

APPENDIX A

LIST OF INTERNATIONAL AUTHORS, CONTRIBUTORS, AND REVIEWERS

COCHAIRS

Ayité-Lô Nohende Ajavon	Université de Lomé	Togo
Daniel L. Albritton	National Oceanic and Atmospheric Administration (retired)	USA
Robert T. Watson	World Bank	USA

SCIENTIFIC STEERING COMMITTEE

Marie-Lise Chanin	Service d'Aéronomie / IPSL (CNRS-UPMC-UVSQ)	France
Susana B. Diaz	Centro Austral de Investigaciones Cientificas	Argentina
John A. Pyle	University of Cambridge	UK
A.R. Ravishankara	NOAA Earth System Research Laboratory	USA
Theodore G. Shepherd	University of Toronto	Canada

AUTHORS AND CONTRIBUTORS

CHAPTER 1 LONG-LIVED COMPOUNDS

Chapter Lead Authors

Cathy Clerbaux	Service d'Aéronomie / IPSL (CNRS-UPMC-UVSQ)	France
Derek M. Cunnold	Georgia Institute of Technology	USA

Coauthors

John Anderson	Hampton University	USA
Andreas Engel	Universität Frankfurt	Germany
Paul J. Fraser	CSIRO Division of Marine and Atmospheric Research	Australia
Emmanuel Mahieu	Université de Liège	Belgium
Alistair Manning	Climate Research Division, Met Office	UK
John Miller	NOAA Earth System Research Laboratory	USA
Stephen A. Montzka	NOAA Earth System Research Laboratory	USA
Ray Nassar	University of Waterloo	Canada
Ronald Prinn	Massachusetts Institute of Technology	USA
Stefan Reimann	Swiss Federal Laboratories for Materials Testing and Research	Switzerland

AUTHORS, CONTRIBUTORS, AND REVIEWERS

Curtis P. Rinsland	NASA Langley Research Center	USA
Peter Simmonds	University of Bristol	UK
Daniel P. Verdonik	Hughes Associates, Inc.	USA
Ray F. Weiss	Scripps Institution of Oceanography	USA
Donald J. Wuebbles	University of Illinois	USA
Yoko Yokouchi	National Institute for Environmental Studies	Japan

Contributors

Peter Bernath	University of Waterloo	Canada
Donald R. Blake	University of California at Irvine	USA
Thomas Blumenstock	Forschungszentrum Karlsruhe	Germany
James H. Butler	NOAA Earth System Research Laboratory	USA
Pierre-Francois Coheur	Chimie Quantique et Photophysique, Université Libre de Bruxelles	Belgium
Geoffrey S. Dutton	CIRES/NOAA Earth System Research Laboratory	USA
David Etheridge	CSIRO Division of Marine and Atmospheric Research	Australia
Lucien Froidevaux	NASA Jet Propulsion Laboratory	USA
Paul B. Krummel	CSIRO Division of Marine and Atmospheric Research	Australia
Jens Mühle	Scripps Institution of Oceanography	USA
Simon O'Doherty	University of Bristol	UK
David E. Oram	University of East Anglia	UK
Ellis E. Remsberg	NASA Langley Research Center	USA
Robert Rhew	University of California at Berkeley	USA
James M. Russell III	Hampton University	USA
Cathy Trudinger	CSIRO Division of Marine and Atmospheric Research	Australia
Darryn W. Waugh	The Johns Hopkins University	USA
Rudolphe Zander	Université de Liège	Belgium

CHAPTER 2 HALOGENATED VERY SHORT-LIVED SUBSTANCES

Chapter Lead Authors

Katherine S. Law	Service d'Aéronomie / IPSL (CNRS-UPMC-UVSQ)	France
William T. Sturges	University of East Anglia	UK

Coauthors

Donald R. Blake	University of California at Irvine	USA
Nicola J. Blake	University of California at Irvine	USA
James B. Burkholder	NOAA Earth System Research Laboratory	USA
James H. Butler	NOAA Earth System Research Laboratory	USA
R. Anthony Cox	University of Cambridge	UK
Peter H. Haynes	University of Cambridge	UK
Malcolm K.W. Ko	NASA Langley Research Center	USA
Karin Kreher	National Institute of Water and Atmospheric Research	New Zealand
Céline Mari	Laboratoire d'Aérodynamique, CNRS/Université Paul Sabatier	France
Klaus Pfeilsticker	Universität Heidelberg	Germany
John M.C. Plane	University of Leeds	UK
Ross J. Salawitch	Jet Propulsion Laboratory/California Institute of Technology	USA
Cornelius Schiller	Forschungszentrum Jülich	Germany
Björn-Martin Sinnhuber	University of Bremen	Germany

AUTHORS, CONTRIBUTORS, AND REVIEWERS

Roland von Glasow	Universität Heidelberg	Germany
Nicola J. Warwick	University of Cambridge	UK
Donald J. Wuebbles	University of Illinois	USA
Shari A. Yvon-Lewis	Texas A&M University	USA

Contributors

André Butz	Universität Heidelberg	Germany
David B. Considine	NASA Langley Research Center	USA
Marcel Dorf	Universität Heidelberg	Germany
Lucien Froidevaux	NASA Jet Propulsion Laboratory	USA
Laurie J. Kovalenko	NASA Jet Propulsion Laboratory	USA
Nathaniel J. Livesey	NASA Jet Propulsion Laboratory	USA
Ray Nassar	University of Waterloo	Canada
Christopher E. Sioris	Harvard-Smithsonian Center for Astrophysics	USA
Debra K. Weisenstein	Atmospheric and Environmental Research, Inc.	USA

CHAPTER 3

GLOBAL OZONE: PAST AND PRESENT

Chapter Lead Authors

Martyn P. Chipperfield	University of Leeds	UK
Vitali E. Fioletov	Environment Canada	Canada

Coauthors

Bram Bregman	KNMI, now with TNO Business Unit Built and Geosciences	The Netherlands
John P. Burrows	University of Bremen	Germany
Brian J. Connor	National Institute of Water and Atmospheric Research	New Zealand
Joanna D. Haigh	Imperial College London	UK
Neil R.P. Harris	European Ozone Research Coordinating Unit/University of Cambridge	UK
Alain Hauchecorne	Service d'Aéronomie / IPSL (CNRS-UPMC-UVSQ)	France
Lon Hood	University of Arizona	USA
S. Randy Kawa	NASA Goddard Space Flight Center	USA
Janusz W. Krzyściński	Polish Academy of Sciences	Poland
Jennifer Logan	Harvard University	USA
Nzioka John Muthama	University of Nairobi	Kenya
Lorenzo M. Polvani	Columbia University	USA
William Randel	National Center for Atmospheric Research	USA
Toru Sasaki	Japan Meteorological Agency	Japan
Johannes Staehelin	Swiss Federal Institute of Technology – Zurich	Switzerland
Richard S. Stolarski	NASA Goddard Space Flight Center	USA
Larry W. Thomason	NASA Langley Research Center	USA
Joseph M. Zawodny	NASA Langley Research Center	USA

Contributors

Greg Bodeker	National Institute of Water and Atmospheric Research	New Zealand
Philippe Demoulin	Université de Liège	Belgium
Wuhu Feng	University of Leeds	UK
Lawrence E. Flynn	NOAA National Environmental Satellite, Data, and Information Service	USA
Stacey Hollandsworth Frith	Science Systems and Applications, Inc.	USA

AUTHORS, CONTRIBUTORS, AND REVIEWERS

Serge Guillas	Georgia Institute of Technology	USA
Mohammad Ilyas	University College of Engineering North Malaysia	Malaysia
Bjørn Knudsen	Danish Meteorological Institute	Denmark
J. Ben Liley	National Institute of Water and Atmospheric Research	New Zealand
Richard D. McPeters	NASA Goddard Space Flight Center	USA
Alvin J. Miller	NOAA NWS Climate Prediction Center	USA
Rolf Müller	Forschungszentrum Jülich	Germany
Samuel Oltmans	NOAA Earth System Research Laboratory	USA
Yvan J. Orsolini	Norwegian Institute for Air Research	Norway
Irina Petropavlovskikh	CIRES/NOAA Earth System Research Laboratory	USA
Wolfgang Steinbrecht	German Weather Service, Hohenpeissenberg	Germany
Hamish Struthers	National Institute of Water and Atmospheric Research	New Zealand
David W. Tarasick	Environment Canada	Canada
Yukio Terao	Harvard University	USA

CHAPTER 4

POLAR OZONE: PAST AND PRESENT

Chapter Lead Authors

Paul A. Newman	NASA Goddard Space Flight Center	USA
Markus Rex	Alfred Wegener Institute for Polar and Marine Research, Potsdam	Germany

Coauthors

Pablo O. Canziani	Pontificia Universidad Católica Argentina/CONICET	Argentina
Kenneth S. Carslaw	University of Leeds	UK
Katja Drdla	NASA Ames Research Center	USA
Sophie Godin-Beekmann	Service d'Aéronomie / IPSL (CNRS-UPMC-UVSQ)	France
David M. Golden	Stanford University and SRI International	USA
Charles H. Jackman	NASA Goddard Space Flight Center	USA
Karin Kreher	National Institute of Water and Atmospheric Research	New Zealand
Ulrike Langematz	Freie Universität Berlin	Germany
Rolf Müller	Forschungszentrum Jülich	Germany
Hideaki Nakane	National Institute for Environmental Studies	Japan
Yvan J. Orsolini	Norwegian Institute for Air Research	Norway
Ross J. Salawitch	Jet Propulsion Laboratory/California Institute of Technology	USA
Michelle L. Santee	Jet Propulsion Laboratory	USA
Marc von Hobe	Forschungszentrum Jülich	Germany
Shigeo Yoden	Kyoto University	Japan

Contributors

Greg Bodeker	National Institute of Water and Atmospheric Research	New Zealand
Katja Frieler	Alfred Wegener Institute for Polar and Marine Research, Potsdam	Germany
Florence Goutail	Service d'Aéronomie / IPSL (CNRS-UPMC-UVSQ)	France
Manuel López-Puertas	Instituto de Astrofísica de Andalucía	Spain
Gloria L. Manney	NASA JPL and New Mexico Institute of Mining and Technology	USA
Eric R. Nash	Science Systems and Applications, Inc.	USA
Cora E. Randall	CU Laboratory for Atmospheric and Space Physics	USA
Howard J. Singer	NOAA National Weather Service	USA
Cynthia Shaw Singleton	CU Laboratory for Atmospheric and Space Physics	USA

AUTHORS, CONTRIBUTORS, AND REVIEWERS

Richard M. Stimpfle	Harvard University	USA
Simone Tilmes	National Center for Atmospheric Research	USA
Mark Weber	University of Bremen	Germany

CHAPTER 5 CLIMATE-OZONE CONNECTIONS

Chapter Lead Authors

Mark P. Baldwin	NorthWest Research Associates, Inc.	USA
Martin Dameris	DLR Institut für Physik der Atmosphäre	Germany

Coauthors

John Austin	NOAA Geophysical Fluid Dynamics Laboratory	USA
Slimane Bekki	Service d'Aéronomie / IPSL (CNRS-UPMC-UVSQ)	France
Bram Bregman	KNMI, now with TNO Business Unit Built and Geosciences	The Netherlands
Neal Butchart	Climate Research Division, Met Office	UK
Eugene Cordero	San Jose State University	USA
Nathan P. Gillett	University of East Anglia	UK
Hans-F. Graf	University of Cambridge	UK
Claire Granier	NOAA ESRL and Service d'Aéronomie / IPSL (CNRS-UPMC-UVSQ)	USA/France
Douglas E. Kinnison	National Center for Atmospheric Research	USA
Shyam Lal	Physical Research Laboratory	India
Thomas Peter	Swiss Federal Institute of Technology – Zurich	Switzerland
William Randel	National Center for Atmospheric Research	USA
John F. Scinocca	Canadian Centre for Climate Modelling and Analysis, Univ. Victoria	Canada
Drew Shindell	NASA Goddard Institute for Space Studies	USA
Hamish Struthers	National Institute of Water and Atmospheric Research	New Zealand
Masaaki Takahashi	University of Tokyo	Japan
David W.J. Thompson	Colorado State University	USA

Contributors

David Battisti	University of Washington	USA
Peter Braesicke	University of Cambridge	UK
Rolando R. Garcia	National Center for Atmospheric Research	USA
Peter H. Haynes	University of Cambridge	UK
Elisa Manzini	Istituto Nazionale di Geofisica e Vulcanologia	Italy
Katja Matthes	National Center for Atmospheric Research	USA
Giovanni Pitari	Università degli Studi dell'Aquila	Italy
V. Ramaswamy	NOAA Geophysical Fluid Dynamics Laboratory	USA
Karen Rosenlof	NOAA Earth System Research Laboratory	USA
Benjamin D. Santer	Lawrence Livermore National Laboratory	USA
Robert B. Scott	University of Texas	USA
Andrea Stenke	DLR Institut für Physik der Atmosphäre	Germany
Claudisa Timmreck	Max-Planck-Institut für Meteorologie – Hamburg	Germany

AUTHORS, CONTRIBUTORS, AND REVIEWERS

CHAPTER 6 THE OZONE LAYER IN THE 21ST CENTURY

Chapter Lead Authors

Greg Bodeker	National Institute of Water and Atmospheric Research	New Zealand
Darryn W. Waugh	The Johns Hopkins University	USA

Coauthors

Hideharu Akiyoshi	National Institute for Environmental Studies	Japan
Peter Braesicke	University of Cambridge	UK
Veronika Eyring	DLR Institut für Physik der Atmosphäre	Germany
David W. Fahey	NOAA Earth System Research Laboratory	USA
Elisa Manzini	Istituto Nazionale di Geofisica e Vulcanologia	Italy
Michael Newchurch	University of Alabama in Huntsville	USA
Robert W. Portmann	NOAA Earth System Research Laboratory	USA
Alan Robock	Rutgers University	USA
Keith P. Shine	The University of Reading	UK
Wolfgang Steinbrecht	German Weather Service, Hohenpeissenberg	Germany
Elizabeth C. Weatherhead	CIRES/NOAA Earth System Research Laboratory	USA

Contributors

John Austin	NOAA Geophysical Fluid Dynamics Laboratory	USA
Slimane Bekki	Service d'Aéronomie / IPSL (CNRS-UPMC-UVSQ)	France
Christoph Brühl	Max-Planck-Institut für Chemie – Mainz	Germany
Neal Butchart	Climate Research Division, Met Office	UK
Martyn P. Chipperfield	University of Leeds	UK
Martin Dameris	DLR Institut für Physik der Atmosphäre	Germany
Tatiana Egorova	World Radiation Center/Institute for Atmospheric and Climate Science ETH	Switzerland
Vitali E. Fioletov	Environment Canada	Canada
Andrew Gettelman	National Center for Atmospheric Research	USA
Marco A. Giorgetta	Max-Planck-Institut für Meteorologie – Hamburg	Germany
Douglas E. Kinnison	National Center for Atmospheric Research	USA
Eva Mancini	Università degli Studi dell'Aquila	Italy
Marion Marchand	Service d'Aéronomie / IPSL (CNRS-UPMC-UVSQ)	France
Paul A. Newman	NASA Goddard Space Flight Center	USA
Steven Pawson	NASA Goddard Space Flight Center	USA
Giovanni Pitari	Università degli Studi dell'Aquila	Italy
David Plummer	Environment Canada	Canada
Björg Rognerud	University of Oslo	Norway
Eugene Rozanov	World Radiation Center/Institute for Atmospheric and Climate Science ETH	Switzerland
Ross J. Salawitch	Jet Propulsion Laboratory/California Institute of Technology	USA
Theodore G. Shepherd	University of Toronto	Canada
Kiyotaka Shibata	Meteorological Research Institute	Japan
Björn-Martin Sinnhuber	University of Bremen	Germany
Miriam Sinnhuber	University of Bremen	Germany
Sergei P. Smyshlyaev	Russian State Hydrometeorological University	Russia
Richard S. Stolarski	NASA Goddard Space Flight Center	USA

AUTHORS, CONTRIBUTORS, AND REVIEWERS

Hamish Struthers	National Institute of Water and Atmospheric Research	New Zealand
Wenshou Tian	University of Leeds	UK
Guus J.M. Velders	Netherlands Environmental Assessment Agency	The Netherlands
Debra K. Weisenstein	Atmospheric and Environmental Research, Inc.	USA
Eun-Su Yang	Georgia Institute of Technology	USA

CHAPTER 7 SURFACE ULTRAVIOLET RADIATION: PAST, PRESENT, AND FUTURE

Chapter Lead Authors

Alkiviadis F. Bais	Aristotle University of Thessaloniki	Greece
Dan Lubin	Scripps Institution of Oceanography	USA

Coauthors

Antti Arola	Finnish Meteorological Institute	Finland
Germar Bernhard	Biospherical Instruments Inc.	USA
Mario Blumthaler	Medical University of Innsbruck	Austria
Natalia E. Chubarova	Moscow State University	Russia
Carynelisa Erlick	The Hebrew University	Israel
H. Peter Gies	Australian Radiation Protection and Nuclear Safety Agency	Australia
Nickolay A. Krotkov	NASA Goddard Space Flight Center	USA
Kathleen O. Lantz	CIRES/NOAA Earth System Research Laboratory	USA
Bernhard Mayer	Deutsches Zentrum für Luft- und Raumfahrt	Germany
Richard L. McKenzie	National Institute of Water and Atmospheric Research	New Zealand
Rubén D. Piacentini	National University of Rosario	Argentina
Gunther Seckmeyer	University of Hannover	Germany
James R. Slusser	Colorado State University	USA
Christos S. Zerefos	National and Kapodestrian University of Athens	Greece

Contributors

Uwe Feister	Deutscher Wetterdienst	Germany
Vitali E. Fioletov	Environment Canada	Canada
Julian Gröbner	Physikalisch-Meteorologisches Observatorium Davos	Switzerland
Esko Kyrö	Finnish Meteorological Institute	Finland
Harry Slaper	National Institute for Public Health and the Environment	The Netherlands

CHAPTER 8 HALOCARBON SCENARIOS, OZONE DEPLETION POTENTIALS, AND GLOBAL WARMING POTENTIALS

Chapter Lead Authors

John S. Daniel	NOAA Earth System Research Laboratory	USA
Guus J.M. Velders	Netherlands Environmental Assessment Agency	The Netherlands

Coauthors

Anne R. Douglass	NASA Goddard Space Flight Center	USA
Piers M.D. Forster	University of Leeds	UK
Didier A. Hauglustaine	CNRS – Laboratoire des Sciences du Climat et de l'Environnement	France
Ivar Isaksen	University of Oslo	Norway

AUTHORS, CONTRIBUTORS, AND REVIEWERS

Lambert Kuijpers	Technical University Eindhoven	The Netherlands
Archie McCulloch	University of Bristol	UK
Timothy J. Wallington	Ford Motor Company	USA

Contributors

Paul Ashford	Caleb Management Services Ltd.	UK
Stephen A. Montzka	NOAA Earth System Research Laboratory	USA
Paul A. Newman	NASA Goddard Space Flight Center	USA
Darryn W. Waugh	The Johns Hopkins University	USA

TWENTY QUESTIONS AND ANSWERS ABOUT THE OZONE LAYER: 2006 UPDATE

Lead Author

David W. Fahey	NOAA Earth System Research Laboratory	USA
----------------	---------------------------------------	-----

CHAPTER EDITORIAL CONTRIBUTORS

CHAPTER 1: LONG-LIVED COMPOUNDS

Maya George	Service d'Aéronomie / IPSL (CNRS-UPMC-UVSQ)	France
-------------	---	--------

CHAPTER 4: POLAR OZONE: PAST AND PRESENT

Rose M. Kendall	Computer Sciences Corporation	USA
Kathy A. Thompson	Computer Sciences Corporation	USA

CHAPTER 5: CLIMATE-OZONE CONNECTIONS

Amy Guenther	NorthWest Research Associates	USA
--------------	-------------------------------	-----

CHAPTER 6: THE OZONE LAYER IN THE 21ST CENTURY

Hisako Shiona	National Institute of Water and Atmospheric Research	New Zealand
---------------	--	-------------

TWENTY QUESTIONS AND ANSWERS ABOUT THE OZONE LAYER: 2006 UPDATE

Brenda S. Irish	NOAA Earth System Research Laboratory	USA
Debra Dailey-Fisher	NOAA Earth System Research Laboratory	USA

REVIEWERS

Ayité-Lô Nohende Ajavon	Université de Lomé	Togo
Daniel L. Albritton	NOAA Earth System Research Laboratory (Retired)	USA
Stephen O. Andersen	U.S. Environmental Protection Agency	USA
Gustavo A. Argüello	Universidad Nacional de Cordoba	Argentina
Elliot Atlas	University of Miami	USA
Pieter J. Aucamp	Ptersa Environmental Consultants	South Africa
John Austin	NOAA Geophysical Fluid Dynamics Laboratory	USA

AUTHORS, CONTRIBUTORS, AND REVIEWERS

Gnon Baba	Université de Lomé	Togo
Alkiviadis F. Bais	Aristotle University of Thessaloniki	Greece
Mark P. Baldwin	NorthWest Research Associates, Inc.	USA
Leonard A. Barrie	World Meteorological Organization	Switzerland
Gufran Beig	Indian Institute of Tropical Meteorology	India
Slimane Bekki	Service d'Aéronomie / IPSL (CNRS-UPMC-UVSQ)	France
Lars Olof Björn	Lund University	Sweden
Greg Bodeker	National Institute of Water and Atmospheric Research	New Zealand
Rumen D. Bojkov	Dresden Technical University	Germany
Janet Bornman	University of Waikato	New Zealand
Geir O. Braathen	World Meteorological Organization	Switzerland
Claus Brüning	European Commission	Belgium
John P. Burrows	University of Bremen	Germany
Neal Butchart	Climate Research Division, Met Office	UK
James H. Butler	NOAA Earth System Research Laboratory	USA
James M. Calm	Engineering Consultant	USA
Pablo O. Canziani	Pontificia Universidad Católica Argentina/CONICET	Argentina
Daniel Cariolle	Météo-France	France
Lucy Carpenter	University of York	UK
Marie-Lise Chanin	Service d'Aéronomie / IPSL (CNRS-UPMC-UVSQ)	France
Martyn P. Chipperfield	University of Leeds	UK
Hans Claude	German Meteorological Service, Hohenpeissenberg	Germany
Cathy Clerbaux	Service d'Aéronomie / IPSL (CNRS-UPMC-UVSQ)	France
William J. Collins	Hadley Centre for Climate Prediction and Research, Met Office	UK
David B. Considine	NASA Langley Research Center	USA
John Crowley	Max-Planck-Institut für Chemie – Mainz	Germany
Paul Crutzen	Max-Planck-Institut für Chemie – Mainz	Germany
Derek M. Cunnold	Georgia Institute of Technology	USA
Martin Dameris	DLR Institut für Physik der Atmosphäre	Germany
John S. Daniel	NOAA Earth System Research Laboratory	USA
Michael Danilin	The Boeing Company	USA
Susana B. Diaz	Centro Austral de Investigaciones Cientificas	Argentina
Anne R. Douglass	NASA Goddard Space Flight Center	USA
Ellsworth G. Dutton	NOAA Earth System Research Laboratory	USA
Kalju Eerme	Tartu Observatory	Estonia
Christine A. Ennis	CIRES/NOAA Earth System Research Laboratory	USA
Wayne Evans	NorthWest Research Associates, Inc.	USA
Veronika Eyring	DLR Institut für Physik der Atmosphäre	Germany
David W. Fahey	NOAA Earth System Research Laboratory	USA
Vitali E. Fioletov	Environment Canada	Canada
Horst Fischer	Max Planck Institut für Chemie – Mainz	Germany
Lawrence E. Flynn	NOAA National Environmental Satellite, Data, and Information Service	USA
Ian Folkins	Dalhousie University	Canada
John Frederick	University of Chicago	USA
Lucien Froidevaux	NASA Jet Propulsion Laboratory	USA
Jan Fuglestedt	University of Oslo	Norway
Marvin A. Geller	State University of New York, Stony Brook	USA
Andrew Gettelman	National Center for Atmospheric Research	USA
Nathan P. Gillett	University of East Anglia	UK
Sophie Godin-Beekmann	Service d'Aéronomie / IPSL (CNRS-UPMC-UVSQ)	France

AUTHORS, CONTRIBUTORS, AND REVIEWERS

Marco González	United Nations Environment Programme	Kenya
Florence Goutail	Service d'Aéronomie / IPSL (CNRS-UPMC-UVSQ)	France
Hans-F. Graf	University of Cambridge	UK
Claire Granier	NOAA ESRL and Service d'Aéronomie / IPSL (CNRS-UPMC-UVSQ)	USA/France
Neil R.P. Harris	European Ozone Research Coordinating Unit/University of Cambridge	UK
Dennis Hartmann	University of Washington	USA
Sachiko Hayashida	Naru Women's University	Japan
Peter H. Haynes	University of Cambridge	UK
Jay Herman	NASA Goddard Space Flight Center	USA
David J. Hofmann	NOAA Earth System Research Laboratory	USA
Dale Hurst	CIRES/NOAA Earth System Research Laboratory	USA
Abdelmoneim A.R. Ibrahim	Egyptian Meteorological Authority	Egypt
Mohammad Ilyas	University College of Engineering North Malaysia	Malaysia
Takashi Imamura	National Institute for Environmental Studies	Japan
Ivar Isaksen	University of Oslo	Norway
Elena Jimenez	Universidad de Castilla – La Mancha	Spain
Paul Johnston	National Institute of Water and Atmospheric Research	New Zealand
Roderic L. Jones	University of Cambridge	UK
Hiroshi Kanzawa	Nagoya University	Japan
David Karoly	University of Oklahoma	USA
Jussi Kaurola	Finnish Meteorological Institute	Finland
Jack A. Kaye	NASA Headquarters	USA
M.A.K. Khalil	Portland State University	USA
Bjørn Knudsen	Danish Meteorological Institute	Denmark
Malcolm K.W. Ko	NASA Langley Research Center	USA
Chester Koblinsky	NOAA Climate Program Office	USA
Peter Koepke	University of Munich	Germany
Janusz W. Krzyściński	Polish Academy of Sciences	Poland
Lambert Kuijpers	Technical University Eindhoven	The Netherlands
Michael J. Kurylo	NASA Headquarters	USA
Katherine S. Law	Service d'Aéronomie / IPSL (CNRS-UPMC-UVSQ)	France
Mark G. Lawrence	Max-Planck-Institut für Chemie – Mainz	Germany
Zenobia Litynska	Institute of Meteorology and Water Management	Poland
Jennifer Logan	Harvard University	USA
Dan Lubin	Scripps Institution of Oceanography	USA
Gloria L. Manney	NASA JPL / New Mexico Institute of Mining and Technology	USA
Elisa Manzini	Istituto Nazionale di Geofisica e Vulcanologia	Italy
Mack McFarland	DuPont Fluoroproducts	USA
Richard L. McKenzie	National Institute of Water and Atmospheric Research	New Zealand
Richard D. McPeters	NASA Goddard Space Flight Center	USA
Davit Melkonyan	Armenian State Hydrometeorological and Monitoring Service	Armenia
Pauline Midgley	M&D Consulting	Germany
Alvin J. Miller	NOAA NWS Climate Prediction Center	USA
Kenneth R. Minschwaner	New Mexico Institute of Mining and Technology	USA
Stephen A. Montzka	NOAA Earth System Research Laboratory	USA
Rolf Müller	Forschungszentrum Jülich	Germany
Nzioka John Muthama	University of Nairobi	Kenya
Hideaki Nakane	National Institute for Environmental Studies	Japan
Eric R. Nash	Science Systems and Applications, Inc.	USA

AUTHORS, CONTRIBUTORS, AND REVIEWERS

Paul A. Newman	NASA Goddard Space Flight Center	USA
Ole John Nielsen	University of Copenhagen	Denmark
Alan O'Neill	University of Reading	UK
Samuel Oltmans	NOAA Earth System Research Laboratory	USA
Eduardo Palenque	Universidad Mayor de San Andrés	Bolivia
Panos Papagiannakopoulos	University of Crete	Greece
Thomas Peter	Swiss Federal Institute of Technology – Zurich	Switzerland
Ulrich Platt	Universität Heidelberg	Germany
R. Alan Plumb	Massachusetts Institute of Technology	USA
Ian Plumb	CSIRO Industrial Physics	Australia
Lamont R. Poole	Science Applications International Corporation	USA
Robert W. Portmann	NOAA Earth System Research Laboratory	USA
Gilles Poulet	Université d'Orléans	France
Michael Prather	University of California at Irvine	USA
John A. Pyle	University of Cambridge	UK
S. Ramachandran	Physical Research Laboratory	India
V. Ramaswamy	NOAA Geophysical Fluid Dynamics Laboratory	USA
William Randel	National Center for Atmospheric Research	USA
A.R. Ravishankara	NOAA Earth System Research Laboratory	USA
Thomas Reddmann	Forschungszentrum Karlsruhe	Germany
Claire Reeves	University of East Anglia	UK
Stefan Reimann	Swiss Federal Laboratories for Materials Testing and Research, EMPA	Switzerland
Markus Rex	Alfred Wegener Institute for Polar and Marine Research, Potsdam	Germany
Alan Robock	Rutgers University	USA
José M. Rodríguez	NASA Goddard Space Flight Center	USA
Geert-Jan Roelofs	University of Utrecht	The Netherlands
Howard Roscoe	British Antarctic Survey	UK
Karen Rosenlof	NOAA Earth System Research Laboratory	USA
Ross J. Salawitch	Jet Propulsion Laboratory/California Institute of Technology	USA
Michelle L. Santee	Jet Propulsion Laboratory	USA
Benjamin D. Santer	Lawrence Livermore National Laboratory	USA
Yasuhiro Sasano	National Institute for Environmental Studies	Japan
Robert Sausen	DLR Institut für Physik der Atmosphäre	Germany
Ulrich Schmidt	Johann Wolfgang Goethe Universität	Germany
Robyn Schofield	CIRES/NOAA Earth System Research Laboratory	USA
Ulrich Schumann	DLR Institut für Physik der Atmosphäre	Germany
Gunther Seckmeyer	University of Hannover	Germany
Megumi Seki	United Nations Environment Programme	Kenya
Theodore G. Shepherd	University of Toronto	Canada
Kiyotaka Shibata	Meteorological Research Institute	Japan
Keith P. Shine	The University of Reading	UK
Emily Shuckburgh	University of Cambridge	UK
Isobel Simpson	University of California at Irvine	USA
Pavla Skrivankova	Czech Hydrometeorological Institute	Czech Republic
Susan Solomon	NOAA Earth System Research Laboratory	USA
Johannes Staehelin	Swiss Federal Institute of Technology – Zurich	Switzerland
Knut Stamnes	Stevens Institute of Technology	USA
Richard M. Stimpfle	Harvard University	USA
Richard S. Stolarski	NASA Goddard Space Flight Center	USA

AUTHORS, CONTRIBUTORS, AND REVIEWERS

Frode Stordal	University of Oslo	Norway
Susan Strahan	NASA Goddard Space Flight Center	USA
Hamish Struthers	National Institute of Water and Atmospheric Research	New Zealand
William T. Sturges	University of East Anglia	UK
Azadeh Tabazadeh	Stanford University	USA
Darin Toohey	University of Colorado	USA
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AUTHORS, CONTRIBUTORS, AND REVIEWERS

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Technical Editing

Christine A. Ennis CIRES/NOAA Earth System Research Laboratory USA

Reference Research and Editing

Heather L. McCullough NOAA Boulder Laboratories Library USA

Publication/Graphics Design and Layout

Debra Dailey-Fisher NOAA Earth System Research Laboratory USA
 Dennis Dickerson (*Graphics Design, "Twenty Questions"*) Respond Grafiks USA

Editorial Assistance

Karen M. Layman NOAA Earth System Research Laboratory USA
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Geir O. Braathen World Meteorological Organization Switzerland
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 Catherine Michaut CNRS/Institut Pierre-Simon Laplace France
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APPENDIX B

MAJOR ACRONYMS AND ABBREVIATIONS

A1	baseline halocarbon scenario (Chapter 8)
AAO	Antarctic oscillation
ACE-FTS	Atmospheric Chemistry Experiment Fourier Transform Spectrometer
AER	Atmospheric and Environmental Research, Inc. (United States)
AERONET	Aerosol Robotic Network
AFEAS	Alternative Fluorocarbons Environmental Acceptability Study
AFGL	Air Force Geophysics Laboratory (United States)
AGAGE	Advanced Global Atmospheric Gases Experiment
AGCM	Atmospheric General Circulation Model
AGWP	Absolute Global Warming Potential
AIDA	Aerosol Interactions and Dynamics in the Atmosphere
amsl	above mean sea level
AO	Arctic Oscillation
AOD	aerosol optical depth
AOGCM	coupled ocean-atmosphere general circulation model
ARPANSA	Australian Radiation Protection and Nuclear Safety Agency (Australia)
ASAP	Assessment of Stratospheric Aerosol Properties (SPARC)
ATLAS	Atmospheric Laboratory for Applications and Science
atm	atmosphere (unit of pressure)
ATMOS	Atmospheric Trace Molecule Spectroscopy
AVHRR	Advanced Very High Resolution Radiometer
B0	full capture and destruction of the 2007 bank cases (Chapter 8)
BAU	business as usual (scenario)
BDC	Brewer-Dobson circulation
BfS	Bundesamt für Strahlenschutz (Germany)
BL	boundary layer
BOM	Bureau of Meteorology (Australia)
BUV	Backscatter (or Backscattered) Ultraviolet (spectrometer)
CCD	charge-coupled device
CCM	Chemistry-Climate Model
CCMVal	CCM Validation Activity
CCN	cloud condensation nuclei
CCSP	Climate Change Science Program (United States)
CCSR	Center for Climate System Research (University of Tokyo)
CDOM	chromophoric dissolved organic matter
CERES	Clouds and the Earth's Radiant Energy System
CFC	chlorofluorocarbon
CIE	Commission Internationale de l'Éclairage (France)
CIRES	Cooperative Institute for Research in Environmental Sciences (United States)
CLaMS	Chemical Lagrangian Model of the Stratosphere
cm	centimeters (unit of length)
CMAM	Canadian Middle Atmosphere Model

ACRONYMS

CMDL	Climate Monitoring and Diagnostics Laboratory (NOAA)
CMF	cloud modification factor
CNRM	Centre National de Recherches Météorologiques (France)
CNRS	Centre National de la Recherche Scientifique (France)
CONICET	Consejo de Investigaciones Científicas y Técnicas (Argentina)
CPT	cold point tropopause
CSIRO	Commonwealth Scientific and Industrial Research Organisation (Australia)
CTM	chemical transport model
CU	University of Colorado (United States)
CUSUM	cumulative sum of residuals
DHM	dihalomethane
DIAL	Differential Absorption Lidar
DJF	December-January-February
DLR	Deutsches Zentrum für Luft- und Raumfahrt (Germany)
DMS	dimethyl sulfide
DNA	deoxyribonucleic acid
DOAS	Differential Optical Absorption Spectroscopy
DOC	dissolved organic carbon
DOM	dissolved organic matter
DU	Dobson unit
DWD	Deutscher Wetterdienst (Germany)
E0	“no future emission” case (Chapter 8)
EC	European Commission
ECMWF	European Centre for Medium-Range Weather Forecasts (United Kingdom)
EDUCE	European Database for UV Climatology and Evaluation
EECI	effective equivalent chlorine
EESC	equivalent effective stratospheric chlorine
ENSO	El Niño-Southern Oscillation
ENVISAT	Environmental Satellite
EOS	Earth Observing System
EP	Eliassen-Palm
EPA	Environmental Protection Agency (United States)
ERA	ECMWF Re-Analysis
ER-2	Earth Resources-2 (aircraft)
ERS-2	European Remote Sensing-2 (satellite)
ESA	European Space Agency
ESRL	Earth System Research Laboratory (NOAA)
ETH	Eidgenössische Technische Hochschule (Swiss Federal Institute of Technology) (Switzerland)
EUVDB	European Ultraviolet Database
ExTL	extratropical tropopause layer
F1	future control simulation (Chapter 6)
FASTRT	Fast and Easy Radiative Transfer
FC	fluorocarbon
FMI	Finnish Meteorological Institute (Finland)
FTIR	Fourier transform infrared
FTS	Fourier Transform Spectrometer
FUB	Freie Universität Berlin (Germany)

g	gram (unit of mass)
GC	gas chromatograph
GCM	general circulation model
GCR	galactic cosmic ray
GEOS	Goddard Earth Observing System
GEWEX	Global Energy and Water Cycle Experiment (WCRP)
GFDL	Geophysical Fluid Dynamics Laboratory (NOAA)
Gg	Gigagrams (10^9 grams) (unit of mass)
GHG	greenhouse gas
GHz	Gigahertz (10^9 cycles per second) (frequency unit)
GMAO	Global Monitoring and Assimilation Office (NASA)
GMD	Global Monitoring Division (NOAA/ESRL)
GMI	Global Modeling Initiative (CTM)
GOME	Global Ozone Monitoring Experiment
GSFC	Goddard Space Flight Center (NASA)
GtC	gigatons carbon
GWP	Global Warming Potential
H1	no-Protocol halocarbon scenario (Chapter 8)
HALOE	Halogen Occultation Experiment
HBFC	hydrobromofluorocarbon
HCFC	hydrochlorofluorocarbon
HFC	hydrofluorocarbon
HFE	hydrofluorinated ether or hydrofluoroether
hPa	hectoPascal (10^2 Pascal) (unit of pressure)
HTOC	Halons Technical Options Committee (TEAP)
IASB	Institut d'Aéronomie Spatiale de Belgique (Belgium)
IFU	Institute for Atmospheric Environmental Research (Germany)
ILAS	Improved Limb Atmospheric Spectrometer
IMG	Interferometric Monitor for Greenhouse Gases
INSPECTRO	Influence of Clouds on the Spectral Actinic Flux in the Lower Troposphere
IPCC	Intergovernmental Panel on Climate Change
IPSL	Institut Pierre-Simon Laplace (France)
IR	infrared
ISCCP	International Satellite Cloud Climatology Project
IUPAC	International Union of Pure and Applied Chemistry
JJA	June-July-August
JMA	Japan Meteorological Agency (Japan)
JPL	Jet Propulsion Laboratory (NASA)
JRC	Joint Research Centre (Italy)
K	Kelvin (unit of temperature)
kg	kilogram (10^3 grams) (unit of mass)
km	kilometer (10^3 meters) (unit of length)
KNMI	Koninklijk Nederlands Meteorologisch Instituut (The Netherlands)
kton	kilotons (10^3 tons) (unit of mass)
l	liter (unit of volume)
LaRC	Langley Research Center (NASA)

ACRONYMS

LMS	lowermost stratosphere
LOPES	long path extinction spectrometer
LPDM	Lagrangian particle dispersion model
LPMA	Limb Profile Monitor of the Atmosphere
LS	lower stratosphere
LT	Lagrangian transport
m	meter (unit of length)
M	Molar (moles per liter) (unit of concentration)
MAESTRO	Measurement of Aerosol Extinction in the Stratosphere and Troposphere Retrieved by Occultation
MAM	March-April-May
MBL	marine boundary layer
MBTOC	Methyl Bromide Technical Options Committee
mg	milligram (10^{-3} grams) (unit of mass)
MIPAS	Michelson Interferometer for Passive Atmospheric Sounding
MLS	Microwave Limb Sounder
mm	millimeters (10^{-3} meters) (unit of length)
MNP	Netherlands Environmental Assessment Agency (The Netherlands)
mol	mole (unit, amount of substance)
molec	molecule
MOZAIC	Measurement of Ozone and Water Vapor by Airbus In-Service Aircraft
MRI	Meteorological Research Institute (Japan)
MSC	Meteorological Service of Canada (Canada)
MSG	METEOSAT Second Generation
MSU	Microwave Sounding Unit
MVIRI	METEOSAT Visible and Infrared Instrument
NAM	Northern Hemisphere annular mode
NAO	North Atlantic Oscillation
NASA	National Aeronautics and Space Administration (United States)
NAT	nitric acid trihydrate
NCAR	National Center for Atmospheric Research (United States)
NCC	no climate change simulation (Chapter 6)
NCEP	National Centers for Environmental Prediction (United States)
NDACC	Network for the Detection of Atmospheric Composition Change
NDSC	Network for the Detection of Stratospheric Change (now NDACC)
NH	Northern Hemisphere
NIES	National Institute for Environmental Studies (Japan)
NILU	Norwegian Institute for Air Research (Norway)
NIST	National Institute of Standards and Technology (formerly NBS, United States)
NIWA	National Institute of Water and Atmospheric Research (New Zealand)
nm	nanometers (10^{-9} meters) (unit of length)
NMI	National Metrology Institutes
NOAA	National Oceanic and Atmospheric Administration (United States)
n-PB	n-propyl bromide
NSF	National Science Foundation (United States)
NWP	numerical weather prediction
NWS	National Weather Service (NOAA)

ODP	Ozone Depletion Potential
ODS	ozone-depleting substance
OHA	ozone hole area
OMD	ozone mass deficit
OMI	Ozone Monitoring Instrument
OPAC	Optical Properties of Aerosols and Clouds
P0	“no future production” case (Chapter 8)
P1	past trends simulation (Chapter 6)
PAR	photosynthetically active radiation
PFC	perfluorocarbon
PG	product gas
PGI	product gas injection
pmol	picomole (10^{-12} mole) (unit, amount of substance)
POAM	Polar Ozone and Aerosol Measurement
POC	particulate organic carbon
ppb	parts per billion
ppbv	parts per billion by volume
ppm	parts per million
ppmv	parts per million by volume
ppt	parts per trillion
pptv	parts per trillion by volume
PSC	polar stratospheric cloud
PSS	photochemical steady state
PTFE	polytetrafluoroethylene
PV	potential vorticity
PVU	potential vorticity unit
QA/QC	quality assurance/quality control
QASUME	Quality Assurance of Spectral Solar UV Measurements in Europe
QBO	quasi-biennial oscillation
QPS	quarantine and pre-shipment
RAMI	Radiation Transfer Model Intercomparison
RATPAC	Radiosonde Atmospheric Temperature Products for Assessing Climate
REF	reference simulation (Chapter 6)
REPROBUS	Reactive Processes Ruling the Ozone Budget in the Stratosphere
RF	radiative forcing
RIVM	Rijksinstituut voor Volksgezondheid en Milieu (National Institute of Public Health and the Environment) (The Netherlands)
RT	radiative transfer
SAD	surface area density
SAGE	Stratospheric Aerosol and Gas Experiment
SAM	Southern Hemisphere annular mode
SAOZ	Système d’Analyse par Observation Zénithale
SBDART	Santa Barbara Discrete-ordinate Hemispheric Radiative Transfer
SBUV/SBUV2	Solar Backscatter (or Backscattered) Ultraviolet (spectrometer)
SCIAMACHY	Scanning Imaging Absorption Spectrometer for Atmospheric Chartography
SCOUT-O ₃	Stratospheric-Climatic Links with Emphasis on the Upper Troposphere and Lower Stratosphere

ACRONYMS

SCTM	Stratospheric Chemistry Transport Model
SeaWiFS	Sea-viewing Wide Field-of-view Sensor
SG	source gas
SGI	source gas injection
SH	Southern Hemisphere
SHADOZ	Southern Hemisphere Additional Ozonesondes
SIDES	Surface Irradiation Derived from a Range of Satellite-Based Sensors
SLIMCAT	Single-Layer Isentropic Model of Chemistry and Transport
SMR	Submillimeter Radiometer or Submillimeter Receiver
SOGE	System for Observation of Halogenated Greenhouse Gases in Europe
SOLSTICE	Solar Stellar Irradiance Comparison Experiment
SON	September-October-November
SPARC	Stratospheric Processes and Their Role in Climate (WCRP)
SPE	solar proton event
SPURT	Spurenstofftransport in der Tropopausenregion
SRES	Special Report on Emissions Scenarios (IPCC)
SSA	stratospheric sulfate aerosol
SST	sea surface temperature
SSU	Stratospheric Sounding Unit
STACCATO	Influence of Stratosphere-Troposphere Exchange in a Changing Climate on Atmospheric Transport and Oxidation Capacity
STAR	System for Transfer of Atmospheric Radiation
STREAM	Stratosphere-Troposphere Experiments by Aircraft Measurements
STT	stratosphere-to-troposphere transport
SUNY	State University of New York (United States)
SUSIM	Solar Ultraviolet Spectral Irradiance Monitor
SYNOP	Surface Synoptic Observations
SZA	solar zenith angle
2-D	two-dimensional
3-D	three-dimensional
TEAP	Technology and Economic Assessment Panel (UNEP)
TEMIS	Tropospheric Emission Monitoring Internet Service
THM	trihalomethane
TOMS	Total Ozone Mapping Spectrometer
TOVS	TIROS Operational Vertical Sounder
TRACE-P	Transport and Chemical Evolution over the Pacific
TROICA	Trans-Siberian Observations Into the Chemistry of the Atmosphere
TST	troposphere-to-stratosphere transport
TTL	tropical tropopause layer
TUV	Tropospheric Ultraviolet Visible
UARS	Upper Atmosphere Research Satellite
UEA	University of East Anglia (United Kingdom)
UH	University of Heidelberg (Germany)
UKMO	United Kingdom Met Office (United Kingdom)
UM	University of Manchester (United Kingdom)
UNEP	United Nations Environment Programme
UPMC	Université Pierre et Marie Curie (France)
UT	upper troposphere

ACRONYMS

UTLS	upper troposphere/lower stratosphere
UV	ultraviolet
UVMFRSR	ultraviolet multifilter rotating shadowband radiometer
UVSQ	Université Versailles Saint-Quentin (France)
VAR	variational analysis
VSL	very short-lived
VSLs	very short-lived substances
W	Watts (unit of energy)
WCRP	World Climate Research Programme
WHO	World Health Organization
WMGHG	well-mixed greenhouse gas
WMO	World Meteorological Organization
WOUDC	World Ozone and Ultraviolet Radiation Data Centre (Canada)

APPENDIX C

MAJOR CHEMICAL FORMULAE AND NOMENCLATURE FROM THIS ASSESSMENT

HALOGEN-CONTAINING SPECIES

Cl	atomic chlorine	Br	atomic bromine
Cl _x	inorganic chlorine oxides/radicals	Br _x	inorganic bromine oxides/radicals
Cl _y	total inorganic chlorine	Br _y	total inorganic bromine
CCl _y	organic chlorine	CBr _y	organic bromine
Cl ₂	molecular chlorine	Br ₂	molecular bromine
ClO	chlorine monoxide	BrO	bromine monoxide
Cl ₂ O	dichlorine monoxide	Br ₂ O	dibromine monoxide
ClO _x	chlorine radicals	BrO _x	bromine radicals
OCIO	chlorine dioxide	OBrO	bromine dioxide
ClOO	chloroperoxy radical		
Cl ₂ O ₂ , ClOOCl	dichlorine peroxide (ClO dimer)		
ClONO ₂ , ClNO ₃	chlorine nitrate	BrONO ₂ , BrNO ₃	bromine nitrate
HCl	hydrogen chloride (hydrochloric acid)	HBr	hydrogen bromide
HOCl	hypochlorous acid	HOBr	hypobromous acid
BrCl	bromine chloride		
F	atomic fluorine	I	atomic iodine
F ₂	molecular fluorine	I ₂	molecular iodine
		I _x	inorganic iodine oxides/radicals
F _y	total inorganic fluorine	I _y	total inorganic iodine
		IO	iodine monoxide
		IO _x	iodine radicals
		OIO	iodine dioxide
		IOIO	iodine oxide dimer
		IONO ₂	iodine nitrate
HF	hydrogen fluoride (hydrofluoric acid)	HI	hydrogen iodide
		HOI	hypoiodous acid
SF ₆	sulfur hexafluoride		
SF ₃ CF ₃	trifluoromethylsulfurpentafluoride		
NF ₃	nitrogen trifluoride		

CHEMICAL FORMULAE

HALOCARBONS

CHLOROFLUOROCARBONS (CFCs)

CFC-11	CCl_3F
CFC-12	CCl_2F_2
CFC-13	CClF_3
CFC-113	$\text{CCl}_2\text{FCClF}_2$
CFC-113a	CCl_3CF_3
CFC-114	$\text{CClF}_2\text{CClF}_2$
CFC-114a	CCl_2FCF_3
CFC-115	CClF_2CF_3

HYDROCHLOROFLUOROCARBONS (HCFCs)

HCFC-21	CHCl_2F
HCFC-22	CHClF_2
HCFC-31	CH_2ClF
HCFC-123	CHCl_2CF_3
HCFC-124	CHClFCF_3
HCFC-141b	$\text{CH}_3\text{CCl}_2\text{F}$
HCFC-142b	CH_3CClF_2
HCFC-225ca	$\text{CHCl}_2\text{CF}_2\text{CF}_3$
HCFC-225cb	$\text{CHClFCF}_2\text{CClF}_2$
HCFC-243cc	$\text{CH}_3\text{CF}_2\text{CCl}_2\text{F}$

HYDROFLUOROCARBONS (HFCs)

HFC-23	CHF_3	HFC-245cb	$\text{CH}_3\text{CF}_2\text{CF}_3$
HFC-32	CH_2F_2	HFC-245ca	$\text{CH}_2\text{FCF}_2\text{CHF}_2$
HFC-41	CH_3F	HFC-245ea	$\text{CHF}_2\text{CHFCHF}_2$
HFC-125	CHF_2CF_3	HFC-245eb	$\text{CH}_2\text{FCHFCF}_3$
HFC-134	CHF_2CHF_2	HFC-245fa	$\text{CHF}_2\text{CH}_2\text{CF}_3$
HFC-134a	CH_2FCF_3	HFC-263fb	$\text{CH}_3\text{CH}_2\text{CF}_3$
HFC-143	CH_2FCHF_2	HFC-272ca	$\text{CH}_3\text{CF}_2\text{CH}_3$
HFC-143a	CH_3CF_3	HFC-281ea	$\text{CH}_3\text{CHFCH}_3$
HFC-152	$\text{CH}_2\text{FCH}_2\text{F}$	HFC-365mfc	$\text{CH}_3\text{CF}_2\text{CH}_2\text{CF}_3$
HFC-152a	CH_3CHF_2	HFC-356mcf	$\text{CH}_2\text{FCH}_2\text{CF}_2\text{CF}_3$
HFC-161	$\text{CH}_3\text{CH}_2\text{F}$	HFC-356mff	$\text{CF}_3\text{CH}_2\text{CH}_2\text{CF}_3$
HFC-227ea	$\text{CF}_3\text{CHF}_2\text{CF}_3$	HFC-338pcc	$\text{CHF}_2\text{CF}_2\text{CF}_2\text{CHF}_2$
HFC-236cb	$\text{CH}_2\text{FCF}_2\text{CF}_3$	HFC-43-10mee	$\text{CF}_3\text{CHFCHFCF}_2\text{CF}_3$
HFC-236ea	$\text{CHF}_2\text{CHF}_2\text{CF}_3$	HFC-458mfcf	$\text{CF}_3\text{CH}_2\text{CF}_2\text{CH}_2\text{CF}_3$
HFC-236fa	$\text{CF}_3\text{CH}_2\text{CF}_3$	HFC-55-10mcf	$\text{CF}_3\text{CF}_2\text{CH}_2\text{CH}_2\text{CF}_2\text{CF}_3$

HALONS

Halon-1202 (BFC-12B2)	CBr_2F_2	Halon-1301 (BFC-13B1)	CBrF_3
Halon-1211 (BCFC-12B1)	CBrClF_2	Halon-2402 (BFC-114B2)	$\text{CBrF}_2\text{CBrF}_2$

CHLOROCARBONS

CH_3Cl (HCC-40)	methyl chloride, chloromethane
CH_2Cl_2 (HCC-30)	methylene chloride, dichloromethane
CHCl_3 (HCC-20)	chloroform, trichloromethane
CCl_4 (CC-10)	carbon tetrachloride
C_2HCl_3	trichloroethene, trichloroethylene
C_2Cl_4	tetrachloroethene, perchloroethene
$\text{CH}_3\text{CH}_2\text{Cl}$	chloroethane, ethyl chloride
$\text{CH}_2\text{ClCH}_2\text{Cl}$	1,2 dichloroethane
CH_3CCl_3 (HCC-140a)	methyl chloroform
$\text{C}_2\text{H}_2\text{Cl}_4$	tetrachloroethane
$\text{CH}_3\text{CH}_2\text{CH}_2\text{Cl}$	n-propyl chloride
COCl_2 , $\text{Cl}_2\text{C}(\text{O})$	phosgene, carbonyl chloride

BROMOCARBONS

CH_3Br (HBC-40B1)	methyl bromide, bromomethane
CH_2Br_2	methylene bromide, dibromomethane
CHBr_3	bromoform, tribromomethane
$\text{C}_2\text{H}_5\text{Br}$	ethyl bromide, bromoethane
$\text{CH}_2\text{BrCH}_2\text{Br}$	1,2 dibromoethane
$\text{CH}_3\text{CH}_2\text{CH}_2\text{Br}$, (n-C ₃ H ₇ Br)	1-bromopropane, n-propyl bromide, n-PB
COHBr	formyl bromide
COBr_2 , $\text{Br}_2\text{C}(\text{O})$	carbonyl dibromide

CHEMICAL FORMULAE

IODOCARBONS

CH ₃ I	iodomethane, methyl iodide
CH ₂ I ₂	diiodomethane
CH ₃ CH ₂ I, C ₂ H ₅ I	iodoethane, ethyl iodide
CH ₃ CHICH ₃ (i-C ₃ H ₇ I)	2-iodopropane, isopropyl iodide
CH ₃ CH ₂ CH ₂ I (n-C ₃ H ₇ I)	1-iodopropane, n-propyl iodide

FLUOROCARBONS

CF ₄ (FC-14)	perfluoromethane, carbon tetrafluoride
C ₂ F ₆ , CF ₃ CF ₃ (FC-116)	perfluoroethane
C ₃ F ₈ , CF ₃ CF ₂ CF ₃ (FC-218)	perfluoropropane
c-C ₃ F ₆ (FC-C216)	perfluorocyclopropane
C ₄ F ₁₀ (FC-31-10)	perfluorobutane
c-C ₄ F ₈ (FC-C318)	perfluorocyclobutane
C ₅ F ₁₂ (FC-41-12)	perfluoropentane
C ₆ F ₁₄ (FC-51-14)	perfluorohexane
C ₁₀ F ₁₈	perfluorodecalin
COF ₂	carbonyl fluoride

OTHERS

CHBr ₂ Cl	dibromochloromethane	CF ₃ I (FIC-1311)	trifluoriodomethane, trifluoromethyl iodide
CH ₂ BrCl	bromochloromethane		
CHBrCl ₂	bromodichloromethane	COClF	chlorofluorocarbonyl
CH ₂ BrI	bromoiodomethane	SF ₆	sulfur hexafluoride
CHBrF ₂	bromodifluoromethane	SF ₅ CF ₃	trifluoromethylsulfurpentafluoride
CH ₂ ClI	chloriodomethane		

OTHER CHEMICAL SPECIES

O	atomic oxygen	H	atomic hydrogen
O(³ P)	atomic oxygen (ground state)	H ₂	molecular hydrogen
O(¹ D)	atomic oxygen (first excited state)	OH	hydroxyl radical
O ₂	molecular oxygen	HO ₂	hydroperoxyl radical
O ₃	ozone	H ₂ O	water
O _x	odd oxygen (O, O(¹ D), O ₃) or oxidant (O ₃ + NO ₂)	H ₂ O ₂	hydrogen peroxide
		HO _x	odd hydrogen (H, OH, HO ₂ , H ₂ O ₂)
N	atomic nitrogen	HNO ₂ , HONO	nitrous acid
N ₂	molecular nitrogen	HOONO	pernitrous acid
N ₂ O	nitrous oxide	HNO ₃	nitric acid
NO	nitric oxide	HNO ₄ , HO ₂ NO ₂	peroxynitric acid, pernitric acid
NO ₂	nitrogen dioxide	RONO ₂	alkyl nitrates
NO ₃	nitrogen trioxide, nitrate radical	PAN	peroxyacetylnitrate (CH ₃ C(O)OONO ₂)
N ₂ O ₅	dinitrogen pentoxide	CH ₃ CN	acetonitrile
NO _x	nitrogen oxides (NO + NO ₂)		
NO _y	total reactive nitrogen (usually includes NO, NO ₂ , NO ₃ , N ₂ O ₅ , ClONO ₂ , HNO ₄ , HNO ₃)		

CHEMICAL FORMULAE

S	atomic sulfur	H ₂ S	hydrogen sulfide
SO ₂	sulfur dioxide	CS ₂	carbon disulfide
H ₂ SO ₄	sulfuric acid	COS, OCS	carbonyl sulfide
CH ₃ SCH ₃	DMS, dimethyl sulfide		
C	carbon atom		
CO	carbon monoxide		
CO ₂	carbon dioxide		
NMHC	nonmethane hydrocarbon	CH ₂ O, HCHO	formaldehyde
CH ₄	methane	CH ₃ CHO	acetaldehyde
C ₂ H ₆	ethane	CH ₃ OH	methyl alcohol, methanol
C ₃ H ₈	propane	CH ₃ O ₂	methyl peroxy radical
C ₂ H ₄	ethylene, ethene	RO	alkoxy radicals
C ₂ H ₂	acetylene, ethyne	RO ₂	organic peroxy radical