

AS5.11 Atmospheric gases and particles: metrology, quality control and measurement comparability

Programme for Sharing Geoscience Online

We will discuss the displays in order of appearance as listed on the EGU website (<https://meetingorganizer.copernicus.org/EGU2020/displays/36813>) and as below.

We will **only discuss** those displays which **have uploaded presentation materials**.

Please can I recommend that authors upload their presentation materials as soon as possible and at the **latest by the end of Sunday May 3rd** to allow sometime for participants to read these and formulate questions for the live chat discussion.

Each author is asked for a 1-2 sentence introduction, please can you prepare this in advance. We will then take questions on each presentation.

At the end of the session if there is time we can have a more open discussion at the end of the chat.

Looking forward to virtually seeing you all at the EGU next week.

Best regards,

Dave Worton (on behalf of all convenors)

Session Order

D3266 | EGU2020-8518

Comparison of isotope ratio measurement capabilities for CO₂: Sample preparation and characterization by Isotope Ratio Infrared Spectroscopy. Edgar Flores, Philippe Moussay, Eric Mussell Webber, Ian Chubchenko, Francesca Rolle, Tiqiang Zhang, and Robert Ian Wielgosz

D3267 | EGU2020-3539

Improving inter-laboratory compatibility of atmospheric carbon dioxide and methane isotope measurements. Heiko Moossen, Sylvia Englund Michel, Peter Sperlich, Michael Rothe, and Willi A. Brand

D3268 | EGU2020-18389 | **Highlight**

Progress towards atmospheric isotope ratio carbon dioxide and nitrous oxide reference materials that meet the WMO-GAW data quality objectives for compatibility. Ruth Hill-Pearce, Eric Mussell Webber, Aimee Hillier, Heiko Moossen, David Worton, and Paul Brewer

D3269 | EGU2020-18624

N₂O isotope research: development of reference materials and metrological characterization of OIRS analyzers within the SIRS project. Joachim Mohn, Joanna Rupacher, Heiko Moossen, Sakae Toyoda, Christina Biasi, Jan Kaiser, Stephen Harris, Jesper Liisberg, Benjamin Wolf, Longlong Xia, Matti Barthel, Longfei Yu, Kristýna Kantnerová, Jing Wei, Ruth Pearce, Eric Mussell Webber, Bryce Kelly, Thomas Blunier, Naohiro Yoshida, and Paul Brewer and the Additional co-authors

D3270 | EGU2020-6069 | **Highlight**

Intercomparison of nitrogen monoxide and nitrogen dioxide measurements in the atmosphere simulation chamber SAPHIR during the MetNO₂ campaign. Robert Wegener and the The MetNO₂ SAPHIR intercomparison team

D3271 | EGU2020-21718

FTIR-based spectral line data of the ν_3 band of NO₂ at 6.3 μm and multi-component impurity analysis of NO₂ reference gases within the scope of the EMPIR MetNO₂ project. Gang Li, Viktor Werwein, Alexandra Lüttschwager, Mi Eon Kim, Jarvis Nwaboh, Olav Werhahn, and Volker Ebert

D3272 | EGU2020-13471

Spark discharge aerosol generator for field calibration of absorption photometers: Aerosol properties and stability. Jorge Saturno, Andreas Nowak, Matthias Jahn, Tobias Klein, Thomas Müller, and Volker Ebert

D3273 | EGU2020-221

Metrological calibration strategies and uncertainty assessments for spectroscopic mid-IR isotope ratio measurements in carbon dioxide. Ivan Prokhorov, Ian Chubchenko, Olav Werhahn, and Volker Ebert

D3274 | EGU2020-1473

Carbon and Oxygen Isotope Fractionation of Pressurized CO₂ as a Function of Temperature
Tracey Jacksier and Rick Socki

D3275 | EGU2020-18746

The importance of appropriate isotope reference standards for determination of the isotopic composition of C and O in atmospheric CO₂. Bor Krajnc, Samo Tamše, and Nives Ogrinc

D3276 | EGU2020-21827

DEVELOPING STATIC AND DYNAMIC STABLE ISOTOPE REFERENCE GAS MIXTURES OF CO₂ AT 400 $\mu\text{mol/mol}$
Aylin Boztepe, Tanil Tarhan, Zeynep Gülsoy Şerif, and Adnan Şimşek

D3277 | EGU2020-14771

Development and characterization of a high precision QCLAS for selective NO₂ measurement.
Nicolas Sobanski, Beat Schwarzenbach, Béla Tuzson, Lukas Emmenegger, Dave R. Worton, Naomi Farren, Tatiana Mace, and Christophe Sutour

D3278 | EGU2020-17866 **WITHDRAWN**

A thermal dissociation CAPS for detection of NO_y species within the MetNO₂ project. Annika Kuß, Dagmar Kubistin, Robert Holla, Christian Plaß-Dülmer, Erasmus Tensing, Felix Utschneider, Maximilian Prostedter, David R. Worton, Stefan Persijn, Maitane Iturrate-Garcia, and Robert Wegener

D3279 | EGU2020-19259

Diode laser spectrometer for NO₂ quantification: Absolute laser spectroscopic and direct NO₂ concentration measurements for atmospheric monitoring within the EMPIR project MetNO₂. Jarvis A. Nwaboh, Zhechao Qu, Gang Li, Mi Eon Kim, Jan C. Petersen, David Balslev-Harder, Olav Werhahn, and Volker Ebert

D3280 | EGU2020-18995 **WITHDRAWN**

Assessment of on-line and off-line instruments for the measurement of polyfunctional oxygenated organic volatile compounds (OVOCs) under controlled. Amalia Munoz, Mila Rodenas, Alexander Brennan, Inmaculada Colmenar, Julian Dellen, Aline Gratien, Tatiana Gomez, Eetu Kari, Vicent Michoud, Anke Mutzel, Mike Newland, David Reimer, Andrew Rickard, Paul Seakins, Marvin Shaw, Thomas Speak, Ralf Tillmann, Teresa Vera, Annele Virtanen, and Sergej Wedel

D3281 | EGU2020-8833

Comparison of Formaldehyde Measurements by HANTZSCH, CRDS and DOAS instruments in the SAPHIR Chamber. Marvin Glowania, Hendrik Fuchs, Franz Rohrer, Hans-Peter Dorn, Frank Holland, and Ralf Tillmann

D3282 | EGU2020-7161

Traceability of real-time reference gas generation for reactive gaseous compounds. Timo Rajamäki and Sari Saxholm

D3283 | EGU2020-10511

Fast Airborne Extractive Electrospray Mass Spectrometry (EESI) Measurements of the Chemical Composition of Biomass Burning Organic Aerosol. Demetrios Pagonis, **Pedro Campuzano-Jost**, Hongyu Guo, Douglas Day, Wyatt Brown, Melinda Schueneman, Benjamin Nault, Felix Piel, Tomas Mikoviny, Laura Tomsche, Armin Wisthaler, and Jose Jimenez

D3284 | EGU2020-11863

Evaluating the Consistency of All Submicron Aerosol Mass Measurements (Total and Speciated) for the NASA Atmospheric Tomography Aircraft Mission (ATom). Hongyu Guo, **Pedro Campuzano-Jost**, Benjamin Nault, Douglas Day, Christina Williamson, Agnieszka Kupc, Charles Brock, Gregory Schill, Karl Froyd, Daniel Murphy, Eric Scheuer, Jack Dibb, Joseph Katich, and Jose Jimenez

D3285 | EGU2020-8307

Cost-Effective Air Quality Monitoring System Based on an Open-Source Electronics Platform for Three-Dimensional Atmospheric Environmental Data Collection. **Yi-Chung Tung**, Dao-Ming Chang, and Chuang-Yuan Kuo