

NDACC Publications – 2019

Latest updates – 6/23/2021

2019, Agustí-Panareda, A.

Diamantakis, M., Massart, S., Chevallier, F., Muñoz-Sabater, J., Barré, J., Curcoll, R., Engelen, R., Langerock, B., Law, R. M., Loh, Z., Morguí, J. A., Parrington, M., Peuch, V.-H., Ramonet, M., Roehl, C., Vermeulen, A. T., Warneke, T., and Wunch, D.

Modelling CO₂ weather – why horizontal resolution matters

Atmos. Chem. Phys., 19, 7347–7376,

doi:10.5194/acp-19-7347-2019

FTIR; Model; CO₂

2019, Baars, H.

Ansmann, A., Ohneiser, K., Haarig, M., Engelmann, R., Althausen, D., Hanssen, I., Gausa, M., Pietruczuk, A., Szkop, A., Stachlewska, I. S., Wang, D., Reichardt, J., Skupin, A., Mattis, I., Trickl, T., Vogelmann, H., Navas-Guzmán, F., Haeefe, A., Acheson, K., Ruth, A. A., Tatarov, B., Müller, D., Hu, Q., Podvin, T., Goloub, P., Veselovskii, I., Pietras, C., Haeffelin, M., Fréville, P., Sicard, M., Comerón, A., Fernández García, A. J., Molero Menéndez, F., Córdoba-Jabonero, C., Guerrero-Rascado, J. L., Alados-Arboledas, L., Bortoli, D., Costa, M. J., Dionisi, D., Liberti, G. L., Wang, X., Sannino, A., Papagiannopoulos, N., Boselli, A., Mona, L., D'Amico, G., Romano, S., Perrone, M. R., Belegante, L., Nicolae, D., Grigorov, I., Gialitaki, A., Amiridis, V., Soupiona, O., Papayannis, A., Mamouri, R.-E., Nisantzi, A., Heese, B., Hofer, J., Schechner, Y. Y., Wandinger, U., and Pappalardo, G.

The unprecedented 2017–2018 stratospheric smoke event: decay phase and aerosol properties observed with the EARLINET

Atmos. Chem. Phys., 19, 15183–15198

doi: 10.5194/acp-19-15183-2019.

Lidar; Aerosol

2019, Bahramvash Shams, S.

Walden, V. P., Petropavlovskikh, I., Tarasick, D., Kivi, R., Oltmans, S., Johnson, B., Cullis, P., Sterling, C. W., Thölix, L., and Errera, Q.

Variations in the vertical profile of ozone at four high-latitude Arctic sites from 2005 to 2017

Atmos. Chem. Phys., 19, 9733–9751

doi: 10.5194/acp-19-9733-2019

Sonde; Ozone

2019, Bais, A. F.

G. Bernhard, R. L. McKenzie, P. J. Aucamp, P. J. Young, M. Ilyas, P. Jöckel, and M. Deushi

Ozone–climate interactions and effects on solar ultraviolet radiation

Photochem. Photobiol. Sci., 18, 602–640

DOI: 10.1039/C8PP90059K

Spectral UV; Ozone; UVB

Barnes, P. W., et al. (2019), Contributions of the Montreal Protocol to a sustainable Earth, *Nature Sustainability*, doi:10.1038/s41893-019-0314-2. Bernhard, G. H., et al. (2020), Environmental effects of stratospheric ozone depletion, UV radiation and interactions with climate change: UNEP Environmental Effects Assessment Panel, update 2019, *Photochem. Photobiol. Sci.*, 19, 542-584
doi: 10.1039/d0pp90011g.

Spectral UV; Ozone; UVB

2019, Becagli, S.

Amore A., Caiazza L., Di Iorio Tatiana, di Sarra Alcide, Lazzara L., Marchese C., Meloni Daniela, Mori G., Muscari G., et al.

Biogenic aerosol in the Arctic from eight years of MSA data from Ny Ålesund (Svalbard Islands) and Thule (Greenland)

Atmosphere, Volume 10, Number 7, (2019)

Lidar; Aerosol

2019, Bernet L.

von Clarmann T., Godin-Beekmann S., Ancellet G., Maillard Barras E., Stübi R., Steinbrecht W., Kämpfer N., Hocke K.

Ground-based ozone profiles over central Europe: incorporating anomalous observations into the analysis of stratospheric ozone trends

Atmospheric Chemistry and Physics, 19 (7), pp.4289-4309

doi: 10.5194/acp-19-4289-2019

Microwave; Sonde; Ozone; Trends

2019, K. Bogner

X. Zhao, K. Strong, C.D. Boone, A.E. Bourassa, D.A. Degenstein, J.R. Drummond, A. Duff, F. Goutail, D. Griffn, P.S. Jeffery, E. Lutsch, G.L. Manney, C.T. McElroy, C.A. McLinden, L.F. Millan, A. Pazmino, C.E. Sioris, K.A. Walker, and J. Zou

Updated validation of ACE and OSIRIS ozone and NO₂ measurements in the Arctic using ground-based instruments at Eureka, Canada

J. Quant. Spectrosc. Rad. Transfer, 238, 106571

doi: 10.1016/j.jqsrt.2019.07.014

FTIR; UVVis; Satellite; Ozone; NO₂; Validation

2019, Brunamonti, S.

L. Füzér, T. Jorge, Y. Poltera, P. Oelsner, S. Meier, R. Dirksen, M. Naja, S. Fadnavis, J. Karmacharya, F. G. Wienhold, B. P. Luo, H. Wernli, and T. Peter

Water Vapor in the Asian Summer Monsoon Anticyclone: Comparison of Balloon-Borne Measurements and ECMWF Data

Journal of Geophysical Research: Atmospheres, 124(13), 7053–7068

doi:10.1029/2018JD030000

Sonde; H2O

2019, Cadet, J.-M.

H. Bencherif, D. J. du Preez, T. Portafaix, N. Sultan-Bichat, M. Belus, C. Brogniez, F. Auriol, J.-M. Metzger, K. Ncongwane, G. J. R. Coetzee and C. Y. Wright

Solar UV Radiation in Saint-Denis, La Réunion and Cape Town, South Africa: 10 years Climatology and Human Exposure Assessment at Altitude

Atmosphere 2019, 10, 589

doi:10.3390/atmos10100589

Spectral UV

2019, Chesnokova T.Yu.

Makarova M.V., Chentsov A.V., Voronina Yu.V., Zakharov V.I., Rokotyan N.V. and Langerock B.

Retrieval of Carbon Monoxide Total Column in the Atmosphere from High Resolution Atmospheric Spectra

Atmospheric and Oceanic Optics, V. 32. No. 04. pp. 378–386

doi: 10.1134/S1024856019040031

FTIR; CO

2019, Davis, S.M.

K.H. Rosenlof, D.F. Hurst, H.B. Selkirk, and H. Voemel

Stratospheric Water Vapor [in “State of the Climate in 2018”]

Bull. Amer. Meteor. Soc., 100 (9), S56-S58

doi:10.1175/2019BAMSStateoftheClimate.1

Sonde; H2O

2019, Denton M.H

Kivi R, Ulich T, Rodger C.J, Clilverd M.A, Denton J.S, Lester M

Observed response of stratospheric and mesospheric composition to sudden stratospheric warmings

Journal of Atmospheric and Solar-Terrestrial Physics Vol. 191

doi: 0.1016/j.jastp.2019.06.001

<http://www.sciencedirect.com/science/article/pii/S1364682619300124>

Sonde, SSW

2019, Donner, S.

Kuhn, J., Van Roozendaal, M., Bais, A., Beirle, S., Bösch, T., Bognar, K., Bruchkousky, I., Chan, K. L., Drosoglou, T., Fayt, C., Frieß, U., Hendrick, F., Hermans, C., Jin, J., Li, A., Ma, J., Peters, E., Pinardi, G., Richter, A., Schreier, S. F., Seyler, A., Strong, K., Tirpitz, J.-L., Wang, Y., Xie, P., Xu, J., Zhao, X., and Wagner, T.

Evaluating different methods for elevation calibration of MAX-DOAS instruments during the CINDI-2 campaign

Atmos. Meas. Tech. Discuss.
doi: 10.5194/amt-2019-115, in review
UVVis; Calibration

2019, Emili, E.
Barret, B., Le Flochmoën, E., and Cariolle, D.
Comparison between the assimilation of IASI Level 2 ozone retrievals and Level 1 radiances in a chemical transport model
Atmos. Meas. Tech., 12, 3963–3984
doi: 10.5194/amt-12-3963-2019.
Sonde; Satellite; Model; Ozone

2019, Farhani G.
Sica R. J., Godin-Beekmann S., Ancellet G., Haefele A.
Improved ozone DIAL retrievals in the upper troposphere and lower stratosphere using an optimal estimation method Applied optics
Optical Society of America, 2019, 58 (6), pp.1374-1385
doi: 10.1364/AO.58.001374
Sonde; Lidar; Ozone; Validation

2019, Farhani, Ghazal
Robert J. Sica, Sophie Godin-Beekmann, and Alexander Haefele
Optimal estimation method retrievals of stratospheric ozone profiles from a DIAL
Atmos. Meas. Tech., 12, 2097–2111, 2019b
doi: 10.5194/amt-12-2097-2019
Lidar; Sonde; Ozone

2019, Frey, M.
Sha, M. K., Hase, F., Kiel, M., Blumenstock, T., Harig, R., Surawicz, G., Deutscher, N. M., Shiomi, K., Franklin, J. E., Bösch, H., Chen, J., Grutter, M., Ohyama, H., Sun, Y., Butz, A., Mengistu Tsidu, G., Ene, D., Wunch, D., Cao, Z., Garcia, O., Ramonet, M., Vogel, F., and Orphal, J.
Building the COllaborative Carbon Column Observing Network (COCCON): long-term stability and ensemble performance of the EM27/SUN Fourier transform spectrometer
Atmos. Meas. Tech., 12, 1513-1530
doi: 10.5194/amt-12-1513-2019
FTIR, Carbon

2019, Friedrich M.
M., Rivera, C., Stremme, W., Ojeda, Z., Arellano, J., Bezanilla, A., García-Reynoso, J. A., and Grutter, M
NO₂ vertical profiles and column densities from MAX-DOAS measurements in Mexico City
Atmos. Meas. Tech., 12, 2545–2565
doi: 10.5194/amt-12-2545-2019

UVVis; FTIR; NO₂

2019, Frieß, U.

Beirle, S., Alvarado Bonilla, L., Bösch, T., Friedrich, M. M., Hendrick, F., Pitters, A., Richter, A., van Roozendaal, M., Rozanov, V. V., Spinei, E., Tzipker, J.-L., Vlemmix, T., Wagner, T., and Wang, Y.
Intercomparison of MAX-DOAS vertical profile retrieval algorithms: studies using synthetic data
Atmos. Meas. Tech., 12, 2155-2181

doi: 10.5194/amt-12-2155-2019

UVVis; Algorithm

2019, Garane, K.

Koukouli, M.-E., Verhoelst, T., Lerot, C., Heue, K.-P., Fioletov, V., Balis, D., Bais, A., Bazureau, A., Dehn, A., Goutail, F., Granville, J., Griffin, D., Hubert, D., Keppens, A., Lambert, J.-C., Loyola, D., McLinden, C., Pazmino, A., Pommereau, J.-P., Redondas, A., Romahn, F., Valks, P., Van Roozendaal, M., Xu, J., Zehner, C., Zerefos, C., and Zimmer, W.

TROPOMI/S5P total ozone column data: global ground-based validation and consistency with other satellite missions

Atmos. Meas. Tech., 12, 5263–5287

doi: 10.5194/amt-12-5263-2019

Brewer; UVVis; Satellite; Ozone; Validation

2019, García, R. D.

Cuevas, E., Ramos, R., Cachorro, V. E., Redondas, A., and Moreno-Ruiz, J. A.

Description of the Baseline Surface Radiation Network (BSRN) station at the Izaña Observatory (2009–2017): measurements and quality control/assurance procedures

Geosci. Instrum. Method. Data Syst., 8, 77-96

doi: 10.5194/gi-8-77-2019

Brewer; Sonde; Validation

2019, Griffin, D.

K.A. Walker, I. Wohltmann, S.S. Dhomse, M. Rex, M.P. Chipperfield, W. Feng, G.L. Manney, P.F. Bernath, J. Liu, and D. Tarasick

Stratospheric ozone loss in the Arctic winters between 2005 and 2013 derived with ACE-FTS measurements

Atmos. Chem. Phys., 19, 577-601

doi: 10.5194/acp-19-577-2019

FTIR; Sonde; Ozone

2019, A.N. Gruzdev

Accounting for serial correlation in a multiple linear regression problem on the example of analysis of the column NO₂ content in the atmosphere

Izvestiya, Atmospheric and Oceanic Physics, 2019, v. 55, pp. 65–72

DOI: 10.1134/S0001433819010043

UVVis; NO₂

2019, A.N. Gruzdev

Accounting for long-term serial correlation in a linear regression problem

IOP Conf. Ser. Earth Environ. Sci. 2019. V. 231. 012020. P. 1–10

doi: 10.1088/1755-1315/231/1/012020

<https://iopscience.iop.org/article/10.1088/1755-1315/231/1/012020/meta>

UVVis; NO₂

2019, Hauchecorne A.

Blanot L., Wing R., Keckhut P., Khaykin S., Bertaux J.-L., Meftah M., Claud C., Sofieva V.,

A new Mesospheric data set of temperature profiles from 35 to 85 km using Rayleigh scattering at limb from GOMOS/ENVISAT daytime observations

Atmospheric Measurement Techniques, European Geosciences Union, 2019, 12 (1), pp.749-761

Doi: 10.5194/amt-12-749-2019

Lidar; Satellite; Temperature

2019, Hedelius, J. K.

He, T.-L., Jones, D. B. A., Buchholz, R. R., De Mazière, M., Deutscher, N. M., Dubey, M. K., Feist, D. G., Griffith, D. W. T., Hase, F., Iraci, L. T., Jeseck, P., Kiel, M., Kivi, R., Liu, C., Morino, I., Notholt, J., Oh, Y.-S., Ohyama, H., Pollard, D. F., Rettinger, M., Roche, S., Roehl, C. M., Schneider, M., Shiomi, K., Strong, K., Sussmann, R., Sweeney, C., Té, Y., Uchino, O., Velasco, V. A., Wang, W., Warneke, T., Wennberg, P. O., Worden, H. M., and Wunch, D.

Evaluation of MOPITT version 7 joint TIR-NIR XCO retrievals with TCCON

Atmos. Meas. Tech., 12, 5547-5572

doi: 10.5194/amt-12-5547-2019

FTIR; Algorithm

2019, Hicks-Jalali

S., Sica, R. J., Haeferle, A., and Martucci, G.

Calibration of a water vapour Raman lidar using GRUAN-certified radiosondes and a new trajectory method

Atmos. Meas. Tech., 12, 3699-3716

doi: 10.5194/amt-12-3699-2019

Lidar; Sonde; H₂O; Validation

2019, Huang, G.

Newchurch, M. J., Kuang, S., & Ouwersloot, H. G.

A Case Study of Ozone Diurnal Variation in the Convective Boundary Layer in the Southeastern United States Using Multiple Observations and Large-Eddy Simulation

Climate, 7(4), 53

Lidar; Ozone; Diurnal

2019, Inness, A.

Ades, M., Agustí-Panareda, A., Barré, J., Benedictow, A., Blechschmidt, A.-M., Dominguez, J. J., Engelen, R., Eskes, H., Flemming, J., Huijnen, V., Jones, L., Kipling, Z., Massart, S., Parrington, M., Peuch, V.-H., Razinger, M., Remy, S., Schulz, M., and Suttie, M.

The CAMS reanalysis of atmospheric composition

Atmos. Chem. Phys., 19, 3515–3556

doi: 10.5194/acp-19-3515-2019

Model; Sonde; Ozone

2019, Jalali, Ali

Shannon Hicks-Jalali, Robert Sica, Alexander Haefele, Thomas von Clarmann.

A practical information-centered technique to remove a priori information from lidar optimal-estimation-method retrievals.

Atmospheric Measurement Techniques. 12: 3943–3961

Lidar; Algorithm

2019, Kivimäki, E., et al.

Evaluation and Analysis of the Seasonal Cycle and Variability of the Trend from GOSAT Methane Retrievals

Remote Sens., 11, 882, 2019

FTIR; CH₄; Trends

2019, Andrew R. Klekociuk

Matthew B. Tully, Paul B. Krummel, Oleksandr Evtushevsky, Volodymyr Kravchenko, Stuart I. Henderson, Simon P. Alexander, Richard R. Querel, Sylvia Nichol, Dan Smale, Gennadi P. Milinevsky, Asen Grytsai, Paul J. Fraser, Zheng Xiangdong, H. Peter Gies, Robyn Schofield and Jonathan D. Shanklin.

The Antarctic Ozone Hole during 2017

JSHES, DOI: 10.22499/3.6902.001

FTIR; Ozone

2019, Kreher, K.

M. Van Roozendaal, F. Hendrick, A. Apituley, E. Dimitropoulou, U. Frieß, A. Richter, T. Wagner, N. Abuhassan, L. Ang, M. Anguas, A. Bais, N. Benavent, T. Bösch, K. Bogner, A. Borovski, I. Bruchkovsky, A. Cede, K.L. Chan, S. Donner, T. Drosoglou, C. Fayt, H. Finkenzeller, D. Garcia-Nieto, C. Gielen, L. Gómez-Martín, N. Hao, J.R. Herman, C. Hermans, S. Hoque, H. Irie, J. Jin, P. Johnston, J. Khayyam Butt, F. Khokhar, T.K. Koenig, J. Kuhn, V. Kumar, J. Lampel, C. Liu, J. Ma, A. Merlaud, A. K. Mishra, M. Müller, M. Navarro-Comas, M. Ostendorf, A. Pazmino, E. Peters, G. Pinardi, M. Pinharanda, A. PETERS, U. Platt, O. Postyljakov, C. Prados-Roman, O. Puentedura, R. Querel, A. Saiz-Lopez, A. Schönhardt, S.F. Schreier, A. Seyler, V. Sinha, E. Spinei, K. Strong, F. Tack, X. Tian, M. Tiefengraber, J.-L. Tirpitz, J. van Gent, R.

Volkamer, M. Vrekoussis, S. Wang, Z. Wang, M. Wenig, F. Wittrock, P.H. Xie, J. Xu, M. Yela, C. Zhang and X. Zhao

Intercomparison of NO₂, O₄, O₃ and HCHO slant column measurements by MAX-DOAS and zenith-sky UV-Visible spectrometers during the CINDI-2 campaign

Atmos. Meas. Tech. Discuss.

doi: 10.5194/amt-2019-157, in review

UVVis; Ozone, NO₂; HCHO

2019, Kulla

Ritter

Water Vapor Calibration: Using a Raman Lidar and Radiosoundings to Obtain Highly Resolved Water Vapor Profiles

Remote Sensing, 11 (6), 616

doi: 10.3390/rs11060616

Lidar; Sonde; H₂O

2019, Martin Lainer

Klemens Hocke, Ellen Eckert, Niklaus Kämpfer

Significant decline of mesospheric water vapor at the NDACC site near Bern in the period 2007 to 2018

Atmos.Chem. Phys. , vol.: 19, pp.: 6611-6620

Microwave; H₂O

2019, Lamy, K.

T. Portafaix, B. Josse, C. Brogniez, S. Godin-Beekmann, H. Bencherif, L. Revell, H. Akiyoshi, S. Bekki, M. I. Hegglin, P. Jöckel, O. Kirner, B. Liley, V. Marecal, O. Morgenstern, A. Stenke, G. Zeng, L. N. Abraham, A. T. Archibald, N. Butchart, M. Chipperfield, G. Di Genova, M. Deushi, S. S. Dhomse, R. Hu, D. Kinnison, M. Kotkamp, R. McKenzie, M. Michou, F. O'Connor, L. D. Oman, G. Pitari, D. Plummer, J. Pyle, E. Rozanov, D. Saint-Martin, K. Sudo, T. Y. Tanaka, D. Visioni, and K. Yoshida

Clear-sky ultraviolet radiation modelling using output from the Chemistry Climate Model Initiative

Atmos. Chem. Phys., 19, 10087–10110

doi: 10.5194/acp-19-10087-2019

Spectral UV; Model; UVB

2019, Leblanc, T., et al.

A 25-year high in global stratospheric aerosol loading

[in "State of the Climate in 2019"]. Bull. Amer. Meteor., 101 (8), S88–S89

doi: 10.1175/BAMS-D-20-0104.1

Lidar; Aerosol

2019, Lieschke, K. J.

J. A. Fisher, C. Paton-Walsh, N. B. Jones, J. W. Greenslade, S. Burden, and D. W. T. Griffith

Decreasing Trend in Formaldehyde Detected From 20-Year Record at Wollongong, Southeast Australia

Geophysical Research Letters, 46(14), 8464-8473

doi:10.1029/2019gl083757

FTIR; CH₂O

2019, Lossow, S.

F. Khosrawi, M. Kiefer, K.A. Walker, J.-L. Bertaux, L. Blanot, J.M. Russell III, E.E. Remsberg, J.C. Gille, T. Sugita, C.E. Sioris, B.M. Dinelli, E. Papandrea, P. Raspollini, M. García-Comas, G.P. Stiller, T. von Clarmann, A. Dudhia, W.G. Read, G.E. Nedoluha, R.P. Damadeo, J.M. Zawodny, K. Weigel, A. Rozanov, F. Azam, K. Bramstedt, S. Noël, J.P. Burrows, H. Sagawa, Y. Kasai, J. Urban, P. Eriksson, D.P. Murtagh, M.E. Hervig, C. Högberg, D.F. Hurst, and K. H. Rosenlof

The SPARC water vapour assessment II: Profile-to-profile comparisons of stratospheric and lower mesospheric water vapour data sets obtained from satellites

Atmos. Meas. Tech., 12, 2693-2732

doi:10.5194/amt-12-2693-2019

Sonde; Satellite; H₂O

2019, E. Lutsch

K. Strong, D.B.A. Jones, I. Ortega, J.W. Hannigan, E. Dammers, M.W. Shephard, E. Morris, K. Murphy, M.J. Evans, M. Parrington, S. Whitburn, M. Van Damme, L. Clarisse, P.-F. Coheur, C. Clerbaux, B. Croft, R.V. Martin, J.R. Pierce, and J.A. Fisher

Unprecedented ammonia concentrations detected in the high Arctic from the 2017 Canadian wildfires
J. Geophys. Res. Atmos., 124, 8178–8202

doi: 10.1029/2019JD030419

FTIR; NH₃

2019, Mahagammulla Gamage, S.

Sica, R. J., Martucci, G., and Haeferle, A.

Retrieval of Temperature From a Multiple Channel Pure Rotational Raman-Scatter Lidar Using an Optimal Estimation Method

Atmos. Meas. Tech., 12, 5801–5816

doi: 10.5194/amt-12-5801-2019

Lidar; Aerosol; Temperature

2019, McKenzie, R.

G. Bernhard, B. Liley, P. Disterhoft, S. Rhodes, A. Bais, O. Morgenstern, P. Newman, L. Oman, C. Brogniez and S. Simic

Success of Montreal Protocol demonstrated by comparing high-quality UV Measurements with “World Avoided” calculations from two chemistry-climate models

Scientific Reports, 9, 12332

doi: 10.1038/s41598-019-48625-z

Spectral UV; Model

2019, J. Mendonca

K. Strong, D. Wunch, G.C. Toon, D.A. Long, J.T. Hodges, V.T. Sironneau, and J.E. Franklin

Using a speed-dependent Voigt line shape to retrieve O₂ from Total Carbon Column Observing Network solar spectra to improve measurements of XCO₂

Atmos. Meas. Tech., 12, 35-50, 2019

doi: 10.5194/amt-12-35-201

FTIR; O₂; XCO₂

2019, Francisco Navas Guzmán

Giovanni Martucci, Martine Collaud Coen, María José Granados

Muñoz, Maxime Hervo, Michael Sicard, and Alexander Haefele:

Towards continuous monitoring of aerosol hygroscopicity by Raman lidar measurements at the EARLINET station of Payerne

Atmos. Chem. Phys., 19, 11651–11668

<https://doi.org/10.5194/acp-2019-289>

Lidar; Aerosol

2019, Ohyama, H. et al

Interannual variation of upper stratospheric ozone in the northern midlatitudes in early winter caused by planetary waves

Journal of Geophysical Research: Atmospheres, Volume 124, Issue 24, pp. 14,347-14,361

Microwave; Ozone

2019, D. Oman

and S. E. Strahan

The Effects of a 1998 Observing System Change on MERRA-2-based Ozone Profile Simulations

Journal of Geophysical Research: Atmospheres, 124: 7429– 7441

doi: 10.1029/2019jd030257

Sonde; Model; Ozone

2019, Ortega, I.

R.R. Buchholz, E.G. Hall, D.F. Hurst, A.F. Jordan, and J.W. Hannigan

Tropospheric water vapor profiles obtained with FTIR: comparison with balloon-borne frost point hygrometers and influence on trace gas retrievals

Atmos. Meas. Tech., 12, 873-890

doi: 10.5194/amt-12-873-2019

FTIR; Sonde; H₂O

2019, Polyakov A.V.

Ya.A. Virolainen, M.V. Makarova

Technique for Inverting Transmission Spectra to Measure Freon Concentration

Journal of Applied Spectroscopy, 85, 6, 1085–1093

DOI:10.1007/S10812-019-00763y

FTIR; Freon

2019, K. Ranjbar

N.T. O'Neill, E. Lutsch, E.M. McCullough, Y. AboEl-Fetouha, P. Xian, K. Strong, V.E. Fioletov, G. Lesins, and I. Abboud

Extreme smoke event over the high Arctic

Atmospheric Environment, 218, 117002

doi: 10.1016/j.atmosenv.2019.117002

FTIR; Aerosol

2019, Schiavo B. et al.

Characterization of a UV camera system for SO₂ measurements from Popocatepetl Volcano

Journal of Volcanology and Geothermal Research 370,82–94

doi: 10.1016/j.jvolgeores.2018.09.001

FTIR; SO₂; Volcano

2019, O. Schneising

M. Buchwitz, M. Reuter, H. Bovensmann, J.P. Burrows, T. Borsdorff, N.M. Deutscher, D.G. Feist, D.W.T. Griffith, F. Hase, C. Hermans, L.T. Iraci, R. Kivi, J. Landgraf, I. Morino, J. Notholt, C. Petri, D.F. Pollard, S. Roche, K. Shiomi, K. Strong, R. Sussmann, V.A. Velazco, T. Warneke, and D. Wunch

A scientific algorithm to simultaneously retrieve carbon monoxide and methane from TROPOMI onboard Sentinel-5 Precursor

Atmos. Meas. Tech., 12, 6771–6802

doi: 10.5194/amt-12-6771-2019

FTIR; Satellite; CO, CH₄; Algorithm

2019, Schranz, F.

Tschanz, B., Rüfenacht, R., Hocke, K., Palm, M., & Kämpfer, N.

Investigation of Arctic middle-atmospheric dynamics using 3 years of H₂O and O₃ measurements from microwave radiometers at Ny-Ålesund

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Microwave; H₂O; Ozone

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Sonde; Ozone

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Lidar; PSC; model

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Sonde; Model; Ozone

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Sonde; Ozone; Wind

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FTIR; Lidar; Ozone; Trends

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Sonde; SHADOZ; Ozone; Validation

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Sonde; Ozone

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Lidar; Satellite; H2O; Validation

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UVVis; O4

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FTIR; H2O

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FTIR; H2O

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Sonde; Ozone

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UVVis; Clouds; Ozone

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FTIR; NO; Model

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FTIR; XCO

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FTIR; CH4