

# APPENDIX B

## MAJOR ACRONYMS AND ABBREVIATIONS

AASE	Airborne Arctic Stratospheric Expedition
ADEOS	Advanced Earth Observing Satellite
AER	Atmospheric and Environmental Research, Inc. (United States)
AFEAS	Alternative Fluorocarbons Environmental Acceptability Study
AGAGE	Advanced Global Atmospheric Gases Experiment
AI	aerosol index
ALE	Atmospheric Lifetime Experiment
AO	Arctic Oscillation
AOD	aerosol optical depth
ATMOS	Atmospheric Trace Molecule Spectroscopy
AVHRR	Advanced Very High Resolution Radiometer
AWI	Alfred Wegener Institute (Germany)
BDC	Brewer-Dobson circulation
BL	boundary layer
BUV	Backscatter Ultraviolet (spectrometer)
CARIBIC	Civil Aircraft for Regular Investigation of the Atmosphere Based on an Instrument Container
CARMA	Community Aerosol and Radiation Model for Atmospheres
CCSR	Center for Climate System Research (University of Tokyo)
CFC	chlorofluorocarbon
CICERO	Centre for International Climate and Environmental Research, Universitetet i Oslo (Norway)
CIE	Commission Internationale de l'Éclairage (France)
CIRES	Cooperative Institute for Research in Environmental Sciences (United States)
CLAES	Cryogenic Limb Array Etalon Spectrometer
CLAMS	Chemical Lagrangian Model of the Stratosphere
CMAM	Canadian Middle Atmosphere Model
CMDL	Climate Monitoring and Diagnostics Laboratory (NOAA)
CNR-IFA	Consiglio Nazionale della Ricerca-Istituto di Fisica dell'Atmosfera (Italy)
CNRM	Centre National de Recherches Météorologiques (France)
CNRS	Centre National de la Recherche Scientifique (France)
CONICET	Consejo de Investigaciones Científicas y Técnicas
CPC	Climate Prediction Center (NCEP)
CSIRO	Commonwealth Scientific and Industrial Research Organisation (Australia)
CTM	chemical transport model
DLR	Deutsches Zentrum für Luft- und Raumfahrt (Germany)
DMS	dimethyl sulfide
DMSO	dimethyl sulfoxide
DOAS	Differential Optical Absorption Spectroscopy
DSCD	differential slant column density
DSIR	Department of Scientific and Industrial Research (South Africa)
DU	Dobson unit
EC	European Commission
ECC	electrochemical concentration cell (ozonesonde)

## ACRONYMS

ECD	electron capture detector
ECHAM	European Centre Hamburg Model
ECMWF	European Centre for Medium-Range Weather Forecasts (United Kingdom)
EECI	effective equivalent chlorine
EESC	effective equivalent stratospheric chlorine
ENSO	El Niño-Southern Oscillation
EP	Earth Probe
EPA	Environmental Protection Agency (United States)
ER-2	Earth Resources-2 (aircraft)
ERBE	Earth Radiation Budget Experiment
ERS-2	European Remote Sensing-2 (satellite)
ETH	Eidgenössische Technische Hochschule (Swiss Federal Institute of Technology) (Switzerland)
EU	European Union
EUVDB	European Ultraviolet Database
FC	fluorocarbon
FDH	fixed dynamical heating (model)
FSSP	forward scattering spectrometer probe
FTIR	Fourier transform infrared
FUB	Freie Universität Berlin (Germany)
GAGE	Global Atmospheric Gases Experiment
GAW	Global Atmosphere Watch
GCM	general circulation model
GC-MS	gas chromatograph-mass spectrometer
GFDL	Geophysical Fluid Dynamics Laboratory (NOAA)
GHG	greenhouse gas
GISS	Goddard Institute for Space Studies (NASA)
GOME	Global Ozone Monitoring Experiment
GRIPS	GCM-Reality Intercomparison Project for SPARC
GSFC	Goddard Space Flight Center (NASA)
GWD	gravity wave drag
GWP	Global Warming Potential
HALOE	Halogen Occultation Experiment
HBFC	hydrobromofluorocarbon
HC	hydrocarbon
HCFC	hydrochlorofluorocarbon
HFC	hydrofluorocarbon
HFE	hydrofluorinated ether or hydrofluoroether
hPa	hectoPascal
IASB	Institut d'Aéronomie Spatiale de Belgique (Belgium)
IFU	Institute for Atmospheric Environmental Research (Germany)
IGAC	International Global Atmospheric Chemistry
ILAS	Improved Limb Atmospheric Spectrometer
IPCC	Intergovernmental Panel on Climate Change
IR	infrared
IROE-CNR	Istituto di Ricrea sulle Onde Elettromagneticher del Consiglio Nazionale della Richerche (Italy)
ISAMS	Improved Stratospheric and Mesospheric Sounder
ISCCP	International Satellite Cloud Climatology Project
IUPAC	International Union of Pure and Applied Chemistry

JMA	Japan Meteorological Agency (Japan)
JPL	Jet Propulsion Laboratory (NASA)
JRC	Joint Research Centre (Italy)
KASIMA	Karlsruhe Simulation Model of the Middle Atmosphere
KNMI	Koninklijk Nederlands Meteorologisch Instituut (The Netherlands)
LaRC	Langley Research Center (NASA)
LCTM	Lagrangian chemical transport model
LLNL	Lawrence Livermore National Laboratory (United States)
LMS	lowermost stratosphere
LS	lower stratosphere
M3	Meteor-3 (satellite)
MAECHAM/CHEM	Middle Atmosphere European Centre Hamburg Model with Chemistry
MASP	Multiangle Aerosol Spectrometer Probe
MATCH	Model of Atmospheric Transport and Chemistry
MBL	marine boundary layer
MD	mass deficiency
MIT	Massachusetts Institute of Technology (United States)
MLS	Microwave Limb Sounder
MODIS	Moderate Resolution Imaging Spectroradiometer
MOZAIC	Measurement of Ozone and Water Vapor by Airbus In-Service Aircraft
MOZART2	Model for Ozone and Related Chemical Tracers, version 2
MPAE	Max-Planck-Institut für Aeronomie (Germany)
MPIC	Max-Planck-Institut für Chemie (Germany)
MSA	methanesulfonic acid
MSC	Meteorological Service of Canada
MSU	Microwave Sounding Unit
N7	Nimbus-7 (satellite)
NAD	nitric acid dihydrate
NAM	NH 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)
NCEP	National Centers for Environmental Prediction (NOAA)
NDSC	Network for the Detection of Stratospheric Change
NH	Northern Hemisphere
NIES	National Institute for Environmental Studies (Japan)
NIST	National Institute of Standards and Technology (formerly NBS, United States)
NIWA	National Institute of Water and Atmospheric Research (New Zealand)
NMHC	nonmethane hydrocarbon
NOAA	National Oceanic and Atmospheric Administration (United States)
n-PB	n-propyl bromide
NPL	National Physical Laboratory (United Kingdom)
NPLS	nonparametric least-square fits
NSF	National Science Foundation (United States)
NWP	numerical weather prediction
NWS	National Weather Service (NOAA)

## ACRONYMS

ODP	Ozone Depletion Potential
ODS	ozone-depleting substance
OGI	Oregon Graduate Institute (United States)
OHP	Observatoire de Haute-Provence (France)
OMS	Observations of the Middle Stratosphere
OPC	optical particle counter
PAN	peroxyacetyl nitrate
PAUR	Photochemical Activity and Solar Ultraviolet Radiation
PEM-Tropics	Pacific Exploratory Mission in the Tropical Pacific
PFC	perfluorocarbon
PGI	product gas injection
POAM	Polar Ozone and Aerosol Measurement
POLARIS	Photochemistry of Ozone Loss in the Arctic Region in Summer
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
PV	potential vorticity
PWD	planetary-wave drag
QBO	quasi-biennial oscillation
RAF	radiation amplification factor
RDF	reverse domain filling
RIVM	Rijksinstituut voor Volksgezondheid en Milieu (National Institute of Public Health and the Environment) (The Netherlands)
rms	root mean square
RT	radiative transfer
SAD	surface area density
SAGE	Stratospheric Aerosol and Gas Experiment
SAM	SH annular mode
SAM	Stratospheric Aerosol Measurement
SAOZ	Système d'Analyse par Observation Zénithale
SBDART	Santa Barbara Discrete-ordinate Hemispheric Radiative Transfer
SBUV/SBUV2	Solar Backscatter Ultraviolet (spectrometer)
SCD	slant column density
SeaWiFS	Sea-viewing Wide Field-of-view Sensor
SEFDH	seasonally evolving fixed dynamical heating (model)
SGI	source gas injection
SH	Southern Hemisphere
SIO	Scripps Institution of Oceanography (United States)
SOLVE	SAGE III Ozone Loss and Validation Experiment
SPARC	Stratospheric Processes and Their Role in Climate (WCRP)
SPOT	Satellite Pour l'Observation de la Terre (satellite)
SRES	Special Report on Emissions Scenarios (IPCC)
SRM	solid rocket motor
SSA	stratospheric sulfate aerosol
SSU	Stratospheric Sounding Unit

STAR	System for Transfer of Atmospheric Radiation
STE	stratosphere-troposphere exchange
STRAT	Stratospheric Tracers of Atmospheric Transport
STREAM	Stratosphere-Troposphere Experiments by Aircraft Measurements
STS	supercooled ternary solution
STT	secondary tropical tropopause
SUNY	State University of New York (United States)
SUSPEN	Standardization of Ultraviolet Spectroradiometry in Preparation of a European Network
SUVDAMA	Scientific UV Data Management
SZA	solar zenith angle
2-D	two-dimensional
3-D	three-dimensional
TAR	Third Assessment Report (IPCC)
TEAP	Technology and Economic Assessment Panel (UNEP)
THESEO	Third European Stratospheric Experiment on Ozone
TIROS	Television Infrared Observation Satellite
TOMS	Total Ozone Mapping Spectrometer
TOVS	TIROS Operational Vertical Sounder
TRACE-P	Transport and Chemical Evolution over the Pacific
TT	tropical tropopause
TTL	tropical tropopause layer
TTT	thermal tropical tropopause
TUV	Tropospheric Ultraviolet Visible
UARS	Upper Atmosphere Research Satellite
UCI	University of California at Irvine (United States)
UEA	University of East Anglia (United Kingdom)
UH	University of Heidelberg (Germany)
UIUC	University of Illinois at Urbana-Champaign (United States)
UK	United Kingdom
UKMO	United Kingdom Meteorological Office
ULAU	Università degli Studi dell'Aquila (Italy)
UM	unified model
UMETRAC	Unified Model with Eulerian Transport and Chemistry
UN	United Nations
UNEP	United Nations Environment Programme
US	upper stratosphere
USDA	United States Department of Agriculture
UT	University of Tokyo (Japan)
UT	upper troposphere
UV	ultraviolet
VOC	volatile organic compound
WCRP	World Climate Research Programme
WMGHG	well-mixed greenhouse gas
WMO	World Meteorological Organization
WOUDC	World Ozone and Ultraviolet Radiation Data Centre (Canada)