

NDSC Publications - 1995

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1995, Chazette P., C. David, J. Lefrere, J. Pelon, S. Godin, and G. Megie, Study of the optical, geometrical and dynamical properties of stratospheric post-volcanic aerosols from lidar remote sensing at 532 nm, following the eruptions of El Chichon and Mt Pinatubo, *J. Geophys. Res.*, 100, 23195-23207, 1995. Lidar; Aerosol

1995, Adriani A.

T. Deshler, G. Di Donfrancesco, G.P. Gobbi

Polar stratospheric clouds and volcanic aerosol during the 1992 spring over McMurdo, Antarctica: Lidar and particle counter comparative measurements

J. Geophys. Res., 100, 25,877-25,897

Lidar; Sonde; Aerosol; PSC

1995, Beekmann, M.

G.Ancellet, D.Martin, C.Abonnel, G.Duverneuil, F.Eideliman, P.Bessemoulin, N.Fritz, and E.Gizard

Intercomparison of tropospheric ozone profiles obtained by electrochemical sondes, a ground-based lidar and an airborne UV-photometer

Atmos. Environ., 29, 1027-1042

Lidar; Sonde; UVVis; Ozone

1995, Bodeker, G.E.

Trends in total column ozone over Australia and New Zealand and its influence on clear-sky surface
erthemal irradiance

Radiation protection in Australia, 13, 39-49

Spectral UV; Ozone; Erythemal UV

1995, Clancy R.

D.O. Muhleman

Ground-based Microwave Spectroscopy of the Earth's Stratosphere and Mesosphere

Atmospheric Remote Sensing by Microwave Radiometry, M.A. Janssen, Ed., John Wiley & Sons, New York

Microwave

1995, Connor B.J.

A. Parish, J.-J. Tsou and M.P. Mc Cormick

Error analysis for the ground-based microwave ozone measurements during STOIC

J. Geophys. Res., 100, 9283-9291

Microwave; Ozone; Validation

1995, Crewell, S.

D. Cheng, R.L. de Zafra, and C. Trimble

Millimeter Wave Spectroscopic Measurements Over the South Pole, 1: A Study of Stratospheric Dynamics using N₂O Observations

J. Geophys. Res., 100, 20,839-20,844

Microwave; N₂O

1995, Delbouille, L.

Roland, G.

High-resolution solar and atmospheric spectroscopy from the Jungfraujoch high-altitude station

Optical Engineering, 34, 2736-2739

FTIR

1995, de Zafra, R.L.

J.M. Reeves, and D.T. Shindell

Chlorine Monoxide in the Antarctic Spring Vortex over McMurdo Station, 1993, I: Evolution of Midday Vertical Profiles

J. Geophys. Res., 100, 13,999-14,007

Microwave; ClO

1995, di Sarra, A.

M. Cacciani, G. Fiocco, D. Fua, T.S. Joergensen, B. Knudsen, N. Larsen, and I.S. Mikkelsen

Ozone and aerosol correlated observations at Thule, Greenland, in the period 1991-1994

J. Geophys. Res., 100, 25965-25977

Lidar; Ozone; Aerosol

1995, Donovan, D.P.

J.C. Bird, J.A. Whiteway, T.J. Duck, S.R. Pal, and A.I. Carswell

Lidar Observations of Stratospheric Ozone and Aerosol above the Canadian High Arctic During the 1994-95 Winter

Geophys. Res. Lett., 22, 3489-3492

Lidar; Ozone; Aerosol

1995, Elokhov, A.S.

A.N.Gruzdev

Estimation of tropospheric and stratospheric NO₂ from spectrometric measurements of column NO₂ abundances

SPIE, 2506, 444-455

UVVis; NO₂

1995, Emmons, L.K.

J.M. Reeves, D.T. Shindell, and R.L. de Zafra

Stratospheric ClO Profiles from McMurdo Station, Antarctica. Spring 1992

J. Geophys. Res., 100, 3049-3055

Microwave; ClO

1995, Ferrare, R. A.

T. J. McGee, D. Whiteman, J. Burris, M. Owens and J. Butler

Lidar Measurements of Stratospheric Temperature During STOIC, J. Geophys. Res., 100, 9303-9312

Lidar; Temperature

1995, Gross, M.

T. J. McGee, U. N. Singh, and P. Kimvilakani

Measurements of Stratospheric Aerosols with a Combined Rayleigh/Raman Lidar

Appl. Opt., 34, 6915-6924

Lidar; Aerosol

1995, Hofmann, D.

P. Bonasoni, M. De Maziere, F. Evangelisti, G. Giovanelli, A. Goldman, F. Goutail, J. Harder, R. Jakoubek, P. Johnston, J. Kerr, T. McElroy, R. McKenzie, G. Mount, J. P. Pommereau, P. Simon, S. Solomon, J. S tutz, A. Thomas, M. Van Roozendael, E. Wu

Intercomparison of UV/visible spectrometers for measurements of stratospheric NO₂ for the Network for the Detection of Stratospheric Change

J. Geophys. Res., 100, 16765-16791

UVVis; NO₂; Validation

1995, Hoppe, U.-P.

G. Hansen, and D. Opsvik

Differential absorption lidar measurements of stratospheric ozone at ALOMAR: First results

Eur. Space Agency Spec. Publ. SP370, 355-344, 1995.

Lidar; Ozone

1995, Jaeger, H.

T. Deshler, and D.J. Hofmann

Midlatitude lidar backscatter conversions based on balloonborne aerosol measurements

Geophys. Res. Lett., 22, 1729-1732

Lidar; Sonde; Aerosol

1995, Jaeger, H.

O. Uchino, T. Nagai, T. Fujimoto, V. Freudenthaler, and F. Homburg

Ground-based remote sensing of the decay of the Pinatubo eruption cloud at three northern hemisphere sites

Geophys. Res. Lett. 22, 607-610

Lidar; Aerosol; Volcano

1995, Johnson, B. J.

T. Deshler, R. Zhao

Ozone profile measurements over McMurdo Station, Antarctic in spring 1993; record low season

Geophys. Res. Lett., 22, 183-186

Sonde; Ozone

1995, Kampfer N.

Microwave remote sensing of the atmosphere in Switzerland

Optical Eng., 34, 2413-2424

Microwave

1995, Keckhut P.

A. Hauchecorne, and M.L. Chanin

Mid-latitude long-term variability of the middle atmosphere trends, and cyclic and episodic changes

J. Geophys. Res., 100, 18887-18897

Lidar; Temperature; Trends

1995, Koehler, U.

Homogenization and re-evaluation of the long-term ozone series at the Meteorological Observatory Hohenpeissenberg: Final report on the DWD-Project K/U 31, Abteilung Forschung Arbeitsergebnisse Nr. 31, 1995.

Dobson; Ozone; Time-Series

1995, Komhyr W.D.

Barnes R.A., Brothers G.B., Lathrop J.A., Opperman D.P.

Electrochemical concentration cell ozonesonde performance evaluation during STOIC 1989

J. Geophys. Res., 100, 9231-9244

Sonde; Ozone

1995, Komhyr, W. D.

B. J. Connor, I. S. McDermid, T. J. McGee, A.D. Parrish and J. J. Margitan

Comparison of STOIC 1989 Ground-Based Lidar, Microwave Radiometer, and Dobson

Spectrophotometer Umkehr Ozone Profiles With Ozone Profiles from Balloon-Borne ECC Ozonesondes

J. Geophys. Res., 100, 9273-9282

Lidar; Microwave; Sonde; Umkehr; Ozone; Validation

1995, Kreher, K.

M. Fiedler, T. Gomer, J. Stutz, and U. Platt

The latitudinal distribution (50N - 50S) of NO₂ and O₃ in October/November 1990

Geophys. Res. Lett., 22, 1217-1220

UVVis; Ozone; NO₂

1995, Larsen, N.

J. M. Rosen, N. T. Kjome, and B. Knudsen

Deliquescence and freezing of stratospheric aerosol observed by balloonborne backscattersondes

Geophys. Res. Lett., 22, 1233-1236

Sonde; Aerosol

1995, Liley, J.B.

Analytic solution of a one-dimensional equation for aerosol and gas dispersion in the stratosphere

J. Atmos. Sci., 52, 3283-3288

Theory; Aerosol

1995, Mahieu, E.

C. P. Rinsland, R. Zander, P. Demoulin, L. Delbouille, and G. Roland

Vertical Column Abundances of HCN deduced from Ground-Based Infrared Solar Spectra: Long-Term Trend and Variability

J. Atmos. Chem., 20, 299-310

FTIR; HCN

1995, Madronich, S.

McKenzie, R.; Caldwell, M.M.; Bjorn, L.O.

Changes in ultraviolet radiation reaching the Earth's surface

Ambio, 24, 143-152

Spectral UV; UV Irradiance

1995, Margitan, J. J.

R. A. Barnes, G. B. Brothers, J. Butler, J. Burris, B. J. Connor, R. A. Ferrare, J. B. Kerr, W. D. Komhyr, M. P. McCormick, I. S. McDermid, C. T. McElroy, T. J. McGee, A. J. Miller, M. Owens, A. D. Parrish, C. L.

Parsons, A. L. Torres, J. J. Tsou, T. D. Walsh, and D. Whiteman,

Stratospheric Ozone Intercomparison Campaign (STOIC) 1989: Overview,

J. Geophys. Res., 100, 9193-9208

Lidar; Microwave; Sonde; Ozone; Validation

1995, I. S. McDermid

NDSC and the JPL Stratospheric Lidars

The Review of Laser Engineering, 23, 97-103

Lidar

1995, McDermid, I. S.

S. M. Godin and T. D. Walsh, Results from the JPL Stratospheric Ozone Lidar During STOIC 1989

J. Geophys. Res., 100, 9263-9272

Lidar; Ozone; Validation

1995, McDermid, I. S.
T. D. Walsh
Surface Ozone Levels at Table Mountain During STOIC 1989
J. Geophys. Res., 100, 9301-9302
Lidar; Ozone

1995, McDermid, I. S.
T. D. Walsh, A. Deslis, and M. L. White
Optical Systems Design for a Stratospheric Lidar
Appl. Optics, 34, 6201-6210
Lidar

1995, McGee, T.J.
M. Gross, U.N. Singh, J. J. Butler, and P. Kimvilakani
An Improved Stratospheric Ozone Lidar
Opt. Engin., 34, 1421-1430
Lidar; Ozone

1995, Nedoluha, G. E.
R. M. Bevilacqua, R. M. Gomez, D. L. Thacker, W. B. Waltman, and T. A. Pauls
Ground-Based Measurements of Water Vapor in the Middle Atmosphere
J. Geophys. Res., 100, 2927
Microwave; H₂O

1995, Notholt, J.
I. Beninga, O. Schrems
Shipborne FTIR measurements of atmospheric trace gases on a South (33 M-OS) to North (53 M-ON)
Atlantic traverse
Applied Spectr., 49, 1525-1527
FTIR

1995, Notholt, J.
P. von der Gathen, S. Peil
Heterogeneous conversion of HCl and ClONO₂ during the Arctic winter 1992/93 initiating the ozone
depletion
J. Geophys. Res., 100, 11269-11274
FTIR; HCl; ClONO₂

1995, Notholt, J.
A. Meier, and S. Peil

Total column densities of tropospheric and stratospheric trace gases in the undisturbed Arctic summer atmosphere

J. Atmosph. Chem., 20, 311-332

FTIR;

1995, Notholt, J.

O. Schrems

Ground-based FTIR spectroscopic absorption measurements of stratospheric trace gases with the sun and moon as light sources

J. Mol. Structure, 347, 407-416

FTIR

1995, Oltmans, S. J.

Hofmann, D. J.

Increase in lower-stratospheric water vapour at a mid-latitude northern hemisphere site from 1981 to 1994

Nature, 374, 146–149

doi:10.1038/374146a0

Sonde; H₂O

1995, Pommereau, J. P.

F. Goutail, and A. Sarkissian

SAOZ Total Ozone Measurements in Antarctica. Comparisons with TOMS Versions 6 and 7

in Proc. 3rd Europ. Symp. on Polar Stratosph. Ozone, EC Ed., Air Pollution Research Report, 56, 516-520

UVVis; Satellite; Ozone; Validation

1995, Pougatchev, N.S.

Connor, B.J.; Rinsland, C.P.

Infrared measurements of the ozone vertical distribution above Kitt Peak

J. Geophys. Res., 100, 16,689-16,698

FTIR; Ozone

1995, Reisinger, A.R.

Jones, N.B.; Matthews, W.A.; Rinsland, C.P.

Southern hemisphere mid-latitude ground based measurements of ClONO₂: method of analysis, seasonal cycle, and long term trend

J. Geophys. Res., 100(D11), 23183-23193

FTIR; ClONO₂; Trend

1995, Rinsland, C. P.

B. J. Connor, N. B. Jones, I. Boyd, W.A. Matthews, A. Goldman, F. J. Murcray, D. G. Murcray, S. J. David, and N. S. Pougatchev

Comparison of infrared and Dobson total columns measured from Lauder, New Zealand
Geophys. Res. Lett., 23, 1025-1028
FTIR; Dobson

1995, Seckmeyer, G.
B. Mayer, G. Bernhard, R. L. McKenzie, P. V. Johnston, M. Kotkamp, C. R. Booth, T. Lucas, T.
Mestechkina, et al.
Geographical differences in the UV measured by intercompared spectroradiometers
Geophys. Res. Lett., 22, 1889-1892
Spectral UV; UV Irradiance; Validation

1995, Shindell, D.T.
R.L. de Zafrá
Chlorine Monoxide in the Antarctic Spring Vortex over McMurdo Station, 1993, II: A Comparison of
Measured and Modeled Diurnal Cycling
J. Geophys. Res., 101, 1475-1488
Microwave, Model, ClO, Diurnal

1995, Shindell, D.T.
R.L. de Zafrá
The Chlorine Budget of the Lower Stratosphere; Upper Limits on ClO, and Implications of New Cl₂ O₂
Photolysis Cross-sections
Geophys. Res. Lett., 22, 3215-3218
Microwave; ClO

1995, Sica, R. J. et al.
Lidar Measurements Taken with a Large-Aperture Liquid Mirror.1. Rayleigh-Scatter System. Applied
Optics 34, 6925-6936
Lidar; Temperature

1995, Siskind, D.E.
B.J. Connor, R.S. Eckman, E.E. Remsberg, J.J. Tsou, and A. Parrish
An Intercomparison of Model Ozone Deficits in the Upper Stratosphere and Mesosphere From Two
Datasets
J. Geophys. Res., 100., 11191-11201
Microwave; Model; Ozone

1995, Slaper, H.
H.A.J.M. Reinen, M. Blumthaler, M. Huber and F. Kuik
Comparing ground-level spectrally resolved solar UV measurements using various instruments: a
technique resolving effects of wavelength shift and slit width
Geophys. Res. Lett., 22 (20) 2721-2724

Spectral UV; UV Irradiance; Validation

1995, Stefanutti, L.

M. Morandi, M. Del Guasta, S. Godin and C. David

Unusual PSCs observed by lidar in Antarctica

Geophys. Res. Lett., 22, 2377-2380

Lidar; PSC

1995, Stiller, G.P.

T. von Clarmann, A. Wegner, M. Baumann, E. Frank, and H. Oelhaf

Retrieval of tropospheric versus stratospheric partitioning of HCl from ground-based MIPAS FTIR spectra

J. Quant. Spectrosc. Radiat. Transfer, 54, 899-912

FTIR; HCl

1995, Tsou, J. J.

B. J. Connor, A. Parrish, I. S. McDermid and W.P. Chu, Ground-Based Microwave Monitoring of Middle Atmosphere Ozone: Comparison to Lidar and SAGE II Satellite Observation

J. Geophys. Res., 100, 3005-3016

Lidar; Microwave; Satellite; Ozone; Validation

1995, Uchino, O.

T. Nagai, T. Fujimoto, W.A. Matthews and J. Orange

Extensive lidar observations of the Pinatubo aerosol layers at Tsukuba (36.1N), Naha (26.2N), Japan and Lauder (45.0S), New Zealand

Geophys. Res. Lett., 22, 57-60

Lidar, Aerosol; Volcano

1995, von der Gathen, P.

M. Rex, N. R. P. Harris, D. Lucic, B. M. Knudsen, G. O. Braathen, H. De Backer, R. Fabian, H. Fast, M. Gil, E.

Kyro, I. St. Mikkelsen, M. Rummukainen, J. Stahelin, and C. Varotsos

Observational evidence for chemical ozone depletion over the Arctic in winter 1991-92

Nature, 375, 131-134

Sonde; Ozone

1995, Wild, J. D.

M. E. Gelman, A. J. Miller, M. L. Chanin, A. Hauchecorne, P. Keckhut, R. Farley, P. D. Dao, J. W.

Meriwether, G. P. Gobbi, F. Congeduti, A. Adriani, I. S. McDermid, T. J. McGee and E. F. Fishbein

Comparison of stratospheric temperatures from several lidars, using National Meteorological Center and microwave limb sounder data as transfer references

J. Geophys. Res., 100, 11,105-11,111

Lidar; Satellite; Temperature; Validation