

NDSC Publications - 2001

2001, Bais, A.F.

B.G. Gardiner, H. Slaper, M. Blumthaler, G. Bernhard, R.L. McKenzie, A.R. Webb, G. Seckmeyer, B. Kjeldstad, T. Koskela, P. Kirsch, J. Groebner, J.B. Kerr, S. Kazadzis, K. Leszczynski, D. Wardle, C. Brogniez, W. Josefsen, D. Gillotay, H. Reinen, P. Weihs, T. Svenoe, P. Eriksen, F. Kuik, and A. Redondas
SUSPEN intercomparison of ultraviolet spectroradiometers
J. Geophys. Res., 106, 12,509-12,526
Spectral UV; UV Irradiance; Validation

2001, Barnes, J. E.

D. J. Hofmann

Variability in the Stratospheric Background Aerosol over Mauna Loa Observatory
Geophys. Res. Lett., 2859-2863

2001, M.R. Bassford

C.A. McLinden, and K. Strong

Zenith-Sky Observations of Stratospheric Gases: The Sensitivity of Air Mass Factors to Geophysical Parameters and the Influence of Tropospheric Clouds
J. Quant. Spectrosc. Radiat. Transfer, 68, 657-677
UVVis; Clouds, Validation

2001, Beyerle, G.

Deckelmann, H., Neuber, R., Rosen, J. M., Reimer, E., Schoeberl, M. R. (2001). Occurrence of solid particles in the winter polar stratosphere above the nitric acid trihydrate co-existence temperature inferred from ground-based polarization lidar observations at Ny-Ålesund, Spitsbergen
J. Geophys. Res., 106, 2979-2992
Lidar; Aerosol

2001, Beyerle, G.

M. R. Gross, D. A. Haner, N. T. Kjome, I. S. McDerimid, T. J. McGee, M. J. Rosen, H.-J. Schäfer and O. Schrems
A lidar and backscatter sonde aerosol measurement campaign at Table Mountain during February-March 1997: Observations of cirrus clouds
J. Atmospheric Sciences, 58, 1275-1287
Lidar; Sonde; Aerosol; Cloud

2001, Bodeker, G.E.

Connor, B.J.; Liley, J.B.; Matthews, W.A.

The global mass of ozone: 1978-1998
Geophys. Res. Lett., 28, 2819-2822

Dobson; Ozone

2001, Bodeker, G. E.

J. C. Scott, K. Kreher, and R. L. McKenzie

Global ozone trends in potential vorticity coordinates using TOMS and GOME intercompared against the Dobson networks: 1978-1998

J. Geophys. Res., 106, 23,029-23,042

Satellite; Dobson; Ozone; Trends

2001, Calisesi, Y.

H. Wernli, N. Kämpfer

Midstratospheric ozone variability over Bern related to planetary wave activity during the winters 1994-1995 to 1998-1999

J. Geophys. Res., 106, 7903-7916

Microwave; Ozone

2001, De La Casinière, A.

T. Cabot, M. L. Touré, D. Masserot

Method for correcting the wavelength misalignment in measured UV spectra

Applied Optics 40 (33), 6130-6135

Spectral UV; UV Irradiance; Validation

2001, deZafra, R. L.

S. P. Smyshlyaev

On the formation of HNO₃ in the Antarctic mid to upper stratosphere in Winter

JGR, 106, 23,115-23,125

Microwave; HNO₃

2001, Frieß, U.

T. Wagner, I. Pundt, K. Pfeilsticker, and U. Platt

Spectroscopic measurements of tropospheric iodine oxide at Neumayer station, Antarctica

Geophys. Res. Lett, 28, 1941-1944

UVVis; IO

2001; Gernandt, H.

Neuber, R., von der Gathen, P.

Recent contributions to long-term atmospheric studies at Koldewey-Station.

Mem. Natl Inst. Polar Res., Spec. Issue, 54, 49-63

Lidar; Sonde

2001, Gerrard, A.J.

T.J. Kane, J.P. Thayer, C.S. Ruf, and R.L. Collins

Consideration of non-Poisson distributions for Lidar applications

Applied Optics, 40, (9),1488-1492

Lidar

2001, A. C. Green

L. M. Bartlett and G. Vaughan

SAOZ measurements of total ozone at Aberystwyth

J. Quant. Spec. Radiat. Transfer 69, 231-243

UVVis; Ozone

2001, Godin S.

V. Bergeret, S. Bekki, C. David, G. Megie

Study of the interannual ozone loss and the permeability of the Antarctic Polar Vortex from long-term aerosol and ozone lidar measurements in Dumont d'Urville (66.4M-0, 140M-0S)

J. Geophys. Res., 106, 1311-1330

Lidar; Aerosol; Ozone

2001, Höpfner M.

T. Blumenstock, F. Hase, A., Zimmermann, H. Flentje, S. Fueglistaler

Mountain polar stratospheric cloud measurements by ground based FTIR solar absorption spectroscopy

Geophys. Res. Lett. 28, 2189 – 2192

FTIR; PSC

2001, Jones, N. B.

C. P. Rinsland, J. B. Liley, and J. M. Rosen

Correlation of Aerosol and Carbon Monoxide at 450S, Evidence of Biomass burning Emissions

Geophys. Res. Lett. 28, 709-712

FTIR; Aerosol; CO

2001, Keckhut P

Temperature trends in the stratosphere and mesosphere Greenhouse Gases, Aerosols and Dust

Adv. in Space Research 28 (7), 955-959

Theory; Temperature; Aerosol; Trends

2001, Keckhut P.

Wild J., Gelman M., Miller A.J., and Hauchecorne A.

Investigations on Long-Term Temperature Changes in the upper stratosphere using lidar data and NCEP analyses

J. Geophys. Res., 106, 7937-7944

Lidar; Satellite; Temperature

2001, Kivi, R.

Kyrö, E., Dörnbrack, A. and Birner, T.

Observations of vertically thick polar stratospheric clouds and record low temperature in the Arctic vortex

Geophys. Res. Lett., 28, 3661-3664

Dobson; Sonde; PSC; Temperature

2001, Klein, U.

Wohltmann I., Lindner, K., Künzi, K. F.

Ozone depletion and chlorine activation in the Arctic winter 1999/2000 observed in Ny-Ålesund
JGR, 107, 8288

doi:10.1029/2001JD000543

Microwave; Ozone; Cl

2001, Krins, A.

B. Dörschel, P. Knuschke, H.K. Seidlitz and S. Thiel

Determination of the calibration factor of polysulphone film UV dosimeters for terrestrial solar radiation
Radiation Protection Dosimetry 95(4), 345-352

Spectral UV; UV Irradiance; Validation

2001, Lambert, J.-C.

Claude, H. et al.

Combined characterisation of GOME and TOMS total ozone measurements from space using ground-based observations from the NDSC

Adv. Space Res., 26,1931-1940

Lidar; Sonde; UVVis; Satellite; Ozone

2001, Leblanc T.

I. S. McDermid

Quasi-biennial Oscillation Signatures in Ozone and Temperature Observed by Lidar at Mauna Loa, Hawaii, (19.5°N, 155.6°W)

J. Geophysical Research, 106, 14,869-14,874

Lidar; Ozone; Temperature

2001, Lemoine, Rene

H. De Backer

Assessment of the Uccle ozone sounding time series quality using SAGE II data

J. Geophys. Res., 106, 14515-14523

Sonde; Satellite; Ozone; Validation

2001, Liley, J. B.

J. M. Rosen, N. T. Kjöme, N. B. Jones, and C. P. Rinsland

Springtime Enhancement of upper Tropospheric Aerosol at 450S

Geophys. Res. Lett., 28, 1495-1498

FTIR; Aerosol

2001, McKenzie, R. L.

P. V. Johnston, D. Smale, B. Bodhaine, and S. Madronich

Altitude effects on UV Spectral Irradiance deduced from measurements at Lauder, New Zealand and at Mauna Loa Observatory, Hawaii.

J. Geophys. Res., 106, 22,845-22,860

Spectral UV; UV Irradiance; Validation

2001, McKenzie, R. L.

G. Seckmeyer, A. Bais, and S. Madronich

Satellite retrievals of Erythemal UV dose compared with ground-based measurements at Northern and Southern mid-latitudes

J. Geophys. Res., 106, 24,051 -24,062

Spectral UV; Satellite; Erythemal UV; Validation

2001, McLinden CA

Olsen SC, Prather MJ, Liley JB

Understanding trends in stratospheric NO_y and NO₂

J. Geophys. Res., 106 (D21), 27787-27793

Theory; NO_y; NO₂; Trends

2001, Mueller, M.

Neuber, R., Beyerle, G., Kyroe, E., Kivi, R., Woeste, L.

Non-uniform PSC occurrence within the Arctic polar vortex

Geophys. Res. Lett., 28 (22), 4175-4178

Lidar; Aerosol

2001, Nagai, T.

A. Ichiki, M. Nakazato, O. Uchino, T. Fujimoto, K. Mizutani, M. Yasui, T. Itabe, T. Shibata, S. Ishii and H.

Fast

Polar Stratospheric Clouds Observed at Eureka in Canadian Arctic

Advances in Laser Remote Sensing, 389-392

Lidar; Aerosol; PSC

2001, Neuber, R.

Beyerle, G., Gathen, P. von der, Wahl, P., Dahl, A., Gross, M., McGee, Th., Klein, U., Steinbrecht, W.

An intercomparison campaign of ozone and temperature measurements in the Arctic (NAOMI-98, Ny-Ålesund/Spitsbergen)

Mem. Natl Inst. Polar Res., Spec. Issue, 54, 65-70

Lidar; Ozone; Temperature; Validation

2001, Neuber, R.

Beyerle, G., von der Gathen, P., Wahl, P., Dahl, A., Gross, M., McGee, Th., Klein, U., Steinbrecht, W.
An intercomparison campaign of ozone and temperature measurements in the Arctic (NAOMI-98, Ny-
Ålesund/Spitsbergen)

Mem. Natl. Inst. Polar Res., Spec. Issue, 54, 65-70

Sonde; Ozone; Temperature; Validation

2001; Oltmans, S.J.

B.J. Johnson, J.M. Harris, H. Vömel, A.M. Thompson, K. Koshy, P. Simon, R.J. Bendur, J.A. Logan, F.
Hasebe, M. Shiotani, V. Kirchhoff, M. Maata, G. Sami, A. Samad, J. Tabuadravu, H. Enriquez, M. Agama, J.
Cornejo, F. Paredes

Ozone in the Pacific tropical troposphere from ozonesonde observations

J. Geophys. Research, 106, 32503-32525

Sonde; Ozone

2001, Orsolini, Y.

G. Hansen, G.L. Manney, M. Livesey, and U.-P. Hoppe

Lagrangian re-construction of ozone column and profile at the Arctic Lidar Observatory for Middle
Atmosphere Research (ALOMAR) throughout the winter and spring 1997-1998

J. Geophys. Res., 106, 10,011-10,021

Lidar; Ozone

2001, Perrin, A.

J.-M. Flaud, F. Keller, M. A. H. Smith, C. P. Rinsland, V. Malathy Devi, D. C. Benner, T. M. Stephen, and A.
Goldman

The $\nu_1 + \nu_3$ Bands of the $^{16}\text{O}^{17}\text{O}^{16}\text{O}$ and $^{16}\text{O}^{16}\text{O}^{17}\text{O}$ Isotopomers of Ozone

J. Mol. Spectrosc., 207, 54-59

FTIR; Ozone

2001, Ramaswamy V.

M.L. Chanin, J. Angell, J. Barnett, D. Gaffen, M. Gelman, P. Keckhut, Y. Kolshelkov, K. Labitzke, J.-J. R. Lin,
A. O'Neill, J. Nash, W. Randel, R. Rood, K. Shine, M. Shiotani, and R. Swinbank

Stratospheric temperature changes: observations and model simulations

Rev. Geophys., 39, 71-122

Lidar; Model; Temperature

2001, Rinsland, C. P.

A. Goldman, R. Zander, and E. Mahieu

Enhanced Tropospheric HCN Columns above Kitt Peak during the 1982-1983 and 1997-1998 El Niño
Warm Phases

J. Quant. Spectrosc. Radiat. Transfer, 69, 3-8

FTIR; HCN

2001, Rinsland, C. P.

A. Meier, D. W. T. Griffith, and L. S. Chiou

Ground-based Measurements of Tropospheric CO, C₂H₆, and HCN from Australia at 34°S Latitude during 1997-1998

J. Geophys. Res., 106, 20,913-20,924

FTIR; CO; C₂H₆; HCN

2001, Roscoe, H.K.

A.J. Charlton, D.J. Fish, J.G.T. Hill

Improvements to the accuracy of measurements of NO₂ by zenith-sky visible spectrometers II: errors in offset using a more complete chemical model

J. Quant. Spectrosc. Radiat. Trans., 68, 337-349

UVVis; NO₂; Model; Validation

2001, Roscoe, H.K.

J.G.T. Hill, A.E. Jones, A. Sarkissian

Improvements to the accuracy of zenith-sky measurements of total ozone by visible spectrometers II: use of daily air-mass factors

J. Quant. Spectrosc. Radiat. Trans., 68, 327-336

UVVis; Ozone; Validation

2001, Roscoe, H. K.

K. Kreher, and U. Frieß

Ozone loss episodes in the free Antarctic troposphere, suggesting a possible climate feedback

Geophys. Res. Lett., 28, 2911-2914

UVVis; Ozone

2001, Roscoe, H.K.

A.M. Lee

Increased stratospheric greenhouse gases could delay recovery of the ozone hole and of ozone loss at Southern mid-latitudes

Adv. Space Res., 28, 965-970

UVVis; Ozone

2001, Rosenlof, K. H.

S. J. Oltmans, D. Kley, J. M. Russell, E-W. Chiou, W. P. Chu, D. G. Johnson, K. K. Kelly, H. A. Michelsen, G.

E. Nedoluha, E. E. Remsberg, G. C. Toon, and M. P. McCormick

Stratospheric water vapor increases over the past half-century

Geophys. Res. Lett., 28, 1195-1198

Microwave; H₂O

2001, Santacesaria V.

A.R. MacKenzie and L. Stefanutti

A climatological study of polar stratospheric clouds (1989-1997) from lidar measurements over Dumont d'Urville (Antarctica)

Tellus (B), 53, 306-321

Lidar; PSC

2001, Schulz, A.

Rex, M., Harris, N. R. P., Braathen, G. O., Reimer, E., Alfier, R., Kilbane-Dawe, I., Eckermann, S., Allaart, M., Alpers, M., Bojkov, B., Cisneros, J., Claude, H., Cuevas, E., Davies, J., De Backer, H., Dier, H., Dorokhov, V., Fast, H., Godin, S., Johnson, B., Kois, B., Kondo, Y., Kosmidis, E., Kyrö, E., Litynska, Z., Mikkelsen, I. S., Molyneux, M. J., Murphy, G., Nagai, T., Nakane, H., O'Connor, F., Parrondo, C., Schmidlin, F. J., Skrivankova, P., Varotsos, C., Vialle, C., Viatte, P., Yushkov, V., Zerefos, C., von der Gathen, P.

Arctic ozone loss in threshold conditions: Match observations in 1997/1998 and 1998/1999

J. Geophys. Res., 106, 7,495-7,503

Sonde; Ozone

2001, Seidlitz, H.K.

S. Thiel, A. Krins and H. Mayer

Solar radiation at the Earth's surface. In: P.U. Giacomoni (ed.) Sun protection in man
Comprehensive Series in Photoscience Vol.3, Elsevier: 705-738.

Spectral UV; UV Irradiance

2001, Smith, M. A. H.

V. Malathy Devi, D. C. Benner, and C. P. Rinsland

Absolute Intensities of 1603 Lines in the 9-11 μm Region

J. Geophys. Res., 106, 9909-9921

FTIR

2001, Steinbrecht, W.

Claude, H., Köhler, U., Winkler, P

Interannual changes of total ozone and northern hemisphere circulation patterns

Geophys. Res. Lett., 28, 1191-1194

Lidar; Sonde; Ozone

2001, Suortti, T.

Karhu, J., Kivi, R., Kyrö, E., Rosen, J., Kjome, N., Larsen, N., Neuber, R., Khattatov, V., Rudakov, V., Yushkov, V. and Nakane H.

Evolution of the Arctic stratospheric aerosol mixing ratio measured with balloon-borne aerosol backscatter sondes for years 1988-2000

J. Geophys. Res., 106, 20759-20766

Sonde; Ozone

2001; G. Vaughan

H. Gouget, F. M. O'Connor and D. Wier

Fine scale layering on the edge of a stratospheric intrusion

Atmos. Environ., 35, 2215-2221

Sonde

2001, Weihs, P.

T. Martin, G. Seckmeyer, D. Schmucki, R. Philipona, C. Sergent, E. Pougatch, M. Blumthaler, J. Gröbner, A. de La Casinière, T. Cabot, J. Lenoble, D. Masserot, S. Simic, G. Rengarajan, A. Albold, T. Pichler, M. Mueller

Modelling the effect of an inhomogeneous surface albedo on incident UV radiation in mountainous terrain: determination of an effective surface albedo

J. Geophys. Res. 28 (16), 3111-3114

Spectral UV; Model; UV Irradiance

2001, Wickert, J.

Ch. Reigber, G. Beyerle, R. König, C. Marquardt, T. Schmidt, L. Grunwaldt, R. Galas, T.K. Meehan, W.G. Melbourne, and K. Hocke

Atmosphere sounding by GPS radio occultation: First results from CHAMP

Geophys. Res. Lett., 28, 3263-3266

Satellite