

Publications Relevant to NDSC – 1980s

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1980, Hauchecorne A.

M.L. Chanin

Density and Temperature Profiles Obtained by Lidar Between 35 and 70 km

Geophys. Res. Lett., 7, 565-568

Lidar; Temperature

1980, W.D. Komhyr

Operations handbook - ozone observations with a Dobson spectrophotometer

Global Ozone Research and Monitoring Project. Report 6, World Meteorological Organization, Geneva

Dobson; Ozone

1982, Reid E. Basher,

Review of the Dobson spectrophotometer and its accuracy

Global Ozone Research and Monitoring Project. Report 13, World Meteorological Organization, Geneva

Dobson; Error

1982, McKenzie, R. L.

P. V. Johnston

Seasonal variations in stratospheric NO₂ at 45 deg.S

Geophys. Res. Lett., 9, 1255-1258

UVVis; NO₂

1982, Thornton, D.C.

N. Niazy

Sources of background current in the ECC ozonesonde: implications for total ozone measurements

J. Geophys. Res., 87, 8943-8950

Sonde; Ozone

1983, Mastenbrook, H. J.

Oltmans, S. J.

Stratospheric water vapor variability for Washington, DC/Boulder, CO: 1964–82

J. Atmos. Sci., 40, 2157–2165

Sonde; H₂O

1983, McKenzie, R. L.

P. V. Johnston

Stratospheric nitrogen dioxide measurements at Arrival Heights, Antarctica

N.Z. Antarctic Record, 5, 12

UVVis; NO₂

1983, Rosen, J.M.

D.J. Hofmann

Unusual behavior in the condensation nuclei concentration at 30 km

J. Geophys. Res vol 88, 3725- 3731

Sonde; Aerosol

1984, Barthia, P.K.

K.F. Klenk, C.K. Wong, and D. Gordon

Intercomparison of the Nimbus 7 SBUV/TOMS Total Ozone Data Sets With Dobson and M83 Results

J. Geophys. Res., 89, 5239-5247

Dobson; Satellite; Ozone

1984, Johnston, P. V.

R. L. McKenzie

Long-path absorption measurements of tropospheric NO₂ in rural New Zealand

Geophys. Res. Lett., 11, 69-72

UVVis; NO₂

1984, Lobsiger E.

K.F. Kunzi and H.U. Dutsch

Comparison of stratospheric ozone profiles retrieved from microwave-radiometer and Dobson-spectrometer data

J. Atm. and Terr. Phys., 46, 799-806

Dobson; Microwave; Ozone

1984, Russell, P.B.

M.P. McCormick, T.J. Swissler, J.M. Rosen, D.J. Hofmann, and L.R. McMaster

Satellite and correlative measurements of the stratospheric aerosol III: Comparison of measurements made by SAMII, SAGE, dustsondes, filters, impactors, and Lidar

J. Atmos. Sci., vol. 41, 1792-1800

Sonde; Satellite; Aerosol; Validation

1985, Oltmans, S. J.

Measurements of water vapor in the stratosphere with a frost-point hygrometer, Moisture and Humidity

Measurement and Control in Science and Industry, 251–258

Sonde; H₂O

1986, Gelman, M. E.

A. J. Miller, K. W. Johnson, and R. M. Nagatani

Detection of long-term trends in global stratospheric temperature from NMC analyses derived from NOAA satellite data

Adv. Space Res., 6, 17-26

Satellite; Temperature; Trends

1986, Lobsiger E.

K.F. Kunzi

Night-time increase of mesospheric ozone measured with ground-based microwave radiometry

J. Atm. and Terr. Phys., 48, 1153-1158

Microwave; Ozone

1986, Pelon, J.

S. Godin, G. Megie

Upper Stratospheric (30-50 km) Lidar Observations of the Ozone Vertical Distribution

J. of Geophys. Res., 91, 8666-8671

Lidar; Ozone

1986, Rinsland, C. P.

R. Zander, L. R. Brown, C. B. Farmer, J. H. Park, R. H. Norton, J. M. Russell III, and O. F. Raper, Detection of carbonyl fluoride in the stratosphere

Geophys. Res. Lett., 13, 769-772

FTIR, COF₂

1986, Rosen, J.M.

D.J. Hofmann

Optical modeling of stratospheric aerosols: present status

Appl. Opts., vol 25/3, 410-419

Sonde; Model; Aerosol

1986, Zander, R.

C. P. Rinsland, C. B. Farmer, L. R. Brown, and R. H. Norton

Observation of several chlorine nitrate (ClONO₂) bands in stratospheric infrared spectra

Geophys. Res. Lett., 13, 757-761

FTIR; ClONO₂

1987, deZafra R.L.

M. Jaramillo, A. Parrish, P. Solomon, B. Connor, and J. Barrett

High concentrations of chlorine monoxide at low altitudes in the Antarctic spring stratosphere: diurnal variation

Nature, 328, 408-411

Microwave, ClO, Diurnal

1987, Farmer, C.B.

G.C.Toon, P.W.Schaper, J.-F.Blavier, and L.L.Lowes

Stratospheric Trace Gases in the Spring 1986 Antarctic Atmosphere

Nature, 32, 126-130

FTIR

1987, Lobsiger E.

Ground-based microwave radiometry to determine stratospheric and mesospheric ozone

J. Atm. and Terr. Phys., 49, 493-501

Microwave; Ozone

1987, McDermid, I. S.

Ground-based Lidar and Atmospheric Studies

Geophysical Surveys, 9, 107-122

Lidar

1987, Mount, G. H.

R.W. Sanders, A.L. Schemltekopf, and S. Solomon

Visible spectroscopy at McMurdo Station, Antarctica, 1. Overview and daily variations of NO₂ and O₃, austral spring, 1986

Geophys. Res., 92, 8320-8328

UVVis; Ozone; NO₂

1987, Raper, O. F.

C. B. Farmer, R. Zander, and J. H. Park

Infrared spectroscopic measurements of halogenated sink and reservoir gases in the stratosphere with the ATMOS instrument

J. Geophys. Res., 92, 9851-9858

FTIR

1987, Solomon P.M.

B.Connor, R.L. deZafra, A. Parrish, J. Barrett, and M. Jaramillo

High concentrations of chlorine monoxide at low altitudes in the Antarctic spring stratosphere: secular variation

Nature, 328, 411-413

Microwave; ClO

1987, Solomon, S.

G.H. Mount, R.W. Sanders and A.L. Schemltekopf

Visible spectroscopy at McMurdo Station, Antarctica, 2. Observation of OClO

J. Geophys. Res., 92, 8329-8338

UVVis, OClO

1987, Solomon, S.
A.L. Schmeltekopf, and R.W. Sanders
On the interpretation of zenith sky absorption measurements
J. Geophys. Res., 92, 8311-8319
UVVis

1987, Zander, R.
C. P. Rinsland, C. B. Farmer, and R. H. Norton
Infrared spectroscopic measurements of halogenated source gases in the stratosphere with the ATMOS instrument
J. Geophys. Res., 92, 9836-9850
FTIR

1987, Zander, R.
G. Roland, L. Delbouille, A. J. Sauval, P. Marché, F. Karcher, M. Amoudei, and B. Dufour
Concentration of hydrogen chloride and hydrogen fluoride measured during the MAP/GLOBUS campaign of September 1983
Planet. Space Sci., 35, 665-672
FTIR; HCl; HF

1987, Zander, R.
G. Roland, L. Delbouille, A. J. Sauval, C. B. Farmer, and R. H. Norton
Monitoring of the integrated column of hydrogen fluoride above the Jungfraujoch station since 1977 - the HF/HCl column ratio
J. Atmos. Chem., 5, 385-394
FTIR; HF; HCl

1987, Zander, R.
G. Roland, L. Delbouille, A. J. Sauval, C. B. Farmer, and R. H. Norton
Column abundance and long-term trend of hydrogen chloride (HCl) above the Jungfraujoch station
J. Atmos. Chem., 5, 395-404
FTIR; HCl

1988, Barrett J.W.
P.M. Solomon, R.L. deZafra, M. Jaramillo, L. Emmons, and A. Parrish
Formation of the Antarctic ozone hole by the ClO dimer mechanism
Nature, 336, 455-458
Microwave; ClO; Ozone

1988, McKenzie, R. L.

W. A. Matthews, Y. Kondo, R. Zander, Ph. Demoulin, P. Fabian, D. G. Murcray, F. J. Murcray, O. Lado-Bordowsky, C. Camy-Peyret, H. K. Roscoe, J. A. Pyle, and R. D. McPeters
Intercomparison of NO column measurements during MAP/GLOBUS 1985
J. Atmos. Chem., 7, 353-367
FTIR; NO; Validation

1988, Parrish, A.
R.L. de Zafra, P.M. Solomon, and J.W. Barrett
A ground-based technique for millimeter wave spectroscopic observations of stratospheric trace constituents
Radio Sci., 23, 106-118
Microwave

1988, Pommereau, J.P.
F. Goutail
O3 and NO2 Ground-Based Measurements by Visible Spectrometry during Arctic Winter and Spring 1988
Geophys. Res. Lett., 15, 891
UVVis; Ozone; NO2

1988, Pommereau, J.P.
F. Goutail
Stratospheric O3 and NO2 Observations at the Southern Polar Circle in Summer and Fall 1988
Geophys. Res. Lett., 15, 895
UVVis; Ozone; NO2

1988, Zander, R.
Ph. Demoulin
Spectroscopic evidence for the presence of the v4 - Q branch of chlorine nitrate (ClONO2) in ground-based infrared solar spectra
J. Atmos. Chem., 6, 191-200
FTIR; ClONO2

1989, G. Ancellet
A. Papayannis, J. Pelon, and G. Megie
DIAL Tropospheric Ozone Measurement Using a Nd:YAG Laser and the Raman Shifting Technique
J. Atmos. Oceanic Technol., 6, 832-839
Lidar; Ozone

1989, Godin S.
G. Megie, J. Pelon
Systematic Lidar Measurements of the Stratospheric Ozone vertical Distribution
Geophys. Res. Lett., 16, 547-550

Lidar; Ozone

1989, Johnston, P. V.

R. L. McKenzie

NO₂ observations at 45°S during the decreasing phase of Solar Cycle 21, from 1980 to 1987

J. Geophys. Res., 94, 3473-3486

UVVis; NO₂

1989, Kroeger, B.C.

R. Neuber, S. El Naggar, H. Walther

Measurements of ozone profiles by a LIDAR method during the arctic winter and spring 1988, in Ozone in the Atmosphere, R.D. Bojkov, P. Fabian, eds, A. Deepak, Hampton

Lidar; Ozone

1989, Lenoble, J.

Presentation of the European Correlative Experiment Program for SAGE II

J. Geophys. Res., 94, 8395-8398

Satellite

1989, Murcray, F. J.

A. Goldman, R. Blatherwick, W. A. Matthews, and N. B. Jones

HNO₃ and HCl amounts over McMurdo during the spring of 1987

J. Geophys. Res., 94, 16615-16619

FTIR; HNO₃; HCl

1989, Osborn, M.T.

J.M. Rosen, M.P. McCormick, Pi-Huan Wano, J.M. Livingstyon, and T.J. Swissler

Sage II aerosol correlative observations: profile measurements

J. Geophys. Res., vol. 94, p8353-8366

Sonde; Satellite; Aerosol; Validation

1989, Rosen, J.M.

S.J.Oltmans, W.F.Evans

Balloon borne observations of PSCs, frost point, ozone and nitric acid in the north polar vortex

Geophys. Res. Lett., 16, 791-794

Sonde; Ozone; PSC; H₂O; HNO₃

1989, Sacco V.M. et al.

Elastic backscattering Lidar System for Atmospheric measurements in Antarctica

Opt. & Quant. Electr., 21, 215-226

Lidar; Aerosol

1989, Sugimoto, N., Y. Sasano, H. Nakane, S. Hayashida-Amano, I. Matsui and A. Minato
Multiple-wavelength laser radar for measuring stratospheric and tropospheric ozone profiles
Oyobutsuri, 56, 1385-1397 (in Japanese)
Lidar; Ozone

1989, Toon, G.C.
C.B.Farmer, P.W.Schaper, J.-F.Blavier, and L.L.Lowes
Ground-based Infrared Measurements of Tropospheric Source Gases over Antarctica during the 1986
Austral Spring
J.Geophys.Res., 94, 11613-11624
FTIR

1989, Toon, G.C.
C.B.Farmer, L.L.Lowes, P.W.Schaper, J.-F.Blavier, and R.H.Norton
Infrared Aircraft Measurements of Stratospheric Composition over Antarctica during September 1987
J.Geophys.Res., 94, 16571-16596
FTIR

1989, Zander, R.
Ph. Demoulin, D. H. Ehhalt, U. Schmidt, and C. P. Rinsland
Secular increase of the total vertical column abundance of carbon monoxide above central Europe since
1950
J. Geophys. Res., 94, 11,020-11,028
FTIR; CO

1989, Zander, R.
Ph. Demoulin, D. H. Ehhalt, and U. Schmidt
Secular increase of the vertical column abundance of methane derived from IR solar spectra recorded at
the Jungfraujoch station
J. Geophys. Res., 94, 11,029-11,039
FTIR; CH₄

1989, Zommerfelds W.C.
K.F. Kunzi, M.E. Summers, R.M. Bevilacqua, D.F. Strobel, M. Allan and W.J. Sawchuck
Diurnal variations of mesospheric ozone obtained by ground-based microwave radiometry
J. Geophys. Res., 94, 12819-12832
Microwave; Ozone; Diurnal