric Power Research Inst, USA
 University of Toronto, Canada

M. Heimann Max-Planck Institut für Meteorologie, Germany

A. Jain Lawrence Livermore University, USA F. Joos University of Bern, Switzerland

J. Kaduk Max-Planck Institut für Meteorologie, Germany

A.A. Keller Electric Power Research Inst, USA

M. Krol RIVM (Netherlands Institute for Public Health and Environment), Netherlands

K. Kurz Max Planck Institut für Meteorologie, Germany

K.R. Lassey National Inst for Water and Atmospheric Research, New Zealand

C. Le Quere Princeton University, USA

J. Lloyd Australian National University, Australia
 E. Meier-Reimer Max-Planck Institut für Meteorologie, Germany

B. Moore III University of New Hampshire, USA

J. Orr Laboratoire de Modelisation du Climate et de l'Environment, France

T.H. Peng Oak Ridge National Laboratory, USA

J. Sarmiento Geophysical Fluid Dynamics Laboratory, USA

U. Siegenthaler University of Bern, Switzerland

J. A. Taylor Australian National University, Australia
J. Viecelli Lawrence Livermore National Laboratory, USA

T.M.L. Wigley Office for Interdisciplinary Earth Studies @ UCAR, USA

D. Wuebbles Lawrence Livermore National Laboratory, USA

CHAPTER 2: OTHER TRACE GASES AND ATMOSPHERIC CHEMISTRY

Convening Lead Author

Michael Prather University of California @ Irvine, USA

Lead Authors

R.Derwent Meteorological Office, UK

D.Ehhalt Institut für Chemie der KFA Jülich GmbH, Germany P. Fraser CSIRO Division of Atmospheric Research, Australia

E. Sanhueza Instituto Venezolano de Investigaciones Científicas, Venezuela

X. Zhou Academy of Meteorological Sciences, China

Contributors

F. Alyea Georgia Institute of Technology, USA
J. Bradshaw Georgia Institute of Technology, USA

J. Butler NOAA, Climate Monitoring & Diagnostics Laboratory, USA

M.A. Carroll University of Michigan, USA

D. Cunnold Georgia Institute of Technology, USA

E. Dlugokencky

J. Elkins

NOAA ERL @ Boulder, USA

NOAA ERL @ Boulder, USA

D. Etheridge CSIRO Division of Atmospheric Research, Australia

D. Fisher DuPont, Wilmington, USA

P. Guthrie Systems Applications International, USA

N. Harris European Ozone Research Coordination Unit, UK

University of Oslo (Geophysics), Norway I. Isaksen

Harvard University, USA D.J. Jacob Harwell Laboratory, UK C.E. Johnson J. Kaye NASA Headquarters, USA

NOAA Aeronomy Laboratory, USA S. Liu

C.T. McElroy Atmospheric Environment Service (ARQX), Canada

P. Novelli NOAA, Climate Monitoring & Diagnostics Laboratory, USA

J. Penner Lawrence Livermore National Laboratory, USA R. Prinn Massachusetts Institute of Technology, USA University of California @ Irvine, USA W. Reeburgh National Center for Atmospheric Research, USA B. Ridley J. Rudolph Institut für Atmosphärische Chemie, Germany

P. Simmonds Bristol University, UK

L.P. Steele CSIRO Division of Atmospheric Research, Australia Norwegian Institute for Air Research, Norway F. Stordal Scripps Institute of Oceanography, USA R. Weiss

A. Volz-Thomas Institut für Chemie der Belasteten, Germany

A. Wahner Institut für Chemie der KFA Jülich GmbH, Germany D. Wuebbles Lawrence Livermore National Laboratory, USA

CHAPTER 3: AEROSOLS

Convening Lead Author

Peter R. Jonas UMIST, UK

Lead Authors

R.J. Charlson University of Washington, USA H. Rodhe University of Stockholm, Sweden

Contributors

T.L. Anderson University of Washington, USA

M.O. Andreae Max-Planck Institut für Chemie, Germany

E. Dutton NOAA Climate Monitoring & Diagnostics Laboratory, USA

Max Planck Institut für Meteorologie, Germany H. Graf

Y. Fouquart LOA/Université des Science & Technologie de Lille, France

H. Grassl Max-Planck Institut für Meteorologie, Germany

J. Heintzenberg University of Stockholm, Sweden P.V. Hobbs University of Washington, USA

D. Hofmann NOAA Climate Monitoring & Diagnostics Laboratory, USA

B. Huebert University of Hawaii, USA

R. Jaenicke Johannes Gutenberg-Universität, Mainz, Germany

M. Jietai Peking University, China

J. Lelieveld University of Wageningen, Netherlands M. Mazurek Brookhaven National Laboratory, USA

M.P. McCormick Langley Research Center, USA

J. Ogren NOAA Climate Monitoring & Diagnostics Laboratory, USA

J. Penner Lawrence Livermore National Laboratory, USA

F. Raes CEC Joint Research Centre, Italy

L. Schütz Johannes Gutenberg Universität, Mainz, Germany S. Schwartz Brookhaven National Laboratory, USA
G. Slinn Pacific Northwest Laboratories, USA

H. ten Brink Netherland Energy Research Foundation, Netherlands

CHAPTER 4: RADIATIVE FORCING

Convening Lead Author

Keith P. Shine University of Reading, United Kingdom

Lead Authors

Y. Fouquart LOA/Université des Science & Technologie de Lille, France

V. Ramaswamy Geophysical Fluid Dynamics Laboratory, USA

S. Solomon NOAA Aeronomy Laboratory, USA
J. Srinivasan Langley Research Center, USA

Contributors

M.O. Andreae Max-Planck Institut für Chemie, Germany
J. Angell NOAA ERL @ Silver Springs, USA

G. Brasseur National Center for Atmospheric Research, USA

C. Brühl Max-Planck Institut für Chemie, Germany

R.J. Charlson University of Washington, USA

M.D. Chou

NASA, Goddard Space Flight Centre, USA

J.R. Christy

University of Alabama @ Huntsville, USA

T. Dunkerton

Northwest Research Associates, USA

E. Dutton NOAA Climate Monitoring & Diagnostics Laboratory, USA

B.A. Fomin Institute of Molecular Physics, USA

C. Granier NCAR, USA

H. Grassl Max-Planck Institut für Meteorologie, Germany
J. Hansen Goddard Institute for Space Studies, USA

Harshvardhan Purdue University, USA

D. Hauglustaine Service d'Aeronomie du CNRS, France

P. Hobbs University of Washington, USA

D. J. Hofman NOAA Climate Monitoring & Diagnostics Laboratory, USA

L. Hood University of Arizona, USA

N. Husson CNRS, Laboratoire de Météorologie Dynamique, France

I. Karol Main Geophysical Observatory, Russia
 Y.J. Kaufman NASA, Goddard Space Flight Centre, USA
 J. Kiehl National Center for Atmospheric Research, USA

S. Kinne NASA Ames Research Center, USA

M.K. W. Ko Atmosphere & Environment Research Inc, USA

K. Labitzke Free University of Berlin, Germany

H. Le Treut CNRS, Laboratoire de Météorologie Dynamique, France

A. McCulloch AFEAS / ICI C&P, UK

A.J. Miller NOAA National Meteorological Center, USA
M. Molina Massachusetts Institute of Technology, USA

E. Nesme-Ribes Observatoire de Paris, France

A.H. Oort Geophysical Fluid Dynamics Laboratory, USA
J.E. Penner Lawrence Livermore National Laboratory, USA

S. Pinnock University of Reading, UK

V. Ramanathan Scripps Institute of Oceanography, USA

A. Robock University of Maryland, USA

E. Roeckner Max-Planck Institut für Meteorologie, Germany M.E. Schlesinger University of Illinois @ Urbana-Champaign, USA

K. Sassen

University of Utah, USA

G. Y. Shi

Institute of Atmospheric Physics, China Institute of Molecular Physics, Russia

A.N. Trotsenko W.C. Wang

State University of New York @ Albany, YSA

CHAPTER 5: TRACE GAS RADIATIVE FORCING INDICES

Convening Lead Author

Daniel L. Albritton

NOAA Aeronomy Laboratory, USA

Lead Authors

R.G. Derwent

Meteorological Office, UK

I.S.A. Isaksen

University of Oslo (Geophysics), Norway Max-Planck Institut für Meteorologie, Germany

M. Lal D.J. Wuebbles

Lawrence Livermore National Laboratory, USA

Contributors

C. Brühl

Max-Planck Institut für Chemie, Germany

J.S. Daniel

NOAA Aeronomy Laboratory, USA

D. Fisher

DuPont, Wilmington, USA

C. Granier

NCAR, USA

S.C. Liu

NOAA Aeronomy Laboratory, USA

K. PattenV. Ramaswamy

Lawrence Livermore National Laboratory, USA Geophysical Fluid Dynamics Laboratory, USA

T.M.L. Wigley

ž

Office for Interdisciplinary Earth Studies @ UCAR, USA