NOAA GML GLOBAL MONITORING ANNUAL CONFERENCE 2022

gml.noaa.gov/gmac

Times are in Mountain Daylight Time

Monday Afternoon, May 23, 2022 Agenda

(Only presenter's name is given; please refer to abstract for complete author listing.)

11:30 Conference Virtual Meeting Room Opens

14:00 - 14:20 Coffee Break and Open Discussion

14:20 - 14:40 Poster Lightning Talks

14:40 - 16:00 Poster Session

14:40 - 16:30 Open Discussion Room

NOAA GML GLOBAL MONITORING ANNUAL CONFERENCE 2022

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Tuesday Afternoon, May 24, 2022 Agenda

(Only presenter's name is given; please refer to abstract for complete author listing.)

11:30 Conference Virtual Meeting Room Opens

14:00 - 14:20 Coffee Break and Open Discussion

14:20 - 14:40 Poster Lightning Talks

14:20 - 16:00 Poster Session

14:40 - 16:30 Open Discussion Room

16:30 -18:30 eGMAC Virtual Happy Hour

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Wednesday Afternoon, May 25, 2022 Agenda

(Only presenter's name is given; please refer to abstract for complete author listing.)

10:00 - 11:00 Early Career Panel, Moderated by Xinyi Zeng

11:00 - 11:30 Early Career Panel Coffee Break

11:30 Conference Virtual Meeting Room Opens

14:00 - 14:20 Coffee Break and Open Discussion

14:20 - 14:40 Poster Lightning Talks

14:20 - 16:00 Poster Session

14:40 - 16:30 Open Discussion Room

NOAA GML GLOBAL MONITORING ANNUAL CONFERENCE 2022

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Thursday Afternoon, May 26, 2022 Agenda

(Only presenter's name is given; please refer to abstract for complete author listing.)

11:30 Conference Virtual Meeting Room Opens

14:00 - 14:20 Coffee Break and Open Discussion

14:20 - 14:40 Poster Lightning Talks

14:20 - 16:00 Poster Session

14:40 - 16:30 Open Discussion Room

16:30 Potluck in Boulder's Harlow Platts Community Park

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Friday Afternoon, May 27, 2022 Agenda

(Only presenter's name is given; please refer to abstract for complete author listing.)

11:30 Conference Virtual Meeting Room Opens

14:05 - 14:30 Open Discussion

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Monday, May 23, 2022 Poster Session Agenda

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14:20 - 14:25 Poster Session Welcome and Logistics, Chaired by Bharat Rastogi

14:25 - 14:40 Poster Lightning Talks

Carbon Cycle and Greenhouse Gases Poster Block 1: 14:40 - 15:20

P-1 Comparison of Atmospheric Observations to High-resolution Fossil Fuel and Biogenic CO_2 Flux Models for Auckland, New Zealand

Timothy W. Hilton (GNS Science, National Isotope Centre, Lower Hutt, New Zealand)

P-2 Analyzing Long-term East Asia CH_4 Emission Changes Inferred from CH_4/CO_2 Mole Fraction Ratios Based on Observation and Modelling at Anmyeondo, South Korea between 2010-2020

Samuel Takele Kenea (National Institute of Meteorological Sciences, Innovative Meteorological Research Department, Seogwipo-si, South Korea)

P-3 Biogas as a Replacement for Fossil Fuels to Reduce CO_2 Emission Rate

Md Abu Bakkar Siddik (College of Civil Engineering, Nanjing Forestry University, Nanjing, China)

P-4 Advancing Understanding of Plant-Drought Responses in North American Ecosystems using Carbon Isotopic Discrimination in the Simple Biosphere Model

Aleya Kaushik (Cooperative Institute for Research in Environmental Sciences (CIRES), University of Colorado)

Carbon Cycle and Greenhouse Gases Poster Block 2: 15:20 - 16:00

P-5 Misrepresentation of the Temperature Sensitivity of Ecosystem Respiration in Terrestrial Biosphere Models Revealed by Atmospheric CO_2 Observations

Wu Sun (Carnegie Institution for Science, Department of Global Ecology)

P-6 Abstract Withdrawn: Western USA Ecosystem Response to Prolonged Drought and Susceptibility to Fire

Ian Baker (Colorado State University)

P-7 The NOAA High-altitude Operational Returning-Uncrewed System (HORUS) for Atmospheric Observing

Bianca Baier (Cooperative Institute for Research in Environmental Sciences (CIRES), University of Colorado)

P-8 MLO 2.0: A Contingency Plan in the Making

Darrien Reichler (Department of Defense Skillbridge Program Servicemember)

14:40 - 16:30 Open Discussion Room

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Tuesday, May 24, 2022 Poster Session Agenda

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14:20 - 14:25 Poster Session Welcome and Logistics, Chaired by Hagen Telg

14:25 - 14:40 Poster Lightning Talks

Global Radiation and Aerosols Poster Block 1: 14:40 - 15:20

P-9 Linking *In Situ* and Lidar Aerosol Measurements for Air Quality Nowcasting
Darrel Baumgardner (Droplet Measurement Technologies)

P-10 Aerosol Optical Properties Calculated from Size Distributions, Filter Samples and Absorption Photometer Data at Dome C, Antarctica
Aki Virkkula (Finnish Meteorological Institute, Helsiniki, Finland)

P-11 Measuring and Interpreting Particulate Mass Concentration using the Tapered Element Oscillating Microbalance (TEOM) at Appalachian State University
Ethan Barber (Appalachian State University, Department of Physics and Astronomy)

P-12 Celebrating 30+ Years of the Network for Detection of Atmospheric Composition Change (NDACC)
Irina Petropavlovskikh (Cooperative Institute for Research in Environmental Sciences (CIRES), University of Colorado)

Global Radiation, Aerosols, and Ozone Poster Block 2: 15:20 - 16:00

P-13 Balloon-based SO_2 Measurements during the Hunga Tonga Eruption
Paul Walter (St. Edward's University)

P-14 Impact of Meteorology on Baseline Ozone in the Western United States
Matthew Ninneman (University of Washington Bothell)

P-15 Spatiotemporal Characteristics of the NMHCs and Their Contribution in Situ Tropospheric Ozone Production: First Results from the Central Himalayan
Mahendar Rajwar (Aryabhatta Research Institute for observational sciencES (ARIES), Department of Science and Technology (DST), Atmospheric Science Division, Govt. of India, Nainital, India)

P-16 Bias in O_3 Measurements in Smoky Air When using some UV Instruments
Dan Jaffe (University of Washington)

14:40 - 16:30 Open Discussion Room

16:30 - 18:30 eGMAC Virtual Happy Hour

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Wednesday, May 25, 2022 Poster Session Agenda

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14:20 - 14:25 Poster Session Welcome and Logistics, Chaired by Peter Effertz

14:25 - 14:40 Poster Lightning Talks

Ozone and Water Vapor Poster Block 1: 14:40 - 15:20

P-17 50 Years of Balloon-borne Ozone Profile Measurements at Uccle, Belgium
Roeland Van Malderen (Royal Meteorological Institute of Belgium, Brussels, Belgium)

P-18 Updated Trends of the Stratospheric Ozone Vertical Distribution at Select NOAA Global Monitoring Laboratory Dobson Monitoring Stations Based on the LOTUS Regression Model
Peter Effertz (Cooperative Institute for Research in Environmental Sciences (CIRES), University of Colorado)

P-19 Working Towards Replacing the NOAA FPH Cryogen (R23) with Dry Ice and Alcohol (DIA)
Emrys Hall (Cooperative Institute for Research in Environmental Sciences (CIRES), University of Colorado)

P-20 Observations of the Lower Stratospheric Environment from Solar Balloons in the Southwest US
Erika Roesler (Sandia National Laboratories)

Ozone and Water Vapor Poster Block 2: 15:20 - 16:00

P-21 The Effects of the IUP Ozone Cross-section in Umkehr Retrievals and Temperature Correction
K. Miyagawa (Guest Scientist at NOAA Global Monitoring Division (GML))

P-22 South Pole Station Ozonesondes: Variability in the 2019-2021 Springtime Antarctic Ozone Holes
Bryan Johnson (NOAA Global Monitoring Laboratory (GML))

P-23 Southern Hemisphere Additional Ozonesondes (SHADOZ) Project Update: 2022 Archive and Outreach Activities
Debra Kollonige (Science Systems and Applications, Inc. (SSAI))

P-24 Harmonization and Evaluation of Ground-based Instruments for Free-Tropospheric Ozone Measurements by TOAR-II Focus Working Group “HEGIFTOM”
Roeland Van Malderen (Royal Meteorological Institute of Belgium, Brussels, Belgium)

14:40 - 16:30 Open Discussion Room

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Thursday, May 26, 2022 Poster Session Agenda

(Only presenter's name is given; please refer to abstract for complete author listing.)

14:20 - 14:25 Poster Session Welcome and Logistics, Chaired by Matthew Gentry

14:25 - 14:40 Poster Lightning Talks

Halocarbons and Other Trace Species Poster Block 1: 14:40 - 15:20

P-25 Uncertainty, Stability and Traceability in Global Monitoring of Atmospheric Composition and the Role of WMO/GAW Central Calibration Facilities – Reality and Plans

Herman G.J. Smit (Institute for Energy and Climate Research, Troposphere IEK-8, Research Center Juelich, Juelich, Germany)

P-26 New System to Measure Carbonyl Sulfide in Air Samples from Baring Head and Fiordland National Park, New Zealand

Peter Sperlich (National Institute of Water and Atmospheric Research (NIWA), Wellington, New Zealand)

P-27 Mapping Methane Sources in the Baltimore-Washington, DC Area Using an Instrumented Mobile Platform

Xinrong Ren (NOAA Air Resources Laboratory (ARL))

Halocarbons and Other Trace Species Poster Block 2: 15:20 - 16:00

P-28 Evaluation of MOPITT and TROPOMI Carbon Monoxide Retrievalsusing AirCore *in Situ* vertical Profiles

Sara Martínez-Alonso (National Center for Atmospheric Research (NCAR), Atmospheric Chemistry Observations and Modeling Laboratory)

P-29 Progress Towards Diagnosis of North American CO_2 and CH_4 Fluxes with the Expanded *In Situ* Measurement Network

Natasha Miles (The Pennsylvania State University, Department of Meteorology and Atmospheric Science)

P-30 Analysis of Source Distribution of High GHGs and CO Events using Airborne and Surface Observations in Korea

Sunran Lee (National Institute of Meteorological Sciences, Innovative Meteorological Research Department, Seogwipo-si, South Korea)

P-31 Laboratory Validation of a Laser Absorption Spectrometer for Balloon-borne Measurements of UTLS Water Vapor

Simone Brunamonti (Swiss Federal Laboratories for Materials Science and Technology (Empa) Laboratory for Air Pollution and Environmental Technology, Dübendorf, Switzerland)

14:40 - 16:30 Open Discussion Room

16:30 Potluck in Boulder's Harlow Platts Community Park