

NDSC Publications - 2004

2004, A. Adriani

P. Massoli; G. Di Donfrancesco; F. Cairo; M. Moriconi; M. Snels

Climatology of polar stratospheric clouds based on lidar observations from 1993 to 2001 over McMurdo Station, Antarctica

J. Geophys. Res., 109, 24211

Lidar; Aerosol; PSC; Climatology

2004, Ajtic, J.

Connor, B.J.; Lawrence, B.N.; Bodeker, G.E.; Hoppel, K.W.; Rosenfield, J.E.; Heuff, D.N.

Dilution of the Antarctic Ozone Hole into Southern Midlatitudes, 1998–2000

Journal of Geophysical Research

Dobson; Ozone

2004, Bernhard, G.

C. R. Booth, and J. C. Eshamjian

Version 2 data of the National Science Foundation's Ultraviolet Radiation Monitoring Network: South Pole

J. Geophys. Res., 109, D21207

doi:10.1029/2004JD004937

Spectral UV; UV Irradiance

2004, Bhosale, C.S.

G.S. Meena, A.L. Londhe, D. B. Jadhav, O. Puentedura and M. Gil

Variations of O₃, NO₂, and O₄ densities in association with NAO indices during winter/spring of 1993/94 and 1994/95 at sub-Arctic station

Indian J. of Radio & Space Phys., V33, 104-114

UVVis; Ozone, NO₂; O₄; NAO

2004, G. O. Braathan

S. Godin-Beekmann, P. Keckhut, T. J. McGee, M. R. Gross, C. Vialle, and A. Hauchecorne

Intercomparison of stratospheric ozone and temperature measurements at the Observatoire de Haute Provence during the OTOIC NDSC validation campaign from 1-18 July, 1997

Atmos. Chem. Phys. Disc., 4, 5303-5344

Lidar; Ozone; Temperature; Validation

2004, Cuevas, E.

K. Lamb, A. Redondas, C. Torres, V. Carreño, J. Gröbner, J.P. Díaz and J.M. Vilaplana

Total ozone intercomparison of Brewer spectrophotometers and other instruments,

The First Iberian UV-Visible instruments intercomparison: Final Report, Chapter 8, Edited by A. Labajo, E. Cuevas and B. de la Morena, Ministerio de Medio Ambiente, Spain
Brewer; UVVis; Ozone; Validation

2004, Denis, L.

Roscoe, H. K.; Chipperfield, M. P.; Van Roozendaal, M. and Goutail, F.

A new software suite for NO₂ vertical profile retrieval from ground-based zenith-sky spectrometers

J. Quant. Spectrosc. Radiat. Transfer, 92(3), 321-333

UVVis; NO₂; Algorithm

2004, Deuber

Kämpfer

Minimized standing waves in microwave radiometer balancing calibration

Radio Science, Vol 39, RS1009

doi:10.1029/2003RS002943

Microwave

2004, Deuber et al.

A New 22-GHZ Radiometer for Middle Atmospheric Water Vapor Profile Measurements

IEEE Transactions on Geoscience and Remote Sensing, Vol 42(5)

doi:10-1109/TGRS.2004.825581

Microwave; H₂O

2004, de Zafra, R. L.

G. Muscari

Correction to "CO as an important high-altitude tracer of dynamics in the Polar Stratosphere and Mesosphere"

J. Geophys. Res, 109, D16102

doi:10.1029/2004JD005102

Lidar; CO

2004, de Zafra, R. L.

G. Muscari

CO as an important high-altitude tracer of dynamics in the Polar Stratosphere and Mesosphere

J. Geophys. Res, 109, D06105

doi:10.1029/2003JD004099

Lidar; CO

2004, J.P. Díaz

F.J. Expósito, A. Redondas, V. Carreño, C. Torres and A.M. Díaz

Irradiance absolute calibration of spectroradiometers in laboratory

The First Iberian UV-Visible instruments intercomparison: Final Report, Chapter 5, Edited by A. Labajo, E. Cuevas and B. de la Morena, Ministerio de Medio Ambiente, Spain
UVVis; Ozone; Validation

2004, Frieß, U.

Hollwedel, J., König-Langlo, G., Wagner, T., Platt, U.

Dynamics and chemistry of tropospheric bromine explosion events in the Antarctic coastal region

Journal of geophysical research, 109, D06305

doi: d10.1029/2003JD004133

UVVis; Sonde; BrO

2004, Gerrard, A. J.

T. J. Kane, J. P. Thayer, and S. D. Eckermann

Concerning the Upper Stratospheric Gravity Wave and Mesospheric Cloud Relationship Over

Sondrestrom, Greenland

J. Atmos. Solar-Terr. Phys., 66, pp. 229-240

Lidar; Cloud

2004, Gerrard, A. J.

T. J. Kane, S. D. Eckermann, and J. P. Thayer

Gravity waves and mesospheric clouds in the summer middle atmosphere: A comparison of lidar measurements and ray modeling of gravity waves over Sondrestrom, Greenland

J. Geophys. Res., 109, D10103

doi:10.1029/2002JD002783

Lidar; Cloud

2004, Hase, F.

J.W. Hannigan, M.T. Coffey, A. Goldman, M. Höpfner, N.B. Jones, C.P. Rinsland, S.W. Wood

Intercomparison of retrieval codes used for the analysis of high-resolution, ground-based FTIR measurements

Journal of Quantitative Spectroscopy & Radiative Transfer 87, 25–52

FTIR; Algorithm; Validation

2004, Hendrick, F.

Barret, B., Van Roozendaal, M., Boesch, H., Butz, A., De Mazière, M., Goutail, F., Hermans, C., Lambert, J.-C., Pfeilsticker, K., and Pommereau, J.-P.

Retrieval of nitrogen dioxide stratospheric profiles from ground-based zenith-sky UV-visible observations: validation of the technique through correlative comparisons

Atmos. Chem. Phys., 4, 2091-2106

Satellite; UVVis; NO₂; Validation

2004, Hofzumahaus, A.

Lefer, B.; Monks, P.; Hall, S.R.; Kylling, A.; Mayer, B.; Shetter, R.; Junkermann, W.; Bohn, B.; Bais, A.; Calvert, J.; Cantrell, C.; Madronich, S.; Edwards, G.; Kraus, A.; Muller, M.; Schmitt, R.; Johnston, P.; McKenzie, R.; Frost, G.; Griffioen, E.; Krol, M.; Martin, T.; Pfister, G.; Roth, E.; Ruggaber, A.; Swartz, W.; Weele, M.V. (2004)

Photolysis frequency of O₃ to O(1D): Measurements and modeling during the international photolysis frequency measurements and modeling intercomparison (IPMMI)

Journal of Geophysical Research 109(8): D08S90

Doi: 10.1029/2003JD004333

UVVis; Model; Ozone

2004, Houët, M.

C. Brogniez

Ozone column retrieval from solar UV irradiance measurements at ground level: sensitivity tests and uncertainty estimation

J. Geophys. Res., 109, D15302

doi: 10.1029/2004JD004703

Spectral UV; UV Irradiance; Ozone

2004, Huber M.

M. Blumthaler, J. Schreder, and B. Schallhart, J. Lenoble

Effect of inhomogeneous surface albedo on diffuse UV sky radiance at a high-altitude site

J. Geophysical Res. 109, D08107

doi: 10.1029/2003JD004013

Spectral UV; UV Irradiance

2004, Keckhut P

Middle Atmospheric Temperature Measurements With Lidar

Journal de Physique IV, 121, 239-248

Lidar; Temperature

2004, P. Keckhut

I. S. McDermid, D. Swart, T. J. McGee, S. Pal, S. Godin-Beekmann, A. Adriani, J. Barnes, H. Bencherif, H. Claude, G. Fiocco, G. Hansen, A. Hauchecorne, T. Leblanc, C. H. Lee, G. Mégie, H. Nakane and R. Neuber
Review of ozone and temperature lidar validations performed within the framework of the Network for the Detection of Stratospheric Change

J. Environ. Monit., 6, 721 – 733

doi: 10.1039/B404256E

Lidar; Ozone; Temperature; Validation

2004, Lait, L.

P. Newman, M. Schoeberl, T. McGee, L. Twigg, E. Browell, M. Fenn, W. Grant, C. Butler, R. Bevilacqua, J. Davies, H. De Backer, S. Andersen, E. Kyrö, R. Kivi, P. von der Gathen, H. Claude, A. Benesova, P. Skrivankova, V. Dorokhov, I. Zaitcev, G. Braathen, M. Gil, Z. Litynska, D. Moore and M. Gerding
Non-Coincident inter-instrument comparisons of ozone measurements using quasi-conservative coordinates
Atmospheric Chemistry and Physics, Vol. 4, pp 2345-2352
Lidar; Satellite; Sonde; Ozone; Validation

2004, Leblanc, T.
I. S. McDerimid, and A. Hauchecorne
A study of ozone variability and its connection with meridional transport in the Northern Pacific lower stratosphere during summer 2002
J. Geophys. Res., 109, D11105
doi: 10.1029/2003JD004027
Lidar; Ozone

2004, René Lemoine
Secondary maxima in ozone profiles
Atmospheric Chemistry and Physics, Page(s) 1085-1096
Sonde; Ozone

2004, Lenoble J.
A. de La Casinière, and T. Cabot
Analysis of direct solar ultraviolet irradiance measurements in the French Alps. Retrieval of turbidity and ozone column amount
Applied Optics, Vol. 43, No. 15, 3133-3139
Spectral UV; UV Irradiance; Ozone

2004, Lenoble J.
A. Kylling, and I. Smolskaia
Impact of snow cover and topography on ultraviolet irradiance at the Alpine station of Briançon
J. Geophysical Res., 109
doi: 10.1029/2003JD004523
Spectral UV; UV Irradiance

2004, McKenzie, R.
Smale, D.; Kotkamp, M.
Relationship between UVB and erythemally weighted radiation
Photochemical & Photobiological Sciences 3(3): 252 – 256
Spectral UV; UV-B; Erythemal UV

2004, McKenzie, R.L.

Björn, L.O.; Bais, A.; Ilyas, M.

Environmental effects of ozone depletion and its interactions with climate change: Progress report 2003
Photochemical & Photobiological Sciences 3(1): 1-5
Spectral UV; UV Irradiance; Ozone

2004, McKenzie, R.L.

UV measurement: international intercomparison
Water & Atmosphere 12(1): 7
Spectral UV; UV Irradiance; Validation

2004, Meier, A.

A. Goldman, P. Manning, T. Stephen, C. Rinsland, N.B. Jones, and S.W. Wood
Improvements to Air Mass Calculations for Ground-Based Infrared Measurements,
Journal of Quantitative Spectroscopy and Radiative Transfer, 83 (1), 109-113
FTIR

2004, Meijer, Y. J.

D.P.J. Swart, M. Allaart, S.B. Andersen, G. Bodeker, I. Boyd, G. Braathen, Y. Calisesi, H. Claude, V. Dorokhov, P. van der Gathen, M. Gil, S. Godin-Beekmann, F. Goutail, G. Hansen, A. Karpetchko, P. Keckhut, H.M. Kelder, R. Koelemeijer, B. Kois, R.M. Koopman, J.-C. Lambert, T. Leblanc, I.S. McDermid, S. Pal, G. Kopp, H. Schets, R. Stübi, T. Suortti, G. Visconti and M. Yela
Pole-to-pole validation of Envisat GOMOS ozone profiles using data from ground-based and balloon sonde measurements
J. Geophys. Res., 109, D23305
doi: 10.1029/2004JD004834
Lidar; Microwave; Sonde; Satellite; Ozone; Validation

2004, S.M.L. Melo

E. Farahani, K. Strong, M.R. Bassford, and K.E. Preston
NO₂ Vertical Profiles Retrieved from Ground-Based Measurements During Spring 1999 in the Canadian Arctic
Advances in Space Research, 34 (4), 786-792
UVVis; NO₂

2004, M. Müller

R. Neuber, P. Massoli, F. Cairo, A. Adriani, M. Moriconi, and G. Di Donfrancesco
Differences in Arctic and Antarctic PSC occurrence as observed by lidar in Ny-Aalesund [79N,12E] and McMurdo [78S,167E]
Atmospheric Chemistry and Physics Discussions, MS-NR: acpd-2004-0145
Lidar; PSC

2004, Oltmans S. J., et al.

Tropospheric ozone over the North Pacific from ozonesonde observations

J. Geophys. Res., 109, D15S01

doi:10.1029/2003JD003466

Sonde; Ozone

2004, Clare Paton-Walsh

Nicholas B. Jones, Stephen Wilson, Arndt Meier, Nicholas Deutscher, David Griffith, Ross Mitchell and Susan Campbell

Trace gas emissions from biomass burning inferred from aerosol optical depth

Geophys. Res. Lett., Vol. 31, L05116

doi:10.1029/2003GL018973

FTIR; Aerosol

2004, Petritoli, A.

P. Bonasoni, G. Giovanelli, F. Ravegnani, I. Kostadinov, D. Bortoli, A. Weiss, D. Schaub, A. Richter, and F. Fortezza

First Comparison Between ground-based and Satellite-borne Measurements of Tropospheric Nitrogen Dioxide in the Po Basin

J. Geophys. Res., 109, D15307

doi:10.1029/2004JD004547

Satellite; NO₂; Validation

2004, Randel, W.

Udelhofen, P., Fleming, E., Geller, M., Gelman, M., Hamilton, K., Karoly, D., Ortland, D., Pawson, S., Swinbank, R., Wu, F., Baldwin, M., Chanin, M.L., Keckhut, P., Labitzke, K., Remsberg, E., Simmons, A. and Wu, D.

SPARC Intercomparison of Middle Atmosphere Climatologies

J. Clim., 17(5), 986-1003

Lidar; Climatology

2004, Redondas, A.

J. Gröbner, J.P. Díaz, F.J. Expósito, C. Torres, V. Carreño and J.M. Vilaplana,

Intercomparison of solar UV measurements: spectral and broadband instruments

The First Iberian UV-Visible instruments intercomparison: Final Report, Chapter 6, Edited by A. Labajo, E. Cuevas and B. de la Morena, Ministerio de Medio Ambiente, Spain

UVVis; Ozone; Validation

2004, J. Reichardt

A. Dornbrack, S. Reichardt, P. Yang and T. J. McGee

Mountain wave psc dynamics and microphysics from ground-based lidar measurements and meteorological modeling

Atmos. Chem. Phys., 4, 1149-1165

Lidar; Model; PSC

2004, Rex, M.

Salawitch, R.J., von der Gathen, P., Harris, N.R.P., Chipperfield, M., Naujokat, B.

Arctic ozone loss and climate change

Geophys. Res. Lett., 31, L04116

doi: 10.1029/2003GL018844

Sonde; Ozone

2004, Rinsland, C. P.

E. Mahieu, R. Zander, Aaron Goldman, S. Wood, and Linda Chiou

Free Tropospheric Measurements of Formic Acid (HCOOH) from Infrared Ground-Based Solar Absorption Spectra: Retrieval Approach, Evidence for a Seasonal Cycle, and Comparison with Model Calculations

J. Geophys. Res., 109, D18, D18308

DOI: 10.1029/2004JD004917

FTIR; Model; HCOOH

2004, Roscoe, H.K.

C.L. Fowler, J.D. Shanklin, J.G.T. Hill

Evidence from ozone measurements for long-term dynamical changes at the edge of the Antarctic vortex in early winter

Quart. J. Roy. Met. Soc. 130, 1123-1135

UVVis; Ozone

2004, Schneider, M.

T. Blumenstock, M. Chipperfield, F. Hase, W. Kouker, T. Reddmann, R. Ruhnke, E. Cuevas, and H. Fischer

Subtropical trace gas profiles determined by ground-based FTIR spectroscopy at Izaña (28°N, 16°W):

Five year record, error analysis, and comparison with 3D-CTMs

Atmos. Chem. Phys.

Dobson; FTIR; Model; Ozone; Validation

2004, Schofield, R.

K. Kreher, B.J. Connor, P.V. Johnston, A. Thomas, D. Shooter, M.P. Chipperfield, C.D. Rodgers, and G.H. Mount

Retrieved tropospheric and stratospheric BrO columns over Lauder, New Zealand

J. Geophys. Res. 109(D14)

Theory; BrO

2004, Steinbrecht W.

H. Claude, P. Winkler

Reply to comment by D. M. Cunnold et al. "Enhanced upper stratospheric ozone: Sign of recovery or solar cycle effect?"

J. Geophys. Res., 109, D14306
doi: 10.1029/2004JD004948
Lidar; Sonde; Ozone

2004, Steinbrecht, W.
Claude, H.; Winkler, P.
Reply to Comment by D.M. Cunnold et al. on "Enhanced Upper Stratospheric Ozone: Sign of Recovery or Solar Cycle Effect?"
J. Geophys. Res., 109, D02308
doi: 10.1029/2003JD004284
Lidar; Sonde; Ozone

2004, Steinbrecht, W.
Claude, H.; and Winkler, P
Enhanced Upper Stratospheric Ozone: Sign of Recovery or Solar Cycle Effect
J. Geophys. Res., 109, D02308
doi: 10.1029/2003JD004284
Sonde; Lidar; Ozone

2004, Struthers, H.
Kreher, K.; Austin, J.; Schofield, R.; Bodeker, G.; Johnston, P.; Shiona, H.; Thomas
A. Past and future simulations of NO₂ from a coupled chemistry-climate model in comparison with observations
Atmospheric Chemistry and Physics 4(8): 2227-2239
UVVis; Model; NO₂

2004, Sussmann, R.
Satellite plus ground-based FTIR measurements for tropospheric studies: towards an integrated global measurement system (IGMS) and an improved validation strategy, in "TROPOSAT - Sounding the troposphere from space: a new era for atmospheric chemistry
EUROTRAC-2 Subproject Final Report, P. Borell, P.M. Borell, J.P. Burrows, U. Platt, eds., Springer, ISBN 3-8236-1390-1, pp. 345-35
FTIR; Validation

2004, Wagner, T.
B. Dix, C. von Friedeburg, U. Frieß, S. Sanghavi, R. Sinreich, and U. Platt
MAX-DOAS O₄ measurements: A new technique to derive information on atmospheric aerosols – principles and information content
J. Geophys. Res., 109
doi: 10.1029/2004JD004904
UVVis; O₄, Aerosol

2004, P. Werle

S. Scherle, Eva Falge

Strahlungsvariabilität in einem Gerstenbestand (Radiation Variability in a barley stand)
in Rundgespräche der Kommission für Ökologie, Bd. 27 »Erhöhte UV-Strahlung: Folgen und
Maßnahmen«, pp. 47-55. 2004, Verlag Dr. Friedrich Pfeil, München
ISSN 0938-5851 - ISBN 3-89937448-1
Spectral UV; UV Irradiance

2004, F. Wittrock

H. Oetjen, A. Richter, S. Fietkau, T. Medeke, A. Rozanov, J. P. Burrows
MAX-DOAS measurements of atmospheric trace gases in Ny-Ålesund - Radiative transfer studies and
their application
Atmos. Chem. Phys., 4, 955-966
UVVis

2004, Wood, S.W.

Batchelor, R.L.; Goldman, A.; Rinsland, C.P.; Connor, B.J.; Murcray, F.J.; Stephen, T.M.; Heuff, D.L.
Ground-based nitric acid measurements at Arrival Heights, Antarctica, using solar and lunar Fourier
transform infrared observations
Journal of Geophysical Research 109(D18): D18307
doi.org/10.1029/2004JD004665
FTIR; HNO₃

2004, Yurganov, L.N.

T. Blumenstock, E.I. Grechko, F. Hase, E.J. Hyer, E.S. Kasischke, M. Koike, Y. Kondo, I. Kramer, F.-Y. Leung,
E. Mahieu, J. Mellqvist, J. Notholt, P.C. Novelli, C.P. Rinsland, H.E. Scheel, A. Shultz, A. Strandberg, R.
Sussmann, H. Tanimoto, V. Velazco, R. Zander, and Y. Zhao
A Quantitative Assessment of the 1998 Carbon Monoxide Emission Anomaly in the Northern
Hemisphere Based on Total Column and Surface Concentration Measurements
J. Geophys. Res., Vol. 109, No. D15, D15305
doi.org/10.1029/2004JD004559
FTIR; CO